Audio Interchange File Format: Sound Files To Windows

I'm looking for information on the Audio Interchange File Format (AIFF) that I've seen sound files available in. Is AIFF a standard with Mac OS? Can it be used with Windows? How can I move sound files to DOS/Windows?
This article has been archived and is no longer updated by Apple.
AIFF sound files are the standard file format defined by Apple and several third-party developers for sampled (digitized) sound.

However, Windows only works with AIFF in a few applications. Windows uses .WAV files as its own file format for digitized sound. Unless the application you are using in Windows works with AIFF files, a simple transfer of the sound file won't provide a usable Windows sound file.

The AIFF sound file has header information that can be followed by a variety of "chunks." One of these chunks represents a linear sampling of audio waveforms stored as bytes. A general overview of AIFF files is in Chapter 22, The Sound Manager, of Inside Macintosh VI. A more complete description of the AIFF file format is available from Apple's developer web site at:

http://www.apple.com/developer/

Nothing in the Windows/MS-DOS environment can directly understand the header information. Therefore, you need to do a file conversion. There are several Macintosh applications and shareware utilities that allow you to convert AIFF files into WAV files.

Published Date: Feb 19, 2012

Mac OS: Maximum Size of the Note Pad

What is the limit to the size of the Note Pad file?
This article has been archived and is no longer updated by Apple.
The practical limit of each page of a Note Pad in Note Pad version 7.5 is 32,700 characters. Note Pad 7.5 is included with Mac OS 7.5 and later.

Earlier versions of Note Pad are limited to 8 pages total.

For information on working around these limitations, please see Knowledge Base article:

Article 25127: "Mac OS: Using Multiple Note Pads and Scrapbooks"
Published Date: Feb 20, 2012

Apple Hardware: See Manual for Care and Cleaning Information

Refer to the manual that came with your Apple product for recommendations and instructions on how to clean it.
This article has been archived and is no longer updated by Apple.
The manual that comes with each Apple product contains basic care and cleaning instructions. You can find the specific page numbers for this information in the manual's table of contents.

Some cleaning procedures must be performed by Apple Authorized Service Providers. If you cannot find cleaning instructions for your particular needs in the manual, contact your Apple-authorized reseller or Apple Authorized Service Provider.
Published Date: Feb 19, 2012

How to clean edge connectors on cards

Technicians agree that the most difficult troubleshooting involves intermittent symptoms, and that many of these can be traced to dirty electrical connections or connectors.
This article has been archived and is no longer updated by Apple.

Inspecting an Edge Connector

1. Make sure the card is not receiving electrical power. If necessary, turn off and unplug the device housing the card.
2. Touch an electrically grounded area to rid yourself of static electricity. For example, touch the power supply or the metal chassis frame of the computer. Once this is done, do not shuffle your feet or move your body in a way that will create a new static electric charge.
3. Handling the card by its edges as much as possible, remove the card from its slot or connector. Do not touch electronic components or the edge connectors.
4. Visually inspect the edge connectors for signs of dirt or contamination. A magnifying glass may help.

   Cleaning an Edge Connector

   Here are two methods for cleaning edge connectors:

   Pencil eraser

   Use an ordinary pencil eraser to clean the edge connectors. Blow the eraser crumbs away; do not wipe them away with your fingers.

   Stabilant-22A

   Stabilant 22-A is a contact-enhancing product by D.W. Electrochemicals Ltd.; their website is at http://www.stabilant.com/ .

   Stabilant 22-A is a non-conductive block polymer that becomes conductive in the presence of an electrical field or when placed in a very narrow gap between electrical contacts. It remains non-conductive between adjacent contacts in a multiple-pin environment. Users of this product report that it works well on a variety of connections. It can also be used for audio and video connectors.

   [**Important:** Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

AirPort Base Station: How to Set Up File Sharing Between AirPort and Ethernet Computers

Computers connected to an AirPort Base Station (Graphite) may not be able to share information with each other if bridging is turned off. For the AirPort Base Station (Dual Ethernet) and AirPort Extreme Base Station, bridging from wireless AirPort clients to the LAN port is automatically enabled.
This article has been archived and is no longer updated by Apple.

Symptom

An Ethernet (wired) computer and an AirPort (wireless) computer successfully connect to the Internet through an AirPort Base Station, but attempts to set up File Sharing or any TCP/IP services between them on the local network fail.

Click here if you are using the AirPort Base Station (Dual Ethernet).

Solution

An AirPort Base station treats Ethernet and AirPort as two disconnected network segments. Turning on the "AirPort to Ethernet bridging" option in the AirPort Admin Utility allows you to connect those two segments for services such as File Sharing. For detailed instructions and information on designing an AirPort network, review the document "Designing AirPort Networks" to see what works best for you. You may find the document at Apple Software Updates (http://www.apple.com/swupdates/).

If you have a cable modem and need to bridge Ethernet and AirPort, see this article:

Article 106021: "**AirPort: How to Set Up Bridging When Using a Cable Modem**"

Important: Bridging may adversely affect other network services in certain environments. If you have a cable modem, you should not use the AirPort Base Station for bridging combined with NAT (network address translation) and DHCP services. NAT and DHCP services may be run on a separate router.

Note: Computers that are set up as AirPort software base stations do not have a bridging feature.

Note: Wireless Internet access requires an AirPort Card, AirPort Base Station, and an Internet service provider, for which fees may apply. Some ISPs are not compatible with AirPort. America Online (AOL) works with AirPort software version 2.0 or later. For more information on AOL compatibility, see technical document 106591: **"AirPort: How to Use with AOL**." Range may vary with site conditions.

Sharing with AirPort Base Station (Dual Ethernet) or AirPort Extreme Base Station

Bridging from wireless AirPort clients to the LAN port of the AirPort Base Station (Dual Ethernet) and AirPort Extreme Base Station is automatically enabled. You do not need to follow these steps. You may share across the WAN port when you are not using network address translation (NAT) to share a single IP address.

Published Date: Oct 3, 2008

AirPort Base Station (Graphite): How to Set Up Bridging When Using a Cable Modem

Users of cable modems may use one of two network strategies when bridging Ethernet (wired) and AirPort (wireless) computers with an AirPort Base Station (Graphite).
This article has been archived and is no longer updated by Apple.

Designing AirPort Networks

To follow the directions in this article, you will need the document "Designing AirPort Networks," available in article 75138: "**Designing AirPort Networks**"

If you do not have a cable modem or would like an example of why you might wish to use bridging, see related article 106016: "**AirPort: How to Set Up File Sharing Between AirPort and Ethernet Computers**"

Bridging With a Cable Modem

If you have a cable modem and need to bridge Ethernet and AirPort, you may consider one of these two solutions:

An IP Address for Each Computer

- Obtain additional DHCP leases from your Internet Service Provider for each computer on your network. A DHCP lease is the ability for one computer to obtain the IP address necessary to connect to the Internet. If your cable provider uses static IP addresses instead of DHCP service, obtain additional static IP addresses.
- Set up the AirPort Base Station as a bridge only as described in the document "Designing AirPort Networks."

Add a Router

- Set up a separate router on the network for DHCP and NAT services. For information on locating a router or routing software, you may search the Macintosh Products Guide (http://guide.apple.com). Routers come in many sizes, from industrial strength to table top. A computer with two Ethernet interfaces and routing software may also serve the same purpose.
- Set up the AirPort Base Station as a bridge only as described in the document "Designing AirPort Networks."

Important: Bridging may adversely affect other network services in certain environments. If you have a cable modem, you should not use the AirPort Base Station for bridging combined with NAT (network address translation) and DHCP services. NAT and DHCP services may be run on a separate router.

Note: Computers that are set up as AirPort software base stations do not have a bridging feature.

Note: Wireless Internet access requires an AirPort Card, AirPort Base Station, and an Internet service provider, for which fees may apply. Some ISPs are not compatible with AirPort. America Online (AOL) works with AirPort software version 2.0 or later. For more information on AOL compatibility, see technical document 106591: "**AirPort: How to Use with AOL**"

Published Date: Feb 19, 2012

Macintosh Manager: Ways to Mount Volumes

Using the method presented here, you may mount (connect to) volumes for use within the Macintosh Manager environment.
This article has been archived and is no longer updated by Apple.
When a student logs in at a Macintosh Manager client workstation, that computer by default connects to the Macintosh Manager shared folder on the startup volume of the designated authentication server. Using the following techniques, other volumes may be accessed or used for storage.

Terminology: What is a "volume," or an "authentication server"?

A "volume" is a unit of storage. Physically speaking, examples of a volume include:

- hard disk
- hard disk partition
- CD-ROM disc
- an array of disks (RAID)

A volume behaves as a single, independent disk on the desktop, regardless of its physical form. Additional volumes may be physically connected to the authentication server or to other computers. A multi-volume or multi-server setup may be attractive or even necessary when each of a large number of students needs to store a relatively large amount of data, such as an iMovie project. When connecting to a server, a share point (whether a single folder or an entire disk) also behave as a volume.

A "share point" is a folder or volume that has been designated for sharing by an AppleShare IP or Mac OS X Server.

"Authentication server" is a specific way of referring to the Macintosh Manager server to which a student logs on when beginning a Macintosh Manager session. Because it verifies the student's name and password, it is called an "authentication" server. The authentication server uses either AppleShare IP or Mac OS X Server in conjunction with Macintosh Manager software. In advanced setups which may include multiple servers, understanding which is the authentication server is important.

Common reasons that Macintosh Manager users may want to add volumes include:

- to create Group Documents folders on other volumes to expand total storage area
- to give access to remote files or applications

The steps presented here require that you know how to set privileges in AppleShare IP. For general questions about setting privileges, see these documents:

60612: "**AppleShare IP 6.3: About Sharing, Share Points, and Access Privileges**"
31265: "**Macintosh Manager 1.3: Saving Workgroup Documents to Another Volume**"

The Multiple Users User/Macintosh Manager User

When Macintosh Manager users are at the log-on screen, they connect to the Macintosh Manager authentication server via a special AppleShare user. If the authentication server is using AppleShare IP, that user is named Multiple Users User. For authentication servers using Mac OS X Server, that user is named Macintosh Manager User. If a user logs on to a workgroup that has a Documents folder outside the default Macintosh Manager volume on the authentication server, the authentication server disconnects that user from the default volume and automatically forwards the user's connection to the correct volume--a process that is transparent to the user.

Note: When an added Documents volume is local (physically connected) to the Macintosh Manager authentication server, users who belong to more than one workgroup will not be able to switch between them while logged on. In other circumstances this may be possible via the Macintosh Manager Icon in the menu bar. Users affected by this may switch workgroups by logging off and logging back on to the new workgroup.

Here's a simple test for determining if your Multiple Users or Macintosh Manager User has appropriate access to a volume:

1. Open the Macintosh Manager admin application.
2. Log on to your server.
3. Open the Chooser.
4. Click AppleShare.
5. Double-click the authentication server name. You should already be connected as "Multiple Users User" or "Macintosh Manager User".
6. Click Connect.

You should now see the list of volumes to which the Multiple Users User or Macintosh Manager User has access. If the volume you need to mount does not appear in the list, make sure that the Macintosh Manager User or Multiple Users User has read or read-write privileges to the volume.

Important notes for setting privileges:

- The only volume of which the Multiple Users User or Macintosh Manager User should be the Owner is the Macintosh Manager shared folder on the authentication server.
- All other volumes accessed by a workgroup (for Documents volumes, general storage, or application use) should have the Multiple Users User or Macintosh Manager User listed in the User/Group field with read-write access.
- Each of these additional volumes should be assigned its own unique AppleShare user as Owner. Each of these AppleShare users should have a password that is not the same as the server administrator's.

Once you have successfully logged on, follow these steps to connect to a volume automatically for members of a workgroup:

1. Open the Macintosh Manager application from the administration computer, not at the server.
2. Click the Workgroups tab.
3. Click the Volumes tab.
4. Click Chooser.
Note: Skip steps 4 and 5 if the volume you want to add already appears on your desktop.
5. Use the Chooser to connect to the volume you wish to add.
6. In the Volumes field, click the name of the volume.
7. Click Add.
8. In the "Mount at log in" field, click the name of the volume.
9. Click the radio button next to "Log in automatically as the following AFP user."
10. Enter a user name and password.
Note: You should not use the name of a user that is designated Owner or Administrator in the Users & Groups list of the Mac OS Server Admin. When mounting a volume that is physically connected to the authentication server, you want to use the user name that was created for the owner of that specific volume (see above paragraph). When mounting volumes that are physically connected to a different computer, choose a user from that computer's Users & Groups list that has appropriate privileges for the volume.
11. Click Save.

You do not need to check the box next to "Always try automatic log-in with user's name and password first."
Published Date: Feb 17, 2012

Macintosh Manager 1.3: Moving Macintosh Manager Folder to Another Volume

When considering a move of the Macintosh Manager folder, it is best to copy only the Users folder.
This article has been archived and is no longer updated by Apple.
The Macintosh Manager folder that is created on the startup disk of your Macintosh Manager server contains all the databases and initial documents and preferences for your users.

Moving the Macintosh Manager folder from the startup disk to another local disk or partition may result in stability issues with the clients and server. The most common reason administrators want to move the Macintosh Manager Folder is to utilize more hard disk space that's available for user's documents and preferences.

Rather than copying the entire Macintosh Manager folder, copy only the Users folder contained within the Macintosh Manager folder. The Users folder contains all user preferences and documents. The Users folder may be relocated to a disk or partition on the server or on a remote server.

In this configuration, the original server's startup disk remains the authentication volume for Macintosh Manager, while the users then save their documents to another volume to conserve space on the startup disk of the Server.

Once the Users folder is copied, you must change the location of the Group Documents folder in the Macintosh Manager application. For instructions, see:

Article 31265: "**Macintosh Manager 1.3: Saving Workgroup Documents to Another Folder**"
Published Date: Feb 19, 2012

Mac OS 9.1, FireWire 2.7: Third-Party FireWire Drives May Not Recognize Audio CDs

If required software for third-party FireWire drives is not installed, these drives may not recognize audio format CDs.
This article has been archived and is no longer updated by Apple.

Symptom

Third-party FireWire drives eject or fail to recognize audio CDs.

FireWire 2.7 software, included with Mac OS 9.1, includes built-in support for third-party mass storage devices such as CD-R drives. This does not, however, eliminate the need to install any third-party software included with the drive. In the absence of appropriate third-party software, Mac OS 9.1 may allow the third-party device to recognize data but not audio CDs.

Solution

Follow the installation directions included with third-party FireWire drives for any required software.

Alternatively, you may use the Macintosh computer's built-in CD-ROM, DVD-ROM, or DVD-RAM drive for audio CDs.
Published Date: Feb 17, 2012

Mac OS 9.1: Computer Stops Responding After Accessing Extensions Manager at System Startup Time

On some Macintosh computers, using the space bar to access the Extensions Manager at system startup time may cause the computer to stop responding (or "freeze").
This article has been archived and is no longer updated by Apple.

Symptom

After using the space bar to access the Extensions Manager during system startup time, the computer may stop responding immediately after the Extensions Manager window is closed.

Solution

1. Turn on or restart the computer.
2. Press and hold the Shift key as the computer starts up to turn off all system extensions. You may release the key when you see the "Welcome to Mac OS" screen.
3. Open the Extensions Manager control panel and make any changes.
4. Restart the computer

Published Date: Feb 17, 2012

Mac OS 9.1, 9.2, and 9.2.1: Hard Disk Space Requirements

Though Mac OS 9 requires about 320 MB of available hard disk space for installation, the System Folder is only 160 MB after restart.
This article has been archived and is no longer updated by Apple.

Symptom

The Mac OS 9 Installer may inform you that you do not have enough hard disk space to complete the installation. For example, you may see a message that contains a statement like "313 MB required, 290 MB available."

But after restart, the System Folder takes up only 160 MB of hard drive space.

Solution

During installation, several temporary folders and files are created. These require more room on the hard disk than just the amount needed to install a System Folder. If you need to make room for a Mac OS 9 installation, you can copy files to another partition or disk, then copy the files back over once installation is complete.
Published Date: Feb 17, 2012

Mac OS 9.1: PowerBook 1400 Fails to Restart After PRAM Reset

PowerBook 1400 computers may fail to restart after resetting PRAM.
This article has been archived and is no longer updated by Apple.

Symptom

After a PRAM reset, the PowerBook 1400 may have a black screen with no lights or sound.

Solution

Press the reset button on the back of the computer to restart. This is an intermittent software behavior for PowerBook 1400 computers using Mac OS 9.1. It does not indicate a hardware failure.

Published Date: Feb 17, 2012

Mac OS 9.1: Some Preferences Are Not Retained When Updating to Mac OS 9.1

Preferences for Views, Trash, General Controls, and default Desktop Printer are not retained when updating to Mac OS 9.1. You must also re-enable Web Sharing, File Sharing over TCP/IP, and Custom settings in the Date & Time control panel.
This article has been archived and is no longer updated by Apple.

Symptom

After installing Mac OS 9.1:

- Finder Views in list or button mode change back to the default icon view.
- The Trash defaults to asking for confirmation before deleting files.
- The default Desktop Printer is no longer selected.
- The TCP/IP feature of File Sharing is disabled.
- Web Sharing is turned off.
- Settings in the General Controls control panel return to default.
- Custom settings for Time Formats and Date Formats return to the default region of the system software installed.

Solution

Some preferences are not retained during the upgrade to Mac OS 9.1. Follow these steps to restore any setting you may have lost:

- To change the way items are displayed in Finder windows, choose the appropriate command from the View menu.
- In the File Sharing control panel, click the checkbox to "Enable File Sharing clients to connect over TCP/IP."
- In the Web Sharing control panel, click Start.
- Open the Chooser from the Apple menu and use it to create a Desktop Printer.
- Open the General Controls control panel to reset settings.
- In the Time Formats and Date Formats panes of the Date & Time control panel, reselect Custom from the Region pop-up menu.
- To disable the Trash warning:
  1. Click the Trash to select it.
  2. Choose Get Info from the File menu.
  3. Click the checkbox next to "Warn before emptying" to deselect that option.

Published Date: Feb 17, 2012

AppleWorks 6: AOL Users Must First Connect to Internet to Use Web Clippings

You must make at least one IP (Internet Protocol) connection before AppleWorks 6 can access Web-based clippings.
This article has been archived and is no longer updated by Apple.

Symptom

If you connect to America Online and then immediately try to access Web-based AppleWorks clippings, this message appears:

> "You must be connected to the Internet in order to access content from a Web site."

Solution

There are three contributing factors to understand for this issue:

- Because America Online uses proprietary connection protocols, it may not make an IP connection immediately.
- Your computer's underlying IP software, or "stack," must be activated before you can make an IP connection. Most Internet applications, such as Netscape Communicator or Microsoft Internet Explorer, do this automatically.
- AppleWorks does not activate the IP stack.

To work around this issue:

1. Connect to America Online.
2. Open an Internet application, such as Netscape Communicator or Microsoft Internet Explorer, that is not a part of America Online. This activates the IP stack. Keep in mind that getting email via America Online does not necessarily activate the IP stack due to its proprietary protocols.
3. You may quit the application you used to activate the IP stack.
4. Open AppleWorks 6.

Once the IP stack is activated, you should be able to use Web-based clippings in AppleWorks.
Published Date: Feb 20, 2012

Mac OS 9.1: Some Sherlock 2 Channels May Appear Empty

On first use of the Sherlock 2, the contents of some channels may appear empty until the necessary site search plugins are automatically downloaded via the Internet.
This article has been archived and is no longer updated by Apple.

Symptom

On first use of a channel in Sherlock 2, there may be no search sites listed.

Solution

Some Sherlock 2 channels do not include the search site plugins when installed. Instead, these plugins are downloaded and installed the first time you choose a particular channel in Sherlock 2. This may take a few moments, depending on the speed of the computer's Internet connection.

For example, click on the Entertainment channel. After waiting a few moments, Sherlock should connect to the Internet, download the necessary plugins, and display the missing Entertainment search sites.

If it does not, make sure that you have an active Internet connection by performing a search using one of the other Internet channels, or by opening a Web page in your Internet browser. If you have a valid Internet connection, Sherlock should momentarily download the search site plugins and display them automatically.

Multiple Users clients may see similar symptoms the first time they access Internet channels in Sherlock 2.

For more information, please see:

Article 31154: "**Sherlock 2 and Multiple Users: Missing Channels**"
Published Date: Feb 17, 2012

Mac OS 9.1: Start Up from CD to Install on Original Power Macintosh Computers

A Mac OS 9.1 CD is required to install Mac OS 9.1 on original Power Macintosh computers.
This article has been archived and is no longer updated by Apple.
A Mac OS 9.1 CD is required to install Mac OS 9.1 on original Power Macintosh computers.

Affected computers

Power Macintosh 6100 series
Power Macintosh 7100 series
Power Macintosh 8100 series
Power Macintosh 8115
Workgroup Server 6150
Workgroup Server 8150
Workgroup Server 9150

After placing the Mac OS 9.1 CD in the drive, restart the computer. Press and hold the "c" key during system startup time. When the computer is started up from CD, you will see a unique CD desktop pattern as confirmation.

The downloadable Mac OS 9.1 update available from Apple Downloads is not compatible with original (NuBus-based) Power Macintosh computers.
Published Date: Feb 19, 2012

Mac OS 9.x: Custom Removing Internet Access

Because the Internet Access Installer relies on third-party applications, some third-party components may not be removed by a Custom Remove.
This article has been archived and is no longer updated by Apple.

Symptom

Performing a custom remove of Internet Access components from the Mac OS 9.x installer may not remove all Internet Access components.

Solution

The Internet Access Installer relies on third-party applications to install components of third-party Internet applications. The Mac OS 9.x installer cannot remove all of the third-party components.

If you need to remove all Internet Access components, disable or manually remove the following items:

Name	Location	Type
Browse the Internet	desktop	alias
Mail	desktop	alias
Register with Apple	desktop	alias
ActiveX Controls	System Folder: Extensions:	folder
Macromedia	System Folder: Extensions:	folder
Stuffit Engine	System Folder: Extensions:	extension file
Stuffit Engine Power Plug	System Folder: Extensions:	extension file
Microsoft Component Library	System Folder: Extensions:	extension file
Microsoft Framework	System Folder: Extensions:	extension file
Microsoft Internet Library	System Folder: Extensions:	extension file
MS Font Embed Library	System Folder: Extensions:	extension file

Mac OS 9 and 9.0.x only:

Name	Location	Type
Internet	Macintosh HD	folder
Internet Setup Assistant	Macintosh HD: Assistants:	alias

Mac OS 9.1 only:

Name	Location	Type
Netscape Communicator Folder	Macintosh HD: Applications (Mac OS 9):	folder
Outlook Express 5.02 Folder	Macintosh HD: Applications (Mac OS 9):	folder
Internet Explorer 5	Macintosh HD: Applications (Mac OS 9):	folder
Internet Utilities	Macintosh HD: Applications (Mac OS 9):	folder
Internet Setup Assistant	Macintosh HD: Applications (Mac OS 9): Utilities: Assistants:	alias
Internet Setup	Macintosh HD: Applications (Mac OS 9): Utilities: Assistants:	folder

Warning: Before deleting any Internet-related items, be sure that you know the location of email messages, bookmarks, or other items you may wish to save. The location to which email, bookmarks and other items are stored is determined by the third-party application developer. Possible locations include:

- the Preferences folder (America Online and Netscape Communicator, for example)
- an application's folder (Microsoft Outlook Express 4.5, for example)

- the Users folder (Microsoft Outlook Express 5.0.2, for example)

Published Date: Feb 17, 2012

Twentieth Anniversary Macintosh, Mac OS 9.1: Updating Mac OS Disables Virtual Memory

Updating to Mac OS 9.1 on a Twentieth Anniversary Macintosh disables virtual memory.
This article has been archived and is no longer updated by Apple.

Symptom

Installing Mac OS 9.1 on a Twentieth Anniversary Macintosh disables virtual memory. Alert boxes may appear with messages stating that you do not have enough available memory to perform certain tasks.

Products Affected

- Twentieth Anniversary Macintosh
- Mac OS 9.1

Solution

1. Open the Memory control panel.
2. Click On to turn on virtual memory.
3. If necessary, adjust the amount of virtual memory.

Note: Virtual memory defaults to one megabyte more than the actual amount of memory (RAM) installed in the computer (for example, 65 MB on a computer with 64 MB of physical RAM). Some applications may require that you increase the amount of virtual memory. Total virtual memory is the combination of the computer's physical RAM and space designated on the computer's hard disk for use as "virtual" RAM. As reliance on hard disk space for virtual memory increases, system performance may decrease depending on application. For best performance, add additional physical RAM.

Published Date: Feb 17, 2012

Mac OS 9.1: Pro Keyboard CD Does Not Install if Third-Party USB Card Is in Use

The Mac OS 9.1 CD included with the Apple Pro Keyboard only installs on Macintosh computers that came from Apple with built-in USB ports.

This article has been archived and is no longer updated by Apple.

Symptom

If you attempt to install the Mac OS 9.1 CD included with the Apple Pro Keyboard, an alert box appears with a message that the installer cannot be used on your computer.

This would happen, for example, on a Power Macintosh G3/233 computer with an added third-party USB PCI card.

Solution

The Pro Keyboard Mac OS 9.1 CD only works with Macintosh computers that came from Apple with built-in USB ports. If you have a computer that did not come from Apple with built-in USB ports that is using Mac OS 8.6 or earlier, you must purchase the retail version of Mac OS 9.1 to be able to upgrade. If you already have Mac OS 9.0.x installed, you may download the Mac OS 9.1 Update from Apple Software Updates at http://www.apple.com/ .

Published Date: Feb 20, 2012

Mac OS 9.1: Installer Only Updates the Startup Disk When Mac OS 8.5 or Later Is Installed

Though your Macintosh meets the stated system requirements, you may not use the Mac OS 9.1 Install CD to update an active System Folder of a version prior to Mac OS 8.5.

This article has been archived and is no longer updated by Apple.

Symptom

Though a Macintosh computer meets the stated system requirements for Mac OS 9.1, an alert box appears with a message that you cannot use the installer on that Macintosh computer.

This may happen, for example, when started up from a hard disk that contains Mac OS 8.1.

Solution

1. Startup from the Mac OS 9.1 CD by pressing and holding the "c" key at system startup time. This prevents the older System Folder on the hard disk from being active.
2. After Mac OS 9.1 finishes installing, open the Startup Disk control panel from the Apple Menu.
3. Be sure that the hard disk is highlighted in this control panel. If it is not, click its icon.
4. Close the Startup Disk control panel.
5. Restart the computer. When you restart the computer, your updated Mac OS 9.1 System Folder will be active.

Published Date: Feb 20, 2012

Mac OS 9.1, AppleShare IP 6.3: Installing Mac OS Server Admin

Installing AppleShare IP or updates of its components of version 6.3.2 or earlier (or installing the Mac OS Server Admin application included with that software) may cause the AppleShare client extension to disappear from the Extensions folder and the Chooser.
This article has been archived and is no longer updated by Apple.

Symptom

The AppleShare client disappears from the Chooser after AppleShare IP or the Mac OS Server Admin application is installed on a computer that has been updated to Mac OS 9.1.

This happens when installing AppleShare IP from disc or when using the Installer for Mac OS Server Admin found on the at the top (root) level of the hard disk.

Solution

Mac OS 9.1 installs a new version (3.8.8) of the AppleShare client extension. AppleShare IP versions 6.3.2 and earlier or the bundled Mac OS Server Admin replaces this new version with an older version (3.8.6) that was current at the time their Installers were created. Subsequently, Mac OS 9.1 disables the older version as incompatible.

You may prevent or address this issue using the approaches described here.

Installing AppleShare IP and Mac OS 9.1 on the same computer

AppleShare IP 6.3.3, announced 2001-01-09 and to be made available in the near future, is required to use Mac OS 9.1 with AppleShare IP. You should not install Mac OS 9.1 on an AppleShare IP 6.3.x server until you have AppleShare IP 6.3.3.

Mac OS 9.1 already installed, AppleShare missing

You may download and install version 3.8.8 of AppleShare from the Apple Software Updates Web site at http://www.info.apple.com/support/oldersoftwarelist.

Using a Mac OS 9.1 computer as a remote admin station

This does not require AppleShare IP 6.3.3. You may avoid using the Mac OS Server Admin Installer by following these steps:

1. Log on to the AppleShare IP server.
2. Locate the folder named AppleShare IP 6.3 at the top (root) level of the server volume.
3. From there, locate the folder named Mac OS Server Admin.
4. Copy this folder to the Macintosh using Mac OS 9.1.

Once the folder copies, you may begin using Mac OS Server Admin.
Published Date: Feb 19, 2012

Mac OS 9.1: AppleShare Client Disappears From Chooser

Installing AppleShare IP or component updates of version 6.3.2 or earlier (or installing the Mac OS Server Admin application included with that software) may cause the AppleShare client extension to disappear from the Extensions folder and the Chooser.
This article has been archived and is no longer updated by Apple.
For a discussion of this issue, please see:

Article 10609: "**Mac OS 9.1, AppleShare IP 6.3: Installing Mac OS Server Admin**"
Published Date: Feb 17, 2012

Mac OS 9.1: Downloadable update versus Mac OS 9.1 disc

The downloadable Mac OS 9.1 Update contains fewer updates and extras than the Mac OS 9.1 CD-ROM disc, to reduce the amount of data that must be downloaded at once.

You may wish to read the Mac OS 9.1: Software and Before You Install document before downloading.

This article has been archived and is no longer updated by Apple.

Mac OS 9.1 Update

The downloadable update contains core system software updates, Apple Remote Access (ARA) Client Server 4.0, and QuickTime 4.1.3. The Mac OS 9.1 download may only be used to update a computer that has Mac OS 9.0.x installed. It is available at Apple Software Updates (http://www.apple.com/swupdates).

Note: If you use Apple language kits, the disc is required to update to Mac OS 9.1.

Mac OS 9.1 Disc

The Mac OS 9.1 disc includes additional updates to Mac OS that are not a part of the downloadable Mac OS 9.1 Update. Some of these additional items are available separately at Apple Software Updates or from third-party Web sites (non-Apple software). The disc may be used for full installation or clean installation.

Items included on the Mac OS 9.1 Disc

AirPort 1.2
Aladdin Software 5.5
Apple DVD Software 2.3
Apple Internet Access 1.5.1
ARA Client Server 4.0
ColorSync 3.0.3
English Speech Recognition 2.0.4
English Text-to-Speech 2.0
Language Kits updates
Microsoft Internet Explorer 5.0
Microsoft Outlook Express 5.0.2
Mac OS Runtime for Java (MRJ) 2.2.3
Netscape Communicator 4.75
Network Assistant Client 4.0.2
Personal Web Sharing 1.5.5
QuickTime 4.1.3
System software

Items in the CD Extras folder

Additional Desktop Patterns
Additional Desktop Pictures
Additional Modem Scripts
Apple LDAP Changes
Apple Printer Utility
AppleScript CD Extras
ColorSync CD Extras
CSW 4000 Install (Color StyleWriter)
Eric's Solitaire Sampler
File Sharing Extras
FirmWare Updates
HyperCard Player
HyperCard Update
Language Kits CD Extras
Mex. Spanish Text-to-Speech
Network Extras
Palm Desktop
Pointer Mode
QuickTime Samples

Unicode
Universal Access
VideoMirroringApp
WhatRoute Folder
WorldText

Items in the Adobe Software folder

Adobe Acrobat Reader (4.05)
Adobe Type Manager / ATM (4.6)

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access".**

Published Date: Feb 20, 2012

Mac OS 9.1: Includes Licensed Use of WhatRoute

Mac OS 9.1 includes licensed use of the WhatRoute network utility.
This article has been archived and is no longer updated by Apple.
Apple has licensed WhatRoute 1.7, a freeware utility written by Bryan Christianson, for distribution and use with Mac OS 9.1. WhatRoute is provided "as is" and is not supported by Apple. The documentation included with WhatRoute includes a description of its capabilities.

WhatRoute may be either Custom Installed using the Mac OS 9.1 Installer or manually installed by dragging the WhatRoute folder from the CD Extras folder on the Mac OS 9.1 CD to a location of your choice on the hard disk.

Notes:

1. Manual installation includes items not installed by a Custom Install: WhatRoute documentation and the PromiscuousMod extension used by the Monitor function. If you perform a Custom Install but need these items at a later time, you may manually copy them from the WhatRoute folder located in the CD Extras folder on the Mac OS 9.1 CD.

2. The stated system requirements included in the WhatRoute documentation have not been updated to reflect compatibility with Mac OS 9.1. WhatRoute works with Mac OS 9.1 and Open Transport 2.6.x and later.

3. When reading the readme.html file, clicking the link to view the Options for the Monitor function does not properly display the image file. In order to correct this, change the name of the file "MonitorPrefs.gif" to "MonitorPrefs.jpg". This file is located in the images folder inside the Documentation folder found in the WhatRoute folder.

You may also visit the WhatRoute Web site at: http://www.whatroute.net/ .
Published Date: Feb 17, 2012

Mac OS 9.1: Changes to USB Printer Sharing 1.0.1

USB Printer Sharing 1.0.1 includes a change to network neighborhood selection and to USB PS.
This article has been archived and is no longer updated by Apple.
Mac OS 9.1 includes version 1.0.1 of USB Printer Sharing.

USB Printer Sharing 1.0.1 includes the following two changes:

1. Due to changes in NSL 1.1.3, Mac OS 9.1 includes a script that can indicate the current neighborhood as well as allow you to set the neighborhood. When you select the article "Sharing a USB printer" in Mac Help, you will see a diamond shaped icon labeled "Set my network neighborhood" that opens this script. Setting the neighborhood via entries in the Search Domain area of the TCP/IP control panel no longer works with version 1.1.3 of NSL.
2. In order to comply with changes made to Open Transport in Mac OS 9.1, USB PS no longer calls Open Transport at interrupt time.

Published Date: Feb 17, 2012

Mac OS 9.1: Open Transport 2.7.4 Cannot Be Called at Interrupt Time

Open Transport 2.7.4 returns an error if called at interrupt time, which may change the behavior of certain networking applications.
This article has been archived and is no longer updated by Apple.
Mac OS 9.1 includes Open Transport 2.7.4. A significant change in Open Transport 2.7.4 is that Open Transport no longer allows itself to be called at interrupt time. Previous versions of Open Transport did not actively block such calls. This resulted in difficult-to-reproduce software issues that might be perceived as "random" software failures. Because of this, Open Transport 2.7.4 now returns an error if called during interrupt time.

Apple has notified software developers of this change so that applications may be updated. Apple has updated USB Printer Sharing in part for this reason.

If you use a network or Internet-based application that produces a new error under Mac OS 9.1, check for updates to the affected application.

The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"
Published Date: Feb 17, 2012

Mac OS 9.1: Services Location Protocol (SLP) Changes

Mac OS 9.1 introduces a changes to Services Location Protocol (SLP) behavior intended to eliminate confusion between domain names and network neighborhoods.
This article has been archived and is no longer updated by Apple.
Services Location Protocol (SLP) facilitates the discovery and advertisement of TCP/IP-based services. Services such as Personal File Sharing, Personal Web Sharing, and USB Printer Sharing which advertise themselves on networks via SLP are viewable in the Network Browser and in Navigation Services.

In Mac OS 9.0.x, the network neighborhood (also know as SLP "scope") was defined by entering a domain or subdomain name in the TCP/IP control panel within the "Search domains" field. This manner of definition incorrectly suggested that scope naming must be tied to a particular domain name or should follow the naming convention associated with a domain name.

Rather, SLP scopes may be arranged according to meaningful information about their members. An SLP directory agent (DA) could specify a scope based on a logical or physical grouping. A scope, for example, could logically associate all resources pertinent to financial management with a "Finance" scope. Alternatively, resources within a scope may be associated with a physical locale such as a "Honolulu."

To eliminate confusing suggestions or assumptions about ties between TCP/IP domain names and SLP scopes, Mac OS 9.1 stores the SLP scope in an SLP Preferences file located in the Preferences folder. Scope is no longer defined in the TCP/IP control panel.

Note: When a version of Mac OS 9.0.x is updated to Mac OS 9.1, the "Search domains" field ceases its definition of SLP scope. The pre-existing scope is not automatically converted to the new SLP Preferences format. Instead, North American English and International English versions of Mac OS 9.1 use the Local Services as the default for computers that have not been configured otherwise.

Setting a new scope in Mac OS 9.1

The SLP Scope remains easily configurable via an AppleScript in the USB Printer Sharing section of Mac Help.

- Choose Mac Help from the Help menu.
- Search for the article "Sharing a USB printer."
- In that article, click the link to "Set my network neighborhood."

Notes:

1. A blank Mac Help window will remain open on your screen and may safely be closed after using the configuration script.
2. The SLPPlugin must be present and active. You can verify this in the Extensions Manager control panel.

Network administrators: setting scope via DHCP

DHCP (Dynamic Host Configuration Protocol) is a common method for offering configuration information to client computers. When Mac OS 9.1 clients are set up to configure using a DHCP server, network administrators may use the SLP Service Scope Option (DHCP option code 79) to specify the SLP scope in which the client machines should register their services.

For more information on Network Services Location Services such as SLP, please see:

Article 24691: "**Network Services Location (NSL) Technology: Description**"

The following links provide information about standards which are not defined by Apple. Apple, Inc. is not responsible for their content.

Services Location Protocol (SLP) is defined in **RFC 2608**
DHCP option 79 is described in **RFC 2610**
Published Date: Feb 20, 2012

AppleShare IP 6: Update to 6.3.3 Required for Use With Mac OS 9.1

Users of AppleShare IP must update to version 6.3.3 if the use of Mac OS 9.1 is required or desired.
This article has been archived and is no longer updated by Apple.
For more information on AppleShare IP and Mac OS 9.1, please see:

Article 106099: "**Mac OS 9.1, AppleShare IP 6.3: Installing Mac OS Server Admin**"
Published Date: Feb 17, 2012

Mac OS 9.1: Late-Breaking News

This article contains links to late-breaking articles about Mac OS 9.1, a copy of the Late-Breaking News text included in Mac Help for Mac OS 9.1, and a link to Mac OS 9.1 developer documentation describing new features.
This article has been archived and is no longer updated by Apple.
The following articles describe symptoms and solutions related to issues that you may encounter when using Mac OS 9.1. To see a complete listing of Mac OS 9.1 articles and to check for more recent additions, use the search term "Mac OS 9.1" or use the keyword "kmos91".

Article 106089:
"**Mac OS 9.1: Start Up from CD to Install on Original Power Macintosh Computers**"
Article 106097:
"**Mac OS 9.1: Installer Only Updates the Startup Disk When Mac OS 8.5 or Later Is Installed**"
Article 106085:
"**Mac OS 9.1: Some Preferences Are Not Retained When Updating to Mac OS 9.1**"
Article 106082:
"**Mac OS 9.1: Hard Disk Space Requirements**"
Article 106094:
"**Twentieth Anniversary Macintosh, Mac OS 9.1: Updating Mac OS Disables Virtual Memory**"
Article 106074:
"**Mac OS 9.1, FireWire 2.7: Third-Party FireWire Drives May Not Recognize Audio CDs**"
Article 106083:
"**Mac OS 9.1: PowerBook 1400 Fails to Restart After PRAM Reset**"
Article 106100:
"**Mac OS 9.1: AppleShare Client Disappears From Chooser**"
Article 106091:
"**Mac OS 9.1: Dialog Box Does Not Cancel on First Attempt**"
Article 106088:
"**Mac OS 9.1: Some Sherlock 2 Channels May Appear Empty**"
Article 106081:
"**Mac OS 9.1: Computer Stops Responding After Accessing Extensions Manager at System Startup Time**"
Article 106107:
"**AppleShare IP 6: Update to 6.3.3 Required for Use With Mac OS 9.1**"
Article 16145:
"**AppleShare: Platforms and Mac OS Releases Supported**"

The following text is a reproduction of the Late-Breaking News included in Mac Help for Mac OS 9.1, which is accessible in the Help menu.

About Mac OS 9.1

This section provides current information about Mac OS 9.1.

Starting up from the Mac OS 9.1 CD

If you start up from the Mac OS 9.1 CD, some features (such as the ability to play QuickTime movies in Mac OS Help) are not available. Use of all features is restored when you restart from your hard disk.

Using Acrobat PDF documents

Some documents included with Mac OS 9.1 were created using Adobe Acrobat (these files have "pdf" at the end of their names). To view or print these documents, you must install Adobe Acrobat Reader, located in the Adobe software folder on the Mac OS 9.1 CD.

Drive Setup and Energy Saver

If you need to use Drive Setup to perform an operation that takes more than a few minutes, such as testing a disk or initializing a disk with a low-level format, make sure your system will not go to sleep by dragging the slider in the Energy Saver control panel to "Never." You can return it to your previous setting after the formatting is complete.

PowerBook (FireWire)

If you have a PowerBook with built-in FireWire ports, install the PowerBook Firmware update 2.7 to ensure that the FireWire ports work correctly. For more information, see the following Web site www.apple.com/firewire

Monitor resolution changes after installation

After you do a clean installation of Mac OS 9.1, your monitor resolution may change from its previous settings. You can change your monitor resolution back using the Monitors control panel.

America Online (AOL) and QuickTime To view QuickTime content while using America Online (AOL), drag a copy of the file "QuickTime plugin" into the AOL Plug-ins folder (located in the same folder as the AOL application), then reopen AOL.

Notes about compatibility

Apple CD-ROM extension and non-Apple CD/DVD driver incompatibilities

If your CD/DVD drive is not manufactured by Apple, or you have an Apple CD/DVD drive and you use a non-Apple driver, your CD/DVD drive may not function correctly. Remove the file named "Apple CD/DVD Driver" from the Extensions folder (in the System Folder), and reinstall the software that came with your CD/DVD drive. Contact the CD/DVD manufacturer to see if you have the latest version of their software.

Applications that install QuickTime

Some applications replace the version of QuickTime installed by Mac OS 9.1 with an earlier version. If this occurs, you need to re-install QuickTime by selecting "Add/Replace" in the Mac OS Installer, and then doing a customized installation. For more help, open Mac Help and search for "adding or removing system software."

Problems opening applications

A small number of applications will not open if the system font is not set to Chicago. Others may require additional memory. If you have problems opening an application after you've installed Mac OS 9.1, try these possible solutions:

1. Open the Appearance control panel and set the large system font to Chicago, then open the application again. Or, contact the software manufacturer to see if an updated version is available.
2. Select the application's icon, then choose Get Info from the File menu. Increase the application's minimum memory allocation by 300K. For more information, see the Memory topic in Mac Help.

Language kits

Apple's language kits are now included with the Mac OS. If you use language kits, you must upgrade both your system software and your language kits at the same time using the Mac OS 9.1 CD. Previous versions of Apple's language kits are not compatible with Mac OS 9.1. To upgrade your system software and language kits, start up from the Mac OS 9.1 CD by inserting the CD and holding down the C key as you restart the computer. Continue holding down the C key until you see the CD background. Open the Mac OS Installer and choose Customize in the Install Software panel. Select both the Mac OS Install and Language Kits, and remember to select the specific language kits you want to upgrade.

Apple HD SC Setup program

If you need to initialize your hard disk after installing Mac OS 9.1, use the Drive Setup program on your Mac OS 9.1 CD. Do not use the Apple HD SC Setup program.

FireWire hard disk drives

FireWire 2.7 includes a new built-in driver for many FireWire hard disk drives. This driver will be used automatically if the disk vendor's driver extension cannot be found. You should still install the vendor's software to get maximum features from FireWire storage devices.

Adobe Type Manager and Adobe Type Reunion

Changes in Mac OS 9.1 cause an incompatibility with Adobe Type Manager (ATM), ATM Deluxe, and Adobe Type Reunion Deluxe (ATR). The Mac OS 9.1 installer automatically moves the ATM control panel into the Control Panels (Disabled) folder during installation. The latest updates can be found at http://www.adobe.com

Notes about printing

Switching between a LocalTalk network and a serial printer

If you use the same port to alternately connect to a LocalTalk network and a serial printer, the port may not reset properly after you turn off AppleTalk to use the printer. If you have trouble printing after turning off AppleTalk, restart your computer.

Reinstalling printer drivers

If an icon for your printer is not available in the Chooser after you have done a clean installation of Mac OS 9.1, you may need to reinstall the software that came with your printer.

- If you have a StyleWriter, StyleWriter II, or StyleWriter 1200, use the Color SW 1500 driver that comes with Mac OS 9.1 (instead of installing your original printer software).
- If you have a Color StyleWriter 2200 or 2400, install the Color StyleWriter 2500 driver that comes with Mac OS 9.1 (instead of installing your original printer software).
- If you have a Color StyleWriter 4000 Series printer, you can find the latest driver in CD Extras of your system software CD.

You may also need to reinstall fonts that came with your printer software. Follow the instructions that came with your printer software.

Notes about Multiple Users environments

Using Epson printers

To print on an Epson printer, a user in the Limited or Panels environment should configure the Epson printer driver to use a spool folder located in the user's folder, or another location where the user can create files. In the Epson print dialog box, click the Tools button, then click Configuration. Then change the Temporary Spool and Temporary High Speed Copies folder locations.

Printer access in Multiple Users environments

Printers that do not appear on the desktop are not shown in the list of available printers in the Multiple Users control panel. To allow Limited or Panels users to use these printers, grant access to "all printers" or allow the users access to the Chooser.

PowerBook 5300 and voice passwords

If you have a PowerBook 5300 computer, you cannot use voice verification. You must use a typed password.

Program compatibility

If you are experiencing problems in the Limited or Panels user environments, search Mac Help for "Multiple Users" to find troubleshooting and other important information about configuring your software.

Miscellaneous notes

Changing filenames updates file modification date

If you alter the name of a file or folder in Mac OS 9.1, it will change the modification date of the enclosing folder.

RAM disk disappears when resized

If you reset the size of a RAM disk on your Mac OS 9.1 system, the icon may disappear from the desktop. Restarting your computer will bring back the icon with the new size.

Downloading disk images

If you experience problems when downloading and mounting disk images (files with the suffix ".img" or ".smi"), you may need to disable the Mount Disk Images preference in StuffIt Expander. To do this, open StuffIt Expander and choose Preferences from the File menu. Click Disk Images and deselect Mount Disk Images.

Power button sleep

Slot-loading iMacs, G4 Cubes, and most G4 towers can be put to sleep by pressing the Power button. You can turn off this feature by deselecting the Power button sleep option in the Energy Saver control panel.

Apple Remote Access Personal Server

If you are using the Apple Remote Access Personal Server and you perform a clean installation of Mac OS 9.1, the server may not answer incoming calls correctly the first time you restart the computer after the installation. Restart your computer a second time before using the Apple Remote Access Personal Server.

Developer information

Technical Note TN2010: Mac OS 9.1

TA20343_Mac_OS_LateBreaking_News.pdf

http://developer.apple.com/technotes/tn/tn2010.html

Summary from the Apple Developer Connection:

> "This Technical Note discusses changes and corrections in the next generation of Mac OS: Mac OS 9.1. This system follows Mac OS 9.0.4 and contains several enhancements and revised features. All developers interested in creating products compatible with Mac OS 9.1 will want to review this document.
>
> For the most part, Mac OS 9.1 is a system update that fixes bugs and improves operational performance and stability."

Published Date: Feb 17, 2012

Mac OS 9: "Big System Morsels" Message During Download Installation

Enabling virtual memory or starting up from CD-ROM may resolve a rare issue in which an alert box with a "Big System Morsels" message appears during Mac OS 9 installation.
This article has been archived and is no longer updated by Apple.

Symptom

During Mac OS 9 installation, an alert box appears with a message about "Big System Morsels."

Solution

Under rare circumstances a "Big System Morsels" message may appear during installation of Mac OS 9.1 Update, Mac OS 9.2.1 Update, or Mac OS 9.2.2 Update downloaded from the Web.

You may resolve or avoid this issue by taking one of these actions:

- Start up from a Mac OS disc before installing the update (as suggested in the Mac OS 9.1 "Before You Install" document).
- Turn on virtual memory in the Memory control panel If installing the update directly from a hard disk.

In the unlikely event that these steps do not resolve the issue, please see the following article for additional troubleshooting steps:

Article 25222: "**Mac OS 9: "Big System Morsels**".
Published Date: Feb 17, 2012

AppleShare IP 6.3.x: Installing Downloadable Updates

You should install AppleShare IP 6.3.x downloadable updates in a particular order to achieve the proper software version state.

This article has been archived and is no longer updated by Apple.

There are several downloadable updates to AppleShare IP 6.3. To update your AppleShare IP 6.3 server components to the latest versions available, download and install the following components in this order:

1. AppleShare IP Update (version 6.3)
2. AppleShare IP Update (version 6.3.1)
3. Apple Share IP Agent Update (version 6.3.2)
4. Update Mac OS 9 (version 9.0.4)
5. AppleShare IP 9.0.4 Update (version 1.0)

This software is available from Apple Software Updates (http://www.apple.com/swupdates).

Notes:

1. When searching Apple Software Updates for software, do not include the parenthetical version number information listed above as a part of your search term.
2. The AppleShare IP 6.3.3 update contains all the updated components included in the listed updates.

Published Date: Feb 17, 2012

Mac OS 9, FireWire: About FireWire Versions 2.6, 2.7, and 2.8

This document describes changes introduced with various versions of Apple FireWire software.

This article has been archived and is no longer updated by Apple.

FireWire 2.6

FireWire 2.6 adds support for iBook (FireWire) computers.

Note: FireWire versions prior to 2.6 should not be installed on an iBook (FireWire) computer. FireWire 2.6 is not necessary for other computers and is only available with computers on which it shipped from Apple.

FireWire 2.7

FireWire 2.7 is part of the **Mac OS 9.1 Update**, please verify the computer's **system requirements** before downloading.

FireWire 2.7 includes a generic disk driver that works with many third-party FireWire hard drives. This driver is used by default when a third-party driver is not present. To realize full performance and features, you should still follow directions provided by a third-party drive vendor for installation of any required third-party driver or software.

FireWire 2.7 resolves two issues sometimes experienced with any earlier version:

- iMovie encounters dropped frames when capturing video from some early Digital Video (DV) cameras to a FireWire hard drive.
- PowerBook computers with FireWire PC cards connected to a FireWire DV camera may stop responding when shut down or restarted.

FireWire 2.7 resolves an issue sometimes experienced with FireWire 2.5 or an earlier version:

- With the Final Cut Pro application open, the computer stops responding while switching between DV cameras.

FireWire 2.8

FireWire 2.8 adds support for the Power Mac G4 (Digital Audio) and the PowerBook G4 computers. FireWire 2.8 is not necessary for other computers and is only available with computers on which it shipped from Apple.

FireWire 2.8.2

FireWire 2.8.2, included with Mac OS 9.2, includes a new built-in driver for many FireWire hard disk drives. This driver will be used automatically if the disk vendor's driver extension cannot be found. You should still install the vendor's software to get maximum features from FireWire storage devices.

FireWire 2.8.5

FireWire 2.8.5 is included with Mac OS 9.2.2 and includes support for new computer models.

Published Date: Oct 7, 2016

Macintosh Manager: How to Move Macintosh Manager Between Servers

Follow these steps to migrate Macintosh Manager services from one server to another while retaining all Macintosh Manager data and user documents.
This article has been archived and is no longer updated by Apple.

Steps for Moving Macintosh Manager Services

Note: Some steps give different directions for AppleShare IP and Mac OS X Server. Choose your action according to which of the two you are using.

1. Open the Macintosh Manager application from an administration workstation. Choose Export User List from the File menu.

Note: Do not export Groups.

2. Check to see that software is properly installed on the computer that is to become the new Macintosh Manager server.

AppleShare IP: Place the Macintosh Management Server extension in the Extensions Folder and restart the computer.
Mac OS X Server: In the Setup Assistant, be sure to click the checkbox to activate Macintosh Management Server. When you finish the Setup Assistant, you are prompted to restart the computer.

3. Open the Macintosh Manager administration application. When presented with the login dialog, click Change Server. Click to select the new Macintosh Management Server. Log on as an administrator.

Mac OS X Server: You may use "root" access.

4. Choose Import Users from the File menu. In the subsequent dialog box, select the file you exported in Step 1. Afterward, you should have all users listed as they were on the previous server. Quit the Macintosh Manager application.

Important: Step 4 creates entries for users in the Users & Groups Database (AppleShare IP) or the local NetInfo Database (Mac OS X Server). Skipping this step may cause you to encounter issues later with duplicating or deleting a user.

5. Copy the complete contents of the Macintosh Manager shared folder from the previous Macintosh Manager server to the same location on the new Macintosh Manager server, replacing any existing items.

6. For the Macintosh Manager shared folder on the new server, copy the AppleShare privileges to all enclosed folders.

AppleShare IP: Use the Mac OS Server Admin to perform this step.
Mac OS X Server: You may use Web-based administration to perform this step.

7. Wait for the server to reassign privileges, which may take a few moments.

8. Open the Macintosh Manager application. Log on to the new server and verify that all users, workgroups, and other Macintosh Manager settings have moved successfully.

Note: Be sure to verify the location of each workgroup's documents volume by clicking on the Workgroups tab and Options pane.

Published Date: Feb 17, 2012

Mac OS 9.1: Third-Party OHCI USB Cards Automatically Supported

Mac OS 9.1 includes USB Support 1.4.4, which provides support for third-party OHCI-compliant cards.
This article has been archived and is no longer updated by Apple.
The Mac OS 9.1 Installer installs USB Support 1.4.4 if it detects an OHCI-compliant USB card. The USB OHCI (Open Host Controller Interface) is an industry standard for defining how manufacturers may create a USB controller for the PCI bus.

USB Support 1.4.4 should allow a compliant device to work without additional software. However, if a third-party manufacturer provides additional software, you should consult the third-party's support materials to determine which course of action is best for your system configuration.
Published Date: Feb 17, 2012

Mac OS 9.1 and Later: "Reconnect to servers on wakeup" Feature Removed

The "Reconnect to servers on wakeup" feature has been removed from the Advanced Settings pane of the Energy Saver control panel in Mac OS 9.1 and later. If desired, you may use the workaround described in this article.
This article has been archived and is no longer updated by Apple.

Symptom

When you choose Sleep from the Special menu an alert box with this message appears:

> "Putting the computer to sleep will cause you to lose some network services, including file servers. Check your connections in the Chooser next time you wake the Macintosh."

When the computer wakes up:

- The previously available servers are no longer on the desktop.
- An alert box with this message appears: "File server's connection unexpectedly closed"
- An AppleShare Server Messages log appears on the desktop.

You must then reconnect to the server(s) that were available before sleep.

Note: This issue should only occur on the computers listed below.

Macintosh Manager

Macintosh Manager clients disconnected while logged on to their server cannot reconnect upon waking.

Important: Customers who encounter this issue may lose unsaved changes to work, since the Macintosh Manager client is not connected to the Documents volume in this situation.

Solution

The best time to put a Macintosh Manager client computer to sleep is when it is logged off, not during a Macintosh Manager session.

As a workaround, administrators may set the option to automatically log out idle users. To locate this feature in the Macintosh Manager admin application, click the Computers tab then look in the Security pane.

Important: For this workaround to have the desired effect, the time value set in Macintosh Manager for idle users must be less than what has been defined in the client computer's individual Energy Saver control panels for "Put the system to sleep whenever it's inactive for."

You should only set Macintosh Manager to log out the idle users, not to lock the screen.

Notes

1. The parenthetical product description (Summer 2000) refers to the summer of the Northern Hemisphere.

Published Date: Feb 17, 2012

Disc Burner 1.0.1: Does Not Work With Macintosh Manager or Multiple Users

Disc Burner 1.0.1 or earlier does not work in a Macintosh Manager or Multiple Users environment.

This article has been archived and is no longer updated by Apple.

Symptom

When a user in the Macintosh Manager or Multiple Users environment tries to burn a disc with Disc Burner, this alert message appears:

> "Disk initialization failed because the startup disk is full!"

Solution

This known limitation is documented in the Disc Burner 1.0.1 read me file. See technical document 75106, "**Disc Burner 1.0.1 Document and Software**".

Published Date: Feb 18, 2012

AirPort: Unable to Access Other Computers After Joining Computer-to-Computer Network

If you enter an incorrect password when joining a Computer-to-Computer network, you cannot access other computers but may not see any alert message notifying you of the mistake.
This article has been archived and is no longer updated by Apple.

Symptom

You appear to successfully join a Computer-to-Computer network but are unable to access other computers.

Solution

Reconnect to the Computer-to-Computer network with the correct password.

Note: Wireless Internet access requires an AirPort Card, AirPort Base Station, and an Internet service provider, for which fees may apply. Some ISPs are not compatible with AirPort. America Online (AOL) works with AirPort software version 2.0 or later. For more information on AOL compatibility, see technical document 106591: "**AirPort: How to Use with AOL**." Range may vary with site conditions.

Published Date: Feb 19, 2012

AirPort 1.3 or Later: AirPort Base Station Software File Relocated

The file "AirPort Base Station Software," visible in the Base Station Extras folder in earlier versions of AirPort software, has been incorporated into other files.
This article has been archived and is no longer updated by Apple.
The Base Station Extras folder on the AirPort disc no longer includes a separate file for AirPort Base Station Software.

Rather than opening this file directly, you may get the same effect by using the AirPort Admin Utility or the AirPort Setup Assistant. Either of these applications prompts you to update the software on your base station when it is using an earlier version.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**"
Published Date: Feb 20, 2012

AirPort 1.3: PPPoE - Software Base Station Does Not Connect to Internet as Expected

A computer acting as an AirPort software base station and its AirPort client computers may not connect to the Internet via PPP over Ethernet (PPPoE) as expected when the PPPoE connection is not made prior to setting up the software base station.
This article has been archived and is no longer updated by Apple.

Symptom

AirPort client computers cannot connect to the Internet through the software base station and may obtain unroutable 169.x.x.x IP addresses. The computer acting as software base station also may not be able to connect to the Internet.

Solution

1. Connect to the Internet using PPPoE software provided by your Internet service provider.
2. Check to be sure that the Internet connection is active using a Web browser or other Internet application.
3. With the Internet connection still active, open the AirPort Setup Assistant and set up the software base station.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access".**

Published Date: Feb 19, 2012

Macintosh Manager: How to Set up Kid Pix Studio Deluxe for Mac OS 9.x Workstations

Follow these steps to set up The Learning Company's Kid Pix Studio Deluxe so it will work in a Macintosh Manager or Multiple Users environment.
This article has been archived and is no longer updated by Apple.
Note: This document contains information on how the setup and installation of a third-party product is affected by the Macintosh Manager environment. Please contact the vendor for any support information not covered by this document.

Document 17159: "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.

Setting up the Client Workstation

1. Install Kid Pix Studio Deluxe from its CD-ROM disc.

2. If you have not created an Other Applications· folder on the workstation, do so as described software download document 25280: "**Macintosh Manager 1.4.1: Document and Software**"

3. Place the entire Kid Pix Studio Deluxe folder into the Other Applications· folder.

If the Workgroup Items is set to "Members can open any items on local volumes," then setup is complete. Otherwise, follow the steps below.

Setting up the Macintosh Manager Admin Application

1. Open the Macintosh Manager admin application.

2. Click the Workgroups tab.

3. Click the Items tab. If the radio button for "Members can open any items on local volumes" is selected, then you can stop here. If you use the option to "Restrict members to Selected Items below," then continue to Step 4.

4. From the list of Workgroups, select those that you want to be able to use Kid Pix Studio Deluxe.

5. Add the following applications to the Approved Items list:

- Digital Puppets
- Kid Pix
- Kid Pix Studio Deluxe
- Moopies
- SlideShow
- Stampimator
- WackyTVTM

Figure 1 Adding approved items

Important: To use Digital Puppets, the Kid Pix Studio Deluxe CD must be in the workstation's CD-ROM drive.

Mac OS 8.6 and Earlier Clients

The process for setting up the workstation is not necessary for Mac OS 8.6 or earlier.
Published Date: Feb 17, 2012

Mac OS X10.0: Computer With SCSI Chain Does Not Start up or Stops Responding

A computer running Mac OS X may not start up or may stop responding if the SCSI chain is improperly terminated.
This article has been archived and is no longer updated by Apple.

Symptom

The computer does not start up, or stops responding. The mouse pointer may appear as a spinning disc, and the computer may appear unresponsive.

Solution

This is the result of an improperly terminated SCSI chain. Verify that all SCSI chains are terminated at both ends. This includes terminating any SCSI card that is the last device in the chain.

Note: A SCSI chain that worked with Mac OS 9 may not work with Mac OS X. Mac OS 9 is more tolerant of improper termination than Mac OS X. A properly terminated SCSI chain should perform better, regardless of the version of the Mac OS.
Published Date: Feb 17, 2012

Mac OS X: About Show Info, Get Info, and the Inspector

This article has been archived and is no longer updated by Apple.

This document describes the behavior of the Info, or Inspector, window in various versions of Mac OS X.

The behavior of the Info window has varied throughout different versions of Mac OS X. To see the Info window:

1. Click the Finder icon in the Dock.
2. Select an item in the Finder.
3. Choose Get Info or Show Info (whichever appears) from the File menu.

Here is a chronological summary of the behavior:

Mac OS 8 and 9

If you select an item in the Finder and choose Get Info from the File menu, an Info window appears. Additionally, a new Info window appears each time that you select another item and choose Get Info again. Selecting a new item in the Finder does not affect an open Info window. In this manner, you can open multiple windows for side-by-side comparison.

Mac OS X Server 1.0

The Get Info command is replaced by the Inspector command. After opening the Inspector window, choosing a new item in the Finder dynamically updates the information in the same window to match the new item (rather than opening a new window). While this model prevents visual clutter, it requires a workaround (described below) for comparing different items' info side by side.

Mac OS X 10.0 to 10.1.5

The command is renamed to Show Info, but it retains the dynamic, single-window behavior of the Inspector.

Mac OS X 10.2, 10.3

Mac OS X 10.2 offers both behaviors. The name of the command in the File menu returns to Get Info, and the multi-window behavior is like that of Mac OS 8 or 9. But if you prefer the Inspector-like behavior, you may get it by pressing the Command-Option-I key combination instead of using the Get Info command. Another method for accessing the Inspector is to press and hold the Option key while the File menu is open.

Mac OS X 10.4

As in Mac OS X 10.2 and 10.3, when getting information on two-to-ten items at the same time, multiple information windows open. If you wish, you can get results in a single window with the Command-Option-I key combination.

Information windows are resizable in Mac OS X 10.4 and later.

The Spotlight Comments field in Mac OS X 10.4 is the same as the Comments field in earlier Mac OS X releases.

Mac OS X 10.0, 10.1: Capturing multiple Show Info (dynamic) windows

In Mac OS X 10.1.5 or earlier, if you want to see the Show Info window for multiple items, you may use the Grab utility or the Command-Shift-4 key combination (Mac OS X 10.1 only) to make a a screenshot of a selection.

Mac OS X 10.1 directions

Press and hold the Command, Shift, and "4" keys. You will notice that the pointer changes to a cross hair. Drag the cross hair across the portion of the screen you wish to capture in a screenshot. After you release the mouse button, a picture of the selected area appears on your desktop.

Mac OS X 10.1 users may also use the Grab method described for Mac OS X 10.0.

Mac OS X 10.0 to 10.0.4 directions

1. Open the Grab application (~/Applications/Utilities).
2. Choose Selection from the Capture menu.
3. Move the mouse pointer to one corner of the Show Info window.
4. Drag the pointer across the portion of the window you wish to keep on screen.

A new window appears with the image of the window you selected. Grab saves images in the TIFF format. You may choose whether or not to save the Grab images when closing their windows.

Figure 1 Comparing Grab images of Show Info windows

Published Date: Feb 17, 2012

Mac OS X 10.0: Conflict Catcher Requests Registration Information After Using Classic

When alternatively starting up the computer from Mac OS 9.1 and Mac OS X, Conflict Catcher may request registration information.
This article has been archived and is no longer updated by Apple.

Symptom

Conflict Catcher software requests registration information even though you have previously registered the product.

Solution

If you use the Classic environment of Mac OS X and then restart the computer using Mac OS 9.1, Conflict Catcher may request registration information. The symptom may repeat itself the next time you start up the computer from Mac OS X and use the Classic environment. This happens when the same Mac OS 9.1 System Folder is used to start up both the computer and the Classic environment. This is the way that most computers are set up.

Note: Apple recommends contacting the software publisher for the latest information on this issue.

If you partition your hard disk, you may also use a workaround:

1. Make each hard disk partition at least 2 GB.
2. Install Mac OS X and Mac OS 9.1 on one partition, named "Disk A", for example.
3. Install only Mac OS 9.1 on a second partition, named "Disk B", for example.
4. Start up the computer from Disk A. In the Classic pane of the System Preferences application, select Disk A as the Classic startup volume.
5. Install Conflict Catcher on Disk B.
6. Do not install Conflict Catcher on Disk A.

When you want to start up the computer from Mac OS 9.1, select the System Folder on Disk B as the Startup Disk.

Note: This workaround requires that you plan which Classic software you wish to have installed on each disk or on both. Items installed on one System Folder will not be available when the computer is started up from the other System Folder.

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"

Published Date: Feb 20, 2012

Mac OS X 10.0: No Status Bar for Keyboard Volume Adjustment

Volume adjustments made from a keyboard work, but a graphical representation does not appear on screen.
This article has been archived and is no longer updated by Apple.

Symptom

You can adjust the computer's volume from your keyboard, but a status bar representing the volume level does not appear on screen.

You may expect to see such a status bar if you are accustomed to Mac OS 9.

Solution

Update to Mac OS X 10.1.

For related information, please see:

Article 106213: "**Mac OS X 10.0, iBook, PowerBook: Display Brightness and Volume Keys Do Not Respond**"
Published Date: Feb 17, 2012

Power Macintosh G3 All-In-One: Volume Adjustment Buttons Do Not Work With Mac OS X

The volume adjustment buttons on the front of a Power Macintosh G3 All-In-One computer do not work with Mac OS X.
This article has been archived and is no longer updated by Apple.

Symptom

Pressing the volume adjustment buttons on the front of the computer has no effect on the volume.

Solution

Use the Sound pane of the System Preferences application to adjust volume.
Published Date: Feb 17, 2012

Mac OS X 10.0: Start up From Mac OS 9.1 to Use Apple DVD Player

You must start up the computer using Mac OS 9.1 or later to watch a movie from a DVD-Video disc.
This article has been archived and is no longer updated by Apple.
You must start up the computer using Mac OS 9.1 or later to watch a movie from a DVD-Video disc.

Mac OS X 10.0 does not have a DVD-Video disc playback feature, but you can watch a movie from a DVD-Video disc using Mac OS 9.1 (included as part of Mac OS X 10.0).

Note: If you have updated to Mac OS X 10.1, please stop here and go to technical document 106470: "**Mac OS X 10.1: DVD Player Installed on Compatible Computers**"

Follow these steps to start up the computer using Mac OS 9.1 or later:

1. Choose System Preferences from the Apple Menu.
2. Click the Startup Disk icon.
3. Select the Mac OS 9.1 System Folder.
4. Restart the computer.

To watch a movie

1. Insert the DVD-Video disc.
2. Open Apple DVD Player--which you may locate with Sherlock 2, available in the Apple Menu.
3. Click Play in the Apple DVD Player controller.

Note: Apple DVD Player does not work in the Mac OS X Classic environment.
Published Date: Feb 17, 2012

Mac OS X: Optimizing for Earlier ATI Graphics Accelerators

Movies and 2D graphics perform better at lower color depths when using Power Macintosh computers with earlier ATI graphics chipsets.
This article has been archived and is no longer updated by Apple.

Symptom

QuickTime movies may play with a lower frame rate than expected. Games and other software that utilize hardware graphics acceleration or OpenGL may perform more slowly than expected.

These computers include one of these graphics accelerators:

- ATI RAGE II+
- ATI RAGE IIc
- ATI RAGE Pro
- ATI RAGE Pro Turbo
- ATI RAGE LT Pro
- ATI RAGE Mobility

Solution

Mac OS X 10.1.5 improves support for 2D and QuickTime acceleration for Rage Pro, Rage Pro Turbo and Rage Mobility. See technical document 106888, "**Mac OS X Update 10.1.5: Enhancements and 'Before You Install' Information**".

Lowering the display color bit depth to thousands improves performance of some movies and applications.

1. Choose System Preferences from the Apple Menu.
2. Click Displays .
3. Click the Display tab.
4. Choose Thousands from the Colors pop-up menu.

Use the latest version of Mac OS X for best overall performance and feature set. Further support for the graphic accelerator chipsets listed above is being investigated for a future version of Mac OS X.
Published Date: Feb 17, 2012

Mac OS X: Cannot Connect to AOL in Classic Environment

The America Online application cannot establish a dial-up connection from the Classic environment of Mac OS X 10.0 and later.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to connect to America Online in the Classic environment via a modem, an alert box with this message appears:

> "Unable to communicate with the modem."

Solution

Use the Mac OS X-native version of America Online for best results.

The AOL installer may already be installed on the hard disks of some Apple computers (at /Applications/Installers/). To locate this in a Finder window, just click the Applications button and then look in the Installers folder.

If you need to download the application, or for more information, see: AOL for Mac OS X

Note: This issue does not occur when you have access AOL through an existing Ethernet connection, or if you connect to AOL after having previously made a PPP (dial-up) connection to a different Internet service provider.

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

The following document can help you search for a particular vendor's address and phone number:

Document 17159: "**Locating Vendor Information**"
Published Date: Feb 19, 2012

AirPort 1.3: Service Name Field Provided for PPPoE Internet Access

Some Internet service providers that use PPPoE require you to enter a name in the "Service name" field to make a connection.
This article has been archived and is no longer updated by Apple.
The "Service name" field is visible when you click the Internet tab in the AirPort Admin Utility and set the "Connect using" pop-up menu to "PPP over Ethernet (PPPoE)."

Figure 1 The Service name field

Like the DHCP Client ID used on many networks, the service name is an optional piece of information that Internet service providers may choose to use to control access. When a service name is used, the Internet service provider defines the types of service to which the service name controls access. Most Internet service providers do not require the use of a service name. You should not type anything into this field unless instructed to do so by your Internet service provider. Contact your Internet service provider for any questions about the use of service names on its network.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access".**

Published Date: Feb 19, 2012

Mac OS X 10.0 Mail: Unexpected Changes When Editing a Mail Signature

When editing a signature in Mail, text justification or text color may unexpectedly change.
This article has been archived and is no longer updated by Apple.

Symptom

When editing a signature in Mail, text justification or text color may unexpectedly change after pressing the Return key.

Solution

Select the affected text and reapply the desired formatting.

This issue may be addressed in a future software update.

Published Date: Feb 17, 2012

Mac OS X 10.0 Mail: Rules May Fail With Hundreds of Messages at Once

Select fewer than 256 messages at once if mail rules in Mail do not work.
This article has been archived and is no longer updated by Apple.

Symptom

One or more mail rules may not be applied when you select a large number of messages at once. This may occur when using an IMAP mail server.

Note: This does not occur when mail rules are being applied automatically. This happens when you choose the Apply Rules to Selection command from the Message menu.

Solution

Select fewer than 256 messages at a time when applying mail rules. Larger numbers of messages may work, but this is the suggested amount.

A future version of the Mail application may address this issue.
Published Date: Feb 17, 2012

Mac OS X 10.0: Internal Modem Makes No Sound When Connecting

The internal modem in certain Macintosh computers makes no sound when connecting.
This article has been archived and is no longer updated by Apple.

Symptom

Modem makes no sound when connecting.

Solution

This issue is resolved in Mac OS X 10.1 and later.
Published Date: Feb 17, 2012

Mac OS X: How to log in automatically at startup

This article has been archived and is no longer updated by Apple.

Use these steps to log in automatically when your computer starts up.

Note: The text and images below describe Mac OS X 10.0 to 10.1.5. The action required for Mac OS X 10.2 or later is very similar, except that you use the Accounts preference pane instead of the Login preference pane. In the 10.2 Accounts pane, look for the Set Auto Login button and the checkbox for "Log in automatically as <username>."

Note: This document applies to Mac OS X 10.2.8 or earlier. For information about Mac OS X 10.3.x, see this article; for information about Mac OS X 10.4 or later, see this article.

Where you begin

After using the Mac OS X Setup Assistant, your computer is set up to log in the first user automatically. When you use the Users pane in System Preferences to add a second user, a sheet appears with a message reminding you that automatic login is turned on.

Figure 1 Automatic login reminder in Users pane

Setting up automatic login

1. Choose System Preferences from the Apple Menu.
2. Click the Login icon.
3. Click the Login Window tab.
4. If you are not logged in as an Admin user, click the lock button to make changes. Enter an Admin user's name and password.
5. Click the checkbox to turn on "Automatically log in," or leave it unchecked to turn off this feature.

Figure 2 The Login pane of System Preferences

6. If you checked "Automatically log in," enter the name and password of the user you want to have logged in at system startup time.
7. Click Set. It is normal to hear a system tone.

Important: This option is most appropriate for a computer that has a single user. To get the security and Multiple-Users benefits of Mac OS X, each member of a group of users that shares the same computer should log in with his or her own name and password and log out at the end of the session. This allows Mac OS X to properly separate items such as user documents, application preferences, and email. If a group of users must use the "Automatically log in" option for the convenience of one of its members, then all other members of the group should immediately choose Log Out from the Apple menu and then log back in with their own names and passwords. Be sure to remember the administrator's name and password. Even after the "Automatically log in" option has been enabled, some software installation and system settings still require authentication of the administrator's name and password.

Published Date: Feb 17, 2012

Mac OS: Multiple Users Creates a Desktop Folder for Each User

The file structure of Mac OS X includes a Desktop folder for each user. In Mac OS 9 you may activate this feature in the Multiple Users control panel.

This article has been archived and is no longer updated by Apple.

Multiple Users provides an individual experience

Mac OS 9 and Mac OS X both introduce the concept of Multiple Users to the Macintosh. Having Multiple Users allows the computer owner or administrator to maintain a separate environment for each user, enhancing the privacy and security of the user experience. As part of the Multiple Users concept, a user only sees the contents of his desktop when he logs in.

What is the difference between the "desktop," "Desktop Folder," "Desktop folder," and "Desktop file?"

The term Desktop has several different meanings in the Mac OS, and you can determine the meaning from context. If you aren't familiar with this term, see:

Article 106166: "**Mac OS 9, Mac OS X: Usage of the Term Desktop**"

The desktop in Mac OS 9 and earlier versions

By default, anyone who uses the computer sees the same desktop. Assuming that Macintosh HD is the startup disk, items from the Macintosh HD or from remote volumes placed on the desktop are stored in one invisible Desktop Folder, located here:

> Macintosh HD: Desktop Folder

Figure 1 A Desktop Folder revealed by Sherlock

If you have more than one hard disk or hard disk partition, each disk or partition contains its own invisible Desktop Folder. Items moved from a disk to the desktop reside in that disk's Desktop Folder. That is why items moved from a floppy disk, for example, disappear from the desktop when the floppy disk is ejected. Items from remote volumes are stored in the Desktop Folder of the disk that was the startup volume at the time the item was copied or downloaded to the desktop.

In the default mode, all items in any Desktop Folder appear on the desktop. The Mac OS does not distinguish who is using the computer. Prior to Mac OS 9, this single desktop was the only option available without the use of additional security software.

If you turn on Multiple Users in the Multiple Users control panel, a Desktop Folder is created for each non-owner user when he logs in. They are in this path:

> Macintosh HD:Users:<User Name>:Desktop Folder

Figure 2 Desktop Folder in Multiple Users

The user designated as owner in the Multiple Users control panel continues to have his desktop items stored in the original Desktop Folder located in the root level of the Macintosh HD volume.

The visibility of the owner's Desktop Folder changes in these situations:

- The owner's Desktop Folder becomes visible to some types of non-owner users when they log in, but they cannot open it. When the owner logs in, his Desktop Folder becomes invisible again.
- The Desktop Folder of a remote Macintosh to which you connect via AppleShare becomes visible, allowing you to access items on that computer's desktop.
- The owner's Desktop Folder becomes visible in the Apple Menu when an alias of the Macintosh HD is placed in the Apple Menu with submenus active.
- The Desktop Folder becomes visible when the computer is started up from Mac OS X.

The desktop in Mac OS X

In Mac OS X, a folder named Desktop is in each user's Home folder (or Home directory). As in Mac OS 9, you may drag items to the desktop or save items to the desktop. Any item visible on the desktop when a user is logged in is stored in that user's Desktop folder. If you were logged in as a user named "Maria," then the items she places on the desktop would be stored in a folder at this location:

Mac OS X/Users/maria/Library/Desktop

Figure 3 Desktop folder in Mac OS X

In this example, the hard disk is named Mac OS X. Like Maria, other users of the computer have folders bearing their names inside the Users folder.

Unlike Mac OS 9, the Trash and hard disk volume names do not appear on the desktop. You may drag a hard disk volume from the Finder window to the desktop, which creates an alias of the disk there. However, there is no option to place the Trash on the desktop. There is not an option for all users to see the same desktop.

Behavior of additional disks used with Mac OS X

Items in a Desktop Folder created by previous versions of Mac OS on removable media (such as Iomega Zip, Syquest, or floppy disks), additional hard disks, or hard disk partitions do not appear on the Desktop of Mac OS X. Rather, the Desktop Folder on these volumes appears as a regular folder in the volume. You can choose to have removable media displayed on the desktop or not by choosing that option in the Desktop & Dock Preferences.

For related information, please see:

Article 106167: "**Mac OS X: Open and Save Dialogs Default to a User's Documents Folder**"

Published Date: Feb 19, 2012

Mac OS: Usage of the Term Desktop

In the Mac OS, the term "desktop" has several different meanings, which are explained in this article.
This article has been archived and is no longer updated by Apple.
There are four primary uses of the term "desktop":

- desktop
- Desktop file
- Desktop Folder
- Desktop folder

desktop

This term, normally lowercase, refers to the central work area you see on your computer's screen after it starts up. This is where the desktop pattern or desktop picture defined in the Appearance control panel (Mac OS 9) or Finder preferences (Mac OS X) appears.

Desktop file

If you have ever heard that you need to "rebuild the Desktop," that was a reference to this invisible file that stores information about the contents of your hard disk. To learn about the Desktop file, see:

Article 10182: "**Mac OS: Rebuilding the Desktop File and Icon Recovery**"

Desktop Folder (Mac OS 9 and earlier)

When you leave items on the desktop, they are stored in an invisible folder on the hard disk named Desktop Folder. Items stored in the Desktop Folder exclude the Trash and any disk icons that appear on the desktop. Since you can't see the Desktop Folder, it may help to imagine that the desktop is a folder that is always open on your computer's screen.

If you have more than one hard disk or hard disk partition, the Mac OS creates an invisible Desktop Folder on each disk or partition. This also applies to removable media.

If you turn on the Multiple Users feature of Mac OS 9, there may be more than one Desktop Folder per disk or disk partition.

Desktop folder (Mac OS X)

Each user with an account on a Mac OS X computer has a folder named Desktop in his home directory. The Desktop folder stores items a particular user places on the desktop when logged in to the computer.

Additional information

For more information on where the Desktop Folder is located, who can access its contents, and how its visibility may change, see:

Article 106165: "**Mac OS X, Mac OS 9: Multiple Users Creates a Desktop Folder for Each User**"
Published Date: Feb 17, 2012

Mac OS X 10.0: Classic Does Not Allow Direct Hardware Networking Access

Applications open in the Classic environment of Mac OS X do not have direct access to networking hardware.
This article has been archived and is no longer updated by Apple.

Symptom

Applications that directly access network hardware do not work in Classic. Examples include:

- Network "sniffers" used to capture network traffic
- Modem dialing software

Such an application may report that it cannot find any ports.

Product affected

- Mac OS X 10.0

Solution

When the computer is started up from Mac OS X, you cannot use Mac OS 9 applications in the Classic environment for functions that require direct networking hardware access. Packet capture is one example of a task that requires direct or "raw" access to network hardware. Dial-up modem access is another. Alternatively, you may start up the computer from Mac OS 9.x to use such an application.

Open Transport, AppleTalk, and TCP/IP networking within Classic rely on the networking capability provided by Mac OS X. LocalTalk (AppleTalk over serial ports) does not work in Classic, nor does any software that depends on accessing the network directly through networking hardware. Dial-up access is passed through the Mac OS X application Internet Connect rather than originating within Classic.
Published Date: Feb 17, 2012

Mac OS X 10.0: Num Lock Prevents Dragging in Cocoa Applications

If the Num Lock key is activated while using Mac OS X, you may be unable to drag or arrange items within Cocoa applications.
This article has been archived and is no longer updated by Apple.

Symptom

An item can be selected within an application, such an email message in the Mail application, but you cannot drag or arrange it. This may also be seen in the language list in System Preferences, and potentially other lists in the system.

Note: Software developers may create applications for Mac OS X to run in environments that include Classic, Carbon, and Cocoa. This issue may only affect applications designed for Cocoa.

Solution

Turn off Num Lock. This is done by pressing the Num Lock key while pressing and holding the Shift key.
Published Date: Feb 17, 2012

Mac OS X 10.0 Mail: Requires Cleartext Authentication on IMAP Server

The application Mail cannot authenticate when connecting to an IMAP server if cleartext authentication is disabled.
This article has been archived and is no longer updated by Apple.

Symptom

You cannot get email from an IMAP server.

Solution

Choose one of these two options:

- Client - Use POP3 mail service instead, if available.
- Network Administrator - Enable cleartext authentication on the IMAP server.

Published Date: Feb 17, 2012

Mac OS X 10.0: How to Set Date and Time to ISO 8601:1988 Standard

Follow these steps to set the date and time in Mac OS X to use the ISO 8601:1988 date and time notation standard.

This article has been archived and is no longer updated by Apple.

Follow these steps:

1. Open the System Preferences application.
2. Click International. The International pane appears.
3. Click the Date tab.
4. In the Long Date area, set the pop-up menus to this order:
Weekday
Day
Month
Year
5. Delete the comma in the field next to the Month pop-up menu.
6. Click the checkbox to enable "Leading zero for day".
7. In the Short Date area, choose Year/Month/Day from the pop-up menu.
8. Type a hyphen in the Separator field, and press Tab to update the field.
9. Click the checkboxes to enable "Leading zero for day", "Leading zero for month", and "Show century".

When you have finished these steps, your settings should look like those in Figure 1.

Figure 1 Date tab

10. Click the Time tab.
11. Click 24-Hour clock.
12. Click the checkbox to enable "Use leading zero for hour".

When you have finished these steps, your settings should look like those in Figure 2.

Figure 2 Time tab

13. Quit the System Preferences application.

Classic applications

To use ISO 8601:1988 date and time notation in Classic applications, you must also set the Mac OS 9 Date & Time control panel in the Classic environment. For steps on how to do this, see article 60752: "**Mac OS 9: How to Set Date and Time to ISO 8601:1988 Standard**."

More information
For more information on the ISO 8601:1988 standard, Open Sherlock and search for ISO 8601.

Note: Some applications included with Mac OS X, including Mail, may not use the date and time settings in the System Preferences application.

Published Date: Feb 20, 2012

Mac OS X: Only Use 256 Colors and/or 640 by 480 Resolution When Required by Classic

The 256 color depth setting and the 640 by 480 screen resolution (alone or in combination) should only be used by Classic applications.
This article has been archived and is no longer updated by Apple.

Symptom

Irregularities may appear in system graphics when using either the 256 color depth setting or the 640 by 480 screen resolution. Normally, neither is a choice in the Displays preference panel.

Solution

You should use the 256 color depth setting or the 640 by 480 screen resolution in Mac OS X only when a Classic application prompts you to do so or makes the change automatically. The applications that require these settings should not suffer any graphic anomalies in most cases.

However, when you quit the application that requires one or both of these settings, you should check the Displays pane of the System Preferences application. If the application did not automatically switch the display's settings back to a higher resolution and color depth, you should do so using the menus in the Displays pane.

Note: For convenience, you may select the option to "Show displays in menu bar" in the Displays pane of System Preferences.

Mac OS X 10.2 or Later

If display irregularities persist after resetting the resolution and color depth, use the following solution (requires Mac OS X 10.2 or later):

1. Open System Preferences.
2. Open the Displays preference pane.
3. Select a resolution of at least 800 x 600.
4. Open the Universal Access preference pane.
5. Click the Set Display to Grayscale button.
6. Click the Set Display to Grayscale button again to restore color.

Published Date: Feb 17, 2012

Mac OS X 10.0, Mac OS 9.0.4: Classic Requires Update to Mac OS 9.1 or Later

The Classic environment of Mac OS X does not work with Mac OS 9.0.4 or earlier.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to open a Classic application, an alert box appears as Classic opens with the message:

> "The System file on the selected startup disk is prior to version 9.1 and is not supported by Classic. Please select a different startup disk using the Classic preferences panel and restart Classic"

Figure 1 Starting Classic with Mac OS 9.0.4

You see a similar message when you open the Classic control panel:

> "No Startup Volume. There is no volume with a system folder that supports starting Classic. Please install Mac OS 9.1 or later."

Solution

If you install Mac OS X on a computer that has Mac OS 9.0.4 or earlier installed, you will see a warning telling you that you need Mac OS 9.1 to run Classic.

If you have a reason not to update to Mac OS 9.1, you can use Mac OS 9.0.4 and Mac OS X on the same computer. However, you must also install a Mac OS 9.1 System Folder on the computer and designated it as the Classic startup volume. Because this requires having two Mac OS 9.x System Folders, the most manageable setup would include at least two hard disk partitions.

Published Date: Feb 17, 2012

Mac OS X 10.0: Cannot Open Debugger in Classic

Microbug, the ROM-based debugger, does not work in the Classic environment of Mac OS X. You may open other debuggers in Classic, but not with the programmer's button.
This article has been archived and is no longer updated by Apple.

Symptom

After pressing the Command-Power key combination, or the programmer's button, the Microbug debugger box does not appear in the Classic environment as it would if the computer had been started up from Mac OS 9. The programmer's button is also known as the debugger button or interrupt button.

For further information on Microbug, see article 30556: "**Mac OS: Empty White Box on Screen**"

Solution

Mac OS X does not work with the ROM-based debugger in Classic. To use Microbug, start up the computer in Mac OS 9. To debug Mac OS 9 programs in Classic, use MacsBug or another Classic-compatible third-party debugger. Developers can download MacsBug at:

Apple Developer Connection http://developer.apple.com/tools/debuggers/

MacsBug is a developer tool. As such, technical support for MacsBug is not provided as a part of Apple's normal consumer product support.

Note: Even when using a Classic-compatible debugger, the programmer's button does not work in the Classic environment. To open a debugger in the Classic environment, use the appropriate keyboard command, which is Command-Power on those keyboards that have a Power button, and Command-Eject on those that do not. On some portable machines, you may have to hold down the Command-Eject combination for a moment until the debugger window appears.
Published Date: Feb 17, 2012

Mac OS X 10.0: Using Classic With Tomb Raider, Star Wars: Episode 1 Racer, Myth II

Some early versions of the games Tomb Raider (Eidos Interactive/Aspyr Media), Myth II (Bungie Software) and Star Wars: Episode 1 Racer (LucasArts Entertainment Company) require software updates to work in the Classic environment.
This article has been archived and is no longer updated by Apple.

Symptom

When opening a game an alert box appears with a message that says OpenGL could not load or that not enough memory is free.

Solution

Download and install the appropriate software updates for each game.

Updates for games published by Aspyr Media can be found at:

Aspyr Support http://www.aspyr.com/support/

Updates for games published by LucasArts Entertainment can be found at:

LucasArts Technical Support http://support.lucasarts.com/

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The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"
Published Date: Feb 19, 2012

Mac OS X 10.0: Some Classic Applications Require Installation of System Folder Components

Some applications do not function correctly or at all if required System Folder components are not properly installed, such as extensions or libraries.
This article has been archived and is no longer updated by Apple.

Symptom

A Classic application:

- works but seems to be missing functions
- generates and alert box with a message that extensions or other System Folder components are missing

For example, AppleWorks 5.0.4 works but you cannot check spelling because its System Folder resources are not properly installed.

Solution

This behavior does not differ from versions of the Mac OS prior to Mac OS X 10.0. Any application that uses System Folder items must be properly installed. Use the included application installer or the instructions provided by the software publisher to place these items in the System Folder on the startup volume.

It is important to remember this necessity when the computer has more than one potential Mac OS 9 startup volume. Consider this set of circumstances and events:

1. A hard disk has two partitions, named "Disk A" and "Disk B."
2. Both partitions contain Mac OS 9 system folders.
3. Disk A is the designated Classic startup volume in System Preferences.
4. AppleWorks 5.0.4 is installed while Classic is started up from Disk A.
5. AppleWorks 5.0.4 successfully performs spell checking.
6. The Classic startup volume is changed to Disk B.
7. When Classic restarts from Disk B, AppleWorks cannot check spelling.

In this example, you would repeat the AppleWorks 5.0.4 installation process to establish proper operation when started up from either System Folder.

Note: When using an application started up alternatively from different System Folders, you will have separate preferences stored in each System Folder. If, in the example above, you restarted Classic from Disk A after using AppleWorks while started up from Disk B, your AppleWorks preferences would be just as you left them the last time you used it while started up from Disk A.

Applications that require special hardware access may not work in the Classic environment even when properly installed. See article 106184: "**Mac OS X 10.0: Access Not Provided in Classic for Certain Hardware-Oriented Applications**."
Published Date: Feb 17, 2012

Mac OS X 10.0: Access Not Provided in Classic for Certain Hardware-Oriented Applications

Some applications that require special hardware access, such as the AppleCD Audio Player and the Apple DVD Player, do not work in Classic. This article has been archived and is no longer updated by Apple.

Symptom

Applications that require direct hardware access may not work in the Classic environment. An alert box may appear when you open the application that suggests you need to add extensions to the System Folder.

Solution

You should update to the latest version of Mac OS X for best compatibility. Mac OS X 10.1 and later include DVD playback on compatible computers.

Some applications that require special hardware access do not work in the Classic environment of Mac OS X 10.0.

In order to perform the desired function, the appropriate Mac OS X application must be used. For example, use iTunes to listen to an audio CD.

Mac OS X 10.0 does not have a DVD player application. To watch a movie from a DVD-Video disc, restart the computer from Mac OS 9.x and use the Apple DVD Player application. For related information, please see technical documents:

106153: "**Mac OS X 10.0: Start Up from Mac OS 9.1 to Use Apple DVD Player**"
106470: "**Mac OS X 10.1: DVD Player 3.0 Installed on Compatible Computers**"
Published Date: Feb 17, 2012

Mac OS X: Copy and Paste Between Classic and Mac OS X Applications

The Clipboard may take a few seconds to synchronize when copying from a Classic application to a Mac OS X application.
This article has been archived and is no longer updated by Apple.

Symptom

If you paste before the Clipboard has synchronized from the Classic environment to the Mac OS X environment, the pasted data may not be what is expected.

Solution

Update to Mac OS X 10.1.2 or later. Use the Software Update pane in System Preferences, or download the update from Apple Software Downloads (http://www.apple.com/swupdates/).

Note: If your copying does not complete (spinning cursor and system is unresponsive) see document number 106669 "**Mac OS X 10.1.2: Spinning Disc Cursor When Copying/Pasting From Classic**."
Published Date: Feb 17, 2012

Mac OS X 10.0: Startup Sound Persists With Volume Muted

Muting the system volume does not silence the startup sound (or "chime").
This article has been archived and is no longer updated by Apple.

Symptom

After setting system volume to mute, you still hear the startup sound.

Solution

A future update to Mac OS X may permit the startup sound to be muted along with the system volume.
Published Date: Feb 17, 2012

Mac OS X 10.0: Epson SC 740 Printer Error -27 Message

When a document is still printing from a Classic application and a second (queued) document is sent to print, the second job may fail.
This article has been archived and is no longer updated by Apple.

Symptom

A queued print job fails to print, and an alert box appears with a -27 error code.

Solution

Contact Epson for information on a permanent solution to this issue. However, there are two workarounds:

1. Wait until the first Classic print job is complete before printing the second job.

2. Send the second print job again after the error message appears.

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"
Published Date: Feb 20, 2012

Mac OS X Mail: Plain Text Compared to Rich Text (RTF)

Mail can send text or rich text format messages, but not all recipients can read rich text (RTF).
This article has been archived and is no longer updated by Apple.

Symptom

Some of your email recipients cannot read the messages you send, or do not see text formatting the way you do.

Solution

You can compose email in either plain text (.txt) or rich text format (RTF).

Plain text (.txt)

- Can be read by anyone, regardless of the email application they use.
- Does not offer text formatting options.
- Can have pictures or graphics attached, but not inset.

Rich text format (.rtf)

- Allows you to format a message for font, justification, stylized text and other options.
- Pictures or graphics can be inset.
- Cannot be read by every type of email application.

Choosing a format

Mail defaults to rich text so that you can take advantage of its formatting choices. You may change the default behavior by using these steps:

1. Choose Preferences from the Mail application menu.
2. Click the Composing icon.
3. Choose the format you desire from the "Default message format" pop-up menu.
4. Close the Mail Preferences window.

To automatically reply to messages in the format used by a sender, check "Use the same format as original message" in the Composing pane of Mail Preferences.

Changing format on the fly

If you want to send a message that is not in your preferred format, you may do so without changing the preferences back and forth. After you click Compose for a new message, choose the alternate format from the Format menu.

Related documents

25606 Mac OS X 10.3: Mail - Some Font Styles Appear in Compose Window but Not in Sent Messages

Published Date: Feb 19, 2012

Mac OS X 10.0: Performance Slower When Sherlock Updates or Creates an Index

Mac OS X may seem less responsive when Sherlock is indexing.

This article has been archived and is no longer updated by Apple.

Symptom

With a Sherlock window open and volume indexing in progress, Mac OS X or the Classic environment may seem less responsive.

Solution

Turn off Sherlock indexing:

1. Choose Preferences from the Sherlock application menu.
2. Click the two Indexing Options checkboxes to turn them off.
3. Click OK.

Note: Indexed volumes provide an enhanced Sherlock experience. You should turn indexing back on at a later time or choose Index Now from the Find menu.

Published Date: Feb 20, 2012

Mac OS X 10.0: Startup Volume Is Named "/" Instead of "Mac OS X"

When Mac OS X is installed on a UNIX File System (UFS) volume, the startup volume is named "/."
This article has been archived and is no longer updated by Apple.

Symptom

The computer's startup volume is named "/" instead of "Mac OS X" when Mac OS X is installed on a UFS volume. The volume's name may be changed, but that change is lost after a restart.

Solution

This is the expected behavior when installing onto a UFS volume. This does not affect the operation of Mac OS X. When referring to a file by a pathname, substitute "/" in place of the leading "/Mac OS X/."

To avoid this behavior, install Mac OS X on to a Mac OS Extended (HFS Plus) volume.

A future update to Mac OS X may allow for a customizable UFS volume name.
Published Date: Feb 17, 2012

Mac OS X 10.0: Setting up an AirPort Base Station Requires Restart from Mac OS 9

Restart your computer from Mac OS 9 to set up or administer an AirPort Base Station.
This article has been archived and is no longer updated by Apple.

Symptom

The AirPort software in Mac OS X 10.0 allows you to connect to an AirPort network, but it does not include the ability to administer a base station.

If you attempt to use AirPort software in Classic without restarting, you may see an alert box with this message:

> "That application or control panel is not supported by Classic."

Figure 1 Attempting AirPort use in Classic

Notes

1. This alert box may not appear if you have the latest AirPort software installed in Mac OS 9. However, you should still restart your computer.
2. While started up from Mac OS 9, you should download and install the latest version of AirPort software from Apple Software Updates (http://www.apple.com/swupdates/).

Solution

Updating to Mac OS X 10.1 will allow you to administer an AirPort Base Station from within Mac OS X. If you do not yet have Mac OS X 10.1, you may do so by following these steps:

1. Choose System Preferences from the Apple menu.
2. Click Startup Disk.
3. Click an Mac OS 9 System Folder.
4. Restart the computer.

After you've administered your AirPort Base Station in Mac OS 9, you can use the Startup Disk control panel to select your Mac OS X System Folder.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access".**

Published Date: Feb 17, 2012

Mac OS X 10.0, Sherlock: Closing Versus Quitting Applications and Control Panels

Some applications do not quit automatically when closed as they did in Mac OS 9.x.
This article has been archived and is no longer updated by Apple.

Mac OS 9.x and earlier

In versions of the Mac OS prior to Mac OS X, control panels automatically quit when you closed them. They did not behave the way other applications in Mac OS 9.x and earlier did, which was to remain open until explicitly quit. Sherlock behaved as a control panel in this respect.

Mac OS X 10.0 and later

With Mac OS X, both control panels and Sherlock behave as normal applications.

Each Mac OS X control panel is contained as a "pane" in the System Preferences application. If you open the System Preferences application and close the System Preferences window, System Preferences does not quit. The Dock indicates that the System Preferences application is still open by showing a triangle underneath the application icon.

To get a new window for an application, click its icon in the Dock.
Note: This does not apply to applications such as the Grab utility, which do not show a window when opened.

Quitting an open application

Select the application in the Dock and choose Quit from the application menu. You may alternatively use the Command-Q key combination.

Monitoring system usage

Open applications continue to use memory and system resources until you explicitly quit them. Though an application that is open but not being used generally consumes very few system resources, you should be aware that some applications may be performing significant tasks when not in the foreground. How can you tell the difference? You may use the Process Viewer utility to see the percentage of CPU time and memory being used by an application.

Note: It is normal to see processes in the Process Viewer that do not appear as applications in the Dock. Most of these are components of the operating system.
Published Date: Feb 17, 2012

Mac OS X: Use Roman Characters Names on Mac OS Standard (HFS) Volumes

Japanese characters cannot be used for file or folder names on a Mac OS Standard (HFS) formatted volume.
This article has been archived and is no longer updated by Apple.

Symptom

When using Japanese characters to rename a file or folder located on a Mac OS Standard (HFS) volume, you may see an alert with a message such as this:

> "The name Konichiwa cannot be used. Try using another name, with fewer characters, or no punctuation marks."

Note: In the alert message, "Konichiwa" would appear in Japanese characters.

If you copy an existing folder or file with Japanese characters to a Mac OS Standard volume, you will see an alert box with this message:

> "Sorry, the operation could not be completed because an unexpected error occurred (Error code -50)"

Figure 1 Alert dialog

Solution

Mac OS Extended (HFS Plus) format improves efficiency over the earlier Mac OS Standard (HFS) format, but some situations may require you to continue using HFS. An example of such a situation is when the volume in question must be capable of starting up a computer with system software earlier than Mac OS 8.1.

If the volume you are using must be HFS format, then use Roman characters for folder names.

To copy an existing file with Japanese characters in the filename to an HFS volume, you must rename the item. In the case of a folder you could copy the contents of the folder to a new folder on the Mac OS Standard format hard drive.

To use Japanese characters in a folder name instead of Roman characters the drive must be reformatted using HFS Plus with the Disk Utility or Drive Setup applications.

Note: This will affect also other double-byte languages including Chinese and Korean.

Related documents

- 106553 "**Mac OS X: Using Double-Byte Characters**"

Published Date: Feb 17, 2012

Mac OS X 10.0 Mail: Mailbox Locked Alert

Sometimes an alert box appears with a message that the mailbox is locked. This can happen if the application Mail did not properly quit or the network connection changed.
This article has been archived and is no longer updated by Apple.

Symptom

When opening the application Mail, you may get an alert box with a message like this:

> "The mailbox ~/Library/Mail/Mailboxes/INBOX.mbox is currently locked by username on host myhost.com. If you open a mailbox that is already in use, you may damage its contents."

Notes

1. The exact message varies depending on the name of the Mail user and the host name.
2. The tilde (~) represents a user's Home directory.

A dialog box offers three choices:

- Open Read Only
- Quit
- Open Anyway

Solution

Update to Mac OS X 10.1 or later.

There are three reasons why this alert could occur.

Application did not quit properly

If the application Mail stopped responding or quit unexpectedly during its last use, it may not have been able to properly close the files. It is safe to click Open Anyway in this case.

Changing network connection

This alert could occur if you change networks while Mail is open. Some examples include:

- Disconnecting from an Ethernet network and connecting to an AirPort network.
- Changing from Ethernet to dial-up PPP.
- Changing the configuration of an Ethernet connection (static IP to DHCP, for example).

In these cases it is also safe to click Open Anyway.

Multiple accounts in Personal Mailboxes

This issue can happen when:

- Two or more mail accounts are set to deposit messages in the Personal Mailboxes Inbox.
- Messages from two or more accounts are subsequently written to the Inbox at the same time.

To work around this, you either create a separate Inbox for each account or check your accounts individually.

Note: The first workaround is only available for POP accounts. IMAP accounts automatically have a separate Inbox. A Mac.com account may be set up as either POP or IMAP.

Follow these steps to create separate Inboxes:

1. Choose Preferences from the Mail application menu.

2. Click to select the name of an account in the Description column of the Mail Preferences window.
3. Click Edit.
4. Click the Account Options tab.
5. Click the radio button to enable the "Show this account separately in mailboxes drawer" option.
6. Click OK.

To check your accounts individually, choose Get New Mail In Account from the Mailbox menu. You also need to set your accounts to check mail manually. To do that:

1. Choose Preferences from the Mail application menu.
2. Choose Manually from the Check accounts for new mail pop-up menu.

Published Date: Feb 17, 2012

Mac OS X 10.0: Mail May Interrupt Log Out

Sometimes the application Mail in Mac OS X interrupts Log Out.
This article has been archived and is no longer updated by Apple.

Symptom

An alert box appears with the message:

> "Logout has timed out because the application Mail failed to quit. To try again, quit Mail and choose Log Out from the Apple menu."

Figure 1 Mail failed to quit message

This happens if you choose Log Out from the Apple menu with the Mail application still open.

Solution

Quit Mail prior to logging out.

Sometimes Mail takes longer than expected to quit, a known behavior for this release of Mail. It does not indicate an issue. This may be addressed in a future software version.
Published Date: Feb 17, 2012

Mac OS X 10.0: Cannot Have Two Open Versions of Microsoft Internet Explorer

You cannot use Internet Explorer 5.1 for Mac OS X at the same time as Internet Explorer 4.x or 5.0x in Classic.
This article has been archived and is no longer updated by Apple.

Symptom

A second version of Internet Explorer will not open when a different version is already open.

Solution

Quit Internet Explorer before attempting to open a different version.
Published Date: Feb 17, 2012

Mac OS X 10.0: Use Command Key to Select Multiple Items in List and Column Views

The behavior of the Shift key when used to make a selection in the Finder has changed between Mac OS 9 and Mac OS X.
This article has been archived and is no longer updated by Apple.

Symptom

Holding down the Shift key while you click in List view selects the first and second items, and all items in between.

Solution

Press the Command key before clicking to select multiple noncontiguous items in Mac OS X for List and Column views. (In Mac OS 9 and earlier, pressing the Shift key while in List view allowed you to select multiple noncontiguous items.)

Behavior in Icon view remains the same in both operating systems.
Published Date: Feb 17, 2012

Mac OS X 10.0: Cannot Make Alias of Hard Disk Volume in Computers Directory

The Make Alias command in the File menu appears dimmed or unavailable when a hard disk or other volume is selected in the Computers directory.

This article has been archived and is no longer updated by Apple.

Symptom

You are unable to make aliases of volumes in the Computers directory.

Solution

Because users do not have write privileges to the Computers directory, the Make Alias command is not available. To make an alias to a volume that appears in the Computers directory, drag a volume's icon into an area to which you have write privileges, such as the desktop or the Favorites folder. Since a volume cannot be removed from the Computers directory, an alias is automatically created in the new location.

Published Date: Feb 17, 2012

Mac OS X: How to Use Pop-Up, Hierarchical Menus in the Dock

Dragging a folder or disk to the Dock provides a hierarchical pop-up menu.
This article has been archived and is no longer updated by Apple.
A pop-up menu in the Dock offers you the same type of hierarchical submenu structure that was available in the Apple menu of Mac OS 9 and earlier. To create a pop-up menu in the Dock, simply drag a disk or folder icon into the Dock, between the dividing line and the Trash. Disks and folders in the Dock must be placed to the right of or below the divider.

A disk or folder in the Dock reacts two ways:

1. When clicked, the item opens in a Finder window.
2. When Control-clicked, a pop-up menu with submenus appears. With a disk or folder in the Dock, you can use submenus to navigate through folders to a file.

Figure 1 Navigating a disk from the Dock
Published Date: Feb 17, 2012

Mac OS X 10.0, 10.1, 10.2: List View Settings May Not Be Retained

Finder windows in the List view may not retain proper settings on subsequent viewings.
This article has been archived and is no longer updated by Apple.

Symptom

A Finder window viewed as a list may fail to retain a custom view or sort order (such as viewing by Date Modified) after the window is closed and reopened.

Solution

As new information becomes available, this document will be updated.

Related Documents

106893 Mac OS X: Icons Appear Stacked Upon Each Other, Cannot Be Moved

Published Date: Feb 17, 2012

Mac OS X 10.0: "Can‘t index" Appears in Sherlock Window

Mac OS X allows you to index only the portion of the file system to which you have read-write access.
This article has been archived and is no longer updated by Apple.

Symptom

"Can't index" appears in the Index Status column of the Sherlock window.

Solution

This is the correct behavior for Mac OS X. As a multi-user operating system, Mac OS X enhances privacy and file system integrity by allowing each user to access only specific areas of the file system. Sherlock can only index folders or volumes to which you have complete access. By default, this includes your Home directory, and it may include other volumes, such as an external hard drive, to which you have write access. Sherlock cannot access volumes to which you do not have complete access, such as the Mac OS X startup disk, or to read-only volumes such as CD-ROMs.

Your Home directory should appear in the Sherlock window with a status of "Indexed". Volumes and folders which cannot be indexed will appear with a status note explaining why they cannot be indexed.
Published Date: Feb 17, 2012

Mac OS X 10.0: Submenus Not Provided for Folder Aliases in the Dock

Aliases in Dock pop-up menus do not create submenus as expected.
This article has been archived and is no longer updated by Apple.

Symptom

- You place a folder or disk which contains aliases in the Dock.
- When you Control-click that folder or disk in the Dock, the aliases in the pop-up menu do not create submenus as expected.

Figure 1

The availability of a submenu is noted by a gray triangle next to a folder in a pop-up menu. Note that the original "untitled folder" has the triangle, but its alias does not (Figure 1).

Solution

This is expected behavior for Mac OS X 10.0.
Published Date: Feb 19, 2012

Mac OS X 10.0: Message That "There are no view options for the desktop" Appears

Though View Options exist for the desktop, you may find a message that leads you to believe otherwise.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to customize the desktop, you may:

1. Close all Finder windows.
2. Click the desktop.
3. Choose the Show View Options from the View menu.

Then you see this message in the Window pane:

"There are no view options for the desktop."

The Finder Preferences window contains all the settings you would expect to find in View Options:

- Icon Size
- Icon Arrangements
- Show Disks on Desktop

Additionally, Finder Preferences allows you to select the Desktop Picture.

Apple may address the "no view options" message in a future software update.
Published Date: Feb 17, 2012

Mac OS X 10.0: The Capture Window Command Does Not Work in the Grab Utility

The Window command in the Capture menu remains dimmed (unavailable) and does not work in Mac OS X 10.0.
This article has been archived and is no longer updated by Apple.

Symptom

The Window command in the Capture menu of Grab appears dimmed or unavailable.

Figure 1 Window command dimmed

Solution

The Window command does not work. You may use this workaround:

1. Choose the Timed Screen command from the Capture menu.
2. Click Start Timer.
3. Arrange windows or menus for your screen shot.
4. Save the resulting image file.
5. Use an image editor application to crop the picture as you wish.

Published Date: Feb 19, 2012

Mac OS X 10.0: Using the Command-Option-Drag Key Combination

Using Command-Option-Drag forces an application to attempt to open a file that it normally does not recognize.
This article has been archived and is no longer updated by Apple.

Symptom

When you drag a file over an application icon, the application does not open the file.

Solution

By using Command-Option-Drag, you force the application to attempt to open the file. This feature is not intended for any one situation, but here is one example:

1. Locate a PICT file (such as created by a Shift-Command-3 screen shot in Mac OS 9.x).
2. Drag the PICT file over the Internet Explorer icon in the Finder or Dock.
3. Note that the Internet Explorer icon does not darken, indicating that Internet Explorer does not recognize the PICT as a file that it would normally open.

Figure 1 PICT file not recognized by Internet Explorer

4. Press and hold the Command (Apple) and Option keys.
5. Drag the PICT file over the Internet Explorer again.
6. When the Internet Explorer icon darkens, release the mouse button.

Figure 2 Command-Option-Drag forces recognition

The PICT file opens in Internet Explorer.

Note: Command-Option-Drag never guarantees a file will open as expected or at all. In this example, Internet Explorer uses QuickTime support to display the PICT file. No application can be forced to correctly handle a file type for which it was not designed. You may achieve varying degrees of success using this technique.
Published Date: Oct 7, 2016

Mac OS: "Unable to establish a secure connection" or "can‘t verify identity" messages in Web browsers

This article has been archived and is no longer updated by Apple.

Your Web browser software relies on correct date and time settings to make secure connections to the Internet.

If the date and time are not correct, an alert box may appear with a message such as "unable to establish a secure connection" or "can't verify identity." The exact words vary with different Web browsers, but it might look like this message from Safari:

There could also be other causes. To avoid this issue, follow these steps:

1. Be sure that your Date & Time control panel settings are correct.
2. Try a different Web browser.
3. Download the latest versions of your Web browsers.
4. If you still cannot make a secure connection, notify the contact listed on the affected Web site.
5. In Mac OS X 10.3, 10.4 or later, you can use Keychain First Aid to resolve potential keychain issues.

Why Date and Time?

A common cause for this issue is incorrect Date & Time settings. Some Web sites use encryption to protect your data while in transit, particularly when making purchases, financial transactions, or conveying other sensitive information. To be sure that only "trusted" Web sites can make a secure connection to your computer, the Web browser queries the site for a valid security certificate. Because certificates are issued and expired like a driver's license, your Web browser perceives that a proper certificate is invalid if your computer is set to a date outside the range of the certificate.

Published Date: Oct 7, 2016

Mac OS X: How to Set Up TextEdit as an HTML or Plain Text Editor

TextEdit renders HTML by default. You may change its preferences to act as a plain text editor, for use in editing HTML or configuration files, for example.

This article has been archived and is no longer updated by Apple.

Symptom

You expect TextEdit to open your HTML file in plain text form for editing, but it renders the file into its consumable form.

Solution

1. Open TextEdit.
2. Choose Preferences from the TextEdit application menu.
3. Click the Plain Text radio button for New Document Format.
4. Under Saving, click the checkbox to turn off "Append '.txt' extension to plain text files."
5. Under Rich text processing, click the checkbox to turn on "Ignore rich text commands in HTML files."
6. Be sure the checkbox for "Wrap to Page" is deselected (Figure 1).

Figure 1 Correct TextEdit Preferences for configuration file editing

Notes

1. Any data in TextEdit prior to taking these steps may contain rich text commands that become visible after the preference changes are made.

2. TextEdit may continue to render files saved from Web browsers as HTML Source, ignoring the preferences you have set. As a workaround (after following the steps above) view the source code in the Web browser and copy/paste the text into a new TextEdit document.

Published Date: Oct 7, 2016

Mac OS X 10.0, iBook, PowerBook: Display Brightness and Volume Keys Do Not Respond

On most PowerBook and iBook computers, display brightness and volume keys do not work with Mac OS X 10.0.
This article has been archived and is no longer updated by Apple.

Symptom

You press a function key (or dedicated button on some models), and the expected adjustment to display brightness or volume does not occur.

Note: The behavior of affected computers varies. On the PowerBook G4, for example, you may adjust volume using the keyboard but not display brightness. Other computers, such as the PowerBook (FireWire), may not be able to use either display or volume keys.

Solution

Update to Mac OS X 10.1. Otherwise, you may:

1. Choose System Preferences from the Apple menu.
2. Use the Displays and Sound panes in System Preferences to make the desired adjustments.

For related information, please see:

Article 106150: "**Mac OS X 10.0: No Status Bar for Keyboard Volume Adjustment**"
Published Date: Oct 7, 2016

Mac OS X 10.0: "file system dirty, run fsck"

Certain file system issues may prevent the computer from starting up to a normal state, causing this message to appear: "file system dirty, run fsck". The fsck utility may be able to verify and repair a Mac OS X disk when this happens.
This article has been archived and is no longer updated by Apple.

Symptom

The computer starts up in a command-line (text only) environment and displays this message:

> "file system dirty, run fsck"

Solution

Use the fsck utility to check and repair the disk. For instructions on using the fsck utility, see article 106214: "**Mac OS X 10.0: Why, When, and How to Run fsck for File System Maintenance**".
Published Date: Oct 11, 2016

Mac OS X, Portables: Batteries shouldn‘t be changed when computer is sleeping

This article has been archived and is no longer updated by Apple.

Attempting to change a battery while the some portable computers are asleep (and started up from Mac OS X) causes an NVRAM and/or Power Manager reset. Connect the AC power adapter before swapping the battery, or shut the computer down instead.

If you try to change the portable computer's battery while it is asleep and not connected to the AC power adapter, these things might happen:

- Your computer shuts down.
- The system clock, Startup Disk, and other PRAM/NVRAM settings reset to default.
- Your computer restarts from the first available volume, when more than one is present.
- You may not be able to make secure connections in a Web browser (because the date isn't correct).

Important: You should not do this kind of reset unnecessarily. A variety of system settings return to default after this type of reset.

This document applies to these portable computers:

- PowerBook G3 Series
- PowerBook G3 Series (Bronze Keyboard)
- PowerBook (FireWire)
- PowerBook G4
- PowerBook G4 (12-inch) (all)
- iBook (all)

Solution

Connect to your AC power adapter, or shut the computer down to change batteries.

Be sure to use System Preferences to reselect your Startup Disk and to correct date and time. If your computer starts back up from Mac OS 9.x, use the Startup Disk control panel to select the Mac OS X System Folder.

Related documents

106211: "Mac OS: "Unable to establish a secure connection" or "security certificate" Messages in Web Browsers"
14449: "PowerBook and iBook: Resetting Power Manager"
2238: "Macintosh: How to Reset PRAM and NVRAM"

Published Date: Oct 11, 2016

Mac OS X 10.0, PowerBook: Shut Down to Switch Monitors

Mac OS X 10.0 does not allow PowerBook users to switch between the built-in display and an external monitor while sleeping.
This article has been archived and is no longer updated by Apple.

Symptom

You hear the PowerBook wake up, but it has no video.

Solution

When started up from Mac OS 9.x, PowerBook users can switch between an external monitor and the built-in display by putting the computer to sleep, connecting or disconnecting the display cable (VGA), and waking the computer up.

If you attempt the same in Mac OS X 10.0, the computer wakes up without video. When this happens, you can shut your computer down normally without video by following these steps:

1. Press the Power button.
2. Wait a few seconds.
3. Press the Return key.
4. Wait a few seconds.

You should hear the computer shut down. If it does not, you may force it to shut down by pressing and holding the Power button until the computer shuts down. This may take up to 10 seconds.

Note: Pressing and holding the Power button does not shut down a PowerBook G3 Series (Bronze Keyboard) computer. You may use the Control-Command (Apple)-Power key combination to force a restart.

After the PowerBook is shut down, connect or disconnect the monitors as desired and restart.

Published Date: Oct 11, 2016

Mac OS X 10.0: Many Third-Party Ink Jet Printer Drivers Are Built In

Mac OS X includes preinstalled drivers for many popular third-party ink jet (raster) printers.
This article has been archived and is no longer updated by Apple.
The default installation of Mac OS X 10.0 includes drivers written by Canon, Epson, and Hewlett-Packard for certain models of their respective printers. If you own one of the printers listed below, simply connect it to your Macintosh -- and Mac OS X automatically sets up Print Center to use the printer. If you have updated to Mac OS X 10.1, see technical document 106490: "**Mac OS X 10.1: Many Third-Party Ink Jet Printer Drivers Are Indcluded**"

Printer drivers included

Canon

- BJF360
- BJF660
- BJF870
- BJS600
- S400
- S450
- S600
- S800

Epson

- Stylus COLOR 680
- Stylus COLOR 740
- Stylus COLOR 760
- Stylus COLOR 777
- Stylus COLOR 860
- Stylus COLOR 880
- PM-720C
- PM-780C
- PM-880C
- PM-900C
- PM-3500C

Hewlett-Packard

- Deskjet 810
- Deskjet 812
- Deskjet 816
- Deskjet 830
- Deskjet 832
- Deskjet 840
- Deskjet 842
- Deskjet 880
- Deskjet 882
- Deskjet 895
- Deskjet 930
- Deskjet 932
- Deskjet 935
- Deskjet 950
- Deskjet 952
- Deskjet 955
- Deskjet 957
- Deskjet 960
- Deskjet 970
- Deskjet 990

Apple may add more printer drivers with a later version of software. If your printer is not listed here, check with your printer's manufacturer to

determine availability of drivers for use in Mac OS X.

Notes

1. Some printing features are not included in Mac OS X 10.0, such as custom paper sizes, banner printing, booklet printing, and watermarks.
2. ColorSync color matching may produce unexpected results when printing to any raster printer.
3. Some of the listed printers may include built-in or add-on network adapters. The drivers included with Mac OS X 10.0 only work with these printers when they are directly connected to the computer's USB port. These drivers do not have a network connection feature for any of these printers.

Published Date: Oct 7, 2016

Mac OS X 10.0: May Start Up From Wrong System Folder When Multiple Versions Are Installed

Your computer may start up from the wrong System Folder when multiple versions of Mac OS X are installed.

This article has been archived and is no longer updated by Apple.

Symptom

The computer does not start up from the System Folder selected in the Startup Disk pane of the System Preferences application.

Solution

If multiple version of Mac OS X are installed on an affected computer, the Startup Disk setting may be ignored.

On the affected computers, you should not install different versions of Mac OS X on different partitions or disks.

Published Date: Oct 7, 2016

Mac OS X 10.0: Setup Assistant and AppleVision Display 640- by 480-Pixel Resolution

The welcome and registration screens may not be entirely visible after installing Mac OS X 10.0 when using an AppleVision 1710 Display.
This article has been archived and is no longer updated by Apple.

Symptom

After installing Mac OS X 10.0 on a computer that is connected to an AppleVision 1710 or 1710AV display, some areas of the welcome and registration screens may not be visible.

Solution

The welcome and registration screens function in 800- by 600-pixel or larger resolution. The affected displays temporarily use a 640- by 480-pixel resolution after installing Mac OS X 10.0.

If your computer has a built-in ADB port, verify that the ADB cable from the AppleVision 1710 or 1710AV Display is properly connected. Power Macintosh computers made earlier than the Power Mac G4 have built-in ADB ports.

If your computer does not have a built-in ADB port, you may try to complete the Setup Assistant in the lower resolution and then correct any errors in the System Preferences application. Alternatively, you may shut down the computer and temporarily use a different monitor.

Note: Aside from this issue, the affected displays work with Mac OS X 10.0 and will offer other resolutions after bypassing the setup assistant.
Published Date: Oct 7, 2016

Mac OS X 10.0: Help Viewer - "The Specified HTML File Could Not Be Found"

Help Viewer does not display content if the Mac OS X hard disk name contains certain characters. These characters include the solidus (/) character and the trademark character (TM).
This article has been archived and is no longer updated by Apple.

Symptom

The Mac OS X Help Viewer reports "The Specified HTML File Could not Be Found" when a Help topic is selected.

Solution

Remove any solidus (/) or trademark (TM) characters from the name of the Mac OS X hard disk or partition. You can substitute another character, such as a comma, ampersand, or underscore. If this issue occurs with any other alphanumeric character, particularly í, é, á, ú, ö, ü, or ö, try removing it as well.
Published Date: Oct 7, 2016

Mac OS X, Mac OS 9: Use Current Startup Disk Control Panel or Mac OS 9.2.2

You should update your Mac OS 9.1 Startup Disk control panel to version 9.2.1 or later. Updating to Mac OS 9.2.2 is recommended for best Mac OS X compatibility (applicable when both are installed on the same computer).
This article has been archived and is no longer updated by Apple.
Note: If you are using Mac OS 9.2.1 and Mac OS X 10.1 , you already have the appropriate Startup Disk Control Panel installed and do not need to use the information in this document.

When both Mac OS 9 and Mac OS X are installed on the same computer, use Mac OS 9.2.2 for best results. You may update to Mac OS 9.2.2 from earlier Mac OS 9 versions by using Apple Software Downloads (http://www.apple.com/swupdates/).

If Mac OS 9.0 to 9.0.4 is installed and you are unable to select the Mac OS X System folder in your Mac OS 9 Startup Disk control panel, you should install Mac OS 9.2.2. The Mac OS X 10.2 Classic environment cannot use a Mac OS 9.0 to 9.0.4 System Folder.

For a temporary workaround, you may install Startup Disk control panel 9.2.1, available from software download document120024, "**Startup Disk 9.2.1 Document and Software**".

Notes

1. On some computer models, you can force-start up from Mac OS X by pressing the X key during startup.

2. If you have Mac OS X 10.0, you should restart your computer from Mac OS 9.1 or later before installing any Mac OS 9 software updates that you have downloaded.

3. For potentially related information, see technical document 107285, "**Macintosh: Computer Can Start Up From Mac OS X But Not From Mac OS 9**".

Published Date: Oct 7, 2016

Mac OS X 10.0: Does Not Recognize and Cannot Be Installed on UFS Disks Formatted by Drive Setup 1.8.1

Mac OS X 10.0 does not recognize Mac OS UFS disks or partitions formatted with Drive Setup 1.8.1, which was included with some versions of Mac OS 9.

This article has been archived and is no longer updated by Apple.

Symptom

1. In the Mac OS X 10.0 Installer, only a Mac OS Extended (HFS Plus) partition appears.
2. When started up from Mac OS X 10.0, a UFS disk or partition is not available (does not mount).

Solution

Mac OS X 10.0 and its Installer do not recognize a file system on Mac OS UFS disks or partitions formatted by Drive Setup 1.8.1. Subsequently, the Installer does not allow installation on such a disk or partition. To make this disk space available to Mac OS X 10.0, you must reinitialize the disk.

Warning: Always back up data you wish to keep before initializing a hard disk. Initialization erases all data on the hard disk.

Steps to initialize the startup disk:

1. Start up the computer from the Mac OS X 10.0 Installation CD-ROM.
2. At the first screen, choose Open Disk Utility from the Installer menu.

Note: Do not click Continue. If you do, you must restart from CD. There is not an option for backing up.

3. Select Drive Setup.
4. Select the hard disk you are going to reformat.
5. Click the Partition tab.
6. Set up the desired partition scheme and format.
7. Click Partition.

After this process is complete, Mac OS X 10.0 and its Installer can use the disk.

Published Date: Oct 7, 2016

Mac OS X: Ejecting (unmounting) a partition ejects all on same disk; File Sharing and Classic are affected

This article has been archived and is no longer updated by Apple.

If you eject (unmount) any partition on a disk, all partitions from the same disk are also ejected, except for a partition that contains the startup System Folder. File Sharing and Classic are also affected.

Note: Apple does not ship Mac OS X installed on partitioned hard disks. This document applies to systems using hard disks that have been intentionally reformatted and partitioned.

Tip: Ejecting a volume may not mean that it is physically ejected from the computer, but that it is no longer available (mounted) on the desktop or in a Finder window.

Tip: With Mac OS X 10.3 and 10.4, you can eject a single partition or volume, if you wish, by using Disk Utility. You cannot eject a partition via the Finder in Mac OS X 10.4.

Symptom

1. Effect on a startup disk:
When three or more partitions are on the startup disk, ejecting one partition causes all other partitions, except the startup partition, to also be ejected.

2. Effect on a non-startup disk:
Ejecting one partition on the disk causes all partitions to be ejected. Removable media are physically ejected.

3. Effect on File Sharing:
Sharing from the startup partition via AppleShare (AFP) becomes unavailable, but FTP remains available.

4. Effect on Classic:
If you eject the partition that contains Mac OS 9 and then try to start up Classic, you an alert box with this message appears:

"To start Classic, you need Mac OS 9.1 or later installed. See your documentation for instructions on installing this software."

Note: The volume containing the designated Classic System Folder (Mac OS 9) also counts as a startup partition. If Mac OS X and Mac OS 9 are installed on separate partitions and Classic is running, then neither of the two partitions would be ejected.

"To start Classic, you need Mac OS 9.1 or later installed. See your documentation for instructions on installing this software."

Solution

Check before you eject

Before you eject a partition, be sure that any files contained on it are no longer in use. Look at the Dock to see what applications are active.

To make a partition available again

For removable media, reinsert the media.

1. To use a hard disks partition, restart the computer to make all partitions available, or use Disk Utility instead. Follow these steps to use Disk Utility:
2. Open Disk Utility (/Applications/Utilities/).
3. Click the disclosure triangle to the left of the hard drive icon to display the names of your hard disk volumes and partitions.
4. Select any dimmed partition name in the Disk Utility window. It is not necessary to select more than one dimmed partition name.
5. Choose Mount from the Options menu. All non-mounted partitions on the selected hard disk appear on the desktop again.
6. Quit Disk Utility.

Published Date: Oct 7, 2016

Mac OS X 10.0: Creating a Login Hint

The Login pane of System Preferences states that "A hint can be created in the Password pane," but no such pane exists.
This article has been archived and is no longer updated by Apple.

Symptom

There is no apparent "Password pane" for showing hints when logging in to Mac OS X. There is only a Password field.

Solution

1. Choose System Preferences from the Apple menu.
2. Click Login.
3. Click the Login Window tab.
4. Be sure the checkbox for "Show password hint after 3 attempts to enter a password" is checked.
5. Click Show All.
6. Click Users.
7. Click the name of the user you wish to have a hint.
8. Click Edit User.
9. Type the text you want in the Password Hint field.
10. Click save.

The next time this user enters the wrong password three times while logging in, an alert box should appear that contains the hint.

Note: In the Mac OS X 10.1 release, the Users Preference pane on the Password tab provides a field to enter a password hint. The Login Window tab of the Login Preference page is still used for allowing/disallowing password hints.
Published Date: Oct 7, 2016

Mac OS X: Built-in Floppy Disk Drives Not Recognized

Mac OS X recognizes floppy disks from some third-party USB drives but not from built-in floppy disk drives.
This article has been archived and is no longer updated by Apple.

Symptom

- Built-in floppy disk drives show no sign of activity when a disk is inserted. The floppy disk does not appear on the desktop, or in a Finder window.
- You must eject the disk manually using a paper clip or restart from Mac OS 9 to eject the disk.

Solution

1. Open System Preferences.
2. Click Startup Disk.
3. Select a Mac OS 9 System Folder.
4. Restart the computer.
5. Either copy the information from the desired floppy disk(s) onto your hard disk or use the Disk Copy utility to create disk images of the floppy disk(s).

   Note: Be sure to put the copied files or disk images in a location that is accessible when the computer is started up from Mac OS X. A folder in your Home directory would be the best place to put the files.

6. Open the Startup Disk control panel.
7. Select the Mac OS X System Folder.
8. Restart the computer.

For related information on locating and using your Home directory, see the document Mac OS X: Using Your Home Directory.

Related Documents

106167 Mac OS X: Using Your Home Directory

Published Date: Oct 7, 2016

Mac OS X: Disk Appears Dimmed (or "Grayed Out") in the Installer

On certain computers, Mac OS X cannot install on a volume that is not completely contained within the first 8 GB of an ATA hard disk. Other possible causes that affect any Mac OS X-compatible computer are listed at the bottom of this article.
This article has been archived and is no longer updated by Apple.
This information is also available in the Before You Install document included with Mac OS X.

Symptom

A volume appears dimmed or "grayed out" in the Mac OS X Installer. You cannot select it as the install destination.

Note: "Volume" in this instance refers to either an ATA hard disk or an ATA hard disk partition.

SCSI hard disks may not be affected, regardless of their storage capacity.

Solution

If you do not have one of the computers listed specifically in the "Products affected" section, skip down to the "Additional Causes" section.

On the listed computers, Mac OS X must be installed on a volume that is contained entirely within the first 8 GB of its ATA hard disk. You may partition your hard disk to facilitate installation.

Note: Even if your hard drive was sold as having an 8 GB capacity, it may still be affected. Many hard drive manufacturers slightly understate the actual size of their hard drives to account for the space which is used in formatting. A hard drive sold as having an 8 GB capacity may actually be 8.25 GB, for example.

This generally breaks into three scenarios:

1. The hard disk is larger than 8 GB and is not partitioned.

   In this circumstance, you may partition the disk to create a volume that falls entirely within the first 8 GB of the disk.

2. A partitioned hard disk has at least one volume in the first 8 GB.

   For example: If you had a 12 GB disk divided into three partitions of 3 GB , 3 GB, and 6 GB, respectively, then the first and second would be available to the Installer and the third dimmed. You could choose to install only on the first or second partition. If the first two partitions are already full, you could start up from a Mac OS 9.x CD to backup data from one of the first two to the third partition, then empty or erase the backed-up partition to free space for Mac OS X.

3. A partitioned hard disk does not have a volume in the first 8 GB.

   For example: If you had a 20 GB disk divided into two equal partitions, both would appear dimmed in the Installer, since neither partition would be contained within the first 8 GB. In this circumstance, you may partition the disk to create a volume that falls entirely within the first 8 GB of the disk.

How to partition the disk

Warning: Always backup data you wish to keep before initializing and partitioning a hard disk. Initialization erases all data on the hard disk.

Important: If your hard disk was sold as 8 GB and appears affected by this issue, you should create at least two partitions to ensure that the symptom does not recur. The second partition could be just enough megabytes of unallocated space to offset the actual size of your disk, or it could be a significant portion. The choice of how to manage the disk space is up to you.

Steps to initialize and partition the startup disk:

1. Start up the computer from the Mac OS X 10.0 Installation CD-ROM.
2. At the first screen, choose Open Disk Utility from the Installer menu.

   Note: Do not click Continue. If you do, you must restart from CD. There is not an option for going back.

3. Select Drive Setup.

4. Select the hard disk you are going to partition.
5. Click the Partition tab.
6. Set up the desired partition scheme and format.

Note: This is the critical step for this issue. Be sure that the first partition stays within the first 8 GB of the disk.

7. Click Partition.

After the process is complete, you may install Mac OS X on the disk.

Additional Causes

The following circumstances may cause a volume to appear dimmed in the Installer on any Mac OS X-compatible computer. In Mac OS X 10.1 and later, you can move the mouse pointer over a dimmed volume to reveal more information about why the volume is unavailable.

1. The volume does not have enough available space to accommodate the installation of Mac OS X.
2. You are attempting to install an incompatible Mac OS X (client) update when Mac OS X Server is already installed. Not all Mac OS X updates can be installed with Mac OS X Server. A message to this effect may appear when you move the pointer over the volume in question.
3. The disk format of the affected volume is not compatible with Mac OS X or cannot be converted by the Installer. For more information see technical document 106229: "**Mac OS X 10.0: Does Not Recognize and Cannot Be Installed on UFS Disks Formatted by Drive Setup 1.8.1**"
4. The volume is read only, such as a CD-ROM disc.
5. The volume is of a type that cannot be used as a Mac OS X startup disk. USB hard drives, for example, are not fast enough to be Mac OS X startup disks, though they work normally as data volumes.

Related documents

24604: "**PowerBook G3 Computers: How to Identify Different Models**"
Published Date: Oct 7, 2016

Mac OS X 10.0: Included 9.1 CD Cannot Start Up Latest Computers

The Mac OS 9.1 CD-ROM included with Mac OS X does not start up computers introduced in early 2001.
This article has been archived and is no longer updated by Apple.

Symptom

A flashing question mark appears if you try to start up an affected computer from the Mac OS 9.1 CD included with Mac OS X 10.0.

Solution

Use the Mac OS 9.1 CD that came with your computer. Because your computer was produced after the release of Mac OS 9.1, it requires the computer-specific version of Mac OS 9.1 that came with it.
Published Date: Oct 7, 2016

Mac OS X 10.0: iSub Makes No Sound

In its initial release, Mac OS X 10.0 does not work with the iSub speaker.
This article has been archived and is no longer updated by Apple.

Symptom

Sound is heard from other speakers, but no bass comes from the iSub.

Solution

Mac OS X 10.1 provides sound for the iSub speaker, but there is not a graphical user interface component for iSub volume control. For related information, please see technical document 106562: "**Mac OS X 10.1: Hot-Plugged Speakers Do Not Respond to Volume Change**"
Published Date: Oct 7, 2016

Mac OS X 10.0: Do Not Use "root" as a User Name

The name "root" is reserved for system purposes and should not be used.
This article has been archived and is no longer updated by Apple.

Symptom

If you create a user named "root" in the Setup Assistant or Users control panel, you may encounter unforeseen difficulties caused by a conflict between two "root" user accounts.

When setup assistant creates the first user account it is created with a specific numeric user ID. This ID is different from the built in 'root' account and conflicts can arise if two 'root' accounts exist.

Solution

Do not use the name "root." Pick a different name for the user account.

The name "root" is reserved for system use in UNIX-like operating systems. Conflicts between the operating system's root user and your "root" user can arise if you choose this name.
Published Date: Oct 7, 2016

Mac OS X 10.0: Generic Folders Appear in the Dock and Applications Folder

Under certain conditions, applications appear as generic folders in the Dock and the Applications folder.
This article has been archived and is no longer updated by Apple.

Symptom

After installing Mac OS X 10.0, applications in the top-level Applications folder and in the Dock have icons that look like plain folders instead of their regular application icons.

This symptom may appear with or without this alert message:

> "Your Home folder is not available. The server where it's stored may be temporarily unavailable. . . Contact your network admin."

Solution

There are two possible solutions:

I. Disk Utility or fsck

First, try using Disk Utility or fsck to verify and repair the disk. If the issue persists, try the second solution.

For information on using Disk Utility or fsck, please see:

Article 106214: "**Mac OS X 10.0: Why, When, and How to Run fsck for File System Maintenance**"

II. Removing Preference files

You can resolve this issue when started up from Mac OS 9.x or Mac OS X. You must navigate to the filepath /Users/<user name>/Library/Preferences and delete three files. Follow these steps:

1. Open the Mac OS X disk in the Finder.
2. Open the Users folder.
3. Open the folder named after the affected user.
4. Open the Library folder in that user's folder.
5. Open the Preferences folder in that Library folder.
6. Drag these files to the Trash:
LSApplications
LSClaimedTypes
LSSchemes
7. If you are using Mac OS X, choose Log Out from the Apple menu.
8. Log back in as the affected user.
9. If you are working in Mac OS 9.x, restart the computer from Mac OS X and log in as the affected user.

The correct icons should now appear.
Published Date: Oct 7, 2016

Mac OS X 10.0: Available/Used Disk Space Does Not Appear in Show Info

The Show Info window does not display available or used disk space when the disk is selected from the desktop.
This article has been archived and is no longer updated by Apple.

Symptom

The Show Info window does not display available or used disk space.

Solution

Select the disk in a Finder window when using Show Info.

You can follow these steps:

1. Click Finder in the Dock.
2. Click Computer in the Finder window.
3. Select the disk you want to examine.
4. Choose the Show Info command from the File menu.

Note: If the Finder toolbar is not visible, you can click the show/hide button in the top right corner of the Finder window.
Published Date: Oct 7, 2016

Mac OS 9.1, Mac OS X 10.0: "To install this software you must boot with the Mac OS CD" Message

If you have not installed Mac OS 9.1 before installing Mac OS X 10.0, use this workaround in this document.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to install Mac OS 9.1, an alert box appears with this message:

> "To install this software you must boot with the Mac OS CD. Consult 'Before you install' for instructions."

Solution

Note: For purpose of this discussion, "volume" means a hard disk or hard disk partition.

If you plan to install both Mac OS X and Mac OS 9.1 on the same volume, you should install Mac OS 9.1 first.

This symptom occurs if you install Mac OS X on a volume that does not contain any version of Mac OS 9 and then follow with an attempt to install Mac OS 9.1 on the same volume.

To work around this issue, use the clean installation option in the Mac OS 9 Installer.

Related documents

58176, "Mac OS 8.5, Mac OS 9: Performing a Clean Installation"

Published Date: Oct 7, 2016

Mac OS X 10.0: Unexpected Classic Behavior When Using Mac OS 9.1 All or Base Extension Sets

Because the Mac OS 9.1 All and Base extension sets do not include items added by Classic, you may see strange or unexpected behaviors in Classic when either of these sets is in use.
This article has been archived and is no longer updated by Apple.

Symptom

Classic applications may not behave as expected. Some Classic windows may not be visible.

Solution

The Classic environment adds components to your Mac OS 9.1 System Folder that are necessary for it to work properly. The Mac OS 9.1 All and Mac OS 9.1 Base extension sets do not include some of these components. When you restart Classic using one of these extension sets, it does not behave as expected. To use one of these extension sets, create a copy and add any Classic components that have been disabled. You must be logged in to the computer as an Admin user to follow these steps:

1. Open a Classic application.
2. With the Classic application in the foreground, select Control Panels from the Classic Apple Menu.
3. Open the Extensions Manager control panel.
4. Choose the desired set from the Selected Set pop-up menu.
5. Choose Duplicate Set from the File menu.
6. Give the new copy a name, such as "Mac OS 9.1 All (Classic)", that will remind you what this set contains.
7. Choose "as Items" from the View menu.
8. Click the Package column in the Extensions Manager window to sort by package name.
9. Scroll down to locate the "Classic Compatibility Environment" package items (Figure 1).

Figure 1 The Extensions Manager control panel

10. Be sure that the checkbox next to each one of these items is checked. Click the box in the On/Off column to add an "x."
11. Close the Extension Manager control panel.

The next time you restart Classic, your new extension set will be active.

Update to Mac OS 9.2.1 and Mac OS X 10.1 to avoid this issue. Mac OS 9.2.1 contains Extension Manager control panel sets which already include Classic Environment components.
Published Date: Oct 7, 2016

Mac OS X, AirPort: Connecting to Third-Party Base Stations

You may need to format your password in a specific way before connecting to (or "associating with") third-party wireless access points with AirPort in Mac OS X

This article has been archived and is no longer updated by Apple.

Symptom

When you try to connect to (or "associate with") a third-party wireless access point, the password or WEP key does not appear to work.

Solution

Many third-party wireless access points use a WEP key or a password entered either as a string of hexadecimal numbers or as five ASCII characters.

To connect Mac OS X to a third-party wireless access point that is configured to use WEP, format your password one of these two ways:

1. Hexadecimal - precede the string with a dollar sign ($). For example: $123456789a
2. ASCII - enclose the characters in double quotes ("). For example: "magic"

Notes:

1. This is similar to the situation in which a third-party wireless client attempts to connect to an AirPort Base Station. But in this case, the WEP key or password must be obtained from the network administrator. It cannot be obtained using the Network Equivalent Password algorithm found in the AirPort Admin Utility.

2. Some third-party base stations offer features for supporting up to four WEP keys. On these systems, make sure that the AirPort password is entered in the primary password field (first). Other settings may be required so refer to the manufacturer's instructions for additional information.

Note: Wireless Internet access requires an AirPort Card, AirPort Base Station, and an Internet service provider, for which fees may apply. Some ISPs are not compatible with AirPort. America Online (AOL) works with AirPort software version 2.0 or later. For more information on AOL compatibility, see technical document 106591: "**AirPort: How to Use with AOL**." Range may vary with site conditions.

Published Date: Oct 7, 2016

Mac OS X: kmod_destroy Messages Are Harmless

The kmod_destroy message (sometimes seen in single-user and verbose modes) are normal and do not indicate a serious condition.
This article has been archived and is no longer updated by Apple.
If you start up Mac OS X in single-user mode or verbose mode, you may see some messages that look like this:

> Feb 15 17:22:09 localhost mach_kernel: kmod_destroy: com.apple.iokit.AudioDeviceTreeUpdater (id 16), deallocating 3 pages starting at 0x7204000

You may safely ignore these messages.

These messages only indicate that drivers are being unloaded to conserve memory when the devices they support are not found. These messages may also appear in the file /private/var/log/system.log.

If you are using the log to gather information about another issue, look for the lines just before or just after this text, starting from the last line of text and reading backwards several lines.
Published Date: Feb 17, 2012

Mac OS X 10.0: AirPort Does Not Work From UFS Partition

Mac OS X does not recognize an AirPort card when started up from a disk formatted as UNIX File System (UFS).
This article has been archived and is no longer updated by Apple.

Symptom

Your AirPort card is not recognized.

Solution

This issue is resolved in Mac OS X 10.1 and later. For versions of Mac OS X prior to 10.1, install Mac OS X on a disk or partition that is formatted using the Mac OS Extended (HFS Plus) format.

Note: Wireless Internet access requires an AirPort Card, AirPort Base Station, and an Internet service provider, for which fees may apply. Some ISPs are not compatible with AirPort. America Online (AOL) works with AirPort software version 2.0 or later. For more information on AOL compatibility, see technical document 106591: "**AirPort: How to Use with AOL**." Range may vary with site conditions.
Published Date: Oct 7, 2016

Mac OS X 10.0: Power Macintosh G3 Makes No Sound

Some Power Macintosh G3 computers do not produce sound in Mac OS X, even though the computer's sound is normal when started up from Mac OS 9.x.

This article has been archived and is no longer updated by Apple.

Symptom

No sound is produced when started up from Mac OS X on a Power Macintosh G3.

Solution

Install Mac OS X 10.0.3 Update or later to resolve this issue.

Published Date: Feb 17, 2012

Mac OS X 10.0: Disk First Aid Runs When Mac OS 9 Starts up After Using Mac OS X

It is normal for Disk First Aid to check your hard disk each time you restart the computer from Mac OS 9.x after using Classic in Mac OS X.
This article has been archived and is no longer updated by Apple.

Symptom

Disk First Aid checks your hard disk at system startup time, even though your computer was shut down properly. You see a message that your computer was not shut down properly.

Solution

This issue is resolved in Mac OS X 10.1 or later. For earlier versions:

Allow Disk First Aid to check your disk, then click Done. This issue does not indicate any actual trouble with your computer, despite the message you see on screen.

Each time you start up your computer from Mac OS 9.x, it checks the disk to see if the file system was "clean" or "dirty" after the previous shutdown. If you last started up from Mac OS X and used the Classic environment, Mac OS 9.x incorrectly determines that the previous shutdown was "dirty," or improper. This causes Disk First Aid to automatically check the disk at system startup time.

Note: If you have more than one hard disk or partition, then the one designated as the Classic startup volume in Mac OS X System Preferences gets erroneously marked "dirty."
Published Date: Oct 7, 2016

Mac OS X 10.0: Sleep Choice Dimmed When PCI Card Is Installed

A PCI card may make Sleep unavailable in the Apple Menu and prevent the computer from entering full sleep mode after a period of inactivity. This article has been archived and is no longer updated by Apple.

Symptom

The Sleep command in the Apple menu appears dimmed (or "grayed out"). The computer does go into sleep mode for a period of inactivity as defined in the Energy Saver pane of the System Preferences application.

Solution

Some PCI cards may prevent Mac OS X from entering sleep mode. Your computer should sleep when the PCI card is not present.

Note: Apple-original video cards installed in the dedicated video slot do not cause this symptom. If you have additional Apple Configure-to-Order video cards installed in other PCI slots, you may experience this issue.

Even if you have a PCI card that prevents full sleep, you may still use other Energy Saver features. You may set system sleep to "Never" in the Energy Saver pane of System Preferences while maintaining monitor sleep and hard disk spin down.

Published Date: Oct 7, 2016

Mac OS X: Deleting a Former User‘s Home Directory (Folder)

Mac OS X 10.2 and later make it easier to remove the files of a deleted user account. This document describes steps for doing so in Mac OS X 10.0 to 10.1.5.
This article has been archived and is no longer updated by Apple.

Symptom

After deleting a user in the Users pane of System Preferences, that former user's Home directory remains on the hard disk and cannot be deleted by dragging it to the Trash. The word "Deleted" is added to the name of the former user's Home directory. If you try to drag this folder to the Trash, an alert box appears with the message:

> "The item '<user name> Deleted' cannot be moved to the Trash because it cannot be deleted."

Note: Hierarchical directories on a disk appear on screen as folders. The terms "directory" and "folder" are interchangeable in the context of Mac OS X. Users of UNIX-like operating systems expect the term "home directory."

For related information, please see:

Article 106167: "**Mac OS X: Using Your Home Directory**"

Solution

With Mac OS X 10.2 or later, deleted users' folders are handled differently. The contents of the deleted folder are compressed on to a disk image, named "<deleted_username>.img". This disk image is placed in the Deleted Users folder located in the Users folder of the startup disk (/Users/Deleted Users/). Admin users may leave them for reference or simply drag them to the Trash, as desired. The steps below are not necessary.

In Mac OS X 10.0 to 10.1.5, the Home directory of a deleted user reverts to the ownership of the Admin user(s). This allows the Admin user to examine, move, or back up the contents of the former user's Home directory before disposing of it. Once you are certain that you have moved or backed up anything that you wish to keep from the former user's Home, you may follow these steps to delete the "Deleted" folder:

1. Log in to Mac OS X as an Admin user.
2. Open the Terminal utility.
3. Type: `sudo rm -rf /Users/shortname\\ deleted`
   Important: Where the example says "shortname," you would insert the former user's short name, which is the name (preceding "Deleted") on the Home directory you wish to delete. This step does not work if you have not already deleted the user in the Users pane of System Preferences.
   Warning: Type carefully. Specifying the wrong directory path can result in data loss, including to system files.
4. Press Return.
5. Type your Admin user password.
6. Press return.

The former user's Home directory is now deleted. The Finder may not display this change immediately.

Note: Deleting a former user's folder is an optional aesthetic action. Without following these steps, an Admin user may still reduce a former user's Home directory to a negligible amount of disk space by simply dragging all of its contents to the Trash. In the event that you cannot do this, it may be because the former user's Home directory was assigned to "System Administrator" (which is different from an Admin user). For more information on this scenario, see technical document 106840, "**Mac OS X: Unable to Access Delete/Former User's Files or Folders**".
Published Date: Oct 7, 2016

Your computer‘s name does not appear on the network

Use these troubleshooting steps to allow others to connect to your Mac OS X computer.

This article has been archived and is no longer updated by Apple.

There are three major types of symptom. Find the symptom that matches your computer, then choose the appropriate solution.

1. Your computer name does not appear in the Chooser, Network Browser, or Connect to Server dialog of other computers; but your computer does have access to the Internet or other network services.

2. Your computer name fails to appear in the Chooser, but it does appear in the Network Browser and in the Connect to Server dialog of other Mac OS X computers. Others can connect to your computer by entering its IP address and by using the Network Browser and Connect to Server dialog.

3. In addition to not appearing on the network, you discover that your computer does not have any network or Internet services at all.

Tip: The Connect to Server command is located in the Finder's Go menu in Mac OS X. The Chooser and Network Browser are found on computers with Mac OS 9 or in the Classic environment of Mac OS X. When using Network Browser or Connect to Server, Mac OS X computers appear by default in the Local Services neighborhood.

Though this article does not focus on troubleshooting Mac OS 9, it describes symptoms that you may notice from a computer with Mac OS 9 or earlier.

If your computer has Symptom 1:

This may indicate that file sharing is off.

1. Choose **System Preferences** from the **Apple** menu.
2. Click the Sharing icon.
3. If File Sharing is off, click Start.
4. Check to be sure there is a name in the Computer Name field. You may need to stop and restart file sharing for this change to take affect.

If you have not turned on AppleTalk, your computer will not appear in the Chooser (Symptom 2, described above).

Computers connected to the Internet via telephone modem ("dial-up") or DSL, for example, will not be able to browse by computer name. If you are connecting from remote locations across the Internet you must connect by entering the IP address or DNS name of a computer. Browsing for computer name requires that computers be on either a local area network (LAN) or a wide are network (WAN). The way your network is routed can affect your ability to browse by computer name. Firewalls may be configured to prevent File Sharing with remote locations. You may ask your network administrator or Internet service provider about firewalls and routing.

If your computer has Symptom 2:

This symptom simply indicates that AppleTalk is turned off, or that AppleTalk is active on more than one port (Note 3 below). To make AppleTalk active:

1. Choose **System Preferences** from the **Apple** menu.
2. Click Network.
3. Choose the network interface you wish to use from the Show pop-up menu ("Configure" menu prior to Mac OS X 10.1).
4. Click the AppleTalk tab.
5. Click the checkbox to select Make AppleTalk Active.
6. Click Save.
7. Click Show All.
8. Click Sharing.
9. Click Stop and wait for Sharing to stop.
10. Click Start and wait for Sharing to start.

If you turn AppleTalk on while Sharing is on, you may need to stop and restart Sharing for your computer to start broadcasting its AppleTalk name.

You may still connect using the computer's IP address when AppleTalk is off.

AppleTalk may not behave as expected if it is active on more than one port (multi-homing). Specific requirements must be met to multi-home with AppleTalk in Mac OS X versions 10.0 to 10.1.5. In Mac OS X 10.2 or later, you may only use AppleTalk on one network interface, or one of several port configurations of the same network interface (if thus configured). For more information, see technical document 106614: "Mac OS X: How to Set Up AppleTalk Multi-Homing"

If your computer has Symptom 3:

1. Check to ensure that your computer is physically connected to a network. This means checking your phone line, Ethernet cable, or AirPort card for a proper connection. (See Notes below.)
2. Choose System Preferences from the Apple menu.
3. Click Network.
4. Choose the network interface you wish to use from the Configure pop-up menu.
5. Click the TCP/IP tab.
6. Check to be sure that your computer has an IP address that is valid for your network. If your Configure menu is set to
7. Manually, you also need to ensure that the Router and Subnet Mask entries are correct for your network. If you are not sure, check with the network administrator.
8. Click Show All.
9. Click Sharing If Sharing is not already on, click Start.

To see instructions for installing an AirPort card and connecting the antenna, you may search the for the phrase "AirPort and install." Select the article that matches your computer.

Computers connected to the Internet via telephone modem ("dial-up") or DSL, for example, will not be able to browse by computer name. If you are connecting from remote locations across the Internet you must connect by entering the IP address or DNS name of a computer. Browsing for computer name requires that computers be on either a local area network (LAN) or a wide are network (WAN). The way your network is routed can affect your ability to browse by computer name. Firewalls may be configured to prevent File Sharing with remote locations. You may ask your network administrator or Internet service provider about firewalls and routing.

Related documents

106262: "Mac OS X 10.0: Connecting to AppleShare or File Sharing Requires TCP/IP"

Important: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some Internet service providers are not compatible with AirPort. Read more about AirPort requirements for wireless Internet access.

Published Date: Feb 17, 2012

Mac OS X 10.0: Connecting to AppleShare or File Sharing Requires TCP/IP

Mac OS X versions 10.0 to 10.0.4 connect to AppleShare (AFP, file sharing) only over the TCP/IP protocol, not over AppleTalk.
This article has been archived and is no longer updated by Apple.

Symptom

1. Some computers that appear in the Chooser do not appear in the Connect to Server dialog.

2. The following message appears in an alert box when you attempt to use the Chooser in the Classic environment:

"The AppleShare server you are trying to connect to appears not to support the IP protocol required by Mac OS X. Check with the server's administrator if a 'Server IP Address' is available."

Solution

Update to Mac OS X 10.1, which can connect to AppleShare over the AppleTalk protocol. The following section is useful if you do not yet have the Mac OS X 10.1 Update. It may also provide you with useful background information.

Connecting in Mac OS X 10.0 to 10.0.4

Mac OS X versions 10.0 to 10.0.4 only connect to AppleShare volumes over the TCP/IP protocol. Mac OS 8.6 and earlier, as well as some third-party server products, only offer AppleShare over the AppleTalk protocol. Since Mac OS X cannot connect to them, you can reverse the sharing relationship as a workaround: Set up File Sharing on the Mac OS X computer and then connect from the Chooser of the AppleTalk-only computer. Using this method, you can still copy files between the computers. Alternatively, you can update the earlier operating system to Mac OS 9 or later to achieve true bidirectional sharing.

Mac OS 9 and certain versions of AppleShare IP do not share over TCP/IP by default, so you must select this option. The following sections can help you do this or perform the workaround.

Making Mac OS 9 available via TCP/IP

1. Open the File Sharing control panel.
2. Click the checkbox to enable the "Enable File Sharing clients to connect over TCP/IP" option. (Your computer must already be set up on a TCP/IP network.)
3. Close the File Sharing control panel.

Mac OS X connects to Mac OS 9 computers that have this option enabled. Choose the Connect to Server command from the Go menu.

Making AppleShare IP servers available via TCP/IP

Using your server admin application, be sure that services are enabled over TCP/IP in addition to AppleTalk. This option is located in the AppleShare section of the admin application.

Connecting to Mac OS X from an earlier Mac OS

Computers using Mac OS 9 and earlier may connect to your Mac OS X computer from the Chooser, either by browsing AppleTalk names or by using an IP address.

Note: AppleTalk must be enabled on the Mac OS X computer for its name to appear in the Chooser.

Setting up File Sharing in Mac OS X

For information on setting up File Sharing in Mac OS X, see technical document 106461: "**Mac OS X: File Sharing**"

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"

TA20436_Mac_OS_X_Connecting_to_AppleShare_or_File_Sharing_Requires_TCPIP.pdf

Published Date: Oct 7, 2016

Mac OS X 10.0: No Sound on Power Mac G4 (Digital Audio) 533 MHz Dual Processor

This article describes an issue when a Power Mac G4 (Digital Audio) 533 MHz dual processor computer stops making sound shortly after it is turned on.
This article has been archived and is no longer updated by Apple.

Symptom

Sound functions as expected after you turn the computer on. This can range from a few seconds up to 30 minutes. After this period, the computer makes no more sound until it restarts or wakes from sleep.

Sound functions normally when started up from Mac OS 9.x.

Note: This issue has only been reported on this hardware configuration.

Solution

Install Mac OS X 10.0.3 Update or later to resolve this issue.
Published Date: Oct 7, 2016

Mac OS X: Applications Do Not Work Automatically If Utilities Folder Is Renamed

If you rename the Utilities folder, applications contained in that folder will not open automatically when called by other processes.
This article has been archived and is no longer updated by Apple.

Symptom

Any process that would normally make automatic or transparent use of items in the Utilities folder may fail.

Printing from an application, for example, fails without an alert when the path to the Print Center is not found.

Solution

1. Select the folder formerly named Utilities.
2. Choose Show Info from the File menu.
3. In the name field of the Info window, change the name back to Utilities.

Note: If, for some reason, you cannot tolerate a folder named Utilities, you may open the utility applications manually. In the example used above, printing would succeed if the Print Center application were first opened manually. This is not a preferred course of action.
Published Date: Oct 7, 2016

Mac OS 9.1: Scroll Wheel Does Not Respond After Hot Plugging

The scroll wheel on a third-party USB mouse or other input device may not respond after hot plugging.
This article has been archived and is no longer updated by Apple.

Symptom

The scroll wheel on your third-party mouse, trackball, or other device does not respond after hot plugging.

Note: "Hot plugging" describes the capability of USB and FireWire devices to be plugged in and unplugged while the computer is turned on.

Note: You may only experience this issue on a computer that originally came with Mac OS 9.1.

Solution

Restart the computer to regain scroll wheel function.
Published Date: Oct 7, 2016

Mac OS X 10.0: Using the Keyboard Control Panel in Classic

A Classic application must be in the foreground for Classic-defined function keys to take effect.
This article has been archived and is no longer updated by Apple.

Symptom

The function keys do not behave as defined in the Classic Keyboard control panel.

Solution

Function key actions defined in the Mac OS 9.x Keyboard control panel only work when the selected and running (or "foreground") application is a Classic application.

Mac OS 9.x keyboard definitions do not have precedence when a native Mac OS X (Carbon or Cocoa) application is in the foreground.
Published Date: Oct 7, 2016

Mac OS X 10.0: Software Update Privileges and Password Issue

If your Admin user password contains spaces, you may encounter privileges/permissions "errors" when installing software.
This article has been archived and is no longer updated by Apple.

Symptom

When installing software, you see an alert with a message stating that there has been an error due to permissions or privileges.

Solution

1. Choose System Preferences from the Apple menu.
2. Click Users.
3. Select your Admin user.
4. Click Edit User.
5. Create a new password that does not contain spaces.
6. Click OK.

Important: In addition to spaces, certain characters may produce unexpected results when used in a password. Generally, these characters are those you type with the Option key.

Published Date: Oct 7, 2016

Mac OS X 10.0: Software Update 1.3.1, 10.0.1 Update, and Epson Printer Driver Update Provide Feature Enhancement, Address Issues

Install Software Update 1.3.1, 10.0.1 Update, and the Epson Printer Driver Update for best system performance.
This article has been archived and is no longer updated by Apple.
Install these software updates for the best Mac OS X performance and feature set:

- Software Update 1.3.1
- 10.0.1 Update
- Epson Printer Driver Update

Important: Before you install, read these notes.

1. You must have an Admin user password to install this update. The password must not contain spaces and may not be blank. Certain characters may also produce unexpected results when used in a password. Generally, these characters are those you type with the Option key. To change your password, open System Preferences and click Users. Select an Admin user and click Edit User. Create a new password. For best security, put both numbers and letters within the first eight characters of the password.

2. You may experience unexpected results if you have installed third-party modifications to system software or if you have modified the operating system through other means, such as the Terminal. This precautionary statement does not apply to the normal installation of application software.

3. Do not interrupt the 10.0.1 Update installation process. You can monitor progress by clicking the Detailed Progress disclosure triangle. When viewing Detailed Progress, it is normal for the update to say "optimizing" for several minutes prior to completion. If you experience a power outage or other interruption during a software update installation, you should download the update from **Apple Software Updates** and reinstall it. "Optimizing" refers to the execution of a process called "update_prebinding," which allows applications to open faster by precalculating the address information of system data the applications use. This optimization is performed on the Mac OS X startup disk when Apple updates certain System components. Though update_prebinding may be executed manually, it is not necessary to use it at any other time.

Steps to install the updates

(You must first be connected to the Internet.)

1. Quit open applications, which are marked in the Dock with a small triangle. You cannot quit the Finder.
2. Choose System Preferences from the Apple menu.
3. Click the Software Update icon.
4. Click Update Now.

You may now install Software Update 1.3.1. You must install this update first to access the 10.0.1 Update, the Epson Printer Driver Update, and any future updates using the Software Update pane in System Preferences.

Repeat the steps above to install the 10.0.1 Update. Restart your computer after installing the 10.0.1 Update and repeat steps again to install the Epson Printer Driver Update.

About the Updates

Software Update 1.3.1

Software Update 1.3.1 includes enhancements to the Mac OS X Software Update engine, including:

- resumable downloads
- ability to work with proxy connections
- interface improvements

10.0.1 Update

This update delivers various enhancements to Mac OS X 10.0. It appears in the Software Update pane only after you install Software Update 1.3.1. After you install this update, the About This Mac window available in the Apple menu reflects the change.

This update may also be obtained from Apple Software Updates (http://www.apple.com/swupdates/).

Enhancements include:

- Improved functionality with iTunes.
- Improved compatibility with third-party USB and FireWire devices.
- Ability to make SSH connections.
- Classic environment refinements.
- Enriched compatibility with AFP (AppleTalk/AppleShare) volumes.

Epson Printer Driver Update

Install this update if you use an Epson USB ink jet printer with Mac OS X.

This update may also be obtained from Apple Software Updates (http://www.apple.com/swupdates/).
Published Date: Oct 7, 2016

Mac OS X: About Remote Login, OpenSSH, and Telnet

With Mac OS X 10.0.1 or later, your computer uses OpenSSH for remote login instead of telnet, rlogin, and rsh services. If you have a specific need for telnet, it may be re-enabled as explained below.
This article has been archived and is no longer updated by Apple.
The Sharing pane of System Preferences includes a checkbox for "Allow remote login." Installing the Mac OS X 10.0.1 Update (no longer available) or a later version of system software on your computer changes the behavior of remote login.

Mac OS X 10.0 behavior

Enabling the "Allow remote login" option turns on telnet, rlogin (remote login), and rsh (remote shell) services. You can then connect remotely to your computer by using a client application for any of these services.

Mac OS X versions 10.0.1 to 10.1 and later

Enabling the "Allow remote login" option turns on OpenSSH service. You can then connect remotely to your computer by using an SSH client application. Mac OS X 10.0.1 provides OpenSSH-2.3.0p1. For more information on OpenSSH, open the Terminal utility and type "`man ssh`" after the prompt.

Notes:

1. To install a software update, choose System Preferences from the Apple menu and click the Software Update icon. You may check for updates manually or on a schedule.

2. If you have installed an open source version of OpenSSH, the 10.0.1 Update will overwrite it. This may apply to later versions of system software.

3. Depending on system software version, you may experience a delay when you enable the "Allow remote login" option. The delay is due to the time it takes to start up the OpenSSH service. Click the checkbox only once. Clicking multiple times may result in the box appearing checked even if the service is off. You may correct this symptom either by restarting the computer or by using the Terminal utility to delete the file `/var/run/sshd.pid`.

Enabling telnet, rlogin, and rsh in Mac OS X 10.0.1 and later

Important: Telnet, rlogin, and rsh send information (including passwords) over the network unencrypted. OpenSSH provides greater security. You should only revert to telnet, rlogin, and rsh if your network environment requires them.

You must be logged in as an Admin user to follow these steps. After each step in which you type a command, press the Return key.

1. Open the Terminal utility.
2. Type `sudo pico /etc/inetd.conf`
3. Type in your admin password.
4. Press Return.
5. The file inetd.conf will open in the pico text editor. Using the arrow keys to navigate, scroll down until you see the lines for:
#telnet
#shell
#login
6. Remove the pound "#" character from the line of each service you want to re-enable.
7. Save the file (press Control-O), press Return, and exit pico (press Control-X).
8. Choose Restart from the Apple menu.

When the computer has restarted, the services you enabled should be available.
Published Date: Oct 7, 2016

Mac OS X: Cannot Use Mac OS 9 Software Update Control Panel in Classic

The Classic environment of some Mac OS X versions (10.0 to 10.0.4 and 10.2 or later) does not allow use of the Mac OS 9 Software Update control panel, and the Software Update pane of System Preferences does not update Mac OS 9 system software.
This article has been archived and is no longer updated by Apple.

Symptom

Mac OS X 10.0 to 10.0.4 **and** 10.2 and later:

If you try to use the Software Update control panel within the Classic environment, an alert box appears with this message:

> "That application or control panel is not supported by Classic."

Mac OS X 10.1 to 10.1.5:

The Software Update control panel opens within the Classic environment. It reports that your software is up to date, but that is not necessarily accurate.

Solution

Restart the computer from Mac OS 9 to use the Software Update control panel. After updating your software, switch the startup System Folder back to Mac OS X. For more information about changing the startup operating system, see article 106667, "**How to Switch Between Mac OS 9 and Mac OS X**".
Published Date: Oct 7, 2016

Mac OS X 10.0: Classic Does Not Work From a UFS Disk on First Use

When Mac OS X 10.0 is installed on a disk or disk partition that uses the UNIX File System (UFS) format, use the steps in this article to open the Classic environment for the first time.
This article has been archived and is no longer updated by Apple.

Symptom

The Classic environment does not open.

Solution

To use Classic, you must already have Mac OS 9.1 installed on a separate volume that uses the Mac OS Extended (HFS Plus) format. This issue is resolved in Mac OS X 10.1 and later.

For affected Mac OS X versions, follow these steps to open the Classic application for the first time:

1. Log in to Mac OS X as an Admin user.
2. Choose Go To Folder from the Go menu.
3. Type `/System/Library/CoreServices`
4. Click Go.
5. Drag the item Classic Startup to the OS 9.1 Volume.
6. Open the Terminal utility.
7. Type `cd /Volumes/HFSvolume/Classic\\ Startup.app/Contents/Resources`
Note: In place of "HFSvolume," type the exact name of your Mac OS 9.1 volume.
8. Press Return.
9. Type `chmod u+s TruBlueEnvironment`
10. Press Return.
11. Type `sudo chown root TruBlueEnvironment`
12. Press Return.
13. Enter your Admin user password at the prompt and press return.
14. Quit Terminal
15. Open "Classic Startup" from the Mac OS 9.1 volume.
16. Click OK when prompted to add Resources.

Note: You only need to open Classic from the HFS Plus volume the first time that you use it with a specific Mac OS 9.1 System Folder. This allows Classic to install required components into the Mac OS 9.1 System Folder. Classic opens normally from the original copy on the UFS volume on subsequent use. If you change the Classic startup volume or remove the components installed by Classic, you must open the copy of Classic that you have installed on the HFS Plus volume.
Published Date: Oct 7, 2016

Mac OS X 10.0: "You are running Classic without superuser (root) Privileges" Message

An alert box with a message about "superuser" privileges appears when attempting to open Classic under a certain circumstance.
This article has been archived and is no longer updated by Apple.

Symptom

As Classic begins to open, an alert box appears with the message:

> "You are running classic without superuser (root) Privileges. Ensure that TruBlueEnviroment is setuid and owned by root, or re-install Classic".

Note: For other versions of Mac OS X, see these related technical documents:

106639: "**Mac OS X 10.1: You are running Classic without superuser (root) Privileges' Message**"
106584: "**Mac OS X 10.2: You are running Classic without superuser (root) Privileges' Message**"

Solution

This happens if you select the checkbox for "Ignore privileges on this volume" in the Show Info window for the Mac OS X startup volume, and attempt to use Classic without first restarting the computer. Either restart the computer or deselect this checkbox to use Classic.

Important: If you don't have a specific need to ignore privileges, you should not use that option. Your computer is more secure when privileges are active.
Published Date: Oct 7, 2016

Mac OS X 10.0: Deselect the PPP "Wait for Dial Tone" Option in Italy

A computer in Italy may not make a PPP connection if the option to "Wait for dial tone before dialing" is enabled.
This article has been archived and is no longer updated by Apple.

Symptom

When attempting a PPP connection, an alert box with this message appears:

> "PPP Connect Error. No dial tone detected. Check phone line connection and try again."

Solution

This occurs when a modem in the nation of Italy encounters a nonstandard dial tone or line signal.

Note: Updating to Mac OS X 10.1 resolves this issue.

Users of Mac OS X versions 10.0 to 10.0.4 may follow these steps to ignore the dial tone:

1. Choose System Preferences from the Apple menu.
2. Click Network.
3. Set the Configure pop-up menu to Internal Modem.
4. Click the Modem tab.
5. Be sure that the option for "Wait for dial tone before dialing" is not selected.

Published Date: Feb 17, 2012

Mac OS X 10.0: Setup Assistant Does Not Accommodate DSL User Name and Password

The Mac OS Setup Assistant used during the installation process does not allow you to set up a user name and password for connecting to the Internet via DSL.
This article has been archived and is no longer updated by Apple.

Symptom

The DSL option in the Setup Assistant only allows for DHCP and BootP.

Solution

1. Choose System Preferences from the Apple menu.
2. Click Network.
3. Click the PPPoE tab.
4. Click the checkbox to select the "Connect using PPPoE" option
5. Enter the information required by your DSL Internet service provider.

Published Date: Oct 7, 2016

Mac OS X: Using LocalTalk Hardware and Serial Port Devices

This document provides an overview of when Mac OS X will and will not work with serial port devices and LocalTalk-based hardware.

This article has been archived and is no longer updated by Apple.

LocalTalk Hardware

Mac OS X does not work with LocalTalk hardware. A third-party Ethernet-to-LocalTalk adapter may allow you to use your LocalTalk device with Mac OS X. You can find such adapters at the Macintosh Products Guide. Check the third-party manufacturer's specifications for Mac OS X compatibility.

Alternatively, you can restart the computer with Mac OS 9.1 to use a LocalTalk device.

For more information, see technical document106170: "**Mac OS X 10.0: Classic Does Not Allow Direct Hardware Networking Access**."

Note: LocalTalk (hardware) should not be confused with AppleTalk (a networking protocol). You can use AppleTalk devices with Mac OS X, as long as they are not connected to an external serial port with LocalTalk hardware.

Serial Port-Based Modems

Mac OS X is compatible with serial port-based modems and PPP connections. Serial port-based modems work with PPP applications such as Mail and Microsoft Internet Explorer, both natively and in the Classic environment. Use the Mac OS X Internet Connect application to make the PPP connection if needed, but afterwards you may use a Classic PPP application successfully.

Classic (non-PPP) modem software, such as a Classic fax application or a terminal emulation application, will not work. If you need to use this software, start up with Mac OS 9.1.

Other Serial Port-Based Hardware

Other hardware devices that use a serial port do not work in the Mac OS X Classic environment, but they may work in the native Mac OS X environments. Verify compatibility of the hardware in question with the product's manufacturer.

If you use a device that adds a serial port to a computer that did not originally come with one (such as a GeeThree Stealth Serial Port, or Griffin Technology gPort or CubePort), you should verify compatibility information of the device with the manufacturer.

Published Date: Oct 7, 2016

Mac OS X 10.0: Webdings and Zapf Dingbat Fonts Do Not Work in TextEdit

TextEdit does not correctly recognize the Webdings and Zapf Dingbats fonts.
This article has been archived and is no longer updated by Apple.

Symptom

After selecting Webdings or Zapf Dingbat, you get an unexpected font choice (Hiragino Kaku Gothic Pro W3).

Solution

This is a known issue for this version of software.
Published Date: Oct 7, 2016

Mac OS X 10.0: Menu Bar Clock Can Obscure Other Menu Bar Items

If menus enter the space of the menu bar clock, the clock appears in the foreground, obscuring the menus.
This article has been archived and is no longer updated by Apple.

Symptom

The menu bar clock is drawn over a menu.

Solution

The menu bar clock can obscure menus of an application if the application places enough menus in the menu bar to extend into the clock's space. The lower your display resolution, the greater the possibility that this will occur. To address this, you may either increase display resolution or turn off the menu bar clock. Choose System Preferences from the Apple menu to perform either of these tasks.
Published Date: Feb 17, 2012

Mac OS X: IP Configuration "in use by" Message, Networking Disabled

Assigning an IP address that is already in use disables TCP/IP networking.
This article has been archived and is no longer updated by Apple.

Symptom

Network services become unavailable to the computer you are setting up. You may see an alert box with a message that says (Figure 1):

"IP Configuration <IP Address> is in use by <MAC Address>"

Figure 1 Duplicate IP address message

Solution

In the Network pane of System Preferences, assign an IP address that is not in use. Consult your network administrator if you have questions about an appropriate IP address. If connectivity is not restored after saving your change in System Preferences, then either restart the computer or unplug and replug the Ethernet cable.

You can also resolve the IP address conflict by locating the other device using the affected IP address, then either reconfiguring it or disconnecting it from the network. After you do this, you may need to switch your computer to a different configuration, save it, then switch back to the original IP address in order for the changes to take effect.

Published Date: Feb 17, 2012

Mac OS X 10.0: Software Update, Mac Help, or Sherlock "is not able to connect to the Internet" Message

Connect first to www.apple.com to resolve a particular situation in which Software Update, Sherlock, or Mac Help fails to connect.
This article has been archived and is no longer updated by Apple.

Symptom

You computer is clearly connected to the Internet, but an alert box with this message appears when you attempt to use the Software Update control panel in Mac OS X:

> "Software Update is not able to connect to the Internet."

A similar message may appear for Sherlock or when using Mac Help to connect to the Internet.

Solution

You can work around this by connecting to www.apple.com in a Web browser before using Software Update, Sherlock, or Mac Help.

Alternatively, you could use the Network Utility included with Mac OS X to ping www.apple.com before using them.

Your Internet service provider or network administrator provides a DNS server that converts names like "apple.com" into their numerical IP addresses. Apple has identified certain DNS servers that may provide Software Update with an unexpected response, producing the alert described above.

Installing the Mac OS X 10.0.2 Update will prevent this issue.
Published Date: Feb 17, 2012

Macintosh Manager: The Managed Preference Model

This document describes how to use Managed Preferences in Macintosh Manager.
This article has been archived and is no longer updated by Apple.

1. An Overview of the Preference Model

The Managed Preference model was first included in Macintosh Manager version 1.3 to allow greater control and management of user preferences.

Note: Some system-specific preferences are not affected by the Managed Preference model.

Preference Storage

When a user logs in to Macintosh Manager, preferences specific to that user are accessed and used by the client computer. Mac OS 9 clients differ from Mac OS 8.6 and earlier clients in where these preferences are stored while a user is logged in.

Important: This document does not discuss how preferences are handled when "Startup Disk" is selected as the location where documents are stored for a workgroup in the Workgroups: Options pane of the Macintosh Manager admin application. For more information on this behavior, please see technical document 106932, "**Macintosh Manager: Managed Preference Behavior When Group Documents Volume is the Startup Disk**".

When logged in to Macintosh Manager

Mac OS 8.6 and earlier clients automatically copy user-specific preferences from the server to the local workstation when a user logs in. These preferences are accessed locally during the Macintosh Manager session. When the user logs out, the preferences may or may not be copied back to the server, depending on the configuration.

By default, Mac OS 9 clients access the preferences files on the server over the network during the Macintosh Manager session.

When logged out of Macintosh Manager

By default, both Mac OS 9 clients and Mac OS 8.6 and earlier clients store user preferences on the server when a user is not logged in.

Preference Model Components

The Preference Model allows you to group preferences into three special categories: Initial Preferences, Forced Preferences, and Preserved Preferences. The first two categories work with Mac OS 9 client computers, and all three categories can be used with Mac OS 8.6 and earlier clients.

The Macintosh Manager Server extension automatically creates a folder called Managed Preferences on the server the first time any user whose preferences will be stored on the server logs in. By default, this Managed Preference folder is created in the Macintosh Manager shared folder on the server. Inside this folder are the three folders needed for the new preference model to function: Forced Preferences, Initial Preferences, and Preserved Preferences.

Figure 1 Managed Preferences folder

2. Initial Preferences

The Initial Preferences folder allows a user to receive preconfigured preferences the first time she opens an application that uses those preferences. The Initial Preferences folder only gives the user any specific preference file once. If a user already has the preference file in her own preference folder, Macintosh Manager will not replace her copy of the preference file with the copy in the Initial Preferences folder. This process is repeated each time a user logs in, so you can place additional preference files in the Initial Preferences folder later if you install additional software. When a user opens the new software for the first time, a copy of the preference files for the new software will be placed in her Preferences folder.

There are also some preference files and folders that get created when a user logs in for the first time, whether or not the Preference Model is active. These items include, but are not limited to:

- Apple Menu Options Prefs
- Internet Preferences
- Keyboard Preferences
- Keychains (a folder)

- Mac OS Preferences
- TSM Preferences
- Location Manager Prefs (a folder)
- AppSwitcher Preferences
- User Prefs

These files and folders are created during the client startup process before the Preference Model runs. Files and folders in the Initial Preferences folder matching any of these items are therefore not copied. Note: Aliases and invisible files placed in the Initial Preferences folder will not work, and should not be used.

Usage Example

The following is an example of how the Initial Preferences can be used to provide all users with preconfigured bookmarks and preferences for Internet Explorer the first time they log in.

Setup

1. On your administration computer, set up bookmarks and preferences in Internet Explorer that you want all your users to have the first time they log in to Macintosh Manager.
2. Copy the entire Explorer folder from the Preferences folder in the System Folder of your administration computer to the Initial Preferences folder on the Macintosh Manager server.

Implementation

Mac OS 9 client

1. A Macintosh Manager user logs in to a client computer.
2. The Macintosh Manager server scans the Initial Preferences folder and detects a folder named Explorer.
3. The Macintosh Manager server scans for a folder named Explorer in the user-specific Preferences folder in the Users folder on the document storage sharepoint for the user's workgroup.
4. If Macintosh Manager does not detect a folder named Explorer there, Macintosh Manager copies the Explorer folder and the files and folders within it to that location.
5. If Macintosh Manager detects a folder named Explorer, neither the Explorer folder nor any of the files inside it is copied.

Mac OS 8.6 and earlier client

1. A Macintosh Manager user logs in to a client computer.
2. The Macintosh Manager server scans the Initial Preferences folder and detects a folder named Explorer.
3. The Macintosh Manager server scans for a folder named Explorer in the user-specific Preferences folder in the Users folder on the document storage sharepoint for the user's workgroup.
4. The Macintosh Manager server also scans for a folder named Explorer in the Preferences folder in the System Folder on the client computer.
5. If Macintosh Manager does not detect a folder named Explorer in either or both of the locations, it copies the Explorer folder in the Initial Preferences folder to either or both locations where an Explorer folder is not already present.
Note: If an Explorer folder already exists in one location, but not the other, the Explorer folder in Initial Preferences is only copied to the location where an Explorer folder does not already exist. This can lead to an inconsistent user experience from one client computer to another.

Figure 2 Initial Preferences logic process

3. Forced Preferences

The Forced Preferences folder forces a user to receive the same preference file or folder of files every time he logs in on any Macintosh Manager client computer. The items in the Forced Preferences folder will replace items with the same names in the Preferences folder the user will be using regardless of whether he has newer or older items. For Mac OS 9 clients, the items in the Forced preferences are copied to the user-specific Preferences folder in the Users folder in the Macintosh Manager folder on the server. For Mac OS 8.6 and earlier clients, Macintosh Manager copies the file only to the Preferences folder in the System Folder of the client computer. It does not copy them to the user-specific Preferences folder on the server.
Note: Aliases and invisible files placed in the Forced Preferences folder will not work, and should not be used.

Usage Example

The following is an example of how the Forced Preferences can be used to provide all users with preconfigured bookmarks and preferences for Internet Explorer every time they log in.

Setup

1. On your administration computer, set up bookmarks and preferences in Internet Explorer that you want all your users to have every time they log in to Macintosh Manager.
2. Copy the entire Explorer folder from the Preferences folder in the System Folder of your administration computer to the Forced Preferences folder on the Macintosh Manager server.

Implementation

Mac OS 9 client

1. A Macintosh Manager user logs in to a client computer.
2. The Macintosh Manager server scans the Forced Preferences folder and detects a folder named Explorer.
3. The Macintosh Manager server scans for a folder named Explorer in the user-specific Preferences folder in the Users folder on the document storage sharepoint for the user's workgroup.
4. If Macintosh Manager does not detect a folder named Explorer there, Macintosh Manager copies the Explorer folder from the Forced Preferences folder on the server to that location. If Macintosh Manager detects an Explorer folder there, Macintosh Manager updates the existing folder, replaces older files with newer files that have the same names, and adding any files that you've put in the Forced Preferences folder since the last time the client logged in. If there are files or folders in the user's Preferences folder with unique names that don't match files in the Forced Preferences folder, Macintosh Manager does nothing to them. If you have concerns about these files accumulating and consuming disk space, check the user's Preferences folder as often as you think necessary to prevent this.

Mac OS 8.6 or earlier client

1. A Macintosh Manager user logs in to a client computer.
2. The Macintosh Manager server scans the Forced Preferences folder and detects a folder named Explorer.
3. The Macintosh Manager server scans for a folder named Explorer in the Preferences folder in the System Folder on the client computer.
4. If Macintosh Manager does not detect a folder named Explorer there, Macintosh Manager copies the Explorer folder from the Forced Preferences folder on the server to that location.
5. If Macintosh Manager detects an Explorer folder there, Macintosh Manager updates the existing folder, replaces older files with newer files that have the same names, and adding any files that you've put in the Forced Preferences folder since the last time the client logged in. If there are files or folders in the user's Preferences folder with unique names that don't match files in the Forced Preferences folder, Macintosh Manager does nothing to them. If you have concerns about these files accumulating and consuming disk space, check the user's Preferences folder as often as you think necessary to prevent this.

Figure 3 Forced Preferences logic process

4. Preserved Preferences

The Preserved Preferences folder allows an administrator to set the preferences that are copied between the server and Mac OS 8.6 or earlier clients during login and logout. Important: This portion of the preference model is only applicable to Mac OS 8.6 or earlier client computers. The Preserved Preference portion of the preference model behaves differently than the Initial Preferences and Forced Preferences in that the files and folders you put in the Preserved Preferences folder are never actually copied. Macintosh Manager scans the files and folders in the Preserved Preferences folder, and builds a list containing the names of all the items inside. Macintosh Manager then uses this list to determine which preferences need to be copied back and forth from the server to the client computer during login and logout instead of copying the entire contents of the Preferences folder. You can use the Preserved Preferences folder to decrease login and logout time by limiting the amount of preferences that are copied.
Note: Aliases and invisible files placed in the Preserved Preferences folder will not work, and should not be used.

There are some preferences that are always copied, whether or not they exist in the Preserved Preferences folder and some that are never copied, even if they exist in the Preserved Preferences folder:

Always Copied Preferences	Never Copied Preferences

Appearance Preferences	Energy Saver Preferences
Control Strip Preferences	AppleTalk Preferences
Date & Time Preferences	ColorSyncTM Profiles
Finder Preferences	Desktop Picture Prefs
Mac OS Preferences	Extensions Manager Preferences
Panels Preferences	Client Prefs
User Prefs	TCP/IP Preferences
	Multi-User Items
	Multi-User Prefs
	Remote Access
	Open Transport Preferences
	Users & Groups Data File
	Network Assistant Preferences

When a user logs in on a Mac OS 8.6 or earlier client computer, Macintosh Manager builds a list of the names of the files and folders inside the Preserved Preferences folder. Macintosh Manager adds the names of the items in the 'Always Copied' list, creating a combined list. Macintosh Manager compares the combined list against the items in the user-specific Preferences folder on the server. Macintosh Manager then copies all the files and folders whose names exist on the combined list from the user-specific Preferences folder on the server to the local system's Preferences folder. Any files or folders that are already in the local Preferences folder that have the same name as those listed in the combined list are deleted. If an item on the list does not exist in either location, the item is skipped.
Note: Any item that has the same name as an item in the Forced Preferences folder is removed from the list, and is not copied.

Figure 4 Preserved Preferences logic process

When the user logs out, the same process runs to determine which preferences are copied from the local system's Preferences folder back to the user's server based Preferences folder. All items matching those on the combined list are then deleted from the Preferences folder on the client computer. Note: A user who then logs in using a System Access workgroup may not be able to use some applications, because the preferences for the applications do not exist in the Preferences folder.

5. Administration of the Managed Preference Model

Creation of the Managed Preferences folder

The Managed Preferences folder, and the three folders within it are created automatically by Macintosh Manager the first time any member of a workgroup logs in. Note: The folder is created in the same folder as the Users folder at the workgroup document sharepoint. This sharepoint is designated in the Options sub tab under the Workgroups tab in the Macintosh Manager administration application. The default location is the Macintosh Manager folder on the server.

Activation of the Managed Preference Model

The Managed Preferences model is made active when any item is placed in one of the three folders in the Managed Preferences folder. "Copy only Internet preferences or administrator defined preferences" must be selected under the Security tab which is under the Global tab in the Macintosh Manager administration application for the Preserved Preferences portion of the Managed Preferences model to function.

Using Multiple Managed Preferences Folders

Each workgroup uses the Managed Preferences folder on the workgroup documents volume for that workgroup. Different workgroups can use different sets of Managed Preferences only if they use different workgroup document locations. Conversely, in order to use the same Managed Preferences folder for workgroups with different workgroup documents locations, the Managed Preferences folder must be copied to each workgroup documents location.
Published Date: Feb 17, 2012

Mac OS X: Using AppleTalk With PPPoE

Follow the steps in this document to use AppleTalk and PPPoE on the same Ethernet port.
This article has been archived and is no longer updated by Apple.

Symptom

If you are connected to the Internet with PPPoE and try to turn on AppleTalk at the same time, a message appears in the AppleTalk pane that says:

> "AppleTalk cannot be used with PPPoE. To use AppleTalk, select the Advanced pane and create a new Ethernet configuration."

Note: This does not affect your computer in two circumstances.

1. Your computer connects to an AirPort Base Station or other router that has already made the actual PPPoE connection. Your computer is not in a direct PPPoE connection, so you should not have selected the PPPoE checkbox.
2. You enable AppleTalk and PPPoE on two different network interfaces, such as AirPort and Ethernet.

Solution

You can create multiple configurations of the Ethernet port to allow access to AppleTalk.

Follow these steps:

1. Choose System Preferences from the Apple menu.
2. Click Network.
3. If you are not logged in to Mac OS X as an Admin user, click the padlock to enter an Admin user name and password.
4. Choose Active Network Ports from the Show pop-up menu.
Note: Some names have changed. For versions prior to Mac OS X 10.1, choose Advanced from the Configure pop-up menu.
5. Click Built-in Ethernet to select it.
6. Click Duplicate.
7. Rename the new port configuration, if desired, then click OK.
8. Choose the name of the port configuration you just created/named from the Show pop-up menu.
9. Click the PPPoE tab.
10. Deselect "Connect using PPPoE".
11. Click the AppleTalk tab.
12. Click the checkbox to select Make AppleTalk Active.
13. Click Save.

Published Date: Feb 17, 2012

Macintosh Manager: How to Use QuarkXpress "XTensions" in a Macintosh Manager Environment

Use steps described here to resolve QuarkXpress "XTensions" alert messages in a Macintosh Manager environment.
This article has been archived and is no longer updated by Apple.

Symptom

When starting QuarkXpress on a computer using Macintosh Manager, an alert box appears with this message:

> "Xtensions Loading Error
>
> "The following Xtensions software was unable to load. For more information select the Xtension and click 'About.'"

Figure 1 QuarkXpress alert box

This alert box does not appear when you log in with System Access.

Solution

Some QuarkXpress XTensions must have read and write access to function completely. You can provide this access by moving the QuarkXpress folder into the "Other Applications·" folder. For more information on using and setting up the Other Applications· folder, please see:

Article 75333: "**Macintosh Manager 1.3: Read Me**"

If moving the QuarkXpress folder into the Other Applications· folder does not resolve the issue, follow these steps:

1. Log in to the computer with System Accesss.
2. Open QuarkXpress.
3. Check the XTensions Manager in QuarkXpress to see which XTensions are still reporting an error status.

Figure 2 The QuarkXpress Xtensions Manager

Important: Do not confuse the Mac OS Extensions Manager control panel with the QuarkXpress Xtensions Manager feature.

The XTension that reports an error status (Figure 2) while in System Access is not functioning because it must be updated or replaced. Its error status is not caused by Macintosh Manager. Please contact QuarkXpress (www.quarkxpress.com) for assistance with XTensions that do not load in QuarkXpress.

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"
Published Date: Feb 17, 2012

Mac OS X 10.0: 10.0.3 Update and Before You Install Information

The Mac OS X 10.0.3 Update adds audio CD burning capability to iTunes for Mac OS X, updates system software, addresses issues, and improves performance.

This article has been archived and is no longer updated by Apple.

There are two versions of the update available to bring your computer to Mac OS X v10.0.3:

10.0.3 Update (15 MB)
This update is required if you have not yet applied the 10.0.2 Update.

10.0.3 Update (1.6 MB)
This smaller update is appropriate if you have already installed the 10.0.2 Update.

Note: The 10.0.2 Update is no longer available from Apple. You should use the 10.0.3 Update instead of 10.0.2.

There are two ways to get a 10.0.3 Update:

1. Open System Preferences and use the Software Update feature. When you click Update Now, the Software Update pane automatically displays the correct version of the 10.0.3 update for your computer.

2. Download the standalone installer from Apple Software Updates (http://www.apple.com/swupdates/). Only the 10.0.3 Update (15 MB) is available here.

Important: Read Before Installing

1. You must have an Admin user password to install this update. The password must not contain spaces and may not be blank. Certain characters may also produce unexpected results when used in a password. Generally, these characters are those you type with the Option key. To change your password, open System Preferences and click Users. Select an Admin user and click Edit User. Create a new password. For best security, put both numbers and letters within the first eight characters of the password.

2. The Software Update pane in System Preferences will only display other updates after Software Update 1.3.1 has been installed.

3. Mac OS X 10.0 and either the 10.0.1 or 10.0.2 Update must be installed before a 10.0.3 Update.

4. You may experience unexpected results if you have installed third-party modifications to system software or if you have modified the operating system through other means, such as the Terminal. This precautionary statement does not apply to the normal installation of application software.

5. The 10.0.3 Update installation process should not be interrupted. You can monitor progress by clicking the Detailed Progress disclosure triangle. When viewing Detailed Progress, it is normal for the update to say "optimizing" for several minutes prior to completion. If you experience a power outage or other interruption during a software update installation, you should download the standalone installer from Apple Software Updates and reinstall it. "Optimizing" refers to the execution of a process called "update_prebinding," which allows applications to open faster by precalculating the address information of system data the applications use. This optimization is performed on the Mac OS X startup disk when Apple updates certain system components. Though update_prebinding may be executed manually, it is not necessary to use it at any other time.

Steps to install the updates using Automatic Software Update

(You must first be connected to the Internet.)

1. Quit open applications, which are marked in the Dock with a small triangle. You cannot quit the Finder.
2. Choose System Preferences from the Apple menu.
3. Click the Software Update icon.
4. Click Update Now.

Note: If you have not yet installed Software Update 1.3.1, you must do so to access other updates using the Software Update feature of System Preferences. After installing Software Update 1.3.1, repeat the above steps to install the 10.0.1 Update (if needed), followed by a 10.0.3 Update.

About the Update

10.0.3 Update Enhancements

This update delivers various enhancements to Mac OS X (10.0.1). Enhancements delivered with the 10.0.3 Update include:

- Enhances iTunes (for Mac OS X) to allow audio CD burning when used with Apple and compatible third-party CD-RW drives.
  Note: You must download iTunes 1.1.1 or later to use this feature. iTunes 1.1.1 is available by the same methods as the 10.0.3 Update.
- Ensures full visibility of file lists in directories that contain a large number of items.
- Improved compatibility with third-party USB and FireWire devices.
- Classic environment refinements.
- Enriched compatibility with AFP (AppleTalk/AppleShare) volumes.
- Enhanced optimization process.
- Improved reliability of PPP connections on certain computers.
- Refined performance of certain file and folder types in the Finder.
- Enriched recognition of display resolution choices.
- Enhancements to the Mail application.
- Heightened functionality of the Login window.
- Refined audio performance on certain computers.
- Improved performance of ColorSync with certain printers.
- Favorites are now easier to use.
- Enriched functionality of the Connect To command.
- Enhanced performance when connecting to certain types of servers.
- Refined compatibility with displays that are connected to certain types of ATI display cards.

Published Date: Feb 20, 2012

Mac OS X 10.x, Mac OS 9.x: Info Comments Do Not Appear

Mac OS X and Mac OS 9.x do not display each others Info window comments.
This article has been archived and is no longer updated by Apple.

Symptom

Comments that you typed in the Info window for an item do not appear.

Solution

The Get Info command in the Mac OS 9 Finder and the Show Info command in the Mac OS X Finder both open an Info window that displays various facts about the selected item. The Info window also has a Comments field in which you can type notes about the selected item.

Mac OS 9 and Mac OS X store file Comments separately. Comments entered in the Info window when started up from Mac OS 9 do not appear in the Info window when started up from Mac OS X (and vice versa).

This is a known behavior of Mac OS 9 and Mac OS X and does not indicate any issue with your computer's software.
Published Date: Feb 17, 2012

Mac OS 9.1: Conflict Between CarbonLib 1.3.1 and AppleScript

Using AppleScript with CarbonLib 1.3.1 installed can cause the computer to stop responding.
This article has been archived and is no longer updated by Apple.

Symptom

1. The computer stops responding ("freezes") after you click the record button in the AppleScript Script Editor.

2. The computer stops responding when you (or an application) execute an AppleScript. This includes the Browse the Internet, Mail, and Register with Apple icons on the desktop.

Solution

Download and install Carbonlib 1.4 or later. You can obtain this update either through the Software Update control panel or by visiting the Apple Software Downloads page (http://www.apple.com/swupdates/).
Published Date: Feb 18, 2012

Macintosh Manager 1.4.1: Microsoft Word "insufficient memory" Message

You can update Mac OS 9.1 computers to Mac OS 9.2.1 to resolve an issue in which Microsoft Word produces an "insufficient memory" alert message when used with Macintosh Manager 1.4.1.
This article has been archived and is no longer updated by Apple.

Symptom

When using a Macintosh Manager client with Microsoft Word 98 or Word 2001, an alert box appears with this message:

> "Word cannot open the document. Try one of more of the following: On the File menu, click Open to open the document. Make sure the document is a valid Word document."

Figure 1 Alert box

After clicking OK, an alert box appears with this message:

> "There is insufficient memory or disk space. Close extra windows and save your work."

Figure 2 Alert box

When you click OK in the second alert box, it reappears. It will reappear indefinitely until you force restart the computer using the power or reset button.

with this software:

- Mac OS 9.1
- Macintosh Manager 1.4.1
- Microsoft Word 98 or 2001
- Restricted Finder or Panels Environment

Solution

Install Mac OS 9.2.1.
Published Date: Feb 17, 2012

Mac OS X 10.0: Internet Explorer 5.1 Preview Update and Before You Install Information

This update installs a feature-enhanced version of Microsoft Internet Explorer 5.1 Preview that resolves certain issues.
This article has been archived and is no longer updated by Apple.
To get the updated version of Internet Explorer 5.1 Preview, use the Automatic Software Update feature of Mac OS X. This update installs the complete Internet Explorer application (in the Applications directory), and does not require that a previous version be present.

Notes: Important - Read Before Installing

1. This updated version of Internet Explorer 5.1 Preview has the same name as the version that shipped with Mac OS X 10.0. You can verify a successful installation by choosing About Internet Explorer from the Explorer application menu. In the "About" window, version number 5.1b1 (3408) means that this update is installed.

   Microsoft Internet Explorer 5.1b1 (5502) Preview was originally included with Mac OS X. However, version 3408 is newer than version 5502.

   You may also verify installation with Show Info. Navigate to the Internet Explorer application, located in the Internet Explorer folder, which is installed by default in the Applications directory. Select the icon and choose Show Info from the File menu. 'Version:' states 'Internet Explorer 5.1.1 for Mac'.

2. You must have an Admin user password to install this update. The password must not contain spaces and may not be blank. Certain characters may also produce unexpected results when used in a password. Generally, these characters are those you type with the Option key. To change your password, open System Preferences and click Users. Select an Admin user and click Edit User. Create a new password. For best security, put both numbers and letters within the first eight characters of the password.

3. Mac OS X 10.0.3 and Software Update 1.3.1 must be installed before this update will appear in your Software Update control pane. For more information on the 10.0.3 Update and the Software Update 1.3.1 Update, please see:

   Article 106300: "**Mac OS X 10.0: 10.0.3 Update and Before You Install Information**"
   Article 106271: "**Mac OS X 10.0: Software Update 1.3.1, 10.0.1 Update, and Epson Printer Driver Update Provide Feature Enhancement, Address Issues**"

4. A standalone installer is not available from Apple Software Updates.

Steps to install the Internet Explorer 5.1 Preview using Automatic Software Update

(You must first be connected to the Internet.)

1. Quit open applications, which are marked in the Dock with a small triangle. You cannot quit the Finder.
2. Choose System Preferences from the Apple menu.
3. Click the Software Update icon.
4. Click Update Now.

About this Update: Internet Explorer 5.1b1 (3408) Enhancements

This update delivers various enhancements to Microsoft Internet Explorer 5.1 Preview:

- Carbon and Cocoa helper applications now open in lieu of equivalent Classic helper applications, when available.
- Improved reliability when copying from or pasting in to a browser window.
- The Print Preview function now properly scales large printing previews to the current display resolution.
- File URLs ("file://") now work better with POSIX directory paths.
- Local Java applets that use POSIX will now perform as expected.
- Eliminated a potential issue if a "file://" URL referred to a nonexistent file on a local volume.
- Enhanced reliability when navigating from one search engine to another using the Next button.
- More choices are offered to view a downloaded PDF file.
- Visible Java applets will still work after clicking outside the Internet Explorer browser window.
- Reduced occurrences of "polling" (the color disc mouse cursor is visible and the browser is temporarily unresponsive).
- Java applets that appear inside an HTML frame are now positioned more accurately.
- Increased compatibility with Java-based games, such as Yahoo Games.
- Java applets from a previous Web page no longer appear after visiting a new Web page.
- The Web site http://www.sun.com/java/ now works as expected.

- New QuickTime and Macromedia Flash plug-ins are installed for use with Internet Explorer 5.1 Preview.
- The Back, Next, and Refresh button icons now work as expected in the Spanish localized version.

Published Date: Feb 19, 2012

Darwin: Streaming Proxy Read Me

This Read Me discusses the use of Streaming Proxy.
This article has been archived and is no longer updated by Apple.
The Darwin Streaming Proxy is an application-specific proxy that would normally be run in a border zone or perimeter network. It is used to give an intranet access to external streaming servers when a firewall would otherwise block RTSP connections or RTP/UDP data flow. The network is usually set up to allow:

- RTSP connections from within the network, as long as the destination is the proxy.
- RTSP connections to outside the network, as long as the source is the proxy.
- RTP datagrams to and from the proxy to the inner network.
- RTP datagrams to and from the proxy to the outside.

On the perimeter network, an "inner skin" and "outer skin" may use differing configurations to allow the flows above.

Notes:

1. RTSP runs over TCP, and the normal connection port is 554.
2. If the URL supplied by the client to the proxy includes a port number, then the proxy will attempt to connect to the server using that port number rather than the default 554.
3. RTP runs over UDP, and a range of ports may be used. Client-side ports are usually in a restricted range (starting at 6970), but servers cannot so easily restrict what ports they use. For best results, do not restrict port number access to the proxy; use only the IP address.
4. This proxy handles standard RTSP controlling standard RTP. RTSP can be used to control other media protocols, and a number of companies use it to control proprietary media protocols. This proxy does not attempt to proxy those other protocols. For more information on these protocols, please see:

   To learn more about these specifications, see documentation from the Internet Engineering Task Force and search for the following:
   - Real-Time Streaming Protocol (RTSP) - Article 2326
   - Real-Time Transport Protocol (RTP) - Article 1889

License

The Darwin Streaming Server and Streaming Proxy is distributed under the terms of the Apple Public Source License. For more information, refer to the license terms at http://www.publicsource.apple.com/ . The Apple Public Source License does not allow you to use the terms "QuickTime" or "QuickTime Streaming Server" in descriptions of products developed using Darwin Streaming Server or Streaming Proxy open source code, nor to use any Apple trademarks or logos associated with QuickTime and QuickTime Streaming Server.

How To Use

The application must reside on a computer that can access both the Internet and your intranet. This could be either your bastion host or another computer in your perimeter network. Follow these steps:

1. Install the Streaming Proxy in a reasonable place on your computer, such as: /usr/local/sbin
2. Edit the streamingproxy.conf file and place it in the /etc directory.
3. Launch the StreamingProxy application:
   #/usr/local/sbin/StreamingProxy -c /etc/streamingproxy.conf

Notes:

You can launch the StreamingProxy application using the -h command line option for a description of the other command line options. The root user is required to enable default port 554 for reception.

Setting Up Clients

1. Open the QuickTime Settings control panel.
2. Select Streaming Proxy from the pop-up menu.
3. Click the checkbox to select RTSP Proxy Server.
4. Type in the IP address or domain name of your proxy server in the corresponding field. In the port field, you may enter either the default of 554 or another port that you designated in the streamingproxy.conf file.

How It Works

The Streaming Proxy listens on ports you specify for a RTSP command sequence. It parses the commands and redirects the command to the desired server. It also rewrites the RTSP commands to reflect the new set of port numbers that the proxy must use.

The Streaming Proxy only relays data that comes from a server from which data was requested.

Credits

This proxy includes software developed by the University of California, Berkeley, and its contributors. That included software is the regular expression code developed by Henry Spencer.
Published Date: Feb 19, 2012

QuickTime/Darwin Streaming Server 4: TCP Ports Used

This document lists TCP ports used by version 4 of the QuickTime Streaming Server and Darwin Streaming Server.

This article has been archived and is no longer updated by Apple.

QuickTime Streaming Server 4 and Darwin Streaming Server 4 use the following TCP ports:

- 80: HTTP
- 554: RTSP
- 6970 -9999: used for dynamic (announced) UDP broadcasts
- 7070: RTSP
- 8000, 8001: MP3 streaming
- 10,000-20,000: buffer space
- 20,000-65,535: static SDP default range (user defined)

Published Date: Feb 17, 2012

QuickTime Streaming Server 3: How to Migrate Playlists and Config Files From Earlier Versions

Use these steps to move playlists and broadcast config files from QuickTime Streaming Server versions 1.x and 2.x to version 3.

This article has been archived and is no longer updated by Apple.

Follow these steps to migrate playlists and config files from a previous version of QuickTime Streaming Server:

1. Copy playlist and broadcast config files into this directory (folder):

/Library/QuickTimeStreaming/Playlists/

2. The playlist and broadcast config files need to be named following this convention:

listname.config
listname.playlist

Note: In this example, "listname" represents the name of one of your files. Be sure to use the correct filename suffixes, as shown.

3. The "destination_ip_address" property in the broadcast config file needs to be set as:

destination_ip_address 127.0.0.1

Notes:

1. 127.0.0.1 is a reflexive IP address that refers a computer back to its own IP stack.

2. Streaming Server Admin in QTSS 3.0 only provides administration of playlists that are to be unicast to the QTSS server process that is running on the same computer. The produced SDP file gets copied by default to the movie directory (/Library/QuickTimeStreaming/Movies/).

3. Creating playlists with the Playlists Settings pane in streaming Server Admin uses the RTSP "Announce" feature. It does not by default use the "destination_base_port" designated in the broadcast config file. Rather, the QTSS 3.0 server (reflector) and the 3.0 PlaylistBroadcaster process negotiate an available base UDP port, starting at 6970.

If this port is in use, then the PlaylistBroadcaster process and QTSS server will increment the TCP port by positive, even numbers until an available UDP base port is found (for example: 6972, 6974, 6976).

Playlists created by the Playlist Settings pane in Streaming Server Admin set the default base port to 0. At runtime this prompts the streaming server and broadcaster to auto negotiate a valid and available UDP base port:

destination_base_port 0

4. Streaming Server Admin launches PlaylistBroadcaster processes on the same computer. Because the RTSP "Announce" takes place locally (via 127.0.0.1), there is no need to enter a username or password into the broadcast config file.

Published Date: Feb 17, 2012

Darwin/QuickTime Streaming Server 3: How to Loop With One Movie in Playlist

Use these steps to enable looping when only one movie is in the playlist.

This article has been archived and is no longer updated by Apple.

Using QuickTime Streaming Server 3 or Darwin Streaming Server 3, you can enable looping with a single movie by making **one** of these changes to the default settings:

1. Set the recent_movies_list_size to 0, **or**

2. Set the play_mode to sequential_looped. In this mode, looping will occur regardless what the value is in recent_movies_list_size.

Note: By default, the Playlists Settings pane in the Streaming Server Admin application sets a recent_movies_list_size value of 1. Additionally, the default play_mode is weighted_random. Movies loop when these defaults are present with more than one movie in the playlist. But when you have only one movie in the playlist, it plays once and does not loop.

Published Date: Feb 18, 2012

Darwin/QuickTime Streaming Server 3: Requirements for Skip Protection

Skip protection requires the combination of QuickTime 5 or later client software and QuickTime Streaming Server 3.0 or later, or Darwin Streaming Server 3.0 or later software.

This article has been archived and is no longer updated by Apple.

QuickTime 5 client software includes skip protection. To take advantage of skip protection, a QuickTime 5 client must connect to a server that is using QuickTime Streaming Server 3 or Darwin Streaming Server 3 software. The server must also be configured properly for skip protection.

QuickTime users can view content normally when these conditions are not met, but without skip protection.

Requirements for Skip Protection

- QuickTime 5.0 or later (client)
  QuickTime Streaming Server 3.0 or later **or** Darwin Streaming Server 3.0 or later
- QuickTime 5 must be set to use UDP for streaming transport.
  Note: Skip Protection is only available via UDP. HTTP streaming transport does not accommodate this feature.
- QuickTime Streaming Server 3 must be set up by the server admin for media location. This is set in the server's XML preference file by the parameter reliable_udp_dirs.

Published Date: Feb 18, 2012

Mac OS X 10.0: "<Attachment Missing>" Message When Sending Plain Text Mail

Recipients of your email see the text "<Attachment missing>" in the body of the mail message, but the attachment is actually present.
This article has been archived and is no longer updated by Apple.

Symptom

Recipients of your email see the text "<Attachment missing>" in the body of the mail message, but the attachment is actually present.

Solution

This issue is resolved by updating to Mac OS X 10.1.

For Mac OS X 10.0 to 10.0.4:

Despite this message, the attachment is still present and can still be opened.

The application Mail, included with Mac OS X, uses the Rich Text (HTML/MIME) message format by default. You can change the format of a message to plain text by choosing the Make Plain Text command from the Format menu in Mail. The best way to avoid the erroneous message is to use the Rich Text format when possible.

When you send a plain text mail that includes an attachment, some mail programs do not recognize the encoding of the message, leading them to display "<Attachment missing>" in the body of the message. This lack of recognition occurs because the message is being encoded in the Alternative MIME standard so it can be compatible with the widest range of recipients. This issue does not affect recipients who are using Mail to view mail.
Published Date: Feb 17, 2012

Mac OS X 10.0: Reselecting Startup Disk May Be Necessary Following Update

Reselect your startup disk after installing a Mac OS X software update to avoid a startup delay.
This article has been archived and is no longer updated by Apple.

Symptom

After installing a software update to Mac OS X 10.0, there is a longer delay before the Mac OS logo appears at system startup time.

Solution

Follow these steps:

1. Start up the computer from the Mac OS 9.1 CD-ROM disc.
2. Open the Startup Disk control panel.
3. Select the Mac OS 9.1 System Folder on the hard disk.
4. Restart the computer.
5. Connect to the Internet.
6. Open the Software Update control panel.
7. Click Update Now.
8. If the Software Update control panel offers you a later version of Startup Disk control panel, install it and then restart the computer.
9. Open the Startup Disk control panel.
10. Select the Mac OS X System Folder.
11. Restart the computer.

The computer should startup normally using Mac OS X.
Published Date: Feb 17, 2012

Mac OS X: PC-DOS Formatted Disks Do Not Work With Classic Applications

You cannot save directly to a PC-DOS formatted disk from an application that is open in the Classic environment. Unexpected behavior can also occur when you use the Mac OS X Finder to directly open (double click) a Classic file stored on a PC-DOS disk.
This article has been archived and is no longer updated by Apple.

Symptom

1. Dialog boxes in Classic applications do not offer you the option of saving to a disk that is in the PC-DOS format.

2. If, in the Mac OS X Finder, you double click (or otherwise open) a Classic application file stored on a PC-DOS disk, one of these symptoms could occur:

- The Classic application of the type that created the file may open with no windows.
- A new document window may open in the affected Classic application.
- The affected Classic application may generate an alert box with a message stating that the file is already in use

Solution

Saving Files

The Classic Environment in Mac OS X 10.2 or later can work directly with volumes formatted using the DOS File Allocation Table (FAT) format.

If you need to save to a PC-DOS formatted disk from a Classic application in an affected Mac OS X version, use these steps:

1. Save the file to a location on your hard disk, such as your Documents folder or desktop.
2. After the file has been saved, select the Finder from the Dock.
3. Using the Finder, navigate to the location in which you saved the file.
4. Drag the file from the Finder window to the disk icon.
Note: This requires two Finder windows if you have deselected the option to have disks displayed on the desktop.

If you do not need to exchange files with a computer that uses PC-DOS formatted disks, then you may wish to reformat the disks as either Mac OS Standard or Mac OS Extended format. You will be able to save to disks with either of these two formats from within Classic. Mac OS Extended is preferred if all the Macintosh computers that use the disk have Mac OS 8.1 or later.

Opening Files

If you need to open a Classic document from a PC-DOS disk, simply copy the file to the Documents folder on your hard disk and open it from there.
Published Date: Feb 17, 2012

Mac OS X Server 10.0: Advertised MySQL Not Included on CD-ROM, May Be Downloaded

The advertised MySQL feature is not included in the first version of Mac OS X Server (10.0.3) but is available for download.
This article has been archived and is no longer updated by Apple.

Symptom

MySQL is not installed by Mac OS X Server 10.0.

Solution

MySQL was omitted from the initial version (10.0.3). The 10.0.4 Server Update includes MySQL. Before installing the 10.0.4 Server Update, your server computer must be updated to Mac OS X 10.0.4. You may download these updates by visiting Apple Software Downloads (http://www.apple.com/swupdates/).

Published Date: Feb 17, 2012

Mac OS X 10.0: Mac OS 9.1 Language Kits Work in Classic

The Language Kits included as an optional installation for Mac OS 9.1 can be used in the Classic environment of Mac OS X.
This article has been archived and is no longer updated by Apple.
The optionally-installed Language Kits included with Mac OS 9.1 can be used with Classic applications just as in native Mac OS 9.1.

If you plan to use Language Kits in the Classic environment, be sure to install software updates specific to your language kit.

Important: The Language Kit software updates are not available at Apple Software Updates (http://www.apple.com/swupdates/) or in the Knowledge Base (http://kbase.info.apple.com/). They only appear in the Mac OS 9.1 Software Update control panel after a particular Language Kit is installed.

Follow these steps to download a Language Kit update:

1. If you have installed a Mac OS 9.1 Language Kit, restart your computer from Mac OS 9.1.
2. If your computer is started up from Mac OS X, choose System Preferences from the Apple Menu. Click the Startup Disk icon and then select the Mac OS 9.1 System Folder. Close the System Preferences window and choose Restart from the Apple menu. The computer will restart using Mac OS 9.1.
3. Connect to the Internet.
4. Choose Control Panels from the Apple Menu.
5. Open the Software Update control panel.
6. Click Update Now.
7. Install any Language Kit updates that appear. If you do not see any updates, the Language Kit you have installed does not require one.
8. Open the Startup Disk control panel and choose the Mac OS X System Folder to restart the computer using Mac OS X.

Published Date: Feb 17, 2012

Macintosh Manager 2.0: About Macintosh Manager

This document contains a copy of the "About Macintosh Manager" document for version 2.0.
This article has been archived and is no longer updated by Apple.

About Macintosh Manager

This document includes information about additional Mac OS client software for use with the Mac OS X Server. The Macintosh Manager installation will install Macintosh Manager 2.0, a version of AppleShare Client, and Macintosh Manager 2.0 administration software.

Macintosh Manager is Apple's workstation management technology, providing education network administrators with a centralized method of securing Mac OS workstations, controlling student software access, and providing a consistent, personalized experience for students and staff.

AppleShare Client allows client computers to connect to the server. A version of AppleShare Client is installed by default when you install Macintosh Manager 2.0. If you are installing on a 68K-based computer, AppleShare Client 3.8.7 will be installed. If installing on a PowerPC-based computer, AppleShare Client 3.8.8 will be installed.

To administer Macintosh Manager on a server running Mac OS X Server software from a remote Mac OS 9 computer, install the Macintosh Manager administration software using the Custom Install option of the Mac OS Client Installer.

Macintosh Manager 2.0 administration can be used to manage client computers with Mac OS 8.1 or later.

For more information about these software applications, refer to the Admin Guide.pdf file on the CD, the online Help for Macintosh Manager and Server Admin, and late-breaking news which is available in the online Help.

System requirements

Macintosh Manager 2.0 client software requires a computer with:

- Mac OS 8.x or 9.x

AppleShare Client software:

- AppleShare Client 3.8.7 requires a computer running Mac OS 8.1 to 8.5
- AppleShare Client 3.8.8 requires a computer running Mac OS 8.1 or later

Macintosh Manager 2.0 administration software requires a computer with:

- Mac OS 9 or Mac OS X
- At least 64 MB of RAM

Published Date: Feb 17, 2012

Mac OS X: How to Disable or Enable Automatic Modem (PPP) Connections

Use these steps to enable or disable your computer's ability to automatically connect to the Internet.
This article has been archived and is no longer updated by Apple.

To turn on or turn off automatic dial-up (PPP) Internet connections

1. Choose System Preferences from the Apple menu.
2. Click Network.
3. Choose your modem or other dial-up device from the Show pop-up menu.
Note: The Show menu is named "Configure" prior to Mac OS X 10.1.
4. Click the PPP tab.
5. Click PPP Options.
6. Click the checkbox to select or deselect the "Connect automatically when starting TCP/IP applications" option.
7. Click OK.
8. Click Save.

With automatic connection disabled, Mac OS X will prompt you to connect to the Internet when necessary. You then connect using the Internet Connect application.

Additional information

Mac OS X connects to the Internet automatically in some circumstances. For example, Mac OS X attempts to connect to the Internet to:

- download Help Center information, including Late Breaking News
- search for and retrieve software updates from Apple (via scheduled automatic software updates)
- perform a Sherlock Internet search
- send or receive email using the Mail application
- to start Web Sharing as your computer starts up (Mac OS X 10.2.8 or earlier)

When automatic connection is enabled and you are not yet connected to the Internet you may see a message such as "The specified server could not be found" or "A connection failure has occurred" when you open a Web browser This only means that the browser attempted to connect before the computer had completed the connection process. This does not indicate any issue with your configuration or Internet service provider. If necessary, quit and reopen the browser after the connection sequence is complete. If such messages persist after you are connected, you may need to check your DNS settings. See technical document 106798, "**Mac OS: Troubleshooting 'A connection failure has occurred', 'The specified server could not be found' or Similar Messages**".

If the setting to "Connect automatically when starting TCP/IP applications" is enabled in the Network pane, you may not be aware that the connection has been made. In Mac OS X versions prior to 10.1, enabling modem sound does not permit you to monitor when your modem is connecting. Updating to Mac OS X 10.1 or later resolves that issue. See technical document 106162: "**Mac OS X 10.0: Internal Modem Makes No Sound When Connecting**"

If you are obviously already connected to the Internet but an alert box appears with a message that says "...is not able to connect to the Internet" see technical document 106291: "**Mac OS X 10.0: Software Update, Mac Help, or Sherlock 'is not able to connect to the Internet' Message**"
Published Date: Feb 17, 2012

Mac OS X Server 10.0: Computer Stops Responding at "Starting Network Filesystem"

The computer does not finish starting up if it has been improperly set up to have an NFS loopback. It stops when the progress bar reaches "Starting Network Filesystem."
This article has been archived and is no longer updated by Apple.

Symptom

During system startup time, the Mac OS X Server computer appears to stop responding ("hangs" or "freezes") when the progress bar reaches the message:

> Starting Network Filesystem

The most common cause for this symptom is that the server has been configured to automatically connect to an NFS export that is on the server's own hard disk, a condition called a "loopback."

Solution

There are two ways to resolve an NFS loopback:

- Restore your network.nidb file from a good backup, **or**
- Delete or modify the mount(s) causing the issue.

Since the server will not start up normally, you can start up into single-user mode and use the "nicl" command tool.

Follow these steps to delete the mount(s) causing the issue:

1. When you turn on the computer, press and hold the Command and "s" keys to enter single-user mode.
2. Type: `mount -uw /`
3. Press Return.
4. Type: `fsck -fy`
5. Press Return, and wait for fsck to complete a file system check.
6. Type: `nicl -raw -v /var/db/netinfo/network.nidb`
7. Press Return.
8. Type: `cd /mounts`
9. Press Return.
10. Type: `ls`
11. Press Return. This should list the mounts.
12. Type: `read`
13. Press Return. You should see a list of the directory's contents with expanded information. Write down the name of any item that has: vfstype = nfs.
14. Type: `cd name`
Note: In place of "name," you would type the name of one of the names you wrote down in step 13.
15. Press Return.
16. Type: `delete`
Note: If you check the file path, you should **not** be in /mounts/, but rather in an appropriate subdirectory of mounts, such as /mounts/directoryname/.
17. Press Return.
18. Repeat steps 14-17 for any additional name(s) that you wrote down in step 13.
19. Type: `quit`
20. Press Return to exit nicl.
21. Type `reboot`
22. Press Return to restart the server.

Published Date: Feb 17, 2012

Mac OS X 10.0: How to Remove a Picture from Address Book

A picture added to an Address Book entry appears in Mail when viewing a message from that person, even after the entry is deleted. Use these steps when you wish to remove a picture.
This article has been archived and is no longer updated by Apple.

Symptom

After deleting a person's entry in Address Book, the picture associated with that entry continues to appear in Mail.

Solution

First, locate the picture you wish to remove.

Address Book stores pictures in the folder:

~/Library/Images/People/

Note: The tilde character (~) represents your Home directory. Click the Home icon in the Finder toolbar, then proceed to your Library folder and so on.

After you navigate to the People folder, you see files with names that correspond to the email addresses in your Address book. The files carry the filename suffix ".tiff." An example could look like:

e_dupont@apple.com.tiff

To remove the picture from Mail, simply drag it to the Trash.
Published Date: Feb 17, 2012

Mac OS X Server 10.0: How to View NFS Exports

Use steps described here to view current NFS exports in Mac OS X Server 10.0.x.
This article has been archived and is no longer updated by Apple.

Finding a list of current NFS exports

To see if an individual folder or disk has been exported, use these steps:

1. Open the Server Admin application.
2. Click the General tab.
3. Click the Sharing icon, then select Set Sharing Attributes.
4. In the Choose Object window, select the item and click Choose.
5. Set the pop-up menu in the item's privileges window to NFS Access Control.

Here, you can see the NFS Export status of the disk or folder.

Listing all current exports

To list all the current exports, use the Terminal application located in the folder Applications/Utilities/.

The list of exports is maintained by the mountd daemon. The Server Admin application manages this data, which is used by the mountd daemon to perform the export. To list all folders that have been exported, follow these steps:

1. Open the Terminal application.
2. Type: `showmount -e`
3. Press Return.

To list the raw data that determines which folders are exported and the export options, follow these steps:

1. Open the Terminal application.
2. Type: `nidump -r /exports .`
   Note: Be sure to add the space and period at the end of the command. This determines the database to which the nidump command is applied. The period indicates the local NetInfo database.
3. Press Return.

Published Date: Feb 17, 2012

Mac OS X Server 10.0: How to Set SLP Neighborhood

Setting your SLP Neighborhood determines where your server appears on the network.
This article has been archived and is no longer updated by Apple.

Defining where your computer appears

In Mac OS 9.x and Mac OS X (client), a computer's services are registered by default in the Local Network neighborhood. You can see this in the Connect to Server window (Mac OS X) and Network Browser (Mac OS 9.x). A large network may be logically divided into smaller neighborhoods, which are also called "scopes." Examples of such division might include groupings by department or by floors of a building.

To change a Mac OS X computer's default neighborhood, follow these steps:

1. Open the Set SLP Neighborhood application, found in the /Applications/Utilities/ folder. The SLP Neighborhood window shows where your computer is set to register its services.
Note: This application may not be present on versions of Mac OS X released prior to Mac OS X Server 10.0.3.
2. Type the name of the new SLP neighborhood.
Important: If your network has one or more SLP servers, you must enter a neighborhood (scope) that is already defined on one of these servers. Otherwise, your service will not be visible to the rest of the network.
3. Click Save.
4. Choose Restart from the Apple menu.

Your computer should now appear in the new neighborhood when viewed in the Connect to Server window or Network Browser.
Published Date: Feb 17, 2012

Mac OS X Server 10.0: AppleShare Does Not Start When Duplicate Computer Names Exist

Apple File Service (AFP, AppleShare) does not start and does not display an alert to warn you when another computer on the network is already sharing under the same Computer Name.
This article has been archived and is no longer updated by Apple.

Symptom

1. Clients cannot connect to the server as expected.
2. Clients connect to a computer that is not the desired server.
3. The Apple File Service log, accessible with the Log Viewer feature of Server Admin, contains the message:

"AppleTalk service couldn't be enabled."

Solution

Each computer sharing files with AppleShare must have a unique Computer Name. The Computer Name field for Mac OS X Server is located in the Server Admin application. For Mac OS 9 and Mac OS X (client), the Computer Name field is located in the Sharing panel.

The exact order of operations required to address this situation in the least number of steps can vary depending on which computer you wish to rename, but these steps cover all situations:

1. Identify all computers that share the same Computer Name.
2. Stop AppleShare (AFP, File Sharing, Apple File Services) on all computers you have identified.
3. Give each computer a unique Computer Name.
4. Restart AppleShare (AFP, File Sharing, Apple File Services) on all computers.

Published Date: Feb 17, 2012

Mac OS X Server 10.0: Print Center Requires BSD Package for LPR

You cannot use LPR printers in Print Center if you did not install the BSD package.
This article has been archived and is no longer updated by Apple.

Symptom

LPR is not available to Print Center, and therefore not available to Print Service.

Solution

By default, the installer for Mac OS X Server 10.0.x installs the BSD package. Using the Custom Install option, you may deselect this package.

The BSD package includes software required for LPR printing. Without BSD, you may still use AppleTalk and USB printers.
Published Date: Feb 17, 2012

Mac OS X Server 10.0: Deleting Guest-Created Folders Requires root Access

A folder created by an AppleShare user logged in through Guest access can only be deleted by the root user.
This article has been archived and is no longer updated by Apple.

Symptom

When you are logged in as an Admin user and attempt to delete a folder that was created by an AppleShare user logged in with Guest access, an alert appears with this message (or a variation of it):

> "The operation cannot be completed because you do not have sufficient privileges for '502'."

Solution

Folders created in this manner have an owner of "Unprivileged User" or "Nobody." You must use root access to delete a folder (directory) created by a Guest-access user.

Deleting with Terminal

If you are familiar with the Terminal, you may use the sudo command to delete the undesired folder.

Deleting with Finder

Otherwise, follow these steps:

1. Choose Log Out from the Apple menu.
2. Log back in as the root user.
Note: The root user does not appear in the Users pane of System Preferences but is enabled in Mac OS X Server 10.0.3 by default.
Where you would normally type your user name during login, type: `root`
3. Type your normal Admin user password.

Once logged in as root, you can delete the folder by Choosing Empty Trash from the Finder menu.
Published Date: Feb 17, 2012

Mac OS X 10.0: Removable disks don‘t appear (mount) on desktop

In some cases with Mac OS X 10.0 through 10.0.4, removable media (CD-ROM discs, Zip disks, for example) may not appear on the Mac OS X desktop as expected.
This article has been archived and is no longer updated by Apple.
When the disk is inserted, an alert appears with this message:

> "You have inserted a disk containing volumes that Mac OS X can't read. To use the unreadable volumes, click Initialize. To use only the rest of the disk, click Continue."

This issue may occur when certain information is missing from the file /etc/hostconfig.

First, be sure that you have selected the checkbox to Show disks on the Desktop in Finder Preferences:

1. Click Finder in the Dock.
2. Choose Preferences from the Finder application menu.

To determine if information is missing from the file /etc/hostconfig, check the contents of this file using TextEdit.

Checking the hostconfig file

Follow these steps:

1. Open TextEdit (located in the Applications folder).
2. Choose Open from the File menu.
3. In the "Go to" field of the Open dialog, type: `/etc/hostconfig`
4. Click Open.

The hostconfig file should contain the following line:

> AUTODISKMOUNT=-REMOVABLE-

The final section of this article contains a sample hostconfig file that is correctly set up. If this line is not present, removable media will not appear on the desktop. You can update the hostconfig file by following these steps.

Updating the hostconfig file

1. Create a new document in TextEdit.
2. Copy and Paste in the text that is in the section below, titled "Sample hostconfig file."
3. Choose Make Plain Text command from the Format menu.
Note: If this command is not present in the Format menu, skip this step (as you have already set plain text as the default format).
4. Save this file to the Documents folder with the name: `hostconfig`
Note: The resulting file will actually be called: hostconfig.txt
5. Open the Terminal application (located in the Utilities folder).
6. Type: `sudo mv /etc/hostconfig /etc/hostconfig.old`
7. Press Return.
8. Type the Admin user password, and press Return.
Note: The command will rename the existing hostconfig file to hostconfig.old.
9. Type: `sudo cp ~/Documents/hostconfig.txt /etc/hostconfig`
Note: This command copies the new hostconfig file to the correct location.
10. Press Return.
11. Restart the computer.

Sample hostconfig file

Begin copying below this line:

```
##
# /etc/hostconfig
##
# This file is maintained by the system control panels
##
# Network configuration
HOSTNAME=-AUTOMATIC-
ROUTER=-AUTOMATIC-
# Services
AFPSERVER=-NO-
APPLETALK=-NO-
AUTHSERVER=-NO-
AUTOCONFIG=-YES-
AUTODISKMOUNT=-REMOVABLE-
AUTOMOUNT=-YES-
CONFIGSERVER=-NO-
IPFORWARDING=-NO-
MAILSERVER=-NO-
MANAGEMENTSERVER=-NO-
NETBOOTSERVER=-NO-
NISDOMAIN=-NO-
TIMESYNC=-NO-
QTSSERVER=-NO-
SSHSERVER=-NO-
WEBSERVER=-NO-
```

End copying above this line.

Published Date: Feb 17, 2012

Mac OS X Server 10.0: Server Admin System Requirements and Installation

You can administer Mac OS X Server from another computer that meets the requirements of Server Admin.
This article has been archived and is no longer updated by Apple.
You can administer Mac OS X Server from another networked computer that meets the system requirements of Server Admin. The computer must have a valid IP address and a TCP/IP route to the server. Firewalls and router configuration may prevent you from administering Mac OS X Server from some locations on the Internet, or on your network. If you suspect this is an issue, check with your Internet service provider or network administrator.

System Requirements for Server Admin

- Mac OS X 10.0.2

The remote admin computer must have Mac OS X 10.0.2 or later. If you have Mac OS X 10.0.2, you should update to Mac OS X 10.0.3 or later at your next opportunity. You may find software updates at http://www.apple.com/swupdates/ .

For complete Mac OS X 10.0.x system requirements, please see:

Article 106163: "**Mac OS X 10.0: System Requirements**"

How to install the Server Admin application

To install the Server Admin application on a remote computer, follow these steps:

1. Verify that the remote computer has a valid TCP/IP connection. You may also verify a route to the server by using the Network Utility included with Mac OS X.
2. Insert the Mac OS X Server CD-ROM disc.
3. Open the Admin Install folder and double-click the installer package (Admin_Install.mpkg).
4. Choose the Custom Install option, then select Server Admin.

After installation, you'll find the application in this location:

/Applications/Utilities

You may drag the Server Admin icon to the Dock for easy access.
Published Date: Feb 17, 2012

Mac OS X 10.0: Mail Import From Outlook Express Requires "Microsoft User Data" Folder

If the Identities folder for Microsoft Outlook Express is not located within the Microsoft User Data folder, the import utility cannot automatically import your email.
This article has been archived and is no longer updated by Apple.

Symptom

The application Mail, included with Mac OS X, cannot locate email to import from Outlook Express.

Note: Versions of Outlook Express prior to 5 do not use the Microsoft User Data and Identities folder hierarchy. You may, for example, update from Outlook Express 4.5 to Outlook Express 5 to create a Microsoft User Data folder before importing email with Mail.

Solution

You may use **one** of the following solutions:

1. Create a new folder named "Microsoft User Data," and place the Identities folder inside this folder.

2. Click the Browse button on the second screen of the "Import mailboxes" utility to select the Identities folder containing the email you want to import.

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"
Published Date: Feb 17, 2012

Macintosh Manager 2.0: Global CD-ROMs Eject Button Does Not Work With CarbonLib 1.2.5

The Eject button in the Global: CD-ROMs pane of Macintosh Manager does not work with CarbonLib 1.2.5.
This article has been archived and is no longer updated by Apple.

Symptom

After opening Macintosh Manager and clicking the Global tab followed by the CD-ROMs tab, the Eject button does not work as expected.

Solution

Restart the computer and drag the CD icon to the Trash to eject it.

To avoid this in the future, be sure that CarbonLib 1.2.5 is not installed on the affected computer. You can download an earlier or later version from Apple Software Updates (http://www.apple.com/swupdates/).

How to check for CarbonLib

1. Choose Control Panels from the Apple menu.
2. Open Extensions Manager.
3. Scroll down in the Extensions Manager window until you find CarbonLib.

The version number of CarbonLib is displayed to the right of its name.
Published Date: Feb 17, 2012

Mac OS: Computers in Sleep Mode Disappear From Network

When the name of a computer in sleep mode disappears from the network, you may still connect to it by IP address.
This article has been archived and is no longer updated by Apple.

Symptom

The name of a computer in sleep mode no longer appears in the Connect to Server dialog, Chooser, or Network Browser.

Products Affected

- Mac OS X 10.0 or later
- Mac OS X Server 10.0.3 or later
- Mac OS 9.x

Solution

A computer's name does not appear on the network after it has been in sleep for three hours. To connect to a computer in sleep mode, type its IP address or DNS name (when applicable). The Chooser, Connect to Server dialog, and Network Browser each provide a field for this purpose.

Note: AppleTalk must be active for a computer to appear in the Chooser.
Published Date: Feb 18, 2012

Mac OS X 10.0: 10.0.4 Update and Before You Install Information

The Mac OS X 10.0.4 Update addresses certain issues and updates system software.

This article has been archived and is no longer updated by Apple.

There are two versions of the update available to bring your computer to Mac OS X 10.0.4. Use of this update does not require that you install prior updates.

10.0.4 Update (19.3 MB)

This updates any previous version (10.0, 10.0.1, 10.0.2, and 10.0.3) to Mac OS X 10.0.4.

10.0.4 Update (12 MB)
This smaller update updates Mac OS X 10.0.3 to Mac OS X 10.0.4.

There are two ways to get the Mac OS X 10.0.4 Update:

1. Open System Preferences and use the Software Update feature. When you click Update Now, the Software Update pane automatically displays the correct version of the 10.0.4 Update for your computer.

2. Download the appropriate installer from Apple Software Updates.

Related Software Downloads

75141 Mac OS X (10.0.4) Combined Update Information and Software
For Mac OS X (10.0.0 - 10.0.3)

75142 Mac OS X (10.0.4) Update Information and Software
For Mac OS X (10.0.3)

Important: Read Before Installing

1. You must have an Admin user password to install this update. The password must not contain spaces and may not be blank. Certain characters may also produce unexpected results when used in a password. Generally, these characters are those you type using the Option key. To change your password, open System Preferences and click Users. Select an Admin user and click Edit User. Create a new password. For best security, put both numbers and letters within the first eight characters of the password.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means such as the Terminal. This precautionary statement does not apply to the normal installation of application software.

3. The 10.0.4 Update installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. When viewing Detailed Progress, it is normal for the window to state "optimizing" for several minutes. If you experience a power outage or other interruption during installation, download the 10.0.4 Update standalone installer from Apple Software Updates and use it to install the update.

Steps to install the update using Automatic Software Update

(You must first be connected to the Internet.)

1. Quit open applications, which are marked in the Dock with a small triangle. You cannot quit the Finder.
2. Choose System Preferences from the Apple menu.
3. Click Software Update.
4. Click Update Now.

Note: You must install Software Update 1.3.1 in order to access other updates using the Software Update feature of System Preferences. After installing Software Update 1.3.1, repeat the above steps to install the 10.0.4 Update.

About the 10.0.4 Update

This update delivers enhancements included with the 10.0.1 and 10.0.3 Updates, as well as the following:

USB-Related Enhancements

- PrintCenter compatibility with certain third-party USB inkjet printers has been improved.
- Improves compatibility with many third-party USB devices including: "KVM" switchboxes, certain self-powered USB hubs, certain handheld devices that connect to a USB port, certain ADB-to-USB adapter devices, and third-party USB mouse and keyboard input devices.
- Improves iTunes audio CD burning performance by offering only the most reliable burn speed choice(s).
- Resolves a rare issue in which a USB device may not respond after the computer wakes from sleep.
- Enriches the reliability of USB input devices that connect to a display's USB port.
- USB modem reliability is improved.
- Addresses issues that may have led to a USB mouse or keyboard input device becoming unresponsive unless it was disconnected and reconnected.
- Resolves an isolated issue in which a Roland/Edirol UA-3 audio device may have not properly enumerated on the USB bus.
- Addresses a potential kernel panic that may have occurred when disconnecting or hot swapping certain third-party USB devices.
- Brings iTunes compatibility to additional third-party USB CD-RW drives, including: Toshiba DVD-ROM SD-R1102 Combo Drive, Que Plextor PX-W1610A, MKE CD-RW CW8571B, Que Lite-On LTR-12101B, Iomega ZipCD 650, and Iomega Predator ZipCD 650.
- Resolves an issue in which simultaneous use of two Shift keys while typing with a USB keyboard may have unexpectedly resulted in lowercase characters.

Classic-Related Enhancements

- Enhances reliability when remotely accessing a shared FileMaker Pro 5.0 document through TCP/IP in the Classic environment.
- Addresses a rare issue in which no response was received when pinging a remote host in the Classic environment.
- Enhances the reliability of the Classic environment after the computer wakes from sleep.
- Addresses an isolated issue in which a key press may have repeated unexpectedly in a Classic application.
- Addresses a potential issue in the Classic environment in which the mouse pointer cursor may have become temporarily transparent.
- Enriches reliability of certain Classic mail applications when used with certain types of mail servers.
- Addresses a potential issue in the Classic environment with products that provide firewall services.
- General improvements allow third-party hardware device drivers to perform better in the Classic environment; future OS X hardware device drivers can be developed to co-exist with Classic device drivers for the same USB device.

Internet- and Networking-Related Enhancements

- Addresses certain issues that may have occurred when copying files using Apple File Protocol (AFP), including: potential kernel panic when copying files, reliability on a VPN connection, and copying a file that has a long Japanese file name.
- The advanced PPPoE option "Send PPP echo packets" now behaves as expected when disabled.
- Addresses a potential issue where Internet Explorer 5.1 may have become temporarily unresponsive when viewing a QuickTime movie.
- A later version of SSH is included.

Other Enhancements

- Improves reliability when a large number of FireWire devices are disconnected and reconnected.
- Enhances reliability when viewing certain types of PICT files.
- Addresses a potential issue in which a copied file's modification date may be inaccurate.
- Resolves an issue in which the restart button does not appear after the installation of software that requires a restart.
- A Brightness slider bar is now available when used with the Apple Studio Display 17.
- Improves reliability for applications that interact with SCSI devices and SCSI busses.
- Optical media is made available more reliably from certain third-party FireWire and USB devices.
- Enriches the reliability of some display resolution choices provided by certain ATI video cards.
- Resolves a headphone volume and potential sound quality issue involving Power Macintosh G3 computers that use certain A/V personality cards.
- Addresses a potential issue with certain PowerBook computers in which an undesirable sound may be heard while the computer is in sleep mode.
- Enhances PowerBook battery power conservation when in sleep mode.
- Improves responsiveness of application menus that are drawn with OpenGL.
- Addresses a potential issue in which the startup hard disk volume could not be renamed after updating the version of Mac OS X.
- Resolves an isolated issue when using paint frames in an AppleWorks 6.1 presentation document.
- Addresses a rare issue in which an incomplete login window or graphics abnormality appears after waking from a period of sleep that began

while a screen saver had been in use.
- Resolves a potential issue when printing from applications localized for German.
- A later version of sudo is included.

Published Date: Feb 20, 2012

Mac OS X : Password Does Not Work As Expected After a Change

When using Mac OS X Server, the Setup Assistant creates both Admin and root user accounts with the same password. For Mac OS X (client), the root password remains undefined until you enable the root user. In both versions of Mac OS X, subsequent changes to a password only affect the selected user, not both.
This article has been archived and is no longer updated by Apple.

Symptom

After changing your password, the previous password continues to work for certain functions.

Solution

During the installation process, the Mac OS X or Mac OS X Server Setup Assistant asks for an Administrator account name and password. The Setup Assistant then creates both a "root" user and an "Admin" user. For Mac OS X Server, the Admin and root accounts created both have the same password and root is enabled by default. For Mac OS X (client), the root password remains undefined until you enable root, which is disabled by default. Only the Admin user is immediately visible to you in either version of Mac OS X.

When you change the password at a later time, only the password of the selected user is changed. The password of the other user remains in effect until you change it.

The two users have different capabilities, login names, and visibility characteristics.

	Admin User	root User
Description	The "Admin" user is created for day-to-day login and operation of your computer. The Admin user can log in to the Server Admin and Macintosh Manager applications, but the root user cannot. You can create multiple Admin users in the Users pane of System Preferences.	The "root" user can perform certain administrative tasks that are restricted from the Admin user, such as installing WebObjects software or setting up the NetInfo database. The root user is enabled by default in Mac OS X Server but not in Mac OS X (client). You can have only one root user.
Login Name	The Admin user takes the name you set in the Setup Assistant, which may be changed in the Users control panel.	Type the name "root" or "System Administrator" to log in as the root user.
Visibility	The Admin user name appears in the Users pane of System Preferences regardless of who is logged in to the computer. Admin users have Home directories that appear in the Finder.	The root user only appears in the Users pane of System Preferences (as "System Administrator") when you are logged in to the computer as root. The root Home directory (/Private/var/root/) only appears in the Finder when logged in to the computer as root.
Password Change	Follow these steps: 1. Choose System Preferences from the Apple menu. 2. Click Users. 3. If necessary, click the padlock to make changes. 4. Select the user designated Admin. 5. Click Edit User. 6. Type a new password in the Password and Verify fields. 7. Click OK.	Follow these steps: 1. Choose Log Out from the Apple menu. 2. Log in as the root user. 3. Choose System Preferences from the Apple menu. 4. Click Users. 5. Select the user named System Administrator. 6. Click Edit User. 7. Type a new password in the Password and Verify fields. 8. Click OK.

Important

1. Do not confuse "Admin" with "System Administrator," which is actually an alternative name for the root user (see table above).

2. For more information on the root user, including precautionary statements, please see:

Article 106290: "**Mac OS X: About the root User and How to Enable It**"
Published Date: Feb 17, 2012

Mac OS X 10.0, 10.1: Setup Assistant Creates Two Administrative Users - Admin and root

When using Mac OS X Server, the Setup Assistant creates both Admin and root user accounts with the same password. For Mac OS X (client), the root password remains undefined until you enable the root user. In both versions of Mac OS X, subsequent changes to a password only affect the selected user, not both.

This article has been archived and is no longer updated by Apple.

Symptom

1. After changing your password, the previous password continues to work for certain functions.
2. It may seem that your password does not work for certain functions.

Solution

Mac OS X uses Admin and root users for different types of administrative functions.

For a discussion of this issue, see:

Article 106361: "**Mac OS X 10.0, 10.1: Password Does Not Work as Expected After a Change**"
Published Date: Feb 17, 2012

Mac OS X Server 10.0: Directory Services - Password Security Issue With Windows 2000 Active Directory Group Name

When using a Windows 2000 server for authentication, an Active Directory Group name is accepted for authentication with any nonblank password.
This article has been archived and is no longer updated by Apple.

Symptom

When using a Windows 2000 server for authentication, an Active Directory Group name is accepted for authentication with any nonblank password.

Solution

Normally, this should only grant guest access. But an issue exists in Windows 2000 that results in authentication. Check with Microsoft for updates to Windows 2000 that may resolve this issue.

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"
Published Date: Feb 17, 2012

Mac OS X Server 10.0: Troubleshooting Long Delay at System Startup Time or Server Admin Login

After initial setup, Mac OS X Server 10.0 may take a longer time than expected to start up or connect with the Server Admin application.
This article has been archived and is no longer updated by Apple.

Symptom

The server takes longer than expected to start up. Establishing a connection between Server Admin and the server takes longer than expected.

Solution

By default, Mac OS X Server 10.0 verifies connections with numerical TCP/IP addresses (such as 17.254.0.91) by performing a reverse lookup of the corresponding DNS name (such as apple.com) through the user-defined Domain Name System server. If there is no DNS entry for the Mac OS X Server IP address, the server may continue to attempt lookup for the duration of an industry-standard "timeout" period before it connects with only the numerical address.

When logging in to Server Admin, you would experience this as a delay between the time you click Connect and the moment when the administrative interface appears on the screen. During this interval, the message "contacting the server" appears.

If there is an incorrect DNS entry available for the server's TCP/IP address, the Server Admin Agent may quit entirely.

Note: Server Admin Agent is a process at the server that listens for Server Admin connections, whether they originate from the server itself or from another computer. If you see an alert with a message that Server Admin Agent is not available, you may log out and log back in at the server, or restart the server as necessary to eliminate the message.

There are three options for resolving a DNS issue or working around it:

Create or correct a DNS entry

If the agent fails to connect, the best option is to make an entry at the DNS server that matches the assigned IP address and selected hostname of the Mac OS X Server. Until such a correction is made, a hostname can be assigned that matches an existing DNS entry. If you do not administer your own DNS server, contact your Internet service provider or network administrator.

Disabling DNS verification

To avoid connection delay or to eliminate an issue with an incorrect DNS entry, you may disable verification. You should do this when the correction or creation of a DNS server entry is not an option. Verification provides a greater degree of security.

Follow these steps to disable verification:

1. Open Server Admin.
2. Choose Preferences from the Server Admin application menu.
3. Set the pop-up menu in the Server Admin Preferences window to General.
4. Click the checkbox to deselect "Attempt to resolve IP addresses to DNS names."

Use "localhost" as logon address

When using Server Admin at the server itself, you may type "localhost" in the Address field of the Server Admin Logon window.
Published Date: Feb 17, 2012

Mac OS X Server 10.0: Specify AFP Text Encoding for Older Mac OS Clients

You should specify the text encoding that is to be used by Mac OS 9 and earlier computers when they connect to Apple File Services.
This article has been archived and is no longer updated by Apple.
The Apple File Services component of Mac OS X Server 10.0.3 implements Apple Filing Protocol (AFP) version 3.0, which can use Unicode filenames. Unicode offers multiple language support within one character set.

To allow for backward compatibility with older AFP versions (which do not support Unicode filenames), the Server Admin application allows you to specify the character set (or "encoding") earlier clients are to use when connecting to the server. The default encoding specified for earlier AFP clients is the Roman character set. For example: If you have Mac OS 8.6 clients using Japanese characters to connect, you should set Apple File Service to use Japanese encoding for earlier clients.

Follow these steps to change the encoding:

1. Open Server Admin and log in.
2. Click the File & Print tab.
3. Click the Apple icon and select Configure Apple File Service from the submenu.
4. Click the Access tab.
5. Choose the correct character set for your clients from the Encoding for older clients pop-up menu.

Published Date: Feb 17, 2012

Mac OS X Server 10.0: Do Not Set a Home Directory to Mount Statically

A Home directory set to Automount does not appear as expected when a user logs in.
This article has been archived and is no longer updated by Apple.

Symptom

1. The Home directory does not automatically mount when a user logs in.
2. The user is logged into the server as Guest.

Solution

When you use the Automount option, you must choose between "Mount dynamically" and "Mount statically." Do not use static mounts for Home directories.

Note: The Automount setting is available in the privileges window for a sharepoint when using Server Admin.
Published Date: Feb 17, 2012

Mac OS X Server 10.0: How to Install Over Other Versions of Mac OS X

This article discusses how to install Mac OS X Server 10.0.x over Mac OS X 10.0.x or Mac OS X Server 1.x.
This article has been archived and is no longer updated by Apple.
When installing Mac OS X Server 10.0 on a disk or disk partition that has Mac OS X 10.0.x or Mac OS X Server 1.x installed, you must check the option to format the destination disk or disk partition prior to installation.

Warning: Formatting your hard disk erases all data. You must make a backup of your disk prior to installation.

It is not necessary to reformat your disk if you are installing Mac OS X Server 10.0.x over Mac OS 9 and your hard disk is formatted as Mac OS Extended (HFS Plus).
Published Date: Feb 17, 2012

Mac OS X Server: How to Locate MySQL; What Is It?

This article describes MySQL included with Mac OS X Server 10.0.3 or later.
This article has been archived and is no longer updated by Apple.
MySQL is a relational database management system, developed by MySQL AB (http://www.mysql.com/).

MySQL is installed in a hidden directory that is not visible in the Finder. You can find this directory by using the Terminal application to navigate to:

/usr/bin/

Note: Above is the correct location for 10.2.6 or later. For earlier versions, navigate to:

/usr/local/mysql

MySQL documentation is available online at: http://www.mysql.com/documentation/. Mac OS X Server 10.2 includes mysql version 3.
Published Date: Feb 17, 2012

Mac OS X: Flashing Question Mark Appears; Computer Unexpectedly Starts up From Mac OS 9

Reselect the startup disk when you see a flashing question mark or when the computer unexpectedly starts up from Mac OS 9.

This article has been archived and is no longer updated by Apple.

Symptom

- After you turn on the computer, a flashing question mark appears on the screen.
- The computer may not start up or starts up from an alternate System Folder, such as the Mac OS 9 System Folder used by the Classic environment.

Solution

1. Start up the computer from the Mac OS 9 System Folder.
Note: If the computer does not start up successfully from Mac OS 9 a moment after the flashing question mark appears, then start up the computer using the Mac OS 9 CD-ROM disc included with Mac OS X 10.0, or the one that came with your computer. For best results, use Mac OS 9.2.1 or later.
2. Double-click the hard disk icon to open it.
3. Locate the System Folder in the hard disk and open it.
Note: There is another folder named "System". That is not the right folder.
4. Open the Control Panels folder.
5. Open the Startup Disk control panel.
6. Click the Mac OS X System Folder to select it.
7. Restart the computer.

Important

1. You should use Startup Disk 9.2.1, or later, which is available from Apple Software Updates (http://www.apple.com/swupdates/).

2. Startup Disk 9.2.1 is not included on a Mac OS 9.0 or 9.1 CD-ROM disc. The version of Startup Disk located in the System Folder on your hard disk is most likely a later version. For this reason, do not use the Startup Disk control panel available from the Apple Menu when started up from CD-ROM. Use the Startup Disk control panel located in the System Folder on the hard disk instead.

3. If you have installed licensed copies of Mac OS X on multiple disks on the same computer, see technical document 106220: "**Mac OS X 10.0: May Start Up From Wrong System Folder When Multiple Versions Are Installed**"

Related Documents

58042 Macintosh: Flashing Question Mark at Startup

Published Date: Feb 20, 2012

Screen Savers: Using With Liquid Crystal Displays

This article discusses the effect of prolonged use (burn-in), and screen savers in relation to liquid crystal display (LCD) panels.
This article has been archived and is no longer updated by Apple.

Burn-in

An image can be burned into an LCD panel if left displayed for an extended period (approximately 24 hours, depending on the image and LCD). However, unlike monitors with a cathode-ray tube (CRT), an LCD panel recovers over time and eventually dissipates the image.

To allow this recovery, the display panel must be turned off. The time it takes to recover depends on the original image and how long it was left on the screen. It generally takes between one and two times as long to remove the image as it took to burn it in.

Screen Savers

Although a screen saver can be used, it keeps the display backlight in use thereby decreasing its overall life. A screen saver may also prevent a PowerBook or iBook from going to sleep, decreasing battery life.

Putting the computer to sleep or shutting it down when it won't be used for extended periods is preferred to a screen saver. The Energy Saver control panel has a setting for display sleep that is applicable to both PowerBook and stand-alone flat panel displays such as the Apple Studio Display and Apple Cinema Display.

Related Documents

88343 Apple Displays: Avoiding Image Persistence on LCD Displays

Published Date: Feb 20, 2012

Mac OS X 10.0: "You have inserted a disk containing volumes that Mac OS X can‘t read" Alert

After inserting a Zip disk or a CD-ROM disc an alert box with this message may appear "You have inserted a disk containing volumes that Mac OS X can't read."

This article has been archived and is no longer updated by Apple.

For a discussion of this issue, please see Article 106345: "**Mac OS X 10.0: Removable Disks Do Not Appear (Mount) on Desktop**"

Published Date: Feb 17, 2012

Macintosh Manager, Mac OS: Alias Opens Wrong Item

An alias may open the wrong item when used with two or more volumes (disks or disk partitions) that have an identical volume creation date.

This article has been archived and is no longer updated by Apple.

Symptom

An alias opens a file, folder, or application other than the one that is expected.

Note: This article pertains only to an alias that is used on more than one volume, or on a volume other than the one from which it was created. This is most likely to affect a Macintosh Manager environment. However, this could occur when an alias is copied from one volume to another in an unmanaged environment.

Solution

Initialize the disk or disk partition. In a Macintosh Manager environment, this requires initializing all volumes to ensure that each volume has a unique creation date.

Background

This symptom occurs when two or more volumes have an identical creation date (down to minute and second), which effectively serves as a volume serial number for validating an alias. The duplication of creation dates allows an alias to be validated, even if the resulting destination is not correct.

Published Date: Feb 20, 2012

QuickTime Streaming Server 2.0: Setting up a Web Page to Show Streamed Media

This article describes how to setup a web page to show streamed Media using QuickTime Streaming Server 2.0.
This article has been archived and is no longer updated by Apple.
QuickTime Streaming Server 2.0: Setting up a Web Page to Show Streamed Media

This article describes how to setup a webpage to show streamed Media using QuickTime Streaming Server 2.0.

Notes:
1. All information in this article comes from the help file distributed with QuickTime Streaming Server 2.0. The help file includes additional help topics which are not covered in the Knowledge Base.
2. This article discusses software for use only with Mac OS X Server version 1.2 (released prior to May 2001).

Setting Up a Webpage to Show Streamed Media

You can embed streamed media in a webpage. If you do this, viewers can use any web browser to view the media by entering the URL of the website.

> *For example:*
> `<pre>http://www.mywebpage.com/</pre>`

You would replace "www.mywebpage.com" with the DNS name of your website.

To embed live media in a webpage, you must create a reference movie that points to the SDP file in the folder you set up for streaming media. You store the reference movie on your website and include a link to the reference movie on your webpage.

For more information on creating reference movies, see the QuickTime Pro Reference Movie tutorial.

Published Date: Feb 19, 2012

Mac OS X 10.0, 10.1: Pointer Disappears While Using Classic Application

Under certain circumstances, the pointer may temporarily disappear from Classic applications. The mouse remains responsive even though the pointer is not visible.
This article has been archived and is no longer updated by Apple.

Symptom

The pointer temporarily disappears while using a Classic application.

Solution

Update to Mac OS X 10.2 or later.

You can also try one of the following workarounds:

- Switch to a different open application by pressing the Command-Tab keyboard shortcut.
- Pull the mouse so that the pointer goes toward the bottom or side of the screen and the Dock responds. Open the System Preferences application. (You will know that the pointer is over the System Preferences icon when its name appears above the Dock). Click the Classic pane in System Preferences and restart the Classic environment.
- Restart the computer.

Published Date: Feb 17, 2012

Mac OS X Server 10.0: Form Data Not Sent to CGI When Using POST Method

If you use the Server Admin application to start Web service, any CGI script (Perl, PHP, Python, and so forth) will not receive data sent using the HTTP POST method from a Web page form.

This article has been archived and is no longer updated by Apple.

Symptom

Form data is not sent to a CGI when using the HTTP POST method.

To manually stop the Web server, simply replace the start command with stop.

Important: You may still use Server Admin to administer the Web server. If Server Admin module is used to start Web service or is set again to "Start Web service on system startup," this issue will recur.

Published Date: Feb 17, 2012

Mac OS X 10.0, iMac: No Sound From External Speakers

Certain iMac computers using Mac OS X 10.0 may not produce any sound through external speakers plugged in to the computer's sound output port.

This article has been archived and is no longer updated by Apple.

Symptom

No sound comes from external speakers connected to an iMac.

Solution

Plug the external speakers in to one of the headphone jacks on the front of the computer instead of the sound output port on the side of the computer.

This issue may be avoided by updating to Mac OS X 10.1.

Published Date: Feb 20, 2012

Mac OS X: "No Driver for this platform" Message

This document explains what you should do if a kernel panic that includes the message "No driver for this platform" occurs.
This article has been archived and is no longer updated by Apple.

Symptom

A kernel panic occurs, and this message (or a similar one) appears:

> "No driver for this platform."

For an example of what a kernel panic looks like, see technical document 106227, "**Mac OS X: What is a Kernel Panic?**"

Solution

Is the computer Mac OS X-compatible?

Make sure your computer meets the system requirements for Mac OS X. For a list of compatible computers, see technical document 106163, "**Mac OS X 10.0, 10.1: System Requirements**".

Verify that you have a "System" folder

Mac OS X installs a folder named "System" which contains required software. Moving or renaming this folder can cause this symptom. If you have moved or renamed this folder, then start up the computer from Mac OS 9 and take corrective action. The folder must be located at the top (or "root") level of the Mac OS X disk and must be named "System".

If you do not have Mac OS 9 installed on the computer, you may start up from a Mac OS 9 CD-ROM disc. After inserting the CD, press and hold the "C" key immediately after restarting the computer to force the computer to start up from the CD.

For more information, see technical documents:

106805: "**Mac OS X: Do Not Move 'mach_kernel' or Other System-Installed Files and Folders, Some of Which Are Normally Invisible**"
106464: "**Mac OS X: Troubleshooting a Startup Issue**"

Notes:

1. The "System" folder should not be confused with the Mac OS 9 "System Folder". The default configuration for Macintosh computers is to have Mac OS 9 and Mac OS X installed on the same disk. You should see both of these folders at the top (or "root") level of your hard disk.

2. You also should not relocate other folders installed by Mac OS X at the root of your disk. These include Library, Users, and Applications. For more information on troubleshooting a kernel panic, see technical document 106464, "**Mac OS X: Troubleshooting a Startup Issue**".

Published Date: Feb 17, 2012

Mac OS X: 128-Bit 2D/3D Professional Graphics Card Causes Kernel Panic

Some Power Macintosh G3 models offered a build-to-order option for a 128-Bit 2D/3D Graphics Accelerator Card, which does not work with Mac OS X 10.0 to 10.2.8.
This article has been archived and is no longer updated by Apple.

Symptom

Either of these symptoms may occur:

- A kernel panic occurs during system startup time.
- A display connected to the 128-Bit 2D/3D Graphics Accelerator Card only works at a resolution of 640-by 480-pixels.

Any of the following computers when the build-to-order (BTO) 128-Bit 2D/3D Graphics Accelerator Card is installed:

- Power Macintosh G3 Mini Tower
- Power Macintosh G3 Desktop
- Power Macintosh G3 All-In-One
- Macintosh Server G3

Notes

1. This information does not apply to Power Macintosh G3 (Blue and White) computers.

2. For more information on the affected card, see technical document 22199: "**Power Macintosh G3: Information on Build-To-Order Configurations**"

Solution

You should not use the 128-Bit 2D/3D Professional Graphics Card in a computer with Mac OS X 10.0 to 10.2.8. The 128-Bit 2D/3D Professional Graphics Card does not meet the system requirements for Mac OS X versions 10.0 to 10.2.8.
Published Date: Feb 17, 2012

Mac OS X Server 10: Web service uses ports 80 and 16080 by default

The Apache Web server included with Mac OS X Server uses TCP port 16080 when the Performance Cache is enabled. Blocking this port can interfère with Web service.
This article has been archived and is no longer updated by Apple.

Symptom

Clients experience issues accessing Web service.

Solution

Do not block ports 80 or 16080 when setting up the IP Filtering feature of Mac OS X Server or any router or firewall.

Performance Cache communicates on port 80, which is normally used for Web service. Each port can accommodate only one service. Since the Performance Cache process is a front end http server by itself, Apache is reconfigured to run on port 16080. Performance Cache is enabled by default.

Interaction between Performance Cache and Apache

The Performance Cache stores data that can be reserved to clients who request it again. However, not all data can be cached. In this case, Performance Cache retrieves the data by querying Apache locally on port 16080. You may sometimes see clients sending requests to port 16080 directly, as the result of a redirect sent to the clients by Apache. Otherwise the Performance Cache process should transmit all request-response cycles.

Note: Because of this design, the Performance Cache process introduces a small performance penalty when serving dynamic content.

How to enable or disable Performance Cache

Click to select/deselect the checkbox for "Enable performance cache" in the Server Admin application. This setting is located in the General pane of the Web Service module of Server Admin.

In Server Settings, click the Sites tab in the Configure Web Service window. Double-click the site name, then click the Options tab in the resulting window (which will be named after the site you opened).
Published Date: Feb 17, 2012

Mac OS X: How to add an alert sound

This article has been archived and is no longer updated by Apple.

If you'd like to add your own alert sounds to Mac OS X, you can as long as your audio file is in AIFF format and has the ".aiff" extension appended to the filename. (**Note**: The suffix ".aif" is not sufficient in Mac OS X 10.1.5 and earlier.) Here's how to add your own alert sounds to your system.

1. Locate the AIFF sound file you want to use in the Finder.
2. From the **File** menu, choose **New Finder Window** to open another Finder window.
3. Select your Home folder in the new Finder window.
4. Open the Library folder.
5. Open the Sounds folder—you should now be in ~/Library/Sounds, where the tilde (~) represents your Home folder.
6. Drag your AIFF file from your first Finder window to the Sounds folder in the second Finder window.
7. From the **Apple** menu, choose **System Preferences**.
8. In the resulting window, click Sound to display its pane.
9. Click the Sound Effects tab.
10. Your sound should appear in the alert sound list; just select it to put it in use.

Tip: If you'd like to make your sounds available to other users on your computer, create a Sounds folder, put it in the Library folder at the root of your system (/Library), and drag in your AIFF files.

How to convert a sound file to AIFF format

If your sound file is not in AIFF format, you can use an audio application, such as iTunes or QuickTime Pro, that can convert sound files between formats—as long as your selected application can open and play the file that you wish to convert.

Using iTunes to convert audio files to AIFF format

1. Open iTunes (it's in the Applications folder).
2. From the **iTunes** menu, choose **Preferences**.
3. Click the Importing button.
4. From the **Import Using** pop-up menu, choose **AIFF Encoder**.
5. Click OK.
6. Hold down the Option key and from the **Advanced** menu, choose **Convert Selection to AIFF**.
7. In the resulting Convert window, navigate to and select your audio file.
8. Click Choose. iTunes begins to convert the file.
9. After iTunes finishes the conversion, drag the AIFF file from the iTunes library to either `/Users/`*`username`*`/Library/Sounds` or `/Library/Sounds` (if you are using Mac OS X 10.1.5 or earlier, be sure to change the filename extension from ".aif" to ".aiff").

You can then delete the audio file from your iTunes library if you wish (just select the file and press Delete).

Note: If you're using Mac OS X 10.0 and cannot use iTunes, you can use QuickTime Player to do the conversion as long as you've upgraded to QuickTime Pro, and the file is one that QuickTime Player can open and play.

Using QuickTime Pro to convert audio files to AIFF format

Note: Certain files that work with the Mac OS 9 version of QuickTime Player may not work with the Mac OS X version, and vice versa. For example, if you want to bring a sound from the Mac OS 9 System suitcase (also known as a "System 7 Sound") into Mac OS X, you must make the AIFF conversion in the Mac OS 9 version of QuickTime Player—not the Mac OS X version. If needed, you can open the Mac OS 9 version of QuickTime Player in the Classic environment of Mac OS X.

1. Open QuickTime Player (it's in the Applications folder).
2. From the **File** menu, choose **Import**. QuickTime 7 Pro users: From the **File** menu, choose **Open File**.
3. In the resulting dialog, navigate to and select the sound file that you wish to convert.
4. Click Open.
5. From the **File** menu, choose **Export**.
6. In the resulting dialog, choose a location to save the new file (the Desktop or your Documents folder are good choices).
7. From the **Export** pop-up menu, choose **Sound to AIFF**.
8. In the Save As field, check the file name to be sure it ends with a ".aiff" extension.
9. Click Save.

Once QuickTime has converted your file, drag the AIFF file to either `/Users/`*`username`*`/Library/Sounds` or `/Library/Sounds`.

Published Date: Feb 17, 2012

Mac OS X 10.0: "Disconnecting: Bad packet length" Message When Using SSH

Web Sharing Update 1.0 resolves an issue that can cause a disconnection while attempting an SSH connection.
This article has been archived and is no longer updated by Apple.

Symptom

When an SSH connection is attempted, an alert box with this message appears:

> "Disconnecting: Bad packet length"

The SSH software then quits.

Solution

Download and install Web Sharing Update 1.0.

For information on obtaining and installing this software, please see:

Technical document 106408: "**Web Sharing Update 1.0: Before You Install Information**"
Published Date: Feb 17, 2012

Mac OS X 10.0, Sherlock: "An unexpected error occurred" Message

Use the steps in this article to resolve a repeating message in Sherlock that says "An unexpected error occurred."
This article has been archived and is no longer updated by Apple.

Symptom

When you open Sherlock or make it the active application, an alert box with this message appears:

> "An unexpected error occurred. If you continue to encounter problems, quit and start again."

If you click OK, the same message returns.

Solution

Update to Mac OS X 10.1.

The following section applies to Mac OS X versions 10.0 to 10.0.4.

This issue can be caused by having a graphic file on the clipboard, which is the result of using the Copy or Cut command. To resolve the issue, put something that isn't a picture on the clipboard. You may follow these steps:

1. Switch to an application other than Sherlock, such as the Finder.
2. Highlight some text with the pointer.
3. Choose Copy from the Edit menu.
4. Click OK in the Sherlock alert box.

The message should not recur after completing these steps.
Published Date: Feb 17, 2012

Macintosh Manager: Offline Documents Behavior

This article describes the Offline feature and how it behaves with specific versions of Macintosh Manager.
This article has been archived and is no longer updated by Apple.

Working offline

The "Work offline" feature allows users to work on client computers while the Macintosh Manager server or any additional Workgroup Documents server(s) is unavailable.

Macintosh Manager 1.x

There are two offline options in Macintosh Manager 1.x (Figure 1).

1. 'Work offline if the Macintosh Management Server is not available."
2. "Work offline if the workgroup's data volume is not available."

Figure 1 Offline options for Macintosh Manager 1.x

Macintosh Manager 2.x

There are also two offline options in Macintosh Manager 2.x (Figure 2).

1. 'Work offline if the Macintosh Management Server is not available."
2. 'Work offline if the user's home directory is not available."

These options are specific to computer lists and are found in the Computers: Security pane of the Macintosh Manager application.

Figure 2 Offline options for Macintosh Manager 2.x

If users save their documents to a disk that does not reside on the Macintosh Manager server, then the option to 'Work offline if the workgroup's data volume is not available" may be used to allow these users to work offline.

Entering "Work offline" mode

When the Macintosh Manager server is unavailable:

1. A Macintosh Manager user attempts to log in while the Macintosh Manager server is unavailable.
2. A dialog box appears with four buttons: Pick Server, Offline, Finder, Shut Down (Figure 3).
3. Click Offline.

Note: If the option to "Require an Administrator password to work offline" has been selected, the user is prompted for an Admin user password. Clicking Pick Server or Finder also brings up a dialog requiring an Admin user password to continue.

Figure 3 Choices when Macintosh Manager server is unavailable

When an additional Workgroup Documents server is unavailable:

1. A Macintosh Manager user attempts to log in while the Workgroup Documents server is unavailable.
2. A dialog box appears asking if the user wishes to work offline (Figure 4).
3. Click Yes.

Note: Clicking No cancels the login and take you back to the login screen or shut down the client computer (Macintosh Manager versions 1.3 and

earlier).

Figure 4 Choices when Workgroup Documents server is unavailable

Server interruption while working

If the Macintosh Manager server or the Workgroup Documents server becomes unavailable while a user is logged in, the user must log out and back in to work offline. Any unsaved data will be lost when logging out in this situation, unless the user has write access to another local or remote disk.

Document storage location

Macintosh Manager stores user's documents on the client's startup disk while working offline. Versions 1.x to 2.x store documents in different locations.

Macintosh Manager 1.x offline documents location:

ClientDiskName: Users: UserName: Documents:

Macintosh Manager 2.x Offline documents location:

ClientDiskName: Users: UserName: Offline Documents:

After working offline

When the Documents Server becomes available again, Macintosh Manager 1.x users must log out and log back in on the same client computer, then manually copy the items they saved while offline to their documents folder on the server. Restricted Finder and Finder users can navigate to their offline documents folder and copy data to their documents folder. Panels users must open the document with an application and then perform a 'Save As' to save the data in their documents folder.

Macintosh Manager 2.x will copy the documents from the Offline Documents folder to the user's Documents folder automatically. To do this, users must log out and then log back in on the same client computer.
Published Date: Feb 17, 2012

Mac OS X: How to View Memory Usage With the "top" Utility

You may use the top utility in a Terminal window to monitor the usage of RAM, virtual memory, and CPU cycles, in addition to other statistics.
This article has been archived and is no longer updated by Apple.
This article offers an advanced technique. You may perform similar monitoring with the ProcessViewer application. For information on using the ProcessViewer for this task, please see technical document 106386: "**Mac OS X 10.0: How to View Memory Usage and Installed RAM**"

Viewing memory usage with top

1. Open Terminal (located at /Applications/Utilities/).
2. Type: `top`
3. Press Return to open the top utility in the Terminal window. Two rows near the top of the window, "PhysMem:" and "VM:" indicate overall physical RAM and virtual memory usage, respectively. The two columns on the right, "RSIZE" and "VSIZE" offer memory usage information per application. RSIZE indicates the amount of physical RAM in use by the application or process, in megabytes ("M") or kilobytes ("K"). VSIZE indicates the amount of virtual memory Mac OS X has assigned for this process or application, in megabytes ("M") or gigabytes ("G").
4. When you are finished reviewing the information, press the Q key to exit top.

Notes

1. Application and process names are listed in the "COMMAND" column.
2. It is normal for some processes to use very little RAM, such as 64K.
3. Not all applications may have an easily-recognizable name in the Terminal window. For example: Microsoft Internet Explorer 5.1 appears as "Internet E."
4. As with Process Viewer, Classic applications do not appear individually in the Process Listing window. It is normal for the Classic environment to appear as a single process (TruBlueEnv).
5. top itself is listed because it is an open application. This is normal.
6. Type "`man top`" in the Terminal for more information on top.

Published Date: Feb 17, 2012

NetInfo: What is it?; How to Set Up NetInfo

This article contains a link to the PDF manual "Understanding and Using NetInfo."

This article has been archived and is no longer updated by Apple.

Understanding and Using NetInfo		
Language	**Description**	**Manual**
English	**Understanding and Using NetInfo** This document includes information on setting up Mac OS X Server and NetInfo to increase the power of your Mac OS X network	

Published Date: Feb 19, 2012

Mac OS: About Folders, Directories, and Pathnames

Sometimes it is helpful to describe a file or folder by its pathname. This article discusses the relationship between folders, pathnames, and directories.
This article has been archived and is no longer updated by Apple.

Overview

The Mac OS Finder allows you to navigate a file system with easily recognizable file and folder icons. The Finder is all you need to know about the file system for daily usage of your Macintosh. However, you may occasionally need to perform an administrative task described in terms of directories and pathnames. Readers and writers of technical documents can locate a file or directory precisely and efficiently by using a pathname.

What is a directory?

A **directory** is a file that lists the names of items contained on a disk or other piece of storage media. The directory does not actually contain these items, but it does contain information that tells the operating system how to find the item on the disk. A directory can list different types of files, including other directories, meaning that the directory structure of a disk can be multi-tiered.

Expert users can view a text-only directory with tools such as the Terminal application (Figure 1).

Figure 1 Directory listings in a Terminal window

The top directory of a disk is called the **root** directory. Other directories branch from the root, which you could diagram like a family tree or tournament bracket. Each file on the computer is assigned to one directory, like a leaf on a branch. File systems structured like this are frequently described as **hierarchical**. When describing the position of one directory to another, you may use the terms **subdirectory** and **parent directory**. For example (Figure 1):

- Documents is a subdirectory of the Home directory (~).
- root (/) is the parent directory of the Users directory.

What is a folder?

A folder is the graphical representation of a directory. Together with the Finder (Figure 2), folders provide an easily understood way to see and manipulate a file system. Moving an item in or out of a folder in the Finder changes the underlying directory. The terms **folder** and **directory** are sometimes used interchangeably, when the distinction is not relevant.

Figure 2 Folders in the Finder Column View

Note: It is normal for the Finder to display fewer folders than there are directories listed in the Terminal. This enhances simplicity by hiding items which are only used by the operating system.

What is a pathname?

To find a file or folder, you follow a particular path. As in Figure 2, you might open the Mac OS X disk, then the Users folder, then the folder with your user name (or **Home directory**), and finally your Desktop folder. A **pathname** is simply a concise way to identify a folder by both its name and its location in the file system. This is important when files and folders have the same name and can only be differentiated by location. Mac OS X, for example, has four or more folders named "Fonts" that can only be identified by pathname.

Absolute pathname

An **absolute pathname** gives an exact location by including the name of every folder in the path from the root of the disk to the item being named. For example, the absolute pathname of the Desktop folder in Figure 2 would be:

    /Users/mdh/Desktop

Note that the root of the disk is represented simply by the first solidus, or "slash," symbol. Each subsequent solidus marks a division between the names of nested folders.

Relative pathname

A **relative pathname** is described from the current location. If you were the user mdh and you selected the Users folder (Figure 2), then the relative pathname for the Desktop folder would be:

mdh/Desktop

Special abbreviations: the Home directory (~/) and root directory (/)

It is conventional to use the tilde (~) character to represent the Home directory. For example, you could note that each user can install personal fonts at ~/Library/Fonts/ in Mac OS X. The tilde may refer to Home directories stored on your computer or on a network server.

It conventional to represent the root directory with the first solidus (/) character in an absolute pathname.

Punctuation of pathnames: solidus (/) versus colon (:)

For Mac OS X and other UNIX or UNIX-like operating systems, it is conventional to use the solidus (/) character to mark the division of names. In earlier versions of Mac OS, it is conventional to use a colon. A Mac OS 9 pathname would look like:

System Folder: Preferences: Sherlock Prefs: Sherlock Defaults
Published Date: Feb 19, 2012

Mac OS X Server 10.0: httpd Processes Can Refuse to Quit

Depending on load, the Apache Web server may create additional instances of itself. Sometimes the additional instances of Apache do not quit as expected.
This article has been archived and is no longer updated by Apple.

Symptom

ProcessViewer or top indicates that many instances of httpd process are running when the server is under light load.

Solution

Use **one** of the following solutions (A or B).

A. Disable logging

If you do not need a log, you may disable logging by using Server Admin. Follow these steps:

1. Click the Internet tab in Server Admin.
2. Click the Web icon and choose Configure Web Service.
3. Click the Sites tab.
4. Select the site for which logging is to be disabled.
5. Click Edit.
6. Click the checkboxes to deselect both "Enable access log" and "Enable error log."
7. Click Save.

Note: If you are hosting more than one Web site, you should change this setting for each site.

B. Change the logging method

If you need a log, follow these steps to change the method that Mac OS X Server uses to log Web server information. The script presented here logs one week of data and then deletes the oldest log file.

First, disable the logs' Archive feature if it is enabled. Follow these steps:

1. Click the Internet tab in Server Admin.
2. Click the Web icon and choose Configure Web Service.
3. Click the Sites tab.
4. Select the site for which logging is to be modified.
5. Click Edit.
6. Be sure that both checkboxes for Archive are deselected.
7. Click Save if you made a change.

Note: If you are hosting more than one Web site, you should change this setting for each site.

Next, you need to edit the /etc/daily file. Follow these steps:

1. Open Terminal (located at /Applications/Utilities/)
2. Type: `pico /etc/daily`
3. Press Return
4. At the end of the file, paste in the following segment of script:

Begin copying below this line.

```
echo ""
echo -n "Rotating Apache log files:"
cd /var/log/httpd
for i in httpd.log; do
if [ -f "${i}" ]; then
echo -n " ${i}"
```

```
if [ -x /usr/bin/gzip ]; then gzext=".gz"; else gzext=""; fi
if [ -f "${i}.6${gzext}" ]; then mv -f "${i}.6${gzext}" "${i}.7${gzext}"; fi
if [ -f "${i}.5${gzext}" ]; then mv -f "${i}.5${gzext}" "${i}.6${gzext}"; fi
if [ -f "${i}.4${gzext}" ]; then mv -f "${i}.4${gzext}" "${i}.5${gzext}"; fi
if [ -f "${i}.3${gzext}" ]; then mv -f "${i}.3${gzext}" "${i}.4${gzext}"; fi
if [ -f "${i}.2${gzext}" ]; then mv -f "${i}.2${gzext}" "${i}.3${gzext}"; fi
if [ -f "${i}.1${gzext}" ]; then mv -f "${i}.1${gzext}" "${i}.2${gzext}"; fi
if [ -f "${i}.0${gzext}" ]; then mv -f "${i}.0${gzext}" "${i}.1${gzext}"; fi
if [ -f "${i}" ]; then mv -f "${i}" "${i}.0"; fi
touch "${i}" && chmod 640 "${i}"
/usr/sbin/apachectl restart
if [ -x /usr/bin/gzip ]; then gzip -9 "${i}.0"; fi
fi
done
```

End copying above this line.

5. Save the file (press Control-O), press Return, and exit pico (press Control-X).

Note: This will stop the Web server momentarily to let it start logging to the new files.

Published Date: Feb 17, 2012

AirPort and AirPort Extreme: Certified by Wi-Fi

All AirPort and AirPort Extreme products are Wi-Fi certified. Wi-Fi certification ensures interoperability between various manufacturers' 802.11b wireless networking products.
This article has been archived and is no longer updated by Apple.
The term Wi-Fi (Wireless Fidelity) is often used in discussions of 802.11 networks. It refers to certification by the Wi-Fi Alliance, an international nonprofit association of 802.11 product vendors. 802.11 products that receive Wi-Fi Certification have been tested and found to be interoperable with other certified products. That means you can use your Wi-Fi certified product with 802.11 Wi-Fi Certified networks, whether they are Mac or Windows-based networks. Although 802.11 products that don't have Wi-Fi Certification may work fine with certified devices, the Wi-Fi Certified logo is your assurance of interoperability. AirPort Extreme is Wi-Fi Certified for 802.11b and 802.11g, which means that it works with any 802.11b or 802.11g Wi-Fi Certified products.

Apple is a member of the Wireless Ethernet Compatibility Alliance (WECA), which provides the Wi-Fi certification. You can find a list of certified Wi-Fi products at the Wi-Fi Alliance web site (http://www.wi-fi.org/).
Published Date: Feb 19, 2012

Mac OS X 10.0: Kernel Panic When Using Matrox RTMac Card

Matrox has developed a firmware update to resolve an issue that causes frequent kernel panics with Mac OS X.

This article has been archived and is no longer updated by Apple.

Symptom

Mac OS X experiences frequent kernel panics when a Matrox RTMac card is installed.

Solution

Matrox has released a firmware update for the RTMac card that addresses this issue. You can download it from:

Matrox RTMac software updates
http://www.matrox.com/video/support/rtmac/software/downloads/software.cfm

Note: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Mac OS X 10.0: Classic Quits Unexpectedly When TCP/IP Is Set Up to Use a Hosts File

The Classic environment does not start up properly if the TCP/IP control panel is set up to use a hosts file.

This article has been archived and is no longer updated by Apple.

Symptom

The Classic environment appears to start up, but then it quits and is not available for Classic applications.

Solution

Note: This particular solution applies only if you have placed your TCP/IP control panel in the Advanced User Mode and used the Select Hosts File feature.

This issue occurs if the last line of the hosts file contains an entry for a computer. You can resolve the issue by adding a blank line to the hosts file after the last computer entry.

Published Date: Feb 17, 2012

Mac OS: "Startup Disk no longer has a valid System Folder"

If the Mac OS 9 System Folder becomes unblessed and you choose Restart from the Special menu, an alert message appears that the "Startup Disk no longer has a valid System Folder."
This article has been archived and is no longer updated by Apple.

Symptom

When you try to restart the computer, an alert box appears with the following message:

> "The startup disk no longer has a valid System Folder.
> "'System' and 'Finder' must be in the System Folder. If you continue, you may not be able to restart the computer. Do you want to continue?"

You may also find that some fonts displayed on screen have jagged edges, and the items in the Apple menu after "About this application..." may not be present.

Solution

Important: This solution deals with the Mac OS 9 "System Folder". When Mac OS 9 and Mac OS X are installed on the same computer, there is another folder at the top (root) level of the hard drive named just "System". The System Folder contains Mac OS 9 software components, and the System folder contains Mac OS X software components. Do not confuse the two folders.

The symptom can happen if:

- The System and/or Finder files are not in the same System Folder.
- The System and Finder files are damaged.
- You are using versions of the Startup Disk control panel earlier than 9.2 to select a Mac OS X startup disk.
  Note: You should use Startup Disk 9.2.1 or later.

Choose a set of steps to match your situation (A or B):

A. Use these steps if you are starting up alternatively from Mac OS 9 and Mac OS X and your System Folder otherwise appears to be intact.

1. Click the Cancel button in the alert box if it is still on screen.
2. Download Startup Disk version 9.2.1 or later from Apple Software Downloads (http://www.apple.com/swupdates/).
3. Use the this version of Startup Disk to select the Mac OS X disk.

You should no longer see the alert message when restarting.

B. Use these steps if you are not using Mac OS X or if you suspect your System Folder is not intact.

1. Click the Cancel button in the alert box if it is still on screen.
2. Locate the System Folder. It is normally at the top level of your hard disk, but it might have been moved or renamed.
3. If you have located the System Folder, open it and check for the presence of two items, named "System" and "Finder."
4. If these files are not in the folder or you cannot locate the System Folder, use Sherlock to locate "Finder" and "System." (This may also allow you to locate a System Folder that has been renamed or files that have been misplaced). As necessary, return the name of the folder containing your system software to "System Folder" and/or put the System and Finder files back into this folder.
   Note: Depending on the state of your System Folder, you may not be able to open Sherlock using the Apple Menu or Command-F keyboard shortcut. In this case, you can start up from a Mac OS 9 CD-ROM disc to use Sherlock.
5. Double-click the System file.

Replacing the files in the System Folder or double-clicking the System file should re-bless (reactivate) the System Folder. You can tell a System Folder is blessed when the Mac OS logo badge appears on the folder. If the System Folder is not re-blessed by this point, you may start up from a Mac OS 9 CD-ROM and use Disk First Aid to verify and repair the hard disk. You may also need to reinstall the core Mac OS 9 operating system.

Note: A Mac OS 9 System Folder used for the Classic environment must be reinstalled by the clean installation method. See technical document 106294: "**Mac OS X 10.0: How to Reinstall Mac OS 9 or Recover From a Software Restore**"
Published Date: Feb 18, 2012

Mac OS X: Pasting Custom Icons Does Not Work in All Contexts

Mac OS X versions 10.0 to 10.0.4 do not allow custom icons for your hard disk or other volumes. Also, you cannot paste a custom icon on a file that has no resource fork.

This article has been archived and is no longer updated by Apple.

Symptom

Mac OS X versions 10.0 to 10.0.4 allow you to execute the Paste command for a custom icon in several situations in which custom icons are not allowed and do not take effect. Symptoms of this issue appear in three ways:

1. A custom icon applied to a disk volume when started up with Mac OS 9 does not appear when started up with Mac OS X.
2. Mac OS X allows you to paste a custom icon on a disk volume, but it does not take effect. However, the custom icon is visible if you restart the computer with Mac OS 9.
3. Mac OS X allows you to paste a custom icon on a file that has no resource fork, but it has no effect. (Many files in Mac OS X do not have resource forks.)

Solution

Updating to Mac OS X 10.1 resolves part of Symptom 2, described above.

In Mac OS X 10.1, you can paste custom icons on a volume. However, the icon is stored in a different place than the icon used by Mac OS 9. This means you can have both a Mac OS 9 custom icon and a Mac OS X custom icon. The icon you see depends on whether the computer is started up from Mac OS 9 or Mac OS X.

Where custom icons are stored

The icon for a Mac OS X volume is stored in a file called ".VolumeIcon.icns " on the root level for that volume. This file is not normally visible in the Finder. The icon for the startup volume will be /.VolumeIcon.icns, while the icon for another disk called "disk2" will be stored at /Volumes/disk2/.VolumeIcon.icns.

Published Date: Feb 17, 2012

Mac OS X, Mac OS X Server: Changing Privileges for System Software Components May Prevent Proper Startup

A computer may not start up correctly with Mac OS X if the privileges (or "permissions") have been changed for system software components. This may occur after a change of guest user privileges.

This article has been archived and is no longer updated by Apple.

Symptom

The computer does not start up properly.

Solution

Do not change the privileges for system software components. Instead, change your share point selection.

Some people change these privileges after noticing that the guest user has rights to some system software components. However, these privileges must remain in place for the computer to start up properly.

The proper way to address this concern is to make share points from individual folders, rather than making an entire disk a share point. This approach should also prevent you from making privileges changes to the entire startup disk when using the Workgroup Manager or Server Admin application included with Mac OS X Server.

For more information, see technical document 106805, "**Mac OS X: Do Not Move 'mach_kernel' or Other System-Installed Files and Folders, Some of Which Are Normally Invisible**".

Published Date: Feb 17, 2012

Mac OS X Server 10.0: Migration Issue, "niutil: can‘t open directory/groups/admin: no such directory"

Using the Mac OS X Server 1.2 Migration Tool, you may not be able to complete the export of a user list. This article includes a workaround. This article has been archived and is no longer updated by Apple.

Symptom

An alert with this message appears:

> "niutil: can't open directory /groups/admin: no such directory"

Solution

The file "Mac_OS_X_Server_1.2_Migration_Tool" is a shell script that is executable from the command line of a Terminal window. You can modify it to resolve the issue by following these steps:

1. Copy the Mac_OS_X_Server_1.2_Migration_Tool from the Mac OS X Server 10.0.3 installation CD-ROM disc to the root user's Home directory on the Mac OS X Server 1.2 server from which the users are to be exported.
2. Open the TextEdit application.
3. Choose Open from the File menu.
4. Navigate to the Mac_OS_X_Server_1.2_Migration_Tool and open it in TextEdit.
5. Search (Command-F) the document for: `/groups/admin`
6. Change this phrase to: `/groups/wheel`
7. Save the change. Be sure the file is saved as as plain text (which should be the default setting for the script file).
8. In the Workspace Manager, locate this file in your Home directory.
9. Select the file and then choose Inspector/Access from the Tools menu.
10. Click the checkboxes to select "Execute" for owner, group, and other.
11. Click OK to save the changes.
12. Open a Terminal window while logged in as root (or su to root).
13. At the root# prompt type: `cd ~`
14. Press Return.
15. Type: `./Mac_OS_X_Server_1.2_Migration_Tool > exportlist.xml`
16. Press Return.

Note: The first command takes you to your Home directory. The second command executes the modified script and puts the output into a new file named exportlist.xml. It contains groups and users, with account information and encrypted passwords.

17. Copy the exportlist.xml file to your Mac OS X Server 10.0.3 computer.
18. Open the Server Admin application.
19. Click the General tab.
20. Click the Users & Groups icon and choose Import.
21. Navigate to and select the exportlist.xml file.
22. Click Choose.

Published Date: Feb 17, 2012

Mac OS X Server 10.0: "403 Forbidden" Message When Attempting Access to a Web Page

Enter Web page names as described in this article to avoid the "403 Forbidden" message.
This article has been archived and is no longer updated by Apple.

Symptom

A Web client attempting to access a site served by Mac OS X Server receives this message:

> "403 Forbidden"
> "You don't have permission to access / on this server."

Figure 1 The "403 Forbidden" message in Microsoft Internet Explorer

Solution

Client workaround

Note: Only the administrator of the Mac OS X Server computer can resolve this issue. If you are a client, refer your Web server administrator to this article. As a workaround, you can try adding common page names to the end of the Web address, such as:

index.html
index.htm
index.php
default.html

Server Admin solution

This occurs when you have set up a Web site for multiple default Web pages without using required punctuation (Figure 2).

Figure 2 Incorrect: the "Default document name" field

When specifying multiple default pages in the Server Admin application, put quotation marks around the name of each document. If you wanted the Web server to try three different names when looking for a default document, you would specify the entry as in this example:

> "index.html" "index.htm" "default.html"

This would cause the Web server to use the index.html page as the default page unless that document doesn't exist, in which case it would try index.htm and then default.html. Figure 3 demonstrates how the server should look if set up for to search for two page names.

Figure 3 Correct: the "Default document name" field with quotation marks
Published Date: Feb 17, 2012

Mac OS X: DSL/PPPoE Frequently Asked Questions (FAQ)

This document answers common questions about connecting to the Internet with Mac OS X and a DSL modem, using the PPPoE protocol.
This article has been archived and is no longer updated by Apple.

Questions answered in this document:

1. What is DSL?
2. What is PPPoE?
3. With Mac OS 9, I used PPPoE software provided by my ISP. How do I use this software with Mac OS X?
4. What if the ISP tells me that their DSL/PPPoE software does not work with Macintosh computers?
5. Where can I find more information?

Question 1: What is DSL?

Answer: A Digital Subscriber Line is a popular medium for delivering high-speed Internet connections. Physically, it looks like a phone line. A DSL modem, normally provided by your Internet service provider (ISP), bridges this line to an RJ-45 Ethernet port like the one on your computer. You then connect your computer to the DSL modem using an Ethernet cable.

Question 2: What is PPPoE?

Answer: PPPoE is the abbreviation for Point-to-Point Protocol over Ethernet. PPPoE is the protocol that your ISP uses to transmit information to and from a computer. Some DSL-based ISPs may not call PPPoE by name, but this information is relevant if you use a DSL modem and are required provide a user name and password in order to connect to the Internet.

Question 3: With Mac OS 9, I used PPPoE software provided by my ISP. How do I use this software with Mac OS X?

Answer: With Mac OS X, you do not need to use such software. This function is part of Mac OS X. Follow the instructions in technical document 106282: "**Mac OS X 10.0: Setup Assistant Does Not Accommodate DSL User Name and Password**"

Question 4: What if the ISP tells me that their DSL/PPPoE software does not work with Macintosh computers?

Answer: You do not need connection software when using Mac OS X, so this does not affect you. Most ISPs only require the correct user name and password when your computer connects to their service. Mac OS X can do this without any additional software. Follow the instructions in technical document 106282: "**Mac OS X 10.0: Setup Assistant Does Not Accommodate DSL User Name and Password**"

Question 5: Where can I find more information?

Answer: More information on DSL should be available from your ISP.

Published Date: Feb 20, 2012

Mac OS X: Frequently Asked Questions (FAQ) for PPP Modem Connections

This document answers frequently asked questions about using a conventional (analog) telephone line modem to connect to the Internet via the Point-to-Point protocol (PPP).
This article has been archived and is no longer updated by Apple.
Note: In order to connect to the internet, you must have the proper configuration information from your Internet service provider (ISP). You may have entered this information the first time you used Mac OS X, when the Setup Assistant prompted you to enter the Internet connection information provided by your ISP.

Questions answered in this document:

1. What is PPP?
2. What is an example of an analog telephone modem?
3. How can I connect to or disconnect from my ISP?
4. How can I set up Mac OS X to automatically dial my ISP and connect to the Internet when needed?
5. When does Mac OS X attempt to connect to the Internet?
6. My ISP provided me with PPP access software that works with Mac OS 9. How do I make it work with Mac OS X?
7. What if my ISP tells me that their software doesn't work with Macintosh computers, or doesn't work with Mac OS X?
8. How can I change the phone number I use to connect to my ISP?
9. Do I need to buy a modem?
10. How is an analog modem connection different from a cable modem or a DSL modem connection?
11. What do I do if my computer pauses for a long time before finally connecting?
12. What if I cannot connect at all?
13. Where can I find more information?

Question 1: What is PPP?

The Point-to-Point protocol is a method used when communicating data between computers via dial-up modem connections.

Question 2: What is an example of an analog telephone modem?

Any modem that uses a conventional voice (analog) phone line to connect to your ISP's server or to another computer. "Dial-up" also describes this method. Formerly, the analog modems were the only ones available to consumers. They must now be distinguished from other types of modems. You may also see "56K modem," referring to the maximum analog speed of 56 kilobits per second. **Note:** In the United States, FCC regulations limit connection speed to 53 Kbps .

Question 3: How can I connect or disconnect from my ISP?

Use the Internet Connect application, located in the Applications folder. For more information, please see technical document 106717, "**Mac OS X: How to Connect to the Internet via PPP (Dial-Up Access) Using a Modem**."

Question 4: How can I set up Mac OS to automatically dial my ISP and connect to the Internet when needed?

1. Choose System Preferences from the Apple menu.
2. Click the Network icon.
3. Be sure the Show pop-up menu is set to your modem (the "Configure" menu prior to Mac OS X 10.1), or other dial-up device.
4. Click the PPP tab.
5. Click PPP Options.
6. Click the checkbox to select the "Connect automatically when starting TCP/IP applications" option.
7. Click OK.
8. Click Apply Now ("Save" prior to Mac OS X 10.1).

Question 5: When does Mac OS X attempt to connect to the Internet?

Using a Web browser or email application are the two most common reasons. But Mac OS X also attempts an Internet connection to:

- download current Mac Help information, including Late-Breaking News.
- use the Software Update feature.
- perform a Sherlock Internet search.
- set your clock using a network time server.

These are only examples. You may use the Internet in many other ways. You should expect a delay of several seconds while connecting (or while reconnecting after a disconnection).

Question 6: My ISP provided me with PPP access software that works with Mac OS 9. How do I make it work with Mac OS X?

Mac OS X does not require the PPP access software that your ISP may have provided. The System Preferences and Internet Connect applications can store all necessary information for making a PPP connection.

Question 7: What if my ISP tells me that their software doesn't work with Macintosh computers, or doesn't work with Mac OS X?

Your ISP may not have Mac OS-specific software, but the good news is that you do not need it. Most ISPs only require that you provide the correct user name and password when your computer connects to their service. Mac OS X can do this without any additional software.

Question 8: How can I change the phone number I use to connect to my ISP?

Use the Internet Connect application, located in the Applications folder. If you do not see the Telephone Number, Name, and Password text fields, click the disclosure triangle to the right of the Configuration pop-up menu.

Question 9: Do I need to buy a modem?

Most Mac OS X-compatible computers include an internal Apple 56K modem. All iMac and iBook computers include one. To see if you have a modem, look on the back or side of your computer for the modem port. The port looks like a standard telephone jack, and it is marked with a phone symbol.

Figure 1 Ports of an iMac

If you do not have a modem, you may wish to consider purchasing a USB modem. You can search the Macintosh Products Guide for modems (http://guide.apple.com/).

Question 10: How is an analog modem connection different from a cable modem or a digital subscriber line (DSL) modem connection?

- Speed - Most cable and DSL connections range from 384 Kbps to 6 megabits per second. Speed varies significantly by ISP, service plan, user density, and other factors. In the United States, the maximum FCC approved speed of an analog modem built to the v.90 standard is 53 Kbps, though it is normal if your modem connects at a slower speed due to phone line conditions. In practice, this means that you can load Web pages and download files 10 to 110 times faster by using cable or DSL service.
- Constant Connection - Cable and DSL connections are always active, which means you do not have to wait for the modem to connect to the Internet. They also leave your phone line free. An analog modem must place a phone call to your Internet service provider at the beginning of each connection session. A phone line in use by an analog modem cannot be used for any other purpose, such as receiving phone calls, without the use of additional hardware and/or software.
- Connecting to Your Computer - Analog modems connect via serial port, USB, or internal modem slots. Cable and DSL modems connect to your computer via Ethernet, the same type of high-speed wiring used in office networks.
- Sound - Cable and DSL modems are normally quiet. Analog modems can usually be set up to amplify their dial-up and negotiation sequences.

Note: Mac OS X 10.0 through 10.0.4 do not have an analog modem sound feature. Please see technical document 106162: "**Mac OS X 10.0: Internal Modem Makes No Sound When Connecting**"

Question 11: What do I do if my computer pauses for a long time before finally connecting?

Your computer may pause before ultimately connecting to your Internet service provider. A spinning disc cursor may appear. If you experience this issue, try updating to Mac OS X 10.1.5. See software download document 106888, "**Mac OS X Update 10.1.5: Enhancements and 'Before You Install' Information**".

Question 12: What if I cannot connect at all?

If you are unable to connect, please see technical document 106928, "**Macintosh: Apple Internal Modem Cannot Establish or Maintain a Connection to Some ISPs**."

Question 13: Where can I find more information?

More information should be available from your ISP.

Related documents

106432: "**Mac OS X: DSL/PPPoE Frequently Asked Questions (FAQ)**"
106447: "**Mac OS X: How to Gather Modem Troubleshooting Information**"
106283: "**Mac OS X 10.0: Using LocalTalk Hardware and Serial Port Devices**"

Published Date: Feb 20, 2012

Mac OS 9.2.2: Provides Improved Mac OS X Compatibility

The Mac OS 9.2.2 Update improves Classic application compatibility in Mac OS X and delivers improved support for Macintosh computers that are based on the PowerPC G3 and G4 microprocessors.
This article has been archived and is no longer updated by Apple.
You should install the Mac OS 9.2.2 Update if you use applications in the Mac OS X Classic environment. Mac OS 9.2.2 is compatible with Mac OS X 10.1 or later.

Updates must be installed in the correct sequence. For assistance, see technical document 75288, "**Mac OS 9: Available Updates**".
Published Date: Feb 17, 2012

Mac OS 9.2.1: System Requirements

This article describes computer hardware requirements for using Mac OS 9.2.1.
This article has been archived and is no longer updated by Apple.
Mac OS 9.2.1 requires one of the following Macintosh computers:

- Power Mac G4 or Macintosh Server G4 (all models)
- Power Macintosh G3 or Macintosh Server G3 (all models)
- iMac (all models)
- iBook (all models)
- PowerBook (all models later than the original PowerBook G3)

Notes

1. Identifying PowerBook computers: All PowerBook computers that work with Mac OS 9.2.1 have a large, white Apple logo on the outside of their display lids.

2. Computers with microprocessor upgrade cards are not supported by Apple with Mac OS 9.2.1. Though Mac OS 9.2.1 may install and appear to function normally on some computers with third-party microprocessor upgrade cards, Apple does not provide technical support or assistance for Mac OS 9.2.1 when used in this way. Contact the manufacturer of your microprocessor upgrade card for support information.

Additionally, the computer should have:

- 320 MB or more of free hard disk space for an easy install. The amount may be greater with a Custom Install. For related information, please see technical document 106082: "**Mac OS 9.1, 9.2, and 9.2.1: Hard Disk Space Requirements**"
- At least 32 MB of RAM with virtual memory set to 64 MB.

  Note: The minimum amount of RAM will let the computer perform only at minimum speeds. Installing additional RAM will increase the system performance. With virtual memory turned off there may be up to a 10 MB difference in RAM usage. This difference is normal and due to code-mapping. For more information, please see technical document 15854: "**Virtual Memory: How It Differs On Power Macintosh**"

Notes on use with Mac OS X Server

- MacOS.app, a part of Mac OS X Server 1.x, does not work with Mac OS 9.2.1.
- NetBoot images on Mac OS X Server work but require a Mac OS 9 license for each NetBoot client.

Published Date: Feb 19, 2012

Mac OS X Server 10.0: Blue Flashing Screen at Login Window

A particular privilege change to the root level of the server startup disk causes the server to stop responding at the Login Window.
This article has been archived and is no longer updated by Apple.

Symptom

During startup, the server stops responding at the Login Window. You see a flashing blue screen.

Solution

This occurs if you change the privileges on the root level of the server's startup disk to take away read access for "Everyone." Follow these steps to resolve this issue:

1. Shut down the computer.
2. Press the power key and then immediately press and hold the Command (Apple) and V keys. This will cause the computer to start up in verbose mode.
3. Open the Server Admin application from another computer, which must have a TCP/IP route to the server.
4. Connect to the server using Server Admin.
5. Click the General tab and then choose Set Sharing Attributes from the Sharing module menu.
6. Select the server's startup disk and set the privileges for Everyone to "Read only."
7. Restart the server.

Note: You may use an SSH connection ("sudo reboot" command) from the Admin computer to restart the server, or perform a force restart using the reset button at the server.

Published Date: Feb 17, 2012

Mac OS X Server: 10.0.4 Server Update Detailed

This article describes the enhancements and changes made when you install the 10.0.4 Server Update.
This article has been archived and is no longer updated by Apple.
The 10.0.4 Server Update delivers reliability improvements for Apple File Protocol (AFP) connections, printer sharing, FTP, mail and directory services. It includes MySQL and security updates to Samba. This update also improves migration and administration of user and groups, home directory settings and Macintosh Manager accounts.

The update is available via both the automatic Software Update feature and as a standalone installer. To update automatically, choose System Preferences from the Apple Menu. Click the Software Update icon and then click the Update Now button. The standalone installer is available at Apple Software Downloads (http://www.apple.com/swupdates/).

Installation Notes

The10.0.4 Update must be applied to Mac OS X Server 10.0.3 before the 10.0.4 Server Update will appear in the Software Update pane. Likewise, you must apply this update before the 10.0.4 Server Update if using standalone installers. You must have at least122 MB free disk space on the targeted volume. If either of these criteria are not met, the following message appears:

"The software "10.0.4 Server Update" cannot be installed on the computer"

After updating, remote administration requires the 10.0.4 version of Server Admin. You can copy the new Server Admin to other Mac OS X computers using AppleShare. Just drag the Server Admin application from a mounted share point to the hard disk of the desired administration computer.

OpenSSH

The 10.0.4 Server Update contains fixes to OpenSSH above and beyond what is installed with the standard 10.0.4 Update. A Mac OS X client computer will not be able to make an SSH connection to the server until you apply Web Sharing Update 1.0 to the client computer. If you have not done this, you will see this message when attempting an SSH connection:

"Disconnecting: Bad packet length"

MySQL

MySQL was omitted from the initial version of Mac OS X Server (10.0.3). The 10.0.4 Server Update includes MySQL version 3.23.32. For more MySQL information see technical document 106383: "**Mac OS X Server 10.0: How to Locate MySQL; What Is It?**"

Server Admin

Connections to servers with more than 11 IP addresses set up or aliased for a single physical network interface now work properly.

Copying privileges to share points containing a large number of files or nested directories can potentially be a lengthy operation. Certain functions of the Server Admin application are not available until this task has been completed. Visual feedback improvements were added to help indicate the current status of ongoing operations. Changes were made to the Users & Groups Administration module to prevent the display of the disabled users group. Allowing this group to be displayed visibly is undesirable since it does not connote that the act of properly disabling a user requires that their password attribute be changed. Simply moving a user to this group does not adequately disable that user.

Independently dragging users with similar names to groups via the Users & Groups Administration module could previously result in the omission of some of the desired users. Changes made in the 10.0.4 Server Update correct this.

This update corrects problems with the process of defining custom home directories in user records. Previously, the defined home directory would revert to the address of the current server despite what had been specified.

Corrects problems with garbled window title and subnet name text in the DHCP Administration module when used on a Japanese language system after having performed a duplication of subnets.

File Services

Improves AFP client connection reliability. Simultaneous disconnect of multiple connected AFP clients could occur in Mac OS X Server version 10.0.3 and could be identified by "TickleTimeoutdisconnect" errors logged to the AppleFileServiceAccess.log.

Improves AFP client behavior when connecting to directories with names containing double-byte characters. The FTP Server has been modified to the upload of files and/or directories containing double-byte characters in their names.

Corrects an issue in which attempts to create directories via FTP in home directories that are defined on volumes other than the root volume would fail.

Server update corrects some conditions in which the absolute path to a given file or directory could be revealed when specifying relative paths in commands such as ls.

Enhanced the FTP server to guard against certain types of buffer overruns.

Directory Services

Addressed memory leaks when changing the search policy or LDAP configuration.

Improved internal processes to reduce the possibility of Directory Services deadlock conditions.

Corrected problems with the Directory Setup application unexpectedly quitting that could be encountered when modifying LDAP settings after applying changes to the NetInfo checkbox.

Addressed problems with Directory Setup applying changes when attempting to add nodes to the Contacts tab. Directory Setup would previously either fail to add the specified node without warning or unexpectedly quit.

Improved LDAP plugin mappings.

Macintosh Manager

Improved the selection of default Macintosh Manager Documents server location by including previously disabled options.

Now properly displays icons in the available CD-ROMs list when administering a Macintosh Manager server on a Mac OS X system.

The addition of Mac OS X application packages containing Classic executables are now properly selected from the appropriate application from within the package to be added to the Workgroup items list.

Performed optimizations of various internal Macintosh Manager functions.

Improved behavior when dragging users from the Users and Groups list in the Server Admin application to the Macintosh Manager application's user list by removing unnecessary confirmation dialogs.

Improved Macintosh Manager application behavior on Mac OS 9.x when the computer list is displayed and the admin application is hidden in the Finder.

Now prevents local administration of Macintosh Management server (when specifying 127.0.0.1 or localhost) to ensure Macintosh Manager database integrity.

Improved logging during Macintosh Manager migrations to remove extraneous messages noting blank volume name targets.

Corrected an issue in which migration of Macintosh Manager users could result in the improper creation of a "Users" directory instead of the intended "Library" directory within their home directory.

Corrected problems administering the Macintosh Management server when more than 303 users were connected simultaneously.

Corrected problem with excessive CPU usage when Appletalk is toggled on and off while the Macintosh Management server is in use.

In addition to the enhancements to the Macintosh Manager server processes and admin application listed above, Macintosh Manager client software version 2.0.2 contains several improvements and should be used in conjunction with a 10.0.4 Server Update installation.

Mail Server

Changes to the Mail Server were made to improve the behavior experienced when mail clients conduct unusually lengthy communications (such as when deleting a large volume of messages).

Addressed a Mail Server stability issue that could occur when using the AppleShare IP Migration Tool to migrate Users & Groups and the Mail database.

Mail Server performance improvements were made through a more efficient threading implementation when posting messages to a user account.

AppleShare IP Migration application

Corrected problems with incomplete migrations of users defined in groups.

Corrected a memory leak that could occur when interacting with Directory Services during the migration process.

Print Services

Improved behavior when sorting print queues by name in the Print Monitor dialog of the Print Services administration module.

Corrected issues with attempting to add a print queue to the parent NetInfo domain. Addressed problem with rejected jobs when printing to a default queue name containing double-byte characters.

Improved print services reliability attained through more robust interaction between lpd and Directory Services.
Published Date: Feb 17, 2012

Mac OS X Server 10.0: Accessing Users Stored in a Remote Directory via Server Admin

Use these steps to access users stored on a remote NetInfo Parent, LDAP server, or other directory via a Directory Services Plug-In.
This article has been archived and is no longer updated by Apple.
Users stored in a remote directory do not appear in the Users and Groups List of the Server Admin application. This occurs when your Mac OS X Server is bound to a NetInfo parent, an LDAP server, or another type of directory using a Directory Services plug-in. If you need to access these users follow these steps:

For a single user or group:

1. Open Server Admin.
2. Click the General tab.
3. Click Users & Groups and choose Find Users & Groups.
4. Set the pop-up menu to Search Path, which will search the Directory Services Search Path.

Figure 1 Search for a single user or group

5. Type the user or group name in the Name field.
6. Click the Find button.

For all users:

1. Open Server Admin.
2. Click the General tab.
3. Click Users & Groups and choose Find Users & Groups.
4. Set the pop-up menu to Search Path, which will search the Directory Services Search Path.
5. Click More Choices.
6. Click the checkboxes to deselect Name and select ID . Either of the two ID checkboxes will do.
7. Set the pop-up menu that corresponds to the selected ID field to Greater Than (Figure 2).

Figure 2 Search for all users

8. In the selected ID field, type: `99`
9. Click Find.

Once you have found your users, you can drag and drop them into groups or services, or view their information. Note that you will not have write access to those users, so you will not be able to edit them.
Published Date: Feb 17, 2012

Mac OS X 10.0, 10.1: Installer Does Not Display Hard Disk

The hard disk icon of a lone ATA hard drive set up as the slave device may not appear in the Mac OS X Installer.
This article has been archived and is no longer updated by Apple.

Symptom

The Mac OS X installer does not display the hard disk icon of a hard drive that is actually connected to the computer.

Note: If your hard disk appears in the installer but looks dimmed, stop here and go to technical document 106235: "**Mac OS X 10.0: Disk Appears Dimmed (or "Grayed Out") in the Installer**"

Solution

This can happen if you have a single ATA hard drive connected to the computer and it is set up as a slave device (ID =1) instead of a master device (ID=0). If you have both a master and a slave drive connected, all volumes for both drives will appear.

To tell how your ATA drives are set up, follow these steps:

1. Choose System Preferences from the Apple menu.
2. Click the Startup Disk icon.
3. Select your Mac OS 9 System Folder.
4. Restart the computer.
5. Choose Apple System Profiler from the Apple menu.
6. Click the Devices and Volumes tab.

The ID appears to the right of the ATA bus, but to the left of the drive information. To restart your computer from Mac OS X, Choose Control Panels from the Apple menu and Startup Disk from the submenu. Select your Mac OS X disk and restart the computer.

Figure 1 Apple System Profiler

Apple does not ship computers in this configuration. To resolve this issue, set up your drive as a master device. The exact steps to do this vary from drive to drive. Most drive manufacturers post the steps to do this on their Web sites.

Tip: Try putting the model number of your hard drive in a Sherlock Web search.

You should not modify the settings of your hard drive if you are not confident in your ability to do so. Damage caused by incorrect modifications may not be covered under the Apple or third-party product warranty.
Published Date: Feb 17, 2012

Mac OS X: Apple System Profiler Modem Information Incorrect or Missing

Apple System Profiler may omit or misreport modem information under certain circumstances. This does not indicate a hardware failure.
This article has been archived and is no longer updated by Apple.

Symptom

1. Where it should indicate a modem in the Network Overview section, Apple System Profiler indicates an additional Ethernet device with these traits:
   - address of 00.00.00.00.00.00
   - "PointToPoint" in the Flags field
2. Apple System Profiler may report the presence of a modem that does not exist.

Solution

This symptom does not indicate a hardware failure of the modem.

To troubleshoot modem connection issues, see technical document 106447: "**Mac OS X 10.0: How to Gather Modem Troubleshooting Information**"

If you suspect you have isolated a hardware issue with your built-in Apple modem, use the Apple Hardware Test software that came with your computer for verification. To identify hardware issues with a non-Apple modem, see the instructions that came with the modem.

Published Date: Feb 19, 2012

Mac OS X: How to Gather Modem Troubleshooting Information

Follow the steps in this document to gather modem troubleshooting information beyond that provided by the Internet Connect application.
This article has been archived and is no longer updated by Apple.
Note: This article only pertains to analog telephone (often called "56K") modems.

Troubleshooting and alert messages provided in the Internet Connect application may not provide adequate information. Use these steps to gather more information:

1. Open the Internet Connect application.
2. Choose Internal Modem from the Configuration pop-up menu. If you can't see the phone number, click the disclosure triangle to the right of the Configuration menu.
3. Click Edit. The Network pane of System Preferences opens.
4. Choose Internal Modem from the Configure pop-up menu.
Note: If Internal Modem does not appear in the pop-up menu, choose Advanced instead. Click the checkbox to select Internal Modem, then choose Internal Modem from the Configure pop-up menu.
5. Click the PPP tab.
6. Click PPP Options.
7. Click the checkbox to enable "Use verbose logging."
8. Click OK.
9. Click Save.
10. Click Internet Connect in the Dock.
11. Choose Connection Log from the Window menu.
12. Click Connect.

When you use the modem to connect to the Internet, a transcript of the modem activity will appear in the Connection Log window. This information can help you troubleshoot connection issues. It may be especially useful when receiving assistance from your Internet Service Provider (ISP) or a modem manufacturer.
Published Date: Feb 17, 2012

Mac OS X: How to Set up AppleTalk Routing

This article has been archived and is no longer updated by Apple.

Use the steps in this document to set up AppleTalk routing in Mac OS X.

If your network necessitates AppleTalk routing in Mac OS X, follow these steps to set it up. This technical document presumes some knowledge of AppleTalk routing on the part of the network administrator following these steps, particularly in terms of the selection of appropriate network numbers (Phase 3, Steps 8 and 9 of this document).

Note: Apple provides phone-based assistance implementing the steps in this article to customers who have a Mac OS X Server Support contract.

Important

1. Editing the /var/db/SystemConfiguration/preferences.xml file can completely disable networking. Only edit the backup copy, created in phase 1, below.

2. You will need an XML property editor application to complete these steps. One named PropertyListEditor is available as part of Apple's Developer Tools. These instructions assume you are using PropertyListEditor. If you use another, adapt your specific steps accordingly where required.

3. You must log in to your computer as the root user to complete these steps. The root user is enabled by default in Mac OS X Server. For more information on this topic, see technical document 106290: "**Mac OS X 10.0: About the root User and How to Enable It**"

Steps to set up AppleTalk routing

Phase 1: Create a copy of preferences.xml or preferences.plist file

Note: Mac OS X Server 10.2.8 and earlier store relevant settings in the file /var/db/SystemConfiguration/preferences.xml. Mac OS X Server 10.3 and later use the file /Library/Preferences/SystemConfiguration/preferences.plist.

1. Open System Preferences and click Network.
2. Set all networking options as appropriate for your network.
Important: For Mac OS X 10.0 to 10.1.5, be sure to select the checkbox for AppleTalk on each network interface to be used for AppleTalk routing. For Mac OS X 10.2 or later, you are not allowed to select AppleTalk on more than one interface. To compensate for that, Step 9 of Phase 2 (below) contains an additional action for Mac OS X 10.2 or later
3. Write down or type the name of the Location that is selected in the Network pane of System Preferences.
Note: This is a user-definable name that may be different for everyone. The default name is Automatic. Because this can be different for everyone, we refer to it later as "YourSet." When you are instructed to type YourSet, you actually should type the name that you have noted.
4. Quit System Preferences.
5. Choose Go to Folder from the Go menu.
6. For 10.2.8 or earlier, type: `/var/db/SystemConfiguration/`
For 10.3 or later, type: `/Library/Preferences/SystemConfiguration/`
7. Click Go. You should now see the either the preferences.xml or preferences.plist file in the Finder window.
8. Select the file.
9. Choose Duplicate from the File menu. You should now have a copy named "preferences copy.xml" or "preferences copy.plist".

Phase 2: Identifying services in the file

You must edit the file to enable AppleTalk routing. The file contains a listing of "sets," which appear as Locations in the Network pane of System Preferences.

1. Open the copy you made in an XML property editor.
2. Click the disclosure triangle next to Root.
3. Look in the Value column to the right of CurrentSet (Figure 1). You should see something like: /Sets/0
Note the number that follows "/Sets/" (0 in this example). This number will be used in Step 6.

Figure 1

4. Below CurrentSet in the list that appears, you should see NetworkServices and Sets.

5. Click the disclosure triangle to the left of Sets. One or more numerals should appear below Sets (Figure 2). These numerals are the sets.

Figure 2

6. Click the triangle to the left of whichever set is current, as determined in Step 3, to reveal its children. This will reveal Network and UserDefinedName. The string in the Value column for UserDefinedName should be YourSet, as noted in Phase 1. In the Figure 3 example, this would be "Automatic."

Figure 3

7. Click the disclosure triangle to the left of Network.
8. Click the disclosure triangle next to Service (Figure 4). These are links to the NetworkServices that this Set uses. These links must be followed to the correct NetworkService, which you will identify in Step 9. You can see the links by clicking the disclosure triangles next to the numbered NetworkServices listed below Service. You should see "__LINK__ " with a value similar to "/NetworkServices/0". The number following "/NetworkServices/" corresponds to the particular service that you will identify in the next step and ultimately edit.

Figure 4

9. The third line in your Property List should be NetWorkServices (directly below Root and CurrentSet). Click the disclosure triangle next to it. Disclose the NetworkServices/x that correspond to the services linked to the CurrentSet. For each network service, the value for UserDefinedName will correspond to port name as listed in Network pane of System Preferences. A service that has AppleTalk active will have a child named "AppleTalk," and AppleTalk will not have child named "__INACTIVE__" with a value of 1. In Figure 6 for example, AppleTalk is active on network service 1 but not on network service 2.

Important: For Mac OS X 10.2 and later, you must delete the _INACTIVE_ child from all NetworkServices that will have AppleTalk enabled.

Figure 5

You have now identified the network services linked to your current set. You will edit these in the next section.

Phase 3: Editing in services

For each network service (port) identified in Steps 8 and 9 of Phase 2, follow these steps:

Note: When instructed to type something in this section, do so with the same capitalization.

1. Double-click the value for ConfigMethod
2. In the field, type: SeedRouter
Select ConfigMethod and click New Sibling .
3. Name the new sibling: SeedNetworkRange
4. In the Class column to the right of SeedNetworkRange, click String and set the pop-up menu to Array.
5. Click the triangle to the left of SeedNetworkRange
6. Click New Child twice.
7. For each new child, change the Class from String to Number.
8. Set the value of child 0 to the starting network number.
9. Set the value of child 1 to the ending network number.
10. Select ConfigMethod and click New Sibling.
11. Set the name of the sibling to SeedZones.
12. Change the class of SeedZones to Array.
13. Click the triangle to left of SeedZones and add one child for each zone name.
14. Set the class for each child to String.

15. Set the value to the zone name.

Note: The default zone for that network is child 0.

To configure a port to be a non-seed router, just set the ConfigMethod to Router. There is no need to create the SeedZones or SeedNetworkRange. This information will be gleaned from another seed router on the network segment. This configuration will only work if there is another seed router on the same network segment.

To determine the home port, the ServiceOrder for IPv4 will be used and this is the order created by arranging the interfaces in Network Preferences. If the AppleTalk home port is to be different from the primary IP interface, an AppleTalk ServiceOrder must be created using the steps below.

Phase 4 (optional): Creating an AppleTalk ServiceOrder

1. In the Property List, go to /Sets/<set ID>/Network/Global
2. Be sure that Global is disclosed, then click New Child.
3. Set the name of the child to AppleTalk and its class to Dictionary.
4. Click AppleTalk and then click New Child.
5. Set the name of the child to ServiceOrder and its class to Array.
6. Click ServiceOrder and create a child for every network interface (port).
Note: Open /Sets/<set ID>/Network/Global/IPv4/ServiceOrder for an example.
7. Change the type of every child to String.
8. The values for these children are the Service IDs from the set, and not the NetworkServices numbers.
9. Enter the services in the preferred order. The port for child 0 is the home port for the server.

Phase 5: replacing the preferences.xml or preferences.plist file

Replace the original file with the copy you have edited, being sure to correct the name to match the original, and then restart. If everything is correct, the server should now be routing AppleTalk and appear in the zone that is child 0 of the SeedZones list for the port that is specified as child 0 in the AppleTalk ServiceOrder.

Figure 6 shows two ports set up as seed routers each advertising one zone. Just add more children to SeedZones to advertise more zones. Remember that SeedZone/0 is the default zone.

Figure 6

Figure 7 shows the AppleTalk Service Order being used. This shows that the value for ServiceOrder/0 is 2. Service/2 is a link to NetworkService/2 and NetworkService/2 is for PCI Ethernet Slot 2x4, Port 1. So this server's home port in card port 1 and it will appear in zone NAT 1.

Figure 7
Published Date: Feb 19, 2012

Macintosh Manager 2.0: Common Setup Strategies

As an alternative to using automatic migration utilities, you may use one of the two strategies presented here to achieve the greatest amount of flexibility in your server installation.
This article has been archived and is no longer updated by Apple.

Two strategies to consider

I. Single Server - One server handles both Authentication and Documents services.

II. Multiple Servers - Two or more servers share the workload of Authentication and Documents services.

Brief listing of terms used in this document

- The term "Folder" may be used interchangeably with "Directory."
- Home directory - Directory bearing a user's name, where that given user is able to store files. Macintosh Manager users must have this feature enabled in the Server Admin, or they will be unable to save files easily on the Mac OS X Server.
- Users folder - Default share point for Macintosh Manager users' Home directories.
- Mac OS X Server - Refers to Mac OS X Server 10.0 or later, unless otherwise specified.
- Macintosh Manager - Refers to Macintosh Manager 2.0 or later, unless otherwise specified.
- NetInfo - A hierarchical distributed database that is used to keep track of administrative data in Mac OS X Server. It can store information on user and group accounts, email configurations, NFS (Network File System), printers, computers and other resources.

Note: For more information on parent/child domain structures, see pages 39 to 55 of the Mac OS X Server Administrator's Guide. You can also review the Understanding and Using NetInfo whitepaper on the Mac OS X Server Web site (http://www.apple.com/macosx/server/).

Required Software and Hardware

- Mac OS X Server 10.0.4 or later. Updates are located at: http://www.apple.com/swupdates/
- For the server: Any Macintosh computer which meets the system requirements defined in technical document 106430 "**Mac OS X Server: System Requirements and Recommended AppleShare Client Software"**.
- For administration: A Macintosh computer that meets the system requirements defined in technical document 106350 "**Mac OS X Server 10.0: Server Admin System Requirements and Installation"**. The Server Admin and Macintosh Manager applications must be installed on this computer.
- For clients: Macintosh computers using Mac OS 8.1 to 9.2.1 with Multiple Users client software installed.

Assumptions

- Your network provides Domain Name Services (DNS) with reverse lookup capability.
- If Domain Name Services are not enabled on the network, it is recommended that the hostname of the Mac OS X Server be entered manually into the "machines" property as a subdirectory using NetInfo Manager. The following properties will need to be present in this subdirectory:

  ip_address (value will be valid ip address for your network)
  name (value will be a hostname for your server)

- Mac OS X Server has been installed with working a network configuration on the computer(s) that will host the Parent NetInfo Domain and/or Child NetInfo Domain(s).

I. Macintosh Manager 2.0 Single Server

Follow these steps if you wish to use a single computer to provide both of the main components of Macintosh Manager (authentication and documents service).

1. **Assigning the Default Home Directory location for your users**

a. At your administration computer, log in to the Server Admin application.
b. Click the Users and Groups icon and select Home Directory Defaults from the menu.
c. Select the Local radio button and the Users share point. This is the default configuration for this scenario. You may use any share point that you have previously created.

2. **Creating or Importing Users into Mac OS X Server Admin**

a. Import Users (.xml file) into Mac OS X Server 10.0 using Mac OS Server Admin. These files can be generated/exported from within AppleShare IP or converted to XML from an exported tab-delimited text file using third party utilities such as Passenger or MM Helper.

3. **Start services.**

Make sure the Apple File Service and Macintosh Management Services have been started in Server Admin.

4. **Adding Users to the Macintosh Manager Users List**

a. Open the Macintosh Manager application and log in as an Admin user.
b. Click the Import All button. You may also selectively drag users from the Server Admin User & Groups list to the Macintosh Manager admin list.

5. **Setup for users.**

Set up users' workgroup membership, items, privileges, etc. as appropriate. These steps roughly mirror those found in versions of Macintosh Manager prior to 2.0 and are not covered in this section.

II. Macintosh Manager 2.0 Multiple Server Environment

The most common configuration used by Macintosh Manager 2.0 administrators is a multiple server environment, where the NetInfo hierarchy is leveraged to provide scalability and organization of user data. Initial user authentication occurs on a single server (Parent from a NetInfo perspective), and the users are split amongst one or more document servers (Child from a NetInfo perspective).

Note: Read through these steps completely before setting up your servers, so that you may appropriately plan how to deploy your users and network infrastructure.

Setting up the NetInfo Hierarchy

1. **First, the Parent server must be configured.**

a. Open NetInfo Domain Setup (Applications/Utilities/) at the Mac OS X Server where your users' NetInfo records are to be maintained.
b. Click the lock and enter the Admin user name and password. You may additionally be asked to authenticate as the root user. For more information on the root user, see technical document **106361**.
c. Edit the settings to reflect the following:

This machine: is a NetInfo Parent
Find NetInfo Parent via: Static Address
NetInfo Parent Address: 10.0.1.1
NetInfo Server Tag: network

Note: Where the example shows 10.0.1.1, type the actual IP address of your authentication server.

Figure 1

d. Click Save and wait until the pointer stops spinning.
e. Quit NetInfo Domain Setup and Restart the computer.

2. **Next, the Child server must be configured.**

a. Open NetInfo Domain Setup on the Mac OS X Server where your users Home directories (documents) are to be maintained.
b. Click the lock and enter the Admin user name and password. You may additionally be asked to authenticate as the root user. For more information on the root user, see technical document **106361**.
c. Edit the settings to reflect the following:

This machine: connects to a NetInfo Parent
Find NetInfo Parent via: Static Address
NetInfo Parent Address: 10.0.1.1
NetInfo Server Tag: network

Note: Where the example shows 10.0.1.1, type the actual IP address of your authentication server.

Figure 2

d. Click Save and wait until the cursor stops spinning.
e. Quit NetInfo Domain Setup and Restart the Server.

3. **Verify parent to network binding**

The local NetInfo database on the parent should automatically bind (connect) to the network database after Step 1 above. To verify this has occurred, follow these steps:

a. Log in to the authentication Server as admin (or root)
b. Open NetInfo Manager.
c. The local NetInfo domain should open automatically.
d. The Globe-Arrow (Open Parent Domain) button should be active.

Figure 3

e. This Globe-Arrow button opens the parent NetInfo domain of the NetInfo domain you are currently viewing (local).

Figure 4

f. Click the button and open the parent, "network @ yourdomain...". This shows that yourdomain is publishing the network domain and that the local domain is a child of yourdomain/network.
g. Click on the machine entry for yourdomain. There are 3 properties shown: name, ip_address and serves. The serves property lists the NetInfo domains being hosted on yourdomain. NetInfo Domain Setup automatically populated these fields in the above steps.
h. If the above steps fail, try Steps 1 and 2 again and verify the settings in NetInfo Domain Setup on both servers.

4. **Verify child to parent binding**

To verify the child (client or server) binds to the parent NetInfo domain. Follow the above steps in item 3, but on the Document Server (the NetInfo child). The Globe-Arrow button should also be active and not grayed out when viewing the local NetInfo pane.

5. **Assign the Default Home Directory location for your users in your NetInfo root domain.**

a. Log in on the Document Server (NetInfo child) and launch Mac OS X Server Admin.
b. Open Mac OS X Server Admin and connect to the Documents Server.
c. In Server Admin, select "Home Directory Defaults..." by clicking the "Users and Groups" icon.
d. Select the "Local" radio button and the "Users" share point. This is the default configuration for this scenario. You may use any share point that you have previously created.

6. **Create or Import Users using Mac OS X Server Admin on the Documents Server (NetInfo child).**

a. Import Users (.xml file) into Mac OS X Server 10.0 using Mac OS Server Admin. These files can be generated/exported from within AppleShare IP or converted to XML from an exported tab-delimited text file using third party utilities such as Passenger or MM Helper.
b. The Users folder will automatically populate with the Home Directories from the above step. If you would like to verify that this step was successful, navigate to /YourStartupVolume/Users and see that there are newly created Home Directories.
c. Users must then be deleted from the User's & Groups list on the Documents Server (the NetInfo child).

7. **Users**

Create or Import Users using Mac OS X Server Admin on the Authentication Server (NetInfo parent).

a. Log in on the Authentication Server (NetInfo parent) and launch Mac OS X Server Admin.
b. Launch Mac OS X Server Admin and connect to the Authentication Server.

c. In Server Admin, select "Home Directory Defaults..." from /NetInfo/root by clicking the "Users and Groups" icon.
d. Select the Custom radio button and edit the fields to read:

Server: server.yourdomain.edu
Share Point: Users
Path:

Note: Leave the Path field blank. It should be populated automatically. Where the example says server.yourdomain.edu, type either the IP address or DNS name of the documents server.

Figure 5

e. The above is the default configuration for this scenario. You may use any share point located on the top (root) level of a server volume that you have previously created. This will allow Macintosh Manager to find the user's Home Directories on any Documents Server that has been previously configured.
f. Repeat Step 6-a above, except connect to the authenticationsServer (NetInfo Parent). Pay particular attention to where these users are created. These users must be created/imported into /NetInfo/root in order for Macintosh Manager to authenticate users properly.

8. **Start services.**

Make sure the Apple File Service and Macintosh Management Services are started in Mac OS X Server Admin.

9. **Additional child domains**

Repeat steps two through 8 for each NetInfo child (to be used as a Macintosh Manager Document Server).

Allowing Users to Login as Macintosh Manager Users

1. Add Users to the Macintosh Manager Users List

a. Open Macintosh Manager Admin and log into the Mac OS X Server.
b. Click Import All. You may also selectively drag users from the Mac OS X Server Admin User & Groups list to the Macintosh Manager Admin list.

2. Set up user's workgroup membership, items, privileges, etc. as appropriate. These configuration steps roughly mirror those found in versions of Macintosh Manager prior to 2.0 and are not covered in this section.

Published Date: Feb 17, 2012

Macintosh Manager 2.0: Restoring Stand-Alone Multiple Users Capability

Reinstall Multiple Users 1.4.1 to restore standalone Multiple Users capability.
This article has been archived and is no longer updated by Apple.

Symptom

After installing Macintosh Manager 2.0.2 software on a Mac OS 9 computer, the standalone Multiple Users feature does not work. The computer seeks a Macintosh Management server after logout or startup.

Solution:

The reason for this is that release 2.0. or later of the Multi-User Startup extension does not work with the standalone Multiple Users feature. Follow these steps to restore this feature:

1. Drag these files to the desktop or Trash:
   - System Folder:Login
   - System Folder:Panels
   - System Folder:Extensions:Multi-User Startup
   - System Folder:Preferences:Mulitple Users
2. Download and install Multiple Users 1.4.1 software from Apple Software Downloads (http://www.apple.com/swupdates/).
3. Restart the computer
4. Open the Multiple Users control panel and set it up as desired.

Published Date: Feb 17, 2012

About AppleShare IP 6.3.3

This is a reproduction of the document "About AppleShare IP 6.3.3" included with AppleShare IP 6.3.3.

This article has been archived and is no longer updated by Apple.

About AppleShare IP 6.3.3

CONTENTS

About AppleShare IP 6.3.3 System requirements Installing AppleShare IP 6.3.3 Using Web-based Remote Administration Using Mac OS Server Admin on a remote workstation Using Macintosh Manager Disk Fragmentation with Macintosh Manager Using TCP Filtering Other Recommendations

About AppleShare IP 6.3.3

AppleShare IP 6.3.3 provides support for the latest system software, Mac OS 9.1 and later, and includes these additional enhancements:

- A new version of client software, AppleShare Client 3.8.8, is provided on the AppleShare IP 6.3.3 CD.
- The maximum number of simultaneous SMB connections is increased to 500.
- SMB drives will always stay mounted on client computers connected to an AppleShare IP server.
- Reading and writing is synchronized when applications running on the server share a file with applications running on a client.

Other enhancements and bug fixes since AppleShare IP 6.3 are:

- Improved performance and increased reliability.
- Client computers that connect to the server using SMB can always view all items available in a directory.
- Improved performance of the IMAP server.
- You can enable the "Start server on system startup" checkbox after using the AppleShare IP 6.3.1 Update package.
- Improved file server security against denial of service attacks.
- You can use Mac OS Admin remotely to change a folder's explicit privileges. In previous versions you could not do this if you set a folder to inherit access privileges of the enclosing sharepoint.
- A security fix to the web server in versions of AppleShare IP 6.1 and later. Invalid range requests are handled correctly.

System Requirements

To install or upgrade to AppleShare IP 6.3.3 you must have a Power Macintosh G4 Cube, iMac, Power Macintosh, Macintosh Server, or Workgroup Server with a PowerPC G4, G3, 604e, 604, 603e 6500 series, or 601 microprocessor that has the following installed:

- Mac OS 9.1 OR Mac OS 9.1 with Mac OS ROM 6.7.1 (Multi-processor Macintoshes must have Mac OS 9.1 with Mac OS ROM 6.7.1 for support with AppleShare IP 6.3.3. See Note below.)
- AppleShare IP version 6.3 or later
- For Client machines, Apple recommends using AppleShare Client 3.8.8. If the client machine does not already have version 3.8.8 installed, follow the instructions provided in the About AppleShare Client 3.8.8 document provided on the AppleShare IP 6.3.3 CD to install version 3.8.8.

Installing AppleShare IP 6.3.3

1. Install Mac OS 9.1 or later.

You can download this version from the Apple Web site at www.apple.com/support or purchase the Mac OS 9.1 CD and related documentation at www.apple.com and select the "Store" tab.

2. Follow the instructions for installing and setting up AppleShare IP found in the Getting Started manual and Late Breaking News.

Using Web-based Remote Administration

- Make sure AppleTalk is active before you use Web-based Remote Administration.

Using Mac OS Server Admin to administer your server from a remote workstation

To administer an AppleShare IP 6.3.3 server, you must install Mac OS Server Admin version 6.3.3 on each workstation from which you want to administer the server. You can't use an older version of Mac OS Server Admin to administer an AppleShare IP 6.3.3 server. However, you can use the newer version of Mac OS Server Admin to administer any server that has AppleShare IP 6.3, 6.3.1 or 6.3.2 installed.

Using Macintosh Manager

When using Macintosh Manager, workgroups should be configured to look for applications only on the client computers. In the Macintosh manager administration application, log in as the Administrator, select the Workgroups tab, and then select the Items tab. For all workgroups, Find chosen items: should be set to only on local volumes. Click on the Save button and quit the Macintosh Manager administration application.

Disk Fragmentation with Macintosh Manager

AppleShare IP Server hard disks can become extremely fragmented when using Macintosh Manager due to the large number of client files, particularly on the servers that store user documents. This will decrease server performance. If you have DiskWarrior or Norton Speed Disk, it is a good idea to defragment your disk to improve performance. Defragmenting a large, full disk drive may take up to several hours.

Using TCP Filtering

Under heavy load on 100 MB Ethernet networks, the TCP Filtering software may cause server freezes or client file copies to hang. If this occurs frequently, you should disable TCP Filtering and remove the "OT Auto Push Support" extension from the Extensions folder in the System Folder.

Other Recommendations

If you are using an AppleShare IP Server with heavy load, or running it in conjunction with Macintosh Manager, check your server configuration for the following:

- Remove Epson Launcher from the Extensions folder.
- On the server computer, turn off Remember recently used items in the Apple Menu Options control panel.
- In Sherlock, select Index Volumes from the Find menu and select the Schedule button. Disable indexing for all days.
- Turn off virtual memory in the Memory control panel.

There is a known issue between some third party networking software and AppleShare IP servers running the Open Transport SNMP extensions. If the AppleShare IP Server stops responding at regular intervals, usually at night, Apple recommends that the SNMP extensions be removed or disabled.

Published Date: Feb 18, 2012

Mac OS X Server: How to Set up NetBoot to Use An Existing DHCP Server

This document provides instructions for configuring NetBoot services in Mac OS X Server 10.0.3 or later to use an existing DHCP server.
This article has been archived and is no longer updated by Apple.
Each computer that you plan to start up from your NetBoot Mac OS X Server needs an IP address to identify it as a unique device on the network. With NetBoot over DHCP, a second generation of NetBoot, client computers can obtain their IP addresses using DHCP. Only later models of NetBoot-capable Macintosh computers can take advantage of this feature. To see which computers are capable of NetBoot over DHCP, please see technical document 106430, "**Mac OS X Server 10.0: System Requirements and Recommended AppleShare Client Software**".

Mac OS X Server is configured by default to provide DHCP server services when enabling NetBoot services. You should only have one DHCP server per network subnet.

To disable DHCP services on Mac OS X Server and use another existing DHCP server on your network, follow these steps:

1. Log in to Server Admin if you are using Mac OS X Server 10.1.5 or earlier. Log in to Server Settings if you are using Mac OS X Server 10.2 or later.
2. Click the Network tab.
3. Click the DHCP/NetBoot icon and choose Configure DHCP.
4. Click the Subnets tab.
5. Double click the default subnet, listed under the Name column.
6. Click the check box to deselect Enable DHCP.
7. Click button and close both windows.
8. Click the DHCP/NetBoot icon and choose Start DHCP Service.

Published Date: Feb 17, 2012

Macintosh Manager 2: Using Macintosh Manager in a Kerberos Environment

This article describes the procedures for setting up Macintosh Manager 2 clients and servers to integrate with environments that require Kerberos authentication.
This article has been archived and is no longer updated by Apple.
Note: Some of the following information pertains to setting up a third-party product. Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor or developer for additional information. This document contains links for getting relevant software and information from the Massachusetts Institute of Technology (**MIT**).

Macintosh Manager 2.0 introduced the ability for Macintosh Manager clients to authenticate against servers supporting the v4 and v5 releases of the Kerberos protocol. This feature allows Macintosh Manager administrators to restrict client workstation access to only those users holding valid Kerberos passwords. With Kerberos enabled, Macintosh Manager client users will retain a ticket-granting-ticket upon successful login to use with other Kerberos-aware services.

System Requirements

- Macintosh Manager 2.0.2 or later client and admin set is required for Kerberos authentication.
- Mac OS X Server 10.0 or later
- Clients computers must have MIT Kerberos for Macintosh 3.0 or later installed and set up. Kerberos for Macintosh 3.0 and later requires at least Mac OS 8.1 and a PowerPC-based Macintosh computer. Kerberos for Macintosh may be downloaded from MIT (http://web.mit.edu/macdev/www/kerberos.html).

Server Set Up

Figure 1: The Global Security Tab

To enable Kerberos authentication on Macintosh Manager 2:

1. Open the Macintosh Manager application and connect to a Macintosh Management server.
2. Click the Global tab.
3. Click the "Clients must authenticate using Kerberos" checkbox. With this feature enabled, only clients with a valid Kerberos for Macintosh installation will be able to log in, and a valid Kerberos name and password will be required of users. Client workstations lacking a Kerberos for Macintosh installation will be unable to log in.

Note: The Macintosh Manager administration application may be run from any Mac OS 9 or Mac OS X client and will continue to use directory passwords.

Macintosh Manager 2.0.2 accepts only a directory password for administrators using this feature.

Client Set Up

Figure 2: Kerberos for Macintosh Realm Configuration Dialog

To prepare a client computer, you must set up the Kerberos for Macintosh realm list. To do this, create a Kerberos Preferences file in your Preferences folder containing a list of realms valid for your site. See the MIT Kerberos for Macintosh documentation for details:
http://web.mit.edu/macdev/Development/MITKerberos/Common/Documentation/preferences.html

After defining realms in the Kerberos Preferences file, add any desired realm(s) to the "Favorite Realms" column. Drag the realm containing the users for the client's Macintosh Manager server to the top of the Favorite Realms list, defining it as the default realm. Only the default realm can be used for login authentication with Macintosh Manager.

With Kerberos enabled, all Macintosh Manager client computers and users must have access to a Kerberos Preferences file in a location accessible to Kerberos for Macintosh. Since each user has a unique Preferences folder, drag the Kerberos Preferences file created above to the Application Support folder of each client computer's system folder, sharing the file across all user accounts.

Logging In

In order to be able to log in to a Macintosh Manager client set up to use Kerberos, each user's account must have a short name set in the Server Admin Users & Groups module that exactly matches his Kerberos name. For example, a user named "Ludovic Decker" with a Kerberos principal "luddeker@APPLE.COM" must have his short name set to "luddecker" in Server Admin. When logging in to the Macintosh Manager client, users may enter either their full name or short name. Kerberos tickets will still be obtained for the correct principal.

Since a user's Kerberos password does not necessarily match the user's directory password, Macintosh Manager may not be able to connect to a user's home directory automatically in the event of a password mismatch. Should this occur, the client will prompt for the user's directory password in an AppleShare connection dialog. A seamless login can be ensured by having users keep their Kerberos and directory passwords in sync, by specifying no home directories for users, or by using the All Other Users feature. User and home directory information can be stored in any source readable by Directory Services, including LDAP.

The All Other Users feature in Macintosh Manager 2 is a useful means of dealing with large Kerberos userbases. With All Other Users enabled, all Kerberos users need not be present in a Directory Services data source or imported into Macintosh Manager to be able to use Macintosh Manager clients. In list login view, users should select the All Other Users account. In "Users type their name" login mode, users should enter their Kerberos name. If users have been imported into Macintosh Manager or are present in a Directory Services data source, they will receive their account and home directory data. If the user is not present in any data source with All Other Users enabled, a local home directory will be created.
Published Date: Feb 17, 2012

Mac OS X: Applications Appear as Folders in the Dock, Cannot Be Opened

Under certain conditions in Mac OS X versions 10.0 to 10.0.4, the applications in the Dock appear with folder icons and cannot be opened.
This article has been archived and is no longer updated by Apple.

Symptom

Applications cannot be opened from the Dock. Folders may appear in the Dock where application icons are expected.

This may occur if the Users folder (/Users) has been moved or deleted.

Note: When the Users folder is moved or deleted, the Setup Assistant is bypassed and the user automatically logs in.

Important: You should not relocate the Users folder.

Solution

Follow these steps:

Warning: These steps recursively eliminate all contents of the affected Home directory. However, it is very likely that the affected Home directory is not your original Home directory, which may have already been relocated or deleted (causing this issue).

1. Choose Log Out from the Apple menu. The Login panel appears.
2. In the user name field, type: `>console`
3. Do not type a password and click Log In. The command-line console appears, and you are prompted to log in.
4. Log in with your normal name and password. If you do not know the password, see technical document 106156: "**Mac OS X 10.0: How to Change a User's Password**"
5. Type: `cd /Users`
6. Press Return.
7. Type: `ls`
8. Press Return, and verify the exact name of your Home directory from the list that appears. This is normally the same as your short user name, but it can be different if you have undertaken a series of deliberate steps to change it.
9. Type: `sudo rm -R home`
Note: Replace "`home`" with the actual name of your Home directory.
10. Press Return. Type your password when prompted and Press Return.

You have eliminated the Home directory with incorrect permissions. To create a new Home directory with the correct permissions, follow these steps:

1. Type: `sudo mkdir /Users/home`
Note: Replace "`home`" with the actual name of your Home directory, the same as the one you just removed. Changing this name would require other steps that are beyond the scope of this document.
2. Press Return.
3. Type: `sudo chown shortname:staff home`
Note: Replace "`shortname`" with the same short user name you have been using. Replace "home" with the name of the Home directory you have been using. These are normally the same. Example: A user named Zoe Brown with a short name of "zbrown" would type:
`sudo chown zbrown:staff zbrown`
4. Press Return. If prompted, type your password and press Return again.
5. Type `exit` and Press Return.

You should now be able to log in normally, and you will have a new Home directory.

Related Documents

106167 Mac OS X: Using Your Home Directory
106603 Mac OS X: Issues When Opening Multiple Applications

Published Date: Feb 17, 2012

Mac OS X Server 10.0: About the FTP root

Mac OS X Server roots FTP service in /Library/FTPServer/FTPRoot.
This article has been archived and is no longer updated by Apple.
When users connect to Mac OS X Server via FTP, they will be 'rooted' in the directory /Library/FTPServer/FTPRoot.

This means that they will not be able to navigate the file system above that directory. When you create share points with the Server Admin application, a symbolic link to that share point is created in this directory. FTP uses symbolic links, since FTP clients cannot follow aliases. If you do not want FTP clients to have access to certain share points, remove the symbolic links from this directory. If you wish to share something via FTP that you do not want to share via other services, you can create a symbolic link using the 'ln' command in Terminal. For more information on this command, open the Terminal application and type: `man ln`

When a user whose Home directory is shared connects via FTP, he will start the session his Home. Otherwise, the user starts his session at the FTP root.

For related information, please see technical document 31099: "**Mac OS X Server: /etc/ftpchroot File Is Ignored**"
Published Date: Feb 17, 2012

Macintosh Manager: How to Set up Internet Explorer for Reduced Network Traffic

Follow the steps in this document to eliminate excess network traffic created when Microsoft Internet Explorer accesses the cache.waf file.
This article has been archived and is no longer updated by Apple.
This article applies to Macintosh Manager versions 1.4.1 and 2.0 to 2.2.

Follow these steps to allow client computers to access the cache.waf locally, rather than across the network:

1. In the Macintosh Manager admin application, click on the "Computers" tab and then the "Control" tab below it.
2. Select the option to "Force computer hard disk name to:" and type "Macintosh HD"
3. At the Macintosh Manager admin workstation, set up Explorer as you like it.
4. While in Internet Explorer, choose Preferences from the Edit menu.
5. Click the Advanced category in the Web Browser portion of the preferences list.
6. Click Empty Now in the Cache section of the preference panel.
7. Click Change Location.
8. Select the location Macintosh HD: System Folder as the cache location.
9. Set the cache size according to your preference.
10. Click OK.
11. Open the Macintosh Manager admin application.
12. Click your desktop.
13. Choose Hide Others from the Application menu.
14. Open the Macintosh Manager folder (the shared volume that has appeared on your desktop).
Note: If the user documents are stored on a different volume, connect to that volume.
15. Locate the Managed Preferences folder on the document storage volume. Also locate the Forced Preferences and Initial Preferences folders inside it.
16. Still at the admin workstation, drag the Internet Preferences file (System Folder: Preferences: Internet Preferences) and the Explorer folder (System Folder: Preferences: Explorer) into the Forced Preferences folder.
17. Using Network Assistant, locate all of the cache.waf files on the document volume(s), then delete them.

After you have completed these steps, the Internet Preferences file and the Explorer folder will be copied to an individual user's preferences folder (on the server) at time of login. If using Mac OS 8.6 or earlier workstations, these items will also be copied down to the local hard disk.

Tips

- If at a later time you want to let users regain their own Internet and Explorer settings, move the Explorer folder from the Forced Preferences folder to the Initial Preferences folder. If you want users to get predefined Internet prefs at first login, this file must go into the Forced Prefs folder. The reason is that the system creates the Internet Preferences file before the preference management begins following login, meaning that the preference management process would not overwrite a pre-existing file with an item from the Initial Preferences folder.
- Make sure you can connect to the documents volume (even if it is the default Macintosh Manager volume), and that you have read-write access to the Managed Preferences folder.
- In the workgroup settings, make sure you have "Copy preferences" selected in the Options panel for the workgroup. Also select the "Copy Internet Preferences or admin-defined" in the Global panel.
- Using the Labels command in the File menu, color code the Internet Preferences file and at least one item inside the Explorer folder at the server. Then log in as a user. After a successful test of your new settings, you should see the color coded items appear in the individual user's folder (the local Preferences folder on Mac OS 8.6 or earlier computers).
- Clients with differing startup disk names may not work properly. You should use the same startup disk name on all clients. By default, the startup disk is named Macintosh HD.

Published Date: Feb 17, 2012

Mac OS X: How to Replace the Alias "Desktop (Mac OS 9)"

If the alias "Desktop (Mac OS 9)" is deleted when Mac OS 9 and Mac OS X are installed on the same disk, the alias cannot be recreated in the Finder. Use the method described here.
This article has been archived and is no longer updated by Apple.

Symptom

1. You cannot recreate the "Desktop (Mac OS 9)" alias after deletion.
2. You cannot access the Mac OS 9 Desktop Folder.

Solution

This issue is resolved in Mac OS X 10.2 or later, as described below. For versions 10.0 to 10.1.5, follow these steps to recreate the alias:

1. Open the Terminal application (located at /Applications/Utilities/).
2. Type: `ln -s /"Desktop Folder" ~/Desktop/"Desktop (Mac OS 9)"`
3. Press Return.
4. Click on the desktop.

You should see the "Desktop (Mac OS 9)" alias on the desktop.

To avoid the need to use this alias, you should move any items from your Mac OS 9 desktop either to your Mac OS X Documents folder, or to a more appropriate folder on the Mac OS 9 disk. Locations within your Mac OS X Home directory provide you with organization and enhanced privacy when in a multi-user environment.

Background information

When you install Mac OS X v 10.0 to 10.1.5, it creates a symbolic link on the Mac OS X desktop named "Desktop (Mac OS 9)." This symbolic link is functionally similar to an alias, providing access to the Mac OS 9 Desktop Folder. If Mac OS 9 is installed on the same disk or disk partition as Mac OS X, this link is the only way to access the Mac OS 9 Desktop Folder. If the link is deleted in this scenario, you can only recreate it by using the Terminal application.

In Mac OS X 10.2, a symbolic link to the Mac OS 9 Desktop Folder called "Desktop (Mac OS 9)" is automatically created at startup if there are items on the Mac OS 9 Desktop. If there are no items on the Mac OS 9 Desktop, then the link is automatically removed the next time the computer restarts. This symbolic link is created at the root of the Mac OS X volume, and its permissions are set so that it cannot be deleted in normal use. If it is deleted, it will be recreated after the next restart.
Published Date: Feb 17, 2012

Mac OS X 10.1: Question Mark Appears in Dock

A question mark may appear in the Dock where an application formerly appeared. This affects Microsoft Internet Explorer when upgrading to Mac OS X 10.1.
This article has been archived and is no longer updated by Apple.

Symptom

The Dock may have one or more question mark (?) icons.

Solution

This occurs whenever an item in your Dock cannot be found. An item may not be found when:

- An installer replaces an application with a different version in a new location.
- You remove the item from your computer.
- The item in the Dock was stored on a disk that is no longer present or available (mounted). This includes items dragged to the Dock from a previously-mounted disk image.
- If the Applications folder is renamed or moved when started up from Mac OS 9. You should not rename or relocate Mac OS X-installed folders.

For example, the Mac OS X Installer replaces Internet Explorer with a new and improved version. If you had Internet Explorer in the Dock, you would follow these steps to delete the question mark and replace it with an icon of Internet Explorer:

1. Drag the question mark from the Dock to the desktop. It disappears.
2. Click the Finder icon in the Dock.
3. Choose Applications from the Go menu.
4. Drag the Internet Explorer icon to the Dock.

Published Date: Feb 17, 2012

Mac OS X 10.1: DVD Player 3.0 Installed on Compatible Computers

DVD Player 3.0 requires an Apple computer originally equipped with a built-in DVD-ROM drive and AGP graphics. Other computers can start up from Mac OS 9 (included) to view DVD-Video discs.
This article has been archived and is no longer updated by Apple.

Symptom

1. DVD Player 3.0 is not installed by the Mac OS X 10.1 Installer.
2. DVD Player 3.0 does not open if copied to the computer from another.

Solution

Watching DVD-Video discs in Mac OS X 10.1

DVD Player 3.0 requires an Apple computer originally equipped with a built-in DVD-ROM drive and AGP graphics. It is installed and will open on computers that meet this requirement.

The following computers may meet the DVD Player requirements:

- iBook - see Notes 1 and 4
- iMac - see Notes 1 and 4
- PowerBook (FireWire)
- PowerBook G4
- Power Mac G4 Cube - see Notes 2 and 4
- Power Mac G4 - see Notes 3 and 4

Notes

1. Models equipped with DVD-ROM drives also include AGP graphics.
Not all computers in this category include DVD-ROM drives.
2. Some models do not include DVD-ROM drives.
3. This refers to all except the Power Mac G4 (PCI Graphics) model.
Some computers in this category do not include DVD-ROM drives.
4. You can open the Apple System Profiler and click the Devices and Volumes tab to see if the computer has a DVD-ROM drive or AGP graphics.

Watching DVD discs in Mac OS 9

Other computers with DVD-ROM drives have hardware decoders, which DVD Player 3.0 does not work with. To play a DVD-Video disc on these computers, restart the computer using Mac OS 9. Follow these steps:

1. Choose System Preferences from the Apple menu.
2. Click Startup Disk.
3. Select your Mac OS 9 System Folder.
4. Close System Preferences.
5. Choose Restart from the Apple menu.
6. Insert the DVD.
7. Open Apple DVD Player.

After watching the movie, use the Startup Disk control panel in Mac OS 9 to select your Mac OS X System Folder, then restart the computer.

Also see technical document 60975 "**DVD Player 3.0.1: Compatible Computers**."

Published Date: Feb 17, 2012

Mac OS X 10.1: FireWire Drives Do Not Become Available When Connected

Third-party FireWire drives with earlier firmware may not appear on the desktop or otherwise become available (mount) in Mac OS X 10.1.
This article has been archived and is no longer updated by Apple.

Symptom

Third-party FireWire drives do not appear on the desktop or otherwise become available when you connect them to the computer.

Solution

Download and install the Mac OS X 10.1.1 Update. You can do this using the Software Update feature of System Preferences.

For Mac OS X 10.1, check the drive vendor's Web site to make sure the FireWire drive's firmware is up to date.
Published Date: Feb 17, 2012

Don‘t start up from an external USB device

If you select a USB startup disk from System Preferences, in some cases the computer may not start up from the USB disk.

This article has been archived and is no longer updated by Apple.

This is expected behavior.

Under Mac OS X, Apple does not support starting up from USB devices. Although some configurations may allow a USB volume to be selected as a startup volume via the Startup Manager, this may not work for all configurations, and Apple is unable to provide assistance in troubleshooting such configurations.

Published Date: Feb 20, 2012

Mac OS X 10.1: iSub Speaker Does Not Respond to Volume Control When Connected to an iBook

Disconnect the iSub speaker from the computer and reconnect it if it does not work properly when connected to an iBook started up from Mac OS X 10.1.

This article has been archived and is no longer updated by Apple.

Symptom

The speakers do not respond to volume control. The sound may be distorted.

Note: iBook (Dual USB) is unaffected.

Solution

After the computer starts up from Mac OS X 10.1, disconnect the iSub speaker from the computer and reconnect it.

Published Date: Feb 17, 2012

Mac OS X 10.1: How to Set up LDAP Address Services for Mail

You can set up the Mail application to find names and email addresses from your institution's LDAP server.

This article has been archived and is no longer updated by Apple.

Many institutions store address information on LDAP (Lightweight Directory Access Protocol) servers. You can set up the Mail application included with Mac OS X to use these servers to find email addresses when names are typed in the various address fields (To, Cc, and Bcc).

This document assumes you have already set up a POP or IMAP email account.

Follow these steps:

1. Open the application Mail (from the Dock or Applications folder).
2. Choose Preferences from the Mail menu.
3. Click Composing in the toolbar.
4. Be sure that the checkbox is selected for "Lookup addresses in network directories."
5. Click Edit Server List.
6. Click Add Server.
7. Double-click the empty field in the "Host name" column, then type the DNS name of the LDAP host.
Note: It might look like: exampleldap.apple.com. Check with your Internet service provider or network administrator to get the address of your LDAP server. There are also a number of public LDAP servers. To find one, use Sherlock to search the Internet for "public ldap servers".
8. Press Return.
9. Double-click the empty field in the Search Base column. Type the information that is correct for your host.
Note: Check with your network administrator or Internet service provider. The information might look like: ou=People, o=Company Name
10. Press Return.
11. Click Close.
12. Close the Mail Preferences window.

When you type a name or email address, "Searching..." should appear in the field as you type. If the server only finds one name, it will fill in the field automatically. If the server finds multiple names, Mail first suggests one you use frequently, and a second or two later a list of other matches will appear.

Published Date: Feb 19, 2012

Mac OS X: Pressing Command-Option-Shift-Power Does Not Shut Down the Computer

Pressing Command-Option-Shift-Power does not shut down the computer when using Mac OS X.
This article has been archived and is no longer updated by Apple.

Symptom

Pressing Command-Option-Shift-Power does not shut down the computer.

Solution

This Mac OS 9 feature is not implemented in Mac OS X, because Apple Pro Keyboards no longer have Power buttons. To restart or shut down the computer, you may:

- Choose Shut Down from the Apple menu.
- Press the reset button to restart the computer.
- Press and hold the power button on the computer for 6 seconds to shut down the computer.

The latter technique does not work on some earlier Mac OS X-compatible computers. On these computers, you may shut down the computer by pressing the reset button immediately followed by the power button.
Published Date: Feb 17, 2012

Mac OS X 10.1: DVD Player Not Installed on PowerBook (FireWire) Computer

DVD Player 3.0 is not installed on PowerBook (FireWire) computers unless a DVD-ROM drive is in the media bay when you install Mac OS X 10.1.

This article has been archived and is no longer updated by Apple.

Symptom

The DVD Player application is not installed.

Solution

Make sure the DVD-ROM drive is installed in the PowerBook (FireWire) computer's media bay before opening the Mac OS X 10.1 Installer.

If you have not done this, reinstall Mac OS X 10.1 while the DVD-ROM is in the media bay.

Published Date: Feb 17, 2012

Mac OS X 10.1: iBook Mute Button Does Not Respond

When using some iBook models with Mac OS X 10.1, the mute button may not respond after the sound is muted. This leaves the sound muted.
This article has been archived and is no longer updated by Apple.

Symptom

After muting sound in Mac OS X 10.1, pressing the mute key does not turn sound back on. The sound remains muted.

Note: iBook (Dual USB) is unaffected.

Solution

Adjust the volume from the volume icon in the menu bar or from the Sound pane of the System Preferences application.
Published Date: Feb 17, 2012

Mac OS X 10.1: iBook or iMac Sound Out of Phase, Left and Right Channels Sound Reversed

Audio may be out of phase when on certain iBook and iMac computers with Mac OS X 10.1. The left and right channels may sound reversed.
This article has been archived and is no longer updated by Apple.

Symptom

iBook

When using the analog sound output port with headphones or external speakers, the audio is out of phase. This can have the effect of distorting or removing certain elements of the audio. For example, bass frequencies may be reduced or other instruments may appear to be "missing."

iMac

When listening to the built-in speakers, the audio is out of phase. This can have the effect of distorting or removing certain elements of the audio. For example, bass frequencies may be reduced or other instruments may appear to be "missing."

The parenthetical product descriptions (Summer 2000) and (Summer 2001) refer to the summer of the Northern Hemisphere.

Note: iBook (Dual USB) is unaffected.

Solution

Update to Mac OS X 10.1.2 or later. Use the Software Update pane of System Preferences, or download the update from Apple Software Downloads (http://www.apple.com/swupdates/).
Published Date: Feb 17, 2012

Mac OS X and Mac OS X Server: Compatible network media

This article has been archived and is no longer updated by Apple.

Mac OS X and Mac OS X Server work with the types of network media described in this document.

Network Access Methods

Mac OS X and Mac OS X Server are designed to work with:

- Ethernet (twisted pair and fiber optic)
- wireless Ethernet (AirPort)

Mac OS X and Mac OS X Server are not designed to work with:

- LocalTalk
- Token Ring

Ethernet networking

Mac OS X provides Ethernet network access when used with the network adapters and transmission media listed below. You should see third-party support materials for information regarding non-Apple network adapters.

Twisted pair Ethernet:

- Built-in Ethernet ports on all Mac OS X 10.1 compatible computers.
- Apple 10/100Base-T Ethernet PCI Card
- Apple 4-Port 10/100 Ethernet PCI Card

These adapters work with the following transmission media:

10Base-T Ethernet twisted pair (Cat 3)
10/100Base-T Ethernet twisted pair (Cat 5)
10/100/1000Base-T Ethernet twisted pair (Cat 5+, Cat 5e, or Cat 6)

Optical Ethernet:

- Apple Gigabit Ethernet PCI Card

This card works with a 1000Base-SX Ethernet fiber optic network. It uses multimode fiber-optic cabling with an SC style connector.

Wireless Ethernet networking

Mac OS X provides 802.11b (AirPort) and 802.11g (AirPort Extreme) networking in the 2.4 GHz band at 11 Mbit/s and 54 Mbits/s, respectively, Direct Sequence Spread Spectrum (DSSS). Apple provides technical support for Apple-branded AirPort products. See third-party support materials for information on compatible third-party wireless products.

Physical data rate based on IEEE 802.11g specification. Actual data throughput will be lower. Range will vary with site conditions. Assumes AirPort Express/Extreme network with 802.11g-enabled computer. Speed and range will be less if an 802.11b product joins the network. Accessing the wireless network requires an AirPort- or AirPort Extreme-enabled computer or other Wi-Fi Certified 802.11a/b/g-enabled computer.

Published Date: Feb 19, 2012

Mac OS X 10.1: Viewing and Typing Text in Different Languages

Mac OS X includes several languages you can select for menus and dialogs. You can also view and type text in these languages. In addition to these languages, you can read and write text in other languages.
This article has been archived and is no longer updated by Apple.

Notes

1. Use of some languages requires installation of additional software, such as a Mac OS 9 language kit or font. For example, Mac OS X 10.1 includes script bundles for Cyrillic and Central European languages. However, such a script bundle does not activate unless at least one font for that script is present. Installing a font that is compatible with the script bundle will activate it. Keyboard layouts associated with the activated bundle then appear in the International Preferences panel. Mac OS 9 language kits are included as custom installation items on the Mac OS 9 Installation CD. References in this document to "language kits" refer to these.

2. Some applications display text in these languages automatically, while others require that you select the text and use a special font for the language.

3. Many languages are included with Mac OS X 10.1. Support for additional languages can be downloaded. See technical document 106700, "**Mac OS X 10.1: Language Updates for Mac OS X**".

4. Unicode allows you to use certain languages in applications such as Mail, TextEdit, or the Finder.

5. To type text in a given language, you may need to select a keyboard or input method for it in the International panel of System Preferences. After selecting additional keyboards or input methods, a new menu with a flag icon will appear in the menu bar of all applications. This is the keyboard menu, and it allows you to choose among different keyboards or input methods. Some input methods may create an additional menu next to the keyboard menu when they are active. Keyboards listed as "Unicode" in International Preferences are only available in Unicode applications such as Mail, TextEdit, or the Finder. When typing in an application, the availability of these keyboards in the keyboard menu indicates whether or not that application works with Unicode.

The following sections explain how to view or type text in various languages:

Japanese

1. Open the document in a Mac OS X application.
2. If necessary, use these fonts: Osaka, Osaka-mono, or Hiragino
3. To type text: Select the Kotoeri input method

Simplified Chinese

1. Open the document in a Mac OS X application.
2. If necessary, use this font: Hei
3. To type text: Install the Simplified Chinese Language Update, if needed, and select Simplified Chinese input method.

Traditional Chinese

1. Open the document in a Mac OS X application.
2. If necessary, use this font: Apple LiGothic.
3. To type text: Install the Traditional Chinese Language Update, if needed, and select Traditional Chinese input method.

Korean

1. Open the document in a Mac OS X application.
2. If necessary, use this font: Apple Gothic
3. To type text: Install the Korean Language Update, if needed, and select Korean input method.

Central European Languages (Czech, Hungarian, Polish, Slovak)

1. Install the Central European Language kit in Mac OS 9.
2. To read in Unicode applications, use these fonts when necessary: Lucida Grande, Geneva, Times, Helvetica, Courier, or Monaco. Many other fonts work with these languages as well.

3. To write in Unicode applications: Select and use the Extended Roman Unicode keyboard.
4. To read in any application, use these fonts when necessary: Times CE, Helvetica CE, Charcoal CE, Geneva CE, Palatino CE, Courier CE, Chicago CE, Monaco CE.
5. To write in any application, select and then use any of the following keyboards: Czech, Hungarian, Polish, Slovak

Cyrillic (Bulgarian, Russian, Ukrainian)

1. Install the Cyrillic Language Kit in Mac OS 9.
2. To read in Unicode applications use the Lucida Grande font when necessary.
3. To read in any application, use these fonts when necessary: Charcoal CY, Geneva CY, Helvetica CY, Monaco CY, Times CY
4. To write in any application, select and use any of the following keyboards: Bulgarian, Russian, Ukrainian

Note: You cannot type Cyrillic with the Extended Roman keyboard.

Vietnamese

You must use a Unicode application.

1. To read: If necessary, use the Lucida Grande font.
2. To write: Select and use the Vietnamese keyboard.

Icelandic or Turkish

You must use a Unicode application.

1. To read: if necessary, use these fonts: Lucida Grande, Times, Helvetica, Geneva, Monaco, or Courier. Many other Roman fonts support these languages as well.
2. To write: enable and use the Extended Roman keyboard.

Related Software Downloads

120063 Mac OS X Language Support Updates: Software Download

Published Date: Feb 17, 2012

Mac OS X Server 10.0, 10.1: How to Enable PHP

This article explains how to enable PHP on Mac OS X Server versions 10.0.3 to 10.1.4.
This article has been archived and is no longer updated by Apple.

Important, before you begin

1. You will edit the "httpd.conf" file to enable PHP service for Apache. Follow these steps carefully, and be sure not to change the file in any other way than specifically described.

2. If Apache does not work as expected or fails to start after you have modified the file, you can delete it and replace it with a duplicate of the "httpd.conf.default" file. After making a duplicate of the default, change its name to "httpd.conf" (to match the one you are replacing). Be sure never to modify the original "httpd.conf.default" file.

3. A pound sign (#) in the front of a line indicates that the line will not be read by Apache when starting. Removing pound signs, as described, will cause Apache to read the configuration from that line.

4. Beyond the Knowledge Base, Apple does not offer technical support for configuring or using PHP. See www.php.net for more PHP information.

How to enable PHP

Follow these steps at the server:

1. Choose Log Out from the Apple menu.
2. Log in as the root user. If you need help with this step, see "Mac OS X: About the root User and How to Enable It".
3. Open TextEdit.
4. Choose Open from the File menu.
5. In the Go To field, type: /etc/httpd/
6. Locate and open the file named "httpd.conf".
7. In this file, find the line that reads:

#LoadModule php_module modules/mod_php.so

8. Remove the pound sign (#) from the start of this line. Do not modify the line in any other way.
9. Scroll down until you find the line that reads:

#AddModule mod_php.c

10. Remove the pound sign (#) from the start of this line. Do not modify the line in any other way.
11. Scroll down until you find the lines that read:

#AddType application/x-httpd-php .php
#AddType application/x-httpd-php-source .phps

12. Remove the pound signs (#) from these lines. Do not modify the lines in any other way.
13. Choose Save from the File menu.
14. Quit TextEdit.
15. Choose Log Out from the Apple menu.
16. Log in as an Admin user.
17. Open Server Admin and log in.
18. Stop and restart the Web Server.

You can verify that PHP is working correctly by connecting to the server and loading the "info.php" page (http://<insertdomain>/info.php). If you have changed the document root or moved this file you, may not be able to do this.

Published Date: Feb 17, 2012

Mac OS X Server 10.0 and later: About the IMAP Admin Access Port

This document explains the purpose of the IMAP Admin Access Port in Mac OS X Server 10.0 and later, and how to use it.
This article has been archived and is no longer updated by Apple.
The IMAP options in Server Admin let you select "Allow IMAP Administrator Access," with a default TCP port of 626. Mail administrators can remotely access the server at this port, view outgoing mail waiting to be delivered to other SMTP hosts, and view mail in users' mailboxes.

Warning: Care should be taken to restrict this access to trusted administrators. The messages can be read, forwarded, and deleted. This is a very powerful feature that is useful in troubleshooting and mail server management.

How to enable Access

1. Open Server Admin and log in.
2. Click the Internet tab.
3. Choose Configure Mail Service from the Mail Service menu.
4. Click the Protocols tab.
5. Click IMAP Options.
6. Be sure that the checkbox for Allow IMAP Administrator Access is selected.

Preparing the administrator user

In your Users & Groups list, be sure you have at least one user set up for this purpose. The user must have have three characteristics:

- privileges to log in to the server
- must be an Admin user (select "User can administer the server")
- must have mail enabled (IMAP)

Connecting to the IMAP Admin Access Port

1. You must have an IMAP mail client that works with nested folders and allows you to change the default port for IMAP connections (for example, Microsoft Outlook Express).
2. In the IMAP client, set up a user account that corresponds to the user created at the server. Enter the information for your server as you would for any account, but change the port to 626 (in Outlook Express, this option is under the Advanced section when setting account preferences).
3. Log in from the IMAP client.

Published Date: Feb 17, 2012

Mac OS X 10.1: Many Third-Party Ink Jet Printer Drivers Are Included

Mac OS X 10.1 includes preinstalled drivers for many popular third-party ink jet (raster) printers.
This article has been archived and is no longer updated by Apple.
The installation of Mac OS X 10.1 includes drivers written by Canon, Epson, and Hewlett-Packard for certain models of their respective printers. If you own one of the printers listed below, simply connect it to your Macintosh -- and Mac OS X automatically sets up Print Center to use the printer. For information on PostScript and Apple LaserWriter printers, see technical document 106516: "**Mac OS X 10.1: Includes PPDs for Many PostScript Printers**"

This list reflects the Mac OS X 10.1 release. Updates available via the Software Update feature of the System Preferences application include drivers for more printers.

Printer drivers included:

Canon

- BJF210
- BJF360
- BJF660
- BJF850
- BJF870
- BJC85
- BJC2100
- BJC8200
- BJM70
- BJS6300
- BJS600
- BJS630
- S400
- S450
- S600
- S630
- S800
- S6300

Epson

- Stylus COLOR 680
- Stylus COLOR 740
- Stylus COLOR 760
- Stylus COLOR 777
- Stylus COLOR 860
- Stylus COLOR 880
- PM-720C
- PM-780C
- PM-780CS
- PM-880C
- PM-900C
- PM-920C
- PM-3500C

Hewlett-Packard

- Deskjet 810C
- Deskjet 812C
- Deskjet 815C
- Deskjet 816C (German SKU)
- Deskjet 830C
- Deskjet 832C
- Deskjet 840C
- Deskjet 842C

- Deskjet 880C
- Deskjet 882C
- Deskjet 895Cse
- Deskjet 895Cxi
- Deskjet 930C
- Deskjet 932C
- Deskjet 935C
- Deskjet 950C
- Deskjet 952C
- Deskjet 955C (Japan SKU)
- Deskjet 957C (Japan SKU)
- Deskjet 960Cxi
- Deskjet 960Cse
- Deskjet 970Cse
- Deskjet 970Cxi
- Deskjet 980Cse
- Deskjet 980Cxi
- Deskjet 990Cse
- Deskjet 990Cxi
- Deskjet 990Cm series

This list covers just the drivers that are included with Mac OS X 10.1. Note that these three vendors and others, such as Lexmark, have released raster drivers for Mac OS X. If your printer is not listed here, check with your printer's manufacturer to determine availability of drivers for use with Mac OS X.

Notes

1. Some printing features are not included in Mac OS X 10.1, such as custom paper sizes, banner printing, booklet printing, and watermarks.
2. Some of the listed printers may include built-in or add-on network adapters. The drivers included with Mac OS X 10.1 only work with these printers when they are directly connected to the computer's USB port. These drivers do not have a network connection feature for any of these printers.

Published Date: Feb 17, 2012

Mac OS X 10.1: AirPort Control Strip, Dock Extra Replaced By Menu Bar Item

The AirPort menu bar item in Mac OS X 10.1 replaces the AirPort portion of the Control Strip in Mac OS 9 and the AirPort Dock Extra of Mac OS X 10.0.
This article has been archived and is no longer updated by Apple.
The AirPort menu bar item in Mac OS X 10.1 replaces the AirPort portion of the Control Strip in Mac OS 9 and the AirPort Dock Extra of Mac OS X 10.0. The AirPort menu bar item appears on the right side of the menu bar.

Figure 1 The AirPort, Sound, and Battery menu bar items

You can use the Airport menu bar item to:

- Change AirPort networks
- Turn the AirPort Card on or off
- Open Internet Connect
- Create a network (Computer-to-Computer)

There are four signal bars on the AirPort status icon in the menu bar. The more bars that are black, the higher the signal quality.

Figure 2 Signal bars

Activating the menu bar item

You can show or hide the AirPort menu bar item using either of these methods:

System Preferences method

1. Choose System Preferences from the Apple menu.
2. Click Network.
3. Choose AirPort from the Show pop-up menu.
4. Click the AirPort tab.
5. Click to select or deselect the "Show AirPort status in menu bar" checkbox.

Internet Connect method

This works when you are already connected to a LAN via AirPort.

1. Open Internet Connect.
2. Click to select or deselect the "Show AirPort status in menu bar" checkbox.

Menu bar items can be repositioned by holding down the Command key while dragging the icon to its new position. You can also remove the icon by pressing Command while dragging the item out of the menu bar.
Published Date: Feb 20, 2012

Mac OS X 10.1: You Must Select USB Speakers in System Preferences

After plugging a pair of USB speakers into a Macintosh using Mac OS X, you must select the speakers to hear sound from them.
This article has been archived and is no longer updated by Apple.

Symptom

No sound comes from USB speakers immediately after plugging them in.

This behavior differs from Mac OS 9, in which sound is automatically rerouted.

Solution

To route sound to the USB speakers:

1. Choose System Preferences from the Apple menu.
2. Click Sound .
3. Click the Output tab.
4. Select the USB Speakers from the device list.

Published Date: Feb 17, 2012

Mac OS X 10.1: Difficulty Selecting Country or Time Zone

In the Date & Time pane, you may not be able to select a country within a time zone. Time zones are off by plus 1 hour on the map.
This article has been archived and is no longer updated by Apple.

Symptom

In the Time Zone section of the Date & Time pane of System Preferences, you cannot select a country within a time zone. The time zones on the map are off by plus 1 hour on the world map.

Note: This applies only when you update to Mac OS X version 10.1 from versions 10.0 to 10.0.4.

Solution

Update to Mac OS X 10.1.2 or later. For more information, see technical document 106704, "**Mac OS X: How to Update Your Software**".
Published Date: Feb 17, 2012

Mac OS X Server: Firmware Update Not on CD-ROM

You may encounter an instruction to "run the Firmware Updater located on this CD." This updater is not on the CD-ROM disc. You must download it.
This article has been archived and is no longer updated by Apple.

Symptom

When using the Mac OS X Server Installer on a computer that requires a firmware update, the Installer instructs you to "run the Firmware Updater located on this CD." There is no Firmware update on the disc.

Figure 1 Firmware update alert box

Solution

The Firmware Updater can be downloaded from:

- Technical document 75130: **iMac Firmware Update 4.1.9**
- Technical document 75131: **Power Mac G4 Firmware Update 4.1.8**
- Technical document 75129: **Power Mac G4 Cube Firmare Update 4.1.9**

For earlier computers, go to Apple Software Downloads (http://www.apple.com/swupdates/) and search using the terms "firmware" and the name of your computer.

For related information, see technical document 106506: "**Mac OS X: Start Up from Mac OS 9 to Install Open Firmware Updates**"
Published Date: Feb 17, 2012

Mac OS X 10.1: Binding Local NetInfo Database to an NIS Domain

Network Information System (NIS) is similar to NetInfo in that it allows multiple computers to share administrative data that is stored on one computer. However, NIS uses standard UNIX flat files for this administrative data, while NetInfo uses a distributed database. Setting up Mac OS X to be an NIS client should not affect NetInfo.
This article has been archived and is no longer updated by Apple.
This article assumes knowledge of NetInfo and its structure. For more information on NetInfo, see technical document 60038: "**Mac OS X Server: What Is NetInfo?**" This document also contains instructions on backing up the database, which should be done before continuing.

For Mac OS X to bind to an NIS domain, the /etc/hostconfig file must be changed, and lookupd must be configured to use NIS. The easiest way to accomplish this task is to log in as root. Alternatively, the steps below can be performed in the Terminal by an Admin user (a member of the admin group). The file system may not be in a state capable of restarting the computer if this procedure is not followed correctly. Therefore you should make backup copies of the /etc/hostconfig file and /var/db/netinfo/local.nidb.

Edit the hostconfig file

Open the /etc/hostconfig file with TextEdit or a command line text editor. From the Terminal, the file can be opened in TextEdit with the command "open -e /etc/hostconfig".

Find the "NISDOMAIN" entry. This is set to "-NO-" by default. Remove "-NO-" and type in the NIS domain name that the computer will bind to, ie NISDOMAIN=my.domain. This information can be obtained from the NIS administrator. Next, the line that contains RPCSERVER=-AUTOMATIC- must be change to RPCSERVER=-YES-. This will allow the portmap daemon to startup. Portmap is required for NIS to function properly.

Set up lookupd

To properly configure lookupd to use NIS, you must add directories, properties, and values to NetInfo. For a description of how these are used in NetInfo read technical document 60038: "**Mac OS X Server: What Is NetInfo?**".

First the /locations/lookupd directory must be created in NetInfo using the command:

```
nicl . -create /locations/lookupd
```

Next, this directory must be populated with the correct subdirectories, properties, and values. To create a sample lookupd.config file, copy the text from the section "Sample lookupd.config file" and save it as a text-only file named "lookupd.config". Then issue this command in the directory that contains this lookupd.config file:

```
niload -r /locations/lookupd . < lookupd.config
```

This file is only an example. It will provide an NIS client access to hosts, groups, users, and netgroups from an NIS domain. These examples can be expanded to other NIS maps, except for the auto.master map. This map type is not supported and will not work with Mac OS X.

Pictures

Here are some graphics of a completed lookupd configuration that can be used to ensure that the setup is correct. These graphics can also be used as a guide to configure lookupd if niload is not used.

Figure 1 The lookupd directory and its values and subdirectories.

Figure 2 The lookupd subdirectory groups and its values

Figure 3 The lookupd subdirectory hosts and its values

Figure 4 The lookupd subdirectory netgroups and its values

Figure 5 The lookupd subdirectory users and its values

Sample lookupd.config file

Copy below this line:

```
{
"LookupOrder" = ( "CacheAgent", "NIAgent", "YPAgent" );
"name" = ( "lookupd" );
"MaxThreads" = ( "12" );
CHILDREN = (
{
"name" = ( "groups" );
"LookupOrder" = ( "CacheAgent", "NIAgent", "YPAgent" );
},
{
"name" = ( "users" );
"LookupOrder" = ( "CacheAgent", "NIAgent", "YPAgent" );
},
{
"name" = ( "hosts" );
"LookupOrder" = ( "CacheAgent", "NIAgent", "YPAgent", "DNSAgent", "NILAgent" );
},
{
"name" = ( "netgroups" );
"LookupOrder" = ( "CacheAgent", "NIAgent", "YPAgent" );
}
)
}
```

Stop copying above this line.
Published Date: Feb 17, 2012

Mac OS X 10.1: F12 Is Eject and Tray Opening Key

In Mac OS X 10.1 the F12 key ejects discs from optical media drives (CD-ROM, CD-RW, DVD-ROM, and combination drives). It will also open and close an empty drive tray.
This article has been archived and is no longer updated by Apple.

Symptom

Applications that would normally use the F12 key no longer recognize it. Instead, the optical drive tray opens.

The F12 key cannot be reassigned for other use.

Solution

In the initial release of Mac OS X 10.1, the F12 ejects optical media or opens and closes the tray of an empty optical drive. While this provides functionality for keyboards that do not have a dedicated Eject key, this behavior can be an issue in some situations.

When working within an application, you can bypass the eject feature by holding the Option key while you press F12. Alternatively, you may use menu items where applicable in affected applications (instead of the F12 key). Some applications allow you to remap the function keys. Check the documentation that came with your application to see if it is possible to move the F12 function to another key or key combination.
Published Date: Feb 19, 2012

Mac OS 9.2.1 - Type 12 "Error" When Connecting Via Network Browser

A computer may stop responding, or Network Browser may unexpectedly quit with a type 12 "error" when connecting to an AppleShare (AFP) server.

This article has been archived and is no longer updated by Apple.

Symptom

- Network Browser quits with a type 12 "error" when connecting to an AppleShare (AFP) server.
- The computer stops responding, or "freezes," when you open Network Browser.

This occurs after installing Mac OS X 10.1 on the computer.

Solution

Download and install Mac OS 9.2.2 or later, which resolves the issue by installing a later version of the affected AppleShare extension.

Mac OS 9.2.2 is available either from the Software Update control panel, or from Apple Software Downloads (http://www.apple.com/swupdates/).

Published Date: Feb 20, 2012

Mac OS X 10.1: Web Sharing Does Not Start After Update from Mac OS X 10.0

Web Sharing may not start after updating to Mac OS X version 10.1 from versions 10.0 to 10.0.4.
This article has been archived and is no longer updated by Apple.

Symptom

When you attempt to start Web Sharing, the status indicates "Web Sharing Starting up...", but the Web Sharing does not start up.

You may also notice this text in your Console log:

dyld: /usr/sbin/httpd Undefined symbols:
_apple_hfs_module
/usr/sbin/apachectl start: httpd could not be started

Solution

This issue is caused by an entry in the configuration file for the Apache Web server. Editing this file allows Web Sharing to start up.

To make this change, follow these steps:

1. Open the Terminal (/Applications/Utilities/).
2. At the prompt (#), type:

```
sudo pico /etc/httpd/httpd.conf
```

3. Press Return.
4. Enter your Admin user password and press Return.
5. While pressing the Control key, press the "W" key.
6. Type: `libexec/httpd/mod_hfs_apple.so`
7. Press Return. You should now see the line:

```
LoadModule apple_hfs_module   libexec/httpd/mod_hfs_apple.so
```

8. Change the line to read:

```
LoadModule hfs_apple_module   libexec/httpd/mod_hfs_apple.so
```

9. While pressing the Control key, press the "X" key.
10. Press the "Y" key.
11. Press Return.
12. Quit the Terminal.

You should now be able open System Preferences and successfully start Web Sharing.
Published Date: Feb 17, 2012

Mac OS X: Start up From Mac OS 9 to Install Firmware Updates

You cannot install firmware updates when the computer is started up from Mac OS X 10.0 to 10.1. Start up from Mac OS 9 to update firmware.
This article has been archived and is no longer updated by Apple.
You cannot install Open Firmware updates when the computer is started up from Mac OS X versions 10.0 to 10.1. Start up from Mac OS 9 to update firmware.

Note: Mac OS 9 is included with Mac OS X and should be installed on your computer's hard disk to perform this procedure.

You can follow these steps to start up the computer from Mac OS 9, and then go back to Mac OS X:

1. Choose System Preferences from the Apple menu.
2. Click Startup Disk.
3. Choose your Mac OS 9 System Folder.
4. Close System Preferences, completing a confirmation if prompted.
5. Choose Restart from the Apple menu.
6. Follow the instructions included with the firmware update.
7. Open the Startup Disk control panel.
8. Select the Mac OS X System Folder.
9. Choose Restart from the Special menu.

Published Date: Feb 17, 2012

Mac OS X 10.1: AirPort Software Base Station Is Not an Included Feature

AirPort Software Base Station is not a feature of AirPort in Mac OS X 10.1. You may use a Computer-to-Computer network or an AirPort Base Station.

This article has been archived and is no longer updated by Apple.

AirPort in Mac OS X 10.1 does not provide a software base station feature.

To share locally between computers, you can still easily create a computer-to-computer network by choosing Create Network from the AirPort menu bar icon. If you need Internet connection sharing or other features provided by software base station, consider purchasing an AirPort Base Station. The dedicated AirPort Base Station offers additional features not provided by the software base station feature of Mac OS 9. For more information, see the AirPort product page (http://www.apple.com/airport/).

Published Date: Feb 17, 2012

Mac OS X: When is Starting Up From CD-ROM to Install Required?

With Mac OS X and Mac OS X Server versions 10.1 to 10.1.5, you must start up from the CD-ROM to install the operating system. Other means of installing the operating system are not recommended or supported. For versions 10.2 and later, Network Install is a secondary supported installation method, though you may need to correct a permissions issue that affects printing.
This article has been archived and is no longer updated by Apple.

Symptom

1. The server may not start up, and the file system may not be in a usable condition after an attempt to install the software when not started up from the Mac OS X Server CD-ROM.
Note: This symptom applies to versions 10.1 to 10.1.5.

2. You cannot print. Print Center quits unexpectedly.

Solution

Versions 10.1 to 10.1.5:

For symptom 1, start up from the CD-ROM to install Mac OS X Server. This is the only supported installation method.

If you have symptom 2 only, try using the Repair Privileges utility. See technical document 106900, "**Mac OS X: About the Repair Privileges Utility 1.1**".

Versions 10.2 and later:

You may install from CD-ROM or via Network Install. However, computers installed using the Network Image Utility bundled with Mac OS X Server 10.2 will have a permissions issue that prevents you from printing. Computers installed using Network Image Utility bundled with Mac OS X Server 10.2.1 or later do not have this issue. Once a computer is affected, updating it to 10.2.1 does not resolve the issue. You may, however, resolve the issue by using the Repair Permissions feature of Disk Utility. At the affected computer:

1. Open Disk Utility (/Applications/Utilities/).
2. Select the Mac OS X startup volume in the left-hand column.
3. Click the First Aid tab.
4. Click the Repair Permissions button.

Published Date: Feb 17, 2012

Mac OS X 10.1: Apple LaserWriter 16/600 PS PhotoGrade Printer Feature Dimmed

The PhotoGrade feature of an Apple LaserWriter 16/600 PS printer cannot be enabled. Start up from Mac OS 9.2.1 to print with PhotoGrade enabled.

This article has been archived and is no longer updated by Apple.

Symptom

The PhotoGrade feature of an Apple LaserWriter 16/600 PS printer cannot be enabled. The "On" choice is dimmed in the Printer Features dialog window.

Solution

Update to Mac OS X 10.1.2 or later.

Published Date: Feb 17, 2012

Mac OS X 10.1: Stops Responding During File Transfer Between FireWire Devices

A large file transfer between two FireWire devices may cause Mac OS X to stop responding or "hang".
This article has been archived and is no longer updated by Apple.

Symptom

Mac OS X stops responding during a large FireWire-to-FireWire device file transfer (copy). This does not occur when Mac OS X is used with one FireWire data storage device at a time.

Solutions

Update to Mac OS X version 10.1.1 or later. For more information, see technical document 106634 "**Mac OS X Update 10.1.2: Enhancement and Installation Information**"

Check with the manufacturer(s) of your FireWire devices to ensure that the latest device firmware is installed.

If the issue persists, use one of the following workarounds:

- Copy smaller amounts of data at a time.
- Copy the data from one FireWire device to a non-FireWire volume, then from the non-FireWire volume to your other FireWire device.
- Start up from Mac OS 9 to perform the file copy.

Published Date: Feb 17, 2012

Mac OS X: "A Crossed Connection Has Been Detected..." Message

An alert box may appear when connecting to the Internet with your internal Apple modem that says: "A crossed connection has been detected. Please check your modem settings and try again."
This article has been archived and is no longer updated by Apple.

Symptom

An alert box with this message appears when connecting to the Internet with your internal Apple modem:

> "A crossed connection has been detected. Please check your modem settings and try again."

Solution

1. Choose System Preferences From the Apple menu.
2. Click Network.
3. Choose Internal Modem from the Show pop-up menu.
4. Click the Modem tab.
5. Choose Apple Internal 56K Modem (v.90) from the Modem pop-up menu.

In the event that your Internet service provider uses a v.34 connection protocol, choose Apple Internal 56K Modem (v.34) instead. Contact your ISP if you are not sure whether to use v.90 or v.34. For more information, see technical document 30734: "**V.90 Protocol: Connectivity Discussion**"
Published Date: Feb 17, 2012

Mac OS X: Start up From CD-ROM to Reformat Any Volume on Startup Device Between Mac OS (HFS) and UNIX (UFS) Disk Formats

You cannot reformat the startup volume. Additionally, you cannot reformat a nonstartup volume located on the startup device between UNIX and Mac OS (HFS and HFS Plus) formats.
This article has been archived and is no longer updated by Apple.

Symptom

When you attempt to erase a volume, Disk Utility only offers you Mac OS Standard (HFS) and Mac OS Extended (HFS Plus) file formats for certain volumes.

Normally, Disk Utility has four formats available:

- Mac OS Standard (HFS)
- Mac OS Extended (HFS Plus)
- MS-DOS File System
- UNIX File System (UFS)

Disk Utility may offer you all for formats for some volumes, while offering only HFS and HFS Plus for others.

Note: This issue only affects volumes on partitioned disks.

Solution

Start up from the Mac OS X CD-ROM to reformat the targeted volume as desired.

Disk Utility behavior explained

First, remember that a startup volume and a startup device are not the same thing. A "startup device," a hard drive for example, is a physical device that draws electricity from your computer and has moving parts. The startup device contains a disk that may be logically divided ("partitioned") into two or more "volumes" of information. At any given time, only one of these volumes contains the instance of the operating system software from which the computer is started up, thus making it the "startup volume." A volume that is contained on the startup device but that does not contain the active operating system software could be called a "nonstartup volume" on the startup device. A secondary or tertiary hard drive installed in your computer that does not contain the startup volume is a "nonstartup device" for purpose of this discussion.

Neither Disk Utility nor its predecessor Drive Setup will erase the startup volume. Disk Utility has the further restriction of not allowing you to switch a nonstartup volume that is contained on the startup device between Mac OS (HFS and HFS Plus) and UNIX file formats. If your computer has multiple hard drives installed, you should see that Disk Utility will offer all four of its available disk formats for volumes contained on nonstartup devices. This explains the symptom described above.
Published Date: Feb 17, 2012

Mac OS X 10.1: Includes PPDs for Many PostScript Printers

Mac OS X 10.1 installs PostScript Printer Description (PPD) files necessary to use many Apple LaserWriter and third-party PostScript printers.
This article has been archived and is no longer updated by Apple.
The Mac OS X print architecture works with many Apple and third-party PostScript printers: those that are PostScript Level 2 and 3 printers, and that use PostScript Printer Description (PPD) files that describe the set of printer features available for a specific PostScript printer or printer family. For example, a PPD file might include features like:

- the paper-handling capabilities of a printer
- the number of paper trays and their capacity
- available paper sizes they handle

PPD files are created by printer vendors. Mac OS X 10.1 comes with many Apple and third-party PPD files from Hewlett-Packard, Tektronix, Lexmark and Xerox. A list of these printers can be found below. For information on ink jet printers, see technical document 106490: "**Mac OS X 10.1: Many Third-Party Ink Jet Printer Drivers Are Included**"

Choosing a PPD File

A new feature for Mac OS X 10.1 is automatic queue creation for USB PostScript printers that use TBCP. When you connect a USB PostScript printer to your computer for the first time, a printer queue is created automatically, and the proper PPD is associated with that printer. If that printer's PPD is not available, the Generic PPD will be automatically associated with that printer and queue. To associate a different PPD with the USB PostScript printer, open Print Center, delete the old printer from the Printer List, then add a new printer and select the specific PPD file you wish to be used from the Printer Model pop-up menu.

When adding a printer in Print Center that is connected to your printer via AppleTalk, the PPD can also be selected automatically for you, unless you choose one specifically from the Printer Model pop-up menu.

The Mac OS print architecture may automatically select the proper PPD for USB and AppleTalk connected printers. The communication protocols used support bi-directional communication, allowing Print Center to query and obtain from the printer its product name. Another advantage of automatic PPD selection is that when a PPD file is not found in the Mac OS X system, it searches for a PPD in the Classic (Mac OS 9) System Folder, provided the Classic environment has been used at least once or that the Classic System Folder has been selected at least once in the Startup Disk pane of System Preferences. For these and other reasons, you should allow the Mac OS X print architecture to use its automatic selection capabilities when the proper PPD is available.

In contrast, you must manually select the printer's PPD file when adding "LPR Printers using IP". For best results, choose the PPD file that is provided specifically for that printer from the Printer Model pop-up menu. When the specific PPD file for your printer is not available, consider choosing the Printer Model that most closely resembles your printer. For example, select the Lexmark E312 PPD file for use with your Lexmark E310 printer. Selecting the PPD intended for a model of printer similar to yours will often provide you access to more of your printer's capabilities than merely selecting the Generic PPD, which is designed for maximum compatibility with a wide range of PostScript printers.

Mac OS X 10.1 includes PPDs for these PostScript printers:

Apple

LaserWriter 4/600 PS
LaserWriter 12/640 PS
LaserWriter 16/600 PS
LaserWriter 16/600 PS Fax
LaserWriter 16/600 PS-J
LaserWriter 8500
LaserWriter Color 12/600 PS
LaserWriter Color 12/600 PS-J
LaserWriter Color 12/660 PS
LaserWriter IIf
LaserWriter IIg
LaserWriter Personal 320
LaserWriter Personal NTR
LaserWriter Pro 600
LaserWriter Pro 630
LaserWriter Pro 810
LaserWriter Pro 810f
LaserWriter Select 360

LaserWriter Select 360f
LaserWriter Select 610

Hewlett-Packard

HP Color LaserJet
HP Color LaserJet 4500
HP Color LaserJet 4550
HP Color LaserJet 5M
HP Color LaserJet 8500
HP Color LaserJet 8550
HP LaserJet 1200
HP LaserJet 1220
HP LaserJet 2200
HP LaserJet 3200M
HP LaserJet 4 Plus
HP LaserJet 4/4M
HP LaserJet 4ML
HP LaserJet 4MP
HP LaserJet 4Si
HP LaserJet 4V
HP LaserJet 5/5M
HP LaserJet 5MP
HP LaserJet 5Si
HP LaserJet 5Si Mopier
HP LaserJet 6P/MP
HP LaserJet 2100 Series
HP LaserJet 4000 Series
HP LaserJet 4050 Series
HP LaserJet 4100 Series
HP LaserJet 5000 Series
HP LaserJet 8000 Series
HP LaserJet 8100 Series
HP LaserJet 8150 Series
HP LaserJet 9000 Series
HP Mopier 240
HP Mopier 320

Lexmark

Lexmark C720
Lexmark Optra C710
Lexmark Optra Color 45
Lexmark Optra Color 1200
Lexmark Optra E312
Lexmark Optra E312L
Lexmark Optra M410
Lexmark Optra M412
Lexmark Optra T (T610, T612, T614, T616)
Lexmark Optra W810
Lexmark T520
Lexmark T522
Lexmark T620
Lexmark T622
Lexmark W820

Tektronix

Tektronix Phaser 360 Extended
Tektronix Phaser 740
Tektronix Phaser 740 Extended
Tektronix Phaser 740 Plus

Tektronix Phaser 750DP
Tektronix Phaser 750DX
Tektronix Phaser 750N
Tektronix Phaser 750P
Tektronix Phaser 780
Tektronix Phaser 780 Graphics
Tektronix Phaser 780 Plus
Tektronix Phaser 840
Tektronix Phaser 840 Extended
Tektronix Phaser 840 Plus
Tektronix Phaser 850DP
Tektronix Phaser 850DX
Tektronix Phaser 850N
Tektronix Phaser 1235 PS

Xerox

Xerox DocuColor 2006
Xerox DocuPrint N2025 PS
Xerox DocuPrint N2125 PS
Xerox DocuPrint N2825 PS
Xerox DocuPrint N3225 PS
Xerox DocuPrint N4025 PS
Xerox DocuPrint N4525 PS
Xerox Phaser 790
Xerox Phaser 2135 PS

Notes

1. Though Mac OS X 10.1 installs the PPDs for the Personal LaserWriter NT, LaserWriter Pro 400, and LaserWriter Pro 405, these printers do not work with Mac OS X, as they are PostScript Level 1 printers. Mac OS X only works with PostScript Level 2 and 3 printers.

2. Some features of certain printers do not work with Mac OS X. For example, a Fax PPD such as the LaserWriter 16_600 PS Fax will allow you to print to this printer but not to fax from it.

3. If your printer is not listed here, try choosing the PPD of a printer that has a feature set similar to your printer. Using a PPD that is not designed specifically for your printer may not provide access to all of your printer's features, and unforeseen problems may be encountered. Before choosing this workaround, check with the manufacturer of your printer to see if they have released a printer-specific PPD for Mac OS X.

4. Apple may add or remove PPD files without notice so this list is subject to change.

Published Date: Feb 17, 2012

Macintosh Manager 2.1: About Macintosh Manager

This document contains a copy of the About Macintosh Manager document included with Macintosh Manager 2.1.
This article has been archived and is no longer updated by Apple.

About Macintosh Manager

This document includes information about additional Mac OS client software for use with the Mac OS X Server. The Macintosh Manager installation will install Macintosh Manager 2.1, a version of AppleShare Client, and Macintosh Manager 2.1 administration software.

Macintosh Manager is Apple's workstation management technology, providing education network administrators with a centralized method of securing Mac OS workstations, controlling student software access, and providing a consistent, personalized experience for students and staff.

AppleShare Client allows client computers to connect to the server. A version of AppleShare Client is installed by default when you install Macintosh Manager 2.1. If you are installing on a 68K-based computer, AppleShare Client 3.8.7 will be installed. If installing on a PowerPC-based computer, AppleShare Client 3.8.8 will be installed.

To administer Macintosh Manager on a server running Mac OS X Server software from a remote Mac OS 9 computer, install the Macintosh Manager administration software using the Custom Install option of the Mac OS Client Installer.

Macintosh Manager 2.1 administration can be used to manage client computers with Mac OS 8.1 or later.

For more information about these software applications, refer to the Admin Guide.pdf file on the CD, the online Help for Macintosh Manager and Server Admin, and late-breaking news which is available in the online Help.

System requirements

Macintosh Manager 2.1 client software requires a computer with:

- Mac OS 8 or 9

AppleShare Client software:

- AppleShare Client 3.8.7 requires a computer running Mac OS 8.1 to 8.5
- AppleShare Client 3.8.8 requires a computer running Mac OS 8.1 or later

Macintosh Manager 2.1 administration software requires a computer with:

- Mac OS 9 or Mac OS X
- At least 64 MB of RAM

Published Date: Feb 17, 2012

Mac OS X: How to Troubleshoot Errors When Running CGIs

Use these tips to help resolve common issues that can arise when enabling CGIs on Mac OS X and Mac OS X Server versions 10.0 and later. This article has been archived and is no longer updated by Apple.
Note: Apple Technical Suport does not offer free technical support for troubleshooting CGI executables.

Use these notes to help troubleshoot your server when CGIs are enabled.

1. If you wish to run AppleScript CGIs, you must be running Mac OS X Server, and you must run the ACGI Enabler application (/Applications/Utilities/). AppleScript CGIs are not supported on Mac OS X 10.3.

2. If you are running non-AppleScript CGIs, be sure to use UNIX line breaks in your file, not Macintosh line breaks.

3 When using TextEdit as a text editor, it should use UNIX line breaks. Be sure not to save as RTF.

4. Be sure that the path to the executable is set properly at the top of the script. For example, this header is incorrect and will generate errors:

#!/usr/bin/local/perl

The perl program is found in /usr/bin, not /usr/bin/local. To verify the path to a program, use the "which" command in Terminal.

5. Be sure that CGI programs have read and execute privileges. You can use the "chmod" command in Terminal to add read and execute privileges. See the "chmod" man page for more information on using this command.

6. If you are running Mac OS X Server, be sure that you have enabled CGI execution for your site in the Server Admin.

7. If you are still seeing errors after following these steps, refer to the Web Server error logs for clues as to why the CGI is failing. In Mac OS X Server, you can use the Log Viewer in Server Admin to see the Web Server Error Log. In Mac OS X, you can use Console to read the logs, which are found in /var/log/httpd.
Published Date: Feb 17, 2012

Mac OS X Server 10.1: How to Enable SSI

This document explains how to enable SSI (Server Side Includes) on Mac OS X Server.
This article has been archived and is no longer updated by Apple.

How to enable SSI

Follow these steps:

1. In Server Admin, click the Internet tab.
2. Click the Web icon and choose Configure Web Service.
3. Click the MIME types tab.
Scroll down to html in the suffix column.
4. Select html.
5. Click Duplicate.
6. Choose "server-parsed" from the Response pop-up menu.
7. Click Save.

Notes

1. Following these steps allows includes to be done with files with the extension .html. If you prefer that only .shtml files be server parsed, then select shtml instead of html in the steps above. See http://httpd.apache.org/docs/howto/ssi.html for more information on SSI.

2. Beyond the Knowledge Base, Apple does not offer free technical support for configuring or using SSI.

Published Date: Feb 17, 2012

Mac OS X 10.1: Cameras and Devices Compatible With Image Capture

The Image Capture application in Mac OS X 10.1 allows you to easily import images and perform related functions. This documents lists compatible cameras and devices.
This article has been archived and is no longer updated by Apple.
Image Capture is a Mac OS X application that offers a variety of features, including:

- Automatically recognizes your digital camera when you connect it to the computer.
- Lets you see thumbnail views of your pictures, rotate them as necessary, and delete any mistakes before you copy them from your camera to your computer.
- Imports movies and audio from compatible cameras that can record them.
- Set the camera date and time to match your computer's clock.

USB Devices Compatible With Image Capture

Canon

- PowerShot S10
- PowerShot S20
- PowerShot S30
- PowerShot S40
- PowerShot S100
- PowerShot S110
- PowerShot S300
- PowerShot A10
- PowerShot A20
- PowerShot G1
- PowerShot G2
- PowerShot Pro90IS
- EOS D30

IXY DIGITAL

- IXY DIGITAL 200
- IXY DIGITAL 300
- DIGITAL IXUS
- DIGITAL IXUS v
- DIGITAL IXUS 300

Hewlett Packard

- PhotoSmart 318
- PhotoSmart C315
- PhotoSmart C500
- PhotoSmart C618
- PhotoSmart C912

Olympus

- C2100UZ
- C3000Z
- C3030Z
- C4040
- Brio 100
- Brio 150
- E-10
- E-100RS
- D370
- D510Z

Epson

- Epson PhotoPC 3100Z

Casio

- Casio QV-3000EX

Fuji

- Fuji FinePix 1400
- Fuji FinePix 2400
- Fuji FinePix 4700
- Fuji FinePix 6300Zoom
- Fuji FinePix S1

Kodak

- DC 220
- DC 240
- DC 260
- DC 265
- DC 280
- DC 290
- DC3400
- DX3500
- DX3600
- DX3700
- DX3900
- DC4800
- DC5000
- MC3

Sony

- CyberShot DSC P1
- CyberShot DSC P3
- CyberShot DSC P5
- CyberShot DSC P20
- CyberShot DSC P30
- CyberShot DSC P50
- CyberShot DSC S75
- CyberShot DSC S85
- CyberShot DSC F505V
- MVC CD300

Nikon

- CoolPix 990
- CoolPix 880
- CoolPix 775
- CoolPix 885
- CoolPix 995

Card Readers

- SanDisk SDDR-31
- Sony MemoryStick Reader/Writer MSAC-1

Note: Additional cameras and devices may work with Image Capture if they comply with one of the following protocols:

- Mass Storage
- Picture Transfer Protocol (PTP)
- Digita
- Custom - requires vendor-specific plug-in for Image Capture. Contact your vendor to see if a plug-in is available for your device.

Published Date: Feb 17, 2012

Mac OS 9.2.1: "can not be installed over the localized version of Mac OS"

International English users must select the correct English to avoid an alert message that Mac OS 9.2.1 "can not be installed over the localized version of Mac OS... ."
This article has been archived and is no longer updated by Apple.

Symptom

When you attempt to install the Mac OS 9.2.1 Update, an alert box with this message appears:

> "This version of Mac OS can not be installed over the localized version of Mac OS on the disk named <diskname> "Please choose a different destination disk, or perform a clean installation."

Solution

If you have an International English version of Mac OS 9, be sure to use the contents of the "International English" folder and not the "English" folder (Figure 1).

Figure 1 Available installation languages

The "English" folder is for North American English Mac OS 9 users upgrading to the North American English version of Mac OS 9.2.1. You can see which English language version you have by opening Apple System Profiler in Mac OS 9. Look under the Software Overview section. It says either "International English" or "US." "US" is North American English.
Published Date: Feb 18, 2012

Mac OS X 10.1: Some Preferences Lost After Using 10.1 Upgrade CD

You lose some preferences when updating to Mac OS X 10.1 with CD-ROM part number 1Z691-3184-A.
This article has been archived and is no longer updated by Apple.

Symptom

The following preferences are lost after updating to Mac OS X 10.1:

- Date & Time control panel settings
- ColorSync
- Monitor Color Calibration
- Classic
- Desktop Picture
- Keyboard Menu
- ScreenSaver

Solution

Set the preferences again.

This happens when updating to Mac OS X version 10.1 from versions 10.0 to 10.0.4 with CD-ROM part number 1Z691-3184-A.
Published Date: Feb 17, 2012

Mac OS X 10.1: Hard Disk Icon Disappears After Changing the Icon

When you try to customize the hard disk icon in Mac OS X 10.1, the icon disappears after the second change.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to customize the hard disk icon, the icon disappears entirely after the second attempt. The name of the hard disk remains.

Solution

Under certain circumstances, the new icon may not be visible until you log out and log back in. Follow these steps:

1. Choose Log Out from the Apple menu.
2. Log back in.
3. Check for the new icon.

If the new icon does not appear, you may have to revert to the default hard disk icon.

1. Click the Finder icon in the Dock.
2. Choose Computer from the Go menu.
3. In the Finder window, select the hard disk for which the icon has disappeared.
4. Choose Show Info from the File menu.
5. Be sure that the area around the missing icon is highlighted. Click it if necessary.
6. Choose Cut from the Edit menu.
7. Close the Show Info window.

The default hard disk icon should now appear. This document may be updated as more information is available. For more information, see technical document 106427, "**Mac OS X: Pasting Custom Icons Does Not Work in All Contexts**".
Published Date: Feb 17, 2012

Mac OS X 10.1: Computer Serial Number No Longer Appears in Software

Reset Parameter RAM (PRAM) to resolve an issue in which the computer's serial number no longer appears in Apple System Profiler or the About This Mac window.
This article has been archived and is no longer updated by Apple.

Symptom

The computer serial number no longer appears in:

- Apple System Profiler
- About This Mac window

Note: On certain computers, in the About This Mac window, you can double-click the version text to reveal the serial number.

Solution

Verify that the most current firmware available for your computer is installed. Firmware updates are available from the **Knowledge Base**. Search for your specific computer or device model.

Mac OS X Update 10.1.3 resolves this issue. See technical document 106704, "**Mac OS X: How to Update Your Software**".

Prior to Mac OS X 10.1.3, you may reset Parameter RAM (PRAM). See technical document 2238 "**Macintosh: How to Reset PRAM and NVRAM**" for instructions.

Note: The serial number may be restored for some but not all computers. If, for example, your computer's logic board had been replaced under warranty service, the serial number would not be retrievable by these methods.

Related Documents

106506 Mac OS X: Start up From Mac OS 9 to Install Firmware Updates

Published Date: Feb 20, 2012

Mac OS X 10.1: Computer May Go to Sleep While Sharing

Under certain circumstances, a Mac OS X computer can go to sleep while File Sharing appears to be active.
This article has been archived and is no longer updated by Apple.

Symptom

The File Sharing computer unexpectedly goes to sleep while it appears to be actively File Sharing. You receive this message:

"The file server's connection has unexpectedly closed down [time and date]."

Solution

To prevent this behavior, follow these steps:

1. Open System Preferences.
2. Click the Energy Saver icon.
3. Click the Sleep tab.
4. Set the "Put system to sleep whenever it is inactive for" slider to Never.
5. Quit System Preferences.

This is the only certain way to prevent the computer from going to sleep while it is sharing files. Being connected to a sharing computer (having it mounted) is not sufficient in itself to prevent the computer from going to sleep or to reset the sleep clock. You might also encounter this behavior if the software you are using locally caches the file being read from the sharing computer. Though it might appear that you are actively reading the file from the sharing computer, there may be no activity between the two at the moment that the defined sleep period expires.
Published Date: Feb 17, 2012

Mac OS X 10.1: Optimizing AirPort Base Station Placement

AirPort Admin Utility 1.4 for Mac OS 10.1 does not have an optimize placement feature, but the AirPort menu item can be used to analyze the signal strength provided by a base station's position.
This article has been archived and is no longer updated by Apple.
You can use different AirPort client computers to check the placement of a base station by performing the following steps:

1. Choose a channel frequency that is different from any frequency used by sources of interference, such as other AirPort networks.
2. Place your base station in a location free from interference.
3. Position multiple clients throughout the area you would like to test.
4. Check the signal strength on the clients from the AirPort menu bar item.

If the client coverage is not optimal:

1. Try repositioning the base station to reduce possible interference
2. In the Admin Utility, use the "Base station density" pop-up menu in the AirPort panel to set the base station density to Low, Medium, or High, depending on how far apart your base stations are from each other.
3. Install additional base stations to increase performance in an area too large or with too much interference for optimal coverage by one base station.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access".**
Published Date: Feb 17, 2012

Mac OS X Server 10.1: Setup Assistant May Stop Responding If TCP/IP Is Set Improperly

Use the steps in this article to resolve an issue in which the Setup Assistant stops responding due to incorrect TCP/IP settings.
This article has been archived and is no longer updated by Apple.

Symptom

The Setup Assistant stops responding.

Solution

Make sure there is a valid router setting if you are upgrading to Mac OS X Server 10.1 from version 10.0.3 or 10.0.4.

The symptom can occur in these situations:

1. The router address is set to the computer's IP address
2. The router address is not set.
3. The network is configured for DHCP, but there is no DHCP server available.

For example, an invalid setting would be:
IP Address: 192.168.43.154
Subnet Mask: 0.0.0.0
Router: 192.168.43.154

If you want to do something along those lines, use this instead:

IP: 192.168.43.154
Subnet Mask: 0.0.0.0
Router: 127.0.0.1

If the computer is set up with this invalid setting, change the router address in the Network pane of System Preferences for the Built-in Ethernet interface. If you don't do this and the Setup Assistant stops responding on the "Port Planning" page, and you are unable to go forward or backward, then start up the computer into single-user mode, and run the following commands:

```
fsck -y
mount -uw /
rm -rf /private/var/db/SystemConfiguration exit
```

This will allow the computer to start up. After this point, when making Network settings, the default router should be set to 127.0.0.1.
Published Date: Feb 17, 2012

Mac OS 9: Pointer Jumps When Copying Files to or From a Zip Disk

You may experience jumpy or erratic pointer movement when copying files to or from a Zip disk.
This article has been archived and is no longer updated by Apple.

Symptom

When copying files to or from a Zip drive on a computer with a USB keyboard and mouse, pointer movement is jumpy or erratic. The behavior is most apparent when the Finder Copy window is the active window.

Solution

- Use a USB Zip drive.

or

- Upgrade to Mac OS X to resolve this issue.

The Zip driver for Mac OS 9 causes the pointer location to be updated less frequently on the screen. However, there is no slowdown of operation.

You can minimize the behavior during file copies to and from the Zip drive by clicking another window to make it active, instead of the Finder Copy window.

Published Date: Feb 20, 2012

Mac OS X Server 10.1: How to Enable Tomcat

Follow the steps in this document to enable Tomcat on Mac OS X Server 10.1.
This article has been archived and is no longer updated by Apple.
Note: These steps are not needed for Mac OS X Server 10.2 or later. The Server Settings application offers a checkbox for "Start Tomcat on System Startup" in the the Configure Web Service window.

Important, before you begin:

1. You will edit the "httpd.conf" file to enable Tomcat. Follow these steps carefully, and be sure not to change files in any other way than specifically described.

2. Before starting, it is recommended that you make a duplicate of the "httpd.conf" file. If you need to reinstall it, delete the 'httpd.conf' file, and change the name of the copy to "httpd.conf" (to match the one you are replacing).

3. A pound sign (#) in the front of a line indicates that the line will not be read by Apache when starting. Removing pound signs, as described, will cause Apache to read the configuration from that line.

4. Beyond the Knowledge Base, Apple does not offer technical support for configuring or using Tomcat. See http://jakarta.apache.org/tomcat/index.html for more Tomcat information.

5. This article explain how to execute commands in the terminal as root. Be careful in typing, and do not execute any other commands than those listed.

How to Enable Tomcat

1. Choose Log Out from the Apple menu.
2. Type "root" as the login user name. Enter your Admin user password, and log in.
3. Open TextEdit.
4. Choose Open from the File menu.
5. In the Go To field, type: `/etc/httpd/`
6. Locate and open the file named "httpd.conf".
7. Scroll to the end of this file, find the lines that read:

```
#LoadModule jserv_module /usr/libexec/httpd/mod_jserv.so
#AddModule mod_jserv.c
#Include /private/etc/httpd/tomcat.conf
```

8. Remove the pound signs (#) from the start of these lines. Do not modify them in any other way.
9. Save the file and quit TextEdit.
10. Open Terminal.
11. Type: `/Library/Tomcat/bin/tomcat.sh start`
12. Press Return. At this point you should see output in the shell showing Tomcat starting up.
13. After Tomcat has started, quit Terminal and choose Log Out from the Apple menu.
14. Log in as your Admin user
15. Open Server Admin and restart the Web server. At this point Tomcat will be running.
16. To verify this, set the document root of your Web site to "/Library/Tomcat/webapps/ROOT/", and visit your server in a Web browser.
17. If you are having difficulties, take a look at the log files in the Server Admin. Tomcat also keeps a log file in /var/log/http/ called 'mod_jserv.log' that you can use Console to read.

Published Date: Feb 17, 2012

Mac OS X 10.1: Directory Services - Authentication and Contacts

This document explains the difference between the Authentication and Contacts sections in the Directory Setup application. In Mac OS X 10.1 the Contacts search policy is not used by any applications.
This article has been archived and is no longer updated by Apple.
Authentication and Contacts are two different types of Directory Service search policies that can return different types of information for users or people. A search policy is when Directory Services looks for information. The Authentication search policy is used by Directory Services to look up user information such as passwords and home directories. It is used when logging in to the computer or when an installer applications asks for an Administrator password.

While the Contacts search policy works, you do not need to set it up in Mac OS X 10.1 because no applications use it. The purpose of the Contacts search policy is to allow applications to look up information about people other than authentication information. An example of this would be an application using a Contacts search policy to look up information from an LDAP server about a person's phone number or address.
Published Date: Feb 17, 2012

AppleWorks 6: Updater Does Not Install, Excel 97 Alert Message

During an upgrade installation of AppleWorks 6, installation is halted by an alert box with a message that mentions Excel 97.
This article has been archived and is no longer updated by Apple.

Symptom

While installing an AppleWorks 6 update over an existing version of AppleWorks 6, an alert box appears with one of the following messages:

"An unexpected error occurred while installing Excel 97.1008:17,-5"
"An error occurred that prevented the installation from completing. Excel 97"

Solution

1. Drag the icon of the updater disk image volume to the Trash.
Note: This icon's filename does not have an extension such as ".smi" or ".img". That file is the disk image file.
2. Double-click the AppleWorks 6 update icon whose filename has a ".smi" filename extension. A new disk icon appears on the desktop.
3. Open the disk icon, and install the update.

To prevent this issue from occurring, see the "ShrinkWrap or ShrinkWrap engine reports an error" section of technical document 75098: "**Software Downloads: Software Format and Assistance**".
Published Date: Feb 20, 2012

Mac OS X 10.1: Nifty - Apple Internal 56K Modem Scripts

There are two sets of scripts listed for the Apple Internal 56K Modem in the modem section of the Network Preferences.
This article has been archived and is no longer updated by Apple.

Symptom

The modem settings located within the network system preferences, has two sets of modem scripts for the internal modem. They are:

1. **"Apple Internal"**
Apple Internal 56K Modem (v.34)
Apple Internal 56K Modem (v.90)

2. **"Nifty - Apple Internal"**
Nifty - Apple Internal 56K Modem (v.34)
Nifty - Apple Internal 56K Modem (v.90)

Solution

The "Nifty" scripts, installed by default, are localized for Japan. Only use these if you are in Japan.
Published Date: Feb 17, 2012

PowerBook G4: How to Find AirPort ID of Preinstalled AirPort Card

This document explains how to find an AirPort card's AirPort ID when it is preinstalled in a PowerBook G4 computer.
This article has been archived and is no longer updated by Apple.
If the computer has Mac OS X, follow these steps:

1. From the **Apple** menu, choose **Location**, and **Network Preferences** from the submenu.
2. From the **Show** pop-up menu, choose **AirPort**.
3. Click the TCP/IP tab.

The AirPort ID is listed at the bottom of the window.

If the computer does not have Mac OS X, locate the serial number label instead. The AirPort ID (or "wireless MAC address") may be printed on the label. If you need help locating the serial number label, see technical document 88060, "**PowerBook G4: How to Find the Serial Number**".
Published Date: Feb 20, 2012

Mac OS X 10.2.8 or Earlier: Issues With Using Double-Byte Characters

This document describes some limitations you may find when using double-byte characters in Mac OS X.
This article has been archived and is no longer updated by Apple.
Mac OS X works with languages that have double-byte character sets, such as Japanese, Chinese, and Korean. Some Mac OS X applications do not recognize these characters, and they may not appear correctly. Following are some of the situations in which this can occur, with steps you can take to resolve the issue.

Using "Find by Content" in Sherlock (Mac OS X 10.0, 10.1) or File > Find (Mac OS X 10.2)

You can use Sherlock (Mac OS X 10.1 and earlier) or Find (Mac OS X 10.2 and later) to search the content of your files. If you have files containing both double-byte characters and Roman characters, Sherlock may not be able to locate a word consisting of double-byte characters. If this happens, try searching for words in the text that use only Roman characters instead.

Note: Find by Content works for Korean documents that use Mac Korean or UTF-16 encoding only. In addition, it does not work on rtf files created with TextEdit, only plain text files.

Setting up your internal modem

When you set up the internal modem using Internet Connect or Network preferences, do not use double-byte characters in the telephone number field.

Connecting to a server

If you connect to a computer with file sharing turned on, or AppleShare (AFP) server volume with a name that uses double-byte characters, the name may not display correctly. You cannot open applications or documents on the volume.

If this happens, try using Roman characters for the names of server volumes.

From a Mac OS 9 computer, you cannot connect to a Mac OS X file sharing volume if your user name contains double-byte characters. To avoid this, choose a user name with only Roman characters.

Using Mail

Double-byte characters may not display correctly in the subject or content of email you receive. If the file name of an attachment displays incorrectly, you can change it.

Seeing the names of items in the Finder

Double-byte characters in the names of disks, server volumes, folders, and files may not display correctly in the Finder. Select the item and choose Show Info from the File menu. Then choose the encoding for the language from the Encoding pop-up menu.

Long file names that you create in Mac OS X using double-byte characters may not display correctly in Mac OS 9. Try giving the file a shorter name.

Using DOS-formatted MO disks

Mac OS X cannot mount Magneto Optical (MO) disks that are DOS-formatted and contain double-byte characters in the disk name. Use disks with only Roman characters in the disk name. In addition, you cannot save files with double-byte characters in the filename on a DOS-formatted MO disk.

Related documents

106196 "**Mac OS X: Use Roman Characters Names on Mac OS Standard (HFS) Volumes**"
106349 "**Mac OS X Server 10.0: Do Not Use Double-Byte Characters for Print Queue Names**"

Published Date: Feb 17, 2012

Mac OS X 10.1 (Norwegian): Drop Box Has Incorrect Privileges

The drop box in the Norwegian localized Mac OS X 10.1 installation has read-only privileges instead of write-only.
This article has been archived and is no longer updated by Apple.

Symptom

Other users can see the contents of your Drop Box folder but are not able to copy files to it.

Solution

This issue does not affect users created after installation, only the first user created by the Setup Assistant. Follow these steps to set the correct privileges:

1. Click the Finder icon in the Dock.
2. Go to the Home directory of the affected user, and locate the Public folder.
3. Open the Public folder and select the folder Drop Box.
4. Choose "Vis info" from the Arkiv menu.
5. Choose Rettigheter from the drop-down menu in the window that appears.
6. Set Gruppe and Alle to "Kun skrive (mottaksmappe)".
7. Close the window.

To verify that the changes were made, either log in as another user or log on to the computer from another computer on the network.

Apple may address this issue in a future update to Mac OS X.
Published Date: Feb 17, 2012

Mac OS X 10.1: Mac Help Cannot Open System Preferences Panes After Installing an Update

After updating to Mac OS X 10.1 from versions 10.0 to 10.0.4, Mac Help no longer automatically opens the System Preference panes when it normally should.
This article has been archived and is no longer updated by Apple.

Symptom

1. Any Mac Help link that would normally open a System Preferences pane, for example "Open Login preferences for me," does not work. This only affect users created prior to updating to Mac OS X 10.1.

2. Preference panes do not open from Menu bar items.

Examples of Menu bar items that open panes in System Preferences:

- You choose Open Date & Time after clicking the clock in the menu bar.
- You choose Open Energy Saver from the battery menu bar item (available on portable computers).

Solution

This issue occurs when the preferences bundles are no longer associated with System Preferences. To resolve this issue, re-associate the preferences bundles with the correct application. Follow these steps:

1. Choose Go to Folder from the Go menu.
2. Type: `/System/Library/PreferencePanes/`
3. Click Go.
4. Select one of the Preferences (it does not matter which one).
5. Choose Show Info from the File menu.
6. Choose Open with application from the pop-up menu.
7. Click the application selection menu, which is located immediately below and to the left of the menu you just set to "Open with application."
8. Choose Other from the menu (Figure 1).

Figure 1 The Info window

9. In the navigation dialog that appears, choose All Applications from the Show pop-up menu.
10. Use the navigation dialog to locate the Applications folder in your Mac OS X disk. From this folder, select the System Preferences application.
11. Click Add. An alert box with this message appears: "You don't have privileges to change the application for this document only. Do you want to change all similar documents to open with the application 'System Preferences'?"
12. Click Continue.
13. The Info window should now show System Preferences 2.0 as the application used to open preferences (Figure 2).

Figure 2 Choosing System Preferences in the Info window

14. Close the Info window.

System Preferences should now open to the appropriate pane when selected from menu items.
Published Date: Feb 20, 2012

Mac OS X 10.1: Unexpected Behavior When You Log Out, Shut Down, or Restart

After choosing Log Out, Shut Down, or Restart from the Apple menu, you may see a plain blue screen without the spinning disc cursor. The computer may not subsequently shut down or restart as expected.
This article has been archived and is no longer updated by Apple.

Symptom

After choosing Log Out, Shut Down, or Restart from the Apple menu, a plain blue screen appears without the spinning disc cursor. The computer may not subsequently shut down or restart as expected. If you press the Power button on the keyboard (if it has one) a dialog box appears that says: "Are you sure you want to shut down?" If you click Shut Down, the computer returns to the Login Window or logs in automatically, depending on your preferences.

Solution

You can force the computer to restart by pressing Control-Command-Power, or by pressing the reset button on the computer. (It is marked with a triangle.) No data loss should occur when you do this under these circumstances because all open applications were quit and disk cache contents flushed to disk.

Then update to Mac OS X 10.1.2 or later to resolve the issue. This software is available via the Software Update feature of the System Preferences applications, or you can download a standalone installer from Apple Software Downloads (http://www.apple.com/swupdates/).
Published Date: Feb 17, 2012

Apple Pro Keyboard (Italian): Some Special Characters Missing When Using "Italian - Pro" Keyboard Layout

It is not possible to produce some characters with diacritics (such as Ã, Ã, Ã, Ã, Ã, Ã¿, and Ã±) when using the "Italian - Pro" keyboard layout with Mac OS 9 or Mac OS X.
This article has been archived and is no longer updated by Apple.

Symptom

When using Italian Mac OS 9 or Mac OS X, there are two keyboard layouts to choose from, "Italian - Pro" and "Italian".

When you are using the Italian layout, depressing the Option key or Option-Shift key combination will produce some characters with diacritics (Figure 1).

Figure 1 Italian keyboard layout

However, when you use the Italian - Pro layout, some characters with diacritics do not appear (Figure 2).

Figure 2 Italian - Pro keyboard layout

Solution

As a workaround, see technical document 25333: "**Apple Pro Keyboard (Italian): How to produce Special Characters**"

This document lists the keystrokes needed to produce various special characters with the Italian versions of the Apple keyboard and the Apple Pro Keyboard, when using the Italian layout of Mac OS 9 or Mac OS X.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Mac OS X: Some Display Calibration Steps Skipped on Some Monitors

When using the Mac OS X Display Calibrator Assistant, some of the steps are skipped with some display models.
This article has been archived and is no longer updated by Apple.
The Display Calibrator Assistant takes you through some or all of the following steps, depending on what type of display you use:

- Set Up, which includes brightness and contrast adjustment
- Native Gamma
- Target Gamma
- Tristimuli Values
- Target White Point

The Set Up step may be skipped on flat-panel (LCD) displays, because they are backlit. The brightness and contrast settings on backlit displays do not usually affect the gamma settings for that display.

The Native Gamma step may be skipped with flat-panel displays, because native gamma does not apply to them. Cathode-ray tube (CRT) displays use the gamma function to determine the relation between the input voltage and the display brightness. Unlike CRT displays, LCD displays are backlit. Because the brightness from the backlight is constant, a native gamma function is not necessary.

The Tristimuli Values step is not necessary on many later display models because the optimized Tristimuli values are already stored in the display and sent to the operating system when the display is connected. If the display provides these optimized values to the operating system, this step is skipped. Tristimuli values are used to control the proportionate levels of red, green, and blue on an RGB display.

Note: In Mac OS X 10.0, some of these steps were enabled when they should not have been. This has been addressed in Mac OS X 10.1.
Published Date: Feb 17, 2012

Mac OS X Server: Windows Clients Log in via SMB With User Short Name

To connect to Mac OS X Server via SMB, a Microsoft Windows client must log in with a "User name" that matches the user Short Name as defined in Mac OS X Server.
This article has been archived and is no longer updated by Apple.

Symptom

Though your Windows user "Full name" matches your Name on Mac OS X Server, attempted SMB connections to the server from the Windows client fail.

Solution

Connect to the server using your Short Name as defined in your user profile in Mac OS X Server (see Figure 1).

Figure 1 Windows user information (left) and Mac OS X Server user information (right)

In Figure 1, the Windows "User Name" is not the same as the Mac OS X Server Short Name. Even though the user's Windows "Full name" matches his Mac OS X Server Name, he is unable to connect. He would need to change his Windows "User name" to "jacobb" to match the Mac OS X Server Short Name.
Published Date: Feb 17, 2012

Mac OS X 10.1: Hot-Plugged USB Speakers Do Not Respond to Volume Change

The Volume menu bar item may not adjust the volume after hot plugging USB speakers. Use System Preferences instead, or update to Mac OS X 10.1.1.

This article has been archived and is no longer updated by Apple.

Symptom

Hot-plugged USB speakers do not respond to volume changes from the Volume menu bar item.

Note: "Hot plug" refers to the ability of USB and FireWire devices to be plugged in and unplugged when the computer is turned on.

Solution

This issue is resolved by updating to Mac OS X 10.1.1, which you may do with the Software Update feature of System Preferences. Even with Mac OS X 10.1.1, you should select your USB speakers in the Sound pane of System Preferences the first time you plug them in.

In Mac OS X 10.1, you can adjust volume after hot plugging by using System Preferences. Follow these steps:

1. Open System Preferences.
2. Click Sound .
3. Click the Output tab.
4. Be sure that your speakers are selected in the Name column.
5. Click the Alerts tab.
6. Be sure that your speakers are selected in the pop-up menu for "Play alerts through."
7. Adjust the volume using the "Main volume" slider.

Published Date: Feb 17, 2012

Mac OS X 10.1 or Later: Services to Which "Connect to Server" May Connect

This document explains which types of service (or protocols) that you can connect to via the Connect to Server command.
This article has been archived and is no longer updated by Apple.
Connect to Server works with these protocols:

- AppleShare (both AppleTalk and TCP/IP)
- SMB/CIFS (Microsoft Windows File Service)
- WebDAV
- NFS

AppleShare

You can discover or browse AppleShare servers using either the AppleTalk protocol or IP. You can also type the server's URL. Type "afp://" and then either the server's DNS name or IP address.

For other file services, there is no option to browse the network. You must type the server's URL.

WebDAV

To connect to WebDAV servers, type the server's URL in this format:

> http://servername.com/path/

NFS

To connect to NFS servers, type the server's URL in this format:

> nfs: //servername.com/path/

For more information, see technical document 25344: "**Mac OS X: Using the Finder to Mount NFS Exports**"

SMB (Windows File Service)

See technical document 106471: "**Mac OS X 10.1: How to Connect to an SMB Volume (Microsoft Windows)**"
Published Date: Feb 17, 2012

Mac OS X: Popping Sound From External Speakers When Waking or Restarting

When a computer using Mac OS X wakes from sleep or restarts, external speakers connected to the computer may make a popping sound.
This article has been archived and is no longer updated by Apple.

Symptom

You hear a popping sound from external speakers when the computer wakes from sleep or restarts.

Solution

The popping sound does not indicate any software issue or hardware failure. This is a normal part of hardware-software initialization after waking from sleep or during startup.
Published Date: Feb 17, 2012

Mac OS X Server 10.1: Windows Clients Create Files Without Group Write Permission

A Microsoft Windows client computer connected via SMB writes files to the server that have read-only permissions for the logged-in user's group.
This article has been archived and is no longer updated by Apple.

Symptom

After a Windows client writes a file to the server, other members of the same group see an alert when trying to write to the file. The alert may say that the user has inadequate permissions or privileges to modify the file.

Solution

There are several possible solutions to this issue. Two are presented here. The easiest solution to have the owner of the file change its permissions after creating it, granting access to group members.

Alternatively, you can edit the /etc/smb.conf file. This causes Windows clients to create files with the same privileges as the folder to which you save a file. The /etc/smb.conf file is dynamically created by Server Admin, so changes you make to this file would normally be overwritten through the normal use of Server Admin. The following steps will prevent that from happening, but they will also prevent you from making changes in the Windows file sharing settings in Server Admin.

1. Open the Terminal (/Applications/Utilities/).
2. At the prompt (#), type:
```
sudo pico /etc/smb.conf
```
3. Press Return. The file opens in the pico text editor within the Terminal window.
4. Use the cursor keys to locate the "global" section of the file, and add this line:
```
inherit permissions = yes
```
5. Press and hold the Control key, then press the "X" key. This saves the file.
6. Press the "Y" key.
7. Press Return.
8. At the prompt, type:
```
sudo chflags uchg /etc/smb.conf
```

Step 8 locks the file. If in the future you want to make changes to this configuration using the Server Admin application, you must unlock the file. Follow these steps to allow unlock it:

1. Open the Terminal.
2. At the prompt, type:
```
sudo chflags nouchg /etc/smb.conf
```
3. Press Return.

Published Date: Feb 20, 2012

Mac OS X Server 10.0, 10.1: Setting Up Multiple Servers to Host User Home Directories

This document outlines the steps required to create a multi-server infrastructure using Mac OS X Server versions 10.0.3 to 10.1.5.
This article has been archived and is no longer updated by Apple.
This document outlines the steps required to create a multi-server infrastructure using Mac OS X Server 10.0.3 to 10.1.5. Before proceeding, you should review Chapters 1 to 4 of the Mac OS X Server Administrator's Guide and the "Understanding and Using NetInfo" whitepaper. These documents are available at the Mac OS X Server product page (http://www.apple.com/macosx/server/). Please read through this entire document carefully before attempting to configure your servers.

Introduction

In this example scenario, one of the servers (parent1.apple.com) will be the NetInfo parent, providing the user and group information for the other servers on the network. There will be three other servers that can each provide various services including file, print and Web. For now, we will focus on each of the three servers hosting the Home directories for the students of a high school.

In addition to spreading user Home directories across multiple servers (for performance reasons), it may be useful to have the users on a specific server divided into multiple share points. One example would be to have the users distributed as follows:

server1.apple.com has the home directories for students with names A to H
server2.apple.com has the home directories for students with names I to Q
server3.apple.com has the home directories for students with names R to Z

As represented by Figure 1, the admin distributes users in different share points, reducing the number of folders per share point. This action reduces complexity to the user and increases security. Each of these servers has four share points in which the user Home directories are located, based upon the student's class year.

Figure 1 Four share points per server, named by class year, distributed by student last name across three servers

Overview of Steps

Preparation

- Create an XML import list of users for each share point hosting user Home folders.
- Each list should contain only the users with Home folders in that share point.
- In this example, we will have 12 user import lists (three servers with four share points each).
- Put some thought into the user ID assignments since you can search on a range of user IDs with Server Admin.

Setting up the parent (parent1.apple.com)

Set up and configure the NetInfo parent server (parent1)

- Install Mac OS X Server and complete the Setup Assistant.
  Note: You may wish to create a startup partition (~5 GB) for the server OS, then use the rest of the drive space as the partition for storing the various share points.
- Install any software updates for the server.

Create the parent domain on parent1

- Use NetInfo Domain Setup to create a parent domain.
- Restart the server. It is necessary to restart the server so that Directory Services will properly recognize the existence of the new parent domain.

Back up the local NetInfo database

- Use the the Terminal (/Applications/Utilities/) to back up the file "local.nidb".

Import all users for a given share point into the network domain of parent1

- Set the Home directory defaults for the parent domain (/NetInfo/root) to server1 and the appropriate share point (that is class_2002 for the seniors).
- Import the user list for that share point (AtoH-2002.xml, for server1's seniors).
- Repeat for the other three share points on server1, changing the Home directory defaults and importing the appropriate user list each time.
- Repeat for server2 and server3 with the user lists for each of their share points.

Setting up the children (server1-server3.apple.com)

Set up and configure the child servers (server1-server3)

- Install and run setup assistant
- **Note:** You may wish to create a startup partition (~5 GB) for the server OS, then use the rest of the drive space as the partition for storing the various share points. If the Users home directory share point is located on a volume other than the startup volume, the "home" attribute will not be correct in the user's record on the parent. You may work around this issue by modifying the "home" attribute of the user record to contain the appropriate path to the home directory sharepoint.
- Be extremely careful when entering networking data or turning off unused ports.
- Install any software updates for the servers.
- Create the share points (class_2002, class_2003, class_2004, class_2005).

Set up the parent-child relationship for each server

- Open NetInfo Domain Setup and authenticate as the Admin user.
- Set up server1, server2 and server3 as children of parent1.

Back up the local NetInfo database of child servers (server1-server3)

- Use the the Terminal (/Applications/Utilities/) to back up the file "local.nidb" on each child server.

Import users into the local domain of server1

- Set the Home directory defaults to local and select the appropriate share point for the first user list.
- Import the user list for that share point (AtoH-2002.xml, for server1's seniors). This step creates the actual Home directories within the share point.
- Repeat for the other three share points on server1, changing the Home directory defaults and importing the appropriate user list each time.
- Repeat the user import process on server2 and server3.

Restore the local NetInfo domain on each child server from the backup

- When the user imports are completed for all four share points on server1, the file "local.nidb" must be restored.
- Repeat the restore process at server2 and server3.

What's Next

Having read through this overview, you should:

1. Completely read through the rest of this document.
2. Place this example in the context of your networking environment.
3. If useful, follow through on the deployment steps listed below.

Step-by-Step Walkthrough

Preparation

The students using this multi-server network will have their Home directories distributed across three servers, so we need to divide the list containing all users into three smaller lists. There should be a list for users with last names starting with different letter ranges, such as A to H, I to Q, and R to Z. Each of these three will then be broken into four lists representing the students graduating in the years 2002, 2003, 2004 and 2005. If these lists still contain more than 4000 users each, then you should consider further dividing them so that you do not import more than 4000 users at a time. Creating share points by class also simplifies the task of removing the large batch of graduates each year.

With this arrangement, the network load should be evenly spread across servers 1 to 3 as students log in and access their documents. The server

parent1 will handle all authentication (and could be used as a Macintosh Manager server if some of the clients are using Mac OS 8 or Mac OS 9).

These user lists now need to be put into the XML format described on page 308 of the Mac OS X Server Administrator's Guide. That can be done in a number of ways including merging the list (as a database) into a text document. Other utilities are also available from third parties to generate an XML import file from a tab delimited text file, such as Passenger or MM Helper.

Example of the minimum user info required for XML import:

```
<user
     loginEnabled = "canLogin"
     isAdminUser = "notAdmin"
     uid = "2001"
     gid = "2003"
     shell = "" >
     <nameList>
          <name
               text = "user2001" />
          <name
               text = "Test User 2001" />
     </nameList>
     <pass
          format = "clearText"
          text = "test2001" />
</user>
```

Note: See page 308 of the Mac OS X Server Administrator's Guide for more detail.

Setting Up the Parent Server (parent1.apple.com)

Installing the Software:

1. Start up your server from the Mac OS X Server CD.
2. Use Disk Utility to partition the drive (optional).
3. Install the server OS onto the desired startup partition of the drive.
4. After installation completes, restart the server.

Setting Up the Server:

1. Complete the Setup Assistant.
2. Be careful when entering the networking information, and verify that it is correct.
3. Restart the server.
4. If your server install CD was version 10.0.3 or 10.0.4, install the Mac OS X Server 10.1 Update.
5. Restart the server.

Creating the NetInfo Parent Domain:

1. At the Login Window, log in as the Admin user.
2. Open NetInfo Domain Setup on parent1.apple.com.
3. Click the lock.
4. Authenticate with the Admin password. A second dialog appears requiring authentication with the root user's password.
5. Authenticate with the root user's password.

Figure 2 Setting as a NetInfo parent

6. Choose "is a NetInfo Parent" from the "This machine" pop-up menu (Figure 2).
7. The field below it should be set to "Static Address".
8. Enter parent1's IP address into the NetInfo Parent Address field, if it isn't already
9. The NetInfo Server Tag should be already set to "network".
10. Save and click OK.
11. Wait for it to finish, usually between one and three minutes.

12. Quit NetInfo Domain Setup.
13. Restart the server.

Backing up the Users & Groups:

1. Open the Terminal (/Applications/Utilities/).
2. Execute this command as the root user:

```
cp -r local.nidb/ local.nidb.bak
```

Importing the first user list (students A to H, 2002):

1. Open Server Admin
2. Click the General tab.
3. Click Users & Groups and select Home Directory Defaults, then /NetInfo/root from the submenu (Figure 3). This sets a default Home directory location for users imported into the NetInfo parent domain (with the tag "network").

Figure 3 Server Admin

4. Click the Custom radio button.
5. In the first field, enter the domain name of server1 (which will host students A to H).
6. In the second field, type "class_2002" for the class_2002 share point on server1 (Figure 4).
7. Click Save and close the window.

Figure 4 Setting the Home directory preference

8. Click Users & Groups again, select Import and then /NetInfo/root from the submenu.
9. Select the XML import file for the first batch of users (AtoH-2002.xml).
10. After the import finishes, check the import log file created for any issues.

Checkpoint: If the first group of users contained over 2000 users, you should restart the server before continuing. This will ensure maximum import speed. The time required to import users can vary substantially depending upon the hardware configuration of the server and the number of group memberships being assigned to users via the XML import. You should expect to see at least 1000 users/hour and could see several times that performance.

Importing the next user list (students A to H, 2003):

1. Click on Users & Groups, select Home Directory Defaults, then /NetInfo/root from the submenu.
2. Click the Custom radio button.
3. In the first field, type in the IP address of server1 (which will host students A-H).
4. In the second field, type in "class_2003" for the class_2003 share point on server1.
5. Click Save and close the window.
6. Click Users & Groups again, select Import and then /NetInfo/root from the submenu.
7. Select the XML import file for the second batch of users (AtoH-2003.xml).
8. After the import, check the import log file looking for any issues.

Checkpoint: If the first and second user lists combined total is over 3000 users, you should restart the server before continuing. This will ensure maximum import speed.

9. To import the remaining user lists for server1, repeat Steps 1 to 8 of this section for students A to H in the classes of 2004 and 2005. Just be sure to change the share point name in Step 4 to match the list you are importing in Step 7.
10. To import the user lists for server2 and server3, repeat the steps used for server1's users. Put students I to Q on server2 and students R to Z on server 3.

Checkpoint: At this point, the Users & Groups list in the Server Admin should display the complete list of users in the path: /NetInfo/root. Home directories will be created in the following steps.

Setting Up the Child Servers (server1, server2 and server3)

Installing the Software:

1. Start up all three servers from the Mac OS X Server CD.
2. Use Disk Utility to partition their drives (optional).
3. Install the server OS onto the desired startup partitions of the drives.
4. After installation completes, restart the servers.

Setting Up the Server:

1. Complete the Setup Assistant for each server.
2. Be careful when entering the networking information, and verify that it is correct.
3. Restart the servers.
4. If you installed version 10.0.3 or 10.0.4, install the Mac OS X Server 10.1 Update.
5. Restart the servers.

Creating the NetInfo Child Domain:

1. At the Login Window of server1.apple.com, log in as the Admin user.
2. Open NetInfo Domain Setup.
3. Click the lock.
4. Authenticate with the Admin password. A second dialog appears requiring authentication with the root user's password.
5. Authenticate with the root user's password.

Figure 5 Setting as a NetInfo Child

6. Choose "connect to a NetInfo Parent" from the "This machine" pop-up menu (Figure 5).
7. The field below it should be set to "Static Address".
8. Enter parent1's IP address into the NetInfo Parent Address field, if it isn't already.
9. The NetInfo Server Tag should be already set to "network".
10. Save and click OK.
11. Quit NetInfo Domain Setup.
12. Repeat Steps 1 to 11 of this section for server2 and server3.

Setting up the share points:

1. At server1, log in as the Admin user.
2. Open the disk or partition where you intend to store the user Home directories.
3. Create the folders to be used as the server's share points (class_2002 to class_2005, as represented in Figure 1).
4. Open Server Admin and log in as the Admin user.
5. Click the General Tab.
6. Click Sharing and select Set Sharing Attributes.
7. Navigate to the "class_2002" folder, select it, and click Choose.

Figure 6 Choosing a share point for sharing attributes

8. Click to select the "Share this item and its contents" checkbox.

Figure 7 Setting sharing attributes (privileges)

9. Save and close the window.
10. Repeat Steps 4 to 9 of this section to set attributes for share points class_2003, class_2004, and class_2005.

11. Repeat Steps 1 to 10 of this section for server2 and server3.

Backing up the Users & Groups:

1. Open the Terminal (/Applications/Utilities/).
2. Execute this command as the root user:

```
cp -r local.nidb/ local.nidb.bak
```

3. Repeat Steps 1 and 2 for server2 and server3.

Importing Users to Create the Home Directories

Importing the user lists:

1. At server1, open Server Admin.
2. Click the General tab.
3. Click Users & Groups and select Home Directory Defaults.

Figure 8 Preparing to import users for a share point

4. Click the Local radio button (Figure 8).
5. Choose the "class_2002" share point from the pop-up menu.
6. Click Save and close the window.
7. Click Users & Groups again and select Import, then /NetInfo/root/server1 from the submenu.
8. Select the XML import file for the first batch of users (AtoH-2002.xml).
9. After the import finishes, check the import log file created for any issues.

Checkpoint: If the first group contained over 2000 users, you should restart the server before continuing. This will ensure maximum import speed.

10. Repeat Steps 3 to 10 of this section for students A to H of class_2003, class_2004, and class_2005.
11. Repeat Steps 1 to 10 of this section for each of server2 and server3, being sure to match the corresponding users lists and share points (students I to Q on server2, and students R to Z on server3).

Restoring the local NetInfo Domain from Backup:

1. Open the Terminal (/Applications/Utilities/).
2. Execute these commands as the root user:

```
rm -r local.nidb
mv local.nidb.bak local.nidb
```

3. Restart the server.
4. Repeat Steps 1 to 3 of this section for server2 and server3.

Additional information

For information concerning possible NetInfo configurations involving Macintosh Manager, please see technical document 106454: "**Macintosh Manager 2.0: Common Setup Strategies**".
Published Date: Feb 20, 2012

Mac OS X 10.1: Gray Screen When Attempting to Start Classic Environment

After installing Security Update 10-19-01, the Classic environment may not be able to start up, causing Classic to stop responding with a gray or white startup window.
This article has been archived and is no longer updated by Apple.

Symptom

After installing Security Update 10-19-01 on an affected computer, the Classic environment stops starting up almost immediately after being opened. A white or gray Classic startup window appears (Figure 1).

Figure 1 A gray Classic startup window

Note: This occurs when no external display is connected to the computer. This could potentially affect any Mac OS X-compatible computer that is operating with a secondary or tertiary video card that does not have a monitor connected to it. This issue primarily affects PowerBook computers with built-in VGA ports, but certain iBook models that include external video ports could display this symptom.

Solution

Update to Mac OS X version 10.1.1 or later. For more information, see technical document 106634: "**Mac OS X Update 10.1.2: Enhancement and Installation Information**"
Published Date: Feb 17, 2012

Mac OS X 10.2: Modem Unable to Dial, "could not open the communications device" Alert

The Mac OS X Modem Update resolves a rare issue in which a built-in modem cannot dial up. You may see an alert box with this message: "Internet Connect could not open the communications device."
This article has been archived and is no longer updated by Apple.

Symptom

After updating or installing Mac OS X 10.2, your computer cannot dial out using the built-in modem. These three symptoms may occur:

1. When you try to dial up using Internet Connect, you see an alert box with this message:

   "Internet Connect could not open the communications device."

2. The Internet Connection Log contains this entry:

   "Failed to open /dev/cu.modem: Device busy."

3. The modem works normally if you start up the computer from Mac OS 9.

Solution

If you have not experienced the symptoms, you do not need to download the Mac OS X Modem Update.

The steps below use the copy of Mac OS 9 that is installed on the affected computer for downloading the update via modem. If you do not have Mac OS 9 installed, you should download the update (as in Steps 3 and 4) from another location, and copy it to a CD-R disc to take back to your computer. If you live near an Apple Store retail location, you may also get help there if necessary. For portable computers, consider going to a location where you could download the update via Ethernet (which includes common broadband Internet services such as cable and DSL).

To download and install the Mac OS X Modem Update, follow these steps:

1. If you have Mac OS 9 installed on the computer, start up the computer from Mac OS 9. For help, see technical document 106667, "**How to Switch Between Mac OS 9 and Mac OS X**".
2. After the computer starts up, connect to the Internet. If you have not previously connected to the Internet in Mac OS 9, see technical document 106869, "**Mac OS 9: How to Connect to the Internet via PPP (Dial-Up Access)**."
3. Go to Apple Featured Software (http://www.apple.com/swupdates/).
4. Search for "Mac OS X Modem Update".
5. Click the "Mac OS X Modem Update: Information and Download" document link.
6. Read the instructions, then download the update. If given the option to decompress the file after downloading it, click Cancel.
7. Restart the computer from Mac OS X. For help doing this, see technical document **106667**.
8. Open the Mac OS X Modem Update, and follow the directions.

Legal information

The Mac OS X Modem Update license agreement permits the reproduction of software once for archival purposes only.

Related documents

25438: "**Mac OS X 10.2: Modem - 'Could not Open the Communications Device' Message (Bluetooth)**"

Published Date: Feb 17, 2012

Mac OS X 10.2.8 or Earlier: Delay When Opening Mail Attachment

The application Mail may temporarily stop responding when you open an attachment that causes the Classic environment to start up. This delay does not occur if Classic is already active.
This article has been archived and is no longer updated by Apple.

Symptom

The application Mail may temporarily stop responding when you open an attachment that causes the Classic environment to start up. A spinning disc cursor may be visible during this period.

Solution

This delay and spinning disc cursor are normal while Classic starts up. To avoid the Classic startup delay while using Mail, you can set Classic to start up when you log in. Follow these steps:

1. Open System Preferences.
2. Click Classic.
3. Click the checkbox to select the "Start up Classic on login on this computer" option.

A future release of Mac OS X may change this behavior.
Published Date: Feb 17, 2012

Mac OS X Server 10.0.3: Do not install server Over Mac OS X client

You should not install Mac OS X Server 10.0.3 over Mac OS X (client). Erase the Mac OS X (client) volume before installing Mac OS X Server on it. Erasure is an option in the Installer.
This article has been archived and is no longer updated by Apple.
This does not apply to Mac OS X Server 10.1 or later. See the documentation included with later versions for installation options.

Warning: Be sure to back up any irreplaceable data from the destination volume before erasing it.
Published Date: Feb 17, 2012

Mac OS X 10.2: "You are running Classic without superuser (root) Privileges" Message

Classic does not start up, and an alert message appears with the text " You are running Classic without superuser (root privileges). Ensure that TruBluEnvironment is setuid and owned by root, or reinstall your Mac OS X System Software."
This article has been archived and is no longer updated by Apple.

Symptom

When you attempt to start up the Classic environment, this alert message appears:

> "You are running Classic without superuser (root privileges). Ensure that TruBluEnvironment is setuid and owned by root, or reinstall your Mac OS X System Software."

Note: For other versions of Mac OS X, see these related technical documents:

106278: "**Mac OS X 10.0: You are running Classic without superuser (root) Privileges' Message**"
106639: "**Mac OS X 10.1: You are running Classic without superuser (root) Privileges' Message**"

Solution

Correct the privileges on your Mac OS X startup volume by following these steps:

1. Open Disk Utility (/Applications/Utilities/).
2. Select your Mac OS X startup volume.
3. Click the First Aid tab.
4. Click the Repair Disk Permissions button.

Published Date: Feb 17, 2012

Mac OS X 10.1: Preferences Do Not Open From Menu Items

You may encounter a situation in which a preference pane does not open from a menu bar item.
This article has been archived and is no longer updated by Apple.

Symptom

Preference panes do not open from Menu bar items.

Examples of Menu bar items that open panes in System Preferences:

- You choose Open Date & Time after clicking the clock in the menu bar.
- You choose Open Energy Saver from the battery menu bar item (available on portable computers).

Solution

This resolution to this issue may be found with additional symptom information in technical document 106557, "**Mac OS X 10.1: Mac Help Cannot Open System Preferences Panes After Installing an Update**".
Published Date: Feb 17, 2012

Mac OS X Server: About the Watchdog Process

Watchdog is a process designed to start, monitor, and restart other processes and services as necessary to keep them running in versions 10.0.x through 10.3.x of Mac OS X Server. In versions 10.4 and later, its process monitoring role is replaced by launchd, and its restart function is replaced by watchdogtimerd.
This article has been archived and is no longer updated by Apple.

What is the Watchdog service?

Watchdog is a process designed to start, monitor and restart other processes and services as necessary to keep them running. It "watches" the programs it starts.

Software monitored

In Mac OS X Server 10.0.3 and later, Watchdog is set by default to keep the following services running:

- **slpd**
  The SLP daemon
- **sambaadmin**
  The SMB (Windows) administration daemon
- **serveradmin**
  The Server Admin daemon
- **mailservice**
  The Apple Mail Services daemon
- **mm**
  The Macintosh Manager server

Note: Please see the Mac OS X Server Administrator's Guide to learn more about each of these services.

If a service stops working almost immediately after being started (the current default is less than 10 seconds), watchdog marks that service as "faulty" and stops trying to restart it. This is a safety measure to prevent a situation in which a failing process restarts indefinitely.

Automatic Restart (hardware)

Watchdog also helps restart the server if its operating system becomes unresponsive (a "hang"). On computers that support automatic restart, this option can be activated in the Energy Saver pane of System Preferences. Once activated, Watchdog periodically resets the computer's Power Management Unit (PMU) timer. If this timer expires (which happens if the system hangs), the PMU forces a restart.

Watchdog.conf

The file "watchdog.conf", located in the /etc/ directory, determines what services Watchdog starts and maintains. Each line in the file represents a single application to manage and follows the following form:

- id:action:path args

id:
A unique way to identify the service.

action:
How to monitor a service and what to do if it stops working. The possible action options are:

- off - If the specified service is not running, do not start it. If it is running, stop it.
- boot - Only start the service when watchdog starts. If it stops after that, it is not restarted.
- bootwait - Currently this behaves the same way as boot.
- respawn - Watchdog will restart the application if it stops working.
- now - Watchdog ignores this entry at startup and will actually change the entry in the configuration file to "off". If you change an entry to "now" and force watchdog to reread its configuration file, it will treat that entry as if it were marked "respawn".

path:
The pathname of the target application.

args:
Any command line options.

This is an example watchdog.conf entry from the default watchdog.conf file included with Mac OS X Server:

```
slpd:respawn:/usr/sbin/slpd -f /etc/slpsa.conf    # SLP daemon
```

This entry would be read "identify this entry as 'slpd', start and restart the application as necessary, using the path and command line options /usr/sbin/slpd -f /etc/slpsa.conf." The last item is a comment used to document the entries. Anything after a pound sign (#) is considered a comment and ignored by watchdog.

Custom Events

You can modify watchdog.conf to suit your needs, including any other services or applications you want to start at system startup and keep active. Apple recommends including only command line or BSD-based applications to Watchdog's list of applications.

Event Log

Watchdog keeps a log of its activities in the file "watchdog.event.log", located in the directory /Library/Logs/. You can view this log from the Terminal application or from the Server Admin's Log Viewer module. You can use this log to monitor when Watchdog starts new applications, restarts unresponsive applications, or stops trying to start an application that fails to start. It should be a good first place to start troubleshooting new or modified watchdog.conf entries.

Other Sources of Information

You can find more detailed technical information about controlling the watchdog process, including command line options, signals, and examples, in the man page (accessible via the Terminal application) and the from watchdog.conf file itself.

Published Date: Feb 17, 2012

Mac OS X: Folders With Names That Begin With a Dot Disappear From Finder

If you save a file to a folder with a name that begins with a dot ".", or period, that folder becomes invisible in the Finder.
This article has been archived and is no longer updated by Apple.

Symptom

The New Folder feature of Save and Save As dialogs allows you to create a folder name beginning with dot. This results in the folder being invisible in the Finder or on the desktop. It may seem as if the folder was not created.

Solution

Mac OS X reserves names beginning with the dot for system software items that are not intended to be visible in the Finder. Normally, an alert box with this message appears when you attempt to create a folder or file whose filename begins with a dot:

> "You cannot use a name that begins with a dot ".", because these names are reserved for the system. Please choose another name."

However, the New Folder button is an exception to this rule. If you create a folder in this manner, its contents remain where you saved them, but you will not be able to see the folder in the Finder. You can remedy this by renaming the folder.

Pathname of the invisible folder

First, you must know the pathname of the folder. You can learn how to read and write a pathname with technical document 106419: "**Mac OS: About Folders, Directories, and Pathnames**"

If you named a folder ".myfolder" and saved it on your desktop, then the pathname would be:

> ~/Desktop/.myfolder

If you do not remember where you saved the folder, search on its name in Find or Sherlock.

Determining pathname with Finder Find (Mac OS X 10.2 or later)

Use Find to search for invisible items with the name you made in the search field. If you don't know how, see technical document **107005**.

Determining pathname with Sherlock (Mac OS X 10.1.5 or earlier)

To find an invisible item in Sherlock, you must use the custom search.

1. Open Sherlock.
2. Click the hard disk icon to search your hard disk.
3. Click the radio button for Custom.
4. Click the Custom pop-up menu and choose edit.
5. Click the Advanced Options disclosure triangle.
6. In the bottom right corner, click to select the checkbox next to the pop-up menu that says either "invisible" or "visible."
7. Be sure the pop-up menu is set to "invisible."
8. Click OK.
9. Type the name of the folder you made in the search field, then click the magnifying glass icon.
10. In the Name column of the Sherlock results field, select the folder.
11. Look in the lower pane of the Sherlock window (Figure 1). This pane reveals the path in which the folder is located (Figure 1). Use this path to determine a pathname as given in the example above. Use the tilde (~) character to represent your Home directory so that you will only need type the part of the path beyond your user folder.

Figure 1 Path to ".myfolder" revealed in lower Sherlock pane

Revealing the invisible folder in the Finder

TA20623_Mac_OS_X_Folders_With_Names_That_Begin_With_a_Dot_Disappear_From_Find

You can reveal an invisible folder in the Finder by using the pathname you determined with the Go to Folder command.

1. Click the Finder icon in the Dock.
2. Choose Go to Folder from the Go menu.
3. Type the pathname you determined in the last section.
4. Click Go.
5. Choose As Columns from the View menu. You should now see the formerly invisible folder in the Finder window.
6. Click to select the folder.
7. Choose Show Info from the File menu.
8. Choose Names & Extension from the pop-up menu in the Info window.
9. In the "File system name" field, type a new name that does not begin with a dot.
10. Press Return and close the Info window.
11. If the folder does not appear immediately, choose Log Out from the Apple menu and then log back in.

Published Date: Feb 17, 2012

AirPort: Using with AOL in Mac OS 9

You can use these instructions to connect to America Online in the United States, using minimum software versions of AirPort 2.0 and AOL 5.0.

This article has been archived and is no longer updated by Apple.

AOL customers in the United States using AirPort 2.0 and AOL 5.0 or later software versions can connect to AOL via AirPort.

Notes

1. Sharing your AOL connection among multiple computers requires multiple AOL accounts.
2. AirPort software versions earlier than 2.0 do not connect to AOL. For the latest version, see Apple Featured Software (http://www.apple.com/swupdates/).
3. You must have AOL 5.0 (Build 20.9). Choose About AOL from the Apple menu when AOL is the active application to verify the build number. See your America Online support materials if you need a later version. Beta versions of America Online do not work with AirPort.

Connecting to AOL

Make sure you have America Online 5.0 (build 20.9) or later installed on your computer and that you have an active account with AOL. You also need to enter the AOL access phone number into the AirPort Setup Assistant when connecting via PPP.

There are two different AOL connection types:

- **Standard Dialup (PPP)** - This is for connecting directly to AOL with a dialup modem. Have your preferred AOL access phone number(s) written down.
- **Bring Your Own Access (BYOA)** - This is for connecting to AOL when you are already connected to the Internet. Existing connections can include but are not limited to DSL, cable modems, and non-AOL dialup access (PPP).

This picture shows a dialup configuration, which could be either an AOL Standard Dialup account or a BYOA PPP account:

This pictures illustrates using a cable, DSL, LAN, or other Ethernet connection:

Obtaining dialup access numbers (optional)

There are two ways to get AOL access numbers. The preferred way is to go to http://access.web.aol.com to look up local access numbers. When you do not have access to the Internet, you can follow these steps:

1. Open AOL.
2. Click Setup.

3. Click Expert Setup.

4. Write down the main phone number and alternate phone number for your location.
5. Quit AOL

Connecting Using a Standard Dialup Account

Part 1 - Setting up the AOL client

1. Quit AOL if it is open.

2. Locate the America Online Extras folder on your AirPort 2.0 CD-ROM. Note: Downloaded AirPort 2.0 software does not include this folder. To use AOL with the earlier AirPort Base Station (Graphite), download the extras from America Online Extras for AirPort: Information and Download.

3. Locate the Online Files folder inside the America Online v5.0 folder on your hard disk.

4. Drag the files "AirPort" and "AirPort Connect" from the America Online Extras folder to the Online Files folder.

5. Open AOL and verify that AirPort Connect is selected under the Select Location menu.

The America Online client is now set up. Before you can continue, you need to set up the base station to connect to AOL using AOL access numbers.

Part 2 - Setting up the AirPort Base Station

You can use either the AirPort Setup Assistant or the AirPort Admin Utility to set up the base station.

Setting Up the Base Station Using AirPort Setup Assistant

1. Open the AirPort Setup Assistant, located at Macintosh HD: Applications (Mac OS 9): Apple Extras: AirPort.
2. Select "Set up an AirPort Base Station" in the Introduction panel.
3. Follow the on-screen instructions, entering your America Online access phone number in the Internet Access panel.

Setting Up the Base Station Using AirPort Admin Utility

1. Open the AirPort Admin Utility and connect to your Base Station.
2. Click the Internet tab.
3. Choose either America Online (AOLnet, V.90) or America Online (AOLnet, V.34) from the Connect using menu. Which option you use depends on the access number you use.

4. Enter your first access number in the "Main number" field and if available an alternate number in the respective field.
5. Click Update to load these settings to your base station.

You are finished. After completing these steps, the next time you open AOL, it will connect to the base station over the wireless network,

then the base station will dial AOL and provide service.

Connect Using Bring Your Own Access Accounts

Because the "Bring Your Own Access" account is intended for users who already have a broadband Internet connection, the AOL client is treated the same as other Internet applications. To set up the AOL client to use TCP/IP connections, follow these steps:

1. Open AOL and click Setup.

2. Select the radio button Bring Your Own Access connection and click Next.

3. On the next page you can name the connection. You can ignore the dialing options, since they only apply to dialup modem connections.
4. Click Next.

5. Select "Add a TCP connection" and click Next.

6. After you see this window, click OK, and you are finished. AOL will now connect using your Internet connection, not through a dialup modem.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see AirPort: Requirements for wireless Internet access.

Published Date: Feb 17, 2012

Mac OS X: How to Use Modem AT Commands

You can troubleshoot a modem in Mac OS X using AT commands. This document describes how.

This article has been archived and is no longer updated by Apple.

AT commands make a modem perform certain actions, such as dialing a phone number. Most of these command start with the letters "AT," which is short for "attention". If your modem manufacturer or Internet service provider (ISP) asks you to type AT commands to troubleshoot your modem hardware or your connection, follow these steps to issue the command:

Note: This document does not include the specific commands. Use commands provided by your Internet service provider or modem manufacturer for troubleshooting.

1. Open System Preferences.
2. Click Network.
3. Choose Internal Modem from the Show pop-up menu, or choose the external port to which the modem is connected.
Note: This menu is named "Configure" in Mac OS X versions 10.0 to 10.0.4.
4. Click the PPP Tab.
5. Click PPP Options.
6. Click the checkbox to enable the "Connect using a Terminal window" option.
7. Click OK.
8. Click the Modem tab.
9. Choose any modem script that starts with the words "Null Modem, such as Null Modem 19200" from the Modem pop-up menu.
10. Click Apply Now.
Note: This button is called Save in Mac OS X versions 10.0 to 10.0.4.
11. Open the Internet Connect application.
12. Click Connect. After several seconds, a Terminal window opens. At this point, the modem has not dialed.
13. Type the commands that you were given. When you have finished, click Cancel to end the session, or click Continue to use a connection that you made.

For information about AT commands in Mac OS 9, see technical document TA21981: "**Remote Access: Using the Terminal Window to Send AT Commands**".

Published Date: Feb 20, 2012

Mac OS X: AirPort May Be Called "Ethernet (slot 1)" or "en1"

Some parts of Mac OS X may refer to an AirPort card as "Ethernet (slot 1)" or "en1" instead of "AirPort."
This article has been archived and is no longer updated by Apple.

Symptom

Some parts of Mac OS X refer to an AirPort card generically as "Ethernet (slot 1)" or "en1".

You may see this in:

- The AppleTalk and TCP/IP control panels in the Classic environment
  Note: In Mac OS X 10.2 and later, these two control panels are no longer accessible in Classic.
- The Network Utility
- Many command-line commands related to networking

Solution

If you are not certain which network interface is AirPort, use the Network pane of System Preferences to see the AirPort settings. System Preferences refers to AirPort correctly.

All Macintosh computers that meet the system requirements of Mac OS X include at least one built-in Ethernet port. Some Apple server configurations include a PCI card that has four additional Ethernet ports. When using the affected utilities, having a total of six ports could make it confusing to determine which is AirPort. However, this is not a symptom that indicates a hardware issue or requires any troubleshooting. When viewing an affected utility or control panel, look for other contextual clues such as "wireless" or "11 Megabits per second (Mbps)."

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "AirPort: Requirements for Wireless Internet Access"

Published Date: Feb 20, 2012

AirPort Base Station (Dual Ethernet): LED Behavior

This document describes the Light Emitting Diode (LED) behavior of the AirPort Base Station (Dual Ethernet).
This article has been archived and is no longer updated by Apple.
The LEDs on the AirPort Base Station (Dual Ethernet) provide status information through a series of blinking patterns. Taken in combination with the state of the base station, these patterns provide unique indications. See Figure 1.

The AirPort Base Station (Dual Ethernet) differs from the previous base station in the color of the status LEDs. The earlier base station uses multi-color LEDs (amber, red, and green). The AirPort Base Station (Dual Ethernet) uses a single LED color, white, to provide feedback.

Figure 1 AirPort Base Station (Dual Ethernet) LED sequences

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**"
Published Date: Feb 19, 2012

AirPort Base Station (Dual Ethernet): Factory Default Settings

This article provides the default settings for the AirPort Base Station (Dual Ethernet) with AirPort 2.0 software.
This article has been archived and is no longer updated by Apple.

Default Names, Addresses, and Passwords

For all LAN clients:

Base Station Password: public
Subnet Mask: 255.255.255.0

For wireless clients:

AirPort Network Name: Apple Network xxxxxx (see Note 1, below)
Network Password: None

As seen from wireless and wired LAN clients:

AirPort Base Station Name: Base Station
AirPort Base Station IP: 10.0.1.1

As seen from the WAN port:

AirPort Base Station Name: Base Station
AirPort Base Station IP: 192.42.249.13 **or** 169.254.x.x (Note 2)

Default Port Configurations

Ethernet (LAN): Configure via DHCP and network address translation (NAT)
Wireless: Configure via DHCP and network address translation (NAT)
Channel Frequency: 1
Encryption: Off
Closed network: Off
Station density: Low
Multicast rate: 2
Interference Robustness: Off

See Note 3.

For steps on how to reset the AirPort Base Station (Dual Ethernet) to the default state see technical document 106602: **AirPort Base Station (Dual Ethernet): How to Reset**

Notes:

1. The characters "xxxxxx" represent the last six digits of the wireless Ethernet card's MAC address. See the AirPort ID number on the bottom of the base station.

2. The Configure via DHCP setting will obtain an IP address from your Internet service provider when DHCP is available to the base station. One of these two addresses is taken when DHCP service is not available. Base stations with firmware earlier than 4.0.4 take the former address. Base stations with firmware 4.0.4 or later use the latter, link-local address. The 169.254.x.x address is the same type used by Bonjour (formerly "Rendezvous") in Mac OS X 10.2 or later. Base station firmware 4.0.4 or later is provided with AirPort software version 2.0.4 or later. You can download firmware update 4.0.9 here. For more information on link-local addressing, see technical document 107225, "**AirPort 2.0.4: About Using Link-Local Addressing**".

3. The AirPort Base Station is set up properly out of the box (and after a forced reload) to work with a cable modem or DSL modem that obtains its IP information from a DHCP server. On the wireless side, it is set up as a DHCP server with network address translation (NAT) turned on and network encryption off. The default base station password is "public". If you are trying to use the AirPort Base Station in a Microsoft Windows environment, it may not be necessary for you to run the AirPort Setup Assistant. You need only plug in the base station and set up your Windows-compatible computer to access the base station.

4. Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**"

TA20628_AirPort_Base_Station_Dual_Ethernet_Factory_Default_Settings.pdf

Published Date: Feb 20, 2012

Mac OS X 10.1: "The Classic Environment is Not Responding" Message

When stopping the Classic environment, you may receive an inaccurate message that "The Classic Environment is Not Responding."
This article has been archived and is no longer updated by Apple.

Symptom

After clicking Stop in the Classic pane of System Preferences, an alert box appears with this message:

> "The Classic Environment is Not Responding. You may click Cancel and attempt to save any changes to open documents..."

Note: This issue may occur with certain computers when Mac OS X 10.1 and the Mac OS 9.2.1 System Folder used as the Classic startup System Folder are on different volumes.

Solution

Update to Mac OS X 10.1.2 or later. Use the Software Update pane of System Preferences, or download the update from Apple Software Downloads (http://www.apple.com/swupdates/).
Published Date: Feb 17, 2012

Mac OS X: Issues When Opening Multiple Applications

Opening multiple applications in rapid succession may lead to a situation in which the applications open only partially, into an unresponsive state. The Finder may not respond.
This article has been archived and is no longer updated by Apple.

Symptom

One or more of the following may occur:

- A spinning disc pointer appears and does not change back to an arrow.
- The icon of one or more of the affected applications continues to bounce in the Dock.
- If a bouncing icon is selected in the Dock, an alert with the message "Application Not Responding" appears.
- The Finder does not seem to respond or does not appear after login.

Products affected

- Mac OS X 10.1 to 10.1.1
- Mac OS X Server 10.1 to 10.1.1

Solution

Update to Mac OS X 10.1.2 or later. Use the Software Update pane of System Preferences, or download the update from Apple Software Downloads (http://www.apple.com/swupdates/).

Published Date: Feb 17, 2012

Mac OS X Server 10.1: Setting Privileges to Share FireWire or RAID Hard Disks and Other Removable Media

Mac OS X Server treats FireWire hard disks and certain RAID disks as removable media, so privileges do not behave as those for ATA and SCSI hard disks, which are most often installed internally. Set correct privileges before sharing.
This article has been archived and is no longer updated by Apple.

Privileges for removable disks

Privileges for files and folders on removable media indicate the user "unknown" with a user identification number (UID) of 99. The result of this is that the files and folders act as if owned by whichever user is currently logged in to Mac OS X. However, privilege changes (if any) made by the logged-in user do not persist when that user logs out. When a subsequent user logs in to the computer, the removable disk acts as if owned by the subsequent user.

This behavior preserves the portability of removable disks, the trait for which they are often employed. Superficially, the media behaves as it would if used in Mac OS 9.

Changing privileges behavior

Warning: If you are using Mac OS X Server version 10.0.3 or 10.0.4 and wish to use external FireWire drives for storage, you must update to Mac OS X Server 10.1 to use the steps presented below. Use of removable media for a server is not tested or qualified by Apple, and you should consult the support resources provided by the vendor of your removable media regarding its worthiness for use as a server storage device.

If you wish to share a FireWire hard disk or other appropriate removable media with Mac OS X Server, follow these steps to allow privileges to behave as an internally-installed disk:

1. Select the disk in the Finder.
2. Choose Show Info from the File menu.
3. Choose Privileges from the pop-up menu in the Info window.
4. Click the checkbox to deselect "Ignore privileges on this volume."
5. Close the Info window.

Once this is done, permission changes are preserved on the volume.
Published Date: Feb 17, 2012

Mac OS X 10.1: Do Not Reinstall After Using the Mac OS X Update 10.1.1, 10.1.2, 10.1.3, 10.1.4, or 10.1.5

You should not reinstall Mac OS X 10.1 over an existing installation after the Mac OS X Update 10.1.1, 10.1.2, 10.1.3, 10.1.4, or 10.1.5 has been installed.
This article has been archived and is no longer updated by Apple.
You should not reinstall Mac OS X 10.1 (build 5G64) from CD-ROM over an existing Mac OS X 10.1 installation after the Mac OS X Update 10.1.1 (build 5M28), 10.1.2 (build 5P48), 10.1.3 (5Q45), 10.1.4 (5Q125), or 10.1.5 (5S60) has been installed.

If you need to reinstall Mac OS X 10.1, you should back up data and erase the affected hard disk or partition prior to installation. Follow these steps:

1. Back up important data and documents stored on your Mac OS X 10.1 disk.
2. Erase your Mac OS X 10.1 disk. You may do this from within the Mac OS X 10.1 Installer.
3. Install Mac OS X 10.1.
4. After installation is complete, apply software updates in the order described in technical document 106713, "**Mac OS X 10.1: Chart of Available Software Updates**".

Related information

Technical document 106176: "**Mac OS X: About This Mac "Build" Information**"
Published Date: Feb 17, 2012

AirPort: About Base Station Density Settings

The Base Station Density setting affects the signal strength preferences of clients in a roaming environment, particularly mobile clients.
This article has been archived and is no longer updated by Apple.
A roaming environment contains multiple wireless access points, such as the AirPort Base Station, that connect to the same wired network. The wireless client device, such as an iBook, chooses an access point from those within range based on criteria that include signal strength. The end result should be transparent to the user of the wireless device, since the wireless access points provide the same access to the wired network.

When a wireless client connects to an access point, the density setting is communicated to the client. This tells the client how "picky" to be about which access point it chooses. The High setting for Base Station Density means that the client is more prone to disconnect from a low-strength signal as a stronger signal becomes available. Essentially, the client is more selective. This means a mobile client switches sooner to a new access point that it is approaching. Were the Base Station Density set to low, it would maintain the connection to the weaker, outgoing signal for a longer period of time.

The Base Station Density setting also affects how sensitive the client's receiver is. When set to High, the receiver ignores more radio "noise," or interference. When set to Low, the client is more susceptible to effects from radio noise.

Notes

1. The density setting affects which networks a client will see when scanning. When connected to a base station that specifies High density, you do not see as many distant networks as you would when connected to a base station that specifies Low density.
2. Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**".

Published Date: Feb 19, 2012

Mac OS X 10.1: AppleTalk Does Not Work After Being Enabled

Use the solution in this document if AppleTalk does not work after you make it active.
This article has been archived and is no longer updated by Apple.

Symptom

- The computer name does not appear on the network when you look for it using AppleTalk from other computers (the Chooser, for example).
- You cannot add an AppleTalk printer in Print Center.
- AppleTalk zones do not appear in the network preference pane (Figure 1).
  Note: Your network must have proper AppleTalk routing for zones to appear.

Figure 1 AppleTalk Zone menu blank in the Network pane

Solution

Follow these steps:

1. Choose System Preferences from the Apple menu.
2. Click Network.
3. Make sure that AppleTalk is chosen in the Show pop-up menu for the desired network interface.
4. Click the AppleTalk tab.
5. Verify that the checkbox for "Make AppleTalk Active is selected." If it is not, click to select it and then click Apply Now. Check to see if your issue is resolved. If AppleTalk was already selected and the AppleTalk Zone menu appears as in Figure 1, then continue to the next step.
6. Choose New Location from the Location menu.
7. Type a name for the new location and click OK.
8. Click Apply Now.
9. Switch the location back to your original location ("Automatic" by default) and click Apply Now.
10. Check for AppleTalk zones. They should now appear. If not, try switching between the locations again, being sure to click Apply Now each time.

Notes

1. The issue may persist at this point if you are attempting to use AppleTalk on more than one port (multi-homing). A common scenario includes a computer that has both AirPort and Ethernet active. For more information on addressing this issue, please see technical document 106614: "**Mac OS X: How to Set Up AppleTalk Multi-Homing**"

2. For more related information, see technical document 106260: "**Mac OS X: Computer Name Does Not Appear on Network**"

Published Date: Feb 17, 2012

Mac OS X 10.1: Applications Folder Locked or Cannot Be Modified

In some situations, the Applications folder may be locked or have incorrect permissions after installing Mac OS X 10.1.
This article has been archived and is no longer updated by Apple.

Symptom

When you drag a file or folder to the Applications folder, an alert box with this message appears:

> "The item '<filename>' could not be moved because 'Applications' cannot be modified."

Solution

You should update to Mac OS 10.1.5, then use the Repair Privileges Utility. For information and software download, see technical document 106900, "**Mac OS X: About the Repair Privileges Utility**".
Published Date: Oct 7, 2016

Mac OS X: "The disc ‘Ram‘ could not be modified" Alert

You may be using an improper DVD-RAM disc caddy or have a disc in the UDF format if you see an alert box with this message: "The disc 'Ram' could not be modified."
This article has been archived and is no longer updated by Apple.

Symptom

When copying files to a DVD-RAM disc in UDF format, an alert box appears with this message: "The disc "Ram" could not be modified." You can still read from the disc and copy files from the disc to another volume.

Solution

First, be sure that you are using the DVD-RAM disc caddy provided with the computer. You cannot write to the disc unless it is in the caddy. Next, check the format of the disc. Select the disc in the Finder then choose Show Info from the File menu. The Info window displays the disc format under General Information. Mac OS X writes to DVD-RAM discs formatted in the Mac OS Standard (HFS), Mac OS Extended (HFS Plus), or Unix File System (UFS). If your disc is in the UDF format, you can back up the data on the disc and reformat it to gain the ability to write to the disc. After backing up the data, you can follow these steps:

Warning: This process will erase all data on the DVD-RAM disc. If you decide to format the disc as UFS, the disc will not be available to Mac OS 8 or Mac OS 9.

1. Insert the DVD-RAM disc into the DVD-RAM drive, being sure to use the DVD-RAM disc caddy provided with the computer.
2. Open Disk Utility (/Applications/Utilities/).
3. Click the disclosure triangle next to the DVD-RAM drive and select the DVD-RAM disc below it.
4. Click the Erase tab.
5. Choose Mac OS Standard, Mac OS Extended, or Unix File System from Volume Format pop-up menu.
6. Click Erase.

Published Date: Oct 7, 2016

Mac OS X: How to Delete Printers and Print Job Lists in the Print Center

This document explains how to delete printers and print job lists in the Print Center.
This article has been archived and is no longer updated by Apple.

To delete a single printer or print job

1. Open Print Center (/Applications/Utilities/). The Printer List window appears. If you want to delete a job, choose Show Queue from the Printers menu.
2. Select the printer or print job from the desired list.
3. Click Delete.

To delete multiple printers or print jobs

1. Open Print Center (/Applications/Utilities/). The Printer List window appears. If you want to delete jobs, choose Show Queue from the Printers menu.
2. Command-click each printer or print job you wish to delete. **Note:** Pressing the Command key while clicking allows you to select multiple items.
3. Click Delete.

To delete all printers or all print jobs

Important: If you see a large number of printers in Print Center and are uncomfortable deleting all of them, contact your network administrator first. This option is only available in Mac OS X 10.0 to 10.1.5.

1. Open Print Center (/Applications/Utilities/). The Printer List window appears. If you want to delete jobs, choose Show Queue from the Printers menu.
2. While pressing the Option key, choose Quit Print Center from the Print Center application menu. An alert box appears.
3. Click OK. All printers or print jobs are deleted.
4. Open Print Center and set up the printer(s) you wish to use.

Related documents

25362: "**Mac OS X 10.2: How to Hide or Remove Printers in the Printer List**"

Published Date: Oct 7, 2016

Mac OS X 10.1: File Sharing Name Appears as Localhost to Clients

Your AppleTalk computer name may not appear as expected on the network if the name entered in the Sharing pane of System Preferences contains Simplified Chinese characters.
This article has been archived and is no longer updated by Apple.

Symptom

When other computers browse a network for your computer via AppleTalk, your computer's name does not appear as expected. It appears as the localhost name.

Solution

If the Computer Name as entered in the Sharing pane of System Preferences contains Simplified Chinese characters, the name of the computer when browsed by other computers via AppleTalk will appear as the localhost name or address (rather than the intended name). This behavior is expected. File Sharing works normally despite the appearance of the name.
Published Date: Oct 7, 2016

Mac OS X: "No AppleTalk printers are available" Message

This document explains what to do if this message appears in Print Center: "No AppleTalk printers are available because AppleTalk is currently disabled."
This article has been archived and is no longer updated by Apple.

Symptom

This message appears in Print Center: "No AppleTalk printers are available because AppleTalk is currently disabled."

Solution

Mac OS X can only print to an AppleTalk printer when there is one and only one network interface (or "port") using AppleTalk. AppleTalk is turned off by default and is normally not needed for USB printers. When AppleTalk is off, follow these steps:

1. Choose System Preferences from the Apple menu.
2. Click Network.
3. Choose the name of the port that connects to your printer from the Show pop-up menu.
Note: Prior to Mac OS X 10.1, the Show pop-up menu is named "Configure."
4. Click the AppleTalk tab.
5. Click the checkbox to select "Make AppleTalk Active" for the port that connects to your AppleTalk printer (usually Ethernet).
6. Click Apply Now.

This message may also occur when AppleTalk is active on two or more ports. In that case, you should deactivate the ports you are not using, or turn off AppleTalk on the ports that are not connected to the printer.

Note: Depending on how your network is set up, you may interrupt other services by turning off AppleTalk from a port or deactivating a port that is not connected to the printer.

Deselecting AppleTalk

Using the same steps listed above to access the Network pane, be sure that AppleTalk is only selected for one of the ports listed in the Show menu. This must be the same port connected to the AppleTalk printer.

Deactivating a port

Alternatively, you may deactivate the ports you are not using by following these steps:

1. Choose System Preferences from the Apple menu.
2. Click Network.
3. Choose Active Network Ports from the Show pop-up menu.
Note: Prior to Mac OS X 10.1, the Show pop-up menu is named "Configure," and the Active Network Ports item is named "Advanced."
4. Click to deselect the checkbox next to ports that are not connected to the printer. Be sure the port connected to the printer is selected.
5. Choose the port you left active from the Show pop-up menu.
6. Click the AppleTalk tab.
7. Be sure that the "Make AppleTalk Active" checkbox is selected.
8. Click Apply Now.

You should now be able to select your AppleTalk printer in the Print Center.

For more information, see technical document 106614: "**Mac OS X: How to Set Up AppleTalk Multi-Homing**"

Related documents

106298: "**Mac OS X: Using AppleTalk With PPPoE**"
Published Date: Oct 7, 2016

Mac OS X 10.0, 10.1: How to Set Up AppleTalk Multi-Homing

Mac OS X versions 10.0 to 10.1.5 provide AppleTalk multi-homing under specific conditions, described in this document.

Note: In Mac OS X 10.2 or later, you may only use AppleTalk on one network interface, or on one of several port configurations of the same network interface (if thus configured). If you try to enable AppleTalk on a second port, you will receive a message reminding you that this will disable it on the first port.
This article has been archived and is no longer updated by Apple.

What is multi-homing?

"Multi-homing" means that your computer can simultaneously appear on two or more networks or network segments. For example: A multi-homing computer could be connected to the Internet using two independent connections from an AirPort card and an Ethernet port.

Note: Most computer users do not require multi-homing, and this document does not explore the motivations for or benefits of multi-homing.

Multi-homing may be limited to particular services or protocols, and the ability of an operating system to multi-home may vary between services and protocols.

Requirements for AppleTalk multi-homing

For AppleTalk, Mac OS X may multi-home when these conditions are met:

1. Each network interface (port) is connected to a separate network segment.
2. Accessible networks may not have any overlapping network numbers.
3. Each network interface must have an AppleTalk seed router on its network segment.

When these conditions are not met, the Network pane of System Preferences will still allow you to make AppleTalk active on multiple ports; but the AppleTalk service will not actually be available on all selected ports.

A common scenario for an AppleTalk multi-homing issue occurs when a portable computer, such as an iBook, is used with an Ethernet port at a desk but with an AirPort card while mobile. If both the Ethernet port and the AirPort Base Station connect to the same AppleTalk network, then AppleTalk may not work as expected. This may appear as behaviors described in these technical documents:

106608: "**Mac OS X 10.1: AppleTalk Does Not Work After Being Enabled**"
106613: "**Mac OS X: 'No AppleTalk Printers Are Available' Message**"

How to manage network interfaces (ports)

Warning: To prevent any potential data interruption or loss, be sure that you have completed any active AppleTalk transactions before following these steps.

When AppleTalk is active on two or more ports and the requirements for multi-homing are not met, you should turn off or "deactivate" AppleTalk on all but one port. Alternatively, you may deactivate ports you are not using. You may quickly switch between configurations in which different ports are active by using the Location feature of the Network pane of System Preferences.

Deactivating AppleTalk on all but one port

You may allow AppleTalk on only one port by following these steps:

1. Choose System Preferences from the Apple menu.
2. Click Network.
3. Select the port from the Show pop-up menu that you wish to use AppleTalk.
Note: Prior to Mac OS X 10.1, the Show pop-up menu is named "Configure."
4. Click the AppleTalk tab.
5. Be sure that the checkbox for "Make AppleTalk Active" is selected.
6. Click Apply Now.
7. Using the Show menu again, select each remaining port and ensure that the "Make AppleTalk Active" checkbox is not selected for that port.

Deactivating a port

You may deactivate all activity on a port by following these steps:

1. Choose System Preferences from the Apple menu.
2. Click Network.
3. Choose Active Network Ports from the Show pop-up menu.
Note: Prior to Mac OS X 10.1, the Show pop-up menu is named "Configure," and the Active Network Ports item is named "Advanced."
4. Click to deselect the checkbox next to ports that you wish to deactivate.
5. Choose the port you left active from the Show pop-up menu.
6. Click the AppleTalk tab.
7. Be sure that the "Make AppleTalk Active" checkbox is selected.
8. Click Apply Now.

Using the Location menu

By default, Mac OS X has one location named Automatic, and all ports are active. The name Automatic is to remind you that Mac OS X has the capacity to automatically search all active network ports for your connection to the Internet. You can create different "locations" in which different ports are active. A "Mobile" location could make only your AirPort card active, and a "Desk" location could make only your Ethernet port active.

Follow these steps to make a new location:

1. Choose New Location from the Location menu.
2. Type a name for your new location, such as Mobile, then click OK. The name of your new location appears in the Location menu. Any changes you make to the Network pane now apply to this location. The previous location ("Automatic" by default) will remain as you left it.
3. Using the steps described in the sections above, use the Show menu to select and set up the ports as appropriate for this location.
4. When finished, click Apply Now.
5. Repeat these steps to create a location for each port on which you use AppleTalk, as works for your environment.

Once you have created locations, you may quickly switch between them by changing the Location menu in the Network pane of System Preferences and then clicking Apply Now.
Published Date: Oct 7, 2016

Mac OS X Server 10.1: Do Not Reinstall Over Version 10.1.1

You should not reinstall Mac OS X Server 10.1 over version 10.1.1.
This article has been archived and is no longer updated by Apple.
You should not reinstall Mac OS X Server 10.1 (build 5K10) from CD-ROM over an existing Mac OS X 10.1.1 installation, which would be after the Mac OS X Update 10.1.1 or the Mac OS X Server 10.1.1 update (build 5N13) has been installed.

If you need to reinstall Mac OS X Server 10.1, you should back up data and erase the affected hard disk or partition prior to installation. Follow these steps:

1. Back up important data, customized configuration files, and documents stored on your Mac OS X Server 10.1 disk.
2. Erase your Mac OS X Server 10.1 disk. You may do this using the Mac OS X Server 10.1 Installer.
3. Install Mac OS X Server 10.1.
4. After installation is complete, install the Security Update 10-19-01, the Installer Update 1.0, the Mac OS X Update 10.1.1, and then the Mac OS X Server 10.1.1 update again.

Published Date: Oct 7, 2016

Mac OS X: Do Not Use the Solidus (/) or "Slash" in a Volume Name

A solidus (/), or "slash," in a volume name may cause a "nonexistent path" alert message when attempting to save a file on that volume.
This article has been archived and is no longer updated by Apple.

Symptom

When attempting to save a file, an alert box with this message appears:

> "Nonexistent path The path (attempted save location) does not exist; create it?"

Products Affected

- Mac OS X 10.1

Solution

Remove the solidus from the volume name.

The alert occurs because Mac OS X uses the solidus to define a path to a location in the file system. The solidus in the volume name is interpreted as an attempt to specify an additional part of the path. For example: If the name of your Mac OS X startup disk was "OSX/10.1", it would be interpreted as an attempt to specify a folder named "10.1" inside the disk "OSX".

Note: This document does not apply to disks using the UFS file format.
Published Date: Oct 7, 2016

Mac OS X 10.1: About Infrared (IrComm) Compatibility

Mac OS X 10.1 works with IrComm, an infrared communication protocol, when used with the PowerBook G4 (Gigabit Ethernet) computer and some third-party USB infrared pods.
This article has been archived and is no longer updated by Apple.
Mac OS X 10.1 works with IrComm, an infrared communication protocol, on the PowerBook G4 (Gigabit Ethernet) computer and some third-party USB infrared pods.

The following computers have built-in infrared hardware that **does not** work with Mac OS X 10.1:

- PowerBook G3 Series
- PowerBook G3 (Bronze Keyboard)
- PowerBook (FireWire)
- PowerBook G4
- iMac 233 (233 MHz, 233 MHz/B)

These computers may communicate more efficiently via Ethernet cables. Infrared's vulnerability to interference (from florescent lighting, for example) and limited ability to operate over relatively short distances make it a less ideal choice for communication than AirPort wireless or Ethernet technologies.
Published Date: Oct 7, 2016

AirPort Base Station (Dual Ethernet): Crossover Cable Not Required

The AirPort Base Station (Dual Ethernet) does not require a crossover cable in situations that would normally require one.

This article has been archived and is no longer updated by Apple.

When connecting the AirPort Base Station (Dual Ethernet) to another device over Ethernet, a crossover cable is not required. Both the WAN and LAN Ethernet ports automatically detect the type of connection, and switch the signal configuration as required. The Ethernet jacks do not accept telephone wire (RJ-11). This has been done to prevent confusion from misplugged wiring. The Ethernet jacks will not allow the clip of telephone wire's connector to insert far enough to lock into place.

Published Date: Oct 7, 2016

Mac OS X: Copy and paste from Excel to Mail or TextEdit results in scrambled text

This article has been archived and is no longer updated by Apple.

Scrambled text may result when you copy and paste from Microsoft Excel into either the TextEdit or Mail application included with Mac OS X.

Note: This document applies to Mac OS X 10.3.9 and earlier.

Symptom

Scrambled or unexpected text appears when you copy and paste from Microsoft Excel into either Mail or TextEdit.

Microsoft Excel uses several data types copying or pasting, some of which do not yet work with Mac OS X. This may result in garbled text and differing results than anticipated.

Solution

Copy and paste the desired information into a plain text format document, then copy and paste it from the plain text document into the affected Mail or TextEdit document.

How to make a plain text document

You can make a plain text document in Mail or TextEdit. Follow these steps:

1. Choose a New document from the File menu in either TextEdit or Mail.
2. Choose Make Plain Text from the Format menu.

Note: If Make Plain Text does not appear in the Format menu, then your document is already plain text. You may have plain text defined as your default format. In Mail, this is set up in the Composing pane of the preferences window. In TextEdit, you can enable the "Rich text" or "Plain text" option in the New Document Format section of the Preferences window.
Published Date: Oct 7, 2016

AppleWorks 6 (Windows): "An unexpected error has occurred, #-38" Message

If the "My Documents" path is set to the root level of a volume, AppleWorks may not allow you to save a document.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to save a document in AppleWorks 6, an alert box with this message appears:

> "An unexpected error has occurred, #-38."

The document is not saved.

Solution

- Update to AppleWorks 6.2 or later to resolve this issue.

Related Software Downloads

AppleWorks 6.2.2 Updater (Windows) Document and Software

Published Date: Feb 19, 2012

Mac OS X 10.1: Some Italian AirPort Help Files Do Not Work

When using AirPort Help under Mac OS X 10.1 (Italian), certain help files cannot be found.
This article has been archived and is no longer updated by Apple.

Symptom

Attempting to view certain AirPort Help files in Mac OS X (Italian) may result in an alert with this message:

> "Non ho trovato il file HTML specificato"

Solution

As a workaround, users familiar with English may view the help files in English by following these steps:

1. Quit the Help Viewer if it is open.
2. Choose System Preferences from the Apple menu.
3. Click International.
4. Click the Language tab (if necessary).
5. Drag English to the top of the Languages list.
6. Quit System Preferences.
7. Open the AirPort Admin Utility application.
8. Choose AirPort Help from the Help menu.

Note: You must repeat these steps to view affected help files in English again after reverting to Italian as the System language.
Published Date: Feb 17, 2012

Mac OS X: Some Services Cause Modem to Connect

Some services may make the modem to connect to the Internet.
This article has been archived and is no longer updated by Apple.
This occurs when you have set up your computer to connect automatically when a TCP/IP application needs to access the Internet. Certain applications or services, such as Web Sharing (Apache), Windows Sharing, and the Directory Access SMB Plug-in, may look for a TCP/IP connection, causing your modem to dial. To avoid this, use Network preferences to change your PPP or PPPoE Options:

For a PPP connection

1. Open System Preferences.
2. Click Network.
3. From the **Show** menu ("Configure" menu prior to Mac OS X 10.1), choose **Internal Modem**.
4. Click the PPP tab, then PPP Options.
5. Deselect the checkbox for "Connect automatically when needed" (or in earlier Mac OS X versions, "Connect automatically when starting TCP/IP applications").
6. Click OK, then click Apply Now.

For a PPPoE connection

1. Open System Preferences.
2. Click Network.
3. From the **Show** menu ("Configure" menu prior to Mac OS X 10.1), choose **Built-in Ethernet** or **AirPort**.
4. Click the PPPoE tab, then PPPoE Options.
5. Deselect the checkbox for "Connect automatically when needed" (or in earlier Mac OS X versions, "Connect automatically when starting TCP/IP applications").
6. Click OK, then click Apply Now.

Published Date: Oct 7, 2016

Mac OS X Update 10.1.2: Enhancements Information

Mac OS X Update 10.1.2 addressed certain issues and updated system software.

This article has been archived and is no longer updated by Apple.

This software has been replaced by a later update. Because later updates include previous enhancements, the following information is still provided for reference. To find current software, see technical document 106713, "**Mac OS X 10.1: Chart of Available Software Updates**".

Enhancements delivered with Mac OS X 10.1.2

In addition to enhancements previously delivered with Mac OS X 10.1.1 (listed below), the Mac OS X 10.1.2 update includes the following:

Networking and Internet Connectivity Enhancements

- Internet Access can dial longer phone numbers.
- The Apple Internal 56K Modem (v.90) script works better with certain earlier Apple internal modems.
- Certain internal modems will now ignore the dial tone when expected.
- Addresses a potential issue in which the computer's IP address may not be updated as expected after changing networks during sleep.
- Windows NT volumes now appear on the desktop more reliably.
- Improves function when multiple IP addresses are assigned to a single Ethernet port.
- Addresses potential situations in which a DHCP address may not be retained after sleep.
- Improves peer-to-peer IrDA networking and includes many additional IrDA networking enhancements.
- A later version of Apache (1.3.22) is included.
- Offers several other DHCP enhancements.
- Includes numerous additional Ethernet networking enhancements.
- Offers wireless IrDA functionality for additional systems, including original PowerBook G4 (Titanium) and PowerBook G3 (FireWire) computers.

Mail Application Enhancements

- Mail mailboxes now function as expected when the mailbox name includes a solidus (slash, "/") character.
- An issue in which the Mail application may unexpectedly change the selected mail message while opening an IMAP mailbox has been addressed.
- HTML mail message headers are now displayed more consistently.
- Enables Mail support for CRAM-MD5 (non-cleartext) authentication.
- Includes other Mail enhancements.

Classic Environment Enhancements

- Classic environment applications now remain synchronized with the system clock when in the foreground (after the computer is put to sleep).
- A potential situation in which an inaccurate message may appear when stopping the Classic environment in the Classic preference pane, has been addressed.
- Resolves a potential kernel panic situation when connecting to a sharepoint in the Classic environment.
- Enhances reliability of certain USB devices in the Classic environment.

Printing, Image Capture, and Peripheral Device Compatibility Enhancements

- Improves Print Center auto-discovery of Epson printers.
- Resolves a potential alert message when deleting images from a type 3 or 4 digital camera.
- Enhances function of certain removable media devices after waking from sleep.
- PC cards (PCMCIA) are more appropriately recognized if inserted during sleep.
- Improves compatibility with UNIX-based LPR print servers.
- Several other USB, FireWire, and SCSI device compatibility improvements are included.
- Expands support for ATA-style PC cards, including IBM Microdrives and digital camera media card readers.

Other Enhancements

- Improved compatibility with Microsoft Office v.X.
- Improved compatibility with MindVision InstallerVise when installing large amounts of data.
- Improves behavior when multiple applications are opened at once.

- Includes Apple DVD Player feature enhancements.
- Resolves a potential issue in which the speaker phase is inverted in certain iMac computers with slot-loading disc drives.
- Improves the responsiveness of the built-in microphone included with certain computers, improving Speech Recognition.
- Addresses a rare issue in which the screen display may become slightly misaligned when using a display attached to a GeForce2 video card.
- Resolves a certain issue in which minor screen artifacts may unexpectedly remain visible on the desktop after moving an item.
- Corrects an issue in which the time zone that includes Ireland and the United Kingdom may not be selectable in the Date & Time preference pane.
- Resolves a situation in which files may unexpectedly become locked when using certain applications.
- Improves copy-paste operations between Classic and Mac OS X-native applications.
- Includes AppleScript 1.8, which includes numerous AppleScript enhancements.
- Includes other audio enhancements.
- Addresses other potential kernel panic situations
- Improves results of QuickTime-based image rotation functions, such as when rotating an image in Image Capture.

Enhancements delivered with Mac OS X Update 10.1.1

Peripheral Device Enhancements

- Works with FireWire drives that use the 911 Oxford chip set.
- Different brands of FireWire-based (DV) cameras can now be swapped successfully while iMovie 2 is open.
- Resolves a potential issue that may occur when transferring information from one FireWire volume to another.
- Resolves a potential issue that could cause a USB mouse to temporarily stop responding.
- Resolves a potential issue that could cause a USB mouse and keyboard to stop responding after waking from sleep.
- Enhances reliability of certain SCSI devices, including Fujitsu MO (magneto-optical) SCSI drives, when used with Power Macintosh G3 All-In-One, Power Macintosh G3 Mini Tower and Power Macintosh G3 Desktop computers.
- Resolves a potential kernel panic situation when disconnecting a USB Q-Drive.
- Includes other general USB device reliability enhancements.

iTunes and CD burning-related Enhancements

- Works with Sony Digital Relay CRX 10U-A2, Sony CRX-1650L-A2, Sony Spressa Professional 10x4x32x, and BUSlink RW-2440FM devices.
- Offers improved reliability when resolving aliases of MP3 files in iTunes.
- Files with a long file name can be copied from a burned CD-ROM to a Microsoft Windows 2000- or Windows NT-based PC more reliably.
- Ejecting blank media with the media eject key (F12) now dismisses "Prepare CD" dialog boxes.
- DVD-RAM discs eject more reliably when used with non-DVD-RAM drives.
- Addresses a certain situation in which a burned CD or DVD disc may disappear from the desktop after being moved to the Trash but does not physically eject from the computer.
- Discs burned with iTunes eject more reliably.
- Addresses a rare issue in which a data CD does not burn as expected when using an external FireWire drive.
- Certain types of audio CDs become available for use more quickly.
- Reduces likelihood of a Prepare CD dialog window appearing while a CD is being burned.
- Enhances functionality of full-screen iTunes visualizations when hardware mirroring is enabled.
- Includes other general iTunes and CD burning enhancements.

iDisk, Internet Connectivity, Networking, and Web Sharing Enhancements

- iDisk works with the WebDAV digest authentication security protocol. You can access your iDisk and transfer files using Windows XP.
- Increases reliability of iDisk volumes that contain a large number of files and folders.
- Addresses an issue in which certain TCP/UDP packets in an oversized Ethernet frame may have been dropped. DHCP addresses may now be received more reliably from a network server or broadband (cable modem / DSL) Internet service provider.
- Resolves an issue in which copying a file larger than 2 GB to a Mac OS X Server host may have failed with an alert message -50.
- Addresses a potential kernel panic situation when connecting to a sharepoint in the Classic environment.
- The PPPoE MTU setting has been refined, improving general PPPoE connectivity.
- Addresses an issue in which an alert message code +1 could occur while accessing an HTTP or FTP URL string that contained a non-escaped character, such as a space.
- A potential situation in which a host could inadvertently connect to its shared volume has been addressed.
- Resolves a potential cause of alert message -30785 that may have appeared when accessing a directory using FTP.
- Resolves a potential cause of alert message -43 that may have appeared when uploading a folder using FTP.
- Permits "file://" URLs to work with file names that contain non-escaped characters, such as a space.
- Corrects certain situations in which an AppleShare (AFP) volume may be unexpectedly disconnected, resulting in a "The file server <name>

has unexpectedly closed down" message.
- Addresses a rare, potential kernel panic situation that may have affected idle computers that route AppleTalk on a network.

Printing and PDF-related Enhancements

- Improves reliability when viewing certain types of PDF documents.
- A potential issue with using a Hewlett Packard LaserJet 1200 printer while the Classic Environment is open has been addressed.
- Provides expanded EPS document printing features.
- The time required to print Microsoft Word documents with certain content to a PostScript printer has been reduced.
- PDF documents can be saved with a percent sign character in the file name.
- Improves the process of selecting an AppleTalk- or USB-based PostScript printer PPD.
- Resolves a potential issue that may occur when printing an AppleWorks document that contains buttons and double-byte characters (such as Japanese).

Finder, Dock, Sleep, and System Settings Enhancements

- Resolves an issue on certain computers in which the system clock could potentially lose a few minutes per day unless a Network Time Synchronization server was used.
- Resolves a potential issue in which the Finder's Clean Up or Arrange By Name feature could result in overlapping Desktop icons.
- Improves performance of Arrange By Name when more than one display is connected.
- If multiple displays are connected, the Dock is no longer positioned to the left-most or right-most side of the non-primary display when moved.
- Enables video mirroring on PowerBook G4 (Gigabit Ethernet) computers.
- Improves sleep mode battery power conservation of certain PowerBook computers.
- Addresses certain potential Finder kernel panic situations.

Enhancements to the application Mail

- Addresses an issue in which the same messages may be received from a POP mail server if no mail rules were defined, regardless of the Delete on Server setting.
- Resolves a potential situation when sending a mail message that contains Japanese characters.
- Addresses an issue that could cause mails with certain HTML content to not display a vertical scroll bar.
- Improves interaction with certain types of IMAP mail servers.
- Improves reliability when opening certain types of message attachments.
- Enriches performance when importing mailboxes messages that contain certain Japanese characters.
- Improves mail account password security.
- Improves behavior when an SMTP mail message cannot be sent. The message is not sent later more than once.
- Enhances reliability when both Mail and Screen Saver are running during idle time.
- Improves reliability of Mail when retrieving a large number of messages from a POP server.
- Addresses a rare situation where a message retrieved from a POP server may not appear as expected.
- Resolves an issue in which the Mail application could potentially produce a kernel panic message and stop responding, if certain mail messages with HTML content were left open.
- Includes other general Mail reliability improvements.

Application-related Enhancements

- Enhances compatibility with Microsoft Office v. X.
- Image Capture works with additional Canon cameras.
- Resolves certain AppleWorks 6.2 application window positioning issues.
- Helps to resolve an issue in which the AppleWorks Magic Wand tool might fail to properly select an object.
- Improves AppleWorks (Japanese language version) performance when inputting two-byte characters.
- Enhances performance of applications that input two-byte characters using a Bottom Input Window, such as SimpleText, iTunes, and the Finder.
- Resolves an issue in which FileMaker Pro may fail to open successfully the first time after installation if the Automatic log in option was not enabled.
- Improves reliability of applications after a password authentication dialog box has been dismissed.
- Adds ability for disk-archiving software to restore multiple-linked files.
- Unsaved vector and floating point context is now preserved during sleep mode. Third-party screen savers that process data during idle time may benefit from this.
- Enhances Apple DVD Player controller (horizontal) animation.
- Apple DVD Player, through its preferences, offers a feature enabling it to open automatically once a DVD-Video disc is inserted.
- Resolves a potential issue that could occur when previewing multiple fonts with DiamondSoft Font Reserve software.
- Improves application reliability when items are dragged from inactive windows.

TA20651_Mac_OS_X_Update_Enhancements_Information.pdf

Published Date: Oct 7, 2016

Mac OS X: Compatible TechTool Deluxe Versions

TechTool Deluxe versions 2.5.3 and later work with Mac OS Extended (HFS Plus) format Volumes on which Mac OS X is installed.

This article has been archived and is no longer updated by Apple.

You receive TechTool Deluxe if you purchase the AppleCare Protection Plan. TechTool Deluxe versions 2.5.3 and later work with Mac OS Extended (HFS Plus) format volumes on which Mac OS X is installed. TechTool Deluxe is not compatible with volumes formatted in the UNIX File System (UFS).

If you are using TechTool Deluxe version 3.0 or later, you must start up the computer using Mac OS X. If you are using TechTool Deluxe version 2.5.3 through 2.5.7, you must start up the computer using Mac OS 9 to get accurate results.

Important: TechTool Deluxe versions 2.5.3 through 2.5.7 may indicate issues that do not actually exist when the computer is started up from Mac OS X, when you use them in Classic mode. Start up the computer from Mac OS 9 before testing with these versions of TechTool Deluxe. You may switch between the operating systems in the Startup Disk pane of System Preferences. When in Mac OS 9, you can make the same selection in the Startup Disk control panel. See technical document 25271: "**TechTool Deluxe: False 'Problems' Reported When Used With Mac OS X 10.0**" for more information.

Published Date: Feb 20, 2012

AppleWorks 6, Mac OS X: Cursor Displaced When Font Smoothing Is Turned Off

The insertion point cursor is displaced if the Font Smoothing feature is deselected when AppleWorks 6 is used in Mac OS X.
This article has been archived and is no longer updated by Apple.

Symptom

The insertion point appears a few characters away from where actual typing occurs.

Solution

Select Font Smoothing in AppleWorks text preferences. You may follow these steps:

1. Choose Preferences from the AppleWorks application menu.
2. Choose Text from the Topic pop-up menu.
3. Click to select the checkbox for Font Smoothing.

Published Date: Feb 17, 2012

AppleWorks 6, Mac OS X: Non-Roman Characters Print in Courier

Chinese or Japanese text may not print correctly from AppleWorks 6 when used with Mac OS X and a PostScript printer.
This article has been archived and is no longer updated by Apple.

Symptom

Printing a document which includes Chinese or Japanese text results in Courier font instead of the designated Asian-language font.

Solution

Use the Print Preview option to print the document from the Preview application. You may follow these steps:

1. Choose Print from the File menu in AppleWorks 6.
2. Click Preview.
3. Wait for the preview to open in the Preview application.
4. Choose Print from the File menu of the Preview application.

Published Date: Feb 20, 2012

Mac OS X: Incorrect Version of Mac Help Opens, Without Expected Content

Mac Help does not display expected content in Mac OS X if Classic Mac Help is already open (in the Classic environment), or Mac Help content in the Classic environment, if Mac OS X Mac Help is already open. First close Mac Help to resolve the issue.
This article has been archived and is no longer updated by Apple.

Symptom

- If Mac Help is already open in the Classic environment, Mac OS X applications may display Classic Mac Help instead of the desired Mac OS X Mac Help.
- If Mac Help is already open in the native Mac OS X environment, Classic applications may display Mac OS X Mac Help instead of the desired Classic Mac Help.

Solution

Close Mac Help in one environment (Classic or Mac OS X) before attempting to open it in the other.
Published Date: Feb 17, 2012

Mac OS X 10.1: "You are running Classic without superuser (root privileges)" Message

This document explains how to resolve a potential issue in which the Classic environment does not start up, giving you an alert message about "superuser (root privileges)".
This article has been archived and is no longer updated by Apple.
Note: This technical document covers one aspect of troubleshooting the Classic environment. For more information, see technical document 106677: "**Mac OS X: Troubleshooting the Classic Environment**"

Symptom

An alert box with one of the following messages appears, and Classic does not start up:

> "You are running Classic without superuser (root privileges). Ensure that TruBluEnvironment is setuid and owned by root, or reinstall your Mac OS X System Software."

Note: For other versions of Mac OS X, see these related technical documents:

106278: "**Mac OS X 10.0: You are running Classic without superuser (root) Privileges' Message**"
106584: "**Mac OS X 10.2: You are running Classic without superuser (root) Privileges' Message**"

Solution

1. Open System Preferences.
2. Click Startup Disk.
3. Select your Mac OS 9 System Folder in the Startup Disk pane.
4. Choose Show All from the View menu.
5. Click Classic.
6. Select your Classic startup volume (the one that contains your Mac OS 9 System Folder).
7. Click Start. Classic should now start up as expected.
8. Choose Show All from the View menu.
9. Click Startup Disk.
10. Select your Mac OS X System Folder in the Startup Disk window.
11. Close the System Preferences window.

If the issue persists, use the Repair Privileges Utility. Your system must be updated to Mac OS X 10.1.5 before using this utility. For information and software download, see technical document 106900, "**Mac OS X: About the Repair Privileges Utility**".

Notes:

1. The Classic System Folder may not work if required software components have been removed from it. In this case, the System Folder will not be a choice in the Startup Disk control panel. If you have this symptom, go to Solution section "B" of technical document 106426: "**Mac OS: 'Startup Disk no longer has a valid System Folder'**"

2. For best results, do not install multiple versions of Mac OS 9 on your Classic startup volume.

Related Documents

106663 Mac OS X 10.1.x: Classic May Not Start If LinkSys Hub/Router or Wireless Access Point is Present

Published Date: Oct 7, 2016

Mac OS X Server: Server Admin Agent Stops When in the Console

Server Admin reports that no server is available if you have entered the Console (at the server) from the Login Window.
This article has been archived and is no longer updated by Apple.

Symptom

If you enter the console at the server, the Server Admin Agent does not respond to Server Admin requests, and an alert box with this message appears at any connected Server Admin workstation:

> "The connection to the Server Admin Agent at <domain name or IP address> has been lost. Please try to reconnect later."

Solution

Exit the Console at the server, and the Server Admin Agent will allow Server Admin to reconnect.

This issue with Server Admin is resolved by Mac OS X Server 10.1 and later. However, you still should not leave the server at the Console, because the Window Server process does not run when the server is at the Console. Other server processes rely on Window Server.
Published Date: Feb 17, 2012

Macintosh Manager, Multiple Users: About the Login Window

This document describes the features available from a Macintosh Manager or Multiple Users Login Window.
This article has been archived and is no longer updated by Apple.
The following features are available to clients while at the Login Window:

Restart

By default, the Login Window displays only a Shut Down button. Press the Option key and the Shut Down button changes to a Restart button.

Gain System Access

Press Command + Shift + Escape. Proper authentication is required to enter System Access. For more information, see technical documents:

106901: "**Macintosh Manager 2: How to Gain System Access**"
60147: "**Mac OS X Server: Macintosh Manager - What is System Access?**"

View system information

Basic system information is available under the Apple Menu.

Macintosh Manager versions 1.0 to 1.2.4 display:

- The version of Macintosh Manager installed.

Macintosh Manager versions 1.3 to 1.4.1 display:

- The version of Macintosh Manager installed.
- The AppleTalk name.

Macintosh Manager 2.0 and later display:

- The version of Macintosh Manager installed.
- The AppleTalk name.
- The IP address.
- The Mac OS version.

Force a client to check for updates in the server's databases

Macintosh Manager versions 1.0 to 1.4.1:

1. Press the Option key.

Macintosh Manager 2.0 and later:

1. Press the Control key.

Note: When a Macintosh Manager client is forced to check for updates in the server's databases, the client computer's hard drive will a make an accessing noise. This is normal operation of this function.

The appearance of the Login Window may vary, depending on a few factors, such as running Multiple Users (in stand alone) or Macintosh Manager (connecting to a server). Also, the Login Window for Macintosh Manager clients can be set up in the Macintosh Manager Admin application.

Disconnected menu bar item

Figure 1 Menu bar item indicating no connection to server

When an AppleShare icon with a green "X" over it appears in the Menu Bar (Figure 1), the client is not currently connected to a Macintosh Management Server. To force a client to connect to the server:

1. Select a user.
2. Click Login.
3. At the password screen, click Cancel.

The client should connect to the server.
Published Date: Feb 17, 2012

Mac OS X: "Error code -37" When Copying Files to Earlier AppleShare Servers

An alert box with the message "Error code -37" may appear when you try to copy files from a Mac OS X computer to another computer that is using AppleShare Filing Protocol (AFP) 2.2 or earlier.
This article has been archived and is no longer updated by Apple.

Symptom

An alert box with this message appears when a Mac OS X computer attempts to copy a file to another computer:

> "Sorry, the operation could not be completed because an unexpected error occurred, Error code -37."

Client operating systems:

- Mac OS X 10.0 to 10.1.5

Note: Mac OS X Server is affected when acting as a client of affected servers.

Solution

When copying to an AFP 2.2 or earlier server, check the full file name of the file being copied to be sure that it is not over 31 characters. Updated server software can accommodate longer file names.

At the client computer:

Some operating systems can be set up to automatically hide file name extensions, such as ".jpg", that appear at the end of file names. When set up this way, the actual file name differs from what is displayed in the graphical user interface (GUI). The Mac OS X Finder window is an example of a GUI. You may be led to think the file name is exactly what you see on screen, though the file system name may actually differ. Mac OS X can hide file name extensions, but Mac OS 9 does not. This means the full name will be displayed in Mac OS 9 and earlier. Users of Microsoft Windows operating systems connecting to these servers may see similar symptoms, since Windows can be set up to hide file extensions. There are several ways to view file extensions in Mac OS X, but these steps describe the two easiest ways:

1. Choose Preferences from the Finder application menu.
2. In the Finder Preferences window, click to select the checkbox for "Always show file extensions."

This will show file extensions for all files in the Finder or on the desktop until you deselect the preference. To view the extension of a single file:

1. Select the file in the Finder.
2. Choose Show Info from the File menu.
3. Choose Name & Extension from the pop-up menu in the Info window.

At the server:

AppleShare Filing Protocol 2.2 and earlier is limited to 31 characters for full file system names. Later versions of the AFP server are not bound by this limitation, allowing users to save files that are longer than 31 characters. Upgrading to Mac OS X Server 10.0.3 or later, which includes AFP 3.0 or later, allows files to be copied with up to 255 characters in a file system name.
Published Date: Feb 17, 2012

AppleShare IP 6.3.3: How to Verify Cache Allocation

This document describes how to verify that the AppleShare IP Maximum Server Memory, or Cache, allocation is set correctly.

This article has been archived and is no longer updated by Apple.

Use the Mac OS Server Admin application to view or adjust the Maximum Server Memory setting. For Mac OS 9 servers, the difference between "Maximum Server Memory" and "Total Available Memory" should be at least 32 MB. For Mac OS 9.1 or later computers, allow a difference of at least 40 MB. These settings may need adjustment if you have a large number of clients, heavy activity, or additional applications active on the server.

Setting the Maximum Server Memory value lower than the recommended value is better than setting it higher. Setting Maximum Server Memory too high may not allow the operating system enough RAM for other tasks.

If a server appears to be running out of memory due to concurrent use of other applications or sustaining heavy load, then adjust the Server Activity slider down to about 80 percent. This helps ensure that the server will not run out of the available resources for other applications.

Adjusting memory for other applications

If other applications are used on the server, remember that you can adjust their memory allocation as well.

1. Quit the application.
2. Select the application in the Finder.
3. Choose Get Info from the File menu.
4. Choose Memory from the pop-up menu in the Info window.
5. Set the desired value in the Preferred Size field.

Use the value in the 'Preferred Size' field of the Memory pane of the "Get Info" window for each application to determine an appropriate adjustment.

Published Date: Feb 17, 2012

Macintosh Manager, Sherlock: "no search sites installed on this channel" Message

You may manually install search sites to address an issue in which Sherlock does not download them for a Multiple Users or Macintosh Manager users.
This article has been archived and is no longer updated by Apple.

Symptom

After opening Sherlock in a Macintosh Manager or Multiple Users environment and selecting Search Internet, an alert box with this message appears:

> "There are no search sites installed in this channel. Sherlock will connect to the Internet and update your channels."

After you dismiss the alert box, no search sites are downloaded.

Solution

Manually copy the search sites into the user's Home directory. These search sites can be copied from another computer that has the appropriate Sherlock search sites installed. These are found in the Internet Search Sites folder, which is in the System Folder.

For Macintosh Manager:

The Search Sites folder is found on the server, at the location:

~/Library/Internet Search Sites

Note: The tilde symbol (~) indicates a user's Home directory.

For Multiple Users:

The Search Sites folder is found on your hard disk, at the location:

Macintosh HD: Users: UserName: Internet Search Sites
Published Date: Feb 17, 2012

AppleShare IP 6.3: "Error -43" Alert

If an alert box with the message "error -43" appears, the Users & Groups Data File may have become unusable.

This article has been archived and is no longer updated by Apple.

Symptom

When a user attempts to log in, the AppleShare IP File Server quits and an alert box with the message "error -43" appears.

Solution

Use the ASIP First Aid Tool to repair the Users & Groups Data File. If ASIP First Aid reports no faults and the issue persists, reconstruct the Users & Groups Data File anyway. If the issue still persists, export the Users and Groups, delete the Users & Groups Data File, then use the AppleShare IP Setup Assistant to recreate the file.

Published Date: Feb 17, 2012

Mac OS 9, Mac OS X: How to Choose an Apple Modem

This document describes which Apple modems use which Apple modem scripts.
This article has been archived and is no longer updated by Apple.
Note: This document does not explain which modem you should buy. Rather, this document explains how to correctly selection an Apple modem in the Modem control panel (Mac OS 9) or Network pane of System Preferences (Mac OS X).

"modem" v. "modem script"

Before connecting to the Internet, you may choose a "modem" from the Modem menu. What you are actually choosing is not the modem -- it is already installed in your computer. What you are choosing is known as a "modem script," a piece of software that controls the way in which the Mac OS communicates with the modem that is connected to your computer.

First, use the following table to determine which modem script is correct for your computer.

Modem Scripts by Computer

Modem Script Name	Computers	Description
Apple Internal 56K Modem (v.90)	iBook - all models iMac - all models PowerBook G3 Series PowerBook G3 Series (Bronze Keyboard) PowerBook (FireWire) PowerBook G4 - all models Power Macintosh G3 (Blue and White) Power Mac G4 - all models	In the United States, this modem script allows communication at speeds up to the FCC maximum of 53 Kilobits per second (Kbps), depending on line condition and other factors.
Apple Internal 56K Modem (v.34)	iBook - all models iMac - all models PowerBook G3 Series PowerBook G3 Series (Bronze Keyboard) PowerBook (FireWire) PowerBook G4 - all models Power Macintosh G3 (Blue and White) Power Mac G4 - all models	Choose this script when your telephone line condition or Internet service provider does not allow for a v.90 connection.
Apple:GV 56K Apple/GV 56K **Note:** These two names are the same modem script. The punctuation of the name varies between Mac OS 9 and Mac OS X.	Power Macintosh G3 All-In-One Power Macintosh G3 Desktop Power Macintosh G3 Mini Tower	This modem script is used for "beige" or "platinum" colored Power Macintosh G3 computers that have the Apple/Global Village internal modem.
PowerBook G3 Internal 56K	PowerBook G3	In the United States, this modem script allows communication at speeds up to the FCC maximum of 53 Kilobits per second (Kbps), depending on line condition and other factors.
PowerBook G3 Int56 (v.34 Only)	PowerBook G3	Choose this script when your telephone line condition or Internet service provider does not allow for a v.90 connection.

Choosing the correct script

After determining your correct modem script, use these steps to choose it. Make sure to follow the steps for the version of Mac OS installed on your computer.

Mac OS 9

1. Choose Control Panels from the Apple menu, then Modem from the submenu.
2. Choose Internal Modem from the "Connect via" pop-up menu.
3. Choose the desired modem from the Modem pop-up menu.
4. Close the control panel.
5. If prompted, save your change.

Mac OS X versions 10.0 to 10.0.4

1. Choose System Preferences from the Apple menu.
2. Click Network.
3. Choose Internal Modem from the Configure menu.
4. If your computer contains an internal modem that does not appear in the Configure menu, choose Advanced from the Configure menu and reselect the Internal Modem.
5. Click the Modem tab.
6. Set the Modem menu to the desired modem.
7. Click Apply Now.

Mac OS X versions 10.1 and later

1. Choose System Preferences from the Apple menu.
2. Click Network.
3. Choose Internal Modem from the Show menu.
4. If your computer contains an internal modem that does not appear in the Show menu, choose Active Network Ports from the Show menu and reselect the Internal Modem.
5. Click the Modem tab.
6. Set the Modem menu to the desired modem.
7. Click Apply Now.

Third-party modems

If you have a modem not manufactured by Apple, use the modem script recommended or provided by the third-party manufacturer. Many third-party modem scripts are included with Mac OS 9 and Mac OS X, so you may be able to choose a modem script without installing additional software.

Published Date: Feb 17, 2012

Macintosh Manager: Login Window Does Not Appear, Client Stops Responding

The Macintosh Manager Login Window may not appear, leaving a non-responsive client with a Menu bar and mouse pointer.
This article has been archived and is no longer updated by Apple.

Symptom

Macintosh Manager client computers may stop responding ("hang") just prior to the time that the Login Window should appear. The Login Window does not appear, leaving the Menu bar and mouse pointer on the screen.

Solution

1. If file sharing is turned on, turn it off.

2. If that does not resolve the issue or is not an acceptable solution, disable the following extensions on the affected clients:

- SLP Flag
- SLPPlugin
- ShareWay IP Personal Bgnd

3. Try renaming a few extensions to change their load order:

- Try renaming "Folder Actions" to "zFolder Actions".
- Try renaming "Application Switcher" to "zApplication Switcher".

Published Date: Feb 17, 2012

Ethernet: Cables Used by Macintosh Computers

This document describes Ethernet cabling used by Macintosh computers.

This article has been archived and is no longer updated by Apple.

Current and recent computers

More recent Macintosh computers, those with a PowerPC G3 or later microprocessor, are fitted for twisted-pair cable with an RJ-45 connector (Figure 1). The RJ-45 port looks like a wide version of a standard RJ-11 telephone jack (Figure 2). The Ethernet port on is located on the back or side of your computer, depending on the model. It is labeled with the Ethernet icon.

Figure 1 RJ-45 Ethernet cable connector

Figure 2 An RJ-45 Ethernet port below the Ethernet icon

This document does not cover the fiber optic Apple Gigabit Ethernet PCI Card. For information on that product, see technical document 58296: "**About Your Apple Gigabit Ethernet PCI Card**"

Earlier computers

Earlier Power Macintosh and Quadra computers have the Ethernet icon, as in Figure 1, but with a different style of port. This is the Apple Attachment Unit Interface (AAUI) port. This type of port requires a transceiver, a small box that adapts the AAUI to the type of cabling used (such as RJ-45). On Power Macintosh computers that came with both an AAUI and RJ-45 port, you can use only one at a time.

Speed rating of cabling

Ethernet cable is available in different speeds. For more information on cable speed, see technical document 106655: "**Ethernet: Speed of Ethernet Cabling**"

Other types of cable

If your Ethernet network does not use twisted-pair, RJ-45 Ethernet cable, you may be able to use a third-party adapter to connect to connect. You may search for third-party products at the Macintosh Products Guide (http://www.guide.apple.com/).

Published Date: Oct 7, 2016

Ethernet: Speed of Ethernet Cabling

This document describes speeds of Ethernet cabling used by Macintosh computers.

This article has been archived and is no longer updated by Apple.

Note: This document does not cover the fiber optic Apple Gigabit Ethernet PCI Card. For information on that product, see technical document 58296: "**About Your Apple Gigabit Ethernet PCI Card**"

Speeds of Ethernet cable

Twisted pair Ethernet cable is available in different grades for different speeds of Ethernet. Your Macintosh computer may use any of the following Ethernet grades:

- 10Base-T (Cat 3)
- 10/100Base-T (Cat 5)
- 10/100/1000Base-T (Cat 5+, Cat 5e, or Cat 6)

Your computer's Ethernet speed

You can look up the speed of Ethernet hardware included with your computer by using the Apple Spec Database (http://www.info.apple.com/applespec/applespec.taf).

Determining your network "speed limit"

A Macintosh computer with a higher speed Ethernet adapter may use a slower-rated cable, but transmission speed is limited to the speed of the cable. Conversely, a slower-rated computer may use a faster rated cable but be limited by its own speed. Hubs and routers may also limit speed of network traffic. Be sure to buy Ethernet cable that is appropriate for your networking goals.

Published Date: Oct 7, 2016

Macintosh: Connecting to an Ethernet Network

This document describes how to connect your Macintosh to an Ethernet network.

This article has been archived and is no longer updated by Apple.

Required cabling

You need an Ethernet cable appropriate for your computer. If you do not have one, see technical document 106654: "**Ethernet: Cables Used by Macintosh Computers**"

Steps to connect

1. Plug one end of an RJ-45 twisted-pair cable into the 10/100Base-T Ethernet port on your computer (Figure 1).

Figure 1 RJ-45 Ethernet Port below Ethernet icon

2. Plug the other end of the twisted-pair cable into an RJ-45 network port on the target device.

The target device may be a router, hub, AirPort Base Station, or another computer. For more information on these options, see technical document 106658: "**Creating a Small Ethernet Network**"

After connecting

After connecting, you may wish to perform File Sharing. For more information, see technical documents:

106461: "**Mac OS X: File Sharing**"
106657: "**Mac OS 8, Mac OS 9: File Sharing**"

Published Date: Feb 19, 2012

Mac OS: Sharing Over the Internet, or Between Remote Networks

Mac OS X and Mac OS 9 can share files between remote networks via TCP/IP, or in other words "over the Internet." This document describes this activity.
This article has been archived and is no longer updated by Apple.
Mac OS X can share over the Internet (TCP/IP), as can Mac OS 9 and AppleShare IP. This allows Macintosh computers in remote locations to share files with any type of Internet connection. To use this feature, you must do at least these three things:

1. Start File Sharing.
2. Make at least one computer available as sharing via TCP/IP, which is automatic in Mac OS X.
3. Connect to the sharing computer from a second computer.

You connect to a remote computer just as you would a local computer, with the exception that you cannot browse by AppleTalk names, such as "Michelle's computer." Instead, you enter the IP address or DNS name.

Making Sharing Available via TCP/IP

Your computer must have a valid IP address to share via TCP/IP. If it does not, see technical document 106659: "**Mac OS: How to Get an IP Address for Connecting to the Internet**"

Steps for making File Sharing available over TCP/IP:

Product	Required Action
Mac OS X	Mac OS X shares via TCP/IP automatically. You do not need to do anything else.
Mac OS 9	Be sure that the checkbox in the File Sharing control panel for "Enable File Sharing clients to connect over TCP/IP" has been selected.
AppleShare IP	Using your server admin application, be sure that services are enabled over TCP/IP in addition to AppleTalk. This option is located in the AppleShare section of the admin application.

Starting and Connecting

Steps for starting file sharing and connecting to a sharing computer are found in technical documents:

106461: "**Mac OS X: File Sharing**"
106657: "**Mac OS 8, Mac OS 9: File Sharing**"
Published Date: Oct 7, 2016

Mac OS X 10.1: Classic May Not Start If Linksys Hub/Router or Wireless Access Point Is Present

Update the firmware on your Linksys hardware to avoid a situation that prevents Classic from starting up.
This article has been archived and is no longer updated by Apple.

Symptom

If your Linksys hub/router or wireless access point is set up to distribute IP addresses via DHCP, Classic does not finish starting up. An Open Transport extension icon may be visible when Classic stops responding.

Solution

Try updating the firmware on your Linksys hardware. You may download an update from the Linksys Firmware Upgrades page (http://www.linksys.com/download/firmware.asp).

Firmware updates are available for these Linksys devices, which may be associated with the symptom described above:

- BEFW11S4 EtherFast Wireless AP + Cable/DSL Router w/4-Port Switch
- BEFW11p1 EtherFast Wireless Access Point + Cable/DSL Router w/PrintServer
- BEFSR81 EtherFast Cable/DSL Router with 8-Port Switch

Notes:

1. This list is not intended to be comprehensive, and updating your firmware does not guarantee a solution.
2. Updating firmware on a non-Apple product may require an emulation environment or the use of a non-Apple computer.
3. You should periodically check for firmware updates on any applicable product, whether it is manufactured by Linksys, Apple, or another company.
4. Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Other Workarounds

If updating the firmware is not an option, use one of the following workarounds:

1. Use static IP addressing instead of DHCP. Please see the materials which came with the product or contact LinkSys for more information.
2. Use AirPort instead <http://www.apple.com/airport/>.

Related Documents

106639 Mac OS X 10.1: Classic Does Not Start Up

Published Date: Oct 7, 2016

Mac OS X Server 10.0 to 10.1: About NetBoot

This document duplicates the content of the About NetBoot PDF document distributed with Mac OS X Server versions 10.0 to 10.1.5.
This article has been archived and is no longer updated by Apple.
About NetBoot Read this important information before you install NetBoot 2 v.2.0.2 software on your Mac OS X Server. Netboot 2 software is compatible with Mac OS X Server.

NetBoot features have been extended in this release of NetBoot 2. Early NetBoot capable Macintoshes will not be able to use the new feature of obtaining IP addresses from a DHCP server. Newer Macintoshes are all NetBoot capable, although some will need the latest Open Firmware Update to use DHCP. You can obtain the Open Firmware Update at www.apple.com/support. You should run the proper Update on all Macintoshes you plan to use for NetBoot. Refer to the Admin Guide.pdf on the Mac OS X Server CD for more detailed information about this new feature of NetBoot and for system requirements for your NetBoot client machines.

You must install the NetBoot client image provided on this CD. Earlier or updated versions will not have the necessary modifications for the new NetBoot features.

By default, the NetBoot client image searches for a Macintosh Manager server. The NetBoot client image also contains a default user that allows you to get to the Finder when a Macintosh Manager server can't be found. The default user name is NBUser with the password netboot.

To use NetBoot with the earliest Macintoshes you will need to configure NetBoot 1.0 in the NetBoot Setup Assistant.

For more information about NetBoot and Mac OS X Server, visit this Apple Web site:

- http://www.apple.com/macosx/server

For the latest information about this release of Mac OS X Server, open Server Admin Help or Macintosh Manager Help and click More. For the latest news about a particular service, click the service icon in Server Admin, choose Help from the pop-up menu, and then click More. For QuickTime Streaming Server, click the question-mark button in Streaming Server Admin, and then click More.

For information about the support available for this product, see the Professional Software Support Guide included with Mac OS X Server.
Published Date: Oct 7, 2016

Mac OS X: Spinning Disc Cursor When Copying/Pasting From Classic

This document addresses an issue in which the system becomes unresponsive during a Classic copy/paste operation. The spinning disc pointer appears.
This article has been archived and is no longer updated by Apple.

Symptom

The system becomes unresponsive during a copy/paste operation. The arrow pointer becomes a spinning disc pointer.

This occurs when these two conditions are met:

- Copying from a Classic application into a native Mac OS X application
- Classic is set to start when you log in

Solution

This issue is resolved in Mac OS X 10.2. Users of Mac OS X 10.1.2 to 10.1.5 may use the following workaround:

1. Choose System Preferences from the Apple Menu.
2. Click Classic.
3. Click the Start/Stop tab.
4. Deselect the "Start up Classic on login to this computer" option.
5. If Classic is running, stop or restart it by clicking the appropriate button.

For best results, do not use the option "Start up Classic on login to this computer." If Classic is not running, it will start automatically when you open a Classic application or document. If the issue persists:

1. Stop Classic as described in steps 1 to 3 above.
2. Locate your Classic System Folder. It should appear in the first window of the Classic volume and be titled "System Folder."
3. Open the System Folder.
4. Locate these files (it may help to view the window as a list):
   - Classic
   - Classic Support
   - Classic Support UI
5. Drag these files to the Trash.
6. Using the Classic preference pane, start Classic.
7. This message appears as Classic starts up:

   "Some Classic-specific resources need to be added to or updated in your System Folder on <name of your volume>..."

8. Click OK.

Classic will finish starting up.
Published Date: Oct 7, 2016

AppleWorks 6: Files Do Not Retain Finder Label Status

The Label menu in the Info window allows you to distinguish items in the Finder by color coding. Files opened and saved in AppleWorks 6 return to default Label setting of "None."

This article has been archived and is no longer updated by Apple.

Symptom

Opening and saving a file in AppleWorks 6, the file loses its Label information, or status, in the Finder.

Solution

Relabel the file in the Finder after saving, or consider using folders to organize documents instead of Finder labels.

Published Date: Feb 17, 2012

Macintosh Manager: "-5000" Alert Message Involving Stickies and Temporary Items

When using Stickies in the Multiple Users or Macintosh Manager environment, you may see an alert box with a message about insufficient privileges. Additionally, Stickies notes remain at a client computer, rather than following the user. This can make a user's notes visible to the next user of the computer.

This article has been archived and is no longer updated by Apple.

Symptom

1. When you open Stickies then make a change and quit, an alert box with this message appears, and the application does not quit:

"Could not complete the 'quit' command because you do not have the necessary privileges. -5000"

2. Users' Stickies notes do not follow them from one client computer to another, remaining local to the computer where they were typed. Thus subsequent users (including System Access) of the same client computer can see notes of previous users.

Solution

If you encounter Symptom 1, try force quitting Stickies by pressing the Command-Option-Escape key combination.

Note: This option may be disabled by the administrator. If you cannot force quit, the client computer must be force restarted.

Whether or not the MMLocalPrefs extension is enabled will determine which solution is the best to use:

- If MMLocalPrefs extension is enabled, place a copy of the "Stickies file" and "Stickies Preferences" in the Preserved Preferences folder.
- If the MMLocalPrefs extension is disabled, create a "Temporary Items" folder at the root (top level) of the share point that hosts the user's Home directories (/Users by default). This "Temporary Items" folder must allow Read/Write access for these users.

Note: Clients with MMLocalPrefs enabled that are not configured to preserve the Stickies file and Stickies Preferences will see other user's Stickies that were created while logged into the same computer. Similarly, these Stickies can also be viewed and edited while in System Access on the same computer. Preserving the preferences prevents this behavior.

Published Date: Feb 17, 2012

Mac OS X Server: Random AppleShare (AFP) Pauses

Pauses in AFP service may occur randomly for all AFP-connected clients, lasting from several seconds to several minutes. This document discusses how to resolve this issue.
This article has been archived and is no longer updated by Apple.

Symptom

AppleShare (AFP, or Apple Filing Protocol) is the most common protocol used to connect from a Mac OS client to a Mac OS Server for file sharing purposes. AFP is used when a client connects to the server through the Chooser and is the default protocol used by the Network Browser or the Connect to Server command in Mac OS X. You may see these AFP symptoms:

- Any client computer connected to a Mac OS X Server via AFP may temporarily become unresponsive (a "hang").
- The network activity indication arrows found in the left corner of the menu bar may appear solid during these pauses.
- These pauses may last anywhere from a few seconds to 10 minutes or more.
- The server may appear to be functioning normally during these pauses.
- These pauses appear to end as randomly as the appear.

Solution

Install these software updates on the server:

Mac OS X Update 10.1.4, or later
Mac OS X Server 10.1.4 Update, or later

You may download these software updates from Apple Software Downloads (http://www.apple.com/swupdates/).
Published Date: Feb 17, 2012

Troubleshooting the Classic environment in Mac OS X

Learn what to do if the Classic environment doesn't start up, quits unexpectedly, or stops responding ("freezes").
This article has been archived and is no longer updated by Apple.

Classic won't start

If Classic won't start, see these informative articles:

Mac OS X: Classic Will Not Start Up - Mac OS 9 Not Installed or Not Blessed
Mac OS X 10.3: The Classic Environment Fails to Start or Stops Working

Classic begins to start up, but it does not finish

Classic may almost complete a normal startup, but then stall without any other hint of an issue.

In some cases, Classic might not start up due to an extensions conflict or "bus error".

A Linksys hub/router or wireless access point may also keep Classic from starting in Mac OS X 10.1.

Gray Screen - Classic startup stops (or "freezes") at a gray screen

Classic startup stops at a gray screen, and there is no indication of an extensions conflict or "bus error" in the Classic startup window.

Classic unexpectedly quits or stops responding

Classic may unexpectedly quit and the Dock no longer indicates that individual Classic applications are open. Alternatively, Classic may continue to run but become unresponsive to input. An alert box may appear with this message:

> "The Classic Environment is Not Responding. You may click Cancel and attempt to save any changes to open documents..."

During copy/paste, Classic stops responding ("freezes") with a progress indicator

See Mac OS X: Spinning Disc Cursor When Copying/Pasting From Classic
Published Date: Oct 7, 2016

Mac OS X: Classic Will Not Finish Starting Up - Extension Conflict or "Bus Error"

During Classic startup you may see signs of an extension conflict or "bus error." Use this document to troubleshoot the issue.
This article has been archived and is no longer updated by Apple.
Note: This technical document covers one aspect of troubleshooting the Classic environment. For more information, see technical document 106677: "**Mac OS X: Troubleshooting the Classic Environment**"

Symptom

Classic begins to start up, but it does not finish. If you have clicked the disclosure triangle to view the entire Classic startup window, you may see evidence of an extension conflict or a "bus error." In an extension conflict, you may note that the process halts as the extension icons are being drawn across the bottom of the Classic startup window. If a "bus error" occurs, an alert box with a message may appear.

Solution

You must troubleshoot an extensions conflict or "bus error" just as you would were the computer actually starting up from Mac OS 9, with one exception: You may access the Extensions Manager through the Classic pane of System Preferences. Follow these steps:

1. Choose System Preferences from the Apple Menu.
2. Choose Classic from the View menu. The Classic pane appears.
3. Click the Advanced tab.
4. Choose Open Extensions Manager from the Startup Options pop-up menu.
5. Click Start Classic.

When Classic starts up, Extensions Manager will open and you can proceed according to standard extensions troubleshooting procedures. For more information on using Extensions Manager, see technical document 30929: "**Mac OS: Extension Conflict Troubleshooting/Extensions Manager Features**"
Published Date: Oct 7, 2016

Mac OS X: Classic Quits Unexpectedly or Stops Responding ("Freezes")

Classic may quit unexpectedly or stop responding to input (a "freeze"). Use this document to troubleshoot the issue.
This article has been archived and is no longer updated by Apple.
Note: This technical document covers one aspect of troubleshooting the Classic environment. For more information, see "Mac OS X: Troubleshooting the Classic Environment"

Symptom

You may receive an alert box with this error message:

> "The Classic Environment is Not Responding. You may click Cancel and attempt to save any changes to open documents..."

If you have this message, stop here and go to "Mac OS X 10.1: 'The Classic Environment is Not Responding' Message".

These signs indicate that Classic has quit:

- No alert box appears, but the Dock no longer indicates that individual Classic applications are open.
- In the Classic pane of the System Preferences application, you see the message "Classic is not running."

These signs indicate that Classic is running but not responsive:

- Even though the Classic pane of the System Preferences application says "Classic is running" or "Classic is starting," you cannot open any Classic applications.
- You are using a Classic application that no longer accepts input (a "freeze").
- A blank menu bar appears when you attempt to bring a Classic application to the foreground

Solution

Quit the nonresponsive Classic application or environment

Choose Force Quit from the Apple Menu or use the Command-Option-Escape key combination to access the Force Quit dialog box.

Note: With Mac OS X 10.1.3, you can force quit individual Classic applications. With Mac OS X 10.1.2 and earlier, force quitting has the same effect as force quitting the entire Classic environment.

Determining the cause

An extensions conflict may contribute to undesirable behavior in Mac OS 9 or the Classic environment. You should first try extensions troubleshooting. For information on extensions troubleshooting, see:

106679: "Mac OS X: Classic Will Not Finish Starting Up - Extensions Conflict or 'Bus Error'"
30929: "Mac OS: Extension Conflict Troubleshooting/Extensions Manager Features"

If extensions troubleshooting does not resolve the issue, some files or system software may have been damaged become unusable. This may happen over time, particularly if the computer has often been improperly shut down or improperly restarted.

- Try reinstalling the applications that are in use when Classic quits.
- If that does not help, perform a clean installation of Mac OS 9. For information on a clean installation, see:

  58176 "Mac OS 8.5, Mac OS 9: Performing a Clean Installation"
  107383: "Mac OS X 10.2: How to Perform Mac OS 9 Clean Installation With 10.2 Restore CDs"

  Warning: Be sure to use a Mac OS 9 "installation" disc and not a "restore" disc. A restoration disc is clearly labeled, such as "Power Macintosh G3 Software Restore." These installers differ significantly in the way they work. Recovery from a software restore situation is covered by "Mac OS X 10.0: How to Reinstall Mac OS 9 or Recover From a Software Restore".

Published Date: Oct 7, 2016

AirPort Base Station (Dual Ethernet): How to Reload Software From Mac OS 9

This document explains how to reload software to an AirPort Base Station (Dual Ethernet) that has been hard reset from an AirPort Admin computer that is started up from Mac OS 9.
This article has been archived and is no longer updated by Apple.
Your base station must be in hard reset mode to follow these instructions. If you have not already reset the base station, see technical document 106602: "**AirPort Base Station (Dual Ethernet): How to Reset**"

Follow these steps to upload software to the AirPort Base Station (Dual Ethernet):

1. Connect a computer to the LAN port on the base station with an Ethernet cable. Either standard or crossover type cable will work. The connecting computer must have the AirPort Admin Utility 2.0 or later installed.
2. Choose Control Panels from the Apple menu, then TCP/IP from the submenu.
3. Choose Ethernet from the "Connect via" pop-up menu.
4. Choose Using DHCP Server from the Configure pop-up.
5. Close the control panel, clicking Save if prompted.
6. Open the AirPort Admin Utility. There may be a slight timeout delay while your computer determines that there is no DHCP service available and assigns itself a default IP address in the 169.x.x.x range.
7. Click Configure. You should then see a message that says: "The base station you have selected has been reset and is currently not configured."
8. Click OK.
9. After the AirPort Admin Utility reloads the software, you may perform further configuration or quit the application to use the base station in its factory default state.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**"
Published Date: Oct 7, 2016

AirPort Base Station (Dual Ethernet) : How to reload software from Mac OS X

Learn how to use a Mac OS X computer to reload software to an AirPort Base Station (Dual Ethernet) after the base station has been hard reset.
This article has been archived and is no longer updated by Apple.
Your base station must be in hard reset mode to follow these instructions. If you have not already reset the base station, see Resetting the AirPort Base Station (Dual Ethernet).

Important:

1. Be sure to review the Notes referenced in the individual steps.
2. **You may not be able to complete the procedure if you do not review the notes, particularly Note 3 for Step 15.**

Follow these steps to upload software:

1. Connect a computer to the LAN port on the base station with an Ethernet cable. Either standard or crossover type cable will work. The connecting computer must have the AirPort Admin Utility 2.0 or later installed.

   The LAN port icon:

2. Choose System Preferences from the Apple menu.
3. Click Network.
4. Look at the Location menu, and note what it says now. The default setting is "Automatic", but you may have changed it. You will need to know this later.
5. Choose New Location from the Location menu (see Note 1).
6. Type: AirPort Reload
7. Click OK.
8. Choose Network Port Configurations from the Show Menu (Note 2).
9. Because you created a new location, all ports in the list should be checked. If an AirPort card is installed, uncheck it.
10. Choose the Ethernet port from the Show menu.
11. Click the TCP/IP tab.
12. Choose Manually from the Configure pop-up menu, and type this information in the corresponding fields:

    IP Address (Note 4): 192.42.249.14
    Subnet Mask: 255.255.255.0
    Router: 192.42.249.13

13. Click Apply Now.
14. Open the AirPort Admin Utility.
15. Select the base station. If the base station is not listed see Note 3.
16. Click Configure. You should then see a message that says: "The base station you have selected has been reset and is currently not configured."
17. Click OK.
    Note: When you are prompted to authenticate here, the Mac OS X user name and password are required (not the base station password).
18. After the AirPort Admin Utility reloads the software, quit the AirPort Admin Utility.
19. In System Preferences, choose your original location from the Location menu (which you noted in Step 4), then click Apply Now. This restores your original network settings.
20. If you need to change the configuration of your base station, you may now reopen the AirPort Admin Utility (Note 5). Otherwise, you can use the base station in its factory default configuration.

Notes:

1. Step 5 uses the Location menu to avoid disturbing your original network settings. Step 19 restores your original network settings. To learn more about this feature, see Mac OS X: How to Use Locations. You may delete the "AirPort Reload" location when you are finished, or keep it for future use.

2. This is the language for Mac OS X 10.2 or later. For versions 10.1 to 10.1.5, you would choose "Active Network Ports". For versions 10.0 to 10.0.4, you would choose "Advanced" from the "Configure" menu.

3. If the Manual configuration does not work, go back to step 12, and replace it with this action: Choose Using DHCP from the Configure pop-up menu. If this method allows you to connect to the base station, you may have triggered a soft reset instead of a hard reset.

4. Some other Apple documents may suggest an IP Address of 192.42.249.15. Either may be used, or any other 192.42.249.x address that is not held by the router. For related background information on configuration via DHCP, see AirPort 2.0.4: About Using Link-Local Addressing.

5. Depending on how you had your base station configured, your original network settings may not connect to the base station. If necessary, change your TCP/IP setting to Configure via DHCP, which will connect to the base station in its default state (see Note 6). To avoid disturbing your original network settings, you may choose to create a new location as you did in Step 5. A suggested name for this location is "AirPort Default".

6. If your computer is already set to configure via DHCP, which it probably is after following these steps, it may hold the previously-obtained IP address longer than you expect. The previously-obtained address may no longer be valid, preventing you from connecting. In this case there are different ways to prompt the computer to immediately obtain a new IP address, and this one is the fastest: Change the Location menu to a different location. Click Apply Now. Change the Location menu back to the one you are using. Click Apply Now.

7. Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see AirPort: Requirements for Wireless Internet Access.

Published Date: Oct 7, 2016

Mac OS X: How to select an LPR printer in Classic

When choosing a printer or switching between printers in Classic, it may appear that there is not a Chooser selection available for an LPR printer.
This article has been archived and is no longer updated by Apple.
This fix assumes you have set up an LPR printer before. If you have not, use the Desktop Printer Utility to add an LPR printer. It is located in the Utilities folder inside the "Applications (Mac OS 9)" folder.

Steps to select an LPR printer in Classic:

1. From a Classic application, choose Chooser from the Apple menu.
2. Click the LaserWriter icon. A list of AppleTalk devices appears, which you should ignore.
3. Close the Chooser. When you print from Classic, you are now able to choose the LPR based printer in the print dialog.

Tip: If the job doesn't print as expected, try printing it in the foreground. Choose Background Printing from the Print window's preferences pop-up menu, then select Print In: Foreground.
Published Date: Feb 17, 2012

Mac OS X: Power Mac G4, Slow Performance After Sleep

When you wake the computer from sleep applications will not open. The system does not respond ("freeze").
This article has been archived and is no longer updated by Apple.

Symptom

System performance decreases after sleep. This may only occur after the Eject key is pressed after waking from sleep.

Solution

Update the CD-RW drive's firmware. See technical document 120029: "**Power Macintosh G4 CD-RW Firmware Update: Information and Download**"
Published Date: Feb 17, 2012

Startup Manager: Only Displays Mac OS 9, Not Mac OS X

You have both Mac OS X and Mac OS 9 installed on the same volume, but only one appears in Startup Manager.
This article has been archived and is no longer updated by Apple.

Symptom

You have both Mac OS X and Mac OS 9 installed on the same volume. You press and hold the Option key during startup, but only Mac OS 9 appears in Startup Manager.

Note: All Apple computers (other than servers) come in this default configuration.

Solution

You may use the X key during startup to force the selection of Mac OS X. Follow these steps:

1. If the computer is shut down, press the power button. If it is on, restart it.
2. Immediately press and hold the X key. The computer starts up to a gray screen, then restarts again.
3. Release the X key after the computer restarts.

The computer starts up from Mac OS X. The Startup Disk setting is now changed to start up in Mac OS X. This differs from using Startup Manager, which does not save the preference change.

For more information, see technical documents:

106696: "**Mac OS: Press X Key During Startup to Select Mac OS X on Single-Partition Installations**"
106698: "**Startup Manager: Only Displays Mac OS X, Not Mac OS 9**"
106178: "**Startup Manager: How to Select a Startup Volume**"
Published Date: Feb 17, 2012

Startup Manager: Only Displays Mac OS X, Not Mac OS 9

Your computer can start from Mac OS 9 or Mac OS X, you have both Mac OS X and Mac OS 9 installed on the same volume, but only one appears in Startup Manager.
This article has been archived and is no longer updated by Apple.

Symptom

You have both Mac OS X and Mac OS 9 installed on the same volume of a computer that can start from either. You press and hold the Option key during startup, but only Mac OS X appears in Startup Manager.

Note: All Apple computers (other than servers) come in this default configuration.

Solution

After starting up into Mac OS X, follow these steps:

1. Choose System Preferences from the Apple Menu.
2. Click Startup Disk.
3. Click the Mac OS 9 System Folder.
4. Click Restart, then Save and Restart when prompted to save your change.

If you are troubleshooting Mac OS X and cannot use System Preferences to select Mac OS 9, then start the computer up from a Mac OS 9.1 or later CD-ROM disc. Follow these steps:

- Insert the Mac OS 9.x CD into the disc drive, then restart the computer.
- Press and hold the C key.
- After the computer starts up from Mac OS 9, choose Control Panels from the Apple menu.
- Open the Startup Disk control panel.
- Choose Mac OS 9. Be sure to choose the hard disk icon, and not the CD icon.
- Restart the computer.

For more information, see technical documents:

106178: "**Startup Manager: How to Select a Startup Volume**"
106696: "**Mac OS: Press X Key During Startup to Select Mac OS X on Single-Partition Installations**"
106697: "**Startup Manager: Only Displays Mac OS 9, Not Mac OS X**
Published Date: Oct 7, 2016

Mac OS X 10.1: Language Updates for Mac OS X

Language updates allow you to add more languages to Mac OS X.
This article has been archived and is no longer updated by Apple.
Mac OS X is a multilingual operating system. You may use languages other than the one you selected during installation. Language updates install additional fonts and resources that allow more language choices to appear in the International pane of the System Preferences application. The "Available Updates" section below lists the languages that are available. You may also download combination installers that group the individual languages by region.

The language updates work with Mac OS X 10.1.5. If you do use a version of Mac OS X prior to 10.1.5, see technical document 106888: "**Mac OS X Update 10.1.5: Enhancements and 'Before You Install' Information**"

Note: If you have previously installed a Mac OS X Language Update before updating to Mac OS X version 10.1.5, you do not need to reinstall the language update(s)

After you have updated to Mac OS X 10.1.5, you can install language updates. Follow these steps:

1. Choose System Preferences from the Apple menu.
2. Choose Software Update from the View menu.
3. Click Update Now.

You should see language updates. After installing the software, you can add to the Languages list. To do that, follow these steps:

1. Choose System Preferences from the Apple menu.
2. Choose International from the View menu.
3. Click Edit.
4. Select the new languages that you wish to appear in the list.
5. Click OK.

Available updates

Via Automatic Software Update

- Swedish Language Support
- Danish Language Support
- Finnish Language Support
- Norwegian Language Support
- Brazilian Portuguese Language Support
- Korean Language Support
- Simplified Chinese Language Support
- Traditional Chinese Language Support

Via Apple Software Downloads

You may download standalone installers from Apple Software Downloads (http://www.apple.com/swupdates/).

- Roman Language Updates
  This combined installer adds fonts and resources needed to use Mac OS X in Swedish, Danish, Finnish, Norwegian, and Brazilian Portuguese, in addition to any other language currently installed.
- Asian Language Updates
  This combined installer adds fonts and resources needed to use Mac OS X in Simplified Chinese, Traditional Chinese, and Korean, in addition to any other language currently installed.

Published Date: Feb 17, 2012

Mac OS X: How to Automatically Start up Classic at Login

You may set the Classic environment to automatically start up after you log in. This is set in the Classic pane of System Preferences.
This article has been archived and is no longer updated by Apple.
If you want the Classic environment to open automatically after you log in to Mac OS X, you can choose that behavior in the Classic pane of the System Preferences application. Follow these steps to enable or disable the feature:

1. Choose System Preferences from the Apple menu.
2. Choose Classic from the View menu.
3. If necessary, click the Start/Stop tab.
4. Select or deselect the checkbox for "Start up Classic on login to this computer," whichever you desire.

If you want to set up other login/startup features or items, see technical document 106703: "**Mac OS X: Startup/Login Options and Features**"
Published Date: Feb 17, 2012

Mac OS X: Startup/Login Options and Features

You may enable or invoke several useful Mac OS X features during the startup and login sequences. They may be used to change the way you log in, open items when you log in, update your software, or perform other tasks.
This article has been archived and is no longer updated by Apple.
The following items may be referred to as "startup" or "login" features. A "startup" feature is one that occurs while the computer is starting up, but before you log in. A "login" item or feature is one that occurs immediately after you log in to Mac OS X with your user name and password. These features are available:

Automatic login

You may set up Mac OS X to automatically log in a particular user after startup. See technical document 106164: "**Mac OS X 10.0: How to Log In Automatically at System Startup Time**"

Log in by list or by text entry

The Mac OS X login window allows you to log in by choosing your name from a list of the computer's users, which includes pictures in Mac OS X 10.1 and later. Alternatively, you may choose to type your name and password instead of displaying a list. See technical document 61337: "**Mac OS X: How to Set up a Login List**"

Hide/Suppress previous user's login name

When logging in by text entry, Mac OS X displays the name of the last user that logged in. You may turn off this feature by following the steps in technical document 106691: "**Mac OS X 10.1.2: How to Prevent Prior User Name from Appearing During Login**"

Login items

To set up login items, see technical document 106146: "**Mac OS X: How to Set up Login Items**"

Automatic Classic startup

You may set up Classic to start up automatically after you log in. See technical document 106701: "**Mac OS X: Automatic Classic Startup**"

Changing the startup volume

You can change your startup volume at system startup time. See technical document 106178: "**Startup Manager: How to Select a Startup Volume** "

Software Update

Software Update may periodically open after you log in to your computer. If so, it is set to automatically check for updates. You can set this up in the Software Update pane of System Preferences. See technical document 106704: "**Mac OS X: How to Update Your Software**"

Note: This list covers common startup/login item and features. It is not an exhaustive description of what Mac OS X could be configured to do during the startup and login sequences.
Published Date: Feb 17, 2012

Mac OS X: How to Change the Default Printer

You may change the Mac OS X default printer by following the steps listed in this document.
This article has been archived and is no longer updated by Apple.
When more than one printer is available, you can specify which printer should be the default in the print dialog. Unless you choose otherwise, Mac OS X defaults to the printer most recently added. To change the default printer, follow these steps:

1. From the print dialog, choose Edit Printer List from the Printer pop-up menu.
2. Select a printer from the Printer List.
3. Choose Make Default from the Printers menu.

In the Printer List window, a gray dot marks the default printer.
Published Date: Oct 7, 2016

Mac OS X: How to Choose a PPD File for a PostScript Printer

PostScript printers may use PPD files to access special printer features. Mac OS X often chooses the PPD automatically. This document describes how you may choose a PPD.
This article has been archived and is no longer updated by Apple.
Note: This document covers one aspect of printing in Mac OS X. For more information, see technical document 106706: "**Mac OS X: How to Print**"

Choosing a PPD file

PostScript printers may use PPD files to give you access to special printer features. Mac OS X assigns a PPD file to a USB or AppleTalk printer automatically when you add the printer. You manually select a PPD file when adding an LPR printer to the printer list. Even if a PPD file is not found for a given LPR printer, Mac OS X can still print to it. Choose the Generic PPD or one for a printer model similar to yours. Choosing a similar model often provides access to more of your printer's capabilities the Generic PPD does, which is designed for maximum compatibility with a wide range of printers. For more details, see technical document 106516: "**Mac OS X 10.1: Includes PPDs for Many PostScript Printers**"

Changing a printer's PPD file

To associate a different PPD file with a printer, whether network or USB, follow these steps:

1. From the Print dialog, choose Edit Printer List from the Printer pop-up menu.
2. Select the printer, then click Delete.
3. Add the printer again, selecting the specific PPD you wish to use from the Printer Model pop-up menu.

To see which PPD a printer is using

To find out which PPD file a printer is using, follow these steps:

1. Open an application, such as TextEdit.
2. Choose Print from the File menu.
3. Choose the printer from the Printer pop-up menu.
4. Choose Summary from the pop-up menu that does not have a name to its left.

Published Date: Oct 8, 2016

Mac OS X 10.1: Chart of Available Software Updates

This article has been archived and is no longer updated by Apple.

This chart lists updates available for Mac OS X 10.1, or software that requires Mac OS X 10.1 or later, such as iPhoto 1.0.

Software Updates for Mac OS X 10.1

Update Name and Download	Prerequisite Software Install in Order Listed	Release Date	Information	Notes
Mac OS 9.2.2 Update (for Classic Environment)	◦ Mac OS 9.2.1	2001-12-05		3
Security Update 2004-01-26 (10.1.5 Client and Server)	◦ Mac OS X 10.1.5	2004-01-26		1
Security Update 7-18-02 for v10.1	◦ Mac OS X 10.1	2002-07-18		1, 8
Mac OS X Update 10.1.5	◦ Mac OS X 10.1 ◦ Security Update 7-18-02	2002-06-05		1, 4, 7
Security Update 7-18-02	◦ Mac OS X 10.1.5	2002-07-18		1, 8
Language Support Updates for Mac OS X 10.1.5	◦ Mac OS X 10.1 ◦ Mac OS X Update 10.1.5 ◦ Security Update 7-18-02	2002-06-05		1, 7
Networking Update 1.0	◦ Mac OS X 10.1.5	2002-06-21		1

Upgrading to a later version of Mac OS X

For information about upgrading, see technical document **106953**.

For information about Mac OS X 10.2 updates, see technical document 75421, "**Mac OS X 10.2: Chart of Available Mac OS Software Updates**".

Mac OS X Application Updates				
Update Name and Download	**Prerequisite Software Install in Order Listed**	**Release Date**	**Information**	**Notes**
AirPort 2.0.4 for Mac OS X	◦ Mac OS X 10.1.5 ◦ Networking Update 1.0	2002-06-24		2

Apple DVD Player 3.0.1 for Mac OS X	• Mac OS X 10.1 • Security Update 7-18-02 • Mac OS X Update 10.1.1 or later	2001-11-29		6
iPhoto 1.1.1	• Mac OS X 10.1 • Security Update 7-18-02 • Mac OS X Update 10.1.2 or later	2002-01-07		2
iTunes 2.0.4 for Mac OS X	• Mac OS X 10.1 • Security Update 7-18-02 • Mac OS X Update 10.1.1 or later	2001-12-13		2
iTunes 3.0 for Mac OS X	• Mac OS X 10.1.4 or later • Security Update 7-18-02	2002-07-17		2, 6
Address Book Importer	• Mac OS X 10.1	2001-11-07		2
iDVD 2.0.5 Update for Mac OS X	• Mac OS X 10.1	2001-12-04		2
Internet Explorer 5.1 Security Update (5.1.4)	• Mac OS X 10.1	2002-04		2, 5
iPod Software 1.1	• Mac OS X 10.1 • Security Update 7-18-02 • Mac OS X Update 10.1.2 or later	2002-03-20		N/A
Java 1.3.1 Update 1	• Mac OS X 10.1 • Security Update 7-18-02 • Mac OS X Update 10.1.3 or later	2002-02-25		2, 7
Open Firmware Password 1.0.2	• Firmware 4.1.7 or later • Mac OS X 10.1	2001-12-20		N/A

Notes

1. To reinstall this update over a later version, you should backup important data, erase your Mac OS X volume, install Mac OS X 10.1, reinstall any prerequisite updates, and then this update. You may wish to back up the entire contents of your Home directory, which is the folder bearing your name in the Users folder.

2. You can reinstall this update without first erasing your Mac OS X volume. If you did not save the update after an Automatic Software Update, download the standalone installer from Apple Software Downloads (http://www.apple.com/swupdates/).

3. To reinstall this update, first start up from Mac OS 9. For instructions on how to do this, see technical document 106667: "**How to Switch Between Mac OS 9 and Mac OS X**"

4. This update replaces the Mac OS X 10.1.1, 10.1.2, 10.1.3, 10.1.4 Updates, and the Security Update April 2002..

5. Use the Software Update feature of System Preferences to install this update. It is not available as a stand-alone software download through Apple Software Downloads.

6. This software does not work with all Mac OS X-compatible computers. See the Information and Download link for this document.

7. Computers that shipped with Mac OS X version 10.1.3 do not require the listed Prerequisite Software before installing this update.

8. "Security Update 7-18-02 for v 10.1" is used with Mac OS X 10.1 only, and must be installed before any other Mac OS X update. "Security Update 7-18-02" is used with Mac OS X versions 10.1.1 through 10.1.5, and must be installed before any additional Mac OS X update.

Related Documents

88279 Mac OS X 10.1: Cannot Install 10.1.5 (or other "10.1.x") Update
106718 Mac OS X: How to Install and Update Mac OS X
106176 Mac OS X: About This Mac "Build" Information

Published Date: Oct 8, 2016

Mac OS X: How to Install and Update Mac OS X

This document describes how to install Mac OS X, and update it to the latest software version.
This article has been archived and is no longer updated by Apple.

How to Install Mac OS X

These steps describe installation on a disk that does not contain Mac OS X. If you already have Mac OS X installed and want to update or reinstall it, skip this section.

1. Insert the Mac OS X Installation CD-ROM disc into the computer's disc drive.
2. Double-click the Install Mac OS X icon in the CD window. Your computer restarts automatically, and the Mac OS X Installer opens. You may then review the Read Me documentation and the Software License Agreement.
3. If you agree with the Software License Agreement, follow the on-screen prompts to complete the installation.
4. Restart your computer when the installation is complete.
5. Follow the prompts to complete Mac OS X Setup Assistant.

How to Update Mac OS X

1. Choose About This Mac from the Apple Menu to determine which version of Mac OS X you have installed.

Note: If your version is 10.0.4 or earlier, you must update to Mac OS X 10.1 before you can install the latest software. This requires a 10.1 update CD.

Once you know which version you have installed, you may update one of two ways, Automatic Software Update or by using standalone installers from Apple Software Downloads (http://www.apple.com/swupdates/).

Automatic Software Update

Automatic Software Update is available in the System Preferences application. For more information on how to use it, see technical document 106704: "**Mac OS X: How to Update Your Software**".

Manual update using standalone installer

You can download software updates from Apple Software Downloads (http://www.apple.com/swupdates/). Some updates must be installed in a specific sequence, which is described in technical document 106713: "**Mac OS X 10.1: Chart of Available Software Updates**".

How to Reinstall Mac OS X

You should not reinstall an earlier version of Mac OS X over a later version. For more information, see technical documents:

106605: "**Mac OS X 10.1: Do Not Reinstall After Using the Mac OS X Update 10.1.1, 10.1.2, 10.1.3, 10.1.4, or 10.1.5**".

Related Documents

106692 Mac OS X: Troubleshooting Installation and Software Updates

Published Date: Oct 8, 2016

Mac OS X: How to Use Mac OS 9 Applications

Mac OS X includes the Classic environment, which allows you to use most Mac OS 9 applications without restarting the computer.
This article has been archived and is no longer updated by Apple.
The Classic environment of Mac OS X allows you to use most Mac OS 9 applications. This means that most people only need to restart the computer from Mac OS 9 to install Mac OS 9 software updates. Mac OS 9-compatible applications are referred to as "Classic" applications.

Starting a Classic application

- Double-click the Classic application, just as you would any other. Classic starts up automatically.
- Clicking the disclosure triangle in the Classic startup window reveals the Mac OS 9 startup sequence.
- After Classic starts up, it remains active until you stop it or log out.
- Classic may be manually started or stopped in the Classic pane of System Preferences. Other Classic options are also located there.

Mac OS 9 installation required

- You must install Mac OS 9 before Classic can be used. The Mac OS 9 Installation CD-ROM disc is included with earlier versions of Mac OS X for this reason. It is also included with new computers, in addition to Mac OS X. Update Mac OS 9 to the latest version for best performance. For more information on Mac OS X 10.2 as a standalone retail product, see technical document 106966, "**Mac OS X 10.2: Classic Requires That You Already Have Mac OS 9**".
- If you have Mac OS 9 installed on more than one disk, use the Classic pane of System Preferences to select the System Folder that Classic uses.

Locating Classic software and documents

If you install Mac OS X on the same disk or partition as your Mac OS 9 system, your Classic applications and documents remain in the same folders. You should note, however, that Mac OS X and Mac OS 9 use different desktop folders. To see items from your Mac OS 9 desktop, use the "Desktop (Mac OS 9)" alias that is on your Mac OS X desktop. If this alias is not on your desktop or does not work, see technical document 106468: "**Mac OS X: How to Replace the Alias "Desktop (Mac OS 9)**".

Printing from Classic applications

See technical document 106710: "**Mac OS X: How to Print From a Classic Application**".

More information about Classic

See "Classic" on pages 14 and 15 of your "Welcome to Mac OS X" booklet.

You can find more information in Mac Help, or search for other technical documents using the phrase "Mac OS X and Classic".

Troubleshooting

See technical document 106677: "**Mac OS X: Troubleshooting the Classic Environment**".
Published Date: Oct 8, 2016

Mac OS X: Use Disk Utility If CD Burn Is Interrupted

If a disc burn is interrupted, Disk Utility allows you to recover disk space that was reserved for temporary files.
This article has been archived and is no longer updated by Apple.
Mac OS X reserves an amount of hard disk space when burning a CD. The amount of space reserved depends on the size of the CD. If a disc burning operation is unexpectedly interrupted, this space may be temporarily unavailable. The system is not otherwise adversely affected. Interruption could occur, for example, if the computer loses power, is force restarted, or an external CD burner is disconnected during use.

For Mac OS 10.2 or later

To make the temporary space available again, restart the computer. It is not necessary to use Disk Utility or fsck.

For Mac OS X 10.0 to 10.1.5

To make the temporary space available, either use Disk Utility to repair the disk or burn another CD successfully.

Steps for using Disk Utility:

Insert your Mac OS X CD-ROM disc, then restart the computer while holding the C key.

1. Once started up from CD, choose Disk Utility from the Installer menu.
Important: Do not click Continue in the first screen of the Installer. If you do, you must restart from CD to access Disk Utility.
2. Click the First Aid tab.
3. Click the disclosure triangle to the left of the hard drive icon to display the names of your hard disk volumes and partitions.
4. Select your Mac OS X volume.
5. Click Repair. Disk Utility checks the disk.

Once complete, quit Disk Utility and restart from your Mac OS X volume.

Advanced: Using fsck

If your Mac OS X CD or your CD drive is not available, use fsck twice instead of Disk Utility.

Use fsck two times. See technical document 106214: "**Mac OS X: Why, When, and How to Run fsck for File System Maintenance**".
Published Date: Feb 17, 2012

Mac OS X: Classic Game Slows or Stops Responding When Changing Video Resolution or Color Depth

Certain 3D-accelerated Classic games, including Rune and Madden NFL 2000, may appear to stop responding if a high video resolution or color depth is selected from within the game's preference screen.
This article has been archived and is no longer updated by Apple.

Symptom

After selecting a higher video resolution or color depth within a 3D-accelerated (OpenGL) Classic game, the game may seem to stop responding (the game actually is still working, but not responding as rapidly).

Certain 3D-accelerated Classic games, including:

- Madden NFL 2000 (published by Aspyr)
- Rune (published by Westlake Interactive)

Solution

Use a lower video resolution (such as 800- by 600-pixels) and/or lower color depth (such as 16-bit, "thousands of colors").

If you are not sure how to change the game's settings back, refer to documentation that came with the software, or contact the publisher for assistance.

The more VRAM that is available on your graphics card, the higher the video resolution and color depth settings you can use.

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

The following document can help you search for a particular vendor's address and phone number:

Document 17159: "**Locating Vendor Information**"

Published Date: Feb 17, 2012

Mac OS X 10.1.5 or Earlier: Installing Mac OS 9 in Classic May Leave Temporary Items

If Mac OS X File Sharing is turned on when you install Mac OS 9.1 or Mac OS 9.2 from within Classic, 200 MB of temporary items used by the Installer may be left behind after the installation has completed. These items do not affect the installation and can be deleted normally.

This article has been archived and is no longer updated by Apple.

Symptom

When installing Mac OS 9.1 or Mac OS 9.2 from within Classic, some disk image file systems may remain on your Mac OS X desktop. When this occurs, several Installer Temp folders may also be left in the folder called "System Folder" on the volume where you installed Mac OS 9.

Note: This does not affect Mac OS X 10.2 or later, because File Sharing in Classic is no longer supported.

Solution

These symptoms will not occur if you turn off Mac OS X File Sharing in the Sharing pane of System Preferences before installing Mac OS 9.

If these items are left after installation, follow these steps:

1. Click the disk image icons in the Finder to select them.
2. Choose Eject from the Finder application menu.
3. Locate any folders within the Mac OS 9 System Folder with names that contain "Installer Temp" and drag them to the Trash.
4. Empty the Trash.

Published Date: Feb 17, 2012

Mac OS X: PPP Terminal Window Is Blank When Connecting

This document explains what to do when you connect to a PPP server that requires you to log in via a terminal window, and the expected login prompt does not appear in the window.
This article has been archived and is no longer updated by Apple.

Symptom

Some PPP servers require you connect via a terminal window when establishing the dial-up connection. In this case, you must select "Connect using a terminal window (command line)" in the PPP Options pane of System Preferences. In some cases, the terminal window may appear blank instead of showing the expected login prompt when you connect from a Mac OS X client.

Solution

This is resolved in Mac OS X 10.2 or later. For earlier versions, press the Return key when the blank terminal window appears. The login prompt appears, and you can continue the login process normally.
Published Date: Feb 17, 2012

Mac OS X: Disk Image File Cannot Be Deleted While the Image Is Available

A disk image file cannot be deleted while the related disk image appears on the desktop or is otherwise available..
This article has been archived and is no longer updated by Apple.

Symptom

An alert box with this message appears when you try to delete a disk image file:

> "This operation cannot be completed because the item <name of disk image file> is in use."

Solution

This is a normal behavior. You only need to quit using files stored on the disk image to be able to delete it. You make a disk image appear on the desktop or otherwise become available by double-clicking a ".img" file. This is sometimes called a "mounted" disk image. Though a disk image is not actually a disk, it behaves as one. Follow these steps to put it way or "unmount" it:

1. Find the related disk image on the desktop or in the Finder. It has the same name as the item you are unable to delete, but without the ".img" or ".dmg" filename suffix. It has a disk icon, and it appears in the Computer list in the Finder window.
2. Select the disk image that appears on the desktop.
3. Choose Eject from the File menu, or drag it to the Trash. If the symptom message appears again, close any files or applications that you opened from the disk image. If you cannot determine which are in use, quit all running applications or restart the computer.

For more information on disk images, see technical document 106161: "**Mac OS X: About Using Disk Copy Images**".
Published Date: Oct 8, 2016

Mac OS X: Cannot Install From ATA ID 1 (Slave) Disc Drive

A Mac OS X Installation disc does not work when using a disc drive that is set to ATA ID 1 (slave mode).
This article has been archived and is no longer updated by Apple.

Symptom

You cannot start up or install from the Mac OS X Install CD-ROM disc. A broken folder icon or an alert box with this message may appear:

> "An error occurred. Startup Disk was unable to select the install CD as the startup disk. (-2)"

Note: This does not affect USB-, SCSI-, or FireWire-based disc drives. Apple-installed ATA drives are factory-configured with ATA ID 0.

Solution

"Disc drive" refers to CD, CD-R, CD-RW, DVD, DVD-RAM, DVD-R, Combo drives, SuperDrives. Determine the ATA ID of your disc drive using Apple System Profiler.

1. Open the Apple System Profiler.
2. Click the Devices and Volumes tab.
3. Note the "ID=" information that is associated with your disc drive.

If you do not have access to Apple System Profiler, you will need to visually check jumper settings on your disc drive.

If the ATA ID is 0

Stop here. This document does not apply to you. See technical documents:

88152: "**Mac OS X: Stops Responding While Starting Up From Mac OS X CD**"
106694: "**Mac OS X: Troubleshooting the Mac OS X Installer**"

If the ATA ID is 1

Important: Resolving this issue requires opening your computer's case, physically removing the disc drive, moving one or two small jumpers on the drive, and putting the drive back in your computer. Instructions may have been included with your drive (if it was purchased separately from a third-party company) or appear in the materials which came with your computer.

The drive's ATA ID should be changed to ID 0 (master). Any other ATA device on the bus should need to be set to ATA ID 1. This is usually accomplished by adjusting jumpers on the back of the drive. Specific jumper setting information may be available from the manufacturer of the drive, or printed on the drive itself. If you use a third-party CD drive instead of the original Apple drive, you should also verify product compatibility with the manufacturer. If you need detailed assistance with changing the ID to 0 on a third-party device, refer to the manufacturer of the drive or their Web site.

Note: You should not change your Apple-installed disc drive to ATA ID 1 (slave mode) when adding other ATA devices.
Published Date: Oct 8, 2016

Mac OS X Server: Lookupd "truncating list at maximum 1024 values" Message

If a Mac OS X Server process accesses group information, and that group contains more than 1024 members, a message appears in the console and system.log. The message is harmless and can be ignored.
This article has been archived and is no longer updated by Apple.

Symptom

The following message can appear in the console or system.log:

<time> {host} lookupd[pid]: truncating list at "{host}" (maximum 1024 of {#} values) <time> {host} last message repeated # times

Key:

1. **<time>** is the time that the message was logged in the console and system.log. {host} is the name of the computer on which the issue occurred or the user record that was passed to lookupd that initiated the query.
2. **pid** is the process ID of lookupd, the process that caused the message.
3. **{#}** is the total number of users in the group that lookupd is accessing.
4. # is the number of times the message is repeated as lookupd accesses the group.

Solution

This message is harmless. It does not reflect an actual limitation in the number of users that may be the member of a group in Mac OS X Server or Mac OS X.

These messages can occur on Mac OS X Server computers that have over 1024 local users as members of a single group. It can also occur when the Mac OS X computer has Directory Services set up to bind to a directory that contains more than 1024 users. You can safely ignore these messages. For more information on lookupd, see technical document 30770, "**Mac OS X: What is Lookupd?**"
Published Date: Feb 20, 2012

Mac OS X Server: How to Remotely Determine Which Version Is Installed

You may use the Server Admin or Terminal application to remotely determine the version of Mac OS X Server.
This article has been archived and is no longer updated by Apple.

Using Server Admin

1. Open Server Admin and log on to the Server.
2. Click the General tab.
3. Choose Show Server Info from the Server Info module.

The Server Admin can be found in /Applications/Utilities/ folder. The Mac OS X Server CD-ROM also includes the "Admin-Install.mpkg" file that you can use to install Server Admin application on a Mac OS X 10.1 client computer. It can be found on the CD in this location:

/Mac OS X Server/Welcome to Mac OS X Server/Admin Install/Admin_Install.mpkg

Using the Terminal

Experienced administrators may determine the version of Mac OS X Server by using the uname command with an "a" flag (uname -a) via a remote Terminal session.

This command works with Mac OS X Server, but will only output system information that relates to the UNIX-based foundation of Mac OS X Server, known as Darwin. For example, it can provide the following output:

[macosxserver:~] admin% uname -a Darwin macosxserver.domainname.com 5.2 Darwin Kernel Version 5.2: Fri Dec 7 21:39:35 PST 2001; root:xnu/xnu-201.14.obj~1/RELEASE_PPC Power Macintosh powerpc

To determine the version of Mac OS X Server via a remote terminal session, use the sw_vers command. For example, sw_vers can provide the following output:

[macosxserver:~] admin% sw_vers ProductName: Mac OS X Server ProductVersion: 10.1.2 Server BuildVersion: 5P68
Published Date: Feb 17, 2012

Mac OS X Mail: Spell Checker Available for English Only

Prior to Mac OS X 10.2, spell checking in the application Mail is only available for the English language.
This article has been archived and is no longer updated by Apple.

Symptom

1. Spell checking in the application Mail does not recognize non-English words.

2. When you choose Spelling from the Edit menu in Mail, you only find the English dictionary.

Solution

Spell checker is available in additional languages in Mac OS X 10.2 and later.
Published Date: Feb 17, 2012

Mac OS X: How to Add or Remove Classic Fonts

If you add fonts in the Classic System Folder, you must restart the Classic environment in order for the new fonts to be available to Classic applications. If want to remove fonts from the Classic System Folder, you must first shut down the Classic environment.
This article has been archived and is no longer updated by Apple.

Adding fonts

Mac OS X 10.0 through 10.2.8:

1. Stop the Classic environment (refer to "How to stop or restart Classic" below).
2. Add the font file(s) to the Mac OS 9 System Folder's Fonts folder. If you do not know which Mac OS 9 System Folder is used by Classic, check the Classic preference pane.
3. Start Classic or open a Classic application. The added font files should now be available.

Mac OS X 10.3 or later:

1. Quit any running Classic applications that you want the new fonts to appear in, or stop Classic using Classic preferences.
2. Open Font Book, which is in the Applications folder.
3. Click the triangle next to All Fonts.
4. Drag the fonts you're adding onto "Classic Mac OS".
5. Open the desired Classic application(s).

Removing fonts

Mac OS X 10.0 through 10.2.8:

1. Stop the Classic environment (refer to "How to stop or restart Classic" below).
2. Remove the font file(s) from the Fonts folder within the Mac OS 9 System Folder. If you do not know which Mac OS 9 System Folder is used by Classic, check the Classic preference pane.
3. Start Classic or open a Classic application. The removed font files should no longer be available.

Mac OS X 10.3 or later:

1. Open Font Book, which is in the Applications folder.
2. Click the triangle next to All Fonts.
3. Select "Classic Mac OS" in the Collection column.

   Important: "Classic Mac OS" fonts differ from "Classic" fonts. Removing or disabling a "Classic" font doesn't affect the Classic environment.

4. Select the font to be removed in the Fonts column.
5. From the File menu, choose Remove Font.
6. Restart Classic using Classic preferences.

Note: Removing fonts with Font Book moves the font file into the Trash. Empty the Trash to delete the file.

How to stop or restart Classic

1. Choose Apple menu > System Preferences.
2. Choose View > Classic.
3. Click the Stop or Restart button, as desired.

Published Date: Oct 8, 2016

Mac OS X Mail: About CRAM-MD5 Encryption

In Mac OS X 10.1.2 and later, Mac OS X Mail can use CRAM-MD5 encryption to communicate with SMTP and IMAP servers.
This article has been archived and is no longer updated by Apple.
CRAM-MD5 is a method of encryption that can be used by Mail when logging in to SMTP and IMAP servers in Mac OS X 10.1.2 and later. CRAM-MD5 is used by default to encrypt your password when sending mail using an SMTP server or checking mail on an IMAP server. If the server does not have a CRAM-MD5 encrypted authentication feature, Mail reverts to sending your password in clear text.

Note: In rare cases, Mail may not communicate with a server that responds unexpectedly to CRAM-MD5 encrypted authentication. In this case, Mail will generate a message that can be viewed in the Console application. The message has this format:

> date&time Mail [process id] CRAM-MD5 authentication failed for <SMTP or IMAP> account username@server

In this case, CRAM-MD5 authentication may be manually disabled by following these steps:

1. Open the Terminal application.
2. Type this line exactly:

```
defaults write com.apple.mail DisableMD5Authentication YES
```

3. Press Return.

To re-enable CRAM-MD5 authentication, follow the above directions, but type the command:

```
defaults write com.apple.mail DisableMD5Authentication NO
```

Published Date: Feb 17, 2012

Mac OS X 10.1, 10.2: Help Does Not Open, "any ‘scgaijieditor001‘ s were not found" Alert

Help may not appear in the TrueType Font Editor, Chinese Text Converter, or IM Plugin Converter. These applications are found in the Asia Text Extras folder included with language support updates to Mac OS X 10.1 and 10.2.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to open Help within these applications, an alert box with this message may appear:

> "any 'scgaijieditor001' s were not found."

Solution

The Asia Text Extras folder is found at /Applications/Utilities/ after installing language support updates for Mac OS X. This folder includes the TrueType Font Editor, Chinese Text Converter, and IM Plugin Converter. If you select Japanese during installation or set it as the system language in the International pane of System Preferences, Help may not appear for these three applications.

1. Choose System Preferences from the Apple menu.
2. Choose International from the View menu.
3. Click the Keyboard Menu tab.
4. Select Simplified Chinese from the Keyboard list.
5. The Keyboard menu now appears in the menu bar as the symbol of the selected keyboard, which is often a flag.
6. Using the keyboard menu, switch from Kotoeri to Simplified Chinese.

After performing these steps, Help works with the affected applications, even if you switch back to Kotoeri or deselect Simplified Chinese in the Keyboard Menu pane of System Preferences.

Note: Help information for Asia Text Extras will appear in Chinese.
Published Date: Oct 10, 2016

Macintosh Manager 2.1.1: A Qualified DNS Record May Help Macintosh Manager

If your watchdog log shows that the Macintosh Manager process is "Respawning," you should set up a fully qualified DNS record for the Macintosh Manager server.
This article has been archived and is no longer updated by Apple.

Symptom

1. Macintosh Manager clients take longer to log in than expected.

2. The Watchdog log on the server notes "respawning" of the Macintosh Manager Server process. You can examine the log by using the Log Viewer feature of the Server Admin application. (Figure 1).

Figure 1 Using Server Admin to view logs

Solution

Use the Network Utility (/Applications/Utilities/) to determine if the server's IP address has a fully qualified DNS entry. You should verify both forward and reverse lookups. Follow these steps:

1. Open the Network Utility.
2. Click the Lookup tab.
3. Deselect the checkbox for "Use 'dig' in place of 'nslookup'".
4. Type the server's DNS name (such as myserver.apple.com) in the text entry field.
5. Click Lookup. Is the server's correct IP address returned?

Figure 2 Looking up the Knowledge Base

6. Type the server's IP address (such as 192.169.1.100) in the text entry field.
7. Click Lookup. Is the server's correct DNS name returned?

If one or both of the DNS lookups fails to produce the correct result, contact your network administrator. Request that a fully qualified DNS record be created for your server's name and IP address, for both forward and reverse lookup.

If Macintosh Manager login still seems slow, see technical document 106454, "**Macintosh Manager 2.0: Common Setup Strategies**".
Published Date: Feb 17, 2012

Mac OS X Update 10.1.3: Enhancements and "Before You Install" Information

Mac OS X Update 10.1.3 addresses certain issues and updates system software.

This article has been archived and is no longer updated by Apple.

This software has been replaced by a later update. Because later updates include previous enhancements, the following information is still provided for reference. To find current software, see technical document 106713, "**Mac OS X 10.1: Chart of Available Software Updates**".

Enhancements Delivered with the Mac OS X 10.1.3 Update

In addition to enhancements previously delivered with Mac OS X 10.1.1 and 10.1.2, the Mac OS X 10.1.3 update includes the following:

Device Compatibility Enhancements

- Resolves an issue with USB PCI cards that do not work with sleep mode.
- Image Capture continues to recognize a Canon PowerShot camera connected to a USB port when a user logs out and back in.
- Kodak digital cameras with external SD memory (that contains image data) no longer display duplicate images in Image Capture.
- Works with USB Device Firmware Update.
- Improves USB PC Card memory usage.
- Improves compatibility with various SCSI-based CD-R drives.
- Improves compatibility with various SCSI-based scanners.
- Enhances robustness when using certain third-party CD drives that may not provide expected TOC size information.
- Improves compatibility with Microtech CompactFlash and SmartMedia readers.
- Adds or extends compatibility with many FireWire- and USB-based CD burners including: Que Fire! 24x10x40, EZQuest BOA CDR/W 24X10X40, LaCie 16x10x40 U-RW (FireWire connection) and CDRW 24-10-40 U & I (FireWire connection), Yamaha CRW3200IX-VK and CRW3200FXZ, MCE Technologies, Xcarét Pro (2000) 8x8x24x Expansion Bay CDRW Drive, Sony CDRW D-i1210J/1394, and I-O Data CDRW-i16J/US2.

Networking, Mail, and Internet Connectivity Enhancements

- The Login window can authenticate using Directory Services.
- Screen Saver can authenticate using Directory Services.
- More reliable LDAP compatibility when communicating with Active Directory.
- Mail has an SSL and encrypted IMAP (SIMAP) feature.
- Works with simultaneous active and passive modem port connections; software that receives incoming calls (such as FaxSTF) works better with software that places outgoing calls (such as Internet Connect).
- Improves WebDAV file service robustness, for example: when simultaneously copying and browsing files or folders on your iDisk.
- An issue (alert message "-50") when copying files whose name contains a comma to an iDisk via WebDAV has been addressed.
- Addresses a rare kernel panic that may have occurred during very heavy AppleTalk network traffic.
- Incomplete, unusable downloaded files are deleted when expected.
- Addresses a potential issue in which some deleted Mail messages may have been visible after compacting a mailbox.
- A later version of OpenSSH is included (version 3.0.2p1).
- Includes other general URL Access enhancements. (URL Access is a Mac OS X component that many applications use to provide Internet access features.)
- Includes URL Access scripting enhancements.

Other Enhancements

- Automatic login items may now be disabled temporarily. See technical document 106756, "**Mac OS X: How to Prevent Login Items From Opening Automatically**".
- Improves reliability when force quitting Classic applications individually.
- Reduces likelihood of a potential issue in which the system clock unexpectedly changes to 1969 (or 1970) during startup.
- Resolves a potential issue in which sound may mute unexpectedly when using the optional IrDA menu.
- Enhances reliability of waking certain PowerBook computers from sleep if peripheral devices are disconnected while the computer is in sleep.
- Improves compatibility with certain kinds of audio CDs (pre-gap-audio-track and pre-gap-data-track CDs).
- Improves compatibility with 80 mm CD-R discs used by Sony MVC-CD digital cameras.
- Addresses a rare issue in which the mouse pointer may not appear after exiting iTunes full screen visuals.
- Improves robustness of 3D-accelerated games on certain PowerBook computers, when video mirroring is turned on.
- Includes graphics drivers and display management software; improves display mirroring feature.
- Includes other general CD burning-related enhancements.

- Includes general iTunes enhancements.
- Addresses other potential kernel panic situations.

Published Date: Oct 10, 2016

Mac OS X: Loss of Sound After Waking From Sleep

After installing or updating to Mac OS X 10.1.2, there may be no sound after your computer wakes from sleep.
This article has been archived and is no longer updated by Apple.

Symptom

Visual feedback indicates you have changed the volume when you press the volume keys on the keyboard, but you do not hear any sound. Applications that should produce sound do not.

Solution

You may address the issue by updating to Mac OS X 10.1.5 or later.
Published Date: Oct 10, 2016

AirPort Base Station: About the WAN and LAN Ports

The AirPort Base Station (Dual Ethernet) and the AirPort Extreme Base Station each have two Ethernet ports. The WAN port uplinks to your network, and the LAN port serves wired clients of the base station.
This article has been archived and is no longer updated by Apple.
The base station has two Ethernet ports, a LAN port and a WAN port . Generally speaking, the WAN port connects to the Internet, and the LAN port accommodates wired Ethernet computers. Both ports share these features:

- They accept standard RJ-45 Ethernet connectors.
- They are designed not to allow accidental insertion of an RJ-11 telephone connector.
- A crossover cable is compatible but not required, since the base station automatically senses the cable type and adjusts the pinout signal accordingly.

The WAN port

Figure 1 The WAN port icon

Use the WAN port for connecting to digital subscriber line (DSL), a cable modem, or a wide area network (WAN), such as your existing school or business network. Contact your network administrator before placing a base station on a WAN.

The LAN port

Figure 2 The LAN port icon

Use the LAN port to connect wired Ethernet computers or printers to the base station. This allows them to communicate with wireless computers, to share an Internet connection, or both. You can connect a single computer or printer to the base station; or, for multiple devices, connect to the hub, switch, or router of a local area network (LAN). Since the base station itself is a router, a hub is adequate for a simple network.

Designing a network

For more information on designing a network, see these technical documents:

106658: "**Creating a Small Ethernet Network**."
120061: "**Designing AirPort Networks for Mac OS X (v10.1) Manuals**"
75138: "**Designing AirPort Networks for Mac OS 9 Document**"
Published Date: Oct 10, 2016

Mac OS 9: Unable to Install From CD in Mac OS X Retail Package

If your computer and your Mac OS X retail package both include the **same** version of Mac OS 9 (both 9.2.2 for example), then install using the CD-ROM disc that came with the computer.
This article has been archived and is no longer updated by Apple.

Symptom

1. The computer does not start up from the Mac OS 9 CD included with Mac OS X, and a flashing question mark appears during startup.

2. If you try to install Mac OS 9 while started up from the version of Mac OS 9 already installed on the startup disk, this message appears:

"This program cannot run on your computer. See the documentation for more information."

Note: This document is not relevant to you if your Mac OS X package came with a **later** version of Mac OS 9 than the disc included with your computer.

Solution

Install Mac OS 9 using the CD-ROM disc that came with the computer. Do not use the Mac OS 9 disc included in the Mac OS X box. Computer-specific resources may be included on the computer-bundled disc that are not present on the retail disc, despite the version number being the same. These resources are needed to start up from the CD or to install Mac OS 9 successfully on your computer.

Your choice of operating system language may also dictate that you use the disc included with your computer. For example: If you purchased your computer with the German version of Mac OS 9.1 but then while traveling purchased Mac OS X bundled with an English-localized Mac OS 9 disc, you could not use the English Mac OS 9 disc to update a previously-installed German version of Mac OS 9.

Additional troubleshooting

For related information, see these technical documents:

106294: "**Mac OS X: How to Reinstall Mac OS 9 or Recover From a Software Restore**"
106526: "**Mac OS 9.2.1: 'can not be installed over the localized version of Mac OS'**"
106244: "**Mac OS 9.1, Mac OS X 10.0: 'To install this software you must boot with the Mac OS CD' Message**"
Published Date: Feb 17, 2012

Mac OS X 10.1.3 Update: Changes to Display Settings

You may notice that some display settings have changed after you update to Mac OS X 10.1.3. This is normal.
This article has been archived and is no longer updated by Apple.

Symptom

After updating to Mac OS X 10.1.3, your display mirroring or extended desktop settings may have changed. Displays in extended desktop mode may revert to the default left-to-right layout. You may notice changes to display resolution, color depth, or refresh rate.

Solution

Mac OS X 10.1.3 includes changes to video device drivers that improve the reliability of computers using display mirroring. Due to these improvements, the system may not be able to retain the exact setting you had previously. You should restore your preferred settings using the Displays pane of the System Preferences application. Once you do this, your settings will be retained as expected.
Published Date: Feb 17, 2012

Mac OS X: How to Prevent Login Items From Opening Automatically

Mac OS X 10.1.3 introduces the ability to prevent login items from opening on a per-incident, or temporary, basis.
This article has been archived and is no longer updated by Apple.

How to disable login items per incident, or temporarily

Each time you log in, Mac OS X 10.1.3 or later allows you to choose whether or not your defined login items will open. If you log in normally, login items open. You may choose not to have them open by pressing the Shift key. Follow these steps to disable login items:

1. Start up the computer.
2. If Mac OS X is set to automatically login as a particular user, hold the Shift key during startup as soon as you see the blue background appear with a progress bar and "Mac OS X", then release the Shift key when the login window appears. See Note 1.
3. Login from the Login Window, then immediately hold the Shift key.
4. Release the Shift key after the desktop appears.

Notes:

1. Timing is important. Do not hold the Shift key before the blue screen, the progress bar, and "Mac OS X" appear. For Mac OS X 10.1.3, 10.1.4, or 10.1.5, if the computer is set to automatically login as a particular user, skip step 3 and hold the Shift key until step 4. For more on the automatic login feature, see **Mac OS X: Setting up Login, Startup items**.

2. Login items are those that you may set up to open automatically, immediately after logging in to the computer. For information on setup, see **Mac OS X: Setting up Login, Startup items**.

Published Date: Oct 10, 2016

Mac OS X: How to Change Desktop Icon Size and Arrangement

You can change the size and arrangement of icons on your desktop using the Show View Options command.
This article has been archived and is no longer updated by Apple.
Follow these steps:

1. Click the Finder icon in the Dock.
2. Choose Show View Options from the View menu. The Desktop window appears.
3. Use the slider and radio buttons to set the icon size and arrangement as desired.
4. Close the Desktop window.

Published Date: Feb 20, 2012

Mac OS X: How to Change Your Desktop Picture

You can change your desktop picture, or background, using the System Preferences application.
This article has been archived and is no longer updated by Apple.
You can change your desktop picture, or background, using the System Preferences application. Follow these steps:

1. Choose System Preferences from the Apple menu.
2. Choose Desktop from the View menu.
3. Choose a collection or folder from the Collection pop-up menu. Images contained in that collection or folder then appear in the selection pane below.
4. Click the picture you desire in the selection pane.
5. Quit System Preferences.

Note: The default setting for the Collection menu is Apple Background Images. The Pictures Folder menu selection refers to the Pictures folder in your Home directory. To use any other folder, use the Choose Folder menu selection. When you do, a navigation dialog appears as a sheet attached to the System Preferences window. Select the desired folder in the navigation dialog, then click Open.
Published Date: Feb 17, 2012

Mac OS X 10.3.9 or earlier: Unable to Burn CD or DVD (Alert Message -36)

This article has been archived and is no longer updated by Apple.

If insufficient hard disk space is available, an alert box with message "-36" may appear when you try to burn a CD or DVD.

This article applies to Mac OS X 10.3.9 or earlier.

Symptom

- An alert box with message "-36" appears when you burn a CD or DVD, and the burn does not complete.

Solution

When burning a CD or DVD, Mac OS X 10.3.9 and earlier reserves an amount of hard disk space that corresponds to the amount of data being burned to disc. To resolve the issue, make more disk space available on your Mac OS X volume. For example, you might back up large files that you do not use often, then delete them from your hard disk. For related information, see technical document 106721, "**Mac OS X: Use Disk Utility If CD Burn Is Interrupted**".

Published Date: Feb 17, 2012

Mac OS X Server 10.1: How to Set up SMTP Authentication

Mac OS X Server 10.1.3 or later offers an SMTP Authentication feature for the Apple Mail Server. Follow the steps in this document to set it up. This article has been archived and is no longer updated by Apple.
Note: This document describes versions 10.1.3 and 10.1.4. The procedure is different for versions 10.2 and later.

About SMTP AUTH

Important: Before proceeding, you should read technical document 106761: "**Mac OS X Server: About SMTP Authentication for Apple Mail Server**"

Steps to set up SMTP AUTH

The following procedure explains how to enable and configure SMTP Authentication, known as "SMTP AUTH," for Apple Mail Server by using the NetInfo Manager application.

Important: This document assumes a basic understanding of NetInfo Manager. If you are familiar with the Terminal, the niutil and kill commands, and process IDs, you may use those instead. See the "Advanced Administrators Only" section below.

1. If you have not already, update to version 10.1.4 and restart the server. See technical document 106704, "**Mac OS X: How to Update Your Software**".
2. Open the Server Admin application.
3. Be sure that MailServer is running.
4. Open NetInfo Manager (/Applications/Utilities/).
5. Navigate to the "config" directory in the local domain, located in the second column after "/".
6. Select the AppleMailServer directory in the next column. What you see should resemble Figure 1.

Figure 1 NetInfo Manager

7. Edit the "smtp_plain_login _flag" property by entering the value of "1". This enables SMTP AUTH. The table in Figure 2 summarizes the attributes of the Apple Mail Server for the SMTP AUTH feature.

Figure 2 Attributes of Apple Mail Server

8. Save the new settings and quit NetInfo Manager.
9. Stop and restart Apple Mail Server using Server Admin.

This completes the steps to configure the SMTP AUTH feature. If you need to change the setting, you can repeat this procedure

Client Settings

Email client applications work with SMTP authentication and are configured on a per user, per account basis. Figure 3 gives an example from the application Mail.

Figure 3 Setting up SMTP authentication in Mail

Advanced Administrators Only

You may configure SMTP AUTH in Apple Mail Server using the Terminal.

When the 10.1.3 Apple Mail Server starts up, it creates attributes in local NetInfo that control the behavior of the SMTP AUTH feature. You can edit these values with the niutil command. To view default settings, execute this command as root:

```
niutil -read . /config/AppleMailServer
```

The resulting output:

```
name: AppleMailServer
smtp_plain_login_flag: 0
open_relay_addr_flag: 0
open_relay_addr_list: 17.221.41.168
```

The IP address is the address of the server on which Apple Mail Server is running. You can enable the SMTP AUTH feature with the following command:

```
niutil -createprop . /config/AppleMailServer smtp_plain_login_flag 1
```

These NetInfo settings take effect when a HUP signal is received by the MailService process. To send the HUP signal:

```
kill -HUP `ps auxc | grep MailService | awk '{print $2}'`
```

Additional information

You can get more information from technical documents:

106762: "**Mac OS X Server 10.1: How to Set up Restricted SMTP Relay for Apple Mail Server**"
106763: "**Mac OS X Server: Restricted SMTP Relay Helps Prevent Unsolicited Email**"
Published Date: Oct 10, 2016

Mac OS X Server: About SMTP Authentication for Apple Mail Server

Mac OS X Server 10.1.3 or later offers an SMTP Authentication ("SMTP AUTH") feature for the Apple Mail Server. This allows you to accept SMTP traffic only from authenticated clients.
This article has been archived and is no longer updated by Apple.
SMTP AUTH allows an SMTP client to authenticate with a name and password when sending mail, thus allowing you to restrict who can send SMTP traffic to your server (whether for relay or local delivery). Points to remember:

- If SMTP AUTH is enabled but Restricted SMTP Relay is not, then all SMTP connections must authenticate before any mail will be accepted for either local delivery or relay.
  Important: Whenever SMTP AUTH is enabled, your email server is effectively "send only," because mail servers from other domains are most likely not configured to authenticate with your server. This means your local email clients can only receive email from other local clients.
- If both SMTP AUTH and Restricted SMTP Relay are enabled, then hosts on a pre-approved list can relay without authentication, and those not on the list must authenticate via SMTP AUTH.
- If Restricted SMTP Relay is enabled and SMTP AUTH is disabled, then you are protected from being an open relay, while still allowing local delivery of mail from any host. In other words, SMTP hosts that are not in the Restricted SMTP Relay host list cannot relay through your server, but your local clients could still receive email from them.
  Note: This is the most common configuration.
- Apple Mail Server logs sessions in which there is a failed authentication or an attempt to send mail without authenticating. This is found in Apple Mail Server's activity log, located at /Library/Logs/MailService/AppleMailServer.Server.log. You can read it with the Log Viewer module in the Server Admin application.
- SMTP AUTH is not controlled from the Server Admin application. Instead, it is controlled by a few entries in the local NetInfo database. Apple Mail Server creates these entries for you, but it gives them values that disable SMTP AUTH by default. This means that your mail server continues its prior behavior until you intervene.

Additional information:

For more information on this feature, including setup, see technical documents:

106760: "**Mac OS X Server 10.1: How to Set up SMTP Authentication**"
106762: "**Mac OS X Server: How to Set up Restricted SMTP Relay for Apple Mail Server**"
106763: "**Mac OS X Server 10.1: Restricted SMTP Relay Helps Prevent Unsolicited Email**"
Published Date: Oct 10, 2016

Mac OS X Server 10.1: How to Set up Restricted SMTP Relay for Apple Mail Server

Mac OS X Server 10.1.3 or later offers a Restricted SMTP Relay feature for Apple Mail Server. This document describes how to set it up.

This article has been archived and is no longer updated by Apple.

Note: This document describes versions 10.1.3 and 10.1.4. The procedure is different for versions 10.2 and later.

Steps to set up Restricted SMTP Relay

Important:

1. Before proceeding, you should read technical document 106763: "**Mac OS X Server: Restricted SMTP Relay Helps Prevent Unsolicited Email**"

2. This procedure **will not work** if you do not complete Step 11.

3. This document assumes a basic understanding of NetInfo Manager. If you are familiar with the Terminal, the niutil and kill commands, and process IDs, you may use those instead. See the "Advanced Administrators Only" section below.

Follow these steps to set up Restricted SMTP Relay:

1. If you have not already, update to version 10.1.4 and restart the server. See technical document 106704, "**Mac OS X: How to Update Your Software**".
2. Open the Server Admin application.
3. Be sure that MailServer is running.
4. Open NetInfo Manager (/Applications/Utilities/).
5. Navigate to the "config" directory in the local domain, located in the second column after "/".
6. Select the AppleMailServer directory in the next column. What you see should resemble Figure 1.

Figure 1 NetInfo Manager

7. Edit the "open_relay_addr_flag" property by entering the value of "1". This enables Restricted SMTP Relay.

Important: Next you must edit the "open_relay_addr_list" property, which contains a list of values that may be host names, IP addresses, or IP address ranges from which relaying is allowed. If the Mail Server starts up and these attributes are absent, it creates the attribute open_relay_addr_flag with a value of 0 and the attribute open_relay_addr_list with a value representing the IP address of the local server.

8. To add an additional value to the "open_relay_addr_list" property, choose "New Value" from the "Directory" menu and edit as desired (Figure 2). See the "Example values" section below for syntax examples.

Figure 2 Adding a new value

Figure 3 summarizes the attributes of the Apple Mail Server for the Restrict SMTP Relay feature.

Figure 3 Apple Mail Server attributes

9. Save the new settings and quit NetInfo Manager.
10. Stop and restart Apple Mail Server using Server Admin to enact the new settings.
11. Be sure the checkbox is **deselected** for "Deliver mail to local addresses only (no SMTP relay)" in the Configure Host Settings window of Server Admin (Figure 4). This must be done while Apple Mail Server is running. This allows the server the check the newly created SMTP relay list.

Figure 4 Server Admin

This completes the steps to configure the Restrict SMTP Relay feature. If you need to modify the list of hosts, the procedure can be repeated.

What Restricted SMTP Relay does

Once relay lists have been created and enabled, the Mail Server loads them into a local cache for verification against all incoming SMTP connections. All connections are checked against this list for remote mail delivery regardless of the originating "mail from:" value. Any user who attempts to relay mail from a host not in the approved list will have the message rejected by the server. A user wishing to relay mail from a non-approved host may do so by authenticating via SMTP AUTH (see "Additional Information" below). If you want to assure that your local email users are authenticated when they send email, you can enable the SMTP Authentication ("SMTP AUTH") feature.

The Mail Server reads and processes the open_relay_addr settings in Directory Services when it starts up or after receiving a HUP signal, on the first SMTP session. The ".Server.log" file notes the IP addresses or ranges and the host and domain names added to the valid relay list. Host names that cannot be resolved or malformed address ranges are not added to the relay list. Such a complication would also be noted in the log.

Example values for the host list

A variety of notations can be used for each entry in the open_relay_addr_list. Valid examples include:

- Host Names - myserver.example.com
- Domains - example.com
- Single IP Address - 192.168.123.55
- IP Address Range - 192.168.40.*
  ("*" represents entire range)
- IP Address Range - 192.168.40-43.0-255
  (Ranges explicitly stated)
- IP Address Range: 192.168.40-43.*
  (Mixed notation styles)

Advanced Administrators Only

When it starts up, Apple Mail Server creates attributes in local NetInfo that control the behavior of the Restricted SMTP Relay and SMTP AUTH features. You can edit these values in the Terminal with the niutil command.

1. To view default settings, execute this command as root:

```
niutil -read . /config/AppleMailServer
```

The resulting output:

```
name: AppleMailServer
smtp_plain_login_flag: 0
open_relay_addr_flag: 0
open_relay_addr_list: 17.221.41.168
```

The IP address is the address of the computer on which Apple Mail Server is running. You can enable the Restrict SMTP Relay feature with the following command:

```
niutil -createprop . /config/AppleMailServer open_relay_addr_flag 1
```

2. Deselect the checkbox for the "Deliver mail to local addresses only (no SMTP relay)" in the Configure Host Settings window in the Server Admin application (Figure 4). This cannot be achieved from the Terminal.

3. These NetInfo settings take effect when a HUP signal is received by the MailService process. To send the HUP signal:

```
kill -HUP `ps auxc | grep MailService | awk '{print $2}'`
```

Additional information

TA20722_Mac_OS_X_Server_How_to_Set_up_Restricted_SMTP_Relay_for_Apple_Mail_Ser

For additional information on this subject, see technical documents:

106760: "**Mac OS X Server: How to Set up SMTP Authentication**"
106761: "**Mac OS X Server: About SMTP Authentication for Apple Mail Server**"

Published Date: Oct 10, 2016

Mac OS X Server: Restricted SMTP Relay Helps Prevent Unsolicited Email ("spam")

Mac OS X Server 10.1.3 or later offers a Restricted SMTP Relay feature for the Apple Mail Server. This allows the server to accept SMTP relay traffic only from approved hosts or IP addresses, thus to avoid being an open relay for people who send unsolicited email or "spammers."
This article has been archived and is no longer updated by Apple.

Restricted SMTP Relay feature to prevent unsolicited email

If you are running the Mail Server feature of a Mac OS X Server that is connected to the Internet, it is essential that you use SMTP restrictions to keep the server from becoming an open relay. An "open relay" is a mail server that allows third parties to send mail to other third parties without authentication. Third parties can find an open relay and use it to send unsolicited email (sometimes called "spam"), and then a variety of spam prevention services will blacklist the open relay. Mac OS X Server 10.1.3 or later includes the Restricted SMTP Relay feature to prevent this.
Points to remember:

- Restricted SMTP Relay utilizes a list of hosts (computers) that you trust, such as those on your local area network (LAN). An entry on this list may be a DNS name, an IP address, or a range of IP addresses.
- After this list is created and the feature enabled, the Mail Server loads the host list into a local cache for verification against all incoming SMTP connections. It checks all connections against this list for remote mail delivery regardless of the originating "mail from:" value. Any user who attempts to relay mail from a host not in the approved host list must authenticate via Authenticated SMTP, or it will have its mail rejected by the server.
  Note: Unless you want your local email clients to have to authenticate via Authenticated SMTP, then you do not need to take any additional steps to set up Authenticated SMTP. Enabling Restricted SMTP Relay automatically enables Authenticated SMTP for hosts not in the host list.
- Whenever Authenticated SMTP is enabled, your email server is effectively a "send only" server, because mail servers from other domains are most likely not configured to authenticate with your server. This means your local email clients can only receive email from other local clients. Authenticated SMTP also requires each user's email client software to authenticate before it sends mail through your server.
- If Restricted SMTP Relay is enabled and Authenticated SMTP is disabled, then you are protected from being an open relay, while still allowing local delivery of mail from any host. In other words, SMTP hosts that are not in the Restricted SMTP Relay host list cannot relay through your server, but your local clients can still receive email from them.
  Note: This is the most common configuration.

Published Date: Oct 10, 2016

Mac OS X: Opening Web Browser Before Connecting to Internet Results in Alert Message

An alert message appears in your Web browser if it attempts to load a page before your dial-up modem has finished connecting to your Internet service provider. Improper DNS settings are an alternative cause.
This article has been archived and is no longer updated by Apple.

Symptom

You see an alert message when opening a Web browser. Possible messages include:

"The specified server could not be found."

"The server could not be found."

"A connection failure has occurred."

Solution

You may see these messages when you open a Web browser before connecting to the Internet. If you have dial-up Internet service, and use the PPP option to "Connect automatically when starting TCP/IP applications," then the application returns these messages because the computer has not had time to complete the dial-up connection sequence. This does not indicate any issue with your computer or Internet service provider. There are two ways to address this:

1. Wait for your modem to finish connecting to your Internet service provider, then click Refresh or Reload in your Web browser to reload the page.

2. Connect to the Internet before opening your Web browser or other TCP/IP application. Use the Internet Connect application.

For more information, see technical document 106325, "**Mac OS X 10.0: How to Disable or Enable Automatic Modem (PPP) Connections**". For best results, do not enable this option.

Alternative cause

If this does not resolve the issue, these same messages may appear when you do not have correct DNS (domain name system) settings. What is correct depends on your Internet service provider. For more information on this possible cause, see technical document 106798, "**Mac OS: Troubleshooting 'A connection failure has occurred', 'The specified server could not be found' or Similar Messages**".

Published Date: Oct 10, 2016

Mac OS X: Effective Password Length of Eight Characters

The effective password length for Mac OS X and Mac OS X Server is eight characters. You may type more characters, but they are ignored.
This article has been archived and is no longer updated by Apple.

Symptom

The System Preferences and Server Admin applications allow you to create passwords longer than eight characters. You can type more than eight characters when using your password, but characters after the eighth are ignored.

Note: This also applies to remote login, via telnet or rlogin for example.

Solution

For information on how to create a secure password with eight characters, see technical document 106521, "**Mac OS X: How to Choose a Secure Password**".

Published Date: Oct 10, 2016

Mac OS X 10.1: Sound is delayed and accompanied by a spinning disc pointer

After installing Mac OS X 10.1.2 through 10.1.5, you may encounter a delay before hearing sounds on certain computers.
This article has been archived and is no longer updated by Apple.

Symptom

After installing Mac OS X 10.1.2 through 10.1.5, you may encounter a sound delay with these characteristics:

- Sounds are produced several seconds later than they should be. The delays average three to four seconds.
- During that delay, the pointer appears as a spinning disc.
- If you immediately reactivate the sound, there is no delay.
- If no sounds are produced for 30 seconds, the delay reoccurs.

This may affect, for example, an alert sound, or the sound that is played when the application Mail receives new email.

Solution

In order to increase battery life, Mac OS X versions 10.1.2 through 10.1.5 turn off your computer's sound hardware when it is not used for 30 seconds. The delay in hearing sounds is the time it takes for the sound hardware to go from its low power mode to sound production.

One way to avoid this issue is by using external USB speakers.

With Mac OS X 10.2 or later, you can set Energy Saver preferences' "Optimize Energy Settings:" for battery to Highest Performance.
Published Date: Oct 10, 2016

Mac OS X Server 10.1.3: Automatic Update Will Not Install if 10.0 Was Previously Installed

If you have updated Mac OS X Server version 10.0.3 or 10.0.4 to version 10.1 or later without erasing the disk, then you must apply the Mac OS X Server 10.1.3 Update with a standalone installer (not with Automatic Software Update).
This article has been archived and is no longer updated by Apple.

Symptom

When you try to use the Software Update feature of System Preferences, "Mac OS X Server 10.1.3" installation will not start.

Sometimes this is related to the file "Info-macos.plist" in the Apache.rasplug package.

Solution

You may temporarily avoid the issue in some cases by using a standalone installer of the software. But to permanently resolve the issue and prevent recurrence,, you should delete the file "Info-macos.plist". Follow these steps:

1. Open Terminal (Applications/Utilities/).
2. At the prompt, type:

```
sudo rm /System/Library/ServerAdmin/Apache.rasplug/Contents/Info-macos.plist
```

3. Press Return.
4. Enter an Admin user password when prompted, then press Return again.
5. Quit Terminal.

Published Date: Feb 17, 2012

Mac OS X: Applications With Calendars Cannot Add March Events With Abbreviated Month Name

You may experience difficulty when adding events for the month of March in applications with a calendar feature, such as Microsoft Entourage v. X. This occurs when the date region is set for Belgium, Italy, Netherlands, or Switzerland (Italian).
This article has been archived and is no longer updated by Apple.

Symptom

If you try to set a calendar event using an abbreviated name for March, the date will be rejected and erased. Examples of abbreviated names for March include "Maa" (Dutch and Belgian) and "Mar" (Italian and Swiss Italian).

Note: This issue occurs any time you schedule an event for March, whether or not it is March when you attempt to schedule the event.

Note: Microsoft Entourage 2001 does not use abbreviated month names by default, so it is only affected if you manually type an abbreviated name.

Solution

For Microsoft Entourage

Instead of creating new events with the toolbar or menu items, follow these steps:

1. Go to the month of March on the calendar.
2. Double-click the calendar date of the event.
3. Fill in all of the necessary information for the event.
Note: Be sure not to modify the date fields.

Alternative workaround

Follow these steps to change the date region:

1. Choose System Preferences from the Apple menu.
2. Choose International from the View menu.
3. Click the Date tab.
4. Change the Region to any other unaffected date region.
5. Choose Log Out from the Apple menu.
6. Log back in.
7. Reopen the affected application.

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The following document can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"
Published Date: Feb 17, 2012

Mac OS X: Network "Up" Flag Does Not Accurately Indicate Working Connection

The Mac OS X network interface "Up" flag may be seen in the Apple System Profiler and with certain Terminal commands even when the network connection does not work.
This article has been archived and is no longer updated by Apple.

Symptom

You see the network "Up" flag in the Apple System Profiler or Terminal, but you do not have a valid network connection on that network interface (port).

For example: There is no cable attached to the built-in Ethernet port, but the "Up" flag still appears alongside other built-in Ethernet (en0) network interface information.

Solution

Verify a network connection by checking physical connections or accessing other devices on the network (or, if applicable, accessing the Internet). You may be able to use the Network Utility (/Applications/Utilities/) to verify connectivity.

For related information, see these technical documents:

106749: "**Mac OS X: Troubleshooting a Cable or DSL Internet Connection**"
106260: "**Mac OS X: Computer Name Does Not Appear on Network**"
61426: "**Mac OS X: About Network Utility**"
Published Date: Feb 17, 2012

AppleWorks 6 for Windows: Requires "Recommended" or "Full" QuickTime 5 Installation

AppleWorks 6 for Windows requires one of what the QuickTime 5 Installer calls the "Recommended" and "Full" installations. The "Minimum" QuickTime 5 installation does not work.

This article has been archived and is no longer updated by Apple.

Symptom

An alert box with a "runtime error" message appears when you insert a multimedia file (such as a AVI, GIF, JPG or MOV) into an AppleWorks document.

Solution

This occurs if you have installed the "Minimum" version of QuickTime 5. Use the QuickTime 5 Installer on the AppleWorks 6 CD to reinstall QuickTime. Select the "Recommended" installation option.

Published Date: Feb 17, 2012

Mac OS X Server: Mail is Not Delivered to Some Domains

Email sent via Mac OS X Server is not received by (delivered to) users in certain domains.
This article has been archived and is no longer updated by Apple.

Symptom

Users in certain domains do not receive mail sent via your server.

Solution

Affected versions of Mac OS X Server cannot relay mail to SMTP servers that have an SMTP greeting message that is longer than 128 characters. Update to Mac OS X Server version 10.1.4 or later. You may get software updates from Apple Software Downloads (http://www.apple.com/swupdates/), or by using the Automatic Software Update feature of System Preferences. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".
Published Date: Feb 17, 2012

AppleWorks 6: How to Use Function Keys With Macros, or "The Function Keys can be set up" Message

When you press a function key (F1 to F15), you may use the Option key in combination to distinguish between an AppleWorks call and a system call.

This article has been archived and is no longer updated by Apple.

Symptom

When you try to assign a function key to a macro in AppleWorks, or when you try to execute that macro with a function key, an alert box with this message appears:

> "The Function Keys can be set up to open an application, document, server, or other item, such as an AppleScript. Do you want to open the Keyboard control panel now?"

Solution

Both AppleWorks and the Mac OS 9 Finder allow you to assign items to the same function keys, F1 through F15. This alert may appear when you want an AppleWorks function, but you are actually passing a request to the Finder.

To avoid the alert, distinguish your AppleWorks functions by pressing the Option key in combination with the desired function key. Be sure to press and hold Option before the function key.

Using with iBook and PowerBook computers

If your iBook or PowerBook has a function activation key marked "fn" in the lower left corner of the keyboard, you may use it instead of the Option key.

Published Date: Feb 17, 2012

Mac OS: "The connection to this server has been unexpectedly broken" Message

Do you see that message when making a File Sharing connection from Mac OS 8.6 or 9 to Mac OS X? To get rid of it and make a connection, simply assign an IP address to the computer.

This article has been archived and is no longer updated by Apple.

Symptom

When you try make a File Sharing connection from a Mac OS 8.6 or 9 computer to a Mac OS X computer, an alert box with this message appears:

> "The connection to this server has been unexpectedly broken."

The connection is not made.

Solution

The computer at which you see the alert must have an IP Address assigned to it before connecting to a Mac OS X computer.

If you do not know how to assign an IP address, see "**Mac OS: How to Get an IP Address for Connecting to the Internet**".

Tip: You can use this solution even if you do not intend to connect to the Internet. If you use any routing, firewall, or proxy products, be sure that port 548 is not blocked between the two computers. This is the port used by File Sharing.

Published Date: Oct 10, 2016

Mac OS X 10.1: Disk Issues After Installing on Hard Disk That Uses Intech Disk Software

If you encounter issues after installing Mac OS X 10.1 on a hard disk that has been used with Intech Hard Disk SpeedTools software, a solution is available from Intech.
This article has been archived and is no longer updated by Apple.

Symptom

After using a Mac OS X 10.1 Update CD (whether or not Mac OS X 10.1 was actually installed) on a disk that had previously been used with Intech disk software:

- The computer may start up considerably slower than normal.
- The hard disk icon may appear "generic."
- The hard disk cannot be erased.
- The hard disk may not appear on the desktop or in a Finder window.

Solution

A solution is available from Intech. Please see "IMPORTANT NOTE FOR MacOS X [sic] 10.0 through 10.1.5 USERS" at Intech Software Online (http://www.speedtools2.com/HDInfo.html) .

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

The following document can help you search for a particular vendor's address and phone number:

Document 17159: "**Locating Vendor Information**"
Published Date: Feb 20, 2012

Mac OS X 10.1: CD Installation Stops, "File could not be written" Alert Appears

This document explains how to troubleshoot a "File could not be written" alert during Mac OS X 10.1 installation from CD-ROM on a Power Macintosh G3 computer.
This article has been archived and is no longer updated by Apple.

Symptom

Mac OS X 10.1 installation does not complete, and this message appears:

> "File could not be written"

Solution

First, review technical document 106693, "**Mac OS X: Troubleshooting Installation From CD-ROM**".

Follow these steps if the information in document 106693 does not resolve the issue:

1. Shut down the computer and verify that all internal ATA (IDE) devices are properly installed.
2. Check for proper master/slave settings when applicable.
3. Check to see that data and power cables are firmly connected for ATA devices.

Note: Your hard disk should not be set to ATA ID 1 (slave mode) if it is the only ATA device on the bus. See technical document 106728, "**Mac OS X: Cannot Install From ATA ID 1 (Slave) Disc Drive**".

Advanced step: If installation still does not complete, shut down your computer and temporarily disconnect additional ATA devices, such as an internal (ATA) Zip drive, if present. Disconnect the device by unplugging the ATA data cable. Remember that your hard disk should not be set to ATA ID 1 (slave mode) when it is the only device on the ATA bus.
Published Date: Oct 10, 2016

Mac OS 9: "Type 10" Alert Message If You Change a USB Connection While Using FAXstf

You may update FAXstf 6.0 software to avoid a situation in which connecting or disconnecting a USB device while using its Queue Watcher feature causes a Type 10 alert message.
This article has been archived and is no longer updated by Apple.

Symptom

A "Type 10" alert message appears when you connect or disconnect a USB device while using the Queue Watcher feature of FAXstf 6.0 software.

Solution

Download and install the FaxSTF 6.0.5 update from Smith Micro Software (http://smithmicro.com/support/updates.tpl?update=STF6).

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The following document can help you search for a particular vendor's address and phone number:

Document 17159: "**Locating Vendor Information**"
Published Date: Feb 18, 2012

Mac OS X: No Notification When You Enter an Incorrect Screen Saver Password

If you mistype your password when attempting to dismiss the Screen Saver, it simply resumes. There is no message indicating that you have entered an incorrect password.
This article has been archived and is no longer updated by Apple.
This document is relevant only if you have selected the radio button for "Use my user account password" in the Screen Saver pane of System Preferences.

When Screen Saver is active and you attempt to dismiss it, an authentication dialog appears. Entering an incorrect password dismisses the dialog and returns you to Screen Saver visuals. There is no "incorrect password" alert message.

For more information, see technical document 61319, "**Mac OS X: How to Use the Screen Saver to Protect Your Computer**".
Published Date: Feb 17, 2012

Mac OS X: Formatted Capacity of a 4.7 GB DVD Disc Is 4.29 GB

During the formatting process, a portion of your DVD disc is reserved for catalog and data structure use. Thus formatted capacity is less than the unformatted capacity.
This article has been archived and is no longer updated by Apple.
When formatting a DVD-R or DVD-RW disc, a portion of disc space must be reserved for storing HFS and ISO data structures, and for catalog information. Other types of disks also dedicate space to formatting. The amount of space used may seem more noticeable due to the larger capacity of DVD media.

You should have just under 4.3 GB of space available after formatting your DVD disc. You can verify capacity and available disc space by selecting the disc's icon and choosing Show Info from the File menu.

For more information, see technical document 8647, "**Macintosh: File System Specifications and Terms**".
Published Date: Feb 17, 2012

How to access third-party ink jet printer utilities (Mac OS X)

This article has been archived and is no longer updated by Apple.

Ink jet printers typically come with utilities for cleaning jet nozzles, aligning print heads, and printing test pages. Learn how to use them in Mac OS X.

Printer utilities for many models of ink jet printers by Canon, Epson, and Hewlett Packard are included with Mac OS X as well as Lexmark (and others with Mac OS X 10.4 Tiger). If you have a printer made by another manufacturer or a printer that does not work with one of these utilities, check the manufacturer's website for more information.

There are two ways to open a printer utility application.

Open from Print Center or Printer Setup utility

The printer utility can be opened if the print driver is compatible with the Configure Printer option. Follow these steps:

1. Open Print Center or Printer Setup Utility (/Applications/Utilities/).
2. Select the printer you want, or add your printer if necessary.
3. Choose **Configure Printer** from the **Printers** menu. This automatically opens the printer utility, which then appears in the Dock.

Do this any time you want to use the Printer Utility.

Open the utility in the Finder

If the print driver does not work with the Configure Printer option, then Configure Printer is dimmed in the Printers menu. You can locate the utility in the Finder and open it there. Follow these steps:

1. Click the Finder icon in the Dock to get a new Finder window.
2. Choose **Computer** from the **Go** menu.
3. Open the Mac OS X disk.
4. Open the Library folder.
5. Open the Printers folder. Within the Printers folder there are folders by manufacturer name. These folders contain printer utilities and other items.
6. Locate the printer utility you need and open it.

Do not move the printer utility from its original location. Instead, you may select it then choose Add to Favorites from the File menu. This will add an alias to your Favorites folder, which you may leave there or place elsewhere. Or, just drag it to the Dock.

Related documents

25588: "Mac OS X 10.3: Raster (ink jet) printer drivers included"
107001: "Mac OS X 10.2: Included Ink Jet Printer Drivers"
106490: "Mac OS X 10.1: Many Third-Party Ink Jet Printer Drivers Are Included"

Published Date: Oct 10, 2016

Mac OS X: About Energy Saver Options

Different Energy Saver feature sets are available on different computers. This document describes individual features and their availability.
This article has been archived and is no longer updated by Apple.

Opening Energy Saver

Energy Saver is a pane in the System Preferences application. To access it, choose System Preferences from the Apple menu, then choose Energy Saver from the View menu. The features listed below may be turned on or off in the Energy Saver pane.

Energy Saver features

"Wake when the modem detects a ring"

This allows the computer to wake from sleep when the modem detects a ring. You may want to use this feature if you receive faxes regularly but want to allow your computer to sleep in order to conserve energy.

Available on these computers:

- Power Mac G4 (AGP Graphics) or later
- Power Mac G4 Cube (all models)
- PowerBook (FireWire) or later
- iBook (all models)
- iMac (Slot Loading) or later

"Wake for network administrative access"

Also known as "Wake-on-LAN," this allows network administrators and certain applications to wake the computer from sleep by sending it a special type of network packet.

Available on these computers:

- All Macintosh computers produced in 2003
- Power Mac G5
- Power Mac G4 (Gigabit Ethernet) or later
- Power Mac G4 Cube (all models)
- PowerBook (FireWire) or later
- iBook (all models)
- iMac (Early 2001) or later

"Restart automatically after a power failure"

This allows your computer to automatically restart after shutting down unexpectedly, usually as the result of a power outage.

Available on these computers:

- Power Mac G4 (AGP Graphics) or later
- Power Mac G4 Cube (all models)
- PowerBook (FireWire) or later
- iBook (all models)
- iMac (Slot Loading) or later

"Show battery status in menu bar"

This displays information about the battery in the menu bar on portable computers.

Available on these computers:

- iBook (all models)
- PowerBook (all models)

"Restart automatically after a system 'freeze'"

This is only available to Mac OS X Server. It allows the computer to automatically restart if the operating system stops responding (a "hang" or "freeze").

Available on these computers:

- Power Mac G4 (Digital Audio) or later
- Power Mac G4 Cube (all models)
- PowerBook (FireWire) or later
- iMac (Slot Loading) or later

"Reduce processor performance"

Also known as "PowerStep," this option allows the software to change the microprocessor's clock speed and/or turn off the L3 cache, slowing down to conserve power or speeding up when more speed is needed.

Available on these computers:

- PowerBook G4 - see Note.
- PowerBook G4 (DVI)
- iBook (Special Edition)
- iBook (Dual USB)
- iBook (Late 2001)
- iBook (14.1-inch LCD)
- iBook (16 VRAM)
- iBook (14.1 LCD 16 VRAM)

Note: This feature is not available on PowerBook G4 (Gigabit Ethernet) computers.

About "Deep sleep"

While all PowerBook and iBook computers go into "deep sleep" when Sleep is selected, some older computers do not. Instead, the display turns off and the hard drive spins down, but many other components (including the processor) remain on.

Deep sleep is available on these computers:

- All PowerBook computers
- All iBook computers
- Power Mac G4 (AGP Graphics) or later
- iMac (Slot Loading) or later

Published Date: Oct 10, 2016

Mac OS X: Background Is Black in Some Windows

You may see a window with a black background (making text unreadable) if the display's color depth setting is set to 256 colors.
This article has been archived and is no longer updated by Apple.

Symptom

Finder, Sherlock, and Help windows have black backgrounds, making it impossible to read the text content.

Solution

This occurs if a Classic application changes the display's color depth setting to 256 colors, or if you use the Monitors control panel in Classic to set the display to 256 colors.

To resolve this issue, follow these steps:

1. Choose System Preferences from the Apple menu.
2. Choose Displays from the View menu.
3. Click the Display tab, if necessary.
4. Choose Thousands or Millions from the Colors pop-up menu.

For more information, see technical documents:

106175: "**Mac OS X 10.0: Only Use 256 Color Mode and/or 640 x 480 Resolution When Required by Classic**"
25305: "**Mac OS X 10.0: Using Mac OS 9 Control Panels in Classic Environment**"
Published Date: Feb 17, 2012

Macintosh Manager: Hard Disk May Appear as a Panel

Certain replacement hard drives must be reformatted before use with Macintosh Manager to avoid an issue in which the disk appears as a panel in the Panels environment.
This article has been archived and is no longer updated by Apple.

Symptom

1. The startup volume is displayed as a panel.
2. Some applications may report the user does not have adequate permission.

Solution

A version of drive formatting software used to format certain replacement hard drives is incompatible with Macintosh Manager. It is possible that other third-party formatting software might cause this issue. To resolve this issue, a drive must be reformatted with Drive Setup using the zero all data option. If you have a Mac OS 9 CD-ROM disc, you should use its version of Drive Setup, regardless of which version of Mac OS you intend to install. If you do not have a Mac OS 9 CD-ROM disc and intend to install an earlier Mac OS version, you should download Drive Setup 1.7.3 from Apple Software Downloads (http://www.apple.com/swupdates/).

Follow these steps:

Warning: Initializing a disk destroys all data on it. Be sure to back up any data you wish to keep before proceeding.

1. Start up the computer from a disk other than the affected hard drive. A Mac OS 9 CD-ROM disc is preferred. To start up from CD, insert the CD into the disc drive and restart the computer. Press and hold the "c" key as the computer restarts.
   Note: If the startup disk you are using is not a Mac OS CD-ROM disc, be sure that Drive Setup is on the disk. Mac OS discs include Drive Setup in the Utilities folder.
2. Open Drive Setup.
3. Select the affected drive from the list.
4. Choose Initialization Options from the Functions menu.
5. Select the checkbox for "Zero all data."
6. Click OK.
7. Click Initialize.

Zeroing all data may take several hours to complete.
Published Date: Feb 17, 2012

Mac OS X: Some Fonts Do Not Have Alternate Typefaces (Such as Bold and Italic)

Some Mac OS X fonts do not offer alternate typefaces, such as bold and italic.
This article has been archived and is no longer updated by Apple.

Symptom

Some Mac OS X fonts do not offer alternate typeface choices, such as bold and italic.

Solution

Many Mac OS X fonts offer additional typefaces, including:

- Arial
- Courier
- Georgia
- Helvetica
- Hoefler Text
- Palatino
- Times
- Trebuchet MS
- Verdana

Third-party fonts may also offer bold or italic typefaces. To check for the availability of additional fonts and software, choose Get Mac OS X Software from the Apple menu.
Published Date: Feb 17, 2012

Mac OS X: Empty White Space, or "Box," Appears on Desktop After Classic Starts

A rectangular white space appears on the desktop after Classic starts up and cannot be removed. The white space indicates the presence of an inaccessible dialog box.
This article has been archived and is no longer updated by Apple.

Symptom

A rectangular white space appears on the desktop after Classic starts up.

Figure 1 Empty white space on desktop

Note: This may occur if you have checked an AppleShare (AFP) volume to be opened at system startup time in the Chooser, and that volume requires a password. If this applies to you, see the "AppleShare automatic connection issue" section below.

Solution

The white space indicates the presence of a Mac OS 9 dialog box that you cannot access via Classic. This issue may be avoided by updating to Mac OS X 10.2 or later. To resolve the issue in earlier versions:

1. Choose System Preferences from the Apple menu.
2. Choose Startup Disk from the View menu.
3. Select the Mac OS 9 System Folder as the startup System Folder.
4. Restart the computer.
5. Once Mac OS 9 starts up, you should see the dialog box's contents. Take steps to remedy the situation.
6. When the situation is resolved within Mac OS 9, start up from Mac OS X again.

For more information on how to switch between Mac OS 9 and Mac OS X, see technical document 106667, "**How to Switch Between Mac OS 9 and Mac OS X**".

AppleShare automatic connection issue

If you have a server alias that automatically connects to a server at Mac OS 9 startup, and that server requires a password, then follow these steps:

Remove the server alias from the Servers folder, located in the Mac OS 9 (Classic) System Folder.
Set up the computer to automatically connect to the server at start up by following the steps in technical document 106729, "**Mac OS X 10.1: How to Automatically Connect to a Server When You Log In**".
Published Date: Feb 17, 2012

Mac OS 9: Outlook Express Spell Checking Requires Microsoft Office

Microsoft Outlook Express offers spell checking if Microsoft Office is installed.
This article has been archived and is no longer updated by Apple.
Outlook Express Help states:

"About checking spelling

"If Microsoft Office is installed on your computer, you can use Microsoft Outlook Express to check spelling in your e-mail messages."

For further assistance with Outlook Express, please consult Microsoft support resources, which include Microsoft Mactopia (http://www.mactopia.com/).

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The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"
Published Date: Feb 18, 2012

Mac OS X: How to Create Port Configurations

Mac OS X can automatically connect to the Internet, or other networks, two or more different ways with the same Ethernet port. Each additional connection is achieved by creating a new port configuration.
This article has been archived and is no longer updated by Apple.
This document assumes familiarity with the Automatic location. If you need to review this first, see technical document 106653, "**Mac OS X: How to Use Locations**".

When using the Automatic location in its default state, Mac OS X detects which of your network interfaces is/are connected to a network. You do not have to manually switch between **different** interfaces when using this location in its default state.

But what if you must set up the **same** network interface two different ways, manually at work but via DHCP at home, for example?

The default automatic location does not accommodate having both configuration choices active on the same interface at the same time. You could create two different locations and switch between them. But if you prefer not to switch, this is easily remedied by adding a new port configuration to the existing location.

Note: For most practical purposes, creation of port configurations applies to the Ethernet port. Though Mac OS X 10.1 allows you to create additional port configurations for AirPort, you should use only one for best results. The ability to create multiple port configurations for AirPort has been removed in Mac OS X 10.2 and later. However, multiple AirPort configurations may be present in Mac OS X 10.2 if they were created in Mac OS X 10.1 and then retained during an upgrade installation. In this case, it is recommended that you deactivate the extra AirPort port configurations.

Creating a new port configuration

Follow these steps:

1. Choose Location from the Apple menu and Network Preferences from the submenu.
2. Be sure the Location menu is set to Automatic, or your whichever location you prefer.
3. For Mac OS X 10.2 or later: Choose Network Port Configurations from the Show pop-up menu.
For Mac OS X 10.1: Choose Active Network Ports from the Show pop-up menu.
For Mc OS X 10.0: Choose Advanced from the Configure pop-up menu.
4. Select the Ethernet port configuration that you are using from the list.
5. Click Duplicate.
6. Name the new port configuration as desired, then click OK.
7. Choose the new port configuration from the Show menu.
8. Set up the new port configuration as desired.

Each port configuration is set up as its own Internet connection. If you need any help setting up for the Internet, see these technical documents.
Note: Steps for setting up a connection on an Ethernet LAN are the same as for cable/DSL.

106715: "**Mac OS X: How to Connect to the Internet With Cable or DSL**"
106716: "**Mac OS X: How to Connect to the Internet With PPPoE**"
106717: "**Mac OS X: How to Connect to the Internet via PPP (Dial-Up Access)**"
Published Date: Oct 10, 2016

QuickTime Streaming Server: When Making a Playlist, a Folder or Disk Appears as a File, Preventing Access to Its Contents

An apostrophe (') or backslash (\\) character in the name of any directory (a folder or disk in the Finder) causes it to appear as a file to Streaming Server Admin, preventing access to its contents.

This article has been archived and is no longer updated by Apple.

Symptom

Your designated media directory or a subdirectory (folder) inside it appears to be a file in Streaming Server Admin. This prevents access to the contents of the folder, and you cannot add this content to the Playlist.

Figure 1 illustrates what you would see if the name of folder in the media directory contained an apostrophe:

Figure 1 "6 Gig o'Mostly Texas iTunes" appears as a file

Solution

Do not use the apostrophe or backslash characters in the name of any disk or folder that is your designated media directory in Streaming Server Admin or in any of its subfolders. Remove any of these that you find.

Many MP3 players, including iTunes, offer you the ability to automatically name your files and folders when encoding (or "ripping") music. This is done by downloading names from the Gracenote CDDB service. CDDB can use characters like the apostrophe, so you may find it in your Media Directory if you have used CDDB.

Because using an automatic service like CDDB is likely to save you more time than is required to remove apostrophes, the most efficient solution is to remove the apostrophes from the affected directories' names. When importing new music, be sure to watch for new apostrophes and to subsequently remove them.

This document may be updated as more information on this issue becomes available.

Published Date: Feb 17, 2012

Mac OS X: iSub Speaker Does Not Mute After Headphones Are Connected

Because the iSub is designed to be used with other speakers, it is not muted when headphones are connected (with the exception of USB headphones).
This article has been archived and is no longer updated by Apple.

Symptom

You connect headphones to your computer, but the iSub speaker's volume does not mute as you may expect.

Solution

The iSub is a subwoofer-type speaker designed to be used in conjunction with a pair of speakers. Your computer does not distinguish between analog headphones and analog speakers when you connect either to the computer's analog sound output port. Therefore it is the correct behavior for the iSub not to be muted.

The iSub is muted if you connect USB headphones. Alternatively, disconnect the iSub when you do not wish to hear it.
Published Date: Feb 17, 2012

Mac OS 9: How to Connect a Windows-Compatible Printer to a Macintosh

This document discusses connecting a Microsoft Windows-compatible printer to a Macintosh computer.
This article has been archived and is no longer updated by Apple.
In many cases, the same printers are used for both Windows-compatible and Macintosh computers. Frequently, you only need to download the correct drivers for the printer-operating system combination that you are using. In some cases, you may need an adapter cable (USB-to-parallel, for example). Try these solutions:

1. Check with the printer's manufacture to see if there is a Mac OS driver for the specific printer, and if an adapter cable is necessary.

2. When the manufacturer of your printer does not provide Mac OS drivers, you may be able to purchase drivers and adapter cables from other manufacturers who sell an assortment of popular printer drivers for the express purpose of connecting Windows-compatible printers to Macintosh. You can search the Macintosh Products Guide for such products (http://guide.apple.com/). One example is PowerPrint by Strydent Software (http://www.strydent.com/).

3. If you have a Mac OS X-compatible computer, consider upgrading. Mac OS X includes built-in drivers for many popular printers.

For additional information, see these technical documents:

106163: "**Mac OS X 10.0, 10.1: System Requirements**"
106490: "**Mac OS X 10.1: Many Third-Party Ink Jet Printer Drivers Are Included**"
106516: "**Mac OS X 10.1: Includes PPDs for Many PostScript Printers**"

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information. Document 17159: "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Feb 18, 2012

Mac OS 9: "Printer Not Recognized" in the Chooser

This document discusses troubleshooting a printer that is not recognized, and that does not appear in the Chooser.
This article has been archived and is no longer updated by Apple.

Symptom

A printer connected to your computer is not available in the Chooser.

Solution

Note: The order in which the following steps are presented is designed to be most useful when at least one of the following is true:

- You have attempted to install Macintosh-compatible drivers for the printer.
- The printer previously appeared in the Chooser of the connected computer.
- The printer is an Apple model for which drivers are part of Mac OS 9.

Follow these steps:

1. Check with the printer's manufacturer that it is compatible with the version of Mac OS you have installed. Check the documentation included with the printer, or the outside of its box. If necessary, see the manufacturer's Web site.

2. Disconnect everything from the computer except for the power cord, keyboard, mouse, printer, and monitor. This helps isolate the cause of the issue.

Note: If you are troubleshooting a network printer, create an isolated network consisting of a computer and the printer, using a crossover cable or a simple hub.

3. Verify that all cables are connected properly. You may need to disconnect and reconnect to be sure.

4. Use the keyboard and mouse that came with the computer.

5. Make sure that the printer is turned on and not in an error state. See documentation included with the printer for information on identifying an error state.

6. Choose Apple System Profiler from the Apple menu. Check here to see if the system recognizes that a printer is connected. If the printer appears here, the issue is probably software related. If the printer does not appear here, the issue is probably hardware related.

7. Make sure the latest printer driver software is installed. Check the Web site of the printer manufacture, and download new software if available.

8. Check for an extension conflict. See technical document 30929: "**Mac OS: Extension Conflict Troubleshooting/Extensions Manager Features**".

9. Try different or known good cabling.

10. Try the printer on a different compatible Macintosh computer. Be sure to install appropriate drivers on the second computer if they are not already installed.

11. Perform a clean installation of the system software using the Mac OS CD that came with the computer. (You must use the system software CD that came with the computer, or a later version, in order to get the correct version of the Mac OS.)

12. If after performing all of these steps the printer is recognized by a different Macintosh, and still is not recognized by the first computer, the first computer will probably need to be evaluated by an Apple Authorized Service Provider.

13. If the printer is not recognized in the Chooser of any Macintosh computer on which appropriate drivers have been installed, contact the manufacturer of the printer for further troubleshooting.

Related documents

58027: "**iMac: How Printers Show Up In Chooser With USB Adapter**"
58028: "**USB: Basic USB Printer Troubleshooting**"
Published Date: Feb 18, 2012

TA20752_Mac_OS_Printer_Not_Recognized_in_the_Chooser.pdf

Mac OS X: "Configure Printer" Command Dimmed in Print Center

The Configure Printer command is dimmed in the Printers menu of Print Center.
This article has been archived and is no longer updated by Apple.

Symptom

- The Configure Printer command is dimmed in the Printers menu of Print Center.

Solution

This is the expected behavior in all versions of Mac OS X 10.0 through Mac OS X 10.1.

This has been changed in Mac OS X 10.2 where locally connected printers can be configured using the printer queue, or through your printer's own printer utility software. Postscript printers use Postscript Printer Description files or PPDs for installed options and configurations.

See document 107004 "**Mac OS X 10.2: How to Modify the Print Center Print Queue**" For detailed instructions on configuring a printer using the Print Queue.

Published Date: Oct 10, 2016

Apple Remote Desktop: Using Observe and Control Features on a Wireless (AirPort) Network

This document discusses how to use computers with Apple Remote Desktop on an 802.11 wireless Ethernet (AirPort) network.
This article has been archived and is no longer updated by Apple.

Symptom

An alert with a "communication error" message in the Computer Status window appears when Using Apple Remote Desktop to observe or control client computers via a wireless connection.

Solution

A. If you are using Apple AirPort hardware:

1. Update the client computer's AirPort software to the latest version.
2. Using a computer that has the latest AirPort software installed, connect to the AirPort base station with the AirPort Admin Utility.
3. Update the base station software when prompted.
4. In the AirPort Admin Utility, configure the base station for a Base Station Density of "High", and set the multicast rate to 11 Mb.

You can get the latest software from Apple Software Downloads (http://www.apple.com/swupdates/).

Note: Increasing the Base Station Density setting to High may decrease the usable distance between the wireless client and the access point (AirPort Base Station)

B. If you are using third-party 802.11 hardware:

Be sure that the client and base station software are both up to date. If you use AirPort client software to connect to a third-party base station, try using the latest AirPort software version. Consult third-party support resources for any questions regarding third-party software and compatibility.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**"
Published Date: Oct 10, 2016

Mac OS 9: "A System error occurred while executing an Internet Scripting command" Alert Message

An alert box appears when using the "Browse the Internet" application. This document explains how to resolve the issue.
This article has been archived and is no longer updated by Apple.

Symptom

An alert box with this message appears when you open the Browse the Internet application:

> "A System error occurred while executing an Internet Scripting command."

Solution

When Mac OS 9 and Mac OS X are both installed on the same hard disk, using the Browse the Internet application may result in this alert. Instead of using Browse the Internet, open the desired Web browser directly from the Finder. Alternatively, create and use an alias of the Web browser application.

In the absence of Mac OS X, this issue can occur if system software is incomplete, improperly installed, or has become unusable. You may try these steps:

1. Reinstall Mac OS 9.
2. Reinstall the desired Web browser.
3. Rebuild the desktop, as described in technical document 10182, "**Mac OS: Rebuilding Desktop File and Icon Recovery**".

Additional information

Browse the Internet is a script (a small application) that opens the Web browser that you have chosen in the Internet control panel of Mac OS 9. It is not a browser and does not add any other features to your Web browser. It is functionally similar to an alias.

This issue may occur if you use Browse the Internet when Mac OS 9 and Mac OS X are installed on the same disk or partition. This is the manner in which new computers are shipped from Apple.

Mac OS X includes a later version of Internet Explorer designed to work only in Mac OS X. When the Browse the Internet application is opened, the operating system looks for the Web browser designated in the Internet control panel; additionally it looks for the latest version of that browser on your hard disk, without differentiating whether the latest version is exclusively for Mac OS 9 or Mac OS X. If the Internet control panel is set to use Internet Explorer, Browse the Internet may attempt to open the version of Internet Explorer designed for Mac OS X. It will not be able to open this application, and the alert results.

For more information about the launch order of applications under OS 9, see technical document 17713, "**Finder Search Path for Applications**".
Published Date: Feb 18, 2012

Mac OS X: About the Empty Trash Alert Message

This document explains when the "Are you sure you want to remove the items in the Trash permanently?" alert message will appear.
This article has been archived and is no longer updated by Apple.

When the alert appears

If you want an alert box with the message "Are you sure you want to remove the items in the Trash permanently?" to appear before emptying the Trash, the corresponding checkbox must be selected in the Finder Preferences. It then appears when you choose Empty Trash from the Finder menu.

Note: If you use a contextual menu (Control-click) to empty the Trash, the alert box does not appear.

How to enable/disable or avoid the alert message

Use Finder Preferences to enable or disable the alert box. By using contextual menus, you may avoid the alert on a per-incident basis.

Finder Preferences

1. Click the Finder icon in the Dock.
2. Choose Preferences from the Finder application menu.
3. Select or deselect the "Show warning before emptying the Trash" checkbox, as desired.

Contextual menu

If you want to leave the warning on but avoid it on a per-incident basis, you can use a contextual menu instead of the menu command.

1. Control-click the Trash in the Dock.
2. Choose Empty Trash from the contextual menu that appears.

Note: "Control-click" means to press and hold the Control key while clicking an item. As an alternative, you may press and hold the mouse button until the contextual menu appears. To learn more about clicking, contextual menus, and the Dock, see technical document 106743, "**Mac OS X 10.1: Additional Features of the Dock**".
Published Date: Oct 10, 2016

Mac OS X Server: How to Restrict Non-Owner Access to Home Directories

Mac OS X allows users read-execute (no write) access to the first level of others' Home directories, which is a change from earlier AppleShare default behavior, in which a user had no access to another user's directory by default. This document describes how to change this behavior, if desired.

This article has been archived and is no longer updated by Apple.

In Mac OS X and Mac OS X Server, the default behavior is that any user can look into another user's Home directory. As shown in Figure 1, the Home folders are not locked.

Figure 1 Accessible Home folders

However, the only folders that any non-owner user can look inside are the Public and Sites folders. This feature allows users to immediately begin sharing without any additional setup, while still protecting information in other folders (such as Documents). In the earlier AppleShare behavior to which you may be accustomed, the default was that users did not have any privileges to another's directory. As shown in Figure 2, the folders would appear locked, with the belt-badged icon.

Figure 2 Access denied to Home folders

In some environments, the earlier behavior may be desired. Follow these steps to change the privileges of the Users directory:

1. At the server where the Users directory is stored, open Terminal (/Applications/Utilities/).
2. Type: `su`
3. Press Return.
4. Type the Admin user password.
5. Press Return.
6. Type: `cd /`
7. Press Return.
8. Type: `chmod -R 700 /Users`
9. Press Return.
10. Type: `chmod 755 /Users`
11. Press Return.
12. Type: `cd /Users`
13. Press Return.
14. Type: `chmod 666 .DS_Store`
15. Press: Return.
16. Type: `chmod 333 Shared`
17. Press: Return.

All Home directories should now resemble those in Figure 2, and only the owners have complete access.

Published Date: Feb 17, 2012

Apple Network Assistant: Do Not Use With Mac OS X

You should not use Apple Network Assistant on any Mac OS X volume. A Mac OS X volume copied, in whole or in part, by Network Assistant may not work as expected.
This article has been archived and is no longer updated by Apple.

Symptom

After using Network Assistant on a Mac OS X volume, the following may occur if you try to start up the computer from Mac OS X:

- The computer does not start up.
- The computer starts up to a flashing question mark.
- A kernel panic happens during or after startup.
- Other unexpected behavior occurs.

Note: Apple Network Assistant is designed to work only with Mac OS versions up to and including Mac OS 9.2.2. It is not designed to manage Mac OS X systems.

Solution

Do not use Network Assistant to copy Mac OS X volumes. To prevent this issue in the future, you should use Apple Remote Desktop for remote management of Mac OS X computers. For more information on this product, see the Apple Remote Desktop product page (http://www.apple.com/remotedesktop/).

Resetting permissions

This issue occurs because Network Assistant was not designed to preserve the permissions information that is associated with each file in Mac OS X. The Network Assistant Manage commands Copy Items and Copy Hard Disk do not maintain permissions information for any copied files. Without these permissions, Mac OS X cannot work as expected.

To correct the changes made by Network Assistant, you must manually reset permissions (or "privileges"). You may do this using either the Terminal (/Applications/Utilities/) or a third-party utility. For more information, see technical document 106712, "**Mac OS X: Troubleshooting Permissions Issues**".
Published Date: Oct 10, 2016

Mac OS X 10.1.5: Video Mirroring Setting Changes After Upgrading

After updating to Mac OS X version 10.1.5, video mirroring may be disabled and extended desktop may be enabled. If necessary, re-enable video mirroring using the Displays pane of System Preferences.
This article has been archived and is no longer updated by Apple.

Symptom

After updating to Mac OS X on a computer with an additional display connected, extended desktop is enabled instead of video mirroring.

Solution

Use the Displays preference pane to re-enable mirroring:

1. Open System Preferences from the Apple menu.
2. Choose Displays from the View menu.
3. Click the Arrange tab.
4. Select Mirror Displays.
5. Quit System Preferences.

Published Date: Oct 10, 2016

Apple Remote Desktop: Issues Controlling or Observing a Client When a Text Message Is Displayed

When a text message sent by an Apple Remote Desktop administrator is displayed on a client computer's screen, attempts to control and observe the client fail.

This article has been archived and is no longer updated by Apple.

Symptom

Note: This document applies to the Text Message feature, found in the Manage menu of Remote Desktop. It does not apply to the Text Chat feature.

If a text message is displayed on a client's screen, attempts to use the Control or Observe feature could fail in the following ways:

1. The text message dialog is not shown on the administrator's screen while controlling or observing the client.

2. If observing a client, changes and updates on the client's screen are not displayed on the administrator's screen.

3. When controlling a Mac OS X client, the administrator's screen does not show interaction with the client computer other than moving the mouse, even though such additional action may be occurring. The actions (such as opening a folder) do appear on the client screen. At this point the client's screen is not in sync with the administrator's screen. On client computers using Mac OS versions 8.1 to 9.2.2, clicking anywhere outside the text message dialog will sound a system alert beep.

4. After effects of Controlling
If the text message is not dismissed and the Administrator stops controlling the computer, the Computer Status window indicates the client is "Controlled by: This Screen". No other Apple Remote Desktop commands can be used on this client computer while in this state. An alert message says "You can't use this command on computers that are sharing screens."

5. After affects of Observing
If the text message is not dismissed and the administrator stops observing the computer, the Computer Status window displays client status correctly. However, no other Apple Remote Desktop commands will be accepted by this client computer. An alert is displayed indicating "You can't use this command on computers that are sharing screens."

Solution

Mac OS 8 and Mac OS 9

If in an active Control session, press the Return or Enter key on the administrator's keyboard to dismiss the Text Message on the client and return to normal use.

If in an active Observe session, discontinue the Observe session and use the client computer's keyboard to dismiss the Text Message.

Mac OS X or Mac OS X Server

If in an active Control session, pressing the Return or Enter key on the administrator's keyboard may or may not dismiss the Text Message. If not, discontinue the Control or Observe session and use the keyboard or mouse on the client computer to dismiss the Text Message window.

Published Date: Oct 10, 2016

Xserve: Must Erase RAID Volumes Before Installing Bundled Mac OS X Server

The Mac OS X Server Installer included with Xserve does not allow you to erase a RAID volume as part of the installation. You should erase the RAID volume with Disk Utility prior to installation.
This article has been archived and is no longer updated by Apple.

Symptom

The option to erase the target volume is dimmed (unavailable) in the Mac OS X Server Installer. The only option is to install over an existing installation.

Solution

Prior to using the Installer, use Disk Utility to erase the RAID volume.

Warning: Remember to back up any important data from the target volume before erasing.

When started up from a Mac OS X Server installation CD, you may access Disk Utility from the Installer menu prior to clicking Continue. If you have clicked Continue, you must restart from CD, or use Disk Utility while started up from a hard disk volume.
Published Date: Oct 10, 2016

Xserve, Mac OS X Server 10.3: Server Monitor requires reverse DNS lookup

This article has been archived and is no longer updated by Apple.

In the absence of DNS reverse lookup, specific conditions must be met to connect to Xserve with Server Monitor.

Symptom or issue

1. When you do not have DNS service on a network, you must make connections via IP address (such as "10.0.1.2") rather than by DNS name (such as "myserver.apple.com"). However, server Monitor does not connect to Xserve using its IP address when:

· you are using the product on a network that does not have domain name system (DNS) service,

and

· the hostname of the server is set to something other than "localhost".

2. After adding an Xserve to the Server Monitor, you may see the message 'Waiting for response' in Status Summary.

Solution

To connect with Server Monitor on an isolated network that does not have DNS service, use "localhost" as the hostname of the server.

The reason for this is that Server Monitor requires either:

- that the IP address of a server be resolved using a DNS name assigned to the server's IP address,

  or
- that one of several other specific actions be taken, which include using "localhost" as the server's hostname or making modifications to NetInfo.

In the absence of DNS service, using "localhost" is simplest way to allow Server Monitor to connect.

Note: The steps below should only be used on newly installed server, because changing the hostname on an established server could interrupt services that rely on the hostname.

How to set a hostname

1. Open the file "/etc/hostconfig".
2. Locate the line that begins "HOSTNAME=".
3. Change the line to read: HOSTNAME=localhost
4. Save the change.
5. Restart the server.

For further instruction on editing the hostconfig file, including important precautionary statements, see "Mac OS X Server: How to Locate and Edit Configuration Files".

Benefits of DNS service

For best results, establish DNS service on the network. This would allow you to assign desired hostnames and to connect via DNS names. The server should have a fully qualified DNS record that includes reverse lookup information.
Published Date: Oct 10, 2016

AirPort Base Station (Graphite): Cannot Connect After Switch to Comcast or Rogers Internet Service Provider

The AirPort Base Station (Graphite) may not be able to connect to the Internet after switching to Comcast or Rogers cable modem services.
This article has been archived and is no longer updated by Apple.

Symptom

The base station issues IP addresses to wireless clients through DHCP and NAT, but these clients cannot access the Internet. When a computer is directly connected to the Comcast or Rogers cable modem, the computer is able to access the Internet.

Solution

AirPort Base Station Update 3.84 corrects potential issues with the AirPort Base Station (Graphite) when connected to Comcast or Rogers cable modems and services. You only need this update if you have Comcast or Rogers service and have not been able to connect with your AirPort Base Station (Graphite). See software download document 120107, "**AirPort Graphite Base Station Update 3.84: Information and Download**".

Published Date: Feb 19, 2012

Security Update April 2002: Enhancements and "Before You Install" Information

Security Update April 2002 addresses certain issues and updates Mac OS X system software.

This article has been archived and is no longer updated by Apple.

Security Update April 2002 requires Mac OS X 10.1.3.

Important: Read Before Installing

1. An Admin user password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. Follow these steps if your password needs to be changed: Choose System Preferences from the Apple menu. Choose Users from the View menu. Select an Admin user and click Edit User. Click the Password tab. Change the password and click OK.

2. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If you experience a power outage or other interruption during installation, use the standalone installer (see below) from Apple Software Downloads to install.

Installation

There are two ways to update with Security Update April 2002.

I. Automatic Software Update Installation

See technical document 106704, "**Mac OS X: How to Update Your Software**". Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

II. Standalone Installer

A standalone installer is available from software download document 120111, "**Security Update April 2002: Information and Download**".

You can search all software updates at Apple Software Downloads (http://www.apple.com/swupdates/).

Do not reinstall earlier Mac OS X updates

You should not reinstall any earlier updates after using Security Update April 2002, including:

- Security Update 10-19-01
- Installer Update 1.0
- Mac OS X 10.0.x
- Mac OS X 10.1
- Mac OS X 10.1.1
- Mac OS X 10.1.2
- Mac OS X 10.1.3

Updates should be installed in the correct order. If for any reason you need to reinstall a software update prior to Security Update April 2002, the Mac OS X startup volume should be erased, after first backing up important documents and data. Reinstall Mac OS X, and install updates in the correct order.

Enhancements Delivered with Mac OS X Security Update April 2002

Newer versions of certain components are included to enhance Mac OS X security:

- Apache Mod_PHP
- Apache Mod_SSL
- OpenSSH
- sudo
- rsync
- groff
- /usr/bin/mail (a mail function in the Darwin subsystem unrelated to Mail.app)

For more information, please see the Security Updates page (http://www.apple.com/support/security/security_updates.html).

Published Date: Feb 17, 2012

Mac OS X: Classic startup stalls when almost complete

If a server that is aliased in the Classic (Mac OS 9) System Folder's Server's folder is not available, Classic may not finish starting up.
This article has been archived and is no longer updated by Apple.
As Classic starts up, the loading system extension icons appear then disappear as they normally do. The progress bar in the Classic startup window indicates that Classic startup is almost complete. At this point, Classic stalls and does not finish starting up.

This may occur if a Mac OS 9-based AppleShare (AFP) server that is aliased in the Classic (Mac OS 9) System Folder's Servers folder is not available.

You may choose to solve only the immediate issue by getting Classic started, or you may choose to additionally remove the server alias(es) that caused the issue.

Complete Classic's startup

1. Click the desktop, or any item in the Dock.
2. If the "Classic Environment starting up" window remains, click it once. Classic will finish starting up.

Classic does not finish starting up, click Stop, then click "Stop Classic." In this case, you need to follow the steps in the next section.

Delete the Servers folder and create new startup items

1. Locate the Mac OS 9 (Classic) "System Folder", which should not be confused with the Mac OS X folder named only "System".
2. Locate the Servers folder. Drag the Servers folder to the Trash.
3. Start Classic again. Classic should start up as expected.
4. Create server startup items. See "Mac OS X: How to Automatically Connect to the Server When You Log In".

Tips

1. This issue may not occur as long as the server is available. You may wish to take precautionary measures to avoid this if the server is not available in the future. See the section above.

2. One reason that a server may not be available to Mac OS X, but may be available to Mac OS 9, is that the server does not have an IP address. See "Connecting to AppleShare or File Sharing Requires TCP/IP".

For related information, see technical documents:

106678: "Mac OS X: Classic Will Not Start Up - Mac OS 9 Not Installed or Not Blessed"
151909: "The Classic environment fails to start or stops working"
25214: "Mac OS 9: Brief Delay When Desktop First Appears"
60544: "Mac OS 9: What Is the Servers Folder in the System Folder?"
106794: "Mac OS X: Empty White Space, or 'Box,' Appears on Desktop After Classic Starts"
Published Date: Oct 10, 2016

AppleWorks 6: Imported PDF Files Print in Low Resolution

PDF content that is embedded in an AppleWorks document prints in low resolution if the Fractional Character Widths option is not enabled.

This article has been archived and is no longer updated by Apple.

Symptom

When printing a document that contains an embedded PDF file, the PDF prints in low resolution.

Solution

Enable the Fractional Character Widths option in the AppleWorks General Preferences. Follow these steps:

AppleWorks in Mac OS 9

1. Choose Preferences from the Edit menu, then choose General from the submenu.
2. Choose Text from the Topic pop-up menu.
3. Select the checkbox for Fractional Character Width.
4. Click OK.

AppleWorks in Mac OS X

1. Locate the Preferences menu item that has a submenu, as indicated by the presence of a disclosure triangle.
Note: This item will be in either the Edit menu (earlier AppleWorks 6 versions) or the AppleWorks application menu (later AppleWorks 6 versions).
2. Choose Preferences from the appropriate menu, then choose General from the submenu.
3. Choose Text from the Topic pop-up menu.
4. Select the checkbox for Fractional Character Width.
5. Click OK.

Published Date: Feb 17, 2012

Mac OS X: Unable to Access Delete/Former User‘s Files or Folders

A deleted user's files and folders are inaccessible to Admin users if they were assigned to "System Administrator" when deleted.
This article has been archived and is no longer updated by Apple.

Symptom

When logged in as an Admin user, you cannot access the Home directory or files of a former, deleted user in the Finder.

For more information on the Home directory, see technical document 106167, "**Mac OS X: Using Your Home Directory**".

Solution

When deleting a user with the Users preference pane of System Preferences, a dialog appears to confirm whether you really wish to delete the user. This dialog also asks if the contents of the deleted user's Home directory should be reassigned to a current user or to System Administrator, which is the default choice (Figure 1).

Figure 1 Deleting a user

The term "System Administrator" actually refers to the "root" user, not to "Admin" users. The terms are similar, but they should not be confused. If System Administrator is selected, then the Home directory of the Deleted user will not be available to any other user, not even to an Admin user. To avoid this situation, choose a user other than System Administrator. For more information, see technical documents:

106256: "**Mac OS X: Deleting a Former User's Home Directory (Folder)**"
31375: "**Mac OS: Deleting Same Name User's Folder in Mac OS 9.1 Affects Mac OS X 10.0**"
106290: "**Mac OS X: About the root User and How to Enable It**"
Published Date: Oct 10, 2016

Mac OS X 10.1: About ColorSync and Displays System Preferences

This document explains how the ColorSync and Displays panes of the System Preferences application relate to each other.
This article has been archived and is no longer updated by Apple.
Important: The following terms and concepts are used throughout this document. You should review them first.

Terms and concepts

Mac OS X automatically generates two types of information relevant to ColorSync setup when you start up a computer. This is done for any connected **display**, such as an Apple Cinema Display or built-in PowerBook LCD display, that broadcasts self-descriptive data using the EDID protocol. Current Apple displays and most third-party displays transmit this information.

First, Mac OS X makes a list of all displays connected to your computer. Each list entity, which will later appear as a menu selection, is a known as a **display device** or **device name**. This device name is actually derived from information permanently stored in the display hardware itself. Examples of device names are "Studio Display 21" and "Color LCD".

Second, Mac OS X generates a ColorSync **profile** to be associated with the display device. The profile includes a description of the display's color reproduction characteristics, and it is also created using information that is permanently stored in the display hardware itself. You may change the profile associated with a display device at a later time. Profiles are stored on the hard disk at: /System/Library/ColorSync/Profiles/Displays/

The profile that is generated at startup shares the same name as the device name. When making menu selections, it is important to remember that these are two different software entities. The Display pop-up menu, discussed below, is an example of where both display devices and profiles appear in the same place.

The term **Displays pane** always refers to what you can access by choosing Displays from the View menu while in the System Preferences application.

The term **ColorSync pane** always refers to what you can access by choosing ColorSync from the View menu while in the System Preferences application. To see the **Display pop-up menu**, click the Device Profiles tab.

About ColorSync and Displays panes

Display may seem to have three names

For each display, there is a device name, a profile that has the same name by default, and a profile filename. The profile name is what you see in system and program menus, while the profile's filename contains the ".icc" extension and may be seen as part of a full pathname. Holding the mouse pointer still over any of the pop-up menus in the ColorSync pane of System Preferences brings up Help text showing the name of the display device, profile name, and profile pathname (Figure 1); or it may simply show the path to a specific profile (Figure 2). This can help you determine if the current setting is a display device or a profile.

Figure 1 Device name, profile name, and profile pathname

Figure 2 Profile pathname

Difference between the ColorSync pane and Displays pane

The Displays pane includes a wide range of settings, including geometry, arrangement, resolution and color depth. You can make display-specific color adjustments in the Displays pane , including the assignment of a ColorSync profile to a display device, but it does not encompass the entire color management process. When you select the Displays pane, a System Preferences window appears on each connected display. This clearly identifies which display you are adjusting.

The ColorSync pane focuses on the entire color management process, and it does not include the general, noncolor display settings.

ColorSync functions included in the Displays pane of System Preferences

Here you can assign a different ColorSync profile to each display. You can do the same thing and more using the ColorSync Utility (located at /Applications/Utilities/).

Functions of the ColorSync pane

The ColorSync pane of System Preference gives you control over the entire color management process, including the ability to:

- set default profiles for input, display, output, and proofing devices
- set default profiles for document color spaces, including RGB, CMYK, Gray, and Lab (and you can programmatically set a default profile for XYZ space)
- select a preferred CMM
- save these color settings in named "workflows" and switch between them

The ColorSync pane provides choices that are not available in the Displays pane

Setting the "system profile"

The Display pop-up menu in the ColorSync pane determines what is used as the system profile. This is what Mac OS X returns to an application that requests the "system profile." Here you may choose from two different types of entities: display devices and ColorSync profiles. If you choose a display device here (which is the default choice), then the system profile returned to requesting applications is the one selected for that display device in the Displays pane. If you choose a ColorSync profile here, then it is used as the system profile. See below for more information on this behavior.

How to determine which profile is authoritative if the system profile and individual displays are all assigned different profiles

When the system profile and individual display profiles do not match, behavior varies with different types of applications. Individual applications have different ways of indicating to you which profile is in use. You can experiment to see what happens and what works best for you. See the documentation or help files included with your application. Cocoa applications only use the preferred display device's profile, or "system profile." For most predictable results, set the Display pop-up menu to a device name and choose the profile in the Displays pane. This is not a concern for most users, who have one display and use the default profile.

If you have one display

By default, your display is the only designated display device, and its profile is the one automatically generated when you started up the computer. You do not need to change any settings. However, if you want to create a new profile or change its profile, use the Displays pane of System Preferences. Alternatively, you may go directly to the Display Calibrator application located in the Utilities folder (/Applications/Utilities/).
Published Date: Oct 10, 2016

Mac OS 9.2, Mac OS X: "Code Fragment could not be prepared. ‘PrefRestoreInit‘ error type 1010" During Computer or Classic Startup

A "code fragment" or "PrefRestoreInit" alert message during Mac OS 9 or Classic startup is related to the FileSharingLib extension. Replace it or delete a preference file to resolve the issue.

This article has been archived and is no longer updated by Apple.

Symptom

When either starting up the computer from Mac OS 9.2 or 9.2.1, or when starting up the Classic environment from the same, an alert box with this message appears:

> "Code Fragment could not be prepared. 'PrefRestoreInit' error type 1010"

Solution

This alert box may appear if the FileSharingLib extension is not in the Extensions folder. This issue is resolved by updating to Mac OS 9.2.2. See Apple Software Downloads (http://www.apple.com/swupdates/).

If you cannot update immediately, follow these steps:

1. As Classic or Mac OS 9 starts up, press and hold the Shift key to disable extensions.
2. Locate the FileSharingLib extension. If it is not in the "Extensions (Disabled)" folder of the System Folder, then try locating it with the Mac OS X version of Sherlock (if applicable).
   Alternative solution: If you cannot locate this extension, an alternative solution is to find the file "PrefRestoreInit", which should be in the Extensions folder inside the System Folder.
3. Drag FileSharingLib into the Extensions folder, which is in the Mac OS 9 System Folder.
   Alternative solution: If you could not find FileSharingLib in the last step, then remove PrefRestoreInit from the Extensions folder.
4. Restart the computer or Classic, allowing extensions to load normally.

Published Date: Feb 17, 2012

Mac OS X: About Long File Names

Mac OS X uses file names up to 255 characters long. You normally see a shortened version on the desktop or in the Finder.
This article has been archived and is no longer updated by Apple.
Mac OS X uses file names that are up to 255 characters for files that are stored on Mac OS Extended (HFS Plus) format volumes.

A truncated version of a desktop file's long name can normally be seen. Hold the mouse pointer over a shortened file name to see the long name.

If a file with a long name is viewed while started up from Mac OS 9, some of the file name's first twenty five characters are displayed along with a unique hexadecimal reference number. To view the full file name, start up from Mac OS X.

When using a Mac OS Standard format volume, file names are limited to 31 characters.
Published Date: Oct 10, 2016

Mac OS X 10.1: How to Change Default Currency Symbol to the Euro

This document explains how to set the default currency symbol to the euro.
This article has been archived and is no longer updated by Apple.

Symptom

Applications that rely on the currency setting in the International pane of System Preferences, such as Microsoft Excel and AppleWorks, don't display the euro, but instead display national currency symbols.

Solution

1. Choose System Preferences from the Apple menu.
2. Choose International from the View menu.
3. Click the Numbers tab.
4. Type the euro glyph (€) in the Symbol field, as in Figure 1. See technical document 61586: "**Mac OS: How to Type the Euro Glyph**" for more information.

Figure 1 International pane of System Preferences

Additional information

When a document uses the system's default currency symbol (as defined by the locale), it is subject to change when opened by a user who has a different locale. For example, the currency symbol might change from euro to yen if you emailed it to a colleague in Japan. You may prevent this if your application has a custom numbers format feature that allows the currency symbol to remain the same regardless of locale. Excel is an example of an application that has a custom numbers format feature.

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159 "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Feb 17, 2012

Mac OS X: Mouse Speed Changes Unexpectedly, Follows Trackpad Speed

You can set tracking speed for a mouse and trackpad independently, but the mouse speed is reset to the trackpad speed after you restart your computer.
This article has been archived and is no longer updated by Apple.

Symptom

In the Mouse pane of System Preferences you set your mouse and trackpad to two different speeds on the slider. They maintain separate speeds until you restart your computer. After that, the mouse speed has changed to match the trackpad speed.

Solution

You must reset your mouse to the desired speed each time you restart. Otherwise, you should choose a common speed that is acceptable to you.

This document may be updated as more information is available.
Published Date: Feb 17, 2012

Mac OS: Disk Is Available in Mac OS X But Not in Mac OS 9

A disk formatted in Mac OS X may not become available ("mount") when started up from Mac OS 9 if the Mac OS 9 hard disk drivers are not installed.
This article has been archived and is no longer updated by Apple.

Symptom

A disk that is available in Mac OS X is not available when the computer is started up from Mac OS 9.

Solution

Is the disk UFS-formatted?

UFS-formatted volumes are not available in Mac OS 9. If this is the case, may wish to erase the disk and use a different format (such as Mac OS Extended), as described in section II below.

I. Try Drive Setup first

Depending on the history of the affected disk (Note 1), using Drive Setup to update drivers may resolve the situation. Try these steps first:

1. Start up the computer from a Mac OS 9 CD (Note 2).
2. Open Drive Setup, which is normally located at in the Utilities folder in the "Applications (Mac OS 9)" folder.
3. Select the disk that you wish to make available.
4. Choose Update Driver from the Functions menu (Note 3). This message appears:

"The new driver will not be available until you restart the computer."

5. Restart the computer.

Notes:

1. If the disk was last formatted with Drive Setup (included with Mac OS 9), a third-party disk utility, or the Partition function of Disk Utility (included with Mac OS X), then you may be able to use Drive Setup to update the drivers. If the disk was last formatted using the Erase function of Disk Utility, then you need to continue to Section II, below. Disk Utility in Mac OS X versions 10.0 to 10.0.4 included the Partition but not the Erase function, so you should be able to use Drive Setup on a disk that was last formatted for or by Mac OS X 10.0 to 10.0.4.

2. This requires a "bootable" Mac OS 9 CD, one from which your computer may start up. Some Mac OS 9 Restore CDs included with recent computers are not bootable.

3. If the Update Driver menu selection is dimmed, you cannot use Drive Setup to update the Mac OS 9 drivers on this disk. You should continue to Section II.

II. Using Disk Utility

Warning: These solutions involve formatting the disk. Formatting a disk removes all data contained on the disk. You should first back up important data and documents.

Disk Utility can install Mac OS 9 disk drivers when partitioning or easing your disk. Choose the method (A or B) that you prefer. Partitioning divides your disk so that it virtually behaves as two or more disks. A partition may be erased or reformatted without affecting other partitions contained on the same physical disk. If you do not need that, choose to simply erase the disk.

A. Erasing the disk

1. Start up the computer from a Mac OS X Installation CD. When the first screen of the Installer appears, be sure **not** to click anything. If you do, you must restart the computer again.
2. Choose Disk Utility from the Installer application menu.
3. Select the disk in the left-hand column (see Note).
4. Click the Erase tab.

5. Select the "Install Mac OS 9 Drivers" checkbox.
6. Click Erase.

Note: You must choose the entire disk (Figure 1), not just a volume contained on it. If you are formatting only a partition of your startup disk, you cannot install Mac OS 9 drivers.

Figure 1 Disk Utility

B. Partitioning the disk

Alternatively, you may also avoid this issue by using the Partition function. If you only want the hard disk to be one volume, select one partition.

1. In Disk Utility, click the Partition tab.
2. Select the disk, not a volume of the disk. The message "Select a single disk in order to set it up" appears until a single disk is selected.
3. Set up partitions as desired.
4. Verify that the "Install Mac OS 9 Disk Drivers" option is selected (in the Options box).
5. Click "OK".

Related information

Related Documents

61301 Mac OS X: How to Partition a Hard Disk

75275 Mac OS X: About the "Install Mac OS 9 Drivers" Option in Disk Utility

Published Date: Oct 10, 2016

Mac OS X Server 10.1: Sample File (named.conf) for Configuring DNS in a NAT Environment

This document provides a sample file used for technical document 106853, "**Mac OS X Server 10.1: How to Set Up DNS in a NAT Environment**". You should use this information only as instructed in technical document 106853.
This article has been archived and is no longer updated by Apple.
This document provides an example address-to-name lookup database file.

Caution: You should be aware that the incorrect configuration of DNS settings can result in serious system issues. Only experienced users should manipulate these settings.

------ Copy Below This Line --------

```
// This BIND 8.2 Config File for a Mac OS X Server 10.1.x
//
// named.conf file from the Apple Knowledge Base Article Number
//
// [CAUTION: Users should be aware that the incorrect configuration of DNS
// settings can result in serious system issues. It is recommended that only
// experienced users manipulate these settings.

//

// Declares control channels to be used by the rndc utility
// controls {
//      unix "/var/run/ndc" perm 0600 owner 0 group 0;
//        inet 127.0.0.1 port 54 allow {any; };
// It is recommended that 127.0.0.1 be the only address used
// This also allows non-privileged users on the local host to manage your name server
// };


// Information that you need to provide for this file
//
// Replace the 2 forwarders ip_addr vales with the DNS Server IP addresses
// provided by your ISP
//
// ip_addr - An IP address in with exactly four elements in dotted-decimal notation
// (example: 192.168.1.2)
//
// If you do not have a NAT gateway or router, comment out the forwarders line
// by using "//" <no quotes>


// Controls global server configuration options and sets defaults for other statements
options {
        directory "/var/named";
        notify no;
        forwarders { ip_addr; ip_addr; };
        statistics-interval 1;
        version "surely you must be joking";
};

// These entries are not specific to any zone
// They are required by any DNS server

zone "." in {
        type hint;
        file "db.cache";
};

zone "0.0.127.in-addr.arpa" in {
        type master;
        file "db.127.0.0";
};

//
// The following entries are where your zone information is entered
//


// This file contains the host names and their correlating IP addresses.

zone "example.com" in {
        type master;
        file "db.example.com";
```

```
};

// This file contains the IP addresses and their correlating reverse lookup.

zone "1.0.10.in-addr.arpa" in {
        type master;
        file "db.10.0.1";
};
```

------ Copy Above This Line --------

Published Date: Oct 10, 2016

Mac OS X Server 10.1: Sample File (db.10.0.1) for Configuring DNS in a NAT Environment

This document provides a sample file used for technical document 106853, "**Mac OS X Server 10.1: How to Set Up DNS in a NAT Environment**". You should use this information only as instructed in technical document 106853.
This article has been archived and is no longer updated by Apple.
This document provides an example address-to-name lookup database file.

Caution: You should be aware that the incorrect configuration of DNS settings can result in serious system issues. Only experienced users should manipulate these settings.

------ Copy Below This Line --------

```
$TTL 38400
; db.10.0.1 file from the Apple Knowledge Base from Apple Knowledge Base Article Number
;
; CAUTION: Users should be aware that the incorrect configuration of DNS
; settings can result in serious system issues. It is recommended that only
; experienced users manipulate these settings.

;

1.0.10.in-addr.arpa. IN SOA server.example.com. admin.server.example.com. (
                        1        ; Serial
                        10800    ; Refresh after 3 hours
                        3600     ; Retry after 1 hour
                        604800   ; Expire after 1 week
                        86400 )  ; Minimum TTL of 1 day

; Name servers

1.0.10.in-addr.arpa.    IN NS    server.example.com.

; Addresses point to canonical names

2.1.0.10.in-addr.arpa.    IN PTR    server.example.com.
3.1.0.10.in-addr.arpa.    IN PTR    host3.example.com.
4.1.0.10.in-addr.arpa.    IN PTR    host4.example.com.
5.1.0.10.in-addr.arpa.    IN PTR    host5.example.com.
6.1.0.10.in-addr.arpa.    IN PTR    host6.example.com.
7.1.0.10.in-addr.arpa.    IN PTR    host7.example.com.
8.1.0.10.in-addr.arpa.    IN PTR    host8.example.com.
9.1.0.10.in-addr.arpa.    IN PTR    host9.example.com.
10.1.0.10.in-addr.arpa.    IN PTR    host10.example.com.
11.1.0.10.in-addr.arpa.    IN PTR    host11.example.com.
12.1.0.10.in-addr.arpa.    IN PTR    host12.example.com.
13.1.0.10.in-addr.arpa.    IN PTR    host13.example.com.
14.1.0.10.in-addr.arpa.    IN PTR    host14.example.com.
15.1.0.10.in-addr.arpa.    IN PTR    host15.example.com.
16.1.0.10.in-addr.arpa.    IN PTR    host16.example.com.
17.1.0.10.in-addr.arpa.    IN PTR    host17.example.com.
18.1.0.10.in-addr.arpa.    IN PTR    host18.example.com.
19.1.0.10.in-addr.arpa.    IN PTR    host19.example.com.
20.1.0.10.in-addr.arpa.    IN PTR    host20.example.com.
21.1.0.10.in-addr.arpa.    IN PTR    host21.example.com.
22.1.0.10.in-addr.arpa.    IN PTR    host22.example.com.
23.1.0.10.in-addr.arpa.    IN PTR    host23.example.com.
24.1.0.10.in-addr.arpa.    IN PTR    host24.example.com.
25.1.0.10.in-addr.arpa.    IN PTR    host25.example.com.
26.1.0.10.in-addr.arpa.    IN PTR    host26.example.com.
27.1.0.10.in-addr.arpa.    IN PTR    host27.example.com.
28.1.0.10.in-addr.arpa.    IN PTR    host28.example.com.
29.1.0.10.in-addr.arpa.    IN PTR    host29.example.com.
30.1.0.10.in-addr.arpa.    IN PTR    host30.example.com.
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36.1.0.10.in-addr.arpa.    IN PTR    host36.example.com.
37.1.0.10.in-addr.arpa.    IN PTR    host37.example.com.
38.1.0.10.in-addr.arpa.    IN PTR    host38.example.com.
39.1.0.10.in-addr.arpa.    IN PTR    host39.example.com.
40.1.0.10.in-addr.arpa.    IN PTR    host40.example.com.
41.1.0.10.in-addr.arpa.    IN PTR    host41.example.com.
42.1.0.10.in-addr.arpa.    IN PTR    host42.example.com.
```

```
43.1.0.10.in-addr.arpa.    IN PTR    host43.example.com.
44.1.0.10.in-addr.arpa.    IN PTR    host44.example.com.
45.1.0.10.in-addr.arpa.    IN PTR    host45.example.com.
46.1.0.10.in-addr.arpa.    IN PTR    host46.example.com.
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101.1.0.10.in-addr.arpa.    IN PTR    host101.example.com.
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106.1.0.10.in-addr.arpa.    IN PTR    host106.example.com.
107.1.0.10.in-addr.arpa.    IN PTR    host107.example.com.
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116.1.0.10.in-addr.arpa.    IN PTR    host116.example.com.
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118.1.0.10.in-addr.arpa.    IN PTR    host118.example.com.
119.1.0.10.in-addr.arpa.    IN PTR    host119.example.com.
120.1.0.10.in-addr.arpa.    IN PTR    host120.example.com.
121.1.0.10.in-addr.arpa.    IN PTR    host121.example.com.
122.1.0.10.in-addr.arpa.    IN PTR    host122.example.com.
123.1.0.10.in-addr.arpa.    IN PTR    host123.example.com.
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124.1.0.10.in-addr.arpa.    IN PTR    host124.example.com.
125.1.0.10.in-addr.arpa.    IN PTR    host125.example.com.
126.1.0.10.in-addr.arpa.    IN PTR    host126.example.com.
127.1.0.10.in-addr.arpa.    IN PTR    host127.example.com.
128.1.0.10.in-addr.arpa.    IN PTR    host128.example.com.
129.1.0.10.in-addr.arpa.    IN PTR    host129.example.com.
130.1.0.10.in-addr.arpa.    IN PTR    host130.example.com.
131.1.0.10.in-addr.arpa.    IN PTR    host131.example.com.
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136.1.0.10.in-addr.arpa.    IN PTR    host136.example.com.
137.1.0.10.in-addr.arpa.    IN PTR    host137.example.com.
138.1.0.10.in-addr.arpa.    IN PTR    host138.example.com.
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140.1.0.10.in-addr.arpa.    IN PTR    host140.example.com.
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146.1.0.10.in-addr.arpa.    IN PTR    host146.example.com.
147.1.0.10.in-addr.arpa.    IN PTR    host147.example.com.
148.1.0.10.in-addr.arpa.    IN PTR    host148.example.com.
149.1.0.10.in-addr.arpa.    IN PTR    host149.example.com.
150.1.0.10.in-addr.arpa.    IN PTR    host150.example.com.
151.1.0.10.in-addr.arpa.    IN PTR    host151.example.com.
152.1.0.10.in-addr.arpa.    IN PTR    host152.example.com.
153.1.0.10.in-addr.arpa.    IN PTR    host153.example.com.
154.1.0.10.in-addr.arpa.    IN PTR    host154.example.com.
155.1.0.10.in-addr.arpa.    IN PTR    host155.example.com.
156.1.0.10.in-addr.arpa.    IN PTR    host156.example.com.
157.1.0.10.in-addr.arpa.    IN PTR    host157.example.com.
158.1.0.10.in-addr.arpa.    IN PTR    host158.example.com.
159.1.0.10.in-addr.arpa.    IN PTR    host159.example.com.
160.1.0.10.in-addr.arpa.    IN PTR    host160.example.com.
161.1.0.10.in-addr.arpa.    IN PTR    host161.example.com.
162.1.0.10.in-addr.arpa.    IN PTR    host162.example.com.
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164.1.0.10.in-addr.arpa.    IN PTR    host164.example.com.
165.1.0.10.in-addr.arpa.    IN PTR    host165.example.com.
166.1.0.10.in-addr.arpa.    IN PTR    host166.example.com.
167.1.0.10.in-addr.arpa.    IN PTR    host167.example.com.
168.1.0.10.in-addr.arpa.    IN PTR    host168.example.com.
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170.1.0.10.in-addr.arpa.    IN PTR    host170.example.com.
171.1.0.10.in-addr.arpa.    IN PTR    host171.example.com.
172.1.0.10.in-addr.arpa.    IN PTR    host172.example.com.
173.1.0.10.in-addr.arpa.    IN PTR    host173.example.com.
174.1.0.10.in-addr.arpa.    IN PTR    host174.example.com.
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203.1.0.10.in-addr.arpa.    IN PTR    host203.example.com.
204.1.0.10.in-addr.arpa.    IN PTR    host204.example.com.
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205.1.0.10.in-addr.arpa.    IN PTR    host205.example.com.
206.1.0.10.in-addr.arpa.    IN PTR    host206.example.com.
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247.1.0.10.in-addr.arpa.    IN PTR    host247.example.com.
248.1.0.10.in-addr.arpa.    IN PTR    host248.example.com.
249.1.0.10.in-addr.arpa.    IN PTR    host249.example.com.
250.1.0.10.in-addr.arpa.    IN PTR    host250.example.com.
251.1.0.10.in-addr.arpa.    IN PTR    host251.example.com.
252.1.0.10.in-addr.arpa.    IN PTR    host252.example.com.
253.1.0.10.in-addr.arpa.    IN PTR    host253.example.com.
254.1.0.10.in-addr.arpa.    IN PTR    host254.example.com.
```

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Published Date: Feb 17, 2012

Mac OS X Server 10.1: Sample File (db.example.com) for Configuring DNS in a NAT Environment

This document provides a sample file used for technical document 106853, "**Mac OS X Server 10.1: How to Set Up DNS in a NAT Environment**". You should use this information only as instructed in technical document 106853.
This article has been archived and is no longer updated by Apple.
This document provides an example hostname-to-address lookup database file.

Caution: You should be aware that the incorrect configuration of DNS settings can result in serious system issues. Only experienced users should manipulate these settings.

------ Copy Below This Line --------

```
$TTL 86401
; db.example.com from Apple Knowledge Base Article Number
;
; CAUTION: Users should be aware that the incorrect configuration of DNS
; settings can result in serious system issues. It is recommended that only
; experienced users manipulate these settings.

;

example.com. IN SOA server.example.com. admin.server.example.com. (
                        10       ; Serial
                        10800    ; Refresh after 3 hours
                        3600     ; Retry after 1 hour
                        604800   ; Expire after 1 week
                        86400 )  ; Minimum TTL of 1 day

; Name servers

example.com.    IN NS  server.example.com.

; Primary Addresses

localhost.example.com.    IN A    127.0.0.1

server.example.com.    IN A    10.0.1.2
host3.example.com.    IN A    10.0.1.3
host4.example.com.    IN A    10.0.1.4
host5.example.com.    IN A    10.0.1.5
host6.example.com.    IN A    10.0.1.6
host7.example.com.    IN A    10.0.1.7
host8.example.com.    IN A    10.0.1.8
host9.example.com.    IN A    10.0.1.9
host10.example.com.    IN A    10.0.1.10
host11.example.com.    IN A    10.0.1.11
host12.example.com.    IN A    10.0.1.12
host13.example.com.    IN A    10.0.1.13
host14.example.com.    IN A    10.0.1.14
host15.example.com.    IN A    10.0.1.15
host16.example.com.    IN A    10.0.1.16
host17.example.com.    IN A    10.0.1.17
host18.example.com.    IN A    10.0.1.18
host19.example.com.    IN A    10.0.1.19
host20.example.com.    IN A    10.0.1.20
host21.example.com.    IN A    10.0.1.21
host22.example.com.    IN A    10.0.1.22
host23.example.com.    IN A    10.0.1.23
host24.example.com.    IN A    10.0.1.24
host25.example.com.    IN A    10.0.1.25
host26.example.com.    IN A    10.0.1.26
host27.example.com.    IN A    10.0.1.27
host28.example.com.    IN A    10.0.1.28
host29.example.com.    IN A    10.0.1.29
host30.example.com.    IN A    10.0.1.30
host31.example.com.    IN A    10.0.1.31
host32.example.com.    IN A    10.0.1.32
host33.example.com.    IN A    10.0.1.33
host34.example.com.    IN A    10.0.1.34
host35.example.com.    IN A    10.0.1.35
host36.example.com.    IN A    10.0.1.36
host37.example.com.    IN A    10.0.1.37
host38.example.com.    IN A    10.0.1.38
host39.example.com.    IN A    10.0.1.39
host40.example.com.    IN A    10.0.1.40
```

```
host41.example.com.    IN A    10.0.1.41
host42.example.com.    IN A    10.0.1.42
host43.example.com.    IN A    10.0.1.43
host44.example.com.    IN A    10.0.1.44
host45.example.com.    IN A    10.0.1.45
host46.example.com.    IN A    10.0.1.46
host47.example.com.    IN A    10.0.1.47
host48.example.com.    IN A    10.0.1.48
host49.example.com.    IN A    10.0.1.49
host50.example.com.    IN A    10.0.1.50
host51.example.com.    IN A    10.0.1.51
host52.example.com.    IN A    10.0.1.52
host53.example.com.    IN A    10.0.1.53
host54.example.com.    IN A    10.0.1.54
host55.example.com.    IN A    10.0.1.55
host56.example.com.    IN A    10.0.1.56
host57.example.com.    IN A    10.0.1.57
host58.example.com.    IN A    10.0.1.58
host59.example.com.    IN A    10.0.1.59
host60.example.com.    IN A    10.0.1.60
host61.example.com.    IN A    10.0.1.61
host62.example.com.    IN A    10.0.1.62
host63.example.com.    IN A    10.0.1.63
host64.example.com.    IN A    10.0.1.64
host65.example.com.    IN A    10.0.1.65
host66.example.com.    IN A    10.0.1.66
host67.example.com.    IN A    10.0.1.67
host68.example.com.    IN A    10.0.1.68
host69.example.com.    IN A    10.0.1.69
host70.example.com.    IN A    10.0.1.70
host71.example.com.    IN A    10.0.1.71
host72.example.com.    IN A    10.0.1.72
host73.example.com.    IN A    10.0.1.73
host74.example.com.    IN A    10.0.1.74
host75.example.com.    IN A    10.0.1.75
host76.example.com.    IN A    10.0.1.76
host77.example.com.    IN A    10.0.1.77
host78.example.com.    IN A    10.0.1.78
host79.example.com.    IN A    10.0.1.79
host80.example.com.    IN A    10.0.1.80
host81.example.com.    IN A    10.0.1.81
host82.example.com.    IN A    10.0.1.82
host83.example.com.    IN A    10.0.1.83
host84.example.com.    IN A    10.0.1.84
host85.example.com.    IN A    10.0.1.85
host86.example.com.    IN A    10.0.1.86
host87.example.com.    IN A    10.0.1.87
host88.example.com.    IN A    10.0.1.88
host89.example.com.    IN A    10.0.1.89
host90.example.com.    IN A    10.0.1.90
host91.example.com.    IN A    10.0.1.91
host92.example.com.    IN A    10.0.1.92
host93.example.com.    IN A    10.0.1.93
host94.example.com.    IN A    10.0.1.94
host95.example.com.    IN A    10.0.1.95
host96.example.com.    IN A    10.0.1.96
host97.example.com.    IN A    10.0.1.97
host98.example.com.    IN A    10.0.1.98
host99.example.com.    IN A    10.0.1.99
host100.example.com.    IN A    10.0.1.100
host101.example.com.    IN A    10.0.1.101
host102.example.com.    IN A    10.0.1.102
host103.example.com.    IN A    10.0.1.103
host104.example.com.    IN A    10.0.1.104
host105.example.com.    IN A    10.0.1.105
host106.example.com.    IN A    10.0.1.106
host107.example.com.    IN A    10.0.1.107
host108.example.com.    IN A    10.0.1.108
host109.example.com.    IN A    10.0.1.109
host110.example.com.    IN A    10.0.1.110
host111.example.com.    IN A    10.0.1.111
host112.example.com.    IN A    10.0.1.112
host113.example.com.    IN A    10.0.1.113
host114.example.com.    IN A    10.0.1.114
host115.example.com.    IN A    10.0.1.115
host116.example.com.    IN A    10.0.1.116
host117.example.com.    IN A    10.0.1.117
host118.example.com.    IN A    10.0.1.118
host119.example.com.    IN A    10.0.1.119
host120.example.com.    IN A    10.0.1.120
host121.example.com.    IN A    10.0.1.121
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host122.example.com.    IN A    10.0.1.122
host123.example.com.    IN A    10.0.1.123
host124.example.com.    IN A    10.0.1.124
host125.example.com.    IN A    10.0.1.125
host126.example.com.    IN A    10.0.1.126
host127.example.com.    IN A    10.0.1.127
host128.example.com.    IN A    10.0.1.128
host129.example.com.    IN A    10.0.1.129
host130.example.com.    IN A    10.0.1.130
host131.example.com.    IN A    10.0.1.131
host132.example.com.    IN A    10.0.1.132
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host135.example.com.    IN A    10.0.1.135
host136.example.com.    IN A    10.0.1.136
host137.example.com.    IN A    10.0.1.137
host138.example.com.    IN A    10.0.1.138
host139.example.com.    IN A    10.0.1.139
host140.example.com.    IN A    10.0.1.140
host141.example.com.    IN A    10.0.1.141
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host171.example.com.    IN A    10.0.1.171
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host198.example.com.    IN A    10.0.1.198
host199.example.com.    IN A    10.0.1.199
host200.example.com.    IN A    10.0.1.200
host201.example.com.    IN A    10.0.1.201
host202.example.com.    IN A    10.0.1.202
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host203.example.com.    IN A    10.0.1.203
host204.example.com.    IN A    10.0.1.204
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host242.example.com.    IN A    10.0.1.242
host243.example.com.    IN A    10.0.1.243
host244.example.com.    IN A    10.0.1.244
host245.example.com.    IN A    10.0.1.245
host246.example.com.    IN A    10.0.1.246
host247.example.com.    IN A    10.0.1.247
host248.example.com.    IN A    10.0.1.248
host249.example.com.    IN A    10.0.1.249
host250.example.com.    IN A    10.0.1.250
host251.example.com.    IN A    10.0.1.251
host252.example.com.    IN A    10.0.1.252
host253.example.com.    IN A    10.0.1.253
host254.example.com.    IN A    10.0.1.254
```

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Published Date: Feb 17, 2012

Mac OS X: Icons Have Black Stripes or Bars

Under some conditions, Mac OS X icons may be drawn with black horizontal lines (bars, stripes, bands).
This article has been archived and is no longer updated by Apple.

Symptom

Mac OS X icons in the Finder or Dock appear with black horizontal lines (bars, stripes, bands) over them, as in Figure 1.

Figure 1 Icons with black lines

Solution

This is a cosmetic issue. It cannot be resolved by troubleshooting. The issue may occur more often when the computer is using a lot of virtual memory. Restarting the computer or installing more memory (RAM) may prevent the issue from occurring as often, depending on how the computer is used.

Published Date: Feb 20, 2012

Mac OS X Update 10.1.4: Enhancements and "Before You Install" Information

Mac OS X Update 10.1.4 addresses certain issues and updates system software.

This article has been archived and is no longer updated by Apple.

This software has been replaced by a later update. Because later updates include previous enhancements, the following information is still provided for reference. To find current software, see technical document 106713, "**Mac OS X 10.1: Chart of Available Software Updates**".

Enhancements delivered with this update

In addition to enhancements previously delivered with versions 10.1.1, 10.1.2 and 10.1.3, Mac OS X version 10.1.4 includes the following:

- Resolves a potential delay that could occur when connecting to the Internet using a dial-up modem (PPP connection).
- Improves compatibility with certain single- and dual-channel SCSI cards.
- Reduces time needed for Sherlock file searches.
- Improves usability of Sherlock when searching a Mac OS X Server volume.
- Enhances security with increased TCP broadcast address communication filtering.
- Improves compatibility with certain third-party network routers (AppleTalk source sockets 128 or higher are now used).

Published Date: Feb 19, 2012

Apple Remote Desktop: Troubleshooting Connection to Client Behind NAT Router

This document explains how to troubleshoot when Apple Remote Desktop cannot connect to a computer that is behind a network address translation (NAT) router, such as the AirPort Base Station. **Note:** This document specifically covers connecting from a public IP address to a private IP address, as described in technical document 106847, "**Apple Remote Desktop: How to Connect Through a Firewall or NAT**". This article has been archived and is no longer updated by Apple.

Symptom

From a public IP address, Apple Remote Desktop is unable to connect to a client that is behind a NAT router. This alert message appears:

> "There was a problem communicating with (IP Address)."

Solution

Use the following troubleshooting steps:

1. Make sure the client is set up properly and works with an Apple Remote Desktop admin computer on the local, private network. If this does not work on the local network, then it will not work from across networks. If the client can be controlled from an Apple Remote Desktop admin computer on the local network, continue to step 2.

2. Check that the NAT router's IP address is correct, and that port mapping is working. You can do this by setting up a Web server on the internal network and mapping port 80 to the internal IP address of this server. In Mac OS 9, the default Web server is Personal Web Sharing. In Mac OS X, the default Web server is Apache. Be sure that a client on the private network can load pages from the Web server, then test the connection across networks.

3. Verify that the router hardware (including AirPort Base Station) has the latest firmware installed. Check with the hardware manufacturer for the latest version.

Published Date: Feb 19, 2012

Mac OS X 10.1: "An unexpected error has occurred. -108" Alert Appears

When attempting to print in Mac OS X 10.1 or later, you may see an alert box with a message that says "An unexpected error has occurred. -108".
This article has been archived and is no longer updated by Apple.
For a discussion of this issue, see technical document 106726, "**Mac OS X 10.1: Cannot Print or Add Printer, or Print Center Quits Unexpectedly**".
Published Date: Feb 17, 2012

Mac OS 9: How to Connect to the Internet via Cable, DSL, or Local Area Network (LAN)

To connect to the Internet via a cable modem, digital subscriber line (DSL), or an Ethernet local area network (LAN), set up your TCP/IP control panel for the "Built-in Ethernet" port. You may use the Internet Setup Assistant, if preferred.
This article has been archived and is no longer updated by Apple.

Notes

1. This document does not apply to Mac OS 9 when used in the Classic environment of Mac OS X. The Classic environment uses Mac OS X network settings. For information on Mac OS X connectivity, see technical document 106796, "**Mac OS X: Internet and Network Topics (Getting Connected, Troubleshooting)**".

2. If your Internet service provider (ISP) requires PPPoE, see technical document 106868, "**Mac OS 9: How to Connect to the Internet With PPPoE**".

Gather information

Before you begin, gather this information from your ISP or network administrator:

- domain name server (DNS) addresses
- whether you should choose DHCP or manual IP address configuration, (used in Step 3 below).

For manual configuration only:

- IP address
- router address
- subnet mask

Notes

1. It is possible that your ISP or local network does not provide DNS addresses, but rather has a method for providing this automatically.

2. Once you have this information, you may stop here and use the Internet Setup Assistant, or you may continue with the steps below to configure manually, using the TCP/IP control panel. The location of the Internet Setup Assistant on your hard disk differs slightly between versions of Mac OS 9, so you may use Sherlock to find it.

Steps to connect

Follow these steps for manual configuration:

1. Open the TCP/IP control panel.
2. Choose Built-in Ethernet from the Connect Via pop-up menu.
3. From the Configure pop-up menu, choose either DHCP or Manually, as instructed by your ISP or network administrator.
4. Type the other information you gathered into the corresponding fields. Unless your ISP instructs you otherwise, you may ignore the DHCP Client ID field and the Search Domains field.
5. Close the TCP/IP control panel.
6. Click Save when prompted.
7. Open a Web browser or other TCP/IP application to test your connection to the Internet.

Published Date: Feb 18, 2012

Mac OS 9: How to Connect to the Internet With PPPoE

Many digital subscriber line (DSL) Internet service providers require customers to connect via PPPoE. In Mac OS 9, this requires use of third-party connection software.
This article has been archived and is no longer updated by Apple.
Note: This document does not apply to Mac OS 9 when used in the Classic environment of Mac OS X. The Classic environment uses Mac OS X network settings. For information on Mac OS X connectivity, see technical document 106796, "**Mac OS X: Internet and Network Topics (Getting Connected, Troubleshooting)**".

Connecting with PPPoE

PPPoE stands for "Point-to-Point Protocol over Ethernet." To connect via PPPoE in Mac OS 9, you must use a third-party PPPoE client. Your Internet service provider should provide this software or tell you where to get it. Two commonly used examples are:

- EnterNet, by Efficient Systems
- MacPoET, by Fine Point Technologies

Follow instructions provided by your ISP or by the software vendor.

In the event that you are instructed to make any adjustments to your IP configuration outside of the PPPoE client, use the TCP/IP control panel. To access it, choose Control Panels from the Apple, then double-click the TCP/IP control panel.

Upgrading to Mac OS X

Mac OS X can connect via PPPoE without any additional software, which is one advantage of upgrading. To learn more, see the Mac OS X product page (http://www.apple.com/macosx/). To find out if your computer can use Mac OS X, see technical document 106163, "**Mac OS X 10.0, 10.1: System Requirements**".

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information. Document 17159: "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number:
Published Date: Feb 18, 2012

Mac OS 9: How to Connect to the Internet via PPP (Dial-Up Access)

Use the steps in this document to connect to the Internet using the Point-to-Point Protocol (PPP), which is also known as "dial-up" access.
This article has been archived and is no longer updated by Apple.
Note: This document does not apply to Mac OS 9 when used in the Classic environment of Mac OS X. The Classic environment uses Mac OS X network settings. For information on Mac OS X connectivity, see technical document 106796, "**Mac OS X: Internet and Network Topics (Getting Connected, Troubleshooting)**".

Gather information

Before you begin, gather this information from your Internet service provider (ISP):

- user name and password
- dial-up number
- Domain Name System (DNS) server addresses
- whether you should choose to configure IP information via PPP or manually (see Note 1)

Once you have this information, you may stop here and use the Internet Setup Assistant, or you may continue with the steps below to configure manually, using the Remote Access, Modem, and TCP/IP control panels. The location of the Internet Setup Assistant on your hard disk differs slightly between versions of Mac OS 9, so you may use Sherlock to find it.

Notes

1. If there is any uncertainty, try via PPP first. Manually would be used only if your ISP gave you a static IP address, which is rare for a dial-up connection. This information is used in Step 15, below.

2. If your ISP requires customized software in lieu of a standard PPP connection, contact them to obtain a copy that is compatible with Mac OS 9.

3. A modem is required. If your computer does not have a built-in modem, then select your external modem in Step 8.

4. If you select the checkbox in Step 6, below, and later find out that your computer is connecting to the Internet at unexpected times, see technical document 24877, "**Mac OS: Modem Unexpectedly Dials**".

Steps to connect

Follow these steps to connect:

1. Open the Remote Access control panel.
2. Click the radio button for Registered User.
3. Type the user name, password, and phone number into the corresponding fields. If you want your password to be saved so that you do not have to enter it at each connection, select the checkbox for "Save password".
4. Click Options.
5. Click the Protocol tab.
6. Locate the checkbox for "Connect automatically when starting TCP/IP applications". If you want your computer to dial up automatically when necessary, select this box (see Note 4, above).
7. Choose Modem from the RemoteAccess menu.
8. Choose your modem from the Modem pop-up menu. If you need help making this selection, see technical document 106650, "**Mac OS 9, Mac OS X: How to Choose an Apple Modem**".
9. Set the modem sound on or off, as desired.
10. If your local phone exchange does not work with touch-tone phones, select the radio button for Pulse.
11. Close the Modem control panel, clicking Save when prompted.
12. Close the Remote Access control panel, clicking Save when prompted.
13. Open the TCP/IP control panel.
14. Choose PPP from the Connect via pop-up menu.
15. Choose PPP or Manually from the Configure pop-up menu, as you were instructed by your ISP.
16. Enter your DNS server address(es) in the "Name server addr" field. Unless instructed otherwise by your ISP, you may ignore the "Search domains" field.
17. Close the TCP/IP control panel, clicking Save when prompted.
18. Open the Control Strip (Figure 1), and locate the Remote Access portion, which is labeled with the icon of a Macintosh computer over a telephone pole (Figure 2). If the Control Strip is not visible, open the Control Strip control panel and select Show Control Strip.

Figure 1 The Control Strip

Figure 2 The Remote Access portion of the Control Strip

19. If you did not select "Automatically connect" in Step 6, then you may connect manually by choosing "Connect" from the Remote Access portion of the Control Strip.
20. Open a Web browser to check your connection to the Internet. If you selected "Automatically Connect" in Step 6, then your modem should dial up now.

Published Date: Oct 10, 2016

Mac OS 9: Troubleshooting a Cable Modem, DSL, or LAN Internet Connection

This document offers a general strategy for troubleshooting cable modem, digital subscriber line (DSL), or LAN connectivity issues.
This article has been archived and is no longer updated by Apple.

Symptom

You are not able to connect to the Internet using your cable modem, DSL, or LAN.

Note: If your Internet service provider requires you to connect via PPPoE, stop here and go to technical document 106872, "**Mac OS 9: Troubleshooting a PPPoE Internet Connection**".

Note: This document does not apply to Mac OS 9 when used in the Classic environment of Mac OS X. The Classic environment uses Mac OS X network settings. For information on Mac OS X connectivity, see technical document 106796, "**Mac OS X: Internet and Network Topics (Getting Connected, Troubleshooting)**".

Solution

Note: Comments and steps specific to modems do not apply to LAN users. LAN users connect with a hub, connection pod, switch, or router. Cable and DSL users may or may not have these components, depending on the network. LAN users should contact their network administrator instead of an Internet service provider.

Check all cables and power supplies

Verify that all cables related to the modem are plugged in and firmly inserted. This includes the modem's power cord, the cable from the modem to the computer, and the cable from the modem to the wall outlet. To be sure a connection is properly inserted, disconnect and reconnect it. Be sure that cables have not been cut, chewed, or otherwise damaged.

If you have any hubs, pods, or routers in use, be sure to check all cables and power supplies. If you have more than one power supply available for a type of hub or router, try swapping the power supplies. A defective power supply may affect network traffic.

Reset/power cycle modem hardware

Cycle the power on your DSL or cable modem by turning it off for a few minutes then turning it back on. Some ISPs recommend that you unplug the modem's power cord. This is required if the modem does not have a power button. If the modem has a reset button, you may try it before or after cycling the power.

Check indicator lights on modem

Some DSL and cable modems have indicator lights that can provide useful information about cabling connections. A "Cable" light may indicate that the cable network is available, whereas a "PC" light may indicate that the modem recognizes the connection to your computer. If such a light remains off after you have checked your cables and cycled the power, contact your Internet service provider (ISP).

Check TCP/IP Control Panel settings

Open the TCP/IP control panel, and check to be sure that the settings are still correct. If you have an IP address that begins in 169 or 192, then you may not be successfully connecting to the network. For help verifying that your connection is set up properly, see technical document 106867, "**Mac OS 9: How to Connect to the Internet via Cable, DSL, or Local Area Network (LAN)**".

Network troubleshooting

If you have two or more computers attempting to share an Internet connection, be sure that your network is set up properly. You need to know if your ISP provides only one IP address or if it provides multiple IP addresses. If only one IP address is used, then you must have a router capable of sharing the connection, also known as network address translation (NAT) or "IP masquerading." Check the documentation provided with your router for setup information. Check with the person who set up your network. The AirPort Base Station may be used for this routing function. For more information on using the AirPort Base station, see technical documents:

120061: "**Designing AirPort Networks for Mac OS X (v10.1) Manuals**"
75138: "**Designing AirPort Networks for Mac OS 9 Document**"

Contact your ISP

If you have not resolved the issue with the above steps, contact your Internet service provider.

Published Date: Oct 10, 2016

Mac OS 8, Mac OS 9: Troubleshooting a Dial-Up/PPP Internet Connection

This document offers a general strategy for troubleshooting dial-up/PPP connectivity issues.
This article has been archived and is no longer updated by Apple.

Symptom

You are not able to connect to the Internet using your dial-up (PPP) service provider.

Note: This document does not apply to Mac OS 9 when used in the Classic environment of Mac OS X. The Classic environment uses Mac OS X network settings. For information on Mac OS X connectivity, see technical document 106796, "**Mac OS X: Internet and Network Topics (Getting Connected, Troubleshooting)**".

Solution

Check phone outlet and cables, call waiting, line quality

Make sure your phone outlet or "jack" is good by connecting a telephone to it. Be sure that the phone cable between the jack and your modem is plugged in and firmly inserted. To be sure that a cable is properly inserted, disconnect and reconnect it. If you are using an external modem, check the connection to your computer and its power cord. Be sure that cables are not cut, chewed, or otherwise damaged. If you experience frequent or random disconnection, consider these possible causes:

- **Disconnect if idle feature**
  You can set your computer to automatically disconnect from the Internet after a period of inactivity. Familiarize yourself with this setting, which is found in PPP Options. Be sure this is not your issue before spending time on your phone line. Similarly, your Internet service provider may automatically disconnect you when you are idle. Ask your Internet service provider what its idle disconnection policy is.
- **Call Waiting**
  If you have call waiting, your Internet connection may be interrupted by an incoming call. Check your phone book to obtain the appropriate code for turning off call waiting on a per-call basis. In North America, it is usually "*70". Enter this code as a prefix followed by two commas when typing your dial-up phone number. For example, if your dial-up phone number is 555-1111, then you could enter "*70,,5551111" as your dial-up phone number. The commas are used to pause between tones, allowing the code prefix to be acknowledged before dialing.
- **Phone off the hook**
  Be sure that others in your home or office are not using telephones on the same line.
- **Environmental interference**
  It is possible that your phone line receives interference from a strong electrical field, or an electric or radio appliance. Try an outlet in another area or remove potential sources of interference, if possible.
- **Phone line quality**
  Analog phone lines ("POTS," or plain old telephone service) are generally maintained for voice quality. Your modem may reveal quality issues with your phone line that are not considered when evaluating for voice quality, and that are not perceptible to the human ear. If frequent disconnects cannot be isolated to another cause, you may need to investigate phone line quality by contacting your telephone company. If you cannot resolve an issue with phone line quality, consider other alternatives that may be available in your area, including cable, DSL, ISDN, satellite service, and so forth.

For an expanded discussion of this subject matter, see technical document 24803, "**Troubleshooting Phone Line Issues That Affect Modem Connections**".

Avoid the Ethernet port

The Ethernet port and the modem port look alike, but the Ethernet port is wider. On many Macintosh computers, it is possible to plug a standard RJ-11 phone cable into the Ethernet port, though this has been prevented on some models. Be sure to connect your phone cable to the modem port. Figure 1 illustrates the similarities and differences in these two ports. Note that the ports have identifying icons.

Figure 1 Ports of an iMac computer

Check your connection settings

Open the TCP/IP, Modem, and Remote Access control panels, and check that the settings are still correct (early Mac OS 8 versions may have a PPP control panel instead of Remote Access). If you have an IP address that begins in 169 or 192, then you may not be successfully connecting to

the network. If you need help verifying that your connection is set up properly, try repeating the steps in technical document 106869, "**Mac OS 9: How to Connect to the Internet via PPP (Dial-Up Access)**".

Delete TCP/IP Preferences and MacTCP DNR

If you still cannot connect, it is possible that a damaged TCP/IP preference file or MacTCP DNR file is contributing to this symptom. Record your TCP/IP settings elsewhere so that they can later be re-entered, then delete these preference files:

- Macintosh HD : System Folder : Preferences : TCP/IP Preferences
- Macintosh HD : System Folder : MacTCP DNR (If you do not see this file, skip this step).

Note: Mac OS 9.1 and later will not recreate the MacTCP DNR file. Drag this file to the desktop instead of the Trash unless you are sure you have no earlier programs that may require it (these programs would likely refer to MacTCP instead of Open Transport or TCP/IP).

Restart your computer and re-enter your TCP/IP control panel settings. You may discard the TCP/IP Preferences and MacTCP DNR file.

Be sure your software is up to date

Under certain circumstances, your modem may need a software update to work properly. If you have an Apple built-in modem, be sure that you have the latest update for the version of Mac OS that you are using, and that you have installed any applicable modem update for your computer model. You may search Apple Software Downloads using the word "modem" and the model name of your computer (http://www.apple.com/swupdates/). If you have a third-party modem, check the manufacturer's website for possible modem script, driver, or firmware updates.

Contact your ISP

If you have not resolved the issue with these steps, contact your Internet service provider.
Published Date: Oct 10, 2016

Mac OS 9: Troubleshooting a PPPoE Internet Connection

This document offers a general strategy for troubleshooting PPPoE connectivity issues.
This article has been archived and is no longer updated by Apple.

Symptom

You are unable to connect to your Internet service provider using PPPoE.

Note: This document does not apply to Mac OS 9 when used in the Classic environment of Mac OS X. The Classic environment uses Mac OS X network settings. For information on Mac OS X connectivity, see technical document 106796, "**Mac OS X: Internet and Network Topics (Getting Connected, Troubleshooting)**".

Solution

Check modem cables

Verify that all cables related to the modem are plugged in and firmly inserted. This includes the modem's power cord, the cable from the modem to the computer, and the cable from the modem to the wall outlet. To be sure a connection is properly inserted, disconnect and reconnect it. Be sure that cables have not been cut, chewed, or otherwise damaged.

If you have any hubs or routers in use, be sure to check all cables and power supplies. If you have more than one power supply available for a type of hub or router, try swapping the power supplies. A defective power supply may affect network traffic.

Reset/power cycle modem hardware

Cycle the power on your DSL or cable modem by turning it off for a few minutes then turning it back on. Some ISPs recommend that you unplug the modem's power cord. This is required if the modem does not have a power button. If the modem has a reset button, you may try it before or after cycling the power.

Check indicator lights on modem

Some DSL and cable modems have indicator lights that can provide useful information about cabling connections. A "Cable" light may indicate that the cable network is available, whereas a "PC" light may indicate that the modem recognizes the connection to your computer. If such a light remains off after you have checked your cables and cycled the power, contact your Internet service provider (ISP).

Check System Preferences settings

Open your third-party PPPoE client software, and be sure that it is still properly set up. If you were required to change settings in the Mac OS TCP/IP control panel, check to be sure that they are correct. If you have an IP address that begins in 169 or 192, then you may not be successfully connecting to the network. For more information, see technical document 106868, "**Mac OS 9: How to Connect to the Internet With PPPoE**".

Network troubleshooting

If you have two or more computers attempting to share an Internet connection, be sure that your network is set up properly. You need to know if your ISP provides only one IP address or if it provides multiple IP addresses. If only one IP address is used, then you must have a router capable of connecting via PPPoE and sharing that connection, also known as network address translation (NAT) or "IP masquerading." Check the documentation that came with your router for setup information. Check with the person who set up your network. The AirPort Base Station may be used for this routing function. For more information on using the AirPort Base station, see technical documents:

120061: "**Designing AirPort Networks for Mac OS X (v10.1) Manuals**"
75138: "**Designing AirPort Networks for Mac OS 9 Document**"

Contact your ISP

If you have not resolved the issue with the above steps, contact your Internet service provider.
Published Date: Oct 10, 2016

Mac OS X: How to Use Custom Icons

This document explains how to add or delete custom icons for applications, folders, or documents.
This article has been archived and is no longer updated by Apple.

How to add a custom icon

Note: This document uses the Get Info command. On earlier versions of Mac OS X, this appears as the Show Info command. The function is the same.

After downloading or copying the custom icon file(s) to your computer follow these steps:

1. Select the desired icon in the Finder.
2. Choose Get Info from the File menu.
3. Click the icon that appears in the Info window.
4. Choose Copy from the Edit menu.
Note: Leave the Info window open.
5. In the Finder, select the application, folder, or document whose icon you want to change. Note that the Info window immediately updates to display the newly selected item.
6. Click the icon that appears in the Info window.
7. Choose Paste from the Edit menu.
8. Close the Info window.

Note: You must have write permission to change an item's custom icon. See technical document 106712: "**Mac OS X: Troubleshooting Permissions Issues**" for more information.

How to delete a custom icon

1. Select the item in the Finder from which you wish to delete a custom icon.
2. Choose Get Info from the File menu.
3. Click the icon in the Info window.
4. Press the Delete key.
5. Close the Info window.

Where to find custom icons

Mac OS X - "Downloads Icons, Screensavers, etc."
http://www.apple.com/downloads/macosx/icons_screensavers/

AppleCare Knowledge Base
http://www.info.apple.com/kbsearch/val=kmosx+icons+download

Related information

For additional information, see these technical documents:

107343: "**Mac OS X 10.2: Pasting Custom Icons Over Custom Icons Does Not Always Work**"
106528: "**Mac OS X 10.1: Hard Disk Icon Disappears After Changing the Icon**"
106427: "**Mac OS X: Pasting Custom Icons Does Not Work in All Contexts**"
Published Date: Feb 17, 2012

Mac OS 9: Internet and Network Topics (Getting Connected, Troubleshooting)

This document discusses common Internet and network topics, including how to connect to the Internet, how to troubleshoot your Internet connection, and how to set up a small network.
This article has been archived and is no longer updated by Apple.
Topics covered in this document:

I. Internet Connection and Troubleshooting
II. Troubleshooting Web Browser issues
III. DNS Issues, such as "Server could not be found"
IV. Setting up email
V. Creating a small network
VI. Setting up File Sharing
VII. Using your computer in different locations
VIII. Setting Internet preferences

I. Internet Connection and Troubleshooting

These are the three major types of Internet connection, with links to connection and troubleshooting instructions. The following section on DNS issues applies to all three connection types.

A. PPP, also known as "Dial-up" or "plain old telephone service (POTS)"

These documents explain how to connect to the Internet or troubleshoot your service if you use a modem with an analog telephone line (POTS).

106869: "**Mac OS 9: How to Connect to the Internet via PPP (Dial-Up Access)**".
106871: "**Mac OS 9: Troubleshooting a Dial-Up/PPP Internet Connection**"

Unexpected PPP dial-up

If your computer automatically dials to connect to the Internet when you do not expect or want it to, see technical document 24877, "**Mac OS: Modem Unexpectedly Dials**".

B. Ethernet connection from cable modem, DSL, or LAN

These documents explain how to connect to the Internet or troubleshoot your service if you have a cable modem, digital subscriber line (DSL), or a local area network (LAN). You use your computer's Ethernet port to connect to these services.

106867: "**Mac OS 9: How to Connect to the Internet via Cable, DSL, or Local Area Network (LAN)**".
106870: "**Mac OS 9: Troubleshooting a Cable Modem, DSL, or LAN Internet Connection**"

C. PPP over Ethernet (PPPoE)

Use these documents if your cable or DSL Internet service provider requires you to connect to the Internet using PPPoE.

106868: "**Mac OS 9: How to Connect to the Internet With PPPoE**"
106872: "**Mac OS 9: Troubleshooting a PPPoE Internet Connection**"

II. Troubleshooting Web browser issues

If your Web browser can connect to the Internet but has other issues, such as quitting unexpectedly or becoming unresponsive (a "freeze"), then see technical document 106874, "**Mac OS: Web Browser Quits Unexpectedly or Stops Responding**".

III. DNS Issues - "Server Could Not Be Found", Loading Web Pages Slow

A. DNS-related alert messages

You may successfully connect to the Internet and yet not be able to load Web pages or perform other TCP/IP tasks. You may see messages such as:

"The server could not be found."
"The specified server could not be found."
"A connection failure has occurred."
"Connection attempt failed."
"Name servers not responding."

B. Delay before connection

You may be able to load Web pages but encounter delays before the page loading starts.

Both symptoms A and B may be caused by issues with your domain name system (DNS) server, which is provided by your Internet service provider or network administrator for translating names like "www.apple.com" to their numerical IP addresses. For more information, see technical documents:

106798: "**Mac OS: Troubleshooting 'A connection failure has occurred', 'The specified server could not be found' or Similar Messages**"
106799: "**Mac OS: Long Delay Before Web Pages Start to Load, Then Load Suddenly at Normal Speed**"

IV. Setting up email

For information on setting up an email, see technical document 106878, "**Mac OS 9: How to Set Up Email**".

V. Creating a small network

For information on creating a small Ethernet network, see technical document 106658, "**Macintosh: How to Create a Small Ethernet Network**". Links are provided to AirPort Base Station documentation, and to information on connecting with non-Apple computers, such as those using Microsoft Windows operating systems.

VI. File Sharing

For a variety of File Sharing topics, see technical document 106657: "**Mac OS 8, Mac OS 9: File Sharing**"

VII. Using your computer in different locations

If you use your computer in different locations, the Location Manager allows you to quickly change your Internet, printer, and other location-related settings quickly from the Control Strip. Choose Mac Help from the Help menu, and search on "Location Manager" for more information.

VIII. Setting Internet preferences

You may change settings such as your email address, preferred mail application, and preferred Web browser in the Internet control panel. To access this, choose Control Panels from the Apple menu, then Internet from the submenu.

Information about products or services not manufactured or provided by Apple is for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159: "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 10, 2016

Mac OS 9: How to Set Up Email

This document explains how to set up email.

This article has been archived and is no longer updated by Apple.

Connected to the Internet?

To set up email, your computer must be connected to the Internet. For information on connecting, see technical document 106877, "**Mac OS 9: Internet and Network Topics (Getting Connected, Troubleshooting)**".

Gather information

To set up an email account, you must gather this information from your Internet service provider or network administrator:

- type of email account you have (IMAP or POP)
- your email address
- your email account name, normally the portion of your address that precedes the "at" (@) symbol
- your password for the account
- mail server ("Host") name or names
- SMTP password (only where required, may be same as your account password)

Note: Some Internet service providers may use one mail server for both incoming (POP, IMAP) and outgoing (SMTP) mail. Others may use two. If only one server is used, then use the same server name twice where it is required by your email software. Examples of names would be "pop-mail.apple.com" and "smtp-mail.apple.com".

Choosing an email application

There are many email applications to choose from. You may have Microsoft Outlook Express or Netscape Communicator already installed on your computer. If you do not know where to find them, use Sherlock to search. Other email applications can be downloaded from the Internet or purchased as commercial products. You can search for email software at these sites:

Macintosh Product Guide
http://www.guide.apple.com

VersionTracker
http://www.versiontracker.com/
Tip: Click the Mac OS tab then search on "email client".

Setting up your account

Open your chosen email application. Many applications prompt you to complete a setup assistant the first time you use them. An assistant should ask you for the information that you have gathered. After completing a setup, you should be ready to send and receive email. If your chosen application does not include a setup assistant, check the Help menu and any other documentation that was provided to help you get you started or create new accounts.

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Document 17159: "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.

Published Date: Feb 19, 2012

Mac OS X: Screen Saver Slide Show Goes Blank (or Black)

After the Screen Saver slide show begins, the screen may go blank (or black). This is because the Energy Saver settings put the computer or display to sleep.
This article has been archived and is no longer updated by Apple.

Symptom

1. The screen goes blank after a slide show starts.

2. The time required for the screen to go blank is usually the difference between the Activation setting in the Screen Saver pane of System Preferences and the Sleep setting in the Energy Saver pane of System Preferences.

Note: The system will behave the same way when third-party software is used for a slide show, and Energy Saver is set to put system to sleep or display sleep.

Example:

Activation is set to 5 minute, and Display Sleep is set to 20 minutes. After 5 minutes of computer inactivity, the slide show begins. The Slide Show is displayed for 15 minutes, then the screen goes blank.

Solution

Adjust the desired time until sleep in the Energy Saver pane of System Preferences. Follow these steps:

1. Choose System Preferences from the Apple menu.
2. Choose Energy Saver from the View menu.
3. Click the Sleep tab.
4. Set the sliders as desired.
5. Quit System Preferences.

Try iPhoto

As an alternative to Screen Saver, iPhoto allows you to specify the display duration for each slide, play background music, and other options. For more information, see the iPhoto product page (http://www.apple.com/iphoto/).
Published Date: Feb 17, 2012

Apple Remote Desktop: How to Determine If 1.0.1 Update Is Installed

Apple Remote Desktop 1.0.1 Update does not update the admin application. It only updates the ARD Agent (client) portion of the software. Thus, you must check the version of the ARD Agent to determine whether the update has been installed.
This article has been archived and is no longer updated by Apple.

Symptom

After installing the Apple Remote Desktop 1.0.1 Update, both the About Remote Desktop and Info windows report that the application is still version 1.0.

Solution

This is expected behavior. The Apple Remote Desktop 1.0.1 Update does not update the Apple Remote Desktop admin application. It only updates the ARD Agent (client) portion of the software.

To determine if the Apple Remote Desktop 1.0.1 Update has been installed, follow these steps:

1. Choose Go to Folder from the Go menu.
2. Type: /System/Library/CoreServices/
3. Click Go.
4. Select ARD Agent in the Finder window.
5. Choose Show Info from the File menu.

If the version number is 1.0.1, the update has been installed.

Notes

1. You must restart after installing the update in order for it to take affect.
2. The Apple Remote Desktop 1.0.1 Update is not required and will not work on client computers running Mac OS 8 or Mac OS 9.

Published Date: Oct 10, 2016

Mac OS X 10.1: "Error code -1000" When Burning a DVD-R Disc

If you burn a DVD from the Finder while the Classic environment is running, an alert box with an "Error code -1000" message may appear.
This article has been archived and is no longer updated by Apple.

Symptom

If you burn a DVD from the Finder while the Classic environment is running, an alert box with this message may appear:

> "Sorry, the operation could not be completed because an unexpected error occurred (Error code -1000)."

The blank DVD-R disc has not been affected and is still usable.

Solution

As a workaround, stop the Classic environment before attempting to burn a DVD-R. Follow these steps:

1. Choose System Preferences from the Apple menu.
2. Choose Classic from the View menu.
3. Click the Start/Stop tab, if necessary.
4. Click Stop.

This document will be updated as more information becomes available.
Published Date: Feb 17, 2012

Mac OS X: About Microsoft Internet Explorer Version 5.1.4

Microsoft Internet Explorer version 5.1.4 resolves potential security vulnerabilities in previous versions of Internet Explorer 5.
This article has been archived and is no longer updated by Apple.
The Internet Explorer 5.1 Security Update (5.1.4) resolves potential security vulnerabilities in previous versions of Internet Explorer 5.

This update requires Mac OS X 10.1 or later, and is available only through the Software Update feature of the System Preferences application. For more information on updating software, see these technical documents:

106704: "**Mac OS X: How to Update Your Software**"
106713: "**Mac OS X: Chart of Available Software Updates**"
106692: "**Mac OS X: Troubleshooting Installation and Software Updates**"
Published Date: Feb 17, 2012

Mac OS X Mail: Can‘t drag name (vCard) from Address Book to "To:" or "Cc:" message field

You can drag an Address Book name entry (also referred to as a vCard or "contact") to a Mail message "To:" or "Cc:" field by first selecting a different field. This document applies to Mac OS X 10.2.8 and earlier.
This article has been archived and is no longer updated by Apple.
Select a different message field before dragging the vCard from Address Book. For example, click the subject field before dragging the vCard to the "To:" or "Cc:" field.

Published Date: Feb 17, 2012

Mac Tutorial: Does Not Work With Mac OS X Mac Help

Start up from Mac OS 9 to view Mac Tutorial content within Mac Help.
This article has been archived and is no longer updated by Apple.

Symptom

Mac Tutorial files do not work when using Mac OS X Mac Help.

Solution

Use Mac Help for current information about your computer. Start up from Mac OS 9 before using Mac Tutorial (within Mac OS 9 Mac Help).

Published Date: Feb 17, 2012

Mac OS X Update 10.1.5: Enhancements and "Before You Install" Information

Mac OS X Update 10.1.5 addresses certain issues and updates system software.

This article has been archived and is no longer updated by Apple.

This software updates Mac OS X (version 10.1, 10.1.1, 10.1.2, 10.1.3, or 10.1.4) to version 10.1.5.

Important: Read Before Installing

1. An Admin user password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, then follow these steps: Choose System Preferences from the Apple menu. Choose Users from the View menu. Select and Admin user and click Edit User. Click the Password tab. Change the password and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If you experience a power outage or other interruption during installation, use the standalone installer (see below) from Apple Software Downloads to install.

4. Prerequisite software must be present before you can install Mac OS X Update 10.1.5, whether you are using Automatic Software Update or standalone installers. Updates must be installed in the correct order. For the correct sequence, see technical document 106713, "**Mac OS X 10.1: Chart of Available Software Updates**".

Installation

There are two ways to update to Mac OS X 10.1.5.

I. Automatic Software Update Installation

See technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

II. Standalone Installer

Standalone installers are available from Apple Software Downloads (http://www.apple.com/swupdates/). Two versions are available. See technical document 106713, "**Mac OS X 10.1: Chart of Available Software Updates**".

Do not reinstall earlier Mac OS X updates

You should not reinstall certain earlier updates after using this update, including:

- Mac OS X 10.0.1
- Mac OS X 10.0.2
- Mac OS X 10.0.3
- Mac OS X 10.0.4
- Mac OS X 10.1
- Mac OS X 10.1.1
- Mac OS X 10.1.2
- Mac OS X 10.1.3
- Mac OS X 10.1.4
- Security Update 10-19-01
- Installer Update 1.0

Updates should be installed in the correct order. If for any reason you need to reinstall an earlier software update, the Mac OS X startup volume should be erased, after first backing up important documents and data. Reinstall Mac OS X, and install necessary updates in the correct order.

Enhancements Delivered with this update

In addition to enhancements previously delivered with Mac OS X 10.1.1, 10.1.2, 10.1.3, and 10.1.4, the Mac OS X 10.1.5 update includes the following:

Networking, Mail, and Internet Connectivity Enhancements

- A mail account will go offline if a secure connection to a remote SSL mail server cannot be made (when the SSL encryption option is enabled).
- Improves robustness when accessing files and directories on Microsoft Windows-based servers.
- Resolves a potential Mail issue in which mailbox draft messages (besides the first) could be inadvertently deleted when using Rebuild Mailbox.
- Enhances the security of sendmail (a mail function in the Darwin subsystem unrelated to Mail.app).
- Improves compatibility when accessing a WebDAV volume via a non-standard http port.
- Improves function of certain kinds of WebDAV DNS lookups via an AirPort Base Station (Graphite).
- Permits communications with WebDAV servers that use long http header lines.
- Reduces time required to list iDisk and WebDAV server directories.
- Improves buffer efficiency during WebDAV downloads.
- Improves WebDAV compatibility with servers that use chunked transfer-coding.
- Addresses a potential kernel panic situation that could occur when saving a file stored on an iDisk or WebDAV volume.
- Traditional Chinese text now appears when expected within Internet Connect (AirPort configuration).
- Improves general reliability of Mail.
- Adds a man page for mount_webdav (man pages are accessible when using the Terminal man command).

Device Compatibility Enhancements

- Includes newer Adaptec SCSI card drivers (version 1.1.0) for Apple Ultra SCSI PCI cards and Apple 2906 SCSI PCI cards.
- Addresses an issue in which a SCSI-based magnetic-optical drive may inadvertently report media as write protected when it is not.
- Improves compatibility with certain Canon digital cameras.
- Improves reliability when deleting multiple images from certain Nikon digital cameras.
- Improves reliability of audio applications when a USB MIDI device is disconnected and reconnected.
- Improves PC card (generic serial communications) support, enhancing potential compatibility with third-party PC slot communications cards.
- Reduces likelihood that a non-recommended display resolution and refresh rate could be chosen (resulting in a persistent black screen), when using certain Power Macintosh G4 (QuickSilver) computers with an AppleVision 750 or AppleVision 1710 display.
- Improves compatibility of Power Macintosh G3 (Desktop and Mini Tower) computers with ATI Radeon 7000 video cards.
- Adds support for LaCie Pocket CD-RW devices 16-10-40 U&I, and 8824 U&I
- Improves iSub frequency cutoff range.
- Resolves a potential solid screen color issue, when using an nVidia GeForce 3 video card in a computer with 1 GB of RAM installed.
- Addresses various other potential nVidia video card issues.
- When using certain USB speakers, a mute setting is preserved more reliably after waking from sleep.

Application-related Enhancements

- Reduces the time required to open optimized applications that use embedded frameworks.
- Addresses a potential stall issue that could occur while iTunes was finishing a CD burn.
- Enhances stability of Sherlock.
- Adds Image Capture support for certain recently-introduced Canon USB cameras.
- Addresses an isolated issue in which a Hanja text conversion could fail when using Korean Input Method.
- Improves Korean Input Method (Hanja) compatibility with AppleWorks 6.2.
- Improves Korean Input Method (Hanja) compatibility with Adobe Photoshop 7.0
- fsck_hfs (file system check) now works with Mac OS Extended format volumes larger than 1 TB.
- Addresses various potential Apple DVD Player issues.

Finder, Sleep, and System Settings Enhancements

- Energy Saver now offers an advanced option, on compatible portable computers, to increase battery life by reducing processor performance while the computer is not used.

- Resolves a potential issue in which audio may have become muted after waking from sleep.
- The Sound preference pane may now be opened by pressing a Option-Volume key combination on an Apple Pro USB Keyboard.
- Addresses a potential situation in which the Finder may inaccurately report less available space on a blank disc, after ejecting a disc instead of burning new data to it.
- Additional support for 2D and QuickTime hardware acceleration for Rage Pro, Rage Pro Turbo and Rage Mobility.
- Addresses various potential video mirroring issues.

Published Date: Feb 20, 2012

Mac OS X Server: How and When to Use repairDB for Mail Database Maintenance

In some situations, you may need to use a mail database repair utility that is accessible via the command line.
This article has been archived and is no longer updated by Apple.
Under most circumstances, the Mac OS X Server mail server automatically detects mail database issues and automatically runs a repair utility to correct them. In some situations, the issues are not detected and repair does not happen automatically.

To run repairDB:

1. Stop Mail Service using Server Admin (10.1) or Server Settings (10.2).
2. Open Terminal (/Applications/Utilities/).
3. At the prompt, type one of the following commands, as indicated for server versions 10.1 and 10.2.

   For Mac OS X Server 10.1:

   ```
   sudo /usr/sbin/MailService -repairDB
   ```

   For Mac OS X Server 10.2:

   ```
   sudo /usr/sbin/MailService -compressDB
   ```

4. Press Return.
5. Enter your Admin user password.
6. Press Return.

The repair utility runs. The status of the utility is reported in:

/Library/Logs/MailService/AppleMailServer.Repair.log

Upon completion of the database repair the following lines appears in AppleMailServer.Repair.log:

--- Finished mail database recovery --- Closing the new mail database

Now, you need to kill the MailService process and restart mail service:

1. At the prompt, type: `top`
2. Press Return.
3. In the resulting list, locate the process ID (PID) of the MailService process.
4. Press the "Q" to leave top and get a new prompt.
5. Type: kill <PID>
Note: Where the example says "<PID>", type only the actual number, for example, "kill 123".
6. Press Return.
7. Restart mail service

Published Date: Feb 17, 2012

AppleWorks 6.2.4: Dictionary Preferences Have Changed for Some Localized Versions

The Danish, Norwegian, Finnish, and Brazilian Portuguese versions of the AppleWorks 6.2.4 Update change the spelling dictionary and thesaurus preferences.

This article has been archived and is no longer updated by Apple.

Danish

AppleWorks 6.2.4 does not include a Danish spelling dictionary and instead includes an English spelling dictionary. Updating to version 6.2.4 will change your spelling dictionary preference to English.

Norwegian

AppleWorks 6.2.4 does not include a Norwegian spelling dictionary and instead includes an English spelling dictionary. Updating to version 6.2.4 will change your spelling dictionary preference to English.

Finnish

AppleWorks 6.2.4 does not include a Finnish spelling dictionary or a Finnish thesaurus and instead comes with an English spelling dictionary and thesaurus. Updating to version 6.2.4 will change your spelling dictionary and thesaurus preferences to English.

Brazilian Portuguese

AppleWorks 6.2.4 does not include a Portuguese thesaurus and instead comes with an English thesaurus. Updating to version 6.2.4 will change your thesaurus preference to English.

Published Date: Feb 17, 2012

Mac OS X: Icons Appear Stacked Upon Each Other, Cannot Be Moved

Icons in a Finder window or on the desktop may appear stacked upon each other. They cannot be moved, and when you try to sort the icons or clean up the desktop, it does not work. Upgrade to Mac OS X 10.2 to avoid the issue.
This article has been archived and is no longer updated by Apple.

Symptom

Icons in a Finder window or on the desktop appear stacked upon each other and cannot be moved.

Additional information

This issue may occur when a folder has valid Mac OS X placement information (.DS_Store file) and files in the folder have valid Mac OS 9 placement data (stored in the HFS file system). Deleting the .DS_Store file helps, but only until the files are again changed in Mac OS X.
Published Date: Feb 17, 2012

Mac OS X Server: How To Adjust The NetBoot Client Aging Time

This document explains how to adjust the aging time of the NetBoot AFP User Binding in order to allow a greater number of NetBoot clients to access the NetBoot server.
This article has been archived and is no longer updated by Apple.
NetBoot clients bind to the NetBoot server using an AFP User as part of the NetBoot process. There are a finite number of AFP User bindings available to NetBoot clients in order to provide the optimal mix of network performance and number of clients.

It is possible to adjust the interval at which the AFP bindings can be reclaimed and used for another NetBoot client upon startup. In larger installations, adjusting this interval or aging time below the default setting of 24 hours (86400 seconds) provides NetBoot clients with "reclaimed" AFP bindings with greater frequency. This strategy can be used to effectively increase the number of NetBoot clients that can be served by a NetBoot server.

The default aging time for a NetBoot client is 24 hours. This can be modified by setting the NetInfo property: age_time_seconds

This property is in the local NetInfo domain in the "config" property at: /config/NetBootServer.

The main reason why aging/reclamation was added was to solve the issue of NetBoot client turnover. For example, suppose 50 NetBoot clients were started up initially, then two of the clients were removed or replaced with two other units. Without aging/reclamation, the administrator would need to manually reset the bindings in order to be able to NetBoot 50 clients again.

A NetBoot client that has not started up in the last interval of time as defined by "age_time_seconds" may have its AFP user binding reclaimed. If the server runs out of AFP User logins when servicing a NetBoot request, it may reclaim an AFP User login from one of the other NetBoot clients that has already started up. The reclamation process does not disrupt any existing, started up NetBoot systems as long as they remain turned on.

The side effect of setting the aging time to a very small value (5 minutes, for example) means that it is pretty easy to end up with multiple clients using the same AFP login, thus increasing the number of clients that the NetBoot server will serve. However, should all NetBoot clients that are currently started up from the NetBoot server restart simultaneously, they will still be limited by the maximum number of AFP logins. The maximum number of AFP logins is set in the property afp_users_max (also in /config/NetBootServer).

The preferred method of modifying the aging/reclamation value in the NetInfo database is using the niutil command in the terminal application. NetInfo Manager can also be used to modify these properties and values.

If you wish to change these settings, follow these steps:

1. Open Terminal (/Applications/Utilities).
2. Type: `niutil -create . /config/NetBootServer`
Note: If the directory already exists, this command is unnecessary. Go to the next step.
3. Press Return.
4. Type: niutil -createprop . /config/NetBootServer age_time_seconds 300
Note: Be sure to calculate the time in seconds. In this example, 300 seconds gives you a five minute age time. You may substitute another value.
5. Press Return.
6. Quit Terminal.

For more information see, technical document 122015, "**Mac OS X Server Administration Guide: Manual**".

Published Date: Feb 17, 2012

Mac OS X Server: How to Keep Shared Disk Images Mounted

Disk images are unmounted (or "ejected") when you log out of Mac OS X Server. This document explains how to keep the images mounted after the Admin user logs out.
This article has been archived and is no longer updated by Apple.

Symptom

A shared disk image volume becomes unavailable to users after you log out of the server.

Solution

Terminology

"Mounting" is the process by which a disk is made available for use in the operating system. For actual disks this occurs automatically at startup in Mac OS X. In the context of a disk image file (.dmg), "mounting" is when the file is made to behave as if it were an actual disk. This occurs when you open disk image file or drag it into the Disk Copy window. Disk Copy then "mounts" the image, after which it behaves in the Finder as if it were an actual disk. Though disk images are not literally "ejected," the term is used interchangeably with "unmount".

How to mount a disk image as root

Disk images mounted by a normal user (Admin or non-Admin) are unmounted when that user logs out. If you wish an image to remain mounted so that it may be a shared volume, mount it as the root user.

Follow these steps to mount a disk image as the root user:

1. Log in to the server as an Admin user.
2. Be sure that the disk image you wish to use as root is not already mounted.
3. Place the disk image in your Documents folder.
Note: You may place the image elsewhere, but you would need to adjust the pathname accordingly in Step 5.
4. Open the Terminal application (/Applications/Utilities/).
5. Type: `sudo hdid ~/Documents/<disk image file name>`

   Note: You would replace "<disk image file name>" with the actual name of the disk image. For an image named "Apple.dmg", you would type:

   ```
   sudo hdid ~/Documents/Apple.dmg
   ```

6. Press Return.
7. Enter the Admin user password when prompted, then press Return.

The disk image is mounted as a root user process. It is not unmounted when you log out.

Note: If you log in to the server as the root user at a later time, any disk images you opened as root user processes are unmounted when you log out. You would need to repeat these steps to make the images available when log in as your Admin user.

How to unmount a disk image as Admin

While logged in as your normal Admin user, you may use these steps to unmount a disk image that has been mounted as root.

1. Open the Terminal (/Applications/Utilities/).
2. At the prompt, type: `mount`
3. Press Return. This shows you a list of mounted disks and disk images. Each line represents one mounted disk and contains two components separated by the word "on". Preceding "on" is a device name reference, and following "on" is the pathname of the mounted disk as it would appear in the Finder. Following the pathname component is a parenthetical description of its state, which you may ignore. For a mounted disk image named "apple.dmg" that is stored on the server's startup volume, the list output could be:

   ```
   /dev/disk1/ on /Volumes/apple (local, nodev, nosuid, read-only)
   ```

   In this example, the device name would be:

   ```
   /dev/disk1
   ```

   Note that the second solidus (slash) that appears in the original output is not part of the device name.

4. Locate the line that contains the name of the disk image you wish to unmount.
5. Type: `sudo hdiutil eject <device_name>`

Using the example device name above, what you should type would look like this:

```
sudo hdiutil eject /dev/disk1
```

6. Press Return.
7. Enter your Admin user password when prompted, and press Return.

Published Date: Feb 20, 2012

Mac OS X: How to Save a Finder View (Column, Icon, or List) for a Specific Folder or Disk

The Finder saves the preferred view (Column, Icon, or List) of the first folder or disk opened in a new Finder window.
This article has been archived and is no longer updated by Apple.

Symptom

You open a new Finder window and then navigate to another folder or disk in the same window. You set the window to a different view and then close the window. The next time you open that folder or disk, it has reverted to the previous view.

Note: This symptom is not apparent if you have selected the Finder preference "Keep a window's view the same when opening other folders in the window". The symptoms occurs if you deselect this preference.

Solution

Concept of "starting point"

The Finder always saves the preferred view of the first item opened in a new Finder window. The item may be a disk, folder, or the "Computer" list of volumes. This first item opened in a new Finder window is known as that window's **starting point**. The starting point is also the only place where the window position, scroll position, and window size are saved.

Temporary versus "preferred" view setting

By default, the Finder opens items in the same window as you navigate through disks and folders. The Finder does not save the view of any item opened subsequent to the starting point. Since the subsequent items' views are not saved, this allows you to set a preferred view for an item that you may change temporarily during a session of browsing in the Finder. After you close the Finder window, the item reverts from the temporary setting to your preferred setting.

How to set a preferred view

There are several ways you may open a given item in a new Finder window for the purpose of saving a view, but this method is the simplest. Follow these steps:

1. Close open Finder windows.
2. Click the Finder icon in the Dock.
3. Choose Preferences from the Finder application menu.
4. Click "Always open folders in a new window" to enable that option.
5. Open the item for which you wish to set a view. It should appear in its own new window.
6. Set the desired view in the new window.
7. Close the new window.
8. Repeat Steps 5 to 7 for any item you wish to set.
9. If desired, click "Always open folders in a new window" to disable that option.
10. Close the Finder Preferences window.

Note: When saving a List view, the sort order (such as by Date Modified or Size) may not be consistently retained. See technical document 106204, "**Mac OS X 10.1: List View Settings May Not Be Retained**".
Published Date: Feb 17, 2012

Macintosh Manager: About the Hand Out Feature

This document describes the circumstances in which a Macintosh Manger administrator may use the Hand Out feature to push files out to the members of a workgroup.
This article has been archived and is no longer updated by Apple.

About the Hand Out feature

A Macintosh Manager administrator can hand out files to members of the currently active workgroup, or to specific users that belong to the active workgroup (Figure 1). This feature is only available when logged in as a Macintosh Manager administrative user, either a Workgroup Administrator or a Global Macintosh Manager Administrator. When logged in to a Panels environment, this feature is found in the File menu. If the Hand Out command is dimmed, bring the Documents Panel to the foreground to make it available.

Note: The Hand Out feature is not available in the Finder or Restricted Finder environments, only from the Panels environment.

Figure 1 The Hand Out dialog

Where Handout items appear

Items handed out are copied to a Handouts folder, which is automatically created in the user's Documents folder as needed.

When Handout items appear

Handout items are copied to users' Documents folders when they log in to the workgroup that handouts were given to. A user who logs in to different workgroups does not receive a handout until he logs in to the specific workgroup. After the handouts are copied to a user's Documents folder, they are available to be used in any workgroups the user has access to.

Replacing items

When handing items out, you have the option to replace items with the same name. When this option is selected, a confirmation dialog appears to verify your wish to replace the files (Figure 2). If you choose to replace the files under Macintosh Manager 1.4.1, the files will be replaced. If you choose to replace the files under Macintosh Manager 2.0 and later, the existing files will be renamed and the new files will have the desired names.

Figure 2 Replace confirmation dialog

Disk quotas

When handing out items to members that have exceeded their disk quota, the handed out files will not be copied to the users' Documents folders. These users must be allowed more disk space on the server, or they must delete data from their Home directories to get below the quota.
Published Date: Feb 17, 2012

Macintosh Manager 2: How to Gain System Access

This document discusses which users may gain system access at Macintosh Manager client computers.
This article has been archived and is no longer updated by Apple.
There are multiple ways a user can gain System Access at a Macintosh Manager client. Users can press the Command-Shift-Escape key combination while at the login window, or select Finder when the Macintosh Manager Authentication Server cannot be found (Figure 2, below). In either case, the user is asked to authenticate to gain system access (Figure 1).

At the Macintosh Manager administrator's option, specific users may also be granted System Access. When this option is enabled, users see System Access as an available Workgroup while logging in. No other authentication is required.

Figure 1 "Enter Name and Password" dialog

When prompted for a name and password after pressing Command-Shift-Escape, the following is accepted:

- a Macintosh Manager Global Admin name and password
- the client computer's owner password only

When prompted for a name and password after pressing Command-Shift-Escape, the following are **not** accepted:

- a Macintosh Manager Workgroup Administrator name and password
- a Mac OS X Server Admin user name and password

Note: A Mac OS X Server Admin user may also be a Macintosh Manager Global Admin. If this is the case, the user will be able to gain System Access.

If the Macintosh Manager authentication server cannot be found, one of the options is to open to the Finder (Figure 2).

Figure 2 "Cannot locate server" dialog

When prompted for a name and password to gain System Access when the server cannot be found, the following is accepted:

- the client computer's owner password only

When prompted for a name and password to gain System Access when the server cannot be found, the following are **not** accepted:

- a Macintosh Manager Global Admin name and password
- a Macintosh Manager Workgroup Administrator name and password
- a Mac OS X Server Admin user name and password

Related documents

For more information, see technical document 106644, "**Macintosh Manager, Multiple Users: About the Login Window**".
Published Date: Feb 17, 2012

Mac OS X Server: Some Mac OS 8.6 to 9.1 AppleShare (AFP) Clients Seem Slower Than Others

You may notice that read-write communication and performance is relatively slow between Mac OS X Server computers and Mac OS 8.6 clients.
This article has been archived and is no longer updated by Apple.

Symptom

Mac OS 8.6 clients experience slower observed AFP network throughput when connecting to Mac OS X Server 10.0.3 or later.

Solution

You should upgrade earlier systems to Mac OS 9.2.2.

Alternative workaround

If for any reason you cannot upgrade to Mac OS 9.2.2, you may use the following workaround.

Warning: The following workaround improves performance, but it has not been fully tested and qualified by Apple Computer. Therefore, the workaround is provided by Apple on an "AS IS" basis. AS PERMITTED BY APPLICABLE LAW, APPLE EXPRESSLY DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, AS TO ANY MATTER WHATSOEVER RELATING TO THE USE OF THE WORKAROUND, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND IN NO EVENT SHALL APPLE BE LIABLE FOR ANY INDIRECT OR CONSEQUENTIAL DAMAGES AS A RESULT OF SUCH USE. Technical support cannot be provided for any potential complication that arises from using the following workaround. Use of the workaround is at your own risk. Possible consequences of an unqualified network configuration include data loss.

Follow these steps:

1. Go to Apple Software Downloads (http://www.apple.com/swupdates/).
2. Download Apple Ethernet Update 2.0.
3. Double-click the disk image file (.smi). The disk Apple Ethernet Update 2.0 appears on the desktop, or in the Computer directory if you are performing this step in Mac OS X.
4. In the disk Apple Ethernet Update 2.0, navigate to:

   /Installer Files/Ethernet/Installer Files/

5. Here you find Apple Enet extension version 2.4.3. Copy this to your hard disk.
6. Copy Apple Enet 2.4.3 to the Extensions folder of any Mac OS 8.6 to 9.1 client system.

Published Date: Feb 17, 2012

Mac OS X: Kernel Panic When Using PC Card Modems

Mac OS X 10.1.5 introduced a generic PC card modem driver for a variety of PC card modems. However, if after using the modem one switches to a network location for which the PC card modem port is not active, a kernel panic can occur and the computer will need to be restarted.

This article has been archived and is no longer updated by Apple.

Symptom

A kernel panic occurs when you switch network locations or when you eject a PC card (PCMCIA) modem. If you need help identifying this symptom, see technical document 106227, "**Mac OS X: What is a Kernel Panic?**".

Solution

This resolved in Mac OS X 10.2 or later. Users of Mac OS X 10.1.5 may use the following workaround.

For each network location you use, enable the port for the PC card modem. Follow these steps:

1. Choose System Preferences from the Apple menu.
2. Choose Network from the view menu.
3. Choose the desired location from the Location pop-up menu.
4. Choose Active Network Ports from the Show menu.
5. Be sure that the checkbox is selected for the PC card modem. The name of the port should be "pccard-modem-port" or something similar.

Alternatively, you may eject the PC Card modem while the computer is in sleep mode.

Published Date: Feb 20, 2012

Mac OS X: Loss of Network Connectivity After Updating to Mac OS X 10.1.5

After installing Mac OS X Update 10.1.5, your computer may lose its network or Internet connection.
This article has been archived and is no longer updated by Apple.

Symptom

Your computer does not connect to the Internet, or to your local area network (LAN). This is noticeable immediately after startup. You may also notice one or both of these symptoms:

1. IP address, subnet mask, and router address have all been set to "255.255.255.255".
2. DHCP configuration is not available as a choice in the Network preference pane.

Solution

Install Network Update 1.0. For information and software download, see technical document 106922, "**Mac OS X: About Network Update 1.0**".

If the issue persists, follow these steps:

Important: You must be logged in as an Admin user.

1. Click the Finder icon in the Dock.
2. Choose Go to Folder from the Go menu.
3. Type: `/Library/Preferences/`
4. Click Go.
5. In the Finder window, locate the file named: com.apple.PowerManagement.plist
6. Drag this file to the Trash.
7. Restart the computer.

Published Date: Feb 17, 2012

Mac OS X: Issues after removing "etc" and/or "var" directory alias when started up from Mac OS 9

This article has been archived and is no longer updated by Apple.

Aliases to the "etc" and "var" folders may be visible when started up from Mac OS 9. These aliases shouldn't be removed.

This document applies to Mac OS X 10.1.5 or later.

When starting up in Mac OS X after having been started up from Mac OS 9, one or more of these symptoms occurs:

- The computer stops responding during startup.
- The Setup Assistant reappears.
- BSD commands that access files in etc and var fail.
- An alert box appears with a message that contains:
  "/etc/master.passwd: no such file or directory".

Do not delete the "etc" or "var" aliases, or any other Mac OS X-installed files or folders that are visible when started up from Mac OS 9. See "Mac OS X: "Broken Folder" Icon, Prohibitory Sign, or Kernel Panic When Computer Starts Up".

If these items were deleted, use these steps:

1. Start up in single-user mode.
2. Type: `mount -uw /`
3. Press Return.
4. Type: `ln -s /private/etc etc`

   If this alert appears: "File already exists," execute the following command, then repeat the last step:
   `mv /etc /private/tmp/etc.delete`

5. Press Return.
6. Type: `mv /var /var.delete`
   There is a space between "/var" and "/var.delete".
7. Press Return.
   Tip: If you see the message "No such file or directory," make sure that the spacing and spelling are correct, then repeat the last two steps. If you still see this message after the second attempt, continue to the next step.
8. Type: `ln -s /private/var var`
9. Press Return.
10. Type: `ls -l | grep ">"`
    The character before "grep" is a pipe character ("|"), which is usually located above the Return key.
11. Press Return.

    Look for these two items in the output:

    ```
    lrwxrwxr-t Â 1 root Â admin Â {date} etc -> private/etc
    lrwxrwxr-t Â 1 root Â admin Â {date} var -> private/var
    ```

    If any of these are not present, repeat the necessary steps above until they are.

12. Type: `reboot`
13. Press Return.

If you still can't start from Mac OS X, see Mac OS X: Troubleshooting a startup issue.

TA20809_Mac_OS_X_Issues_after_removing_etc_andor_var_directory_alias_when_started_u

Related documents

107396 Mac OS X: Cannot print, use Classic, start file sharing, burn discs, or update software if /tmp missing

Published Date: Feb 17, 2012

Mac OS 9: Troubleshooting Printer Installation Issues

This document discusses troubleshooting issues that may arise when installing printer software.
This article has been archived and is no longer updated by Apple.

Symptom

Printer software will not install. You may see alert boxes with messages similar to the following:

"There is not enough memory to use the Installer."
"There is not enough disk space to use the Installer."
"The file system cannot be modified."
"The item <name> cannot be replaced."

Solution

Software version and compatibility

Be sure that the printer is compatible with the version of Mac OS 9 that you are using. Check the printer manufacturer's Web site for later versions of the printer drivers than those included in the box with the printer. If later versions exist, it is normally best to use them instead of the ones included in the box. Some printers may also require firmware updates that would be available at the manufacturer's Web site.

Check for instructions, "Read Me" file

Be sure to follow the installation instructions included with the software. If using a later version that you downloaded, be aware that any "Read Me" file included with the download may supersede what was included in the printer box.

Turn off security software during installation

Depending on what kind of security and virus-protection you use, you may need to turn it off while you install software. Even if your security software allows per-incident installation authorization, you may still need to turn it off to eliminate the possibility that it is interfering.

Isolate hardware

Isolate the computer hardware to eliminate the possibility that another device is interfering. Disconnect all peripherals and third-party hardware. Use only the Apple keyboard and mouse included with the computer.

Check for extension conflict

To check for an extension conflict, open the Extensions Manager control panel and select the Mac OS 9 Base set, then restart the computer. Try installing the software again. Afterward, you need to reopen the Extensions Manager and go back to the set you were using before (most likely "My Settings"). See technical document 30929, "**Mac OS: Extension Conflict Troubleshooting/Extensions Manager Features**".

Check the installation CD

If installing from CD, make sure the disc is not dirty or scratched. Clean the data side of the disc by using a dry, lint-free cloth to gently wipe the CD from the spindle hole to the outer edge. Do not wipe in a circular fashion. If you have a CD-ROM lens cleaner disc, use that to clean the drive.

Record alert messages for reference

If you see an alert box with a message during installation that is not discussed below, write down the message for reference when seeking technical support.

"Not enough memory to use the Installer"

If you are trying to use an installer that is on your hard disk and see the message "There is not enough memory to use the Installer," make sure the computer is started up from the hard disk, and it is the selected volume selected as the destination disk when installing.

"Note enough disk space"

If you see a message that "There is not enough disk space," make more space available on your hard disk by deleting some files from the disk. Copy the files you want to keep to another disk, then drag them to the Trash and choose Empty Trash from the Special menu to delete the files.

"File system cannot be modified"

If you see a message that "The file system cannot be modified" or "Installation was not successful," make sure any security and virus-protection software is turned off.

"The item cannot be replaced"

If you see a message that "The item <name> cannot be replaced," the installer is attempting to replace a file, but there is a folder on the disk that has the same name as the file being replaced. (Files cannot replace folders.) Find the folder on your disk and rename it, then try the installation again.

Clean installation

If nothing else has resolves your issue, perform a clean installation of Mac OS 9. If you are installing from a Mac OS 9 CD that did not come with your computer, the version number printed on the disc (such as 9.0.4) must be later than the version of Mac OS that was originally included with your computer. To learn about clean installation, see technical document 58176, "**Mac OS 8, Mac OS 9: Performing a Clean Installation**".
Published Date: Feb 18, 2012

Mac OS: Video Game Quits Unexpectedly After Changing Display Resolution

When a video game switches to a resolution that is not compatible with your display, the game may quit unexpectedly. When you try to open the game later, it may quit immediately, or not open, and no alert box appears.

This article has been archived and is no longer updated by Apple.

Symptom

After changing display resolution in a video game, an alert box with this message (or a similar one) appears:

- "The application <game name> has unexpectedly quit."

When you try again, the game will not open successfully.

Note: This issue may occur with other types of applications that switch the display resolution.

Products affected

- Mac OS 9
- Mac OS X
- Macintosh-compatible video games
- Other applications that switch display resolution

Apple flat panel displays, such as:

- Apple Cinema HD Display
- Apple Cinema Display
- Apple Studio Display 17 (ADC)
- Apple Studio Display LCD (ADC)

Apple computers with built-in flat panel displays, such as:

- PowerBook G4
- iBook
- iMac (Flat Panel)

Solution

This issue occurs when a video game switches to a screen resolution that is not compatible with your display. This does not mean that something is wrong with your display or with the game. Rather, it shows the difference between the very large number of possible display resolutions (those available to any display which a consumer may feasibly use) and the relatively small number of choices that a game manufacturer can put into a menu within the game.

Game resolution background information

Most games contain a list of resolutions that are likely to be compatible with a wide range of multiple scan cathode-ray tube (CRT) displays. The most commonly used resolutions in recent years have been 640 by 480, 800 by 600, and 1024 by 768. The rise of flat panel displays has added resolution possibilities for gamers that were not "traditional" gaming choices in the past. A flat panel display offers its best image quality at its maximum or "native" resolution, though most can also simulate other resolutions through scaling, a method in which multiple pixels are grouped to appear as one. For these reasons, a flat panel display may work with fewer resolutions than a multiple scan CRT. So, you are more likely to notice this issue on a fixed resolution CRT or on a flat panel display than you are on a multiple scan CRT monitor.

Getting the game to open

A. Locating the preference, configuration, or initialization file

The immediate issue you must address is getting the game to open again. For most games you can do this by locating the file that contains the resolution setting. The file usually takes one of these two forms:

- 1. a **preference** file
  Some games store the resolution setting in a preference file. In Mac OS X, preference files are stored at:

  /Users/username/Library/Preferences/

  In Mac OS 9, these files are stored at:

  Macintosh HD: System Folder: Preferences:

  The name of a preference file usually contains the name of the game or application.

  2. a configuration (**.cfg**) or initialization (**.ini**) file
  Other games store the resolution in a "configuration" or "initialization" file. These files can be identified by the filename extensions ".cfg" and ".ini" respectively. Configuration files are usually found in the same folder as the application, or in a subfolder of the applications folder. Below are two example locations.

  For Return to Castle Wolfenstein (id Software/Aspyr Media) installed in the Mac OS X Applications folder:

  /Applications/Wolfenstein/Main/wolfconfig.cfg

  For Unreal Tournament (Epic Games/MacSoft) installed on Macintosh HD in Mac OS 9:

  Macintosh HD: Unreal Tournament: UnrealTournament.ini

Note: Filename extensions other than ".cfg" and ".ini" may be used. Look for any conspicuous text file that contains game settings that is stored in the game application folder. The ".cfg" and ".ini" extensions are used by games that use the Quake III and Unreal game engines, respectively.

B. Corrective action

If you find that your game uses a .cfg or .ini file, try addressing them before you do anything with preferences. If you had not made many custom settings to the game before the issue occurred, you may wish to simply drag the file to the desktop and then reopen the game. When you reopen the game, it should create a new .ini or .cfg file that contains default settings.

If you have made extensive customization to game settings prior to the issue occurring, it is likely that some of them are stored in the .cfg or .ini file. Rather than moving the file, you may wish to edit it.

- 1. Save a copy of the file for reference.
  2. Open the file in TextEdit (Mac OS X) or in SimpleText (Mac OS 9). These files are usually several hundred lines long, but spotting the display resolution is easily done. Look for two lines of text next to each other that contain the last resolution numbers that you used or chose in the game. These lines may contain key word such as "horizontal","vertical,""x", and "y". The "x" and "y" refer to horizontal and vertical axes. Change the resolution numbers to 640 (horizontal) by 480 (vertical). This is a default resolution for many games that will work with most displays currently in use
  3. Save your changes.
  4. Reopen the game.

If the game does not use any kind of configuration file, then drag the preference file from its original location to the desktop. When you reopen the game, it may reset to the default resolution. You may lose custom settings that you have made in the game.

If neither of these methods works for you, check any support information provided by the game maker.

Preventing the issue from recurring

The best way to prevent the issue from recurring is to read all of the documentation that came with the video game. Most game makers are aware of resolution issues, and often solutions are described in the "read me" documents that accompany software. Look for advice on how to create a "custom" resolution. Additionally, you should look for Web sites devoted to the video game, where you may find answers to common questions.

For some games, you need to choose the desired resolution before opening the game, using System Preferences (Mac OS X) or the Monitors control panel (Mac OS 9). Other games require that you enter a special command while the game is running, or that you modify a .cfg or .ini file. You may see other methods, too.

Using Return to Castle Wolfenstein as an example, the "read me" document provides four commands that you can type in the game to switch to your desired custom resolution. An option like this is especially useful if you have a PowerBook or Apple Cinema Display, both of which have native resolutions that are not included in some games.

Choosing a resolution

You should choose resolutions that are listed in the Displays pane of System Preferences (Mac OS X) or in the Monitors control panel (Mac OS 9). Resolutions that appear dimmed (available but not recommended) may often be used successfully with video games.

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

The following article can help you search for a particular vendor's address and phone number:

Technical document 17159: "**Locating Vendor Information**"

Published Date: Oct 7, 2016

Macintosh Manager: How to Enable or Disable Virtual Memory

This document discusses how to enable or disable Virtual Memory within a Macintosh Manager environment.
This article has been archived and is no longer updated by Apple.

Symptom

- Some applications work better with Virtual Memory enabled, and others work better with it disabled.
- Macintosh Manager does not allow user access to the Memory control panel to change these settings.

Solution

If you want users to have a choice between Virtual Memory or no Virtual Memory, follow these steps:

1. Enable Virtual Memory at the client computer. The default state of the computer will be that Virtual Memory is on when the computer starts up.

2. When a user needs Virtual Memory to be disabled, restart the computer while pressing the Command key. This temporarily disables Virtual Memory until the next time the computer is restarted.

Published Date: Feb 17, 2012

AppleShare IP 6: File "In Use" or "Open" Alert Message

This document describes when you might see a message that a file on an AppleShare IP server is in use or already open.

This article has been archived and is no longer updated by Apple.

Symptom

When you try to use a file on an AppleShare IP server, an alert box appears with a message that the file is already open or in use.

Solution

Generally, when a file is opened, the application that opened it marks it as "in use." When so marked, another user may not be able to open the file until it is released.

For example: AppleWorks indicates that a file is locked or in use then asks if you would like to open a copy of the document (Figure 1).

Figure 1 AppleWorks "in use" dialog

SimpleText indicates the document may already be open and that it cannot be opened by someone else at the same time, see Figure 2.

Figure 2 SimpleText "in use" dialog

If a client computer is working on a document that resides on an AppleShare IP File Server and the client unexpectedly disconnects, the document is still marked as "in use" and will not be released initially.

AppleShare IP release such a file after two minutes of inactivity. If the files are not released, you should troubleshoot for possible drive or file damage on the AppleShare IP server.

Published Date: Feb 17, 2012

AirPort 2.0.4: How to Use the DHCP Message Feature

AirPort 2.0.4 introduces a DHCP messaging feature that can provide a message to DHCP clients that connect to the base station.
This article has been archived and is no longer updated by Apple.
With AirPort software version 2.0.4 you can set up a DHCP messaging feature that sends a message, such as network information or a greeting, to connecting DHCP clients (see Notes 1 and 2).

How to Set Up DHCP messaging

Follow these steps:

1. In Mac OS X, open AirPort Admin Utility version 2.0.4.
2. Click the Network tab.
3. Enter the message or greeting in the Message field, which appears in the lower right corner (Figure 1).

Figure 1 The Network pane of AirPort Admin Utility

4. Click Update (see Note 3).

Once the base station has been updated, any Mac OS 9 client connecting to the base station will see the message when it receives its IP address via DHCP from the base station (Figure 2).

Figure 2 A DHCP message in Mac OS 9

Notes

1. Only Mac OS 9 clients will see DHCP messages.

2. Only the AirPort Base Station (Dual Ethernet) can be configured to use this feature.

3. The message must be 253 characters or less. If you click Update with more than 253 characters, an alert box with this message appears:

"The DHCP message cannot be more than 253 characters. Please remove <number> or more characters and try again."

Published Date: Feb 19, 2012

AirPort Base Station (Dual Ethernet): Mac OS 9 AirPort Admin Utility Does Not Work After Updating to AirPort 2.0.4

After configuring an AirPort Base Station (Dual Ethernet) with AirPort 2.0.4 in Mac OS X, you are no longer able to configure that base station from Mac OS 9. This is normal behavior.
This article has been archived and is no longer updated by Apple.

Symptom

Once an AirPort Base Station (Dual Ethernet) has been configured using the AirPort 2.0.4 in Mac OS X, you can no longer configure that base station from Mac OS 9. If you attempt to do so, an alert box with this message appears:

> "The selected base station has been configured with the OS X Admin Utility and can no longer be configured with the OS 9 Admin Utility. Please use the most current version of the OS X AirPort Admin Utility to configure this base station."

Figure 1 AirPort Admin Utility alert message

Solution

AirPort 2.0.4 includes features that are only available when configuring the AirPort Base Station (Dual Ethernet) using the AirPort Admin Utility in Mac OS X.

Attempting to administer an updated base station from Mac OS 9 could lead to unpredictable results. For that reason, AirPort Admin Utility access from Mac OS 9 has been disabled for any base station that has been configured from AirPort 2.0.4 in Mac OS X.

You should use the most recent version of the Mac OS X AirPort Admin Utility to set up an updated base station.
Published Date: Feb 18, 2012

Mac OS X: About Networking Update 1.0

The Mac OS X Networking Update 1.0 addresses certain issues and updates system software.
This article has been archived and is no longer updated by Apple.
This software updates certain networking components. Mac OS X 10.1.5 must be installed first.

Important: Read Before Installing

1. An Admin user password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If you password must be changed, then follow these steps: Choose System Preferences from the Apple menu. Choose Users from the View menu. Select and Admin user and click Edit User. Click the Password tab. Change the password and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If you experience a power outage or other interruption during installation, use the standalone installer (see below) from Apple Software Downloads to install.

4. Prerequisite software must be present before you can install this update, whether you are using Automatic Software Update or standalone installers. Updates must be installed in the correct order. For the correct sequence, see technical document 106713, "**Mac OS X 10.1: Chart of Available Software Updates**".

Installation

There are two ways to update.

I. Automatic Software Update

See technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

II. Standalone Installer

A standalone installer is available from Apple Software Downloads (http://www.apple.com/swupdates/). See technical document 106713, "**Mac OS X 10.1: Chart of Available Software Updates**".

Do not reinstall earlier Mac OS X updates

You should not reinstall certain earlier updates after using this update, including:

- Mac OS X 10.0.1
- Mac OS X 10.0.2
- Mac OS X 10.0.3
- Mac OS X 10.0.4
- Mac OS X 10.1
- Mac OS X 10.1.1
- Mac OS X 10.1.2
- Mac OS X 10.1.3
- Mac OS X 10.1.4
- Mac OS X 10.1.5
- Security Update 10-19-01
- Installer Update 1.0

Updates should be installed in the correct order. If for any reason you need to reinstall an earlier software update, the Mac OS X startup volume should be erased, after first backing up important documents and data. Reinstall Mac OS X, and install necessary updates in the correct order.

Enhancements Delivered with this update

- Addresses a potential issue in which the Internet connection may not be available after waking from sleep.

TA20817_Mac_OS_X_About_Networking_Update_.pdf

- Addresses a potential issue in which a networking connection may not be available when AirPort software is installed.

Published Date: Feb 17, 2012

Xserve: Reset Password Command Does Not Work With RAID Volumes

If the root password is lost and the startup volume is a member of a RAID set, the Reset Password command does not work. You may use the alternative procedure described here.
This article has been archived and is no longer updated by Apple.

Symptom

When the startup disk is a RAID volume, the Reset Password command does not work.

Note: The Reset Password command is found in the Apple menu when started up from the Mac OS X Server Installation CD.

Solution

When the root password has been lost (see Note 1), follow these steps:

1. Start up in single-user mode by holding the Command-S key combination. See Note 2.
2. At the prompt (#), type: `fsck and mount -uw /`
3. Press Return.
4. Type: `nicl -raw /var/db/netinfo/local.nidb`
5. Press Return.
6. Type: `-create /users/root passwd ""`
7. Press Return.
8. Type: `reboot`
9. Press Return.
10. Log in as root.
11. Open Server Admin.
12. Choose Show Users & Groups List from the Users & Groups menu.
13. Click the checkbox to select the "Show System Users & Groups" option.
14. Select the user named System Administrator (which is root).
15. Click Edit.
16. Enter the new password.
17. Click Save.

Notes

1. If the root password is still known and you only need to reset Admin passwords, then log in to the server as root and use the Users pane of System Preferences to change passwords. For a description of the difference between root and Admin passwords, see technical document 106361, "**Mac OS X 10.0, 10.1: Password Does Not Work As Expected After a Change**".

2. You can get additional description of this step from technical document 106388, "**Mac OS X 10.0: How to Start up in Single-User or Verbose Mode**".

Published Date: Feb 19, 2012

Mac OS X Server: About Changing a User‘s Password to a Blank (Null) Value

This document describes when Mac OS X Server users may change their password to a blank value, and when they can change it back to a real value. This document applies only to Mac OS X Server versions 10.0.3 and later.
This article has been archived and is no longer updated by Apple.
Server Admin (versions 10.1 to 10.1.5) and Workgroup Manager (versions 10.2 or later) do not allow you to do either of the following:

- create a user without a password
- edit a user's password to be blank

Users may get a blank password one of these ways:

- AppleShare clients can click Change Password in a connection dialog and set a null value.
- Macintosh Manager clients prior to version 2.2 can click Change Password from the Macintosh Manager Login Window and set a null value.

Note: Macintosh Manager 2.2 and later do not allow users to change their passwords to a blank value. Macintosh Manager 2.2 and later also do not allow users to change their passwords from a blank value to a real one.

In the Macintosh Manager admin application, you may prevent a user from changing her password. This is not a feature, however, of Server Admin or Workgroup Manager.

If you want to turn off the Change Password feature in Macintosh Manager, click the Global tab then the Security tab in the Macintosh Manager admin application. Though Macintosh Manager can prevent users from changing their passwords, a user can still change his password when he connects to a server using the standard AppleShare connection dialog.

The same processes can be used to change a password from a null value to a real value with Mac OS X Server 10.1 through 10.1.5. Server Admin can also be used to create a real value for a user's password.

With Mac OS X Server 10.2 or later, a user cannot change her password from a blank value while at a standard AppleShare connection dialog. With Macintosh Manager 2.2 or later, a user cannot change his password from the Login Window. Only Workgroup Manager can be used to change a password from a blank value with Mac OS X Server 10.2 or later.
Published Date: Feb 17, 2012

Macintosh: Apple Internal Modem Cannot Establish or Maintain a Connection to Some ISPs in the Asia Pacific Region

Some Apple Internal Modems cannot establish or maintain a connection to some Internet service providers (ISPs).

This article has been archived and is no longer updated by Apple.

Symptom

The computer's built-in Apple modem attempts to connect to an ISP but disconnects during negotiation or shortly after the connection is completed.

Solution

Internet access requires compatible Internet service provider. Some Telstra customers in Australia using an Apple Macintosh are experiencing dropout issues. These customers can download a modem updater that addresses their issue at: http://www.asia.apple.com/modemupdater/

Customers who have Mac OS X 10.2 installed do not require this update.

A special number has been set up to assist customers experiencing this issue who have difficulties downloading the updated modem drivers. For further assistance please call 1800 001912.

Notes:

1. This update has only been qualified for systems that utilize the Telstra Network for Internet access.
2. This issue applies only to the ISPs listed above. For regular modem troubleshooting, see technical document 106748, "**Mac OS X: Troubleshooting a Dial-Up/PPP Internet Connection**".

Published Date: Feb 19, 2012

Macintosh Manager 2: How to Recreate the Macintosh Manager User

You may need to recreate the Macintosh Manager User for troubleshooting purposes. This document describes how.
This article has been archived and is no longer updated by Apple.
When troubleshooting Macintosh Manager, its sometimes necessary to recreate the Macintosh Manager User (mmuser). Follow these steps:

1. Using Server Admin, stop the Macintosh Management and AppleShare (AFP) services.
2. Choose Show Users & Groups List from the Users & Groups menu.
3. Click the checkbox to enable the "Show System Users & Groups" option.
4. Select the Macintosh Manager User account.
5. Click Edit.
6. In the user info window that appears, choose Advanced from the pop-up menu.
7. Leaving the user window open, go back to the Users & Group List window. Click ID to sort the list by User ID (UID).
8. Look at ID numbers greater than 100. In your head, choose a number greater than 100 that does not appear in the list.
9. In the user info window, change the User ID to the number you just chose.
10. Click Save.
11. Select the Macintosh Manager user from the Users & Groups List.
12. Click Delete.
13. Restart the Macintosh Management and AFP Servers.

A new user is automatically created when the Macintosh Management Server starts. The permissions of the Macintosh Manager share point are also corrected when the Macintosh Management Server starts.

Note: You should not change settings for the Macintosh Manager User. Follow the steps above to correct issues caused by altering this user's settings.
Published Date: Feb 17, 2012

Mac OS X 10.1.5: Built-In Flat Panel Display Dims

Mac OS X version 10.1.5 introduces automatic display dimming, which occurs after a period of inactivity equal to half the time required for the computer to go to sleep, as set in the Energy Saver pane of System Preferences.
This article has been archived and is no longer updated by Apple.

Symptom

A built-in flat panel display dims. This may occur while watching a movie or slide show.

Solution

As an added feature of Energy Saver, a built-in flat panel displays dim after a period of inactivity equal to half the time required for the computer to go to sleep, as set in the Energy Saver pane of System Preferences. Because watching a movie or slide show does not count as activity, the display may dim while you are watching a QuickTime movie or slide show.

Dimming helps prevent image persistence that can be caused by an unchanging image, such as a login screen. There is no independent setting for display dimming in the Energy Saver preference pane. Pressing any key brings the screen back to full brightness, or wakes the computer.

If you want to prevent dimming while watching a movie or slide show, follow these steps:

1. Choose System Preferences from the Apple menu.
2. Choose Energy Saver from the View menu.
3. Set the slider for "Put system to sleep whenever it is inactive for" to Never.
4. Be sure the checkbox for "Separate timing for display sleep" is not selected."

Note: After viewing a QuickTime movie or slide show, you may wish to set the Energy Saver system preference back to your sleep preference, especially if you need to conserve battery life.

For more information, see technical documents:

106880: "**Mac OS X: Screen Saver Slide Show Goes Blank (or Black)**"
88343: "**Apple Displays: Avoiding Image Persistence on LCD Displays**"
Published Date: Feb 17, 2012

Mac OS X 10.1: Cannot Update Software After Using Security Update 7-12-2002

Other software updates may not be available after installing Security Update 7-12-02.
This article has been archived and is no longer updated by Apple.

Symptom

- No software updates appear when you use the Software Update feature of System Preferences.
- The standalone installer for Security Update 10-29-2001 cannot be installed on Mac OS X 10.1, because the volume cannot be selected in the installer.

Solutions

Download and install Security Update 7-18-02 for v 10.1. It is available from software download document 120136, "**Security Update 7-18-02 for v 10.1: Information and Download**".

Important: This is not the same as "Security Update 7-18-02", which is available from software download document 75304, and which is appropriate for Mac OS X versions 10.1.1 through 10.1.5. This update combines and replaces:

- Security Update 10-19-2001
- Installer Update for Mac OS X 10.1
- Security Update 7-12-2002

Published Date: Feb 17, 2012

AppleWorks 6: Do Not Drag the AppleWorks 6 Application From Its Folder

You should leave the AppleWorks 6 application inside the AppleWorks 6 folder. When the application is moved, it may not be able to find files that provide its extended features.

This article has been archived and is no longer updated by Apple.

Symptom

When you open AppleWorks 6, one or both of these symptoms occur:

- The Starting Points window lacks the Assistants, Templates and Web tabs.
- An alert box with the message, "The main spell dictionary is not installed" appears when you check spelling.

Solution

1. Quit AppleWorks 6.
2. Drag the AppleWorks 6 application back into the AppleWorks 6 folder.
3. Reopen AppleWorks 6

If this does not resolve the issue, reinstall AppleWorks 6 from the original CD or restore set. Make sure to also install the latest available AppleWorks 6 update after reinstallation. Software updates are available from Apple Software Downloads (http://www.apple.com/swupdates/).

Published Date: Feb 17, 2012

AppleWorks 6: Importing Other Types of Documents Doesn‘t Work

When importing files produced by other applications, use the Open command within AppleWorks for bests results. You may then specify how you want the file imported.

This article has been archived and is no longer updated by Apple.

Symptom

1. In the Finder, double-clicking a document you want to open with AppleWorks results in one of these symptoms:

- An alert box with the message, "The document could not be opened because the application cannot be found." appears.
- An alert box with the message, "There is no application available to open the document." appears.
- The document opens in an application other than AppleWorks 6.

2. Dragging a document onto the AppleWorks 6 application icon results in one of these symptoms:

- The document does not open.
- The document opens in the wrong AppleWorks module (word processing text opens as a spreadsheet for example).
- The document opens unreadable text.

Solution

Follow these steps to import a non-AppleWorks document:

1. Open AppleWorks 6.
2. Choose Open from the File menu.
3. In the window that appears, choose the type of document you are opening from the Document Type pop-up menu. For example, if you want to open a text document in the AppleWorks 6 Word Processing module, choose "Word Processing" from the pop-up menu.
4. Choose the existing file format from the File Format pop-up menu. For example, if you want to open a Microsoft Word 2001 document in AppleWorks 6, choose "Word Mac 98, 2001 document" from the pop-up menu.
5. Select the document you want to open in AppleWorks 6 from the list of files.
6. Click Open.

AppleWorks will try to open the document as you specified in Steps 3 and 4. For best results, be sure to specify both.

Published Date: Feb 17, 2012

AppleWorks 6: How to Use With Multiple Users or Macintosh Manager in Mac OS 9

To use AppleWorks 6 in a Mac OS 9 Macintosh Manager or Multiple Users environment, you need to add the Classic version of the application to the approved list.
This article has been archived and is no longer updated by Apple.

Symptom

One or more of the following occurs:

- AppleWorks 6 is not available when you try to select it as an approved application during Macintosh Manager or Multiple Users setup.
- When you open AppleWorks 6 from a Mac OS 9 computer, an alert box with this message appears:
  "AppleWorks requires a compatible version of Mac OS X."
- AppleWorks 6 will not launch from the Panels environment.

Solution

1. Log in to the computer containing the AppleWorks application as an administrator.
2. Locate the AppleWorks 6 application in the Finder.
3. Press and hold the Control key, then click the AppleWorks 6 application icon. A contextual menu appears.
4. Choose Show Package Contents from the contextual menu.
5. Open the Contents folder.
6. Open the MacOSClassic folder.
7. Pressing and hold the Option key, then drag the AppleWorks 6 application from the MacOSClassic folder to the AppleWorks 6 folder. This should make a copy at the top level of the AppleWorks 6 folder.
8. Rename the copy you created to "AppleWorks 6 classic".

When adding the application to users' approved application lists, specify "AppleWorks 6 classic" for those using Mac OS 9 or earlier.

Note: In order for a managed user to be able to spell check in AppleWorks, you have to create a new user dictionary in that user's Documents folder. For more information on creating a user dictionary, see technical document 50387, "**AppleWorks 6: How to Work with Dictionaries"**.

Published Date: Feb 18, 2012

Xserve: Server Assistant does not accept Xserve serial number for remote installation

This article has been archived and is no longer updated by Apple.

If Server Assistant will not accept your Xserve serial number for remote installation, follow the steps outlined in this document.

Symptom

When remotely installing or setting up Mac OS X Server, Server Assistant does not accept the Xserve computer's serial number as the password.

Note: Server Assistant normally requires the first eight characters of the Xserve serial number. If the Xserve computer's logic board has been replaced and the steps in this document do not help, contact the Apple Authorized Service Provider who replaced the logic board for further assistance.

Solution

1. Be sure you're using the server's built-in Ethernet port.

2. Use Network Utility to ping the Xserve to verify your connection.

3. Be sure the remote administration computer is on the same subnet as the server. The IP address the server has obtained appears in the Server Assistant window.

4. At the remote administration computer, be sure to log in as an Admin user. You may also try the root user.

5. Be sure the Admin has read-write access to the folder /System/Library/ServerSetup and the contents of this folder on the remote administration computer.

Published Date: Feb 20, 2012

Mac OS X 10.1: About the Security Update 7-18-02

The Mac OS X Security Update 7-18-02 further improves the security of the Software Update process.
This article has been archived and is no longer updated by Apple.
This software further improves the security of the Software Update process. Mac OS X 10.1 or later is required.

Note: this update should not be confused with Security Update July 2002. For related information, see technical document 106925, "**Mac OS X: About Security Update July 2002**".

Important: Security Update 7-18-02 replaces the prior Security Update 10-19-01 and Installer Update 1.0. To avoid reintroducing issues resolved by Security Update 7-18-02, do not reinstall either of the older updates."

Important: Read Before Installing

1. An Admin user password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, then follow these steps: Choose System Preferences from the Apple menu. Choose Users from the View menu. Select an Admin user and click Edit User. Click the Password tab. Change the password and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.

Enhancements delivered with this update

Security Update 7-18-02 includes a more secure Software Update service, as well as an updated Software Update command line tool, which enables your system to verify that updates have originated from Apple.

Installation

Note: A different version of the update is required for Mac OS X version 10.1 than for versions 10.1.1 through 10.1.5. It is important that you choose Section I or II accordingly.

I. Steps for Mac OS X version 10.1 only

Use the standalone installer available from this software download document 120136, "**Security Update 7-18-02 for v 10.1: Information and Download**".
Optionally, you may verify the authenticity of the of the download package by checking its SHA-1 digest. This is described on the download page.

II. Steps for Mac OS X versions 10.1.1 to 10.1.5

You may use either a standalone installer or Automatic Software Update.

A. Automatic Software Update

To learn about this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

B. Secure Standalone Installer

You can get a secure standalone installer from software download document 75304, "**Security Update 7-18-02: Information and Download**".

Optionally, you may verify the authenticity of the of the download package by checking its SHA-1 digest. This is described in technical document 75304.
Published Date: Feb 17, 2012

Xserve (Japanese): Settings Revert to English During Remote Configuration; File Service Issues Result

Some settings will incorrectly be set to English when using the Server Assistant application to remotely configure an Xserve server for a Japanese environment. File services do not work as expected.
This article has been archived and is no longer updated by Apple.

Symptom

- Some settings that should be in Japanese appear in English.
- The Macintosh Manager application cannot be used.
- Apple (AFP) and Windows (SMB) file services may not work.

Solution

This issue is resolved in Mac OS X Server 10.2 or later. For upgrade information, see:

Apple Japan - Mac OS X Server Up-To-Date
http://www.apple.co.jp/macosx/server/uptodate/index.html

Users of Mac OS X Server 10.1.5 may follow these steps:

1. Open Server Admin.
2. Click the File & Print tab.
3. Choose Configure Apple File Service from the Apple module.
4. Click the Access tab.
5. Choose Japanese from the "Encoding for older clients" pop-up menu.
6. Click Save, and close the window.
7. Choose Configure Windows Services from the Windows module.
8. Click the General tab.
9. Choose Japanese from the "Code Page" pop-up menu.
10. Click Save.

You can perform the steps above remotely from a computer that has the Mac OS X Server administration tools installed. If you log in locally at the server you will initially see English menus. To correct this, follow these additional steps:

1. Choose System Preferences from the Apple menu.
2. Choose International from the View menu.
3. Drag Japanese to the top of the Languages list.
4. Choose Log Out from the Apple menu.
5. Optional: To correct the language of the Login window, you should repeat Steps 1 to 4 while logged in as the root user. For more information see technical document 106290, "**Mac OS X: About the root User and How to Enable It**".

Published Date: Feb 19, 2012

Microsoft Internet: "Error of Type -2" When Opening Explorer, Outlook Express, or Entourage

If the Internet Preferences file becomes unusable, Microsoft Internet applications may display an alert box with a message similar to "an error of type -2 has occurred."
This article has been archived and is no longer updated by Apple.

Symptom

When you open a Microsoft Internet application, an alert box with a message similar the following appears:

> "An error of type -2 has occurred."

Solution

Various Internet applications, including those made by Microsoft, use information stored in the Mac OS 9 Internet Preferences file. These are settings that you enter in the Internet control panel. The "type -2 error" message may appear when this preference file becomes unusable.

Warning: Removing the Internet Preferences file removes information you have entered in the Internet control panel. Before starting the steps listed below, you should write down or copy this information to another location. If it is not possible to retrieve this information, contact your Internet service provider (ISP).

Follow these steps:

1. Locate your Internet Preferences file. It is found at:

   Macintosh HD: System Folder: Preferences: Internet Preferences

2. Drag the Internet Preferences file to the Trash.
3. Restart the computer.
4. Open the Internet control panel.
5. Enter your Internet settings.
6. Close the control panel.
7. Optional: Save a copy of the newly created file to a location outside the Preferences folder as a backup. If the issue recurs, you can replace the unusable copy with a copy of the backup file.

For more information, see the Microsoft Support document, "ENT2001: Error Type 2 Appears When You Start Entourage, Internet Explorer, or Outlook Express."

This document provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

Related documents

17159: "**Locating Vendor Information**"
106874: "**Mac OS: Web Browser Quits Unexpectedly or Stops Responding**"
Published Date: Feb 20, 2012

Mac OS X 10.1: "Error Code -50" Alert Appears When Copying Files From a Remote Disk

When trying to copy files created by other users from a remote disk to the local Mac OS X startup disk, the root user may see an alert box with the message "Error code -50" .
This article has been archived and is no longer updated by Apple.

Symptom

When you are logged in as the root user and you try to copy files from a remote disk to the local Mac OS X startup disk, an alert box with this message appears:

> "Sorry, the operation could not be completed because an unexpected error occurred (Error code -50)."

Solution

You may use the copy command (cp) or CpMac command in the Terminal to work around this issue, as described below.

Warning

- When copying an item with the cp command, any item in the destination folder of the same name is overwritten immediately. You do not receive a warning as in the Finder. Be sure to rename or remove any item of the same name that you do not wish to lose.
- Any file that has a resource fork must be copied with CpMac, not with cp. Information for using CpMac may be found in technical document 61646, "**Mac OS X: About Improving SMB File Transfer Speed with cp or CpMac**".
- As a general precaution, you should only log in as the root user when there is not an alternative. For information and precautionary statements about using the root user, see technical document 106290, "**Mac OS X: About the root User and How to Enable It**".

To use the cp command , follow these steps:

1. Open Terminal (/Applications/Utilities/).
2. Type: `cp -R`
Important: You must type a space after the "R", so that the result is "`cp -R `". The command does not work without the space.
3. Drag the folder or file you wish to copy from the Finder window into the Terminal window. This will automatically type the item's pathname for you, and the required space should automatically be typed after it.
4. Drag the desired destination folder from the Finder window into the Terminal window. The pathname is automatically typed.
5. Press Return.
6. Quit Terminal.

Note: This article contains information about Apple Developer Tools software (CpMac). AppleCare does not provide usage support for Apple Developer Tools software. Paid support for Apple Developer Tools software is available at http://developer.apple.com.
Published Date: Feb 17, 2012

Mac OS X 10.2 (British): Paper Size Reverts to US Letter

After a user of the British keyboard layout chooses the A4 paper size, it may revert to US Letter on the next document.
This article has been archived and is no longer updated by Apple.

Symptom

- After selecting the British keyboard layout, US Letter remains the default paper size.
- After you select the A4 paper size, it reverts to US Letter for the next new document.

  Note: Since US Letter is the default, this behavior is actually correct. It is often misperceived that changing the paper size for one document changes the default paper size either for an application or for the system.

Solution

The default paper size is initially set to match the preferred language in the International preference pane, not to match the keyboard layout. US Letter is selected for English, and A4 is selected for other languages. After you select your language and keyboard layout, you may change the default paper size. Follow these steps:

1. Open Print Center (/Applications/Utilities/).
2. Choose Print Center > Preferences.
3. Choose the paper size from the Default Paper Size pop-up menu.

The default paper size will be used with any new documents you create. Existing documents will retain their previous paper size until you change and save them on an individual basis.

Note: A localized application may specify its own default size, but the system's default is used when an application is not localized for the selected language or region. This explains why applications may default to different paper sizes.
Published Date: Feb 17, 2012

Mac OS X 10.2: How to Change Default Paper Size

You may use Print Center to change the default paper size, which initially follows the selected language.
This article has been archived and is no longer updated by Apple.
The system's default paper size is initially set to match the preferred language in the International preference pane. US Letter is selected for English, and A4 is selected for other languages. You may change this in Print Center. Follow these steps:

1. Open Print Center (/Applications/Utilities/).
2. Choose Print Center > Preferences.
3. Choose a paper size from the Default Paper Size pop-up menu.

The default paper size will be used with any new documents you create. Existing documents will retain their previous paper size until you change and save them on an individual basis.

Note: A localized application may specify its own default size, but the system's default is used when an application is not localized for the selected language or region. This explains why applications may default to different paper sizes.

For additional information, users of the British keyboard layout should see technical document 106948, "**Mac OS X 10.2 (British): Paper Size Reverts to US Letter**".
Published Date: Feb 17, 2012

Mac OS X Server 10.1: DHCP Leases Do Not Appear to Expire

When looking at DHCP client information in Server Admin, you may see client IP addresses with a Time Left value of "0 minutes". IP Addresses with this notation represent client leases that have expired, but that have not necessarily been reassigned.
This article has been archived and is no longer updated by Apple.

Symptom

DHCP clients have a Time Left value of "0 minutes" listed in Server Admin. This appears in the DHCP Clients window (Figure 1), which is accessed by choosing View DHCP Clients from the DHCP/NetBoot module of Server Admin.

Figure 1 The DHCP Clients window

Solution

Client lease expiration occurs at the time specified in the Configure DHCP window of Server Admin. When client leases expire, the DHCP Clients window of Server Admin shows a Time Left value of "0 minutes". These are leases that have expired and are available for reassignment, if necessary.

The DHCP server attempts to associate client hardware addresses with the same IP addresses whenever possible, so an expired lease is retained for future reassignment to the same hardware address that originally requested it. The DHCP server will recycle a leased IP address when these conditions are met:

- A number of client hardware addresses equal to or greater than the maximum number of leases has previously requested a lease.
- The number of computers with unexpired leases is less than the maximum number of leases.
- The lease of the IP address to be recycled is expired.
- The expired lease to be reassigned is associated with the least recently requesting hardware address.

The available IP address range (and thus maximum number of leases) is set in Server Admin. To access these settings, follow these steps:

1. Open Server Admin.
2. Click the Network tab.
3. Choose Configure DHCP from the DHCP/NetBoot module.
4. Click the Subnets tab, if necessary.
5. Select the subnet.
6. Click Edit.

These settings appear in the General pane of the subnet's individual configuration window.

Example

If you create a pool of 100 DHCP client addresses but only start up 25 computers, then the same 25 leases should always be given to those computers. Next, let these leases expire and start up 25 different computers. These clients now receive 25 new leases while the original 25 show as expired. If you start up the original 25 computers, they should get the same IP addresses they had before.

If you keep starting up new computers until 100 leases are used, each computer receives its leased IP address. At this point, no additional computers should be able to receive a new lease. If you shut down all computers and allow the leases to expire, a newly added system (computer 101) gets a new lease, but consumes a previously used DHCP IP address. Server Admin would indicated that there are now 99 leases with a Time Left value of 0 minutes.
Published Date: Feb 20, 2012

Mac OS X 10.0, 10.1: Mail Sends Same Message Repeatedly

If sent mail is saved in the Outbox, Mail sends the same message repeatedly.
This article has been archived and is no longer updated by Apple.

Symptom

- A message remains in the Outbox after it is sent.
- The message is sent again each time other messages are sent.

Solution

This occurs if sent mail is saved in the Outbox folder. Instead, you should keep sent mail in the Sent Messages mailbox. Remove messages from the Outbox if necessary. If your sent mail is automatically being saved in the Outbox, follow these steps:

1. Select Mail Preferences from the Mail menu.
2. Click the Composing icon.
3. Choose Sent Messages from the "Save sent mail in" pop-up menu.
4. Quit and open Mail.

If the issue persists, restart the computer.

Published Date: Feb 17, 2012

Mac OS X: Trash Icon Appears as a Pair of Scissors

The Trash appears as a pair of scissors when removing or relocating a Finder Toolbar item.
This article has been archived and is no longer updated by Apple.
The scissors icon indicates that you are relocating or removing a Finder window Toolbar item. It may appear when you:

- Drag an alias out of the Finder window Toolbar.
- Relocate an alias in the Finder window Toolbar.
- Remove or re-arrange Toolbar items (after choosing Customize Toolbar).

Related documents

61322: "**Mac OS X: How to Customize the Finder Toolbar**"
Published Date: Feb 17, 2012

Mac OS X 10.1: Disk and File Names Appear Garbled

If Mac OS X was installed from a language other than the one you have selected, disk and file names may appear garbled when you use removable media or connect to a remote disk.
This article has been archived and is no longer updated by Apple.

Symptom

File and disk names may appear garbled when you:

- insert a CD, or other removable media.
- connect to a remote disk served by a computer with Mac OS 9, via file sharing, for example.

Solution

This issue occurs when text encoding defaults to the language used to install Mac OS X, rather than your preferred language.

When using a disk other than the Mac OS X startup volume, text encoding does not always automatically switch to that which you prefer. Follow these steps to choose the correct text encoding for the affected disk:

1. Click the Finder icon in the Dock.
2. Choose Computer from the Go menu.
3. Select the affected volume.
4. Choose Show Info from the File menu.
5. Choose your preferred language from the Encoding pop-up menu.

The correct encoding causes file names to be displayed correctly.

Note: The Encoding menu appears in the Info window only when applicable to the selected volume. It does not appear, for example, if you have selected your Mac OS X startup disk.
Published Date: Feb 17, 2012

Mac OS X Server: A File Copied From a Server May Not Open Under Certain Circumstances

In some circumstances, a file copied from Mac OS X Server 10.1 or later to a client computer cannot be opened. This document provides a workaround for opening the file.
This article has been archived and is no longer updated by Apple.

Symptom

A file copied from Mac OS X Server to a client computer cannot be opened by a particular user.

Note: This symptom occurs under specific, limited circumstances after a file has been modified by different users in a particular sequence. It results from the permissions model in Mac OS X that protects the privacy of users' files. If you know that the user who copied the file should be able to open and use it, then the workaround described below will allow that user to open the file.

Solution

Follow these steps to give the affected user permissions for the file. Steps 2 through 4 are optional.

1. Log in as an Admin user.
2. Select the affected file in the Finder.
3. Choose Show Info (Mac OS X 10.1), or Get Info (Mac OS X 10.2) from the File menu.
4. In the Info window, you may verify that the affected user does not have ownership or adequate permissions for the file.
5. Open Terminal (/Applications/Utilities/).
6. Type: `sudo chown <username>`
Important: Replace "<username>" with the actual short name of the affected user. Additionally, you must type a space after the short name. So for a user with a short name of "bernard", the correct text entry would be "`sudo chown bernard `".
7. Drag the affected file from the Finder into the Terminal window. This automatically types the pathname of the file for you.
8. Press Return.
9. When prompted, enter your Admin user password, then press Return.
10. Quit Terminal.

The affected user should now be able to open the file. You may verify ownership of the file in the Info window.
Published Date: Feb 17, 2012

Mac OS X 10.2: Disks (Volumes) Do Not Appear in the Installer

In some situations, hard disk volumes do not appear as a choice in the Mac OS X 10.2 Installer during installation.
This article has been archived and is no longer updated by Apple.

Symptom

No volumes are available in the Installer application.

Solution

These steps may help:

1. Choose Disk Utility from the Installer Menu.
2. Click the First Aid tab.
3. Use the Repair feature on the affected disk (or disks), if it appears.
4. If the disk still does not appear, restart the computer from the Install CD.
5. If the disk still does not appear, shut down the computer.
6. Disconnect any third-party hardware upgrades or peripheral devices, including additional hard drives, USB devices, or FireWire devices.
7. If jumper settings on the original hard drive have been changed, return them to their original position.

Note: If volumes only fail to appear when a known-working secondary hard drive is installed, verify that the jumper settings on the drive are appropriate. For example, with Power Mac G4 (Mirrored Drive Door) computers, additional ATA hard disks must be set for cable select mode, not for master or slave mode. Consult the documentation that came with your computer.

8. Start up from the Install CD.
9. If the disk still does not appear, use Disk Utility again. If the disk appears in Disk Utility but not in the Installer application, back up any important data from the disk and erase it in Disk Utility. The drive should then appear in Installer.

Published Date: Feb 17, 2012

iPod‘s remote control isn‘t working

Learn what to do if iPod plays music, but the remote's buttons do not work.

This article has been archived and is no longer updated by Apple.

1. Make sure the iPod remote Hold switch is turned off. Slide the Hold switch up so the green mark is visible.
2. When you insert the remote connector into the iPod and think it is secure, give it an extra push. You should feel it click into place. The click is noticeable. If the remote does not click into place, audio will play through the headphones, but the controls on the remote will not respond.

In the first image below, the connector is not inserted far enough into iPod. You can see the metal ring. In this case, you will hear sound in the headphones, but the remote will not work.

In the second image, the remote connector is correctly inserted.

Published Date: Oct 10, 2016

Mac OS X 10.2: How to Change Modem Country Setting

You may change the modem country setting using System Preferences, when traveling for example.

Note: This document applies to Mac OS X 10.2 through 10.2.8.

This article has been archived and is no longer updated by Apple.
Mac OS X 10.2 allows you to change the modem country setting via the System Preferences application. You may need to do this when traveling abroad.

Follow these steps:

1. Choose System Preferences from the Apple menu.
2. Choose Date & Time from the View menu.
3. Click the Time Zone tab.
4. Click your part of the world, then choose a city near you from the "Closest City" pop-up menu.
5. Choose Network from the View menu.
6. Choose Internal Modem from the Show pop-up menu.
7. Click the Modem tab, and verify that the Country Setting is correct.

Published Date: Oct 10, 2016

Mac OS X 10.2: Some Classic Components Are Later Than Mac OS 9.2.2

Mac OS X 10.2 includes some Classic components with version numbers later than Mac OS 9.2.2.
This article has been archived and is no longer updated by Apple.
Mac OS X 10.2 includes the versions of Classic components listed below. These are later versions than the same-named components included with Mac OS 9.2.2. These components are installed in your Mac OS 9 System Folder when the Classic environment is opened for the first time, unless they are already present.

Control Panels

- Keyboard (8.6.2)
- Startup Disk (9.2.4)

Extensions

- AppleScript (1.8.3)
- CarbonLib (1.6)
- Classic RAVE (1.8)
- InputSprocket Classic (1.8)
- Network Setup Extension (1.3.3)
- Open Transport (2.8)
- Open Transport ASLM Modules (2.8)
- QuickDraw 3D RAVE (1.8)

Other

- Classic (9.3.0)
- Classic Support (2.1)
- Classic Support UI (2.1)
- Script Editor (1.8.3)
- Standard Additions (1.8.3)

Note: If you start up from your Mac OS 9.2.2 System Folder after Mac OS X 10.2 has been installed, these components will continue to work.
Published Date: Oct 10, 2016

Mac OS X Server 10.2: NetBoot and Network Installation Image Behavior

Mac OS X Server 10.2 allows you to choose which network disk image is the default startup volume for your NetBoot clients. If only one image is available, it becomes the default startup volume for NetBoot clients or Network Installation.
This article has been archived and is no longer updated by Apple.
Mac OS X Server 10.2 allows multiple network disk images to be used with NetBoot client computers. The network images can be used to start up clients in both Mac OS X and Mac OS 9, or to install software as Network Installation volumes. If multiple images exist on a Mac OS X Server 10.2 computer, each can be enabled or disabled, or be set up as a default image for NetBoot clients. You can find these settings by clicking the Image tab in the DHCP/NetBoot configuration window.

If a NetBoot server has only one image, this image becomes the default image for NetBoot clients regardless of the default checkbox selection made. This behavior has implications in a scenario in which the only image on the server is a Network Installation image. If you use a Network Installation image to start up and install software on your client systems, you should also disable the image after the installation has taken place in order to avoid unauthorized installation of software on your client computers.

If you want to reset the default image selection for all NetBoot clients, you should remove the bsdpd_clients listing file from /var/db, followed by restarting server. Then, hold "N" key while starting up each client computer. The user will be forced to the proper default image. Clients will now be bound to the new image by default.

Note: Changing the NetBoot/Network Installation image settings may require restarting the server computer.
Published Date: Oct 10, 2016

Mac OS X 10.2: Classic Requires That You Already Have Mac OS 9

The Classic environment of Mac OS X 10.2 allows you to use Classic applications provided you already have a copy of Mac OS 9.
This article has been archived and is no longer updated by Apple.
The Classic environment of Mac OS X allows you to use Classic applications. Mac OS 9 must be installed on your computer for Classic applications to work. (See Note 1.) Mac OS X 10.2 does not include Mac OS 9. You may install Mac OS 9 from:

- a Mac OS 9 CD that came with your computer (if one did)
- a Mac OS 9 retail CD
- a Mac OS 9 CD included with an earlier retail version of Mac OS X

Customers in the United States who have purchased Mac OS X 10.2 but do not have Mac OS 9 may take part in the Mac OS 9.2 Fulfillment Program (http://www.apple.com/macosx/upgrade/). This applies, for example, if you have a Mac OS X-compatible computer that had been using Mac OS 8.6. In the event that you have lost the Mac OS 9 CD that came with your computer, be aware that the fulfillment program is not suitable for some computers that originally included Mac OS 9.2.1 or later. Such computers may require a later Installation disc.

Customers in other regions should check localized Apple Web sites or contact the Apple Store for applicable purchase options. From the Apple.com front page, choose your region from the "Visit other Apple sites around the world" menu. Then click the Mac OS X tab, then the Upgrade link (in the navigation bar directly below the tabs).

Notes

1. To learn more about Classic applications, see technical document 107033, "**Mac OS X: What is a Classic Application?**"

2. The Mac OS X 10.2 Classic environment requires Mac OS 9.1 or later (Mac OS 9.2.2 recommended). Any installation of Mac OS 9.0 to 9.2.1 may be updated to version 9.2.2 by using the Software Update control panel. See technical document 75288, "**Mac OS 9: Available Updates**".

3. For more information, please see Mac OS X Upgrade Technical Specifications (http://www.apple.com/macosx/techspecs/).

Published Date: Oct 10, 2016

Mac OS X: Classic System Folder Does Not Work With Earlier Versions of Mac OS X After 10.2 Update

After a Mac OS 9 System Folder has been updated with Classic system resources from Mac OS X 10.2, it should not be used with Mac OS X 10.0 through 10.1.5.
This article has been archived and is no longer updated by Apple.

Symptom

Classic is not usable after it is started, and an alert box you cannot dismiss may appear with this message:

> "The application 'Finder' has unexpectedly quit."

Note: The System Folder is not affected when used independently of Mac OS X.

Solution

Do not use a Mac OS 9 System Folder with Mac OS X 10.1.5 or earlier after it has been updated by Mac OS X 10.2.

You may use the following temporary workaround to use this System Folder within a Mac OS X 10.0 through 10.1.5 Classic environment:

1. Before starting Classic, open the System Folder. **Important:** Do not confuse this with the folder named "System".
2. Locate and drag these files, which are located in the top-level of the System Folder, to another folder, or to the desktop:
   - Classic
   - Classic Support
   - Classic Support UI
3. Choose System Preferences from the Apple menu
4. Choose Classic from the View menu.
5. Click Start.
6. Click OK when prompted to install Classic system resources.

Notes

1. If you use this System Folder with Mac OS X 10.2 in the future, Mac OS X 10.2 will ask to update these Classic system resources again the first time that Classic is started.

2. You can also avoid this issue by installing a licensed copy of the Mac OS 9 System Folder for each version of Mac OS X that is installed. Each System Folder should be used by only one version of Mac OS X.

Published Date: Oct 10, 2016

Mac OS X: Restart Classic Environment After Force Quitting Classic Outlook Express or Internet Explorer

If Microsoft Outlook Express or Internet Explorer are force quit in the Classic environment, you should restart Classic.
This article has been archived and is no longer updated by Apple.

Symptom

Classic application programs stop responding or "freeze" after you force quit Outlook Express or Internet Explorer in the Classic environment.

Note: This issue does not affect the Mac OS X-native version of Internet Explorer installed in your Mac OS X Applications folder.

Solution

1. Save any work that you have open.
2. Restart the Classic environment by doing one of the following:
   - Click Restart in the Classic preference pane. This only restarts the Classic environment. It does not restart the computer.
   - Log out, then log back in.
   - Restart the computer.

Published Date: Oct 10, 2016

Mac OS X 10.2 (Retail): Unable to Use EarthLink Software

If you cannot use EarthLink software to set up a new account, or to locate a different dial-up access number, you should download a later software version from EarthLink.
This article has been archived and is no longer updated by Apple.

Symptom

- You are unable to successfully set up a new EarthLink account after entering personal and credit card information.
- You are unable to use EarthLink software to locate a different dial-up access number.

Solution

If you are setting up a new EarthLink account, use Setup Assistant instead. Setup Assistant is located in this path: /System/Library/Core Services/Setup Assistant

To use EarthLink software for setting up a new account, or locating a different access number, download and use EarthLink version 2.6.3 or later from:

EarthLink Software (Macintosh)
http://www.earthlink.com/home/software/mac/

If you cannot connect to the Internet, you may order EarthLink software by calling 1-800-719-4660 (option 2).

This document provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 10, 2016

Mac OS X 10.2: Some Classic Microsoft Applications Appear to Lose User Settings and Information

After upgrading to Mac OS X 10.2, Classic Microsoft applications that store information in the Microsoft User Data folder may appear to have lost user preferences and other information, including mail messages. This includes Microsoft Office 2001 and Outlook Express 5.
This article has been archived and is no longer updated by Apple.

Symptom

A Classic Microsoft application opens but does not retain user information or preferences. An alert box may appear with a message that the Microsoft User Data folder is not in the expected location.

Solution

Classic Microsoft applications that rely on the Microsoft User Data folder expect it to be in the Documents folder. Unlike prior versions of Mac OS X, the version 10.2 Classic Environment uses the Documents folder that is in a user's Home directory, rather than the Documents folder at root level of the Classic System Folder's volume. There is a general solution and an Outlook Express-specific solution.

General solution

Drag the Microsoft User Data folder to the Documents folder in your Home directory by following these steps:

1. Quit any affected Microsoft application that is open.
2. Locate the Microsoft User Data folder that is in the Documents folder. It is at the top (root) level of the hard disk volume that contains your Mac OS 9 System Folder. If your System Folder was on a disk named Macintosh HD, that location would be noted as:

   Macintosh HD : Documents : Microsoft User Data

3. Drag the Microsoft User Data folder to the desktop.
4. Click the Finder icon in the Dock.
5. Choose View > Home.
6. Drag the Microsoft User Data folder from the Desktop into the Documents folder that is in your Home directory.

Once this is complete, you should be able to use the affected Microsoft applications as expected.

Important: In the event that you subsequently start up the computer from Mac OS 9 and open the affected Microsoft applications, the software will expect the Microsoft User Data folder to be in its original location. You can create an alias of the Microsoft User Data and place it at the root level of the Mac OS 9 disk, if you plan on starting up in Mac OS 9 often.

Outlook Express 5 Only

Note: This solution applies only to Classic Outlook Express 5.0 or later.

Outlook Express may prompt you to move the Identities folder, which is located in the Microsoft User Data folder, to the Outlook Express folder. You may use this alternate solution:

1. Quit Outlook Express if it is open.
2. Locate the Identities folder, which is located in the Microsoft User Data folder. If your System Folder was on a disk named Macintosh HD, that location would be noted as:

   Macintosh HD : Documents : Microsoft User Data : Identities

3. Drag the Identities folder into your Outlook Express 5 application folder.

Your user settings and mail messages should now be available whether the computer is started up from Mac OS 9 or Mac OS X 10.2.

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Document 17159: "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

TA20849_Mac_OS_X_Some_Classic_Microsoft_Applications_Appear_to_Lose_User_Settings

Published Date: Oct 10, 2016

Mac OS X 10.2.8 or Earlier: Menu Bar Clock Unexpectedly Uses 24-Hour Setting

The clock in the menu bar may unexpectedly use a 24-hour setting instead of a 12-hour clock. Use the International preference pane to change the clock's setting.

This article has been archived and is no longer updated by Apple.

Symptom

- The clock in the menu bar may unexpectedly use a 24-hour setting instead of a 12-hour clock.
- An inaccurate "AM" or "PM" may appear.

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

iChat: AOL Instant Messenger Compatibility With .Mac Users

AOL Instant Messenger (AIM) users should use a current version of AIM software for compatibility with iChat users who are using a .Mac account name.

This article has been archived and is no longer updated by Apple.

Symptom

Online users of iChat and AIM cannot communicate.

Solution

Affected AIM users should update to a later version of AIM software.

- For Mac OS, use AIM v 4.5.651 or later.
- For Microsoft Windows, use AIM v 4.8.2790 or later.

Visit the AIM Web site to download new software (http://www.aim.com/).

Note: Third-party AIM clients may not work as expected. For best results, both parties should use either AIM or iChat.

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Document 17159: "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.

Published Date: Feb 17, 2012

Mac OS X: How to remove and recreate an inaccessible keychain

This article has been archived and is no longer updated by Apple.

You may delete and recreate a keychain file if the keychain is inaccessible (locked with a lost or unavailable password).

Notes

1. After removing the old keychain and creating a new one, you will need to re-enter stored passwords again.

2. If you use more than one keychain and wish to set the new keychain as default, select it in the list and choose Keychains > Make Default (Mac OS X 10.1) or File > Make Default (Mac OS X 10.2) in Keychain Access.

Mac OS X 10.2, 10.3, 10.4 or later instructions

1. Log in as the affected user.
2. Open Keychain Access (/Applications/Utilities).
3. If the Keychain Files list is not available, click Keychains (Mac OS X 10.3.9 or earlier, upper right corner) or Show Keychains (Mac OS X 10.4 or later, bottom left corner).

4. Select the inaccessible keychain that you wish to remove from the Keychain Files list.
5. Choose Delete "<keychain_name>" from the File menu.
6. When prompted, click Delete References & Files. This deletes the actual keychain file, instead of just the passwords stored in the keychain file.
7. Choose File > New > New Keychain. When prompted, enter a unique name and password for the new keychain.
8. Select the new keychain that appears in the Keychain Files list.
9. Choose File > Make "<new_keychain_name>" Default. The name of the new keychain is now bold in the Keychains Files list.

You may now use the new keychain to store passwords.

Mac OS X 10.1 Instructions

1. Log in as the affected user.
2. Open Keychain Access (/Applications/Utilities).
3. Choose Edit > Keychain List.
4. Select the inaccessible keychain file in the Keychain List window.
5. Click Remove.
6. When prompted, click Delete. The keychain file is removed from the list.
7. Click New.
8. Type a name for the keychain. You may wish to use the same name as the keychain file you just deleted.
9. Type and verify the keychain's new password.
10. Click OK.

You may now use the new keychain to store passwords.

Related documents

106156 Mac OS X: Changing or resetting an account password

Published Date: Oct 10, 2016

Mac OS X 10.2: Startup Graphics Do Not Appear Correctly When Multiple Versions Are Installed

The graphics normally seen during the first portion of Mac OS X 10.2 startup are not drawn and animated correctly when multiple versions of Mac OS X are installed.
This article has been archived and is no longer updated by Apple.

Symptom

When you start up Mac OS X 10.2, a gray screen appears that includes the Apple logo and an animated graphic. The animated graphic on this screen is not drawn and animated correctly. This condition may sometimes be referred to as a "corrupted graphic."

Solution

If multiple version of Mac OS X are installed on an affected computer, the startup graphic is not drawn and animated correctly. This would happen, for example, if you installed Mac OS X versions 10.1.5 and 10.2 on two separate partitions on the same computer.

On the affected computers listed above, you should not install different versions of Mac OS X on different partitions or disks.

Notes

1. On any computer, you should only install Mac OS X in keeping with the terms of the included Software License Agreement.

2. Installing multiple versions of Mac OS X on the same computer may result in undesired and conflicting user privileges settings.

Published Date: Oct 10, 2016

Mac OS X 10.2: Can See Shared Printer But Cannot Print to It

When using Printer Sharing, you may be able to see a shared printer, but not print to it.
This article has been archived and is no longer updated by Apple.

Symptom

- The shared printer appears as a choice at another computer, but that computer cannot print to it.
- Alert boxes appear when you try to print.

Note: This issue does not occur on all types of networks. Certain DNS configurations may prevent the issue from occurring.

Solution

Update to Mac OS X 10.2.1. For more information, see technical document 107036, "**Mac OS X: About the Mac OS X 10.2.1 Update**".

If you cannot immediately update and need a temporary workaround, then follow these steps:

1. Choose ⇒ Location ⇒ Network Preferences.
2. In the Search Domains field, type: `local`.

Figure 1 The Network preference pane

3. Click Apply Now.

Published Date: Oct 10, 2016

Mac OS X 10.2: Internet Sharing Lists Port Name Two or More Times

You may see a message that your connection is being shared over "Built-in Ethernet and Built-in Ethernet", "AirPort and AirPort", or a similar combination.

This article has been archived and is no longer updated by Apple.

Symptom

After you turn on Internet Sharing, you may see a message in the preference pane that repeats the same port (network interface) name two or more times. Possible messages include these examples:

> "This connection will be shared with computers connected to Built-in Ethernet, AirPort and Built-in Ethernet."
>
> "This connection will be shared with computers connected to AirPort and AirPort."

Figure 1 The Internet Sharing preference pane

Solution

The name of the physical network interface (such as AirPort or Built-in Ethernet) appears once for each active port configuration that you have created in the Network pane of System preferences. If you have three active port configurations for Built-in Ethernet named "Ether1", "Ether2", and "Ether3", then "Built-in Ethernet" appears three times in the message. What this actually indicates to you is that your connection is being shared over each active port configuration for the named interface. For more information, see technical document 106800, "**Mac OS X: How to Create Port Configurations**".

Important: Users of AirPort should only use one port configuration for AirPort. It is not possible to create multiple AirPort configurations in Mac OS X 10.2, though you could have still have them if they were created in Mac OS X 10.1 and imported during an upgrade installation. Use of multiple AirPort port configurations may result in unexpected behavior. For best performance, turn off and delete additional port configurations for AirPort.

Published Date: Oct 10, 2016

Mac OS X: Unexplained Hard Disk Activity Produced By "find" Process

You may notice brief periods of intense, unexplained hard disk activity as a result of normal operating system maintenance.

This article has been archived and is no longer updated by Apple.

Symptom

- You hear a brief period of intense hard disk activity, lasting up to about a minute. There is no alert message to explain the activity. This may occur when no other applications are open or when all other applications are idle.
- If you look in Process Viewer or use the top command, you see that the process "find" is using significant CPU time during this activity.
- Users familiar with Sherlock scheduled indexing may confuse this activity with that feature.

Solution

The disk activity generated by find is a normal part of file system maintenance, used for tasks such as removing invisible temporary files that are used by the system. It is scheduled to occur early in the morning at 03:15 everyday, 04:30 on Saturdays, and 05:30 on the first day of each month.

For information on how to manually run these jobs at a time of your choice, see technical document 107388, "**Mac OS X: How to Force Background Maintenance Tasks (Logs and Temporary Items)**".

These scheduled tasks should not be confused with the Sherlock scheduled indexing feature. For more information, see technical document 106190, "**Mac OS X 10.0: Performance Slower When Sherlock Updates or Creates an Index**".

Note: Mac OS X 10.2 replaces the Sherlock indexing feature with a find by content option in the Find dialog of the Finder.

Published Date: Oct 10, 2016

Mac OS X 10.2: Third-Party Menu Bar Items Do Not Work

The Mac OS X 10.2 menu bar does not allow third-party menu bar items that worked with Mac OS X 10.1, such as those added by shareware utilities.

This article has been archived and is no longer updated by Apple.

Symptom

- Third-party menu bar items do not appear after upgrading to Mac OS X 10.2.
- If you try to open the preference pane for a third-party menu bar item, an alert box may appear. Using Application Switcher Menu (Frank Vercruesse, author) as an example, the message in the alert box says:

  "Preferences Error. Could not load ASM."

Solution

Mac OS X 10.2, in its original and supported state, does not allow the addition of third-party menu bar items.

Important: Though third-party solutions exist for re-enabling third-party menu bar items, Apple does not recommend, endorse, or provide technical support for use of such solutions or for complications arising from the use of such solutions. Using third-party solutions to modify Mac OS X may result in unforeseen consequences, including but not limited to the inability to install future Apple software updates.

Published Date: Oct 10, 2016

Mac OS X Server 10.2: Cannot Add Email Addresses in Server Monitor

Deleting all the email addresses in Server Monitor keeps you from adding any new addresses.
This article has been archived and is no longer updated by Apple.

Symptom

When you set up email notifications for Server Monitor in Mac OS X Server 10.2, if you delete all the email addresses from the "To" field, you are unable to add any new addresses. Clicking the Add button does not add a new addresses.

Solution

1. Quit Server Monitor. If more than one instance of Server Monitor is connected (local and remote), be sure to quit them all.
2. Delete these files from the server:
   - /Library/Preferences/Server Monitor Prefs
   - /etc/hwmond.conf

Notes

1. Deleting these files will remove all customized settings in Server Monitor. After deleting these files, you must add your server to the list again.

2. When Server Monitor is used on a remote system, there is a local preference file that must be updated after deleting the files on the server. To update the preference file on the remote system, open Server Monitor and select Edit Notifications for the affected server. You now should be able to successfully add a new email address. If you cannot add new addresses, delete the following file on the remote workstation while Server Monitor is not open:

/Library/Preferences/Server Monitor Prefs

Published Date: Oct 10, 2016

Apple Remote Desktop 1.2 or Earlier: How to Remotely Configure on Mac OS X Server 10.2

This document explains how to remotely configure Apple Remote Desktop (ARD) versions 1.2 or earlier on Mac OS X Server 10.2 or later. When set up via these instructions, the server is available as an Apple Remote Desktop client.

Note: This document does not apply to ARD versions 1.2.1 to 1.2.4 or version 2.0 or later.
This article has been archived and is no longer updated by Apple.

This document explains how to remotely configure Apple Remote Desktop (ARD) versions 1.2 or earlier on Mac OS X Server 10.2 or later. When set up via these instructions, the server is available as an Apple Remote Desktop client.

Note: This document does not apply to ARD versions 1.2.1 to 1.2.4 or version 2.0 or later.

These instructions assume you have already installed Apple Remote Desktop. If you have not, see the Xserve manuals for instructions on how to remotely install Apple Remote Desktop.

Steps for remotely configuring ARD:

1. From your remote computer, make an ssh connection to Xserve. The command is:

   ```
   ssh root@server_address
   ```

   Note: Replace "server_address" with the actual IP address or DNS name of Xserve.

2. Provide your root password when prompted. Unless you have changed it, the root password is the same as that of the first Admin user created for Xserve.

3. In order for ARD to be on after every startup, the hostconfig file must be edited. It must include the line "ARDAGENT=-YES-". You can do this by using a CLI text editor (such as pico or vi). This example uses pico. The command is:

   ```
   pico /etc/hostconfig
   ```

4. Press the down arrow (cursor) key to scroll to the end of the file. On a new line type:

   ```
   ARDAGENT=-YES-
   ```

5. Save the file (press Control-O), press Return, and exit pico (press Control-X).

6. You must add a NetInfo property and value. In this example the user to be configured has a short name of "stewart". You would execute this command, replacing "stewart" with the short name of your chosen user:

   ```
   niutil -createprop . /users/stewart naprivs -1073741569
   ```

7. Restart the Xserve by typing this command then pressing Return:

   ```
   shutdown -r now
   ```

8. After the Xserve restarts, open ARD. Add the Xserve, using the username and password of your chosen user (stewart in this example).

Published Date: Oct 10, 2016

Mac OS X 10.2: Some users cannot use Classic

When using the Classic environment to install software updates, installing Mac OS 9 system software updates or reinstalling Mac OS 9 may cause privilege changes to the Classic System Folder that prevent some users from using the Classic environment.

This document applies to Mac OS X 10.2 through 10.2.2.
This article has been archived and is no longer updated by Apple.
This message may appear when trying to start Classic, "You do not have sufficient permissions to run Classic from the selected system folder."

To fix this, download and install Mac OS X 10.2.3 Update, or later.

Published Date: Oct 10, 2016

Mac OS X 10.2, Remote Desktop: System Preferences Quits Unexpectedly When Accessing Remote Desktop Pane

The System Preferences application quits unexpectedly when an Apple Remote Desktop version earlier than 1.1 is installed. Mac OS X 10.2 works with Apple Remote Desktop 1.1 or later.
This article has been archived and is no longer updated by Apple.

Symptom

After upgrading to Mac OS X 10.2, System Preferences unexpectedly quits if you try to open the Remote Desktop pane.

Solution

Use the Software Update pane of System Preferences to update to Apple Remote Desktop 1.1. See technical document 106704, "**Mac OS X: How to Update Your Software**".
Published Date: Feb 17, 2012

Mac OS X Server 10.2: Software Update Changes Apache Document Root Behavior

Be cautious when modifying preinstalled items at /Library/WebServer/Documents. Items preinstalled in this location are subject to change or reinstallation by future Apple software updates.

This article has been archived and is no longer updated by Apple.

Symptom

If you have modified preinstalled items (such as a symlink) at /Library/WebServer/Documents, then you may encounter unexpected behavior after installing a Mac OS X Server software update.

Solution

If you have modified preinstalled items in the folder /Library/WebServer/Documents, you should back up the folder as a precaution before installing system software updates.

When Apple releases software updates available for Mac OS X Server, they often include a later version of the Apache Web server and the included online Apache manual. The content for the manual is in the /Library/Documentation/Services/apache/ folder, but by default Apache serves content from /Library/WebServer/Documents/. That folder contains a symbolic link (symlink) pointing to the manual. That symlink and the other files originally installed in that folder, including index.html, are subject to being overwritten in the event of a software update. If you modify them, they are subject to being restored to their original content. Certain changes, such as changing a symlink to a folder, may confuse the update process and result in a new symlink being created with a new name. While it is safe to add files and folders to /Library/WebServer/Documents, be cautious when modifying the preinstalled files and folders.

Published Date: Oct 10, 2016

Mac OS X 10.2: inetd Replaced by xinetd

Mac OS X 10.2 replaces inetd with xinetd, providing easier modification of the inetd daemon list.
This article has been archived and is no longer updated by Apple.
Mac OS X 10.2 replaces inetd with xinetd. The xinetd process offers an easier way to add, delete, or modify entries in the inetd daemon list. Rather than editing a single file (/etc/inetd.conf), a directory can have xinetd "modules" dropped into it or removed in order to change the configuration, making it much easier to modify system behavior. The xinetd process also add features such as access control and logging. For information on configuring and using xinetd, see the man pages for xinetd and xinetd.conf, or visit xinetd (http://xinetd.org/).

Services on Mac OS X that formerly were configured with inetd, such as FTP, now use xinetd. Though you should use xinetd, inetd is still running, and may be used to run services alongside xinetd if inetd.conf is configured appropriately.
Published Date: Feb 17, 2012

Mac OS: Find by Content Index Limited to 2000 Unique Terms

To protect performance and disk space usage, all Mac OS applications that use find by content have a 2000-term index limit. This includes all versions of Sherlock, Mac Help, Mail, and the Mac OS X 10.2 Find dialog.

This article has been archived and is no longer updated by Apple.

"Find by content" indexing allows you to locate a file by the words it contains. You could, for example, locate your meeting notes by typing a phrase contained in them. All Mac OS applications that feature find by content indexing use the same underlying engine. These applications include:

- Sherlock - see Note
- Mac Help
- Mail
- the Find dialog - see Note

Note: In Mac OS X 10.2 and later, the Find dialog of the Finder assumes the find by content function that was previously part of Sherlock. To learn more about it, see technical document 107005, "**Mac OS X 10.2: How to Find Items on the Hard Disk**".

Only the first 2000 unique terms of each file are indexed. During this process, a file's text is processed into "terms." This means they are forced to all lower-case, and they may be "stemmed" by removing certain grammatical endings. Thus "BROTHERS", "brother", "Brother's", and "Brother" would be considered the same term, "brother."

"Unique" means that for purposes of the 2000-term limit, each term is only counted the first time it is found. So the indexing process does not stop after the first 2000 terms of a file, but rather when its vocabulary exceeds 2000 terms.

Very few natural language documents have a vocabulary in excess of 2000 words, so this limitation should not hinder you in normal usage. If you were to index a dictionary of the English language, for example, most of it would not be indexed. The same is true of documents containing long lists of names.

The limit is necessary in order to limit the size of index files, and the time required to create them. An index all of the hypothetical English dictionary would be huge. This limit also helps prevent an excess of indexed terms from files that are not natural language documents, and thus that you would not want to index. Such files may be computer-generated, containing many thousands of strings that look like words, but are not.

Published Date: Feb 19, 2012

Open Directory Assistant: Use Only to Configure Mac OS X Server 10.2 or Later

You should only use the Open Directory Assistant application to configure Mac OS X Server.
This article has been archived and is no longer updated by Apple.

Symptom

If you use Open Directory Assistant to configure a non-server installation of Mac OS X, it will not configure the system.

Note: Open Directory Assistant is installed with the Mac OS X Server Admin Tools.

Solution

You should only use the Open Directory Assistant to configure Mac OS X Server.

Note: You may use Open Directory Assistant remotely from a Mac OS X client to configure a Mac OS X Server.

Though Open Directory Assistant allows selection of non-server systems, only Mac OS X Server includes software components required for the Open Directory Assistant to work.
Published Date: Feb 17, 2012

Mac OS X 10.2: Erroneous "You are now running on reserve battery power" Alert

You may see an alert box with a message that says: "You are now running on reserve battery power," even if the battery still has an ample charge.
This article has been archived and is no longer updated by Apple.

Symptom

You see an alert box with a message that says "You are now running on reserve battery power," but your battery still has ample charge. This usually happens when waking from an extended period of sleep, or after unplugging the AC adapter.

Solution

Update to Mac OS X 10.2.4 or later.
Published Date: Oct 10, 2016

Mac OS X: No Modem Sound on PowerBook G3 Series

You cannot hear modem dialing sounds on PowerBook G3 Series computers when using Mac OS X.

This article has been archived and is no longer updated by Apple.

Symptom

No modem sound is heard through speakers or headphones.

Solution

Tthis document will be updated as more information becomes available.

Published Date: Oct 10, 2016

Mac OS X 10.2: Empty Manufacturer and Model Menus in Audio MIDI Setup

If you create a new MIDI device in Audio MIDI Setup and double-click the device icon, the Manufacturer and Model menus are empty.
This article has been archived and is no longer updated by Apple.

Symptom

Manufacturer and Model menus for a newly-created MIDI device are empty.

Solution

This is normal behavior. In a future release, Apple may populate these menus with common manufacturer names and models. You can still enter those names yourself when creating new devices.
Published Date: Oct 10, 2016

Xserve, Mac OS X Server: Modification date changes on files copied via AFP

This article has been archived and is no longer updated by Apple.

The modification dates of files are changed when copied to a Mac OS X Server 10.1.5 via Apple Filing Protocol (AFP, or Apple file service).

Symptom

File modification dates are changed when files are copied via AFP to an Xserve. The last modified date is changed to the time the file was transferred to the server.

Note: The modification date of the files on the file server are changed, not the files on the client.

Solution

Mac OS X Server 10.2 or later resolves this issue.

Published Date: Oct 10, 2016

Mac OS X Server 10.2: Server Assistant Stops Responding While Setting Up Server

Mac OS X Server 10.2 Server Assistant may stop responding ("hang" or "freeze") when setting up your server if TCP/IP is not enabled on the built-in Ethernet port.
This article has been archived and is no longer updated by Apple.

Symptom

Server Assistant stops responding during server configuration.

Solution

Enable TCP/IP on the built-in Ethernet port while setting up Mac OS X Server 10.2. It is not required that an Ethernet cable actually be connected to the port, so long as TCP/IP is enabled on it.

If your server is currently not responding, follow these steps:

1. Restart the computer using the power or interrupt button.
2. Start up into single user mode by holding the Command-S key combination during startup.
3. Execute fsck at the command line (see below for more information).
4. If fsck repairs anything, run it again until it reports no "problems" were found.
5. After that, restart normally; and Server Assistant will start up again. This time, be sure to enable TCP/IP on the built-in Ethernet port while setting up the server.

How to Use fsck From the Command Line

Once you have reached a command line, follow these steps to use fsck:

1. At the prompt, type: `fsck -fy`
2. Press Return.

The fsck utility will go through five "phases" and then return information about the disk's utilization and fragmentation. If fsck alters, repairs, or fixes anything, it will display the message:

***** FILE SYSTEM WAS MODIFIED *****

Important: If this message appears, repeat the "fsck -fy" command until this message no longer appears (as in Step 4 of the section above). It is normal for your computer to require several "passes" of fsck, because first-pass repairs may uncover additional issues.

3. When fsck reports that no problems were found, type: `reboot`
4. Press Return.

The computer should start up normally and allow you to log in.
Published Date: Feb 17, 2012

Mac OS X 10.2: About Import Addresses and Other Mail Scripts

You may use scripts in the Mail Scripts folder to import addresses or for other purposes, but they are provided "AS IS." Apple does not offer technical support for these scripts.
This article has been archived and is no longer updated by Apple.
Scripts in the Mail Scripts folder may be used but are provided "AS IS."

You may import addresses into Address Book from Microsoft Outlook Express, Eudora, Microsoft Entourage, Claris Emailer, Netscape, or Palm Desktop using the "Import Addresses.scpt". Follow these steps:

1. Open Import Addresses.scpt (/Library/Scripts/Mail Scripts).
2. Script Editor opens. Click Run.
3. Follow the on-screen prompts to choose the source of the addresses that you are importing. The script will import addresses automatically once you answer the prompts.

Notes

1. Depending on the source of the addresses, you may be directed to manually export and import addresses.

2. Depending on the source and number of addresses to import, several minutes may be required for the operation to complete.

3. Address groups may not always import correctly. Create new groups within Address Book if necessary.

Published Date: Oct 10, 2016

Mac OS X 10.2: Taking Screen Shots of Classic Environment Windows

In Mac OS X 10.2 you may successfully take a full-screen shot of a Classic environment window, but you cannot take a partial screen shot.
This article has been archived and is no longer updated by Apple.

Symptom

A partial screen shot (Shift-Command-4) does not successfully capture a Classic window's contents.

Solution

To successfully take a picture of a Classic environment window, take a full-screen shot by pressing Shift-Command-3. A numbered "Picture" PDF file will appear on your desktop for each screen shot. You may then use an image editor to crop the image to the desired view.

Partial screen shots (Shift-Command-4) work with native Mac OS X windows, but they will not capture all of a Classic application window's contents.

Published Date: Oct 10, 2016

Mac OS X 10.2: A Classic Window (or the Display) Appears White or Black when Using Zoom

Classic application windows appear white or black when using the Universal Access Zoom feature. The entire display may be affected if the Classic window is covering it.

This article has been archived and is no longer updated by Apple.

Symptom

- Classic application windows appear white or black when using the Universal Access Zoom feature (if white on black is used).
- If Classic environment windows occupy the majority of the display screen, and are not overlaid by Aqua windows, you may see a white or black screen when Zoom is turned on.

Solution

You may reduce this cosmetic symptom by minimizing or hiding any Classic application window before using Zoom.

Alternatively, you may:

- Zoom out completely (press and hold the Option-Command-minus key combination).
- Disable Zoom using the Universal Access preference pane, or by pressing Option-Command-*.

Published Date: Oct 10, 2016

Mac OS X: Do Not Install Carbon Software While Classic Networking Software Is Running

You may not be able to stop Classic if you install Carbon software while Classic networking software is running.
This article has been archived and is no longer updated by Apple.

Symptom

After installing Carbon software, you are unable to stop the Classic environment, shut down, or restart the computer by the normal commands.

Note: "Carbon" is a type of Mac OS-compatible application that has the potential to work in either Mac OS 9 or Mac OS X, depending on circumstances. If you are not sure about what type of software you have, take the precaution listed below.

Solution

Upgrade to Mac OS X 10.2 to avoid this issue.

If you have not yet installed software on an affected version of Mac OS X (10.1.5 or earlier), then avoid the issue by simply stopping the Classic environment before you install software. To stop Classic:

1. Save any files open in Classic, if necessary.
2. Choose System Preferences from the Apple menu.
3. Choose Classic from the View menu.
4. Click Stop.

Note: This procedure is especially important if the Carbon software you are installing does not require you to restart, because the issue will not appear until the computer is restarted or shut down (or Classic is stopped), which may be at a much later date.

If you have already installed Carbon software on an affected version of Mac OS X with Classic running, you may force quit Classic:

1. Press the Option-Apple-Escape key combination to open the Force Quit Applications dialog.
2. Select Classic Environment.
3. Click Force Quit.
4. Verify that the Carbon software was installed correctly, reinstalling if necessary.
5. Start Classic again.

Published Date: Oct 10, 2016

Mac OS X 10.2: Included Ink Jet printer drivers

Mac OS X 10.2 includes preinstalled drivers for many popular third-party ink jet (raster) printers.
This article has been archived and is no longer updated by Apple.
Mac OS X 10.2 includes drivers from Canon, Epson, Hewlett-Packard, and Lexmark for certain models of their respective printers. The drivers, listed below, are included in the optional Mac OS X software package "Additional Printer Drivers", which is installed by default. If your printer is not listed, check with your printer's manufacturer to see if drivers are available for Mac OS X 10.2.

If you own one of the printers listed below, simply connect it to your Macintosh. Mac OS X automatically sets up Print Center to use the printer. For information on PostScript and Apple LaserWriter printers, see "Mac OS X 10.2: Included PPDs and Use of PostScript Printers".

Tips

In addition to the drivers, printer manufacturers may include a printer utility that you use to adjust various printer features. See "Mac OS X: How to Access Third-Party Ink Jet Printer Utilities".

iPhoto is compatible with a number of printers. All of the HP and Lexmark, the Canon v1.4.1, and Epson v1.29 printer drivers listed below have iPhoto presets.

Some printing features are not included in the versions of the drivers included with Mac OS X 10.2, such as banner printing, booklet printing, and watermarks. Contact the printer manufacturer or visit its Web site to learn more about how to use these features if they are available.

Printer manufacturers may release versions of printer drivers later than the ones listed below. To see if you have the latest drivers for your printer, compare the version number below with that on the printer manufacturer's Web site.

Printer drivers included

1. Lexmark
2. Canon
3. Epson
4. Hewlett-Packard

Lexmark

Z22 and Z32 (version 2.0.4)
Z23, Z25, Z33, and Z35 (version 1.3.5)
Z53 (version 2.0.7)
Z45, Z55, and Z65 (version 1.3.4)

Canon

BJ535PD (version 1.4.)
BJ895PD (version 1.4.1)
BJC2100 (version 1.1.0)
BJC2100SP (version 1.4.1)
BJC8200 (version 1.4.1)
BJC85 (version 1.1.0)
BJF210 (version 1.1.0)
BJF360 (version 1.1.0)
BJF6600 (version 1.4.1)
BJF660 (version 1.1.0)
BJF850 (version 1.4.1)
BJF860 (version 1.4.1)
BJF870PD (version 1.4.1)
BJF870 (version 1.4.1)
BJF890PD (version 1.4.1)
BJF890 (version 1.4.1)
BJF9000 (version 1.4.1)
BJF900 (version 1.4.1)

BJF930 (version 1.4.1)
BJM70 (version 1.1.0)
BJS200 (version 1.3.0)
BJS300 (version 1.2.0)
BJS330 (version 1.4.1)
BJS500 (version 1.4.1)
BJS530 (version 1.4.1)
BJS600 (version 1.1.0)
BJS6300 (version 1.1.0)
BJS630 (version 1.1.0)
BJS700 (version 1.4.1)
S100 (version 1.2.0)
S100SP (version 1.2.0)
S200 (version 1.3.0)
S200SP (version 1.3.0)
S300 (version 1.2.0)
S330 (version 1.4.1)
S400 (version 1.1.0)
S400SP (version 1.2.0)
S4500 (version 1.4.1)
S450 (version 1.1.0)
S500 (version 1.2.0)
S520 (version 1.4.1)
S530D (version 1.4.1)
S600 (version 1.1.0)
S6300 (version 1.1.0)
S630 (version 1.1.0)
S750 (version 1.4.1)
S800 (version 1.4.1)
S820D (version 1.4.1)
S820 (version 1.4.1)
S830D (version 1.4.1)
S9000 (version 1.4.1)
S900 (version 1.4.1)

Epson

C40, C60, C70, and C80 Series (version 1.29)
CL750 (version 1.29)
MC2000 (version 1.29)
PM 2200C (version 1.29)
PM 3500C (version 1.29)
PM 720C (version 1.12)
PM 730C (version 1.29)
PM 780C (version 1.12)
PM 780CS (version 1.12)
PM 790PT (version 1.12)
PM 830C (version 1.29)
PM 880C (version 1.12)
PM 890C (version 1.29)
PM 900C (version 1.12)
PM 920C (version 1.12)
PM 950C (version 1.29)
Stylus Color 680 (version 1.32)
Stylus Color 740 (version 1.29)
Stylus Color 760 (version 1.32)
Stylus Color 777 (version 1.29)
Stylus Color 860 (version 1.32)
Stylus Color 880 (version 1.32)
Stylus Color 900 (version 1.12)
Stylus Color 980 (version 1.29)
Stylus Photo 1270 (version 1.12)
Stylus Photo 1280 (version 1.29)
Stylus Photo 1290 (version 1.29)

Stylus Photo 2000P (version 1.29)
Stylus Photo 780 (version 1.12)
Stylus Photo 785EPX (version 1.29)
Stylus Photo 810 Series (version 1.29)
Stylus Photo 820 Series (version 1.29)
Stylus Photo 870 (version 1.12)
Stylus Photo 875DC (version 1.12)
Stylus Photo 890 (version 1.29)
Stylus Photo 895 (version 1.29)

Hewlett-Packard

Version 1.4.1 drivers are included for the following HP ink jet printers.

Important: HP has released version 2.0 drivers that you may get from their website. HP Photosmart v1.3.x and earlier drivers are not compatible with Mac OS X 10.2. Do not install these earlier versions on Mac OS 10.2. See the Hewlett-Packard **website** for more information or for new drivers.

Color Inkjet cp1160
DeskJet 1125C
DeskJet 1220C
DeskJet 3420
DeskJet 350
DeskJet 3820
DeskJet 5550
DeskJet 5551
DeskJet 640C
DeskJet 810C
DeskJet 815C
DeskJet 816C
DeskJet 825C
DeskJet 830C
DeskJet 840C
DeskJet 845C
DeskJet 880C
DeskJet 895C
DeskJet 920C
DeskJet 930C
DeskJet 935
DeskJet 940C
DeskJet 948C
DeskJet 950C
DeskJet 955C
DeskJet 957C
DeskJet 960C
DeskJet 970C
DeskJet 980C
DeskJet 990C
DeskJet 995C
Photosmart 7150

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Published Date: Oct 10, 2016

Mac OS X 10.2: Included PPDs and use of PostScript printers

This article has been archived and is no longer updated by Apple.

Mac OS X 10.2 installs PostScript Printer Description (PPD) files necessary to use many Apple LaserWriter and third-party PostScript printers. This document includes a list of included PPDs and discusses their use.

The Mac OS X print architecture works with many Apple and third-party PostScript printers, specifically those which have these two characteristics:

- Are PostScript Level 2 or 3 printers
- Use PPD files to describe the set of printer features available for a specific PostScript printer or printer family

For example, a PPD file typically describes printer features including:

- The paper-handling capabilities of a printer
- The number of paper trays and their capacity
- Available paper sizes they handle

PPD files are created by printer manufacturers. Mac OS X 10.2 includes PPD files from Apple, Hewlett-Packard, Lexmark, Tektronix, and Xerox. A list of these printers can be found below. For information on ink jet printers, see "Mac OS X 10.2: Included Ink Jet Printer Drivers".

Choosing a PPD File

Mac OS X may automatically select the proper PPD for USB- and AppleTalk-connected printers. Print Center can usually determine the model name of a connected printer, and a matching PPD. An advantage of automatic PPD selection is that when a PPD file is not found in the Mac OS X system, it then searches in the Classic (Mac OS 9) System Folder, provided the Classic environment has been used at least once, or that the Classic System Folder has been selected at least once in Startup Disk preferences. For these and other reasons, you should allow Mac OS X to use its automatic selection capabilities when the proper PPD is available.

When adding a printer that is connected to a computer via AppleTalk, the PPD will be selected automatically for you, unless you choose one specifically from the Printer Model pop-up menu.

When USB PostScript printers that use TBCP (tagged binary control protocol) are connected to your computer for the first time, a printer queue is created automatically, and the proper PPD is associated with that printer. If that printer's PPD is not available, the Generic PPD will be automatically associated with that printer and queue. Check your printer's specifications to see if it uses TBCP. To work with Mac OS X, a USB PostScript printer must use TBCP. Those that do not may not print. If necessary, contact the printer manufacturer for Mac OS X compatibility information.

In contrast to the automatic selection of PPDs for USB and AppleTalk connected printers, you must manually select the printer's PPD file when adding "LPR Printers using IP". For best results, choose the PPD file that is provided specifically for that printer from the Printer Model pop-up menu. When the specific PPD file for your printer is not available, consider choosing the Printer Model that most closely resembles your printer. Selecting the PPD intended for a model of printer similar to yours will often provide you access to more of your printer's capabilities than merely selecting the Generic PPD, which is designed for maximum compatibility with a wide range of PostScript printers.

Printer not listed?

If your printer is not listed below, try choosing the PPD of a printer that has a feature set similar to your printer. Using a PPD that is not designed specifically for your printer may not provide access to all of your printer's features, and unforeseen problems may be encountered. Before choosing this workaround, check with the manufacturer of your printer to see if they have released a printer-specific PPD for Mac OS X.

Some printer features not available?

Bundled PPDs may not offer every feature of a printer, such as sheet feeders or built-in fax machines. If your printer has a feature that is not available, contact the printer manufacturer for more information regarding the use of that feature. In the case of the LaserWriter 16_600 PS Fax, for example, Apple does not include the built-in fax feature when that PPD is used with Mac OS X.

Renaming or reconfiguring your print queue

With Mac OS X 10.2 you can change existing print queues.

PPDs Included with Mac OS X 10.2

This list is subject to change. You may always check with a printer manufacturer to see if a later version of the PPD has been released.

Apple

LaserWriter 12/640 PS
LaserWriter 16/600 PS Fax
LaserWriter 16/600 PS-J
LaserWriter 16/600 PS
LaserWriter 4/600 PS
LaserWriter 8500
LaserWriter Color 12/600 PS-J
LaserWriter Color 12/600 PS
LaserWriter Color 12/660 PS
LaserWriter IIf v2010.113
LaserWriter IIf v2010.130
LaserWriter IIg v2010.113
LaserWriter IIg v2010.130
Personal LaserWriter 320
Personal LaserWriter NTR
LaserWriter Pro 400
LaserWriter Pro 405
LaserWriter Pro 600
LaserWriter Pro 630
LaserWriter Pro 810
LaserWriter Pro 810 Fax
LaserWriter Select 360
LaserWriter Select 360 v2013.112
LaserWriter Select 610

Hewlett-Packard

HP Business Inkjet 2250
HP Business Inkjet 2280
HP Business Inkjet 2600
HP Color LaserJet 4500
HP Color LaserJet 4550
HP Color LaserJet 5M
HP Color LaserJet 8500
HP Color LaserJet 8550
HP Color LaserJet
HP DesignJet 1050C PS3
HP DesignJet 1055CM PS3
HP DesignJet 2500CP PS3
HP DesignJet 3500CP PS3
HP Designjet 5000 PS3
HP Designjet 800 PS3
HP LaserJet 1200
HP LaserJet 1220
HP LaserJet 2100 Series
HP LaserJet 2200
HP LaserJet 3200m
HP LaserJet 3300 Series
HP LaserJet 4 Plus
HP LaserJet 4000 Series
HP LaserJet 4050 Series
HP LaserJet 4100 MFP
HP LaserJet 4100 Series
HP LaserJet 4
HP LaserJet 4ML
HP LaserJet 4MP
HP LaserJet 4Si v2011.110

HP LaserJet 4V
HP LaserJet 5000 Series
HP LaserJet 5100 Series
HP LaserJet 5M
HP LaserJet 5MP
HP LaserJet 5Si Mopier
HP LaserJet 5Si
HP LaserJet 6MP
HP LaserJet 8000 Series
HP LaserJet 8100 Series
HP LaserJet 8150 Series
HP LaserJet 9000 MFP
HP LaserJet 9000 Series
HP Mopier 240
HP Mopier 320
HP Color LaserJet 4600

Lexmark

Lexmark 4039 plus
Lexmark 4079 plus
Lexmark C720
Lexmark C750
Lexmark C910
Lexmark E320
Lexmark E322
Lexmark Optra C
Lexmark Optra C710
Lexmark Optra Color 1200
Lexmark Optra Color 40
Lexmark Optra Color 45
Lexmark Optra E310
Lexmark Optra E312
Lexmark Optra E312L
Lexmark Optra Ep
Lexmark Optra K
Lexmark Optra L
Lexmark Optra Lx+
Lexmark Optra Lx
Lexmark Optra Lxi+
Lexmark Optra Lxn+
Lexmark Optra M410
Lexmark Optra M412
Lexmark Optra N
Lexmark Optra R+
Lexmark Optra R
Lexmark Optra Rn+
Lexmark Optra Rt+
Lexmark Optra Rx
Lexmark Optra S plus
Lexmark Optra S xxx5 Series
Lexmark Optra S
Lexmark Optra SC
Lexmark Optra T
Lexmark Optra W810
Lexmark T520 SBE
Lexmark T520
Lexmark T522
Lexmark T620
Lexmark T622
Lexmark W820
IBM Color Jetprinter PS 4079
IBM Laserprinter 4029
IBM Laserprinter 4039

Tektronix

Tektronix 750DP1
Tektronix 750DX1
Tektronix 7700DN
Tektronix 7700DX
Tektronix 7700GX
Tektronix Phaser 360 P1
Tektronix Phaser 740 E1
Tektronix Phaser 740 E4
Tektronix Phaser 740 P1
Tektronix Phaser 740 P4
Tektronix Phaser 750 N1
Tektronix Phaser 750 P1
Tektronix Phaser 780 G1
Tektronix Phaser 780 P1
Tektronix Phaser 780 G4
Tektronix Phaser 780 P4
Tektronix Phaser 1235 Series
Tektronix Phaser 2135 Series
Tektronix Phaser 7401
Tektronix Phaser 7404
Tektronix Phaser 7801
Tektronix Phaser 7804

Xerox

Document Centre 490/480/470/460 families
Document Centre 440/432/425/420 families
Document Centre 340/332/230/220 families
Document Centre 265/255/240 families
DocuPrint N2025 PS
DocuPrint N2125 PS
DocuPrint N2825 PS
DocuPrint N3225 PS
DocuPrint N4025 PS
DocuPrint N4525 PS
Phaser 790
Phaser 840Ev5
Phaser 840Pv5
Phaser 840v5
Phaser 850DPv2
Phaser 850DXv2
Phaser 850Nv2
Phaser 860Bv2
Phaser 860DPv2
Phaser 860DXv2
Phaser 860Nv2
Phaser 1235
Phaser 2135
Phaser 8200Bv2
Phaser 8200DPv2
Phaser 8200DXv2
Phaser 8200v2
Xerox 2006
Xerox Phaser 790
Xerox Phaser 3400
Xerox Phaser 5400
Xerox Phaser 6200B
Xerox Phaser 6200DP
Xerox Phaser 6200DX
Xerox Phaser 6200N

TA20877_Mac_OS_X_Included_PPDs_and_use_of_PostScript_printers.pdf

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Published Date: Oct 10, 2016

Mac OS X 10.2: Network Printers Do Not Appear in Printer List After Upgrade

After upgrading from Mac OS X 10.1 to 10.2, you must re-add any network printers that you set up in Mac OS X 10.1. In addition, some printers may require updated drivers.
This article has been archived and is no longer updated by Apple.

Symptom

Network printers that were added to Print Center in Mac OS X 10.1 no longer appear in the Printer List after upgrading to Mac OS X 10.2.

Solution

Add your network printers to the Print Center list after upgrading. Printers that are directly connected via USB will automatically appear in the Print Center list.

Note: Some printers may also require later versions of drivers than the ones that worked in Mac OS X 10.1. Mac OS X 10.2 includes drivers for many third-party printers. If a driver is not included for your printer, please contact the printer vendor to get the current compatible driver for your printer. For a list of included drivers, see these technical document documents:

107001: "**Mac OS X 10.2: Included Ink Jet Printer Drivers**"
107002: "**Mac OS X 10.2: Included PPDs and Use of PostScript Printers**"
Published Date: Oct 10, 2016

Changing the Print Center print queue in Mac OS X 10.2

In Mac OS X 10.2 you can change the configuration of an existing print queue. This includes tasks such as:

- Associating a different PPD with PostScript printers
- Renaming the queue
- Configuring installable options

This article has been archived and is no longer updated by Apple.
For example, to associate a different PPD with a PostScript printer queue:

1. Open Print Center (/Applications/Utilities/).
2. Select the printer from the Printer List.
3. Choose **Show Info** from the **Printers** menu.
4. Choose PPD from the pop-up menu in the Printer Info window.
5. Choose a new PPD from the Printer Model pop-up menu.

By using the same procedure to access the Printer Info window, you may change the name of the print queue, enter a description of the printer's location, and configure the printer's installable options (such as optional paper cassettes, memory configuration, or a duplex printing unit).

Tip: To modify a print queue in Mac OS X 10.0 to 10.1.5, you must delete the queue from Print Center then select the preferred settings (as applicable for the version of the operating system) when creating the new queue.
Published Date: Oct 10, 2016

Mac OS X 10.2: Cannot Change the Preferred Language

If you choose to update only one language when installing Mac OS X 10.2 over an existing Mac OS X 10.1 volume that included other languages, you may later encounter issues with changing the default language.
This article has been archived and is no longer updated by Apple.

Symptom

After upgrading to Mac OS X 10.2, you cannot change the preferred language in System Preferences.

Note: Though one language is used as the example, this may occur any time you choose to upgrade fewer languages than were previously installed.

Solution

When installing, you should update the languages that you have previously installed. To resolve this, start up the computer from the Mac OS X 10.2 Install or Upgrade CD and perform a standard reinstallation of Mac OS X 10.2. All languages will be available after the installation.

Note: The Mac OS X 10.2 Installer requires a minimum of Mac OS X 10.1 to perform an upgrade installation. See technical document 106037, "**Mac OS X 10.2: Upgrade Installation Requires Mac OS X 10.1**".
Published Date: Oct 10, 2016

Mac OS X 10.2: Classic Cannot Connect or Print via AppleTalk After Sleep

You may occasionally experience a loss of AppleTalk connectivity in the Classic environment after the computer wakes from sleep.
This article has been archived and is no longer updated by Apple.

Symptom

Classic cannot access an AppleTalk network after waking from sleep.

For many people, the first sign is an alert that says you cannot print from a Classic application to an AppleTalk printer. Depending on circumstances, you may or may not see the general alert that access to your AppleTalk network has been interrupted.

Solution

Download and install Mac OS X 10.2.1 or later.
Published Date: Oct 10, 2016

Mac OS X 10.2 (Japan): Internet Sharing Issue With NTT FLET‘S Internet Service Provider

This document explains how to correct a packet transmission issue that occurs when using Internet Sharing with the NTT FLET'S Internet service provider (ISP).
This article has been archived and is no longer updated by Apple.

Symptom

The computer that is sharing its connection may connect to the Internet, but client computers (those that are using the shared connection) experience these issues:

- Web pages load only partially, or not at all.
- Sherlock cannot search the Internet.
- Automatic Software Update does not work.
- iTunes cannot connect to Internet radio.

You may notice other Internet-related issues.

Solution

Update to Mac OS X 10.2.5 or later.

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Published Date: Oct 10, 2016

Mac OS X 10.2: Ink Handwriting Recognition Requires Installation of Graphics Tablet Drivers

In order to use Ink handwriting recognition included with Mac OS X 10.2 you need to install appropriate drivers for your graphics tablet.

This article has been archived and is no longer updated by Apple.

Symptom

Ink appears to be ready, but you cannot use it.

Note: Ink does not appear in System Preferences unless a graphics tablet is connected to the computer. The connection of a graphics tablet for which drivers have not been installed may cause Ink to appear, but you still would not be able to use Ink.

Solution

Install the latest drivers available for your graphics tablet.

Published Date: Feb 20, 2012

Mac OS X Server: How to Install, Enable, and Configure SNMP

This document explains how to set up the Simple Network Management Protocol (SNMP) on Mac OS X Server.
This article has been archived and is no longer updated by Apple.

Installing SNMP

To use SNMP for monitoring or data collection, an SNMP agent (snmpd) must be running on the monitored Mac OS X Server host (computer). Mac OS X Server 10.1.5 or later includes a version of SNMP (UCD-SNMP v. 4.2.3 or later).

If you do not have the file /usr/sbin/snmpd, then SNMP is not installed.

The following operating systems require that SNMP be built and installed:

- Mac OS X Server 10.1.4 or earlier

If you have access to a Mac OS X Server 10.1.5 or later Admin CD , the SNMP package on the CD may be used to install UCD-SNMP 4.2.3 on these systems.

Note: Mac OS X Server 10.1.5 is available only with Xserve computers shipped before the release of Mac OS X Server 10.2.

If you do not have access to the CD, you may download current SNMP source from the NET-SNMP Project Home Page (http://www.net-snmp.org/).

Note: Apple only provides technical support for the SNMP tools on the Admin CD when they are used with Mac OS X Server 10.1.5 or later.

Warnings

1. Once SNMP is active, anyone with a route to the SNMP host will be able to collect SNMP data from it. To learn more, consult the various SNMP information sources listed below.

2. The default configuration of snmpd uses privileged port 161. For this reason and others, it must be executed by root or using setuid. You should only use setuid as root if you understand the ramifications. If you do not, seek assistance or additional information. There are flags available for snmpd that will change the uid and gid of the process after it starts. See the snmpd man page for more information.

Starting snmpd

Follow these steps for Mac OS X Server 10.1.5 or later:

1. Open the file: /etc/hostconfig

2. Locate the line:

```
APPLETALK_HOSTNAME
```

3. Immediately above, add this new line:

```
SNMPSERVER:=-YES-
```

4. Save the file.

Note: For further instruction on editing configuration files, including important precautionary statements, see technical document 106619, "**Mac OS X Server: How to Edit Configuration Files**".

This change to hostconfig causes snmpd to be executed during system startup, with no options, as dictated by the file /System/Library/StartupItems/SNMP/SNMP.

As an alternative, the snmp agent (/usr/sbin/snmpd) can be executed at the command line at any time.

Configuring snmpd

The configuration (conf) file for snmpd is typically at /usr/share/snmp/ and named "snmpd.conf" or "snmpd.local.conf". If you have an environment variable SNMPCONF, snmpd will read any files named "snmpd.conf" and "snmpd.local.conf" in these directories. The snmpd process can be started with a "-c" flag to indicate other conf files. See the snmpd man page for more information on which conf files can be used.

Configuration files can be created and installed more elegantly using the included script /usr/bin/snmpconf. As root, use this script with the "-i" flag to install the file at /usr/share/snmp/. Otherwise the default location for the file to be written is the user's home directory (~/). Note that only root has write permission for /usr/share/snmp/.

Since snmpd reads its conf files at startup, changes to the conf files require that the process be stopped and restarted. You may stop snmpd with ProcessViewer or at the command line (kill -HUP <pid>).

Example of SNMP Configuration

I. Customize data

To customize the data provided by snmpd, you may add an snmpd.conf file using /usr/bin/snmpconf. As root or using sudo, execute this command:

```
/usr/bin/snmpconf -i
```

You will then see a series of text menus. Make these choices in this order:

1. Select File: 3 (snmpd.conf)
2. Select section: 5 (System Information Setup)
3. Select section: 1 (The [typically physical] location of the system.)
4. The location of the system: type text string here -- such as "server_room"
5. Select section: f (finish)
6. Select section: f (finish)
7. Select File: q (quit)

Notice you have created an snmpd.conf file with creation date of today: ls -l /usr/share/snmpd.conf

II. Start snmpd as root

To start snmpd, execute this as root:

```
/usr/sbin/snmpd
```

If snmpd is already running, HUP the process instead:

```
set x=`ps cax |grep snmpd |awk '{print $1}'` ; kill -HUP $x ;
```

Note that the snmpd process is now running:

```
ps ax |grep snmpd
```

III. Collect SNMP information from the host

To get the SNMP-available information you just added, execute this command from a host that has the SNMP tools installed:

```
/usr/sbin/snmpget hostname public system.sysLocation.0
```

Note: You would replace "hostname" with the actual name of the target host.

You should see location you provided. In this example, you would see:

```
system.sysLocation.0 = server_room
```

The other options in the menu you were working in are:

```
/usr/bin/snmpget hostname public system.sysContact.0
/usr/bin/snmpget hostname public system.sysServices.0
```

The final ".0" indicates you are looking for the index object. The word "public" is the name of the snmp community which you did not alter. If you need information on either of these or explanations of snmp syntax, there are tutorials available on net-snmp.sourceforge.net.

Additional tools

Other than snmpget, there are a variety of snmp based tools and suites both free and commercial with varying complexity and reporting:

Intermapper by Dartware
http://dartware.com/

HP OpenView mrtg and rrdtool
http://people.ee.ethz.ch/~oetiker/webtools/mrtg/

You may also search for perl modules.

Additional information

Man pages

man -k snmp will provide a list of the known man pages.

Web sites

The Net SNMP-Project
http://www.net-snmp.org/
http://net-snmp.sourceforge.net/

Cisco Connection Documentation (Cisco Systems)
http://www.cisco.com/univercd/cc/td/doc/cisintwk/ito_doc/snmp.htm

Books

_Essential_SNMP_ by Douglas Mauro, Kevin Schmidt
Publisher: O'Reilly (First Edition July 2001)
ISBN: 0-596-00020-0, 326 pages

_Snmp,_Snmpv2,_Snmpv3,_and_Rmon_1and_2,
Publisher: Addison, Wesley. (Third Edition 1999)

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Published Date: Oct 10, 2016

Mac OS X 10.2, 10.3: Mac Help Viewer unexpectedly quits

This article has been archived and is no longer updated by Apple.
Does Mac Help Viewer quit unexpectedly when you try to use it from within an application? Learn what you can do if this happens to you.

Note: This document applies to Mac OS X 10.2 through 10.3.9.

Note: "Help Viewer" refers to the Apple (Mac) Help Viewer. Third-party applications such as Microsoft Entourage may use their own help viewers. To see a list of applications that have installed content for the Apple Help Viewer, click the Finder icon in the Dock, Choose Mac Help from the Help menu, then click the Help Center button in the Toolbar of the Help Viewer. **Mac OS X 10.2**

Update to Mac OS X 10.2.1 or later. For more information, see "Mac OS X: How to Update Your Software".

You should also make sure that you are using the latest version of any third-party application in which this issue occurs or which adds Help content to Mac Help Viewer.

Mac OS X 10.3 through 10.3.9

This can be caused by a problematic cache or "Help book".

First, troubleshoot the cache. Just do this:

1. Quit Help Viewer, if it's not already quit.
2. From the Finder's Go menu, choose Home.
3. Open the Library folder.
4. Open the Caches folder.
5. Look for the "com.apple.helpui" folder.
6. Rename that little folder to something else, such as "old Help cache folder".
7. Open Help Viewer. Does the issue return?

If the issue is gone, you're all done!

If the issue persists, use these easy steps to troubleshoot for a problematic Help book. Having a problematic Help book in a Help folder can cause Help Viewer to quit, even if you are opening an unrelated help book.

1. Quit Help Viewer, if it's not already quit.
2. From the Finder's Go menu, choose Home.
3. Open the Library folder.
4. Open the Documentation folder.
5. Open the Help folder.
6. Double-click each Help book (one at a time) to open Help Viewer.
7. When you find one that makes Help Viewer quit unexpectedly, take it out of the folder. Put it in the Trash, for example.

Tip: If you don't see any Help books here, do this instead:

1. Quit Help Viewer, if it's not already quit.
2. From the Finder's Go menu, choose Computer.
3. Open your Mac OS X volume.
4. Open the Library folder.
5. Open the Documentation folder.
6. Open the Help folder.
7. Double-click each Help book (one at a time) to open Help Viewer.
8. When you find one that makes Help Viewer quit unexpectedly, take it out of the folder. Put it in the Trash, for example (you may be prompted for an administrator password).

If this doesn't work either, skip to "A third solution" below.

I removed the Help book(s) that caused the issue, but now that book's Help content is gone. How do I get it back?

Once you've isolated the issue to the specific Help book and deleted it, reinstall it (from its application installer if an application-specific book, or from Mac OS X if it came with Mac OS X). Remember, it's usually best to use the latest versions of third-party software products.

A third solution

No luck with the cache or Help book fixes? Most of the time they should work, but if not you can try this:

1. Quit Help Viewer, if it's not already quit.
2. From the Finder's Go menu, choose Home.
3. Open the Library folder.
4. Open the Preferences folder.
5. Delete these files:
    - com.apple.help.plist
    - com.apple.helpui.plist
    - com.apple.helpviewer.plist

Tip: Troubleshooting preference files is much less likely to be useful than troubleshooting Help books and Help caches.

Related documents

25667 Mac OS X: Can't Access Help Content

Published Date: Oct 10, 2016

Mac OS X Server 10.2: About Apache 2

Mac OS X Server 10.2 includes Apache 2 (v 2.0.36) for evaluation purposes.
This article has been archived and is no longer updated by Apple.
Mac OS X Server 10.2 installs Apache 2 (v 2.0.36) for evaluation purposes, in addition to Apache 1 (v 1.3.23), which is used by default. Apache 2 is disabled, and the Server Settings application works only with Apache 1.

If you want to try Apache 2, note the following:

- It is installed in a separate location in the file system: `/opt/apache2`
- It is not connected to Server Settings.
- It serves Web pages from `/opt/apache2/htdocs`.
- Its config is at: `/opt/apache2/conf/httpd.conf`
- It is controlled by its own version of the apachectl script, so to start it type the following:

  ```
  sudo  /opt/apache2/bin/apachectl start
  ```
- Although it's possible to use both versions of apache, you should be cautious when doing so, and make sure the two versions do not attempt to listen on the same port. Both are configured to listen on port 80, so do one of the following:

  1. Edit `/opt/apache2/conf/httpd.conf` and change the Listen directive, or

  2. Use the Web panel in the Server Settings application to change the port of all your virtual hosts to something other than 80.

Published Date: Oct 10, 2016

Mac OS X Server 10.2: Editing Apache configuration files

Experienced Apache administrators can use these notes on editing Apache's configuration files to work with features of the Apache web server that are not included in Server Settings.

This article has been archived and is no longer updated by Apple.

When Apache starts on Mac OS X Server, it uses a customized /etc/httpd/httpd.conf, which differs significantly from the httpd.conf distributed with Apache and the httpd.conf that resides on Mac OS X computers. This customized file contains some global directives, then includes httpd_macosxserver.conf. When you use Server Settings to configure Web service, httpd_macosxserver.conf is the file that is updated.

To edit Apache configuration files manually:

- When making global configuration changes in httpd.conf or httpd_macosxserver.conf, observe the comments in these files. The comments indicate what is safe and unsafe to modify.
- When making virtual-host-specific changes in httpd.conf or httpd_macosxserver.conf, follow the guidelines that appear at the top of these files. The guidelines describe how to avoid conflicts with Server Settings.
- If you install software updates, your /etc/httpd/ folder may contain configuration files that are not valid for Mac OS X Server. For example, httpd.conf.default, httpd.conf.old, mime.types.default, and mime.types.old. Only the following files, located in /etc/httpd/, are used to configure Mac OS X Server Web service: httpd.conf, httpd_macosxserver.conf, mime.types, mime_macosxserver.types, and tomcat.conf.

Published Date: Oct 10, 2016

Mac OS X Server 10.2: Creating Indexes for Searching Web Site Content

This document offers notes on creating Indexes for Searching Web Site Content.
This article has been archived and is no longer updated by Apple.
Mac OS X Server 10.2 continues to work with the mod_sherlock_apple Apache module, which allows Web browsers to search the content of your Web site. As in previous versions of the server, you must produce a content index before content searching is possible.

Content indexes in earlier server versions were created in Sherlock. Content indexes are now created using the Finder. Select the folder containing the files you want to index, then choose Get Info from the File menu. Click Content Index, then click Index Now.

In addition, there are new constraints that restrict the creation of index files. To create an index, you must be the owner of the folder and must own any files in that folder that are to be indexed. In the case of content in the /Library/WebServer/Documents folder, the folder and all the files within it are owned by root. Even though the folder and files can be written to by members of the admin group, you must still be logged in as root to create a content index.

Creating an index remotely or on a headless server is done using a command-line tool named indexfolder. See the man pages for usage details. The operation of indexfolder is affected by the login window. If nobody is logged in at the login window, the tool must be run as root. If an Admin user is logged in at the login window, the tool must be run as that Admin user. Otherwise, the tool will fail with messages similar to these:

kCGErrorIllegalArgument : initCGDisplayState: cannot map display interlocks.
kCGErrorIllegalArgument : CGSNewConnection cannot get connection port

Whether done from the Finder or the indexfolder tool, content indexing creates a folder named .FBCIndex either in the folder to be indexed or in one of its parent folders.
Published Date: Oct 10, 2016

Mac OS X Server 10.2 or later: About the Web Service access_log format

This document offers notes on the Web Service access_log Format in Mac OS X 10.2 or later.
This article has been archived and is no longer updated by Apple.
In Mac OS X Server 10.2 or later, the web performance cache does not prevent a remote client's IP address from being logged in the access_log. The web performance cache process adds an HTTP header named "PC-Remote-Addr" that contains the client's IP address before passing a request to the Apache web server.

So, with the performance cache disabled, the standard log format string on the CustomLog directive in httpd_macosxserver.conf is as it was in version 10.1:

```
%h  %l %u %t "%r" %>s %b
```

But when the performance cache is enabled, as it is by default, the "%h" item would extract the local computer's IP address. To extract the remote client's IP address, the log format string needs to be modified:

```
%{PC-Remote-Addr}i  %l %u %t "%r" %>s %b
```

When you use the Server Settings application (in 10.2) or Server Admin (in 10.3) to enable and disable Web performance cache for each site (virtual host), the CustomLog directive in httpd_macosxserver.conf for each site is automatically adjusted to the correct format string, so this is normally transparent, and your access logs should always contain the correct remote client address.
Published Date: Oct 10, 2016

Mac OS X 10.2: "error code 1016" Alert

When you try to use certain control panels in Classic, you may see an alert box with a message that contains "error code 1016" if you have managed Classic preferences.
This article has been archived and is no longer updated by Apple.

Symptom

If a client with managed Classic preferences tries to use the Extensions Manager, File Sharing, or Software Update control panels, she sees an alert box with a message that says:

> "The operation could not be completed. An unexpected error occurred (error code 1016)."

Solution

This message indicates that an Admin user has restricted access to the item you tried to use. Non-Admin users may not use these control panels when Classic preferences are managed. You may also see the message if the Admin has selected "Hide Chooser and Network Browser" in Workgroup Manager.

The message also appears if you try to open an unapproved application (one that is not listed in the Items pane of the Applications preference in Workgroup manager) in either Classic or Mac OS X.
Published Date: Oct 10, 2016

Mac OS X Server 10.2: How to Reset the Admin Password When Discontinuing Use of Password Server

This document explains how to reset the Admin password when discontinuing use of Password Server.
This article has been archived and is no longer updated by Apple.
If you want turn off Password Server, make sure you change the Password Server administrator's password validation method before doing so.
This ensures that the administrator can continue to log in to Mac OS X Server.

Follow these steps:

1. Open Workgroup Manager.
2. Select the administrator's account, and open it.
3. Click the Advanced tab.
4. Change the setting for "Use password type" from Password Server to Basic.
5. Reset the administrator's password.

Published Date: Oct 10, 2016

Apple Remote Desktop 1.1: Reinstall After Upgrading to Mac OS X 10.2

If you have installed Apple Remote Desktop 1.1 on Mac OS X 10.1, you must reinstall it after upgrading to Mac OS X 10.2.
This article has been archived and is no longer updated by Apple.

Symptom

Apple Remote Desktop does not work as expected after upgrading from Mac OS X 10.1 to Mac OS X 10.2.

Solution

The Apple Remote Desktop Installer chooses between two versions of its preference file, and installs the version that is appropriate for your system, according to whether it is version 10.1 or 10.2. When your an existing installation of Mac OS X 10.1 with Apple Remote Desktop 1.1 is updated to 10.2, you must reinstall Apple Remote Desktop 1.1 to get the correct preferences file. You may do this two ways:

- Reinstall from the full Apple Remote Desktop 1.1 Installer, or
- Use the Apple Remote Desktop 1.1 Updater.

Published Date: Feb 17, 2012

Macintosh Manager 2: "Error -23045" Alert

An "error -23045" alert may appear during a Macintosh Manager login if the user's Home directory permissions make it inaccessible.
This article has been archived and is no longer updated by Apple.

Symptom

When a user tries to log in to Macintosh Manager, an alert box with this message appears: "error -23045", and the user cannot log in.

Solution

To resolve the issue, examine these three areas:

1. Locate the user's Home directory and verify permissions on the share point containing the home directory. If only one user is affected, compare the privileges of that user's Home directory to that of one on the same sharepoint that works. For more information on troubleshooting privileges, see technical document 106712, "**Mac OS X: Troubleshooting Permissions Issues**".

2. If your server uses a RAID device or an external hard drive (such as a FireWire hard drive), then review technical document 106604, "**Mac OS X Server 10.1: Setting Privileges to Share FireWire or RAID Hard Disks and Other Removable Media**".

3. In NetInfo Manager, verify that the home_loc property and value of the user's record is consistent with the network address of the server.

Published Date: Feb 17, 2012

Apple Remote Desktop: How to Enable the Request Attention Menu

This document explains how to enable the Request Attention menu on Mac OS X Apple Remote Desktop clients. This menu allows users to see when they are being observed in Mac OS X.
This article has been archived and is no longer updated by Apple.

Recognizing the Request Attention menu

In Mac OS X, the Apple Remote Desktop Request Attention menu icon is a balloon alert (Figure 1).

Figure 1 The Request Attention menu

If the Remote Desktop preference pane is configured to show when the client being observed, the menu's icon can change into a pair of binoculars (Figure 2). This occurs only when the client is being observed, similar to the eyes that may appear in Apple Network Assistant.

Figure 2 The Request Attention menu when being observed

How to enable the menu

Update to Remote Desktop 1.1. This is available via Automatic Software Update. See technical document 106704, "**Mac OS X: How to Update Your Software**".

If updating in itself does not automatically enable the Request Attention menu, you must manually enable it. This is achieved by opening "RemoteDesktop.menu" at least once on every client. Follow these steps at a client:

1. Click the Finder icon in the Dock.
2. Choose Go to Folder from the Go menu.
3. Type: /System/Library/CoreServices/Menu Extras/
4. Click Go.
5. Open the file "RemoteDesktop.menu".

The menu will appear on the right side of the menu bar, allowing the user to request attention.

This information is also found in the Remote Desktop Read Me.
Published Date: Feb 19, 2012

Mac OS X 10.2: Compatibility With FAXstf X

FAXstf version 10.0.7 or later is required for use with Mac OS X 10.2.
This article has been archived and is no longer updated by Apple.

Symptom

You may encounter these issues:

- You are unable to send a fax after changing contact information in the Fax Browser preferences.
- The modem does not dial.
- You cannot fax reliably to earlier 9600 baud fax modems.
- FAXstf stops responding when sending documents with names that contain special characters.

Solution

The publisher of FAXstf, Smith Micro, provides a free update for all versions of FAXstf X. For more information about this update, see the Smith Micro Web site (http://www.smithmicro.com/default.tpl?group=product_full&sku=STFMACEE).

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

The following document can help you search for a particular vendor's address and phone number:

Document 17159: "**Locating Vendor Information**"

Published Date: Oct 10, 2016

Mac OS X 10.2: Cannot Send Email

Some outgoing email (SMTP) servers will not accept mail from computers using NAT with a ".local." hostname, which may be assigned by Rendezvous.
This article has been archived and is no longer updated by Apple.

Symptom

Your Internet service provider will not accept outgoing email (SMTP) after upgrading to Mac OS X 10.2.

Note: The ".local." hostnames are assigned by Rendezvous. Client computers connected via NAT have IP addresses beginning in 10, 169, or 192. NAT connections may be provided by an AirPort Base Station, a third-party router, or Internet Sharing. It is also known as IP masquerading, or just connection sharing.

Solution

Update to Mac OS X 10.2.1. For more information, see technical document 107036, "**Mac OS X: About the Mac OS X 10.2.1 Update**".
Published Date: Feb 17, 2012

Mac OS X 10.2 (Japan): Internet Sharing via AirMac Does Not Work

Your Internet connection cannot be shared to AirMac-equipped computers if the network name contains Japanese double-byte characters.
This article has been archived and is no longer updated by Apple.

Symptom

- Internet Sharing will not start over AirMac.
- The AirPort network name does not appear at client computers.
- The AirMac menu bar item does not change to the Internet Sharing icon, which is an up arrow.

Note: AirMac is also known as AirPort in North America and other regions.

Solution

This occurs when the name of the AirMac network created at the sharing computer contains Japanese double-byte characters. To resolve the issue, follow these steps:

1. Choose System Preferences from the Apple menu.
2. Choose Sharing from the View menu.
3. Click the Internet tab.
4. Click AirPort Options.
5. Change the Network Name to a single-byte name (Roman characters).
6. Click OK.

This document will be updated as more information becomes available.
Published Date: Oct 10, 2016

Mac OS X 10.2: Cannot Print to HP LaserJet 4V or 4MV

You may encounter a situation in which you are not able to print to a Hewlett Packard LaserJet 4V or 4MV printer.
This article has been archived and is no longer updated by Apple.

Symptom

An application unexpectedly quits when printing to an HP LaserJet 4V or LaserJet 4MV. A crash log may appear, the first two lines of which read:

Exception: EXC_BAD_ACCESS (0x0001)
Codes: KERN_PROTECTION_FAILURE (0x0002) at 0x00000000

Solution

Update to Mac OS X 10.2.8 or later.
Published Date: Feb 17, 2012

Mac OS X 10.2: Disk Utility Finds "Problems" on Burned Discs

If you use Disk Utility to verify CD-R or CD-RW discs burned in Mac OS X 10.2, it reports "problems" that it says need to be repaired.

This article has been archived and is no longer updated by Apple.

Symptom

Disk Utility reports "problems" on a burned disc. You may see these messages:

"Volume Bit Map needs minor repair"

"Invalid volume free block count (It should be 0 instead of -1)"

This does not affect DVD discs or other applications.

Solution

The condition reflected in these messages does not affect the use of the disc. You may safely ignore the messages. You cannot repair a burned disc. To avoid the message on future discs, update to Mac OS X 10.2.1. For more information, see technical document 107036, "**Mac OS X: About the Mac OS X 10.2.1 Update**".

Note: If the same messages appear in Disk Utility for writable media, such as the computer's hard disk, you should allow the repair.

Published Date: Oct 10, 2016

Mac OS X 10.2, 10.3: Clicking "Apply to enclosed items" copies permissions but not owner or group

When changing Ownership & Permissions in the Info window, clicking "Apply to enclosed items" copies only permissions. It does not affect the owner or group setting.
This article has been archived and is no longer updated by Apple.

Note: This document applies to Mac OS X 10.2 through 10.3.9.

Symptom

Your chosen Owner and Group settings are not copied to enclosed items after you click "Apply to enclosed items".

Solution

If you need to make such changes to many files, you can either:

- Change each item individually in the Finder's Info window (Command-I), or
- Use Terminal commands like `sudo chown -R` and `sudo chgrp -R` to make such changes.

If you need to correct the permissions on folders created by the Mac OS X Installer, click Repair Privileges in the First Aid pane of Disk Utility.

For example, to change ownership:

1. Open Terminal (/Applications/Utilities/)
2. In the Finder, open the window that contains the folder that you wish to modify, so that you can drag that folder into the Terminal window later
3. Type the following: `sudo chown -R username`

   Leave a space after the username, which is the shortname of the user that you'd like to own the items (for example, "smith"). Do not press Return yet.

4. Drag the folder you wish to change into the Terminal window--the path automatically appears in Terminal
5. Press Return
6. Enter your admin password when prompted
7. Quit Terminal when this is finished

For example, to change group:

1. Open Terminal (/Applications/Utilities/)
2. In the Finder, open the window that contains the folder that you wish to modify, so that you can drag that folder into the Terminal window later
3. Type the following: `sudo chgrp -R groupname`

   Leave a space after the "groupname", which is the shortname of the user that you'd like to own the items (for example, "smith"). Do not press Return yet.

4. Drag the folder you wish to change into the Terminal window--the path automatically appears in Terminal
5. Press Return
6. Enter your admin password when prompted
7. Quit Terminal when this is finished

Published Date: Oct 10, 2016

Mac OS X: What is a Classic Application?

This document provides a simple definition of what constitutes a Classic application.
This article has been archived and is no longer updated by Apple.
A Classic application is one for which the original system requirements, normally printed on the application's packaging, include Mac OS 9 but not Mac OS X. The system requirements listed may be "System 7.6.1 to Mac OS 9," for example. These applications cannot be used natively in Mac OS X, which is to say they do not work in the absence of a Mac OS 9 installation and the Classic environment.

Mac OS X includes the Classic environment. It uses a copy of Mac OS 9 to make Classic applications work in Mac OS X. Both Mac OS 9 and Mac OS X must be installed on the computer. The Classic environment starts automatically when you open a Classic application.

Applications that list both Mac OS 9 and Mac OS X in their system requirements are often Carbon applications. Carbon is a type of application that may work natively in either Mac OS 9 or Mac OS X. Neither the Classic environment nor a Mac OS 9 installation is needed to use a Carbon application in Mac OS X.

Notes

1. Retail copies of Mac OS X 10.2 or later do not include Mac OS 9. See technical document 106966, "**Mac OS X 10.2: Classic Requires That You Already Have Mac OS 9**".

2. If you need a technically detailed definition of Classic or Carbon applications, see the Apple Developer Connection (http://developer.apple.com/).

Published Date: Feb 17, 2012

Mac OS X 10.2: Burned CDs Do Not Work in Microsoft Windows

CDs burned using Apple Disc Burner software and the Mac OS X 10.2 Finder do not work with some versions of the Microsoft Windows operating system. Mac OS X 10.2.1 resolves this issue.
This article has been archived and is no longer updated by Apple.

Symptom

If you burn a CD in the Finder, then try to use it on a Windows-compatible computer, one of the following occurs:

- The Windows-compatible computer cannot read the CD.
- Items at the root level of the CD can be read, but items nested within folders cannot be read.

Solution

Update to Mac OS X 10.2.1, which allows you to burn CDs that work with Windows. For more information, see technical document 107036, "**Mac OS X: About the Mac OS X 10.2.1 Update**".
Published Date: Feb 17, 2012

Mac OS X: About the Mac OS X 10.2.1 Update

This software updates Mac OS X 10.2 to version 10.2.1.
This article has been archived and is no longer updated by Apple.

Important: Read Before Installing

1. An Admin user password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, then follow these steps: Choose System Preferences from the Apple menu. Choose Users from the View menu. Select an Admin user and click Edit User. Click the Password tab. Change the password and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.

Installation

There are two ways to update to from Mac OS X 10.2 to 10.2.1.

I. Automatic Software Update Installation

See technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

II. Standalone Installer

An installer is available from Apple Software Downloads (http://www.apple.com/swupdates/).

Enhancements Delivered with this update

Disc Burning Enhancements

- Allows CDs burned on a Mac to be read on Microsoft Windows.
- Addresses a potential failure when burning a disc using iTunes 3 and a high burn speed.
- Addresses an issue in which Disk Utility inaccurately reported "problems" when scanning a disc that was burned with iTunes or in the Finder.
- Adds support for various third-party disc burners, including: TDK VeloCD 241032FP and 241040F, MCE Technologies Lucid-24 24x10x24x Portable FireWire CDRW Drive, LaCie PocketCDRW 24x10x24 U&I, EZQuest Boa CDR/w 48x12x48 FireWire, Formac cdrw 40x10x40 and cdrw 48x10x40.

Digital Hub and Peripheral Device Enhancements

- Decreases the amount of time Final Cut Pro takes to open, and improves iMovie compatibility when a Sony DVMC-DA1 media converter is connected to the computer.
- Improves iMovie compatibility with Canopus ADVC-100 media converter.
- Improves compatibility with certain (SCSI-based) scanners.
- Improves compatibility of Image Capture with Epson DS (TWAIN).
- Improves results when scanning in grayscale or black-and-white with Image Capture and Epson UI.
- Enhances reliability when hot-swapping a FireWire-based camera on certain iMacs using Final Cut Pro.
- Addresses an issue in which a USB keyboard or mouse is not recognized or able to wake the computer after having been connected to or disconnected from an external USB hub while the computer is in sleep.

Networking and Mail Enhancements

- Addresses a situation in which certain Internet service providers (ISPs) may not accept outgoing email (SMTP) from computers using NAT and a ".local" hostname (which may be assigned by Rendezvous).
- Prevents IMAP messages from being lost when your Internet connection is interrupted during a transfer.
- Improves access to Mac OS X Server during heavy AFP load.
- Improves Mac OS X Server reliability when a Mac OS 9 client attempts a scheduled AFP connection.

- Resolves a potential issue in which Mail could fail to import mail messages from Eudora as expected.
- Addresses an issue in which you cannot browse the contents of an iDisk while a large file is being copied to it.
- Kerberos authenticator now allows keytabs to be disabled.

Printing Enhancements

- Addresses a situation in which Print Center would unexpectedly quit when using St. Claire Software's Default Folder X.
- Improves compatibility with HP LaserJet 4V and HP LaserJet 4MV printers (see **Note**).
- Reduces occurrences of a "busy; source EIO (ATALK)" alert message when printing using AppleTalk via CUPS.
- Addresses an issue when printing via CUPS in which the second queued print job would automatically start if the first print job was stopped.
- Addresses an "error -1" message in Print Center when adding a third-party USB printer.

Note: This enhancement alleviates certain alert or log messages, but you still need to download an additional file. See technical document 107029, "**Mac OS X 10.2: Cannot Print to HP LaserJet 4V or 4MV**".

Other Enhancements

- Reduces certain instances of Web page graphics taking longer than expected to appear.
- Improves compatibility with Microsoft Entourage.
- Reduces occurrence of a "ticking hard drive" sound that could be caused by IOAudio errors being written repeatedly to the system.log file.
- Addresses an issue in which Mac Help may not be available following an erase-installation.
- Improves compatibility of the Universal Access Zoom feature with some iBook computers.
- Addresses a situation in which no video may appear after waking certain iBook computers that are connected to an external display or presentation device.
- Addresses a situation in which a Classic application may fail to produce sound after waking from sleep.
- Addresses a situation in which AppleTalk may not be available in the Classic environment after waking from sleep.
- Addresses various potential kernel panic situations.

Published Date: Oct 10, 2016

Mac OS X 10.2: Upgrade installation requires Mac OS X 10.1 or later

This article has been archived and is no longer updated by Apple.

If you have Mac OS X version 10.0.4 or earlier installed, the hard disk must be erased prior to installing version 10.2 or later. The Installer offers an option to "Erase and Install."

Symptom

When you select a volume that contains Mac OS X 10.0 to 10.0.4 system software, an alert box with this message appears:

> "You cannot install Mac OS X on this computer without changing your install setting."

Solution

The version 10.2 "Mac OS X Install Disc" or "Mac OS X Upgrade Disc" cannot be used to upgrade Mac OS X versions 10.0 to 10.0.4. The Mac OS X 10.2 Installer can upgrade Mac OS 10.1 or later.

Choose "Erase and Install" in the Mac OS X 10.2 Installer.

Warning: Choosing Erase and Install will completely erase the contents of the chosen volume before installing Mac OS X 10.2 or later. Be sure to back up your files before continuing. To learn more, see Mac OS X: How to Back Up and Restore Your Files".
Published Date: Oct 10, 2016

Mac OS X Server: About the Mac OS X Server 10.2.1 Update

Mac OS X Server Update 10.2.1 addresses certain issues and updates system software.
This article has been archived and is no longer updated by Apple.
This software updates Mac OS X Server 10.2 to version 10.2.1. It improves reliability and usability for these features:

- IP networking
- Apple file services
- Windows file services
- Open Directory Password Server
- Workgroup Manager
- NetBoot
- Network Image Utility
- Macintosh Manager
- Apple Software Restore
- Print Server

Important: Read Before Installing

1. An Admin user password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, then follow these steps: Choose System Preferences from the Apple menu. Choose Users from the View menu. Select an Admin user and click Edit User. Click the Password tab. Change the password and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.

Installation

There are several ways to update to from Mac OS X Server 10.2 to 10.2.1.

I. Automatic Software Update Installation

See technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

II. Standalone Installer

An installer is available from Apple Software Downloads (http://www.apple.com/swupdates/).

III. Remote installation using the Software Update command-line tool.

See technical document 107058, "**Xserve: How to Remotely Install Software Using the Software Update Command-Line Tool**".

Enhancements Delivered with this update

File Services

- Resolves an issue with the SMB mount command.

Password Server

- Allows Open Directory Password Server to be located on a secondary or standalone server.
- Improves Password Server database integrity.

Installation

- Works better with remote Installation on ports other than the built-in (en0).

Workgroup Manager

- Improvements in Workgroup Manager user creation <cancel> handling.

Open Directory

- Addresses an issue with Open Directory LDAP server, preventing automatic discovery of the directory using DHCP.

Network Image Utility

- Changing active NetBoot images in the Network Image Utility no longer requires you to restart.
- Resolves an issue in which the Network Image Utility creates images with incorrect permissions.

Networking and Mail Enhancements

- Addresses a situation in which certain Internet service providers (ISPs) may not accept outgoing email (SMTP) from computers using NAT and a ".local" hostname (which may be assigned by Rendezvous).
- Improves Mac OS X Server performance in heavy AFP client load situations.
- Improves Mac OS X Server reliability when a Mac OS 9 client attempts a scheduled AFP connection.

Printing Enhancements

- Improves compatibility with HP LaserJet 4V and HP LaserJet 4MV printers.
- Reduces occurrences of a potential "busy; source EIO (ATALK)" alert message when printing using AppleTalk via CUPS.
- Addresses an issue in with printing via CUPS in which the second queued print job would automatically start if the first print job was stopped.
- Includes various other CUPS printing-related enhancements.
- Fixed condition in Print Server which could lead to over utilization of CPU cycles.

Other Enhancements

- Addresses a potential issue in which a USB keyboard or mouse is not recognized nor able to wake the computer, if they are connected to or disconnected from an external USB hub, while the computer is in sleep.
- Addresses a potential issue in which Mac Help may not be available following an erase-installation.
- Addresses various potential kernel panic situations.

This update includes the other enhancements contained in the Mac OS X 10.2.1 (non-Server) update. For more information see, technical document 107036, "**Mac OS X: About the Mac OS X 10.2.1 Update**".
Published Date: Oct 10, 2016

Mac OS X 10.2: How to Change Ownership & Permissions Using the Finder

This document explains how to change item permissions in Mac OS X 10.2 or later. This is a step recommended as part of some other troubleshooting procedures.
This article has been archived and is no longer updated by Apple.
In Mac OS X 10.2 or later, the Finder allows you to easily change basic permissions settings on files and folders.

1. Select the item in the Finder.
2. Choose Get Info from the File menu.
3. Click the disclosure triangle for Ownership & Permissions.
4. Make note of the original ownership and permissions, in case you need to revert to the original settings later.
5. Change the ownership or permissions to what you want, or to what is specified the technical document that referred you to this procedure.
   Note: If you are the owner of the item, you can change its permissions and ownership immediately. If changes require an Admin user name or password, you will be prompted to enter them. If the Access and Others pop-up menus are dimmed (unavailable), you need to change ownership before you can change the access permissions.
6. If needed, click "Apply to enclosed items". This feature only applies permissions, not ownership changes. See technical document 107031, "**Mac OS X 10.2: Clicking 'Apply to enclosed items' Copies Permissions But Not Owner or Group**".
7. If you are making a temporary change to work around an issue, be sure to change it back later.

Note: More advanced control over permissions is only available using non-Apple utilities or the Terminal commands chown, chgrp and chmod. These should not be necessary for normal use of Mac OS X. The Finder cannot be used to change advanced permissions, such as setuid, setgid and sticky settings.

For more information, see article 106712 "**Mac OS X: Troubleshooting Permissions Issues**"
Published Date: Oct 10, 2016

Mac OS X 10.2: Blue or Gray Screen Appears After Installing Apple Display Software

The computer restarts to a blue or gray screen after installing Apple Display Software.
This article has been archived and is no longer updated by Apple.

Symptom

The computer restarts to a blue or gray screen after installing Apple Display Software.

Solution

Reinstall Mac OS X 10.2 to resolve the issue. Because the necessary software is already included with Mac OS X 10.2, you should not install Apple Display Software.

Note: It is not necessary perform an Erase Install or Archive and Install, unless you have updated to a later version of Mac OS X than the one included on your software installation CD.
Published Date: Oct 10, 2016

Mac OS X 10.2: Applications are missing after upgrade installation

This article has been archived and is no longer updated by Apple.

Certain applications may be removed and not reinstalled if the Additional Applications package is deselected during a custom installation of Mac OS X 10.2. Adobe Acrobat Reader may appear as a folder and may not open.

Symptom

- Certain additional applications, such as iTunes, iPhoto, or iMovie, are removed during installation.
- Adobe Acrobat Reader appears as a folder and will not open.

Solution

Do not deselect Additional Applications when installing Mac OS X 10.2. To reinstall missing software, either download and install the software (if applicable) or reinstall using the Mac OS X 10.2 Install CDs.

Note: Before reinstalling Adobe Acrobat Reader, delete the existing (unusable) Acrobat Reader folder.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

Mac OS X 10.2: Does Not Start Up After Third-Party Software Installation

After installing third-party software and restarting, a kernel panic message appears, or the computer does not start up as expected.
This article has been archived and is no longer updated by Apple.

Symptom

After installing third-party software that installs a kernel extension (.kext) file and restarting, a kernel panic message appears, or the computer does not start up as expected. This may include a text message such as "kernel exception" or "you need to restart your computer." For additional help identifying a kernel panic, see technical document 106227, "**Mac OS X: What is a Kernel Panic?**"

Solution

1. Press and hold the Shift key as the computer starts up, until "Safe Boot" appears. If this does not permit the computer to start up, a different issue exists. Refer instead to technical document 106464, "**Mac OS X: Troubleshooting a Startup Issue**".

2. Use the third-party software's original installer to remove the recently-installed software, if feasible. Contact the third party for assistance if needed. Alternatively, try Step 3.

3. If you are uncertain about which software was installed last, open these in List view and sort by Date Modified:

/Library/StartupItems/
/System/Library/Extensions/

Temporarily remove any relevant, recently-modified, third-party .kext files and restart the computer. For compatibility information, contact the manufacturer of any third-party software items which seem to cause this issue.

Note: Apple software installers do not place items in /Library/Startuptems/.
Published Date: Oct 10, 2016

Mac OS X Server: "Error -35" in Server Admin When Changing Sharing Attributes

If a remote server volume has been ejected ("unmounted") from the Finder, then Server Admin displays a "disk error" message when you select it for modification of sharing attributes.
This article has been archived and is no longer updated by Apple.

Symptom

When you select a disk or share point for modification of sharing attributes, you see an alert box with this message:

> " A disk error has occurred. Use a disk repair program to verify your disk. -35"

Solution

This occurs when Server Admin is used remotely, and when you have ejected the remote server volume from the computer at which you are working. Follow these steps to resolve the issue:

1. Quit Server Admin.
2. Reopen Server Admin, and reconnect to the server.

The remote volumes appear when you connect. Refrain from ejecting them until you are finished using Server Admin.
Published Date: Feb 17, 2012

Mac OS X Server: Multiple MTAs Cannot Share TCP Port 25

Only one mail transfer agent (MTA) can use TCP port 25 at any given time.
This article has been archived and is no longer updated by Apple.

Symptom

When you start Apple Mail Service on port 25, you see an alert that says that the port is already in use by another application (such as sendmail).

Solution

1. Quit your current MTA so that it will release the port.
2. In Server Admin, click the Internet tab.
3. Choose Configure Mail Service from the Mail Service module.
4. Click the Protocols tab.
5. Choose SMTP from the "Use... for message transfer" pop-up menu.
6. Click Save.

Note: Be sure that your alternate MTA is not configured to restart automatically, such as when you restart the computer.
Published Date: Feb 17, 2012

Mac OS X: "File Create Error" With HP ScanJet USB Scanner

You are not able to scan with a Hewlett Packard ScanJet scanner, and you see an alert box with a message that contains "file create error."
This article has been archived and is no longer updated by Apple.

Symptom

When you try to scan, you see an alert box with this message:

> "Sorry, an error has occurred saving to the file (File create error.)"

Note: This affects drivers that are installed in the Classic System Folder, and thus the symptom occurs when you are scanning in Classic applications.

Solution

Rebuild the Desktop file for the Classic System Folder. Follow these steps:

1. Choose System Preferences from the Apple Menu
2. Click the Classic icon .
3. Click the Advanced tab.
4. Click Rebuild Desktop.

Published Date: Feb 17, 2012

Mac OS X: Difficulty Using WebDAV Server

You may lack write access, such as creating new files and folders, if your WebDAV server is using Apache 2.
This article has been archived and is no longer updated by Apple.

Symptom

When using WebDAV, you can connect and browse content, but you cannot create new files or folders.

Solution

This occurs when the WebDAV server is using some versions of the Apache 2 Web server. Users of Mac OS 10.0 to 10.1.5 must update to Mac OS X 10.2 or later. Additionally, a configuration change may be required for the server. Refer your server administrator or Internet service provider to this document.

The following directive can be added to the httpd.conf file on the Apache 2 server to fix this issue:

```
BrowserMatch "^WebDAVFS/1.[012]" redirect-carefully
```

The httpd.conf file should already contain several BrowserMatch directives for other WebDAV clients. If there is not a BrowserMatch directive for WebDAVFS, then it should be added.

Note: Apache 2, as installed with Mac OS X Server 10.2, includes this directive, but the default installation of Apache 2 may not.
Published Date: Feb 17, 2012

Mac OS X Server: Multiple Versions of Tomcat Installed

If you have updated to Mac OS X Server 10.2 from a previous version, multiple versions of Tomcat may be present.
This article has been archived and is no longer updated by Apple.

Symptom

You find different versions of Tomcat installed at these locations:

- /usr/local/tomcat
- /Library/Tomcat

This may lead to confusion over which executable file to use.

Solution

To avoid accidentally using the wrong version of Tomcat, you may wish to delete the old version. You must be logged in as an Admin user. Follow these steps:

1. Open Terminal (/Applications/Utilities/). See Warning, below.
2. Type: `sudo rm -rf /usr/local/tomcat`
3. Press Return.
4. Type your Admin password when prompted, then press Return.
5. Quit Terminal.

Warning: Misuse of the "rm -rf" command can result in data loss. Be sure to type the line exactly. You can even copy and paste the text into Terminal. Web browser settings can affect the appearance of text. You can paste the text into a text editor to ensure that you see the correct spacing.

Published Date: Feb 17, 2012

Mac OS X 10.2 Address Book: How to Import Contacts from Entourage

You can easily import contacts from Microsoft Entourage using vCard format.
This article has been archived and is no longer updated by Apple.
To import contacts from Entourage:

1. Create a new folder in the Finder on your desktop named "Contacts".
2. Open the address book in Entourage.
3. Select the contacts you want to export. If you want to export all of them, choose Select All from the Edit menu.
4. Drag the selected contacts into the Contacts folder that you created. This creates vCard files for each of the contacts you selected.
5. Quit Entourage.
6. Open the Address Book application.
7. Choose View Card and Columns from the View menu.
8. Drag the Contacts folder from the desktop to the Groups column of the Address Book window.

The contact information should now be available in Address Book.

Notes:

1. As an alternative method, you may use AppleScript. See technical document 106996, "**Mac OS X 10.2: About Import Addresses and Other Mail Scripts**".

2. For iPod users: If your iPod is in FireWire disk mode, you may also drag vCard files to and from the Contacts folder on iPod.

3. For information about importing addresses from Microsoft Outlook Express, Eudora, Claris Emailer, Netscape, or Palm Desktop, see technical document 106996, "**Mac OS X 10.2: About Import Addresses and Other Mail Scripts**".

Published Date: Feb 17, 2012

Mac OS X 10.2: Difficulty Using Hewlett Packard Printers

Hewlett Packard has released updated (2.0 or later) printer drivers that resolve certain issues you may encounter when using the versions 1.4.1 HP drivers that were included with Mac OS X 10.2 (build 6C115).
This article has been archived and is no longer updated by Apple.

Symptom

Various issues when using an HP printer.

Note: Users of the 1220c series should see technical document 107208, "**Mac OS X 10.2: Cannot Print After Installing Deskjet 2.0 Drivers**".

Solution

Download and install the latest drivers for Mac OS X from the Hewlett Packard Web site (http://www.hp.com/).

HP 2.0 or later drivers address these issues:

- faster printing from all modes (benefits primarily Mac OS X 10.2)
- more stable printer communication
- ability to save more than 1 preset (Mac OS X 10.2 only)
- digital photography options (applicable printers only)
- 2400 by 1200 and 4800 by 1200-enhanced printing (applicable printers only)

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Published Date: Oct 10, 2016

Mac OS X 10.2: iSub Volume Muted After Installation

The volume of an iSub speaker is set all the way down (muted) after installing Mac OS X 10.2.
This article has been archived and is no longer updated by Apple.

Symptom

No sound comes from the iSub speaker.

Solution

Set the iSub volume to the desired level. Follow these steps:

1. Choose System Preferences from the Apple menu.
2. Choose Sound from the View menu.
3. Click the Output tab.
4. Set the iSub volume slider to the desired level.

Published Date: Feb 17, 2012

Mac OS X 10.2: Pressing the Mute Key Does Not Mute iSub

When using Mac OS X 10.2, pressing the Mute key does not mute iSub.
This article has been archived and is no longer updated by Apple.

Symptom

iSub continues to make sound after you press the Mute key.

Solution

Use the Sound preference pane to mute iSub.

1. Choose System Preferences from the Apple menu.
2. Choose Sound from the View menu.
3. Click the Output tab.
4. Select the checkbox for Mute next to the iSub volume slider.

Published Date: Feb 17, 2012

Mac OS X: "You need to restart your computer" Alert Appears

In Mac OS X 10.2 or later, the older style kernel panic message is replaced with an alert that says you need to restart your computer.
This article has been archived and is no longer updated by Apple.

Symptom

You see this alert message:

> "You need to restart your computer. Hold down the Power button for several seconds or press the Restart button."

Figure 1 A kernel panic in Mac OS X 10.2 or later

Solution

This message indicates that a kernel panic has likely occurred. To learn more, see technical document 106227, "**Mac OS X: What Is a Kernel Panic?**"
Published Date: Oct 10, 2016

Mac OS X Server 10.2: "You can‘t connect to this server" Alert When Opening Server Admin

Server Admin cannot administer a version 10.2 or later server, but it can be opened on one for purpose of controlling a remote server with which it is compatible (versions 10.0.3 to 10.1.5).
This article has been archived and is no longer updated by Apple.

Symptom

When you open Server Admin at a Mac OS X Server 10.2 or later computer, an alert box with this message appears:

> "You can't connect to this server with this version of Server Admin. You must first install the version of Server Admin that came with the server to which you want to connect."

Solution

Mac OS X Server 10.2 replaces Server Admin (used in versions 10.0.3 to 10.1.5) with a new set of administration applications. Server Admin is not installed with Mac OS X Server 10.2 or later. It may be present if the server was upgraded from a previous version, or you can copy it manually to the server.

Though the alert appears, you can still use Server Admin from a version 10.2 server to control a remote server that is version 10.0 to 10.1.5. Server Admin cannot control the version 10.2 server on which it resides.

Note: Server Admin cannot be used to add users to groups on a 10.0.3 to 10.1.5 Server when used from a 10.2 computer (server or client). You may, however, change a user's primary group ID.
Published Date: Feb 17, 2012

Mac OS X 10.2: Difficulty Using PDF in Preview

You may have difficulty when using a password-protected PDF document in Preview. A permissions pane may appear when the PDF is opened. This article has been archived and is no longer updated by Apple.

Symptom

A permissions sheet may appear when you open a PDF document. It may not clearly specify what actions are available to you. You may not be able to view, print, or copy items from the document.

Solution

This is expected behavior if the author of the PDF file has password protected it. You must have the password to get full access to the document. Contact the person who created the document for assistance, when possible or necessary.

Published Date: Feb 17, 2012

AppleScript 1.9: Paste Reference Command in Script Editor is Dimmed

In Mac OS X 10.2 through Mac OS X 10.2.8, the Paste Reference menu command is always dimmed (unavailable) in Script Editor version 1.9.

This article has been archived and is no longer updated by Apple.

Symptom

The Paste Reference menu command is dimmed in Script Editor.

Solution

As a workaround, you can manually type the path to the file.

Published Date: Feb 17, 2012

Mac OS X: Computer Does Not Go to Sleep After Disconnecting External Hard Drive

After you disconnect a FireWire or USB hard drive, the computer does not automatically go to sleep when idle (inactive).
This article has been archived and is no longer updated by Apple.

Symptom

The computer does not automatically go to sleep from lack of activity, when idle.

Solution

Update to Mac OS X 10.2.4 or later for improved results.
Published Date: Feb 17, 2012

Mac OS X: Installer Package Appears as a Folder

This document explains what to do if an installer (or other package) appears as a folder and thus cannot be used as expected.
This article has been archived and is no longer updated by Apple.

Symptom

- An installer icon appears as a folder instead of a normal package icon, and it is not usable.
- When trying to use package that appears as a folder, it opens to show contents (instead of opening the Installer application).

Solution

1. Verify that the Installer application is installed in this folder:

/Applications/Utilities

If Installer is not present, you may restore it by copying it from your Mac OS X Install CD. On the CD, it is located at:

Mac OS X Install CD/Applications/Utilities/Installer

If Installer is present but the issue persists, continue to Step 2.

2. Remove these files, then restart the computer:

For Mac OS X 10.2 or later, remove:

/Library/Caches/com.apple.LaunchServices.LocalCache.csstore
~/Library/Caches/com.apple.LaunchServices.UserCache.csstore
~/Library/Preferences/com.apple.LaunchServices.plist

For Mac OS X 10.1 or earlier, remove:

~/Library/PreferencesLSApplications
~/Library/PreferencesLSClaimedTypes
~/Library/PreferencesLSSchemes

Note: The tilde (~) character represents your Home folder.

3. If the issue persists, create a new Admin user account in System Preferences.

Note: For Mac OS X 10.0 to 10.1.5, the User preference pane is used. In Mac OS X 10.2 or later, you use the Accounts preference pane.

4. Log out, and log back in as the Admin user you just created.

5. Mac OS X 10.1.5 only: If the issue persists, use the Repair Privileges utility. See technical document 106900, "**Mac OS X: About the Repair Privileges Utility 1.1**".

6. If the issue persists, you may need perform an erase-install (Mac OS X 10.0-10.1.5) or Archive Installation (Mac OS X 10.2) to resolve the issue.

Published Date: Oct 10, 2016

Mac OS X 10.2: IMAP Mailbox Folders Do Not Appear

When using the application Mail, you may encounter a situation in which new IMAP mailboxes do not appear.
This article has been archived and is no longer updated by Apple.

Symptom

Mail does not display new mailbox folders that you added to an IMAP account. However, the mailbox folders appear as an option in the Transfer submenu of the Message menu.

Solution

You may resolve this by creating an additional, dummy account.

1. Choose Preferences from the Mail menu.
2. Click Accounts, if necessary.
3. Click Add Account.
4. Configure the account with dummy (bogus, fake) information. It does not matter if the account is POP or IMAP.

   Note: You should deselect the Advanced tab option "Include when automatically checking for new mail".

5. Click OK.
6. Close the Mail Preferences window.
7. Try creating new mailbox folders. If they do not appear, then quit and reopen Mail.

Figure 1 shows how this might look. Click the disclosure triangle to the left of the account name (or location) to see subfolders.

Figure 1 Mailbox folders
Published Date: Oct 10, 2016

Mac OS X 10.2: Mac Help Is Slow, Displays Spinning Disc Pointer

Mac Help may be unresponsive for a few seconds, displaying the spinning disc pointer, and the message "Retrieving... ". Mac Help then returns to normal use.
This article has been archived and is no longer updated by Apple.

Symptom

After opening Mac Help, a spinning disc pointer and the status message "Retrieving..." appear for several seconds.

Solution

Wait until Mac Help has finished downloading online content. If Mac OS X 10.2 was recently installed, this may require several seconds and more than one use of Mac Help. Mac Help will open more quickly in the future, after content has been downloaded .

If Mac Help continues to be slow, you may try this workaround: Create a new network location, which you may name "Mac Help" for easy reference. In this location, turn off all port configurations that are not for the primary, in-use Internet connection. If you need help doing this, see technical document 106653, "**Mac OS X: How to Use Locations**".

Example: If the computer is connected via Built-in Ethernet to a DSL or cable modem, then you would disable AirPort, IrDA, USB Bluetooth Modem Adaptor, and Modem port configurations in the new location that you create (AirPort, USB Bluetooth Modem Adaptor, and IrDA appear only on computers that contain that hardware).

After using Mac Help successfully, you should try switching back to your original location.
Published Date: Oct 10, 2016

Mac OS X 10.2: Screen Capture (Screen Shot) Enhancements

Mac OS X 10.2 introduces features for taking screen captures, also known as screens shots.
This article has been archived and is no longer updated by Apple.
As in earlier versions of Mac OS X, the Command-Shift-4 key combination allows you to capture a selection of your screen using a cross-hair mouse pointer. To cancel the capture, press the Esc key.

Additional features for version 10.2 include:

- Press the Space bar to switch between cross-hair selection and Window capture modes.
- Control-click to capture to the clipboard instead of to a file.

Published Date: Feb 17, 2012

Mac OS X 10.2: Kernel Extension (kext) Files May Generate Security Warning

Some third-party kernel extensions (files that have a ".kext" filename extension) may generate a security warning during startup.
This article has been archived and is no longer updated by Apple.

Symptom

During startup, a dialog box appears with this message:

> "The program you are using needs to use a system file that may reduce the security of your computer."

The dialog offers choices of Fix and Use, Use, and Don't Use (Figure 1).

Figure 1 The .kext security warning dialog

Solution

Mac OS X 10.2 and later has stricter security checking of kernel extensions. These files should have permissions that restrict any user other than the system software (the "root" user) from making changes to the file. If a kernel extension has less restrictive privileges, it will trigger this alert.

If you are confident that the kernel extension is the correct, unaltered file, you may click Use to use the file with the existing permissions. Alternatively, click Fix and Use to correct the permissions and use the file.

If you are not confident about the nature of the kernel extension, click Don't Use.

Note: if you select Don't Use, applications and devices that rely on this kernel extension may not function as expected.

In any case, you should contact the vendor of the kernel extension to get a new version that conforms to the expected permissions.
Published Date: Oct 10, 2016

Read before restoring your computer‘s software (Mac OS X 10.2 through 10.3.1)

This article has been archived and is no longer updated by Apple.

This document is a reproduction of the "Read Before Restoring Your Computer's Software" that is included with computers that ship with Mac OS X 10.2 through 10.3.1.

Read Before Restoring Your Computer's Software

Restoring Your Computer's Software
Software Restore restores your computer's original contents except Mac OS X. This includes the Mac OS 9 system software and the applications that came with your computer.

Software Restore does not restore Mac OS X, iPhoto, iTunes, iChat, or iMovie. If you need to reinstall Mac OS X or these applications, use the Mac OS X installation discs that came with your computer. First back up essential software and files, if possible.

After reinstalling Mac OS X, if you need to restore the rest of your computer's applications and files, double-click Software Restore.pkg. This will install the Software Restore application into the Utilities folder, inside the Applications folder on your hard disk. When the installation is complete, Software Restore opens.

To restore your computer's original contents:
1. Make sure you are using Mac OS X v10.2. If you are using Mac OS 9, restart your computer in Mac OS X. To do this, open the Startup Disk control panel, select Mac OS X and click Restart. You can not start your computer from the Software Restore CDs.
2. Make sure you have all the Software Restore CDs that came with your computer.
3. Double-click Software Restore.pkg.
4. Follow the onscreen instructions.
5. When prompted, select the applications and files you want to restore.

For more information about Mac OS X, select Mac Help from the Help menu, or go to www.apple.com/support

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Published Date: Feb 17, 2012

Mac OS X 10.2: Mail Messages Lost If Network Connection Interrupted During Transfer

If your network (or Internet) connection is lost while email is transferred to your computer, all mail not transferred is lost. Update your software to avoid this issue.
This article has been archived and is no longer updated by Apple.

Symptom

Mail being transferred is lost if your network connection is interrupted.

Solution

Update to Mac OS X 10.2.1. For more information, see technical document 107036, "**Mac OS X: About the Mac OS X 10.2.1 Update**".

Warning: Even under normal circumstances, transferring messages to a remote IMAP account is an example of an action that results in deletion of the original file as it is placed elsewhere. Generally speaking, copying a file to another computer does not delete the original file. It is important to remember that IMAP can be an exception to the general rule. Any time that you take this, or similar action, you should back up the original files first. For an example scenario, see technical document 106778, "**Mac OS X Mail: How to Import Email From a Non-Macintosh Computer**".
Published Date: Oct 10, 2016

Mac OS X 10.2: Mail Messages Moved to "On My Mac" Mailbox

If you upgrade to Mac OS X 10.2 from an earlier version, previous email messages are moved to the On My Mac mailbox.
This article has been archived and is no longer updated by Apple.

Symptom

Mail moves existing email messages to an "On My Mac" mailbox.

Solution

1. Click the "On My Mac" Mailbox so that you can see the mailbox contents in the message list.
2. Select the mail in the message list that you want to move to your Inbox.
3. Drag the selected mail to your new Inbox.

Published Date: Oct 10, 2016

AppleWorks 6: Word Processing Documents Do Not Print When Multiple Documents Are Open

If you already have a document open and then open a word processing document, you will not be able to print the word processing document. This document explains the workaround.

This article has been archived and is no longer updated by Apple.

Symptom

After clicking Print in the Print dialog, the document does not print.

Solution

This occurs specifically when you have an AppleWorks document (or multiple documents) already open and then choose Open from the File menu in AppleWorks to open another existing word processing file.

To be able to print the word processing document:

1. Click once anywhere outside of the document window.
2. Click once on the document you would like to print.
3. Choose Print from the File menu.

Published Date: Feb 17, 2012

Mac OS X Server 10.2, 10.3: How to reshare NFS exports via AFP

This article has been archived and is no longer updated by Apple.

To reshare an NFS mount as an AFP share point:

1. From the NFS server, export the directories you want to reshare to the Mac OS X server. Since AFP runs as root, the NFS export must map root-to-root so that AFP will be able to access the files for the clients. Restrict the export to the single AFP server (seen as a client to the NFS server). As NFS is not a secure connection, this can be made even more secure by having a private network for the connection from the NFS Server to the AFP Server.

Note: If you do not map root-to-root when attempting to save privileges in WorkGroup Manager you will see an "Unable to save changes" message when trying to share the item.

2. On the AFP server, create a folder in the root level of the startup disk named "nfs_reshares". Mount any exports that you wish to share as folders inside this folder. For information about mounting nfs exports, see the manual page for the mount command by executing "man mount" in Terminal. The advanced section below describes a method for automatically mounting NFS exports.

3. Use the Sharing module in Workgroup Manager to share the NFS mounts as AFP share points. The NFS mounts appear as normal volumes in the All list. (Though it is also possible to share the NFS mounts using SMB and FTP, only AFP has been fully tested and qualified.) You can change privileges and ownership but cannot enable quotas (quotas work only on local volumes). However, if quotas are enabled on the NFS server, they should apply to the reshared volume as well.

4. Stop the File Server and restart it. The export should be available.

Many users will wish to have exports appear automatically on when they restart their computers. There are third-party utilities that are available to configure this, or you can follow the instructions below to manually edit NetInfo

Advanced

You can set up the server to mount exports at startup by manually editing NetInfo's /mounts property.

Be sure to edit the local NetInfo database. Setting these properties and values as such:

```
property   -   value
vfstype        nfs
dir            /nfs_reshares/mountpoint
name           server:/full/path/to/exported_directory
opts           <any mount options>
```

To do this follow these steps:

1. Open NetInfo Manager (/Applications/Utilities).
2. Click the lock button in the lower left corner.
3. Select the mounts item in the center column.
4. Choose New Subdirectory from the Directory menu.
5. In the new property enter 'vfstype' for the property, and 'nfs' for the value.
6. Choose New Property from the Directory menu.
7. In the new property enter 'dir' for the property, and the path to your mount, which will be a folder in "/nfs_reshares/".
8. Choose New Property from the Directory menu.
9. In the new property enter 'name' for the property, and the server and path in this format:
server:/full/path/to/exported_directory
10. Choose New Property from the Directory menu.
11. In the new property enter 'opts' for the property, and enter any options you want for the mount. "-s" will allow for a soft mount, and so forth. If you are unfamiliar with mount options, see the man page by typing 'man mount' in Terminal.

Note: The NFS exports should be available after the server is restarted. Setting up NFS exports to automatically mount is not covered by AppleCare's free technical support.
Published Date: Oct 10, 2016

Mac OS X 10.2: Screen Shots Are Saved in PDF, May Be Converted

Mac OS X 10.2 saves screen shots in PDF format, which you may convert to another format.
This article has been archived and is no longer updated by Apple.
Screen shots are saved on the desktop as PDF files. If desired, you may convert a screen shot file from PDF to a different format by following these steps:

1. Open the screen shot file that you want to convert (see Note).
2. Choose Export from the File menu. A save dialog sheet appears.
3. In the save dialog sheet, choose a different format from the Format pop-up menu.
4. Change the name of the file and/or the save destination if desired.
5. Click Save.

Note: These directions pertain to the Preview application, which is the default for opening PDF files. You may use other applications, but the steps would differ.
Published Date: Oct 10, 2016

Mac OS X: Importing addresses from Previous Address Book after upgrade or Archive and Install

This article has been archived and is no longer updated by Apple.

When upgrading *from* Mac OS X 10.1 to Mac OS X 10.2, or Mac OS X 10.1 or 10.2 *to* Mac OS X 10.3 Panther, Address Book automatically retains previous entries but not the "temporary" addresses used by Mail. Learn how to import those temporary addresses.

Note: This document applies to Mac OS X 10.1 through 10.3.9.

When you upgrade from Mac OS X 10.1 to Mac OS X 10.2 or later, all your Address Book entries are preserved. The first time that you open Mail, Address Book, or iChat, these addresses will be imported automatically into the Mac OS X 10.2 Address Book.

Tip: This section applies if you installed a later version of Mac OS X over an earlier one on the same volume, without erasing, and without performing an Archive and Install installation. If you performed an Archive and Install installation or different-volume installation, see "Archive and Install or installation on different volume" below.

In Mac OS X 10.1, Mail also kept a list of "temporary" addresses that were used in Mail but that were not explicitly added to the Address Book application. These addresses are not automatically imported into a later Address Book, but are imported as part of the Mail Address History (or Previous Recipients). To add them to the Address Book, follow these steps:

1. Open Mail.
2. Choose Address History (Mac OS X 10.2.8 or earlier) or Previous Recipients (Mac OS X 10.3 or later) from the Window menu.
3. Select as many entries as you wish to import. You can use the Command or Shift key while clicking to select multiple entries.
4. Click Add to Address Book.

Archive and Install or installation on different volume (partition)

If you choose to "Archive and Install" the later version over the earlier one, or installed the later version on a different volume or partition, your previous addresses will not be automatically imported. To import them, follow the steps below. You can also follow these steps if for any reason you wish to re-import your previous addresses.

1. Be sure that Mail, Address Book, and iChat are quit.
2. If you have **not** used these three applications since upgrading, skip to Step 9. If you have used them since upgrading, you will need to remove certain Address Book data before importing your previous addresses (Steps 3 to 8).
3. Click the Finder icon in the Dock.
4. Choose Go to Folder from the Go menu.
5. Type: `~/Library/Application Support/`
6. Click Go.
7. Here, locate the folder named "AddressBook".
8. Drag the AddressBook folder to the Trash, or if you prefer, drag it to a backup location.
9. Copy the "Addresses" folder from the Library folder of your previous Home directory to the Library folder of your current Home directory. For reference, the pathname of your previous Address folder would be:

   `/Previous Systems/Previous System 1/Users/`{your username}`/Library/Addresses`

   The folder to copy it to would be:

   `/Users/`{your username}`/Library/`

10. Rename the "Addresses" folder you copied to "AddressBook".
11. Open Mail, Address Book or iChat. Your previous addresses will be imported automatically.

Published Date: Oct 10, 2016

Mac OS X 10.2: How to Make AppleTalk Active or Inactive in the Classic Environment

In Mac OS X 10.2 or later, Classic AppleTalk status is always that of Mac OS X. Use the System Preferences application to enable or disable AppleTalk.

This article has been archived and is no longer updated by Apple.

In Mac OS X 10.2 or later, the status of AppleTalk in Classic is always the same as the status of AppleTalk in Mac OS X. Use the Mac OS X Network preference pane to adjust AppleTalk status.

In contrast to prior versions of Mac OS X, you cannot use the AppleTalk control panel in the Classic Environment. Additionally, you cannot use the Chooser or AppleScript to change AppleTalk status.

Follow these steps:

1. Open System Preferences.
2. Choose Network from the View menu.
3. Click the AppleTalk tab.
4. Select or deselect the checkbox for Make AppleTalk Active, as desired.
5. Click Apply Now.

Published Date: Oct 10, 2016

Mac OS X 10.2: Kotoeri Keyboard Shortcuts Have Changed

After installing Mac OS X 10.2, the Control-1 and Control-2 keyboard shortcuts used for the Kotoeri input method may be reversed. They are used for the Similar-Kanji-Finding command and the Related-Characters command.
This article has been archived and is no longer updated by Apple.

Symptom

- You get the Similar-Kanji-Finding command when you expect the Related-Characters command, or vice versa.
- The Control-1 and Control-2 keyboard shortcuts are reversed from their normal position in the Kotoeri Pencil Menu.

Solution

You may return the shortcuts to the commands you want by following these steps:

1. Choose Kotoeri Preference from the Kotoeri Pencil Menu.
2. Click the Convert tab.
3. Change the order of the Convert dictionaries.

Published Date: Oct 10, 2016

Mac OS X 10.2: Print Center Unexpectedly Quits When Default Folder X Is Installed

Print Center quits unexpectedly if you are using the shareware application Default Folder X.
This article has been archived and is no longer updated by Apple.

Symptom

When adding a printer to the Printer List, you see an alert box with this message:

> "The application Print Center has unexpectedly quit. The system and other applications have not been affected. OK"

Solution

St. Clair Software has released updates to address this and other issues. Download and install the latest version of Default Folder (http://www.defaultfolder.com/). This is also addressed in the Mac OS X 10.2.1 Update. See technical document 107036, "**Mac OS X: About the Mac OS X 10.2.1 Update**".

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Published Date: Feb 17, 2012

Mac OS X: "No file services are available" Alert When Logging in to Windows File Sharing

When logging in to a shared Microsoft Windows computer from Mac OS X, your password is case-sensitive and must be typed properly.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to log in to a Windows-compatible computer from a Mac OS X computer, an alert box with this message appears:

> "No file services are available at the URL smb://computername/share."

Solution

Be sure to type your password with correct lowercase and capital letters. If necessary, ask the owner of the shared computer to reset your password.

Published Date: Oct 10, 2016

Windows File Sharing will not start, stay on, or allow workgroup name change in Mac OS X 10.2

If you deselect the installation of the BSD Subsystem, Windows File Sharing will not work as expected. Windows File Sharing will not start or stay on, and you cannot change your workgroup name (which may prevent sharing).
This article has been archived and is no longer updated by Apple.
Reinstall Mac OS X with the BSD Subsystem.

The BSD Subsystem is installed by default as a part of Mac OS X. You must have intentionally deselected it to experience this issue for this reason. If you did a standard (non-custom) installation, then you should troubleshoot further and search the Knowledge Base for other related issues. You should also make sure that your network connection is still active, since a lack of network connection may also prevent Windows File Sharing from working.
Published Date: Oct 10, 2016

Mac OS X 10.2: Contents of Windows (SMB) Volumes Not Automatically Refreshed in Finder

The Mac OS X 10.2 Finder does not automatically refresh the contents (directory listing) of Windows shared volumes when files are added to them at the Windows computer that is sharing.
This article has been archived and is no longer updated by Apple.

Symptom

At the Windows computer that is sharing, files are added to a Windows shared volume; but they do not appear there in the Mac OS X Finder. (The directory listing is not refreshed).

Solution

To see an updated view of the shared SMB volume:

- Using the Mac OS X 10.2 Finder, create a new folder or copy a file to the directory you wish to refresh, **or**
- Eject (unmount) the shared SMB volume and reconnect to it.

Published Date: Oct 10, 2016

Mac OS X: Short Name can be longer than Name

In Mac OS X 10.2 or later, a user's "short name" may be longer than the user's "name." This is normal.
This article has been archived and is no longer updated by Apple.
The Name field is where you may type your name as you desire, with capital letters and spaces. But for system-level tasks, Mac OS X also requires a version of your name that does not contain capital letters or spaces. This is referred to as the "short name" and is entered in the Short Name field. The term "short name" should not be taken literally.

The short name is limited to eight characters in Mac OS X versions 10.0 through 10.1.5. With Mac OS X 10.2 or later, it may be up to 255 characters long.
Published Date: Feb 17, 2012

Mac OS X 10.2: Internet Connect Uses CHAP and PPTP for VPN

The Virtual Private Network (VPN) feature of Internet Connect uses Challenge-Handshake Authentication Protocol (CHAP) and Point-to-Point Tunneling Protocol (PPTP). It does not use PAP or IPSec.
This article has been archived and is no longer updated by Apple.

Symptom

If you use Internet Connect VPN to connect to a server configured for PAP, this message appears in the Internet Connect Log:

> "CHAP authentication failed."

Solution

Mac OS X 10.2 Internet Connect VPN uses CHAP to authenticate users with remote Point-to-Point Protocol (PPP) servers. Internet Connect VPN works with MS-CHAP v2 (MPPE-40/128 bit RC4 encryption). Internet Connect VPN does not use PAP.

Internet Connect VPN uses PPTP (Point-to-Point Tunneling Protocol) to provide secure connections with remote networks. Internet Connect VPN does not use IPSec.
Published Date: Oct 10, 2016

Mac OS X: Script Editor Has Two Choices for Saving Compiled Script

When using Script Editor to save a new file, there are two choices for compiled script.
This article has been archived and is no longer updated by Apple.

Symptom

When you choose Save As or save a script for the first time, you see two choices for the format:

- compiled script
- Compiled Script

Solution

The choices produce identical scripts. It does not matter which format you choose; they only differ in the capitalization. This is to expected to be corrected in a future version of Script Editor.
Published Date: Feb 17, 2012

Mac OS X 10.2: "Internet Config. Extension error -677" Alert in Classic

You cannot create or duplicate sets in the Internet control panel. If you try, you see an alert box.
This article has been archived and is no longer updated by Apple.

Symptom

The Internet control panel (available when Classic is running) lists only one set named "Mac OS X". If you try to duplicate the set, or create a new one, an alert box with this message appears:

> "Internet Config. Extension error -677 has occurred! Unable to continue."

The Internet control panel then quits without saving any changes.

Solution

The Mac OS X System Preferences application includes an Internet pane that allows you to make settings for accessing the Internet. The Internet control panel performs the same function. Settings made in System Preferences affect the behavior of Classic Internet applications.

Changes made to the Mac OS X set in the Internet control are effective for all of Mac OS X. However, you should use the Internet pane of System Preferences to change most settings. Some Internet control panel settings have no counterpart in the Internet pane of System Preferences, including those found in the News and Advanced tabs of the Internet control panel. You should use these tabs in the Internet control panel if necessary.
Published Date: Oct 10, 2016

Mac OS X 10.2: Dock and Desktop Icons Out of Position After Quitting Full-Screen Game

After quitting a game that uses the full screen, the Dock and icons on the desktop may be drawn out of position.
This article has been archived and is no longer updated by Apple.

Symptom

Many games use the full computer screen, changing the resolution and color depth during play. After quitting such a game, the monitor returns to the original resolution and color depth settings. In some cases, the Dock and icons on the Desktop may be positioned incorrectly.

Solution

Re-select the proper resolution and color depth settings in the Displays pane of System Preferences, or the Displays menu bar item (if active).
Published Date: Feb 17, 2012

Mac OS X 10.2: "Error =-50" When Connecting to a Windows-Compatible Computer

You may see an "error =-50" alert message when attempting to connect to a Microsoft Windows-compatible computer (PC). This document explains what to do.
This article has been archived and is no longer updated by Apple.

Symptom

When using the Connect to Server dialog, you see an alert box with this message:

> "An error has occurred (error=-50)"

Products affected

- Mac OS X 10.2 or later

Solution

This may indicate that the Windows-compatible computer is not correctly sharing the disk on the network. Follow these steps to resolve the issue on the Windows computer:

Windows 95, 98, or Me

1. Right-click the disk that is to be shared, and select Properties from the contextual menu.
2. Click the Sharing tab.
3. Click "Shared as", and name the selected disk.

Windows 2000 or XP

1. Right-click the disk that is to be shared, and select Properties from the contextual menu.
2. Click the Sharing tab.
3. Click "Share this folder on the network", and name the selected disk.

You should now be able to connect as expected.
Published Date: Oct 10, 2016

Mac OS X 10.2: "SMB Connect Error = -36" Alert When Connecting to a Windows-Compatible Computer

If you see an alert box with the message "SMB Connect Error = -36", this means the Microsoft Window-compatible computer (PC) has refused your connection.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to connect to a Windows-compatible computer, an alert box with this message appears:

> "SMB Connect Error = -36"

Solution

There are many reasons why the connection may be refused by the shared Windows computer.

First, make sure that the share point you are trying to connect to is set up correctly and that other users can log in to the computer.

You should also verify that the user account you are using is set up properly. When you log in to the computer, make sure you are entering your user name and (case-sensitive) password correctly.

If you are connecting to Windows XP, make sure that the Internet Connection Firewall settings are not interfering with your connection. SMB uses ports 137, 138 and 139. These ports should be open on the Windows XP computer.

Additionally, you should review all of the notes in technical document 106471, "**Mac OS X 10.1 or Later: How to Connect to Windows File Sharing (SMB)**".

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Document 17159, "**Locating Vendor Information**", can help you search for a particular vendor's address and phone number.
Published Date: Oct 10, 2016

iChat: Chat windows not named correctly

This article has been archived and is no longer updated by Apple.

Chat windows are labeled as "Instant Message" windows. This document explains how to tell the difference between the two.

Symptom

Chat windows are labeled as "Instant Message with <user_name>".

Solution

An "Instant Message" window is for interaction between two and only two users. You cannot add new participants to an Instant Message window. "Chat" is the term that describes instant messaging between three or more users in the same window. You may notice that Chat windows are labeled as Instant Message windows, even though they are functionally different. To distinguish between the two, click the silhouette button in the message window to open the Participants drawer. If the add participant button (the plus sign) is available, you have a chat window. The add participant button is dimmed (unavailable) in an Instant Message window.

For more information, see technical document 107099, "**iChat: Cannot Add User to Instant Message Window**".

Published Date: Feb 17, 2012

I can‘t add another person to my iChat Instant Message window

Use Chat to talk to two or more people at a time, instead of an Instant Message. This document applies to iChat 1.x and Mac OS X 10.2 or later.

This article has been archived and is no longer updated by Apple.

Start a Chat window to talk to more than one person. A Chat is for "conference" conversations with many people, and Instant Message is for private conversations with a single person.

If you want to be able to add more participants later, then you should start your message as a Chat window instead of as an Instant Message window. To start a Chat, simply choose **New Chat** or **New Chat with Person** from the iChat **File** menu.

Tip: When naming windows, iChat does not distinguish between Instant Message and Chat type windows. To learn how to distinguish them, see "iChat: Chat Windows Not Named Correctly".

Published Date: Oct 10, 2016

iChat: Speak Text Preference Sticks After You Try to Turn It Off

If you use the "Speak text" feature in the Actions preference pane of iChat, it may later stick after you try to turn it off.

This article has been archived and is no longer updated by Apple.

Symptom

iChat continues to speak text even though you tried to turn off that feature.

Solution

These steps are a workaround for turning off "Speak text":

1. Choose Preferences from the iChat menu.
2. Click the Actions icon.
3. Choose the affected event from the Events menu. (The affected event is what is happening when you hear the spoken text.)
4. Deselect the checkbox for "Speak text."
5. Deselect the checkbox for "Enable these actions."
6. Choose Quit iChat from the iChat application menu.
7. Reopen iChat.

You may now reselect "Enable these actions," so that other actions may be used for the affected event. Any time that you select "Speak text" for the affected event, you may have to repeat these steps to turn it off.

Published Date: Feb 17, 2012

Mac OS X 10.2: Inspector (Info) Window Quits Unexpectedly When Changing Name & Extension Field

If you try to change a filename extension (such as ".jpg") in the Inspector version of the Info window, both the Info window and Finder may quit unexpectedly.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to change a filename extension in the Name & Extension field of the Inspector version of the Info window, you experience these symptoms:

- The Finder becomes temporarily unresponsive, and the spinning disc pointer appears.
- A blank alert box appears, sometimes with an OK button.
- The Finder window and Inspector window disappear.
- The Finder restarts.

The computer is unresponsive for only a short period of time, perhaps 30 to 90 seconds, depending on your configuration. The computer functions normally afterwards.

Solution

If you need to change a filename extension, use the original style Info window. This is the default Get Info behavior in Mac OS X 10.2 or later. The symptom should not occur if you are only changing the first portion of the file name, leaving the extension as is.

Additional information

Mac OS X 10.2 offers both the original (Figure 1) and later (Figure 2) styles of what is now, in either case, called the "Info" window. The later style is also known as the Inspector. The appearance of the window types differs slightly.

Figure 1 Original style "Info" window"

Figure 2 Inspector style "Info" window

To learn more about the history of each Info window type, the advantages of each, and how to access the Inspector, see technical document 106148, "**Mac OS X: About Show Info, Get Info, and the Inspector**".
Published Date: Oct 10, 2016

Mac OS X 10.2: Cannot Change Account Settings of Logged-In User Until You Type Password

Admin users can edit the accounts of other Admin users without having to re-enter their passwords, known as reauthentication, but they must reauthenticate to edit their own accounts.
This article has been archived and is no longer updated by Apple.

Symptom

You go to the Accounts preference pane, select your own account, and click Edit User. All settings other than the Picture are unavailable for editing (dimmed). The dimmed settings include the checkboxes for "Allow user to administer this computer" and "All user to log in from Windows".

You may notice that the Lock button, which normally indicates when you need to authenticate, already appears open.

Only after typing your password do the settings become available.

Solution

Type your password in the Current Password field and press Return to make changes.

The appearance of the Lock button is misleading in this instance, and the authentication is inconsistent.
Published Date: Feb 20, 2012

Mac OS X 10.2: Mac Help Viewer Does Not Open From the Keyboard

When using a Mac OS X application such as Mail or the Terminal, the Help key on the keyboard does not open Help Viewer.
This article has been archived and is no longer updated by Apple.

Symptom

When you press the Help key on the keyboard, the mouse pointer turns into a question mark; but the Help Viewer does not open.

Solution

Use the Help menu in the menu bar instead of the Help button.
Published Date: Feb 17, 2012

Mac OS X 10.2: Tab Completion and Aliases in Terminal Differ From Earlier Versions

After updating to Mac OS X 10.2, tcsh uses standard defaults for the shell. To use the customized aliases and completions from version 10.1.5 or earlier, see the tcsh Read Me file.
This article has been archived and is no longer updated by Apple.

Symptom

Tab completion and certain command aliases, such as 'll' and 'l', behave differently with Mac OS X 10.2 than with Mac OS X 10.1.5 or earlier.

Solution

Terminal in Mac OS X 10.2 defaults to industry-standard settings for tcsh, rather than to the highly customized default set used in version 10.1.5 or earlier. This change brings the default behavior of Terminal in line with other UNIX operating systems.

If you want to have some or all of the customized set that was previously used, see:

/usr/share/tcsh/examples/README

Note: If you follow the instructions in the README, you will see an issue in which, when logging into OS X computers via ssh, you see the alert message:

```
TERM_PROGRAM: Undefined variable.
```

You may safely ignore this message.

The error message is caused by a issue in the file /usr/share/tcsh/examples/aliases. If you are familiar and comfortable with editing files as root, you may resolve the error by commenting out these lines as illustrated:

#if ("$TERM_PROGRAM" == "Apple_Terminal") then
alias settermtitle 'echo -n "ESC]2;\\!:1^G"'
#endif
Published Date: Oct 10, 2016

Mac OS 9: Quicken 2001 Does Not Work After Update to CarbonLib 1.6

This document explains how to resolve an issue with Quicken 2001 and CarbonLib 1.6.
This article has been archived and is no longer updated by Apple.

Symptom

After updating to CarbonLib 1.6, Quicken 2001 quits unexpectedly when opened.

Solution

To resolve this issue, do one or both of the following:

- Turn on Virtual Memory in the Memory control panel.
- Upgrade to a Quicken 2002 or later.

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159: "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Feb 18, 2012

Application and folder names unexpectedly change to English (Mac OS X)

This article has been archived and is no longer updated by Apple.

When English is not selected as the preferred language, selecting the Finder preference for "Always show file extensions" causes Mac OS X-installed applications and folders to revert to their English names.

Note: This document applies to Mac OS X 10.2 through 10.3.9.

Symptom

Applications and folder names that formerly appeared in a localized, non-English language change back to English.

Solution

Deselect the Finder preference for "Always show file extensions." Follow these steps:

1. Click the Finder icon in the Dock.
2. Choose Preferences from the Finder menu.
3. Deselect the checkbox for "Always show file extensions."

Published Date: Feb 17, 2012

Mac OS X 10.2: Mail No Longer Checks for Local Mail

If a computer upgraded from Mac OS X 10.1 to 10.2 contains a local (UNIX) mailbox, the Mail application no longer checks for local mail.
This article has been archived and is no longer updated by Apple.

Symptom

Local mailboxes no longer work as expected.

Note: A "local" mailbox is one on a UNIX-style operating system that allows users of the same computer to exchange messages without sending them through an email server. Earlier versions of Mail had an option in Mail Preferences for "UNIX Account" that you could use with this type of local mail. This should not be confused with the On My Mac mailbox.

Solution

For new messages, send to local users as you would anyone else, via an email server.

An option you may consider for preserving this feature is to set up an IMAP server on the computer. IMAP is an included feature of Mac OS X Server 10.2. Though it is also possible to achieve IMAP service on the standard (non-server) version of Mac OS X, Apple does not provide technical support or instruction for this.

Note: If a local mailbox was present at time of the upgrade, it will have been moved to On My Mac. However, the mailbox no longer receives local mail.

Published Date: Oct 10, 2016

Mac OS X 10.2.1: Kernel Panic After Updating to 10.2.1 or Optimizing Mac OS Standard Volume

In a rare situation, a kernel panic may appear during startup after either updating to Mac OS X 10.2.1, or optimizing a Mac OS Standard (HFS) volume using third-party software. This issue is more likely if Mac OS X 10.2 is installed on a UNIX File System (UFS) formatted volume.
This article has been archived and is no longer updated by Apple.

Symptom

A kernel panic message appears during startup after updating to Mac OS X 10.2.1, or optimizing a Mac OS Standard volume. The most recent panic in the "panic.log" file contains the text:

> "kernel loadable modules in backtrace com.apple.BootCache (with dependencies)"

Solution

Use the following workaround:

1. Press and hold the Shift key during startup.
Note: If you cannot start up the computer this way, see technical document 106464, "**Mac OS X: Troubleshooting a Startup Issue**".
2. Click the Finder icon in the Dock.
3. Choose Go To Folder from the Go menu.
4. Type: /var/db
5. Click Go.
6. Locate this file: BootCache.playlist
7. Drag this file to the Trash.
8. Restart

Published Date: Oct 10, 2016

Mac OS X: Cannot see Mail Messages in Mail window

You are unable to see new or existing messages in the Mail window if the Mail window separator bar is set too high.
This article has been archived and is no longer updated by Apple.

Symptom

You cannot see Mail messages.

Solution

Your Mail window pane separator bar may be set too high. Click the bar and drag it down.
Published Date: Feb 17, 2012

Mac OS X 10.2: How to install additional printer drivers from Restore CDs

This article has been archived and is no longer updated by Apple.

Learn how to custom install additional printer drivers after Mac OS X 10.2 has already been installed.

Important: This document is for use with Mac OS X 10.2 Restore CDs. If you are using a (single) Restore DVD disc, stop here and see this article .

If you have already installed Mac OS X 10.2, you may later install the additional printer drivers by following these steps, or by visiting the printer manufacturer's website for a compatible driver:

1. Insert the Mac OS X 10.2 Install Disc 2. See Tips 1 and 2.
2. Double-click AdditionalPrinterDrivers.mpkg. Installer opens.
3. Authenticate by entering your account password when prompted.
4. Select the destination volume that contains Mac OS X 10.2.
5. Click Continue.

The selected software installs.

Tips

1. You do not need to start up from the Install CD.

2. Optionally, you may open a manufacturer-specific package, such as CanonPrinterDrivers.pkg, EpsonPrinterDrivers.pkg, HewlettPackardPrinterDrivers.pkg, or LexmarkPrinterDrivers.pkg.

Published Date: Oct 11, 2016

Mac OS X 10.2: Windows File Sharing (SMB) Computers Beyond Your Subnet Do Not Appear in Connect to Server Dialog

When browsing your local area network (LAN) via SMB, the protocol used for Windows File Sharing, some computers' names appear while others do not. The names that appear are those on your subnet.
This article has been archived and is no longer updated by Apple.

Symptom

In the Connect to Server dialog, you see the names of some but not all Windows File Sharing computers.

Note: A "sharing" computer refers to any computer using any operating system that is capable of sharing via SMB (Mac OS, Microsoft Windows, or other). However, computers experiencing the issue are only those using Mac OS X. SMB client computers using Microsoft Windows operating systems can see computers on other subnets.

Solution

SMB browsing in Mac OS X is limited to discovering workgroups and shared computers on your subnet.

The local subnet is defined as a collection of networked devices that are connected to the same networking media and/or to the same interface on a router. For more information regarding your subnet, see your network administrator.

Note: You may still connect via other normal means. The symptom only means that you cannot browse by name. To see how to connect via IP address or DNS name, see technical document 106471, "**Mac OS X 10.1 or later: How to Connect to Windows File Sharing (SMB)**".
Published Date: Oct 11, 2016

Mac OS X 10.2: Cannot Change Password Hint After Upgrading

After upgrading from Mac OS X 10.1 to Mac OS X 10.2, you cannot change your password hint. This document explains the workaround.
This article has been archived and is no longer updated by Apple.

Symptom

The Password Hint field is dimmed.

Note: This issue only affects Password Hint field. You may still change your actual password.

Solution

1. Open NetInfo Manager (/Applications/Utilities/).
2. Click the lock icon.
3. Enter your account password.
4. Click "users" in the center column.
5. Click your account name in the right-most column.
6. A list of account properties and values appears in the bottom window. Locate the property named "hint," which should appear fourth in the list. Note that the current password hint text appears to the right of hint. Click the hint text.
7. You may now edit the hint text.
8. When finished, choose Save Changes from the Domain menu.
9. A dialog box appears to confirm the change. Click "Update this copy".
10. Quit NetInfo Manager.

Published Date: Feb 17, 2012

Bluetooth: How to Remove Bluetooth Menu Bar Item When No Device Is in Range

This document explains how to remove the Bluetooth menu bar item when no device is in range.

This article has been archived and is no longer updated by Apple.

Press and hold the Command key while dragging the icon from the menu bar to an area below it. Any menu bar item can be removed using this method. (Menu bar items are replaced by opening the corresponding preference pane and reselecting them.)

Published Date: Oct 11, 2016

Mac OS X Server 10.2: "Cannot install due to Errors" over Mac OS X 10.2.1 (Client)

You must use a workaround to install Mac OS X Server 10.2 over a client (non-server) version of Mac OS X 10.2.1. This is because 10.2 server has some earlier component version numbers than 10.2.1 client.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to install Mac OS X Server 10.2, an alert box with this message appears:

> "Cannot Install due to Errors"

Solution

Follow these steps:

1. Start up normally from the target computer's Mac OS X startup disk (not from the Server CD).
2. Log in as an Admin user.
3. Open Terminal (/Applications/Utilities/).

Important: Commands that are typed as one line may appear below as two lines in your Web browser, due to text wrapping. To ensure that you enter them correctly, you may wish to copy and paste the text into Terminal.

4. Type: `sudo mkdir /Library/Receipts/Previous_Receipts`
5. Press Return.
6. Type: `sudo mv /Library/Receipts/French.pkg /Library/Receipts/Previous_Receipts/`
7. Press Return.
8. Type: `sudo mv /Library/Receipts/German.pkg /Library/Receipts/Previous_Receipts/`
9. Press Return.
10. Type: `sudo mv /Library/Receipts/Japanese.pkg /Library/Receipts/Previous_Receipts/`
11. Press Return.
12. Type: `sudo mv /Library/Receipts/BSD.pkg /Library/Receipts/Previous_Receipts/`
13. Press Return.
14. Quit Terminal.

You should now be able to start up from CD to install Mac OS X Server 10.2. This will create new receipts based on the packages in Mac OS X Server 10.2.

Note: If at any point you choose to repair permissions, they may be incorrectly set for certain items due to the new receipts. You should verify that global permissions correction is necessary. If, for example, an executable file is only allowed to be used by the root user, but an Admin user also requires the ability to execute the file, you would only need to adjust permission on that item to grant rights to the Admin user.
Published Date: Oct 11, 2016

Mac OS X 10.2: Windows File Sharing (SMB) Uses NetBIOS Over TCP (NBT)

Mac OS X 10.2 Windows File Sharing (SMB) uses the NetBIOS Over TCP (NBT) protocol.
This article has been archived and is no longer updated by Apple.
NetBIOS-NS (Name Service) uses Port 137 to discover and register the availability of SMB hosts and workgroups.

NetBIOS-DGM (Datagram) Port 138 is used to send and receive datagrams, for example when sending data among members of a workgroup.

NetBIOS-SSN (Session) Port 139 is used to send and receive data during SMB file sharing sessions.

For more information, see technical document 106439, "**"Well Known' TCP and UDP Ports Used by Apple Software Products**".
Published Date: Oct 11, 2016

iChat: Cannot Send a File Until After First Text is Sent

You cannot attach a file to a chat session until you have first sent text to the user.

This article has been archived and is no longer updated by Apple.

Symptom

When you click the paper clip icon you hear a beep. The dialog box that normally appears for selecting the file does not appear.

Solution

Send a text message to the person you're chatting with before clicking the paper clip icon to send a file attachment.

Published Date: Feb 17, 2012

Mac OS X 10.2: Windows File Sharing (SMB) Browsing Limited to Your Subnet

You can only browse for Windows File Sharing (SMB) by computer name on your subnet.
This article has been archived and is no longer updated by Apple.
This is explained in technical document 107117, "**Mac OS X 10.2: Name Does Not Appear on Network for Windows File Sharing (SMB)**".
Published Date: Feb 17, 2012

Mac OS X 10.2: About Using Mac OS 9 Control Panels in the Classic Environment

The table below describes the functions of Mac OS 9 control panels within the Mac OS X 10.2 or later Classic environment.
This article has been archived and is no longer updated by Apple.
Note: The System Preferences application contains any "preference pane" to which the table refers. For the best possible experience, you should use System Preferences in place of certain working Classic control panels. When this is the case, it is stated in the Notes column. The Notes column also describes when a working Classic control panel offers less than its full feature set in the Classic environment.

Mac OS 9 control panels in Classic

Classic Control Panel	Usable?	Notes
Appearance	Yes	• Changes that are not apparent in Classic appear when, if ever, you start the computer up from Mac OS 9. • The desktop picture set in the Desktop preference pane always appears, whether or not you are in Classic. • Sound Track only works in Classic applications. • Changes to the System or Views font only affect the Classic environment and Classic applications.
AppleTalk	No	Use the Network preference pane instead. See technical document 107080, "Mac OS X 10.2: How to Make AppleTalk Active or Inactive in the Classic Environment".
Control Strip	No	None
ColorSync	Yes	Changes affect Classic environment applications only.
Date & Time	Yes	You can change the indicated formats and options, which only affect the Classic environment. You cannot change the date or time here. Use the Date & Time preference pane to set the date and time.
Energy Saver	No	Use the Energy Saver preference pane instead.
Extensions Manager	Yes	These settings are also found in the Advanced portion of the Classic preference pane.
File Sharing	Yes	The control panel may only be used to control Program Linking. File Sharing should be turned on in the Sharing preference pane instead. Note: AppleTalk must be enabled in Mac OS X Network preferences to use Program Linking.
General Controls	Yes	Options that affect only the Classic environment are available. Others are dimmed.
Internet	Yes	You should use the Internet preference pane instead. For more information, see technical document 107093, "Mac OS X 10.2: 'Internet Config. Extension error -677' Alert in Classic".
Keyboard	Yes	You may use this panel only to select the Classic keyboard layout. See the Keyboard preference pane for other options. There are no longer user-defined function keys in Classic.
Launcher	Yes	None
Location Manager	No	None
Memory	No	None
Modem	No	Use the Network preference pane instead.

Monitors	Yes	Use the Displays preference pane instead when possible. Certain Classic applications may require that you set the color depth to 256 colors, or the resolution to 640-by 480-pixels. In this case, you can use the Mac OS 9 Monitors control panel.
Mouse	No	Use the Mouse pane instead.
Multiple Users	No	Use the Accounts pane instead.
Password Security	No	This control panel does not work in the Classic environment. To require a password, open the Accounts pane and deselect "Log in automatically as <user name>".
PowerBook SCSI Disk Mode	No	None
Remote Access	No	Use the Internet Connect application instead.
Software Update	No	Use the Software Update preference pane instead.
Sound	Yes	Use only to select a sound input device for Classic applications. Use the Sound preference pane for other functions.
Startup Disk	No	Use the Startup Disk preference pane instead.
TCP/IP	No	Use the Network preference pane instead.
Trackpad	No	Use the Mouse preference pane instead.
Web Sharing	No	This may appear to work, but you should use the Sharing preference pane instead.
Apple Menu Options	Yes	This only affects recent items listed in Classic Apple. Mac OS X items do not appear in this menu but do appear in the Mac OS X Apple menu. Recent Mac OS X item settings may be configured using the General preference pane.
File Exchange	No	None
File Synchronization	Yes	None
Infrared	No	Use Network preferences (IrDA) instead.
Keychain Access	Yes	Affects Classic environment keychains only.
Numbers	Yes	Affects Classic environment applications only.
QuickTime™ Settings	Yes	Affects Classic environment use of QuickTime only.
Text	Yes	Affects Classic environment applications only.
USB Printer Sharing	Yes	Shares USB printers with Mac OS 9 clients. May be used simultaneously with Mac OS X USB Printer Sharing.

Published Date: Feb 17, 2012

Software Update: Installed updates list is blank

On some computers using Mac OS X 10.2, the Installed Updates list found in the Software Update preference pane is blank (empty), even after a successful installation.

This article has been archived and is no longer updated by Apple.

Symptom

The Installed Updates list in the Software Update preference pane is blank after a successful installation.

This list normally contains the contents of the file /Library/Logs/Software Update.log.

Solution

To resolve this issue, you need to correct the permissions on the folder /Library/Logs/. The steps for doing so are found in technical document 107039, "**Mac OS X 10.2: How to Change Ownership & Permissions Using the Finder**".

You should then set them as follows:

- Owner: system
- Owner Access: Read & Write
- Group: admin
- Group Access: Read & Write
- Others: Read only

Notes

1. If you upgraded from Mac OS X 10.1, the Group Access permissions may be "Read only" instead of "Read Write".

2. To verify whether a software update was installed successfully, look for its receipt in the folder /Library/Receipts/.

3. This issue will occur if a non-Admin user is allowed to install via Software Updates. Do not allow non-Admin users to install via Software Update if this issue is undesirable.

Published Date: Feb 17, 2012

Windows File Sharing: What Is a "Workgroup?"

This document defines a "workgroup" as it relates to Windows File Sharing.

This article has been archived and is no longer updated by Apple.

Mac OS X 10.2 includes Windows File Sharing. As part of its operation, it can specify a **workgroup**. A workgroup is to Windows File Sharing what an AppleTalk zone is to AppleTalk. It is a way network administrators can group related computers into smaller subgroups with meaningful names.

For example, all computers in the Sales department could have a workgroup of "Sales". All of the computers in the sixth grade classrooms could have a workgroup of "Sixth".

The default workgroup name is "WORKGROUP".

To change default workgroup that the server uses, use the Directory Access utility. See technical document 107137, "**Mac OS X 10.2: How to Change the Windows File Sharing Workgroup**".

Published Date: Feb 17, 2012

Mac OS X 10.2: Internet Sharing Refers to Missing "Option Below"

Under certain conditions, the Internet Sharing pane may tell you to "select an option below" when there is none.
This article has been archived and is no longer updated by Apple.

Symptom

The Internet Sharing pane says "select an option below," but there are no options.

Solution

This occurs when only one network port is enabled, and that port is your AirPort card or modem. This is because you cannot simultaneously connect to the Internet and receive client connections (to be shared to) over either one of these ports. You must share between them, meaning at least two ports must be active. Ethernet is the only port over which you can simultaneously make and share an Internet connection.

1. Choose System Preferences from the Apple menu.
2. Choose Network from the View menu.
3. Choose Network Port Configurations from the Show pop-up menu.
4. Select the checkbox of each port configuration you wish to use.
5. Drag the port used for the active Internet connection to the top of the port list.
6. Click Apply Now.
7. Choose Sharing from the Show menu.
8. Click the Internet tab.

You should now have options available. The actual number of checkboxes will depend on the hardware configuration of the computer.
Published Date: Feb 17, 2012

Mac OS X: About the Mac OS X 10.2.2 Update

This software updates Mac OS X 10.2.1 to version 10.2.2.
This article has been archived and is no longer updated by Apple.

Important: Read Before Installing

1. An Admin user password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, then follow these steps: Choose System Preferences from the Apple menu. Choose Accounts from the View menu. Select an Admin user and click Edit User. Type your current password, and press Return. Change the password, and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.

Installation

There are two ways to update to Mac OS X 10.2.2.

I. Automatic Software Update Installation

You may have been referred to this document by Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

II. Standalone Installers

An installer is also available from Apple Software Downloads (http://www.apple.com/swupdates/).

Two versions of the installer are available. One is for updating version 10.2.1 to 10.2.2, the other 10.2 to 10.2.2 (a "Combo" update). This document describes the former. If you need to use the Combo update, see technical document 107141, "**Mac OS X: About the Mac OS X 10.2.2 Update (Combo)**".

Enhancements Delivered with this update

This update delivers many enhancements as outlined below.

Digital Hub and Peripheral Device Enhancements

- Improves playback of large media files and peripheral device file copying.
- Resolves a rare situation in which an inadvertently-ejected CD does not become available to the file system when reinserted and applications that accessed the disc cannot be quit.
- Addresses an issue in which an enhanced CD's data and audio sessions do not appear as expected on the desktop when using iTunes and inserting the disc more than once.
- Addresses a formatting issue that could occur when printing or previewing some TIFF documents.
- Addresses an issue in which ColorSync settings for some third-party displays are not retained after restarting or logging out.
- Addresses an issue when printing more than one copy of a file to a postscript printer from Adobe Photoshop 7.0.
- Improves compatibility with HP 4MV printers when printing over an Ethernet network.
- Includes drivers for additional third-party disc burners, including: LaCie d2 48x24x48x, Sony CRX-820E, Toshiba SD-R2212 and SD-R1202, Pioneer DVR-105, and Yamaha CDW-F1 44x24x44x models.

Networking and Modem Enhancements

- Windows File Sharing (SMB) shared volumes may now be browsed by their user-assigned name.
- Resolves an issue in which an incorrect "Change Password Failed" alert may appear when changing a Mac OS X 10.2 Server client's password via AFP.
- Addresses an issue in which some internal Apple modems may fail to respond, displaying a "Could not open the communication device" alert.
- Addresses an issue in which no sound is produced by some internal Apple modems until several seconds after making a connection.

- Resolves an issue in which some internal Apple modems fail to respond when connecting to the Internet.
- Alerts and warnings no longer appear when you cancel a connection to your iDisk in the connection dialog.
- Addresses a startup issue that could occur if an LDAP server designated in Directory Access is not available.
- Addresses a data loss issue that could occur when copying a file whose filename ends with "#02," or other hexadecimal number, via AFP.
- Available disk space on an iDisk is updated more quickly after deleting files.
- Addresses an issue in which an iDisk would appear with an inaccurate 1 GB capacity and 1023 MB available.
- Addresses some issues that could cause a "error -36" alert when copying files to an iDisk.

Address Book and Mail Enhancements

- Resolves an issue in which Address Book could become unresponsive when using the Large Type menu and switching between applications.
- Address Book can now better import groups from prior versions of Address Book.
- Resolves a potential issue when transferring vCards from Address Book to a mobile phone via Bluetooth.
- Allows address information to be imported when dragging vCards to Address Book that were created with Address Book from any version of Mac OS X 10.1.
- Corrects Address Book address format for Australian entries.
- Improves responsiveness when switching in and out of edit mode in the Address Book.
- Address Book entries without a name included now appear in the All group list with the email address as the name, instead of "<No Name>".
- Addresses the rare issue in which Mail may unexpectedly quit when replying to a message.
- Improves the responsiveness of the Mail application's date column and thread highlighting feature.
- Improves the reliability of transitioning a Mac OS X 10.1.5 "Address Book.addressbook" file to an Address Book for Mac OS X 10.2 format.

Application Enhancements

- Improves compatibility for Microsoft PowerPoint presentations that use animations.
- Addresses a potential Disk Copy volume imaging permissions issue that could affect non-Admin users.
- Applications installed with Mac OS X (Mail, Address Book, and so forth), are properly updated--even if you have dragged them from the Applications folder to another location.
- Addresses a display issue that may occur when Command-clicking a URL in some third-party applications, including BBEdit and Mailsmith.
- Addresses a situation in which the menu bar and Dock are not shown until you click the desktop is clicked after quitting a third-party game application.
- Addresses an issue in which some PDF files created with Mac OS X do not open as expected with Adobe Acrobat Reader 5.
- Reduces occurrences of "missing text" when browsing some webpages.
- Improves compatibility for FAXstf when a fax is being sent while the computer is restarted, shut down, or entering sleep mode.
- Disk Copy no longer requires multiple authentications when creating New Image from Device.
- Resolves an issue that could occur when selecting the Address Book card of an AIM Buddy in iChat.

Other Enhancements

- Improves security when using a read-write disk image volume in which "Ignore ownership on this volume" has been deselected.
- Addresses an issue in which Software Update notifications are turned off when upgrading from Mac OS X 10.1 to Mac OS X 10.2.
- Addresses an issue in which, after upgrading to Mac OS X 10.2, an unexpected value in a user's com.apple.LaunchServices.plist file could prevent proper startup.
- Addresses a potential kernel panic situation when using three video cards and more than 512 MB of RAM.
- Addresses a potential issue in which an unauthorized user could log in as a deleted user.
- Improves the Find function of the Finder by no longer finding items in invisible folders.
- Reduces the time required for switching between Sherlock channels when using a low-bandwidth connection
- Sherlock channels may now be saved as a file.
- Allows automatic login to work as expected following an Archive and Install.
- Improves time needed to wake some portable computers.
- Addresses a potential loss of video when waking some PowerBook computers from sleep after using DVD Player.
- Addresses a potential issue in which the computer does not respond when quitting DVD Player on some portable computers.
- Includes Apache version 1.3.27.
- Addresses a potential security issue in which access to system daemons could be blocked when RPC-based services are enabled.

Published Date: Oct 11, 2016

Mac OS X: About the Mac OS X 10.2.2 Update (Combo)

This software updates Mac OS X 10.2 to version 10.2.2. It is a "combo" update that combines enhancements delivered with versions 10.2.1 and 10.2.2.
This article has been archived and is no longer updated by Apple.

Important: Read Before Installing

1. An Admin user password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, then follow these steps: Choose System Preferences from the Apple menu. Choose Users from the View menu. Select an Admin user and click Edit User. Click the Password tab. Change the password and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.

Installation

There are two ways to update to Mac OS X 10.2.2.

I. Automatic Software Update Installation

You may have been referred to this document by Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

II. Standalone Installers

An installer is also available from Apple Software Downloads (http://www.apple.com/swupdates/).

Two versions of the installer are available. One is for updating version 10.2.1 to 10.2.2, the other 10.2 to 10.2.2 (a "Combo" update). This document describes the latter. If you already have updated to 10.2.1, see technical document 107140, "**Mac OS X: About the Mac OS X 10.2.2 Update**".

Enhancements Delivered with this update

Many enhancements are delivered with this update. Because this is a combo update, it includes those delivered with both Mac OS X 10.2.1 and Mac OS X 10.2.2. These enhancements are listed individually in these two technical documents:

107036: "**Mac OS X: About the Mac OS X 10.2.1 Update**"
107140: "**Mac OS X: About the Mac OS X 10.2.2 Update**"
Published Date: Oct 11, 2016

Mac OS X Server: About the Mac OS X Server 10.2.2 Update

This software updates Mac OS X Server 10.2.1 to 10.2.2 and addresses certain issues.
This article has been archived and is no longer updated by Apple.

Important: Read Before Installing

1. An Admin user password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, then follow these steps: Choose System Preferences from the Apple menu. Choose Users from the View menu. Select an Admin user and click Edit User. Click the Password tab. Change the password and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.

Installation

There are two ways to update to Mac OS X Server 10.2.2.

I. Automatic Software Update Installation

You may have been referred to this document by Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

Note: If you need to do this remotely, see technical document 107058, "**Xserve: How to Remotely Install Software Using the Software Update Command-Line Tool**".

II. Standalone Installer

An installer is also available from Apple Software Downloads (http://www.apple.com/swupdates/).

Two versions of the installer are available. One is for updating version 10.2.1 to 10.2.2, the other 10.2 to 10.2.2 (a "Combo" update). This document describes the former. If you need to use the Combo update, see technical document 107143, "**Mac OS X Server: About the Mac OS X Server 10.2.2 Update (Combo)**".

Enhancements delivered with this update

This update delivers many enhancements as outlined below.

File Services

- Includes a tool that allows you to create user home folders either manually or via a cron job.
- User can set new passwords when they log in by to Macintosh Manager.
- You can use characters such as "#02" in file names. See technical document 107144, "**Mac OS X 10.2: Data Loss When Copying a File Whose Filename Ends With '#02' or Other Hexadecimal Number via Apple File Service**".
- The interface for automatically connecting to server volumes is clearer.
- Static mounts allow paths containing a trailing solidus, or "slash".

File System

Introduces a journaling feature to the Mac OS Extended (HFS Plus) file system for Mac OS X. Search the Knowledge Base on "journaling" to find more information.

Macintosh Manager 2.2.2

- Mac OS 8.6 clients have their Documents path set to ~/Documents.
- Macintosh Manager 2.2.2 server/client work with the Password Server.
- Macintosh Manager 2.2.2 clients are able to connect to the server when the change password option is selected.

Mail Services

- The Mail Server counts mail messages against the mail database.

Network Services

- DHCP no longer displays client licenses/leases with TTL=0.

Open Directory / Password Server

- Password Server no longer requires DNS.
- Directory Setup allows you to specify the scope of the search.
- The LDAPv3 plug-in allows case insensitive attribute and record type mappings.
- The LDAPv3 plug-in allows mapping data type attributes to literal strings using '#' prefix.
- Faster startups at "network file system" when LDAP is using a custom search policy.
- Client times out if LDAP server is not available. See technical document 107147, "Mac OS X 10.2: May Not Start Up If LDAP Server Designated in Directory Access Is Not Available".
- LDAPv3 plug-in "rejects" error using a DHCP LDAP server now creates error log entry.

Printing Services

- Includes PAP queue auto-setup from Mac OS X clients.

Web Services

- Updated Apache2 to version 2.0.42.
- Improved Search Function.
- Updated SquirrelMail to version 1.2.8.
- SquirrelMail: Changed location of installed config files.
- Updated Apache to version 1.3.27.

Workgroup Manager

- Can import users when the server is bound to a parent NetInfo domain.
- Imported users adopt preset settings.
- Group Documents folder is placed in a Managed User's Dock.
- The User accounts tabs allow multiple selections with "Shift" and "Command" keys.
- New users use Password Server by default if it is enabled.
- Groups folder within the Groups share-point created automatically overnight.

Other Enhancements

- Corrects the issue that displayed password hints when the "Show password hint" option was disabled.
- The "Users can change their passwords" setting has been enabled in order for Macintosh Manager users to use the Password Server.
- Items added to Login Items automatically open.

Published Date: Oct 11, 2016

Mac OS X Server: About the Mac OS X Server 10.2.2 Update (Combo)

This software updates Mac OS X Server 10.2 to 10.2.2, and it addresses certain issues. It is a "combo" update that combines enhancements delivered with versions 10.2.1 and 10.2.2.
This article has been archived and is no longer updated by Apple.

Important: Read Before Installing

1. An Admin user password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, then follow these steps: Choose System Preferences from the Apple menu. Choose Users from the View menu. Select an Admin user and click Edit User. Click the Password tab. Change the password and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.

Installation

There are two ways to update to Mac OS X Server 10.2.2.

I. Automatic Software Update Installation

You may have been referred to this document by Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

Note: If you need to do this remotely, see technical document 107058, "**Xserve: How to Remotely Install Software Using the Software Update Command-Line Tool**".

II. Standalone Installer

An installer is also available from Apple Software Downloads (http://www.apple.com/swupdates/).

Two versions of the installer are available. One is for updating version 10.2.1 to 10.2.2, the other 10.2 to 10.2.2 (a "Combo" update). This document describes the latter. If you have already updated to 10.2.1, see technical document 107143, "**Mac OS X Server: About the Mac OS X Server 10.2.2 Update**".

Enhancements Delivered with this update

Many enhancements are delivered with this update. Because this is a combo update, it includes those delivered with both Mac OS X Server 10.2.1 and Mac OS X Server 10.2.2. These enhancements are listed individually in these two technical documents:

107038: "**Mac OS X Server: About the Mac OS X Server 10.2.1 Update**"
107142: "**Mac OS X Server: About the Mac OS X Server 10.2.2 Update**"
Published Date: Oct 11, 2016

Mac OS X 10.2: Data Loss When Copying a File Whose Filename Ends With "#02" or Other Hexadecimal Number via Apple File Service

A kernel panic or data loss may occur if you copy a file whose filename ends with "#02" or other hexadecimal number via any Apple file service. This affects Mac OS X 10.2 clients copying to any version of any Apple file service, which may be served by Mac OS, or other operating systems.
This article has been archived and is no longer updated by Apple.

Symptom

When copying a file whose filename ends in a hexadecimal number with a leading pound sign (see "affected file names" below), either the client experiences a kernel panic or data loss occurs on the server. At the client, this occurs immediately after starting the copy, such as when you drag the file icon onto the server icon.

Data loss occurs at the server when you click Replace in response to an alert box that says the filename already exists. You may at this point see an "error" alert message. Files and folders on the server are then deleted.

Note: When a kernel panic occurs, you may see text stating that "You need to restart your computer," or it may take other forms. For help identifying a kernel panic, see technical document 106227, "**Mac OS X: What is a Kernel Panic?**"

"Server" in this context refers to any computer offering an affected service, whether or not its operating system is sold and marketed as a "server". Mac OS 8.6, for example, is a server when file sharing is turned on.

Affected file names

You will **always** see this issue with files whose filenames end specifically in **#02**, such as:

example_name#02

You **may or may not** see the issue with any filename ending in a pound-led hexadecimal number (file_name#<hex_number>). Examples look like:

example_name#10ade
example_name#123
example_name#dead

Note: Hexadecimal (base-16) numbers are any created from a set of these characters:

abcdef1234567890

This means that, by appearance alone, a hexadecimal number is not always distinguishable from a regular decimal (base-10) number, as in "example_name#123".

Services affected

This affects all versions of Apple file service, whether served by Mac OS or another operating system. This includes but is not limited to services known by these names:

- AppleShare, AppleShare IP
- File Sharing, Personal File Sharing
- Apple File Service
- Apple Filing Protocol (AFP)
- Windows 2000 Services for Macintosh
- Novell Native File Access for Macintosh

Solution

This issue is best prevented by updating to Mac OS X 10.2.2 or later, in which it is resolved. If you cannot update immediately, you should review this information:

Do not use filenames that end in **#<hex number>**, where "<hex number>" may be any hexadecimal number as described in the "Affected file names" section above. The safest course of action is not to use any pound signs in file names at all.

If a dialog asks if you want to replace another file appears when copying such a file, click Stop. Rename the file so that it does not end in #<hex number>. Then you may safely copy the file.

This document will be updated when more information is available.

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Feb 17, 2012

Apple Remote Desktop: How to Install on a Remote Mac OS X 10.2 Server

This document describes how to install Apple Remote Desktop when your server is at a remote location that you cannot physically access, such as an Internet service provider co-location facility. These steps are for Mac OS X Server 10.2 or later.
This article has been archived and is no longer updated by Apple.
This process uses the Terminal and root access to the server. This document is intended for those who feel comfortable using the Terminal. Some notes will be included throughout the document to explain what is happening.

1. Insert the Apple Remote Desktop Installation CD into the computer you use to connect to the server for administration.
2. In the Finder, open the CD.
3. On the CD, navigate to the folder /English/Mac OS X/Packages. Here you should find the three required ARD packages, which are:

RDClient.pkg
RDDocs.pkg
RDPref10_2.pkg

4. Open the Terminal (/Applications/Utilities/).

Note: The following Steps 5 to 9 are used to securely copy the packages to the server.

5. Type: `scp -r`
Note: There is a space following the "r" in "`-r `". You must type this space for the command to be recognized. Do not press Return yet.
6. From the Finder, drag the three required packages into the Terminal window. This should automatically complete the files' pathnames for you. Do not press Return yet.
7. Type: `root@<server_address>:/tmp/`
Note: Here and in Step 10 you replace "`<server_address>`" with the actual IP address or DNS name of the server, so that it might look like "`root@myserver.example.com:/tmp/`" or "`root@10.0.1.2:/tmp/`", for example. Be sure that there is a space between the last file's pathname and "root@<server_address>:/tmp/". Your typed command should now look similar to:

```
[myhost:~] admin% scp -r /Volumes/Apple\\ Remote\\ Desktop\\ 1.1/English/Mac\\ OS\\
X/Packages/RDClient.pkg /Volumes/Apple\\ Remote\\ Desktop\\ 1.1/English/Mac\\ OS\\ X/Packages/RDDocs.pkg
/Volumes/Apple\\ Remote\\ Desktop\\ 1.1/English/Mac\\ OS\\ X/Packages/RDPref10_2.pkg
root@<server_address>:/tmp/
```

8. Press Return.
Note: If this is your first ssh connection to this server, you will be prompted for authorization. If so, type "yes" and press Return to continue.
9. You are prompted to enter the password for the root user of the remote server. Unless it has been deliberately changed, this is the password created for the original Admin user account during initial server setup. Enter the password, and press Return. The copy will start and, you'll see output that starts and ends, respectively, with these two lines:

BundleVersions.plist 100% |*****************************| 1454 00:00
...
software_version 100% |*****************************| 38 00:00

Note: In the remaining steps, you will connect to the server to install the three packages using the command line installer tool that is included with Mac OS X 10.2 and later.

10. In the Terminal type: `ssh root@<server_address>`
11. Enter the root user's password and press return.
12. Type: `cd /tmp`
13. Press Return. Your prompt should change to: `[server:/tmp] root#`
14. Type: `ls -l`
15. Press Return. You should see the three packages, possibly along with other items. The output should include:

```
total 0
drwxr-xr-x  3 root  wheel  102 Sep 27 17:06 RDClient.pkg
drwxr-xr-x  3 root  wheel  102 Sep 27 17:06 RDDocs.pkg
drwxr-xr-x  3 root  wheel  102 Sep 27 17:06 RDPref10_2.pkg
```

16. Execute the following three commands by typing and pressing Return at the end of each. You should see text messaging describing the process after executing the commands.

```
installer -pkg RDClient.pkg -target /
installer -pkg RDDocs.pkg -target /
installer -pkg RDPref10_2.pkg -target /
```

Note: If your Apple Remote Desktop Install disc is for version 1.0, then you should now take the additional step of updating your software. Execute these two commands by typing and pressing Return at the end of each. After the executing the first, you should see text indicating that the ARD update was found.

```
softwareupdate
softwareupdate 3214
```

17. Disconnect from the remote server by typing "`exit`" and pressing Return.

The installation should be complete. For actual configuration of the software, see technical document 106981, "**Apple Remote Desktop: How to Remotely Configure on Mac OS X Server 10.2**".
Published Date: Oct 11, 2016

Mac OS X Server 10.2: Differences Between "Local" Home Directories in Server Admin and Workgroup Manager

Both Server Admin and Workgroup Manager have a Local option for Home directories. They are not the same.
This article has been archived and is no longer updated by Apple.
In Server Admin, the Local option was used to indicate that the user has a Home directory that resides on the server that Server Admin is being used to administer. The correct share point was selected, and the user's Home directory was accessible by other clients that were bound to the same Directory Service, typically NetInfo or LDAP.

In Workgroup Manager, the Local option is used to indicate the Home directory is local to the server. It is not available to clients bound to the same directory service. This is for users that log in using the local console for the server.

To achieve the same result as Server Admin's definition of Local in Workgroup Manager, the Network option must be used. For more detailed information, refer to pages 161 through 164 of the Mac OS X Server Administrator's Guide. It is located on the server in /Library/Documents/MacOSXServer.
Published Date: Oct 11, 2016

Mac OS X 10.2: May Not Start Up If LDAP Server Designated in Directory Access Is Not Available

If Mac OS X is set up to access an LDAP server for directory services, it may not finish starting up completely when that server is not available. This article has been archived and is no longer updated by Apple.

Symptom

The computer appears to start up normally, but stops starting up near the end of the progress bar. If the computer is already started up, it may slow down or become unresponsive for extended periods of time.

Solution

Update to Mac OS X 10.2.2 or later for best results. For earlier versions, or if the issue persists, the steps below may be used to reach a resolution.

Click here for Mac OS X client.
Click here for Mac OS X Server.

I. Steps for Mac OS X

If the computer is already started up:

1. Open Directory Access.
2. If necessary, click the padlock and authenticate.
3. Deselect the checkbox for LDAP services.
4. Click Apply.

If the computer will not start up:

1. Start up into single-user mode by pressing and holding the Command-S key combination immediately after the system startup sound. Press the keys until you see text on the screen.
2. Check the volume with fsck. For instructions, see technical document **106214**.
3. After using fsck, type: `mount -uw /`
4. Press Return.
5. Type: `cd /Library/Preferences`
6. Press Return.
7. Type: `mv DirectoryService DirectoryService.old`
8. Press Return.
9. Type: `reboot`
10. Press Return.

Note: This will set all Directory Access configurations back to their default values."

II. Steps for Mac OS X Server

1. Start up into single-user mode by holding the Command-S key combination immediately after the system startup sound. Press the keys until you see text on the screen.
2. Check the volume with fsck. For instructions, see technical document **106214**.
3. After using fsck, type: `mount -uw /`
4. Press Return.
5. Type: `cd /Library/Preferences`
6. Press Return.
7. Type: `mkdir -m 775 DirectoryService.old`
8. Press Return.
9. Type: `mv DirectoryService/* DirectoryService.old`
10. Press Return.
11. Type: `reboot`
12. Press Return.

Note: The "*" character in step 9 is vital, as it prevents the deletion of important invisible files. If you followed these instructions incorrectly and

accidentally deleted the .DSTCPListening file, this command will create a new one:

```
sudo touch /Library/Preferences/DirectoryService/.DSTCPListening
```

Published Date: Feb 17, 2012

Mac OS X 10.2: How to Save Attachments in Mail

This document describes how to open and save attachments from within a Mail message.
This article has been archived and is no longer updated by Apple.
To save an attachment from an email message, select the message and choose Save Attachments from the File menu. You may also use the methods below.

If the attachment is a file or folder:

1. Drag the icon of the file or folder from the Mail message to your desktop, or another Finder window.
2. Click the enclosure name in the Mail message to reveal the location of the enclosure in the Finder, then use the Finder to drag the file to a different location.
3. If the icon cannot be dragged from the Mail message, Control-click the icon in the Mail message. A contextual menu appears with options that include saving the enclosure to a different location.

If the enclosure is an image:

1. Double-click the image to open it in the default application, such as Preview.
2. Control-click the image to open the contextual menu, which includes options such as Open Attachment, Save Attachment or Save to Downloads Directory (in most cases the Desktop).

Note: If you are unable to open or select the enclosure, the enclosure may have been embedded in the Mail message as an inline graphic. If this is the case, you can forward the mail to yourself so that Mail can re-attach the image.
Published Date: Feb 17, 2012

Apple Remote Desktop: Wake Feature Works for Ethernet Clients Only

The Wake Up command in the Manage menu works only for wired Ethernet-connected client computers. You cannot wake up wireless Ethernet clients using ARD.

This article has been archived and is no longer updated by Apple.

Symptom

A wireless client in the computer list appears as Unavailable when it is asleep.

Solution

As a workaround, you may use separate to-sleep times for the system and the display on the client computer. Assign a longer value to the system, and a shorter value to the display.

Published Date: Oct 11, 2016

Mac OS X 10.2: Improves Classic Compatibility With USB Devices That Use Mac OS 9 Input Sprockets

The Classic environment of Mac OS X 10.2 allows some use of Mac OS 9 USB Input Sprockets.

This article has been archived and is no longer updated by Apple.

Mac OS X 10.2 can use Mac OS 9 USB Input Sprockets in the Classic environment. Some functions of USB input devices that Mac OS X recognizes are available to Classic environment applications. A Classic game that implements Input Sprockets, for example, may use a USB joystick.

Advanced features of the USB input device may not be available in the Classic environment.

Use a Mac OS X-native (Carbon or Cocoa) version of the software if available, or contact the manufacturer of the USB device for additional compatibility information.

Published Date: Feb 17, 2012

Mac OS X 10.2: About Using Kerberos

This document provides information for using Kerberos with Mac OS X 10.2.1 and Mac OS X Server 10.2.1.
This article has been archived and is no longer updated by Apple.
Kerberos is network authentication protocol developed at MIT to provide secure authentication and communication over open networks. In addition to the standard authentication method, Mac OS X Server uses the Generic Security Services Application Programming Interface (GSSAPI) authentication protocol to implement Kerberos v.5.

For more information on Kerberos

For general information on Kerberos, see MIT's Kerberos Web site (http://web.mit.edu/kerberos/www/).

For Macintosh specific information, see MIT's Kerberos for Macintosh Web site (http://web.mit.edu/macdev/Development/MITKerberos/Common/Documentation/index.html).

Setting up to use a Kerberos server

You must create and deploy an edu.mit.Kerberos configuration file. It needs to be located in the /Library/Preferences/ folder of every Mac OS X and Mac OS X Server computer that you want to authenticate via Kerberos. This file is not sensitive, so it can be placed on a guest-accessible volume.

For more information on the configuration file, see MIT's Kerberos for Macintosh web site (http://web.mit.edu/macdev/Development/MITKerberos/Common/Documentation/preferences-osx.html).

You may also consider installing the MIT Mac OS X 10.2 Kerberos Extras, as it will place an example edu.mit.Kerberos file in the /Library/Preferences/ folder.

If you are going to use a keytab file, create a host principal on the KDC and then copy a keytab file from the KDC to /etc/krb5.keytab on the client computer.

Enabling Kerberos Authentication for Login Window

For instructions on how to enable Kerberos Authentication for the Mac OS X 10.2 and Mac OS X Server 10.2 Login Window, see technical document 107154, "**Mac OS X 10.2: How to Enable Kerberos Authentication for Login Window**".

Setting up Mac OS X Server 10.2 services for use with Kerberos

For instructions on how to configure Mac OS X Server 10.2 services for use with Kerberos, see technical document 107155, "**Mac OS X 10.2: How to Integrate Services With Kerberos**".

When Kerberos Extras are required

If you plan on using Kerberized Carbon CFM applications, you need to install the MIT Mac OS X 10.2 Kerberos Extras.

For more information, see the MIT Mac OS X Kerberos Extras Web site (http://web.mit.edu/macdev/Development/MITKerberos/Common/Documentation/osx-kerberos-extras.html).

Note: If you installed the MIT Kerberos Extras on existing Mac OS X 10.1 Kerberos clients and have now upgrading to Mac OS X 10.2, you will encounter some unexpected behavior with Kerberized Carbon CFM applications. For more information, see technical document 107156, "**Mac OS X: Issues With Kerberized Carbon CFM Applications After Upgrading to Mac OS X 10.2**". Once you have updated to Mac OS X 10.2.1, you should install the MIT Mac OS X 10.2 Kerberos Extras.

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Related documents

TA20986_Mac_OS_X_About_Using_Kerberos.pdf

25540: "**Mac OS X 10.2.1 or Later: Kerberos Password Does Not Unlock Screen Effects**"

Published Date: Oct 11, 2016

Mac OS X: Enabling Kerberos authentication for Login Window

Do you need to learn how to set up Mac OS X and Mac OS X Server for Kerberos Authentication when logging in?
This article has been archived and is no longer updated by Apple.
Instead of following the instructions on page 200 of the "Mac OS X Server Administrator's Guide," follow these steps on each Mac OS X client computer where you want to use Kerberos authentication. This document applies to Mac OS X (client) 10.2.1 or later and Mac OS X Server versions 10.2.1 to 10.2.8. The configuration sets outlined in this document are not required with Mac OS X Server 10.3, because the configuration is completely automated when using Open Directory.

Setting up to use a Kerberos server

This document assumes that you have already have created and deployed the appropriate files:

- edu.mit.Kerberos
- krb5.keytab files.

For instructions on how to enable Kerberos Authentication for the Mac OS X 10.2 and Mac OS X Server 10.2, see Information for Using Kerberos.

Post-Login Kerberos Authentication

To configure the Kerberos login plug-in to obtain a Kerberos credential as a consequence of logging in, change the following lines in /etc/authorization:

Change:

```
        <key>system.login.done</key>
        <dict>
                <key>eval</key>
                <string>switch_to_user</string>
        </dict>
<!-- krb5auth:login can be used to do kerberos authentication as a
     side-effect of logging in.  Local username/password will be used.
  -->
```

to:

```
<!-- Do kerberos authentication as a side-effect of logging in.  Local username/password will be used.
  -->
        <key>system.login.done</key>
        <dict>
                <key>eval</key>
                <string>switch_to_user,krb5auth:login</string>
        </dict>
```

Notes

1. You are logging into a local user account before attempting to obtain a Kerberos ticket for a matching name and password. Because of this matching requirement, the account name and password must exactly match those stored on the Kerberos server.
2. The krb5auth:login step added to system.login.done is still available for 10.3. If you just want to try to get a kerberos ticket when logging in but not have it used to authenticate you, you can add it to system.login.done:

```
    <key>system.login.done</key>
    <dict>
            <key>class</key>
            <string>evaluate-mechanisms</string>
            <key>comment</key>
            <string>krb5auth:login can be used to do kerberos authentication as a side-effect of logging in.  Local username/password will be used.</string>
            <key>mechanisms</key>

             <array>
                     <string>switch_to_user</string>
                    <string>builtin:krb5login</string>
             </array>
    </dict>
```

Kerberos Authentication Required for Login

I. Simpler Configuration

To configure the Kerberos login plug-in to require that a user have a valid Kerberos account prior to logging in, change the following lines in /etc/authorization :

Change:

```
<!-- Login mechanism based rule.  Not for general use, yet. -->
        <key>system.login.console</key>
        <dict>

                <key>eval</key>
                <string>loginwindow_builtin:login,authinternal,loginwindow_builtin:success</string>
<!-- krb5auth:authenticate can be used to hinge local authentication on a successful kerberos authentication. -->
        </dict>
```

To:

```
<!-- Local authentication requires a successful kerberos authentication. -->
        <key>system.login.console</key>
        <dict>
                <key>eval</key>
                <string>loginwindow_builtin:login,krb5auth:authnoverify,loginwindow_builtin:success</string>
        </dict>
```

Notes

1. This configuration does not require an /etc/krb5.keytab file, but it is less secure than the following implementation.
2. The format of the authorization file has changed for 10.3.

system.login.console looks like this:

```
<key>system.login.console</key>
<dict>
        <key>class</key>
        <string>evaluate-mechanisms</string>
        <key>comment</key>
        <string>Login mechanism based rule.  Not for general use, yet. krb5auth:authenticate can be used to hinge local authentication on a successful kerberos authentication.</st
        <key>mechanisms</key>
        <array>
                <string>loginwindow_builtin:login</string>
                <string>authinternal</string>
                <string>loginwindow_builtin:success</string>
                <string>builtin:getuserinfo</string>
```

```
                <string>builtin:krb5auth</string>
        </array>
</dict>
```

In the passage above, "<string>authinternal</string>" is the default. It may be replaced with either of these two strings:

String	Action
<string>builtin:krb5authenticate</string>	do kerberos authentication, and verify the KDC
<string>builtin:krb5authnoverify</string>	(For Mac OS X 10.3) do kerberos authentication and skip verifying the KDC
<string>builtin:krb5authnoverify,privileged</string>	(For Mac OS X 10.4) do kerberos authentication and skip verifying the KDC

Nothing else is required for 10.3 and later. The system.login.done step is not required in these cases.

II. More Secure Configuration

This configures the Kerberos login plug-in to require that a user have a valid Kerberos account prior to logging in.

1. Change the following lines in /etc/authorization :

```
<!-- Login mechanism based rule.  Not for general use, yet.
  -->
        <key>system.login.console</key>
        <dict>

                <key>eval</key>
                <string>loginwindow_builtin:login,authinternal,loginwindow_builtin:success</string>
<!-- krb5auth:authenticate can be used to hinge local authentication
     on a successful kerberos authentication.
  -->
        </dict>
```

   To:

```
<!-- Local authentication requires a successful kerberos authentication.
  -->
        <key>system.login.console</key>
        <dict>
                <key>eval</key>
                <string>loginwindow_builtin:login,krb5auth:authenticate,loginwindow_builtin:success</string>
        </dict>
```

2. Create a host principal on the KDC, if you have not already done so. The string "host/mymachine.example.com" is an example of a host principal.
3. Copy a keytab file from the KDC to /etc/krb5.keytab on the client computer, if you have not already done so.

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Published Date: Oct 11, 2016

Mac OS X Server 10.2: How to Integrate Services With Kerberos

This document defines which Mac OS X Server Services support Kerberos Authentication and explains how to enable them.
This article has been archived and is no longer updated by Apple.
Note: To utilize the following configuration information you must update your computer to Mac OS X Server 10.2.1 or later.

These services support Kerberos Authentication:

- Apple Mail server (AMS)
- Apple File Protocol server (AFP)
- Apple FTP server
- Telnet
- Macintosh Manager Client Logins

Note: This document assumes that you have already have created and deployed the appropriate "edu.mit.Kerberos" and "krb5.keytab" files. For information on this and other basic setup, see these technical documents:

107153: "**Mac OS X 10.2: Information for Using Kerberos**"
107154: "**How to Enable Kerberos Authentication for Login Window**"

Kerberos for Apple Mail Server

1. Open the Server Settings application.
2. Click the Internet tab.
3. Choose Configure Mail Service from the Mail Service module.
4. Click the General tab in the Configure Mail Service window.
5. Select an authentication method from the Authentication pop-up menu that allows Kerberos authentication. The choice you make depends on your scenario:
    - Choose Kerberos if you want mail service to require Kerberos authentication for POP, IMAP, and SMTP. In this case, users' mail client software must support Kerberos. If a user's mail client does not support Kerberos, it will not be able to authenticate.
    - Choose Any Method if you want to allow but not require the use of Kerberos authentication. A mail client that does not support Kerberos can still use the standard authentication method(s).
6. Click the Save button.

Kerberos for AFP server

1. Open the Server Settings application.
2. Click the File & Print tab.
3. Choose Configure Apple File Service from the Apple module.
4. Click the Access tab in the Configure Apple File Service window.
5. Select an authentication method from the Authentication pop-up menu that allows Kerberos authentication. The choice you make depends on your scenario:
    - Choose Kerberos if you want the AFP service to require Kerberos authentication for an AFP client to connect. In this case, a user's AFP client software must support Kerberos. If a user's AFP client software does not support Kerberos, it will not be able to authenticate.
    - Choose Any Method if you want to allow but not require the use of Kerberos authentication. An AFP client that does not support Kerberos can still use the standard authentication method(s).
6. Click the Save button.

Kerberos for Apple FTP server

1. Open the Server Settings application.
2. Click the File & Print tab.
3. Choose Configure FTP Service from the FTP module.
4. Click the Advanced tab in the Configure FTP Service window.
5. Select an authentication method from the Authentication pop-up menu that allows Kerberos authentication. The choice you make depends on your scenario:
    - Choose Kerberos if you want the FTP service to require Kerberos authentication for a FTP client to connect. In this case, a user's FTP client software must support Kerberos. If a user's FTP client software does not support Kerberos, it will not be able to authenticate.

- Choose Any Method if you want to allow but not require the use of Kerberos authentication. A FTP client that does not support Kerberos can still use the standard authentication method(s).

6. Click the Save button.

Kerberos for Telnet

To set up Telnet support, edit the /etc/xinetd.d/telnet file to enable Telnet.

Kerberos for Macintosh Manager client logins

If Kerberos Authentication is available for all of your Macintosh Manager users, consider using Kerberos verification for Macintosh Manager users.

Note: By selecting the "Clients must authenticate using Kerberos" option, **all** Macintosh Manager client logins will utilize Kerberos. User Accounts that cannot be authenticated via Kerberos will not be able to log in as Macintosh Manager clients.

Follow these steps:

1. Open the Macintosh Manager application.
2. Click the Global tab.
3. Click the Security tab.
4. Select "Clients must authenticate using Kerberos".
5. Click the Save button.

All Macintosh Manager users are now required to authenticate using Kerberos to log in.

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Published Date: Oct 11, 2016

Mac OS X 10.2: Issues With Kerberized Carbon CFM Applications After Upgrading to Mac OS X 10.2

Existing Kerberos users may encounter different issues with Kerberized Carbon CFM applications after upgrading to Mac OS X 10.2.
This article has been archived and is no longer updated by Apple.

Symptom

If Mac OS X 10.2 is installed over a Mac OS X 10.1.5 Kerberos client on which either the MIT Mac OS X 10.1 Kerberos Extras or MIT Kerberos for Macintosh 4.0 had been installed, then you may encounter these two symptoms:

1. You may see an alert when the Kerberized Carbon CFM application tries to connect to a Kerberos enabled service. For example:

After upgrading to Mac OS X 10.2, when you open the Eudora email application, an alert box appears with a message that that one of the Kerberos libraries failed to initialize. Eudora then quits, and email cannot be accessed.

2. The application may be missing Kerberos authentication options. For example:

After upgrading to Mac OS X 10.2, the Fetch FTP application does not have any Kerberos authentication options available. The only available authentication option is to connect using a plain text password. Prior to upgrading to Mac OS X 10.2, the Preferences Security pane had Kerberos-related options, and New Connection windows had options to choose in the Security pop-up menu (KClient or GSS options in addition to a Cleartext password option).

Note: Similar issues can occur if either:

- A Mac OS X 10.2 Archive and Install was performed on a Mac OS X 10.1.x Kerberos client, or
- The MIT Mac OS X 10.2 Kerberos Extras were not installed on a new Mac OS X client.

Solution

1. Update to Mac OS X 10.2.1, if you have not already.
2. Install the MIT Mac OS X 10.2 Kerberos Extras.

For more information, see technical document 107153, "**Mac OS X 10.2: Information for Using Kerberos**".

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Feb 17, 2012

Mac OS X: Software Update Notifications Turned Off After a 10.1 to 10.2 Upgrade

Automatic notification of software updates may be turned off after upgrading Mac OS X 10.1 to 10.2. This may also occur if the Software Update preference file is deleted.
This article has been archived and is no longer updated by Apple.

Symptom

You are no longer automatically notified of available software updates.

Note: This affects any version 10.1 to 10.1.5 when upgraded to 10.2 or 10.2.1. This may also happen if the Software Update preference is deleted. The issue is resolved in Mac OS X 10.2.2 or later.

Solution

To turn automatic notification back on, follow these steps:

1. Choose System Preferences from the Apple Menu.
2. Choose Software Update from the View menu.
3. Select the checkbox for "Automatically check for updates when you have a network connection".
4. If you wish to check for a Software Update immediately, click Check Now.

Published Date: Feb 17, 2012

Apple Remote Desktop: How to Reinstall After Updating

The Apple Remote Desktop 1.0 installer will not install after updating to a later version.
This article has been archived and is no longer updated by Apple.

Symptom

If you select a target volume in the Apple Remote Desktop (ARD) 1.0 Installer on which a later version of Apple Remote Desktop is already installed, an alert box with this message appears:

> "There are newer versions of some of the software packages in 'Apple Remote Desktop Admin' already installed on the volume 'Macintosh HD.' This software does not allow older versions to be installed on top of newer versions."

Note: This also applies to ARD Client. In this case, the message indicates Client rather than Admin.

Solution

Remove ARD by following the instructions in technical document 107159, "**Apple Remote Desktop: How to Uninstall**". Once ARD is removed, reinstall ARD 1.0 and then install the necessary updates.

Notes

1. The Install button will read Upgrade, which is normal in this situation.
2. After reinstalling 1.0, the later updaters should be run again.
3. The ARD 1.0 Installer will install properly onto Mac OS X 10.2.
4. If ARD 1.0 is installed on Mac OS X 10.2, do not attempt to use the Preference Pane before updating to 1.1.

Published Date: Feb 19, 2012

Mac OS X 10.2: Sending Folders As Mail Enclosures Creates Additional Files

Mac OS X 10.2 Mail creates additional files when sending folders as enclosures.
This article has been archived and is no longer updated by Apple.

Symptom

When sending folders as an enclosure, Mac OS X 10.2 Mail creates a TIFF file for each file contained within a folder. The result is that the folder received contains twice the expected number of items.

Solution

As a workaround, use one of these alternatives:

- Open the folder in the Finder and use the Select All command to highlight the contents of the folder. Then drag all of the contents to the email message, or
- Use a third-party utility to compress the folder prior to attaching the item to your message. A compressed folder is attached as one file.

Published Date: Feb 17, 2012

Mac OS X Managed Client: Cannot Enforce Default Mail and Web Settings

If you use Workgroup Manager to specify a default download folder, email reader, email address, home page, mail server, search page, or Web browser, some applications may not accept these settings.
This article has been archived and is no longer updated by Apple.

Symptom

Some applications do not respect the default download folder, email reader, email address, home page, mail server, search page, or Web browser settings specified in Workgroup Manager.

Solution

Use the client computer's email and/or Web browser application's own preference settings instead.
Published Date: Feb 17, 2012

iChat: Pasted Emoticon Graphic Does Not Work as Expected

When you copy and paste an emoticon graphic (such as the smiley face), the pasted graphic does not appear in your message as expected.

This article has been archived and is no longer updated by Apple.

Symptom

Pasted emoticon graphics do not work as expected.

Solution

Emoticons are transmitted to your recipient via their text equivalents, such as :-) for the smiley face. When you copy and paste, you are attempting to send an inline graphic, so the desired result is not achieved. You may work around this by typing the text equivalent of the emoticon, subsequently copying and pasting it as many times as desired. Here is a list of emoticons used in iChat:

Smile	:-) or :)
Wink	;-) or ;)
Frown	:-(or :(
Undecided	:-/
Gasp	:-O or :O or =-O
Laugh	:-D or :D
Kiss	:-* or :*
Sticking out tongue	:-P or :P
Embarrassed	:-[or :[
Foot in mouth	:-! or :!
Cool	8-) or 8) or B-) or B)
Angry	>:-(or >:(or >:O
Innocent	O:-) or O:)
Cry	:'(
Lips are sealed	:-X or :X
Money-mouth	:-$ or :$

Published Date: Feb 17, 2012

Mac OS X Server: About FTP Macbinary File Encoding and Name Listing

FTP service in Mac OS X Server lists files with resource forks as Macbinary (files ending in ".bin") and automatically converts files to Macbinary when transferring them.
This article has been archived and is no longer updated by Apple.
In any version of Mac OS X Server 10.2 or later, FTP service uses an influence listing mechanism designed to ensure that served files are usable. It presents slightly modified file names to identify files of certain types. The user sees a modified file name, but neither the file nor its actual name on the server is changed.

A "file_one" that has a resource fork, for example, would be presented as "file_one.bin", mapping that file to the MacBinary format. If the user requests file_one.bin, the server attempts to convert the file to Macbinary on the fly, thereby preserving the resource fork. If the user requests file_one without specifying the .bin extension, the server will provide file_one without its resource fork, potentially rendering the file unusable.

This mechanism also increases the likelihood of maintaining the integrity of served Mac OS X applications and Mac OS 9-bundled applications by presenting them as disk images, with the .dmg filename extension.

The influence listing mechanism can be turned off by editing the FTP configuration file /Library/FTPServer/Configuration/ftpaccess to add this line to the end of the file:

```
influence_listings no
```

For help doing this, see technical document 106619, "**Mac OS X Server: How to Locate and Edit Configuration Files**".

Important: Be sure to quit the Server Settings application before modifying the ftpaccess file. If Server Settings is open while you modify the file, it will subsequently change the file back to its previous (undesired) state using data from its cache.
Published Date: Oct 11, 2016

Mac OS X Managed Client: How to clear cached settings

This article has been archived and is no longer updated by Apple.

Follow the steps in this document to remove managed settings from your computer that persist after visiting a network on which clients are managed. This article applies to Mac OS X Server 10.2, 10.3. For information about Mac OS X Server 10.4, see this article.

To remove the managed settings, follow these steps:

1. If have not already done so, disconnect the Ethernet cable from the computer's Ethernet port, or turn off AirPort from the AirPort menu bar item, or do both. This removes the computer from the network on which Workgroup Manager is active.

2. Log in to the affected computer as an Admin user.
Note: If you are the network administrator, this refers to the computer's local Admin user, not to the server's.

3. At the Workgroup Picker dialog, click the Refresh Preferences button.
Note: If the Workgroup Picker does not appear after logging in, you must log out. You may then force the Workgroup Picker to appear by pressing the Shift key as you click the Log In button.

This will remove the cached settings.

If you skip step 1, you may temporarily clear the cached settings while still connected to the network. The settings will be re-cached when logging out or when clicking the Go Back button in the Workgroup Picker.
Published Date: Oct 11, 2016

Mac OS X Server 10.2: Share Point Remains in Workgroup Manager After Being Deleted or Renamed

A reference to a share point may persist in Workgroup Manager after the actual shared folder that was the share point has been deleted or renamed.
This article has been archived and is no longer updated by Apple.

Symptom

- You can delete or rename a folder that is currently a share point (a behavior disallowed in earlier server products).
- A reference to the deleted or renamed share point remains in Workgroup Manager, and you cannot unshare it. If you try to unshare it, an alert box appears with a message that changes could not be saved.

This situation occurs if you delete the share point while Workgroup Manager is not connected to the server.

Solution

There are two methods for removing the undesired share point reference from Workgroup Manager.

Method 1

1. Quit Workgroup Manager, if it is open.
2. Create a new, empty folder with the exact name of the share point reference you wish to remove in Workgroup Manager. This folder must be created in or dragged to the exact location at which the deleted or renamed folder was or is located.
3. Open Workgroup Manager.

You should now be able to unshare the undesired share point reference.

Method 2

These undesired share point reference can be deleted using NetInfo Manager. Follow these steps:

1. Verify that the folder in question either no longer exists, or no longer exists under its former name (the undesired one that appears in Workgroup Manager).

Note: If you cannot unshare a folder that still exists in its original location with the name that appears in Workgroup Manager, you are experiencing a different issue.

2. When there are no connected users, use Server Settings to stop Apple File Services. Also be sure that Workgroup Manager is not connected.
3. Open NetInfo Manager (/Applications/Utilities/).
4. Click padlock, and enter your Admin user name and password.
5. Navigate to: /config/Sharepoints
6. Select the undesired share point reference and delete it.
7. Restart Apple File Services.

The next time you connect to the server with Workgroup Manager, the undesired reference should be gone.
Published Date: Oct 11, 2016

Mac OS X: About Multicast DNS

This document describes Multicast DNS, one of the features incorporated in Bonjour, which was introduced in Mac OS X 10.2.
This article has been archived and is no longer updated by Apple.
Multicast DNS is one of the features of Bonjour (formerly "Rendezvous"), included in Mac OS X 10.2 or later. It allows you to connect via Internet protocol (IP) to other computers on a local network by name, rather than a numbered address.

On the Internet at large, a DNS name such as "www.apple.com" must be resolved to a numbered IP address before your computer can connect to the server. A domain name system (DNS) server normally provides this name resolution service for your computer. Your Internet service provider or network administrator normally provides a local DNS server for your use.

Conversely, Multicast DNS allows computers on a local network, such as home or small office, to look up each others' names and addresses without a DNS server. Each computer knows its own name and responds to requests for that name automatically via IP multicast.

Anywhere that a you could normally use a DNS name such as "www.apple.com", you could instead enter the Bonjour name of the computer on the local network. To indicate that the name should be looked up using local multicast instead of a standard DNS query, all Bonjour host names end with the extension ".local." This helps avoid confusion between names that are local Bonjour computer names ("mycomputer.local") and globally unique DNS names ("www.apple.com").

If you use local Bonjour computer names frequently and do not want to explicitly type ".local." every time, then this extension may be added to the Search Domains field in the Network preference pane. Click the TCP/IP tab in the Network preference pane to access the Search Domains field. Be sure you have selected the correct network port from the Show menu.

For more information about setting your Bonjour Name in Mac OS X 10.2, see technical document 106964, "**Mac OS X 10.2: About Your Computer's Bonjour Name**".

For more information about Multicast DNS in general, see the Multicast DNS website (http://www.multicastdns.org/).

Note: If you have set up a private DNS server that resolves names in the .local domain, computers using Mac OS X 10.2 will not use the DNS server to resolve these names. This may result in unexpected failures to connect to hostnames defined by your server. You should use a different domain, such as .home, .office, or .lan for DNS on private networks.
Published Date: Oct 11, 2016

Mac OS X Server 10.2: Must Enter Router Address in Setup Assistant

The Setup Assistant for Mac OS X Server requires that a router address be entered. This document describes how to work around this for networks on which there is no router.

This article has been archived and is no longer updated by Apple.

Symptom

The Server Setup Assistant will not allow you to finish without entering a router address.

Solution

You may enter an arbitrary but valid IP address for the router. For simplicity, you should enter the server computer's IP address. After completing the Setup Assistant, you may change or remove the router address in the Network pane of the System Preferences application, which does not require a router address to be entered.

Published Date: Oct 11, 2016

Mac OS X: How to Connect to an LDAPv3 Server Using a Self-Signed Certificate

You may connect to an LDAPv3 server via SSL using the Directory Services LDAPv3 plugin in cases in which you are using a self-signed certificate, or in which your certificate is not recognized.
This article has been archived and is no longer updated by Apple.
If you are using a self-signed certificate, or are having issues with your certificate from a Certificate Authority that is not recognized, follow these instructions to allow client connections via SSL.

1. Copy your public certificate file to a location of your choice on your Mac OS X startup disk. If you simply created a self-signed certificate, just use that certificate file in place of the Certificate Authority's public certificate.
2. While logged in as root, open the file /etc/openldap/ldap.conf in your preferred text editor.
3. In that file, add this line:

   ```
   TLS_CACERT
   ```

   Note: Replace "" with the actual pathname of your certificate file. It could look like:

   ```
   TLS_CACERT /Users/certificate_file
   ```

4. To enable certificate checking, remove the line "`TLS_REQCERT never`", if it is present, from /etc/openldap/ldap.conf.

   Note: The default setting in /etc/openldap/ldap.conf for Mac OS X 10.3 is to disable certificate checking. This is to support self-signed certificates in the out-of-box state.

5. Restart the computer.

Published Date: Oct 11, 2016

Mac OS X Server 10.2: Web Proxy Settings Lost During Upgrade

When upgrading a Mac OS X Server version 10.1 system to version 10.2, settings for the web proxy may be lost. This document explains how to reconfigure them.
This article has been archived and is no longer updated by Apple.
Note: This document refers to the server's own settings as a network client, not to the configuration of any proxy service the server may offer to its clients.

Symptom

Settings formerly in the Proxies section of the Network preference pane are missing after an upgrade to Mac OS X Server 10.2 or later.

Solution

If you have already upgraded, you will have to manually re-enter the proxy information.

If you have not yet upgraded and have enough proxy settings to justify using a workaround, you may follow these steps to save and reload them after the upgrade:

1. Log in to the Server as root. See technical document 106290, "**Mac OS X: About the root User and How to Enable It**".
2. Open the Terminal (/Applications/Utilities/).
3. Type: `cd /var/db/SystemConfiguration/`
4. Press Return.
5. Type: `cp preferences.xml preferences.xml.BeforeUpdate`
Note: When you upgrade the system, the proxy settings will still be overwritten; but you just saved a copy in this step.
6. Upgrade to version 10.2, and complete the Server Assistant.
7. Log in to the server as root.
8. Repeat Steps 2 through 4.
9. Type: `cp preferences.xml.BeforeUpdate preferences.xml`
10. Restart the computer.

When the system is restarted, the proxy information you had prior to the upgrade should be preserved.
Published Date: Oct 11, 2016

Mac OS X 10.2: Printing a TIFF File From Preview May Produce Mirror-Image, Reversed Output

On some computers, printing a TIFF file from Preview may result in output that is reversed in mirror-like fashion.
This article has been archived and is no longer updated by Apple.

Symptom

A TIFF file printed from Preview may print out in a reversed, mirror-like image. This effect may be horizontal or vertical. You may also see 90-degree rotation.

TIFF files print from other applications as expected.

Solution

This is resolved by updating to Mac OS X 10.2.2 or later.

If you cannot update immediately, you may open and print the TIFF file with Adobe Acrobat Reader, or another TIFF-compatible application. Alternatively, you may convert the TIFF file to another format.
Published Date: Feb 17, 2012

QuickTime Streaming Server 4: How to Reset a Lost Password and Admin User Name

If you know your QuickTime Streaming Server (QTSS) Admin user name and password, you may reset it in the QTSS Web admin application. This document explains how to reset the name and password if you have lost or forgotten them.

This article has been archived and is no longer updated by Apple.

This document applies to QuickTime Streaming Server 4 for Mac OS X Server 10.0.3 or later.

To reset the QTSS Admin user name and password:

1. Open Terminal (/Applications/Utilities/).
2. Type: `sudo qtpasswd user_name` **Note:** Replace "user_name" with the name of your choice, here and in the steps below.
3. Press Return.
4. Enter your Mac OS X Admin user password when prompted.
5. Press Return.
6. Follow the prompts, entering the user name of the computer's Admin user, followed by a password that you want to assign to the user user_name.
7. Using a text editor, modify the /Library/QuickTimeStreaming/Config/qtgroups file so that the user name just created or modified is included in the group Admin, as follows:
   `admin: user_name` **Note:** For help with this step, see "Mac OS X Server: How to Locate and Edit Configuration Files".
8. Save the file as ordinary text (not .pdf, .rtf, or any other file format).

Published Date: Feb 17, 2012

Mac OS X 10.2: About Multiple Users Features in Classic

This document describes the features for Multiple Users in Classic on a standalone computer.
This article has been archived and is no longer updated by Apple.
Mac OS X 10.2 includes preference management features for users on a standalone computer, one that is not managed via Workgroup Manager (a client management feature of Mac OS X Server 10.2 or later). Though Workgroup Manager is related, a server is not required to take advantage of these features on your standalone computer.

The Classic preference pane now includes a checkbox for "Use preferences from home folder". Click the Advanced tab to see it. The checkbox turns on a new feature in Classic that facilitates Workgroup Manager by redirecting the location of certain Classic preference folders. These folders are normally in the Classic System Folder and thus shared by anyone using the system; but when the "Use preferences from home folder" checkbox is selected, the folders are stored in the Home directory of the user that is currently logged in. This is the path: ~/Library/Classic/

This feature is automatically selected and cannot be deselected when the computer is part of a managed workgroup. When your computer is not being managed by a server, you may select or deselect the feature as you wish.

When used on a standalone computer, this would allow each Classic user to have her own desktop picture, bookmarks file, and Launcher items, for example. The complete list of redirected items is found below. This allows you to approximate the Mac OS 9 Multiple Users experience in Mac OS X. When working towards this goal, remember that file system access (and thus user privacy) is controlled by Mac OS X privileges and not by Classic. This means that how private or individual the Multiple Users experience is in Classic depends on how you have your computer set up. If you have only one volume (which is the default), enable the "Use preferences from home folder" setting immediately after initial setup, and have applications that respect the Home directory model (forcing users to save in their individual Home directories), then the experience may be very individual. Conversely, if you have multiple volumes, with the Classic System Folder on a separate volume, users may be able to access each others Classic preferences or other files. This would depend on how permissions are set for the additional volume(s).

Redirected preferences

When starting Classic with this checkbox selected, any redirected folders that exist in the System Folder, but not in the user's Home directory, will be created automatically. If any of the folders being created contained files, a dialog box will appear asking if Classic should populate the newly created folders in the user's Home directory with the contents from the redirected folders. If you click No, that user will not have the Chooser in the Classic Apple menu. For this reason, you should Click Yes, unless you have a specific reason not populate the information.

The following folders are subject to redirection:

- Apple Menu Items
- Desktop Pictures
- Favorites
- Internet Search Sites
- Keychains
- Launcher Items
- Locations
- Preferences
- Shutdown Items
- Shutdown Items (Disabled)
- Startup Items
- Startup Items (Disabled)
- Volume Settings

For related information see technical document 107180, "**Mac OS X 10.2: How to Manage User Access to Applications, System Preferences, and Disc Burning via 'Capabilities'**".
Published Date: Feb 17, 2012

Apple Remote Desktop 1.2: About Encrypted Communication

When using the Remote Desktop application to connect to an Apple Remote Desktop (ARD) client, some of the communication is encrypted.

This article has been archived and is no longer updated by Apple.

Authentication

To a Mac OS 9 client computer using ARD 1.0 to 1.2

When adding client computers in the Remote Desktop application, the authentication is encrypted using a random number exchange. When Remote Desktop establishes communication with client computers, the Remote Desktop application re-authenticates with the client. (This is seamless to you, as the client already belongs to a list in the Remote Desktop application). This re-authentication is also encrypted using a random number exchange.

When you administer a remote computer, the Remote Desktop application sends a request to the remote ARD client. The remote ARD client responds with a random number. The Remote Desktop application combines the password that you typed with the random number received from the client and performs a one-way hash. This result is sent to the client, and the client makes the same calculation with the local password for that user. If the result matches what the Remote Desktop application sent, then you are granted access to administer the computer.

Since the password is combined with a different random number each time, the login packet is always different.

Authenticating to a Mac OS X client computer using ARD 1.0 or 1.1

This authentication is similar to the authentication done with a Mac OS 9 client in that it also is a random number exchange with a one-way hash of the password. It is different in that this authentication is done with both a user name and a password. With ARD 1.0 and 1.1, the user name has to be sent in the clear, but the password is hashed with a better hash algorithm (SHA1).

To a Mac OS X client computer using ARD 1.2 and 2.x

In Remote Desktop 1.2 and 2.x, authentication is based on a Diffie-Hellman Key agreement protocol that creates a shared 128-bit key. This shared key is used to encrypt both the name and password using the Advanced Encryption Standard (AES). The Diffie-Hellman Key agreement protocol used in ARD 1.2 and 2.x is very similar to the Diffie-Hellman Key agreement protocol used in personal file sharing, with both of them using a 512-bit prime for the shared key calculation.

Administration

When administering with Remote Desktop 1.2 and 2.x, keystrokes and mouse events are encrypted when controlling Mac OS X client computers. This information is encrypted using the Advanced Encryption Standard (AES) with the 128-bit shared key that was derived during authentication.

Note: The VNC protocol does not encrypt keystrokes sent over the network, so sensitive information can be intercepted over the network when using a non-Apple VNC viewer.

Other

There is no encryption for controlling Mac OS 9 client computers. Also, there is no encryption of any of the other communication between the administrator computer and the Mac OS X or Mac OS 9 client computers.

Warning: If you are using ARD to manage computers over public networks, consider using a virtual private network (VPN) solution to protect your information.

Published Date: Feb 17, 2012

Mac OS X 10.2: Terminal - Windows Close But Application Will Not Quit

The Terminal application in Mac OS X 10.2 includes a preference for "Prompt before closing window". If this preference is set to Never, and processes in an open window are active, then Terminal will not quit.
This article has been archived and is no longer updated by Apple.

Symptom

When you choose Quit in Terminal while active processes are in an open window, the window closes; but Terminal does not quit.

Solution

Choose Force Quit from the Apple Menu, and force quite the Terminal.

You can avoid this issue by either stopping all processes before quitting, or by closing the Terminal window before choosing Quit.

You can prevent this situation in other Terminal windows by doing the following:

1. Open Terminal. If a new window is not automatically opened, choose New Shell from the File menu.
2. Choose Window Settings from the Terminal menu.
3. Choose Processes from the pop-up menu in the Terminal Inspector window.
4. Under "Prompt before closing window", choose "Always" or "If there are processes other than".
5. If necessary, click "Use Settings as Defaults" . This will apply your changes to all new Terminal windows.

Published Date: Feb 17, 2012

Mac OS X 10.2 (Australia): Not All Time Zones Are Available in System Preferences

This document explains how to select Australian time zones that are not displayed in the Date & Time preference pane.
This article has been archived and is no longer updated by Apple.

Symptom

The time zone you need does not appear in the Date & Time preference pane.

Australia has a large number of time zones in use during the transition from standard time and daylight savings time, particularly since states and certain locations change on different dates. The transition typically spans a month. Incorrect time settings can contribute to incorrect behavior of email, paging services, and some network backup solutions.

Solution

The information for all time zones in Australia is contained in the files at:

/usr/share/zoneinfo/Australia/

The contents of these files is in binary format, but their names are locative in nature. For example, the "Darwin" file contains time zone information for Darwin and the Northern Territory; and "Broken_Hill" for the Broken Hill Region. You should not attempt to edit, rename or modify these files. If you list the contents of the directory, you will see these names:

```
H2N2079P2:share/zoneinfo/Australia] mdh% ls
ACT          Canberra     Lindeman     North        Sydney       Yancowinna
Adelaide     Darwin       Lord_Howe    Perth        Tasmania
Brisbane     Hobart       Melbourne    Queensland   Victoria
Broken_Hill  LHI          NSW          South        West
```

You should decide which locality's file you need to use before continuing.

The symbolic link /private/etc/localtime is set to point to the appropriate zone file for time zone information. Normally, this link is set automatically from the Time Zone section of the Date & Time preference pane. If your time zone or locality is not shown there, the following procedure can be used to set the system's time zone correctly:

1. Open Terminal (/Applications/Utilities).
2. At the prompt type :

```
sudo ln -sf /usr/share/zoneinfo/Australia/Darwin /private/etc/localtime
```

Note: This example is for Darwin. For other locations, substitute the name of the file that matches the desired locality. Note the space that is between Darwin (the locality name) and "/private/etc/localtime". Be sure to maintain this space when you type the command for your locality.

3. Press Return.
4. Type your Admin user password when prompted, then press Return.
5. Quit Terminal

This document will be updated as more information becomes available.
Published Date: Feb 17, 2012

Mac OS X: Software Updates require more free disk space than update‘s size

This article has been archived and is no longer updated by Apple.

Installing a software update(s) may require more disk space than the total size of the update(s). If you do not have enough available disk space, you may see an alert message stating that you cannot install the update because you do not have enough disk space. This article applies to Mac OS X 10.2 and later.

You should always have enough free hard disk space on the Mac OS X startup volume. The exact amount needed depends on how the computer is used. Free space is used for virtual memory, iDisk (if you use .Mac), system and Internet cache files, and other temporary files.

When installing an update in Mac OS X 10.2 or later, disk space is needed for:

- Downloading the compressed update
- Decompressing the update without deleting the original download (the decompressed installation package is usually larger than the downloaded, compressed update)
- Installing from the uncompressed source package
- Any temporary files used during post-installation optimization

A downloaded update may be 50 MB large when downloading, for example, but may require 300 MB or more of free disk space to install. After installation (and restarting, if necessary), the temporary files should be deleted automatically if you're using Software Update.

Making more disk space available

To free up more space on the Mac OS X disk, or to effectively utilize what space you have, use these tips:

- Empty the Trash (if you have multiple user accounts, log in to each and do this).
- Restart the computer. If the computer has been in use for a while, restarting it may reduce temporary files that could be taking up space.
- If you need to install more than one software update, install them one at a time.
- Check your Applications folder for multiple versions of an application, and delete the earlier version if it's not needed (for example, you might have an iWork '06 and iWork '08 folder, but no longer need iWork '06). **Note**: You should not relocate Apple applications such as Safari, iTunes, or iPhoto from the Applications folder to a different location, software updates for Apple applications expect them to be in the Applications folder.
- Back up large, non-essential files (such as ones on your desktop or in your Documents folder that you rarely use) to another volume and delete them from your Mac OS X volume.
- Check your Shared folder (it's in the /Users/ folder) for any unnecessary files and delete them or back them up to a different disk.
- Open QuickTime preferences, in System Preferences, click the Browser tab. If "Save movies in disk cache" is selected, click the Empty Download Cache button.
- Empty your Web browser's cache. For example, in Safari, choose **Empty Cache** from the **Safari** menu.
- Consider purchasing an additional or external hard drive, if your current hard drive capacity does not meet your needs.

Published Date: Feb 19, 2012

Mac OS X Server 10.2: How to Turn off Automatic MacBinary Encoding

The FTP Server in Mac OS X Server 10.2 automatically encodes some files in MacBinary, adding the filename extension ".bin". This document explains how to disable this feature.
This article has been archived and is no longer updated by Apple.
To turn off the automatic MacBinary-encoding feature, edit the file /Library/FTPServer/Configuration/ftpaccess to add this line to the end of the file:

```
influence_listings no
```

For help doing this, see technical document 106619, "**Mac OS X Server: How to Locate and Edit Configuration Files**".

Note: Many Macintosh FTP clients automatically encode the file in the format dictated by their preference settings prior to posting to the server. For more information on this feature, see technical document 107171, "**Mac OS X Server 10.2: About FTP Macbinary Encoding and Name Listing**".

For more information on the MacBinary file format, see technical document 7328: "**MacBinary: File Format Description**".
Published Date: Oct 11, 2016

Mac OS X: Application Quits After Requesting Passwords in Keychain Using AppleEvents

Sending remote AppleEvents to request keychain access for a stored username and password may cause the requesting application to quit unexpectedly or stop responding.
This article has been archived and is no longer updated by Apple.

Symptom

- The calling application may unexpectedly quit or stop responding. This only occurs if the dialog box asking for access to the keychain appears.
- Alternatively, the event may fail while leaving the calling application unaffected.

Solution

You may use one of these workarounds:

1. Enter the username and password in the URL. For example: eppc://user:password@your.system
Warning: Providing username and password in this format may create security issues over a network

2. Do not save the username and password for the target computer in the keychain. This preference is selected or deselected in the authentication dialog when asked for the username and password for the target computer.

Published Date: Feb 17, 2012

iChat stops responding or "Could not connect to Rendezvous" appears (Mac OS X 10.2)

Learn why iChat may stop responding ("freeze") or display the message "Could not connect to Rendezvous."

This document applies to Mac OS X 10.2 through 10.2.8

This article has been archived and is no longer updated by Apple.

Besides the message "Could not connect to Rendezvous. Login failed: couldn't open session" appearing, one of these things might happen:

- Starting a chat or file transfer from your Rendezvous Buddy list does not work. You may see an empty, white chat window.
- iChat displays a spinning disc cursor and is unresponsive.

The first and easiest solution is to restart, then try to login to iChat. If the issue is resolved, you don't need to do anything else.

If it isn't fixed, it might be caused by not having the Mac OS X BSD Subsystem installed. It is installed as part of a default installation, unless you chose to perform a custom installation that excluded the BSD Subsystem package. If this is your situation, you must install the BSD Subsystem software. See "Mac OS X 10.2: How to Install the BSD Subsystem After Mac OS X 10.2" for more information.

Finally, the Mac OS X Firewall, found in the Sharing preferences, can block the port used for local iChat traffic (port 5298). Firewall blocks this port in its default configuration. Follow these steps:

1. Open System Preferences.
2. Click Sharing.
3. Click the Firewall tab.
4. Click Stop.
5. Click the New button.
6. Choose Other from the Port Name pop-up menu.
7. In the Port Number field, type: 5298
8. In the Description field, type: "Rendezvous"
9. Click OK.
10. Click Start.

Published Date: Feb 17, 2012

Mac OS X: Apple menu follows language of active application, not that selected for system

This article has been archived and is no longer updated by Apple.

Items in the Apple menu do not appear in the preferred system language. When an application appears in a different language, the Apple menu takes on the language of that application.

Tip: This document applies to Mac OS X 10.0 through 10.3.9.

When an application is not localized for the preferred language, as defined in the International pane of System Preferences, it appear in the next-highest ranked language for which a localization is available. The Apple menu in this instance follows the language of the application, and not of the system. You may work around this issue by clicking the Finder icon in the Dock prior to opening the Apple menu.

Published Date: Feb 17, 2012

Mac OS X Server: How to Create the Postmaster Account

This document explains how to create the UNIX postmaster account in Mac OS X Server 10.0.3 or later.
This article has been archived and is no longer updated by Apple.
An Admin user may designate a user account to receive blind carbon copies (Bcc) of mail sent to the system or to unknown local users. Though any account on the system can be designated to receive this mail, the traditional UNIX user is the "postmaster" user. If you would like to set up a postmaster account on your system, create a user with a long name of "postmaster" and a short name of "postmstr". The latter accommodates the eight-character short name limit present in server versions 10.0.3 to 10.1.4. Mac OS X Server 10.2 and later allow the "short name" to be as long or longer than the "long name," up to 255 characters.

Alternately you may create an account of your own choosing and use it as you would the postmaster account.
Published Date: Oct 11, 2016

Mac OS X 10.1: Address Book - Preferences Command Dimmed

Preferences for Address Book are dimmed, or unavailable, in Mac OS X 10.1 to 10.1.5. The LDAP function previously found there can be had by using Mail, or by upgrading to Mac OS 10.2 or later.
This article has been archived and is no longer updated by Apple.

Symptom

The Preferences command in the File menu of Address Book is dimmed.

Solution

For the affected Mac OS X versions, you may use LDAP services in the application Mail.

You may also upgrade to Mac OS X 10.2 or later, in which Preferences (including LDAP) are available in Address Book.
Published Date: Feb 17, 2012

Mac OS X 10.2: PPTP Does Not Remember Password

When making a PPTP connection in Internet Connect, you may be asked for your keychain password, despite having set the password to be saved. You see visual indication of a saved password (bullet characters), but the password is actually blank until you unlock the keychain.
This article has been archived and is no longer updated by Apple.

Symptom

Your saved keychain password setting is not honored when making a PPTP connection.

Solution

You must work around the issue by reentering the keychain password when asked.
Published Date: Feb 17, 2012

Mac OS X 10.2 Mail: Address Auto-Completion Uses "Most Often Used" Address

Mac OS X 10.2 Mail prefers the "most often used" address when auto-completing addresses in the address field.
This article has been archived and is no longer updated by Apple.

Symptom

Mail prefers the most often used address over the most recently used address when auto-completing addresses.

Solution

When entering an address, Mail selects the most commonly used address based on your usage history of each address in your Address Book.

For example, if choosing between two addresses for the same recipient, Mail will choose the address most often used, not the most recently used.

For more information, see technical document 107202, "**Mac OS X 10.2 Mail: LDAP Search Begins When Second Character In Address Field Entered**".
Published Date: Feb 17, 2012

Mac OS X 10.2 Mail: LDAP Search Begins When Second Character in Address Field Is Entered

Mac OS X 10.2 Mail will begin an LDAP search for an address when the second character of an address is entered in the address field.
This article has been archived and is no longer updated by Apple.

Symptom

Mac OS X 10.2 Mail does not use LDAP when only the first character of an address is entered in the address field. It waits for the second.

Solution

When you enter the first character of an address, Mail will search the local directory only.

If you have configured Mail to use an LDAP server, it searches both the local and remote directory for an address after you enter the second character. All subsequent characters entered into the address field cause Mail to search local and remote directories.

For more information, see technical document 107201, "**Mac OS X 10.2 Mail: Address Auto-Completion Uses 'Most Often Used' Address**".
Published Date: Feb 17, 2012

Mac OS X 10.2: Scanners Compatible With Image Capture

Mac OS X 10.2 version of Image Capture is compatible with scanners, as described below.
This article has been archived and is no longer updated by Apple.
Note: Mac OS X 10.2.1 or later is recommended for best scanner performance. See technical document 106704, "**Mac OS X: How to Update Your Software**".

Epson scanners

In Mac OS X 10.2, scanner drivers are included for:

- EPSON Perfection 1640 (outside the United States: GT-8700)
- EPSON Perfection 1650 (outside the United States: GT-8200)
- EPSON Perfection 1660 (outside the United States: GT-8300)
- EPSON Perfection 2400 (outside the United States: GT-9300)
- EPSON Perfection 2450 (outside the United States: GT-9700)

TWAIN-compatible scanners

Additionally, Mac OS X 10.2 can use TWAIN-compatible scanners connected to USB ports, once a Mac OS X-compatible TWAIN Data Source is installed. Contact your scanner vendor for information about a Mac OS X 10.2-compatible TWAIN Data Source for your scanner. TWAIN-compatible scanners that worked without Image Capture in Mac OS X 10.1 must be updated to work with Image Capture in Mac OS X10.2.

Scanners in Classic

Scanners with Mac OS 9-compatible drivers may be usable in the Classic Environment. Contact the scanner vendor for compatibility information.

Other scanners

Scanners not listed above may also be compatible with Mac OS X 10.2 by using applications other than Image Capture and scanner drivers compatible with Mac OS X 10.2. Contact your scanner vendor for Mac OS X 10.2 compatibility information.

Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

You should seek additional support information from documents included with third-party software, from Web-based help at the software manufacturer's Web site, or by contacting the third-party's support personnel when applicable.

Document 17159: "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Feb 17, 2012

Mac OS X 10.2: Volume Formats Compatible With Classic

This document lists the volume formats (file systems) on which Classic in Mac OS X 10.2 can open and save files.
This article has been archived and is no longer updated by Apple.
Except as noted below, the Mac OS X 10.2 classic environment can now use any local or network volume format available to Mac OS X-native applications.

Local Volumes
Internal and external volumes, both removable and non-removable (fixed) volumes not on the network

- Mac OS Standard
  Also called Hierarchical File System or HFS
- Mac OS Extended
  Also called HFS Plus
- UNIX File System
  Also called UFS, (Note 2)
- Universal Disk Format
  UDF, used by DVD discs (DVD-ROM, DVD-Video)
- ISO-9660
  A cross-platform CD-ROM format
- Audio CDs
- Microsoft MS-DOS
  or File Allocation Table (FAT)
- Other CD formats
  See Notes 1 and 4.

Network Volumes
Also called remote disks

- Network File System
  or NFS (Note 2)
- Apple File Protocol (AFP)
- Distributed Authoring and Versioning
  Also DAV or WebDAV
- Server Message Block
  or SMB (Note 2)
- File Transfer Protocol (FTP)

Notes

1. Photo CDs and some multisession CDs cannot be used by Classic applications. As a workaround, copy the files to the hard disk. For Kodak Photo CDs, see technical document 42579 "**Mac OS X: Kodak Photo CD Capabilities**".

2. Although Classic works with this volume format, Mac OS 9 can only do so with the addition of third-party software (SMB, DAV, NFS, UFS).

3. While Classic can read data from the volumes listed above, the System Folder used to run Classic has to be on a Mac OS Standard Format (HFS) or Mac OS Extended format (HFS Plus) volume.

4. Any volume format that the Mac OS X Finder can read should be available to Classic. If it is not, you can copy the desired files off of the volume onto the startup disk or other volume whose format is available to Classic.

Published Date: Feb 17, 2012

Mac OS X 10.3: Asian characters unexpectedly replaced by ASCII

This article has been archived and is no longer updated by Apple.

Asian characters may be replaced by ASCII characters if the second Mac OS X Installation CD was skipped during the installation process.

Note: This document applies to Mac OS X 10.3 through 10.3.9.

Symptom

Asian characters are replaced by ASCII characters.

Solution

If you need to use Asian fonts, you should not deselect the Additional Asian Fonts package in the Mac OS X Installer. While these fonts are not globally required, certain applications may be programmed to use those specific fonts.

Also, always use the second CD during installation if and when prompted. Do not quit the Installer after the first CD is completed. This should be done whether or not you use Asian fonts.

To install the fonts and resolve the issue, follow these steps:

1. Insert the second Mac OS X Installation CD.
2. Double-click the Additional Asian Fonts package.
3. Enter the Admin user password.
4. Click Continue.
5. Select a destination disk.
6. Click Continue.
7. Click Install.

Published Date: Oct 11, 2016

Mac OS X 10.2: Cannot Print After Installing Deskjet 2.0 Drivers

The application from which you try to print quits unexpectedly after installing Hewlett Packard Deskjet 2.0 printer drivers.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to print from an application, the application quits unexpectedly.

Note: It is possible that other HP printer models may be affected when using this software.

Solution

1. Click the Finder icon in the Dock.
2. Choose Applications from the Go menu.
3. Open the Utilities folder.
4. Open Printer Center.
5. Select the affected printer in the Printer List.
6. Click Delete.
7. Click Add.
8. Choose USB in the upper pop-up menu of the sheet that appears.
9. Select the HP printer in the list below.
10. Click Add.
11. Choose Quit from the Print Center menu.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Feb 17, 2012

Mac OS X: No Idle Sleep When File Sharing Is On

When file sharing is on, the computer does not go to sleep after the period of inactivity defined in the Energy Saver pane of System Preferences
This article has been archived and is no longer updated by Apple.

Symptom

The computer does not go to sleep when idle.

Note: The affected Apple file service may be called "File Sharing" or "Personal File Sharing", depending on the version of Mac OS X installed. This does not refer to other sharing services offered by Mac OS X, such as Web Sharing, Windows File Sharing, or FTP.

Solution

The computer will only idle to sleep when file sharing is off. When file sharing is on, you may force the computer to sleep by choosing Sleep from the Apple menu.

File sharing is turned on or off in the Sharing pane of System Preferences.

You may avoid the issue by updating to Mac OS X 10.2.3 or later. See technical document 107263, "**Mac OS X: About the Mac OS X 10.2.3 Update**".

Published Date: Feb 17, 2012

Mac OS X 10.2: How to Change the Spell Check Language Dictionary

This document explains how to change the language dictionary used by the Mac OS X spell check feature.
This article has been archived and is no longer updated by Apple.
Note: Not all applications use the Mac OS X spelling dictionaries to which this document refers. Some third-party applications use their own dictionaries, and you should see third-party documentation for questions about them. Applications that use the Mac OS X spelling dictionaries have Spelling submenu choices in the Edit menu.

To change the language dictionary used by the spell check feature:

1. Open an application that uses a built-in dictionary. Mail is an example.
2. Choose Spelling from the Edit menu, and Spelling from the submenu.
3. In the Spelling dialog box, select the desired dictionary language from the pop-up menu.
4. Close the window.

Note: You must repeat these steps for other applications that use the built-in dictionaries.
Published Date: Feb 17, 2012

Mac OS X 10.2 or Later: Printers That Work With Printer Sharing

This document describes which printers work with Printer Sharing in Mac OS X 10.2 or later.
This article has been archived and is no longer updated by Apple.
Note: This document describes only the "Printer Sharing" feature located in the Sharing preference pane, not to the additional "Print Service" included with Mac OS X Server.

Any printer you add in Print Center can be shared with other Mac OS X 10.2 computers, whether or not printer drivers are included with Mac OS X 10.2. This includes both PostScript and non-PostScript printers that connect via:

- USB
- Ethernet
- 802.11b wireless (such as AirPort)
- FireWire

For a list of printers that work with Mac OS X, see the printers section of the Mac OS X website (http://docs.info.apple.com/article.html?artnum=86054).
Published Date: Oct 11, 2016

iChat: "Disk in use" Alert After Sending a File, Difficulty Ejecting Disk

You may not be able to eject (or unmount) a volume--a disk or partition--after sending a file in iChat.

This article has been archived and is no longer updated by Apple.

Symptom

When you try to eject a disk, an alert box with this message appears :

> "The operation could not be completed because the disk (disk name) is in use."

After this occurs, you cannot eject the volume as you normally would.

Solution

This occurs after sending another iChat user a file stored on a volume other than the startup disk. To prevent the issue, copy the file to the Mac OS X startup disk before sending the file with iChat.

This document will be updated when more information is available.

Published Date: Feb 17, 2012

Mac OS X 10.1: Entourage Email Messages Lost After Force Restart of Computer

You could encounter a situation in which Entourage email messages are lost in Mac OS X 10.1 after a force restart. Mac OS X 10.2 includes new features to guard against data loss in some situations where applications may fail or after a force restart.
This article has been archived and is no longer updated by Apple.

Symptom

After either a force restart of your computer or a kernel panic, you may see that:

- Email messages are missing from Entourage.
- Other data, such as contacts, are missing.
- The email database file has been reduced to 4096 bytes.

Solution

This specific set of symptoms does not occur in Mac OS X 10.2 or later. In Mac OS X 10.1 to 10.1.5, the issue can occur if Entourage is open at the time of a forced restart. The file system may then record an invalid size for the Entourage database, effectively abbreviating the file. These are example scenarios:

- The computer experiences a kernel panic while you are using Entourage, and you must force restart the computer.
- Entourage becomes unresponsive, displaying the spinning disc pointer, and you follow up by force restarting the computer.
- You force restart the computer after it will not wake from sleep, and Entourage had been open before sleep.
- The computer experiences a power loss while using Entourage, or is force restarted for another reason.

Notes

1. New features in Mac OS X 10.2 prevent the specific set of symptoms described above, as characterized by the reduction of the mail database to 4096 bytes. Typical data loss, such as loss of unsaved changes to a single document during a force restart, may still occur in any application. Minimize this type of loss by saving your work often.

2. Mac OS X 10.2 or later resolves the potential data loss issue. You should always update to the latest version of Mac OS X for the best Entourage performance. See technical document 106704, "**Mac OS X: How to Update Your Software**".

3. For help identifying a kernel panic, see technical document 106227, "**Mac OS X: What is a Kernel Panic?**"

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The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"
Published Date: Feb 19, 2012

Mac OS X Managed Client: How the Preference Model Works for Managed Mac OS X Clients

This article has been archived and is no longer updated by Apple.
<>With Mac OS X Server 10.2 or later, you can use the Workgroup Manager application to set preference settings and restrictions for managed Mac OS X 10.2 or later computers. This document provides a brief overview of how the settings work.

In order for Mac OS X Server 10.2 or later to properly manage Mac OS 10.2 client computers, you must set up computer accounts to be managed. This is done in the Accounts area of Workgroup Manager, in the Computers sub-pane. Refer to the Server Admin Guide for complete instructions on setup.

In a situation where settings are managed by Workgroup Manager, the order in which managed settings override other managed settings is:

- Users override Computers, and
- Computers override Workgroups

All managed preferences override a user's personal settings (or the computer's default settings).

If you do not manage a particular preference, the basic user and system preferences are used. For example, if you do not set any managed preferences for Dock placement, then the Dock will use the default location at the bottom of the screen.

In a common setup, most preferences should be set up in Workgroups. Only exceptional cases should be stored in Computers or Users. An example setting would be to set application access to Workgroups, and only set a Printing setting for the Computers.

Preferences can be "Never", "Once", or "Always". Never really means "Don't Manage". In an override calculation a Never is just skipped (ignored) for the calculation.

When you override preferences, the Once or Always setting will be overridden by a higher authority.

For example, suppose Dock Settings is set to display on Left and is Always for a workgroup. But suppose the user is set for Once. The user gets the Once settings (where they can change the settings).

Certain preferences are combined. In 10.2 or later these are:

- Dock Items
- Login Items
- Printers
- Application Items

For combined preferences, the user gets the combination of the managed settings for the Workgroup, Computer, and User. Always settings are available to the user but may not be changed. Once settings are combined with the user's personal settings and may be changed by the user.

Note that both Dock Items and Login Items contain checkboxes that allow Always settings and the user's personal preferences to be displayed at the same time.
Published Date: Feb 19, 2012

Mac OS X: About the Network Icon in the Finder

This document describes what the Network icon in the Finder is for.
This article has been archived and is no longer updated by Apple.
You see the Network icon by clicking the Computer button in the Finder toolbar, or by choosing Computer from the Go menu.

When your computer is set up to bind to a managed network, such as NetInfo, you can browse the network using the Network icon as if it were a hard disk or CD.

Using the Finder, Network resources appear like those on your hard disk, such as /Library and /System. These network resources can be used by any user who has access to them.

For more information on NetInfo, see the whitepaper, "Understanding and Using NetInfo" (**http://manuals.info.apple.com/Apple_Support_Area/Manuals/software/UnderstandingUsingNetInfo.PDF**).
Published Date: Feb 17, 2012

AirPort 2.0.4: Maximum Connection Speed for Incoming Dial-up to AirPort Base Station

If you make a dial-up modem connection to an AirPort Base Station that uses 2.0.4 or later software, you may get a maximum connection speed of 33.6 kilobits per second (Kbps).
This article has been archived and is no longer updated by Apple.
AirPort software version 2.0.4 and later allows an AirPort Base Station to accept incoming dial-up, PPP connections. This allows remote access to the base station and the computers on the AirPort wireless and wired network.

If you connect to the base station from a V.90 modem, the best speed you can expect is a V.34 speed of 33.6 Kbps. This is a limitation of the V.90 standard and does not indicate any issue with your modem or base station. Although the V.90 protocol allows connection speeds of up to 56 Kbps, this maximum speed cannot be achieved between two consumer-grade modems. Specialized equipment, typically owned by Internet service providers, is required at the receiving end to enable maximum speed.

Note: The incoming connection feature can be activated only from Mac OS X computers. Only the AirPort Base Station (Dual Ethernet) can accept incoming calls.
Published Date: Feb 19, 2012

AirPort 2.0.4: How to Administer an AirPort Base Station via a Dial-Up Connection (PPP Dial-In)

With AirPort 2.0.4 or later software and an AirPort Base Station (Dual Ethernet or Extreme), you have the ability to administer the base station over a dial-up connection. This document describes features and setup.
This article has been archived and is no longer updated by Apple.
An AirPort Base Station (Dual Ethernet or Extreme) with AirPort 2.0.4 or later software can accept an incoming dial-up (PPP) connection. This feature is referred to alternatively as "remote access", "PPP Server" and "PPP Dial-in".

The person dialing up can connect to the base station and access:

- The base station itself, via AirPort Admin Utility
- Other computers or devices connected via the LAN port
- Computers connected wirelessly to the base station
- Network or Internet services on the WAN port (Note 1)

Follow these steps to enable this feature:

1. Connect to the base station via AirPort Admin Utility.
2. Click the Network tab.
3. Select the checkbox for "Allow remote access."
4. Click Configure.

After you click Configure, you can set:

- The user name and password of the PPP dial-up user. See Note 2.
- Answer on ring - the number of rings before the base station answers the telephone line. The default is 3.
- Disconnect if idle - the elapsed time of inactivity at which the base station disconnects the PPP user. The default setting is Never.
- Force disconnect after - The elapsed time at which the base station disconnects the PPP user, regardless of activity. This is a useful feature if you want to control the user's session length. The default setting is Never.

Notes

1. Since the base station only has one modem, you cannot be connected to it via dial-up and access any dial-up Internet services at the same time.

2. If you try to update the base station after selecting remote access but without setting a user name, an alert box with this message will appear, "PPP Dial-in requires a user name." Additionally, you cannot update the base station for remote access until you have completed the Password and Verify fields.

3. The AirPort menu on associated clients will contain a new status indication of "PPP Dial-in: Not connected" or "PPP Dial-in: Connected".

4. This feature cannot be used when the base station is configured to connect to the Internet via the modem, AOL, or PPPoE broadband.

5. Only one user name and password can be configured.

6. NAT and DHCP must to be turned on for this feature to work.

7. The IP address of the PPP client cannot be configured manually.

8. The PPP client will have a 255.255.255.255 subnet mask when connected to the base station.

9. AppleTalk and other non-IP protocols are not available over the PPP connection.

10. Another base station cannot be used to dial up a base station with this feature enabled.

11. The maximum connection speed is 33.6 Kbps.

12. Mac OS X Internet Connect will not report max time remaining correctly. This does not occur in Mac OS 9 with Apple Remote Access.

13. When administering the base station via the PPP dial-up connection, you will be disconnected when the base station restarts. This is a

normal part of updating the base station's settings.

Published Date: Oct 11, 2016

Airport 2.0.4: How to Disable SNMP Access to an Airport Base Station (Dual Ethernet)

This document explains how to disable SNMP access to an AirPort Base Station (Dual Ethernet). You can use this feature to protect your network from SNMP denial-of-service attacks.
This article has been archived and is no longer updated by Apple.
Networks managed by Simple Network Management Protocol (SNMP) have a potential vulnerability to malicious attacks, such as denial of service.

SNMP is a network management protocol that is enabled by default in the AirPort Admin Utility. AirPort Admin Utility 2.0.4 or later allows you to disable SNMP on your wide area network (WAN). To disable SNMP, follow these steps:

1. Connect to the base station via AirPort Admin Utility.
2. Click the AirPort tab.
3. Deselect the checkbox for "Enable SNMP access on WAN."
4. Update the base station.

Note: SNMP cannot be disabled on the original AirPort Base Station (Graphite).
Published Date: Feb 19, 2012

AirPort 2.0.4: How to Use a RADIUS Server on a Wireless Network

The AirPort Base Station (Dual Ethernet) can be configured to connect to a RADIUS server to authenticate access to your wireless network.
This article has been archived and is no longer updated by Apple.
RADIUS (Remote Authentication Dial-In User Service) is a client-server protocol for centralized user authentication, profiles, and network statistics. A RADIUS server may also store your hardware Access Control List so that it is not necessary to enter it for each base station on your network. If you have set up a RADIUS server on your network, you may configure the AirPort Base Station (Dual Ethernet) to use it. To do this:

1. Connect to the base station via AirPort Admin Utility.
2. Click the Authentication tab.
3. Select the "Use RADIUS Authentication checkbox."
4. Enter the IP address, port number, and shared secret for the servers.
5. Update the base station.

Notes

1. The base station will look first to its local Access Control List. If the MAC address is there, the client can join the network. If the MAC address is not in the local Access Control List, the base station checks the RADIUS server for the MAC address. If it is there, the user can join the network.

2. The AirPort Base Station (Graphite) does not offer RADIUS authentication. It is a feature included with AirPort 2.0.4 or later.

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Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Feb 19, 2012

Airport 2.0.4: About Using Cisco RADIUS Servers

AirPort 2.0.4 or later software works with the Cisco NAS (Network Authentication Service) identifier for Cisco RADIUS servers.
This article has been archived and is no longer updated by Apple.
The RADIUS pop-up menu includes Default and Alternate choices because some servers use a different method of authentication. The three choices in the RADIUS pop-up menu have the following effects:

- Not used
  RADIUS will not be active on the base station.
- Default
  The MAC address will be formatted as 010203-0a0b0c and used for the user name. The Shared Secret will be the password. This format is often used by Lucent- and Agere-branded RADIUS servers.
- Alternate
  The MAC address will be formatted as 0102030a0b0c and used for both the user name and password. This format is often used by Cisco RADIUS servers.

Earlier versions of base station firmware only provided the Default format for RADIUS servers.

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Published Date: Feb 19, 2012

AirPort 2.0.4: About Using AirPort With Point to Point Tunneling Protocol (PPTP)

AirPort 2.0.4 or later software, combined with the AirPort Base Station (Dual Ethernet), is compatible with PPTP clients.
This article has been archived and is no longer updated by Apple.
AirPort 2.0.4 or later is compatible with Microsoft Windows clients that use PPTP (Point to Point Tunneling Protocol) style VPN (Virtual Private Network). It is also compatible with IPsec (IP security protocol) without authenticated headers.

Multiple PPTP (Microsoft-style VPN) sessions can work through the AirPort Base Station (Dual Ethernet) simultaneously.
Published Date: Feb 19, 2012

AirPort: Cannot Connect More Than One User to a Port-Mapped Service

Updating to AirPort 2.0.4 or later resolves an issue in which only one user can connect to a port-mapped service.
This article has been archived and is no longer updated by Apple.

Symptom

Only one user can connect to a port-mapped service. A different user cannot connect until the base station has been restarted.

Solution

Update to AirPort software 2.0.4 or later, which allows multiple users to connect to port-mapped services.

With AirPort 2.0.2 software and base station firmware (4.0 and 4.02 only), only one external connection could be made to a mapped port, even though the application serving on that port may have been designed to handle multiple connections. If the single user disconnects, a different user cannot connect until after you restart the AirPort Base Station.

Published Date: Feb 19, 2012

AirPort 2.0.4: About Using Link-Local Addressing

Link-Local addressing is a protocol by which computers or other devices on a network, such as the AirPort Base Station, can self-assign IP addresses that are valid for their local network but not globally routable.
This article has been archived and is no longer updated by Apple.
Link-Local addressing is a protocol by which computers or other devices on a network, such as the AirPort Base Station, can self-assign IP addresses that are valid for their local network but not globally routable. Link-Local addresses are all in the 169.254/16 network. Recent versions of Mac OS and Microsoft Windows configured to get an address via DHCP will resort to choosing a Link-Local IP address if no DHCP server responds to their queries.

When a DHCP server is not present, an AirPort Base Station (Dual-Ethernet) with 4.0.4 or later firmware will self-assign a unique 169.254.x.x address (where "x" may be any number from 1 to 255). Link-Local addressing guarantees that you can always find the base station on a known subnet. This means that scans made by AirPort Admin Utility will be more reliable. With earlier base station firmware versions, a base station that could not get an IP address defaulted to an Apple-reserved address of 192.42.249.13 or 192.42.249.12. In some cases it was difficult to connect to such a base station.

This type of addressing is also a useful feature when connecting to a base station that has been "hard" reset. The default IP address of a hard-reset base station is:

LAN Port: 10.0.1.1
WAN Port: 169.254.x.x
Published Date: Feb 19, 2012

AirPort 2.1: Scrolling AirPort Messages in Menu Bar

In Mac OS X 10.2 or later, the AirPort menu bar item displays animated, scrolling status messages for PPP and network status.
This article has been archived and is no longer updated by Apple.
In Mac OS X 10.2 or later, the AirPort menu bar item can slide to the side and display a scrolling text message that reflects your network status, such as "Waiting for modem reset." The status information is essentially the same that appears in the Internet Connect application or the Internal Modem menu bar item. Information is displayed for PPP, PPPoE, and AirPort network status. After restart, waking from sleep, or connecting to a new network, the menu bar item briefly scrolls a message to tell you which network it has joined.
Published Date: Feb 19, 2012

AirPort 2.1: How to Use AOL Parental Controls on the Base Station

Mac OS X 10.2 introduced AirPort software with the ability to implement AOL Parental Controls via the AirPort Base Station.
This article has been archived and is no longer updated by Apple.
To use the parental controls you have previously set up with your America Online (AOL) account, follow these steps:

1. Connect to the base station with the AirPort Admin Utility.
2. Click the Network tab.
3. Select the checkbox for "Enable AOL parental controls."
4. Click Update. The parental controls are copied to the base station.

Note: You must have previously set up parental controls in AOL software. Otherwise, this will only limit broadband access and require authentication via AOL. This is described further below.

Broadband Access Blocked when Parental Controls Enabled

The AirPort AOL Parental Control feature is meant to block availability to other broadband features. Access to the Internet is controlled by authentication in the AOL client software. When this feature is enabled, all users must use an AOL client to authenticate their connection to AOL before any other broadband access will be available.

Defining the Level of Parental Control

When using AOL to control access, the level of parental control must be defined in the AOL Parental Control setup. To activate the AOL parental control feature, you must set up those controls in AOL. The Apple feature simply enables the controls for that individual user logged on to an AOL account through the base station.

You can use the AOL Parental Controls feature to control or limit access to the following:

- connection time
- access level
- instant message notes
- email control
- AOL chat
- downloads from AOL software library or other FTP sites
- newsgroups and other AOL premium services

To learn more, use the AOL keyword "Parental Controls", or click on the link from the main AOL window.

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Published Date: Feb 19, 2012

Mac OS X 10.2: Some Users Cannot Fax With FAXstf X

With Mac OS X 10.2, the first user to set up FAXstf X will add a FAXstf queue in Print Center. This queue will be visible to other users on the computer, but they will not be able to use the queue to send faxes.
This article has been archived and is no longer updated by Apple.

Symptom

When a user other than the one who originally set up FAXstf X attempts to send a fax, Print Center opens but then immediately quits without sending the fax.

Solution

Update to FAXsft X version 10.1.3 or later. The software may be available from the SmithMicro Software File Library (http://www.smithmicro.com/support/files.tpl) .

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Published Date: Feb 17, 2012

Mac OS X 10.2: Repair Disk Permissions Finds Issue With /private/var/run/utmp

Disk Utility may erroneously report an issue with /private/var/run/utmp.
This article has been archived and is no longer updated by Apple.

Symptom

Disk Utility reports:

> "Group differs on ./private/var/run/utmp, should be 0, group is 1"

Solution

The message is not accurate and is not a cause for concern.
Published Date: Oct 11, 2016

AppleWorks 5: Spreadsheet Auto Recalculation May Require "Calculate Now"

Spreadsheet documents created with AppleWorks versions 5.0 through 5.0.4 may not auto recalculate formulas when used in any version of AppleWorks 5.0 or later.

This article has been archived and is no longer updated by Apple.

Symptom

An AppleWorks spreadsheet can automatically recalculate formulas when data changes. To do this, you use references (addresses) of other cells in a formula. When you change the data in a referenced cell, AppleWorks automatically recalculates the formula using the new data. Spreadsheet documents created using AppleWorks 5 may not automatically recalculate the formula, requiring users to choose the Calculate Now menu command. If the document is opened in either AppleWorks 5 or 6, the issue persists in both Macintosh and Windows versions.

Solution

This issue does not occur with AppleWorks spreadsheet documents created in AppleWorks 5.0 or later for Windows. Choosing Calculate Now forces a recalculation, and updates the appropriate cell(s) in AppleWorks 5 spreadsheets. To prevent this issue from occurring in the future, AppleWorks 5 spreadsheets can be updated to AppleWorks 6.0 or later. To update the spreadsheet, use the following steps to copy data into a new AppleWorks 6 spreadsheet:

1. Open the affected spreadsheet in AppleWorks 6.0 or later.
2. Choose Select All from the Edit menu.
3. Choose Copy from the Edit menu.
4. Choose New from the File menu, then Spreadsheet from the submenu.
5. Choose Paste from the Edit menu.
6. Save the new spreadsheet as an AppleWorks 6 document.

For more information about AppleWorks, please visit its product page (http://www.apple.com/appleworks) or search the Knowledge Base.

Published Date: Feb 17, 2012

Workgroup Manager: Automounted Share Points Should Not Be Created in the NetInfo/DefaultLocalNode Domain

When creating share points with Workgroup Manager, selecting the domain NetInfo/DefaultLocalNode will create a local-only automount point that will not be used by client computers.

This article has been archived and is no longer updated by Apple.

Symptom

Automounted share points created with Workgroup Manager do not appear on client computers as expected.

Solution

When selecting a domain for "Automount this item to clients in domain", you should always select a network-visible domain such as the NetInfo/root domain. The NetInfo network domains are searched by clients that are configured to access them via Directory Services. If you do not have any network NetInfo domains, only the NetInfo/DefaultLocalNode will be available in the pop-up list. The NetInfo/DefaultLocalNode is only used by the local system. It will not be accessed for automount share points by other client systems.

You may resolve the issue by following these steps:

1. Using WorkGroup Manager, connect to the server on which you created the share point.
2. Click the Sharing icon in the tool box.
3. Select the affected share point.
4. Click the Automount tab.
5. In the domain selection pop-up menu, change the domain from NetInfo/DefaultLocalNode to NetInfo/root (or other higher level domain if you have one). You will be asked to provide a login name and password for an administrator of this domain.
6. Click Save.

The automounted share point will now be moved to the selected NetInfo domain. It will be used by the NetInfo clients configured to use this directory service.

For more information on NetInfo and Directory Services, see the Mac OS X Server 10.2 Admin Guide installed on your computer at:

/Library/Documentation/MacOSXServer/English/Admin Guide.pdf

Published Date: Feb 17, 2012

Mac OS X Server: Using non-Postscript printers with the Print Server

This article has been archived and is no longer updated by Apple.

The Print Service in Mac OS X Server is designed to share Postscript printers, but it can also share non-Postscript printers with some caveats. A printer's physical connection does not indicate whether or not it uses PostScript--check your printer's specifications.

Mac OS X Server 10.3, 10.4 or later

Mac OS X Server 10.3 and 10.4 use PostScript print queues to provide printer sharing (or spooling) of both Postscript and non-Postscript printers. Clients can print to these queues using AppleTalk PAP, LPR/LPD, or SMB/CIFS protocols.

When Mac OS X Server 10.3 or later receives the print job, it either queues the PostScript print job for delivery to a networked or USB PostScript printer, or converts the PostScript print job into PDF (using the ps2pdf converter) for output to a inkjet (raster) printer connected to the server using USB.

Note: With Mac OS X Server 10.4 or later, IPP-shared queues allow direct spooling of PDF to the server, eliminating the need for Postscript conversion.

Since only PostScript print jobs can be received, clients must use a Postscript PPD to print to the server queue. If the queue is serving a non-Postrscript printer, clients must use the Generic PPD. In this case, driver specific features, such as checking the amount of ink available in the printer, are not available.

For more information about the Print Server, see the Mac OS X Server Print Service Administration Guide (manual).

Mac OS X Server 10.2

To share a printer using Print Server, you must use a PostScript printer connected via USB or Ethernet.

However, you can share non-PostScript printers using the Printer Sharing feature in Sharing preferences. It will appear as a queue in the Server Settings Print Monitor, but you will notice that the Edit button is dimmed. This means that you can monitor what the printer is doing, but you cannot limit access to it, or give it a new queue name, and so forth. If it is a PostScript printer, the Edit button will be available. You will be able to share the printer using Print Service and apply other Print Service options. Printers shared using Mac OS X Server Print Service do not automatically appear in the Printer List in Print Center (Mac OS X 10.2 or later clients) and must be specifically added by the user.

Note: Do not use Printer Sharing (in the Sharing preference pane) if you want to enforce print quotas. Printer Sharing enables clients to use all shared printers and print queues without regard to quotas you may have specified.

For information on setting up Printer Sharing, see Mac Help.

Related documents

75413	Mac OS X Server 10.2: How to Set Up Print Load Balancing Using CUPS
107212	Mac OS X 10.2 or Later: Printers That Work With Printer Sharing

Published Date: Oct 11, 2016

Mac OS X: Maximum Number of File Sharing Connections

Mac OS X, like previous versions of Mac OS, has a Personal File Sharing limit of 10 simultaneously connected users. This service is referred to simply as File Sharing in some versions of Mac OS X.

This article has been archived and is no longer updated by Apple.

In Mac OS X version 10.0 or later, Personal File Sharing is designed to serve a maximum of 10 users. If you need to connect more users at once, you should upgrade to Unlimited-Client version of Mac OS X Server (http://www.apple.com/server/).

Published Date: Feb 17, 2012

Mac OS X Managed Client: Blank Passwords Do Not Work

Managed client users must have a password set. Blank passwords do not work with managed clients.
This article has been archived and is no longer updated by Apple.

Symptom

When a user with a blank password attempts to log in, his home directory does not appear. (It does not become available automatically.)

Solution

Be sure to set a password for all users who are members of managed workgroups.

Published Date: Oct 11, 2016

Mac OS X Server: How to Get More Than 500 Returns From LDAP Server

You can configure the Open Directory LDAP Server to return more than 500 records in a single search result.
This article has been archived and is no longer updated by Apple.
By default, the server returns a maximum of 500 records per search. To increase this limit, you must edit the file /etc/openldap/slapd.conf while logged in as the root user. These steps describe one way to do this:

1. Log in to the server as root. If you need help with this step, see technical document 106290, "**Mac OS X: About the root User and How to Enable It**"
2. Open TextEdit.
3. Click the Finder icon in the Dock.
4. Choose Go to Folder from the Go menu. A sheet appears.
5. Type: /etc/openldap/
6. Click Go.
7. Locate the file named: slapd.conf
8. Drag this file onto the TextEdit icon in the Dock.
9. Add this line to the end of the file:

   sizelimit <max number>

   For example, to allow a maximum of 15000 records, enter:

   sizelimit 15000

10. Save the file.
11. Quit TextEdit.
12. Log out.

This should allow you to increase the number of records returned. If it does not, follow these steps:

1. Drag the slapd.conf file to the Trash.
2. Make a copy of: slapd.conf.default
3. Rename the copy to: slapd.conf
4. Repeat the steps above, being sure to make no other changes to the file.

Type the command "man slapd.conf" in Terminal for more information on the slapd.conf file.
Published Date: Oct 11, 2016

Mac OS X: Modem "Sticks" or "Hangs" When Using Certain Norton Software

After installing Norton Firewall 2.0 or Norton Internet Security 2.0 (which includes Norton Firewall 2.0), your modem may not disconnect properly.

This article has been archived and is no longer updated by Apple.

Symptom

After clicking the Disconnect button for your internal modem, the modem "sticks" or "hangs" at a status of "disconnecting."

Solution

Update to Norton Firewall v2.0.1 or later. The Symantec support site documents this issue at:

http://service1.symantec.com/SUPPORT/num.nsf/docid/2002062811092211

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Published Date: Oct 11, 2016

Mac OS X Server: How to Use createhomedir Command to Create Home Directories

This document explains how to use the createhomedir command-line tool to create home directories.
This article has been archived and is no longer updated by Apple.
You can use the createhomedir command-line tool to create home directories for one or more users on the server on which you use the tool. Here are the parameters that createhomedir accepts. Parameters are delimited using angle brackets (<>) if they are required, and square brackets ([]) if they are optional:

```
createhomedir <-a or -l or -n directoryDomainName> [-u userName]
```

The flags have these effects:

```
-a
```

Creates home directories for users defined in all directory domains of the server's search path.

```
-l
```

Creates home directories for users defined in the local directory domain.

```
-n directoryDomainName
```

Creates home directories for users defined in a specific directory domain in the server's search path.

```
-u userName
```

Creates a home directory for a specific user defined in the domain(s) identified in the -a, -l, or -n parameter. The userName value must be a short name assigned to the user. If you omit the -a, -l, and -n parameters when you use the -u parameter, -a is assumed.

To use createhomedir to create home directories:

1. Log in to the server on which you want the home directories to reside.
2. Open the Terminal application.
3. At the prompt, type :sudo -s
4. Press Return.
5. Enter your Admin user password when prompted, and press Return.
6. You may then use the createhomedir command with the syntax described above. The createhomedir tool is located at: /usr/sbin

The following examples creates a home directory for a user with the short name "ichiro" who has an account in the shared directory domain "/NetInfo/root":

```
createhomedir -n /NetInfo/root -u ichiro
```

This command creates Home directories for all users defined in all directory domains of the server's search path if they do not already exist:

```
createhomedir -a
```

Note: Apple does not offer free telephone support for the use of this command line tool.
Published Date: Oct 11, 2016

Mac OS X Server 10.2: How to Configure WebMail to Enable Searching

This document describes how to set up WebMail to enable searching.
This article has been archived and is no longer updated by Apple.
This applies to SquirrelMail 1.2.7 as installed with Mac OS X Server 10.2 and 10.2.1, and to SquirrelMail 1.2.8 as installed in Mac OS X Server 10.2.2.

If you have enabled WebMail, are using it to access mail from Apple Mail Server, and have found that the WebMail search function fails to find email messages that it should, there is a simple configuration change you can make to fix the issue.

If you have not made any changes to the SquirrelMail configuration file since installing Mac OS X Server 10.2 (either via running the /etc/squirrelmail/config/conf.pl script or by editing the config file /etc/squirrelmail/config/config.php), you can simply replace the old config with the new one by typing these two commands from the Terminal application:

```
#sudo mv /etc/squirrelmail/config/config.php /etc/squirrelmail/config/config.php.old
```

```
#sudo cp /etc/squirrelmail/config/config_default_apple.php /etc/squirrelmail/config/config.php
```

If you have made changes to the squirrelmail config file since installing Mac OS X Server 10.2, you can edit the /etc/squirrelmail/config/config.php config file and make a simple change. Using your preferred text editor as root, find the line in /etc/squirrelmail/config/config.php that reads:

```
$imap_server_type = "other";
```

Change it to:

```
$imap_server_type = "macosx";
```

Save the file.

You can also use the command-line tool to update the configuration:

```
sudo /etc/squirrelmail/config/conf.pl
```

You may also need to use a text editor to fix up /etc/squirrelmail/config/config.php after saving the configuration change. Refer to the help item entitled "New: Configuring WebMail" for important information about running the interactive conf.pl script to configure WebMail. (When reading that help item, note that the paths that read "/etc/squirrelmail/conf/..." are incorrect; they should read "/etc/squirrelmail/config/...)
Published Date: Oct 11, 2016

Mac OS X 10.2: Unable to Drag Icons or Use Drag-and-Drop Feature

This document discusses address an issue in which you cannot drag items in the Finder, or in another application that uses drag and drop.
This article has been archived and is no longer updated by Apple.

Symptom

You cannot use the drag-and-drop feature of the Finder or another application; you cannot drag items within Finder windows or the desktop.

Solution

Restart the computer.

Note: Update to Mac OS X 10.2.2 or later for improved reliability.

Published Date: Oct 11, 2016

Mac OS X Server 10.2: How To Journal a Volume or Repair a Journaled Volume

Mac OS X Server 10.2.2 introduces a file system feature known as journaling. This feature helps protect the file system against unforeseen failures in server components or power outages, reducing the need for repairs. You may journal a volume or disable journaling using either Disk Utility or command-line tools.
This article has been archived and is no longer updated by Apple.
Note: If you need a general description of what journaling is, see technical document 107249, "**Mac OS X: About File System Journaling**".

Using Disk Utility

Using Disk Utility, you may journal a volume with or without erasing it.

To journal a volume without erasing it:

1. Log in as an Admin user to the server whose volume you want to set up for journaling.
2. Make sure that no one is using the server.
3. Open Disk Utility (/Applications/Utilities/).
4. Select the disk you want to work with in the column on the left.
5. Click the First Aid tab.
6. Click Verify Disk to make sure it is free from errors before conducting step 6.
7. Click the Information tab.
8. Click Make Journaled.

To journal a volume while erasing it:

Important: Make sure that you back up all important data on the volume before erasing the it. All data not backed up will be lost after this procedure.

1. Log in as an Admin user to the server whose volume you want to set up for journaling.
2. Make sure that no one is using the server.
3. Open Disk Utility (/Applications/Utilities/).
4. Select the disk you want to work with in the column on the left.
5. Click the Erase tab.
6. Choose "Mac OS Extended (Journaled)" from the pop-up menu.
7. Type a name for the disk in the Name field.
8. Click Erase.

To disable journaling:

You can use the Disk Utility application to disable journaling.

1. Log in as an Admin user to the server whose volume you want to set up for journaling.
2. Make sure that no one is using the server.
3. Open Disk Utility (/Applications/Utilities/).
4. Select the disk you want to work with in the column on the left.
5. Click the Information tab.
6. Click Remove Journaling.

Repairing the journaled volume:

You may use Disk Utility to verify or repair a journaled volume as with any other compatible volume.

Using command-line tools

At the command line, you journal a volume with or without erasing it, as noted in Step 5. This choice decides whether you use the diskutil or new_hfs command.

1. Log in as an Admin user to the server whose volume you want to set up for journaling.

2. Make sure that no one is using the server.

3. Open Terminal (/Applications/Utilities/).

4. Type: `mount`

5. Press Return. A list of volumes that are available to the file system appears. Look for the volume that is at the root level "/". This is the server's startup volume, for example: "`/dev/disk0s11`".

6. Run fsck_hfs with the -f and -n flags to make sure the disk is free from errors. For example, to verify /dev/disk0s11, you would execute:

```
sudo fsck_hfs -f -n /dev/disk0s11
```

7. If you want to convert a disk to a journaled volume without erasing it, continue to Step 8. If you want to erase the volume and then format it with journaling, skip to Step 9.

8. Run diskutil using the enableJournal option, and identify the volume you want to convert. To enable journaling for the root volume, for example, you would execute:

```
sudo /usr/sbin/diskutil enableJournal /
```

To enable journaling for a volume called MyDisk, you would execute:

```
sudo /usr/sbin/diskutil enableJournal /Volumes/MyDisk
```

Stop here. Do **not** continue to Step 9.

9. Make sure that you back up all important data on the volume before erasing the disk. All data not backed up will be lost in this step. Use the -J flag with newfs_hfs. For example, to make a journaled volume named "Foo" on device /dev/disk0s11, you would execute:

```
newfs_hfs -J -v Foo /dev/disk0s11
```

Disabling journaling via diskutil

You can disable journaling from the Terminal application by using diskutil. Follow these steps:

1. Log in as an Admin user to the server whose disk you want to set up for journaling.
2. Make sure that no one is using the server.
3. Open Terminal (/Applications/Utilities/).
4. Execute the diskutil command, using the disableJournal option and identifying the volume for which you want journaling disabled. To disable journaling for the root volume, for example, you would execute:

```
sudo /usr/sbin/diskutil disableJournal /
```

To disable journaling for a volume called MyDisk, you would execute:

```
sudo /usr/sbin/diskutil disableJournal /Volumes/MyDisk
```

Repairing a journaled volume

You can check and repair a journaled volume using fsck_hfs from the command line. To repair a journaled disk:

1. Log in as an Admin user to the server whose disk you want to set up for journaling.
2. Make sure that no one is using the server.
3. Open Terminal (/Applications/Utilities/).
4. Execute the fsck_hfs command using the -f flag. For example, to force checking a journaled volume on device /dev/disk0s11, execute:

```
fsck_hfs -f /dev/disk0s11
```

Published Date: Oct 11, 2016

Mac OS X 10.2: Computer Starts up to Login Window After Upgrade from 10.1

If you choose the Archive and Install option when upgrading from Mac OS X 10.1 to Mac OS X 10.2, the preference to automatically log in at startup is not retained.
This article has been archived and is no longer updated by Apple.

Symptom

After upgrading from Mac OS X 10.1 to Mac OS X 10.2, the computer starts up to the Login Window, even though the option to automatically log in as a specific user was selected in Mac OS X 10.1.

Solution

Mac OS X 10.2.2 and later:

1. Open System Preferences.
2. Choose Accounts from the View menu.
3. If necessary, click the lock button to make changes.
4. Select "Login automatically as" to enable that option.

Mac OS X 10.2 to 10.2.1:

1. Open System Preferences.
2. Choose Accounts from the View menu.
3. If necessary, click the lock button to make changes.
4. Deselect the "Login automatically as" option. (It will already be selected.)
5. Quit System Preferences.
6. Reopen System Preferences, and go back to the Accounts pane.
7. Select the option to "Login automatically as".

Published Date: Feb 17, 2012

Mac OS X Server 10.2.2: Disk Quotas and Journaling Not Compatible With Each Other

You should not use the disk quotas feature in conjunction with the journaling feature in Mac OS X Server 10.2.2. Update to version 10.2.3 or later to use them together.
This article has been archived and is no longer updated by Apple.
Note: Journaling is a feature of Mac OS X Server 10.2.2 or later. For a general description journaling, see technical document 107249, "**Mac OS X Server 10.2: About File System Journaling**".

To use disk quotas in conjunction with journaling, update to Mac OS X Server 10.2.3 or later. See technical document 107265, "**Mac OS X Server: About the Mac OS X Server 10.2.3 Update**".

If you cannot update immediately, this information applies to Mac OS X Server 10.2.2:

If journaling is turned on on a shared volume, use the Workgroup Manager sharing module to turn quotas off for that volume. Follow these steps:

1. Open Workgroup Manager, and connect to the server.
2. Click the Sharing Module icon.
3. Select the volume from the All view.
4. Click the General tab.
5. Be sure the "enable disk quotas on this volume" checkbox is **not** selected.

Published Date: Oct 11, 2016

Mac OS X Server: Do Not Use Spaces in Home Directory Share Point Name

Mac OS X Server clients (including Macintosh Manager clients) cannot find their users' home directories when the share point name contains a space.
This article has been archived and is no longer updated by Apple.

Symptom

When the share point containing the users' home directories has a space in the name, clients are not able to locate their home directory while logging in. This symptom will also be observed in any automounting share point, but it is most commonly encountered with home directories.

Solution

1. Open Workgroup Manager.
2. Stop sharing the share point.
3. Remove the spaces from the folder name in the Finder
4. Once all the spaces are removed, use Workgroup Manager to start sharing the folder again.

For each user that stored his home directory in this share point, you will need to reconfigure the user's home directory settings by selecting the "No Home" option. Save the changes, then select the proper share point using either "Network" or "Advanced". If you select "Network", be sure to select the proper share point and then save the changes. If you select "Advanced", be sure to complete the requested information and then save the changes.

Additional information

When spaces are used in a share point's name, the space is indicated as "%2520" in the "home_loc" property in the NetInfo database. The "%2520" string is the unicode representation of a space. Client computers expect to receive "%20" to indicate a space in the path, which is the ASCII representation of a space.

You should not manually edit the user's home_loc value. Removing the space, as recommended above, is the preferred solution.
Published Date: Oct 11, 2016

Mac OS X Server 10.2: Services and Applications That Do Not Work With Password Server

This document lists which Mac OS X Server services and related Apple products do not work with the Open Directory Password Server service.
This article has been archived and is no longer updated by Apple.
The following services and applications do not work with the password server in Mac OS X Server 10.2:

- Apple Remote Desktop 1.0 to 1.1 (Note 1)
- Macintosh Manager 2.0 to 2.2.1 (Note 2)
- NetInfo Manager (Note 3)
- Versions of AppleShare Client earlier than version 3.8.3 (Note 4)

Notes

1. Apple Remote Desktop versions 1.2 and later are compatible with Password Server.

2. Macintosh Manager versions 2.2.2 and later are compatible with Password Server.

3. To authenticate in NetInfo Manager, log in with an administrator account that does not use the Password Server service, such as root.

4. You should use AppleShare Client 3.8.8 and later. To use AppleShare Client 3.8.3, you must install the DHX UAM (Diffie-Hellman Exchange User Authentication Modules) package. AppleShare Client 3.8.3 can be downloaded from Apple Software Downloads (http://www.apple.com/swupdates/). The DHX UAM package is included with the AppleShare Client 3.8.3 download. AppleShare Client 3.8.5 has DHX UAM built in.

5. Various versions of AppleShare client may be downloaded from Apple Software Downloads (http://www.apple.com/swupdates/). Enter "AppleShare" in the search field on this page. Information on compatibility, for help in determining which you may need to download, may be found in technical document 16145, "**AppleShare: Platforms and OS Releases Supported**".

Published Date: Oct 11, 2016

Mac OS X Server 10.2.8 or Earlier: Cannot Create File or Folder Names Longer Than 31 Characters on Some Volumes

This document describes how to work around a situation in which you cannot remotely create a file or folder with a name longer than 31 characters. This occurs when connected via Apple File Protocol (AFP), of which various examples are named File Sharing, Personal File Sharing, and Apple File Service.

This article has been archived and is no longer updated by Apple.

Symptom

When you try to remotely create a file or folder on an Apple server with a name longer than 31 characters, an alert with this message appears:

> "The name <name of file> has too many characters and cannot be used".

Solution

You may use one of these workarounds:

- Create the file or folder on the client computer, then copy it to the server.
- If convenient, use a shorter file or folder name.
- Carbon and Cocoa applications may be able to create file names longer than 31 characters. Carbon and Cocoa are two types of Mac OS X-native applications.

Published Date: Oct 11, 2016

Mac OS X 10.2: How to Use High-Bit Characters in Terminal

The default configuration of Terminal does not allow you to drag items named with high-bit characters to the command line, or type high-bit characters there. High-bit characters include accented and special characters used in many languages. You may reconfigure Terminal to allow high-bit characters.

This article has been archived and is no longer updated by Apple.

Symptom

You cannot type high-bit characters at the command line or drag items named with them into the Terminal window.

Solution

1. Open Terminal.
2. Choose Windows Settings from the Terminal menu. The Terminal Inspector window appears.
3. Choose Emulation from the pop-up menu.
4. Make sure the checkbox for "Use option key as meta key" is not selected.
5. Select the checkbox for "Escape 8-bit chars with Ctrl-V".
6. Choose Display from the pop-up menu.
7. If necessary, choose Unicode (UTF-8) from the Character Set Encoding pop-up menu.

Note: If you are using tcsh or bash, make sure that "Escape 8 bit characters with Ctrl-V" is selected in the Emulation pane of the Terminal Inspector. If you are using zsh, make sure that "Escape 8 bit characters with Ctrl-V" is not selected. You can then drag/type names of folders with high-bit characters correctly. (tcsh/bash will show the escaped form of the character; zsh will show the actual character.)

Published Date: Oct 11, 2016

Mac OS X Server 10.2: Third-Party Disk Utilities May Turn Off Journaling

Third-party disk utilities that have not been updated to recognize journaling may turn off that feature in the course of repairing a volume.
This article has been archived and is no longer updated by Apple.

Symptom

A volume is no longer journaled after using a third-party disk utility. The Apple Disk Utility no longer indicates the volume is journaled.

Solution

You should check with your software vendor to get a version that has been updated to work with journaled volumes. You may use Disk Utility to turn journaling back on. See technical document 107248, "**Mac OS X Server 10.2: How to Journal a Volume or Repair a Journaled Volume**".

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

The following document can help you search for a particular vendor's address and phone number:

17159: "**Locating Vendor Information**"
Published Date: Oct 11, 2016

Ink: Settings That Affect Handwriting Recognition

This document discusses a variety of settings and usage habits that affect how Ink recognizes your handwriting. This includes premature text recognition, difficulty writing certain letters, handwriting style, and use of pen as mouse (yellow paper appears too quickly).

This article has been archived and is no longer updated by Apple.

Symptom

These are behaviors you might encounter as you become familiar with your tablet and handwriting recognition:

- Your writing disappears when you try to dot an "i", cross a "t", or complete two-stroke letters such as a "k". The writing is thus recognized prematurely, and it appears in the target application as something other than what you intended.
- Some letters may seem more difficult to write than others. You might notice this with multi-stroke characters, like "k" and "E".
- Some handwriting styles are more difficult to use than others, and are not recognized as readily.
- You sometimes have difficulty using the pen as a mouse. The Ink writing space (yellow paper) may appear too quickly for you.

Solution

Settings that affect when text is recognized

Ink may prematurely try to recognize your writing if you lift your pen too high above the tablet when completing multi-stroke letters, or when you write anything else that causes you to lift your pen more than usual. This is due to the preference "Recognize my handwriting when the pen moves away from the tablet," which is on by default. This preference allows you to simultaneously enjoy competing benefits: a relatively long recognition delay, and an easy option for forcing immediate recognition (lifting the tip of your pen).

Additionally, you may prematurely invoke recognition if you have set the "Recognize my handwriting after" slider to an extremely short value.

To address the first, you need to practice keeping your pen lower, or deselect the preference. To address the second, try writing with the slider set to different delay values. Both of these preferences are accessed by clicking the Options button in the Ink preference pane.

Settings that affect ease of writing certain characters

When writing, you may be applying different, lighter amounts of pressure as you form certain characters. This can affect recognition. There are two things you can do to compensate for this. First, adjust the pen tip pressure setting to be "softer" in your tablet setup software, such as the Wacom Tablet application. This makes it easier for Ink to recognize lighter strokes. Second, try pressing down a little harder when you write (particularly if you do not want to change the pressure setting).

Note: If you see unintended gaps in your on-screen Ink, the gaps accurately reflect what Ink does and does not recognize. You should adjust your pen tip pressure (or simply press a little harder) until the gaps no longer appear. Gradients portrayed in on-screen Ink are for aesthetic purposes only, so you should only be concerned with actual gaps.

Handwriting styles that work best with Ink

Ink is optimized for printed characters and relatively straight lines, not for cursive writing. You may, however, experiment with tracing back over the straight lines of printed, non-cursive characters so that you complete them in one stroke. If you want to practice emulating a handwriting style, use the InkPad feature. The default font in InkPad is Apple Casual, and it is designed to best reflect the style that Ink recognizes.

Settings that affect when Ink is invoked, when yellow paper appears

There are three ways you can address this.

First, notice that by holding the tip of the pen just above the surface of the tablet, you may be able to mouse with the pen indefinitely without invoking Ink. You may need to adjust the pen tip pressure setting in your tablet's setup software, such as the Wacom Tablet application.

Second, experiment to find the settings you like best by following these steps:

1. Click the Options button in the Ink preference pane.
2. Drag the "Start inking after the pen moves" slider all the way to Long Delay.
3. Drag the "Use pen as mouse" slider all the way to Short delay.
4. Click OK.

You may not want to keep these extreme settings, but this will allow you to get a better feel for the timing. As you become accustomed, drag the sliders slowly back towards the middle, until you find the setting you like best.

Third, you may set the "Allow me to write" pop-up menu to "Only in Inkpad", then send your text from Inkpad to the target application. Your tablet driver software may allow you to toggle the "Allow me to write" setting via the pen button.

Published Date: Feb 20, 2012

Mac OS X: About the Mac OS X 10.2.3 Update

This software updates Mac OS X 10.2.2 to version 10.2.3.
This article has been archived and is no longer updated by Apple.
This information is available in:

Français | Deutsch | Español | Italiano | Nederlands | Svensk

Important: Read Before Installing

1. An Admin user password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, then follow these steps: Choose System Preferences from the Apple menu. Choose Accounts from the View menu. Select an Admin user and click Edit User. Type your current password, and press Return. Change the password, and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install. Installation

Installation

There are two ways to update to Mac OS X 10.2.3.

Automatic Software Update Installation

You may have been referred to this document by Automatic Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

Standalone Installers

An installer is also available from Apple Software Downloads (http://www.apple.com/swupdates/).

Two versions of the installer are available. One is for updating version 10.2.2 to 10.2.3, the other 10.2 or 10.2.1 to 10.2.3 (a "Combo" update). This document describes the former. If you need to use the Combo update, see technical document 107264, "**Mac OS X: About the Mac OS X 10.2.3 Update (Combo)**".

Enhancements Delivered with this update

This update delivers many enhancements, as outlined below.

Digital Hub and Peripheral Device Enhancements

- Works better with Force Feedback-based USB devices.
- Disc burning speed selection is now retained between Finder CD burns.
- Certain files and folders specific to Mac OS file systems, such as a Temporary Items folder or Desktop Folder, are no longer copied to the disc when burning a CD.
- Addresses a situation in which Disk Copy may not proceed beyond the "Configuring Burn" stage when used with some external FireWire-based CD burners.
- Addresses a potential issue in which some computers do not connect in FireWire Target Disk Mode.
- Improves compatibility for iPhoto and Image Capture with Canon IXY DV, Optura200MC, Elura 40MC, zr50, and GL2.
- Adds disc burning drivers for additional third-party burners, including: LaCie d2 CD-RW 48x12x48x FireWire, LaCie d2 CD-RW FireWire 52x24x52, and BUSLINK RW5252FM 52x24x52x

Networking, iChat and Modem Enhancements

- Addresses an issue in which the computer does not sleep if personal file sharing is turned on.

- Connect to Server may now connect to an FTP server when using the Japanese localized version of Mac OS X.
- Improves compatibility for USB-based CDC modems.
- Connections with iDisk volumes over a busy network or low-bandwidth connection are improved; for example, when trying to use an iDisk while also playing a streamed Internet radio broadcast via iTunes over a dial-up modem connection (PPP).
- Improves results when selecting iChat message text.
- Improves spacing when using Option-Return in an iChat message.
- Improves results when transferring file names via iChat that begin with a ">" character.

Application Enhancements

- Improves compatibility for the HP Communications application.
- Provides a zero all data feature in Disk Utility, for compatible hard drives.
- Improves iPhoto slide show function on some computers that use ATI Rage 128 graphics accelerator chips.
- Allows for improved results with applications that switch emulated address spaces, such as Connectix Virtual PC.
- Improves compatibility for OpenGL-based software on some computers that use ATI Rage 128 graphic accelerator chips; improves reliability for OpenGL-based software while Screen Saver effects are enabled on some computers that use ATI Rage 128 graphic accelerator chips.
- Addresses a situation in which some animated GIFs could cause Preview to unexpectedly quit.
- Allows for improved display of fonts via the Microsoft Word Font Toolbar.
- Improves compatibility with Netopia Timbuktu for TCP/IP connections.
- Improves compatibility for Image Capture when downloading large AVI files from some digital cameras.
- US English spellings are no longer interpreted as correctly spelled when using the built-in British English Dictionary.
- Improves compatibility for Mail when accessing accounts, such as AT&T Broadband, which require SSL v2 or v3 over SMTP.
- Addresses some situations in which the Mail application does not quit as expected.
- Addresses an issue in which Mail may become unresponsive when attaching certain kinds of JPEG files to a message.

Audio Enhancements

- Addresses a potential issue in which sound from some USB audio devices may "stutter" after waking from sleep.
- Addresses an issue in which iSub, when used with some third-party USB speakers, could produce static.
- Improves default reverb setting for applications which use QuickTime Musical Instruments.
- Addresses an issue in which audio recorded from a USB device with a sample rate of 48 kHz or 96 kHz may include distortion.
- Improves results when recording from a USB microphone with a sample rate of 11.025 kHz or 22.050 kHz.
- Addresses an issue in which a MIDI device may unexpectedly fail to be recognized, when several devices are connected.
- Reduces MIDI serial compatibility issues by limiting serial support; Apple supplies third-party developers with documentation necessary to provide serial support.

Printing and Print Center Enhancements

- Improves ability of Print Center to automatically find and add USB printers.
- Enhances default printer selection process after network printers have automatically been added.
- Printers configured with a Rendezvous name are now selectable from a Print dialog window.
- Improves notifications when a job cannot be printed due to a stopped print queue.

Other Enhancements

- Improves keyboard navigation behavior in Column view of Navigation Services dialogs, such as open and save dialogs.
- Addresses an issue in which the computer could become unresponsive when configuring the Screen Effects preference pane.
- Addresses a situation in which the Dock may unexpectedly quit when attempting to display a hierarchical submenu while certain background tasks are in progress.
- Reduces instances on some computers in which keypresses are not detected by the "Are you sure you want to shut down your computer now?" dialog box when some applications are open.
- Addresses a potential kernel panic situation when disconnecting a USB hub from a Power Macintosh G3 (Blue and White) computer.
- Adds a Canadian English language spell checking dictionary.
- Addresses an issue in which Keychain items could become unusable or not allow password changes after a series of different applications request modifications to the item.
- Addresses an issue in which some Power Macintosh G3 computers may be unable to start up in verbose mode with Mac OS X 10.2.1.
- Addresses a potential issue in which some applications may not quit as expected after a USB device is disconnected.
- Addresses a potential issue in which playing certain system alert sounds could cause the Login window to appear.
- Includes OpenGL 1.4 which contains improvements for all systems.

TA21063_Mac_OS_X_About_the_Mac_OS_X_Update.pdf

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 11, 2016

Mac OS X: About the Mac OS X 10.2.3 Update (Combo)

This software updates Mac OS X 10.2 or 10.2.1 to 10.2.3. It is a "combo" update that combines enhancements delivered with versions 10.2.1, 10.2.2, and 10.2.3. If you already have Mac OS X 10.2.2, you may download a smaller update that is not a combo.
This article has been archived and is no longer updated by Apple.
This information is available in:

Français | Deutsch | Español | Italiano | Nederlands | Svensk

Important: Read Before Installing

1. An Admin user password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, then follow these steps: Choose System Preferences from the Apple menu. Choose Users from the View menu. Select an Admin user and click Edit User. Click the Password tab. Change the password and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.

Installation

There are two ways to update to Mac OS X 10.2.3.

Automatic Software Update Installation

You may have been referred to this document by Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

Standalone Installers

An installer is also available from Apple Software Downloads (http://www.apple.com/swupdates/).

Two versions of the installer are available. One is for updating version 10.2.2 to 10.2.3, the other 10.2 or 10.2.1 to 10.2.3 (a "Combo" update). This document describes the latter. If you already have updated to 10.2.2, see technical document 107263, "**Mac OS X: About the Mac OS X 10.2.3 Update**".

Enhancements Delivered with this update

Many enhancements are delivered with this update. Because this is a combo update, it includes those delivered with both Mac OS X 10.2.1, 10.2.2, and 10.2.3. These enhancements are listed individually in these technical documents:

107036: "**Mac OS X: About the Mac OS X 10.2.1 Update**"
107140: "**Mac OS X: About the Mac OS X 10.2.2 Update**"
107263: "**Mac OS X: About the Mac OS X 10.2.3 Update**"
Published Date: Oct 11, 2016

Mac OS X Server: About the Mac OS X Server 10.2.3 Update

This software updates Mac OS X Server 10.2.2 to 10.2.3.
This article has been archived and is no longer updated by Apple.

Important: Read Before Installing

1. An Admin user password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, then follow these steps: Choose System Preferences from the Apple menu. Choose Accounts from the View menu. Select an Admin user and click Edit User. Type your current password, and press Return. Change the password, and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install. Installation

Installation

There are two ways to update to Mac OS X Server 10.2.3.

Automatic Software Update Installation

You may have been referred to this document by Automatic Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

Standalone Installers

An installer is also available from Apple Software Downloads (http://www.apple.com/swupdates/).

Two versions of the installer are available. One is for updating version 10.2.2 to 10.2.3, the other 10.2 or 10.2.1 to 10.2.3 (a "Combo" update). This document describes the former. If you need to use the Combo update, see technical document 107266, "**Mac OS X Server: About the Mac OS X Server 10.2.3 Update (Combo)**".

Enhancements delivered with this update

This update delivers many enhancements, as outlined below.

Admin Guide documentation

- Enhanced documentation includes information about how to operate and configure NetBoot/Network Install, Directory Services Integration and Usage, QuickTime Streaming Server, Password Server, Open Directory Assistant, NFS resharing.

Apple File Service

- Added option for the inherited permissions model when copying files to the server. This option is available in Workgroup Manager.

Workgroup Manager

- Improved information updates when Computer Lists are being manipulated locally and remotely.
- Improves the configuration interface for Group Folder, which provides formatted examples of URLs and Paths.
- Group Folder names may contain spaces.
- Improved share point configuration performance.
- Allows Group Directory creation using the "CreateGroupfolder" Command-Line Tool for on-demand or automatic creation of Group Directories. In the updated Server Admin Guide, see page 202, "Defining an Advanced Group Volume."

Macintosh Manager

- Macintosh Manager 2.2.2 CD includes Deutsch, Japanese, and Français disk sets.
- Macintosh Manager share point is now visible in the list of share points.

Server Monitor

- Status Summary provides more reliable information about monitored servers and prevents conditions which could result in the message "No response from server."

Installation

- Time estimates during installation of Mac OS X Server are more accurate.
- Upgrading from Mac OS X Server 10.1 to Mac OS X Server 10.2.3 preserves proxy settings for each network interface.
- When upgrading a Mac OS X client computer with Mac OS X Server 10.2.3 using the "MacOSXServerInstall.mpkg" file, a restart is required. Restart your computer after any installation of Mac OS X Server.

Server Assistant

- Volume names with spaces and apostrophes are available for both local and remote installation of software using Server Assistant.
- Improved interface configuration when configuring many network interfaces.
- The underscore (_) character is an acceptable character in the hostname configuration.
- Upgrading Mac OS X 10.2 client systems with original usernames containing more than eight characters is supported. See technical document 107304, "**Mac OS X Server 10.2: Cannot Complete Setup Assistant After Installing Server Package**".

NetBoot and Network Install

- NetBoot Images can be compressed using Disk Copy.
- NetBoot Images created using the Network Image Utility can be modified using Disk Copy even if the uncompressed size of the image exceeds 2 GB. The final size of the Disk Image file (after compression) must be less than 2 GB for clients to properly start up.
- Network Image Utility can create images from DVD installation disks.
- Improved function and, and improved documentation in Admin Guide and Knowledge Base related to these items:
  - Updating an existing Mac OS X NetBoot disk image
  - Customizing a Mac OS X NetBoot Disk Image
  - Creating a Mac OS X NetBoot image from an existing system
  - Creating a Network Install disk image
  - Adding packages to an OS install image
  - Automating installation of an OS image
  - Information on "About the minstallconfig.xml" file
  - Selecting a Network Install image (from a Mac OS X client)

Note: To create a custom package install image (an image without system software), you must use a Mac OS X version 10.2.3 or later install disk. See the Server Admin Guide for more information on this topic.

Utilities

- Provides zero all data feature in Disk Utility, for compatible hard drives.
- Improved function of Package Maker utility, as related to maintaining file attributes within created packages.

General System Enhancements

Mac OS X Server 10.2.3 also includes enhancements of the standard, non-server operating system, as listed in technical document 107263, "**Mac OS X: About the Mac OS X 10.2.3 Update**".

Print Server

- Improved AppleTalk Print Queue reliability.
- Improved interface responsiveness related to print queue visibility in the client computer Chooser when queue is no longer available.

Mail Server

- Improved mail delivery performance of large enclosures to clients using Mail.app.

Web Server

- Updated to Apache version 2.0.43.
- Updated to Axis version 1.0.
- Updated to SquirrelMail version 1.2.9.

Other Enhancements

- MySQL version has been updated to 3.23.53.
- Open Directory Assistant allows you to configure IP address of en1 or other secondary active network interface card.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 11, 2016

Mac OS X Server: About the Mac OS X Server 10.2.3 Update (Combo)

This software updates Mac OS X Server 10.2 or 10.2.1 to 10.2.3. It is a "combo" update that combines enhancements delivered with versions 10.2.1, 10.2.2, and 10.2.3. If you already have Mac OS X Server 10.2.2, you may download a smaller update that is not a combo.
This article has been archived and is no longer updated by Apple.

Important: Read Before Installing

1. An Admin user password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, then follow these steps: Choose System Preferences from the Apple menu. Choose Users from the View menu. Select an Admin user and click Edit User. Click the Password tab. Change the password and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.

Installation

There are two ways to update to Mac OS X Server 10.2.3.

Automatic Software Update Installation

You may have been referred to this document by Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

Standalone Installers

An installer is also available from Apple Software Downloads (http://www.apple.com/swupdates/).

Two versions of the installer are available. One is for updating version 10.2.2 to 10.2.3, the other 10.2 or 10.2.1 to 10.2.3 (a "Combo" update). This document describes the latter. If you already have updated to 10.2.2, see technical document 107265, "**Mac OS X Server: About the Mac OS X Server 10.2.3 Update**".

Enhancements Delivered with this update

Many enhancements are delivered with this update. Because this is a combo update, it includes those delivered with both Mac OS X Server 10.2.1, 10.2.2, and 10.2.3. These enhancements are listed individually in these technical documents:

107038: "**Mac OS X Server: About the Mac OS X Server 10.2.1 Update**"
107142: "**Mac OS X Server: About the Mac OS X Server 10.2.2 Update**"
107265: "**Mac OS X Server: About the Mac OS X Server 10.2.3 Update**"
Published Date: Oct 11, 2016

Ink: How to Write Return and Enter

You may want to use Return or Enter when writing in iChat, for example. They are not in the Gestures list.

This article has been archived and is no longer updated by Apple.

The "Vertical Space" gesture inserts a Return character. You may use it anywhere that Return or Enter might normally be required. In iChat, for example, this gesture will send your message.

It is possibly, though unlikely, that your application may distinguish between the insertion of a Return character and an actual keystroke. In that case, the Vertical Space gesture may not work. You could assign Enter or Return as a keystroke on one of your pen's buttons to achieve this effect. This is done in the tablet setup software, such as the Wacom Tablet application.

Published Date: Feb 20, 2012

Ink: About Writing on the Desktop or in the Finder

Using Ink to write on the desktop or in the Finder provides the same convenience of keyboard shortcuts. If you are not familiar with this type of navigation, the writing may seem not to go anywhere. This document explains how it works.

This article has been archived and is no longer updated by Apple.

It may seem like your writing on the desktop goes nowhere, but it is actually being used for navigation, just as keyboard shortcuts are. This is how it works:

Assume you have three files on your desktop named "Apple", "MyDocument", and "Journal". If you write "ap" on the desktop, then "Apple" would be selected. This works alphabetically. If you had many files on your desktop, writing a few letters or numbers would select the best alphabetic match. This same technique may be used in Finder windows, and it may be done on your keyboard.

Note: In Mac OS X versions 10.2 to 10.2.8, you cannot write in the Finder toolbar Search field.

Published Date: Feb 17, 2012

Ink: Tablets That Work With Ink

Ink only works with Wacom graphics tablets.

This article has been archived and is no longer updated by Apple.

Symptom

Ink does not work with brands of tablet other than Wacom.

Solution

Ink works only with Wacom tablets. This document will be updated as more information becomes available.

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Published Date: Oct 11, 2016

Ink: Command-O Does Not Work as Expected

Command-O does not work as expected when using the Command key button in the Ink palette. Other combinations, such as Command-D or Command-I work as expected.

This article has been archived and is no longer updated by Apple.

Symptom

When you write the keyboard equivalent of "Command-O" in Ink, the intended menu command is not executed. In the Finder, for example, the selected item does not open. If you are using an application that has an action assigned to Command-0 (zero), then you might get that action instead.

Solution

Ink allows you to issue the equivalent of keyboard shortcuts by tapping the modifier key buttons in the Ink palette, followed by writing the letter that would normally be used in combination with the modifier key. When you try to enter Command-O, Ink recognizes the input as a zero and not the letter O. Other combinations, such as Command-D or Command-I work as expected.

This document will be updated when more information is available.

Published Date: Feb 20, 2012

Ink: Handwriting Is Garbled and Slanted Down and to the Right

Your handwriting may be garbled and slanted if your tablet is set to mouse mode.

This article has been archived and is no longer updated by Apple.

Symptom

Handwriting is garbled, and it slants downward and to the right.

Solution

This happens when the tablet is in mouse mode. Put the tablet in pen mode.

Your tablet setup software, such as the Wacom Tablet application, should have a setting for pen mode or mouse mode. There may be certain situations in which your tablet software automatically switches modes. See the documentation included with your tablet software.

Published Date: Feb 20, 2012

Mac OS X 10.2: Audio Distortion When Recording at 11 KHz or 22 KHz Over USB

You may hear distortion (pops, clicks) when recording 11 KHz or 22 KHz audio through a USB device.
This article has been archived and is no longer updated by Apple.

Symptom

You hear pops and clicks when you play audio recorded through a USB device at 11 KHz or 22 KHz.

Products Affected

- Mac OS X 10.2 to 10.2.2

Solution

If possible, record the audio at a different sample rate, such as 44.1 KHz or 48 KHz.

Alternatively, you may record audio through the computer's sound input port, if it has one.

This document will be updated as more information becomes available.
Published Date: Oct 11, 2016

Mac OS 9: Quark Express 4 and ATI Radeon 7500 Video Cards

This document describes a compatibility issue between Quark Xpress 4 and the ATI Radeon 7500 video card, which is available with some Macintosh models.
This article has been archived and is no longer updated by Apple.

Symptom

The computer stops responding when you drag a picture using the content tool.

Products Affected

- Mac OS 9.2.2
- Quark Xpress 4
- ATI Radeon 7500 graphics accelerator card

Solution

Upgrade to Mac OS X, **or** upgrade to Quark Xpress 5.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 11, 2016

Mac OS X 10.2: Cannot Change Dock, Burn Discs, or Use Certain System Preferences and Applications

This document describes two circumstances in which use of your computer may be restricted. This may affect application usage, disc burning (CD and DVD), System Preferences usage, Dock usage, and the ability to change your password.
This article has been archived and is no longer updated by Apple.

Symptom

You cannot do one or more of the following activities as expected:

- Open applications
- Burn discs (CD and DVD)
- Remove items from the Dock
- Use certain System Preferences features
- Change your password

Solution

Features designed to restrict use of a Macintosh computer

There are two circumstances in which it is normal for use of your computer to be restricted. The first circumstance is if an Admin user of your computer has placed restrictions on your non-Admin user account. This is done via the Capabilities feature of the Accounts preference pane. Capabilities can manage your ability to use applications, burn discs, remove items from the Dock, use certain System Preferences features, and change your password. Capabilities is further described in technical document 107180, "**Mac OS X 10.2: How to Manage User Access to Applications, System Preferences, and Disc Burning via 'Capabilities'**".

The second circumstance is when your computer has visited, or been used on, a network on which computers are managed by Workgroup Manager, a component of Mac OS X Server. Workgroup Manager can remotely control the same settings on your computer as Capabilities (and more) when you join a managed network as a Guest Computer.

How to determine which affects your computer

First you need to know if you are an Admin user. Open the System Preferences application, and look for the Accounts icon. If the Accounts icon is dimmed (unavailable), you are not an Admin user. If it is not dimmed, click it. Look in the Type column to see if your account type is "Admin".

If you are not an Admin user, stop here and ask an Admin user of the computer if your account has been restricted via the Capabilities feature. If it has been, you may stop here and resolve the issue with the help of your Admin user.

Admin users cannot be managed via Capabilities. If any user who is not managed via Capabilities experiences the symptoms above, the computer may have been used on a network on which Workgroup Manager is active. You would most likely encounter Workgroup Manager in a school, though it could be present anywhere Mac OS X Server is used.

When can Workgroup Manager control your computer?

Workgroup Manager cannot take control of your computer without, figuratively speaking, its permission. Remote management products made by Apple only allow a network administrator to control a computer after specific actions have been taken at that computer to allow such control. In the case of Workgroup Manager, "permission" is given when the computer makes an attempt during startup to connect to a NetInfo and/or LDAP server, which may subsequently manage the computer. In Mac OS X, the default setting is for your computer to attempt to connect to the NetInfo and LDAP servers (if any are present) that are specified via DHCP. This means your computer will allow itself to be managed via this method until you specifically deselect this default setting.

Note: Rest assured that the degree of control Workgroup Manager has over your computer does not allow the network administrator to remotely access or delete files on your computer. Thus falling under inadvertent control of Workgroup Manager does not constitute any risk for your data. This default setting is designed to ease network management for education environments and other large deployments of managed computers. This setting is not likely to inadvertently affect your computer, but its affects are easily undone in the event that it does.

Reversing or preventing inadvertent managed settings

You must be an Admin user of the affected computer to remove the managed settings. Under any circumstance, only an Admin user is authorized to remove managed settings.

To undo the restrictions placed on your computer by Workgroup Manager, see technical document 107172, "**Workgroup Manager: How to**

Clear Cached Settings".

To prevent Workgroup Manager from managing your computer in the future, deselect the default NetInfo and/or LDAP connection that allows Workgroup Manager to manage use of your computer. See technical document 107279, "**Mac OS X 10.2: How to Disable NetInfo and LDAP Connections at Startup**".

Published Date: Oct 11, 2016

Mac OS X: How to Disable NetInfo and LDAP Connections at Startup

This document explains how to disable the NetInfo and LDAP connection attempts that may occur during startup. Under certain circumstances, a startup delay may occur, or your computer may unexpectedly become managed.
This article has been archived and is no longer updated by Apple.

Symptom

If you have your computer configured to connect to a NetInfo and/or LDAP server at startup, you may see these symptoms:

- If your computer is on a network that does not have a NetInfo server, you may experience a startup delay in which a message about NetInfo appears above the progress bar.
- Your computer may unexpectedly join a network as a Workgroup Manager client. For further description of this possibility, see technical document 107278, "**Mac OS X 10.2: Cannot Change Dock, Burn Discs, or Use Certain System Preferences and Applications**".

Note: Only Mac OS X 10.2 or later can be a Workgroup Manager client.

Solution

Any Mac OS X computer may be set up to connect to a NetInfo or LDAP server during startup, but this is a default setting in later Mac OS X versions. If you need to disable these connection attempts, follow these steps:

Note: These steps describe Directory Access as it appears in Mac OS X 10.2 or later. They may vary slightly in earlier versions.

1. Open Directory Access (/Applications/Utilities/).
2. Click the lock button, and type your password.
3. Click OK.
4. If necessary, click the Services tab.
5. In the Enable column, deselect the checkboxes for NetInfo, LDAPv2, and LDAPv3.
6. Click the Apply button.
7. Quit Directory Access.

Published Date: Feb 17, 2012

Mac OS X Server: About Server Admin Tools Update 10.2.3

This document provides information about the administration software applications and programs to remotely administer your Mac OS X Server. This article has been archived and is no longer updated by Apple.

About Administration Tools for Mac OS X Server

Information on Server Administration Software

The Server Administration Software installation package will allow you to install the following applications on a computer other than the server, for purpose of administering the server remotely. These tools require Mac OS X v10.2 or later.

- Workgroup Manager - for managing users, groups, computers, workgroups, and sharing privileges.
- Server Settings - for configuring network, file, Web, print, and mail services.
- Server Status - for monitoring the activity and state of each service running.
- Server Monitor - for monitoring the hardware status of Xserve servers
- Server Assistant and Open Directory Assistant - for setting up your Mac OS X Server and configuring the directory settings remotely
- Macintosh Manager Admin - for managing Macintosh Manager 2 workgroups, preferences and environments
- QuickTime Broadcaster - to use in conjunction with QuickTime Streaming Server
- QuickTime Player - to broadcast live and stored streams

The Installer also updates Mac Help files for Server Admin Tools. Additionally, updated versions of the "Getting Started with Mac OS X Server" and "Mac OS X Server Admin Guide" may be downloaded from Apple Software Downloads (http://www.apple.com/swupdates/).

Published Date: Oct 11, 2016

Mac OS X Server 10.2: Man Page for automount Command

This document contains the man (manual) pages for the automount command, which are missing from Mac OS X 10.2 and Mac OS X Server 10.2.
This article has been archived and is no longer updated by Apple.
The text of the manual pages for automount is:

AUTOMOUNT(8) System Manager's Manual AUTOMOUNT(8)

NAME automount - automatic NFS mount / unmount daemon

SYNOPSIS automount [-d] [-tm secs] [-tl secs] [-m directory map] ...

DESCRIPTION

automount is a daemon that automatically mounts NFS filesystems when they are first accessed, and later unmounts them when they are idle.

automount creates a virtual filesystem mounted at one or more places on the client's file and directory hierarchy. Actual NFS mount points within this virtual filesystem appear as symbolic links. Reading a symbolic link triggers automount to mount the associated remote filesystem.

To make the trigger symbolic links used by automount distinguishable from normal symbolic links, the sticky bit is set in the mode flags for the link. Programs which would normally traverse symbolic links can test for this bit and avoid triggering the mount. Workspace Manager and ls have both been modified in this way.

Each virtual filesystem created by automount is governed by a corresponding map. One or more maps may be specified on the command line with a triple of the form:

-m directory map

Each map is rooted at the directory specified.

FILE MAPS

A map may be file or a special map. A file map is a regular file containing a list of entries of the form:

location mount_options server:path

mount_options must be a comma-separated list of options drawn from the options known to the mount and mount_nfs programs. automount will automatically mount the directory specified by server:path on the specified mount point within the map's virtual filesystem.

SPECIAL MAPS

In addition to reading files specifying mount maps, automount supports the -fstab map. This causes automount to read the fstab(5) database. All mounts with the net option will be mounted within the -fstab map's filesystem using a path of the form:

server/path

For example, if the fstab(5) database contained an entry for

polaris:/Library/Fonts

and automount was started as follows:

automount -m /Useful -fstab

Then the mount would appear in /Useful/polaris/Library/Fonts.

OPTIONS

-m directory map Associate the specified map with the given directory. The directory will be created if it doesn't exist. map may be the name of a file, or it may be the name of a special map. See the FILE MAPS and SPECIAL MAPS sections above.

-d Run automount in debug mode. The program remains attached to the command line and sends debugging information to standard output.

-tm secs Set the timeout for NFS mounts to secs seconds. The default value is 20 seconds.

-tl secs Set the time-to-live for NFS mounts to secs seconds. The default value is 3600 seconds. automount periodically checks all its mounted filesystems. If it finds any filesystems that have been idle for this time-to-live value, it will attempt to unmount them. An unmount will only be successful if there are no processes with open files in that filesystem.

SEE ALSO

mount(8), mount_nfs(8)

BSD March 9, 1998 BSD

Note: If you have upgraded your system from a previous version of Mac OS X to Mac OS X 10.2, the man pages for automount may be present.
Published Date: Oct 11, 2016

Mac OS X 10.2: "Classic needs to update resources..." After Using Base or All Set in Extensions Manager

After selecting the Mac OS 9.2.2 Base or All set in the Extensions Manager control panel, an alert box appears when Classic starts.
This article has been archived and is no longer updated by Apple.

Symptom

An alert box with this message appears when Classic starts:

> "Classic needs to update resources in your selected Classic system folder, <path to folder>. These changes are needed to run Classic and do not affect your ability to use your computer with Mac OS 9."

Note: This issue does not occur the first time Classic is started, because Classic checks for these files before the Extensions Manager appears. But it will occur the next time Classic starts, unless the Extensions Manager set is changed (see Solution below). This message can occur in other situations. For example, it is normal to see this message the first time Classic starts from a System Folder that has not been updated by the currently installed version of Classic.

Solution

Click the Update button that appears in the "Classic needs to update..." dialog sheet.

This issue occurs because certain extensions that Classic needs may not be included in the Mac OS X 9.2.2 All or Base set. Some computers that include Mac OS 9.2.2 and Mac OS X 10.2 are not affected by this issue.
Published Date: Oct 11, 2016

Mac OS X 10.2: German-Localized Mail Application May Not Keep Sent Mail Messages

The German-localized version of Mail 1.2 may not keep sent mails in the Sent folder.
This article has been archived and is no longer updated by Apple.

Symptom

Sometimes Mail does not save outgoing messages in the Sent folder, even if the preference for deleting sent mail in the Special Mailboxes tab is set to never.

Solution

Update to Mac OS X 10.2.4 or later.

Published Date: Feb 17, 2012

Macintosh: Computer Can Start Up From Mac OS X But Not From Mac OS 9

You may encounter a situation in which your computer can start up from Mac OS X, but not from Mac OS 9. Mac OS 9 disk drivers must be present to start up from Mac OS 9.

This article has been archived and is no longer updated by Apple.

Symptom

- The computer will no longer start up from Mac OS 9.
- If you select the Mac OS 9 System Folder in the Startup Disk preference pane of Mac OS X, a flashing question mark appears on the screen when you restart the computer.

Solution

It is likely that the disk was reformatted using Disk Utility for Mac OS X, and that the option to install the Mac OS 9 drivers was not selected. If you do this and then reinstall Mac OS 9 from the Restore CD set included with your computer, it will no longer start up from Mac OS 9, for example. Any time the Mac OS 9 drivers are not installed on the hard disk, you will not be able to start up from Mac OS 9. The resulting behavior is:

- The computer continues to start up from Mac OS X as expected.
- The Mac OS 9 System Folder can still be selected in the Classic preference pane in Mac OS X, and Classic starts successfully.
- The Startup Disk preference pane in Mac OS X lists the Mac OS 9 System Folder as a valid startup choice, but selecting this System Folder as the Startup Disk and restarting the computer results in the display of a flashing question mark at startup.

For more information, see technical document 75275: "**Mac OS X: About the 'Install Mac OS 9 Drivers' Option in Disk Utility**".

Related documents

106464: "**Mac OS X: Troubleshooting a Startup Issue**"
86209: "**Macintosh: Some Computers Only Start Up in Mac OS X**"

Published Date: Oct 11, 2016

Mac OS X 10.2: Mail - How to Remove a .Mac Account

This document explains how to remove a .Mac account from Mail.
This article has been archived and is no longer updated by Apple.
Follow these steps:

1. Choose System Preferences from the Apple menu.
2. Choose Internet from the View menu.
3. Click the Email tab.
4. Deselect the checkbox for "Use .Mac Email account".
5. If any of your .Mac account information is listed in the other fields, either delete it or replace it with the information from the Email account you want to use.
6. Open Mail.
7. Choose Preferences from the Mail menu.
8. Click Accounts.
9. Select the .Mac account.
10. Click Remove.

Published Date: Oct 11, 2016

Mac OS X: Mail - How to Hide Address Book Group Member Names When Sending an Email

This document explains how to hide group member names and addresses when sending a message to a group created in Address Book.
This article has been archived and is no longer updated by Apple.
Follow these steps to hide group member names and email addresses:

1. Choose Preferences from the Mail menu.
2. Click Composing.
3. Deselect the checkbox for "When sending to a group, show all member addresses".

When you send an email to the group, only the groups name will be seen.
Published Date: Feb 17, 2012

Macintosh: Disk Image File Does Not Open With Disk Copy

This document explains what to do when a disk image file will not open, or "mount".
This article has been archived and is no longer updated by Apple.

Symptom

A disk image file will not open. This may occur immediately after you download it.

Note: Disk image files usually have a filename extension of ".img".

Solution

Mac OS X 10.2.8 or earlier

1. Open Disk Copy (/Applications/Utilities/).
2. Drag the disk image file icon into the Disk Copy window.

With Mac OS X 10.2 through 10.2.8, this can happen when an earlier version of Mac OS X is installed over a newer one with an Archive and Install installation. Use Software Update preferences to update your Mac OS X installation after you perform an Archive and Install installation.

If the disk image file still does not open, users of Mac OS X 10.2 (Note 1) may follow these additional steps:

1. Open Disk Utility (/Applications/Utilities/).
2. Select the Mac OS X startup disk in the left-hand column.
3. Click the First Aid tab.
4. Click Repair Disk Permissions.

After repairing permissions, try opening the disk image file again.

Notes:

1. If you have Mac OS X 10.1.5, you may use the Repair Privileges Utility, which is available from Apple Software Downloads (http://www.apple.com/swupdates/). If you have Mac OS X 10.1 through 10.1.4, you must update to version 10.1.5 to use the utility.

2. If you use Aladdin StuffIt Expander, note that Aladdin recommends using Disk Copy to open disk image files in Mac OS X (http://www.aladdinsys.com/support/techsupport/mac/) .

3. If an alert appears after you download a disk image file, you may need to configure your web browser to open disk image files with Disk Copy. See technical document 106171, "**Mac OS X: Double-Clicking a File Opens the Wrong Application**".

Mac OS 8 and 9

1. Open Disk Copy.
2. Drag the disk image file into the window that appears, as instructed.

If you use Aladdin StuffIt Expander, verify that a current, compatible version is installed (http://www.aladdinsys.com/support/techsupport/mac/).

To keep a web browser "helper application" from opening a downloaded disk image file, Control-click the link to the file in your browser's window, then select "Download File to Disk" or "Save Link Target As..." (the exact choice depends on which browser you use). You may wish to review the helper applications (if any) that are used for disk image files in your web browser's preferences.

If a repeating, non-dismissable "-127" alert message appears immediately after downloading a disk image file, you may regain control of your computer by following these steps:

1. Press the power button on the keyboard after dismissing one of the alert messages. A dialog box appears asking if you wish to Shut Down, Restart, or Sleep. You may need to dismiss a few more alert boxes before seeing this dialog box.
2. Click Restart or Shut Down.
3. You may need to dismiss a few more alert boxes before the computer restarts or shuts down.

Note: If these steps to not work, force quit the Finder by press Command-Option-Escape. If you are able to force quit, immediately restart your

computer.

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Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 11, 2016

Mac OS X Server: Some Features Require Use of the Password Server

Some features of Mac OS X Server 10.2 or later require use of the Password Server.
This article has been archived and is no longer updated by Apple.
The following features require use of the Password Server:

Password Options:

- Imposing minimum length
- Forcing change of password
- Preventing users from logging in after certain date
- Preventing users from logging in after a period of inactivity

Authentication Options:

- SMTP Authentication (Using CRAM-MD5)
- POP Authentication (Using APOP)
- Secure (non-clear text) SMB Authentication (Using NT/Lan Manager)

Published Date: Oct 11, 2016

Mac OS X 10.2: Installation From Install Disc 2 Does Not Complete

Some installations from the Mac OS X 10.2 Install Disc 2 (CD) may not complete if the computer is left idle.
This article has been archived and is no longer updated by Apple.

Symptom

Larger installations using the Mac OS X 10.2 Install disc 2 do not complete if the computer is left idle.

Solution

Temporarily turn off the sleep feature, or move the cursor every few minutes to prevent the computer from going to sleep.

If you are installing on a portable computer, you should make sure that the power adapter is connected to a working electrical outlet.

Note: Most recent Macintosh computers should not be affected by this issue. The probability of this issue depends in part upon on how much software is installed from the CD, as well as the speed of the computer and the optical drive.
Published Date: Oct 11, 2016

Mac OS X Server 10.2 or later: How to Start PHP

This document explains how to start PHP in Mac OS X Server versions 10.2 and later.
This article has been archived and is no longer updated by Apple.

Important, before you begin

1. You will edit the "httpd.conf" file to start PHP service for Apache. Follow these steps carefully, and be sure not to change the file in any other way than specifically described.

2. If Apache does not work as expected or fails to start after you have modified the file, you can delete it and replace it with a duplicate of the "httpd.conf.default" file. After making a duplicate of the default, change its name to "httpd.conf" (to match the one you are replacing). Never modify the original "httpd.conf.default" file.

3. A number sign (#) in the front of a line indicates that the line will not be read by Apache when starting. Removing number signs, as described, causes Apache to read the configuration from that line.

4. Beyond the Knowledge Base, Apple does not offer technical support for configuring or using PHP. See http://www.php.net for more PHP information.

How to start PHP

For 10.2 to 10.2.8

Follow these steps at the server:

1. Choose Log Out from the Apple menu.
2. Log in as the root user. If you need help with this step, see About the root User and How to Enable It.
3. Open TextEdit.
4. Choose Open from the File menu.
5. In the Go To field, type: /etc/httpd/
6. Locate and open the file named "httpd.conf".
7. In this file, find the line that reads:

```
#LoadModule php4module /usr/libexec/httpd/libphp4.so
```

8. Remove the number sign (#) from the start of this line. Do not modify the line in any other way.
9. Scroll down until you find the line that reads:

```
#AddModule mod_php.c
```

10. Remove the number sign (#) from the start of this line. Do not modify the line in any other way.
11. Choose Save from the File menu.
12. Quit TextEdit.
13. Choose Log Out from the Apple menu.
14. Log in as an Admin user.
15. Open Server Admin and log in.
16. Stop and restart the Web Server.

For 10.3 or later

1. Open Server Admin.
2. Select the Web service from the desired server in the Computers & Services list.
3. Click on Settings.
4. Click Modules.
5. Enable or disable the php4_module as desired.
6. Save the changes.
7. Restart the Web Service.

You can verify that PHP is working correctly by connecting to the server and loading the "info.php" page (http://<insertdomain>/info.php). If you have changed the document root or moved this file you, may not be able to do this.

Published Date: Feb 17, 2012

Mac OS X 10.2 Updates: Printer Sharing Off After Update

Mac OS X 10.2.2 and Mac OS X 10.2.3 updates include a file (cupsd.conf) that turns off printer sharing. You simply need to turn on printer sharing again in System Preferences.
This article has been archived and is no longer updated by Apple.

Symptom

A shared printer is not available after updating to Mac OS X 10.2.2, or to Mac OS X 10.2.3 using the Mac OS X 10.2.3 Combo updater, or to Mac OS X 10.2.4 using the Mac OS X 10.2.4 Combo updater.

Note: If you are a software developer or advanced user who has customized the cupsd.conf file in any other way, those changes are also lost when this file is replaced during the update.

Solution

Turn on printer sharing. Follow these steps:

1. Choose System Preferences from the Apple menu.
2. Choose Sharing from the View menu.
3. Click the checkbox next to Printer Sharing to turn it on.

Published Date: Feb 17, 2012

Mac OS X 10.2.2: Application Unexpectedly Quits When Printing

When you try to print to a PostScript printer, the application you are printing from may unexpectedly quit ("crash") if the PPD for that print queue incorrectly identifies the default paper tray.
This article has been archived and is no longer updated by Apple.

Symptom

Note: If you are reading this prior to having experienced the symptom, save changes to your document before proceeding. Unsaved changes to a document may be lost when an application unexpectedly quits.

You encounter this sequence of events:

1. You create a new document, or open an existing document.
2. Choose the Print command in the application you are using.
3. The application unexpectedly quits when the Print panel would normally appear.

Note: Additional PostScript printers from these and other vendors may also be affected.

Solution

You may avoid this issue by updating to Mac OS X 10.2.3 or later. See technical document 107263, "**Mac OS X: About the Mac OS X 10.2.3 Update**".

For Mac OS X 10.2.2, you may be able to print to the PostScript printer by creating a new queue for the printer with the Generic PPD.

Note: When using this workaround, be sure to save your document before printing. In the event that you are unable to print, any unsaved changes to the document could be lost. Follow these steps:

1. Open Print Center (/Applications/Utilities/).
2. Select the affected print queue.
3. Click Delete.
4. Click Add.
5. Select the printer from the Name list (if necessary, choose the correct connection method and/or AppleTalk zone in the pop-up menus above the Name list).
6. Choose Generic from the Printer Model pop-up menu.
7. Click Add.
8. Open an existing document, or create a new document.
9. Print the document to the newly created print queue.

If the issue persists, additional troubleshooting may be required. See technical document 106714, "**Mac OS X: How to Troubleshoot Printing Issues**".

Additional information

After a PPD file is uncompressed, examining it with a text editor will typically reveal that the "DefaultInputSlot" attribute is incorrectly specified as "Unknown", where "Unknown" is not defined elsewhere in the PPD. Some other PPD errors known to cause this issue include the DefaultInputSlot attribute being incorrectly specified as "xyz " (contains trailing spaces) whereas everywhere else in the PPD the attribute is specified as "xyz", or the DefaultInputSlot parameter does not exist even though the PPD references input slots.

If crash reporting is enabled in Console preferences, the crash log will contain an entry similar to this one:

```
Exception: EXC_BAD_ACCESS (0x0001)
Codes: KERN_PROTECTION_FAILURE (0x0002) at 0x00000001

Thread 0 Crashed:
#0 0x90026f14 in strcasecmp
#1 0x93a283ec in ppdMarkOption
#2 0x91d0b9d4 in _Z23GetPickOneUIListFromPPDP10ppd_file_tPKcmPP9__CFArray
#3 0x91d0b770 in PaperFeedInitialize
```

```
#4 0x91d09738 in _ZN8PDEPanel10InitializeEP20OpaquePMPrintSessionP16OpaqueControlRef
#5 0x91d095a8 in _ZN21PJCPrintingDialogBase14AddPanelToMenuEP8PJCPanelPK10__CFStringP20OpaquePMPrintSession
#6 0x91d0b22c in _ZN15PJCPrintDialogs14AddPMPDEToMenuEP8PJCPanelP20OpaquePMPrintSession
#7 0x91d08edc in _ZN21PJCPrintingDialogBase15UpdatePanelMenuEP20OpaquePMPrintSession
#8 0x91d055d4 in _ZN21PJCPrintingDialogBase10LoadPanelsEP20OpaquePMPrintSession
#9 0x91d1f4b4 in _ZN15PJCPrintDialogs10LoadPanelsEP20OpaquePMPrintSession
```

Published Date: Feb 17, 2012

Mac OS X 10.2: Printing to Shared HP Printer Causes Application to Unexpectedly Quit

The application from which you are printing may unexpectedly quit ("crash") or stop responding when printing to a Hewlett Packard printer via printer sharing. This occurs at the printing computer when the sharing computer has a different HP driver version installed.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to print, the printing application unexpectedly quits or stops responding. This can happen when the printer is directly connected directly or if the HP printer is selected in the Print dialog box.

If crash reporting is enabled in Console preferences, the crash log may contain an entry similar to this one:

```
Exception: EXC_BAD_ACCESS (0x0001)
Codes: KERN_INVALID_ADDRESS (0x0001) at 0x656e747f

Thread 0 Crashed:
#0 0x04827488 in UnregisterEvent__8AControlP21OpaqueEventHandlerRef
#1 0x0482f47c in UnregisterEvent__20AControlGroupControlP21OpaqueEventHandlerRef
#2 0x04808190 in UnregisterEvent__24APaperPdeUserPaneControl
#3 0x047c28c4 in Terminate__18ATypeAndQualityPdel
#4 0x047b5b48 in TerminateStub
#5 0x91d23200 in _ZN8PDEPanel9TerminateEl
#6 0x91d09640 in _ZN21PJCPrintingDialogBase14AddPanelToMenuEP8PJCPanelPK10__CFStringP20OpaquePMPrintSession
#7 0x91d0b22c in _ZN15PJCPrintDialogs14AddPMPDEToMenuEP8PJCPanelP20OpaquePMPrintSession
#8 0x91d08edc in _ZN21PJCPrintingDialogBase15UpdatePanelMenuEP20OpaquePMPrintSession
#9 0x91d055d4 in _ZN21PJCPrintingDialogBase10LoadPanelsEP20OpaquePMPrintSession
#10 0x91d1f4b4 in _ZN15PJCPrintDialogs10LoadPanelsEP20OpaquePMPrintSession
#11 0x91d03e54 in _ZN15PJCPrintDialogs13DoPrintDialogEP20OpaquePMPrintSessionP21OpaquePMPrintSettingsP18OpaquePMPageFormat
#12 0x91d1f5f8 in
_ZN15PJCPrintDialogs11DoPrintMainEP20OpaquePMPrintSessionP21OpaquePMPrintSettingsP18OpaquePMPageFormatPFvS3_PP14OpaquePMDialogE
#13 0x91d137c8 in PJCPrintDialogMain
#14 0x91d155d0 in PMSessionPrintDialogMain
```

Solution

At each computer, follow these steps:

1. Log in as an Admin user.
2. Click the Finder icon in the Dock.
3. Choose Go to Folder from the Go menu.
4. Type: /Library/Printers/
5. Click Go.
6. Drag the "hp" folder to the Trash.
7. Download the latest printer drivers from the HP website, then install them as instructed.

Important: There is a separate issue with Mac OS X 10.2.2 and the latest versions of HP drivers, depending on which printer you have. The issue may be avoided by updating to Mac OS X 10.2.3. Before installing new HP drivers, review these technical documents:

32147: "**Mac OS X 10.2.2: Sluggish System Performance After Installing HP Printer Drivers**"
107263: "**Mac OS X: About the Mac OS X 10.2.3 Update**"

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 11, 2016

Disk Utility reports some messages that you can ignore when checking permissions

This article has been archived and is no longer updated by Apple.

You can safely ignore certain messages that Disk Utility reports when checking permissions. For example, you may safely ignore a message that contains "permissions are 33261". This article applies to Mac OS X 10.2.2 or later.

You can safely ignore any message that begins with "We are using special permissions for..." or "We are using a special uid for...". These are status messages and not a cause for concern. The message(s) will appear each time you check permissions.

Other messages that you can safelyignore when checking permissions

After running periodic monthly messages such as this may appear and can also be safely ignored: "Permissions differ on ./private/var/log/install.log, should be -rw-r--r-- , they are -rw-r----- Owner and group corrected on ./private/var/log/install.log Permissions corrected on ./private/var/log/install.log"

Published Date: Oct 11, 2016

Mac OS X 10.2: "Software Update is not able to connect to the Internet" Alert

The Software Update feature of Mac OS X 10.2 cannot work if your computer uses a proxy server that requires authentication (a name and password).
This article has been archived and is no longer updated by Apple.

Symptom

When checking for updates in the Software Update pane of System Preferences (either manual or scheduled), an alert with this message appears:

> "Software Update is not able to connect to the Internet. Please check your configuration and try again."

Solution

Manually download and install any required updates from Apple Software Downloads (http://www.apple.com/swupdates/).
Published Date: Oct 11, 2016

Mac OS X: Aliases to Recent Servers in the Classic Apple Menu Do Not Work

When you connect to a server via AppleTalk in the Classic Chooser, any alias made to the server will fail, including the aliases in the Recent Servers folder of the Classic Apple menu.
This article has been archived and is no longer updated by Apple.

Symptom

When you choose a server from the Recent Servers folder in the Classic Apple menu, the computer does not connect to the server.

Solution

To connect immediately, use either the Chooser or the Connect to Server command in the Go menu of the Mac OS X Finder.

To create a working alias

First delete the non-working alias from the Classic Recent Servers folder by dragging it to the Trash. (Aliases are saved in the Apple Menu Items folder inside the System Folder.) Next, follow the steps below according to the server.

If the server offers Apple file service over Internet Protocol (IP), use these steps:

1. Choose Chooser from the Classic Apple menu.
2. Click the AppleShare icon in the Chooser.
3. Click the Server IP Address button.
4. Enter the server's IP address or DNS name.
5. Click Connect. This should produce a working alias in the Recent Servers list of the Classic Apple Menu.

Note: The remaining steps are for Mac OS X 10.1 to 10.3.9 only, because Mac OS X 10.4 does not support AFP over AppleTalk.

If the server only offers AppleTalk connections, follow these steps:

1. Click the Finder icon in the Dock.
2. Choose Connect to Server from the Go menu.
3. Enter the server's IP address or DNS name.
4. Click Connect.
5. Select the server volume in the Finder.
6. Choose Make Alias from the File menu.

Published Date: Oct 11, 2016

Mac OS X: Man (Manual) Pages for "exports" Command

The man (manual) pages for the exports command are part of the BSD SDK package in Mac OS X and X Server 10.2. This package is not part of the default installation.
This article has been archived and is no longer updated by Apple.

Symptom

Typing the man exports command in a Terminal session produces the output "No manual entry for automount".

Solution

To install the man pages for the exports command, select the BSD SDK package in the Mac OS X or X Server Installer.

For convenience, the contents of the man pages are also printed below:

EXPORTS(5) System File Formats Manual
EXPORTS(5)

NAME

exports - define remote mount points for NFS mount requests

SYNOPSIS

exports

DESCRIPTION

The exports file specifies remote mount points for the NFS mount protocol per the NFS server specification; see Network File System Protocol Specification RFC 1094, Appendix A and NFS: Network File System Version 3 Specification, Appendix I.

Each line in the file (other than comment lines that begin with a #) specifies the mount point(s) and export flags within one local server filesystem for one or more hosts. A host may be specified only once for each local filesystem on the server and there may be only one default entry for each server filesystem that applies to all other hosts. The latter exports the filesystem to the ``world'' and should be used only when the filesystem contains public information.

In a mount entry, the first field(s) specify the directory path(s) within a server filesystem that can be mounted on by the corresponding client(s). There are two forms of this specification. The first is to list all mount points as absolute directory paths separated by whites- pace. The second is to specify the pathname of the root of the filesys- tem followed by the -alldirs flag; this form allows the host(s) to mount at any point within the filesystem, including regular files if the -r option is used on mountd. The pathnames must not have any symbolic links in them and should not have any "." or ".." components. Mount points for a filesystem may appear on multiple lines each with different sets of hosts and export options.

The second component of a line specifies how the filesystem is to be exported to the host set. The option flags specify whether the filesys- tem is exported read-only or read-write and how the client uid is mapped to user credentials on the server.

Export options are specified as follows:

-maproot=user The credential of the specified user is used for remote access by root. The credential includes all the groups to which the user is a member on the local machine (see id(1)). The user may be specified by name or number.

-maproot=user:group1:group2:... The colon separated list is used to specify the precise credential to be used for remote access by root. The elements of the list may be either names or numbers. Note that user: should be used to distinguish a credential containing no groups from a complete credential for that user.

-mapall=user or -mapall=user:group1:group2:... specifies a mapping for all client uids (including root) using the same semantics as -maproot.

The option -r is a synonym for -maproot in an effort to be backward compatible with older export file formats.

In the absence of -maproot and -mapall options, remote accesses by root will result in using a credential of -2:-2. All other users will be mapped to their remote credential. If a -maproot option is given, remote access by root will be mapped to that credential instead of -2:-2. If a -mapall option is given, all users (including root) will be mapped to that credential in place of their own.

The -kerb option specifies that the Kerberos authentication server should be used to authenticate and map client credentials. This option requires that the kernel be built with the NFSKERB option.

The -ro option specifies that the filesystem should be exported read-only (default read/write). The option -o is a synonym for -ro in an effort to be backward compatible with older export file formats.

The third component of a line specifies the host set to which the line applies. The set may be specified in three ways. The first way is to list the host name(s) separated by white space. (Standard internet ``dot'' addresses may be used in place of names.) The second way is to specify a ``netgroup'' as defined in the netgroup file (see netgroup(5)). The third way is to specify an internet subnetwork using a network and network mask that is defined as the set of all hosts with addresses within the subnetwork. This latter approach requires less overhead within the kernel and is recommended for cases where the export line refers to a large number of clients within an administrative subnet.

The first two cases are specified by simply listing the name(s) separated by whitespace. All names are checked to see if they are ``netgroup'' names first and are assumed to be hostnames otherwise. Using the full domain specification for a hostname can normally circumvent the problem of a host that has the same name as a netgroup. The third case is specified by the flag -network=netname and optionally -mask=netmask. If the mask is not specified, it will default to the mask for that network class (A, B or C; see inet(5)).

For example:

```
/usr /usr/local -maproot=0:10 friends
/usr -maproot=daemon grumpy.cis.uoguelph.ca 131.104.48.16
/usr -ro -mapall=nobody
/u -maproot=bin: -network 131.104.48 -mask 255.255.255.0
/u2 -maproot=root friends
/u2 -alldirs -kerb -network cis-net -mask cis-mask
```

Given that /usr, /u and /u2 are local filesystem mount points, the above example specifies the following: /usr is exported to hosts friends where friends is specified in the netgroup file with users mapped to their remote credentials and root mapped to uid 0 and group 10. It is exported read-write and the hosts in ``friends'' can mount either /usr or /usr/local. It is exported to 131.104.48.16 and grumpy.cis.uoguelph.ca with users mapped to their remote credentials and root mapped to the user and groups associated with ``daemon''; it is exported to the rest of the world as read-only with all users mapped to the user and groups associated with ``nobody''.

/u is exported to all hosts on the subnetwork 131.104.48 with root mapped to the uid for ``bin'' and with no group access.

/u2 is exported to the hosts in ``friends'' with root mapped to uid and groups associated with ``root''; it is exported to all hosts on network ``cis-net'' allowing mounts at any directory within /u2 and mapping all uids to credentials for the principal that is authenticated by a Kerberos ticket.

FILES

/etc/exports The default remote mount-point file.

SEE ALSO

netgroup(5), mountd(8), nfsd(8), showmount(8)

BUGS

The export options are tied to the local mount points in the kernel and must be non-contradictory for any exported subdirectory of the local server mount point. It is recommended that all exported directories within the same server filesystem be specified on adjacent lines going down the tree. You cannot specify a hostname that is also the name of a netgroup. Specifying the full domain specification for a hostname can normally circumvent the problem.

BSD March 29, 1995

BSD

Published Date: Feb 19, 2012

Mac OS X: How to Delete a Classic Application‘s Temporary Files When Emptying the Trash Does Not

Some Classic applications may not place their temporary files in the Trash as expected. Emptying the Trash, therefore, does not delete them. This document explains how you may delete them.
This article has been archived and is no longer updated by Apple.
Note: This document applies to Mac OS X versions 10.2.8 and earlier.

Some Classic applications may save files to an incorrect Trash location. Choose steps according to how you have software installed on your computer.

Single volume installation

If Mac OS X and the Classic (Mac OS 9) System Folder are on the **same** hard disk volume (this is default configuration), follow these steps:

1. Click the Finder icon in the Dock.
2. Choose Go To Folder from the Go menu.
3. Type: `/Trash`
4. Press Return.
5. Select all files in the window. (If this folder is empty, there are no files to delete.)
6. Drag the files to the Trash.
7. Choose Empty Trash from the Finder menu.

Multiple volume installation

If Mac OS X and the Classic (Mac OS 9) System Folder are on **different** hard disk volumes (two partitions, for example), follow these steps:

1. Click the Finder icon in the Dock.
2. Choose Go To Folder from the Go menu.
3. Type: /Volumes/<Mac_OS_9_volume_name>/Trash

   Note: You would replace "<Mac_OS_9_volume_name>" with the actual name of the volume on which your Mac OS 9 System Folder is installed. If it was installed on a disk partition named "Blue", then you would type:

   /Volumes/Blue/Trash

   Mac OS X may automatically complete the volume's name as you type.

4. Press Return.
5. Select all files in the window. (If this folder is empty, there are no files to delete.)
6. Drag the files to the Trash.
7. Choose Empty Trash from the Finder menu.

Published Date: Feb 17, 2012

Mac OS X Server 10.2: Cannot Complete Setup Assistant After Installing Server Package

If you install the "MacOSXServerInstall" package from the Mac OS X Server 10.2 Installation CD on a computer that already has the standard, non-server version of Mac OS X 10.2 installed, then the Mac OS X Server Setup Assistant may not complete. This occurs if the Admin user name created in Mac OS X 10.2 is longer than eight characters.
This article has been archived and is no longer updated by Apple.

Symptom

Mac OS X Server Setup Assistant does not complete after installing the Mac OS X Server 10.2 package (MacOSXServerInstall.mpkg).

Solution

This issue is resolved in Mac OS X Server 10.2.3 or later. See technical document 107265, "**Mac OS X Server: About the Mac OS X Server 10.2.3 Update**".

The following workaround may be used when installing an earlier version.

You may resolve this issue by changing user ID (UID) numbers. Follow these steps:

1. Start up the computer in single-user mode. If you need help, see technical document 106388, "**Mac OS X: How to Start Up in Single-User or Verbose Mode**".

2. Gain write access by typing this command:

```
mount -w /
```

3. Press Return. An admin user exists with a UID of either 501 or 502.

4. Use the following commands to find the Admin user, pressing Return after each command:

```
nicl -raw /var/db/netinfo/local.nidb -read /name=users/uid=501
nicl -raw /var/db/netinfo/local.nidb -read /name=users/uid=502
```

One of these will return a user record for the Admin user. You must now cycle through the UIDs in the 50x range to find an available UID.

5. Entering the following command:

```
nicl -raw /var/db/netinfo/local.nidb -read /name=users/uid=503
```

If the text "read: Invalid Path" is returned, skip to Step 7.

6. Increment the number at the end of the command by one until the text "read: Invalid Path" is returned (504, 505, 506, and so forth).

7. Change the UID of the Admin user to the available UID by entering the following command:

```
nicl -raw /var/db/netinfo/local.nidb -create /users/yyy uid xxx
```

Note: When typing, you would replace "yyy" the actual value of "name:" in the user record for the Admin user, and "xxx" with the available UID that you found previously.

8. Type: `exit` then press Return

The computer starts up and the Setup Assistant appears.

9. Create a new Admin user in the Setup Assistant.

Note: After completing the Setup Assistant and restarting the computer, you can use the Workgroup Manager application to change the UID of your newly-created Admin user to something else, then change the UID of your original admin user back to 501 or 502, if desired.
Published Date: Oct 11, 2016

Mac OS X Server 10.2: How to Configure the Group Volume to Mount When Logging In

This document explains how to configure the Group Volume feature so that the volume automatically "mounts" when logging in at a managed Mac OS X client computer.
This article has been archived and is no longer updated by Apple.
Follow these steps:

1. In Workgroup Manager, select a group.
2. Select Preferences, Login.
3. Click the Login Items tab.
4. Select the "Add group share point" checkbox.
5. Click Apply Now.

Optionally, if you want the group volume to appear in the Dock:

1. For the groups preferences, select Dock.
2. Click the Dock Items tab.
3. Select the "Add group folder" option.
4. Click Apply Now.

Note: The group folder is not created immediately. It is created by a cron job overnight. If you want to force immediate creation of the group folder, you may use the CreateGroupFolder command in Terminal. For more information on this command, see page 202 of the Server Admin Guide for Mac OS X 10.2.3 or later.

For more information, see technical document 107308, "**Mac OS X Server 10.2: Clients Cannot Select a Workgroup While Logging In**".
Published Date: Feb 17, 2012

Mac OS X Managed Client: Cannot Select a Workgroup While Logging In

When logging in with a managed Mac OS X client, some or all workgroups do not appear and cannot be selected.
This article has been archived and is no longer updated by Apple.

Symptom

Workgroups do not appear and cannot be selected when you log in with a managed client.

Solution

If no managed preferences are configured for a group, the group is not considered a workgroup. Workgroups appear when logging in from a managed Mac OS X client. To learn the difference between a group and a workgroup in Mac OS X 10.2 Server, see technical document 107309, "**Mac OS X Server 10.2: How to Differentiate Between a Group and a Workgroup**".

If no workgroups appear when logging in on a managed Mac OS X client, verify the user logging in belongs to more than one managed workgroup. To display the workgroup selection dialog while logging in, it may be necessary to manage an option for at least two workgroups the user belongs to.

It is also possible the user selected the option to remember his choice while logging in. Selecting this option prevents the workgroup selection dialog from being presented. To present this dialog after the remember option has been selected, press the Shift key while logging in.
Published Date: Feb 17, 2012

Mac OS X Server 10.2 or later: "mod_hfs_apple" protects web content against case insensitivity in the HFS file system

In Mac OS X Server 10.2 or later, "mod_hfs_apple" has been enhanced to protect web content against case insensitivity in the HFS File System. If this feature is used, security realms are enforced on any web folders/directories regardless of letter case used in a URL to access the served web content.
This article has been archived and is no longer updated by Apple.

Warning:

1. The protection afforded by mod_hfs_apple applies only to the default webserver, apache1. If you have chosen to use apache2, beware that these protections do not apply.
2. For important related information, see Protection for sensitive files when using Apache on an HFS+ volume.

Note: This document is a reproduction of information included with Late Breaking News in Mac OS X Server 10.2.2.

The HFS Extended volume format commonly used for Mac OS X Server preserves the case of file names but does not distinguish between a file or folder named "Example" and one named "eXaMpLe". Were it not for mod_hfs_apple, this would be a potential issue when your web content resides on such a volume and you are attempting to restrict access to all or part of your web content using security realms. If you set up a security realm requiring browsers to use a name and a password for read-only access to content within a folder named "Protected", browsers would need to authenticate in order to access the following URLs:

http://example.com/Protected
http://example.com/Protected/secret
http://example.com/Protected/sECreT
But they could bypass it by using something like the following:

http://example.com/PrOtECted
http://example.com/PrOtECted/secret
http://example.com/PrOtECted/sECreT

Fortunately, mod_hfs_apple prevents those types of efforts to bypass the security realm, and it's enabled by default.

Note that mod_hfs_apple operates on folders; it is NOT intended to prevent access to individual files. A file named "secret" can be accessed as "seCREt". This is correct behavior, and does not allow bypassing security realms.

Because of the warning message that appears in the Web Service error log about mod_hfs_apple, there have been questions about the function of mod_hfs_apple. The warning messages do not indicate a problem with the correct function of mod_hfs_apple.

You can verify that mod_hfs_apple is operating correctly by creating a security realm, and attempting to bypass it with a case-variant of the actual URL. You will be denied access and your attempt is logged in the Web Service error log with messages similar to the following:

[Wed Jul 31 10:29:16 2002] [error] [client 17.221.41.31] Mis-cased URI:
/Library/WebServer/Documents/PrOTecTED/secret, wants:
/Library/WebServer/Documents/Protected/
Published Date: Feb 19, 2012

Mac OS X: Stickies Undo Command Works Inconsistently

The Undo command in Stickies may work on an inconsistent or intermittent basis. Changes may not be undone when you choose this command.
This article has been archived and is no longer updated by Apple.

Symptom

Choosing the Undo command may not always undo changes in Stickies.

Solution

If you prefer, use another application for taking notes, such as TextEdit.
Published Date: Feb 17, 2012

Mac OS X 10.2 through 10.3.9: Wrong folder moved to Trash when deleting in Finder in column view

This article has been archived and is no longer updated by Apple.

Deleting a new, untitled folder without first renaming it (in column view) may inadvertently move the parent folder to the Trash under certain circumstances. This article applies to Mac OS X 10.2 through 10.3.9.

When you create a new folder, the name is immediately editable. If you move that folder to the the Trash via one of two specific methods before entering a name **and** the Finder window is in column view, then the parent folder will be moved to the Trash. (The parent folder is the one that contains the new folder.) This happens regardless of how you move the folder to the Trash. The two specific methods that result in this issue are:

- Using the Command-Delete key combination in the Finder
- Choosing Move to Trash from the File menu in the Finder

Solution

Use one of these solutions:

1. Click the Finder icon in the Dock.
2. Choose "Undo move of 'untitled folder'" from the Edit menu. (If you have done other tasks since deleting, this option may not be available.)

1. Click the Trash icon in the Dock to open it.
2. Drag the folder you inadvertently moved there to its original location.

Warning: If you empty the Trash, the folders and their contents will be deleted.

This issue does not occur if you edit names of folders that already exist. It only affects newly created folders.
Published Date: Feb 17, 2012

Apple Remote Desktop 1.1: Cannot Change Upper or Lower Case of Client Computer Name

When you try to change the letter case of a Mac OS 8 or 9 client computer name, an alert with the message "Error: Command Failed" appears.
This article has been archived and is no longer updated by Apple.

Symptom

Apple Remote Desktop allows you to change the AppleTalk name of client computers. If you try to change only the case of a Mac OS 8 or Mac OS 9 client computer name, the attempt fails. The status of the computer will be listed as:

> "Error: Command Failed"

Solution

To work around the issue, follow these steps:

1. Change the name of the client computer from the current name you want to a different name you don't want.
2. Change the name back to the name you want, including the desired case.

Published Date: Oct 11, 2016

Mac OS X: Cannot Use Floppy Disk When Formatted as Mac OS Extended (HFS Plus) via Disk Utility

A floppy disk cannot be used if you format it as Mac OS Extended (HFS Plus) using Disk Utility.
This article has been archived and is no longer updated by Apple.

Symptom

A floppy disk is no longer recognized. If you use Console, it reports:

> "/sbin/newfs_hfs: /dev/rdisk2s2: partition is too small (minimum is 4 MB)"

Solution

Floppy disks are too small to allow Mac OS Extended format, which requires at least a 4 MB disk. To correct the issue, reformat the disk as Mac OS Standard, Unix File System, or MS-DOS File System.
Published Date: Feb 17, 2012

Mac OS X Server 10.2: Unable to receive mail after upgrading from Mac OS X Server 10.1

Email sent to the server after the upgrade may be returned with a message indicating that delivery failed because the sender is not a valid local user on the SMTP server.
This article has been archived and is no longer updated by Apple.

Symptom

The server can send mail without issue, but it will not accept incoming mail. A sender may receive a message indicating the mail was rejected because she is not a valid user on the SMTP server.

Products Affected

- Mac OS X Server 10.2 to 10.2.8

Solution

This occurs if the server was previously set to use the "Require local 'From' address to exist in Users and Groups" and then updated to Mac OS X Server 10.2. To resolve the issue, follow these steps:

1. Use Server Settings to stop Mail service.
2. Open NetInfo Manager (/Applications/Utilities).
3. Click the lock button to authenticate as an Admin user.
4. In the local domain, navigate to /config and select AppleMailServer.
5. In the lower pane, scroll to the require_local_from_flag property.
6. Double click on the value for this property and change it from "1" to "0".
7. Choose Save Changes from the Domain menu.
8. Restart Mail service.

Published Date: Oct 11, 2016

Xserve: "Out of Range" Message at Startup

When starting an Xserve using Mac OS X Server, the display shows an "out of range" message. This document explains how to correct this issue.
This article has been archived and is no longer updated by Apple.

Symptom

When starting up an Apple computer from Mac OS X Server 10.1 or later, a display shows an "out of range" message.

Solution

This issue normally happens if a video resolution is specified that the display device is not capable of producing.

First, reset the parameter RAM (PRAM) on the Xserve by holding down the Command-Option-P-R key combination during startup, followed by holding the Shift key during startup. This may allow you to start up normally and change the display resolution using System Preferences. If you cannot, try the steps below, which deal with the video resolution information that is stored in three places:

- PRAM
- /Library/Preferences/com.apple.windowserver.plist
- ~/Library/Preferences/ByHost/com.apple.windowserver.xxxx.plist

Note: The tilde symbol (~) designates a user's home folder. The text "xxxx" represents an alpha numeric string, such as "00306549719e".

The following steps will reset the video resolution to default value.

Warning: These steps include use of the "rm" command. Be sure to type the commands exactly. Misuse of the rm command may result in accidental data loss, up to and including all data on the target disk. To be sure you are reading the commands below correctly, you may copy and past them into a text editor for verification.

1. Start up the computer in single-user mode. For help with this step, see technical document, 106388, "**Mac OS X: How to Start Up in Single-User or Verbose Mode**".

2. This step contains a series of commands, each preceded by the pound sign (#). You should type each, pressing Return after each to execute it before continuing to the next.

```
# fsck -y
```

Note: If the result of this file system check is: "***** FILE SYSTEM WAS MODIFIED *****" then repeat fsck -y until the result is "** The volume xxxx appears to be OK", Where "xxxx" is the name of the computer's startup volume.

```
#mount -uw /
#rm /Library/Preferences/com.apple.windowserver.plist
#cd /Users/username/Library/Preferences/ByHost
#ls
```

Note: Using the ls command here lists all the visible files and folders in the ByHost folder. Locate the file named "com.apple.windowserver.xxxx.plist", where "xxxx" is an alpha numeric string.

```
# rm com.apple.windowserver.xxxx.plist
```

Note: In place of "com.apple.windowserver.xxxx.plist", use the file name you located in the last step. This step deletes the file located in the last step.

```
# reboot
```

Note: This command restarts the computer.

3. Reset PRAM on the next system startup. For help with this step, see technical document 2238, "**Macintosh: How to Reset PRAM and NVRAM**".

Note: The Xserve has no speaker, so there is no second start up tone to indicate the PRAM has been reset. Instead, watch the system activity lights. When the LEDs start from the middle light and extend out both directions after the initial startup, then the PRAM has been reset.
Published Date: Oct 11, 2016

Mac OS X Server 10.2.1 - 10.2.8: How to Broadcast a QuickTime Stream to a Reflecting Server

With Mac OS X Server 10.2.1 through 10.2.8, you may stream and broadcast on the same server. If you wish to use a second streaming server as a reflecting server, this document explains how.
This article has been archived and is no longer updated by Apple.
A "reflecting" server, one that is to receive your broadcast stream and reflect it, must have a Broadcast User name and password set separately for broadcast reception and reflection. This is separate from the QuickTime Streaming Server Admin user account and password that the original installation Setup Assistant requests. Follow these steps:

1. Open a web browser and connect to the reflecting server's streaming server admin at port 1220 (for example, **http://address_of_reflecting_server:1220**).

2. Log in using the QuickTime Streaming Server Admin user name and password originally configured in the Server Assistant. If this is the first time you have done this, a web-based Setup Assistant will open. This assistant will prompt you for a Broadcast User password and confirmation, but it may not give you an opportunity to assign a Broadcast User name.

3. If you are not prompted for the Broadcast User name, you need to make some additional settings in QTSS Admin. Select General Settings from the list of options, then Change Movie Broadcast Password, which will let you define the Broadcast User name as well as the corresponding password.

4. At the broadcast source server, open QuickTime Broadcaster, and select Show Details. Click the Network tab, and enter the new name and password information into the Username and password fields. Be sure that the file name is what you want it to be (the default is "mystream"), then start QuickTime Broadcaster.

To connect with QuickTime Player, connect to the reflecting server using this URL format:

```
rtsp://address_of_reflecting_server/my_stream_name
```

Published Date: Oct 11, 2016

Mac OS X Server: NetBoot Uses User ID (UID) Numbers 100 to 149

When DHCP/NetBoot is turned on in Server Settings (version 10.2 or later) or Server Admin (versions 10.0.3 to 10.1.5), UIDs 100 through 149 are assigned to NBUsers 1 through 50 in the Local NetInfo Domain.
This article has been archived and is no longer updated by Apple.

Symptom

When DHCP/NetBoot is turned on in Server Settings (version 10.2 or later) or Server Admin (version 10.1.5 and earlier), UIDs 100 through 149 are assigned to NBUsers 1 through 50 in the Local NetInfo Domain.

When two or more accounts have the same UID, the operating system treats them all as the same account. This can result in issues with ownership and access, such as too much access or loss of ownership.

Solution

If NetBoot will be used, assign the NBUsers different UID numbers so they will not overlap with the other users. By doing this, you avoid reconfiguring the ownership of existing home directories.

Mac OS X Server 10.2 or later automatically starts assigning UID numbers 1025 and higher to new users, so it would only be affected if the server was upgraded from an earlier version or the users were imported with pre-existing UIDs.
Published Date: Oct 11, 2016

Mac OS X: How to Set Up Multiple IP Addresses on the Same Network Interface

This document explains how to set up multiple IP addresses on the same network interface (or port), a practice sometimes known as multihoming or IP aliasing.
This article has been archived and is no longer updated by Apple.
In Mac OS X, this is achieved simply by creating a new port configuration for each IP address that you need to use. Give each new port configuration the IP information that is appropriate for your network scenario. To learn how to create a port configuration see technical document 106800, "**Mac OS X: How to Create Port Configurations**".

Note: If you are using Mac OS X Server version 10.0.3 to 10.1.4, different steps are required. For these products see technical documents:

106418: "**Mac OS X Server 10.0: How to Set up Multiple IP Addresses on a Single Network Interface**"
106600: "**Mac OS X Server 10.1: How to Set up Multiple IP Addresses on a Single Network Interface**"
Published Date: Feb 17, 2012

Mac OS X Server 10.2: Tested and Theoretical Maximums (Limits)

The table below lists the tested and theoretical maximums (limits) for services offered by Mac OS X Server 10.2 or later.
This article has been archived and is no longer updated by Apple.
Note: Tested maximums reflect the test configuration and do not represent a guarantee of performance. Your experience may vary depending on factors such as computer model, microprocessor speed, network conditions, hard disk space, disk fragmentation, installed memory (RAM), client load, total number of services running on the server, or other software used on the server. Information left blank in the table is not yet available.

Tested and Theoretical Maximums

Component	Maximum	Tested	Theoretical
Core OS	Number of Open Files	1000	12288
AFP Server	Number of Connected Users	1000	N/A
User Accounts	User Comments Character Limit	54662	N/A
Directory Services	Number of Groups per User	16	16
Directory Services	Number of Groups	10000	
Directory Services	Number of Users	10000	
AFP Server	Shareable Volume Size	8 TB	8 TB
AFP Server	Number of Files per Volume	250 million	2 147 483 646
AFP Server	Number of Shared Items	255	255
Web Server	Number of Connected Users		2048
SMB Server	Number of Open Files	1000	12288
SMB Server	Number of Connected Users	1000	1000
Mail Server	Number of Incoming SMTP Connections		512
Mail Server	Number of Outgoing SMTP Connections		256
Mail Server	Number of POP Connections		1024
Mail Server	Number of IMAP Connections		1024
Mail Server	Maximum Size of Mail Database	128 GB	
Mail Server	Number of Messages in Mail Database	4 billion	
FTP Server	Number of Connected Users		16384
FTP Server	Maximun no. of Connections per User		16384
Web Server	Number of Open Files		12288
QTSS	Number of Connected Users per Streamed File		12288
QTSS	Number of Simultaneously Streamed Files		12288
QTSS	Number of Connected Users		12288
Print Server	Number of Queues	60	
Macintosh Manager Client	Number of Approved Desktop Printers Per Workgroup	5	10
NetBoot	Number of Clients Simultaneously Using NetBoot	50	
Mail Server	Number of Entries in SMTP Server Rejection List	128	N/A
Mail Server	Number of Entries in Approved SMTP Hosts List	128	N/A

Published Date: Oct 11, 2016

Mac OS X Server 10.2: NetBoot/DHCP fails after making changes in Server Settings

NetBoot/DHCP fails after making changes in Server Settings, because bootpd does not get started.
This article has been archived and is no longer updated by Apple.

Symptom

NetBoot clients fail to startup from the server, and DHCP clients do not get an address.

Solution

This is because the bootps configuration file for xinetd may become damaged.

1. Log in to the server as root. If you need information on this step, see technical document 106290, "**Mac OS X: About the root User and How to Enable It**".
2. Open the file /etc/xinetd.d/bootps in your favorite editor. For help with this step, see technical document 106619, "**Mac OS X Server: How to Locate and Edit Configuration Files**". The file should contain the following text. If it does not, make it so.

```
service bootps
{
        disable      =    no
        socket_type  =    dgram
        wait         =    yes
        user         =    root
        server       =    /usr/libexec/bootpd
        groups       =    yes
        flags        =    REUSE
}
```

Published Date: Feb 17, 2012

Mac OS X: Some Mac OS X Applications and Services Require AFP 3.0 or Later When Using AFP Home Directories

Mac OS X applications may not work properly when using Apple Filing Protocol (AFP) home directories hosted by a server that does not have AFP 3.0 or later as a feature.
This article has been archived and is no longer updated by Apple.

Symptom

Classic unexpectedly quits while it is opening. Files may disappear in the Finder but are not actually deleted.

Solution

AFP 3.0 adds several features, including:

- file names longer than 31 characters
- works with volumes larger than 4 GB
- uses UNIX permissions

Many Mac OS X applications and services expect these features. These applications and services may experience unexpected behavior with earlier versions of AFP.

When accessing remote file services using AFP, an AFP server that includes AFP version 3.0 or later may be required for use with some Mac OS X applications and services.

Versions included by product

- Mac OS X Server 10.2 includes AFP 3.1
- Mac OS X Server versions 10.0.3 through 10.1.4 include AFP version 3.0
- Mac OS X Server 1.x includes AFP 2.2
- AppleShare IP includes AFP 2.2 and earlier
- Third-party AFP servers - see vendor documentation

Published Date: Feb 17, 2012

Mac OS X Server: Offered DHCP Addresses Declined by the Client Are Not Reused

DHCP addresses that are offered by the DHCP server in Mac OS X Server and declined by the client are permanently removed from the pool.
This article has been archived and is no longer updated by Apple.

Symptom

The server no longer offers addresses, and Server Status shows leases with no time and other fields as "Not Available".

Solution

1. Use Server Settings to stop the DHCP server.
2. Delete the file: /var/db/dhcpd_leases
3. Use Server Settings to start the DHCP server.

Published Date: Oct 11, 2016

Mac OS X: How To Force a DHCP Lease Renewal

This document explains how to renew or acquire a new DHCP lease.
This article has been archived and is no longer updated by Apple.
Use the Network pane in System Preferences to deactivate then activate the network interface. This allows you to renew or acquire a new DHCP lease.

1. Choose Location from the Apple menu, and Network Preferences from the submenu.
2. Choose Network Port Configurations from the Show pop-up menu.
3. Deselect the checkbox for the network interface for which you need to renew the DHCP lease.
4. Click Apply.
5. Reselect the checkbox for the network interface.
6. Click Apply.
7. Quit System Preferences.

Note: If you use locations, you can automate these steps by simply toggling between locations. Create a location in which the affected network interface is inactive, then toggle between it and your normal location. For more information, see technical document 106653, "**Mac OS X: How to Use Locations**".
Published Date: Feb 17, 2012

Mac OS X: Unexpectedly Displays Negative Image (White on Black, Reverse Type)

Your computer may display a negative image if someone or something presses many keys at the same time. This is a feature of Universal Access that lets you toggle the display between negative and positive image by pressing the Control-Option-Command-8 key combination.
This article has been archived and is no longer updated by Apple.

Symptom

Your see a negative image in the screen. Depending on system configuration, it may be black and white, such as that in Figure 1, or color negative, such as that in Figure 2.

Figure 1 Picture of black and white negative image display using Universal Access

Figure 2 Picture of color negative image display using Universal Access

Solution

You can toggle the display between positive and negative by using the Control-Option-Command-8 key combination. First, press and hold the modifier keys (Control, Option, Command). While holding the modifier keys, press 8.

The screen will go blank for a second and return in the opposite mode.
Published Date: Feb 20, 2012

Mac OS X 10.2: Timbuktu Pro Does Not Work In Classic Environment

Timbuktu Pro for Mac OS 9 will not work in the Classic environment of Mac OS X.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to open Timbukto Pro, an alert box appears with this message:

> "Timbuktu Pro failed to load because your computer is trying to open it in the Mac OS X Classic environment."

Solution

Netopia makes different versions of Timbuktu for Mac OS 9 and Mac OS X systems. To use Timbuktu Pro on a computer that is started up from Mac OS X 10.2, you must use Timbuktu Pro for Mac OS X. If necessary, install the correct version. If you have both versions installed, be sure that you are using the correct version.

Contact Netopia (http://www.netopia.com) for additional information on obtaining a Mac OS X version of Timbuktu Pro.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Feb 17, 2012

Mac OS X 10.2, 10.3: Printer Sharing doesn‘t work immediately after computer name is changed

This article has been archived and is no longer updated by Apple.

If Printer Sharing is on and you change the computer name, print jobs sent from a client computer to the shared printer queue will fail until the sharing computer is restarted.

Note: This document applies to Mac OS X 10.2 through 10.3.9.

Any time you change the name of a computer that has printer sharing turned on, restart that computer as soon as possible. Print clients should reselect the printer in Printer Setup Utility or Print Center, checking for the new computer name in the Host column.

Tips

1. The computer name referenced in this document is the one defined in the Computer Name field of the Sharing preference pane.

2. Printer Setup Utility or Print Center is located in the Utilities folder, which is in the Applications folder.

3. To see the Host column in the Printer List window of Printer Setup Utility or Print Center, choose Columns from the View menu item, then select Host from the submenu.

Published Date: Oct 11, 2016

Mac OS X: About Encrypted Disk Images

This document describes how to use encrypted disk images.
This article has been archived and is no longer updated by Apple.
Disk Copy (/Applications/Utilities/), or Disk Utility (/Applications/Utilities/) for Mac OS X 10.3 Panther, offers the option of using encrypted disk images. To learn how to create one, see technical document 107333, "**Mac OS X: How to Create Encrypted Disk Images**".

An encrypted disk image can be used like any other disk image file. It may be copied to or created on network volumes or removable media, including Zip drives, USB flash media, or FireWire hard drives. You should not create images directly onto CD-Rs or DVD-Rs, but encrypted disk images can be burned onto a CD-R or DVD-R for archival purposes.

Each encrypted disk image is protected by a password, which may be composed of 7-bit ASCII characters and 1 to 255 characters in length. For more information, see technical document 106521, "**Mac OS X: How to Choose a Secure Password**".

Warning: The encryption used is 128-bit, equivalent to that used in the banking industry. If you forget the password to your encrypted disk image, your data will be irretrievably lost. By default, the password is stored in your login keychain when you create an encrypted disk image. The keychain uses the same password that you use to log in to the system. You should use the keychain to store this password.

Notes

1. Backup programs will need to back up the entire image if any file stored within the image has changed, since the image appears as a single file.

2. There is no way to change the password on an image file.

3. An encrypted disk image cannot be used as your home directory.

Published Date: Oct 11, 2016

Mac OS X 10.2: Classic Cannot Start If Disk Is Full

Classic may unexpectedly quit or issue an alert message during its startup if there is little or no free space available on the disk that contains the Mac OS 9 System Folder used by Classic.
This article has been archived and is no longer updated by Apple.

Symptom

Classic unexpectedly quits or issues an alert message during its startup.

Solution

Check the amount of free space available on the disk that contains the Mac OS 9 System Folder. If there is no (or very little) free space, copy or delete files from that disk to create more free space.

Note: Because of differences in the way that Mac OS 9 and Mac OS X use disk space, Mac OS 9 may report that there is space available on the disk when Mac OS X reports that it is full. You will need to ensure that Mac OS X reports free space in order to start the Classic environment.
Published Date: Feb 17, 2012

Mac OS X 10.2.8 or Earlier: Cannot Drag Items From Classic Applications to Trash

Some applications that allow you to drag items to the Trash when the computer is started up from Mac OS 9 may not allow the same action when the application is open in the Classic environment of Mac OS X.
This article has been archived and is no longer updated by Apple.

Symptom

An item, such as a web browser bookmark or email attachment, is not deleted or removed when you drag it from a Classic application to the Trash icon in the Dock. Dragging items from the desktop or Finder windows to the Trash works correctly.

Solution

In Mac OS X 10.2 through 10.2.8, this issue will not occur if the Mac OS 9 System Folder used by Classic is installed on the same volume as Mac OS X.

In Mac OS X 10.0 and 10.1 (and Mac OS X 10.2 if Mac OS 9 is installed on a different volume), you will need to use an alternate method to delete the item. The method will depend on the application and the item you want to remove. For instance, for an email attachment you may need to locate the attached file in the Finder and drag it to the Trash from there. For buttons in the Mac OS 9 Launcher, you will need to open the Launcher Items folder inside the System Folder and drag the appropriate alias to the Trash.
Published Date: Oct 11, 2016

Mac OS X 10.2: Sleep Is Delayed When You Close a PowerBook or iBook

If certain applications are open, there may be a delay of up to 30 seconds before your PowerBook or iBook goes to sleep after closing it.
This article has been archived and is no longer updated by Apple.

Symptom

A PowerBook or iBook using Mac OS X 10.2 does not go to sleep immediately when you close it.

Solution

Some applications may not respond immediately to system sleep notifications in Mac OS X 10.2. These applications should respond within several seconds, allowing the computer to go to sleep. However, this may cause a delay of up to 30 seconds after the computer is closed.

To avoid this delay, quit any such application before closing the computer. You may need to use a process of trial and observation to determine which applications cause a sleep delay.
Published Date: Feb 17, 2012

Mac OS X 10.2.8 or Earlier: Process Viewer Displays Incorrect "% Memory" Values if 2.0 GB of RAM Is Installed

Process Viewer displays incorrect "% Memory" values if 2.0 GB of RAM (random-access memory) is installed.
This article has been archived and is no longer updated by Apple.

Symptom

The Process Viewer application incorrectly displays zero (0.00) or negative (-0.??) "% Memory" values for processes if 2.0 GB of memory is installed in the computer.

Solution

This is a cosmetic issue only. It does not indicate any actual issue with the installed RAM or other computer hardware.

Alternatively, you may use the top Terminal command to get information on memory usage of processes. For more information on using top, execute "man top" in the Terminal (/Applications/Utilities/).
Published Date: Oct 11, 2016

Mac OS X 10.2: Apple System Profiler Unexpectedly Quits

If Apple System Profiler unexpectedly quits ("crashes"), update to Mac OS X 10.2.4 or later.
This article has been archived and is no longer updated by Apple.

Symptom

Apple System Profiler opens for a few seconds, then unexpectedly quits.

Solution

Update to Mac OS X 10.2.4 or later.

Published Date: Feb 17, 2012

Mac OS X 10.2 or Earlier: Classic Application Won‘t Install When Installation Requires More Than One CD

If you are unable to install Classic application software because more than one installation CD is used, start up the computer from the Mac OS 9 System Folder before installation.
This article has been archived and is no longer updated by Apple.

Symptom

The second CD of a multiple-CD software installation is not recognized in the Classic environment, and the installation does not complete.

Solution

Start up from your Mac OS 9 System Folder before performing the installation. For more information, see technical document 106667, "**How to Switch Between Mac OS 9 and Mac OS X**".

Note: Some Macintosh computers start up only in Mac OS X. See technical document 86209: "**Macintosh: Some Computers Only Start Up in Mac OS X**". Contact the manufacturer of the multiple-CD software for Mac OS X compatibility information.

Published Date: Feb 17, 2012

Mac OS X 10.2: Pasting Custom Icons Over Custom Icons Does Not Always Work

If you try to change the icon of an item that already has a custom icon, the icon you paste will not appear on the target item.
This article has been archived and is no longer updated by Apple.

Symptom

If you copy a custom icon and try to paste it into the "Get Info" window of an item that already has a custom icon, the new icon will not appear. You can delete the existing custom icon and try to paste the icon, but the previous custom icon will appear instead of the new one.

Solution

This document will be updated as more information becomes available.
Published Date: Feb 17, 2012

Mac OS X Server 10.2: How to Prevent Open SMTP Relay ("spam" Forwarding)

Mac OS X Server 10.2 Mail Service can be configured to prevent open SMTP relay while still allowing local users to send mail. This document explains how.
This article has been archived and is no longer updated by Apple.
Note: If you are using Mac OS X Server 10.1.3-10.1.5, stop here and see technical document 106762, "**Mac OS X Server 10.1: How to Set up Restricted SMTP Relay for Apple Mail Server**".

Getting started

If you are using Mac OS X Server version 10.2 to 10.2.3, you should update to version 10.2.4 or later. Important changes have been made to the way the Mail Service handles mail. All instructions in this document assume Mac OS X Server 10.2.4 or later. By default, the Mail Service is configured not to allow open relay and not to send email to the Internet outside of your domain. It will, however, accept mail for all local users from any sender. You may follow the steps below to expand email sending capability while still preventing open relay.

Phase I: Outgoing Mail

1. Open Server Settings and connect to the server.
2. Click the Internet tab.
3. Click the Mail Service button and choose Configure Host Settings (Mail Service must be running).
4. Click the Outgoing Mail tab.
5. Select Allow Outgoing Mail from the pop-up menu.
6. Click the Save button.

Now the Mail Service will allow the server to send mail to the Internet. It will also allow anyone who first authenticates using the CRAM-MD5 protocol to send mail to the Internet. It will still accept mail for local users from any sender.

Phase II: Restricting Outgoing Mail by IP Address or Range

If you would like to allow your users to be able to send mail to the Internet without authenticating, follow these steps.

1. Click the Incoming Mail tab in the Configure Host Settings window.
2. SMTP relay should be allowed for "only hosts in this list" by default. The loopback address (127.0.0.1) and the server's primary IP address are in the list by default.

Note: Do not remove the loopback address from the list. This is a special address and needs to be allowed to relay. Its presence does not present a security risk.

3. Click the Add button and add the IP addresses of any computers you wish to allow to send mail without authenticating. You can add an entire network by using an IP address/netmask format.

Examples:
To add 10.0.0.0 through 10.255.255.255, type: 10.0.0.0/255.0.0.0
To add 172.16.0.0 through 172.16.255.255, type: 172.16.0.0/255.255.0.0
To add 192.168.0.0 through 192.168.0.255, type: 192.168.0.0/255.255.255.0

4. Click the Save button and close the window.

Now the Mail Service will allow anyone connecting from an allowed IP address to send mail to the Internet. It will also allow anyone who first authenticates using the CRAM-MD5 protocol to send mail to the Internet. It will accept mail for local users from any sender.

Phase III: Outgoing Mail From Any Authenticated User

If you would like to allow users who are NOT in the list of allowed IP address to send mail to the Internet if they authenticate using ANY method, follow these steps.

1. Click the Mail Service button and choose Configure Mail Service.
2. Click the Protocols tab.
3. Click the SMTP Options button.
4. Select the "Require authenticated SMTP using CRAM-MD5" checkbox.

5. Select the "Allow PLAIN and LOGIN authentication" checkbox.
6. Deselect the "Require authenticated SMTP using CRAM-MD5" checkbox.
7. Click the Save button and close both windows.

Now the Mail Service will allow anyone connecting from an allowed IP address to send mail to the Internet. It will also allow anyone who first authenticates by any method to send mail to the Internet. It will accept mail for local users from any sender.

Notes:

1. CRAM-MD5 authentication requires a Password Server with CRAM-MD5 enabled and the individual users must be set to use Password Server passwords. The users must have a CRAM-MD5 (sometimes called MD5 Challenge-Response) capable mail application (such as Apple Mail) as well.

2. PLAIN and LOGIN may be enabled even when CRAM-MD5 authentication is not required (CRAM-MD5 is always enabled in the Mail Service, you can only require it or not require it). Most mail clients support PLAIN or LOGIN authentication.

Warning: PLAIN and LOGIN transmit the username and password in "plain text" format and pose a security risk. If possible, clients should be encouraged to use CRAM-MD5 instead.
Published Date: Oct 11, 2016

Mac OS X 10.2: Rendezvous Name Fails to Save

If you include a period in the Rendezvous name for your computer, the system will not warn you that a period is an invalid character and will not save the new name.
This article has been archived and is no longer updated by Apple.

Symptom

You enter a Rendezvous name that includes a period in the Sharing preference pane. When you subsequently go to a different preference pane and then return to the Sharing pane, you discover the Rendezvous name was not saved.

Solution

Do not use a period in your Rendezvous name. To learn about creating a valid Rendezvous name, see technical document 106964, "**Mac OS X 10.2: About Your Computer's Rendezvous Name**".
Published Date: Oct 11, 2016

Mac OS X: Some Photoshop 6 Menu Items Do Not Appear

Some menu items may not appear if you open Adobe Photoshop 6 without first starting the Classic environment.
This article has been archived and is no longer updated by Apple.

Symptom

Some Photoshop menu items do not appear.

Solution

Start the Classic environment before opening Adobe Photoshop 6. You may start Classic in the Classic pane of System Preferences.
Published Date: Feb 17, 2012

Mac OS X Server: Users Cannot Log In to Windows File Sharing, Do Not Have tim_password Value in NetInfo

If the root password for the local and parent NetInfo domain are different when the Authentication Manager is in use, users in the parent domain will not have tim passwords set. This prevents users from logging in via Windows File Sharing.
This article has been archived and is no longer updated by Apple.

Symptom

Affected users are not able to log in via Windows File Sharing and do not have a tim_password value in NetInfo.

Solution

1. Connect to the server via Server Admin.
2. Click the General tab.
3. Choose the NetInfo/root domain from the Users & Groups menu.
4. Reset the users' passwords to create a tim_password value in NetInfo. You may do this either using a batch edit or one at a time.

Published Date: Oct 11, 2016

Mac OS X Server: How to Update an Existing NetBoot Image

This document explains how to update an existing NetBoot disk image.
This article has been archived and is no longer updated by Apple.
You can apply a Mac OS X system software update to an existing NetBoot image so that your clients start up from the latest software version. You may download updates from Apple Software Downloads (http://www.apple.com/swupdates/).

To update an image using these instructions, you must have been logged in to the server as the root user when you created the image.

Follow these steps:

1. Log on to the server as the root user. For help, see technical document 106290, "**Mac OS X: About the root User and How to Enable It**".
2. Open Server Settings.
3. Click the Network tab.
4. Choose Configure DCHP/NetBoot from the DHCP/NetBoot menu.
5. Click the Image tab.
6. Deselect the checkbox in the Enabled column for the image that you want to update.
7. In the Finder, locate the image (the image.dmg file in /Library/NetBoot/NetBootSPx/image.nbi).
8. Select the file, then choose Get Info from the File menu.
9. Deselect the Locked checkbox.
10. Using the same method, unlock the associated boot file (/Library/NetBoot/NetBootSPx/image.nbi/booter).
11. Double-click the image file to mount the image.
12. At this point, install the software update according to its instructions. Be sure to select the mounted NetBoot image as the destination disk for the update.
13. Open the Terminal (/Applications/Utilities/).
14. In this step, you will type a series of commands in the Terminal. Each command is preceded by the pound (#) sign. After typing each command, press Return. These commands update the boot files:

```
# cd /Library/NetBoot/NetBootSPx/image.nbi
# vsdbutil -a /Volumes/image
# kextcache -l -n -m mach.macosx.mkext /Volumes/image/System/Library/Extensions
# cp /Volumes/image/usr/standalone/ppc/bootx.bootinfo booter
# cp /Volumes/image/mach_kernel mach.macosx
```

15. In Server Settings, re-enable the NetBoot image.

Important software license information:

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Published Date: Oct 11, 2016

Mac OS X Server: How to create a customized NetBoot image

This document explains how to create a customized NetBoot disk image.
This article has been archived and is no longer updated by Apple.
You can move an image to a client computer, customize it, and return the image to the server. This is easiest if you copy the image to an external FireWire hard drive.

Follow these steps to customize a Mac OS X NetBoot image:

1. Log on to the server as the root user. For help, see technical document 106290, "**Mac OS X: About the root User and How to Enable It**".
2. If you don't already have an image to customize, create a new NetBoot image from a Mac OS X installer CD using the Network Image Utility on the server. To simplify later steps, avoid using spaces in your image name.
3. On an external hard drive, set up a 2 GB partition with the same name as the image.
4. If the image file (the image.dmg file at /Library/NetBoot/NetBootSPx/image.nbi) is locked, select it in a Finder window, choose Get Info from the File menu, and deselect the Locked checkbox.
5. Use the same method to unlock the booter file that is in the .nbi folder with the image.
6. Double-click the .dmg file to mount the image, then use a file utility (such as the shareware Carbon Copy Cloner) to copy the contents of the image to the empty partition on the external disk.
7. Move the external drive to a client computer and start the client from the image partition.
8. Customize the system to suit your users. For example, you may install additional applications, configure directory services, set up user accounts, or customize the Dock. You can also install a Mac OS X update to update the system software on the client.
9. When the client is properly configured, shut down the client computer and reconnect the external disk to the server.
10. Copy the contents of the customized partition from the external disk (using Carbon Copy Cloner, for example) back into the original image on the server (image.dmg in /Library/NetBoot/NetBootSPx/image.nbi, which should still be mounted).
11. Open the Terminal (/Applications/Utilities/).
12. In this step, you will type a series of commands in the Terminal. Each command is preceded by the pound (#) sign. After typing each command, press Return. These commands update the boot files:

```
# cd /Library/NetBoot/NetBootSPx/image.nbi
# kextcache -l -n -m mach.macosx.mkext /Volumes/image/System/Library/Extensions
# cp /Volumes/image/usr/standalone/ppc/bootx.bootinfo booter
# cp /Volumes/image/mach_kernel mach.macosx
```

13. Enable the image using Server Settings.

Important software license information

In accordance with the Network Install and Mac OS X Server software license agreements, you may use the software in this manner as long as you ensure that each end user of the image files is aware of and complies with the terms of the software license(s) that governs the use of the software contained within the image files. The Network Install and Mac OS X Server software may be used to install and reproduce materials so long as your use is limited to reproduction of non-copyrighted materials, materials in which you own the copyright, or materials you are authorized or legally permitted to reproduce.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 11, 2016

Mac OS X Server: How to Create a NetBoot Image From an Existing System

This document explains how to create a NetBoot disk image from an existing system.
This article has been archived and is no longer updated by Apple.
If you already have a client computer set up to suit your users, you can use Disk Copy to create a NetBoot image that is based on that client's configuration. You need an external FireWire hard disk or a second partition on the client's hard disk on which to create the image. You cannot create the image on a volume over the network.

Follow these steps to create a NetBoot image based on an existing system:

1. Make sure there is a second volume available on the client where you can create the image. You can use an external disk (such as a FireWire hard drive) or any partition available on the client other than the startup volume.
2. Make sure that permissions are enabled on the target volume. See Section I of technical document **107524** for more information on enabling permissions for a volume.
3. Open Disk Copy at the client computer.
4. Choose New from the File menu, then New Image From Folder Or Volume from the submenu.
5. Select the client startup volume as the source of the image.
6. Click Image.
7. In the Image Volume panel, type an image name.
8. Choose the external disk or second partition as the destination.
9. Choose read/write from the Image Format pop-up menu.
10. Click Save.
11. Open the Terminal (/Applications/Utilities/).
12. Type this command, pressing Return afterwards:

```
kextcache -l -n -m /Volumes/target_volume/mach.macosx.mkext /System/Library/Extensions
```

Note: Replace "target_volume" with the actual name of the volume which was imaged.

13. On the server, create a new folder named "image_name.nbi" at /Library/NetBoot/NetBootSPx, replacing "image_name" with the actual name of your new image.
14. Copy the image.dmg and mach.macosx.mkext files that you created on the client into the new folder /Library/NetBoot/NetBootSPx/image.nbi.
15. You may now unmount the target volume (the volume which was imaged), if appropriate.
16. At the server, double-click the .dmg file to mount the image.
17. At the server, open the Terminal.
18. In these steps, you will type a series of commands in the Terminal. Each command is preceded by the pound (#) sign, which represents the prompt you see on screen. After typing each command, press Return.

```
# cd /Library/NetBoot/NetBootSPx/image.nbi
# cp /Volumes/image/usr/standalone/ppc/bootx.bootinfo booter
# cp /Volumes/image/mach_kernel mach.macosx
```

19. To set up the image property list file, open the Property List Editor.
20. Choose New from the File menu.
21. Click the New Root button.
22. Click the disclosure triangle next to the Root entry.
23. Click the New Child button to add the first property. To modify a property, double-click in a column or click the triangles to select a value from a pop-up list. After you create the first property, click the New Sibling button to add another.
24. Add all of these properties, classes, and values:
- BootFile, String, booter
- Index, Number, (a unique image index of your choice)
- IsDefault, Boolean, Yes or No
- IsEnabled, Boolean, No
- IsInstall, Boolean, No
- Name, String, (image name, same as name of .nbi folder and .dmg file)
- RootPath, String, (name of image file, including ".dmg" extension)
- Type, String, NFS

25. Save the file with the name "NBImageInfo.plist" in the image folder /Library/NetBoot/NetBootSPx/image.nbi. Instead of creating the file yourself, you can copy an existing NBImageInfo.plist file from another image (.nbi) folder and modify it using the Property List Editor.
26. Enable the image using Server Settings.

Important software license information

In accordance with the Network Install and Mac OS X Server software license agreements, you may use the software in this manner as long as you ensure that each end user of the image files is aware of and complies with the terms of the software license(s) that governs the use of the software contained within the image files. The Network Install and Mac OS X Server software may be used to install and reproduce materials so long as your use is limited to reproduction of non-copyrighted materials, materials in which you own the copyright, or materials you are authorized or legally permitted to reproduce.

Published Date: Oct 11, 2016

Mac OS X Server: Creating a Network Install Disk Image

You can create installer images using the Network Image Utility, which is found on the Mac OS X Server Administration Tools CD that comes with Mac OS X Server. Look in the folder /NetBoot, Network Install/Image Creation. To create an image that includes system software, you need a Mac OS X install CD.
This article has been archived and is no longer updated by Apple.
Follow these steps to create an installer disk image:

1. Open Network Image Utility.
2. Click the lock button, and authenticate as an Admin user.
3. Type a name for the disk image you are creating.
4. Choose Network Install from the Image Type pop-up menu.
5. To create an image that is unique to this server, choose an ID in the range 1-4095. To create one of several identical images to be stored on different servers for load balancing, use an ID in the range 4096-65535. Multiple images of the same type with the same ID in this range are listed as a single image in a client's Startup Disk preference pane.
6. Choose the default language for the installed software.
7. Optional: To have the installation proceed with limited or no interaction from the client computer, select "Enable automated install of the image."
8. Click Create Image.
9. When prompted, insert a Mac OS X Installation CD.

The image (.dmg file) and associated files are saved on the server in the following location, where "x" is the volume number, and "image" is the image name you provided:

/Library/NetBoot/NetBootSPx/image.nbi

Important software license information

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Published Date: Oct 11, 2016

Mac OS X Server: How to Add Packages to an OS Install Image

This document explains how to add packages to an operating system installer disk image.
This article has been archived and is no longer updated by Apple.
To include additional application or file packages in an operating system installer disk image, copy the packages into the image, and then use a text editor such as TextEdit to update the property list (.plist) file that describes the packages in the image.

Follow these steps to add packages to an OS installer disk image:

1. Make sure the disk image file (.dmg) is unlocked. If necessary, select the image file in the Finder and choose Show Info from the File menu. Be sure the Locked checkbox is not selected. You may need to log in as the root user to unlock the file.
2. Double-click the image file to mount it.
3. Copy your packages or metapackages into the following folder in the mounted image: /System/Installation/Packages
4. In the same folder, Control-click the OSInstall.mpkg file and choose Show Package Contents from the shortcut menu.
5. Open the Contents folder (inside OSInstall.mpkg).
6. Use a text editor to open the file Info.plist. To open the file in TextEdit, for example, drag the file's icon onto the icon for the TextEdit application.
7. Add a new <dict>...</dict> entry for your package within the array of entries under the key IFPkgFlagPackageList. You can copy one of the existing entries, then just change the value of the IFPkgFlagPackageLocation key to the name of the package you put in the Packages folder.
8. Repeat step 6 for each package you want to install.
9. Save the updated property list.
10. Eject the image.

Important software license information

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Published Date: Oct 11, 2016

Mac OS X Server: How to Automate Installation of an OS Image

This document explains how to automate installation of operating system software onto a client computer from a Network Install disk image.
This article has been archived and is no longer updated by Apple.
To install Mac OS software (along with any packages you add) with limited or no interaction from the client computer, use the Network Image Utility to create an automated install image, then update the associated configuration file and enable the image.

Follow these steps to set up an OS image for automated installation:

1. Create a new image using the Network Image Utility. In doing so, choose Network Install as the image type, and select "Enable automated install of the image."
2. Mount the new image, which is located at /Library/NetBoot/NetBootSPx/image.nbi.
3. Open the file minstallconfig.xml using the Property List Editor. The file is in the mounted image, in the folder /private/etc.
4. Adjust the values in the minstallconfig.xml file to specify the details of the installation and determine whether any interaction will be required from the client. When you are finished, save your changes. See "About the minstallconfig.xml File" on page 551 of the Server Admin Guide.
5. Eject the image.
6. Enable the image in Server Settings.

The Server Admin Guide is available from technical document 50525, "**Mac OS X Server Manuals**".

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Published Date: Oct 11, 2016

Mac OS X Server: About the minstallconfig.xml File

This document explains the minstallconfig.xml file.
This article has been archived and is no longer updated by Apple.
Automated installations use information in this file to control how the installation proceeds. To set up a completely automated installation with no user interaction, for example, you need to make sure this file contains the information that a user of the client computer would otherwise provide. The minstallconfig.xml file is located in the installer image in /private/etc. You can use TextEdit or the Property List Editor to modify the file.

minstallconfig.xml Keys and Values

Key	Value	Description
InstallType	minimal	Installation proceeds without any interaction from the client.
InstallType	confirm	Someone at the client computer must respond to a confirmation dialog before installation can proceed.
Package	<path>	The path to the file that describes the packages to be installed. To automatically install an image that includes the operating system (with or without additional application packages), the path is /System/Installation/Packages/OSInstall.mpkg where pkgfile is the name of a package file (.pkg) in the case of a single package, or a metapackage file (.mpkg) if you are installing more than one package.
Target	<path>	The path to the location where the software will be installed. The default is /Volumes/Macintosh HD
Target	userselect	Prompts the user on the client computer to choose where the software will be installed.
Language	<code>	The two-letter ISO code for the primary language to be used by the installed software.
ShouldErase	true	The target volume is erased before installation proceeds.
ShouldErase	false	The target volume is not erased.
Restart	true	The client computer restarts when installation is finished.
Restart	false	The client computer does not restart after installation.

Published Date: Oct 11, 2016

Mac OS X Server: How to Select a Network Install Image

This document explains how to select a Network Install disk image from the Mac OS X client computer on which you want to perform the installation.
This article has been archived and is no longer updated by Apple.
If the client computer is using Mac OS X version 10.2 or later, use the Startup Disk pane in System Preferences to select a NetBoot startup disk image.

Follow these steps to select a Network Install image from Mac OS X:

1. Open System Preferences.
2. Choose Startup Disk from the View menu.
3. Select the Network Install disk image you want to use to start up the computer.
4. Click Restart.

Published Date: Oct 11, 2016

Mac OS X 10.2: Unresponsiveness if Network Disconnected While Connected to Shared Volume

The computer may temporarily stop responding, displaying a spinning disc pointer, if you are disconnected from the network while connected to a shared volume. This may happen if your Ethernet cable is loose, or if it is intentionally disconnected, for example.
This article has been archived and is no longer updated by Apple.

Symptom

The pointer turns into a spinning disc, and the computer is temporarily unresponsive. This message appears:

> "Disconnected The file server '<name of shared volume>' has unexpectedly closed down and reconnect has failed. <time stamp>"

Solution

1. Reconnect to the network. The spinning disc pointer may remain for a short time after the network is reconnected.
2. Reconnect to the shared volume, if possible. See Note, below.
3. If the spinning disc persists, restart the computer.

Note: If the network connection is working but you cannot connect to the shared volume, check with the administrator of the computer that is serving the shared volume.
Published Date: Feb 17, 2012

Mac OS X: About the Mac OS X 10.2.4 Update

This software updates Mac OS X 10.2.3 to version 10.2.4.
This article has been archived and is no longer updated by Apple.
This information is available in:

Français | Deutsch | Español | Italiano | Nederlands | Svensk

Important: Read Before Installing

1. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

2. To install Mac OS X 10.2.4, you must enter the password for an Admin account. The password cannot contain a space or special characters typed by pressing the Option key

If you need to change an Admin account password, choose Apple menu > System Preferences, then choose View > Accounts. Select the account name and click Edit User. Type the current password and press Return, then type the new password in both text boxes. Click OK when you are done.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Featured Software to install.

Installation

There are two ways to update to Mac OS X 10.2.4.

Automatic Software Update Installation

You may have been referred to this document by Automatic Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

Standalone Installers

An installer is also available from Apple Featured Software (http://www.apple.com/swupdates/).

There are two versions of the update installer available:

- Mac OS X 10.2.4 Update updates Mac OS X 10.2.3 to the new version. This document describes how to use this installer.
- Mac OS X 10.2.4 Update (Combo) updates Mac OS X 10.2, 10.2.1, 10.2.2, or 10.2.3 to version 10.2.4. If you need to use the Combo installer, see technical document 107363, "**Mac OS X: About the Mac OS X 10.2.4 Update (Combo)**".

Enhancements

Enhancements delivered with this update include:

Digital Hub and Audio Enhancements

- Further improves an enhancement introduced with Mac OS X 10.2.3, in which files and folders specific to Mac OS file systems are no longer copied to the disc when burning a CD.
- Improves audio quality for FireWire audio devices.
- Enhances support for mLAN devices.
- Adds support for LaCie d2 48x12x48x disc burners.
- Improves the way voice-activated applications work in Classic.
- Addresses an issue in which audio may not be sampled when using some Mac OS 9 audio applications in the Classic environment.

Printing Enhancements

- The Paper Size pop-up menu in the Page Setup dialog now has submenus if the selected printer has several margin settings for a paper size.
- Includes software for Brother printers that work with Rendezvous.
- Addresses a potential security issues with the CUPS printing software; for more information see technical document 61798 "**Apple Security Updates**."
- The Shared Printers list now appears by default in the "Format for:" pop-up menu in Page Setup dialog boxes.

Networking, Modem, and Internet-Related Enhancements

- You may turn on or off the ability to log into AFP servers using an Admin account password.
- Allows for use of a hardware Ethernet address with the ifconfig command in Terminal.
- Improves results when copying large files (4 GB or larger) to a Windows file sharing (SMB) server.
- Addresses an issue in which connecting to an AFP or other server could cause a Finder window to open displaying the contents of the Volumes directory, instead of the target volume.
- Addresses an issue in which the Web browser selection could unexpectedly change to a different browser after updating your default browser.
- Addresses a potential kernel panic situation when receiving a phone call on the same line that connects a DSL modem to the Internet.
- Includes sendmail version 8.12.6; for more information see technical document 61798 "**Apple Security Updates**."
- Dialing with the modem sound turned on produces sound on a portable computer.
- Rendezvous-enabled computers that have personal web sharing turned on appear in the Safari Rendezvous bookmark collection.

Address Book and Mail Enhancements

- Addresses a situation in which an application making use of Address Book could unexpectedly quit when certain text is deleted from the Show People search box.
- For German-localizations: addresses an issue in which sent messages in Mail may be deleted even if the "Delete sent mail when" preference setting is Never, except for sent messages transferred to a different mailbox.
- Address Book remains open after closing all of its windows.
- Address Book edit mode now includes an Undo feature.
- Resolves an issue that could occur when quitting Address Book after creating a new group.
- Improves Address Book formatting for Irish and Japanese addresses.

Finder Enhancements

- Addresses an issue that could occur when dropping items near the far left or top of the desktop in which existing item icons are "pushed away" from the dropped items.
- Resolves a situation in which the Finder could become temporarily unresponsive after closing a Get Info window.
- Improves behavior when pasting a custom icon over an existing custom icon.
- Dragging an alias from the preview column to the Trash no longer deletes the original item.
- Improves wording in the progress indicator window when copying a large file to an iDisk or WebDAV volume ("5 seconds remaining" could previously for much longer than five seconds).

Other Enhancements

- The Traditional Chinese Input Method now includes Hanin; using Hanin with either Zhuyinfuhao or Pinyin results in significantly more accurate typing.
- Reduces issues that could be caused by a damaged font within the Fonts folder of the System Folder used by the Classic environment, even if Classic is not running.
- Sherlock allows for typed selection of search results.
- Addresses an issue that could lead to a kernel panic when logging out.
- Addresses some situations in which Apple System Profiler 3.0 may unexpectedly quit.
- Addresses an issue in which the computer may not sleep when idle after disconnecting a FireWire or USB device.
- Selecting several items in a dialog list by Shift-clicking now works better in some Mac OS X (Carbon) applications.
- Turning on Folder Actions no longer results in increasing amounts of disk space being used.
- The Classic environment no longer draws the Mac OS 9 desktop picture on both monitors if you are using Display preferences to arrange your displays while Classic is starting.
- Addresses an issue in which the Classic environment could unexpectedly stop on a portable computer while the computer is in sleep mode and certain USB devices are attached.
- Resolves an issue in which System Preferences could unexpectedly quit if the Speech preference pane was open, Speakable Items was on, and sound was detected by the microphone.
- Improves compatibility with Firaxis Civilization III when the application's "Quartz text rendering" option is selected.

- The computer sleeps as expected if certain Ethernet cards are installed but the network port configuration is turned off in Network preferences.
- Addresses an issue with Disk Utility (10.3 v88.11), that could result in some disk repair utilities inaccurately finding issues with the "HFS wrapper" of a newly-formatted disk; the issue would not cause data loss.
- For Swedish-localizations, addresses an issue in which some advanced calculator conversions could result in zero.
- Reduces likelihood of a situation in which an inaccurate message, "You are now running on reserve battery power," may appear when waking an iBook or PowerBook.
- Includes Hiragino fonts version 7.11.
- Improves results when a large user dictionary is used with Kotoeri conversions.
- Addresses an issue in which, after using the Repair Disk Permissions feature of Disk Utility, Kotoeri stalls when the candidate window is shown.
- Improves support for USB-based MIDI devices in Classic.

Published Date: Oct 11, 2016

Mac OS X: About the Mac OS X 10.2.4 Update (Combo)

This software updates Mac OS X 10.2, 10.2.1, 10.2.2, or 10.2.3 to version 10.2.4. It is a "combo" update that combines enhancements delivered with versions 10.2.1 through 10.2.4. If you already have Mac OS X 10.2.3, you may download a smaller update that is not a combo.
This article has been archived and is no longer updated by Apple.

Important: Read Before Installing

1. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

2. To install Mac OS X 10.2.4, you must enter the password for an Admin account. The password cannot contain a space or special characters typed by pressing the Option key

If you need to change an Admin account password, choose Apple menu > System Preferences, then choose View > Accounts. Select the account name and click Edit User. Type the current password and press Return, then type the new password in both text boxes. Click OK when you are done.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Featured Software to install.

Installation

There are two ways to update to Mac OS X 10.2.4.

Automatic Software Update Installation

You may have been referred to this document by Automatic Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

Standalone Installers

An installer is also available from Apple Featured Software (http://www.apple.com/swupdates/).

There are two versions of the update installer available:

- Mac OS X 10.2.4 Update (Combo) updates Mac OS X 10.2, 10.2.1, 10.2.2, or 10.2.3 to version 10.2.4. This document describes how to use this installer.
- Mac OS X 10.2.4 Update updates Mac OS X 10.2.3 to the new version. To learn more about that installer, see technical document 107362, "**Mac OS X: About the Mac OS X 10.2.4 Update**".

Enhancements Delivered with this update

Many enhancements are delivered with this update. Because this is a combo update, it includes those delivered with both Mac OS X 10.2.1, 10.2.2, and 10.2.3. These enhancements are listed individually in these technical documents:

107036: "**Mac OS X: About the Mac OS X 10.2.1 Update**"
107140: "**Mac OS X: About the Mac OS X 10.2.2 Update**"
107263: "**Mac OS X: About the Mac OS X 10.2.3 Update**"
107362: "**Mac OS X: About the Mac OS X 10.2.4 Update**"
Published Date: Oct 11, 2016

Mac OS X Server: About the Mac OS X Server 10.2.4 Update

This software updates Mac OS X Server 10.2.3 to version 10.2.4.
This article has been archived and is no longer updated by Apple.

Important: Read Before Installing

1. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

2. To install Mac OS X Server 10.2.4, you must enter the password for an Admin account. The password cannot contain a space or special characters typed by pressing the Option key.

If you need to change an Admin account password, choose Apple menu > System Preferences, then choose View > Accounts. Select the account name and click Edit User. Type the current password and press Return, then type the new password in both text boxes. Click OK when you are done.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Featured Software to install.

Installation

There are two ways to update to Mac OS X Server 10.2.4.

Automatic Software Update Installation

You may have been referred to this document by Automatic Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

Standalone Installers

An installer is also available from Apple Featured Software (http://www.apple.com/swupdates/).

There are two versions of the update installer available:

- Mac OS X Server 10.2.4 Update updates Mac OS X Server 10.2.3 to the new version. This document describes how to use this installer.
- Mac OS X Server 10.2.4 Update (Combo) updates Mac OS X Server 10.2, 10.2.1, 10.2.2, or 10.2.3 to version 10.2.4. If you need to use the Combo installer, see technical document 107365, "**Mac OS X Server: About the Mac OS X Server 10.2.4 Update (Combo)**".

Enhancements

This update delivers many enhancements, as described below.

Workgroup Manager / Client Management

- User list display performance enhanced, especially when displaying large lists of users.
- Improved managed client login performance and reliability.
- Management of Mac OS X preferences can be disabled by someone with a local Admin account on a client computer by removing the Directory Services binding using the Directory Access application.
- When the root user logs in on a managed client computer, management is disabled for the duration of the login.
- "Other . . ." user now appears in the Login Window of a client computer when the computer is configured such that no valid users would otherwise appear in the user's list.
- Preference allowing you to "limit search results to x records".
- Preference allowing you to "search for all on empty search key" .

Server Status

- Server Status provides more accurate graphic representation of Server CPU Usage and Network Traffic over time.

Web Server

- New Apache authentication module (mod_auth_digest_appl) handles digest authentication for WebDAV via DirectoryServices.
- Ability to process Rendezvous directives to Web server. This allows Safari users to browse for websites on a local subnet using the Rendezvous pop-up menu in Safari.

Netboot / Network Install

- The Network Image Utility is capable creating disk images with up to 10 GB of storage. This feature gives administrators the ability to image DVD content. Disk Utility is required to create images larger than 10 GB for use with NetBoot and Network Install. Netboot and Network Install images larger than 2 GB require Mac OS X 10.2.3 or later.

QuickTime Streaming Server

- QuickTime Streaming Server has been enhanced to provide greater security.

File Services: Apple (AFP), Windows (SMB), NFS, and FTP

- SMB: Improved handling of file copies larger than 4 GB to and from SMB share points.
- Enhanced NFS export to a specific subnet, in addition to World or Client IP list.
- The Inherit Permissions feature of Workgroup Manager copies execute bits from parent directories, if selected.
- Improves ability to save existing Microsoft Word files located on a Windows 2000 server share point.
- Improves ability to save Microsoft Word files on a Mac OS X Server share point, which sometimes resulted in the message "Word could not read from disk".
- Addresses issue in which clients using the LDAP plug-in and an "Authentication" search policy other than "Automatic" results in auths failure for AFP connections.
- Addresses issue in which trying to copy files to an auto-mounted group drop box results in the message "The operation cannot be completed because you do not have sufficient privileges for some of the items". (Managed Mac OS X clients were more likely to encounter this symptom.)
- Addresses issue in which AFP client cannot connect to Windows 2000 SFM "password protected" volumes. This issue could have resulted in a dialog requesting a "volume password," followed by a failure to connect to the selected volume.
- Better handling of Finder Comments field when using the Get Info command on any file or folder, allowing workflow and other applications using this information to perform normally.
- Addresses issue in which connection from a client to users' home directories can be broken if ejecting (unmounting) a second share point of the same server.
- Improves Finder experience when remotely viewing contents of folders in which filenames are being edited by two or more users over an AFP connection.
- Improves Finder experience when remotely viewing contents of a folder hosted on a uShare AFP volume.

Print Server

- Improved Print Queue performance when printing multiple jobs.
- Integrated latest LaserJet 4 Series of PPDs, providing improved compatibility.

Mail Server

- Sendmail has been updated to version 8.12.6.
- Improved support for Kerberos authentication via SMTP.
- Improved support for alternate locations of the mail database file; changes can be made in Server Settings.

X Serve

- if the security lock on X Serve is engaged, X Serve drives will not unmount when the drive handle is pressed. The drive indicator lights will remain green and drive operation should not be affected.

Networking

- Mac OS X Server version 10.2.4 supports jumbo Ethernet frames (MTU up to 9 KB) on Xserve when used with supported PCI gigabit Ethernet cards.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's

recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 11, 2016

Mac OS X Server: About the Mac OS X Server 10.2.4 Update (Combo)

This software updates Mac OS X Server 10.2, 10.2.1, 10.2.2, or 10.2.3 to version 10.2.4. It is a "combo" update that combines enhancements delivered with versions 10.2.1 through 10.2.4. If you already have Mac OS X Server 10.2.3, you may download a smaller update that is not a combo.
This article has been archived and is no longer updated by Apple.

Important: Read Before Installing

1. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

2. To install Mac OS X Server 10.2.4, you must enter the password for an Admin account. The password cannot contain a space or special characters typed by pressing the Option key.

   If you need to change an Admin account password, choose Apple menu > System Preferences, then choose View > Accounts. Select the account name and click Edit User. Type the current password and press Return, then type the new password in both text boxes. Click OK when you are done.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Featured Software to install.

Installation

There are two ways to update to Mac OS X Server 10.2.4.

Automatic Software Update Installation

You may have been referred to this document by Automatic Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

Standalone Installers

An installer is also available from Apple Featured Software (http://www.apple.com/swupdates/).

There are two versions of the update installer available:

- Mac OS X 10.2.4 Server Update (Combo) updates Mac OS X Server 10.2, 10.2.1, 10.2.2, or 10.2.3 to version 10.2.4. This document describes how to use this installer.
- Mac OS X Server 10.2.4 Update updates Mac OS X Server 10.2.3 to the new version. To learn more about that installer, see technical document 107364, "**Mac OS X Server: About the Mac OS X Server 10.2.4 Update**".

Enhancements Delivered with this update

Many enhancements are delivered with this update. Because this is a combo update, it includes those delivered with both Mac OS X Server 10.2.1, 10.2.2, 10.2.3, and 10.2.4. These enhancements are listed individually in these technical documents:

107038: "**Mac OS X Server: About the Mac OS X Server 10.2.1 Update**"
107142: "**Mac OS X Server: About the Mac OS X Server 10.2.2 Update**"
107265: "**Mac OS X Server: About the Mac OS X Server 10.2.3 Update**"
107364: "**Mac OS X Server: About the Mac OS X Server 10.2.4 Update**"
Published Date: Oct 11, 2016

Mac OS X 10.2: Windows File Sharing Does Not Start Without Network Connection

Windows file sharing does not start if the computer is not connected to a network. You should restart if sharing is on when a network cable is disconnected.

This article has been archived and is no longer updated by Apple.

Symptom

Windows file sharing does not start when the computer is not connected to a network.

Solution

1. Make sure that the computer is connected to a network, such as an Ethernet network.
2. Turn on Windows File Sharing in the Sharing preference pane (Services tab).
3. If Windows File Sharing does not start, restart the computer.

If Windows File Sharing still does not start, there may be an issue with your network cable or other network hardware. Contact your network administrator for assistance if needed. For general network troubleshooting information, see technical document 106796, "**Mac OS X: Internet and Network Topics (Getting Connected, Troubleshooting)**".

Published Date: Feb 17, 2012

Mac OS X 10.2: Personal File Sharing Stops When Not Connected to Network

Personal file sharing stops if the computer is not connected to a network during startup.
This article has been archived and is no longer updated by Apple.

Symptom

Personal file sharing stops if the computer is not connected to a network during startup.

Solution

1. Make sure that the computer is connected to a network, such as an Ethernet network or the Internet.
2. Turn on Personal File Sharing in the Sharing preference pane (Services tab).
3. If Personal File Sharing will not start, restart the computer.

For general network troubleshooting information, see technical document 106796, "**Mac OS X: Internet and Network Topics (Getting Connected, Troubleshooting)**".
Published Date: Feb 17, 2012

Mac OS X 10.2 or later: Alert Message When Using the Connect to Server Command With HTTP Server

You can use an http URL (a Web address starting with "http://") in the Connect to Server dialog if the target server uses WebDAV. If you specify a URL to a server that does not use WebDAV, you see an alert message
This article has been archived and is no longer updated by Apple.

Symptom

When you try to open an http connection in the Connect to Server dialog, an alert with this message appears:

Mac OS X 10.2:

> "An error has occurred (error = -36)."

Mac OS X 10.3:

> "You cannot connect to this server because it cannot be found on the network. Try again later or try a different URL."

Solution

Connect to Server is only appropriate for http servers that use WebDAV. When connecting to one, be sure to include the desired share point, such as:

http://idisk.mac.com/username/

To connect to a Web server that does not use WebDAV, use a Web browser instead.
Published Date: Oct 11, 2016

AirPort Extreme: Compatibility with earlier AirPort and third-party wireless products

You can use an AirPort Extreme card or base station seamlessly with existing AirPort and third-party 802.11b wireless products.
This article has been archived and is no longer updated by Apple.

Choosing an AirPort card

Because the card slots are different types, AirPort-capable computers use either the AirPort Card or the AirPort Extreme Card. The computer's listed specifications, as at the Apple Store, will name the card used. Computers described as "AirPort Extreme ready" accept the AirPort Extreme Card. Computers labeled as "AirPort ready" accept the AirPort Card. Both cards are available at The Apple Store.

Joining an AirPort Extreme network

Any computer using the earlier AirPort Card can connect to an AirPort Extreme Base Station. Any third-party 802.11b wireless card or adapter that works with an earlier AirPort Base Station should also be able to connect to the AirPort Extreme Base Station.

Joining AirPort and third-party 802.11b networks

Any computer using an AirPort Extreme Card can connect to an earlier AirPort Base Station. The AirPort Extreme Card can connect to the same third-party 802.11b wireless access points that the earlier AirPort Card connects to.

Mixing clients on an AirPort Extreme network

When you mix 802.11b (AirPort) and 802.11g (AirPort Extreme) clients on an AirPort Extreme network, each type of client receives an appropriate data throughput rate. The 802.11g clients continue to receive data at a higher rate than 802.11b clients.

Related Documents

107427 AirPort Extreme Base Station: Some Third-Party Cards Cannot Connect

Published Date: Oct 11, 2016

Mac OS X: Unable to Print to Some Postscript IP Printers

Your print job may not be printed on certain IP Postscript printers when "Use default queue on server" is selected in Print Center and the printer's firmware does not specify a default queue.
This article has been archived and is no longer updated by Apple.

Symptom

When adding a printer in Print Center, you select "Use default queue on server". If this is selected for certain printers, you cannot print to them.

Solution

1. Open Print Center (/Applications/Utilities/).
2. Select the printer's queue.
3. Choose Printer > Delete Printer.
4. Click Add.
5. Select the connection type IP Printing.
6. Enter the printer's IP address or DNS name.
7. Instead of selecting "Use default queue name on server", enter a known good queue for the printer. Refer to your printer's owner's manual for the list of proper IP or LPR queue names.

Note: Most IP printers do not require that a default IP/LPR queue name be specified. However, with printers that have no default queue name specified in firmware, you must correctly specify the queue name to print over IP.
Published Date: Feb 17, 2012

Mac OS X 10.2 (Japan): Kotoeri Stalls When Candidate Window Is Shown

After using the Repair Disk Permissions feature of Disk Utility, Kotoeri stalls when the candidate window is shown.
This article has been archived and is no longer updated by Apple.

Symptom

After typing Japanese text and pressing the space key to show the candidate window, Kotoeri stalls.

Solution

Update to Mac OS X 10.2.4 or later, then use the Repair Disk Permissions feature.

Published Date: Oct 11, 2016

Mac OS X 10.2: About Languages and Input Methods

Mac OS X 10.2 is a multilingual operating system. You may choose one of several languages for application menus and dialogs. In addition to these base languages, it is also possible to read and write text in several other languages.
This article has been archived and is no longer updated by Apple.

Languages included

Mac OS X 10.2 can display Finder menus, System Preferences, and file names in the following languages:

- Chinese (Simplified and Traditional)
- Danish
- Dutch
- English
- Finnish
- French
- Korean
- German
- Italian
- Japanese
- Norwegian
- Portuguese
- Spanish
- Swedish

You may select and prioritize languages in the System Preferences application. Go to the International pane, and (if necessary) click the Language tab.

Names of certain system-installed items will be translated into the selected language. Your home directory, for example, and its immediate subfolders (such as Music and Documents) appear with localized names when one of the above languages is selected as the preferred language. Folders that are not system installed retain their English names. You may rename user-created folders as desired, but you should not rename folders that were created by the system or by other applications that retain their English names. Examples of folders you should not rename are found at ~/Library and ~/Library/Preferences/.

After clicking the Language tab, you may also find more localization options (Script and Behaviors).

Selecting a keyboard layout or input method

To type text in a given language, you may need to select a keyboard layout or input method for it. Click the Input Menu tab of the International preference pane to locate these options. Keyboards layouts designated as Unicode are only available for Unicode applications such as Mail, TextEdit, or the Finder.

Application awareness, fonts, and language support

Some applications display text in these languages automatically, while others require that you select the text and use a special font for the language. The additional Asian and Western Language fonts are available on the Mac OS X 10.2 Install disc.

In the Finder of Mac OS X 10.2 or later, the Get Info command provides information about an application's language support. In the Info window, click the Languages disclosure triangle to see a list of available languages for the selected application. For help, see technical document 106148, "**Mac OS X: About Show Info, Get Info, and the Inspector**".

Unicode input methods

Mac OS X 10.2 includes several Unicode input methods:

- Arabic
- Croatian
- Devanagari
- Devanagari--QWERTY
- Greek
- Gujarati
- Gujarati--QWERTY
- Gurmukhi
- Gurmukhi--QWERTY

- Hawaiian
- Hebrew
- Icelandic
- Persian
- Romanian
- Slovenian
- Thai
- Thai--PattaChote
- U.S. Extended
- Unicode Hex Input
- Vietnamese

To select the language you want to use, click the Input Menu tab in the International preference pane, then select the checkbox next to the language. When more than one language is selected, the Input menu appears in the menu bar to the right of the Help menu. The Input menu is represented by a flag or other symbol that is associated with the selected language or input method. This menu allows you to quickly switch between active languages.

If the application does not support Unicode input, the languages are dimmed in the Input menu.

The Character Palette, also available from the Input menu, is a floating window utility to help you input difficult-to-remember or difficult-to-reproduce characters.
Published Date: Feb 17, 2012

Localized or Dvorak keyboard configurations not available when started from Install CD (Mac OS X 10.2, 10.3, 10.4)

This article has been archived and is no longer updated by Apple.

When started up from a Mac OS X Install disc, localized and Dvorak keyboard configurations are not available when using Installer's Disk First Aid or the password reset features.

Text input does not yield the expected results when using Disk Utility or password reset features while started up from CD.

When starting up from a Mac OS X 10.2, 10.3, or 10.4 Install disc, the Mac OS X Installer is limited to the U.S. English keyboard layout.

Text entry will be via the US English keyboard layout instead of the expected localized keyboard layout. This means that you will not see expected text when trying to rename an erased volume in Disk Utility (except 10.4) or when trying to change your password.

Mac OS X 10.4 tip: While started from a Mac OS X 10.4 Tiger install disc, you can use localized and Dvorak keyboard configurations in Disk utility.

Published Date: Feb 20, 2012

Mac OS X 10.2, 10.3: How to perform Mac OS 9 clean installation with Restore CDs

This article has been archived and is no longer updated by Apple.

This document explains how to perform a clean installation of Mac OS 9.2.2 using the Software Restore CDs included with computers that come with Mac OS X 10.2 or 10.3 (in which Mac OS 9 is installed from Mac OS X Restore CDs and there is no separate Mac OS 9 CD included with the computer).

Tip: Click here for more information about what a clean installation is and when you might need to perform it.

How to perform a Mac OS 9.2.2 clean installation using Mac OS X 10.2 or 10.3 Panther Software Restore CDs:

1. For Mac OS X 10.3 or later, open Disk Utility, then, from the **File** menu, choose **Fix OS 9 Permissions**. For Mac OS X 10.2.8 or earlier, locate and change the permissions settings of the Mac OS 9 System Folder so that you own it.
2. Open the Mac OS 9 System Folder, create a new empty folder, and drag the Finder into it.
3. Rename the Mac OS 9 System Folder to something such as "Former Mac OS 9 System Folder". **Tip:** Do not use "Previous System Folder".
4. Open Software Restore, and select to restore only Mac OS 9.
5. Open Classic preferences and verify that System Folder (the one that was just installed) is selected for the Classic environment.

When you are finished moving any items from the "Old Mac OS 9 System Folder," (such as preference files for Classic applications, unless "Use preferences from home folder" is selected in the Classic preference pane) it can be deleted.

Related documents

107397 Mac OS X 10.2: Classic Issue Persists After Mac OS 9 Clean Installation

Published Date: Oct 11, 2016

Mac OS X: How to View a File‘s Path

This document explains how to view a file's path.
This article has been archived and is no longer updated by Apple.
There are several ways to view the hierarchical path to a particular file. Use any of these:

- Set the Finder window view to Columns, and read the path from left to right.
- Select the item in the Finder, then Command-click the icon of the enclosing folder that appears in the window's title bar.
- In Mac OS X 10.1 and later, you may choose Customize Toolbar from the View menu in the Finder, then add the Path button to your toolbar.

Note: The icon for the toolbar Path button suggests the path will be presented top to bottom. The path will actually be presented bottom to top (upside down). This is expected behavior. The same is true when Command-clicking the title bar of the Finder window.
Published Date: Feb 17, 2012

Mac OS X: "Error Creating Folder... Access Denied" When Installing Photoshop Elements 2.0 From CD

Adobe has posted solutions for an issue in which Photoshop Elements 2.0 cannot be installed from CD.
This article has been archived and is no longer updated by Apple.

Symptom

When installing Adobe Photoshop Elements 2.0 from CD, installation fails. An alert with this message appears:

> "Error Creating Folder... Access Denied"

Solution

A solution is available at the Adobe website (http://www.adobe.com/cfusion/knowledgebase/index.cfm?id=331295).

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Feb 20, 2012

Mac OS X: How to Move or Close an Inactive (Background) Window

You can use Command-drag and Command-click to move or close an inactive (background, dimmed) window.
This article has been archived and is no longer updated by Apple.

Mac OS X native windows

To close an inactive window without bringing it to the foreground, Command-click the Close Window button.

To move an inactive window, Command-drag the window's title bar.

Note: "Command" refers to the key on your keyboard that is marked with an Apple icon.

Classic environment windows

You can use the above commands for Classic windows while in the Classic environment, or for native Mac OS X windows while in the Classic environment.

However, if you are not in a Classic application, Command-clicking or dragging a background Classic window will make the window active (bring it to the foreground).

Published Date: Feb 17, 2012

Address Book: How to Print a List of Names With Phone Numbers or Email Addresses

This document explains how to print a list of names with phone numbers or a list of names with email addresses.

This article has been archived and is no longer updated by Apple.

Follow these steps:

1. Open Address Book, if it is not already open.
2. Click All or a Group name, as desired.
3. Click any name.
4. Choose Select All from the Edit menu.
5. Choose Print from the File menu.
6. Within the print window, choose Address Book from the pop-up menu that reads Copies & Pages.
7. Choose Phone List or Email List from the Print pop-up menu.
8. Click Print.

Note: Information within an imbedded group is not printed.

Published Date: Feb 17, 2012

About SMTP

SMTP is the Simple Mail Transfer Protocol.

This article has been archived and is no longer updated by Apple.

SMTP stands for the Simple Mail Transfer Protocol, used to send electronic mail from your computer through an SMTP server, which is usually operated by your Internet service provider or network administrator. When configuring or troubleshooting Internet email, SMTP may also be referred to as "outgoing email" or "sending email."

SMTP is an industry standard protocol that allows different companies' products to work together.

The SMTP protocol is described in depth in RFC document number 821 (http://www.ietf.org/rfc/rfc0821.txt).

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Published Date: Feb 17, 2012

Mac OS X: Cannot print, use Classic, start file sharing, burn discs, or update software if /tmp missing

This article has been archived and is no longer updated by Apple.

If you start up the computer from Mac OS 9, certain items are visible in the Mac OS 9 Finder that are normally invisible in the Mac OS X Finder, including "/tmp" (which looks like a folder). Don't throw "/tmp" out!

What might happen in Mac OS X if the "/tmp" symbolic link is missing? Lots of things:

- Classic won't start.
- Attempts to print fail, with the alert message "error while printing".
- Software Update fails, with the alert message "An unexpected error has occurred".
- File sharing will not start.
- You cannot burn CDs or DVDs in Mac OS X 10.3.9 or earlier, the message "Burning a disc cannot proceed because the startup disc is full (Error code -34)" appears.
- A PPP dial-up connection attempt fails, with the alert message "An incorrect PPP option has been set".
- Repair Privileges Utility (Mac OS X 10.1.5 only) unexpectedly quits.

To avoid these issues, you guessed it, you shouldn't delete the /tmp symbolic link from the Mac OS X volume.

If /tmp is missing, it's easy to make a new one by following these steps:

Mac OS X 10.3 or later

Recreate the missing /tmp link by using the Disk Utility application to repair permissions on your Mac OS X startup volume.

Mac OS X 10.2.8 or earlier

1. Open Terminal (/Applications/Utilities/).
2. Type: `ls -la / | grep tmp`
3. Press Return.
4. Look at the resulting text. If it matches the following line (which would indicate that /tmp is still present) then this document does **not** apply to you, and you should stop here and try another troubleshooting path.
   `lrwxrwxr-t 1 root admin 11 Jan 15 11:00 tmp@ -> private/tmp`
   The timestamp following "admin" will reflect the current date.

5. If you do not see the line above, then type:
   `sudo ln -s /private/tmp /tmp`

6. Press Return.
7. Enter your administrator account password when prompted, the press Return.

Tip: If you have Safari 1.0 Beta (v48), update to Safari 1.0 or later to reduce the chances of this issue recurring. Choose **About Safari** from the **Safari** menu to see which version you have.

Related documents

106908: "Mac OS X: Issues After Removing 'etc' and/or 'var' Directory Alias When Started Up From Mac OS 9"
106805: "Mac OS X: "Broken Folder" Icon, Prohibitory Sign, or Kernel Panic When Computer Starts Up"
Published Date: Oct 7, 2016

Mac OS X 10.2: Classic Issues Persist After Mac OS 9 Clean Installation

If you perform a Mac OS 9 clean installation after having selected the "Use preferences from home folder" option in the Classic preference pane, the Classic preferences and other items remain in your home directory after the clean installation. This means that any issues related to the retained files may persist after clean installation.
This article has been archived and is no longer updated by Apple.

Symptom

A clean installation does not resolve a Classic (Mac OS 9) issue that you would normally expect it to resolve. This occurs specifically after having selected the "Use preferences from home folder" option in the Classic preference pane. If you are not familiar with this option, see technical document 107398, "**Mac OS X 10.2: About the Classic 'Use preferences from home folder" Feature**".

Note: If you have not used the "Use preferences from home folder" feature, then this document does not apply to you.

Solution

A clean installation does not affect files copied to a user's home directory by the "Use preferences from home folder" feature. Rather, the clean installation only affects the Mac OS 9 System Folder. This means issues caused by files in the home directory will persist so long as the "Use preferences from home folder" is selected. You may troubleshoot the issue by following these steps:

1. Open System Preferences, and choose View > Classic.
2. Click the Start/Stop tab, and look for bold text that says Classic is "running" or "not running."
3. You want to be sure Classic is not running. If it is running, click the Stop button.
4. Click your desktop.
5. Choose File > New Folder.
6. Give the new folder a name such as "Previous Mac OS 9 Items".
7. Choose Go > Home.
8. Open your Library folder, then open the Classic folder that is inside it. (Your current path is: ~/Library/Classic/).
9. Move all the contents of this Classic folder into the folder you named in Step 6.
10. Go back to System Preferences and click the Start button to start Classic. A dialog asks if you want to populate the folder you just emptied with files from the Mac OS 9 System Folder.
11. Click OK. Items are copied from the cleanly installed System Folder, and folders reappear at ~/Library/Classic/.
12. Once Classic starts, check to see whether the issue persists. If it does, you may have an application-specific issue, and you need to reinstall the application.

If you wish to restore items removed in Step 9, you should do so a few at a time, to isolate the issue. In general, you should not replace "clean" system software items with prior ones. For example, do not replace the newly-copied Chooser with the Chooser from your "Previous Mac OS 9 items" folder.

Once the issue is resolved and all desired items are restored from the "Previous Mac OS 9 items" folder, the "Previous Mac OS 9 items" folder can be deleted.
Published Date: Oct 7, 2016

Mac OS X: About the Classic "Use Preferences From Home Folder" Feature

The Classic environment of Mac OS X 10.2 or later offers a customized experience, similar to Multiple Users in Mac OS 9. This means, for example, that each user in Classic could have their own Favorites in a Classic application.
This article has been archived and is no longer updated by Apple.
In the Advanced tab of the Classic preference pane, you can select the "Use preferences from home folder" option. When selected, several types of Classic-related preferences and items are stored in each Classic user's home directory. A major advantage of this is that each Mac OS X user can have customized Classic settings, such as:

- Control panel settings
- Favorites
- Application preferences (such as Web browser bookmarks)

The first time Classic starts after this option is selected, you are asked:

> "Would you like the contents of these folders copied from your Classic system folder?"

This is asking if you want to copy Preferences (and other folders) from the Mac OS 9 System Folder to your home directory. The process of copying may require a few minutes, and there is no indication of progress. Classic will continue to start when this is finished.

For a more detailed explanation of this feature, including how it relates to Mac OS X Server, see technical document 107184, "**Mac OS X 10.2: About Multiple Users Features in Classic**".
Published Date: Oct 7, 2016

Mac OS X Mail: How to Turn On or Off HTML Rendering

This document explains how to enable or disable HTML rendering of images or embedded objects in Mail (a spam prevention technique).
This article has been archived and is no longer updated by Apple.
Note: This document discusses Mail, an application included with Mac OS X. The same concepts apply to other email applications you may use, though the steps may differ.

Follow these steps to turn on or off HTML rendering, as desired:

1. Open Mail.
2. Choose Mail > Preferences.
3. Click the Viewing icon in the Preferences window.
4. Select or deselect (as desired) the checkbox for "Display images and embedded objects in HTML messages".

For more related information, including how HTML email messages relate to spam, see technical documents:

107399: "**Mac OS X Mail: How to Delete Multiple Messages Without Viewing Them First**"
107401: "**Mac OS X Mail: How HTML Email Messages Relate to Unsolicited Commercial Email**"
Published Date: Feb 17, 2012

Mac OS X Mail: How HTML Email Messages Relate to Unsolicited Commercial Email ("spam")

Rendering an HTML email message may verify your email identity to a legitimate or illegitimate sender, such as a sender of unsolicited commercial email (a "spammer").
This article has been archived and is no longer updated by Apple.
Note: This document discusses Mail, an application included with Mac OS X. The same concepts apply to other email applications you may use.

Background concepts

The pages you view in a Web browser are most often written at least in part in hypertext markup language (HTML). On an HTML Web page, you most often see two types of content placed by the page author: text and images.

The text is actually contained in the HTML, but the images are not. Rather, the page author places a text link that loads the image file from a different location. Your Web browser loads the text portion first, then subsequently sends a request for the images, which are loaded afterwards.

Because modern email applications can receive HTML-formatted email messages, you should be aware that your email application sends the same type of outgoing requests for images that are made by your Web browser. This feature is often referred to generically as "HTML rendering". In Mail Preferences, this option is labeled "Display images and embedded objects in HTML messages".

How viewing HTML messages relates to spam

There are both advantages and disadvantages to having HTML rendering turned on in Mail or any other email client application. You should consider these when evaluating your personal preferences. The advantage is that you will be able to see HTML-formatted email as the sender intended. When this is from someone you know or another legitimate source, this is aesthetically desirable and provides a better user experience.

However, spammers can use HTML mail to easily verify that your email address is valid, which is a disadvantage. This is often done by embedding your email address in the HTML links (particularly for graphics). When your mail application connects to the Internet to load graphics from the spammer's Web site, the spammer can log your address as "known good." Here is an example of how your email address may be embedded in a link:

> http://example.com/bizarre-x-html/yourname=apple.com/spamsite.html

In this example, a spammer working for example.com is attempting to verify the address "yourname@apple.com". This is one common example of the syntax used, and many other variations are possible.

Since spammers often start with randomly generated email addresses, verification of your address means that you may receive even more spam after knowingly or unknowingly loading such links. If you use the Mail spam filtering feature, this may not be of great concern to you.

However, if you prefer to tightly control your email address, turning off HTML rendering can be a good idea. If the HTML is not rendered, then no request is sent to the spammer when viewing the mail.

A middle ground solution is to leave rendering on but not use the preview pane, because the outgoing request that transmits your email address to the spammer is not sent until you view the message. Thus with the preview pane off, you may delete the message without verifying your address to the spammer. In this manner, you can still enjoy HTML rendering in messages from legitimate sources.

If you choose to turn off HTML rendering, beware that clicking any link in the unrendered message may compromise your identity. When viewing a spam message, do not click on any link that contains any portion of your email address. If the link appears to include encrypted data (looks like random characters), this could also be your email user name.

To learn more (including how to turn off the preview pane), see these technical documents:

107399: "**Mac OS X Mail: How to Delete Multiple Messages Without Viewing Them First**"
107400: "**Mac OS X Mail: How to Turn On or Off HTML Rendering**"
Published Date: Oct 7, 2016

Mac OS X: How to Find Background Applications

This document discusses how to find background applications, those that do not appear in the Dock or Force Quit dialog. These applications are also known as "processes" or "daemons."
This article has been archived and is no longer updated by Apple.
A background application is one that runs without appearing in the Dock or Force Quit window. It can sometimes be useful to look for a specific background application when troubleshooting. Follow these steps:

1. Open the Activity Monitor (/Applications/Utilities/).

   Tip: Before Mac OS X 10.3, this utility was named Process Viewer.

2. Choose All Processes from the Show pop-up menu.
3. Locate the background application (by name or percentage of time being used).

For Activity Monitor, the process' identification number (PID) appears in the main window. If you need the PID when using Process Viewer, follow these steps:

1. Select the process from the listing.
2. Click the disclosure triangle labeled More Info, which is near the bottom of the window.
3. Click the Process ID tab.

Process ID appears in the first line. It should be a whole number that is positive.

Note: Do not confuse the "parent process id" or "process group id", which are different numbers.

The PID is necessary for the terminal commands sample and kill, among others.
Published Date: Feb 17, 2012

Mac OS X 10.2: Internet Sharing Off After a Computer Restart

Internet Sharing is turned off (stopped) when the computer shuts down or restarts. You must start it each time the computer is restarted.
This article has been archived and is no longer updated by Apple.

Symptom

After restarting a computer that is sharing its Internet connection, its clients are no longer able to connect to the Internet. If you go to the Sharing preference pane, you see "Internet Sharing Off."

Solution

You must manually start Internet Sharing after a restart.

This document will be updated when more information becomes available.
Published Date: Feb 17, 2012

Mac OS X 10.2: Sherlock Yellow Pages Search Fails

When using the Sherlock Yellow Pages channel, a search fails if you do not search with both a city and a state.
This article has been archived and is no longer updated by Apple.

Symptom

When searching with the Sherlock Yellow Pages channel, the message "- no items found -" appears in the search results window.

Solution

Be sure to include both the city and state, or the zip code, in the "City & State or Zip" search field. The issue occurs only when a city without a state is entered in this field.

If the issue persists, verify the spelling of the search terms that you are using.
Published Date: Feb 17, 2012

Mac OS X Server 10.2: Server Monitor Indicates Journaled RAID Volume Is "Degraded"

Server Monitor may erroneously indicate that a RAID volume is "degraded" when the volume is being journaled.
This article has been archived and is no longer updated by Apple.

Symptom

When checking drives in Server Monitor, a drive's status is reported as "degraded."

Solution

If you see the "degraded" status, you should use Disk Utility to verify whether the RAID has any actual issues. If Disk Utility reports that there are no issues, you may safely ignore the "degraded" status.
Published Date: Oct 7, 2016

Mac OS X: Interruption of Server Connection Can Cause Computer to Stop Responding

If connectivity to a Windows (SMB), NFS, or WebDAV shared volume is interrupted, the computer may stop responding ("hang" or "freeze") under certain circumstances.
This article has been archived and is no longer updated by Apple.

Symptom

Following the interruption of the connection:

- A spinning cursor may appear.
- New applications may not open.
- The Finder becomes unresponsive.

For example, this occurs when connected to a shared volume and the:

- IP address or Network Location of the computer is changed, or
- Computer is put sleep and then wakes when or where the server is unavailable, or
- The server is shut down, or the server's IP address is changed.

Note: Changing the Network Location may refer to two different actions. First, it may refer to using the Location menu to switch between locations in the Network preference pane. Second, it may refer to putting a portable computer to sleep while still connected to the server, carrying it to a different physical location, and then waking the computer where the server cannot be reached. An example of the latter would be connecting an iBook to a server at work, putting the iBook to sleep without first disconnecting it from the server, then waking the iBook at home.

Solution

To resolve the issue, you may have to force restart your computer using the power or interrupt button.

Avoid the issue in the future by ejecting any shared volumes before taking the actions described above.

If you accidentally trigger this issue, restoring connectivity to the server might eliminate the need for a forced restart.
Published Date: Feb 20, 2012

Mac OS X: Setting Up AOL Is Different From Other Internet Service Providers

America Online dial-up service connects in a proprietary manner that is different from other Internet service providers, so you should not try to set it up as a normal PPP connection.

Note: This document applies to Mac OS X 10.2.8 or earlier.

This article has been archived and is no longer updated by Apple.
Most dial-up Internet service providers use the point to point (PPP) protocol. Dial-up connections to America Online use a different, proprietary protocol. For this reason, dial-up AOL customers should configure the AOL software to dial the modem directly (without using the normal Mac OS X preference panes, assistants, or utilities).

You should **not** type the AOL phone number, AOL user name, or AOL password information in any of these locations:

- Mac OS X Setup Assistant
- Network preference pane
- Internet Connect

If you use AOL over a wireless or broadband connection, then you should configure the above parts of Mac OS X as directed by your network administrator or Internet service provider.

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Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Feb 17, 2012

Apple Remote Desktop: Managed Clients Become Unavailable

When managed clients are restricted to opening specific applications, Apple Remote Desktop clients become unavailable.
This article has been archived and is no longer updated by Apple.

Symptom

When managed Mac OS X clients are restricted to opening specific applications, Apple Remote Desktop clients become unavailable.

Solution

In certain scenarios when managing application access via Workgroup Manager, the process ARD Helper (/System/Library/CoreServices) may not be running. This can cause Remote Desktop clients to become unavailable. If this occurs, log out and then log back in to automatically relaunch the ARD Helper process.

Removing restrictions on applications in Workgroup Manager will resolve this.

If removing restrictions on applications is not preferred, allowing unbundled applications to launch is an alternative solution. For more information on allowing unbundled applications to launch, see technical document 107659, "**Workgroup Manager: How to Allow Use of Unbundled Applications**".

Published Date: Oct 7, 2016

Mac OS: Classic or Mac OS 9 issues after installing HP ScanJet 3.0.1 update

After installing the Hewlett Packard ScanJet 3.0.1 Update, Mac OS 9 may have startup issues, or the Classic environment of Mac OS X may not start.

This article has been archived and is no longer updated by Apple.

After installing the HP ScanJet 3.0.1 Update:

- A computer with Mac OS 9 as the startup system folder has startup issues and may stop responding.
- The Classic environment of Mac OS X will not start.

Make sure CarbonLib 1.4 or later is installed in the Extensions folder of the affected Mac OS 9 System Folder.

For more information, see HP customer support document 15336 .

If the issue persists, reinstall the earlier HP ScanJet Manager 1.4 extension. Consult documentation that came with the software for installation instructions.

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Published Date: Feb 19, 2012

Mac OS X 10.2 or Later: Cannot Copy to FTP Servers in the Finder

You can use the Connect To Server command to connect to an FTP server in the Finder, but you will have read-only access. You cannot copy, or upload, to an FTP volume in the Finder.

This article has been archived and is no longer updated by Apple.

File Transfer Protocol (FTP) server volumes available in the Finder have read-only access, even when the FTP server is set to allow you write access.

If you want to copy files from a Mac OS X computer to an FTP server, you need to use an application other than the Finder.

You can use the Terminal utility or a third-party FTP utility such as:

- Interarchy, by Stairways Software (http://interarchy.com/)
- Fetch, by Fetch Softworks (http://fetchsoftworks.com/)
- Transmit, by Panic, Inc. (http://www.panic.com/transmit/)

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Published Date: Oct 7, 2016

Mac OS X: Format of DVD-R discs burned in the Finder

This article has been archived and is no longer updated by Apple.

Learn about the file format of DVD-R discs burned in the Finder.

With Mac OS X 10.2.8 or earlier, DVD-R discs burned in the Finder are Mac OS Extended format (HFS Plus). With Mac OS X 10.3 or later, they are a HFS Plus/ISO 9660 hybrid format, which can be read by most computer systems, including Microsoft Windows. The disc contains these filesystems: HFS+, ISO-9660 with Rock Ridge, and Joliet with Rock Ridge.

This does not apply to DVD-R discs burned in iDVD or DVD Studio Pro.

Related documents

mh1120 Mac OS X 10.4 Help: Creating a CD formatted for MS-DOS (Windows)

Published Date: Feb 17, 2012

Mac OS X: Unexpectedly Starts Up to Login Window

This document explains what to do if the computer unexpectedly starts up to the Login Window instead of to the desktop. The Login Window displays either a list of user names, or name and password entry fields. It also has buttons named Restart and Shutdown.
This article has been archived and is no longer updated by Apple.

Symptom

The computer starts up to the Login Window instead of to the desktop of the Finder.

Solution

The Login Window appears at startup when the option to log in automatically has been deselected. Depending on which version of Mac OS X you are using, this option is found in either the Login or Accounts preference pane. This normally happens when you create a second user for the computer.

To log in, you will either select your user name from a list, or you will have to type your user name (depending on which is set in System Preferences). After selecting or typing your user name, enter your password, then click the Log In button.

If you have forgotten your password, see technical document 106156, "**Mac OS X: How to Change or Reset a User's Password**" .

To make your computer always log in as a specific user, see technical document 106164, "**Mac OS X: How to Log in Automatically at Startup**".
Published Date: Feb 17, 2012

Mac OS X: Speech Recognition - computer does not respond to spoken commands

This article has been archived and is no longer updated by Apple.

These are some tips you can use if the computer does not respond to spoken commands (Speech Recognition).

1. **Check your microphone**
Be sure that your microphone works, either with the Sound preference pane or an application capable of recording audio (such as iMovie).

2. **How are you speaking?**
Make sure you say commands in a calm voice that is not too soft or too loud. Watch the meter in the feedback window. If it shows only blue, you are too quiet. If it is red, you are too loud. When you say the command, do not shout or hesitate.

3. **Check your environment**
Avoid background noise. If you use Speech Recognition in a noisy environment, you may need to purchase a special microphone.

If background noise is unpredictable, try pressing the listening key 1/2 second before saying a command.

If you move your computer to a new environment, press the listening key 5 to 8 seconds before saying a command. You may need to adapt Speech Recognition to your environment again. If you use continuous listening while working in a noisy environment or having a conversation, Speech Recognition may become slow or less accurate. If this happens, turn off continuous listening.

4. **Check the listening name**
If you use continuous listening and the listening name is not configured as optional, make sure that the listening name is not blank. This setting may be found in the Speech preference's Listening tab. Alternatively, set Name Is: to "Optional before commands".

5. **Mac OS X 10.4 or later only: Check for (null) Address Book entries.**
Any contacts named "(null)" could lead to this issue. See this article for more information.

Some of this information may also be found in Mac Help, which is accessible from the Help menu on your computer. Speech Recognition does not work on all computers. See technical document 88229, "**Mac OS X: Speech Recognition Does Not Work on Some Computers**".

Published Date: Feb 20, 2012

Mac OS X: Stickies Notes Off Screen After Changing Resolution

In some cases, after changing display resolution, notes in the Stickies application may be positioned so that the title bar is off screen.
This article has been archived and is no longer updated by Apple.

Symptom

You cannot drag a Stickies note after changing display resolution because its title bar is off screen.

Solution

1. Click the Stickies icon in the Dock.
2. Choose Window > "Arrange in Front".

Published Date: Feb 17, 2012

Mac OS X 10.2: Unable to Unlock (Authenticate) a System Preferences Pane

On rare occasions, System Preference panes appear locked and do not respond to attempts to unlock (authenticate).
This article has been archived and is no longer updated by Apple.

Symptom

System Preference panes such as Energy Saver or Date & Time appear with the locked icon and do not accepts changes, even from an Admin user. Clicking on the lock button does not open an authentication dialog as expected.

Solution

Quit and reopen the System Preferences application. Be sure that you are actually quitting the application, and not just closing the window.

Follow these steps:

1. Click the System Preferences icon in the dock.
2. Choose System Preferences > Quit System Preferences (or simply press Command-Q).
3. Reopen System Preferences by choosing Apple menu > System Preferences.

Published Date: Feb 17, 2012

Mac OS X Server: Web Server Does Not Resolve Aliases

The web server in Mac OS X and Mac OS X Server will not resolve alias files created in the Finder.
This article has been archived and is no longer updated by Apple.

Symptom

When clients try to view a web page on your server with a URL that specifies a file, or contains a directory name, that corresponds to an alias file on your server, the page will not load.

Solution

Use a symlink instead of an alias. A symlink is similar to an alias and will be resolved to the original file or directory by both the Finder and the web server. You can create a symlink in the Terminal by using the command:

```
ln -s original_filename link_name
```

For more information, refer to the man page for the ln command by using the command:

```
man ln
```

Published Date: Feb 17, 2012

Mac OS X: Mail - How to Remove Unused SMTP Servers

This document explains how to remove unused SMTP servers from Mail when using Mac OS X version 10.2.8 or earlier.
This article has been archived and is no longer updated by Apple.
Follow these steps:

1. From the **Go** menu, choose **Go to Folder**.
2. Type: `/Library/Scripts/Mail Scripts`
3. Click Go.
4. Locate the file "Manage SMTP Servers.scpt" that is in this folder, and open it. The Script Editor opens.
5. Click the Run button.
6. Once the script locates SMTP servers that are unused, a dialog box appears that says:

   "Choose one or more SMTP servers to delete. None of these servers are being used by your POP or IMAP accounts."

7. Select the server(s) to remove, and click OK.
8. Quit Script Editor.

Note: If no unused SMTP servers are found, a different message appears:

"All the SMTP servers you have defined are being used by active accounts."
Published Date: Feb 17, 2012

AirPort Extreme Base Station: Some Third-Party Cards Cannot Connect

Some third-party 802.11b wireless cards do not connect to the base station when it is in Compatibility mode. The 802.11b Only mode allows you to work around the issue until you can update the affected card's drivers and/or firmware to join a the base station in Compatibility mode.
This article has been archived and is no longer updated by Apple.

Symptom

Some users cannot connect to the AirPort Extreme Base Station. The affected users have third-party wireless devices, and the base station is in Compatibility mode.

Note: "802.11b Compatible," or "Compatibility," mode is one that allows both 802.11b and 802.11g clients (such as AirPort and AirPort Extreme) to join the base station at the same time.

Solution

Any WiFi certified 802.11b wireless card should be able to connect to the AirPort Extreme Base Station when it is in Compatibility mode. Cards that are 802.11b compliant but not WiFi certified may or may not be able to connect when the base station is in Compatibility mode. But any 802.11b compliant wireless card should connect when the base station is in 802.11b Only mode. For best results, be sure that both AirPort and third-party software is up to date.

First, be sure that your AirPort software is version 3.1 or later. You may use the Software Update pane of System Preferences to update software on your Macintosh. After that, connect to the base station using AirPort Admin Utility. You will be prompted to update the base station. If you administer from a Microsoft Windows computer, you may download the latest base station firmware separately from Apple Software Downloads (http://www.apple.com/swupdates/), then use the AirPort Admin Utility for Windows to upload the firmware.

Second, be sure that you have the latest firmware and drivers for the affected third-party card. Updating them may resolve the issue for you. Check the website of your card's manufacturer to be sure that you have the most recent drivers and firmware installed.

If the issue persists, or if you cannot update immediately, you may follow these steps as a workaround:

1. Connect to the base station using AirPort Admin Utility.
2. Click the Show All Settings button.
3. Click the AirPort tab.
4. Set the Mode pop-up menu to 802.11b Only.
5. Update the base station.

You should now be able to associate the affected 802.11b card with the base station, which may allow you to download needed third-party software updates to that computer. If you update card software or firmware, you should set the base station back to 802.11b Compatible mode to see if your issue is resolved.

If you cannot connect to the base station in 802.11b Only mode, or if you already have the latest software/firmware and cannot connect to the base station in Compatibility mode, then you may contact the card manufacturer to ask if they have done testing with 802.11g access points.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 7, 2016

AirPort Extreme Base Station: Dr. Bott Antenna Not Recognized, Does Not Work After Installation

After installing an Apple-certified external antenna for the AirPort Extreme Base Station, you will need to turn off the base station before the external antenna will work.

This article has been archived and is no longer updated by Apple.

Symptom

- Your Dr. Bott antenna is not recognized or working.
- Information in AirPort Admin Utility is not accurate.

Solution

Follow these steps:

1. Quit AirPort Admin Utility (if it is open).
2. Disconnect the base station power supply.
3. Disconnect then antenna from the base station, then reconnect it. This is to ensure that it is inserted completely.
4. Reconnect the base station power supply.
5. Open AirPort Admin Utility and connect to the base station.

Published Date: Feb 19, 2012

AirPort Extreme Base Station: Power Supply Compatibility

This document explains power supply compatibility for the AirPort Extreme Base Station.
This article has been archived and is no longer updated by Apple.
The AirPort Extreme Base Station may not be used with power supplies from the earlier AirPort Base Station (Dual Ethernet) or AirPort Base Station (Graphite).

The earlier AirPort Base Station (Dual Ethernet) or AirPort Base Station (Graphite) may not use the power supply from the AirPort Extreme Base Station.
Published Date: Oct 7, 2016

AirPort Extreme, AirPort Express: Can‘t use USB printer utilities while printer sharing

You can use USB printer utilities when the printer is directly connected to a computer, not when the printer is connected to the USB port on the AirPort Extreme Base Station or AirPort Express.
This article has been archived and is no longer updated by Apple.
Tip: The Mac OS X Installer includes several third-party USB printer utilities. You can read about them here.

Base station printer sharing works with:

- AirPort Extreme Base Station
- AirPort Express
- Mac OS X 10.2.3 or later (AirPort Extreme)
- Mac OS X 10.2.7 or later (AirPort Express)
  Note: We encourage the Mac OS X 10.2.8 Update for all 10.2 users. The versions listed here are simply the minimum required.

When you need to use a USB printer utility, you should temporarily connect the printer to a USB port on a Mac OS X computer.

Published Date: Oct 7, 2016

AirPort Extreme Base Station: Some USB Printer Status Messages Not Available

When a printer is connected to the USB port on the AirPort Extreme Base Station, some types of printer status messages are not available.
This article has been archived and is no longer updated by Apple.

Symptom

When your printer is directly connected to a computer, it may offer status messages such as:

- out of paper
- out of ink
- printer busy

Status messages such as these may not appear when the printer is connected via USB to the AirPort Extreme Base Station.

Solution

Check for indicator lights on the printer itself that may convey the same meaning as the alert messages. If necessary for troubleshooting, temporarily connect the printer directly to your computer.
Published Date: Oct 7, 2016

Software you need to administer the AirPort Extreme Base Station

Wondering what software you need to administer your AirPort Extreme Base Stations? Look no further.
This article has been archived and is no longer updated by Apple.
The AirPort Extreme Base Station requires the versions of the Airport Admin Utility application that come with the AirPort 3.0 software package. This software is on the CD that comes with each AirPort Extreme Base Station.

AirPort 3.0 software can be used to administer all versions of AirPort and AirPort Extreme Base Stations, including AirPort Base Station (Graphite), AirPort Base Station (Dual Ethernet), and AirPort Extreme Base Station.

There are two installers for the AirPort 3.0 software on the CD. One installer is for use with Mac OS X 10.1.5 and the other for Mac OS X 10.2. The first installer contains Airport Admin Utility 2.0.7 and the second contains AirPort Admin Utility 3.0.1.

When working from Mac OS X 10.1.5 to administer an AirPort Extreme Base Station, you must have AirPort Admin Utility 2.0.7. When working from Mac OS X 10.2, you must have AirPort Admin Utility 3.0.1 or later.

Even though some versions of the AirPort Admin Utility are later than 2.0.7, they will not be able to administer the AirPort Extreme Base Station. For example, you can not use the AirPort Admin Utility 2.1 or 2.1.1 (available with some versions of the Mac OS X 10.2) to administer the AirPort Extreme Base Station.

Notes

1. AirPort client computers do not require 3.0 software and can use earlier versions to join the AirPort Extreme Base Station (including versions of Mac OS 9).
2. Some AirPort Extreme Base Station features are only available when using a client computer with an AirPort Extreme Card.
3. If you have AirPort Admin Utility version 2.0.6, see AirPort 3.0 Software: About the Two Versions of the AirPort Admin Utility.

Published Date: Oct 7, 2016

Mac OS X: Starts Up to Window With Two Buttons, Restart and Shut Down

This document explains what to do if the computer unexpectedly starts up to the Login Window instead of to the desktop. The Login Window displays either a list of user names, or name and password entry fields. It also has buttons named Restart and Shutdown.
This article has been archived and is no longer updated by Apple.
The window you see is known as the Login Window.

See technical document 107419, "**Mac OS X: Unexpectedly Starts Up to Login Window**".

Published Date: Feb 17, 2012

AirPort 3.0 and later: Configuration applications don‘t accept high ASCII characters

This article has been archived and is no longer updated by Apple.

The AirPort Setup Assistant and other configuration applications do not accept high ASCII characters. If you try to enter a network or base station password that contains high ASCII characters, the AirPort Setup Assistant will not accept them.

High ASCII characters include the following:

Solution

Use any of the following characters to set passwords for your AirPort base stations:

```
a b c d e f g h i j k l m n o p q r s t u v w x y z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
0 1 2 3 4 5 6 7 8 9
! " # $ % & ' ( ) * + , - . / : ; < = > ? @ [ \\ ] ^ _ ` { | } ~
```

For more information about ASCII and High ASCII, refer to http://en.wikipedia.org/wiki/ASCII.

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Published Date: Feb 17, 2012

AirPort 3.0 Software: About the Two Versions of the AirPort Admin Utility

This document explains the differences in the two versions of the AirPort Admin Utility that are part of the AirPort 3.0 software.
This article has been archived and is no longer updated by Apple.
AirPort 3.0 is the software group included on CD with the AirPort Extreme Base Station. This software group includes two versions of the AirPort Admin Utility, 2.0.7 and 3.0.1.

Note: A limited number of CDs include version 2.0.6 instead of 2.0.7. Any statement below that applies to version 2.0.7 also applies to 2.0.6. The two versions are functionally the same, and you do not need to update from 2.0.6 to 2.0.7.

About versions 2.0.7 and 3.0.1

AirPort Admin Utility 2.0.7 is for use with Mac OS X 10.1.5, and AirPort Admin Utility 3.0.1 is for use with Mac OS X 10.2 or later. AirPort Admin Utility 2.0.7 contains virtually the same feature set as AirPort Admin Utility 3.0.1, with exception of these differences:

In AirPort Admin Utility 3.0.1, there is a toolbar button to perform operations (upload software and/or saved configurations) to multiple computers. That button is not presented to Mac OS X 10.1.5 users in AirPort Admin Utility 2.0.7.

Figure 1 Configuring Multiple Base Stations

In AirPort Admin Utility 3.0.1, you can quickly add the admin-connected computer to the access control list by clicking the "This computer" button in the Access control panel. This button is unavailable in AirPort Admin Utility 2.0.7.

Figure 2 Add the Configuring Computer to the Access Control Panel
Published Date: Oct 7, 2016

Apple Remote Desktop 1.2: "Purple Screen" After Sharing Your Screen With Mac OS X 10.1 Computers

After you stop sharing your screen with a Mac OS X 10.1 client computer that is using the Classic environment, your computer may have a redraw issue, which is often described as a purple screen over the desktop.
This article has been archived and is no longer updated by Apple.

Symptom

When you share your screen with a client computer that is using Classic and then stop sharing, your display has a redraw issue, most commonly described as a purple screen over the desktop.

Solution

This issue is cosmetic. Restart the computer to resolve it.
Published Date: Oct 11, 2016

Mac OS X 10.2, 10.3, 10.4: Address Book - How to Locate and Use the "Map Of" Feature

In Mac OS X 10.2 and later, Address Book includes a "Map Of" feature for locating an address on a card.
This article has been archived and is no longer updated by Apple.
To use the "Map Of" feature, you must be connected to the Internet. Additionally, a given card must have at least one valid address and country entered. If necessary, click the Edit button to add one to the selected card before using the "Map Of" feature.

To see a map of a valid address, simply click the label (such as "Home" or "Work") that appears to the left of the address, as in Figure 1.

Figure 1 Accessing the "Map of" command

Note: The country field should be filled in in the vCard. Otherwise, the wrong map may appear. If the map shows the wrong country, you can either change the default country for all of your postal addresses in Address Book preferences, or you can edit the individual card to get a correct map:

1. Select a card that includes a postal address in a different country.
2. Choose Edit > Edit Card.
3. From the Home, Work, or Other pop-up menu, choose Change Address, then the desired country.
4. Repeat for other address fields if desired.

Published Date: Feb 17, 2012

Mac OS X 10.2.4 or Earlier: "Error 1016", Classic Fails to Start When Managing Applications

Classic fails to start if you choose to restrict the applications available to a user who does not have an Admin account.
This article has been archived and is no longer updated by Apple.

Symptom

Classic fails to start, and you see the alert message:

> "Classic Startup Failure - Classic Startup failed to start due to an error [1016]."

Note: If the affected client is managed via the Workgroup Manager feature of Mac OS X Server, see technical document 107450, "**Workgroup Manager: Managed Client Cannot Start Classic**".

Solution

Update to Mac OS X 10.2.5 or later.

This occurs when application access is being restricted via the Accounts preference pane Capabilities feature (Figure 1)

Figure 1 The Accounts preference pane Capabilities sheet

Published Date: Oct 7, 2016

Mac OS X 10.2: Contents of Shared Folder Missing After Archive and Install

This document explains how you to recover items that were stored in the Shared folder (/Users/Shared) prior to an Archive and Install.
This article has been archived and is no longer updated by Apple.

Symptom

After an Archive and Install, the Shared folder is empty.

Note: This refers to the folder /Users/Shared, not to the "shared" folders of individual users, which are named Public and Sites.

Solution

1. Close any open Finder windows.
2. Click the Finder icon in the Dock.
3. Choose Go > Computer.
4. Locate this folder:

   /Previous Systems/Previous System n/Users/Shared

   Note: In the actual path, "n" will be a number, such as "1". If more than one Previous System is present, the one with the highest number is the one you most recently replaced via Archive and Install.

5. Choose File > New Finder Window.
6. In the new window, go to the folder: /Users/Shared .
7. Select all the items in the first finder window (Shared from the previous system).
8. Drag the selected items to Shared folder in the second Finder window (Shared from the current system).

Related documents

107120: "**Mac OS X 10.2: About the Archive and Install Feature**"
107297: "**Mac OS X 10.2: How to Restore a Home Directory After Using Archive and Install**"
Published Date: Oct 7, 2016

Mac OS X 10.2 Managed Client: Cannot Start Classic

Managed Mac OS X clients cannot use Classic when applications are managed.
This article has been archived and is no longer updated by Apple.

Symptom

Managed Mac OS X clients cannot use Classic when access to Applications are managed. This is configured in Workgroup Manager.

When Classic is configured to start at login, it will appear in the Dock and then disappear. When Classic is started from System Preferences, an "error 1016" message appears.

Note: For affected computers that are not managed via Workgroup Manager, see technical document 107442, "**Mac OS X 10.2: 'Error 1016', Classic Fails to Start When Managing Applications**".

Solution

This issue is resolved by updating client computers to Mac OS X 10.2.5.
Published Date: Oct 7, 2016

Apple Remote Desktop 1.2: Read Me

Read the following before you install Apple Remote Desktop. It includes information about supported computers, system requirements, and known issues.
This article has been archived and is no longer updated by Apple.
This information is available in:

Français | Deutsch | Japanese

For more information about Apple Remote Desktop, visit this Apple Web site:

- http://www.apple.com/remotedesktop/

For information about support, training and certification programs, integration services, consulting, and enterprise support, see the Apple Professional Software Services and Support Guide included with Apple Remote Desktop.

Supported Computers

You can install this version of Apple Remote Desktop on any of the following computers.

Administration Computers

- eMac, iMac, iBook, Power Mac G3, Power Mac G4, or PowerBook G3, or PowerBook G4
- Mac OS X version 10.1 or later
- Ethernet (recommended), AirPort, or Airport Extreme network connection

Client Computers

- eMac, iMac, iBook, Power Mac G3, Power Mac G4, PowerBook G3, PowerBook G4, other PowerPC-based Macintosh, or Xserve
- Mac OS 8.1 through Mac OS 9.2, or Mac OS X version 10.1 or later
- Ethernet (recommended), AirPort, or Airport Extreme network connection

Additional Information

Compatibility with previous versions of ARD

The ARD version 1.2 admin will allow you to add ARD version 1.1 and version 1.0 clients to the computer list and will automatically assist you in upgrading ARD version 1.1 clients on Mac OS X.

Enabling Apple Remote Desktop On Mac OS X Client Computers

In the Remote Desktop System Preferences, select "Start Apple Remote Desktop client at System Startup". You must restart the client computer for the change to take effect.

Enabling Apple Remote Desktop On Mac OS 8 or 9 Client Computers

Please refer to the "Setting Up Apple Remote Desktop on Client Computers / Setting Access Privileges for Client Computers That Use Mac OS 8.1 Through 9.2" section of the Administrator's Guide (ARD Admin Guide.pdf).

Copy Performance

For optimal copy performance, the administrator and client computers should be on a wired network and in the same subnet.

Permissions

Before using Apple Remote Desktop to copy files from your administrator computer to a client computer that uses Mac OS X, set the permissions for the files you want to copy as you want them to be on the client.

NAT and Firewall Support

If you wish to use the Remote Desktop application from behind a NAT router, you will need to set UDP port forwarding for port 3283 to your

administration computer. If you wish to access a client computer that is behind a NAT router, you will need to set the router to forward UDP port 3283 to the client computer you wish to access. Note: You will be able to access only that client computer.

Other

When customizing the picture for the "lock" screen feature, you can now use any QuickTime still image format (.tiff, .jpg, .pict, etc.) as long as the main portion of the filename remains "Lock Screen Picture".

Known Issues

Administration Issues

To add computers from the network computers list, each one must have a unique computer name.

If an AirPort card or another network interface is enabled on your administration computer, the computer may be listed in the Setup Computers window. Do not add an administration computer to its own list. Management commands directed to the administrator's own computer will fail.

A Mac OS 9 system may be unresponsive during the execution of a Software Version Report.

Client Issues

In order to open a document on a Mac OS 9 Client, you should use the "Copy and Open" functionality instead of the "Open" functionality.

Computer Issues: Systems Using Mac OS X version 10.1.x

To enable the Request Attention menu on a client computer, each user must open RemoteDesktop.menu at least once. Then, a menu appears on the right side of the menu bar allowing the user to request attention. The RemoteDesktop.menu is located in /System/Library/CoreServices/Menu Extras/. You can use the "Go to Folder" command the Finder's Go menu to quickly locate the menu extra.

While controlling a remote computer some applications may enter a space when you use the delete key.

When you have made changes using the Remote Desktop preference pane, do not click the lock to prevent further changes. If you do, changes you made in the preference pane might not be saved.

Published Date: Oct 7, 2016

AirPort Extreme: Controlling the Range of Your Network

You may adjust the transmission range of an AirPort Extreme Base Station.
This article has been archived and is no longer updated by Apple.
You can limit the range of your AirPort Extreme network to control who has access to it. By shortening the range of the network, only computers closest to the base station can join the network.

To shorten the range of the network:

1. Open AirPort Admin Utility (/Applications/Utilities/).
2. Select your base station, and click Configure.
3. Click the Show All Settings button.
4. In the AirPort pane, use the Transmit Power slider (Figure 1) to set the network range.

Figure 1 Adjusting the Transmit Power slider

These settings correspond to 10, 33, 50, 75 and 100 percent of transmission power.
Published Date: Feb 19, 2012

AirPort Extreme, AirPort Express: How to tell if a USB printer is connected to the base station

You may use the AirPort Admin Utility to confirm whether a USB printer is recognized by an AirPort Express or AirPort Extreme Base Station.

This article has been archived and is no longer updated by Apple.

Notes:

1. Some Mac OS X-compatible printers don't work as base station printers. If yours doesn't seem to be working, try this troubleshooting.
2. USB printing to an AirPort base station requires Mac OS X 10.2.7 or later.

Checking for a printer

Use these steps to verify that the base station recognizes your printer:

1. Open AirPort Admin Utility (/Applications/Utilities/).
2. Select your base station from the list, then click Configure.
3. Choose **View > Summary**.

The printer appears at the bottom of the Show Summary window if it is connected and recognized, like this:

If the printer is not listed here, try disconnecting the cables and reconnecting. Close the summary window, and repeat the steps above so that AirPort Admin Utility updates its listing.

Published Date: Feb 17, 2012

AirPort Extreme: Sharing a printer from the base station‘s USB port

Want to share a printer among your AirPort-enabled computers? No problem! Connect it to the USB port on the AirPort Extreme Base Station.

This article has been archived and is no longer updated by Apple.

Notes

1. Some Mac OS X-compatible printers don't work as base station printers. If yours doesn't seem to be working, try this troubleshooting.
2. USB printing with an AirPort Extreme Base Station requires Mac OS X 10.2.3 or later.
3. Mac OS X Bonjour (formerly "Rendezvous") technology is used to share the printer over your network. In the event that a compatible printer is not available to you using the steps below, remember to troubleshoot factors such as network configuration and firewalls that may affect Bonjour.

Follow these steps to print:

1. Open Print Center (Applications/Utilities/).
2. Click Add.
3. Choose Bonjour from the upper pop-up menu. If a compatible USB printer is recognized by the AirPort Extreme Base Station, it appears in the printer list.
4. Select the printer you want to use.
   Note: Be aware that the same printer may appear twice, under two different names. This may be the normal result of having connected the USB printer directly to your computer, then later connecting it directly to the base station, as shown below.

   If this happens and you do not know which is correct, choose Show Info from the Printers menu. As shown below, the Location field shows the printer is connected to a base station named "Boquillas". As in this example, check for the name of your base station here.

5. Click Add.

Published Date: Feb 17, 2012

AirPort Extreme Base Station: Meaning of Indicator Lights (LEDs)

Use the chart in this document to determine the meaning of the indicator lights on the AirPort Extreme Base Station.
This article has been archived and is no longer updated by Apple.
The light emitting diodes (LEDs) on the AirPort Extreme Base Station provide status information through a series of blinking patterns. The AirPort Extreme Base Station uses white LEDs that do not change colors.

Published Date: Oct 7, 2016

AirPort Extreme: WAN Privacy Access Not Required to Print via USB

WAN privacy access is not required to use USB printing on the AirPort Extreme Base Station.
This article has been archived and is no longer updated by Apple.
Some AirPort Extreme documentation erroneously states that you must "Enable Remote Printer Access" in the WAN Privacy dialog of the AirPort Admin Utility.

That action is not required.

For more information on setting up USB printing using AirPort Extreme Base Stations, see technical document 107456, "**AirPort Extreme: How to Print via USB**".
Published Date: Oct 7, 2016

AirPort 3.0 for Mac OS 10.1.5: Install Networking Update Before Installing AirPort Software

Prior to installing the AirPort 3.0 software group on a computer with Mac OS X 10.1.5, first install the Networking Update. AirPort 3.0 software is found on the CD included with AirPort Extreme, for example.
This article has been archived and is no longer updated by Apple.
Before installing AirPort 3.0 on to computers using Mac OS X 10.1.5, be sure that you have first installed the Networking Update.

To download the Networking Update, see software download document 120124, "**Networking Update 1.0 for Mac OS X : Information and Download**".

The Software Update preference pane will present you with updates you need, in the correct order. To learn more about this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".
Published Date: Oct 7, 2016

Apple Remote Desktop 1.2: How to Add or Remove the Menu Bar Item

You can remove the Apple Remote Desktop menu bar item, or re-add it later, by following the steps below.

Note: The menu bar item is represented by an exclamation point and contains the Request Attention command.
This article has been archived and is no longer updated by Apple.
To remove the Apple Remote Desktop menu bar item:

- While pressing the Command key, click and drag the Apple Remote Desktop icon below the menu bar, then release the mouse button.

To add the Apple Remote Desktop menu bar item:

- Double-click the file named: "RemoteDestkop.menu".

The file is located in this folder:

/System/Library/CoreServices/Menu Extras

Note: If you wish to remove the menu bar item permanently, you may delete this file.
Published Date: Oct 7, 2016

Mac OS X 10.2: "Volumes" Window Opens After Using "Connect to Server" Command in Finder

After connecting to a server, the contents of your computer's Volumes folder may unexpectedly appear in the Finder.
This article has been archived and is no longer updated by Apple.

Symptom

A Volumes folder opens in the Finder after you connect to any remote volume.

Note: The folder displays the contents of the directory /Volumes/ on your computer, not that of the remote computer. The directory /Volumes/ is normally invisible in the Finder.

Solution

Update to Mac OS X 10.2.4 or later. See technical document 106704, "**Mac OS X: How to Update Your Software**".

Additional information

The Volumes folder appears whenever the URL for the server contains a trailing solidus (forward slash), such as in these two examples:

afp://server/
smb://server/share/

On affected versions of Mac OS X, you may avoid this issue by omitting the trailing solidus, such as:

afp://server
smb://server/share

In addition to URLs that you manually enter, computer names that appear automatically via Rendezvous, AppleTalk, or SLP may be affected when the discovery protocol publishes a URL that includes the trailing solidus.
Published Date: Feb 17, 2012

Workgroup Manager: Files Copied With Windows Service (SMB) Do Not Inherit Privileges as Expected

To avoid unexpected behavior that results from the failure of SMB permissions inheritance, do not select "Inherit permissions from Parent" from the Windows File Setting options.

This article has been archived and is no longer updated by Apple.

Symptom

In Workgroup Manager if you select the "Inherit permissions from Parent" options in Windows File Settings, the permissions are not inherited from the enclosing share point as implied. For example:

- A client may be able to open a file or folder that you believe you have restricted.
- A client may not be able to open a file or folder that you believe you have made available.

Solution

The "Inherit permissions from Parent" feature does not work. You should not select the "Inherit permissions from parent" option.

As a workaround, select the "Assign as follows" option instead. Using the Owner, Group, and Everyone pop-up menus, set the desired privileges for files to be copied to or from a share point by Windows clients.

Published Date: Feb 17, 2012

.Mac Address Book: Changes don‘t sync to your Mac OS X Address Book

This article has been archived and is no longer updated by Apple.

Issue or symptom

You may encounter one of these issues:

- Some changes made to your online .Mac Address Book may not successfully sync with your computer, or vice versa.
- You attempt to disable syncing in the online Address Book, but the syncing option remains enabled (yet syncing does not occur).
- Your online Address Book has not been synced in several days or weeks despite recent changes to it or to Address Book on your computer.

Solution

As a workaround:

1. Log out of .Mac by clicking Logout (don't just quit your Web browser).
2. Remain logged out of .Mac for at least 30 minutes.
3. Log back in to .Mac and try again.
4. If the issues still occur, contact .Mac Support.

Published Date: Feb 17, 2012

Mac OS X Server 10.2.4 or Later: How to Enable Integrated WebDAV Digest Authentication

With Mac OS X Server 10.2.4 or later, you may enable digest authentication for Web service. This document explains how.
This article has been archived and is no longer updated by Apple.

Enabling integrated WebDAV digest authentication

To use digest authentication for an existing WebDAV realm, you need to enable mod_digest_apple and change your virtual host configuration directives to use digest authentication instead of basic authentication.

Prior to version 10.2.4 of Mac OS X Server, you also needed to maintain a separate digest file containing a list of authorized users, passwords, and realms. This separate file is no longer necessary.

The new mod_digest_apple module first checks for users in a specified digest file. If the file is absent or unspecified, or if the user name and password fail to authenticate successfully against that file, the module tries to use Open Directory for user authentication. Open Directory users must be set up for password validation using Open Directory Password Server.

This approach applies to WebDAV authentication (called "author" access in Server Settings); it does not apply to access to Web pages via a browser (called "browse" access in Server Settings).

The Apple digest module is included in the standard installation of Mac OS X Server 10.2.4, but is disabled by default.

Follow these steps to enable mod_digest_apple:

1. As the root user, open this file in a text editor:

```
/etc/httpd/httpd.conf
```

Note: If you need help with this step, see technical document 106619, "**Mac OS X Server: How to Locate and Edit Configuration Files**".

2. Enable the digest module by adding the following lines to the file:

```
LoadModule apple_digest_module  /usr/libexec/httpd/mod_digest_apple.so

AddModule mod_digest_apple.c
```

3. Be sure the similar directives for the "standard Apache mod_digest" are deleted or commented out. (They are commented out by default):

```
#LoadModule digest_module /usr/libexec/httpd/mod_digest.so
...
#AddModule mod_digest.c
```

4. If you have enabled the newer Apache mod_auth_digest, you must disable that as well. Also, remove any Apache directives specific to that module from your Apache configuration files.

5. Save changes and close the file.

6. As the root user, open this file in a text editor:

```
/etc/httpd/httpd_macosxserver.conf
```

7. Find the WebDAV directives for the virtual host that contains the desired realm. Here is an example of the directives for "realm1":

```
<Directory "/Library/WebServer/Documents/realm1">
AuthName "realm1"
AuthType Basic
```

8. Change the AuthType from "Basic" to "Digest." Here are the completed changes for "realm1":

```
<Directory "/Library/WebServer/Documents/realm1">
AuthName "realm1"
AuthType Digest
```

9. Save changes and close the file.

The changes take effect when you restart Web service.

Any new virtual hosts you create using Server Settings are configured to use basic authentication by default. You will need to make the changes described above if you want to use digest authentication.

Starting with Mac OS X 10.2, the Finder issues a warning about clear-text passwords when a user tries to connect to a WebDAV server with basic rather than digest authentication. This warning should no longer appear when the server is configured for digest authentication.

Note: Some WebDAV clients do not use digest authentication. For example, Goliath 1.0 requires basic authentication.
Published Date: Oct 7, 2016

Mac OS X 10.2: How to Set the MTU Value During Startup

Use the procedure below to create a startup item script that sets the maximum transmission unit (MTU) value for your network interface(s). This may be required when using certain Internet service providers.

Note: This document applies to Mac OS X 10.2 through 10.2.8.
This article has been archived and is no longer updated by Apple.
Important:

- This document discusses an advanced procedure. If you are not familiar with command line interface and manual configuration in general, you should seek assistance. If you do not follow these steps precisely, the script may not work, which could prevent the computer from starting up normally.
- AppleCare does not offer any type of free technical support on setting up or creating Startup Items. Contract based support for setting up and creating Startup Items, and creating shell scripts is only offered by Apple Professional Services. For more information on Apple Professions Services see (http://www.apple.com/services/).

Follow these steps to create a script that sets the MTU each time the computer restarts:

1. Open Terminal (/Applications/Utilities/).
2. Type: `cd /Library`
3. Press Return.
4. Type: `mkdir StartupItems`
5. Press Return. (If you encounter an error, continue to step 6.)
6. Type: `cd StartupItems`
7. Press Return.
8. Type: `mkdir MTU`
9. Press Return.
10. Type: `cd MTU`
11. Press Return.
12. Type: `pico MTU`
13. Press Return.
14. In the pico editor, paste in the following text.

Begin copying below this line.

```
#!/bin/sh

. /etc/rc.common

##
# Configure a network interface MTU setting
##
#
# This script will set the MTU setting for the specified interface(s)
#
# The name of the interface (ex. en0) must be edited to match the interface
# to which the MTU setting should be applied
#
##

StartService ()
{
ConsoleMessage "Configuring MTU"

### uncomment lines and change the value following 'mtu' as appropriate

if [ "${MTU:=-NO-}" = "-YES-" ]; then

# /sbin/ifconfig en0 mtu 1490
# /sbin/ifconfig en1 mtu 1490

fi

}

StopService ()
{
return 0
}
```

```
RestartService ()
{
return 0
}

RunService "$1"
```

End copying above this line.

15. Uncomment the /sbin/ifconfig line(s) to set the MTU for a particular interface.

Note: Removing the number sign (#) from the beginning of a line uncomments it. Typically, en0 is the interface name for the Built-in Ethernet port and en1 is interface name for the AirPort Card. This is not always the case, though. To confirm that a network port is associated with a particular interface name, open the Network Utility (/Applications/Utilities/), and click the Info tab.

16. When you have finished customizing the file, save it (press Control-O), press Return, and exit pico (press Control-X).

17. Type: chmod 755 MTU

18. Press Return.

19. Type: pico StartupParameters.plist

20. Press Return.

21. In the pico editor paste in the following text.

Begin copying below this line.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple Computer//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/PropertyList-1.0.dtd">
<plist version="1.0">
<dict>
 <key>Description</key>
 <string>Can set MTU</string>
 <key>OrderPreference</key>
 <string>None</string>
 <key>Provides</key>
 <array>
  <string>MTU</string>
 </array>
 <key>Requires</key>
 <array>
  <string>Network Configuration</string>
 </array>
</dict>
</plist>
```

End copying above this line.

22. When you have finished customizing the file, save it (Control-O), press Return, and exit pico (Control-X).
23. Type: `chmod 755 StartupParameters.plist`
24. Press Return.
25. Type: `sudo pico /etc/hostconfig`
26. When prompted, enter your password.
27. Press Return.
28. In the pico editor, add this line at the bottom:

```
MTU=-YES-
```

29. Save it (Control-O), press Return, and exit pico (Control-X).

When you restart the computer, MTU is set for the interface that you specified.

Notes

1. The MTU will be reset after changing a Location, waking the computer from sleep, or changing the state of the network interface. To use the script again without having to restart, enter the following command:

```
sudo SystemStarter start MTU
```

2. If you experience any issues or wish to not set MTU during startup, you can turn off the new script by changing the MTU line in /etc/hostconfig to:

```
MTU=-NO-
```

Published Date: Oct 7, 2016

Mac OS X 10.2: How to Set Ethernet Speed and Duplex During Startup

Use the procedure below to create a startup item script that sets the Ethernet speed and duplex settings for your network interface(s).

Note: This document applies to Mac OS X 10.2 through 10.2.8.
This article has been archived and is no longer updated by Apple.
Important:

- This document discusses an advanced procedure, intended primarily for institutional networks on which certain third-party hardware precludes automatic negotiation of a full duplex connection. If you are not familiar with command line interface and manual configuration in general, you should seek assistance. If you do not follow these steps precisely, the script may not work, which could prevent the computer from starting up normally.
- AppleCare does not offer any type of free technical support on setting up or creating Startup Items. Contract based support for setting up and creating Startup Items, and creating shell scripts is only offered by Apple Professional Services. For more information on Apple Professions Services see (http://www.apple.com/services/).

Note: You may not be able to configure the available options on some Ethernet network interfaces and network connections. Use the ifconfig command to test a particular option before using it in the script. You cannot set the speed and duplex settings for AirPort Cards.

Follow these steps to create a script that is executed during startup, setting the speed and duplex settings:

1. Open Terminal (/Applications/Utilities).
2. Type: `cd /Library`
3. Press Return.
4. Type: `mkdir StartupItems`
5. Press Return. (If you encounter an error, continue to step 6.)
6. Type: `cd StartupItems`
7. Press Return.
8. Type: `mkdir SpeedDuplex`
9. Press Return.
10. Type: `cd SpeedDuplex`
11. Press Return.
12. Type: `pico SpeedDuplex`
13. Press Return.
14. In the pico editor, paste in the following text.

Begin copying below this line.

```
#!/bin/sh

##
# Configure network interface speed and duplex settings
#
# Note: speed and duplex settings are not supported on AirPort cards
#
##

. /etc/rc.common

StartService ()
{
ConsoleMessage "Configuring Speed and Duplex"

##
# Speed and Duplex
##

if [ "${SPEEDDUPLEX:=-NO-}" = "-YES-" ]; then

# /sbin/ifconfig en0 media 10baseT/UTP mediaopt full-duplex
# /sbin/ifconfig en0 media 100baseTX mediaopt full-duplex
# /sbin/ifconfig en0 media 1000baseTX mediaopt full-duplex
#
# /sbin/ifconfig en0 media 10baseT/UTP mediaopt half-duplex
# /sbin/ifconfig en0 media 100baseTX mediaopt half-duplex
# /sbin/ifconfig en0 media 1000baseTX mediaopt half-duplex
```

```
fi

}

StopService ()
{
return 0
}

RestartService ()
{
return 0
}

RunService "$1"
```

End copying above this line.

15. If you want to set the speed and duplex of an interface, uncomment one of the six speed lines (such as "/sbin/ifconfig en0 media 100baseTX mediaopt full-duplex") that you want for that interface. If you leave all six lines commented, then the interface remains in auto-select mode.

Note: Removing the number sign (#) from the beginning of a line uncomments it. Typically, en0 is the interface name for the Built-in Ethernet port, and en1 is interface name for the AirPort Card. This is not always the case. To confirm that a network port is associated with a particular interface name, note its Ethernet Address on the TCP/IP tab of the Network preference pane and compare that to the output of the ifconfig command when entered in the Terminal.

16. When you have finished customizing the file, save it (press Control-O), press Return, and exit pico (press Control-X).
17. Type: `chmod 755 SpeedDuplex`
18. Press Return.
19. Type: `pico StartupParameters.plist`
20. Press Return.
21. In the pico editor paste in the following text.

Begin copying below this line.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple Computer//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/PropertyList-1.0.dtd">
<plist version="1.0">
<dict>
 <key>Description</key>
 <string>Can set Speed and Duplex</string>
 <key>OrderPreference</key>
 <string>None</string>
 <key>Provides</key>
 <array>
  <string>SpeedDuplex</string>
 </array>
 <key>Requires</key>
 <array>
  <string>Network Configuration</string>
 </array>
</dict>
</plist>
```

End copying above this line.

22. When you have finished customizing the file, save it (Control-O), press Return, and exit pico (Control-X).
23. Type: `chmod 755 StartupParameters.plist`
24. Press Return.
25. Type: `sudo pico /etc/hostconfig`
26. When prompted, enter your account password.
27. Press Return.
28. In the pico editor, add this line at the bottom:

SPEEDDUPLEX=-YES-

29. Save it (Control-O), press Return, and exit pico (Control-X).

When you restart the computer, speed and duplex settings are set for the interface that you specified.

Notes

1. The speed and duplex setting will be reset after changing a Location, waking the computer from sleep, or changing the state of the network interface. To use the script again without having to restart, enter the following command:

```
sudo SystemStarter start SpeedDuplex
```

2. If you experience any issues or do not want to set speed and duplex during startup, you can turn off the script by changing the SPEEDDUPLEX line in /etc/hostconfig to:

SPEEDDUPLEX =-NO-

Published Date: Oct 7, 2016

iChat: Cannot Send or Receive a File When Firewall Is Active

When the Mac OS X firewall is active, you cannot send or receive a file via iChat.

This article has been archived and is no longer updated by Apple.

Symptom

iChat cannot send or receive a file when the Mac OS X firewall is active in its default state. If you have opened the AIM port, you may be able to receive a file but not send them.

Solution

In its default state, the Mac OS X firewall blocks file transfers using iChat or America Online AIM software. If either the sender or receiver has turned on the Mac OS X firewall, the transfer may be blocked.

The simplest workaround is to temporarily turn off the firewall in the Sharing preference pane on both computers. This is required for the sender. However, the receiver may keep the firewall on if the AIM port is open. To open the AIM port:

1. Choose Apple menu > System Preferences.
2. Choose View > Sharing.
3. Click the Firewall tab.
4. Click New.
5. Choose AOL IM from the Port Name pop-up menu. The number 5190 should already be filled in for you.
6. Click OK.

If you do not want to turn off firewall at the sending computer, a different file sharing service may be used instead of iChat. The types of file sharing available in Mac OS X are outlined in technical document 106461, "**Mac OS X: File Sharing**".

Note: If you use a file sharing service when the firewall is turned on, be sure to click the Firewall tab and select the service you have chosen in the "Allow" list. If you do not do this, the firewall will also block the file sharing service.

This document will be updated as more information becomes available.

Published Date: Feb 17, 2012

Apple Remote Desktop 1.2: Set Network Startup Command Does Not Display All Available Images

The first time it is used, the Set Network Startup command may not display all available NetBoot and/or Network Installation images on a subnet.
This article has been archived and is no longer updated by Apple.

Symptom

Some NetBoot and/or Network Installation images do not appear the first time you choose Manage > Set Network Startup.

Solution

If the NetBoot or Network Installation image does not appear, follow these steps:

1. Close the Set Network Startup window.
2. Go to another computer on the same subnet.
3. Using the Startup Disk preference pane at that computer, verify the image is available
4. At the ARD administration computer, select the Set Network Startup command again.

The desired NetBoot or Network Installation image should be available if it is properly enabled on your server.

For more information on NetBoot and Network Installation image behavior see these documents:

- Mac OS X Server Admin Guide
- Technical document 106965, "**Mac OS X Server 10.2: NetBoot and Network Installation Image Behavior**"

Published Date: Oct 7, 2016

AppleWorks 6: Difficulty Importing Microsoft Word Files in Mac OS 9 or Earlier

This document explains what to do if you cannot import Word files into AppleWorks 6.0 or later in Mac OS 9 or earlier.
This article has been archived and is no longer updated by Apple.

Symptom

1. When opening a Word file by double-clicking or choosing File > Open in the Finder, one of these symptoms may occur:
   - The file does not open in AppleWorks 6.
   - The file is imported as the wrong document type, such as spreadsheet or plain text.
   - You see the message "Could not find the application program 'Microsoft Word' to open the document...".
2. When dragging a Word file onto the AppleWorks 6 application icon, the document may be imported as the wrong document type, such as spreadsheet or plain text.
3. If you choose the Open dialog within AppleWorks and try to select the Word file, the file is dimmed.

Solution

Check translation software

Make sure the file translation components are properly installed. See technical document 88150 "**AppleWorks 6: Cannot Locate the Microsoft Word and Excel Translators After AppleWorks 6.1.2 Update**".

Compatible format?

Confirm the file is in a compatible format. AppleWorks 6 does not import Microsoft Word 5 or earlier formatted files.

Try updating software

Update to AppleWorks 6.2.3 or later. Updates are available from the AppleWorks website (http://www.apple.com/appleworks/).

File Exchange settings

If you are using Mac OS 9.2.2 or earlier, edit the Microsoft Word entries from the File Exchange or PC Exchange control panel. Follow these steps:

1. Open the File Exchange (Mac OS 9) or PC Exchange (Mac OS 8) control panel.
2. Sort the PC Exchange listing by PC Extension/Suffix.
3. Delete all .doc entries from the PC Exchange listing.
4. Click Add. The control panel searches for applications on the hard disk, and the Add Mapping window appears.
5. In the Extension field, type: doc
6. In the Application listing, select SimpleText.
7. In the File Type menu, select TEXT.
8. Click Add.
9. Close the File Exchange control panel.
10. Copy a fresh copy of the file to the Mac OS computer.
11. Open the file as described below.

Use Open command

Do not double-click the file or drag and drop the file onto the AppleWorks application to open it. Instead, open the file from within AppleWorks 6 by following these steps:

1. Choose File > Open.
2. Choose Word Processing from the Document Type pop-up menu.
3. Choose the appropriate Word format from the File Format pop-up menu.

Published Date: Feb 17, 2012

Mac OS X 10.2: Folders Created on Windows AFP Share Have Wrong Permissions

Folders created on a Windows 2000 Server by Mac OS X AFP clients may have the wrong permissions, preventing Mac OS X users from accessing the folders they create.

This article has been archived and is no longer updated by Apple.

Symptom

A Mac OS X user has no access to the folder she created on the server's AFP share point.

Solution

This issue is resolved in Mac OS X 10.2.5 and later. For affected versions, you may use the following solution.

At the Windows 2000 Server, follow these steps:

1. Choose Start > Programs > Administration Tools > Computer Management.
2. Choose Shares from the Tree section of the Computer Management window.
3. Double-click the Macintosh share to view the properties for the share.
4. Click the Security tab in the Properties window for the share.
5. Click the Advanced button to view the Access Control Settings for the share.
6. Click the Owner tab in the Access Control Settings window for the share (Figure 1).
7. Set the owner of the share to be the Administrators group, not the Administrator user.

Figure 1 Access Control Settings Window

Published Date: Oct 7, 2016

Mac OS X Server 10.2 or later: How to Set Custom Client View Options for Server Volumes

You can set custom view options (window size, icon placement, and so forth) that clients see when they connect to a server volume via Apple File Service (AFP).
This article has been archived and is no longer updated by Apple.
You can customize the size, position, and other view options of the window that clients see when they connect to a server volume via Apple File Service (AFP). You can do this on a per-volume basis.

To customize view options, follow these steps:

1. Log in to a client computer.
2. Using Connect to Server, connect to the target volume as the owner of the volume; the owner must **not** be an administrator account (see Notes 1, 2, and 3, below).
3. Make any desired changes to the window position, view mode (Icons, List, Columns), icon arrangement, or any of the settings found in View Options window (Command-J).
4. Disconnect from the server volume by dragging it to the Trash.

When you disconnect from the server volume, your changes are saved. Subsequently, all users will see that view of the server volume when they connect to it. Users may still make temporary changes that will persist on their computers for as long as they are connected to the volume. This will not affect the view options set by the owner, even if the other users have write access to the volume. These changes only affect remote users. If you view the volume locally at the server, these changes may not be seen.

Notes

1. For purpose of this document, "administrator account" refers to a user who can "administer the server", as indicated in the Accounts pane of Workgroup Manager.

2. Complying with these steps may mean changing the owner of the volume. You should not try to comply by deselecting "administer the server" when only one administrator account exists, since that may create a situation in which you have to fall back on the root account to reestablish your administrator status.

3. The requirement that you not log in with an administrator account assumes that the shared volume is a directory (folder) on one of the server's logical volumes (such as a disk). If the entire logical volume is being shared, then you may log in with an administrator account.

Background information

You cannot set persistent view options when logged in with an administrator account, because the window information for most folders is stored in a hidden file of that folder's enclosing folder (parent directory). So for folder B on volume A, the window information is stored in the root directory of volume A, not within folder B. When you log in via AFP to the server as an administrator, you will get all of volume A. Thus when you make changes to the window information for folder B, the changes are stored outside folder B. When other users log in, they do not see this information (since it is outside the share point), and they revert to a default view.

The exception to this rule is when the folder is a volume root. In this case, there is no parent directory, so all window information for the window of volume A itself is within volume A. When you mount folder B remotely as a non-administrator owner, it is seen as a volume root, so its behavior changes and it stores its own window information within itself.

Because the share point is a folder on the server that is seen as a volume by remote users, the window information is stored differently depending on whether you view it locally or remotely. Thus, the window may appear one way to remote users and another when you view it locally at the server.
Published Date: Oct 7, 2016

Mac OS X 10.2: MS-DOS Disk Does Not Appear in Finder

A local MS-DOS (FAT32) volume, whether a whole disk or a partition, will not appear in the Finder ("mount") if it is larger than 128 GB.
This article has been archived and is no longer updated by Apple.

Symptom

- The MS-DOS volume does not appear on the desktop or in a Finder window.
- In the log file /var/log/system.log, there is a line containing "mountmsdosfs(): disk too big, sorry".

Note: "Local" volumes are those that are directly connected to your computer, including hard drives that connect via ATA, SCSI, USB, and FireWire. This issue does not affect remote volumes, such as "shares" on a Microsoft Windows server.

Solution

If your computer has a hard drive that is larger than 128 GB and that must be used locally in MS-DOS format, partition it so that no individual partition is larger than 128 GB. You could also share the disk from another computer and connect to it from your Macintosh.

The remainder of this document provides more information on partitioning and sharing.

How to partition

Connect the drive to a computer that is using a Microsoft Windows or Linux operating system. Use an appropriate disk formatting utility to partition it so that each volume is smaller than 128 GB.

Warning: With most disk utilities, partitioning a disk requires erasing the whole disk. Be sure to back up any files you wish to keep before partitioning.

Notes

1. The Disk Utility application included with Mac OS X allows you to format an entire hard disk as MS-DOS, but it will not allow you to choose MS-DOS when partitioning. Therefore, Disk Utility may not be used as a solution in this scenario.

2. Disk Utility allows you to initialize a hard disk larger than 128 GB as MS-DOS, but it will not appear in the Finder after being initialized.

3. If you are transferring a hard drive that was installed in another computer to a Macintosh and plan to use it only in the Macintosh, you may use Disk Utility to reformat it as something other than MS-DOS (Mac OS Extended, for example). Though the disk will not appear in the Finder prior to initialization, it will still be available to Disk Utility.

How to share the disk

Connect the hard drive to a computer using a Windows or Linux operating system. On that computer, share the disk using either SMB (Windows or Samba service) or FTP. Refer to Windows or Linux documentation for information on how to set up sharing.

Note: Though some non-Apple systems offer an Apple sharing service (AFP), you should not use it in this case.

To connect to the disk from a Mac OS X computer:

- If you share using SMB, connect your Mac OS X computer using the Connect to Server command in the Finder, as explained in technical document 106471, "**Mac OS X 10.1 or Later: How to Connect to Windows File Sharing (SMB)**".
- If you share the disk via FTP, you may connect with a Web browser (by starting the address with "ftp://" instead of "http://"), or by using a dedicated FTP application program.

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Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 7, 2016

Mac OS X Server: About Privilege Mapping and When It Is Used

Apple File Service uses privilege mapping as a method of translating a remote client's "effective" server privileges for use in the client's local environment. Circumstances determine whether this or other methods are used, as explained in this document.
This article has been archived and is no longer updated by Apple.
Note: This document assumes that you know how to read Terminal output for user, group, owner, directory, and privileges information. If you cannot, you should seek assistance. How to read this information is explained in part in technical document 106712, "**Mac OS X: Troubleshooting Permissions Issues**".

When privilege mapping is used

Privilege mapping is used if:

- The client and server do not share a common directory service, or
- The account used to log in at a the client is not the same one used to log in to the server.

For example, you use the account "locadmin" to log in to a Mac OS X computer, then connect to a Mac OS X Server with an account named "01user," mounting a share point named "Groups". Viewed at the server, the privileges for Groups look like this:

```
ls -ld /Groups
drwxrwxr-x   7 root  admin   264 Jan  8 03:15 Groups

ls -l /Groups
drwxr-x---  6 15user  group1    264 Jan  7 13:00 group1
drwxr-xr-x  5 15user  group2    264 Nov 26 03:15 group2
drwxr-xr-x  5 01user  managed   264 Nov 21 03:15 managed
drwxr-x---  5 04user  mmanaged  264 Nov 21 03:15 mmanaged
drwxr-xr-x  5 11user  tgroup1   264 Jan  8 03:15 tgroup1
```

When viewed at the client, privileges for Groups looks like this:

```
ls -ld /Volumes/Groups
dr-xr-xr-x   7 locadmin  unknown   264 Jan  8 03:15 Groups

ls -l /Volumes/Groups/
d---------  6 locadmin  unknown  264 Jan  7 13:00 group1
dr-xr-xr-x  5 locadmin  unknown  264 Nov 26 03:15 group2
drwxr-xr-x  5 locadmin  unknown  264 Nov 21 03:15 managed
dr-x------  5 locadmin  unknown  264 Nov 21 03:15 mmanaged
dr-xr-xr-x  5 locadmin  unknown  264 Jan  8 03:15 tgroup1
```

The effective privileges seen here are the union of owner, group, and everyone, as applies to 01user. You can see that these "mapping" actions have taken place to present 01user's privileges as those of localadmin:

- The effective owner privilege is taken from the actual server privilege of the authenticated account.
- Thus, 01user's actual server privilege has been transposed into the owner's slot of the effective privilege output; and all folders are presented as if localadmin is the owner, even though he is not in reality. This presentation of the owner privilege is known as User Access Rights (UARights), as described in "Inside AppleTalk", pages 13-32. The user access rights (UARights) contain a summary of what the rights are, regardless of the category (owner, group, world) from which they were obtained.
- Server groups are represented locally as "unknown", and the group permissions are just a copy of world (everyone) permissions.
- Effective group privileges echo the server's actual everyone privileges.

Examples:

- Actual privileges of the folder mmanaged are 750, and 01user is a member of the group mmanaged. From the mapped perspective, this becomes a privilege of 500 for localadmin.
- Actual privileges of the folder group1 are 750, and 01user is not a member of group1. Thus, the folder group1 is locally locked with effective mapped privileges of 000 for localadmin.
- Actual privileges of the folder "managed" are 755. Because 01user owns this folder, the effective mapped privileges are also 755.

When privilege mapping is not used

Privilege mapping is not used when:

- The client and server share a common directory service such as Open Directory, LDAP or NetInfo, and
- The same account is used to log in to both the client and the server.

Using the same Groups directory as above and 01user this scenario, these are the privileges seen at the client:

```
ls -ld /Volumes/Groups
drwxrwxr-x   7 root  admin   264 Jan  8 03:15 Groups

ls -l /Volumes/Groups
drwxr-x---  6 15user  group1    264 Jan  7 13:00 group1
drwxr-xr-x  5 15user  group2    264 Nov 26 03:15 group2
drwxr-xr-x  5 01user  managed   264 Nov 21 03:15 managed
drwxr-x---  5 04user  mmanaged  264 Nov 21 03:15 mmanaged
drwxr-xr-x  5 11user  tgroup1   264 Jan  8 03:15 tgroup1
```

Privilege mapping is not being used, since the client and server are sharing a common directory service, allowing the client to readily resolve the user and group names and ID numbers used on the server.

Notes

1. Unmapped permissions provide better compatibility for applications that rely upon specific behavior with respect to permissions. For example, the chmod command might be expected to work since 01user appears to be the owner, but will be rejected by the server when the actual owner is not 01user. Additionally, sticky bits cannot be set or used. These differences may cause issues in subtle ways.

2. Unmapped permissions are necessary when using the "Inherit permissions from parent" setting on AFP share points.

3. Unmapped permissions should be used with AFP home directories.

Situations to avoid

Unpredictable results can occur when an account exists on both client and server with the same short name and/or UID, and the client and server do not share a directory service.

Note: GIDs and UIDS do not conflict with each other. The server being used in all of these examples has both a user (01user) and a group (mmanaged) with the ID 1026. Privilege mapping is off in this example, but the client cannot resolve the UIDs and GIDs used by the server. At a client computer that has a local "01user" account with a UID of 1026, and the same server as before, the privileges look like this:

```
ls -ld /Volumes/Groups
drwxrwxr-x   7 root  admin  264 Jan  8 03:15 Groups

ls -l /Volumes/Groups
drwxr-x---  6 1040    1027  264 Jan  7 13:00 group1
drwxr-xr-x  5 1040    1028  264 Nov 26 03:15 group2
drwxr-xr-x  6 01user  1025  264 Feb  3 16:21 managed
drwxr-x---  5 1029    1026  264 Nov 21 03:15 mmanaged
drwxr-xr-x  5 1036    1029  264 Jan  8 03:15 tgroup1
```

Note that ID numbers appear instead of user and group names. This is because the client has no way of determining which users and groups these IDs correspond to. Also note that "01user" will be denied access to the "mmanaged" folder, even though the user is a member of the mmanaged group on the server. The client cannot map GID 1026 to any group, so the user cannot be a member of that group.

Important: This same situation can occur with a common directory service if groups are created in the local domain on the server. Workgroup Manager warns that you are working in a domain that it not network visible.
Published Date: Oct 7, 2016

Mac OS X: Cannot Connect to Windows (SMB) Server Using Password Stored in Keychain

This document explains how to connect to a Windows (SMB) server with a user name and password stored in the keychain.
This article has been archived and is no longer updated by Apple.

Symptom

After storing your user name and password for an SMB server in a keychain, the stored information does not work as you would expect when you connect to the server again. You must re-enter your user name and password.

Solution

Create an alias of the SMB share point. Follow these steps:

1. Click the Finder icon in the Dock.
2. Choose Go > Connect to Server.
3. Enter the SMB server address, and click Connect.
4. Select the desired share point.
5. Choose Go > Computer.
6. Drag the SMB volume from the Finder window to your desktop. The icon that appears on the desktop after you drag it will be an alias.
7. From the Finder window, select the SMB volume and choose File > Eject.
8. Double-click the alias created in step 6.
9. Enter your user name and password, then select Add to Keychain.
10. Click OK.

The next time you connect to this SMB volume using the alias, the keychain will work as expected.

Additional information

If you click the Computer button in a Finder window then select a volume, the Make Alias command is dimmed. This is normal behavior, because accounts other than root do not have permission to create new items in the Computer list. Dragging the volume to a place where you have permission allows you to make the alias, as you did in the steps above.
Published Date: Feb 17, 2012

Mac OS X 10.2: Internet Sharing Does Not Work When MTU Value Is Exceeded

Internet Sharing will not work with certain Internet service providers, because the maximum transmission unit (MTU) value of the ISP is set lower than that of Mac OS X. This document explains how to resolve the issue.
This article has been archived and is no longer updated by Apple.

Symptom

The computer that is sharing its connection may connect to the Internet, but client computers (those that are using the shared connection) experience these issues:

- Web pages load only partially, or not at all; forms within Web pages (including online discussion forums and registration forms) may not work as expected.
- Sherlock cannot search the Internet.
- Email may not be sent.
- Automatic Software Update does not work.
- iTunes cannot connect to Internet radio.

Other Internet-related issues may be caused by an MTU issue.

Various Internet service providers could be affected, and some customers of these are known to be affected:

- Covad ADSL (United States)
- Eircom (Ireland)
- NTT FLET'S ADSL service (Japan)
- NTT B FLET'S service (Japan)
- PacBell DSL (United States)
- Wanadoo (France, Jordan, Lebanon, Luxembourg, Morocco, Spain, the Netherlands, the United Kingdom, and Salvador)

Solution

Update to Mac OS X 10.2.5 or later.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.
Published Date: Feb 17, 2012

Macintosh Manager 2.2.2: Clients cannot locate or log in to the server

Learn what to do if Macintosh Manager 2.2.2 clients are unable to locate or log in to the Macintosh Management Server.
This article has been archived and is no longer updated by Apple.
When the clients can't log in, this is sometimes referred to as having a "deaf" server. This could happen when using:

- Mac OS X Server 10.2.8
- Macintosh Manager 2.2.2

AppleTalk versus TCP/IP

This may happen when clients connecting to the server via AppleTalk. TCP/IP is preferred.

When clients choose a server name from the list provided at the Login Window, AppleTalk is used to connect. When clients select a server by choosing "Other Remote Server", followed by an IP Address or host name, then TCP/IP is used to connect.

Disabling Authentication Manager on upgraded servers

If the server was upgraded from 10.1 to 10.2, you should disable the Authentication Manager (also known as "tim"). To do that, locate this line in the /etc/hostconfig file:

```
AUTHSERVER=-YES-
```

Change the line to say:

```
AUTHSERVER=-NO-
```

Save the change, and restart the server.

Note: Disabling the Authentication Manager ("tim") will prevent any Basic Password users from accessing the server via SMB (Windows file sharing). These users should be updated to use the Password Server.
Published Date: Feb 17, 2012

Mac OS X Server 10.2: Imaging DVD Discs for NetBoot and Network Install

This document discusses creating NetBoot and Network Install images from DVD discs.
This article has been archived and is no longer updated by Apple.
NetBoot and Network Install images can be created with DVD source discs when using Mac OS X 10.2.4 or later. If you are creating an image on a client computer, be sure to copy the updated version of Network Image Utility from the server to the client computer.

When imaging DVD discs, Network Image Utility asks if you want to continue the imaging process with a second disk. Click Cancel when prompted for the second disk.

Important: If you click Continue when asked about the second disk, you must force quit Network Image Utility by pressing Command-Option-Escape. After a force quit, the imaging process is not complete. You should start over with a new image.
Published Date: Feb 17, 2012

Mac OS X Server: About the Mac OS X Server 10.2.5 Update

This software updates Mac OS X Server 10.2.4 to 10.2.5.
This article has been archived and is no longer updated by Apple.

Important: Read Before Installing

1. An Admin user password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, then follow these steps: Choose System Preferences from the Apple menu. Choose Accounts from the View menu. Select an Admin user and click Edit User. Type your current password, and press Return. Change the password, and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install. Installation

Installation

There are two ways to update to Mac OS X Server 10.2.5.

Automatic Software Update Installation

You may have been referred to this document by Automatic Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

Standalone Installers

An installer is also available from Apple Software Downloads (http://www.apple.com/swupdates/).

Two versions of the installer are available. One is for updating version 10.2.4 to 10.2.5; the other for updating 10.2, 10.2.1, 10.2.2, 10.2.3, or 10.2.4 to 10.2.5 (a "Combo" update). This document describes the former. If you need to use the Combo update, see technical document 107492, "**Mac OS X Server: About the Mac OS X Server 10.2.5 Update (Combo)**".

Enhancements delivered with this update

This update delivers enhancements, as outlined below.

Open Directory and Password Server

- Adds a Network Information System (NIS) plug-in for Open Directory, allowing Mac OS X Server and clients to better integrate into this traditional Unix directory structure.
- Import tool (dsimportexport) performance improved when importing users with Password Server passwords.
  Note: Workgroup Manager is currently the only supported tool for exporting user and group information.
- LDAP connections now time out, operating more efficiently in high-volume networking environments. The default timeout value is two minutes. (Applies the LDAPv3 plug-in only.)
- New user accounts that have Password Server passwords and which are created by secondary administrators respect the "Disable login as of mm/dd/yyyy" option.
- Improved Password Server reliability and performance with DIGEST-MD5 authentication, especially after long server uptime.
- Improved performance for Password Server authentications.

File Services

- Improved handling of server volume aliases that have been copied from one user's environment to another.
- Improved Apple Filing Protocol (AFP) client permissions handling related to exclusive access of files. Resolves some instances of messages such as:
  - "<file name> cannot be accessed"
  - "The file may be read-only"

  - "you may be trying to access a read-only location"
  - "the server the document is stored on may not be responding"
  - Example: Microsoft Excel can now open text documents on AFP volumes which were previously affected.
- Prevents two applications on two computers from opening the same file at the same time from an AFP volume with write access. (Carbon supports denyWrite and denyRead/DenyWrite on AFP volumes as documented in "Inside Macintosh", pages 2-17.)
- Improves Classic compatibility by not caching read-write data from the Classic environment to an AFP volume, providing behavior more consistent with Mac OS 9 access to AFP volumes.
- AFP client software works as expected when connecting to Windows 2000 server share points. It is no longer necessary to configure your Windows 2000 share points to be owned by an administrator group.

Client Management and Workgroup Manager

- Updates Workgroup Manager to version 1.2.1.
- Managed Mac OS X clients can use Classic when access to Applications are managed (configured in Workgroup Manager). For reference, see technical document 107450, "**Workgroup Manager: Managed Clients Cannot Start Classic**".
- Group identification numbers (GID) of users imported into Workgroup Manager are properly retained.
- Resolves a managed client access issue that resulted in the alert message "Couldn't contact Spell Checker" for certain applications.
- Resolves an issue in which Workgroup Manager stopped responding while applying presets after importing users, resulting in "error 14901".
- Improved performance for display of user records in Workgroup Manager.

Server Administration Applications

- Server Monitor now reports RAID status as "degraded" only when applicable on servers with journaled mirrored volumes. See technical document, 107406 "**Mac OS X Server 10.2: Server Monitor Indicates Journaled RAID Volume Is 'Degraded'**".
- Server Monitor correctly reports CPU temperature of a monitored Xserve.

NetBoot, Network Install, and Network Image Utility

- Network Image Utility may now create installable images of server software.
- Building a NetBoot or Network Install image using the Network Image Utility or other tool requires specific privileges to be set on the source CD. The source CD must have privileges enabled.

QuickTime Streaming Server

- Resolves an SSL-related authentication issue that resulted in the message "The connection was refused when attempting to contact 127.0.0.1:1220".

Networking

- Improves data network performance and transfer rates using IP over FireWire, most noticeable in high-bandwidth usage scenarios.
- For computers other than Xserve, adds support for IP over Firewire, allowing Mac OS X Server to connect to other capable devices via existing IP protocols over Firewire. (Xserve already had this feature, which was introduced for it in January, 2003.)

Core OS

- Mac OS Standard (HFS) CD volumes may be shared using Workgroup Manager.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 7, 2016

Mac OS X Server: About the Mac OS X Server 10.2.5 Update (Combo)

This software updates Mac OS X Server 10.2, 10.2.1, 10.2.2, 10.2.3, or 10.2.4 to version 10.2.5. It is a "combo" update that combines enhancements delivered with versions 10.2.1 through 10.2.5. If you already have Mac OS X Server 10.2.4, you may download a smaller update that is not a combo.
This article has been archived and is no longer updated by Apple.

Important: Read Before Installing

1. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

2. To install Mac OS X Server 10.2.5, you must enter the password for an Admin account. The password cannot contain a space or special characters typed by pressing the Option key.

   If you need to change an Admin account password, choose Apple menu > System Preferences, then choose View > Accounts. Select the account name and click Edit User. Type the current password and press Return, then type the new password in both text boxes. Click OK when you are done.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Featured Software to install.

Installation

There are two ways to update to Mac OS X Server 10.2.5.

Automatic Software Update Installation

You may have been referred to this document by Automatic Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

Standalone Installers

An installer is also available from Apple Featured Software (http://www.apple.com/swupdates/).

There are two versions of the update installer available:

- "Mac OS X 10.2.5 Server Update (Combo)" updates Mac OS X Server 10.2, 10.2.1, 10.2.2, 10.2.3, or 10.2.4 to version 10.2.5. This document describes how to use this installer.
- "Mac OS X Server 10.2.5 Update" updates only Mac OS X Server 10.2.4 to the new version. To learn more about that installer, see technical document 107491, "**Mac OS X Server: About the Mac OS X Server 10.2.5 Update**".

Enhancements Delivered with this update

Many enhancements are delivered with this update. Because this is a combo update, it includes those delivered with Mac OS X Server versions 10.2.1 through 10.2.5. These enhancements are listed individually in these technical documents:

107038: "**Mac OS X Server: About the Mac OS X Server 10.2.1 Update**"
107142: "**Mac OS X Server: About the Mac OS X Server 10.2.2 Update**"
107265: "**Mac OS X Server: About the Mac OS X Server 10.2.3 Update**"
107364: "**Mac OS X Server: About the Mac OS X Server 10.2.4 Update**"
107491: "**Mac OS X Server: About the Mac OS X Server 10.2.5 Update**"
Published Date: Oct 7, 2016

Macintosh Manager 2: Cannot Check In a Checked Out Computer

If a Macintosh Manager Administrator or Workgroup Administrator checks out a client Macintosh Manager computer, the computer can no longer be checked in.
This article has been archived and is no longer updated by Apple.

Symptom

The user who checked out the Macintosh Manager client does not appear in the user list and thus cannot log in or check the computer in. The user who checked out the client cannot check out any other Macintosh Manager client computers.

Solution

1. Open the Macintosh Manager application, and connect to the server.
2. Click the Computers tab.
3. Select the Machine List that the affected client is on, then click the Log-In tab.
4. Deselect the checkbox for "List displays users only (no administrators)".
5. Click Save.
6. On the affected client, log in with System Access. For reference, see technical document 106901, "**Macintosh Manager 2: How to Gain System Access**".
7. Delete the folder:

   Macintosh HD: System Folder:Preferences:Multiple-Users:Multi-User Items Cache

8. Be sure the affected client is connected to the Macintosh Manager network.
9. Log out of System Access (choose Special > Log Out, or press Command-Q).
10. A message that the server is not set up for use (Figure 1) appears. Click Stop.

Figure 1 Server not in use dialog

11. A dialog asks if you would like to select a different server. Click Yes.
12. The Available Servers dialog appears. Select your Macintosh Manager server, then click Choose.

You should see a list of all the Macintosh Manager users, and you should be able to check the computer in.

Note: If this results in a situation in which you can log in but not check the computer in (or cannot check out a different computer), then you should follow the additional procedure in technical document 107495, "**Macintosh Manager 2: Cannot Check Out a Computer**".

Additional information

This situation occurs when the Machine List to which the Macintosh Manager client computers belong is set by default not to display Macintosh Manager Administrator or Workgroup Administrator user types. You can change the Macintosh Manager login window to show All Users, Macintosh Manager Administrators, or Workgroup Administrators. After checking out the computer, though, the login dialog returns to the default. Since you will not see the user who checked out the computer, you will not be able to check it in or even log in. Therefore, the checkout feature is not compatible with the feature for hiding Administrator type users from the login dialog.
Published Date: Feb 17, 2012

Mac OS X Server 10.2.3: How to Install on Power Mac G4 (FW 800) or eMac (ATI Graphics)

This document explains how to use a Mac OS X Server 10.2.3 installation CD on a Power Mac G4 (FW 800) or eMac (ATI Graphics) computer.
This article has been archived and is no longer updated by Apple.

Notes

1. Follow these instructions exactly. If you do not, the process may not be completed.

2. This procedure requires the Mac OS X Server 10.2.3 CD. Installing from an earlier version of the CD is not supported for these computers.

3. The Mac OS X Server 10.2.3 CD cannot be used as a startup disc, so the installer will be used while started up from the computer's hard disk.

Follow these steps to install:

1. Complete the Mac OS X Setup Assistant on the target computer, if you have not already done so.

Note: The user name and password you choose here will also be the administrator account name and password created for the server software.

2. Use the Software Update feature to check for any available updates, and install them if applicable. Be sure to check again after each update, since additional software may have become available. For help with this step, see technical document 106704, "**Mac OS X: How to Update Your Software**".

3. Insert the Mac OS X Server 10.2.3 CD.

4. Find the folder named "MacOSXServerInstall" on the root level of the CD (Figure 1), and open it.

Figure 1 Contents of the Mac OS X Server 10.2.3 CD

5. Double-click the installer package named "MacOSXServerInstall.mpkg".

6. After the installation process is finished, restart the server.

7. Complete the Mac OS X Server Setup Assistant.

8. When the Open Directory Setup Assistant appears, you must authenticate with the Admin user name and password. Select the option for "Temporary IP Address", and complete the assistant.

9. Restart the server again.

10. Use the Software Update feature to check for and install available updates. Be sure to check again after each update, since additional software may have become available. If for some reason Software Update does not display available updates, download a standalone installer from Apple Featured Downloads (http://www.apple.com/swupdates/).

Note: At this point, the latest version of Mac OS X that you installed in step 2 and the latest version of Mac OS X Server that you installed in this step should be the same.

11. If desired, you may now use Open Directory Assistant. It is located at /Applications/Utilities/.

This completes the installation process.
Published Date: Oct 7, 2016

AirPort Extreme: Card‘s Name Does Not Appear in Apple System Profiler

Apple System Profiler either does not display a name for the AirPort Extreme Card, or labels the card as "Slot B". This is a cosmetic omission. It does not mean that something is wrong with your system.
This article has been archived and is no longer updated by Apple.

Symptom

- No name appears for the AirPort Extreme Card in Apple System Profiler.
- Apple System Profiler labels the AirPort Extreme Card as "Slot B".

Solution

To check that you are reading information for the AirPort Extreme Card, compare the MAC address you see in Apple System Profiler with the one that appears in the Network pane of System Preferences.

Published Date: Feb 19, 2012

Mac OS X Server: Mac OS 9 clients may connect to only one Apple File Service (AFP) Volume

In certain situations, Mac OS 9 clients may fail to connect to (mount) additional AFP volumes after successfully connecting to one from the same server. This issue only occurs with the Apple File Service implementation of AFP in Mac OS X Server. It does not occur if the AFP server is Mac OS X client file sharing.
This article has been archived and is no longer updated by Apple.

Symptom

This is an example scenario:

1. A Mac OS 9 client selects AppleShare in the Chooser and connects to a Mac OS X Server AFP share point.
2. Later, the client again tries to connect to another AFP volume from the same server in the same manner, without first putting away (unmounting) the first volume.
3. When the "already connected" dialog appears with the list of available share points, the client sees a message that says: "server failed to respond" or a similar message.

Solution

This symptom occurs when the server replies to the client with an AFP packet that is too large for the Mac OS 9 client to understand. Certain configurations on the server may cause the reply packet to be large enough to cause this symptom:

- Secure Connections (AFP over SSH) enabled
- TIM enabled (Mac OS X Server 10.2 and earlier)
- Long server name
- Multiple Ethernet interfaces configured

To work around the issue:

1. Put away all of the volumes on the client side.
2. Reconnect and select all of the volumes you want to use at once, rather than in succession.

Published Date: Feb 20, 2012

Apple Remote Desktop 1.2 or later: How to Optimize Performance of Observe and Control Feature

You can optimize the performance of the Observe and Control feature by setting the observed computer to Thousands of colors in the Displays preference pane. This achieves the best refresh rates when observing and controlling.

This article has been archived and is no longer updated by Apple.

To change the color depth at the client computer, follow these steps:

1. Choose Apple menu > System Preferences.
2. Choose View > Displays.
3. Choose Thousands from the Colors pop-up menu.

You can also follow these steps remotely while controlling the client via Apple Remote Desktop.

Note: If you are using Apple Remote Desktop over a dial-up or ISDN connection, you may wish to use Preferences to choose black and white instead of color.

Published Date: Feb 17, 2012

Mac OS X Server 10.2: Group Folders Require Full Path to Share Point

When you configure a Group Folder, you must specify the full path to the share point.
This article has been archived and is no longer updated by Apple.
When configuring a Group Folder using the Advanced option in Workgroup Manager, be sure to enter the full path to the share point in the URL field, not just the share point name.

For example, if a share point named "Students" is in the folder "HighSchool" at the root of the startup volume, the full path you would enter in the URL field would be:

```
afp://server.example.com/HighSchool/Students
```

If your share point is on another local volume, be sure to include /Volumes/<VolumeName> in the URL. For example, if a share point named "Students" is in the folder "HighSchool" at the root of the volume called "2ndDrive", the full path you would enter in the URL field would be:

```
afp://server.example.com/Volumes/2ndDrive/HighSchool/Students
```

Notes

1. The URL should always include the protocol to be used when configuring a Group Folder using the Advanced option. See technical document 107509, "**Mac OS X Server 10.2: Specify Protocol When Configuring Group Folder**".

2. Avoid using spaces in the full path when possible. See technical document 107254, "**Mac OS X Server: Do Not Use Spaces in Home Directory Share Point Name**" for more information on spaces in the home directory share point name.

Published Date: Oct 7, 2016

AirPort Extreme: How to Print to a USB Printer From the WAN Port

This document explains how to set up your AirPort Base Station to allow access to its USB printer from the WAN port.

This article has been archived and is no longer updated by Apple.

In the default configuration, computers connected to the base station's WAN port are outside the base station's firewall, and are unable to access the base station's USB printer. There are two methods you can use to allow access to the USB printer from the WAN port. After using either of the methods below, computers connected via the WAN port should be able to access the base station printer in Print Center via Bonjour (formerly "Rendezvous").

Notes

1. If the WAN network connects to another router, printer access is only supported on the WAN subnet that is local to the base station. It is not supported for computers that are separated from the base station by a router.

2. USB printing through an AirPort Extreme Base Station requires Mac OS X 10.2.3 or later.

Turn on WAN-LAN bridging

If you have a computer on the WAN port that you would like to give access for USB printing, you can bridge between the LAN and WAN networks.

Note: When using this method, you will be dependent on Bonjour for all local network connectivity, or you will need to rely on a router that provides addresses for the connected computers.

Follow these steps to turn on WAN-LAN bridging on an AirPort Extreme Base Station:

1. Open the AirPort Admin Utility (/Applications/Utilities/).
2. Select your base station from the list.
3. Click the Configure icon.
4. Click the Network Tab.
5. Deselect the checkbox for "Distribute IP Addresses".
6. **Note:** If your AirPort Extreme Base Station has a built-in modem that you are using to connect to the Internet, WAN-LAN bridging is automatically turned on without the need to follow these steps. In that configuration, you may rely on the DHCP and NAT services provided by the base station for WAN, LAN and wireless clients.

Using WAN privacy to allow printer access

There may be reasons that you are be unable to bridge between the LAN and WAN networks. If unsure, check with your network administrator. When you cannot use WAN-LAN bridging, you may choose to use remote printer access from the WAN privacy settings. To do so, follow these steps:

1. Open AirPort Admin Utility (/Applications/Utilities/).
2. Select your base station from the list.
3. Click the Configure icon.
4. Click the Base Station Options button.
5. From the pop-up menu, select the checkbox for Enable Remote Printer Access.
6. Click Update.

Published Date: Feb 17, 2012

Apple Remote Desktop 1.2: Cannot Remotely Update or Control Mac OS 9 ARD 1.1 Clients

Apple Remote Desktop 1.2 cannot administer Mac OS 9 ARD 1.1 clients. To update your clients remotely, you must update them first, then the administration software.
This article has been archived and is no longer updated by Apple.

Symptom

After updating to ARD 1.2 at your administration computer, you cannot administer ARD 1.1 client computers that use Mac OS 9.

Solution

If you have not yet updated any of your ARD software to version 1.2, you may avoid this issue by updating the client computers first. If you have already updated the administration computer first, there are two alternatives: You may either update the client computers locally, or you may reinstall ARD 1.1 at the administration computer.

I. Locally updating clients

This method may be easier if you have only a few affected ARD client computers. You may individually update each computer to ARD 1.2 by using the Software Update control panel or by using the standalone installer available from software download document 120206, "**Apple Remote Desktop 1.2 Client for OS 8.1 - 9.2: Information and Download**".

II. Reinstalling ARD 1.1

This method is easier when you have many affected ARD client computers. Follow these steps:

1. At the administration computer, uninstall ARD 1.2. To do this, see technical document 107159, "**Apple Remote Desktop: How to Uninstall**".

Note: If there is a secondary Mac OS X computer that does **not** already have ARD administration software installed but on which you would not mind having it installed, then you may continue to Step 2 at that computer without completing Step 1.

2. If you have the ARD 1.1 CD, reinstall the ARD 1.1 administration software. If you have the ARD 1.0 CD, please contact AppleCare Technical Support for assistance with installing ARD 1.1.

Note: If prompted to update, be sure not to update to version 1.2.

3. Download the update from software download document 120206, "**Apple Remote Desktop 1.2 Client for OS 8.1 - 9.2: Information and Download**".

4. On the update disk image, look in the Remote Desktop Parts folder and locate the Remote Desktop Startup extension.

5. Open the ARD 1.1 application.

6. Select the affected client computers from the Computer Status list.

7. Copy the Remote Desktop Startup extension to the selected computers, with a destination of:

System Folder: Extensions

8. Restart the selected client computers.

9. Update the administration software to version 1.2, using the Software Update pane of the System Preferences application.

Published Date: Oct 7, 2016

AirPort Extreme Base Station is not Available in AirPort Admin Utility on certain computers

System software included with certain computers allows them to join AirPort Extreme networks. At the same time, they may not being able to use the AirPort Admin Utility with the base station. A software update resolves the issue.
This article has been archived and is no longer updated by Apple.

Symptom

You can connect to an AirPort Extreme network, but the base station is not available in AirPort Admin Utility.

Solution

The AirPort software on the computer needs to be updated to version 3.0. This software is included on a CD that comes with the AirPort Extreme Base Station. It is also available from Apple Featured Software (http://www.apple.com/swupdates/).
Published Date: Oct 7, 2016

Apple Remote Desktop 1.2: Automatic Software Update Stops Responding During Installation

When using the Software Update preference pane, the Apple Remote Desktop 1.2 installation may stop responding ("hang"). This may occur just as the "optimizing" process is finished.
This article has been archived and is no longer updated by Apple.

Symptom

Software Update stops responding when you install Apple Remote Desktop 1.2 on a computer with Mac OS X 10.1.4. This may occur just after optimization is completed.

Note: This issue may be avoided by updating to Mac OS X 10.1.5 prior to updating Apple Remote Desktop.

Solution

When this occurs after optimization, the software has actually been installed. To resolve the responsiveness issue, follow these steps:

1. Choose Apple menu > Force Quit.

   Note: If the Finder is not responsive, try pressing Command-Option-Escape to open the Force Quit dialog.

2. Select Software Update, and click Force Quit.
3. Quit and reopen System Preferences.
4. Verify the addition of the Remote Desktop preference pane to the Internet and Network section of System Preferences. This verifies that the software was installed.

Published Date: Oct 7, 2016

Apple Remote Desktop: Cannot Shut Down or Restart Client Computer at Login Window

With version 1.1 or earlier of the Remote Desktop application, you cannot use the Shut Down or Restart commands on a client computer that does not have a user logged in.
This article has been archived and is no longer updated by Apple.

Symptom

If an Apple Remote Desktop client computer is at the Login Window, the Remote Desktop application cannot restart it or shut it down.

Solution

Update the administration and client computers to Apple Remote Desktop 1.2.
Published Date: Oct 7, 2016

Apple Remote Desktop 1.2: How to Update Mac OS X Clients That Do Not Have Internet Access

This article discusses how to update client computers that do not have Internet access to Apple Remote Desktop (ARD) 1.2.

Note: At least one administration computer must have Internet access.
This article has been archived and is no longer updated by Apple.
The Remote Desktop 1.2 administration application can update Mac OS X clients ARD 1.1 clients to version 1.2. The clients do not need to be connected to the Internet to do this. After updating the administration computer, the Remote Desktop application will prompt you to update Mac OS X clients when you are at the Computer Status window.

If one administration computer is unable to reach the Internet, you may use another administration system that is able to reach the Internet to download the ARD updater package. You may follow these steps at that computer:

1. Open System Preferences.
2. Choose View > Software Update.
3. Click Update Now.
4. Select the checkbox for the ARD Update.
5. Choose Update > Download Checked Items to Desktop.

Note: The downloaded update package should only be used on a computer that has the same versions of Mac OS X and ARD as the computer on which you download it (version of ARD in this instance refers to administration or client; version of Mac OS X refers to 10.1.x or 10.2.x).
Published Date: Oct 7, 2016

Mac OS X 10.2.5: Unable to Log In After Deleting NIS Server Entry

You may not be able to log in after you delete an NIS server entry in the Directory Access application.
This article has been archived and is no longer updated by Apple.

Symptom

Mac OS X startup stalls at the message "Waiting for Network Information Service", or Login Window will not accept any local or network user name and password combinations.

Solution

This occurs because incomplete information remains in the NIS pane of the Directory Access application. When deleting information from this pane, be sure to delete it all. Note that adding an NIS server entry in Directory Access may insert one or more blank lines after the NIS server address. Note the position of the cursor in Figure 1.

Figure 1 NIS pane of Directory Services

If you remove the server address without removing the blank line(s), then Login Window will be unable to authenticate local or network accounts. If you remove the server address without removing the domain name, the startup process will stop responding at the "Waiting for Network Information Service" message.

To avoid this problem, be sure to select and delete all blank line(s) in the field in addition to the NIS server IP address and domain name.

After encountering this problem, you may resolve it by logging in as root at the client computer and removing any blank lines from the NIS configuration in the Directory Access application. This solution will only work if the root account is currently enabled on the client. For more information, including how to log in as root, see technical document 106290, "**Mac OS X: About the root User and How to Enable It**".

If the root account is not enabled, or you cannot reach the login window, you may use the following steps to recover. In these steps, you will type a series of text commands. Each command below is preceded by the pound sign (#). After each command, press the Return key to execute it.

Warning: Misuse of the "rm" command may result in severe data loss. If you are not comfortable performing these steps, seek assistance before continuing. Even if you cannot log in to the computer, you may wish to back up data before continuing (by using Target Disk Mode, for example, or other methods).

Steps to recover:

1. Start up into single-user mode. For help with this step, see technical document 106388, "**Mac OS X: How to Start up in Single-User or Verbose Mode**".
2. Check the volume with fsck. For instructions, see technical document **106214**.

3. Execute this series of commands at the text prompt:

```
# mount -uw /
# cd /var/yp/binding
# ls
```

Note: This will list the contents of the binding directory, including a file whose name is in the format:

```
<domain>.ypservers
```

In this example, "<domain>" represents the actual name of the NIS domain that was configured in Directory Access.

4. Execute this command:

```
# rm <domain>.ypservers
```

Note: You must replace "<domain>" with the name of the domain listed at the end of Step 2.

5. Enter the following command:

```
# more /etc/hostconfig | grep NIS
```

Note: The "|" character above is the "pipe," located above or below the Return key on most keyboards. This command will generate text output. If the output from is "NISDOMAIN=-NO-", then skip to Step 6.

6. Execute the following commands:

```
# mv /etc/hostconfig /etc/hostconfig.nis.old
# sed 's/NISDOMAIN=.*/NISDOMAIN=-NO-/g' /etc/hostconfig.nis.old > /etc/hostconfig
```

Note: These commands will change your hostconfig file to remove a reference to the NIS server, while also creating a backup copy of the original file. You can also use a command-line text editor such as pico to manually change the NISDOMAIN line in the hostconfig file to:

```
NISDOMAIN=-NO-
```

7. Execute this command:

```
# exit
```

The computer will restart normally, and you can log in using a local account.
Published Date: Oct 7, 2016

Mac OS X Server 10.2: NetBoot or Network Install Image Does Not Work Properly If Permissions Not Enabled on Source

If the source volume for a NetBoot or Network Install disk image does not have permissions enabled when the image is created, client computers will not start up properly from the resulting image.
This article has been archived and is no longer updated by Apple.

Symptom

Client computers cannot start up from the NetBoot or Network Install image.

Solution

To prevent this issue from occurring, be sure that permissions are enabled for the source volume. You may use Disk Utility to repair an existing image or client installation that is affected by this issue.
I. Prior to creating an image, click here.
II. To repair an existing image, click here.
III. To repair an existing client installation, click here.

I. How to enable permissions for a volume

Permissions are enabled by default for some types of volumes but disabled by default for others, to correspond with the way that the volume is most likely to be used. Some operating system installation CDs, for example, may have permissions enabled by default. Since you cannot change a write-only CD, remember that any change made to the permissions setting for a CD is stored on the computer where the change is made. To be sure permissions are enabled for any volume, follow these steps prior to creating a NetBoot or Network Install image:

1. Insert or connect the volume to be imaged (if applicable). Example: If you are creating a Network Install image of Mac OS X 10.2, insert Disc 1 of the Mac OS X Install CD set.
2. Click the Finder icon in the Dock.
3. Choose Go > Computer.
4. Select the volume to be imaged.
5. Choose File > Get Info.
6. In the Info window, click the disclosure triangle for Ownership & Permissions.
7. Be sure that the checkbox for "Ignore ownership on this volume" is NOT selected, then close the Info window.

Note: If you are creating an image from a multi-CD set, repeat the steps for each CD prior to making an image from them. Example: If you plan to use Disc 2 of the Mac OS X Install CD set for your Network Install image, eject Disc 1, and repeat the steps above for Disc 2.

You may now create the image using the directions from the Mac OS X Server Admin Guide. You can download the latest version of the Admin Guide from the Apple Manuals page (http://www.info.apple.com/support/manuals.html).

II. How to repair an existing image

To repair an existing NetBoot image, follow these steps at the server:

1. Open Disk Copy (/Applications/Utilities/).
2. Drag the image file into the Disk Copy window to mount it.
3. Open Disk Utility.
4. Click the First Aid tab.
5. Select the volume to be repaired.
6. Click the Repair Disk Permissions button.

Note: Network Installation image permissions cannot be repaired and requires recreation in order to properly function.

III. How to repair a client installation

To repair permissions on a client installation, use the diskutil tool in Terminal. Follow these steps at the client computer:

1. Open Terminal (/Applications/Utilities/).
2. Type: `sudo diskUtil repairPermissions /`
3. Press Return.

4. Type your Admin user account password when prompted, then press Return.
5. Quit Terminal.

Published Date: Oct 7, 2016

Mac OS X Server 10.2: NetBoot Clients Get "Error -36" When Connecting to Server

If the source volume of the NetBoot image did not have privileges enabled, NetBoot clients get an "Error -36" alert message when trying to connect to an Apple Filing Protocol (AFP) server.

Note: Apple File Service, AppleShare, File Sharing, and Personal File Sharing are all examples of AFP service.
This article has been archived and is no longer updated by Apple.

Symptom

A NetBoot client displays an "Error -36" alert message when trying to connect to an AFP volume.

Solution

Privileges should be enabled on the source volume prior to making a NetBoot image. To repair file permissions on an existing image, use the Repair Privileges feature of Disk Utility.

For more information, including steps on how to enable permissions, see technical document 107524, "**Mac OS X Server 10.2: NetBoot or Network Installation Image Does Not Work Properly if Permissions Not Enabled on Source**".
Published Date: Oct 7, 2016

Mac OS X Server: A Group Cannot Own a Share Point

In AppleShare and Mac OS versions prior to Mac OS X, a group could be specified as the owner of a shared folder or volume. This feature is not available in Mac OS X.
This article has been archived and is no longer updated by Apple.
Mac OS X and Mac OS X Server use Unix-style permissions on files and folders. In this system, only a user can be the owner of a file or folder. Therefore a group cannot be assigned as the owner of a share point.

For more information about permissions in Mac OS X and Mac OS X Server, see Knowledge Base article 106712, "**Mac OS X: Troubleshooting Permissions Issues**".
Published Date: Oct 7, 2016

Mac OS X Server: About the Mac OS X Server 10.2.6 Update

This software updates Mac OS X Server 10.2.5 to 10.2.6.
This article has been archived and is no longer updated by Apple.

Important: Read Before Installing

1. An Admin user password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, then follow these steps: Choose System Preferences from the Apple menu. Choose Accounts from the View menu. Select an Admin user and click Edit User. Type your current password, and press Return. Change the password, and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install. Installation

Installation

There are two ways to update to Mac OS X Server 10.2.6.

Automatic Software Update

You may have been referred to this document by Automatic Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

Standalone Installers

An installer is also available from Apple Software Downloads (http://www.apple.com/swupdates/).

Two versions of the installer are available. One is for updating version 10.2.5 to 10.2.6; the other updates version 10.2, 10.2.1, 10.2.2, 10.2.3, 10.2.4, or 10.2.5 to 10.2.6 (a "Combo" update). This document describes the former. If you need to use the Combo update, see technical document 107532, "**Mac OS X Server: About the Mac OS X Server 10.2.6 Update (Combo)**".

Enhancements delivered with this update

This update delivers the enhancements outlined below. This installer is server-specific, but the issues it resolves are not. This update provides the same fixes found in the client version of the Mac OS X 10.2.6 Update. The issues described below are relevant in a server setting, but you must also update the client computers.

File Services

- Provides more reliable software installation for a client computer that is installing from a file located on a remote Apple Filing Protocol (AFP) server volume.
- Improves AFP client copy reliability, resolving an issue in which a file could have become unusable after copying via AFP in certain circumstances.
- Improves compatibility with Microsoft UAM (User Authentication Module) 1.0.2 when connecting to Windows share points.

Core OS

- Addresses a rare condition in which users cannot complete the login process.
- Improves compatibility with some USB devices, providing greater system reliability.

Printing

- Improved CUPS printing experience for Hewlett Packard LaserJet 8150 DN laser printer, allowing full text and image print by default.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's

recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 7, 2016

Mac OS X Server: About the Mac OS X Server 10.2.6 Update (Combo)

This software updates Mac OS X Server 10.2, 10.2.1, 10.2.2, 10.2.3, 10.2.4, or 10.2.5 to version 10.2.6. It is a "combo" update that combines enhancements delivered with versions 10.2.1 through 10.2.6. If you already have Mac OS X Server 10.2.5, you may download a smaller update that is not a combo.
This article has been archived and is no longer updated by Apple.

Important: Read Before Installing

1. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

2. To install Mac OS X Server 10.2.6, you must enter the password for an Admin account. The password cannot contain a space or special characters typed by pressing the Option key.

   If you need to change an Admin account password, choose Apple menu > System Preferences, then choose View > Accounts. Select the account name and click Edit User. Type the current password and press Return, then type the new password in both text boxes. Click OK when you are done.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Featured Software to install.

Installation

There are two ways to update to Mac OS X Server 10.2.6.

Automatic Software Update Installation

You may have been referred to this document by Automatic Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

Standalone Installers

An installer is also available from Apple Featured Software (http://www.apple.com/swupdates/).

There are two versions of the update installer available:

- "Mac OS X 10.2.6 Server Update (Combo)" updates Mac OS X Server 10.2, 10.2.1, 10.2.2, 10.2.3, 10.2.4, or 10.2.5 to version 10.2.6. This document describes how to use this installer.
- "Mac OS X Server 10.2.6 Update" updates only Mac OS X Server 10.2.5 to the new version. To learn more about that installer, see technical document 107531, "**Mac OS X Server: About the Mac OS X Server 10.2.6 Update**".

Enhancements Delivered with this update

Many enhancements are delivered with this update. Because this is a combo update, it includes those delivered with Mac OS X Server versions 10.2.1 through 10.2.6. These enhancements are listed individually in these technical documents:

107038: "**Mac OS X Server: About the Mac OS X Server 10.2.1 Update**"
107142: "**Mac OS X Server: About the Mac OS X Server 10.2.2 Update**"
107265: "**Mac OS X Server: About the Mac OS X Server 10.2.3 Update**"
107364: "**Mac OS X Server: About the Mac OS X Server 10.2.4 Update**"
107491: "**Mac OS X Server: About the Mac OS X Server 10.2.5 Update**"
107491: "**Mac OS X Server: About the Mac OS X Server 10.2.6 Update**"
Published Date: Oct 7, 2016

Apple Remote Desktop: "Computers" Setup Window Does Not Appear

In some situations the "Computers" setup window may not appear. This is the window that should appear when you choose Setup > Computers, or that appears the first time you use the Remote Desktop application.
This article has been archived and is no longer updated by Apple.

Symptom

The Computers setup window does not appear when it should.

Solution

Remote Desktop may not display the Computers window when the following file is missing or unusable:

~/Library/Preferences/com.apple.security.plist

Remote Desktop stores information on added client computers and computer lists in the user's keychain (~/Library/Keychains/).

The file "com.apple.security.plist", which is saved in ~/Library/Preferences/, contains a reference to the user's keychain. If this file is missing or unusable, Remote Desktop may "lose" the added client computers and computer lists. Additionally, Remote Desktop will not display the Computers window when this file is missing or unusable.

Important: In following these steps, you will make a copy of the original preference file, edit it, then replace the original with the copy. If at any point you think you have made a mistake or any unintended change, close the copy without saving changes and return to Step 5.

1. Locate the file: `~/Library/Preferences/com.apple.security.plist`
2. Select the file in the Finder window.
3. Choose File > Duplicate.
4. Open TextEdit.
5. Choose File > Open.
6. Type: `~/Library/Preferences/com.apple.security copy.plist`
7. Click Open.
8. Verify that the "DefaultKeychain" key is present in the file. Here is a sample of the "DefaultKeychain" key to look for:

```
<key>DefaultKeychain</key>
<array>
     <dict>
          <key>DbName</key>
          <string>~/Library/Keychains/username</string>
          <key>GUID</key>
          <string>{87191ca3-0fc9-11d4-849a-000502b52122}</string>
          <key>SubserviceType</key>
          <integer>6</integer>
     </dict>
</array>
```

9. You likely see that "DefaultKeychain" key is not present, but the "DLDBSearchList" key is present. If so, continue to the next step. (If not, then another issue may be the cause. Consider contacting Apple Technical Support in this case.)
10. Copy the "DLDBSearchList" key information, starting with and including the "<key>", through and including the "</array>" tag.
11. Paste it in a new line after the last "</array>" of the file.
12. In the pasted text, change "`<key>DLDBSearchList</key>`" to read:

```
<key>DefaultKeychain</key>
```

13. Save the file.
14. Before replacing the files, be sure that the Remote Desktop application is not open.
15. In the Finder, open your Preferences folder (~/Library/Preferences/)
16. Rename "`com.apple.security.plist`" to:

```
com.apple.security.plist_old
```

17. Rename "`com.apple.security copy.plist`" to:

```
com.apple.security.plist
```

Published Date: Oct 7, 2016

Mac OS X 10.2: LDAP Users Cannot Log In, Computer Stops Responding at Login Window

When you click a user name in the Login Window of an LDAP client computer, it may briefly appear to be logging in. However, the computer becomes unresponsive (a "hang") at the progress bar, and the user is not logged in. LDAP accounts cannot log in in this circumstance.
This article has been archived and is no longer updated by Apple.

Symptom

When you click a user name at the Login Window, it skips the password dialog and briefly appears to be logging in. The window shakes (which normally indicates incorrect password), and the system stays at the progress bar. To be able to log in as a local user after this occurs, you must force the computer to restart by pressing the power button, reset button, or appropriate keyboard shortcut as applicable to the computer model.

Solution

This happens specifically when the computer is an LDAP client and the attribute for the LDAP directory service being used is not mapped. Some LDAP servers do not store the user password in Directory Services. If the password attribute for users is not mapped, login is tried without a password and thus cannot succeed.

Follow the steps below at each affected client computer. To log in to an affected computer, select a local administrator account at the Login Window, not an LDAP user account. After logging in, follow these steps:

1. Open Directory Access (/Applications/Utilities/).
2. Click the Lock button to authenticate.
3. Select LDAPv3.
4. Click Configure.
5. Select the relevant LDAP configuration from the list.
6. Click Edit.
7. Click the "Search and Mappings" tab.
8. Click the disclosure triangle next to Users.
9. Scroll down to the Password attribute, and select it.
10. Click the rightmost Add button. (This should reveal a text field with a blinking cursor in the field beneath "Map to <menu> items in list".)
11. Type: `#********`
12. Click OK.
13. Quit Directory Access.

Published Date: Feb 17, 2012

Mac OS X Server 10.2: MySQL Will Not Start

This document explains what to do if MySQL will not start when you click the Start button in MySQL Manager.
This article has been archived and is no longer updated by Apple.

Symptom

When you click the Start button in MySQL Manager, nothing happens. Normally, the button changes from Start to Stop after MySQL starts.

Solution

This usually happens when the host name of the server is set to something other than its DNS name. This prevents the database from being created, as you may verify by reading the ".err" files at /var/mysql/. If you cannot fix your DNS configuration, then follow these steps to create the database files:

1. Open Terminal (/Applications/Utilities/).
2. Each of the following commands is preceded by the number sign (#), which represents the prompt you see on screen. Type each command, pressing Return before continuing to the next:

```
# sudo mysql_install_db --force
# sudo chown -R mysql:admin /var/mysql
# sudo chmod -R o- /var/mysql
# sudo safe_mysqld &
# sudo mysqladmin -u root password <new_pwd>
```

Note: Replace "<new_pwd>" with your actual new password of choice. If your new password was "p$ssw*rd", then you would type:

```
sudo mysqladmin -u root password p$ssw*rd
```

3. Quit Terminal.

Published Date: Feb 17, 2012

Apple Remote Desktop 1.2: Control Lost When Logging Out of the Client Computer

During a Control session, you may occasionally lose your control connection after you log out the client computer. This document contains some workarounds for this situation.
This article has been archived and is no longer updated by Apple.

Symptom

During a Control session, if you choose the Log Out command for the client computer, you may lose your control connection.

Solution

Use one of several workarounds.

First, try closing the Control window and simply starting a new Control session. This should work in most cases.

If that does not work, either restart the client computer or use SSH to restart the ARD agent process, whichever you prefer.

Note: To use SSH, Remote Login must have previously been selected in the Sharing preference pane of the client computer.

To use SSH, follow these steps:

1. Open Terminal (/Applications/Utilities/).
2. Type: `ssh <client_address>`
Note: replace "<client_address>" with the actual DNS name or IP address of the client computer.
3. Press Return.
4. Complete the authentication dialog. You may or may not see an RSA key warning.
5. Type: `ps -auxwww | grep ARD`
6. Press Return. If the ARD processes are running, the output will include:

```
root   344   0.0  0.0     1552    100  ??  Ss   15Apr03   0:04.25 /System/Library/CoreServices/ARD Helper
root   633   0.0  0.7    42512   1784  ??  S    15Apr03   5:29.80 /System/Library/CoreServices/ARD
Agent.app/Contents/MacOS/ARD Agent -psn_0_524289
```

7. If either of the above processes is not running, type:

```
sudo /System/Library/StartupItems/RemoteDesktopAgent/RemoteDesktopAgent
```

8. Press Return. This restarts the processes. Repeat the ps command to verify that they are restarted.

Published Date: Feb 19, 2012

Mac OS X Managed Client: Stops Responding During Login When Using Custom Desktop Picture

A managed client may stop responding ("hang") during login when a custom desktop picture has been set and applications are managed.
This article has been archived and is no longer updated by Apple.

Symptom

After a user authenticates at the Login Window, the progress bar appears as if logging in, but the computer stops responding at the progress bar.

Solution

Use SSH to recover from the unresponsive state. Remote Login must have previously been selected in the Sharing preference pane of the client computer. Follow these steps:

1. Open Terminal (/Applications/Utilities/) at another computer.
2. Type: `ssh <client_address>`
Note: Replace "<client_address>" with the actual IP address or DNS name of the client computer.
3. Press Return.
4. Complete the authentication dialog, using an administrator account of the target computer. You may or may not see an RSA warning message.
5. Type: `sudo killall loginwindow`
6. Press Return.
7. Enter the administrator account password when prompted, and press Return.
8. Type: `sudo rm ~<shortname>/Library/Preferences/com.apple.desktop.plist`
Note: Replace "<shortname>" with the short name of the affected user who selected the custom picture.
9. Press Return.

The user should now be able to login.

The following steps prevent users from accessing the Desktop preference pane and changing their Desktop Picture.

1. Open Workgroup Manager.
2. Choose View > Preferences.
3. Click the Users, Groups, or Computers tab.
4. Be sure a user, group, or computer list is selected.
5. Click the System Preferences icon.
6. For "Manage these settings", select the Always option.
7. Deselect the checkbox for the Display preference pane.
8. Click the Apply Now button.

Note: A user still can manually edit the ~/Library/Preferences/com.apple.desktop.plist file, causing the same issue.

This document will be updated when more information becomes available.

For related information, see technical document 107659, "**Workgroup Manager: How to Allow Use of Unbundled Applications**".
Published Date: Oct 7, 2016

Energy Saver: How to Use the "Wake for administrator access" Feature

There are several ways to remotely wake a computer from sleep when the "Wake for network administrator access" option is selected in Energy Saver. Applicable routers must be configured to allow directed broadcast of the wake-on-LAN (WOL) packet, also known as a "magic packet". This article has been archived and is no longer updated by Apple.
Note: To wake a remote computer, any intervening router must be configured to allow directed broadcast. If you need help configuring a router, see documentation provided by the router manufacturer.

To remotely wake an eligible computer from sleep, use one of these applications:

Apple Remote Desktop
http://www.apple.com/remotedesktop/

Wake550, by Five Fifty Software
http://www.tc.umn.edu/~olve0003/wake550.html
For additional information, see technical document 25414, "**Mac OS X: 'Wake for Network Administrator Access' Option Is For Ethernet Only**".

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Feb 20, 2012

Xserve RAID: Link and Activity Lights May Not Be Active Immediately After AC Power Interruption

After an AC power interruption, some indicator lights on the front panel may remain off for a while. The Xserve RAID otherwise works normally, and the lights eventually come back on.
This article has been archived and is no longer updated by Apple.

Symptom

Though the Xserve RAID is otherwise working normally, you see these symptoms:

- The fibre link channel lights are not on.
- The host channel activity lights are not on.
- The RAID Admin application reports "Controller not ready".

Solution

If the Xserve RAID has the optional Cache Battery Backup Modules, this may occur after an unplanned AC power interruption. You should not see these symptoms if you use the RAID Admin application to shut down prior to turning AC power on and off.

These symptoms do not indicate that anything is wrong with your system. If the RAID otherwise appears to be working normally, you should continue to use it. The lights should return to their normal behavior after a period of use.

This document will be updated when more information is available.
Published Date: Feb 19, 2012

Mac OS X Server 10.2, 10.3: Password authentication options for networked environments

Mac OS X 10.2 and later support a variety of popular standards-based authentication protocols. Here's an overview.
This article has been archived and is no longer updated by Apple.
Note: For information on Mac OS X Server 10.3 or later, please see the "User Authentication With Open Directory" section of the Open Directory pdf available at the **Apple Server Documentation** page. The remainder of this document describes version 10.2.

"Authentication" verifies a user's identity. It ensures an individual is who she claims to be. Mac OS X 10.2 supports popular standards-based authentication protocols to ensure that only valid, sanctioned users can access the services on your network.

Mac OS X 10.2 provides four distinct password options for network administrators to authenticate network users:

- Open Directory
- Password Server
- Kerberos
- NetInfo

Review these descriptions of Mac OS X 10.2 password authentication options to assist in making the proper decisions for your networks. Regardless of which method you choose, remember to also consider these other standard security practices.

Open Directory

Open Directory is Apple's open-source, standards-based directory system. It provides the flexibility to work with popular password authentication standards. Mac OS X 10.2 client and server use Open Directory in all user-group and authentication interactions.

Open Directory can work with a wide range of directory systems, and the password management options vary along with the directories configured by the network administrators. For example, if Open Directory is configured to work with an LDAP server, then the password verification and security is dependent on the LDAP server.

Note: Use caution when choosing a non-Apple directory service. Authentication standards and quality may vary according to the capabilities and configuration of the directory system.

Password Server

Password Server is a Simple Authentication and Security Layer (SASL) based password management system. You can give users a single user name and password combination for accessing all authorized resources on the network. Password Server also works with Workgroup Manager to help you set up and manage password policies, such as:

- Forcing users to change passwords the next time they log in.
- Expiring user accounts after a certain date.
- Enforcing minimum password lengths.
- Disabling inactive accounts after a period of no use.

Client-side Password Server software was added in Mac OS X 10.2. All services in Mac OS X 10.2 Server take complete advantage of it. For added security, Password Server does not transmit the password over the network; it simply indicates whether a given user name and password pair is correct. With the Password Server there is no encrypted hash stored in the user record. Rather, password verification is done via a secure network connection to the Password Server, which is set up and configured by a network administrator. Access to the password hash database is very restricted; it is protected even from remote network administrators. Password Server logs all network activity and provides implementation of "best practices" for password management and security. For a full discussion of the Password Server, see the Mac OS X 10.2 Server Administration Guide.

Kerberos

Kerberos is a popular authentication system that Mac OS X 10.2 can fully support as its primary authentication system. Full implementation of MIT Kerberos client authentication services enables single user sign-on to all authorized systems and network services. Mac OS X 10.2 users can access networks secured by Kerberos v4 and v5 servers and appreciate the benefits of Kerberized applications such as Mail, FTP, Telnet, and the AFP (Apple Filing Protocol) client.

If you have an established Kerberos site, you should consider using Mac OS X 10.2 with Kerberos as a password management alternative. Instructions for configuring Mac OS X 10.2 desktop and server can be found at the AppleCare website (http://www.apple.com/support/) and in Mac OS X 10.2 Server documentation.

NetInfo

Every Mac OS X computer has a local directory domain called NetInfo. Only local applications and system software can access administrative data for this local domain. It is the first domain consulted when a user logs in or performs some other operation that requires data stored in a directory domain.

When the user logs in to a Mac OS X 10.2 computer, Open Directory searches the computer's NetInfo database for the user's record. If NetInfo contains the user's record (and the user typed the correct password), the login process proceeds, giving the user access to the computer. This is the default behavior, but it can be changed by specifying an alternate search path in the Directory Access application.

User records are encrypted in the NetInfo database by using the UNIX crypt() function. Anyone with access to the system can access this encrypted data, so you should beware of potential exploit by experienced individuals. The encrypted data is most commonly viewed using one of four tools. It is advisable to change the permissions on these tools so that they are only executable by root and admin groups. This will limit the security exposure these password storage techniques represent. The four tools are:

- NetInfo Manager (Applications/Utilities)
- nidump (/usr/bin/nidump)
- nicl (/usr/bin/nicl)
- niutil (/usr/bin/niutil)

Additionally, Mac OS X 10.2 should be configured to prevent users from installing new software. This prevents someone from installing their own copy of these or equivalent tools.

Most importantly, administrators should encourage users to choose secure passwords. Administrators can assign passwords and prevent users from changing them by removing "_writers_password" properties in the NetInfo database.

Note: Local password hash form of password management is the required method for local user accounts and backwards compatibility with Mac OS 10.1

Standard Security Practices

Regardless of which authentication method you use, consider these additional security practices:

- Keep the server physically secured.
- Only allow trusted users with an administrator account access to the server.
- Use Open Firmware Password Security.
- Choose secure passwords.
- Remember that any local administrator account on the server can access the root account. Local administrator account and root account access provides opportunity for exploits that, depending on configuration, may not be available to remote users and administrators. This includes the ability to discover encrypted password hash.

Related documents

106290: **Mac OS X: About the root User and How to Enable It**
106482: **Mac OS X 10.1: How to Set Up Open Firmware Password Protection**"
106521: **Mac OS X: How to Choose Secure Passwords**
Published Date: Oct 7, 2016

AirPort 3.0.4 for Mac OS X 10.1.5: Contains Some Version 2.0.8 Components

AirPort 3.0.4 software for Mac OS X 10.1.5 includes both versions 3.0.4 and 2.0.8; this is normal.
This article has been archived and is no longer updated by Apple.

Symptom

After you download the AirPort 3.0.4 software, you see that:

- The unopened disk image file is named "AirPort 30410.1.5.dmg".
- The opened (mounted) disk image volume is named "AirPort 2.0.8".
- Included documentation references 3.0 software.
- The update includes version 2.0.8 of the AirPort Admin Utility and AirPort Setup Assistant.

Solution

AirPort 3.0.4 for Mac OS X 10.1.5 is a software group that coincides with the release of the 3.0.4 group for Mac OS X 10.2. The 2.0.8 components included with this update are the latest and most appropriate versions for Mac OS X 10.1.5.
Published Date: Feb 20, 2012

Workgroup Manager: Sharing Button Is Dimmed

The Sharing button may be dimmed if you do not use correct upper and lower case letters when logging in.

This article has been archived and is no longer updated by Apple.

Symptom

The Sharing button is dimmed in Workgroup Manager.

Solution

When you log in, use the same letter case for your user name that was used when your account was created.

Published Date: Feb 20, 2012

Mac OS X Server: About starting and stopping web service with the apachectl script

You should be aware of certain behaviors, described below, when using the apachectl script to stop and start Web service.
This article has been archived and is no longer updated by Apple.
The default way to start and stop Apache on Mac OS X Server is to use the Web module of Server Settings. When you start Web service using Server Settings, the Watchdog startup item starts several processes, including one named serversettingsd, which is part of Server Settings. The serversettingsd process includes several plugins, including one for Apache. The Apache plugin checks the #AutoStartServer pseudo-comment in /etc/httpd/httpd_macosxserver.conf; if it's set to On, it raises the soft process limit and does "apachectl start".

If you want to use the apachectl script to start and stop Web service instead of using Server Settings, be aware of the following behaviors:

- The Web performance cache is on by default. When Web service starts, both the main Web service process (httpd) and a webperfcache process start. (The webperfcache process serves static content from a memory cache and relays requests to httpd when necessary.) The apachectl script that comes with Mac OS X Server is unaware of webperfcache. So if you have not stopped the performance cache, you also need to use the webperfcachectl script to start and stop webperfcache.
- The apachectl script does not increase the soft process limit beyond the default of 100. Server Settings raises this limit when it starts Apache. If your Web server receives a lot of traffic and relies on CGI scripts, Web service may not work when it reaches the soft process limit. In this case, you can start Web service using Server Settings, which sets the soft process limit to 2048. Alternatively, you can type "ulimit -u 2048" before using apachectl.
- The apachectl script does not start Apache automatically whenever the server restarts. To make sure that Web service is on after startup, use Server Settings. This behavior differs on a Mac OS X computer, where an Apache Startup Item is used in conjunction with a flag in the /etc/hostconfig file. (If you install a Software Update, it may contain content intended only for a Mac OS X computer, a harmless side effect as long as you don't add the flag to /etc/hostconfig that uses that content.)

Published Date: Feb 17, 2012

Mac OS X Managed Client: Can add printer, but can‘t print to it

This article has been archived and is no longer updated by Apple.

Sometimes managed clients can add a printer, but then they cannot print to it. Here's the specific sequence of events:

- You select Always as the management setting for Printer preferences, and "Allow user to add printers to the printer list."
- Users can add printers to the printer list in Print Center.
- However, the newly added printers don't appear in the list of available printers when a user tries to print a document.

The issue affects these products:

- Mac OS X Server 10.2 or later
- Workgroup Manager
- Mac OS X 10.2 and 10.3 managed clients

Solution

Users of Mac OS X managed client computers can add printers in Print Center, but a user-added printer does not appear in the Print sheet of any application, unless the printer is connected directly to the client computer's USB port.

In Workgroup Manager, an administrator can make additional printers available to specific users, groups, or lists of computers using the Printer List pane of Printer preferences.

Note: If "Allow user to add printers to printer list" is not selected, an administrator password is required to add or remove printers in Print Center.

Published Date: Feb 17, 2012

Mac OS X Server: Each User Connection Counts Against Server License Limit

A client computer may simultaneously connect to the server via Apple Filing Protocol (AFP) as two or more unique users. Each AFP user connection counts against the user limit allowed by the server license agreement.
This article has been archived and is no longer updated by Apple.

Symptom

In Server Status, multiple user accounts appear connected from a single client computer.

Note: Only AFP connections count against the AFP user limit in the Mac OS X Server license.

Solution

Whether this occurs depends on how you have the server and user accounts configured.

For example, a user that has a network home directory and is also a member of a group with an automounted share point on the same server makes two connections. The computer connects to the home directory with the user's own user ID (UID), and the group share point using a Guest ID. Each connection appears separately in Server Status (10.2.8 and earlier) or Server Admin (10.3 and later), and both connections will count against the AFP user limit in the Mac OS X Server license.

In Mac OS X Server 10.0.3 to 10.2.8 this is correct behavior.But in Mac OS X Server 10.3, the Apple File Server should only count a single connection against the license for each computer that uses automounts. However, you must update to Mac OS X Server 10.3.3 or later for the correct behavior.
Published Date: Oct 7, 2016

Xserve: How To Rename a Hard Disk Remotely

This document explains how to remotely rename a hard disk on an Xserve with Mac OS X Server 10.2.
This article has been archived and is no longer updated by Apple.
The Xserve can be configured with as many as four Apple Drive Modules. The drives in bays 2, 3 and 4 have similar default names. To rename these disks via a remote connection, use the disktool command during an ssh session. In the steps below, each command you must type is preceded by the number sign (#). Press Return after each command to execute it. Follow these steps:

1. At the remote computer, open Terminal (/Applications/Utilities/).

2. Execute this command:

```
# ssh <server_address>
```

Note: Replace "<server_address>" with the server's actual IP address or DNS name. When prompted to authenticate, use an administrator account of the server. You may or may not receive an RSA key warning.

3. Execute this command to see a list of hard disks:

```
# disktool -l
```

The terminal output will contain entries similar to the following, but your disk numbers may differ. "Unrecognized disk" entries are normal in this output. Example output:

***Disk Appeared ('disk0s10',Mountpoint = '/', fsType = 'hfs', volName = 'Jaguar')
***Disk Appeared ('disk1s2',Mountpoint = '/ServerHD', fsType = 'hfs', volName = 'ServerHD')
***Disk Appeared ('disk2s2',Mountpoint = '/ServerHD 1', fsType = 'hfs', volName = 'ServerHD')

4. Use this command to rename a hard disk with the new name.

```
# disktool -n disk1s2 new_name
```

This command renames the designated hard disk (disk1s2) from the list above to the value "new_name". Replace "new_name" with the actual new name of your choice. If the new name contains a space, enclose it in quotation marks, like this:

```
disktool -n disk1s2 "My Disk"
```

For disks 3 and 4, simply change the target drive in the command (to "disk2s2", for example).

Published Date: Oct 7, 2016

Apple Remote Desktop 1.2: "Old Version" or "Access Denied" When Network Assistant 3 Clients Present on Network

Client status for all computers may be reported incorrectly if Network Assistant 3 clients are present on the network after updating to Apple Remote Desktop 1.2.

This article has been archived and is no longer updated by Apple.

Symptom

Client status is reported incorrectly. Clients report either of these messages:

"Old Version"
"Access Denied"

This happens when using the Remote Desktop 1.2 application with Network Assistant 3 clients present on the network.

Solution

Update to Apple Remote Desktop 1.2.4 or later.

Published Date: Oct 7, 2016

Macintosh Manager 2: Home Directory Is Not Created When Logging In With Administrator Password

When you log in using an administrator account password, the account's home directory is not created.
This article has been archived and is no longer updated by Apple.

Symptom

When you log in using an administrator account password, the account's home directory is not created. This message also appears:

> "Your documents can't be accessed at this time. (Unknown problem #-120.)"

Figure 1 Problem #-120 alert

Note: If offline access is not enabled, the alert message will not include the offline information.

When offline access is allowed, and the user chooses not to work offline, you aren't able to log in using a different account on this computer. When you try to log in using a different account, you see the message in Figure 1.

Solution

Either log in using the account's actual password, or use the createhomedir command on the server to create the home directory for this account before logging in. See technical document 107245, "**Mac OS X Server: How to Use createhomedir Command to Create Home Directories**" for more information on the createhomedir command.

If you can't log in using any other accounts, try either of the following:

- Restart the client computer.
- Log in using an account that already has a home directory, then choose to work offline. This user may immediately log out and back in to log in successfully.

Published Date: Feb 17, 2012

Mac OS X 10.2: Troubleshooting FTP Connection Issues

This document explains what do to if you have issues making an FTP connection using the Finder's Connect to Server command.

This article has been archived and is no longer updated by Apple.

Symptom

- A window named "Volumes" appears, but the actual server volume does not appear.
- There is no alert if you type the wrong server name, volume name, user name, or password.
- The Console utility displays messages like these:

  execstring: /System/Library/Filesystems/ftp.fs/csmount -m /Volumes/doesnotexist.apple.com ftp://doesnotexist.apple.com/ no worky! domain:1, error1
  2003-05-01 14:13:35.390 csmount[869] CFLog (20): Authentication: Enter username and password no worky! domain:1, error1

  or:

  execstring: /System/Library/Filesystems/ftp.fs/csmount -m /Volumes/doesnotexist.apple.com ftp://doesnotexist.apple.com/ no worky! domain:1, error61
  2003-05-01 14:13:35.390 csmount[869] CFLog (20): Authentication: Enter username and password

  Note: In this latter case, if FTP services are unavailable but the computer is reachable, the "connecting to server" message appears indefinitely. The computer is still usable during this time.

Solution

There can be multiple reasons for these symptoms.

- You did not enter the correct user name, password, server name, or volume name.
- The server is unreachable.
- The server is reachable, but FTP services are unavailable.

To test whether the server is reachable at all, enter the server's DNS name or IP address in the ping field of Network Utility (/Applications/Utilities/).

Next, carefully retype the server name or address, user name, password. If that does not work, try using a third-party FTP application instead of the Finder. If that does not work, be sure the server is properly configured.

Published Date: Oct 7, 2016

PowerBook G4 (867 MHz / 1 GHz): Audio Distortion When Playing DVD Movies in Mac OS 9

You may hear noises described as popping and clicking while playing DVD movies in Mac OS 9.
This article has been archived and is no longer updated by Apple.

Symptom

You hear audio distortions, such as popping and clicking, while playing DVDs in Mac OS 9.

Solution

Turn on virtual memory. Follow these steps:

1. Open the Memory control panel
2. Click On.
3. Restart the computer.

Note: Virtual Memory cannot be used on computers that have 1 GB of physical memory (RAM) installed.
Published Date: Oct 7, 2016

Xserve RAID, Apple Fibre Channel PCI Card: Initial Link to a Vixel Fibre Channel Switch Is Uncertain

The Vixel 315 and 335 Fibre Channel Switches do not auto-negotiate speed well with the Apple Fibre Channel PCI Card and the Xserve RAID.
This article has been archived and is no longer updated by Apple.

Symptom

You see:

- an amber light on the affected port of the Apple Fibre Channel PCI Card
- an amber link light on the Vixel 335 port
- an amber link light on the Vixel 315 port
- no fibre channel link light on the controller of the Xserve RAID

Solution

Set the speed for Xserve RAID to 1 Gbit or 2 Gbit, depending on what other devices are connected to the Vixel switch. Follow these steps:

1. Open the RAID Admin Utility.
2. Select the Xserve RAID.
3. Select Settings.
4. Select Fibre Channel.
5. Set Speed to 1 Gbit or 2 Gbit as appropriate for other devices on the Vixel 315 or 335 switch
6. Set topology to Point to Point

Now you should be able to unplug and reconnect the Apple Fibre Channel PCI Card connector in the Vixel switch until it establishes a link.

This document will be updated as more information becomes available.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Feb 19, 2012

Using RAID Admin with other operating systems

The RAID Admin application included with Xserve RAID can be used with operating systems other than Mac OS, such as Microsoft Windows, Linux, or UNIX.

This article has been archived and is no longer updated by Apple.

You can use RAID Admin on any computer that uses Java 1.3.1 or later. On non-Macintosh computers, note that the admin.app folder is not recognized as an application as it is in Mac OS X or Mac OS X Server. To use the application, follow these steps:

1. Copy the RAID Admin folder from the installation CD to a directory of your choice.
2. Execute the RAID_Admin.jar file, found in the relative path outlined here:

   For RAID Admin 1.2.x and earlier:
   `/RAID Admin/RAID Admin.app/Contents/Resources/Java/RAID_Admin.jar`

   For RAID Admin 1.3 and later:
   `/RAID Admin 1.3.x/RAID_Admin.jar`

Apple recommends that all customers use the latest version of RAID Admin and the accompanying firmware. The latest version of RAID Admin can be downloaded as a Disk Image, a tar file or a zip file from the software downloads section of the Apple Support site.

Also see third-party qualification information for Xserve RAID.

Published Date: Feb 17, 2012

Mac OS X Managed Client: Items in the Dock Do Not Work, or Display a Question Mark (?)

If you choose the wrong location for a managed client Dock item, the item may appear as a question mark (?) in the Dock, or the item may not work.

This article has been archived and is no longer updated by Apple.

Symptom

An item in the Dock does not work, or it appears as a question mark (?), instead of as its normal icon.

Solution

When adding items for the Dock, the full pathname of the item is written. If the administration computer at which you are using Workgroup Manager has that item in a different path than at the client computers, the Dock item may not work. Administration computers should have software or other target files installed in the same location as on managed client computers.

Published Date: Oct 7, 2016

Mac OS X Server 10.2: Cannot Start the NetBoot Server From Server Settings

You may encounter a situation in which Server Settings reports DHCP/NetBoot is not running, and it will not start. This document explains what to do.
This article has been archived and is no longer updated by Apple.

Symptom

- Server Settings reports DHCP/NetBoot is not running, and it will not start.
- Server Status reports DHCP/NetBoot is running.

Solution

When the DHCP/NetBoot service will not start in Server Settings, yet Server Status reports the service is running, check the contents of /etc/xinetd.d/bootps to verify it looks like this:

```
service bootps
{
        disable = no
        socket_type     = dgram
        wait            = yes
        user            = root
        server          = /usr/libexec/bootpd
        groups          = yes
        flags           = REUSE
}
```

If the file is empty (or if the file size is 0), then edit the existing bootps file to look like the example above. Quit and reopen Server Settings, and it should now report the correct status.

Note: You may edit the bootps file in a text editor of your choice. If you are not familiar with editing such files, one method is described in technical document 106619, "**Mac OS X Server: How to Locate and Edit Configuration Files**".
Published Date: Oct 7, 2016

Mac OS X Server 10.2: How to Add Apple Remote Desktop to a Network Install Image

This document explains how to add Apple Remote Desktop administration or client software to a Network Install image.
This article has been archived and is no longer updated by Apple.
Follow the steps below to add Remote Desktop administration or client software to a Network Install image. These steps are written for a version 10.2 installation. If installing version 10.1 then be sure to use the 10.1 pref package in place of the 10.2 pref package in step 7.

1. On the NetBoot Server, log in with the root account. If you need help, see technical document 106290, "**Mac OS X: About the root User and How to Enable It**".

2. In Server Settings, stop the NetBoot/DHCP Service (be sure no NetBoot clients are online).

3. Navigate in the Finder to your Network Install image:

```
/Library/NetBoot/NetBootSPx/<image name>.nbi/<image name>.dmg
```

4. Select the image, and choose File > Get Info.

5. Unlock the image, and close the Info window.

6. Double-click the disk image file to mount it.

7. Copy the following files to the Packages folder in the mounted image (/System/Installation/Packages):

```
RDClient.pkg
RDDocs.pkg
RDPref10_2.pkg
RDAdmin.pkg (optional administration software)
```

8. Control-click the OSInstall.mpkg file in the mounted image (/System/Installation/Packages), and choose Show Package Contents from the shortcut menu that appears.

9. Open the Contents folder (inside OSInstall.mpkg), then open the file Info.plist that you find there, using a text editing application of your choice.

10. Copy and paste one of the existing entries, which take this form:

```
<dict>
    <key>ExampleKeyOne</key>
    <string>example1.pkg</string>
    <key>ExampleKeyTwo</key>
    <string>example_value</string>
</dict>
```

11. Change the value of the IFPkgFlagPackageLocation key to the name of the first package you put in the Packages folder in step 7.

Note: The value is the text between the "string" tags.

12. Change the value of the IFPkgFlagPackageSelection key to "required" or "selected". For example:

```
<dict>
    <key>IFPkgFlagPackageLocation</key>
    <string>RDClient.pkg</string>
    <key>IFPkgFlagPackageSelection</key>
    <string>required</string>
</dict>
```

13. Repeat steps 10 through 12 for each additional package copied in step 7.

14. (Optional) Open the file NBImageInfo.plist (in /Library/NetBoot/NetBootSPx/<image name>.nbi/). Change the value of the Name key to what you would like to appear when selecting a Startup Disk. For example:

```
    <key>Name</key>
```

```
        <string>10.2 + ARD 1.2</string>
```

15. Put away the image.

16. In Server Settings, enable the image (if the image does not appear under the Images tab, quit and reopen Server Settings).

17. Start the NetBoot/DHCP service.

See also page 548 of the 10.2.3 Server Admin Guide for more information on adding packages to a Network Install image, or to technical document 107356, "**Mac OS X Server: How to Add Packages to an OS Install Image**".

Important software license information

In accordance with the Network Install and Mac OS X Server software license agreements, you may use the software in this manner as long as you ensure that each end user of the image files is aware of and complies with the terms of the software license(s) that governs the use of the software contained within the image files. The Network Install and Mac OS X Server software may be used to install and reproduce materials so long as your use is limited to reproduction of non-copyrighted materials, materials in which you own the copyright, or materials you are authorized or legally permitted to reproduce.
Published Date: Oct 7, 2016

Mac OS X Server 10.2: Where to Find the Serial Number

The Mac OS X Server serial number may be found on either the CD sleeve or on a separate sheet in the documentation packet. It is not always on the CD sleeve, as suggested by the Setup Assistant.

This article has been archived and is no longer updated by Apple.

The Mac OS X Server Setup Assistant indicates that the Software Serial Number can be found on the paper sleeve that contained the installation disc. It says:

> "The Software Serial Number is located on the CD envelope"

This is not always the case. The serial number may also be found ona full size sheet of paper that is included in the documentation packet.

Published Date: Feb 17, 2012

Open Firmware: Password Not Recognized When Using Keyboard Layout Other Than U.S.

If you created a password in the Open Firmware Password application while using a keyboard layout other than U.S., your password may not be recognized during the startup process (when you try to access Startup Manager, for example).

This article has been archived and is no longer updated by Apple.

Symptom

Your Open Firmware password is not recognized during startup.

Solution

This issue occurs because keyboard layout mapping is not available early in the startup process. This means your keyboard input is treated as if it were a U.S. keyboard.

Use one of these two workarounds:

1. At the password prompt during startup, type your password as if you had a U.S. (QWERTY) keyboard, **or**

2. Change the keyboard layout to U.S. prior to creating your password in the Open Firmware Password application, but type your password as if you were using a localized keyboard layout.

Either of these workarounds will have the effect of "reverse mapping" your password, so that it is recognized.

Published Date: Oct 7, 2016

Mac OS X: Sendmail Does Not Start

Certain privilege settings that make Mac OS X easier to use can cause the sendmail process not to run properly.
This article has been archived and is no longer updated by Apple.

Symptom

The sendmail process cannot start. The system.log file contains an entry similar to this:

```
sendmail[1195]: NOQUEUE: SYSERR(root): /etc/mail/sendmail.cf: line 93: fileclass: cannot open
'/etc/mail/local-host-names': Group writable directory
```

Note: The Mail application does not require sendmail, which is turned off by default. If you don't know what sendmail is, you probably don't need it and should not be affected by this issue.

Solution

Sendmail requires alternate permissions for the root directory (/).

1. In Terminal, execute this command:

```
sudo chmod g-w /
```

2. Restart the computer.

Note: You may have to repeat these steps after installing software or repairing privileges on the startup volume.
Published Date: Oct 7, 2016

Mac OS X Server: How to Avoid Sending Clear Passwords in a Kerberos Environment With LDAPv3

To avoid sending clear text passwords over the network, turn off LDAP bind authentication when using Kerberos login authentication.
This article has been archived and is no longer updated by Apple.
When using a Kerberos login and integration with an LDAPv3 server, a account password may be sent in clear text format. When the authentication authority attribute is not set, Login Window tries to authenticate the account to the configured LDAP server. After trying to authenticate the user with an encrypted password, Login Window falls back to trying a simple bind on the server. This simple bind transmits the account password in clear text.

To prevent this, map the AuthenticationAuthority attribute to an existing non-null attribute in your LDAP server. Which attribute you map it to is not important as long as that attribute is not null and exists in the directory. Do not use a static map entry. This may keep the Login Window from completing the login process and you may need to restart the computer.

To update your configuration, follow these steps at each client computer:

1. Open Directory Access (/Applications/Utilities/).
2. Click the lock button to authenticate.
3. Select LDAPv3.
4. Click the Configure button.
5. Click the Search and Mappings tab.
6. Select the Users record entry.
7. Click the triangle to expose the configured attributes.
8. Click the Add button.
9. Select the Attributes Types.
10. Scroll down and select AuthenticationAuthority from the list. See Figure 1.

Figure 1

11. Click OK.
12. With AuthenticationAuthority selected, click the Add button on the "Map to in list" window (right side of screen).
13. Type in an existing Attribute to map the AuthenticationAuthority to. In Figure 2, it is mapped to loginshell.

Figure 2

14. Click OK to save the configuration.
15. Click OK again to close configuration entries screen.
16. Quit Directory Access.
17. The changes will propagate in approximately two to three minutes, but you can restart the computer to immediately test the new configuration

System Requirements

- Mac OS X 10.2 and later
- Mac OS X 10.2 Server and later

Note: When using LDAP, you should use it with SSL to reduce risk of other data security issues.
Published Date: Oct 7, 2016

Mac OS X 10.2: Web Sharing Uses Default Configuration After Software Update

Mac OS X 10.2.4 and later include an updated "httpd.conf" file as part of a larger Rendezvous update.
This article has been archived and is no longer updated by Apple.

Symptom

Personal Web Sharing operates in its default state after a software update.

Note: You should not encounter this issue if you did not use the 10.2.4 Update specifically. Example: If you updated from 10.2.3 to 10.2.6 by using the Mac OS X 10.2.6 "combo" update, then you should not have this issue.

Solution

The previous http.conf file that you customized is saved by the Installer and renamed to "httpd.conf.applesaved". By renaming the files, you may put the customized file back into service.

1. Turn off Personal Web Sharing.
2. Open Terminal (/Applications/Utilities/).
3. Type: `sudo mv /etc/httpd/httpd.conf /etc/httpd/httpd.conf.rendezvous`
4. Press Return.
5. Type the password for your administrator account when prompted, and press Return.
6. Type: `sudo mv /etc/httpd/httpd.conf.applesaved /etc/httpd/httpd.conf`
7. Turn on Personal Web Sharing.

Additional information

When using the previous file, Rendezvous will not have features that require the updated file. The steps above saved the updated file as "httpd.conf.rendezvous". This is so that you may customize the new file and put it back into service at a later date.

Mac OS X 10.2.5 and later updates have a different installation method for the new httpd.conf file. The Installer checks to see if you have modified the existing httpd.conf file. If you have not, then it automatically replaces it with the new version. If you have modified it, then your modified file is left in place, and the new file is written as /etc/httpd/httpd.conf.default. At your leisure, you should add your modifications to the new file and retire the old one.
Published Date: Oct 7, 2016

Mac OS X 10.2 cannot connect to file sharing over Ethernet when AirPort is the primary interface

You may not be able to make an Apple Filing Protocol (AFP) connection, such as Personal File Sharing, over wired Ethernet if AirPort is your preferred network port.
This article has been archived and is no longer updated by Apple.
This occurs when you're using Mac OS X 10.2 to 10.2.8 and these three conditions are met:

- Built-in Ethernet is configured via DHCP.
- AirPort is the preferred configuration (listed first) in the Network Port Configurations list.
- You get a local-link (169.254.x.x) IP address.

Use one of these workarounds in Network preferences:

Manually enter a valid IP configuration for the Built-in Ethernet port.

Or

Drag the Built-in Ethernet port to the top of the Network Port Configurations list.
Published Date: Oct 7, 2016

Mac OS X: How to Set Up NetInfo Binding

This document explains how to connect, or bind, a Mac OS X computer to a NetInfo server. Users' home directories may be provided via NetInfo, for example.
This article has been archived and is no longer updated by Apple.
You can configure NetInfo binding by using the Directory Access application (or Directory Setup prior to v10.2). Follow these steps:

1. Open Directory Access (/Applications/Utilities/).
2. If necessary, click the Lock button to authenticate.
3. Click the Services tab.
4. Select NetInfo in the list of services, then click Configure.
5. Select the binding protocols that you want the computer to use (broadcast, DHCP, or specific server). If you use the specific server option, enter the IP address of the parent server in the Server Address field, and the parent domain's NetInfo tag in the Server Tag field.
6. Click OK, then click Apply.
7. Restart the computer.

If the client computer is set to log in automatically with a specific account, then log out to log back in as a NetInfo User. You may need to set the client login option for name and password entry.

Additional information

A Mac OS X computer can bind to a shared NetInfo domain by using any combination of three protocols: static, broadcast, or DHCP. If you configure a computer to use multiple binding protocols and a parent is not located with one protocol, another one is used. The protocols are used in this order: static, DHCP, broadcast.

- With static binding, you specify the address and NetInfo tag of the shared NetInfo domain. This is most commonly used when the shared domain's computer is not on the same IP subnet as the computer that needs to access it.
- With DHCP binding, a DHCP server automatically supplies the address and NetInfo tag of the shared NetInfo domain. To use DHCP binding, the DHCP server must be configured to supply a NetInfo parent's address and tag.
- With broadcast binding, the computer locates a shared NetInfo domain by sending out an IP broadcast request. The computer hosting the shared domain responds with its address and tag. For broadcast binding:
  - Both computers must be on the same IP subnet or on a network that is configured for IP broadcast forwarding.
  - The parent domain must have the NetInfo tag "network".
  - The parent domain must have a machine record for each of its child domains.

Note: This information can be found beginning on page 106 of the Mac OS X Server Administrator's Guide. Please see the guide for additional related information. You may download it from Knowledge Base document 120174, "**Mac OS X Server Admin Guide for Mac OS X 10.2.3: Manual**".
Published Date: Feb 17, 2012

Bluetooth: How to Set Up a Microsoft Bluetooth Mouse

This document describes how to set up a Microsoft Bluetooth Mouse with Mac OS X 10.2.6 or later.

This article has been archived and is no longer updated by Apple.

Important: Before starting, be sure you have updated to Mac OS X 10.2.6 or later. If your Macintosh does not have built-in Bluetooth hardware, connect a USB Bluetooth adapter to one of the USB ports on the computer. If your computer came with a wired mouse, keep it connected until setup of the new Bluetooth mouse is complete. After setup is complete, you can disconnect the wired mouse.

Follow these steps:

1. Open the Bluetooth Setup Assistant (/Applications/Utilities/).
2. Click Continue.
3. At the Select Device Type panel, select Mouse. Do not click Continue yet.
4. Press the Connect/Channel button located on the underside of the Bluetooth mouse.

Note: This button is located next to the battery compartment on recent models.

5. Click Continue. Microsoft Mouse should appear in the device list of the Search pane.

Note: If your mouse is not listed in the Search pane, try pressing the button on the underside of the mouse again, then click the Go Back button in the Setup Assistant, and click Continue to reinitiate the search. If the mouse is still not listed, be sure that you have installed working batteries in the mouse. The light on the underside of the mouse should light when you click a mouse button. See the documentation that came with the mouse for more information.

6. Select the mouse in the Setup Assistant listing, then click Continue. The assistant tries to pair with the mouse.
7. Once the assistant indicates that the computer and mouse have successfully paired, click Continue.
8. The setup should be complete. Click the Quit button to exit setup.

You should now be able to use the Bluetooth mouse.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.

Published Date: Feb 18, 2012

Bluetooth: How to Set Up a Microsoft Bluetooth Keyboard

This document describes how to set up a Microsoft Bluetooth Keyboard with Mac OS X 10.2.6 or later.

This article has been archived and is no longer updated by Apple.

Important: Before starting, be sure that you have updated to Mac OS X 10.2.6 or later. If your Macintosh does not have built-in Bluetooth hardware, connect a USB Bluetooth adapter to one of the USB ports on the computer. If your computer came with a wired USB keyboard, keep it connected until setup of the new Bluetooth keyboard is complete. After setup is complete, you can disconnect the wired keyboard.

Follow these steps:

1. Open the Bluetooth Setup Assistant (/Applications/Utilities/).
2. Click Continue.
3. At the Select Device Type panel, select Keyboard. Do not click Continue yet.
4. Press the Connect/Channel button located on the underside of the keyboard.

Note: On recent models this button is located near one of the keyboard feet.

5. Click Continue in the Setup Assistant to go to the Search pane. Microsoft Keyboard should appear in the device list of the Search pane.

Note: If your Keyboard is not listed in the search pane, try pressing the button on the underside of the keyboard again. Then click the Go Back button in the Setup Assistant to back up one pane, and click Continue to re-initiate the search. If the Keyboard is still not listed, make sure that you have installed working batteries in your keyboard. See the documentation that came with your keyboard for more information.

6. Select the keyboard from the listing, and click Continue to advance to the next setup screen.
7. You will be prompted to enter a passkey. Using the wired keyboard, type a number between one and nine digits into the passkey field of the assistant, then click Continue.
8. You will then be prompted to enter the same passkey again, this time using the Bluetooth keyboard. Type it, then press enter.
9. The setup should be complete. Select the Quit Button in the Setup Assistant to exit setup.

You should now be able to use the Bluetooth keyboard.

Tip: If you do not have a wired keyboard connected but do have a working mouse, you can use the KeyCaps application to input the passkey in step 7. Open KeyCaps and click the keys represented in the KeyCaps application with your mouse. Select the text in the KeyCaps field, then copy and paste it into the passkey field of the Bluetooth Setup Assistant.

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Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.

Published Date: Feb 18, 2012

Mac OS X Server 10.2: Server Status Does Not Display LDAP Log

By default slapd.log does not exist, and syslogd does not redirect LDAP logging data to /var/log/slapd.log.
This article has been archived and is no longer updated by Apple.

Symptom

There is no data available when you try to locate the LDAP log in Server Status.

Solution

Important: This procedure requires restarting the server, so it is best performed during off-peak hours. Some LDAP clients, including Mac OS X and Mac OS X Server computers, may not reconnect until you restart them.

1. Open Terminal (/Applications/Utilities/).
2. Type: `sudo touch /var/log/slapd.log`
3. Press Return.
4. Type your administrator account password when prompted, and press Return.
5. Type: `sudo pico /etc/syslog.conf`
6. Press Return.
7. Add the following line to the end of the syslog.conf file, creating the space with the Tab key:

```
LOCAL4.*    /var/log/slapd.log
```

Note: In the line above, four tabs are used. The exact number of tabs does not matter, so long as they are tabs and not spaces. This is an aesthetic choice. You may use only one tab, or use the number of tabs required to align the text with adjacent lines.

8. Press Control-X, then press Y to confirm.
9. Press Return. This will save the data to the syslog.conf file.
10. Restart the server.

When you log into Server Status, you should now see the LDAP log information.
Published Date: Feb 17, 2012

Mac OS X Server 10.2.8 or Earlier: How to Prevent One File From Being Simultaneously Modified by Two Users

Two users connected to the server via different protocols may be able to modify the same file simultaneously.
This article has been archived and is no longer updated by Apple.

Symptom

An Apple File Services (AFP) client is able to obtain read-write access to a file that is already being modified by a Windows File Service (SMB) or NFS client, or vice versa.

Note: It would normally be expected that secondary users of a file get read-only access.

Solution

File locking systems vary between Apple Filing Protocol, SMB, and NFS. Use the following strategies to avoid the issue.

Using AFP with SMB

When sharing simultaneously via AFP and SMB, take these actions:

1. Be sure that client and server are both updated to version 10.2.3 or later.
2. When configuring Windows File Settings for a share point in Workgroup Manager, be sure the checkbox for "Enable strict locking" is selected.

Note: If you cannot immediately update to 10.2.3 or later, use only one protocol per share point.

Using NFS

To prevent this issue when using NFS, separate your share points by protocol. Use one share point for NFS clients, and another share point for AFP and SMB clients.

Note: All versions of Mac OS X can connect to a server over NFS. Mac OS X 10.1 or later can connect to file servers over SMB.
Published Date: Feb 17, 2012

Mac OS X Server 10.2: Installing From Command Line Results in Working But Incorrect System

If you install Mac OS X Server from the command line, the result may be a working system that has incorrect permissions. This occurs if the installation CD does not have permissions enabled. This document explains how to resolve the issue.
This article has been archived and is no longer updated by Apple.

Symptom

After you start up the installed system, the Disk Copy application will not open. If you look at the system.log in Console, you see this message:

> Mac OS X Version 10.2.4 (Build 6I34)
> load_hdi: this tool was improperly installed.
> (The setuid bit was cleared accidentally.)
> You will need to either re-install the system software and/or execute the following as root:
> chown root:wheel /usr/libexec/load_hdi
> chmod 4555 /usr/libexec/load_hdi

Solution

To prevent this issue from occurring, deselect the "Ignore ownership on this volume" checkbox for the installation CD prior to installation.

If you have not yet installed, follow these steps:

1. Insert Disc 1 of the Mac OS X Server CD set that you plan to install from.
2. Select the disc in the Finder.
3. Choose File > Get Info.
4. Click the Ownership & Permissions disclosure triangle.
5. Deselect the checkbox that says "Ignore ownership on this volume".
6. Eject the CD
7. Reinsert the CD.

Now you will get the correct results when installing from the command line.

Note: The steps above update the Volume Information Database, a permanent file of information about each volume that has been used by the Mac OS X system.

If you have already installed and need to correct permissions, follow these steps:

1. Open Disk Utility.
2. Click the First Aid tab.
3. Select the target volume.
4. Click the Repair Disk Permissions button.

Published Date: Feb 17, 2012

Mac OS X: May Not Share AirPort Internet Connection

Internet Sharing may not allow you to share an AirPort Internet connection if AirPort is not set to the highest port priority.
This article has been archived and is no longer updated by Apple.

Symptom

The Internet Sharing preference pane does not allow you to share your AirPort Internet connection to wired Ethernet clients.

Solution

At the sharing computer, drag AirPort to the top of the port configuration list:

1. Choose Apple menu > System Preferences.
2. Choose View > Network.
3. Choose Network Port Configurations from the Show pop-up menu.
4. Drag AirPort to the top of the port configuration list.
5. Click Apply Now.

In the Internet Sharing preference pane, you should now see this message:

"You are connected to the Internet over Airport. This connection will be shared with computers connected to Built-in Ethernet. "

Published Date: Oct 7, 2016

Mac OS X Managed Client: "You are already logged on to another computer" Message

If a client computer stops responding ("freezes") or has a power interruption while connected to the user's home directory, the server may continue to register the volume as mounted. This prevents the user from logging in at a second computer.
This article has been archived and is no longer updated by Apple.

Symptom

A user who tries to log in at a second computer after the first stops responding sees this message:

"You cannot continue because you are already logged on to another computer. You may only log into one computer at a time. Contact your system administrator for help."

Solution

Use one of these methods:

- Have the user log back into the server on the same client computer that stopped responding. You may need to force the client computer to restart.
- Use the Server Status application to manually disconnect the user's AFP connection. If the user has multiple sessions open from the same client computer, disconnect them all.

Note: If this issue affects only 10.4 clients, it may be due to access to the invisible folder ~/.Spotlight-V100. The issue would happen if the owner of this folder were set to read-only permissions, for example. The owner of this folder must have full read-write-execute permissions ("rwx" or "7"). Files inside ~/.Spotlight-V100/ must be set to read-write ("rw" or "6"), with exception of mds-lock-dir and slave-work-dir, which should be set to rwx.

Published Date: Feb 17, 2012

AirPort: "Assistant can only be used to Configure an Apple AirPort Base Station" Message

The AirPort Setup Assistant can only be used with Apple base stations that have DHCP turned on.
This article has been archived and is no longer updated by Apple.

Symptom

When you open the AirPort Setup Assistant, this message appears:

> "The AirPort Setup Assistant is unable to configure the selected base station. The AirPort Setup Assistant can only be used to setup an Apple AirPort Base Station. If you are trying to reconfigure a base station that has DHCP turned off, use the AirPort Admin Utility."

Solution

These are the two possible causes. Either the wireless access point you are trying to set up was not manufactured by Apple, or DHCP is turned off on the Apple base station.

If you have a third-party wireless access point, follow the manufacturer's instructions for setting it up. The AirPort Setup Assistant and AirPort Admin Utility are not used for third-party base stations.

If you have an AirPort base station, follow these steps:

1. At the client computer, choose Apple menu > System Preferences.
2. Choose View > Network.
3. Choose AirPort from the Show pop-up menu.
4. Be sure that TCP/IP for AirPort is set to configure "Using DHCP".

Note: If you had to make any changes, click Apply Now. If the computer is connected to both AirPort and wired Ethernet, be sure to disconnect the wired Ethernet before continuing.

5. Unplug both the base station's power cord and its Internet connection (Ethernet cable or phone wire).
6. Restart the computer.
7. Open a Web browser on the computer.

Note: The browser's connection attempt is intended to fail. It has the effect of forcing the computer to self-assign an IP address in the correct range.

8. Plug in the base station's power cord, and wait for it to start.
9. If the AirPort network is not already selected, join the network by selecting it from the AirPort menu bar item.
10. Open the AirPort Admin Utility.

You may now reconfigure the base station using AirPort Admin Utility.

Note: One possible way to accidentally turn off DHCP is by using the wrong Ethernet port on the base station. Be sure to connect to the base station to the Internet via the WAN port, depicted in Figure 1. This does not apply to the original AirPort Base Station (Graphite), which has only one Ethernet port.

Figure 1 Ports of the AirPort Base Station (Dual Ethernet)
Published Date: Oct 7, 2016

Safari does not resolve certain aliases

If you like to use aliases, you might notice that Safari does not resolve them under certain circumstances.
This article has been archived and is no longer updated by Apple.
You may notice these symptoms:

1. Your Microsoft Internet Explorer bookmarks are not automatically imported by Safari if you have placed an alias in the path to your Explorer bookmarks.
2. If you drag an alias of a compatible file into a Safari window, the file does not open. The file opens if you drag the original file into the window.
3. If you replace the folder ~/Library/Safari with an alias, the alias is not resolved.

For the first symptom, see **Internet Explorer bookmarks not imported when alias is used**.

For the second symptom, the solution is to drag the original file into the window. This document will be updated if that behavior changes.

The third symptom is by design. Allowing Safari to resolve this particular alias could affect the time it takes to open the application.

Advanced technique

If using an alias is very important to you, you may work around the issue by using a symbolic link instead of an alias. Because this is an advanced technique that is not recommended in all circumstances, Apple does not provide technical support for it.

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Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.

Published Date: Oct 7, 2016

Safari 1.0: Internet Explorer bookmarks not imported when alias is used

If you are using an alias in the place of your Internet Explorer bookmarks, or if you place an alias in the path to them, they are not automatically imported by Safari.
This article has been archived and is no longer updated by Apple.
When your Internet Explorer bookmarks file, "favorites.html", is in the default location, Safari will import it the first time you open Safari. However, if you have placed an alias in the path, the bookmarks are not imported.

If you have already started building a new bookmarks collection in Safari, the best solution may be to copy the bookmarks from Internet Explorer one at a time. If you have not yet built a collection of bookmarks in Safari, follow the steps below. These steps will remove Safari bookmarks and preferences that you have set, simulating a first use of Safari.

For Safari version 1.1 or later, see **Importing bookmarks from other browsers**.

For Safari 1.0 you may use that document or these alternate steps. These steps do not work for Safari 1.1 or later.

1. Quit Safari if it is open.
2. Click the Finder icon in the Dock.
3. From the **Go** menu, choose **Home**.
4. Open your Library folder.
5. Locate the Safari folder there, and drag it to the Trash.
6. Place the Internet Explorer bookmarks (favorites.html) back in their original location (removing the alias from the path).
7. Open Safari.

Related document

107600: "**Safari: You can only drag one bookmark at a time from Internet Explorer**"

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Published Date: Oct 7, 2016

Safari: You can only drag one bookmark at a time from Internet Explorer

This article has been archived and is no longer updated by Apple.
If you try to drag a selected group of bookmarks from Internet Explorer to Safari, only one will be copied. Most often, only the first or last bookmark of the selection is copied.

You should drag one bookmark at a time from Explorer to Safari. This is the expected behavior.

As a temporary workaround, drag the file ~/Library/Preferences/Explorer/Favorites.html into your Safari bookmarks window. This adds a bookmark to your Explorer favorites file, which you can open as a list of links in Safari. When doing this, beware that the file is only bookmarked and not imported. You must keep the original Favorites.html file.

Additional information

Because Safari automatically imports Explorer bookmarks the first time you use Safari, this issue is normally only relevant if the import could not be completed. For related information, see technical document 107599, "**Safari: Internet Explorer Bookmarks Not Imported When Alias Is Used**".

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Published Date: Oct 7, 2016

Safari only prints the visible portion of the page

Safari may only print the visible portion of a webpage, cutting off the portion you must scroll to see.
This article has been archived and is no longer updated by Apple.
This occurs when the page uses frames.

For best printing results, click on the block of text that you are trying to print immediately before printing. Many websites have these major elements, each of which could be a frame:

- A site identification area, or banner, across the top of the page.
- A table of contents, or navigation links, in a column on the right or left side.
- A central text window in the middle, which shows the main content.

Update to Mac OS X 10.3.6 or later to resolve the issue.

As an immediate workaround, prior to updating, you can click the text in the primary window immediately before printing. This tells Safari that you are focused on the main content frame.

Published Date: Oct 7, 2016

Do not drag install Safari

You should not drag a copy of Safari 1.0 or later to install it. If you do, Safari may not work, or may give unexpected results.

This article has been archived and is no longer updated by Apple.

Beta versions of Safari were compatible with "drag install," the practice of installing software by simply copying an application to the desired location. With Safari 1.0 and later, this is no longer a viable method of installation. Instead, use the Safari Installer, which includes necessary support files.

Published Date: Oct 7, 2016

Safari does not work after installing version 1.0

If you have installed multiple copies of Safari, the Installer will upgrade the first copy it finds. This may not be the copy that is in use. Subsequently, Safari may not work at all.
This article has been archived and is no longer updated by Apple.
To resolve the issue, follow these steps:

1. Click the Finder icon in the Dock.
2. From the **File** menu, choose **Find**.
3. Type "Safari.app" in the File Name Contains field.
4. Click Search.

   Note: The resulting files will be named simply "Safari", since the ".app" suffix is hidden by default.

5. One at a time, double-click the copies of Safari that are found until you find the one that works.
6. Using the copy that works, download Safari again from its website (http://www.apple.com/safari/).
7. Drag all copies of Safari.app to the Trash.
8. Reinstall Safari using the Installer you just downloaded.

Published Date: Oct 7, 2016

Safari: Images dragged or copied from Safari appear upside down

Images dragged or copied from Safari 1.1 or earlier may appear upside down when the screen resolution is set to thousands of colors (16-bit screen depth).
This article has been archived and is no longer updated by Apple.
Images dragged or copied from Safari windows appear upside down.

For best results, change the display to millions of colors. (The issue may still occur infrequently in millions of colors.)

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **Displays**.
3. Locate the Colors pop-up menu item on the upper right.
4. Choose Millions from the pop-up menu.
5. Quit System Preferences.
6. Quit and reopen Safari.

Published Date: Oct 7, 2016

Safari doesn‘t sign out of MSN, even though you click Sign Out

The MSN.com webpage refreshes when you click Sign Out, but you may actually remain signed in.
This article has been archived and is no longer updated by Apple.
You can tell because the "Sign Out" button does not switch to "Sign In" after you try to sign out.

This is caused by using the default cookie setting, which is to accept cookies only from sites you navigate to. Changing the cookies preference to Always allows MSN to log out properly. To change the default cookie setting:

1. From the **Safari** menu, choose **Preferences**.
2. Click the Security icon.
3. Locate the Accept Cookies area in the panel.
4. Select the Always radio button for Accept Cookies.
5. Close the preference panel.

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Published Date: Oct 7, 2016

Safari: Using with Live Connect

Safari can't display Live Connect pages when using older versions of Java software, in which case you might see some blank pages.
This article has been archived and is no longer updated by Apple.
But you can use Live Connect websites after installing these software updates:

- Mac OS X 10.3.1 or later
- Java 1.4.2
- Safari 1.2 or later

You can get these updates in Software Update preferences, or from Apple Downloads.

Note: Live Connect is a technology used on some websites for Java functions. With the software listed above, Live Connect is able to use JavaScript-to-Java applet communication. It does not facilitate JavaScript-to-plug-in functions, so some Live Connect features may be unavailable.

Published Date: Oct 7, 2016

Workgroup Manager: "Error -14487"

You may see an alert message that includes "error -14487" when using Workgroup Manager.

This article has been archived and is no longer updated by Apple.

Symptom

You see an alert message that contains "error -14487".

Solution

This message means that Password Server is unavailable. There are two likely causes:

- Directory Services cannot open a connection to Password Server, or
- The administrator has a password set to "basic". An Admin user account with a basic password cannot set up users on the Password Server. In order to administer Password Server accounts, you must log into Workgroup Manager with a Password Server-based Admin user account.

To resolve the issue:

1. Verify the Password Server is running.
2. Log into Workgroup Manager as an administrator who has a Password Server password.

Published Date: Feb 17, 2012

Mac OS X Server 10.2: How to Select a Startup Disk via SSH

You may need to change the startup volume via SSH in certain scenarios, such as when remotely installing Mac OS X Server. This document explains how to do so.
This article has been archived and is no longer updated by Apple.
You can use this method any time you prefer to use SSH, but a particularly useful example is when the computer does not start up from the desired volume after installation from CD, or when you wish to select a different volume immediately after remote installation (before restarting the target computer).

If the target computer is currently started up from CD and you don't already know its IP address, see technical document 51846, "**Mac OS X Server for Xserve: How to Find a Server on the Network**".

The following procedure uses the "bless" command to choose a startup disk for a remote Mac OS X Server.

1. Open Terminal (/Applications/Utilities/).
2. Type: `ssh root@<address>`

Note: Replace "<address>" with the actual IP address or DNS name of the target computer. An actual example would look like:

```
ssh root@mycomputer.example.com
```

3. Press Return.
4. Enter the root password for the target computer when prompted, then press Return.

Note: If the target computer is started up from CD, the root password is the first eight digits of the target computer's serial number. If that password does not work when started up from CD, the computer's logic board may have been replaced. You cannot use this method when started up from CD if the logic board has been replaced.

5. Once connected to the server via ssh, type:

```
bless -folder "/Volumes/disk_name/System/Library/CoreServices" -setOF
```

Note: Replace "disk_name" with the actual name of the disk that contains the desired startup volume.

6. Press Return.
7. Type: reboot
8. Press Return.

Your ssh connection will be closed, and the server will restart to the volume selected in step 5.
Published Date: Feb 17, 2012

Server Monitor: How Server Monitor Sends Email Notifications

This document explains the methods Server Monitor uses to send email notifications. This document applies only to Mac OS X Server versions 10.1.5 to 10.2.8.

This article has been archived and is no longer updated by Apple.

Server Monitor consists of two separate pieces of software. The "hwmond" process is the hardware monitoring on the server itself. The Server Monitor application remotely monitors the server via communication with hwmond.

There are two ways to have notifications sent. The server can be configured to send notifications itself. In this case, hwmond just creates a text file and pipes it through sendmail. In order for this to work correctly, make sure the permissions on the root directory (/) don't allow group or other write permissions. The permissions for / are set to 1755 when Mac OS X Server is installed. Some software updates modify this, enabling group write permission, which causes sendmail to exit without sending any mail.

The Server Monitor application can also be configured to send email notifications. Note that it is not possible to have both hwmond and Server Monitor send notifications. Choose one or the other. Server Monitor uses the Message.framework to send the notification. The Message.framework looks in two places for a way to send email. The first is that it looks for an SMTP server configured in the Email tab of Internet preferences. The other way is to use an email account configured in Mail. If an outgoing SMTP server is configured in Internet preferences, there is no need to configure the Mail application.

Published Date: Feb 17, 2012

Mac OS X Server 10.2: How to Authenticate Using an Administrator‘s Password

This document explains how to allow or disallow a normal user from authenticating with an administrator's password.
This article has been archived and is no longer updated by Apple.
An option for Apple File Service (AFP) allows a normal user to authenticate using an administrator's password. This can be useful when troubleshooting user-specific issues, such as permissions.

This feature can only be configured manually, by editing the AFP server's local NetInfo database. Use the steps below to enable or disable this feature:

1. Log into the server with an administrator account.
2. Open NetInfo Manager (/Applications/Utilities/).
3. In the NetInfo Manager navigation window, select the local directory, and go here:

   /config/AppleFileServer

4. Look for this property:

   attempt_admin_auth

5. To enable the feature, the value of this property must be 1. To disable this feature, the value of this property must be 0. Double-click the value to change it.
6. Save the changes in NetInfo Manager.
7. Using Server Settings, stop and restart Apple File Service.

Published Date: Feb 17, 2012

Mac OS X Server 10.2: NetBoot Clients Cannot Use Some Disk Utility Features

While a computer is a NetBoot client, some of the features in Disk Utility do not work.
This article has been archived and is no longer updated by Apple.

Symptom

An alert with this message appears in Disk Utility:

> "Unmount Failed The disk 'Macintosh HD' failed to unmount because it is in use. The operation has been canceled."

Solution

This is expected behavior for NetBoot clients. You may use all features of Disk Utility while started up from any of the following:

- A Network Install image
- An installation CD
- Another volume with Mac OS X installed on it

Published Date: Feb 17, 2012

Mac OS X Server: Maximum UFS partition size is less than 1 TB

This article has been archived and is no longer updated by Apple.

The maximum volume size for a UFS partition in Mac OS X Server 10.0.3 or later is just less than 1 TB.

Symptom

You cannot format a UFS volume as 1 TB or larger.

Solution

Use smaller volumes. The maximum volume size for a UFS partition is slightly less than 1 TB. Precisely, it is 2147475488 blocks.

Published Date: Oct 7, 2016

Mac OS X Server 10.2: Mac OS 9 Users Can‘t Delete Files or Folders

Mac OS 9 Apple File Service clients may not be able to delete items from a server volume with group write permission.
This article has been archived and is no longer updated by Apple.

Symptom

There are two different symptoms:

- When dragging a file to the Trash, an alert message states that you don't have enough privileges or that the item has to be deleted immediately.
- You drag a folder to the Trash, but you can't empty it. The folder icon has a belt on it when viewed in the Trash.

Solution

To resolve the first symptom, Install Security Update 2003-06-09.

To resolve the second symptom, turn off the "use inherited permissions" option for the shared folder, or follow these steps:

1. Open the folder.
2. Drag all the contents to the Trash.
3. Drag the empty folder to the Trash.
4. Repeat for any nested folders.

Published Date: Feb 17, 2012

Mac OS X Server 10.2: Administrator Sees Volumes But Not Home Directory When Connecting via AFP

When an administrator logs into Apple File Service (AFP), he sees all mounted server volumes and no home directory. Normal users see only shared volumes and their home directories. You may change the default administrator behavior if desired.
This article has been archived and is no longer updated by Apple.

Symptom

An administrator sees all mounted server volumes but no home directory when connecting via AFP.

The administrator may navigate to his home directory, but when he does, he will see only the Library and Desktop folders.

Solution

If you want administrators to see their home directories instead of volumes when connecting via AFP over the network, follow these steps:

1. Open NetInfo Manager (/Applications/Utilities/).
2. In the NetInfo Manager window, navigate to

   /config/AppleFileServer

3. Locate this property: admin_gets_sp
4. Change the value of the property to 1. (You double-click the value to edit it.)
5. Save the changes in NetInfo Manager.
6. Use the Server Settings application to stop and restart Apple File Service.

Published Date: Oct 7, 2016

Workgroup Manager: How to Add Volumes for Mount at Login

This document explains how to configure additional server volumes to mount at login when managing Mac OS X computers via Workgroup Manager.
This article has been archived and is no longer updated by Apple.
There are two ways to mount additional volumes while logging into a managed Mac OS X client system: automounts or the Login Items managed preference feature. The Group Folder (or Group Volume) is not covered by this document. For the Group Volume, see technical document 107307, "**Mac OS X Server 10.2: How to Configure the Group Volume to Mount When Logging In**".

Using automounts

Share points set to automount are made available to bound clients at startup and automatically mount when accessed. The item can be accessed by navigating to it in the Finder or by opening an application that looks in this specific location.

Refer to page 225 of the Server Admin Guide v10.2.3 for steps for setting up automounts in Mac OS X Server. You may download the guide from document **120174**.

Optionally, you may also add the share point to the user's dock for easy access. It's recommended to configure this from an administrator's client computer, rather than at the server itself. To do that, follow these steps:

1. Log in on a client or admin computer that has this share point automounted.
2. Open Workgroup Manager, and connect to the server.
3. Select the user, group, or computer list for which you would like to manage this setting.
4. Select Preferences.
5. Select Dock.
6. Under the Dock Items tab, drag the volume (from a local Finder window) into the Documents and Folders list.

   Note: The location of the volume in the local file system must match the location of the volume on the client systems. This is why it's not recommended to perform these steps from the server itself.

7. Save the changes by clicking Apply Now.

Login Items

You can use these steps to mount an additional volume without automount.

1. Connect to the server volume(s) you would like to automatically mount at login. It's recommended to do this from an administrator's client computer, rather than at the server itself.
2. Open Workgroup Manager, and connect to the server.
3. Select the user, group, or computer list you would like to manage this setting for.
4. Select Preferences.
5. Select Login.
6. Under the Login Items tab, drag the volume (from the Finder) into the Login Items list. The kind will appear as "Unknown," which is expected behavior.
7. Save the changes by clicking Apply Now.

Optionally, you may add the share point to the user's dock for easy access.

1. In Workgroup Manager, select Preferences.
2. Select Dock.
3. Under the Dock Items tab, drag the volume (from the Finder) into the Documents and Folders list.
4. Save the changes (Apply Now).

When a user logs into the managed account, she sees a Connect To dialog. This is expected behavior, and the user can then authenticate or log in as a guest.

Note: The account used to authenticate (in step 1) will appear in the Connect To dialog box, which is expected behavior. The user can edit the login information and authenticate as needed.

Keychain

When using the Login Items solution, the user may also choose to add the password to her keychain. To do this, click the Options button in the Connect To dialog.
Published Date: Feb 17, 2012

Mac OS X Server: How to Format User Information For Password Server

If you want to use Password Server (rather than Basic) and need to import users from a separate file, format the user information as described in this document.
This article has been archived and is no longer updated by Apple.
Pages 191-193 of Server Admin Guide v 10.2.3 discuss creating an import file with record descriptions. An example on page 192 shows how to import users who use the Password Server.

A record description identifies the fields in each record you want to import from a character-delimited file; it indicates how records, fields, and values are separated; and it describes the escape character that precedes special characters in a record. Encode the record description using the following elements in the order specified, separating them using a space:

- End-of-record indicator (in hex notation)
- Escape character (in hex notation)
- Field separator (in hex notation)
- Value separator (in hex notation)
- Type of accounts in the file (DSRecTypeStandard:Users or DSRecTypeStandard:Groups)
- Number of attributes per account
- List of attributes

When importing user passwords, you can insert the following in the list of attributes to set the user's password service to the Password Server:

```
dsAttrTypeStandard:AuthMethod
```

Then insert the following in the formatted record (in this example, the user's password is "password"):

```
dsAuthMethodStandard\\:dsAuthClearText:password
```

Note: In this example, the colon (:) is the field separator. As there is a colon in the description for this attribute, the escape character must be used to indicate the colon should not be treated as a delimiter. The backslash (\\ ) is the escape character in this example. If the field separator is anything other than the colon, the escape character is not needed.

This is an example of a header from a standard users import file with users who use the Password Server. It must be typed as one line of text in which the elements are separated by spaces and without line breaks, as presented here. Though your browser will wrap the text for presentation, you can see that it contains no line breaks if you copy and paste it into a text editor that has wrapping turned off:

```
0x0A 0x5C 0x3A 0x2C dsRecTypeStandard:Users 8 dsAttrTypeStandard:RecordName dsAttrTypeStandard:AuthMethod
dsAttrTypeStandard:Password dsAttrTypeStandard:UniqueID dsAttrTypeStandard:PrimaryGroupID
dsAttrTypeStandard:Comment dsAttrTypeStandard:RealName dsAttrTypeStandard:UserShell
```

This is an example of a formatted record with the following attributes and values:

```
<Attribute>: <Value>

Record Name (short name): tuser

Authentication Method: dsAuthClearText

Password: password1

Unique ID: 1242

Primary Group ID: 20

Comment: <blank>

Real Name (long name): Terri User

User Shell: /bin/tcsh


tuser:dsAuthMethodStandard\\:dsAuthClearText:password1:1242:20::Terri User:/bin/tcsh
```

Note: This example also uses the colon (:) as the field separator and the backslash (\\) as the escape character.
Published Date: Oct 7, 2016

Mac OS X Server: Computer Stops Responding at "Starting Network Filesystem"

The computer does not finish starting up if it is providing both DNS Service and NFS Service. It stops when the progress bar reaches "Starting Network Filesystem."
This article has been archived and is no longer updated by Apple.

Symptom

During system startup time, the Mac OS X Server computer appears to stop responding ("hangs" or "freezes") when the progress bar reaches the message "Starting Network Filesystem."

Solution

This occurs when you are providing DNS Service on your network and you have client or network NFS exports (not world). If this is not your configuration, review this alternative cause. To recover, follow these steps.

1. Start up the computer in single-user mode.
2. At the prompt, type: /sbin/fsck -fy
3. Press Return.

   The fsck utility will go through five phases and then return information about the disk. If no issue is found, you should see:

   ```
   ** The volume  appears to be OK.
   ```

   ```
   If fsck alters, repairs, or fixes anything, it will display the message:
   ```

   ```
   ***** FILE SYSTEM WAS MODIFIED *****
   ```

   Important: If this message appears, repeat the "/sbin/fsck -fy" command until this message no longer appears. It is normal for your computer to require several passes of fsck, because first-pass repairs may uncover additional issues.

4. Type: /sbin/mount -uw /
5. Press Return.
6. Type: pico /System/Library/StartupItems/NFS/StartupParameters.plist
7. Press Return. This opens the NFS StartupPararmeters preference file in the pico text editor. The file should look like this:

   ```
   {
     Description     = "Sun network file system";
     Provides        = ("NFS");
     Requires        = ("Portmap", "Resolver");
     Uses            = ("Disks");
     OrderPreference = "None";
     Messages =
     {
       start = "Starting network file system";
       stop  = "Stopping network file system";
     };
   }
   ```

   Note: The "Uses" line only appears in Mac OS X Server 10.1.5.

8. Add "Watchdog" to the Requires section. The file will then look like this.

   ```
   {
     Description     = "Sun network file system";
     Provides        = ("NFS");
     Requires        = ("Portmap", "Resolver", "Watchdog");
     Uses            = ("Disks");
     OrderPreference = "None";
     Messages =
     {
       start = "Starting network file system";
       stop  = "Stopping network file system";
     };
   }
   ```

   Note: Do not add a "Uses" line in Mac OS X Server 10.1.4 and below. It will only exist in Mac OS X Server 10.1.5.

9. Press Ctrl-X to exit, then "y" and Return to save the file.
10. Type: reboot

11. Press Return .

The server should start up normally now.
Published Date: Feb 17, 2012

Mac OS X Server 10.2: Share Point Will Not Automount if It Has Custom AFP Name

A share point cannot automount if you give it a custom AFP name. When this issue occurs, a user's home directory may include only the Desktop and Library folders.

This article has been archived and is no longer updated by Apple.

Symptom

A share point does not automount, or a user's home directory only includes the Desktop and Library folders.

Solution

If you have already given a custom AFP name to a share point, change the custom AFP name to match the actual name of the share point (as it appears in the Finder).

For new share points, do not set a custom AFP names for a share point that is set to automount.

Note: To see the AFP custom name setting, select the share point in Workgroup Manager, then click the Protocols tab. Choose Apple File Settings from the pop-up menu. To see if the share point is set to automount, click the Automount tab.

Published Date: Feb 17, 2012

Apple Remote Desktop: Incorrect "Unavailable" Client Status

Remote Desktop may sometimes incorrectly report a client's status as unavailable even though it is available.
This article has been archived and is no longer updated by Apple.

Symptom

A client's status is reported as unavailable when it is actually available.

Note: If the affected client uses Mac OS 9, see related information in technical document 107500, "**Apple Remote Desktop 1.2: "Communication Error" During Multi-Observe, Client Status Incorrect** ".

Solution

Switching to another computer list and back forces the list to refresh, which normally resolves the incorrect report. If another computer list is not available, quit and reopen the Remote Desktop application to force a refresh.
Published Date: Feb 19, 2012

Mac OS X Managed Client: Default Classic System Folder Behavior

This document describes the behavior of the "default System Folder" option for managing Classic Preferences in Workgroup Manager. This applies to Mac OS X Server 10.2 or later.
This article has been archived and is no longer updated by Apple.
When managing Classic Startup preferences, a Classic System Folder may or may not be specified. If no Classic System Folder is specified, the "default System Folder" is used. The "default System Folder" refers to a single Mac OS 9 System Folder on the startup volume.

If no Mac OS 9 System Folder is on the startup volume, or if multiple Mac OS 9 System Folders are on the startup volume, the user sees the following alert message when starting Classic:

"Classic Startup found no system folder on the boot volume from which to start classic."

If there are multiple Classic System Folders installed on the startup volume or you wish to use a Classic System folder installed on a different local volume, use either of these solutions:

Solution 1

Specify which Classic System Folder clients will use in Workgroup Manager.

Notes

1. If you use the Choose button to do this, the volume that contains the Classic System Folder must have the same pathname at the client computer as it does on the administrator's computer. You must select the file "System" in the System Folder (though the resulting pathname will end with "System Folder", not "System Folder/System" as might be expected).

2. If the administrator and client computers have different paths to the Classic System Folder, then you must type the pathname instead of using the Choose dialog. Remember that paths on the startup volume start with root ("/") but that paths for secondary volumes must be preceded by "/Volumes/". For a secondary volume named "Other_Stuff" that contains the Classic System Folder you would type this, for example:

```
/Volumes/Other_Stuff/System Folder
```

Solution 2

Set "Manage these settings" to "Never" in the Startup tab, and allow access to Classic preferences.

Note: Any Classic preference that is managed cannot be edited by a managed user, so it may not be necessary to prevent access to the Classic preferences pane in System Preferences when managing Classic preferences.
Published Date: Feb 17, 2012

Workgroup Manager: "error -14130" or "error -14136" Message When Using LDAP

If LDAP User and Group types are not properly mapped, Workgroup Manager may issue alert messages that contain "error -14130" or "error -14136".

This article has been archived and is no longer updated by Apple.

Symptom

You see one of these alert messages when attempting to connect to an LDAP server, or a similar message:

"error -14130 on line 369 of UserBasicPlugin.mm"
"error -14136 of line 91 of UserVolumePlugin.mm"

Solution

Using the Directory Access application, map the User and Group Types and Attributes to the proper Attributes on the LDAP server. Figure 1 shows a proper mapping for a user's "UniqueID" mapped to the "uidNumber" of Open Directory server. The mapped value depends on the version of LDAP server. Apple's Open Directory server is based on and uses OpenLDAP.

Figure 1

For more information on LDAP and Directory Access, please see the Mac OS X Server Admin Guide.

Published Date: Feb 17, 2012

Mac OS X Server 10.2: Users With Passwords Left Blank Cannot Log In

Users with passwords intentionally left blank are sometimes unable to log in to a server or connect to a share point. If you experience this, you should reset the password as described here.
This article has been archived and is no longer updated by Apple.

Symptom

A user with a blank password cannot log in.

Solution

Follow these steps:

1. In Workgroup manager, select affected user.
2. Look at the Password and Verify fields. Both should show eight bullets, "·····". If the password fields are blank, select another user, then reselect the affected user.
3. Delete the contents of the Password and Verify fields.
4. Click the Save button. A warning about blank passwords should appear.
5. Click OK.

You have reset the blank password, and the user should be able to log in without a password.
Published Date: Feb 17, 2012

Safari: "Times RO" font may prevent some pages from loading

Mac OS X does not require the "Times RO" font, but certain applications may install it. Installation of this font can cause Safari not to load some web pages, or to load them partially.
This article has been archived and is no longer updated by Apple.

Symptom

Some web pages load partially, or don't load at all.

Products Affected

- Safari 1.0 or later
- Mac OS X 10.2.6 to 10.3.3

Solution

For Mac OS X 10.2.6 to 10.2.8

1. If Safari is open, quit it.
2. Check these two folders for for the Times RO font:

   /Library/Fonts/
   ~/Library/Fonts/

3. If you find Times RO, remove it from either or both folders.
4. Open Safari.

For Mac OS X 10.3 or later

Update to Mac OS X 10.3.4 or later to avoid the issue.

Published Date: Oct 7, 2016

Mac OS X Server: About Using "systemsetup" to Select a Startup Volume With a Space in Its Name

When using interactive mode, the "systemsetup" command cannot designate a startup volume whose name contains a space. This document explains the alternative.
This article has been archived and is no longer updated by Apple.

Symptom

You see a message similar to this one:

> "Not a System Folder: /Volumes/Mac Error: OS is not a valid command"

In this example, the volume selection attempted was:

/Volumes/Mac OS X Server/System/Library/CoreServices

Solution

To choose a startup volume with a space in its name, you cannot use the interactive mode of the systemsetup command. You must enter the command arguments directly. For the volume "Mac OS X Server" you would type the command this way:

```
systemsetup -setstartupdisk "/Volumes/Mac OS X Server/System/Library/CoreServices"
```

For more information on the systemsetup command, see page 600 of the Mac OS X Server Admin Guide for 10.2.3 or later, which you may download from document **120174**.

Note: This document discusses only one of several existing methods for changing the startup disk. You may also use the System Preferences application, or you may use the bless command. For an example of the latter, see technical document 107613, "**Mac OS X Server 10.2: How to Select a Startup Disk via SSH**".
Published Date: Oct 7, 2016

Mac OS X Server 10.1: Security Vulnerability With QuickTime Streaming Server Web Admin

The QuickTime Streaming Server web-based admin agent in Mac OS X Server 10.1 to 10.1.5 contains a potential vulnerability that could allow remote users to execute arbitrary code.
This article has been archived and is no longer updated by Apple.
To avoid this vulnerability, you should disable the QTSS web-based admin.

If you are not actively administrating QTSS via the web-based admin, disabling it should not be an issue for you. But if you are actively using the web-based admin, you will need to use one of these two alternatives:

1. Disable the web-based admin, and directly edit the QTSS configuration files instead, or

2. Limit who is capable of connecting to the web-based admin.

The following sections explain how to use either of these alternatives.

How to disable QTSS web-based admin

1. At the server, open Terminal (/Applications/Utilites/).
2. Type: su root
3. Press Return.
4. Enter your "Admin" account password when prompted, and press Return.

Note: The password you need to enter is not the QTSS administrator password. You must be logged into the server as an administrator (designated "Admin" in the Accounts preference pane), and you use the password for that user account.

5. Type: `sed s/QTSSERVER=-YES-/QTSSERVER=-NO-/ /etc/hostconfig > /etc/hostconfig.tmp`
6. Press Return.
7. Type: `mv /etc/hostconfig.tmp /etc/hostconfig`
8. Press Return.
9. Quit Terminal.
10. Restart the server.

How to limit QTSS web-based admin access

1. Open this file in a text editor:

/Library/QuickTimeStreaming/Config/streamingadminserver.conf

Note: If the file is not there, create a new one. This file only contains information that differs from default settings, so it is OK if the file contains only the line that you will choose in the next step -- you do not need any additional information. If you need help opening and editing the file, see technical document 106619, "**Mac OS X Server: How to Locate and Edit Configuration Files**".

2. Place one of the following lines in the streamingadminserver.conf text file, substituting a valid DNS value for either "server_hostname" or "your_domain_name".

To limit access to only web browsers running locally at the server, use this line:

```
allow=127.0.0.1 server_hostname
```

To limit access to web browsers within your domain, use this line:

```
allow=127.0.0.1 *.your_domain_name.com
```

Published Date: Oct 7, 2016

Apple Remote Desktop 1.2: How to Transfer Computer Lists to Another Administrator Account

Apple Remote Desktop version 1.2 stores encrypted computer list information in a user's keychain. An administrator might want to share her computer list with another administrator or transfer the list from one account/computer to another. This document explains how to do that.

This article has been archived and is no longer updated by Apple.

Note: This document applies only to Apple Remote Desktop version 1.2 (for 2.0 or later, look here).

To transfer a computer list from one administrator account to another, follow these steps:

1. The Remote Desktop administrator who wants to share the computer list(s) should log into the computer where they are stored. This is the "source administrator".
2. Open Keychain Access (/Applications/Utilities).
3. Choose File > New > New Keychain.
4. Enter "Export" as the new keychain's name, and click Create.
5. Enter a password for the new keychain. You will need to provide this password to the target administrator, so don't use your own account password or any other sensitive password.
6. Click the Keychains button to open the tray, if not already open.
7. Select the source administrator's main keychain.
8. If the keychain is locked, click the Unlock button to authenticate.
9. Click the Name column to sort the items by name.
10. Select only the Apple Remote Desktop entries, and copy them (Command-C).
11. Select the Export keychain.
12. Paste the entries into the Export keychain (Command-V).
13. You will be asked to provide a password to decrypt each entry. Provide the password of the source administrator's main keychain (not that of the Export keychain).
14. Quit Keychain Access.
15. Click the Finder icon in the Dock.
16. Choose Go > Go to Folder.
17. Type: ~/Library/Keychains/
18. Click Go.
19. Copy the Export keychain to the same location in the home directory of the target administrator. If you cannot copy the file in the target administrator's Keychains folder, you may copy it to the user's drop box (~/Public/Drop Box).
20. At the computer to which the Export keychain was copied (which may be the same computer), log in as the target administrator. If the keychain is in the user's drop box, move it to the Keychains folder (~/Library/Keychains).Open Keychain Access.
21. Choose File > Add Keychain.
22. Select the Export keychain, and click Open.
23. Click the Keychains button to open the tray, if not already open.
24. Select the Export keychain.
25. Select the ARD entries, and copy them. When prompted for the password, enter the one created in step 5.
26. Select the main keychain of the target administrator. If this keychain is locked, click the Unlock button to authenticate.
27. Paste the entries into this keychain.
28. Open Apple Remote Desktop as the target administrator.

After entering the target administrator's name and password, you will see the computer list(s) transferred from the source administrator.

Published Date: Feb 17, 2012

Mac OS X Server: About the Mac OS X Server 10.2.8 Update

This software updates Mac OS X Server 10.2.6 to 10.2.8.

Note: This also includes an updated ethernet driver for 450Mhz and 500Mhz dual processor Power Mac G4 desktop systems. If you downloaded version 10.2.8 before 2003-10-03, you need this update. If you cannot connect to the Internet at the affected computer, see technical document **107669** for workarounds and a description of the issue.
This article has been archived and is no longer updated by Apple.
Important: Read Before Installing

1. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

2. To install Mac OS X Server 10.2.8, you must enter the password for an administrator account. The password cannot contain a space or special characters typed by pressing the Option key.

   If you need to change an administrator account password, on the Apple menu click System Preferences; then on the View menu, click Accounts. Select the account name and click Edit User. Type the current password and press Return, then type the new password in both text boxes. Click OK when you are done.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Featured Software to install.

Installation

There are two ways to update to Mac OS X Server 10.2.8.

Automatic Software Update

You may have been referred to this document by Automatic Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

Standalone Installers

An installer is also available from **Apple Software Downloads**.

Two versions of the installer are available. One is for updating version 10.2.6 to 10.2.8; the other updates version 10.2, 10.2.1, 10.2.2, 10.2.3, 10.2.4, 10.2.5, or 10.2.6 to 10.2.8 (a "Combo" update). This document describes the former. If you need to use the Combo update, see technical document 107648, "**Mac OS X Server: About the Mac OS X Server 10.2.8 Update (Combo)**".

Enhancements delivered with this update

This update delivers the enhancements outlined below. This installer is server-specific, but the issues it resolves are not. This update provides the same fixes found in the client version of the Mac OS X 10.2.8 Update. The issues described below are relevant in a server setting, but you must also update the client computers.

Directory Services - LDAPv3

The update addresses these issues that could occur when using the LDAPv3 plug-in:

- The first login by a user works normally, but subsequent login attempts do not.
- Clients do not reestablish connection after entering CLOSE_WAIT state.

Background: If a Mac OS X 10.2.7 (or earlier) LDAP client lost its connection to the LDAP server for any reason (such as server timeout, network interruption, or sleep/wake), the LDAPv3 plug-in would sometimes mishandle the transaction and wait for a standard two-minute timeout period to expire before attempting to reconnect. Version 10.2.8 is far better at noticing a lost connection and attempts to reconnect immediately. This improves performance in environments with heavily loaded LDAP servers or LDAP servers with idle disconnect behavior.

Directory Services - Password Server

- Addresses a situation in which Password Server clients could lose the ability to log in after a period of uptime.

Background: Under moderate to heavy load, Password Server could exhaust the server's available socket resources. Mac OS X 10.2.8 resolves the issue by providing proper server-client cleanup in all circumstances, allowing the system to run for longer periods of time.
Published Date: Oct 7, 2016

Mac OS X Server: About the Mac OS X Server 10.2.8 Update (Combo)

This software updates Mac OS X Server 10.2, 10.2.1, 10.2.2, 10.2.3, 10.2.4, 10.2.5, or 10.2.6 to version 10.2.8. It is a "combo" update that combines enhancements delivered with versions 10.2.1 through 10.2.8. If you already have Mac OS X Server 10.2.6, you may download a smaller update that is not a combo.

Note: This also includes an updated ethernet driver for 450Mhz and 500Mhz dual processor Power Mac G4 desktop systems. If you downloaded version 10.2.8 before 2003-10-03, you need this update. If you cannot connect to the Internet at the affected computer, see technical document **107669** for workarounds and a description of the issue.
This article has been archived and is no longer updated by Apple.
Important: Read Before Installing

1. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

2. To install Mac OS X Server 10.2.8, you must enter the password for an administrator account. The password cannot contain a space or special characters typed by pressing the Option key.

   If you need to change an administrator account password, on the Apple menu click System Preferences; then on the View menu, click Accounts. Select the account name and click Edit User. Type the current password and press Return, then type the new password in both text boxes. Click OK when you are done.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Featured Software to install.

Installation

There are two ways to update to Mac OS X Server 10.2.8.

Automatic Software Update Installation

You may have been referred to this document by Automatic Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

Standalone Installers

An installer is also available from Apple Featured Software (http://www.apple.com/swupdates/).

There are two versions of the update installer available:

- "Mac OS X 10.2.8 Server Update (Combo)" updates Mac OS X Server 10.2, 10.2.1, 10.2.2, 10.2.3, 10.2.4, 10.2.5, or 10.2.6 to version 10.2.8. This document describes how to use this installer.
- "Mac OS X Server 10.2.8 Update" updates only Mac OS X Server 10.2.6 to the new version. To learn more about that installer, see technical document 107647, "**Mac OS X Server: About the Mac OS X Server 10.2.8 Update**".

Enhancements Delivered with this update

Many enhancements are delivered with this update. Because this is a combo update, it includes those delivered with Mac OS X Server versions 10.2.1 through 10.2.8. These enhancements are listed individually in these technical documents:

107038: "**Mac OS X Server: About the Mac OS X Server 10.2.1 Update**"
107142: "**Mac OS X Server: About the Mac OS X Server 10.2.2 Update**"
107265: "**Mac OS X Server: About the Mac OS X Server 10.2.3 Update**"
107364: "**Mac OS X Server: About the Mac OS X Server 10.2.4 Update**"
107491: "**Mac OS X Server: About the Mac OS X Server 10.2.5 Update**"
107491: "**Mac OS X Server: About the Mac OS X Server 10.2.6 Update**"
107647: "**Mac OS X Server: About the Mac OS X Server 10.2.8 Update**"
Published Date: Oct 7, 2016

WebObjects 5.2.2: About the WebObjects 5.2.2 Update

This document contains an overview and download information for Apple's WebObjects 5.2.2 Update. WebObjects 5.2 users who plan to develop their WO applications on Mac OS X 10.3 Panther or who use the Xcode development tool suite or plan to deploy their WO 5.2.2 applications on Mac OS X Server 10.3, Windows or Solaris should install this update.
This article has been archived and is no longer updated by Apple.
Technical document 70037, "**WebObjects Current Patch List**", contains information on all available patches and updates for all versions of WebObjects. Read this document if you're not sure which update you need on your system.

This update addresses the issues and adds support for the features listed below:

- Incompatibilities between WebObjects 5.2 development tools and Xcode 1.0
- Incompatibilities between WebObjects 5.2 and Java 1.4.1 for Mac OS X
- Incompatibilities between WebObjects 5.2 and Mac OS X 10.3
- Fixes for the Enterprise Object Frameworks runtime
- Fixes for WOFileUpload
- Provide tighter integration between WebObjects 5.2 and the new JBoss features on Mac OS X 10.3 Server

Important: WebObjects 5.2.2 requires Java 1.4.1. Java 1.3.1 is no longer supported.

Important: You will not be able to use legacy ProjectBuilder to develop WebObjects applications after installing this update.

The **WebObjects Current Patch List** contains information on all available patches and updates for all versions of WebObjects. Read this document if you're not sure which update you need on your system.

WebObjects 5.2.2 Developer for Mac OS X 10.3

Important: Support for developing WebObjects applications using legacy Project Builder and JDK 1.3.1 have been dropped in WebObjects 5.2.2 update.

This update is available through the Software Update feature of Mac OS X. If you use this method, only the proper update for the software which you have installed on your system is visible and available for download. If you prefer to download and install the package manually, follow the instructions below.

Note: WebObjects 5.2.2 Developer requires:

- Mac OS X 10.3 or later
- JDK 1.4.1
- Xcode 1.0 Developer Tools

If you have not yet updated to the correct version of Mac OS X or Developer Tools, you must do so before installing WebObjects 5.2.2.

If you are creating a new Mac OS X WebObjects 5.2 development system, you should install the software in the following order:

1. Mac OS X 10.3
2. Xcode 1.0 Developer Tools
3. WebObjects 5.2 Developer
4. WebObjects 5.2.2 Developer

Manually Installing WebObjects 5.2.2 Developer on Mac OS X 10.3

These instructions are for manually downloading and installing WebObjects 5.2.2 Developer. If you are installing using Software Update, see the previous section of this document, WebObjects 5.2.2 for Mac OS X 10.3.

Note: WebObjects 5.2.2 Developer requires:

- Mac OS X 10.3 or later
- JDK 1.4.1
- Xcode 1.0 Developer Tools

If you have not yet updated to the correct version of Mac OS X, Java, or Developer Tools, you must do so before installing WebObjects 5.2.2.

1. Download WO522Developer.pkg.tar, the update package for Mac OS X 10.3. The update is available from:

http://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/webobjects/patches/5.2/WO522Developer.dmg

The disk image should expand when double clicked in the finder, leaving WO522Developer.pkg.

2. Open WO522Developer.pkg.

The Authenticate panel opens.

Important: Only an administrator can install the update.

3. Type the proper administrator name and password to authenticate.

4. Click OK to proceed. The Introduction panel appears.

5. Click Continue. The Software License Agreement appears.

6. Read the software license agreement, then click Continue.

7. Click Agree to agree to the license agreement and continue the installation.

8. Select the volume containing Mac OS X and WebObjects 5.2 Developer.

9. Click Continue.

10. Make sure that there are no WebObjects or EOF applications running.

11. Click Install to proceed with installation. The Installer window displays information about the progress of the installation, which may take several minutes.

12. Restart your computer.

WebObjects 5.2.2 Deployment for Mac OS X 10.3 Server

WebObjects 5.2.2 deployment now comes pre-installed on Panther Server only. To install WebObjects 5.2.2. Deployment, install or upgrade to Mac OS X 10.3 Server.

Configuration tasks:

1. wotaskd is not configured to autostart by default. Open the file /System/Library/StartupItems/WebObjects/WebObjects and uncomment the following line:

```
#/usr/bin/su appserver -c "$WOSERVICE -appPath $WOTASKD" >/var/log/webobjects.log 2>&1 &
```

2. If you are planning to use Apache, you will need to update the httpd.config file. Add the following to the end of the file /etc/httpd/httpd.config:

```
# Including WebObjects Configs
Include /System/Library/WebObjects/Adaptors/Apache/apache.conf
```

Installing WebObjects 5.2.2 on Windows 2000

Notes

1. During the installation, if you see panels indicating that certain files being replaced by the update are "locked", click Reboot to continue the installation. The files will be replaced upon restarting.
2. This update cannot be uninstalled alone. Once you have upgraded to WebObjects 5.2.2 you cannot revert to WebObjects 5.2. However, the entire WebObjects 5.2.2 installation can be uninstalled using the Add/Remove Programs control panel.

Steps

1. Install JDK 1.4.1 if not yet installed (available from http://java.sun.com). This version is required.

2. Download WO522.exe, the self-extracting update installer for Windows 2000.

The update is available from:

http://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/webobjects/patches/5.2/WO522.exe

3. Log in as a user with Administrator privileges.

4. Make sure that there are no WebObjects or EOF applications running.

5. Double-click on the update installer, WO522.exe, to start the installation process. A screen appears with some information about this update.

6. After you have read the information screen, click Next to continue. The license agreement for this update appears.

7. To agree to the license and continue the installation, click Yes. The update will be installed on your system and you will be asked if you want to restart.

8. Select "Yes, I want to restart my computer now" to restart Windows.

The WinZip self-extractor automatically quits and removes its temporary files in about 20 seconds.

Installing WebObjects 5.2.2 on Solaris

1. Install JDK 1.4.1, if not yet installed (available from http://java.sun.com). This version is required.

2. Download WO522Solaris.TAR.Z, the update installer for Solaris.

Note: You will also need to download the update installation script, patcher.sh.

The update is available from:

http://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/webobjects/patches/5.2/WO522Solaris.tar.gzip

The installation script is available at:

http://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/scripts/patcher.sh

After you have downloaded the files, the patcher.sh script needs its executable bit set. At the command prompt enter:

chmod 511 patcher.sh

3. Log in as root.

4. Make sure that there are no WebObjects or EOF applications running, including Monitor.

5. If a web server is running on the computer on which you are installing the update, stop it.

6. Stop WebObjects services (wotaskd and woservice) using the WOServices script. At the command prompt enter:

cd $NEXT_ROOT/Library/WebObjects/Executables ./WOServices stop

These services will restart when you restart the computer after installing the update.

7. To Install the update, cd to the directory containing the update and the patcher.sh installation script. Then at the command prompt enter:

patcher.sh -install WO522Solaris.TAR.Z

For more information on using patcher.sh, at the command prompt enter:

patcher.sh -help

8. Copy the updated WODocument root to your web server's document root.

cp -r $NEXT_ROOT/Library/WebObjects/WODocumentRoot/WebObjects <webserver doc root>/WebObjects

9. Restart your computer.

Issues resolved in WebObjects 5.2.2

EOBeanBuilder does not handle entities with relationships properly.

Apple Reference 3012075

ISSUE:

EOBeanBuilder does not handle entities with relationships properly.

RESOLUTION:

This issue has been resolved and support for Container Managed Persistence 2.0 (CMP) in Enterprise Java Beans (EJBs) have been added.

WOFileUpload is improperly setting filePath when no file is uploaded.

Apple Reference 3078140

ISSUE:

Sometimes the filePath binding was munged after repeated uploads.

RESOLUTION:

If the user submits a file upload without a filepath binding, the filePath string will be set to "".

EOModeler does not support double quotes in building qualifiers.

Apple Reference 3081517

ISSUE:

When double quotes are used in building qualifiers, an extra space is added to the end of the qualifiers. For example, (title like "A*") would be treated as (title like A*), which breaks the data browsing and filtering functionality.

RESOLUTION:

This issue has been resolved.

wotaskd does not launch upon start up after specifying it to launch using a non-root user.

Apple Reference 3088811

ISSUE:

A few double quotes are misplaced in the startup script /System/Library/StartupItems/WebObjects.

RESOLUTION:

This issue has been resolved.

The class EOAttribute throws the exception ClassCastException when illegal arguments are encountered under certain situations.

Apple Reference 3101631

ISSUE:

The method adaptorValueByConvertingAttributeValue() defined in the class EOAttribute throws the exception ClassCastException when illegal arguments are encountered.

RESOLUTION:

The exception IllegalArgumentException is thrown upon encountering illegal arguments.

Content encoding related exceptions are thrown when WebObjects encounters Chinese/Japanese characters.

Apple Reference 3135465

ISSUE:

WebObjects determines the content encoding based on HTTP headers only and ignores other encoding information in XML content.

RESOLUTION:

This issue has been resolved.

Checked boxes generated by WOCheckedboxMatrix do not align correctly in some cases.

Apple Reference 3148863

ISSUE:

If the text to the right of the checked boxes takes more than one line and if it wraps, the checked boxes are aligned between the lines instead of aligning at the first line.

RESOLUTION:

This issue has been resolved.

Accesses to EOObjectStore are blocked after calling EODatabaseDataSource.qualifyWithRelationshipKey() in some cases.

Apple Reference 3177592

ISSUE:

The lock acquired by calling EODatabaseDataSource.qualifierForRelationshipKey() never gets released.

RESOLUTION:

This issue has been resolved.

The name "shared" cannot be used as an attribute name for an entity in WebObjects 5.2, but it can in WebObjects 5.0.

Apple Reference 3179807

ISSUE:

Some private methods introduced to EOCustomObject in WebObjects 5.2 conflict with users specified property names.

RESOLUTION:

This issue has been resolved.

The Object Inspector of WebObjects Builder does not handle binding values started with the character "^" correctly.

Apple Reference 3179819

ISSUE:

Whenever a value started with "^" get assigned to a binding using Object Inspector, the binding value get double-quoted undesirable

RESOLUTION:

This issue has been resolved.

WebObjects Builder does not handle binding value starting with the character "-" correctly.

Apple Reference 3180520

ISSUE:

Whenever WebObjects Builder encounters a binding value starting with the character "-", it interprets it as an incorrect declaration.

RESOLUTION:

This issue has been resolved.

The binding "overwrite" in the WOFileUpload example shipped in WebObjects 5.2 is not being respected.

Apple Reference 3188888

ISSUE:

There are some issues with files renaming in some cases, which causes overwriting to fail.

RESOLUTION:

This issue has been resolved.

JDBCContext does not respect the value returned by EOAdaptorContext.Delegate.adaptorContextShouldCommit()

Apple Reference 3190939

ISSUE:

Even if EOAdaptorContext.Delegate.adaptorContextShouldCommit() returns true, JDBCContext always does the commit instead of delegating the responsibility to the delegate.

RESOLUTION:

This issue has been resolved.

False warnings about missing locks are issued in some cases inside the method EOEditingContext._undoManagerCheckpoint() .

Apple Reference 3192337

ISSUE:

Certain assertion checks in EOEditingContext are invalid.

RESOLUTION:

This issue has been resolved.

NullPointerException is thrown in EOAttribute.adaptorValueType() upon generating an error message.

Apple Reference 3192384

ISSUE:

If an illegal internal type presents in the definition of a stored procedure, EOAttribute.adaptorValueType() would throw an NullPointerException upon generating an error message.

RESOLUTION:

This issue has been resolved.

NSTimeZone.timeZoneWithName() returns null in some cases, when handling certain names and abbreviations of some well-known time zones in JVM 1.4.1.

Apple Reference 3203985

ISSUE:

Some new names/abbreviations for well-known time zones was introduced in Java Virtual Machine (JVM) ver. 1.4.1. NSTimeZone.timeZoneWithName() could not handle those names/abbreviations.

RESOLUTION:

This issue has been resolved.

willRead() will throw a NullPointerException when an EO is in an invalid state.

Apple Reference 3223265

ISSUE:

EOCustomObject can throw an NullPointerException in willRead() if the EO is either not inserted in an EOEditingContext or is somehow a zombie.

RESOLUTION:

It now throws an IllegalStateException instead.

The width of some JComboBoxes in Direct to Java Client applications is not scaled according to the list of selectable values.

Apple Reference 3252950

ISSUE:

In some cases JComboBox.getPerferredSize() returns less than optimal dimension in Java Virtual Machine ver. 1.4.1.

RESOLUTION:

This issue has been resolved.

EOEditingContext throws NullPointerException in some cases.

Apple Reference 3252964

ISSUE:

In some cases notifications are sent to an already disposed nested EOEditingContext.

RESOLUTION:

This issue has been resolved.

There is an extra non-black space in the closedLabel attribute of the WOCollapsibleComponentContent.

Apple Reference 3252969

ISSUE:

The closedLabel attribute of the WOCollapsibleComponentContent contains an extra non-blank space.

RESOLUTION:

This issue has been resolved.

An error message is returned to Safari by Apache Web Server upon calling session.terminate().

Apple Reference 3253004

ISSUE:

Cookies expiration is not being handled correctly, which causes issues with Safari and Apache Web Server.

RESOLUTION:

This issue has been resolved.

The binding codebase of WOApplet is being ignored.

Apple Reference 3255852

ISSUE:

The binding code base of WOApplet is not being respected.

RESOLUTION:

This issue has been resolved.

Interface Builder crashes upon opening the MainMenu.nib file of a Cocoa Enterprise Objects Application project.

Apple Reference 3319422

ISSUE:

When a Cocoa Enterprise Object Application project was created, a MainMenu.nib file was created by default. Upon opening such nib file, Interface Builder crashes.

RESOLUTION:

This issue has been resolved.

An alter panel was displayed when launching Interface Builder on a system with Java Virtual Machine (JVM) ver. 1.4.1 installed as default JVM.

Apple Reference 3319683

ISSUE:

Although the system default JVM was 1.4.1. Interface Builder still uses JVM 1.3.1 in some cases, which causes an error java.lang.UnsupportedClassVersionError.

RESOLUTION:

This issue has been resolved.

Upon disposing an editing context, NSDelayedCallbackCenter throws an IllegalArguementException in some cases.

Apple Reference 3323451

ISSUE:

Upon disposing an editing context, an IllegalArgumentException was thrown in NSDelayedCallbackCenter._cancelAllActionsWithTarget() due to encountering an array out of bound issue.

RESOLUTION:

This issue has been resolved.

Troubleshooting:

1. My application is throwing the exception "com.webobjects.foundation.NSForwardException for java.lang.NoClassDefFoundError: javax/servlet/ServletContext"

For some reason, the necessary packages are not in your classpath. Debug your classpath to make sure the javax.servlet.* classes are there. If the classes are not found, the resolution is to download the servlet.jar and put it into /Library/Java/Extensions or in your classpath. The servlet.jar can be found with

many open source distributions (e.g tomcat).

2. How do I convert my legacy WebObjects application to build as a true war bundle?

1. In Xcode, configure your build settings to the following:

```
SERVLET_SINGLE_DIR_DEPLOY = NO
SERVLET_STUB_WAR = NO
SERVLET_TRUE_WAR = YES
SERVLET_DEPLOY_LICENSE = <your deployment license>
SERVLET_WEBAPPS_DIR = /Library/JBoss/3.2/deploy
```

2. add the JavaWOJSPServlet.framework to your project

3. You should also verify that all of your custom frameworks are being built as jar files and are installed or linked into /Library/WebObjects/lib.

Published Date: Oct 7, 2016

Apple Hardware Test: May Incorrectly Report That Bluetooth Is Not Present

Apple Hardware Test may incorrectly report that the Bluetooth module is not present. You may use Apple System Profiler to test for presence of the module.

This article has been archived and is no longer updated by Apple.

Symptom

Apple Hardware Test (AHT) may state that the Bluetooth module is not present when it actually is present.

Solution

To verify presence of the module:

1. Restart the computer from the hard disk.
2. Open Apple System Profiler (/Applications/Utilities/).
3. Click the Devices and Volume tab.
4. Look to see if the Bluetooth module appears on the USB bus (Figure 1).

Figure 1 Apple System Profiler

Published Date: Oct 7, 2016

Apple Remote Desktop: How to Manage a "Dual Boot" Computer From One Computer List

When configured properly, you may manage a computer that starts up alternatively from Mac OS 9 and Mac OS X (also known as "dual boot") from a single computer list.
This article has been archived and is no longer updated by Apple.
You can manage the client from the same list when both of the following are true:

1. The Remote Desktop administrator's password is the same for Mac OS 9 and Mac OS X. (See Notes, below.)

2. The client computer was added to the list while started up from Mac OS 9, entering both the name and the password (not just the password).

Notes:

1. In Mac OS 9, the Remote Desktop administrator's password is set in the Remote Desktop Security application.

2. In Mac OS X, the Remote Desktop administrator's password belongs to a user who has been granted privileges in the Remote Desktop System Preferences pane.

Example

This example illustrates the configuration, using the name "ARD User" and the password "Apple".

1. In Mac OS X, create a user named "ARD User" with the password "Apple".
2. In the Remote Desktop System preference pane, give this user access.
3. Change the startup system folder to Mac OS 9, and restart the computer.
4. Open Remote Desktop Security, and authenticate.
5. Change the current administrator's password to "Apple".
6. While the computer is still started up from Mac OS 9, add it to the computer list in the Remote Desktop application. When entering the authentication info, enter both the user name ("ARD User") and the password ("Apple").

The computer will now appear in the list whether started up from Mac OS 9 or Mac OS X.
Published Date: Feb 19, 2012

Mac OS X 10.2 or Later: Firewall Blocks Internet Sharing

If you don't open an extra port, Firewall will block the use of Internet Sharing.
This article has been archived and is no longer updated by Apple.

Symptom

A client of your shared Internet connection can get an IP address from your computer, but it cannot actually access the Internet.

Solution

These steps open port 443, which should resolve the issue.

1. Turn on Personal Web Sharing in the Sharing preference pane.
2. Click the Firewall tab.
3. Click the New button.
4. From the Port Name pop-up menu, choose Other.
5. In the Port Number field, type: 443
6. In the description field, type: https

7. Click OK.
8. Turn off Firewall and Internet Sharing.
9. Turn on Firewall and Internet Sharing.

Published Date: Oct 7, 2016

Mac OS X Managed Client: How to allow use of unbundled applications in Mac OS X 10.2, 10.3

This article has been archived and is no longer updated by Apple.

This document explains how to allow the use of unbundled applications when managing clients. You need to do this when applications open sub-applications which have no bundle ID.

This document applies to the Workgroup Manager component of Mac OS X Server 10.2, when used to manage Mac OS X 10.2 or later clients. For Mac OS X Server 10.3, use the "Allow UNIX tools to run" option, which can be found in the Application Managed Preference section of Workgroup Manager. Mac OS X 10.2 and 10.3 client systems will respect this setting when bound to a 10.3 server. Similarly, 10.2 and 10.3 client systems will respect this setting when bound to a 10.2 server.

Note: This advanced procedure requires manual editing of a value in NetInfo Manager. This is provided for information purposes only. Apple does not provide any further technical support or assistance for performing this task.

About unbundled applications

An unbundled application is an executable that does not have an assigned Type/Creator or Bundle ID. Some applications open (or launch) unbundled application utilities to perform certain tasks. When one application launches another, it is known as "sub-launching."

Unbundled applications cannot be sub-launched if you are managing applications and have deselected the preference for "User can also open all applications on local volumes".

To allow sub-launching in this scenario, you may use the procedure below.

Note: To locate the "User can also open all applications on local volumes" setting discussed here, you would select your managed user or group in Workgroup Manager, then click the Preferences icon, then click the Applications icon. The adjacent setting "Allow approved applications to launch nonapproved applications" is not relevant to unbundled applications.

Part I: Preparing Workgroup Manager and NetInfo Manager

1. Open Workgroup Manager (/Applications/Utilities), and connect to your server.
2. Using the Preferences, enable the option to "Allow approved applications to launch nonapproved applications" for each of the Users, Groups, and Computer Lists that you will be allowing unbundled applications to launch within.
3. Apply the changes, and quit Workgroup Manager.
4. Open NetInfo Manager (/Applications/Utilities).
5. Choose Domain > Open By Tag.
6. Enter the host name or IP address of the server that manages the Mac OS X Clients.
7. Enter the NetInfo database tag for that server (Default: network).
8. Click the Open button to connect to the designated server and NetInfo domain.
9. Choose Security > Authenticate.
10. Enter the necessary authentication information, and select OK.

Part II: Locate and Copy mcx_settings

1. In NetInfo Manager, navigate to the user, group, or computer list that you will be allowing unbundled applications to launch within. For example, to edit the group "8thgrade", navigate to /groups/8thgrade in NetInfo Manager. To edit the computer list "Macs near me", navigate to "/computer_lists/Macs near me" in NetInfo Manager.
2. Locate the mcx_settings property, and select its value by double-clicking the field to its right. All of the text should be highlighted.
3. Choose Edit > Copy.

Part III: TextEdit

1. Open TextEdit (/Applications/). A new, untitled document should appear. If not, create a new document.
2. Choose Format > Make Plain Text.
3. Choose Edit > Paste.
4. Choose File > Save As.
5. Name the file "mcx_settings.org.plist", and click Save.
6. Select the file you just saved in the Finder.
7. Choose File > Duplicate.
8. Name the copy "mcx_settings.plist".

9. Open the mcx_settings.plist file in TextEdit.
10. Locate the AlwaysAllowedList-Raw dictionary (<dict>) under the mcx_preference_settings domain.

Note: If this dictionary is not present, then applications are not being managed for this user, group, or computer list. There may be multiple instances of this dictionary. Only edit the dictionary located under the mcx_preference_settings (Figure 1).

Figure 1 The AlwaysAllowedList-Raw dictionary

11. Add this text just above the AlwaysAllowedList-Raw dictionary, as in Figure 2:

```
<key>AllowUnbundledApps</key>
<true/>
```

Figure 2 The AllowUnbundledApps key

12. Save the changes.

Note: You can test the validity of your plist file by attempting to open it in the Plist Editor application (installed with the developer tools, also found on the NetBoot for Mac OS 9 CD). If the file does not open in Plist Editor, there may be an issue with how you added the key.

13. Choose Edit > Select All.
14. Choose Edit > Copy. (You should be copying all contents of the mcx_settings.plist file to the clipboard.)

Part IV: Replacing mcx_settings

1. Switch to the NetInfo Manager application.
2. Select the mcx_settings value that you previously copied from NetInfo Manager in Section II.
3. Choose Edit > Paste.

Note: You can use the Up and Down Arrow keys to scroll down and verify that text was successfully pasted.

4. Save the changes in NetInfo Manager.
5. Confirm the modification by clicking the "Update this copy" button.

Part V: Additional Users, Groups, or Computers

Repeat the steps in Part I through Part IV for each additional managed user, group, or computer list you would like to be able to open unbundled applications.

Part VI: Empty the Cache

1. Via Workgroup Manager, select your managed computer list(s) and click the Empty the Cache button.
2. Restart your managed client computers.

Upon subsequent logins, the users, groups, and computer lists you edited will now be able launch unbundled applications.

Related Knowledge Base documents:

107539: "**Mac OS X Managed Client: Stops Responding During Login When Using Custom Desktop Picture**"
25400: "**iPhoto, Image Capture: Managed Mac OS X Clients May Not Recognize a Camera**"
107410: "**Apple Remote Desktop: Managed Clients Become Unavailable**"
Published Date: Oct 7, 2016

Server Monitor: What Triggers Email Notifications?

You can configure Server Monitor to send email notifications of certain events. Events that generate a notification email are listed here.

This article has been archived and is no longer updated by Apple.

Drives

Server Monitor sends a notification email if the number of drives changes.

Power

Voltage rails: 12, 5V, 3.3V, 2.5V, Logic (1.7V), Processor (CPU specific)

Server Monitor sends email notification when:

- A voltage rail crosses a threshold of +/-5% (warning message).
- A voltage rail crosses a threshold of +/-10% (failure message).
- A voltage rail returns to acceptable value (normal message).

Network

There are no warning emails in this category.

Temperature

Nominal temperature for the enclosure is 40C. Thresholds occur at nominal +15C and +25C. Processor temperature is CPU specific, with thresholds at +5C and +10C.

Server Monitor sends email notification when:

- Enclosure temperature crosses 55C (warning message).
- Enclosure temperature crosses 65C (failure message).
- Processor temperature crosses nominal +5C (warning message).
- Processor temperature crosses nominal +10C (failure message).

Blowers

This applies to blowers for enclosure and processor.

Server Monitor sends email notification when:

- A blower is less than 1000 RPMs (warning message).
- A blower is less than 661 RPMs (failure message).

Security

Server Monitor sends email notification when the enclosure is opened or closed.

Published Date: Feb 17, 2012

Safari: A Website Does Not Work as Expected

Sometimes certain features on a website may not work as expected. This document explains what to do when that happens.
This article has been archived and is no longer updated by Apple.

Symptom

A particular website, or one of its features, does not work as expected.

Solution

When a particular website does not work as expected, the issue may be caused either by the site itself or by the software on your computer. Sometimes you can resolve the issue by updating your software, or by performing other troubleshooting.

You cannot identify the cause of the issue in all cases, so it may help engineers identify the issue If you send feedback to Apple and the affected website. To send feedback to Apple, choose Safari > Report Bugs to Apple.

For troubleshooting that you can perform yourself, see technical document 107657, "**Safari: Safari Unexpectedly Quits**". Even if Safari does not actually quit, the steps you can use to troubleshoot unexpected website behavior are the same in either case.
Published Date: Feb 19, 2012

Mac OS X Server: How Many NetBoot Clients Can Connect to a Server

This document explains how many clients you can connect to a NetBoot server using Mac OS X Server versions 10.0 and later. **Note:** This document covers Mac OS X Server versions 10.0 and later. For versions 1.0 to 1.2, see technical document 60144, "**Mac OS X Server: How Many NetBoot Clients Can Connect to a Server**".
This article has been archived and is no longer updated by Apple.
The number of NetBoot client computers you can connect to your server depends on server hardware and a number of other factors.

Server Hardware

A NetBoot server with these specifications can easily support 50 NetBoot client computers:

- PowerPC G3 or G4 microprocessor at 400 MHz or faster
- 256 MB of memory (RAM)
- Gigabit Ethernet and/or a four-port, 100BASE-T or faster Ethernet card
- Two or more hard disks of 9 GB or larger (Multiple hard disks allow more efficient NetBoot operation.)

Note: For best performance and reliability, avoid starting up more than 20 computers simultaneously. After a few moments, you may start up the next 20 computers.

Other Factors

If you want to support more than 25 client computers or use a server that has a different configuration, consider these factors:

Ethernet speed
For best performance, use 100BASE-T or faster connections for both client computers and the server.

Hard disk capacity and number of NetBoot clients
The NetBoot server requires a certain amount of hard disk space for each client connected to it. The amount of space depends on the size and configuration of the system image.

Hard disk capacity and number of users
If you have a large number of users, consider adding a separate file server to your network to store user documents. User documents and preferences are stored by default on the NetBoot server when you use Macintosh Manager, but any Apple Filing Protocol (AFP) server can store this information.

Location of server and client
NetBoot client computers that must use BootP must be located on the same subnet as the server, and there can be only one BootP server on that subnet. However, there can be multiple NetBoot servers serving images on the same subnet.

Number of Ethernet ports on the server
If you have a four-port Ethernet card at the server, distributing NetBoot clients over the ports offers a performance advantage. You can add ports by adding Ethernet cards, or by using several ports on a multi-port Ethernet card. Each port must serve a distinct segment.

Shadow image
As a client starts up from a NetBoot server, it creates a shadow image on the server's hard disk. Each NetBoot client's shadow image takes up the full space of a system disk image for a short time. The size of the server's shadow disk image increases and decreases as needed.
Published Date: Oct 7, 2016

Open Firmware: Password Not Recognized When It Contains the Letter "U"

If you used Open Firmware Password utility to create a password that contains the capital letter "U", your password will not be recognized during the startup process (when you try to access Startup Manager, for example).

This article has been archived and is no longer updated by Apple.

Symptom

Your Open Firmware password is not recognized during startup.

Solution

Don't use a capital letter "U" when setting up an Open Firmware password. Change your password if necessary.

For more information, see technical document 106482, "**Mac OS X 10.1, 10.2: How to Set Up Open Firmware Password Protection**".

Published Date: Oct 7, 2016

WebObjects 5: How to Specify the Character Encoding for a Web Browser

A WebObjects application may set the character encoding used by the client Web browser so that international characters are displayed correctly.
This article has been archived and is no longer updated by Apple.
Character encodings can be set at various places in a WebObjects application, such as string encoding for session data, XML encoding, database server encoding, or the encoding used to communicate with the client Web browser. This document only discusses the latter.

It is important to select the proper character encoding and initialize WebObjects accordingly, so that the characters of your chosen language are displayed correctly. This document discusses using Japanese characters, but this information can be used for other languages as well.

Setting the encoding inside WebObjects

UTF-8, which is a way to represent Unicode, covers a wide range of Japanese characters and allows Japanese text to be mixed with other languages (European, Asian, and so forth). Therefore, this encoding is preferred compared to other Japanese-only encodings such as Shift-JIS.

In your Application.java file, override two methods, takeValuesFromRequest() and appendToResponse() to specify the proper encoding (UTF-8 is used as an example here). The method appendToResponse() also sets the proper encoding in each WOResponse header.

```
      public void takeValuesFromRequest(WORequest r, WOContext c) {
        r.setDefaultFormValueEncoding("UTF8");
        super.takeValuesFromRequest(r,c);
    }

    public void appendToResponse(WOResponse r, WOContext c) {
        r.setContentEncoding("UTF8");
        super.appendToResponse(r,c);
        r.setHeader("text/html;charset=utf-8", "Content-Type");
    }
```

See Sun's encoding documentation (http://java.sun.com/j2se/1.3/docs/guide/intl/encoding.doc.html) to determine the correct encoding for your environment.

Example: Resolving a browser display problem when using Shift_JIS (JIS X0208:1997)
Problem description: Web browser does not display correctly the vendor specific characters
Encoding used: Shift_JIS

Solution:

1. Windows-31J is the correct character set for displaying the vendor specific characters.

2. Modify the character encoding to "MS932", Windows Japanese.

3. The request header should be set to ("text/html;charset=Windows-31J", "Content-Type")

Code example:

```
public void takeValuesFromRequest(WORequest r, WOContext c) {
        r.setDefaultFormValueEncoding("MS932");
        super.takeValuesFromRequest(r,c);
    }

    public void appendToResponse(WOResponse r, WOContext c) {
        r.setContentEncoding("MS932");
        super.appendToResponse(r,c);
        r.setHeader("text/html;charset=Windows-31J", "Content-Type");
    }
```

For more information, see:

Microsoft Windows Codepage : 932 (Japanese Shift-JIS)
<http://www.microsoft.com/globaldev/reference/dbcs/932.htm?&gssnb=1>

Mapping Differences Between JIS X 0221 and Code Page 932
<http://support.microsoft.com/default.aspx?kbid=286776>

Windows31-J and other character sets
<http://www.iana.org/assignments/character-sets>

Important: On Mac OS X, Internet Explorer may not display the Japanese characters correctly even with the MS932 encoding. Use Safari 1.0 or later instead.

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Document 17159: "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 7, 2016

Apple Remote Desktop: About the ARD 1.2.4 Update for Mac OS X

This software updates Apple Remote Desktop to version 1.2.4 on computers using Mac OS X 10.1 or later.

Important: Read Before Installing

1. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.
2. To install Apple Remote Desktop 1.2.4, you must enter the password for an administrator account. The password cannot contain a space, or special characters typed by pressing the Option key. If you need to change an administrator account password, use Accounts preferences.
3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Featured Software to install.

Installation

There are two ways to update to Apple Remote Desktop 1.2.4.

Software Update

You may have been referred to this document by Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

Standalone Installers

An installer is also available from **Apple Downloads**.

Enhancements delivered with this update

These are some of the enhancements delivered with the Apple Remote Desktop v1.2.4 Update:

- Large files copy up to 30 percent faster on 100BASE-T networks.
- Improves performance when using the Observe, Control, or Sharing screen on 100BASE-T networks.
- Includes new Apple Remote Desktop menu extra icons and status indicators.
- Includes a new command line tool can be used in lieu of the GUI preference pane.
- Includes new defaults keyword AdminConsoleAllowsRemoteControl, which allows you to administer a client that is also running the administration application.
- Computer status windows no longer "flicker" when Apple Network Assistant 3 clients are present.

This article has been archived and is no longer updated by Apple.
Published Date: Oct 7, 2016

Xserve: How to Enable Ethernet Jumbo Frames on the PCI Gigabit Card

Learn how to enable Jumbo Frames on supported Ethernet PCI network interfaces.
This article has been archived and is no longer updated by Apple.
Warnings:

1. All devices on a local network must be configured to use Jumbo Frames, or loss of connectivity could occur on that network.

2. All devices on the local network must support use of Jumbo Frames. Few network switches support Jumbo Frames, and sending them to a switch that does not support them may cause the switch to stop operating. Check the specifications of network hardware prior to enabling Jumbo Frames. Even if your devices are Jumbo Frame compatible, Jumbo Frames are not needed under most circumstances. Be sure you have a need for them before using this procedure.

3. This procedure is intended only for computers with Mac OS X Server and the PCI Gigabit Card, or for the Xserve G5. Jumbo Frames can be used on the built-in Ethernet port **only** on the Xserve G5.

Enabling Jumbo Frames

If you have Mac OS X Server 10.3 or later, you can set up Jumbo Frames via normal administration applications. The steps below would not be needed.

If you have Mac OS X Server 10.2.4 to 10.2.8, follow these steps to create a script that is executed during startup:

Warning: Users who are unfamiliar with command line interface and manual configuration in general should proceed with caution or preferably seek assistance. Assistance in setting up or creating Startup Items is not part of Apple's complimentary technical support for new products. Users interested in fee-based support for setting up and creating Startup Items or shell scripts should contact Apple Professional Services (http://www.apple.com/services/). If you do not follow these steps precisely, the script may not work, which could prevent the computer from starting up normally.

1. Make sure you are logged in with an administrator account.
2. Open Terminal (/Applications/Utilities).
3. Type: `mkdir -p /Library/StartupItems/JumboFrame`
4. Press Return.
5. Type: `cd /Library/StartupItems/JumboFrame`
6. Press Return.
7. Type: `pico JumboFrame`
8. Press Return.
9. In the pico editor, paste in the following text.

Begin copying below this line.

```
#!/bin/sh

##
# Configure kernel parameters for Jumbo Frame support
##

. /etc/rc.common

StartService ()
{
ConsoleMessage "Configuring for Jumbo Frames"

if [ "${JUMBOFRAME:=-NO-}" = "-YES-" ]; then

/usr/sbin/sysctl -w  net.inet.raw.maxdgram=16384
/usr/sbin/sysctl -w  net.inet.raw.recvspace=16384
/usr/sbin/sysctl -w  net.inet.tcp.sendspace=65536
/usr/sbin/sysctl -w  net.inet.tcp.recvspace=65536
/usr/sbin/sysctl -w  net.inet.udp.recvspace=65536

fi

}

StopService ()
{
```

```
return 0
}

RestartService ()
{
return 0
}

RunService "$1"
```

End copying above this line.

10. Save the file (Control-O, Return), and exit pico (Control-X).
17. Type: `chmod 755 JumboFrame`
18. Press Return.
19. Type: `pico StartupParameters.plist`
20. Press Return.
21. Paste the following text into the pico editor:

Begin copying below this line.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple Computer//DTD PLIST 1.0//EN"
"http://www.apple.com/DTDs/PropertyList-1.0.dtd">
<plist version="1.0">
<dict>
        <key>Description</key>
        <string>Can set Jumbo Ethernet Frames</string>
        <key>OrderPreference</key>
        <string>None</string>
        <key>Provides</key>
        <array>
                <string>JumboFrame</string>
        </array>
        <key>Requires</key>
        <array>
                <string>Network Configuration</string>
        </array>
</dict>
</plist>
```

End copying above this line.

22. Save the file (Control-O, Return) and exit pico (Control-X).
23. Type: `chmod 644 StartupParameters.plist`
24. Press Return.
25. Type: `sudo pico /etc/hostconfig`
26. When prompted, enter your account password.
27. Press Return.
28. In the pico editor, add this line at the bottom (use the down arrow key to navigate to the file end):

```
JUMBOFRAME=-YES-
```

29. Save it (Control-O, Return) and exit pico (Control-X).

When you restart the computer, the script makes the kernel parameter settings necessary to support Ethernet Jumbo Frames. Once that is done, you can enable Jumbo Frames on the PCI Gigabit port using this command:

```
sudo networksetup -setMTU en1 9000
```

If your PCI Gigabit card has a port name different from "en1", you should change the port name in the command to match. Repeat this command if you have multiple PCI Gigabit cards, substituting the other port names.

This setting is retained after a restart and does not need to be entered after each startup.

How to disable Jumbo Frames

If you experience any issues or do not want to use Jumbo Frames, you can change the port back by using this command:

```
sudo networksetup -setMTU en1 1500
```

Then change the JUMBOFRAME line in /etc/hostconfig to:

```
JUMBOFRAME=-NO-
```

After that, restart the computer.
Published Date: Oct 7, 2016

Mac OS X 10.2: How to allow use of unbundled applications with Account Capabilities

This article has been archived and is no longer updated by Apple.

You may not be able to open unbundled applications with an account that is managed by the Capabilities feature. You may notice this when one application cannot open another sub-application, sometimes called "sub-launching." This document explains how to allow unbundled applications.

Note: This advanced procedure requires manual editing of a value in NetInfo Manager. This is provided for information purposes only. Apple does not provide any further technical support or assistance for performing this task. The Capabilities feature is available in Mac OS X 10.2.

About unbundled applications
An "unbundled" application is one that does not have an assigned Type/Creator or Bundle ID. These applications cannot open if you have selected the "Use only these applications" checkbox in the Capabilities pane of Accounts preferences. Some applications may open (or sub-launch) unbundled application utilities to perform certain tasks.

Allowing use of unbundled applications
Using the steps below, you can allow use of unbundled applications while still managing application access.

Part I: Accounts Preferences

1. From the **Apple** menu, choose **System Preferences**.
2. Click the Accounts icon.

Figure 1 Selecting the Accounts pane

3. Click the New User button, and follow the prompts to create a new user.
4. Select the user you just created from the Users list.
5. Click the Capabilities button.
6. Set the Capabilities options as desired.
Note: If your are restricting applications by selecting the "Use only these applications" option, click the Locate button to add support applications to the allowed list.
7. Click OK to save the Capabilities settings.

Part II: NetInfo Manager

1. Open NetInfo Manager (/Applications/Utilities).
2. From the **Security** menu, choose **Authenticate**.
3. Enter your administrator account name and password.
4. Using the columns in NetInfo Manager, navigate to the user that you just created. For example, to edit the user with the short name "grethe", you would go to /users/grethe in the columns.
5. Locate the mcx_settings property, and select its value by double-clicking the field to its right. All of the text should be highlighted.
6. Press Command-C to copy the contents of the mcx_settings property to the Clipboard.

Part III: TextEdit

1. Open TextEdit (/Applications/).
2. If a new, blank document did not appear, create one now. From the **File** menu, choose **New**.
3. From the **Format** menu, choose **Make Plain Text**.
4. Press Command-V to paste the contents of the mcx_settings value into the document.
5. From the **File** menu, choose **Save As**.
6. Name the file: `mcx_settings.org.plist`
7. Save the file to the desktop.
8. Using the Finder, select the file you just saved.
9. From the **File** menu, choose **Duplicate**.
10. Rename the duplicate to: `mcx_settings.plist`
11. Open the mcx_settings.plist file in TextEdit.
12. Locate the "AlwaysAllowedList-Raw" dictionary (<dict>) that is under the mcx_preference_settings domain (highlighted in Figure 1).

Note: If this dictionary is not found, then applications are not being managed for this user. Conversely, there may be multiple instances of

this dictionary. In that case you should only edit the one located under the mcx_preference_settings, as illustrated in Figure 2.

Figure 2 Locating the AlwaysAllowedList-Raw dictionary

13. Add the following text above the AlwaysAllowedList-Raw dictionary (highlighted in figure 3):

```
<key>AllowUnbundledApps</key>
<true/>
```


Figure 3 Adding the AllowUnbundledApps key

14. Save the changes.

Note: You can test the validity of your plist file by trying to open it in the Plist Editor application (installed with the developer tools, also found on the NetBoot for Mac OS 9 CD). If the file does not open in Plist Editor, there may be an issue with how you added the key.

15. From the **Edit** menu, choose **Select All**. (This should select all of the mcx_settings.plist document).
16. Press Command-C to copy the text to the Clipboard.

Part IV: Replacing mcx_settings

1. Go back to the NetInfo Manager application.
2. Paste the text from the Clipboard into the mcx_settings value that you previously selected in NetInfo Manager.

Note: You can use the Up Arrow and Down Arrow keys to scroll down and verify that text was successfully pasted.

3. Save the changes in NetInfo Manager.
4. Confirm the modification by clicking the "Update this copy" button.

Go back to Part II, Step 4 and repeat this process for each account that needs to be able to open unbundled applications.

The accounts you edited will be able use unbundled applications when they next log in.

This document will be updated when more information is available.

Additional information

You may see this issue when using iPhoto, Image Capture, Apple Remote Desktop, or a custom desktop picture. For related information, see these technical documents:

107539: "**Mac OS X Managed Client: Stops Responding During Login When Using Custom Desktop Picture**"
25400: "**iPhoto, Image Capture: Managed Mac OS X Clients May Not Recognize a Camera**"
107410: "**Apple Remote Desktop: Managed Clients Become Unavailable**"
Published Date: Oct 7, 2016

Workgroup Manager: Troubleshooting "A computer with that description already exists" Messages

This article has been archived and is no longer updated by Apple.

When you try to add to a computer list in Workgroup Manager, a message may say the computer already exists in a list.

Symptom

You see one of these alert messages in Workgroup Manager:

> "Unable to save. A computer with that description already exists in this or another list."
>
> "Unable to save. A computer with that address already exists in this or another list."

Solution

LDAPv3 (Mac OS X Server 10.3 or later)

Using Workgroup Manager, manually remove the computer record using the inspector. Follow these steps:

1. Open Workgroup Manager (/Applications/Server).
2. Connect to the directory domain (default: /LDAPv3/127.0.0.1).
3. From the **Workgroup Manager** menu, choose **Preferences**.
4. Select the "Show 'All Records' tab and inspector" checkbox, and save the changes.
5. Click the All Records tab.
6. Click the Options button, and be sure that only these options are selected (you may have to deselect some options):

   Show Standard Attributes
   Show Native Attributes

7. From the pop-up menu, choose **Computer Lists**.
8. Select the Computer List that you were trying to add this computer to.
9. Click the disclosure triangle next to Computers, and you will see a list of computers.
10. Locate the record for the computer you were trying to add. Note: The computer may or may not be in this list. If the computer is in the list, continue to step 11; otherwise skip to step 13.
11. Select the Computer you were trying to add.
12. From the **Server** menu, choose **Delete Selected Records**.
13. Click the disclosure triangle next to "apple-computers", and you will see a list of computers.
14. Locate and select the record for the computer you were trying to add. Note: The computer may or may not be in this list. If the computer is in the list, continue to step 15; otherwise skip to step 17.
15. Select the Computer you were trying to add.
16. From the **Server** menu, choose **Delete Selected Records**.
17. Save the changes.
18. From the pop-up menu, choose **Computers**.
19. Locate and select the record for the computer you were trying to add.
20. From the Server menu, choose 'Delete Selected Records'
21. Save the changes.

You may now add this computer to a list.

Mac OS X Server 10.2 only

Using NetInfo Manager, manually remove the computer record from the /computers directory. Follow these steps:

1. Open NetInfo Manager (/Applications/Utilities)
2. Connect to the directory domain (default: network).
3. From the **Security** menu, choose **Authenticate**.
4. Enter the necessary authentication information.
5. In the NetInfo Manager columns, browse to /computers. You will see a list of computers in this directory.
6. Locate the record for the computer you were trying to add.
7. Delete the record.
8. Save the changes in NetInfo Manager.
9. Confirm the modification by clicking the "Update this copy" button.

You may now add this computer to a list.

Published Date: Oct 7, 2016

Workgroup Manager: Select Local When Browsing Computers to Add to a List

When browsing to add to a computer list in Workgroup Manager, you should select Local in the network dialog. The Local option searches via Bonjour (formerly "Rendezvous").
This article has been archived and is no longer updated by Apple.
When using the browse feature in Workgroup Manager to add to a computer list, a standard Connect to Server dialog appears. Select the Local option, which uses Bonjour to discover client computers on the network.

Clients that display their media access control (MAC) address in the list can be successfully added to the computer list.

Additional information

The search options, such as Local and AppleTalk, that appear in a Connect to Server dialog depend on which services are enabled in Directory Access (/Applications/Utilities). If AppleTalk is enabled, for example, you will see a list of all the available AppleTalk Zones. If SMB is enabled, you will see a list of all the available SMB Workgroups.

You can disable any service that you are not using to reduce the number of directory service choices in a Connect to Server dialog. Services such as AppleTalk, SLP, and SMB can appear in a Connect to Server dialog. Some other services cannot appear in a Connect to Server dialog. These include Active Directory, BSD Configuration Files, LDAPv2, LDAPv3, and NetInfo.

For more information, see technical document 107675, "**Workgroup Manager: Why a MAC Address May Not Appear When Adding to a Computer List**".
Published Date: Feb 17, 2012

Workgroup Manager: Why a MAC Address May Not Appear When Adding to a Computer List

When browsing to add computers in Workgroup Manager, MAC addresses may not appear for some client computers. You cannot add these clients to the computer list.
This article has been archived and is no longer updated by Apple.

Symptom

When using the browse feature in Workgroup Manager to add computers to a computer list, some clients display their Media Access Control (MAC) address, while others do not.

Solution

MAC address information appears for clients that identify themselves via Rendezvous, supplying information such as the MAC address of the built-in Ethernet port and the computer name. You can successfully add these clients to the computer list when browsing.

To see only clients broadcasting via Rendezvous, select the Local option when browsing. This is discussed further in technical document 107674, "**Workgroup Manager: Select Local When Browsing Computers to Add to a List**".

Clients that do not display their MAC address information are using another directory service protocol, such as AppleTalk or SMB. These clients cannot be added to the computer list when browsing.

Additional information

Disabling Rendezvous in Directory Access only prevents the ability to discover services via Rendezvous. It does not prevent broadcast via Rendezvous. This means clients with Rendezvous disabled in Directory Access will still appear in the list when browsing to select a computer.
Published Date: Feb 17, 2012

Apple Remote Desktop: Primary Language on Administrator and Client Computers Must Match

For Apple Remote Desktop to work properly, the most preferred (or "primary") language must be the same for the administrator's user account and a client computer's root account.
This article has been archived and is no longer updated by Apple.
Note: The client computer's primary root account language is the one that was selected in the Mac OS X Setup Assistant. The administrator account's primary language is whichever the administrator has selected for her (non-root) administrator account at any given time. The root account language of the administrator's computer is not a factor.

Individual users of the client computers are still free to choose any language, so long as the client computer's root user language matches the administrator's current choice. Remember to choose the same language on all computers during initial setup.

To change or view the root account's language preference on a client computer that has already been set up, follow these steps:

1. Log in as the root user at the client computer. For help with this step, see technical document 106290, "**Mac OS X: About the root User and How to Enable It**".
2. From the **Apple** menu, choose **System Preferences**.
3. From the **View** menu, choose **International**.
4. Click the Language tab.
5. Drag the most preferred language to the top of the list. In this case, make sure the same language is at the top of the list on both the client and administrator computers.

Published Date: Feb 19, 2012

Mac OS X 10.2: Software Update Command Requires DNS

DNS must be available for the "softwareupdate" command-line tool to work. When there is no DNS service, softwareupdate incorrectly reports that software is already up-to-date.
This article has been archived and is no longer updated by Apple.

Symptom

The softwareupdate tool incorrectly reports that software is up-to-date. This happens when it cannot reach or resolve the target server.

Solution

There are two workarounds to this issue:

- Use Software Update preferences instead of the command-line tool, or
- Change the computer's Network settings to include a working DNS server.

Published Date: Feb 17, 2012

Mac OS X Server 10.2: How to Change Password Server Host to Password Server Client

You can change the status of a server from hosting Password Server service to being a Password Server client.
This article has been archived and is no longer updated by Apple.
To change the status of a server from hosting Password Server service to being a Password Server client:

1. Open the Open Directory Assistant at the server to be changed, which in this example will be called Server 1.
2. In the Security panel, select "stored and accessed locally in user records".
3. Restart Server 1.
4. Open the Open Directory Assistant again at Server 1.
5. In the Directory Use panel, select "get directory information from another system". The parent server from which you intend to get information will be referred to as Server 2 in this example.
6. In the Configure panel, enter information appropriate for your directory configuration.
7. Finish by clicking "Go Ahead".
8. Restart Server 1.
9. To verify that the change has been completed you may wish to log in locally at Server 1 using user information known to exist on Server 2.

Published Date: Feb 17, 2012

Mac OS X Server 10.2: Changing the grade of encryption used with Apache

You can change the grade of encryption used with Apache in Mac OS X Server 10.2. The Cipher Suite directive designates the cryptographic algorithms for data encryption. Examples are DES, IDEA, and RC4.
This article has been archived and is no longer updated by Apple.
To change the grade of encryption used with Apache on Mac OS X Server, follow these steps:

1. Open Terminal (/Applications/Utilities/).
2. Type: `sudo pico /etc/httpd/httpd_macosxserver.conf`
3. Press Return.
4. Enter your administrator password when prompted, and press Return. The httpd_macosxserver.conf file opens in the pico text editor.
5. Review the guidelines at the top of this file. Be sure to follow these when editing.
6. Use the arrow keys to scroll down to the SSLCipherSuite directives. There will be one for each virtual host. By default it looks like this:

```
SSLCipherSuite "RSA:-HIGH:-MEDIUM:-LOW:+EXP"
```

7. Modify this directive as necessary to provide the desired level of encryption. Examples:

- To require strong encryption:

```
SSLCipherSuite HIGH:MEDIUM
```

- To use the default cipher, but remove the no-longer-recommended SSLv2:

```
ALL:!ADH:RC4+RSA:+HIGH:+MEDIUM:+LOW:!SSLv2:+EXP:+eNULL
```

- One way to add stronger encryption would be to change it to the following:

```
SSLCipherSuite "ALL"
```

8. Press Control-O to save the file, and Return to confirm.
9. Press Control-X to exit pico.
10. Restart Apache.

Notes

1. To list the available ciphers, use the "openssl ciphers -v" command, in Terminal.

2. For more information about the SSLCipherSuite directive follow the below web link to the modssl site:

http://www.modssl.org/docs/2.8/ssl_reference.html#ToC9

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Published Date: Feb 17, 2012

Mac OS X Server 10.3: Tested and theoretical maximums (limits)

The table below lists the tested and theoretical maximums (limits) for services offered by Mac OS X Server 10.3 or later.

This article has been archived and is no longer updated by Apple.

Note: Tested maximums reflect the test configuration and do not represent a guarantee of performance. Your experience may vary depending on factors such as computer model, microprocessor speed, network conditions, hard disk space, disk fragmentation, installed memory (RAM), client load, total number of services running on the server, or other software used on the server. Information left blank in the table is not yet available.

Tested and Theoretical Maximums

Component	Maximum	Tested	Theoretical
AFP Server	Number of Connected Users	1000	N/A
AFP Server	Shareable Volume Size	16 TB	16 TB
AFP Server	Number of Files per Volume	250 million	2 147 483 646
AFP Server	Number of Shared Items (Share Points)	255	255
BSD Kernel	Number of Processes (Note 1)	2048	
BSD Kernel	Number of Processes per UID (Note 2)	1000	
BSD kernel	Size of Argument	256 KB	256 KB
Core OS	Number of Open Files	1000	12288
Directory Services	Number of Groups	10000	
Directory Services	Number of Users	10000	
Directory Services	Number of Users per Group	10000	
Directory Services	Number of Groups per User	16	16
FTP Server	Number of Connected Users		16384
FTP Server	Number of Connections per User		16384
Macintosh Manager Client	Number of Approved Desktop Printers Per Workgroup	5	10
Mail Server	Number of Incoming SMTP Connections	256	2000
Mail Server	Number of Outgoing SMTP Connections	256	2000
Mail Server	Number of POP Connections	512	2000
Mail Server	Number of IMAP Connections	512	2000
Mail Server	Number of Messages in System (Note 3)	1.5 million	File system maximum
Mail Server	Number of Entries in SMTP Server Rejection List	128	N/A
Mail Server	Number of Entries in Approved SMTP Hosts List	128	N/A
NetBoot	Number of Clients Simultaneously Using NetBoot	50	
Print Server	Number of Queues	60	
QTSS	Number of Connected Users per Streamed File		12288
QTSS	Number of Simultaneously Streamed Files		12288
QTSS	Number of Connected Users		12288
SMB Server	Number of Open Files	1000	12288
SMB Server	Number of Connected Users	1000	1000
User Accounts	User Comments Character Limit	54662	N/A
Web Server	Number of Connected Users		2048
Web Server	Number of Open Files		12288

Notes:

1. For comparison, the maximum is 532 in the standard version of Mac OS X 10.3 Panther.
2. Many applications run with their own UID. For comparison, the maximum is 100 in the standard version of Mac OS X 10.3 Panther.
3. Mail is no longer stored in a database, but rather as a file per message.

Published Date: Feb 20, 2012

Mac OS X Server 10.0 to 10.3: System Requirements

Use of Mac OS X Server requires computer hardware with the amounts of RAM and hard disk space described in this document. Other considerations, as noted, may apply to your setup. This document applies to server versions 10.0.3 and later.
This article has been archived and is no longer updated by Apple.

Computers that can use Mac OS X Server

These computers can use Mac OS X Server versions 10.0.3 to 10.2.8 only:

- Power Macintosh G3 All-In-One
- Power Macintosh G3 Mini Tower
- Power Macintosh G3 Desktop
- Macintosh Server G3

Generally speaking, these computers may use Mac OS X Server versions 10.0.3 or later:

- eMac
- iMac
- Power Macintosh G3 (Blue and White)
- Macintosh Server G3 (Blue and White)
- Power Mac G4
- Macintosh Server G4
- Power Mac G4 Cube
- Power Mac G5
- Xserve

Note that some of these computers require a minimum version, as listed in this table:

Computer Model	Minimum Server Version
Macintosh Server G4 (QuickSilver)	10.0.4
Power Mac G4 (QuickSilver Dual 800 MHz)	10.1
iMac (Flat Panel)	10.1.2, see Note 1
Power Mac G4 (QuickSilver 2002)	10.1.2, see Note 1
eMac	10.1.4, see Note 1
Xserve	10.1.5, see Note 2
iMac (17-inch Flat Panel)	10.1.4, see Note 1
Power Mac G4 (Mirrored Drive Doors)	10.2
Macintosh Server G4 (Mirrored Drive Doors)	10.2.1
Power Mac G4 (FW 800)	10.2.3, see Note 3
iMac (17-inch 1 GHz)	10.2.3, see Note 3
Xserve (Cluster Node)	10.2.4
Xserve (Slot Load)	10.2.4
eMac (ATI Graphics)	10.2.4, see Note 3
Power Mac G4 (MDD 2003)	10.2.6, see Note 3
Power Mac G5	10.3

Important: Only the listed computers meet the system requirements for Mac OS X Server. Apple provides technical support **only** for hardware-software combinations that appear on this list. Power Mac G5 computers cannot be used with Mac OS X Server 10.2.8 or earlier.

Notes

1. For installation instructions, see technical document 106699,"**Mac OS X Server 10.1: How to Install on Power Mac G4 (QuickSilver 2002) or iMac (Flat Panel) Computer**".
2. Mac OS X Server 10.1.5 was only available when bundled with some earlier Xserve computers. Users of Mac OS X Server 10.1.5 should upgrade to 10.2 or later.
3. For installation instructions, see technical document 107496, "**Mac OS X Server 10.2.3: How to Install on Power Mac G4 (FW 800) or eMac (ATI Graphics)**".

Use on Unsupported Computers

Because software developers sometimes must use older computers with developer releases or need to demonstrate their software using PowerBook computers, Apple has allowed for Mac OS X Server to be installed on certain unsupported computers. Services are only qualified for use on the supported computers listed above by version. If you use Mac OS X Server in an unsupported configuration in a production server environment, performance, reliability, and functionality may all be significantly degraded.

Memory (RAM)

- 128 MB

Note: This is the minimum amount of RAM required. More RAM may be required for certain services, to support a large number of clients, or for best performance.

Hard disk space

- 4 GB

Note: This is the minimum amount of available disk space required. More available disk space may be required for certain services, to support a large number of clients, or for best performance.
Published Date: Feb 17, 2012

Mac OS X Server: NetBoot Capable Computers

Find out which computers can be used as NetBoot clients.
This article has been archived and is no longer updated by Apple.

NetBoot capable computers

These computers may be used as NetBoot clients. Server versions 10.0.3 to 10.2.8 offer both NetBoot 1 and NetBoot 2, which adds DHCP during NetBoot. With exception of certain older models listed in the next section, the listed computers can use NetBoot 1 or NetBoot 2.

- eMac (all models)
- iBook (all models)
- iMac (all models)
- Macintosh Server G3 (Blue and White)
- Power Macintosh G3 (Blue and White)
- Power Mac G4 (all models)
- Macintosh Server G4 (all models)
- Power Mac G4 Cube (all models)
- Power Mac G5
- PowerBook ("Bronze Keyboard" and later models)

Note: Some computers require a firmware update to use NetBoot 2. Use the Software Update feature to be sure your firmware is up to date.

Computers not capable of NetBoot 2

Certain models of NetBoot 1- capable computers are not capable of NetBoot 2. This section describes those.

- iBook (see Note)
- iMac (models with tray-loading optical drives)
- Macintosh Server G3 (Blue and White)
- Power Macintosh G3 (Blue and White)
- Power Mac G4 (PCI Graphics)
- PowerBook G3 (Bronze Keyboard)

Note: This refers to variations of the original iBook that were released prior to iBook (Dual USB). Some versions of the original iBook are NetBoot 2 capable, and others are not. If an original iBook will accept firmware update 4.1.7 or later, then it is NetBoot 2 capable.

Published Date: Oct 7, 2016

Mac OS X Server 10.1, 10.2: Network Settings for Ethernet Port Are Incorrect After Using Setup Assistant

After using the Server Assistant, a port may be misconfigured with IP information intended for a different port.
This article has been archived and is no longer updated by Apple.

Symptom

Network settings entered in the setup assistant appear on the wrong port.

This does not affect the built-in Ethernet port. It occurs when the computer has AirPort or an additional PCI Ethernet card, or if the computer is capable of IP over FireWire.

Solution

Use Network preferences to correct the settings.
Published Date: Feb 17, 2012

Mac OS X Server 10.3: Server Setup Assistant Doesn‘t Work When Date and Time Are Wrong

Server Assistant only works when the date and time settings are correct.
This article has been archived and is no longer updated by Apple.

Symptom

Server Assistant does not allow you to continue.

Solution

Prior to installing Mac OS X Server, be sure that that server's date and time settings are correct in Date & Time preferences.

You can set the clock in single-user mode if you need to. For information on single-user mode, see document 106388, "**Mac OS X: How to Start up in Single-User or Verbose Mode**".

Follow these steps:

1. Type: `mount -uw /`
2. Press Return.
3. Type: `date +0307210800`
   Note: In this example, the date is 2003-07-21, 8:00 A.M. Using that format, insert values that are current. Time must be entered in 24-hour format.
4. Press Return.
5. Type: `sync`
6. Press Return.
7. Type: `sync`
8. Press Return.
9. Type: `reboot`
10. Press Return.

Published Date: Oct 7, 2016

Mac OS X Server 10.2: NetBoot Clients Stop Responding During Startup Due to Image Creation Issue

If you create a NetBoot or Network Installation image while serving active NetBoot clients from the same server, clients may subsequently stop resounding ("hang" or "freeze") during startup or network installation.
This article has been archived and is no longer updated by Apple.

Symptom

NetBoot clients do not start up successfully. A computer may stop responding at a blue screen, or a kernel panic may occur. You may notice other unexpected behavior.

Solution

First, try restarting the affected clients. If that is not successful, create your NetBoot or Network Installation images during off-peak hours when clients are least likely to be using the service.
Published Date: Feb 17, 2012

Power Mac G5: Stops Responding During Login As a NetBoot Client

A Power Mac G5 NetBoot client may stop responding ("hang" or "freeze") during login. A workaround is to resize the NetBoot image, as described in this document.
This article has been archived and is no longer updated by Apple.

Symptom

When a user tries to log in, the Power Mac G5 NetBoot client stops responding.

This usually affects NetBoot images that were created using the Network Image Utility in Mac OS X Server. NetBoot images created from existing systems are usually not affected.

Solution

1. At the server, log in as the root user. For help with this step, see technical document 106290, "Mac OS X: About the root User and How to Enable It".
2. In Server Settings, stop the NetBoot service.
3. Unlock the NetBoot image.
4. Open Disk Copy and use it to resize the NetBoot image, adding about 100 MB.
5. Start the NetBoot service in Server Settings.

Note: This issue does not occur in Mac OS X Server 10.3 or later.
Published Date: Oct 7, 2016

Mac OS X Server 10.3, 10.4: NetBoot images over 2 GB cause kernel panic when served via HTTP

If a NetBoot image larger than 2 GB is served over HTTP, the NetBoot client may stop responding ("hang" or "freeze").

This article has been archived and is no longer updated by Apple.

Symptom

Clients experience kernel panic when using a NetBoot image served via HTTP.

Because the same image may work normally when served via NFS, this issue is especially notable when changing an image from NFS to HTTP.

Solution

Use either of these workarounds:

- Use NFS to serve images larger than 2 Gb.
- Compress the image. If the compressed image is 2 Gb or smaller, you can serve it via HTTP.

Published Date: Oct 7, 2016

Mac OS X Server 10.3: Can‘t add a third-party package to NetBoot image

Learn how to add a third-party (non-Apple) package to a NetBoot image.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to add a package to the NetBoot image, Network Image Utility issues these alert messages:

> "There was an error creating the image."
> "Disabled volume <VolumeName> because there is not enough free space."

Solution

When adding non-Apple pkgs or custom-created pkgs, take one of these actions:

- Make sure the pkg has the IFPkgFlagInstalledSize set in the Info.plist, or
- Stretch the image and try adding the pkg later.

Published Date: Oct 7, 2016

Mac OS X Server 10.3: Additional LDAP configuration parameters

Here you can learn about two LDAPv3 plugin parameters that are not documented in the Open Directory administration guide.
This article has been archived and is no longer updated by Apple.
These two parameters are in (or can be added to) the server's LDAP configuration file (/library/preferences/directoryservice/DSLDAPv3PlugInConfig.plist).

Delay Rebind
The parameter takes this form:

```
<key>Delay Rebind Try in seconds<\\key>
<integer>n<\\integer>
```

This parameter should be located near "<key>OpenClose Timeout in seconds<\\key>".

The value "n" specifies how long the LDAP plugin waits before trying to reconnect to a server that fails to respond. You can increase this value to prevent continuous reconnection attempts.

Idle Timeout
The parameter takes this form:

```
<key>Idle Timeout in minutes<\\key>
<integer>n<\\integer>
```

If this parameter is not already in the file, add it near "<key>OpenClose Timeout in seconds<\\key>".

This setting specifies how long the LDAP plugin will sit idle before disconnecting from the server. You can adjust this value to reduce overloading the server's connections from remote clients.

Related document

If you need help modifying a configuration file, see technical document 106619, "**Mac OS X Server: How to Locate and Edit Configuration Files**".
Published Date: Oct 7, 2016

Mac OS X Server 10.3: About disk quotas, home directory disk quotas, and BSD quotas

Learn about the different ways quotas can be used on Mac OS X Server 10.3 volumes and directories. You can implement one type of quota or a combination, depending on your needs.
This article has been archived and is no longer updated by Apple.

Soft and Hard quotas--the differences

"Soft" Disk Quotas - User accounts have a fixed amount of disk space in their Documents folder. This disk space can be used for any purpose. Soft Quotas allow users to exceed the defined disk quota in order to save a single file. However, users are subsequently prevented from saving additional files. Note that neither the user nor the administrator has an interface for viewing the status of soft quotas.

"Hard" Disk Quota - This feature prevents users from exceeding their defined quotas. A hard quota does not allow a file that would exceed the quota to be saved. When using AFP, the hard quota is represented to the user as available space remaining on the volume.

Setting quotas with Workgroup Manager

Worgroup Manager allows you to set hard quotas for user home directories. In the Sharing pane of Workgroup Manager, there is an option to enable quotas on a given volume. You must select this for the home directory share point(s) prior to setting home directory quotas for specific users. Next, you can use the "disk quota" setting in the User Home pane to regulate the disk usage of a particular user's home directory on a volume.

AFP applies quotas to the file system when a user with a home directory quota logs in. Quota limits always apply to the entire volume. In the case of home directories, the quota will apply to any files saved or owned by the user within the volume the homes are shared from.

For example: If an administrator were to share both a group folder and home directories from the same server partition, enable quotas for that partition, and set a quota for a user who had a home directory in that share point, then the quota would apply to files owned by the user in both her home directory and group folder.

Setting quotas in Terminal

You can use the "edquota" command in Terminal to set quotas for users and groups outside the scope of quotas set in Workgroup Manager. For example: You could use this tool to set quotas for any user or group volumes that are not home directories.

If you make any settings that overlap with Workgroup Manager, Workgroup Manager will override edquota.

Usage of the edquota command is documented in its man page (execute "man edquota" in Terminal to see it). You should be proficient in command line usage before using the command. See also the man pages for repquota, quotaon, and quotaoff.

Note: Apple does not provide any free-of-charge technical support for use of these commands.

For more information on Disk Quotas, see the Mac OS X Server 10.3 User Management Administration Guide
Published Date: Oct 7, 2016

Mac OS X Server 10.3 or later: Kerberos authentication may not work after changing to LDAP master or replica, or Kerberizing a particular service

If you change your server LDAP directory configuration to Master or Replica, or if you re-Kerberize a service, the creation of duplicate keytab files may cause Kerberos authentication to stop working in some cases. Deleting older keytab files resolves the issue.
This article has been archived and is no longer updated by Apple.

Symptom

Kerberos authentication no longer works.

Products Affected

- Mac OS X Server 10.3 or later

Solution

There are normally three keys within the keytab file per kerberized service. If there are duplicate sets of keys, execute the following commands in Terminal. Commands are preceded by the number sign (#).

To examine the keytab file:

```
# sudo ktutil
```

At the ktutil prompt:

```
ktutil: read_kt /etc/krb5.keytab
ktutil: list
ktutil: exit
```

If duplicate keys exist or Kerberos authentication is no longer working, remove the keytab file with this command:

```
#sudo rm /etc/krb5.keytab
```

Then recreate the keytab file with this command:

```
#sudo sso_util configure -r KERB-REALM -a LDAP-ADMIN -p LDAP-ADMIN-PASSWORD all
```

The new keytab file should allow kerberized services to authenticate correctly.

Note: The "LDAP-ADMIN" mentioned above represents the user (or administrator) created on the master LDAP server in Server Assistant during initial server setup. This step may fail if the root user is used.
Published Date: Oct 7, 2016

Mac OS X 10.3: Some Zones, Workgroups, or SLP Scopes Don‘t Appear When Browsing Network

Sometimes, you can't see all AppleTalk Zones, Windows Workgroups, Windows Domains, or SLP Scopes in the Network Browser. If some devices appear and others don't, the missing ones may have duplicate names.
This article has been archived and is no longer updated by Apple.

Symptom

Some network resources appear in the zone list, but others you expect do not appear.

Products Affected

- Mac OS X 10.3 to 10.3.2

Solution

Update to 10.3.3 or later.
Published Date: Oct 7, 2016

Mac OS X 10.3: Slows or Stops Responding While Using VISE Installer

Your computer may slow down or stop responding when you install software that uses the VISE Installer.
This article has been archived and is no longer updated by Apple.

Symptom

When you install software, the computer slows down or stops responding ("crashes", or "freezes").

This can happen if the software you're installing uses the VISE installer and you've connected to a server volume, such as your iDisk.

Many software publishers use VISE to install their products. You can normally tell you are using VISE by a VISE-specific icon for the installer, a reference to VISE in the installer splash screen, or mention of VISE in some other part of the installer.

Note: This issue affects all remote volumes other than AFP volumes. This includes WebDAV, SMB, and NFS volumes.

Solution

Before you install any software, disconnect from remote volumes, such as your iDisk, before opening the installer application.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 7, 2016

Mac OS X 10.3: About Sleep and Windows File Sharing (SMB)

After your computer wakes from sleep, shared disks (or "shares") from a Microsoft Windows computer or other Windows File Sharing (SMB) server may not be available.
This article has been archived and is no longer updated by Apple.
If a Windows shared disk is no longer available after sleep, reconnect to the server.

To prevent this from occurring, avoid putting the computer to sleep while SMB shared disks are mounted, especially when using an SMB-based home directory. The computer will not go to sleep automatically while SMB shared disks are mounted, but it can still be put to sleep manually (from the Apple menu or by closing the display on a portable computer).

Warning: You may lose unsaved changes to documents stored on the shared disk when your computer goes to sleep. Either always save your work or do not put the computer to sleep to prevent this from happening.

Published Date: Oct 7, 2016

Mac OS X 10.3 or later: Can‘t connect via PPTP with some Internet service providers

PPTP login attempts may fail when using certain Internet service providers. PPTP is the point-to-point tunneling protocol, which may be used as part of a virtual private network (VPN).
This article has been archived and is no longer updated by Apple.

Symptom

Your attempt to authenticate (or log in) fails, even when you are certain that your name and password are correct.

An entry similar to this one will appear in the connection log, but with IP address and time code information that matches your situation:

```
Mon Aug  4 20:56:02 2003 : acsp check options
Mon Aug  4 20:56:02 2003 : PPTP connecting to server '169..192.1.253' (169.192.1.253)...
Mon Aug  4 20:56:02 2003 : PPTP connection established.
Mon Aug  4 20:56:03 2003 : Using interface ppp0
Mon Aug  4 20:56:03 2003 : Connect: ppp0 <--> socket[34:17]
Mon Aug  4 20:56:03 2003 : MPPE required, but MS-CHAP[v2] auth not performed.
Mon Aug  4 20:56:03 2003 : Connection terminated.
Mon Aug  4 20:56:03 2003 : PPTP disconnecting...
Mon Aug  4 20:56:03 2003 : PPTP disconnected
```

Solution

First, be sure you have updated to Mac OS X 10.3.4 or later.

Follow these steps:

1. Open Internet Connect.
2. Click VPN (PPTP).
3. From the **Configuration** pop-up menu, choose **Edit Configuration**.
4. From the **Encryption** pop-up menu, choose **None**.

Notes

- The change is persistent.
- This PPTP connection must be used only to connect to the ISP for which you configured it.
- If you need an additional VPN PPTP connection, you must create a new one using Internet Connect.

Published Date: Oct 7, 2016

Mac OS X Server 10.3: Delaying an automatic restart

You can time delay the automatic restart feature of your server. Some peripheral devices require this extra time to initialize and become accessible after a power failure.
This article has been archived and is no longer updated by Apple.
You can set the time delay by using the "systemsetup" command. Follow these steps:

1. Open Terminal (/Applications/Utilities/).
2. Type: `sudo systemsetup -setWaitForStartupAfterPowerFailure seconds`

   Note: Replace "seconds" with the delay time in multiples of 30 seconds. For example, to allow a five-minute delay, type:

   sudo systemsetup -setWaitForStartupAfterPowerFailure 300

3. Press Return.
4. Enter your administrator password when prompted, and press Return.

Example scenarios

These two examples illustrate when this feature might be required.

- Your Xserve RAID requires a minute to become available, so you set the Xserve restart delay to two minutes. The RAID is up and ready to go by the time the Xserve starts up.
- You have a large number of servers relative to your electrical circuit's capacity. To reduce load on the circuit, you decide to stagger the startup time of the servers so that they start up over several minutes.

Published Date: Oct 7, 2016

Mac OS X 10.3: IP address conflict not resolved when connected to a switch

An IP address conflict may not be resolved during startup if your computer is connected to a switch. You can avoid the issue by changing a configuration file.
This article has been archived and is no longer updated by Apple.
This happens if your computer takes an IP address that is being used by another computer. After the duplicate address is identified, one or both computers shut down their network interfaces. You may see a message explaining what happened.

This can happen in either Mac OS X or Mac OS X Server version 10.3 or later.

Tip: A switch is a more sophisticated type of Ethernet hub. This document only applies if you are using one. If you are on a large network, ask your administrator if you are using a switch.

To resolve the issue:

During startup, Mac OS X sends four ARP probes to determine whether a duplicate IP address exists on the network. Four is not enough when using certain switches. To solve the issue, increase the number of ARP probes sent at startup by editing a configuration file.

Important: The following steps describe an advanced technique using the command line in Terminal. Review the instructions before you begin. If you are not comfortable following these instructions, you should seek assistance. Inappropriate changes to the configuration file could prevent system features from working properly.

Follow these steps:

1. Open Terminal (/Applications/Utilities/).
2. Type: `sudo pico /System/Library/SystemConfiguration/IPConfiguration.bundle/Resources/IPConfiguration.xml`
3. Press Return.
4. Enter your administrator password when prompted, and press Return.
5. Use the arrow keys to scroll to these lines:

```
<key>ARPProbeCount</key>
<integer>4</integer>
```

6. Change the integer value (4) to 15 or more.
7. Press Control-O to save the file, and press Return to confirm.
8. Press Control-X to exit pico.

Note: Increasing the number of ARP probes at startup increases the amount of time the computer takes to start up.
Published Date: Oct 7, 2016

Mac OS X 10.3: Firewall Unavailable After Upgrade Installation

The Mac OS X firewall may no longer be available if you perform an upgrade installation of Mac OS X Panther. An "upgrade" installation is when you install version 10.3 over an earlier version, such as 10.2.8, without first erasing the disk.
This article has been archived and is no longer updated by Apple.

Symptom

Firewall is no longer available in Sharing preferences. When you look there, you may see this message:

> "Other firewall software is running on your computer. To change the Apple firewall settings, turn off the other firewall software."

The status may say "Firewall Unavailable," and the Start button may be dimmed.

Solution

This happens if both printer sharing and the firewall were turned on in Mac OS X 10.2. Download and install Mac OS X 10.3.2 or later.

If you're not ready to update, follow these steps to resolve the issue:

1. Click the Finder icon in the Dock.
2. From the **Go** menu, choose **Go to Folder**.
3. Type: /Library/Preferences/
4. Click Go.
5. Locate this file: com.apple.sharing.firewall.plist
6. Drag this file to the Trash (see Note).
7. From the **Apple** menu, choose **Restart**.

Note: This step removes any custom port settings you have made to the firewall. If you previously opened any ports, you will need to do so again. If you do not want to lose your custom settings, use the Advanced solution below.

Advanced solution

You can use this solution to avoid losing your custom settings, but you must be comfortable with editing a text file in Terminal. Follow these steps:

1. Open Terminal (/Applications/Utilities/).
2. Type: sudo pico /Library/Preferences/com.apple.sharing.firewall.plist
3. Press Return.
4. Enter your administrator password when prompted, and press Return.
5. Using the arrow keys, scroll down to these two lines:

```
<key>allports</key>
<array>
```

6. Directly under "<array>", add a new line containing this text:

```
    <string>515</string>
```

7. Press Control-O to save the file, and Return to confirm.
8. Press Control-X to exit pico.
9. Restart the computer.

Published Date: Oct 7, 2016

Mac OS X 10.3: Windows File Sharing (SMB) Users Can‘t Connect After Upgrade

Learn what to do if Windows File Sharing (SMB) clients can't connect to your computer after you upgraded to Mac OS X Panther.
This article has been archived and is no longer updated by Apple.

Symptom

Windows File Sharing (SMB) clients can't connect to your computer.

Products Affected

- Mac OS X 10.3
- Windows File Sharing (SMB)

Solution

1. From the Apple menu, choose System Preferences.
2. From the View menu, choose Accounts.
3. Click the icon for an account that can't log in.
4. Change that account's password.
5. Repeat steps 3 and 4 for any account that uses Windows File Sharing.

Published Date: Oct 7, 2016

AirPort: Update your firmware to use WPA and WDS together

To use Wi-Fi Protected Access (WPA) and Wireless Distribution System (WDS) at the same time, be sure your AirPort Express or AirPort Extreme has the latest firmware. WPA and WDS can't be used together with earlier firmware versions.

This article has been archived and is no longer updated by Apple.

Note: To review the requirements for joining a WPA network, see document **107795**. Only AirPort Extreme and AirPort Express can host a WPA or WDS network. Earlier AirPort base stations cannot. All AirPort base stations can use WEP.

Published Date: Oct 7, 2016

Safari 1.1: Safari Quits Unexpectedly When PithHelmet Is Installed

If you have installed PithHelmet software on Mac OS X Panther, Safari may unexpectedly quit when opened.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to open Safari on Panther, its icon bounces in the Dock as if it's going to open, but it doesn't. An alert appears instead.

Solution

PithHelmet version 0.7.1 is compatible with Mac OS X 10.2.8 or earlier. See the developer's website for information on a Panther-compatible release.

You can resolve the issue by removing the PithHelmet "SIMBL" file, which will disable PithHelmet but allow Safari to work.

1. Click the Finder icon in the Dock.
2. From the **Go** menu, choose **Go to Folder**.
3. Type: `~/Library/Application Support`
4. Click Go.
5. Search this folder for a file named "SIMBL".
6. If present, drag it to the Desktop.
7. Try to open Safari again.

If this does not resolve the issue, the issue may not be related to PithHelmet. Review the troubleshooting in technical document 107567, "**Safari: Unexpectedly Quits**."

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Published Date: Feb 19, 2012

AOL Internet access requires an update when using AirPort

You may not be able to access websites using your AOL account, even if you still get email. An AOL update can get you back on the web.
This article has been archived and is no longer updated by Apple.
This happens when using:

- AirPort or AirPort Extreme Base Station
- Mac OS X 10.3 or later
- AOL dial-up or DSL account

First, be sure you have AOL software v.10.3 (revision 4136.208) or later:

Then use the AOL keyword "MacAirportFix", and install the AOL update the keyword takes you to.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

Remote Desktop: Package Installation Does Not Finish

When using the Remote Desktop package installation feature with Mac OS X 10.3 clients, package installations do not appear to be completed.

This article has been archived and is no longer updated by Apple.

Symptom

The installation of the package itself is completed, but the installation process does not exit.

Solution

You should update to **Apple Remote Desktop 1.2.4** to avoid this issue in the future. If you are currently experiencing this issue, you need to follow these steps before updating:

1. At the client, open Activity Monitor (/Applications/Utilities).
2. From the **Monitor** menu, choose **Show Activity Monitor**.
3. Choose **All Processes** from the **Show** pop-up menu.
4. In the Filter field, type: `installer`

   If the installer process is present (Figure 1), the installation process has not yet completed. Continue to step 5 after the installer process completes (it will disappear from the list in Activity Monitor).

   Figure 1 Installer Process still running

5. In the Filter field, type: `ARD`

   Figure 2 ARD Agent Process

6. Select the process named ARD Agent.
7. Click the Quit Process button in the toolbar.
8. When asked if you're sure you want to quit the process, click Force Quit.

The ARD Agent process will then disappear and reappear a few moments later. Once it reappears, the client will report the correct status in Remote Desktop Admin.

Note: The steps above must be done at the affected clients because you can't use ARD to control an affected client in this situation. If Remote Login is enabled on the client, you may also connect to the affected computer with ssh and use top or ps to see if the installer process is still running. Once the installer process has quit, use the following command to kill the ARD Agent process:

```
sudo kill `cat /var/run/ARD.pid`
```

Note: The quote marks are back quotes, not straight quotes. The back quote character is found on the same key as the tilde (~) on the keyboard.

Published Date: Feb 17, 2012

Mac OS X Server: About the Mac OS X Server 10.3.1 Update

This software updates Mac OS X Server 10.3 to 10.3.1.
This article has been archived and is no longer updated by Apple.
Important: Read Before Installing

1. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.
2. To install Mac OS X Server 10.3.1, you must enter the password for an administrator account. The password cannot contain a space, or special characters typed by pressing the Option key. If you need to change an administrator account password, use Accounts preferences.
3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Featured Software to install.

Installation

There are two ways to update to Mac OS X Server 10.3.1.

Software Update

You may have been referred to this document by Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

Standalone Installers

An installer is also available from **Apple Software Downloads**.

Enhancements delivered with this update

This update delivers the enhancements outlined below. This installer is server-specific, but resolves issues found in both the client and server versions of the operating system.

FireWire

- Apple has identified an issue with external FireWire hard drives using the Oxford 922 bridge chipset with firmware version 1.02 that can result in the loss of data stored on the drive. Even with the improvements available in this update, Apple recommends you update the firmware on your FireWire drive. Contact the drive's manufacturer for more information.

Core OS

- Resolves an issue in which FileVault users can potentially lose their home directory settings.
- Addresses issues you may experience with USB printers after upgrading to Mac OS X 10.3 or Mac OS X Server 10.3.

Web Server (WebDAV)

- Addresses issue in which Mac OS X 10.3 or Mac OS X Server 10.3 users may not be able to browse iDisk contents or otherwise connect to a WebDAV server.
- Addresses a potential issue in which files appear to copy successfully to a WebDAV server, but do not appear in the folder and are not on the server volume.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 7, 2016

Mac OS X Server: About the Mac OS X Server 10.3.2 Update

This software updates Mac OS X Server 10.3 or 10.3.1 to version 10.3.2.
This article has been archived and is no longer updated by Apple.

Important: Read Before Installing

- You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.
- To install Mac OS X Server 10.3.1, you must enter the password for an administrator account. The password cannot contain a space, or special characters typed by pressing the Option key. If you need to change an administrator account password, use Accounts preferences.
- The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Featured Software to install.

Installation

There are two ways to update to Mac OS X Server 10.3.2.

Software Update

You may have been referred to this document by Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

Standalone Installers

An installer is also available from **Apple Software Downloads**.

Enhancements delivered with this update

This update delivers the enhancements outlined below.

Open Directory / Password Server

- Resolves a Directory Access plug-in issue in which attributes received from an Active Directory Windows 2003 server, such as user "Name" and "Realname", do not propagate to a client computer.
- Can join an Active Directory domain when server names in DNS entries have uppercase and lowercase characters. For example: SERVER1x.mydomain.com
- SMB Directory Services plug-in now defaults to other Local Master Browsers (LMB's) when primary LMB is not available, providing a more reliable SMB network browsing experience.
- SMB servers are more readily detectable when browsing the network with a Mac OS X 10.3.2 client.

File Services

- Resolves an issue in which searching a remote AFP volume finds files outside of a share point being searched.
- Provides ability for a Mac OS X 10.3 AFP client to connect to a Mac OS X 10.2 Server using Kerberos.
- Improved responsiveness of NFS from client when attempting to access NFS mounts immediately after startup. (When using previous versions of Mac OS X 10.3, attempting to access NFS-mounted volumes immediately after startup would result in the alert message "Permission Denied".)
- WebDAV file system supports use of Apache virtual host names.

Administration

- Includes enhanced Server Admin and Workgroup Manager applications.
- Includes improved Network Image Utility and QTSS Publisher applications.
- Increases speed of importing of user records.

Other

- Improves printing to PostScript printers.
- Includes FileVault, FireWire 800, WebDAV and USB Printing improvements from Update 10.3.1.
- Includes previous standalone security updates.
- Updates MySQL to version 4.0.16.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 7, 2016

Mac OS X Server 10.3: Mobile accounts feature does not copy home directory contents

The Mobile Accounts feature synchronizes account data between a network and a local (mobile) user account. Items such as account name, password, and managed preferences are synchronized, but not other user data such as Documents, Pictures, or Preferences.
This article has been archived and is no longer updated by Apple.
Synchronization of account data, such as name, password, and managed preferences, allows network users to log in while the computer is away from the Directory Service server.

The Mobile Accounts feature is not intended to synchronize the entire contents of a user's home directory.
Published Date: Oct 7, 2016

Java 1.4.2: JBoss and Tomcat Do Not Start After Installing Java 1.4.2 Update

Find out what to do if JBoss and Tomcat do not start after installing the Java 1.4.2 update.

This article has been archived and is no longer updated by Apple.

The run.conf script for starting the JBoss server has a hardcoded reference to the 1.4.1 JVM. Installing the Java 1.4.2 Update removes the Java 1.4.1 installation, and JBoss/Tomcat services will not be able to start. Neither the Server Manager application nor Console will indicate why the service cannot start.

Solution for Mac OS X Server

A JBoss/Tomcat software update is available for Panther server. It installs a new /Library/JBoss/3.2/bin/run.conf file. The original file will be renamed to run.conf.applesaved. It is up to the administrator to merge any customizations back into the new run.conf file.

Solution for Mac OS X (client)

If you have optionally installed the ApplicationsServersDev.pkg from the Developer Tools CD, just update the reference.

The reference below should be changed in the file: /Library/JBoss/3.2/bin/run.conf

```
JAVA=/System/Library/Frameworks/JavaVM.framework/Versions/1.4.1/Home/bin/java
```

to

```
JAVA=/usr/bin/java
```

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Document **17159**, "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Published Date: Oct 7, 2016

Bluetooth: About Encrypted Communication (Key Icon)

Some Bluetooth devices can encrypt data exchanged with your computer. This helps prevent eavesdropping.
This article has been archived and is no longer updated by Apple.
Some devices allow you to encrypt the data that is exchanged with your computer. Encrypted communication makes it more difficult for others to eavesdrop on the information exchanged between your computer and the Bluetooth device. When you pair such a device with your computer, you may be prompted to create a passkey. Some devices automatically generate a random passkey.

When a paired device uses encrypted communication, its icon in the device list of Bluetooth preferences looks like a key (Figure 1).

Figure 1 A paired device with encrypted communication.

For a list of other Bluetooth icons, see technical document 107679, "**Bluetooth: About Bluetooth Icons**".
Published Date: Oct 7, 2016

Bluetooth: About Favorite Devices (Heart Icon)

You can set a "Favorite" device to automatically re-pair with your computer.
This article has been archived and is no longer updated by Apple.
Your computer may lose the connection to a paired Bluetooth device if you temporarily move it out of range, turn it off, or if it has low batteries. By making the device a Favorite in Bluetooth preferences, it will automatically re-pair with the computer as soon as it is back in range or turned on again.

You can set Favorites in Bluetooth preferences. Select a device from the device list, then click the Add to Favorites button. Favorites appear with a heart icon (Figure 1).

Figure 1 A Favorite paired device

For a list of other Bluetooth icons, see technical document 107679, "**Bluetooth: About Bluetooth Icons**".
Published Date: Oct 7, 2016

Apple Remote Desktop: Preference Pane Missing From System Preferences

The Remote Desktop preference pane may not appear for all Mac OS X 10.2 user accounts. Learn how to resolve this issue.
This article has been archived and is no longer updated by Apple.

Symptom

The Remote Desktop preference pane may or may not appear, depending on which user account is logged in to the computer.

Solution

The Remote Desktop preference pane may not appear for users accounts created prior to installing the application. It may appear only for users whose accounts were created after Remote Desktop was installed. You can resolve this on a per-account basis by following these steps:

1. Log in with the affected account.
2. From the **Go** menu, choose **Go to Folder**.
3. Type: `~/Library/Caches`
4. Click Go.
5. Drag the file named "com.apple.preferencepanes.cache" to the Trash.

The Remote Desktop preference pane should appear the next time you open System Preferences.

If the issue persists after deleting the appropriate cache file, troubleshoot following the suggestions in document 25398, "**Mac OS X: How to Troubleshoot a Software Issue**".
Published Date: Oct 7, 2016

Mac OS X: Get Info Comments May Not Appear for Remote Volumes

When you add or edit a Get Info comment for an item on a server volume, the change is not visible to other clients or at the server itself.
This article has been archived and is no longer updated by Apple.
Mac OS X treats comments as a Finder property, such as icon position and view setting. Writing of these properties is local, which means your changes are not saved back to the server. Thus someone connecting to the server from a different computer may not see the Get Info comments you add to an item on the server from another remote client of the server.

For a comment to be visible to all clients, it may be changed at the server itself (see Note 2).

Notes

1. Comment changes do not appear to clients immediately, but they will eventually.
2. Copying a folder to the server yields a different result than editing an existing file or folder. Comments for that folder and items within it will be transferred when you copy it. If you must modify a comment on the server from a client, a user with adequate privileges may do so in this manner.

Published Date: Oct 7, 2016

Mac OS X 10.3.2: Menu Bar Items Blink On and Off

When you are using certain languages, connecting to an AFP server may cause your menu bar items to blink (disappear and reappear every few seconds).
This article has been archived and is no longer updated by Apple.

Symptom

Menu bar items blink, such as the clock, AirPort menu, Input menu (flag), and Volume menu.

If Crash Logging is enabled, a log for "SystemUIServer" is generated each time the menu extras disappear.

Note: The Apple Filing Protocol (AFP) is known by service names such as Apple File Service, AppleShare, and Personal File Sharing. It may be offered by Apple or third-party operating systems.

Solution

Update to Mac OS X 10.3.3 or later.

Additional information

The menu bar items will stop blinking when you eject, or disconnect, the AFP server.

This happens when certain languages are selected as the primary language in International preferences. The affected languages use Cyrillic, Greek, Central European, or Modified Roman characters. These languages are:

- Belarusian
- Bulgarian
- Czech
- Croatian
- Hungarian
- Icelandic
- Greek
- Kirghiz
- Kazakh
- Latvian
- Lithuanian
- Macedonian
- Polish
- Romanian
- Russian
- Serbian
- Slovakian
- Slovenian
- Tatar
- Tajiki
- Turkish
- Turkmen
- Ukrainian
- Uzbek

Published Date: Oct 7, 2016

DVD Studio Pro 2.0.3: Scale Issue With Still Images in PAL Projects

Still menus, slideshows, or tracks containing stills do not have the correct scale in PAL projects.

This article has been archived and is no longer updated by Apple.

Symptom

A PAL project containing still images appears to be scaled correctly when played back from the Simulator, but it is not scaled correctly when played back from the Apple DVD Player or Hardware DVD Players.

NTSC projects are not affected by this issue.

Solution

The DVD Studio Pro 2.0.4 Update addresses this issue. You can download it from Software Update preferences, or from the DVD Studio Pro website (http://www.apple.com/dvdstudiopro/).

Published Date: Oct 7, 2016

WebObjects 5.2.2: Moving Projects From Project Builder to Xcode

Learn how to update a WebObjects 5.x application developed with Project Builder on Mac OS X to Xcode.
This article has been archived and is no longer updated by Apple.
When you use Xcode to open a WebObjects 5.x application developed with Project Builder on Mac OS X, the upgrade process may fail if the main aggregate target name of the project does not match the project name.

To avoid build errors, make sure the main target name matches the project name. If there is a mismatch, rename the target before doing a build.

1. Open the WebObjects application with Xcode, and select Targets.
2. Option-click the target name, and edit it accordingly.
3. From Xcode's **File** menu, choose **Close Project**.
4. Re-open the same project again in Xcode.

The build should now work.

Note: For the change to take effect, it is very important to perform steps 3 and 4.

Important: Projects created with Xcode and WebObjects 5.2.2 cannot be opened with the legacy Project Builder for Mac OS X 10.2.
Published Date: Oct 7, 2016

Safari: You Can‘t Open RealOne Player Content

Safari may not be able to open RealOne Player links if the player is saved on the desktop, or was installed by someone who is using FileVault to protect her account.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to open a RealOne Player link or file, a message appears that says the alias cannot be resolved. An authentication dialog to open another account's home directory may also appear.

Solution

When you install RealOne Player, it downloads as a compressed application. If a FileVault user leaves that application on her desktop, it may be unavailable to other accounts.

Put the RealOne Player application in the Applications folder so all accounts can use it.

1. Log in using the account that installed RealOne Player (see Note).
2. Drag the RealOne Player application to the Applications folder.
3. Open RealOne Player once after moving it. This creates links to its new location.

RealOne content should now work as expected.

Note: If you don't have an administrator account, you cannot move the RealOne Player to the Applications folder. Instead, move it to the Shared folder (/Users/Shared), and ask a user with an administrator account to move it to the Applications folder.

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Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Feb 19, 2012

Remote Desktop 1.2.1 to 1.2.4: How to Configure Remotely via Command Line (kickstart)

Learn about the command line utility named "kickstart," which you can use to configure Apple Remote Desktop.

Note: This document does not apply to ARD version 1.2 or earlier or version 2.0 or later.
This article has been archived and is no longer updated by Apple.
Remote Desktop 1.2.1 and later includes the "kickstart" command line utility. It allows you to install, uninstall, activate, configure, and/or restart components of Apple Remote Desktop without restarting the computer. You can configure all the features found in Apple Remote Desktop preferences.

The kickstart utility is saved here:

/System/Library/CoreServices/ARD Agent.app/Contents/Resources/kickstart

To use the kickstart utility, administrative permissions are required. To begin using the kickstart utility, use the sudo command, such as:

```
# sudo '/System/Library/CoreServices/ARD Agent.app/Contents/Resources/kickstart' -restart -agent
```

Note: All commands presented in this document should be typed as one line of text, though some of them may appear wrapped in your browser. To see the commands as one line, you may temporarily decrease text size in your browser or copy them to another application.

1. Activate Remote Desktop Sharing, enable access privileges for all users, restart ARD Agent:

```
# sudo '/System/Library/CoreServices/ARD Agent.app/Contents/Resources/kickstart' -activate -configure -access
-on -restart -agent -privs -all
```

2. Activate Remote Desktop Sharing, enable access privileges for the users "admin", grant full privileges for the users "admin", restart ARD Agent and Menu extra:

```
# sudo '/System/Library/CoreServices/ARD Agent.app/Contents/Resources/kickstart' -activate -configure -access
-on -users admin -privs -all -restart -agent -menu
```

Note: The -users flag should reference the shortname of a user of the system.

3. Activate Remote Desktop Sharing, disable access privileges for all users:

```
# sudo '/System/Library/CoreServices/ARD Agent.app/Contents/Resources/kickstart' -activate -configure -access
-off
```

Tip: For more information about using the kickstart command, add the -help
flag. For example:

```
# sudo '/System/Library/CoreServices/ARD Agent.app/Contents/Resources/kickstart' -help
```

Published Date: Oct 11, 2016

Mac OS X Server 10.3: Sometimes Windows XP clients can‘t save to an SMB share point

Under certain circumstances, Windows XP clients cannot save larger files to an SMB share point hosted by Mac OS X Server.
This article has been archived and is no longer updated by Apple.
This happens only in certain applications, such as Adobe applications and AutoCAD.

To resolve the issue, update to Mac OS X Server 10.3.6 or later.
Published Date: Oct 11, 2016

AirPort Extreme: Computer Doesn‘t Start After Installing Card

Learn what to do if your computer doesn't start up normally after you install an AirPort Extreme Card.
This article has been archived and is no longer updated by Apple.

Symptom

After installing an AirPort Extreme card, the computer starts up into an unresponsive state known as a kernel panic. A message says to restart your computer, and it appears in several languages. In rare cases you might see lines of code-like text. To learn more about kernel panics, see technical document 106227, "**Mac OS X: What Is a Kernel Panic?**"

Solution

This can happen if the AirPort software on your computer is too old to be used with your AirPort Extreme Card. To resolve the issue, follow these steps:

1. Shut down the computer.
2. Remove the AirPort Extreme Card.
3. Restart the computer. It should start normally but may take a moment longer to check the disk.
4. Optional: Connect the computer to the Internet using wired Ethernet or a dial-up modem.
5. Update your software (this step may be done over an Internet connection or from software Installation CDs, if you have the right versions).

The following sections can help you with steps 4 and 5.

Connecting to the Internet

If you are going to update by downloading software, you need to connect a phone line or Ethernet cable to the computer. To use a phone line, you must have access to a dial-up Internet service provider account. Ethernet is used for broadband modems (such as cable and DSL) or when you are on an institutional network. If you have an AirPort Base Station, temporarily transfer its Ethernet or phone line to the computer.

Tip: Any time you move a broadband modem's Ethernet cable between a computer and a base station, you should unplug the modem's power source for a few seconds to ensure that it will recognize the newly-connected device. Many modems require this "reset" step when connecting to a different device. After you have updated your software and reconnected the Ethernet cable to your AirPort Base Station, you need to power cycle the modem again.

If you have Mac OS X 10.3 and need help connecting to the Internet, click the Assist Me button in the Network preference pane.

If you have Mac OS X 10.2.8 or earlier and need help connecting, see **Mac OS X Internet and Networking Topics**.

Updating Software

Method 1: Use Software Update

When you are connected to the Interenet, use the Software Update feature to ensure that you get the latest software versions.

Tip: Sometimes you have to update your Mac OS X software before you can use the latest AirPort software. For example: AirPort software version 3.1.1 requires Mac OS X 10.2.6 or later.

Follow these steps:

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **Software Update**.
3. Click the Update Now button.
4. Select any available AirPort or Mac OS X update, and follow the prompts to install them.

   Note: Because some updates are prerequisites for others, you may have to repeat steps 1 through 5 to be sure you have all relevant updates.

5. Restart the computer, and wait for the restart to finish.
6. Shut down the computer.
7. Reinstall the AirPort Extreme Card.

Method 2: Use the in-box AirPort Installation Disc

Your AirPort Extreme Card should come with a software installation disc. You may install software from this disc rather than connecting to the Internet via wire. However, this does not guarantee the latest software version. If you reinstall the AirPort Extreme Card after using the CD and find that the issue still occurs, then you should follow Method 1.

Important: When reinstalling the AirPort Extreme card, be sure that it is inserted in the correct direction and fully seated. The issue may occur if the card is upside down or partially seated.
Published Date: Oct 11, 2016

AirPort and AirPort Extreme: Using Public Networks, or "Hot Spots" to Access the Internet

You can use your AirPort-equipped computer at public Wi-Fi access points, known as "hot spots", which are frequently available at coffeehouses, book stores, hotels, airports, restaurants, and other public places around the world.
This article has been archived and is no longer updated by Apple.
All AirPort- and AirPort Extreme-equipped computers are Wi-Fi certified 802.11 devices, which means you can use them at public hot spots. All devices that earn the Wi-Fi certification are capable of interacting with each other, regardless of manufacturer. This is why you may see hot spots advertised as Wi-Fi. To learn more about Wi-Fi, see technical document 106421, "**AirPort and AirPort Extreme: Certified by Wi-Fi**."

There's a movement in progress to set up hot spots just about anywhere you can imagine. The movement can be characterized by two driving forces, which affect how you will log on at the hot spot. The first is commercial network providers. When you subscribe to one of their services, you can access the Internet from any of the hundreds or thousands of hot spots owned by that provider. This is especially useful when traveling between airports and hotels. The second driving force is a grass roots movement of small businesses and local Wi-Fi clubs that establish independent hot spots in a variety of locations.

Joining a network provider's hot spot

To join a network provider's hot spot, you need to set up an account with that provider. The provider typically offers a way for you to sign up immediately, at the hot spot itself. The provider may add variations to this theme, but it goes something like this:

1. Choose the provider's network from the AirPort menu, just as you would choose your own AirPort Base Station.
2. Open a Web browser, such as Safari.
3. The provider automatically pushes a page to your browser, or you enter the address specified in writing at the hot spot.
4. The page offers you a form where existing account holders may log in, and it includes a link for new customers to set up an account.

If your experience differs, follow the instructions that you find at the hot spot.

Joining an independent hot spot

The experience at non-network hot spots varies and is generally less formal (you are not as likely to see a web-based subscription form). Typically, you will choose the network from the AirPort menu, just as you would your own AirPort Base Station. If access is unrestricted, nothing else is required. If access is restricted, you would enter a password when prompted, just as you would for a password-protected AirPort Base Station.

You might get the password of the day if you buy a lattÃ© at a coffeehouse, for example. Just ask a staffer at the location what the wireless access policy is.

Establishing a hot spot

If you wish to establish a hot spot at your location, it can be simple. For the most basic hot spot, you only need two things: an appropriate connection from your Internet service provider (ISP) and a Wi-Fi certified wireless access point, such as the AirPort Extreme Base Station.

Because many people may use your hot spot at once, you will probably want to use a broadband ISP, such as a DSL, cable, or T-1 provider. Additionally, make sure not to violate the terms of your ISP contract. When allowing others to join your network, you may need a commercial account with your ISP.

A hot spot may involve multiple devices and may be much more complex. If you have questions about creating a hot spot, talk with a local network consultant. If you think your location might be eligible for contracting with a commercial network provider, you could consider that option.

Finding hot spots and network providers

Well-known hot spot providers in the United States and Europe include:

- T-Mobile
- Wayport
- Surf and Sip
- iPass
- Metronet

To locate a hot spot near you, use locator sites like these:

http://www.wi-fihotspotlist.com
http://www.wifinder.com
http://www.wififreespot.com/

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Published Date: Oct 7, 2016

Safari: AutoFill Is Turned Off by Some Websites

A website author may request that a browser temporarily turn off its auto fill feature, usually for security reasons. Safari honors these requests.
This article has been archived and is no longer updated by Apple.
If AutoFill does not work at a particular website or for part of a form, it is probably because the site author has turned it off. Financial sites do this most often (banks, brokerage houses, credit unions, and others).

Safari honors the AutoComplete="off" flag used by website authors. You can verify that the site author has turned off AutoFill by searching for this tag in the webpage's source file. From the **View** menu, choose **View Source**.
Published Date: Oct 7, 2016

Mac OS X 10.3 or later: "Invalid user name and password combination" Message When Using Active Directory

When binding a Mac OS X client computer to Active Directory, the account entered is not validated (resolved) at that time. It is used as entered. If entered incorrectly, you will see an alert message later.
This article has been archived and is no longer updated by Apple.

Symptom

After configuring the Active Directory Directory Access plug-in, an alert message appears at the client computer that says "invalid user name and password combination."

Solution

This happens when an incorrect name and/or password is entered, including a username entered with incorrect syntax.

The user's login name (also known as "PrincipalName") is required when binding a computer to Active Directory.

The user can also use the short part of the login name (such as "virginia"). The typical syntax of a login name is similar to "virginia@domain.forest.company.com".

Note: If the user's login name has been modified from the default "virginia@domain.forest.company.com", then the default login name must be used. The modified login name (such as "virginia@email.company.com") cannot be used.

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Published Date: Oct 7, 2016

Activity Monitor: Process Name Appears Twice, or With Wrong PID

Under certain circumstances, Activity Monitor may show an application's name twice, and/or with the wrong process identification number ("PID"). The correct PID appears in Terminal.

This article has been archived and is no longer updated by Apple.

This issue does not affect system performance or behavior. If you notice this while troubleshooting a different issue, it shouldn't cause any additional concern.

The PID that appears in Terminal is correct.

If you don't know how to view process information in Terminal, you may do so using the "ps" or "top" commands. For example:

1. Open Terminal (/Applications/Utilities).
2. At the prompt, type: ps -aux
3. Press Return.

To learn more about ps or top, type "man ps" or "man top" in Terminal.

Published Date: Feb 17, 2012

Network Image Utility: Can‘t add metapackages

The Network Image Utility allows you to add packages to be installed after the initial installation of the operating system. This feature works with individual packages, not metapackages.
This article has been archived and is no longer updated by Apple.

Symptom

You can't add metapackages to Network Installation Images using Network Image Utility.

Solution

This feature is not designed to work with metapackages. Follow the steps outlined in the System Image Administration guide for adding individual packages.
Published Date: Oct 7, 2016

Macintosh Manager 2: AppleWorks Font Menu Lacks Font Previews

The AppleWorks font menu does not display font names in their own typefaces when the MMLocalPrefs extension is enabled.
This article has been archived and is no longer updated by Apple.

Symptom

Fonts in the AppleWorks fonts menu do not appear in their own typefaces.

Solution

This is the expected behavior when the MMLocalPrefs extension is enabled.

Important: You should not disable this extension without consulting with your network administrator. Other applications may not perform as expected if this extension is disabled.
Published Date: Feb 17, 2012

About the Mac OS X Server 10.3.3 Update

This software updates Mac OS X Server version 10.3.2 to version 10.3.3.
This article has been archived and is no longer updated by Apple.

Important: Read Before Installing

1. An administrator account password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, follow these steps: Choose System Preferences from the Apple menu. Choose Accounts from the View menu. Select an Admin account and click Edit User. Type your current password, and press Return. Change the password, and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.

4. This update can be installed on non-startup volumes, but that should be done **only** when the current startup volume has already been updated to Mac OS X Server 10.3.3. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

5. If you use a MySQL database, you must back it up prior to upgrade. See the Additional Information for MySQL section, below.

6. If you have set up a loginhook, a custom serial port configuration, or have edited the "/etc/ttys" file for other reasons, you will need to back it up prior to installation of this update.This is because the 10.3.3 update overwrites the file with a new copy. The new file will set the Xserve's serial port to communicate at 56Kbps. If your serial device cannot communicate at this speed, you must edit this file to reduce the speed.

Installation

There are two ways to update to Mac OS X Server 10.3.3: Software Update and Standalone Installer.

Software Update Installation

You may have been referred to this document by Software Update. For more information on this feature, see **How to Update Your Software**.

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

An installer is also available from **Apple Featured Software**.

The Mac OS X Server 10.3.3 Update is specifically for updating version 10.3.2. There is also a "**combo**" installer available, which will update version 10.3, 10.3.1, or 10.3.2.

Remote Installation

If you need to install the update on a remotely located computer, you can do so using either the **Server Admin** application or the "**softwareupdate**" command-line tool. Choose the method that works best for you.

Enhancements

These are some of the enhancements that are part of Mac OS X 10.3.3 Server Update:

Open Directory (Directory Services)

- Improved Directory Services reliability in Active Directory Domains with large number of hosts/clients.
- Addresses an issue in which a Kerberized AFP server may return a "-5023" error when a client attempts mount a volume on the server.
- The Active Directory plug-in is no longer sensitive to the case of the domain; the plug-in now works in ".local" domain environments; the plug-in can now work with DNS records that don't have matching reverse lookup; and the plug-in can work in environments that are not hierarchical.
- Addresses an issue in which the response to certain DNS lookups could cause the lookupd process to quit, which would in turn cause the server to stop responding if Crash Reporter was enabled.

Network Services

- NAT Service: Port redirects function correctly after the natd.plist is modified with the appropriate redirect entries. Addresses an issue of incorrectly parsed redirect_port entries in /etc/nat/natd.plist causing an incorrect natd command to be written to /etc/nat/natd.conf.apple.
- NAT Service: Addresses an issue in which all network interfaces would be available for port forwarding under the "Network connection to share" menu in Server Admin. Now only the active network interfaces (as configured in Network preferences) should be available for selection.
- VPN Service : Addresses an issue in which VPN Server daemon may not be installed when upgrading from Mac OS X Server 10.2 to Mac OS X Server 10.3.
- VPN Service: Adds a tool which allows users in an LDAP domain to make VPN connections to the server via PPTP.
- VPN Service: Addresses an issue in which the server may experience a kernel panic if the VPN service is enabled and has active PPP interfaces.

General Networking

- Provides 802.1q Virtual LAN (VLAN) support on secondary PCI gigabit Ethernet cards available or included with Xserves. VLAN allows multiple computers that are on different physical LANs to communicate with each other as if they were on the same LAN. Benefits include more efficient network bandwidth utilization and greater security, because broadcast or multicast traffic is only sent to computers on the common network segment.
- Increases the size of the Ethernet receive ring elements (RxRingElements) from 64 to 256, which allows the server to handle high-volume inbound network traffic more efficiently.
- Addresses issues that could occur when connecting to a network device that is "locked" (the device forces the network speed and/or duplex setting), such as losing the network connection.
- AppleTalk Browsing is on by default in Directory Access. This setting allows browsing for servers in AppleTalk Zones with the default installation of this update.
- Resolves an issue in which name conflicts could occur among Network Service Entities, such as SLP, AppleTalk and SMB.
- All available servers can be seen when browsing Windows Workgroups or Domains.
- Enhancements to /Network browsing include: Servers appear on the desktop and in Finder window Sidebars; AFP Authentication options are available; and you can disconnect a server by dragging its icon on the desktop to the Trash or by clicking the Eject icon in the Sidebar.
- Improves compatibility for certain third-party wireless PC cards, such as the Honda AH-G10. More...
- Finder and applications that allow you to browse the file system now refresh the contents of a remote network volume's folder or directory if the folder's contents change.

File Services

- AFP: Addresses an issue in which files residing on a share point may have received a new modification date when opened but not modified. Refreshing the view of modification dates of files on a share point, when viewed from an AFP client, provides more consistent and rapid feedback to users.
- AFP: Improves handling of unexpected network interruptions while editing/saving files to a share point. A file may not have opened because it erroneously appeared to be locked or in use. In some cases this condition may have caused a kernel panic.
- Samba: This release includes Samba 3.0.2 distribution, providing additional features. See the samba.org **website** for more information about this release.

System Imaging (NetBoot/Network Install)

- Improves system reliability for NetBoot clients when used in "Diskless" configuration.
- Network Image Utility: Addresses issue in which the Image Information scroll arrow (up) does not appear to function.
- Network Image Utility: Addresses issue in which selecting Japanese as the default language for a newly created image reverts to English after clicking the Create button.
- Network Image Utility: Addresses issue in which the "Diskless" NetBoot option did not remain active after updating a NetBoot image to Mac OS X 10.3.2.
- Server Admin properly displays the available protocol for Mac OS 9 NetBoot Images as AFP when using the Japanese language.
- Addresses issue where non-English language NetBoot users with network home directories get the English Finder by default rather than language selected during NetBoot image creation.

Printing

- Addresses a missing text issue that could occur in Mac OS X 10.3.2 when printing a document that contains Japanese Hiragino OTF or

Kozmin CID fonts.

Mail Service

- Addresses an issue in which mail server preferences such as host lists, "bcc to", and relay were not retained when migrating to a new server using "amsmailtool".
- Addresses issue in which "seen flag" settings for each user are not migrated during mail migration using "amsmailtool".
- Improves the mailing list server configuration in Server Admin. You may now save multiple newly-created lists with a large number of members at once.
- Addresses an issue in which the WebMail login window displays English when user had set display options to Japanese.

Web Services

- Addresses an issue In Server Admin (Websites : General) in which erroneous IP addresses could have appeared in the IP Address pop-up menu. This could have occurred if you had recently viewed the same information in another Server Admin connection to another site.
- Allows more flexibility to use special characters in passwords, such as "$", during initial configuration in Server Assistant. In previous releases, inclusion of such characters prevented authentication during login.
- The Web Server log format has been revised to improve the data output for processing by third-party web log analysis software.
- Addresses an issue in which newly saved realms in the httpd.conf file may include artifacts, such as authentication name and limit directives from removed realms.

QuickTime Streaming Server

- Addresses potential denial of service attack that could prevent legitimate usage of the content. This issue is also addressed in a separate Security Update.
- Provides QTSS Live Broadcast with ability to provide streaming content to 3G phone users.
- Addresses an issue in which QuickTime Broadcaster does not send Japanese language annotations correctly to iTunes.
- Addresses an issue in which QTSS Publisher unnecessarily consumes CPU time if left open for a long time (such as 48 to 72 hours).
- Addresses an issue in which MP3 playlists couldn't be removed once published using QTSS Publisher.
- Addresses an issue in which QTSS Publisher does not hint or allow editing of annotations where filenames exceed 32 characters.

Server Administration Tools

- Server Assistant now offers activation of Apple Remote Desktop for the default administrator user account. This option provides automatic activation of the Apple Remote Desktop client service for remote control, software distribution, and so forth to the server before the first login.
- Optimized the way servermgrd plug-ins store history data to reduce idle time CPU load. This should increase responsiveness in server administration and general performance of services.
- Workgroup Manager: Sharing panel display performance improved, reducing the time required to display a large number of share points.
- Workgroup Manager: Sharing panel allows the Shared Library network mount to reside on a non-startup volume on the server. This allows for better organization and management of server network mounts.
- Addresses an issue in which "Copy these privileges to enclosed items" may time out on share points with large numbers of nested folders.
- Workgroup Manager: Addresses a cosmetic issue in the Sharing Panel in which a newly created share point icon may not have appeared.
- Workgroup Manager: Network Mounts: Re-authentication is no longer required after an unsuccessful mount record creation attempt.
- Workgroup Manager: Addresses an issue in the Sharing Panel which prevented dragging and dropping Active Directory groups into the Group ownership field from the Users & Groups list.

Application Server

- The Application Server component JBoss has been updated to allow administrators to take advantage of the new JDK 1.4.2.
- Japanese localized text is changed/corrected in Server Admin:Web:Realms and Server Admin:Mail:Overview.

Finder enhancements

- Improves security after an administrator authenticates a Finder action that the current user wouldn't normally be allowed to perform.

- Addresses an issue in which Finder does not refresh the contents of a remote network volume's folder or directory if the folder's contents change on the server.
- Addresses an issue in which Finder unexpectedly quits when many icons are dragged when the View menu option "Show icon preview" is enabled.
- Improvements when dragging hundreds of items, in both applications and Finder.

Disk Utility (AppleRAID)

- Provides support for online rebuilding of a failed mirrored RAID drive.

Other

- A System Preferences pane for UPS is now available in Energy Saver preferences when a UPS power management system is connected; overall support for UPS systems is improved.
- Mac OS X Server (10-User License) allows 10 individual client computers to connect to the server even when each computer has multiple connections in the form of directly connected users or automounts.
- The Xserve security lock option can now provide USB function for mouse and keyboard while still preventing drive modules from being ejected. This options is configured in the Security system preference for Xserve hardware and may also be remotely configured via command line.
- When the Xserve security lock option is enabled, it ejects any CD/DVD media that is inserted.

Additional Information for MySQL

Data stored in MySQL databases with the version of MySQL that is pre-installed Mac OS X Server 10.3.2 or earlier must be exported and re-imported in order to be compatible with version of MySQL that is pre-installed on Mac OS X Server 10.3.3, in which a byte-ordering issue is fixed.

As with any upgrade install, you should back up your old data. In this particular upgrade, the following process is recommended to convert the data to the correct byte ordering:

Before the upgrade, use the terminal to export the data from your pre-10.3.3 database:

```
#  mysqldump -p table > backup-file.sql
```

or

```
#  mysqldump  --opt database > backup-file.sql
```

After the upgrade, and after initializing the MySQL database, import the data:

```
#  mysql -p table < backup-file.sql
```

or

```
#  mysql  database < backup-file.sql
```

Published Date: Oct 7, 2016

About the Mac OS X Server 10.3.3 Update (Combo)

This software updates Mac OS X Server version 10.3, 10.3.1, or 10.3.2 to version 10.3.3. It is a "combo" update that combines enhancements delivered with versions 10.3.1 through 10.3.3. If you already have Mac OS X Server 10.3.2, you may download a smaller update that is not a combo.
This article has been archived and is no longer updated by Apple.

Important: Read Before Installing

1. An administrator account password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, then follow these steps: Choose System Preferences from the Apple menu. Choose Accounts from the View menu. Select an Admin account and click Edit User. Type your current password, and press Return. Change the password, and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.

4. This update can be installed on non-startup volumes, but that should be done **only** when the current startup volume has already been updated to Mac OS X Server 10.3.3. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

5. If you use a MySQL database, you must back it up prior to upgrade. See the Additional Information for MySQL section, below.

Installation

There are two ways to update to Mac OS X Server 10.3.3: Software Update and Standalone Installer.

Software Update Installation

You may have been referred to this document by Software Update. For more information on this feature, see **How to Update Your Software**.

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

An installer is also available from **Apple Featured Software**.

Mac OS X Server 10.3.3 Update (Combo) updates Mac OS X Server 10.3, 10.3.1, or 10.3.2 to the later version.

Remote Installation

If you need to install the update on a remotely located computer, you can do so using either the **Server Admin** application or the "**softwareupdate**" command-line tool. Choose the method that works best for you.

Enhancements Delivered with this update

Many enhancements are delivered with this update. Because this is a combo update, it includes those delivered with Mac OS X Server versions 10.3.1, 10.3.2, and 10.3.3.

Additional Information for MySQL

Data stored in MySQL databases with the version of MySQL that is pre-installed Mac OS X Server 10.3.2 or earlier must be exported and re-imported in order to be compatible with version of MySQL that is pre-installed on Mac OS X Server 10.3.3, in which a byte-ordering issue is fixed.

As with any upgrade install, you should back up your old data. In this particular upgrade, the following process is recommended to convert the data to the correct byte ordering:

Before the upgrade, use the terminal to export the data from your pre-10.3.3 database:

```
#  mysqldump -p table > backup-file.sql
```

or

```
#  mysqldump  --opt database > backup-file.sql
```

After the upgrade, and after initializing the MySQL database, import the data:

```
#  mysql -p table < backup-file.sql
```

or

```
#  mysql  database < backup-file.sql
```

Published Date: Oct 7, 2016

Mac OS X Managed Client - List of Users Does Not Appear in Login Window

A list of users may no longer appear in the Login Window after updating to Mac OS X 10.3.2 or 10.3.3.
This article has been archived and is no longer updated by Apple.
This issue can happen when using:

- Mac OS X 10.3.2 or 10.3.3 managed clients
- Mac OS X Server 10.3 to 10.3.3
- Workgroup Manager

You should update the clients and server to 10.3.4 or later.
Published Date: Oct 7, 2016

WebObjects 5.2: How to Specify the JDBC URL and Choose Database Server Character Encodings

Learn how to specify the correct JDBC URL to connect to a database from a WebObjects application, and see examples of database server encodings that support international characters.
This article has been archived and is no longer updated by Apple.
Character encodings can be set at various places in a WebObjects application, such as string encoding for session data, XML encoding, database server encoding, or the encoding used to communicate with the client Web browser. This document only discusses how to specify the correct JDBC URL syntax for a WebObjects application and shows examples of database server encodings to support international characters.

To enter the JDBC URL and connection dictionary:

1. Start the EOModeler tool.
2. Select Model, then New to get a new connection panel.
3. Enter the username and password.
4. For proper JDBC URL syntax, consult the following table.

Database Name	Example Database Server Encoding(s)	Example JDBC URL Format	WebObjects Default Encoding
Oracle	JA16SJIS, Unicode (AL32UTF8)	jdbc:oracle:thin:@<SERVERNAME>:1521:<DBNAME>	MS932, UTF8
Sybase	sjis, utf8	jdbc:sybase:Tds:<SERVERNAME>:11222/<DBNAME>	MS932
		jdbc:sybase:Tds:<SERVERNAME>:11222/<DBNAME>?CHARSET=utf8&JCONNECT_VERSION=6	UTF8
Microsoft SQL Server 2000	Japanese (cp932)	jdbc:microsoft:sqlserver://<SERVERNAME>:1433;DatabaseName=<DBNAME>	MS932, UTF8
MySQL	Unicode	jdbc:mysql://<SERVERNAME>/<DBNAME>?useUnicode=true&characterEncoding=MS932	MS932
		jdbc:mysql://<SERVERNAME>/<DBNAME>?useUnicode=true&characterEncoding=UTF8	UTF8
OpenBase	SHIFTJIS, Unicode UTF-8, Unicode Extended	jdbc:openbase://<SERVERNAME>/<DBNAME>	SJIS, UTF8
OpenLDAP	Unicode	ldap://<SERVERNAME>:389/<dn>	UTF8

Notes

1. Database Server Encoding:

Although Unicode or UTF is preferred for its portability, database server encoding tends to be selected by other system requirements or usage patterns. For example, if the database is only used in Japan, then Shift-JIS is probably the better choice. Typically, Japanese database servers are configured using "Shift-JIS" (and its variants such as "MS932"), Japanese EUC, UTF8, and UTF16.

2. WebObjects Default Encoding for Oracle, Sybase, Microsoft SQL Server 2000, MySQL:

If you use "MS 932" as the default encoding, you will be able to use the vendor's Japanese-specific character set. However, using "MS932" is limited to Japanese, while "UTF8" will cover a broad range of characters used in other languages.

See technical document **107667** for setting the browser's character encoding from a WebObjects application.

3. Database Adaptors and JDBC Drivers

For Mac OS X 10.2, Windows 2000, and WebObjects 5.2.1, see the Deploying Applications guide at:

http://developer.apple.com/documentation/WebObjects/Deployment/Deploying_Applications/Installation/chapter_3_section_4.html

Also see technical document **72598** on WebObjects Compatibility.

For Mac OS X 10.3, WebObjects 5.2.2, the following newer database versions and JDBC driver can be used, but they have not been officially

qualified by Apple:

- New JDBC driver MySQL Connector/J 3.0

  Important: Using the JDBC driver MySQL Connector/J 3.0 with OS X 10.3 allows you to use Japanese with the "text" external type. To avoid seeing garbled text with the "text" external type when using the older driver MySQL Connector/J 2.0, the JDBC URL must include the character encoding type "UTF8".

  Example:

  jdbc:mysql://<SERVERNAME>/<DBNAME>?useUnicode=true&characterEncoding=UTF8

  Note: The MySQL Connector/J 3.0 does not work with Windows 2000.

- OpenBase 8.0.0, which is the updated version of OpenBase 7.0.5.
- OpenLDAP 2.1.22

4. Additional information

For additional information, consult your JDBC driver documentation.

Oracle 9i
Database encoding supported for Japanese: JA16SJIS, or Unicode
JA16SJIS is Oracle's NLS style specifier for MS 932 and SHIFTJIS. It is usually chosen when the database is only used in Japan.

Sybase
JDBC URL Format: To specify the UTF-8 character set to support international characters, you need to add the CHARSET and JCONNECT_VERSION parameter values.Example:

jdbc:sybase:Tds:localhost:11222/JTest?CHARSET=utf8&JCONNECT_VERSION=6

Microsoft SQL Server 2000
The following data types are not supported in EOModeler or WebObjects applications:
'nchar', 'nvarchar', and 'ntext' data types.

OpenBase: To use vendor specific Japanese characters, select "Unicode UTF-8" or "Unicode Extended" as the database server encoding.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 7, 2016

Bluetooth: Pairing takes longer when using a headset with Mac OS X 10.3

When you use a Bluetooth headset, it might take a little longer than normal to connect to other Bluetooth devices. This is expected.
This article has been archived and is no longer updated by Apple.
This delay can happen when adding a new device in the Bluetooth Setup Assistant or when reconnecting to a favorite device, such as a wireless mouse. If you'd rather not wait, turn off your headset while you pair other devices, then turn the headset back on.

This issue affects Mac OS X 10.3. For best results, use Software Update to get Mac OS X 10.3.9 and other suggest updates.
Published Date: Feb 17, 2012

Bluetooth: Headset doesn‘t appear in Sound preferences or Setup Assistant

Find out what to do if the "headset" choice doesn't appear in Sound preferences or in the Bluetooth Setup Assistant.

This article has been archived and is no longer updated by Apple.

If you use Bluetooth preferences to pair a headset, the headset choice may not appear in Sound preferences.

To avoid the issue, follow these tips:

- Use the Bluetooth Setup Assistant to pair the headset to the computer. For best results, do not pair the headset from Bluetooth preferences.
- In the Setup Assistant, select "headset" as the device you are trying to pair.

If the headset choice is missing in the Setup Assistant:

- Make sure you have installed Bluetooth 1.5 software or later, and that your Bluetooth adapter's firmware is up to date.
- To connect the headset to your computer, be sure to use your computer's built-in Bluetooth hardware or a D-Link DBT-120 USB adapter.

Related documents

120276: Bluetooth Software 1.5 for Mac OS X: Information and Download
120253: Bluetooth Firmware Updater 1.0.2: Information and Download

Important: The Bluetooth Firmware Updater linked above should only be used with Apple built-in Bluetooth hardware or the D-Link DBT-120 adapter (rev b2 or higher).

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Published Date: Feb 18, 2012

Bluetooth: System Requirements for Using a Headset

If you want to use a Bluetooth headset, your computer must meet the requirements listed in this document.

This article has been archived and is no longer updated by Apple.

Using a headset

To use a Bluetooth headset, your computer needs:

- Bluetooth 1.5 software or later
- Built-in Bluetooth hardware, or the D-Link DBT-120 USB adapter (rev. B2 or later)
- Up-to-date firmware for the adapter

To use with iChat

To use the headset with iChat, you should use iChat AV 2.1 Public Beta or later, which you can download from the iChat website (http://www.apple.com/ichat/). Earlier versions of iChat AV may not work reliably with a Bluetooth headset.

Related documents

120276: **Bluetooth Software 1.5 for Mac OS X: Information and Download**
120253: **Bluetooth Firmware Updater 1.0.2: Information and Download**

Important: The Bluetooth Firmware Updater linked above should only be used with your computer's built-in Bluetooth hardware or the D-Link DBT-120 adapter (rev b2 or higher).

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Published Date: Feb 18, 2012

Bluetooth: Using Apple Wireless Mouse With a Bluetooth Headset

Your Apple Wireless Mouse may respond slowly or erratically if you also use a Bluetooth headset and your firmware is out of date.

This article has been archived and is no longer updated by Apple.

If you want to use a Bluetooth headset and the Apple Wireless Mouse, make sure your firmware is up-to-date.

Published Date: Feb 18, 2012

Bluetooth: About Sony Ericsson headsets

Some Sony Ericsson headsets may not work as expected with your Mac.

This article has been archived and is no longer updated by Apple.

These Bluetooth headsets do not work as expected with Mac OS X:

- Sony Ericsson HBH-10
- Sony Ericsson HBH-15
- Sony Ericsson HBH-65
- Sony Ericsson HBH-200

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document **17159**, "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Published Date: Feb 18, 2012

Mac OS X Server 10.3: Using the Case Sensitive/Journaled file system

Mac OS X Server 10.3 allows you to use the Case Sensitive/Journaled file system for data volumes. It is not intended for use on startup disks. This article has been archived and is no longer updated by Apple.
If you format a volume as Case Sensitive/Journaled and try to install Mac OS X Server on it, the Installer will tell you that you can't install on the selected volume until settings are changed.

When you need to use the Case Sensitive/Journaled file system, you should partition the server's hard disk (or use multiple hard disks). Put case sensitive items on a Case Sensitive/Journaled volume, and install Mac OS X Server on a volume that is not case sensitive.

Examples of reasons to use the Case Sensitive/Journaled file system are:

- When hosting (non-boot) data volumes containing case sensitive files
- As a higher performance alternative to UFS
- Situations where you need a file system that supports case sensitivity and journaling
- When you need to use case sensitive volumes larger than 1 TB (UFS supports volumes up to 1 TB ; HFS Plus supports volumes up to 16 TB)
- Situations where you have legacy UNIX applications and scripts that require or were only designed for case sensitive file systems

Published Date: Oct 7, 2016

Mac OS X 10.2, Managed Client: Printing from Classic applications while restricting access

Using the Capabilities feature of Accounts preferences, you can limit the applications available to local user accounts. Workgroup Manager allows you to do the same thing for managed network clients if you use Mac OS X Server.

This article has been archived and is no longer updated by Apple.

When you start managing application access, Classic applications may not be able to print. If that happens, simply add the PrintMonitor utility to the list of allowed applications.

Published Date: Feb 17, 2012

Mac OS X Server 10.2: AFP is required to start Mac OS 9 NetBoot clients

For Mac OS 9 clients to successfully use NetBoot, Apple File Service (AFP) must be running on the server.
This article has been archived and is no longer updated by Apple.
When AFP is not running at the server, Mac OS 9 clients that try to use NetBoot process will display a gray screen, pause, then possibly start up from a local volume.

If this happens when AFP is running, be sure that none of your network hardware, such as a switch or router, is interfering with AFP traffic. A simple test for isolating your network hardware is to run a crossover cable between a Mac OS 9 client and the server.

Be sure that any switches and routers have the latest firmware that is available from their manufacturers.
Published Date: Feb 17, 2012

Mac OS X and AirPort: About "Using DHCP with manual address"

The "Using DHCP with manual address" feature is for connecting to routers that use the DHCPINFORM protocol. AirPort base stations assign addresses without using this protocol.
This article has been archived and is no longer updated by Apple.
In Mac OS X 10.2 and later, Network preferences lets you choose the "Using DHCP with manual address" option as a way to configure your computer's TCP/IP settings.

If you choose this option when connected to an AirPort or AirPort Extreme base station, you are assigned a subnet mask of 255.0.0.0, and no router address is assigned. You can't connect to the Internet. This could also happen when connecting to any router that doesn't use DHCPINFORM.

To connect to an AirPort base station, configure "Using DHCP" or "Manually".
Published Date: Oct 7, 2016

Mac OS X Server 10.3: Changing the hostname with the changeip command

The Mac OS X Server Setup Assistant gives examples of proper hostnames. If you need to change the hostname after using the assistant, this document explains how.
This article has been archived and is no longer updated by Apple.
The Setup Assistant gives these examples when it asks you to enter a hostname:

server.example.com
www.example.com

This is the correct form for a hostname in Mac OS X Server 10.3, and it's the form that will be listed for the HOSTNAME in the "/etc/hostconfig" file on a properly configured server.

If you need to change the hostname later, you can use the "changeip" command in Terminal. To learn more about the command, see the Mac OS X Server Command-Line Administration Guide or type "man changeip" in Terminal.
Published Date: Oct 7, 2016

About the Application Servers Update 2.0 for Mac OS X Server 10.3

This document contains an overview and download information for the Application Servers Update 2.0. Apple recommends this update to deployers of applications on WebObjects, JBoss, or Tomcat on Mac OS X Server 10.3. The update also includes WebObjects 5.2.3, which has formal support for Java 1.4.2.
This article has been archived and is no longer updated by Apple.
This update upgrades various Java application server components shipped in Mac OS X Server 10.3. WebObjects 5.2.3 deployment, which contains many important fixes and is qualified on the Java 1.4.2 platform. JBoss is upgraded to version 3.2.3 and contains new security features and fixes. Tomcat has been updated to version 4.1.29 and is fully integrated with the JBoss distribution.

Installing Application Servers Update on Mac OS X Server 10.3

The update requires:

- Mac OS X Server 10.3.3 or later
- Mac OS X Server 10.3.3 is available via Software Update.
- Java 1.4.2 (bundled with Mac OS X Server 10.3.3)

Follow these steps:

1. Install Mac OS X Server 10.3, and update to 10.3.3 via Software Update.
2. Install the Applications Server Update via Software Update or manual download.

Important: For JBoss deployers who have customized their /Library/JBoss/3.2/bin/run.conf file: This update installs a new /Library/JBoss/3.2/bin/run.conf file. The original file will be renamed to run.conf.applesaved. It is up to the administrator to merge any customizations back into the new run.conf file.

For more information on WebObjects 5.2.3, see document **107873**.

See the JBoss website for more information on JBoss, or the Apache website for more information on Tomcat

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Published Date: Oct 7, 2016

Mac OS X Server: Holding N key does not select the default NetBoot image

Some server documentation says that pressing the N key as the computer starts up chooses the default NetBoot image. This is not actually the case.

This article has been archived and is no longer updated by Apple.

The NetBoot image for a client is stored on the server. The client will start up from the previously selected NetBoot image, whether or not you hold down the N key during startup.

To select a NetBoot startup image for a Mac OS X 10.2 or later client, use Startup Disk preferences. To select a NetBoot startup image for a Mac OS 9 client, use the Startup Disk control panel version 9.2.4 or later.

Published Date: Oct 7, 2016

Mac OS X Server 10.2: The "No such directory" message may safely be ignored

The System Log may contain a specific "No such directory" message that you can safely ignore.
This article has been archived and is no longer updated by Apple.
The specific message is:

bootpd[915]: ni_pathsearch '/config/NetBootServer' failed: No such directory

This message can safely be ignored.
Published Date: Oct 7, 2016

Mac OS X Server 10.2: Portmap must be running if you use an /etc/exports file

You can use Workgroup Manager to configure NFS exports, but Mac OS X Server also allows you to use a standard /etc/exports file. In the latter case, the portmap process must be running for the NFS exports to be shared.
This article has been archived and is no longer updated by Apple.
The server must meet one of the following conditions for portmap to start during system startup:

- The server is a NetInfo parent.
- There are already NFS exports in NetInfo (as happens when using Workgroup Manager to create the export).
- /etc/hostconfig has an entry that says RPCSERVER=-YES-
- /etc/hostconfig has an entry that says NETINFOSERVER=-YES-

Published Date: Oct 7, 2016

WebObjects: About the 5.2.3 Update

This document contains an overview and download information for the WebObjects 5.2.3 Update. WebObjects 5.2 users who want formal qualification and support for Java 1.4.2 should install this update. WebObjects 5.2 users who plan to develop their WebObjects applications on Mac OS X 10.3.3 or who use the Xcode development tool suite or plan to deploy their WO 5.2 applications on Mac OS X Server 10.3.3, Windows, or Solaris should also install this update.
This article has been archived and is no longer updated by Apple.
The WebObjects Current Patch List contains information on all available patches and updates for all versions of WebObjects. Read this document if you're not sure which update you need on your system.

This update address issues with CLOSE_WAIT states in deployment using JavaMonitor and wotaskd. It also addresses a number of issues related to EOF under high load.

WebObjects 5.2.3 Developer for Mac OS X 10.3.3

Important: There are two mutually exclusive updates for this platform. If you have WebObjects 5.2 Developer installed on Mac OS X 10.3, you need the WebObjects 5.2.3 Developer update. If you have WebObjects 5.2 Deployment installed on Mac OS X Server 10.3, you need the WebObjects 5.2.3 Deployment update. You do not need both on any system.

This update is available through the Software Update feature of Mac OS X. If you use this method, only the proper update for the software which you have installed on your system is visible and available for download. If you prefer to download and install the package manually, follow the instructions below.

System requirements

WebObjects 5.2.3 Developer requires:

- Mac OS X 10.3.3 or later
- Xcode 1.1 Developer tools
- Java 1.4.2

If you have not yet updated to the correct version of Mac OS X or Developer Tools, you must do so before installing WebObjects 5.2.3. Mac OS X 10.3.3 and the Xcode 1.1 Developer tools are available through Software Update.

If you are creating a new Mac OS X WebObjects 5.2.3 development system, you should install the software in the following order:

1. Install Mac OS X 10.3
2. Update to Mac OS X 10.3.3
3. Xcode Developer tools CD
4. Xcode 1.1 Software Update
5. WebObjects 5.2 Developer
6. WebObjects 5.2.2 Developer
7. WebObjects 5.2.3 Developer

Manually installing WebObjects 5.2.3 Developer on Mac OS X 10.3.3

These instructions are for manually downloading and installing WebObjects 5.2.3 Developer. If you are installing using Software Update, see the previous section of this document.

System requirements

WebObjects 5.2.3 Developer requires:

- Mac OS X 10.3.3 or later
- JDK 1.4.2
- Xcode 1.1 Developer Tools

If you have not yet updated to the correct version of Mac OS X, Java, or Developer Tools, you must do so before installing WebObjects 5.2.3.

1. Go to http://www.apple.com/support/downloads and download the WebObjects 5.2.3 Developer update. The disk image should expand after downloading, leaving WO523Developer.pkg.
2. Open WO523Developer.pkg. The Authenticate panel opens.
   Important: Only an administrator can install the update.
3. Type the proper administrator name and password to authenticate.
4. Click OK to proceed. The Introduction panel appears.
5. Click Continue. The Software License Agreement appears.
6. Read the software license agreement, then click Continue.
7. Click Agree to agree to the license agreement, and continue the installation.
8. Select the volume containing Mac OS X and WebObjects 5.2 Developer.
9. Click Continue.
10. Make sure that there are no WebObjects or EOF applications running.
11. Click Install to proceed with installation. The Installer window displays information about the progress of the installation, which may take several minutes.
12. Restart your computer.

WebObjects 5.2.3 Deployment for Mac OS X 10.3.3 Server

This update is available through the Software Update feature of Mac OS X. If you use this method, only the proper update for the software which you have installed on your system is visible and available for download. See document **107869** for more information on the Applications Servers update for Mac OS X Server.

Important: If you have installed the Application Servers update and have WebObjects services that do not run upon restart, see document 107909.

System requirements

WebObjects 5.2.3 Deployment requires:

- Mac OS X Server 10.3.3 or later
- Java 1.4.2

If you have not yet updated to the correct version of Mac OS X Server, you must do so before installing WebObjects 5.2.3. Mac OS X Server 10.3.3 is available through Software Update

If you are creating a new Mac OS X WebObjects 5.2.3 deployment system, you should install the software in the following order:

1. Mac OS X Server 10.3
2. Mac OS X Server 10.3.3
3. Application Server Update

Configuration tasks:

1. wotaskd is not configured to autostart by default. Open the file /System/Library/StartupItems/WebObjects/WebObjects and uncomment the following line:

   ```
   "$WOSERVICE" -appPath "$WOTASKD" >/var/log/webobjects.log 2>&1 &
   ```

2. If you are planning to use Apache, you will need to update the httpd.config file. Add the following to the end of the file /etc/httpd/httpd.config:

   ```
   # Including WebObjects Configs Include /System/Library/WebObjects/Adaptors/Apache/apache.conf
   ```

Manually Installing WebObjects 5.2.3 Deployment on Mac OS X Server 10.3.3

These instructions are for manually downloading and installing WebObjects 5.2.3 Deployment. If you are installing using Software Update, see the previous deployment section of this document, WebObjects 5.2.3 for Mac OS X Server 10.3.

System requirements

WebObjects 5.2.3 Deployment requires:

- Mac OS X Server 10.3.3 or later
- Java 1.4.2

Follow these steps:

1. Go to http://www.apple.com/support/downloads
2. Download the Application Servers Update package for Mac OS X Server 10.3.3. Stuffit Expander should automatically expand the archive, leaving a disk image with the ApplicationsServerUpdate.pkg.
3. Open ApplicationsServerUpdate.pkg. The Authenticate panel opens.
   Important: Only an administrator can install the update.
4. Type the proper administrator Name and Password to authenticate.
5. Click OK to proceed. The Introduction panel appears.
6. Click Continue. The Software License Agreement appears.
7. Read the software license agreement, then click Continue.
8. Click Agree to agree to the license agreement and continue the installation.
9. Select the volume containing Mac OS X and WebObjects 5.2 Deployment.
10. Click Continue.
11. Make sure that there are no WebObjects or EOF applications running.
12. Click Install to proceed with installation. The Installer window displays information about the progress of the installation, which may take several minutes.
13. Restart your computer.

Installing WebObjects 5.2.3 on Windows 2000

System Requirements

WebObjects 5.2.3 Developer/Deployment requires:

- Java 1.4.2 (J2SE SDK)
- WebObjects 5.2.2

If you see panels indicating that certain files being replaced by the update are "locked" during installation, click Reboot to continue the installation. The files will be replaced upon restarting.

This update cannot be uninstalled alone. Once you have upgraded to WebObjects 5.2.3 you cannot revert to a previous version of WebObjects 5.2. However, the entire WebObjects 5.2.3 installation can be uninstalled using the Add/Remove Programs control panel.

Follow these steps:

1. Download the self-extracting update installer for Windows 2000.
2. Log in as a user with Administrator privileges.
3. Make sure that there are no WebObjects or EOF applications running.
4. Open WO523.exe to start the installation process. A screen appears with some information about this update.
5. After you have read the information screen, click Next to continue. The license agreement for this update appears.
6. To agree to the license and continue the installation, click Yes. The update will be installed on your system and you will be asked if you want to restart.
7. Select "Yes, I want to restart my computer now" to restart Windows.
8. The WinZip self-extractor automatically quits and removes its temporary files in about 20 seconds.

Installing WebObjects 5.2.3 on Solaris

System Requirements

WebObjects 5.2.3 Deployment requires:

- Java 1.4.2 (J2SE SDK)
- WebObjects 5.2.2

If you have not yet updated to these versions, you must do so before installing WebObjects 5.2.3.

Follow these steps:

1. Download the update installer for Solaris and the update installation script, patcher.sh.
2. After you have downloaded the files, the patcher.sh script needs its executable bit set. At the command prompt enter:

   ```
   chmod 511 patcher.sh
   ```

3. Log in as root.
4. Ensure that there are no WebObjects or EOF applications running, including Monitor.
5. If a web server is running on the computer on which you are installing the update, stop it.
6. Stop WebObjects services (wotaskd and woservice) using the WOServices script. At the command prompt enter:

```
cd $NEXT_ROOT/Library/WebObjects/Executables ./WOServices stop
```

These services will restart when you restart the computer after installing the update.

7. To Install the update, cd to the directory containing the update and the patcher.sh installation script. Then at the command prompt enter:

```
patcher.sh -install WO523Solaris.tar.gzip
```

For more information on using patcher.sh, at the command prompt enter:

```
patcher.sh -help
```

8. Copy the updated WODocument root to your web server's document root.

```
cp -r $NEXT_ROOT/Library/WebObjects/WODocumentRoot/WebObjects <webserver doc root>/WebObjects
```

9. Restart your computer.

Issues resolved in WebObjects 5.2.3

Support for single byte numbers broken

Apple Reference 3100683

ISSUE:

Specifying an attribute that mapped to a single byte external database type with a value type of 'b' and NSNumber value class was broken.

RESOLUTION:

This specific case has been enabled.

Checked boxes generated by WOCheckedboxMatrix do not align correctly in some cases.

Apple Reference 3148863

ISSUE:

If the text to the right of the checked boxes takes more than one line and if it wraps, the checked boxes are aligned between the lines instead of aligning at the first line.

RESOLUTION:

This issue has been resolved.

The escapeHTML binding was missing in certain WOComponent such as WOSubmitButton.

Apple Reference 3197639

ISSUE:

The logic for handling the escapeHMTL binding of WOSubmitButton was missing.
As a result, JavaWebObjects.framework always replaced the "&" character with the "&" string.

RESOLUTION:

The logic for handling the escapeHTML binding has been added to WOInput. The escapeHMTL binding can be manually added to subclasses of WOInput such as WOSubmitButton by using the Binding Inspector of WebObjects Builder.

NullPonterException raised in com.webobjects.eocontrol.EOEditingContext._eoForGID

Apple Reference 3206657

ISSUE:

Under some circumstances, this exception is thrown when calling EOEditingContext.saveChanges().

RESOLUTION:

This issue has been resolved.

Multithreaded EOF access causes NPE in EODatabaseContext

Apple Reference 3219139

ISSUE:

Under heavy load, multithreaded EOF throws a NullPointerException while saving changes.

```
java.lang.NullPointerException
        at com.webobjects.eoaccess.EODatabaseContext.createAdaptorOperationsForDatabaseOperation(EODatabaseContext.java:5467)
        at com.webobjects.eoaccess.EODatabaseContext.performChanges(EODatabaseContext.java:6291)
        at com.webobjects.eocontrol.EOObjectStoreCoordinator.saveChangesInEditingContext(EOObjectStoreCoordinator.java:411)
        at com.webobjects.eocontrol.EOEditingContext.saveChanges(EOEditingContext.java:3130)
```

RESOLUTION:

This issue has been resolved.

WOMessage.appendHeader() needs to check for duplicate values

Apple Reference 3219197

ISSUE:

Under some circumstances, appendHeader can continually add duplicate values to a header.

RESOLUTION:

This issue has been resolved.

Certain cookies were not handled properly.

Apple Reference 3274806

ISSUE:

Whenever the last attribute-value pair of a cookie contains a null value, an NSForwardException for java.lang.StringIndexOutOfBoundsException get thrown.

RESOLUTION:

This issue has been resolved.

Deadlock in a single threaded application when garbage collection occurs

Apple Reference 3277451

ISSUE:

Under some circumstances, some customers were seeing deadlocks when some EnterpriseObjects were being finalized and an attempt to take a lock on them occurred.

RESOLUTION:

This issue has been resolved.

Potential deadlock when EOSharedEditingContexts are involved

Apple Reference 3323120

ISSUE:

Under some circumstances, EOF would deadlock when faults were fired and objects were being finalized.

RESOLUTION:

This issue has been resolved.

componentsSeparatedByString wrong when chopping strings of only separators

Apple Reference 3323130

ISSUE:

If a string contains only separators, or multiple separators in a row, this method may produce an array with too few empty strings.

RESOLUTION:

This issue has been corrected.

JSModalWindow inserts a spurious newline

Apple Reference 3323144

ISSUE:

JSModalWindow inserts a spurious newline.

RESOLUTION:

This issue has been resolved.

Deadlock with nested EOEditingContexts

Apple Reference 3342847

ISSUE:

Under some circumstances, unlocked child EOEditingContexts were leaving locks on their parent EOEditingContexts.

RESOLUTION:

This issue has been resolved.

Batch faulting not generating the correct SQL

Apple Reference 3428581

ISSUE:

Under some circumstances, would not generate the correct EOFetchSpecification when batch faulting.

RESOLUTION:

This issue has been resolved.

Performance problems within component caching

Apple Reference 3467030

ISSUE:

Inefficient cache lookups for components caused a lot of disk usage.

RESOLUTION:

This issue has been resolved.

WOComponent.path() breaks API compatibility

Apple Reference 3467194

ISSUE:

WOComponent.path() in 5.2.2 broke previous behavior and returned a URL formatted path. Pre-5.2.2 behavior has been restored.

RESOLUTION:

This issue has been resolved.

NullPonterException in WOResourceManager.stringForKey() for invalid key

Apple Reference 3473069

ISSUE:

If WOResourceManager.stringForKey() is called for an invalid key, we throw and exception instead of returning null.

RESOLUTION:

This issue has been resolved.

The Java source files generated by EOModelder could not be customized in per project basis.

Apple Reference 3473117

ISSUE:

The Java source files generated by EOModelder could not be customized in per project basis by providing a local copy of EOJavaClass.template file in the project folder, as documented in WebObjectsTools_Techniques.pdf.

RESOLUTION:

This issue has been resolved.

primeApplication(String, URL, String) should not be deprecated

Apple Reference 3484678

ISSUE:

WOApplication.primeApplication(String mainBundleName, URL mainBundlePathURL, String nameOfApplicationSubclass) was mistakenly marked as deprecated in javadoc.

RESOLUTION:

This issue has been resolved.

WOSortOrder generates an illegal element "border=0" in the <A> html tag.

Apple Reference 3489479

ISSUE:

The <A> tag generated by WOSortOrder contains an element "border=0", which is not a legal element for the <A> html tag.

RESOLUTION:

This issue has been resolved.

Certain legacy ProjectBuilder projects did not build after upgrading to Xcode projects.

Apple Reference 3493962

ISSUE:

When a legacy ProjectBuilder project was first opened with Xcode, the option of upgrading to Xcode project was offered. However, the upgrading process failed whenever the main aggregate target name of a legacy ProjectBuilder project did not match with the project name. As a result, the upgraded Xcode project does not build properly.

RESOLUTION:

The resolution is to manually rename the main aggregate target name of the project to match with the project name using either the legacy ProjectBuilder or Xcode, save and close the project, re-open the project with Xcode, and finally then rename the main aggregate target name to its original value.

REGRESSION:WO5.2.2: WOFileUpload generates exception when no file selected at submission

Apple Reference 3508033

ISSUE:

WOFileUpload could generate a ClassCastException when no file is selected and the form is submitted.

RESOLUTION:

This issue has been resolved.

wotaskd and monitor leave sockets in a CLOSE_WAIT state

Apple Reference 3535483

ISSUE:

Under some circumstances, a socket leak occurred when http 1.0 was used. We think a majority of the CLOSE_WAIT problems pertaining to wotaskd and monitor are addressed.

RESOLUTION:

This issue has been resolved.

NullPointerException at EOEditingContext._setRecordIsInitialized()

Apple Reference 3538032

ISSUE:

It is possible to see this exception when an EO is deleted and updated within the same event (usually save changes)

RESOLUTION:

This issue has been resolved.

Monitor potentially leaked a socket when adding new hosts

Apple Reference 3551310

ISSUE:

When adding new hosts, Monitor potentially could leak a socket per host.

RESOLUTION:

This issue has been resolved.

To-one relationship does not update correctly when destination entity has boolean attribute

Apple Reference 3108071

ISSUE:

Upon saving changes, the destination entity with boolean attributes does not commit correctly to the database because the snapshot is in an invalid state.

RESOLUTION:

In order to resolve this problem, the behavior of a boolean attribute that is defined with a Number value class and value type of 'c' will now return a Boolean value instead of an Integer value.

Troubleshooting

1. My application is throwing the exception "com.webobjects.foundation.NSForwardException for java.lang.NoClassDefFoundError: javax/servlet/ServletContext"

For some reason, the necessary packages are not in your classpath. Debug your classpath to make sure the javax.servlet.* classes are there. If the classes are not found, the resolution is to download the servlet.jar and put it into /Library/Java/Extensions or in your classpath. The servlet.jar can be found with many open source distributions (e.g tomcat).

2. How do I convert my legacy WebObjects application to build as a true war bundle?

1. In Xcode, configure your build settings to the following:

```
SERVLET_SINGLE_DIR_DEPLOY = NO
SERVLET_STUB_WAR = NO
SERVLET_TRUE_WAR = YES
SERVLET_DEPLOY_LICENSE = <your deployment license>
SERVLET_WEBAPPS_DIR = /Library/JBoss/3.2/deploy
```

2. Add the JavaWOJSPServlet.framework to your project
3. You should also verify that all of your custom frameworks are being built as jar files and are installed or linked into /Library/WebObjects/lib.

Published Date: Oct 7, 2016

Mac OS X Server: Guidelines for relocating the server during initial setup

If possible, you should place a server in its final network location (subnet) before configuring it for the first time.
This article has been archived and is no longer updated by Apple.
If you are concerned about unauthorized or premature access during setup, you can set up a firewall to protect the server while you're finalizing its configuration.

If you can't avoid moving a server after initial setup, you must change location-dependent settings before it can be used. For example, the server's IP address and hostname must be updated.

When you move a server, take these guidelines into account:

- Minimize the time the server is in its temporary location so that the information you need to change is minimized.
- Postpone configuring services that depend on network settings until the server is in its final location. These include Open Directory replication, Apache settings (such as virtual hosts), DHCP, and other network infrastructure settings that other computers depend on.
- Avoid importing final user accounts. Limit accounts to test accounts so you minimize the user-specific network information (such as home directory location) that will need to change.
- After moving the server, use the changeip command-line tool to change IP addresses, host names, and other data stored in Open Directory NetInfo and LDAP directories on the server. Because changeip doesn't actually change the server's IP address, you use the networksetup or serversetup command (or Network preferences) to change the server's IP address in its network settings. See the command-line administration guide for more information.
- Reconfigure the search policy of computers (such as user computers and DHCP servers) that have been configured to use the server in its original location.

Published Date: Oct 7, 2016

Mac OS X Server 10.3: Upgrading Password Server users to Kerberos and single sign-on

After upgrading a Mac OS X Server from 10.2 to 10.3, follow the steps listed here to upgrade Password Server users to Kerberos.
This article has been archived and is no longer updated by Apple.
After the upgrade, user accounts whose password type was Password Server automatically have a password type of Open Directory and can use the authentication methods supported by Open Directory Password Server. If you want them to use Kerberos and single sign-on authentication, you need to upgrade the accounts.

1. Open Workgroup Manager.
2. From the **View** menu, choose **Accounts**.
3. Click the Users button.
4. Click the small globe icon (above the list of users).
5. From the pop-up menu that appears, open the directory domain where the user accounts reside.
6. Click the lock and authenticate as a directory domain administrator.
7. Select one or more user accounts in the list, and click Advanced.
8. Set User Password Type to "Crypt password" or Shadow Password (whichever is available).
9. Enter and verify a new password for the selected user or users.
10. Click OK, then click Save.
11. Set User Password Type to Open Directory.
12. Enter and verify a new password for the selected user or users.
13. Click OK, then click Save.
14. Tell users the password you assigned, and advise them to change the password in Accounts preferences the next time they log in.

Published Date: Oct 7, 2016

Mac OS X Server: Windows 95/98 clients do not see share points or printers with longer names

Windows 95/98 clients do not see the names of share points or printers hosted from the server when the names are longer than 12 characters.
This article has been archived and is no longer updated by Apple.
To browse or connect to printer or disk shares on Mac OS X Server from a Windows 95/98 client, the share name must be 12 characters or less. For more information, see the Microsoft support site.

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Published Date: Oct 7, 2016

Safari: eBay access may be blocked for some legally sensitive items

If eBay thinks you are located in a certain country, they may block your access to certain legally restricted items.
This article has been archived and is no longer updated by Apple.
This is the message you see from eBay:

"Unfortunately, access to this particular category or item has been blocked due to legal restrictions in your home country. Based on our discussions with concerned government agencies and eBay community members, we have taken these steps to reduce the chance of inappropriate items being displayed. Regrettably, in some cases this policy may prevent users from accessing items that do not violate the law. At this time, we are working on less restrictive alternatives. Please accept our apologies for any inconvenience this may cause you, and we hope you may find other items of interest on eBay."

If you are not in Germany, follow these steps:

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **International**.
3. If the Language tab is not already selected, click it.

4. Click the Edit button.
5. Deselect Deutsch, and click OK.
6. Quit Safari.
7. Reopen Safari.

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Published Date: Feb 19, 2012

Mac OS X Server 10.3: When is diskless NetBoot available?

You can use diskless NetBoot with Mac OS X 10.3 and later NetBoot images.
This article has been archived and is no longer updated by Apple.
Diskless NetBoot is not available with Mac OS 9 NetBoot, Mac OS X 10.2 NetBoot, or for any Network Installation images.
Published Date: Oct 7, 2016

Bluetooth: Static heard on Bluetooth headset

Other wireless devices around you could cause static on your Bluetooth headset.

This article has been archived and is no longer updated by Apple.

When this happens, the clarity of your audio is reduced. It may sound "digitized."

Wireless devices that use the same frequencies as your headset increase the likelihood of this happening. Examples include AirPort (802.11) connections, cordless phones, and other Bluetooth devices.

Turn off any Bluetooth or AirPort services and devices you're not using, and move your phone or its base away from your computer.

Published Date: Oct 7, 2016

Mac OS X, Managed Client: Users with low UIDs do not appear in the login window

Users with identification numbers (UIDs) lower than 500 do not appear in the login window, whether or not the client is managed.
This article has been archived and is no longer updated by Apple.
Mac OS X normally creates user accounts with UIDs of 501 and higher. Under some circumstances, you may have users with lower UIDs. Examples include when:

- Binding to an Open Directory server, such as LDAP or NIS
- Importing users
- Changing UIDs with administration tools

An alternate scenario in which some users may not appear is when you have more than 500 LDAP users.
Published Date: Oct 7, 2016

AirPort Extreme: WDS auto setup may not work if the admin computer has a static IP address

When you are using AirPort Admin Utility to set up a wireless distribution network (WDS), make sure the admin computer's Network preferences are set to get its IP address via DHCP.
This article has been archived and is no longer updated by Apple.
If the admin computer has a static IP address, the AirPort Admin Utility won't be able to connect to a remote base station to configure it.

If you don't want to change the admin computer's settings, you can create a second location for configuring the base stations. In the second location, drag AirPort to the top of the port configurations list.
Published Date: Oct 7, 2016

WebObjects 5.2: Fixing a java.lang.NoClassDefFoundError exception after upgrading to Mac OS X 10.3

Learn how to set the correct JVM in a WebObjects application that failed to run with a java.lang.NoClassDefFoundError exception. This would occur when using WebObjects 5.2.2 after an upgrade to Mac OS X 10.3.
This article has been archived and is no longer updated by Apple.
Running a WebObjects application that was created on an earlier system can produce an immediate java.lang.NoClassDefFoundError exception upon launch. This will happen even after the project is rebuilt on a Mac OS X 10.3 system.

To check that the proper JVM is set:

1. Open the application with Xcode.
2. Expand the "Targets" column on the left.
3. Select the main project target. For example, if the main project is named "MyApp", select "MyApp" target.
4. Double-click the project target to get the Settings display.
5. Select Expert View.
6. Set the correct value for the JAVA_VM variable:
7. JAVA_VM = java

The reason is that the JVM version was hard-coded into a variable in the project. After upgrading to Mac OS X 10.3, the default JVM, as defined in the project, has not changed and still points to the older JDK 1.3.1 with the following value:

JAVA_VM = /System/Library/Frameworks/JavaVM.framework/Versions/1.3.1/Commands/java

Setting the JAVA_VM to the correct value will fix the runtime error. Please note that Mac OS X 10.3 requires JDK 1.4.1.
Published Date: Oct 7, 2016

Using client-side certificates in Safari

Safari 1.2 and later offer support for client-side certificates, which are a security used by some websites that place a high priority on security.
This article has been archived and is no longer updated by Apple.
To use Safari 1.2 or later, you must have Mac OS X 10.3 or later.
Published Date: Oct 7, 2016

Mac OS X: Recursively removing files and directories on HFS file systems

Some implementations of the "rm" command line tool (and other tools that support the recursive removal of files and directories) depend on an unspecified behavior outlined below.
This article has been archived and is no longer updated by Apple.
The unspecified behavior is outlined in the following "pseudo code":

```
opendir();
while (readdir()) unlink();
closedir();
```

The unspecified behavior is what readdir() should return after the directory has been modified. Many file systems have been implemented such that subsequent readdir() calls will return the next directory entry. The implementation of the HFS file system cannot guarantee that all enclosed files or directories will be removed using the above method.

The Mac OS X "rm" command does not exhibit this behavior because it uses the fts(3) library functions to traverse the directory hierarchy, which causes the entire contents of the directory to be read before modifying it.

The Solaris and GNU "rm" commands are known to be implemented using the readdir/unlink loop above. So, attempts to recursively remove files and directories using those tools may fail.

Symptom

You are unable to reliably recursively delete files and directories on HFS file systems using tools other than the Mac OS X "rm" command.

Products affected

Any operating system using a tool to recursively remove files on an HFS file systems

Examples: Linux, Solaris, and so forth on an NFS export of the HFS file system

Note: The Mac OS X "rm" command is able to properly execute a recursive removal of files and directories.

Solution

The readdir()/unlink() loop needs to call rewinddir() either after each unlink() call, or whenever readdir returns NULL immediately after files have been unlinked. For example:

"The following pseudocode describes this solution:"

```
opendir();
do {
    unlinkedfiles = 0;
    while(readdir()) {
        unlink();
        unlinkedfiles = 1;
    }
    if (unlinkedfiles)
        rewinddir();
} while (unlinkedfiles);
closedir();
```

The GNU coreutils "rm" command was recently updated to do this on "affected" systems. However, that code is only used if the configuration scripts can determine that the system has this issue. This requires that the GNU coreutils be built on an HFS file system (NFS-exported, if building on a non-Mac OS X platform). Alternatively, one could simply modify the GNU coreutils source to force the constant HAVE_WORKING_READDIR to be undefined or defined to be zero (0).
Published Date: Oct 7, 2016

Muting audio on a Bluetooth headset

To mute audio on a Bluetooth headset, turn down the volume in the application that is providing audio.

This article has been archived and is no longer updated by Apple.

For example, if you're listening to music in iTunes, drag the volume slider all the way down to mute the headphones.

You might still hear audio on a Bluetooth headset after:

- Pressing the mute key
- Turning the system volume all the way down using the media keys on the keyboard
- Turning the volume down with the audio menu bar item

The media keys on your Apple keyboard can be used to adjust the sound level of your Bluetooth headset, but not to completely mute it.

You might also notice that the Mute option is dimmed in Sound preferences.

Published Date: Oct 7, 2016

Apple Remote Desktop 1.2.1: Meanings of the menu bar icons

The Apple Remote Desktop menu bar item displays an icon when Apple Remote Desktop Client is running. The icon changes according to the status of Apple Remote Desktop and the type of observation or administrator control that is active.

This article has been archived and is no longer updated by Apple.

This table describes the icons used in version 1.2.1 or later.

Icon	Description
	Not Active ARD has been installed but is not running on the client system.
	No Administrator ARD has been installed and is running on the client system, but no administrator is available.
	Ready ARD is installed and running on the client system, and an administrator is available.
	Observed ARD is installed and running on the client system, and an administrator is available and currently monitoring activity on the client system.
	Assisted The system is being monitored by an administrator who also shares control of the screen with the user. The administrator and the user are both able to view the client system's screen and work with the client computer.
	Remote The system is being monitored and controlled by a remote administrator. The local user is a passive observer.

Published Date: Feb 19, 2012

Mac OS X Server 10.3: Windows clients can‘t print after using Repair Permissions on server

Using Repair Permissions on a Mac OS X Server 10.3 system that is operating as a print server will cause the print server to stop working for Windows clients.
This article has been archived and is no longer updated by Apple.
To resolve the issue, log in with an administrator account on the server and execute this command in Terminal:

```
sudo chmod 777  /var/spool/samba
```

Published Date: Oct 7, 2016

Mac OS X Server 10.3: "We hit a bug" message appears when creating a mailing list

Mac OS X Server 10.3 includes a Web interface for mailing list administration. If you create a new mailing list with this tool, you may see a message that says, "We're sorry, we hit a bug!"
This article has been archived and is no longer updated by Apple.
This Mailman interface is available at http://myserver.com/mailman/admin, where "myserver.com" would be replaced with the address of your server.

When you try to save a new mailing list, you see this message:

> Bug in Mailman version 2.1.2
>
> We're sorry, we hit a bug!
>
> If you would like to help us identify the problem, please email a copy of this page to the webmaster for this site with a description of what happened. Thanks!

This message is followed by a detailed traceback.

To resolve the issue, follow these steps:

1. Open Terminal (/Applications/Utilities/).
2. Type: `sudo chmod g+w /var/mailman/data/aliases.db`
3. Press Return.
4. Use Server Admin to remove the partially created list.

Published Date: Oct 7, 2016

Apple Remote Desktop 1.2: Screen sharing uses lowest available resolution

The lowest display resolution available to the admin or any client computer determines the resolution available to all computers for the screen sharing feature.

This article has been archived and is no longer updated by Apple.

When the administrator is using the screen sharing feature, client computers with display resolutions greater than the computer with the lowest display resolution will see the shared screen at this lower resolution.

Published Date: Oct 7, 2016

Mac OS X Managed Client 10.3: Duplicate Apple bookmarks in the Dock

If you have used Workgroup Manager to configure Dock items for more than one kind of account (user, group, or computer list), a user's Dock may contain duplicate Apple bookmark items.
This article has been archived and is no longer updated by Apple.
This occurs when you have given the affected account the ability to add and remove Dock items as part of your Managed Preferences settings for that account and when you are managing at more than one account level (user, group, and/or computer list).

The user can manually remove duplicate bookmark from the Dock.

Alternatively, the duplicate item should go away if you deselect the "User may add and remove additional Dock items" option for that account.
Published Date: Oct 7, 2016

Xserve: Apple File Service, Windows sharing, and KDC do not automatically start after restarting the server

Apple File Service (AFP), Windows sharing (SMB), and the Kerberos Key Distribution Center (KDC) may not automatically start after you restart the server.
This article has been archived and is no longer updated by Apple.
This happens if you are using only the PCI Ethernet card and not the built-in Ethernet port. This issue affects:

- Mac OS X Server 10.3 to 10.3.2
- Xserve

There are two ways to avoid the issue. One is to use the built-in Ethernet port. The second is to configure the built-in Ethernet port, but not use it. Follow these steps:

1. Enable the built-in Ethernet port.
2. Configure it for a static IP address.
3. Save the changes.
4. Don't connect a cable to the port.

This document will be updated when more information is available.
Published Date: Oct 7, 2016

Mac OS X Server 10.3: SMTP server may remain "disabled" after you try to start it

The SMTP server included in Mac OS X Server 10.3 may not appear to start in some situations. Learn to work around this issue.
This article has been archived and is no longer updated by Apple.

After you turn on the SMTP server (shown above), it may still appear to be disabled.

This happens when using Mac OS X Server 10.3 to 10.3.2.

Follow these steps to resolve the issue:

1. Stop the Mail server by clicking the Stop Service button in the Mail Service module of Server Admin.
2. Wait 10 seconds.
3. Restart the Mail server by clicking the Start Service button in the Mail Service module of Server Admin.

Published Date: Oct 7, 2016

Mac OS X Server 10.3: Home directories not created for some users

If you select several hundred users in Workgroup Manager and click the Create Home Now button in the Home tab, some of the selected users' home directories are not created.
This article has been archived and is no longer updated by Apple.
This happens when using Mac OS X Server 10.3 to 10.3.9.

Note that there is no message to indicate success or failure in creating the home directories.

To avoid the issue, create the home directories in smaller batches. Select up to 250 users at a time.
Published Date: Oct 7, 2016

Mac OS X 10.3: Tasks that use an NFS export from a Linux server may become unresponsive ("hang")

When an application or tool tries to acquire or test for locks on files from a Linux-hosted NFS export, the action may be blocked indefinitely, potentially hanging the application or tool.
This article has been archived and is no longer updated by Apple.
The Linux NFS file locking implementation has a limitation in which NFS file locking requests may only contain cookies that are 8 bytes or smaller.

This limitation means that Linux NFS file locking will not work with NFS clients that use NFS file lock request cookies larger than 8 bytes. Currently, this includes Mac OS X 10.3 and FreeBSD 5 (from which the Mac OS X implementation is derived).

An update for the Linux kernel is available at:

http://www.fys.uio.no/~trondmy/src/Linux-2.4.x/2.4.23-rc1/

Apply the patch linux-2.4.23-03-fix_osx.dif to the Linux kernel sources and rebuild.

Other workarounds:

- Mount the Linux-served NFS filesystems using the -L option, which disables file locking support for that mount.
- To disable all NFS file locking support for the affected client, change its /etc/hostconfig default value "NFSLOCKS=-AUTOMATIC-" to be "NFSLOCKS=-NO-", and restart.

  Note: If the client is also an NFS server, then file locking will also be disabled for service that it offers.

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Published Date: Oct 7, 2016

Mac OS X Server: Web service may not start after upgrading from 10.2 to 10.3 or 10.3.1

After upgrading from Mac OS X Server 10.2.x to either 10.3 or 10.3.1, Web service may not start.
This article has been archived and is no longer updated by Apple.
This affects Mac OS X Server 10.2 to 10.2.8 when upgraded to 10.3 or 10.3.1

To avoid this issue, update the server to the most recent version (10.3.2 or later) before trying to start the Web service.

If you've already encountered the issue, follow these steps:

1. Open Terminal (/Applications/Utilities/).
2. Type:`sudo apachectl configtest`
3. Press Return.
4. Type your administrator password when prompted, then press Return.

This will check the syntax of the Apache configuration files. If you see a syntax error with a line number of the file "/etc/httpd/httpd.conf" that says "CacheRoot takes one argument, The directory to store cache files", then take these additional steps:

1. As the root user, make a copy of the file "/etc/httpd/httpd.conf".
2. Still as root, open /etc/httpd/httpd.conf using a text editor.
3. Look for a line that says

   ```
   CacheRoot ""
   ```

   Important: Be sure to choose a line that does **not** start with a number sign (#).

4. Edit the line to say:

   ```
   CacheRoot "/private/var/run/proxy"
   ```

   Tip: If you use a text editor that displays line numbers, this can help you make sure you're editing the line that was mentioned earlier in the syntax error.

5. Save the changes to /etc/httpd/httpd.conf.
6. Type: `sudo apachectl configtest`
7. Press Return. This time, a message saying "Syntax OK" should appear.
8. Open Server Admin and start the Web service.

Web service should now start.
Published Date: Oct 7, 2016

Mac OS X Server 10.2 and Later: Learn about Web Performance Cache

The Web Performance Cache interacts with various Web server functions. This document explains how it is configured by default, which may assist you when configuring Mac OS X Server Web services.

Except where noted, this information applies to Mac OS X Server 10.2 or later.
This article has been archived and is no longer updated by Apple.

Important notes about Web Performance Cache

The Web Performance Cache is enabled by default on Mac OS X Server 10.3 or later. It improves the performance of the Web server under certain circumstances, but you should be aware of the following:

- When the Web Performance Cache is enabled for any virtual hosts, a process named webperfcache runs, and takes over the listener on the configured TCP port (usually port 80). The Apache Web server is then configured to listen on a different TCP port (usually port 16080). All requests are received by the webperfcache process, and they are either served from the in-memory cache, or they are relayed to the Apache Web server. In the latter case, the Web Performance Cache then receives a response from the Apache Web server, saves it in its in-memory cache (if it can be cached and caching is enabled for that virtual host), and returns the response to the requester.

- The Web Performance Cache is not compatible with Apache's connection KeepAlive mechanism. By default, the KeepAlive mechanism is disabled and cannot be controlled by the Server Admin application. If you want to enable KeepAlive for your websites, you must use a text editor to change the KeepAlive setting in /etc/httpd/httpd.conf and use Server Admin to disable Web Performance Cache for all your websites.

- If a request contains Cookie headers, Web Performance Cache considers the request uncacheable and does not cache any responses for that request.

- Web Performance Cache respects the expiration times of cacheable items such as images, audio, and video files. By default these are all configured to expire after one hour. If you are running a busy website with Web Performance Cache enabled, and you notice a heavier load on your Apache Web server once per hour, it may be due to the image, audio, and video files all expiring at once. You may be able to flatten the load profile by staggering the expiration times of these file types. These are controlled by Apache's ExpiresByType directive. This directive is not configurable with the Server Admin application, so you'd need to use a text editor to edit /etc/httpd/httpd.conf.

- Mac OS X Server 10.3 or later only: Web Performance Cache is started at system startup by the Apache startup item, based on the setting of WEBPERFCACHESERVER in /etc/hostconfig.

- Web Performance Cache is not compatible with SSL. You should not enable both Web Performance Cache and SSL for a specific site. Doing so keeps Apache from starting.

- The amount of RAM WebPerfCache uses for its cache is determined by the WebPerfCacheRAMAvailable setting in the `webperfcache.conf` file, if present. That directive is commented out in the default version of this configuration file, so WebPerfCache will use all the physical RAM for its cache.

  Note that WebPerfCache can use a maximum of 2097151 KB of RAM for its cache. If a computer has 2G or more of physical RAM, WebPerfCache will not be able to determine the proper amount of memory to use for its cache. In that case, you must specify a value for WebPerfCacheRAMAvailable in the `/etc/webperfcache/webperfcache.conf` file. The maximum usable value is:

  ```
  WebPerfCacheRAMAvailable 2097151
  ```

- Performance Cache must be disabled if you wish to serve files larger than 2GB via HTTP/Apache. When Web Performance Cache is enabled, downloads larger than 2GB in size get truncated to 2GB.

- When running PHP or other dynamic web page generation, Web Performance Cache can cause the performance of dynamically generated content to be slower. While the Performance Cache will improve the performance of static content, you should disable the Performance Cache when using the server primarily for dynamic content.

- Additional information about the Web Performance Cache can be found in its configuration file: /etc/webperfcache/webperfcache.conf

Published Date: Oct 7, 2016

Mac OS X Server 10.3: Windows client authentication stalls when used as a PDC

When many Windows clients are logging in and Mac OS X Server 10.3 is used as a primary domain controller (PDC), authentication may stall.
This article has been archived and is no longer updated by Apple.
This mainly occurs when a large number of Windows users try to log in simultaneously, such as in a classroom environment.

Lookupd's default of 64 threads may not be high enough for large numbers of simultaneous Windows logins. To verify this is the issue, execute this command in Terminal when the logins are slow:

```
# top -l0 | grep lookupd
```

Tip: The three characters following "top" are minus, ell, and zero. Be sure to include all spaces as above. You can copy and paste into Terminal. The number sign (#) and first space represent the prompt in Terminal, so don't copy them.

While running, the above command will display data about the lookupd process that is updated every second. The number in the fifth column is the number of threads. If this is near 64, the number of threads needs to be increased. Press Control-C to stop the process.

To increase the number of threads, execute these commands in Terminal:

```
# sudo nicl . create /locations/lookupd MaxThreads 128
# sudo nicl . create /locations/lookupd MaxIdleThreads 4
# sudo killall -1 lookupd
```

Threads are created only when needed and killed when no longer needed. This change uses no additional system resources when the system isn't loaded.
Published Date: Oct 7, 2016

Mac OS X Server 10.3: Update software remotely using Server Admin

This article has been archived and is no longer updated by Apple.

In Mac OS X Server 10.3 and later, you can update software remotely using the Server Admin. This is an alternative to using the command line tool for remote updates.

Note: This method does not work with Mac OS X Server 10.4 or 10.4.1. In versions, use the "softwareupdate" command line tool instead. Once you have updated to Mac OS X Server 10.4.2 or later, you can install later updates using this method.

The Server Admin application offers the same function as Software Update preferences, but with the additional ability update your server remotely.

Follow these steps to update your server software using Server Admin.

1. Open Server Admin and connect to your server.
2. Under the Computers & Services column, click the server to be updated.
   Note: If you have not added your server to this list, please do so before trying this step.
3. At the bottom of the Server Admin window, click the Update button.
4. A Check Now button appears in the pane above the Update button. Click this button to see all available updates for your server software.
5. Once you see the list of available updates, select those you wish to install.
   Note: If no updates appear in this window, your software may be up-to-date, or you may not have Internet access.
6. After selecting the updates you wish to install, click the Install button.
7. While the software is downloading and installing, you will see percentage complete progress for each installation, along with the progress indicator.
8. When the Status of each package is "Installed," restart the server.

To learn more, see Getting Started with Mac OS X Server and How to Update Your Software.
Published Date: Oct 7, 2016

Network Image Utility: Can‘t make a NetBoot image from source larger than 2.5 GB

If you try to make a NetBoot image from a source disk image that contains more than 2.5 GB of data, your attempt will not succeed.

This article has been archived and is no longer updated by Apple.

Network Image Utility will report the creation was successful, but it really isn't. The Network Image Utility log, which can be seen by clicking the triangle in the bottom of the window, will show error messages.

This occurs with Mac OS X Server 10.3 or later.

To resolve the issue, follow these steps:

1. Double-click the image to mount it.
2. Select the mounted volume as the source in Network Image Utility.

Published Date: Oct 7, 2016

Mac OS X Server 10.3: How to enable NetBoot 1.0 for older NetBoot client computers

You can enable NetBoot 1.0 for older client computers by using the "nicl" command-line tool.
This article has been archived and is no longer updated by Apple.
If you want older computers such a tray-loading iMac or Power Macintosh G3 (Blue and White) to use NetBoot, you need to enable NetBoot 1.0. You may do this by using Terminal or NetInfo Manager.

Note: Apple does not provide free-of-charge technical support for this configuration. You may receive technical support with an appropriate support contract.

Using Terminal

To use Terminal, execute these commands:

```
sudo nicl . create /config/dhcp old_netboot_enabled port_list
sudo killall bootpd
```

Note: Replace "port_list" with the list of ports you want to enable, formatted like:

```
en0 en1 en2
```

Note: NetBoot 1.0 and 2.0 can run on the same network interface simultaneously.

Using NetInfo Manager

1. Navigate to /config/dhcp in NetInfo Manager.
2. Create a property named: old_netboot_enabled
3. Assign the values for the "port_list", or network adapters you wish to enable this property for.

Additional information

The "old_netboot_enabled" attribute enables NetBoot 1.0 (BOOTP-based) NetBoot on the specified list of interface. You can have only one server providing NetBoot 1.0 BootP addressing on a subnet. Leaving the "port_list" blank will enable this property on all ports.

To learn more about bootp, see the bootpd man page and the Mac OS X Server System Image Administration guide.
Published Date: Oct 7, 2016

Safari: Unable to download attachments from Hotmail

When you try to download an attachment from Hotmail, you are asked to sign in again.
This article has been archived and is no longer updated by Apple.
This happens when using:

- Mac OS X 10.2 or later
- Safari 1.0 or later
- MSN Hotmail

For Mac OS X 10.2 to 10.2.8, use another browser to download attachments, such as Internet Explorer.

For Mac OS X 10.3 or later, update to Mac OS X 10.3.4 or later.
Published Date: Oct 7, 2016

Safari may not work after an Archive and Install

If Safari won't work after you do an Archive and Install, follow the instructions below.
This article has been archived and is no longer updated by Apple.
When you try to open Safari after an Archive and Install, the Safari icon may bounce in the Dock and display the triangle that indicates activity, though no window appears.

This occurs when performing an Archive and Install of an older version of Mac OS X over a newer version. For example, you might Archive and Install Mac OS X 10.3.5 on a computer that, prior to the install, had Mac OS X 10.3.9. The best solution is to update to the same version of Mac OS X that you had before the Archive and Install, or a later version.

Published Date: Oct 7, 2016

iMac, Power Mac G4 Cube: Issues with Nortel Baystack switch

The Power Mac G4 Cube and some models of flat-panel iMac computers are unable to maintain a link with Nortel Baystack 5510-24T and -48T switches.

This article has been archived and is no longer updated by Apple.

Symptom

When data is sent to an affected computer connected to a Baystack switch:

- The link light on the switch intermittently blinks (as the link is dropped, then brought back up).
- Network performance is poor.
- The Macintosh system.log has many "Link is down" and "Link is up" entries.

Products affected

- iMac (15-inch Flat Panel) 700 MHz and 800 MHz
- iMac (17-inch Flat Panel) but not the "17-inch 1GHz" model
- Power Mac G4 Cube
- Nortel Baystack 5510-24T and 48T

Solution

Update the firmware of the affected switch to version 4.0.0 or later, available from the Nortel website.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Identifying AirPort hardware

This article has been archived and is no longer updated by Apple.

Not sure which AirPort, AirPort Extreme, or AirPort Express base station you have? Use the pictures to easily identify your AirPort products.

Product	Image
AirPort Extreme Base Station (802.11n) More details...	
AirPort Express More details...	
AirPort Extreme Base Station (PoE/UL 2043) More details...	
AirPort Extreme Base Station with modem More details...	
AirPort Extreme Base Station without modem More details...	
AirPort Base Station (Dual Ethernet) More details...	
AirPort Base Station (Graphite) More details...	
Power adapter for AirPort Extreme Base Station More details... Note: Base stations purchased outside the United States may include a different adapter.	
Power cord for AirPort Extreme Base Station Note: Base stations purchased outside the United States may include a different cord.	
Power adapter for AirPort Base Station (Dual Ethernet) More details... Note: Base stations purchased outside the United States may include a different adapter.	
Power adapter for AirPort Base Station (Graphite) More details... Note: Base stations purchased outside the United States may include a different adapter.	
AirPort Extreme Card More details...	

AirPort Card

More details...

AirPort Card Adapter

More details...

Published Date: Oct 7, 2016

WebObjects services do not start during system startup after using Applications Server Update 2.0

If you install the version of Applications Server Update 2.0 that was available prior to 18 March 2004 on Mac OS X Server 10.3.3, WebObjects 5.2.3 services do not start during system startup.
This article has been archived and is no longer updated by Apple.
Important: Users who are unfamiliar with command line interface and manual configuration in general should proceed with caution or preferably seek assistance. Assistance in setting up or creating Startup Items is not part of Apple's complimentary technical support for new products. Users interested in fee-based support for setting up and creating Startup Items or shell scripts should contact Apple Professional Services.

Symptom

WebObjects services (wotaskd and, optionally, JavaMonitor) normally start automatically during the operating system's startup process. But after installing Applications Server Update 2.0, WebObjects 5.2.3 services do not start. This will prevent deployed WebObjects applications managed by JavaMonitor from starting automatically and from being managed by JavaMonitor.

Notes:

1. WebObjects 5.2.3 Developer is not affected.
2. If you obtained Applications Server Update 2.0 on 18 March 2004 or later, you do not need to perform the solution.

Solution

Two files deleted from /System/Library/StartupItems/WebObjects by Applications Server Update 2.0 must be replaced. After doing so, WebObjects services will automatically start during system startup. Follow these steps:

1. Be sure you are logged in to the server with an administrator account.
2. Open Terminal, and execute these commands:

```
# cd ~
# mkdir WO523
# cd WO523
# pico StartupParameters.plist
```

3. Carefully copy the text below, and paste it into the pico editor in the Terminal window.

   Begin copying below this line.

```
{
  Description     = "WebObjects Services";
  Provides        = ("WebObjects Services");
  Requires        = ("Disks", "Network");
  OrderPreference = "Last";
  Messages =
  {
    start = "Starting WebObjects Services";
    stop  = "Stopping WebObjects Services";
  };
}
```

   End copying above this line.

4. Save the file (Control-O, Return), and exit pico (Control-X).
5. Execute this command in Terminal:

```
# pico WebObjects
```

6. Carefully copy the text below, and paste it into the pico editor in the Terminal window.

   Begin copying below this line.

```
#!/bin/sh
#
# Start and Stop WebObjects Services
#
```

```
. /etc/rc.common


WOSERVICE="/System/Library/WebObjects/JavaApplications/wotaskd.woa/\\
Contents/Resources/javawoservice.sh"

WOTASKD="/System/Library/WebObjects/JavaApplications/wotaskd.woa/wotaskd"
WOJAVAMONITOR="/System/Library/WebObjects/JavaApplications/\\
JavaMonitor.woa/JavaMonitor"

GREP=/usr/bin/grep
AWK=/usr/bin/awk
PS=/bin/ps

PRINTSTARTSTOPMESSAGES="YES"

##
# Start WebObjects services
# (Services to be stopped by this script must use "javawoservice.sh".)
##
StartService ()
{
    if [ -x "$WOSERVICE" ]; then

        if [ "$PRINTSTARTSTOPMESSAGES" = "YES" ]; then
            ConsoleMessage "Starting WebObjects services"
        fi

        if [ -e /var/log/webobjects.log ]; then
            mv /var/log/webobjects.log /var/log/webobjects.log.1
        fi

        ####
        # This set of invocations will launch wotaskd and
        # (optionally) Monitor as root.  This is less secure than
        # starting as 'appserver'

        "$WOSERVICE" -appPath "$WOTASKD" >/var/log/webobjects.log \\
2>&1 &

        # Uncomment the next line to start Monitor as root at boot time
        #"$WOSERVICE" -appPath "$WOJAVAMONITOR" -WOPort 56789 \\
        #-WOAutoOpenInBrowser NO >> /var/log/webobjects.log 2>&1 &
        ####

        ####
        # OSX Server now has the 'appserver' and 'appserveradm'
        # It is recommended that apps be started as the 'appserver'
        # instead of 'root'
        #
        #/usr/bin/su appserver -c "$WOSERVICE -appPath $WOTASKD" > \\
        #/var/log/webobjects.log 2>&1 &
        #
        #/usr/bin/su appserver -c "$WOSERVICE -appPath $WOJAVAMONITOR \\
        #-WOPort 56789 -WOAutoOpenInBrowser NO" >> \\
        #/var/log/webobjects.log 2>&1 &
        #
        ####

    fi
}

##
# Stop WebObjects Services
# (Stop all services run by "javawoservice.sh".)
##
StopService ()
{
    if [ "$PRINTSTARTSTOPMESSAGES" = "YES" ]; then
        ConsoleMessage "Stopping WebObjects services"
    fi

    WOSERVICEPIDS=`$PS -jaxwwwww | $GREP "$WOSERVICE" | \\
$GREP -v grep | $AWK '{print $2}'`

    parents=""
    children=""

    for parent in $WOSERVICEPIDS
    {
```

```
        WOSERVICECHILDPIDS=`$PS -jaxwwwww | \\
$AWK 'NF>3 {if ( $3 =='"$parent"' ) print $2}'`
        parents="$parents $parent"

        for child in $WOSERVICECHILDPIDS
        {
            children="$children $child"
        }

}

#kill them all at once
    kill $parents $children
}

##
# Restart WebObjects Services
##
RestartService ()
{
    ConsoleMessage "Restarting WebObjects services"

    PRINTSTARTSTOPMESSAGES="NO"

    StopService
    StartService
}

##
# Stop Process by PID
##
StopPID ()
{
    `kill "$1"`
}

RunService "$1"
```

End copying above this line.

7. Save the file (Control-O, Return), and exit pico (Control-X).
8. In Terminal, execute these commands. Note that the first use of sudo will prompt you for your administrator password.

```
# cd /System/Library/StartupItems/WebObjects
# sudo mv ~/WO523/StartupParameters.plist .
# sudo mv ~/WO523/WebObjects .
# sudo chown root:wheel StartupParameters.plist WebObjects
# sudo chmod 644 StartupParameters.plist
# sudo chmod 755 WebObjects
```

9. Test the validity of the WebObjects shell script with the following command. Fix any errors before proceeding.

```
# sh -n WebObjects
```

10. Execute this command to start WebObjects services:

```
# sudo SystemStarter start "WebObjects Services"
```

You were successful if the output contains "Starting WebObjects services" followed by "Startup complete."
Published Date: Oct 7, 2016

Xserve RAID: Third-party qualification information

By following the links provided below, you can learn more about third-party hardware and software products that have been tested by vendors for use with Xserve RAID.

This article has been archived and is no longer updated by Apple.

Fibre Channel Host Bus Adapters (HBA)

- Apple Fibre Channel Host Bus Adapter
- ATTO Technology, Inc.

Operating Systems

- Microsoft
- Novell NetWare
- Red Hat
- Yellow Dog Linux
- Novell SUSE

2 GB Fibre Channel Switches

- QLogic
- Brocade
- Emulex (Vixel)
- Cisco

Volume Management Solutions

- VERITAS

Fibre Channel Host Bus Adapters (HBA)

Apple Fibre Channel HBA

Operating System	Approved HBA
Mac OS X/Mac OS X Server 10.2.8, 10.3.2	Apple Fibre Channel HBA

ATTO Technologies, Inc.

Host	Operating System	Approved HBA
Xserve	Mac OS X Server 10.2.8, 10.3	ATTO Express PCI FC 3300 (Firmware 2.20)

TA21443_Xserve_RAID_Thirdparty_qualification_information.pdf

Operating Systems

Microsoft
Server configuration: 800 MHz and up with memory configurations ranging from 256MB to 4.5 GB

Operating System	Approved HBA	Approved Switch
Windows 2000 Server	QLogic	QLogic 5200
Windows 2000 Advanced Server	QLogic	QLogic 5200
Windows 2000 Professional	QLogic	QLogic 5200
Windows 2003 Server	QLogic	QLogic 5200

Novell NetWare

Operating System	Hardware RAID	Server	Approved HBA	Driver & Support Files
NetWare 6.5	Apple Xserve RAID; 501. GB; Firmware 1.3/1.20a; FibreChannel	Compaq ProLiant DL360 Pentium(r) III 933 MHz; Mobile Intel Pentium III-M 933 MHz ; BIOS Compaq 12/31/99; PCI-ISA; Memory 1024 MB	LSI Logic LSI_FC929X; PCI; BIOS 2.00.03; Channels 2; FibreChannel; Version 2.0, 2.1	Primary Driver File(s) LSIMPTNW.HAM (213987 bytes 12-Sep-2003 02:41 pm v3.04w)
NetWare 6	Apple Xserve RAID; 501. GB; Firmware 1.3/1.20a; FibreChannel	Compaq ProLiant DL360 Pentium(r) III 933 MHz; Mobile Intel Pentium III-M 933 MHz ; BIOS Compaq 12/31/99; PCI-ISA; Memory 1024 MB Dell PowerEdge 6350; PIII 550; BIOS 1.10 A12; 7 PCI; Memory 1024 MB	LSI Logic LSI_FC929X; PCI; BIOS 2.00.03; Channels 2; FibreChannel; Version 2.0, 2.1	SCSIHD.CDM (28306 bytes 09-Dec-2003 06:39 pm v3.02c)
NetWare 5.1	Apple Xserve RAID; 501. GB; Firmware 1.3/1.20a; FibreChannel	HP Proliant DL380 Xeon(r) 2.8GHz; BIOS - P29 07/25/2003; PCI-ISA 8661-11Y; Memory 2048 MB IBM Netfinity 5500; PII 400 MHz; M10); BIOS Phoenix ROM BIOS PL PLUS Version 1.10 A12 03/02/00; PCI-ISA; Memory 1024MB	LSI Logic LSI_FC929X; PCI; BIOS 2.00.03; Channels 2; FibreChannel; Version 2.0, 2.1	Driver Support File(s) LSIMPTNW.DDI (34938 bytes 12-Sep-2003 02:41 pm v3.04w)
NetWare 5.0	Apple Xserve RAID; 501. GB; Firmware 1.3/1.20a; FibreChannel	Compaq ProLiant DL360 Pentium(r) III 933 MHz; Mobile Intel Pentium III-M 933 MHz ; BIOS Compaq 12/31/99; PCI-ISA; Memory 1024 MB	LSI Logic LSI_FC929X; PCI; BIOS 2.00.03; Channels 2; FibreChannel; Version 2.0, 2.1	SCSIHD.DDI (29164 bytes 22-Oct-2003 02:52 pm v3.00)

Red Hat Linux

Server	Operating System
IBM x205	RHEL 2.1
IBM x205	RHEL 3

Yellow Dog Linux

Server	Operating System
Xserve	Yellow Dog Linux 3.0 and 3.0.1

Novell SUSE

Server	Operating System
HP	SUSE Linux Enterprise Server 9

2 GB Fibre Channel Switches

QLogic

Operating System	Approved HBA	Approved Switch
Microsoft Windows 2000 Server (Service Pack: SP3 or above)	QLA2340 QLA2342 QLA2344	SANbox2-8 SANbox2-16 SANbox2-64 SANbox 5200
Microsoft Windows 2003 Server	QLA2340 QLA2342 QLA2344	SANbox2-8 SANbox2-16 SANbox2-64 SANbox 5200
Linux	QLA2340 QLA2342 QLA2344	SANbox2-8 SANbox2-16 SANbox2-64 SANbox 5200
Solaris	QLA2340 QLA2342 QLA2344	SANbox2-8 SANbox2-16 SANbox2-64 S SANbox 5200

QLogic SANblade HBAs

Model	Windows Driver	BIOS
QLA2310 QLA234x	8.2.3.11 or above	1.33 or above

QLogic SANbox Switches

Model	Firmware Version	Management Software
SANbox 5000 series	4.0.6.02	4.00.10.00

Brocade

Fabric OS	Approved Switch
2.6.1 3.1.0 4.1.0	Silkworm 3200 Silkworm 3800 Silkworm 3900 Silkworm 12000

Emulex (Vixel)

Server	Operating System	Approved HBA	Approved Switch
Xserve	Mac OS X 10.3.2	LSI44929 Fibre Channel Utility V1.0	375 (Firmware Build 48)

Cisco

Server	Operating System	Approved HBA	Approved Switch
Xserve	Mac OS X 10.3.2	Apple Fibre Channel HBH	9509 9216
	Microsoft Windows 2000	QLA 2310	

Volume Management Solutions

VERITAS

Server	Operating System	Approved HBA	Approved Switch
Sun Netra 1125t	Solaris 8	Emulex LP 9202	Vixel 315

HBA

Model	Windows Driver	Firmware
Emulex L9002S	5.01e	1.31a5

Switch

Model	Firmware
Vixel 315	0315A00000B00A7001

Application

Application	Vendor	Version
VERITAS Foundation Suite	VERITAS	3.5/Patch: 112392-04

Operating System

Operating System	Version	Service Pack/Patch
Sun Solaris	8	108528-23/OBP: 3.17

For contact information about each of the vendors mentioned, look here.

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Published Date: Feb 20, 2012

Mac OS X, Mac OS X Server: 10.3.3 Update overwrites /etc/ttys file

If you have customized the file /etc/ttys, back it up before updating to 10.3.3 and restore it afterward. The 10.3.3 updates for Mac OS X and Mac OS X Server replace this file .

This article has been archived and is no longer updated by Apple.

If you updated without backing up the /etc/ttys file, these customized features don't work as expected:

- Login and/or logout hooks
- Secure console in single-user mode
- Customized communication speed on the Xserve's serial port

The change made to the /etc/ttys file for 10.3.3 is to set the communication speed on the Xserve's serial port to 56 kbit/s.

Published Date: Oct 7, 2016

Mac OS X 10.3.3: USB device, FireWire device, RAID card or SCSI card doesn‘t work after updating to 10.3.3

If a USB or FireWire device, RAID PCI card, or SCSI PCI card does not work after installing the 10.3.3 Update (on Mac OS X or Mac OS X Server), then you can resolve the issue by updating to 10.3.4.
This article has been archived and is no longer updated by Apple.
Symptoms you might see on an affected system include:

- External or internal SCSI devices that are not recognized.
- USB or FireWire disks (or devices with file systems) do not mount.
- If the startup volume is on a SCSI drive, the computer may stop responding ("hang") during startup.
- Apple System Profiler may recognize some devices that are not recognized elsewhere in the system.

If the affected computer can start up, update to Mac OS X or Mac OS X Server 10.3.4.

If the the computer won't start up, try using Safe Mode to update to 10.3.4. If it still won't start, these are some tips you can follow.
Published Date: Oct 7, 2016

Xserve RAID Admin 1.3: Documentation for v1.2 also applies to v1.3

Xserve RAID Admin 1.2 documentation also applies to Xserve RAID Admin 1.3.
This article has been archived and is no longer updated by Apple.
Documentation available for Xserve RAID Admin 1.2 continues to apply to Xserve RAID Admin 1.3, which was released to fix a number of issues and improve overall reliability.

For PDF manuals, see the Apple Server Documentation webpage.
Published Date: Feb 19, 2012

Mac OS X Server 10.3: Creating an HTTP network install image

Network Image Utility in Mac OS X Server 10.3 can't create an install image for delivery over HTTP, but you can do it using this workaround.
This article has been archived and is no longer updated by Apple.
If you must install over HTTP, follow these steps to prepare an image:

1. Make sure the image is smaller than 2 GB. If necessary, use Disk Utility to compress it.
2. Use a text editor to open the file NBImageInfo.plist (inside the image's .nbi folder) and change the value of the "Type" key from "NFS" to "HTTP."
3. Open Server Admin, select NetBoot, click Settings, and check in the General pane to make sure the volume containing the image is enabled for storing images.
4. In the Image pane, disable and re-enable the image.
5. Select Web in the Computers & Services list, click Settings, then click Sites.
6. Double-click the default site that supports NetBoot (Library/WebServer/Documents), click Options, and deselect Performance Cache.
7. NetInstall the client.

This information appears in Late Breaking News, available from the Help Center in Mac OS X Server.
Published Date: Oct 7, 2016

AirPort for Mac OS X 10.3 or later: Using different types of wireless security (WEP and WPA)

Wireless networks may use one of several common security schemes, such as Wired Equivalent Privacy (WEP) and Wi-Fi Protected Access (WPA). Mac OS X 10.3 or later automatically recognizes which type of Wi-Fi security is being used and gives you the correct prompt.
This article has been archived and is no longer updated by Apple.
WPA is a very secure encryption method that is now preferred for **computers that can use it**. WEP is an older encryption method that is less secure, but it is useful if your network has systems that are not WPA capable.

Mac OS X 10.3 or later automatically recognizes if the network you are joining uses WEP or WPA, and it gives you the correct prompt. This is the one you see for WEP:

If you join a WPA network, Mac OS X 10.3 or later shows you this prompt:

In addition to being much more secure, WPA is also easier to use. WPA works best in Mac OS X 10.3.3 or later with AirPort software 3.3 or later.

There are two ways to set up WPA, Personal and Enterprise. WPA Personal is easier to set up if you have a small network, such as in your home. You would set it up using AirPort Admin Utility, much as you may have for WEP in the past.

For a school or business, WPA Enterprise can provide each user with unique credentials. WPA Enterprise uses the same security as WPA Personal, but with the added measure of individual usernames and passwords (WPA Personal uses a shared password). Each wireless base station communicates with a RADIUS server to authenticate the user's credentials. When joining a WPA Enterprise network, Mac OS X 10.3 or later would give you this prompt that includes username and password:

The basis of WPA Enterprise is 802.1X, which can be used with either wired or wireless networks. It requires more extensive knowledge to set up than WPA, which is advertised by the wireless access point. If you encounter the older "802.1X Authentication" method, the user will be prompted with a WEP password dialog box. The 802.1x Authentication method is not recommended, because it uses a static key and is less secure. You may need the help of a network administrator to join an 802.1x network.
Published Date: Oct 7, 2016

About the Mac OS X Server 10.3.4 Update

This software updates Mac OS X Server version 10.3.3 to version 10.3.4.
This article has been archived and is no longer updated by Apple.

Important: Read Before Installing

1. An administrator account password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, follow these steps: Choose System Preferences from the Apple menu. Choose Accounts from the View menu. Select an Admin account and click Edit User. Type your current password, and press Return. Change the password, and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.

4. This update can be installed on non-startup volumes, but that should be done **only** when the current startup volume has already been updated to Mac OS X Server 10.3.4. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are two ways to update to Mac OS X Server 10.3.4: Software Update and Standalone Installer.

Software Update Installation

You may have been referred to this document by Software Update. For more information on this feature, see How to Update Your Software.

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

An installer is also available from Apple Featured Software.

The Mac OS X Server 10.3.4 Update is specifically for updating version 10.3.3. There is also a "combo" installer available, which will update version 10.3, 10.3.1, 10.3.2, or 10.3.3.

Remote Installation

If you need to install the update on a remotely located computer, you can do so using either the Server Admin application or the "softwareupdate" command-line tool. Choose the method that works best for you.

Enhancements

These are some of the enhancements that are part of Mac OS X 10.3.4 Server Update:

Open Directory (Directory Services)

- Password Server: Addresses issue in which Password Server replicas have incomplete databases and use 100% of the CPU time, causing the server to operate slowly. The affected Password Server Replication log file displays the message "DoSyncWithServer: error = -14090."
- Passwords: Addresses an issue in which inclusion of the dollar sign ($)in the password of the the primary administrator (UID 501) results in unexpected server behavior. Reported symptoms include Password Server not starting, unreliable LDAP services, and the inability to log in at the Login
- LDAP: Addresses issue in which Open Directory client computers will not rebind to an LDAP master after waking from sleep. This issue may also prevent the network users list from appearing on the client computer.
- LDAP: The LDAP server has been enhanced to allow more client connections. This improves server performance by allowing more than 250 client connections and reducing the total CPU usage. Note: The maximum number of client connections is approximately 1000.
- Active Directory Plug-in: Addresses an issue in which attributes/values may be lost if when modified by the Workgroup Manager Inspector, particularly when administrators attempt to change values for attributes that have "multiple" values (all of the old values may be deleted while keeping the new value intact).

- Active Directory Plug-in: Addresses an issue in which clients fail to bind to the directory master when computer is in a domain separate from the user. For example: If all users are members of the top-level domain, and all computers are in a domain lower in the hierarchy, users attempting to bind the computer to the top-level domain will not succeed.
- Addresses an issue in which accounts with a period in the UPN (User Principal Name) may not be able to log in.
- Active Directory Plug-in: Enhances client-server interaction by requiring clients to only read group information for each user as on-demand, reducing network-server bandwidth usage by each client.
- Directory Services: Improves performance of Directory Services (DirectoryS process) by reducing the total CPU usage for servers with significant uptime.

Network Services

- DNS: Enhances DNS code to deal with large network infrastructures (more than 10 DNS servers). This enhancement should improve experience when performing activities such as web browsing, Active Directory integration, and connections to Microsoft Exchange servers in this type of networking environment.

File Services

- NFS: Resolves a situation in which you have issues while trying to search NFS reshared volumes mounted at a client. (The search never finishes in Mac OS X and Sherlock; Mac OS 9 says the volume was modified by another process and to try again.)
- AFP/NFS: Addresses an issue that causes the message "unexpected problems occurred" when executing a Sherlock search for a file or folder on an AFP reshared volume which has originally been exported using NFS (such as from Linux, NetApp, or Solaris).

System Imaging (NetBoot/Network Install)

- Network Image Utility: Addresses an issue in which more than one package added to a Network Install image will not install on the targeted client computers.

User Management (Managed Client)

- Addresses an issue in which the Login Window will not display the list of users when local users or administrators are not enabled for clients.

Mail Service

- Mailman: Addresses an issue in which mailman lists no longer accept new mail after using the repair permissions feature of Disk Utility on the server's startup disk.

Web Services

- Site Administration: Addresses an issue in which no sites can be created on a server that had no defined websites at the time of being upgraded from 10.2 to 10.3. The resultingmessage is "Uncaught exception raised in Web client-side plugin."
- Configuration Files: Multiple RegisterResource directives may now be manually added to the httpd.conf file without being overwritten by Server Admin activities.

Server Administration Tools

- Server Admin Application: Software Update pane GUI has been enhanced to display software updates flagged as requiring "Reboot". This may allow you to better plan your updates during off-hours, for example.

Disk Utility

- Addresses an issue in which Disk Utility will not open on a client computer started up from a NetInstall image that was created from a configured volume (rather than a CD/DVD).

Other

- Addresses issue in which some USB-, Firewire-, SCSI-, and PCI RAID card-connected devices may not mount after applying the Mac OS X 10.3.3 Software Update. See document 107914.

Published Date: Oct 7, 2016

About the Mac OS X Server 10.3.4 Update (Combo)

This software updates Mac OS X Server version 10.3, 10.3.1, 10.3.2, or 10.3.3 to version 10.3.4. It is a "combo" update that combines enhancements delivered with versions 10.3.1 through 10.3.4. If you already have Mac OS X Server 10.3.3, you may download a smaller update that is not a combo.
This article has been archived and is no longer updated by Apple.

Important: Read Before Installing

1. An administrator account password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, then follow these steps: Choose System Preferences from the Apple menu. Choose Accounts from the View menu. Select an Admin account and click Edit User. Type your current password, and press Return. Change the password, and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.

4. This update can be installed on non-startup volumes, but that should be done **only** when the current startup volume has already been updated to Mac OS X Server 10.3.4. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

5. If you are updating from 10.3.2 or earlier and use a MySQL database, you must back it up prior to upgrade. See the Additional Information for MySQL section, below.

6. If you are updating from 10.3.2 or earlier and have set up a loginhook, a custom serial port configuration, or have edited the "/etc/ttys" file for other reasons, you will need to back it up prior to installation of this update.This is because a 10.3.3 or later update overwrites the file with a new copy when updating from 10.3.2 or earlier. The new file will set the Xserve's serial port to communicate at 56Kbps. If your serial device cannot communicate at this speed, you must edit this file to reduce the speed.

Installation

There are two ways to update to Mac OS X Server 10.3.4: Software Update and Standalone Installer.

Software Update Installation

You may have been referred to this document by Software Update. For more information on this feature, see How to Update Your Software.

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

An installer is also available from Apple Featured Software.

Mac OS X Server 10.3.4 Update (Combo) updates Mac OS X Server 10.3, 10.3.1, 10.3.2, or 10.3.3 to the later version.

Remote Installation

If you need to install the update on a remotely located computer, you can do so using either the Server Admin application or the "softwareupdate" command-line tool. Choose the method that works best for you.

Enhancements Delivered with this update

Many enhancements are delivered with this update. Because this is a combo update, it includes those delivered with Mac OS X Server versions 10.3.1, 10.3.2, 10.3.3, and 10.3.4.

Additional Information for MySQL

Data stored in MySQL databases with the version of MySQL that is pre-installed Mac OS X Server 10.3.2 or earlier must be exported and re-imported in order to be compatible with version of MySQL that is pre-installed on Mac OS X Server 10.3.3 or later, in which a byte-ordering issue is fixed.

As with any upgrade install, you should back up your old data. In this particular upgrade, the following process is recommended to convert the data to the correct byte ordering:

Before the upgrade, use the terminal to export the data from your pre-10.3.3 database:

```
#  mysqldump -p table > backup-file.sql
```

or

```
#  mysqldump  --opt database > backup-file.sql
```

After the upgrade, and after initializing the MySQL database, import the data:

```
#  mysql -p table < backup-file.sql
```

or

```
#  mysql  database < backup-file.sql
```

Published Date: Oct 7, 2016

AirPort Management Utility 1.0: Cannot change the "Serve DHCP" or "Provide NAT" settings

AirPort Management Utility (AMU) allows you to update base stations en masse. Due to the nature of DHCP and NAT settings, accidentally changing them across a network of base stations could result in a dysfunctional network.
This article has been archived and is no longer updated by Apple.
To prevent that from happening, AMU intentionally disallows modification of these settings. It will, however, report status of these settings.

When you need to change Serve DHCP and Provide NAT settings, use AirPort Admin Utility to do so on an individual basis.

Note: AirPort Management Utility 1.0 may be found on the software CD included with the AirPort Extreme Base Station (PoE/UL 2043).
Published Date: Oct 7, 2016

Final Cut Pro HD: Projects will not open in earlier versions of Final Cut Pro

Earlier versions of Final Cut Pro cannot open Final Cut Pro HD projects. If you attempt it, you get this message:

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"Unable to read file. It appears to have been corrupted."

The project file isn't really corrupted. The older version of the program simply can't understand its new format.

Published Date: Feb 20, 2012

What‘s new in Final Cut Pro HD?

High Definition Video:

This article has been archived and is no longer updated by Apple.

Capturing, editing, and output of DVCPRO HD high definition video Final Cut Pro HD natively supports DVCPRO HD media.

You can capture, edit, and output DVCPRO HD video using the built-in FireWire port on a qualified Power Mac without any additional specialized equipment.

Editing:

Copying and pasting clips follows track selection in the Timeline.

Final Cut Pro HD performs copying and pasting in the Timeline differently than Final Cut Pro 4.1 and earlier. When you copy clips from tracks in the Timeline, Final Cut Pro pastes those clips in the same tracks unless you specify different destination tracks by clicking their Auto Select controls.

For a full description, see the complete PDF version of this document and Final Cut Pro HD Late-Breaking Features.

Published Date: Feb 20, 2012

Late-Breaking Features in Final Cut Pro HD

This document contains late-breaking information about Final Cut Pro HD. For the latest information about product updates, tips and techniques, and qualified third-party devices, visit the Final Cut Pro website (http://www.apple.com/finalcutpro/).

This article has been archived and is no longer updated by Apple.

High Definition Video Support

720p High Definition Video Support Final Cut Pro HD includes support for 720p high definition video, including both uncompressed and DVCPRO HD formats. For more information about high definition video, see New Features in Final Cut Pro HD .

Editing and Trimming

New Menu Commands and Buttons for Trim Edit Window Options Preferences for listening to audio in the Trim Edit window have corresponding menu commands and buttons in the Button List:

Preference	Description	Shortcut key
Dynamic Trimming	Turns dynamic trimming on and off in the Trim Edit window.	Shift-Command-D
Trim with Sequence Audio	Allows you to listen to all sequence audio tracks while trimming in the Trim Edit window.	Command-Option-A
Trim with Edit Selection Audio (Mute Others)	Mutes all audio tracks except the ones currently selected in the Timeline.	Command-Option-Z

Capture and Output

Edit to Tape Can Output DVCPRO HD Sequence Timecode When outputting with Edit to Tape using DVCPRO HD via FireWire, you can choose to use the existing tape timecode or the sequence timecode. This means you can control the timecode written to tape during output. If you choose this option, sequence and output tape timecode match.

Note: This option is available for assemble edits only, which is currently the only choice available when outputting all types of DV media to tape.

Media Management

Media Manager Provides New Master Clip Options A new checkbox labeled "Include master clips outside selection" allows you to:

- More effectively trim media when generating a new project (by specifically choosing not to include master clips outside the current Browser selection to be processed by the Media Manager).
- Control when master clips are created by media manager operations.

Timecode

Logging Without a Device Connected Supports All Timecode Formats When logging in the Log and Capture window, you can now log clips in any supported timecode format without a device connected. The frame rate of the currently selected device control preset determines the timecode rate choices in the timecode fields in the Log and Capture window.

Note: You can now easily choose between DF and NDF timecode while logging without a DV deck connected.

Important: Changes made to the currently selected device control preset may not be reflected in the Log and Capture window until you close and reopen it, or switch to another preset and back to the one you modified.

Preferences

Choosing Whether the Last Previously Opened Project Opens When Final Cut Pro Launches By default, Final Cut Pro opens the last previously open project file when relaunched. You can now select whether Final Cut Pro launches with the last open project, or an empty project.

To start with a default, empty project instead of the last previously open project file: In the General tab of the User Preferences window, deselect the "Open last project on application launch" checkbox.

Interface

Command-M Keyboard Shortcut for Minimize Window Command Pressing Command-M, the default OS X keyboard shortcut, minimizes the active window in Final Cut Pro.

External Monitoring

Digital Cinema Desktop Option for Presenting Full-screen Video Monitoring on the Main Computer Display In addition to viewing Canvas or Viewer video on a second computer display connected to your computer, you can now present video on the main display.

Note: The main computer display is the display that normally shows the menu bar for applications.

This feature is particularly useful for systems with a single computer display (such as PowerBooks and high definition video editing systems with a single Cinema Display). Regardless of how many monitors you have connected, you can always choose to monitor on the main display.

Video presented on the main display is always shown in full-screen mode. In full-screen mode, the video is scaled to fit the display in at least one dimension. If the aspect ratio of the video signal and the computer display do not match, the video on the display is letterboxed (black on top and bottom) or pillarboxed (black on sides) as necessary. This is identical to full-screen mode on a second monitor. For more information about monitoring on a computer display, see New Features in Final Cut Pro HD .

To view Final Cut Pro video output on the main computer display
connected to your computer:

1. Choose Final Cut Pro > A/V Settings.
2. Click the A/V Devices tab.
3. Choose the Desktop Cinema Display - Full Screen [Main] option from the Playback Output Video pop-up menu.
4. Choose View > External > All Frames or press Command-F12.

Tip: Regular editing commands still work when full-screen video is presented on the main display. This means you can still mark In and Out points, use JKL-playback, and so on. For a list of shortcut keys, choose Tools > Keyboard Layout > Customize or see the Final Cut Pro HD Quick Reference.

Important: Command-F12 is the default shortcut key for turning external video monitoring on and off. When full-screen video is presented on the main display, the menu bar cannot be seen, so it is important to learn the shortcut key.

To turn off full-screen video presented on the main display: Press Command-F12 or press the Escape key.

External Monitoring on a Computer Display Ignores Latency Setting Directly monitoring video on a computer display does not introduce video latency. Therefore, Final Cut Pro ignores the frame delay offset setting when you monitor your video on a computer display (as opposed to an output that has inherent video latency, such as FireWire DV or a third-party video card).

For more information about latency when using an external monitor, see "External Audio and Video Monitoring" in New Features in Final Cut Pro HD

Published Date: Oct 7, 2016

Late-Breaking Issues in Final Cut Pro HD

This document contains late-breaking information about Final Cut Pro HD. For the latest information about product updates, tips and techniques, and qualified third-party devices, visit the Final Cut Pro website (http://www.apple.com/finalcutpro/).

This article has been archived and is no longer updated by Apple.

Editing

Previous and Next Keyframe Commands Follow Auto-Selected Tracks In the Timeline, navigating to the previous or next keyframe now follows the currently auto-selected tracks.

Capture and Output

"Disk Full" Error Message Final Cut Pro preallocates disk space just prior to capturing media. Final Cut Pro HD has a higher minimum disk space threshold to prevent some cases of the "Disk Full" error message.

For best performance, use a non-boot disk for capture, render, and final output to tape.

For most situations, it's best to select journaling for your system boot disk. For your scratch disk (which is ideally a non-boot disk), you may choose to select journaling or not depending on the level of media integrity you require. Of course, all of your media is critical to your project, but some media files are easier to recapture than others. For example, media captured from tape can always be captured again (assuming proper timecode exists on the tape and in the clip).

What Is Journaling? Journaling is a technique that helps protect the integrity of the Mac OS Extended file systems on Mac OS X volumes. It both prevents a disk from getting into an inconsistent state and expedites disk repair if the server fails.

When you enable journaling on a disk, a continuous record of changes to files on the disk is maintained in the journal. If your computer stops because of a power failure or some other issue, the journal is used to restore the disk to a known-good state when the server restarts.

For more information about journaling, see the AppleCare article at http://docs.info.apple.com/article.html?artnum=107249.

Timecode

Batch Lists Always Export Clips Using Native Timecode Display Format All timecode columns in batch lists always export in their native timecode display format.

Note: This change restricts exporting batch lists with alternative time displays such as frame display mode.

EDL Timecode Support

The following sequence rates are supported for EDL export:

Timebase (frame rate)	Timecode rate
29.97, 30 fps	30
25 fps	25
24 fps	24 @ 25
23.98, 24 fps	24

Note: Final Cut Pro always uses the source timecode of the sequence.

Timecode Fields in the Time Remap Parameter in the Motion Tab in the Viewer When adjusting time remap (speed) parameters in the Motion Tab in the Viewer, the following timecode fields have the following options:

- Duration: Always shows clip time mode (as opposed to source time and View Native Speed is always deselected.
- Source Duration: Always shows clip time mode (as opposed to source time) and View Native Speed is always selected.
- Time: Shows the timecode of the current sequence.
- Source Frame: Always shows time with View Native Speed selected.

Note: To experiment with the time remap timecode fields, try using a sequence clip instead of a Browser clip.

Tutorials

Documentation for the Final Cut Pro tutorials is available on the Final Cut Pro HD installer DVD, in /Extras/Final Cut Pro Tutorial.

Published Date: Feb 20, 2012

Compressor 1.2: Late-Breaking News

This document contains important late-breaking information about Compressor. Choose Help > New Features when using Compressor to get information on the new features added in Compressor 1.2. For the latest information about product updates, tips and techniques, and qualified third-party devices, visit the Compressor website at http://www.apple.com/finalcutpro/compressor.html.

This article has been archived and is no longer updated by Apple.

Read the following points for compatibility information about Compressor 1.2.

- Compressor 1.2 is strongly recommended for all users of any previous Compressor versions.
- Compressor 1.2 requires Mac OS X version 10.3.
- Final Cut Pro must be updated to version 4.1 for its Export Using Compressor feature to work with Compressor 1.2.
- Because Shake Qmaster and Compressor share the same Batch Monitor feature when both are installed on the same computer, you must update Shake Qmaster to version 1. 2 when you update Compressor to version 1.2. You can update Shake Qmaster using Software Update.

New Presets Included

Compressor 1.2 includes new presets designed to be used with high definition (HD) sources and with the new MPEG-1 encoder.

The new presets are automatically available in new Compressor 1.2 installations. If you are updating an earlier version of Compressor, you must remove the existing presets before Compressor will update to the new ones.

To update the presets of an earlier version of Compressor:

1. Quit Compressor.
2. Update to Compressor 1.2.
3. Locate the folder containing the current presets. It is in your home folder at /Library/Application Support/Compressor. You must remove all of the presets in this folder or Compressor will not replace them with the updated versions.
4. Copy any custom presets you want to save to a different folder or to your desktop. These include those presets you have created as well as presets included with Compressor that you have customized.
5. Delete all existing presets (all files and folders) from the /Library/Application Support/ Compressor folder.
6. Open Compressor. The new presets are added to the /Library/Application Support/Compressor folder.
7. Copy the custom presets you saved back into the /Library/Application Support/ Compressor folder.
8. To make these custom presets available to the updated version of Compressor, quit and reopen Compressor.

Incorrect Preset Names Appear for Source Media Files Dragged From the History Drawer

If you drag a submitted job from the History drawer to the Batch table for resubmission, the Preset column displays the output filename of the media file as well as the preset name. This applies to presets for all encoders, but it has no impact on the resulting output media file.

Media File Codecs May Be Unrecognized When Working With Third-Party Codecs

Compressor supports any of the QuickTime codecs. However, if you attempt to transcode a file whose codec is not installed, you may see strange drawing behavior throughout the application. Typically, parts of your monitor are drawn in black, and movies don't appear in the Preview window. Make sure you have the proper codec installed for your source media file.

To see which codec was used to create your source media file:

1. Open your source media file in QuickTime Player.
2. Choose Window > Show Movie Info.
3. Click the More Info disclosure triangle and view the Format line. The Format line displays the codec name as well as the original frame size and depth format. Once you see which codec is used by your source media file, you can check to see if Compressor will recognize it.

To see whether Compressor will recognize your source media file's codec:

1. Open Compressor.
2. Either select an existing QuickTime preset or create a QuickTime preset.
3. Click the Video Settings button in the QuickTime Encoder pane to open the Compression Settings dialog.
4. Open the Codec pop-up menu at the top of the dialog and view the codecs listed. If you don't see your source media file's codec listed, Compressor will not recognize your source media file.

Some Final Cut Pro Output Media Files Are Saved to the Root Boot Partition

If you are using Compressor to transcode a Final Cut Pro project and you choose Source as your destination, your resulting file(s) are saved to the root boot partition of your computer rather than to the source location.

Important Information Regarding MPEG-2 Files Generated by Compressor and DVD Studio Pro

Timecode
DVD Studio Pro 1.5.2 doesn't recognize imported MPEG-2 files generated from Compressor when the timecode wraps in the following way for the following broadcast formats:

- NTSC: From 23:59:59:29 to 00:00:00:00
- PAL: From 23:59:59:24 to 00:00:00:00
- 24P: From 23:59:59:23 to 00:00:00:00

If your source media file is of a duration that you know will cause a timecode wrap to 00:00:00:00 and you intend to export the MPEG-2 output media file to DVD Studio Pro 1.5.2, select the "Choose start timecode" checkbox in the MPEG-2 Encoder Video Format pane in the Presets window, and enter the timecode 00:00:00:00 in the related "Choose start timecode" field.

To view Final Cut Pro video output on the main computer display connected to your computer:

1. Choose Final Cut Pro > A/V Settings.
2. Click the A/V Devices tab.
3. Choose the Desktop Cinema Display - Full Screen [Main] option from the Playback Output Video pop-up menu.
4. Choose View > External > All Frames or press Command-F12.

Chapter Markers
Chapter markers set in Final Cut Pro and transcoded in Compressor, or set directly in Compressor, will not be present in the imported MPEG-2 data in versions earlier than DVD Studio Pro 2. However, I-frames will be set where chapter markers were named. If you are using a version earlier than DVD Studio Pro 2, you have several options.

Final Cut Pro native projects
You have the following options for Final Cut Pro native projects:

- Export QuickTime Movie: To preserve chapter markers, choose File > Export > QuickTime Export, and choose Compression Markers from the pop-up menu. You will not get the high quality and encoding options that Compressor provides, but you will keep your chapter markers.
- Export Using Compressor: If quality and encoder controls are important to your project, choose File > Export > Using Compressor to export your MPEG-2 media file. If you are using a version earlier than DVD Studio Pro 2, you can manually set the chapter markers directly in DVD Studio Pro.

Compressor native projects
You can set chapter markers using the Compressor Preview window, but they will not be preserved when exported to versions earlier than DVD Studio Pro 2. I-frames will be preserved. If you are using a version prior to DVD Studio Pro 2, you can manually set the chapter markers directly in DVD Studio Pro.

- Add DVD Studio Pro meta-data checkbox: Selecting this checkbox allows Compressor to parse specific MPEG-2 authoring information during the transcoding process to accelerate the import process into DVD Studio Pro 2. However, these MPEG-2 files will be incompatible

with DVD Studio Pro 1.5 or earlier. Leaving the checkbox unselected means the information will be parsed later in DVD Studio Pro.

Note: MPEG-2 streams with additional DVD Studio Pro meta-data are only compatible with DVD Studio Pro 2 (or later). MPEG-2 streams processed with this checkbox selected will not be compatible with versions prior to DVD Studio Pro 2.

MPEG-2 Automatic Field Dominance Ordering Inconsistent If you are using the Automatic Field Dominance setting in the MPEG-2 Video Format pane, the auto-detection mechanism sometimes picks the wrong field order (top or bottom). Auto-detection chooses the correct field order when the source media file is using the DV codec, but with many other codecs it chooses the wrong field order (all of the Compressor default MPEG-2 settings use Automatic Field Dominance).

To correct this inconsistency, create a new preset or duplicate an existing one, and set the field dominance to either "Top first" or "Bottom first" (rather than Automatic) to correspond to the field dominance of the source media file you want to transcode.

Transcoding With Compressor in Final Cut Pro When you submit a Final Cut Pro project for transcoding, Final Cut Pro begins to render and transcode frames via Compressor. You have the option to pause or cancel this process in Final Cut Pro. The recommended method for pausing a Final Cut Pro to Compressor job is to use the Stop button in the Batch Monitor toolbar. The recommended method for stopping a Final Cut Pro to Compressor job is to use the Delete button in the Batch Monitor toolbar.

Published Date: Oct 7, 2016

Encoding video incompatibility with Power Mac G5 dual-processor

Compressor can appear to stop responding ("crash" or "hang") while encoding video on a dual-processor Power Mac G5.

This article has been archived and is no longer updated by Apple.

Symptom

- The progress indicator stops, and estimated time remaining begins to go up.
- Compressor unexpectedly quits.
- The computer stops responding ("freezes") and must be restarted.

Products affected

This only happens when using this combination of products:

- Power Mac G5 dual-processor system with Mac OS X 10.3.3 or earlier and one or more of the following:
  - Compressor 1.2
  - DVD Studio Pro 2.0.5
  - iDVD 4.0 to 4.0.1

Solution

Update to Mac OS X 10.3.4 or later.

Published Date: Oct 7, 2016

AirPort 3.4: "Error joining the selected Airport network"

Sometimes when you try to join a visible AirPort network, you may see this message:

"There was an error joining the selected AirPort network."

This message can occur due to several different scenarios. AirPort 3.4 software provides a solution for one possible cause of the issue. To **update** to AirPort 3.4 software, you must have Mac OS X 10.3.
This article has been archived and is no longer updated by Apple.
If you see the message after updating to AirPort 3.4, try these steps:

1. Dismiss the message after it appears.
2. Press and hold the Control key.
3. While holding it, reselect the network from the AirPort menu.

This causes AirPort to use an alternate connection method that may succeed. If it does not, try general **Airport troubleshooting**.

Additional information

The alternate connection method addresses a scenario in which the wireless network is not Wi-Fi compliant. The issue occurs when a Wi-Fi compliant 802.11g client tries to communicate at speeds that the non-compliant network does not support. The steps above will force the AirPort Extreme (802.11g) card to communicate in 802.11b mode, which may allow access to the non-compliant network.

When the issue occurs, the Console log may contain a message such as "WirelessJoin unexpected status: 4".

Administrators of non-compliant networks might consider updating their wireless hardware to allow better access for 802.11g clients. A firmware update often resolves the issue.
Published Date: Oct 7, 2016

AirPort Management Utility 1.0: Noise level is not updated for some monitored clients

AirPort Management Utility lets you see the signal strength between a base station that you are monitoring and each client that is associated with it.

You may notice that the graph's measurement of noise levels remains constant for some clients. It's because some wireless clients, such as the older AirPort Card (802.11b), do not report their updated level.
This article has been archived and is no longer updated by Apple.
This document will be updated as more information becomes available.

Note: AirPort Management Utility 1.0 may be found on the software CD included with the AirPort Extreme Base Station (PoE/UL 2043).
Published Date: Oct 7, 2016

AirPort Management Utility 1.0: No graph when monitoring some 10.2 clients

AirPort Management Utility lets you see the signal strength between a base station that you are monitoring and each client that is associated with it. If you are monitoring Mac OS X 10.2 clients, graphs may not appear for some of them, though their MAC addresses may be listed.

This article has been archived and is no longer updated by Apple.
This document will be updated as more information becomes available.

Note: AirPort Management Utility 1.0 may be found on the software CD included with the AirPort Extreme Base Station (PoE/UL 2043).
Published Date: Oct 7, 2016

What to do if you can‘t drag multiple photos in iPhoto

If you've disabled or removed the font Helvetica, you won't be able to drag a selection of photos in the Organize pane, though you can still drag a single photo.

This article has been archived and is no longer updated by Apple.

To drag multiple photos, enable and/or replace the Helvetica font.

Published Date: Oct 7, 2016

You hear a pop or gap during a title or transition in iMovie

After applying a title or transition, you may sometimes hear a pop or brief period of silence between the transition and the next clip.

This article has been archived and is no longer updated by Apple.

This can happen when using iMovie versions 3, 4, and 5.

If you experience this, try extracting the audio from your video clip to a separate track before applying the title or transition. Follow these steps:

1. Select the affected clip.
2. To undo the title or transition you have added: From the **Edit** menu select **Undo**, or from the **Advanced** menu select **Restore Clip**.
3. Select the video clip in the timeline.
4. From the **Advanced** menu, select **Extract audio**. The audio for the selected clip will be moved to its own audio track in the timeline.
5. Add your transition or effect.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

AirPort Management Utility 1.0: What‘s the meaning of my base station status?

AirPort Management Utility (AMU) reports the status of a list of known base stations. There are three common status messages: Unknown, Normal, and Offline.

This article has been archived and is no longer updated by Apple.

Unknown

Normally, this only appears for a few seconds while the application gets the status information from the base station.

Normal

If the base station can be reached via TCP/IP, it is queried for name, contact, and description. "Normal" appears if the queried values are returned correctly.

Offline

This means the base station cannot be reached at the specified IP address.

Published Date: Oct 7, 2016

Final Cut Pro HD: Checking saturation leads to a black screen in the Waveform Monitor

HD material isn't stored or transmitted as a composite signal, so it's not possible to view saturation data separately in the Waveform Monitor. If you select Saturation from the shortcut menu, the monitor goes black.

This article has been archived and is no longer updated by Apple.

To restore the Waveform Monitor, Control-click in the window and deselect Saturation.

Published Date: Feb 20, 2012

AirPort Management Utility 1.0: Adjusting the SNMP scan settings

AirPort Management Utility uses SNMP to check the status of Apple base stations on the network. You can adjust the scan interval with the defaults command, which takes this form:
This article has been archived and is no longer updated by Apple.

```
defaults write com.apple.airport.managementutility
```

For example:

```
defaults write com.apple.airport.managementutility logTimeInterval 2
```

Property	Default Value	Description
logTimeInterval	1	The number of seconds to wait between retrieving saved syslog messages from a base station when the Log panel is active.
monitorTimeInterval	5	The number of seconds to wait between each SNMP query when the Monitor panel is active.
statusCheckLimit	5	The number of times to attempt to retrieve status from a base station. On a slow or busy network, this value can be increased to make the application try more often to get status from remote base stations.
statusCheckInterval	30	The number of seconds to wait between polling for base station status. The program periodically polls all the base stations it knows about in order to maintain accurate status. If you're less concerned with this and have a large number of base stations, you might want to increase this number to reduce the amount of polling.

Published Date: Oct 7, 2016

AppleWorks unexpectedly quits if you leave the Find/Change window open

AppleWorks 6 for Mac OS X may unexpectedly quit if this sequence of events occurs:

This article has been archived and is no longer updated by Apple.

- You have multiple AppleWorks documents open (or multiple views of the same document).
- You use the Find/Change window in a document.
- You leave the Find/Change window open.
- You try to close a document.
- AppleWorks stops responding.

To avoid this issue, close the Find/Change window (shown here) before you close a document.

Published Date: Feb 17, 2012

Playing songs encoded with the Apple Lossless Encoder on your iPod

iPod (with Dock Connector) and iPod mini can play songs encoded with the Apple Lossless encoder after you update your iPod's software to the required version.

This article has been archived and is no longer updated by Apple.

iPod model	Required software version
iPod (with Dock Connector)	2.2 or later
iPod mini	1.1 or later

Update your iPod with the iPod Updater 2004-04-28 or later before transferring Apple Lossless audio files to your iPod.

Note: Earlier iPod models that have a FireWire port and use iPod software 1.4 or earlier cannot play files that use the Apple Lossless Encoder.

Published Date: Oct 7, 2016

Using the SnapBack arrow in iTunes

Can't find the song you're listening to? Try clicking the SnapBack arrow (in iTunes 4.5 or later). It will take you straight back to the current song.
This article has been archived and is no longer updated by Apple.

The SnapBack arrow appears only when a song is playing. It also works when you preview songs on the iTunes Store.

Published Date: Oct 8, 2016

Using Link Arrows to the iTunes Store in iTunes 4.5

In iTunes 4.5, arrows appear next to song, artist, and album names in your library and playlists.
This article has been archived and is no longer updated by Apple.

You can click these arrows to find related music on the iTunes Store.

If you'd rather browse that item in your library, there's a shortcut for that, too. For Mac users, Option-click its arrow, and for Windows users Shift-click it.
Published Date: Oct 8, 2016

Mac OS X 10.3 and later: "Jumbo" packet size is dimmed

Mac OS X can automatically configure the Ethernet port, and most users choose this option. But some networks require a custom, manual setting. When configuring manually, you may see that the Jumbo setting for Maximum Packet Size (MTU) is not available.
This article has been archived and is no longer updated by Apple.

The option is dimmed when your Ethernet device does not work with Jumbo frames. The Apple Ethernet devices that support Jumbo Frames are the Gigabit Ethernet PCI-X card and the built-in Ethernet port on the Xserve G5. The card is optional on Xserve, sold separately by the Apple Store, and may be used in the Power Mac G5. For information on third-party Ethernet devices, see the vendor's website.
Published Date: Oct 8, 2016

Read Before You Install iPod Update 2004-04-28 (for Windows)

iPod Update 2004-04-28 supports all models of iPod and iPod mini introduced before 28 April 2004.
This article has been archived and is no longer updated by Apple.

System Requirements

- A PC with built-in FireWire or USB 2.0, or a Windows-certified FireWire or USB 2.0 card.
- Windows 2000 or Windows XP Home or Professional.

About iPod Update 2004-04-28

iPod Update 2004-04-28 supports all models of iPod and iPod mini introduced before 28 April 2004. To take advantage of new features in iTunes 4.5 and the iTunes Store, you should install the software in this updater.

Changes for iPod without a Dock connector:

- Compatibility with iTunes 4.5 and the iTunes Store.
- Improved playback performance.

Changes for iPod with a Dock connector and iPod mini:

- Compatibility with iTunes 4.5 and the iTunes Store.
- Improved playback performance.
- Support for the Apple Lossless Encoder, to enable compressed music encoding at high quality.

For more information about iPod and iPod mini, go to http://www.apple.com/support/ipod/ .

To get the latest version of iTunes, go to http://www.apple.com/itunes/download/ .

Related document

93786 About the universal iPod Updater

Published Date: Oct 8, 2016

LiveType: Combined font characters render separately

LiveType may not properly handle fonts that use ligatures, or that combine glyphs together.

This article has been archived and is no longer updated by Apple.

Some fonts for languages such as Thai, Arabic, and Devanagri combine characters to make ligatures, or compound glyphs. Because LiveType handles each character as a separate glyph object, two glyphs that would normally be combined in a ligature may be rendered separately.

Fonts for Chinese, English, French, German, and Japanese should work correctly. Fonts that rely on ligatures to create "compound-glyphs" may not be handled correctly in LiveType.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

iPhoto doesn‘t attach your photo in email

Do you use email encryption software? If so, your photo may not appear in the message after you click the Email button in iPhoto.
This article has been archived and is no longer updated by Apple.
This issue only happens when using encryption software. It does not affect the actual attachment of the picture. When you send the message, the recipient will still receive the photo.
Published Date: Feb 19, 2012

Making 3G export Advanced settings in QuickTime Pro

QuickTime Help contains some incorrect information about the Advanced settings for 3G export via QuickTime Pro. This document contains corrected information.

This article has been archived and is no longer updated by Apple.

If your file is in Mobile MP4 or EZmovie format, you can restrict distribution so that a file can't be sent or copied anywhere else once it is on a handset

With either of the two EZmovie formats, you can specify how many times the file can play on the handset once downloaded, or make the file expire after a certain number of days or on a certain date.

Note: The "Allow transfer" pop-up menu has only one option, "No transfer allowed."

With the 3GPP2 (EZmovie) format, the "Fragment movie" option is activated and hard-set to 15 second fragments. Fragmenting enables the file to download via HTTP in small pieces so that playback can start faster and so that larger files can be played on the handset (only the fragment, not the entire movie, must fit on the handset at one time).

Published Date: Feb 19, 2012

Burned iPhoto album seems to have wrong picture order

If you burn a CD or DVD disc of an iPhoto album then select the disc from the Source list, you may get the idea that the album order of the pictures was not retained during the burn.
This article has been archived and is no longer updated by Apple.
In this example, notice how the disc is selected in the Source list, not the album. These photos are not in album order.

But when you select the album in the Source list, the photos do appear in album order, like this:

Tip: To see the albums on a disc, click the disclosure triangle next to the disc's name.
Published Date: Feb 19, 2012

Users can‘t send email within SquirrelMail

In certain circumstances, users see a browser error or the page doesn't reload when they try to send a message via SquirrelMail.

This article has been archived and is no longer updated by Apple.

Symptom

It varies by Web browser. Users may see a "browser error" or a failure to reload the page. Mozilla-based browsers indicate a failure to connect on port 80, while Safari simply does not reload the page.

Products affected

- Mac OS X Server 10.3 or later

Solution

The issue happens if the Apache environment includes definitions for SSL related settings while the server is not actually running via SSL. This can occur when the Web server is restarted via Server Admin. To resolve the issue, execute these two commands in Terminal:

```
# sudo apachectl stop

# sudo apachectl start
```

Published Date: Feb 17, 2012

Printers connected to AirPort Extreme Base Stations have the same name

You can share a printer with computers on your network by connecting it to an AirPort Extreme Base Station's USB port. The printer will be available to computers via Bonjour (formerly "Rendezvous").

This article has been archived and is no longer updated by Apple.

If two printers with the same model name are connected to two base stations on the same subnet and you're using older AirPort firmware, you won't be able to tell which printer is which when you select one in Printer setup, nor can you rename them.

Later versions of AirPort software and Firmware resolve this issue. Use Software Update or Apple Downloads to get AirPort 4.1 or later software, which will include updated base station firmware (5.5 or later for AirPort Extreme, 6.1 or later for AirPort Express). Once AirPort 4.1 software is installed on your computer, update the firmware on the AirPort Extreme Base Station or AirPort Express.

After both software and firmware are updated, you can rename the printers in AirPort Admin Utility. Be sure that you give each printer a unique name. The new names will appear on the network, and computers will be able to distinguish between them.

Tip: On larger networks, give each printer a name that corresponds to its base station or location.

Published Date: Feb 17, 2012

AirPort Admin Utility can‘t connect when "Allow Wireless clients" is off on a WDS base station

When you are setting up a wireless distribution system (WDS) network, you may notice the "Allow wireless clients on this base station" checkbox. Remember that administrators are clients, so this setting applies to them, too.
This article has been archived and is no longer updated by Apple.
If you deselect that checkbox, you won't be allowed to connect wirelessly to the base station, even with AirPort Admin Utility. To administer the base station in this state, use one of two methods:

- Connect to the base station's LAN port with an Ethernet cable.
- Connect to a different section of the larger network -- try connecting wirelessly to a different base station and using AirPort Admin Utility via the indirect connection, for example.

Published Date: Feb 19, 2012

Mac OS X Server 10.3: Changing the administrator password

If you log in to Workgroup Manager as the primary administrator, you can't edit your password.
This article has been archived and is no longer updated by Apple.

To change it: Log out of Workgroup Manager, then log back in as the System Administrator (root).

Tip: By default, the root user has the same password as the primary administrator account that was originally created in the Server Setup Assistant.

You should now be able to edit the primary administrator's password. After doing so, be sure to log out the root user and log back in with your regular administrator account.

Note: Be sure the search path is set to "Local", as the record for the Administrator resides in the local NetInfo database.
Published Date: Feb 17, 2012

Mac OS X Server 10.3: Disk quota not set until the user logs in via AFP

Disk Quotas are set up in Workgroup Manager in Mac OS X Server 10.3. However, they are not enforced for an account until that user has logged in once via AFP.
This article has been archived and is no longer updated by Apple.
If the disk quotas you set up in Workgroup Manager aren't being applied to some accounts, it's probably because they connect via SMB. A user must log in at least once via AFP for the quota to apply.

To set up Disk Quotas for an account, follow these steps in Workgroup Manager:

1. Click the Sharing button in the Toolbar.
2. Click the All tab.
3. Select the volume (not share point) on which quotas are to be enforced.
4. Check "Enable disk quotas on this volume".
5. Click the Accounts button in the Toolbar.
6. Select the account to set a quota for.
7. Click the Home tab.
8. Enter an amount (in MB) in the Disk Quota field.
9. Click Save.

Then, at a client workstation:

1. Connect to the server via AFP.
2. Log in with the account you selected above.
3. Mount any shared volume (not necessarily the user's home).
4. Unmount the shared volume.

Quotas will now apply to this account whether connected via AFP or SMB.

You can view the status of an account's quota in Server Admin or by using the repquota command-line tool on the server. In Server Admin:

1. Select the name of the server (not a specific service name).
2. Click the System tab at the bottom of the window.
3. Click the Quota tab at the top of the Window.

Published Date: Oct 8, 2016

Managed Client: Items removed in Workgroup Manager remain in a user‘s Dock

This article has been archived and is no longer updated by Apple.

If you allow users to add or remove items from the Dock, they will see the default set of Dock items, even if the items were removed via Workgroup Manager. This occurs in Mac OS X and Mac OS X Server versions 10.3 or later, because the user specific Dock preference file (.plist) settings are respected when a user is allowed to add or remove items.

A user has these items in his Dock by default:

- Safari
- Mail
- iChat
- Address Book
- iTunes
- iPhoto
- iMovie
- iCal
- QuickTime Player
- System Preferences
- Apple - Mac OS X (mail link)

Users can manually remove the unwanted items by dragging them from the Dock. An alternative is to disable the option that allows users to add and remove items (10.3 and earlier). In Mac OS X 10.4 and later, the option is "Merge with user's Dock."

Published Date: Feb 19, 2012

Mac OS X Server: NetBoot clients cannot use the iTunes Store

The iTunes Store is not available to a NetBoot client, even though it is enabled in iTunes.

This article has been archived and is no longer updated by Apple.

NetBoot clients are not expected to work with the iTunes Store. This document will be updated as more information becomes available.

Published Date: Oct 8, 2016

Server Admin 10.3: Client computer names don‘t appear in DHCP module

In the DHCP module of Server Admin, the "computer name" fields of some Macintosh clients might be left blank.

This article has been archived and is no longer updated by Apple.

Tip: The "computer name" is set in the client's Sharing preferences.

If a client's computer name contains spaces or non-alphanumeric characters, it might not register correctly with the Mac OS X Server DHCP server. To resolve or avoid this issue, give each client a computer name that contains only alphanumeric characters, with no spaces.

Published Date: Feb 17, 2012

Mac OS X Server 10.3: /var/spool/cups/tmp folder contains thousands of files

If the Server Admin program is left connected to Mac OS X Server 10.3 to 10.3.2, the /var/spool/cups/tmp folder on the server may grow to contain a large number of files. In some circumstances it could be thousands of files that use a large amount of disk space on the startup disk.
This article has been archived and is no longer updated by Apple.
The Mac OS X Server Update 10.3.3 significantly reduces the number of files that will be written to this directory, though you may still wish to periodically clean it out. Any time you want to empty the folder, follow these steps:

1. Stop the Print Service.
2. Open Terminal (/Applications/Utilities).
3. Execute these commands:

```
$ sudo rm -r /var/spool/cups/tmp
$ sudo mkdir /var/spool/cups/tmp
$ sudo chmod 1770 /var/spool/cups/tmp
```

4. Start the Print Service.

Published Date: Oct 8, 2016

Mac OS X Server 10.2: Panther clients using Simple Finder are missing folders in the Dock

When Mac OS X 10.3 clients using Simple Finder are bound to a version 10.2 server, their Dock does not have the My Applications, Documents, or Shared folders. Mac OS X 10.2 clients see these folders as expected.
This article has been archived and is no longer updated by Apple.
Follow these steps to add the My Applications and Documents folders to the Dock. There is not a known workaround for adding the Shared folder.

1. Use a 10.3 version of Workgroup Manager to connect to your 10.2 server. If necessary, download the 10.3 Admin Tools. Use them from a Mac OS X 10.3 computer.
2. Once connected to the 10.2 server, select the affected group.
3. Select Preferences, then Dock.
4. Under the Dock Items tab, enable any of the following options, depending on what you would like to appear in the Dock:
    - My Applications
    - Documents
    - Network Home
5. Save the changes.

A user logging into the workgroup selected in step 2 above will now see the selected items in the Dock.

Note: You should only use the 10.3 version of Workgroup Manager with a 10.2 server when explicitly instructed to do so. Continue to use the 10.2 version of Workgroup Manager for all other purposes.
Published Date: Feb 17, 2012

Mac OS X Server: Giving groups different permissions on a share point

In Mac OS X Server, only a user can be the owner of a share point, not a group. This renders obsolete the method of assigning a read-write group to the Owner field and a read-only group to the Group field.
This article has been archived and is no longer updated by Apple.
You can still achieve the same permissions effect, but the setup is different. Here's an example of how you would do it:

1. Create two new groups, named "Read-Write" and "Read-Only".
2. Put all users to whom you want to give read-write access in the group Read-Write.
3. Put all members of the Read-Write group and all other users to whom you want to give read-only access in the Read-Only group.
4. Create a new share point named "Share_Point".
5. Inside Share_Point, create a folder named "Items".
6. When setting permissions for Share_Point:
    - Make an appropriate user of your choice the Owner.
    - Assign Read-Only to the Group field with read-only permissions.
    - Give Everyone no access.
7. When setting permissions for Items:
    - Make an appropriate user of your choice the Owner.
    - Assign Read-Write to the Group field with read-write permissions.
    - Give Everyone read-only access.

When a user who is not in one of these two groups connects to the server, he will not see Share_Point. Members of Read-Only and Read-Write will have the desired experience.
Published Date: Feb 17, 2012

TA21492_Apple_GSX_Login.pdf

Apple Global Service Exchange

Forgot your Apple ID?

Forgot your password?

Sign In

English

Mac OS X Server 10.3: "Include Mac OS X" checkbox missing from Network Image Utility

When the Network Image Utility is opened without an install CD or DVD mounted, the "Include Mac OS X" checkbox may not be visible. This feature is described on page 30 of the 10.3 Server System Image Administration Guide.
This article has been archived and is no longer updated by Apple.
Use either of these solutions:

1. Select another volume for the source, then reselect the install CD or DVD. If there are no other volumes to choose from, select the Disk Image option, then select the CD or DVD again.
2. Quit Network Image Utility, and reopen it with the install CD or DVD mounted on the Desktop.

The box will now appear.

Published Date: Oct 10, 2016

Printing from Adobe Creative Suite (CS) Applications to Print Server

When using CS versions of Adobe Illustrator and InDesign, you might not be able to print to queues hosted on Mac OS X Server 10.3.

This article has been archived and is no longer updated by Apple.

At the client computer, the job appears briefly in the client printer window, then disappears. It doesn't print and never appears in the Queue listing of Server Admin or in the Print Service logs. However, it may appear on the server in the /var/spool/PrintService/<queue_name> directory.

To resolve the issue, update the server to 10.3.5 or later. You can get the updates here.

Published Date: Feb 17, 2012

NetInfo to LDAP migration stalls at data import

When using Server Admin to migrate from NetInfo to LDAP, the migration process may stall at the data import phase.

This article has been archived and is no longer updated by Apple.

Symptom

The progress bar in Server Admin fills about two thirds of the way, then stops. The text "Data Import" appears below the progress bar.

Products affected

- Mac OS X Server 10.3

Solution

First, execute these commands in Terminal:

```
$ sudo killall slapconfig
$ sudo killall slapadd
$ sudo slapconfig -destroyldapserver
$ sudo rm /var/db/openldap/migration/*.ldif
```

Next, follow these steps in Directory Access to go back to the original NetInfo configuration:

1. Select LDAPv3 in the Services panel.
2. Click the Configure button.
3. Show Details, if they are not already shown.
4. Delete the localhost mapping.
5. Click OK.
6. Deselect the LDAPv3 checkbox.
7. Select the NetInfo checkbox.
8. Select NetInfo.
9. Click the Configure button.
10. Configure NetInfo to bind to the IP address of the server with the tag "network".
11. Click the Authentication tab.
12. Change the pop-up menu from Custom to Automatic.
13. Click Apply.
14. Quit Directory Access.

Back in Terminal, execute this command:

```
$ nicl .. read /
```

Look at the value of the master property. It will be <host>/network. Now execute this command:

```
$ hostname
```

If the value returned from "hostname" does not match the <host> part of the master property, do this in Terminal:

```
$ sudo hostname <host>
```

This will temporarily sync the host names.

Now you should migrate again and restart the server.

TA21496_NetInfo_to_LDAP_migration_stalls_at_data_import.pdf

Published Date: Oct 10, 2016

Mac OS X Server 10.3: Managed clients don‘t mount SMB/CIFS volume at login

In Workgroup Manager you can set managed users to mount an SMB/CIFS volume at login. However, volumes do not mount correctly for these users unless you edit the Workgroup Manager settings.
This article has been archived and is no longer updated by Apple.
Follow these steps:

1. In the Finder on an admin workstation, choose **Connect to Server** (Command-K) from the **Go** menu.
2. Connect to the desired SMB/CIFS share (for example, "smb://server.apple.com").
3. Click the Authenticate button in the dialog.
4. Authenticate as the desired user.
5. Select a share point. It mounts in the Finder.
6. Click the Preferences icon in the Workgroup Manager window.
7. Select a user, group, or computer list.
8. Choose Login, and select "Manage these settings: Always".
9. Click the Login Items tab, and drag the SMB/CIFS share point to the list of Login Items. Note that the URL is in the format:

   ```
   cifs://user@SERVER/SHARE
   ```

10. Select the "Mount with user's name and password" option.
11. Save the changes by clicking Apply Now.
12. From the **Workgroup Manager** menu, choose **Preferences**, and be sure that "Show 'All Records' tab and inspector", is selected.
13. Click the Inspector ("bullseye") button, seen here:

14. Select the same user, group, or computer that you did in step 7.
15. Click the Accounts button.
16. Select the attribute "dsAttrTypeNative:apple-mcxsettings", and click Edit.
17. Locate the line in the format:

    ```
    <string>cifs://user@SERVER/SHARE</string>
    ```

18. Edit this line so that it has the format:

    ```
    <string>smb://SERVER/SHARE</string>
    ```

19. Click OK.
20. Click Save.

Published Date: Oct 10, 2016

WebObjects 5.2: Upgrading the included OpenBase database

After upgrading to Mac OS X 10.3, the OpenBase database included with WebObjects 5.2 needs to be upgraded to support the new version of the operating system.
This article has been archived and is no longer updated by Apple.

Products affected

- WebObjects 5.2.2 (Developer) or later on Mac OS X 10.3

To update the database, go to the OpenBase website and download the OpenBase Personal edition and get a license (at no charge):

http://www.openbase.com/personal

Published Date: Feb 19, 2012

Mac OS X Server 10.3: Mac OS 9 clients cannot mount multiple share points

Mac OS 9 users cannot mount a second sharepoint from a Mac OS X Server 10.3 computer. A software update addresses the issue.
This article has been archived and is no longer updated by Apple.

Symptom

In Mac OS 9 you use the Chooser to connect to a Mac OS X Server 10.3 computer and mount a share point. If you subsequently use the Chooser to connect to a second share point on the same server, you expect to see a message confirming that you are already connected to the server and allowing you to choose the additional share point. Instead you see an alert that says:

"No response from the server. Please try again."

Solution

To resolve this issue, install version 3.9.4 of the AppleShare extension on the Mac OS 9 client. This version of the AppleShare extension can be found in the System Folder of a computer that has used the Classic environment in Mac OS X 10.3.

To install this extension, drag it to the System Folder of the Mac OS 9 client.

Note: This issue does no occur when connecting to a server running Mac OS X Server 10.2.8 or earlier, or when connecting to a Mac OS X computer with file sharing enabled.
Published Date: Feb 17, 2012

Mac OS X Server, Xserve: Disabling "Ignore ownership on this volume" via the command line (vsdbutil)

You can use the command line utility "vsdbutil" to disable "Ignore ownership on this volume." This technique can resolve certain permissions situations.
This article has been archived and is no longer updated by Apple.
For example: After adding a new hard drive to an Xserve, you cannot remotely change permissions to the new volume using normal means.

- Using "chown" results in no error, but the owner remains the same.
- Using "chgrp" results in no error, but the group remains "unknown."

This document describes using Mac OS X or Mac OS X Server 10.2 or later.

To resolve the issue, you can use the "vsdbutil" command-line tool to disable the "Ignore ownership on this volume" option and activate the on-disk permissions. Follow these steps:

1. Open Terminal locally (/Applications/Utilities/), or remotely connect to the server using SSH.

   Note: If you are started up from CD, you may open Terminal by choosing it from the File menu. Also note that you should not precede any commands with "sudo" if you have gone into single-user mode.

2. Execute this command to enable permissions on the volume named "NewHD":

   ```
   $ sudo vsdbutil -a /Volumes/NewHD/
   ```

   Note: "NewHD" would be your new hard drive's volume name.

3. Enter your administrator password when prompted, and press Return.
4. Execute this command to display permissions status information on the volume named "NewHD":

   ```
   $ vsdbutil -c /Volumes/NewHD/
   ```

   This should result in a line that says "Permissions on '/Volumes/NewHD/' are enabled." The following is an example of the terminal output:

   ```
   [server1:/Volumes] admin# sudo vsdbutil -a /Volumes/NewHD/
   password:
   [server1:/Volumes] admin# vsdbutil -c /Volumes/NewHD/
   Permissions on '/Volumes/NewHD/' are enabled.
   ```

Type "vsdbutil -h" for more information on this utility.

Published Date: Feb 17, 2012

Mac OS X Server 10.3: Setting default print job status to hold

In Mac OS X Server 10.2, there is a "Hold" setting that allows the Print Server queue to hold jobs indefinitely when received by the server. When set, an administrator must explicitly allow each job to print.
This article has been archived and is no longer updated by Apple.
This setting does not appear in the graphical user interface of Mac OS X Server 10.3, but you can still make this setting at the command line. Follow these steps:

1. Be sure the Print Service is stopped.
2. Determine the ID of each print queue by executing this command in Terminal:

   ```
   $ sudo serveradmin settings print
   ```

   This will print out the Queue Data Array, including lines for each queue that look like this:

   ```
   print:queuesArray:_array_id:CE54AB2C-1401-4B3B-77E5-1AC38522FF0B:
   quotasEnforced = no
   ```

3. The long item between the colons that starts "CE54" is the array ID. You'll need to copy this ID for each queue you want to edit.
4. Then enter this command:

   ```
   $ sudo serveradmin settings
   ```

   This will give you a blank prompt.

5. Type the following command for each queue, substituting the proper array ID:

   ```
   print:queuesArray:_array_id:CE54AB2C-1401-4B3B-77E5-1AC38522FF0B:
   defaultJobState = "HOLD"
   ```

6. When you're finished, press Control-D to exit, and restart the Print Service.

Published Date: Oct 10, 2016

Mac OS X Server 10.3: Setting up Windows XP clients to print to the server queue

When you share a printer via SMB in Mac OS X Server 10.3.3, Windows XP clients say the correct driver is not installed on the server. You can ignore this message. All you need to do is select the proper preinstalled print driver, or install it if necessary.
This article has been archived and is no longer updated by Apple.
To set up a print queue for use by Windows clients, refer to the Print Services manual available at:

http://www.apple.com/server/documentation/

To set up a Windows XP client to print to the server queue, follow these steps:

1. Create a new printer.
2. Select "A network printer", and click Next.
3. Select "Connect to this printer... Name:" \\\\server\\queue_name

   Tip: Replace "server" and "queue_name" with the name of your server and queue.

4. Click Next. A dialog appears that says "You are about to connect to a printer on <server> which will automatically install a print driver on your machine... ."
5. Click Yes. A dialog appears "The server for the printer does not have the correct printer driver installed... ."
6. Click OK. A pick panel appears with a list of printer makes and models.
7. Just select the proper driver and finish setting up the printer.

   Tip: If there is more than one driver listed for your printer model, choose the one that says "PS".

Published Date: Oct 10, 2016

Apple Remote Desktop 2.0: Additional Information for "Read Me"

Here's a list of important topics for Apple Remote Desktop 2.

- Backing up the admin database
- How to uninstall or disable Apple Remote Desktop 2
- Configuring remotely via command line (kickstart)
- Installer does not give notification of completion for RemoteDesktop.mpkg
- Admin application unexpectedly quits ("crashes") when you open it
- AirPort and modem data not collected properly in System Overview report
- Screen sharing across subnets causes black screens on clients
- Agent resets the database under certain conditions
- Stopping screen sharing for one client stops it for all clients

This article has been archived and is no longer updated by Apple.
Published Date: Feb 17, 2012

Mac OS X Server: Changes to a user record take a long time to sync

After changing a user record in Open Directory/LDAP server, the POSIX layer (lookupd) may not immediately pick up the changes.
This article has been archived and is no longer updated by Apple.

Symptom

If you use "id <user>" to find a user record, subsequently change something in the user record (such as the GID which id displays), then use "id <user>" again, the change may not be seen.

Products affected

- Mac OS X Server 10.3 or later
- Mac OS X 10.3 or later

Solution

Execute the two commands below in Terminal. This will change the time to live for the records to 300 seconds, but you are free to substitute your preferred value.

```
$ sudo nicl . create /locations/lookupd TimeToLive 300
$ sudo killall -1 lookupd
```

Published Date: Oct 10, 2016

Mac OS X Server 10.3 and Xserve: Setting up remote control for a server without a video card

Xserve G5 comes without a video card, so you may be considering remote control options. One easy way to remotely control the server is with Apple Remote Desktop administration software (sold separately).
This article has been archived and is no longer updated by Apple.
To make setup a snap, the ARD client software is preinstalled with Mac OS X Server 10.3 and later. All you need to do is remotely enable it using the command line, then start using ARD admin.

Tip: If you have any version of Mac OS X Server 10.3.3 or later, or a version of 10.3.2 that came bundled with a server, then Server Setup includes a new checkbox to enable the ARD client in the Services section, shown here:

Server Setup can be run remotely. See page 65 of the Getting Started Guide for Mac OS X Server 10.3.
Published Date: Oct 10, 2016

Macintosh Manager, Mac OS 9 Multiple Users: Login unexpectedly quits after updating Classic components

If you use Mac OS X 10.3 and either Macintosh Manager or Mac OS 9 Multiple Users on the same computer ("dual boot"), users won't be able to log in to Mac OS 9 after updating Classic components in Mac OS X 10.3. The login routine will unexpectedly quit, and the user will be returned to the Login Window.

This article has been archived and is no longer updated by Apple.

This only affects Mac OS X 10.3 to 10.3.3. Update to Mac OS X 10.3.4 or later to resolve the issue, and allow the updated system to update your Classic components again.

The specific Classic item that resolves the issue is Apple Menu Options version 1.2.1.

Published Date: Feb 17, 2012

Apple Remote Desktop: Client moving the administrator‘s pointer

A controlled Remote Desktop client can move the administrator's pointer arrow under certain circumstances. Only mouse movements on the client are sent to the admin system, not mouse clicks.

This article has been archived and is no longer updated by Apple.

This can happen when both of these conditions are met:

- The administrator switches to another application while leaving the control window open.
- The administrator's pointer is located over the control window (even if the control window is behind another window).

Note: Even when the administrator is actively controlling the client, the client can still move the pointer.

Published Date: Feb 17, 2012

WebObjects 5: Using the JNDI adaptor with EOModeler on Microsoft Windows

When using EOModeler to create a new model with the JNDI adaptor, you will see one of these messages:
This article has been archived and is no longer updated by Apple.

- "No reason provided"
- "Unable to load the bundle for the adaptor named JNDI..."

This happens when using WebObjects 5.1 or WebObjects 5.2 on Microsoft Windows.

When using the LDAP plug-in with its default settings, the JNDI adaptor requires that the JNDI package and LDAP Service Provider be installed on the system. Otherwise, you will be unable to create a new model with the JNDI adaptor using EOModeler.

These jar files need to be downloaded and installed:

- ldap.jar
- providerutil.jar
- jndi.jar
- ldapbp.jar

You should download them from the Sun website located at:

http://java.sun.com/products/jndi/downloads/index.html

Specifically, you would follow these steps:

1. Download the JNDI 1.1.2 packages, which consist of:
   - JNDI 1.1.2 class libraries package (jndi112.zip)
   - LDAP Service Provider package (ldap103.zip)

   Upon extraction, jndi112.zip will place the file jndi.jar in its lib folder after extraction, and ldap103.zip will place the files ldap.jar and providerutil.jar in its lib folder.
2. Download the JNDI 1.2.1 package (JNDI/LDAP booster pack 1.0 ldapbp-1_0.zip). Upon extraction, ldapbp-1_0.zip will place the file ldapbp.jar in its lib folder.

   Note: The LDAP provider supports access to LDAP directories using Secure Sockets Layer (SSL). This feature requires the "booster package", ldapbp.jar that comes with the JNDI 1.2 Standard Extension.
3. Copy the extracted jar files, as appropriate, to either:
   - `C:\\Apple\\Library\\Java`
   - `$NEXT_ROOT\\Library\\Java`
4. Modify the JavaConfig.plist file that resides under `C:\\Apple\\Library\\Java` to include this:

   ```
   $NEXT_ROOT/Library/Java/ldap.jar;$NEXT_ROOT/Library/Java/jndi.jar;$NEXT_ROOT/Library/Java/providerutil.jar;$NEXT_ROOT/Library/Java/ldapbp.jar
   ```

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information. JNDI software is licensed by Sun Microsystems, and its use is subject to their licensing terms.

Published Date: Feb 19, 2012

Mac OS X Server 10.3.4: Server Assistant won‘t connect remotely

You may not be able to connect remotely with Server Assistant if the versions of the server's operating system and Admin Tools differ.
This article has been archived and is no longer updated by Apple.
This issue affects Mac OS X Server 10.3.4.

Be sure that you have Mac OS X Server Admin Tools 10.3.4.
Published Date: Oct 10, 2016

Mac OS X 10.3: Connecting to a server using an alias in the Dock

If you have an alias to a shared volume in your Dock, and you try using it to connect to the server, you could run into these issues:
This article has been archived and is no longer updated by Apple.

- The authentication dialog is not editable. Though your name may already appear, it's dimmed, and you can't change it.
- The authentication dialog may appear behind another window.

This affects Mac OS X 10.3 and connections that use Apple Filing Protocol (AFP), such as Personal File Sharing or Apple File Service (Mac OS X Server).

To avoid the issue, open the alias from the Finder rather than from the Dock. You could keep a copy in your Favorites folder for quick access, for example. You can use an alias in the Dock to access the shared volume after you've connected.
Published Date: Oct 10, 2016

About the Mac OS X Server 10.3.5 Update

This software updates Mac OS X Server version 10.3.4 to version 10.3.5.
This article has been archived and is no longer updated by Apple.

Important: Read Before Installing

1. An administrator account password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, follow these steps: Choose System Preferences from the Apple menu. Choose Accounts from the View menu. Select an Admin account and click Edit User. Type your current password, and press Return. Change the password, and click OK.
2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.
3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.
4. This update can be installed on non-startup volumes, but that should be done **only** when the current startup volume has already been updated to Mac OS X Server 10.3.5. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are two ways to update to Mac OS X Server 10.3.5: Software Update and Standalone Installer.

Software Update Installation

You may have been referred to this document by Software Update. For more information on this feature, see How to Update Your Software.

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

An installer is also available from Apple Featured Software.

The Mac OS X Server 10.3.5 Update is specifically for updating version 10.3.4. There is also a "combo" installer available, which will update any version 10.3 to 10.3.4.

Remote Installation

If you need to install the update on a remotely located computer, you can do so using either the Server Admin application or the "softwareupdate" command-line tool. Choose the method that works best for you.

Enhancements

These are some of the enhancements that are part of Mac OS X 10.3.5 Server Update:

Open Directory (Directory Services)

- Active Directory Plug-in: Addresses an issue in which some Mac OS X computers would not bind to Active Directory, affecting computers with Mac OS X 10.3.3 to 10.3.4.
- Active Directory Plug-in: Addresses an issue in which only users for the Active Directory domain to which a computer is bound can authenticate on a client computer or be located in the Workgroup Manager user list.
- Active Directory Plug-in: Addresses an issue in which the "dsconfigad" command-line tool fails to join pre-existing accounts. When attempting to bind a computer to Active Directory, the -f option for forcing a bind to an existing account results in the following message: "Error: Undefined error occurred trying to Bind this computer to Active Directory."
- Password Server: Addresses an issue in which deleted user records may still appear in Kerberos replica databases.
- LDAPv3 Plug-in: Added option to enable or disable LDAP referrals in the file /Library/Preferences/DirectoryService/DSLDAPv3PlugInConfig.plist. In some configurations, LDAP referrals can cause symptoms such as slows logins, crashes, and overall unpredictable results.

Mail Server

- Mail Server: Addresses an issue in which mail server may stop functioning, especially in an environment with high mail volume. The race condition usually occurs if the cyrus database maintenance app (ctl_cyrusdb) is cleaning up database transaction log files at the same time a POP or IMAP session is active, requiring an update to the removed log file.

File Services

- AFP: Addresses an issue in which AFP clients may drop the connection to the server when attempting multiple copy or read-write operations with one or more AFP servers. Analysis of a network trace when this issue occurs will reveal that the TCP Window size will drop to zero.
- AFP: Improved reliability and performance of AFP login to AFP server share from both Mac OS 9 and Mac OS X clients.
- NFS: Improves performance and reliability of NFS, such as better handling of lookup caching, small files, and file locking.

System Imaging (NetBoot/Network Install)

- Network Image Utility: The Network Image Utility now creates a block-copy restore image if using a volume as the source. This change improves installation performance and maintains original volume integrity.

Print Server

- Print Server: Addresses an issue in which some print jobs may not execute if the file's Postscript header is larger than 1023 bytes. This issue is more likely to affect graphic or page layout applications such as Adobe InDesign or Adobe Illustrator.

QuickTime Streaming Server

- QTSS: Provides support for streaming 3G files to Real One mobile player. This benefits users with 3G handsets and compatible service.

Directory Services

- DSAgent: Addresses the issue in which the default cache life of 12 hours for user records (such as those appearing to the POSIX layer, finger, and id) could never be overridden. Now, in most configurations, the default will fall back to five minutes and can be correctly overridden by the manually setting of the time-to-live (TTL) values, as explained in the lookupd man page.

File Systems

- NTFS: Addresses issues which may prevent copying of large files (i.e. 4GB) from an NTFS volume to another volume. Note: NTFS volumes are mounted as Read Only.

Server Admin Tools

- Server Admin CD: The CD has been updated for the Mac OS X Server 10.3.5 release, and the updated software can be downloaded here.

Mac OS X Server 10.3.5 also includes the enhancements of the Mac OS X 10.3.5 client update.

Published Date: Oct 10, 2016

About the Mac OS X Server 10.3.5 Update (Combo)

This software updates any version of Mac OS X Server 10.3 to 10.3.4 to Mac OS X Server version 10.3.5. It is a "combo" update that combines enhancements delivered with versions 10.3.1 through 10.3.5. If you already have Mac OS X Server 10.3.4, you may download a smaller update that is not a combo.
This article has been archived and is no longer updated by Apple.

Important: Read Before Installing

1. An administrator account password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, then follow these steps: Choose System Preferences from the Apple menu. Choose Accounts from the View menu. Select an Admin account and click Edit User. Type your current password, and press Return. Change the password, and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.

4. This update can be installed on non-startup volumes, but that should be done **only** when the current startup volume has already been updated to Mac OS X Server 10.3.5. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

5. If you are updating from 10.3.2 or earlier and use a MySQL database, you must back it up prior to upgrade. See the Additional Information for MySQL section, below.

6. If you are updating from 10.3.2 or earlier and have set up a loginhook, a custom serial port configuration, or have edited the "/etc/ttys" file for other reasons, you will need to back it up prior to installation of this update.This is because a 10.3.3 or later update overwrites the file with a new copy when updating from 10.3.2 or earlier. The new file will set the Xserve's serial port to communicate at 56Kbps. If your serial device cannot communicate at this speed, you must edit this file to reduce the speed.

Installation

There are two ways to update to Mac OS X Server 10.3.5: Software Update and Standalone Installer.

Software Update Installation

You may have been referred to this document by Software Update. For more information on this feature, see How to Update Your Software.

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

An installer is also available from Apple Featured Software.

Mac OS X Server 10.3.5 Update (Combo) updates Mac OS X Server 10.3, 10.3.1, 10.3.2, 10.3.3, or 10.3.4 to the later version.

Remote Installation

If you need to install the update on a remotely located computer, you can do so using either the Server Admin application or the "softwareupdate" command-line tool. Choose the method that works best for you.

Enhancements Delivered with this update

Many enhancements are delivered with this update. Because this is a combo update, it includes those delivered with earlier 10.3 updates. You can see the individual lists for 10.3.1, 10.3.2, 10.3.3, 10.3.4, and 10.3.5.

Additional Information for MySQL

Data stored in MySQL databases with the version of MySQL that is pre-installed Mac OS X Server 10.3.2 or earlier must be exported and re-imported in order to be compatible with version of MySQL that is pre-installed on Mac OS X Server 10.3.3 or later, in which a byte-ordering issue is fixed.

As with any upgrade install, you should back up your old data. In this particular upgrade, the following process is recommended to convert the data to the correct byte ordering:

Before the upgrade, use the terminal to export the data from your pre-10.3.3 database:

```
#  mysqldump -p table > backup-file.sql
```

or

```
#  mysqldump  --opt database > backup-file.sql
```

After the upgrade, and after initializing the MySQL database, import the data:

```
#  mysql -p table < backup-file.sql
```

or

```
#  mysql  database < backup-file.sql
```

Published Date: Oct 10, 2016

About the Mac OS X Server 10.3.5 Admin Tools Update

Important: Read Before Installing

The Mac OS X Server Admin Tools 10.3.5 Update requires that you've previously installed Mac OS X Server Admin Tools 10.3.4 and Mac OS X Server 10.3.5 or Mac OS X 10.3.5.

Installation

There are two ways to get Mac OS X Server Admin Tools 10.3.5: Software Update and Standalone Installer.

Automatic Software Update

You may have been referred to this document by Software Update.

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

This standalone Installer is useful when you need to update more than one computer.

Enhancement Related to Admin Tools 10.3.5

System Imaging (NetBoot/Network Install)

- Network Image Utility: Now creates a block-copy restore image if using a volume as the source. This change improves installation performance and maintains original volume integrity.

This article has been archived and is no longer updated by Apple.
Published Date: Feb 17, 2012

Mac OS X Server 10.3: Startup Disk 9.2.6 missing from NetBoot for Mac OS 9 disk image

Page 39 of the 10.3 Server System Image Administration Guide incorrectly states that Startup Disk 9.2.6 is available on the NetBoot for Mac OS 9 CD. Mac OS X Server 10.3 does not come with a NetBoot for Mac OS 9 CD. Instead, you can download it in the form of a disk image.
This article has been archived and is no longer updated by Apple.
To locate Startup Disk 9.2.6 on the downloaded image:

1. Double-click the downloaded NetBoot9.dmg file to open it.
2. Double-click NetBoot.pkg to begin the installation process.
3. Install the NetBoot package on your NetBoot server.
4. Once the installation is complete, open this folder:

   /Library/NetBoot/NetBootSP0/MacOS92Default.nbi/

5. Double-click the NetBoot HD.img disk image file to mount it on the desktop.
6. Open this folder:

   /Volumes/NetBoot HD/System Folder/Control Panels/

7. Copy the Startup Disk control panel from the disk image to the Control Panels folder in your local hard disk's Mac OS 9 System Folder.

Published Date: Oct 10, 2016

Mac OS X 10.3: Modem Country Setting incorrect after using Setup Assistant

After using Setup Assistant, the Country Setting for your modem may be wrong.
This article has been archived and is no longer updated by Apple.
It may happen in this specific sequence of events:

- When offered Get Internet Ready options in Setup Assistant, you choose "I'm not ready to connect to the Internet."
- Then, for Register With Apple, you choose Register Later.

This happens when using Mac OS X 10.3 to 10.3.9 and a Macintosh with a Jump modem. You can see what kind of modem your computer has in Apple System Profiler.

To get back to the right Country Setting, follow these steps:

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **Date & Time**.
3. Click Time Zone.
4. Change the Time Zone to one other than where you are actually located.
5. Select any city from the **Closest City** pop-up menu.
6. From the **View** menu, choose **Network**.
7. Choose **Internal Modem** from the **Show** pop-up menu.
8. Click Modem.
9. Verify the Country Setting is correct for that time zone and city you selected.
10. Repeat steps 3 through 9, but this time enter the correct time zone and city.

Published Date: Oct 10, 2016

Apple Remote Desktop 2: Stopping screen sharing for one client stops it for all clients

If you disable screen sharing for one selected client, it is disabled for all clients in the group.

This article has been archived and is no longer updated by Apple.

This feature does not work as expected. This document will be updated as more information becomes available.

Published Date: Feb 17, 2012

Apple Remote Desktop 2: Screen sharing across subnets causes black screens on clients

Screen sharing between an Apple Remote Desktop 2 admin computer and multiple clients on a different subnet causes client displays to go black (or blank).

This article has been archived and is no longer updated by Apple.

Sharing with multiple clients across subnets does not work. Screen sharing to a single client across subnets should work.

This document will be updated as more information becomes available.

Published Date: Feb 17, 2012

Apple Remote Desktop 2: Installer does not give notification of completion for RemoteDesktop.mpkg

You can install the RemoteDesktop.mpkg on an Apple Remote Desktop 2 client, but the Installer does not provide feedback to indicate a successful installation. (Installation of this packages may be advantageous when configuring multiple administration computers or switching to another computer.)

This article has been archived and is no longer updated by Apple.

Because this particular package stops (kills) the Apple Remote Desktop 2 agent process after successful installation, the lack of notification should be considered normal behavior.

To verify successful installation of the admin application on the client, go to the client and open the application.

Published Date: Feb 17, 2012

Apple Remote Desktop 2: AirPort and modem data not collected properly in System Overview report

Because there are differences in how Apple System Profiler collects certain data on various versions of Mac OS X, the System Overview report may not collect all client system information. Specifically, AirPort and modem data may not be collected properly.
This article has been archived and is no longer updated by Apple.
This affects Apple Remote Desktop 2 with Mac OS X 10.3 or later

This document will be updated as more information becomes available.
Published Date: Oct 10, 2016

Apple Remote Desktop (all versions): File Copy using "Specify Full Path" works for startup volume only

The Specify Full Path option used with File Copy only works for copying files to the startup volume. If you try to copy to another volume, you see this message:

This article has been archived and is no longer updated by Apple.

"Can not replace on 1 of 1 computers. Didn't copy '<filename>'. 1 of 1 items not copied."

When you want to into the path:

```
/Volumes/Non_Startup_Volume/ ...
```

Drop the "/Volumes/" and enter the path as:

```
Non_Startup_Volume/ ...
```

Published Date: Feb 17, 2012

Apple Remote Desktop 2: Agent resets the database under certain conditions

The ARD agent process monitors the database that stores client configuration data. If the agent detects more than three attempts to start the "rmdb" process, the agent will reset the database with a default configuration.

This article has been archived and is no longer updated by Apple.

If this happens, no information about previously configured ARD clients will appear in the Remote Desktop admin application.

During normal operation, the ARD agent should not be active when the rmdb process is inactive. So this issue would primarily affect developers or administrators trying to extend their use of the RemoteManagement data, who might need to start and stop the rmdb process.

To avoid the issue, always shut down ARD in Sharing preferences before disabling the rmdb process.

It's also a good idea to back up your databases on a regular basis.

This document will be updated as more information becomes available.

Published Date: Feb 17, 2012

Properly attaching the antenna on an AirPort Extreme Card

If you don't fully insert the antenna connector when installing an AirPort Extreme Card, you may experience greatly reduced wireless range on your computer.

This article has been archived and is no longer updated by Apple.

Make sure the antenna connector is fully inserted, as shown here:

If the connector is not fully inserted, you'll see a large portion of the connector collar, like this:

Published Date: Oct 10, 2016

AirPort Express Assistant can‘t set up a WDS when network address translation is turned off

When using AirPort Express Assistant to set up a remote station for a wireless distribution system (WDS), you may see this alert message:
This article has been archived and is no longer updated by Apple.
"The base station you selected as a WDS main base station is not distributing IP addresses. Please use AirPort Admin Utility to set up this base station to distribute IP addresses."

This happens when you've set your main station to distribute a range of user-defined IP addresses, rather than using network address translation.

As the message suggests, you can avoid this issue by simply using AirPort Admin Utility to configure for this type of network (see how here).
AirPort Express Assistant handles only the most common network configurations, while AirPort Admin Utility can be used for all available settings.

Important: After encountering this alert message, your remote station's password may be set to match that of your main base station.
Published Date: Oct 10, 2016

AirPort Express can‘t join network in client mode, flashes its status light (LED)

If you want to use your AirPort Express in client mode but unwittingly try adding it to a network that is protected with an access control list (ACL), AirPort Express will flash its status light amber once per second. This means that it wasn't able to join the network and get an IP address.
This article has been archived and is no longer updated by Apple.
The ACL is stored on the base station that is hosting the wireless network, and it contains the MAC (media access control) address of each device that is allowed to join the network. To use your AirPort Express as a wireless client, its MAC address must be added to the ACL.

AirPort Express has two MAC addresses, and both are listed on its case. The one labeled "AirPort ID" is the MAC address for its wireless interface, and the one labeled "Ethernet ID" is the one for its Ethernet port.

If you are the network administrator, you simply need to update your ACL using AirPort Admin Utility so that it includes the "AirPort ID" of the AirPort Express. If not, speak with the person who runs the network.
Published Date: Oct 10, 2016

Apple Remote Desktop 2: Can‘t control or observe clients after update from ARD 1

If a firewall is blocking the ports that ARD 2 uses, your ARD 2 admin computer won't be able to control or observe clients after upgrading them from ARD 1 to ARD 2 (version 1.2 to 2.0, for example).

This article has been archived and is no longer updated by Apple.

If you find yourself in this situation, be sure to open the ports that Remote Desktop uses. This applies to any firewall between the administration and client systems, including NAT routers (such as an AirPort Base Station) and the Firewall feature built into Mac OS X and Mac OS X Server.

Apple Remote Desktop 2 uses some ports not used by ARD 1. You can start by opening port 5900, both TCP and UDP. For all the ports used by Apple Remote Desktop, see our complete list, which is regularly updated. For additional ARD-specific information, see Connecting through a firewall or NAT.

Published Date: Feb 17, 2012

AirPort Express Assistant changes the base station password when setting up a WDS remote

If you use AirPort Express Assistant to configure AirPort Express as a WDS remote, it will automatically change the base station password to match that of the WDS main station. This behavior protects the AirPort Express in the event that you still have the default password "public".
This article has been archived and is no longer updated by Apple.
AirPort Express Assistant does not have options for defining a separate password for the main and remote stations, but you can customize your password settings using AirPort Admin Utility.
Published Date: Oct 10, 2016

AirPort: Windows XP users must have Wireless Zero Configuration (WZC) installed to administer an AirPort base station

Wireless Zero Configuration (WZC) is a service that's part of the Windows XP operating system, but one that may not be installed by default. WZC is required before you can use your wireless network adapter to configure an AirPort Extreme or AirPort Express base station.
This article has been archived and is no longer updated by Apple.
WZC should be installed as part of XP Service Pack 2. If you haven't already done so, run the Windows Update tool in Windows XP and get Service Pack 2 or later and any other appropriate updates for your system. Microsoft has posted instructions on obtaining the latest service pack, How to obtain the latest Windows XP service pack.

If you are unable to update to Service Pack 2 for any reason, you may be able to get everything working by ensuring a compatible version of WZC is installed on an XP machine running Service Pack 1. There are a couple of ways to determine if the WZC service is installed, activated, and up to date. To see if the WZC service is installed and active:

1. From the Start menu, select Control Panels.
2. Double-click Administrative Tools (if you don't see Administrative Tools, you may need to click Performance and Maintenace to reveal them).
3. Select Services, and look for Wireless Zero Configuration.
4. Make sure that the service is started and that the startup type is set to automatic.
5. Navigate to C:\\WINDOWS\\system32\\, and locate any of these component files:
   - wzcsapi.dll
   - wzcsvc.dll
   - wzcdlg.dll
6. Right-click any of these, and choose Properties from the menu to determine the specific version. You should be using version 5.1.2600.1276 or later.

Published Date: Oct 10, 2016

AirPort Express Assistant does not work with Windows 2000

To set up AirPort Express from a Windows 2000 computer, use AirPort Admin Utility for Windows.
This article has been archived and is no longer updated by Apple.
You can administer AirPort Express from Mac OS X, Windows XP, and Windows 2000. The AirPort Express Assistant provides an easy way to set up AirPort Express, but it's specifically designed to be compatible with Mac OS X or Windows XP. To set up AirPort Express from a Windows 2000 computer, you must use AirPort Admin Utility for Windows, version 4.0 or later.

The AirPort Installer does not install AirPort Express Assistant on Windows 2000 computers, and you shouldn't copy it from a Windows XP computer.
Published Date: Oct 10, 2016

Using AirPort Express with the Phono jack on your stereo

Do your AirTunes sound funny when you connect AirPort Express to the Phono (or phonograph) input jack on your stereo? Well, it should! This is because many record turntables produce a very low signal. Consequently, most stereos are designed to boost the Phono channel.
This article has been archived and is no longer updated by Apple.
When you connect a normal line level device to a Phono jack using an analog cable, the resulting sound may be distorted, too loud, or have too much low-end boost.

To avoid this, simply connect AirPort Express to another jack such as CD, Tape 1, Tape 2, Video 2, AUX, DVD, or DAT.

Tip: This applies only when connecting AirPort Express via analog cables, not digital.
Published Date: Oct 10, 2016

Using iChat AV with a Mac OS X Server firewall

This article has been archived and is no longer updated by Apple.
You can configure Mac OS X Server as a firewall between a local network (LAN) and the Internet. Some types of iChat traffic will not pass through the Mac OS X Server firewall in its default setting. You'll need to open additional ports.

iChat uses ports 5060, 5190, 5297, 5298, 5353, 5678, and 16384 through 16403. The list of ports used by Apple products shows this in greater detail, and you can also read about an optional setup that is more complex and offers greater security.

Use Server Admin to edit the preferences for the firewall. You can find instructions for creating advanced firewall rules in the Network Services guide, starting on page 51.

Published Date: Oct 10, 2016

Safari works briefly, then stops browsing

Does Safari surf the web for a second, then totally wipe out? Remain calm--a quick check of your hard disk name could have you back online in no time.
This article has been archived and is no longer updated by Apple.
If the name of your hard disk contains a non-ASCII character, such as a symbol, diacritical, or two-byte character, Safari may not work. If you quit and reopen it, it may work briefly again. Here's the specific symptoms you see:

- Safari quits loading websites soon after you open it, or partially displays a webpage.
- The blue progress bar stops advancing.
- The Status Bar indefinitely reads Contacting or Loading <site_name>.

Advanced Tip: The Console may say "Safari error: Conversion to encoding 'some number' failed for string 'string including offending character'."

This happens with Safari 1.2.2 in Mac OS X 10.3.4.

To avoid the issue, simply update to Mac OS X 10.3.6 or later. As a temporary solution, you can rename your hard disk.

Published Date: Oct 10, 2016

Getting a better AirTunes connection in a Microsoft Windows environment

Does your AirTunes music stream get interrupted when you use AirPort Express and iTunes with Microsoft Windows-based computers? If so, a simple adjustment to the Wireless Network Connection Properties on your Windows computers could help out.

This article has been archived and is no longer updated by Apple.

Windows scans for wireless networks every minute, sometimes causing a connection to drop, which you'd hear as skip in your music. Defining your wireless network preferences can help maintain the connection when a computer is doing another wireless activity, such as providing an AirTunes stream. Try this:

1. Go to Network Connections.
2. Right-click your Wireless Network Connection, and select Properties.
3. Select the Wireless Networks tab. In the lower section you'll find a list of your preferred wireless networks.

4. Move the network you're using for AirTunes to the top of the list.

The updated list order should improve your connection, reducing AirTunes interruptions.

Published Date: Feb 19, 2012

Configuring AirPort Express on a wired-only Ethernet network

Even though AirPort Express includes a fully-functional wireless access point, it's totally legit to use it on a wired-only network for its print server and music streaming features. When setting up for a wired-only environment, you could get a bit confused by the fact that AirPort Express Assistant refuses to hook you up. This is because AirPort Express Assistant will only connect wirelessly from a computer that has a wireless card. Don't worry -- you just need to use AirPort Admin Utility instead, as shown here.
This article has been archived and is no longer updated by Apple.
To set up your AirPort Express as a print server and AirTunes receiver on a wired network, follow these steps:

1. Connect your AirPort Express by Ethernet to your network.
2. Open the AirPort Admin Utility. On a Macintosh it's at /Applications/Utilities/. In Windows, it's at C:\\Programs\\AirPort\\Admin.
3. Select the base station from the chooser (browser) window. Click on Configure to continue.

4. Select the AirPort Tab. Next, provide a name for your base station and a name for your network. The network name is probably not as important to you, since you have a wired-only installation. However, the name you use here will become the default name for your AirTunes network.

5. If you're concerned about other unauthorized wireless clients getting on your network, you can take two additional steps. Turn the Transmitter Power down to its minimal setting (10%), and give your network a security layer.

Tip: This picture shows the Windows version, where the Transmitter Power is directly under the AirPort tab. On a Mac, you'd click the Wireless Options button to access Transmitter Power.

6. Next, set the type of security you want to use. For this implementation, it is recommended that you use WPA for home/small office (Windows) or WPA-Personal (Macintosh).

7. Now you need to turn off the router settings on your AirPort Express that provide DHCP and NAT capabilities to wireless clients. Select the Network tab. Be sure the checkbox for "Distribute IP addresses" is not checked (it is checked by default).

8. Select the Music tab, and turn on the AirTunes feature.

You will need to enter the name of the iTunes Speaker Name. On a Macintosh computer, this will take the name of the wireless network you have previously entered.
Note: Selection of the "Enable AirTunes over Ethernet" checkbox shown above has no effect after following step 7 (which is recommended for most users), but it would be required if you chose not to follow step 7 for any reason. On the Macintosh you will find this checkbox by clicking the Base Station Options under the AirPort Tab. This checkbox is not selected by default.

9. Now click Update. Your AirPort Express will now reset, and you are off an running with a streaming AirTunes network.
10. To share a printer, you need only connect it to your AirPort Express. Here's some extra information for Macintosh and Windows XP.

Published Date: Oct 10, 2016

AirTunes audio stream drops or cuts out

In certain circumstances, the AirTunes music stream you're sending to an AirPort Express may stop or cut out for periods of time.
This article has been archived and is no longer updated by Apple.
There are several things you can do to troubleshoot this.

First, if you're using a Mac, install the AirPort 4.1 or later update.

If that doesn't fix it for you, check for radio interference and physical barriers. Try setting AirPort Express to a different channel that may be less susceptible to interference, such as channel 1, 6, or 11. Then you should evaluate your site for physical barriers that can block radio transmissions. In the case of AirPort Express, stereo wiring can also be a physical barrier. Try to leave clear space between AirPort Express and your other stereo equipment.

Next, if you have any third-party access points, check the manufacturer's website to be sure their firmware is up to date.

Some people have more success with interference robustness enabled, and others with it disabled, so you might try both.

These three settings may be made using the AirPort Admin Utility (/Applications/Utilities/). Note that you'll need the version included with AirPort Express, or a later version.

1. Connect to the base station using AirPort Admin Utility.
2. Click the AirPort tab.
3. Change either the Channel, Mode, or Wireless option for testing.
4. Update the base station.
5. Repeat for each base station or each option, as applies to your situation.

For more information, see the Designing AirPort Networks manual.

Using WDS

If you use AirPort Express in a WDS environment, make sure all access points are configured to use the same channel.

If WDS is desired to allow for wired Ethernet clients at the AirPort Express, then it may help to disable the "Allow wireless clients to connect" option.

Lastly, try configuring the AirPort Express to be a client of the existing network, as opposed to a WDS node.

Using wireless security

Wireless security makes your computer work harder, so it together with an AirTunes stream might be a bit taxing for a slower system. Try using a lower grade of security or turning it off completely to see if there's improvement. If you're using WPA personal, for example, try using WEP instead. If you're using 128-bit WEP, try 40-bit WEP.

Using third-party security software

If you have installed security software that inspects outgoing network traffic on your computer, it may slow down your stream as it inspects it, causing the interruption. Try turning off any security software temporarily to isolate the issue.

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

Changes to Summary view in AirPort Admin Utility 4.0

Looking for your printer? No problem--AirPort Admin Utility 4.0, included with AirPort Express, introduces new default view and printer features: This article has been archived and is no longer updated by Apple.

- Summary now appears as a choice in the View menu, rather than being the default view.
- A connected USB printer appears in this Summary view.

Published Date: Oct 10, 2016

AirPort Express clients can‘t see my existing Ethernet network

Are wireless computers unable to see things on the wired Ethernet network that you connected to your AirPort Express, such as printers or other computers? It's not a issue-- you just need to know when the Ethernet port on your AirPort Express acts as a LAN port or a WAN port.
This article has been archived and is no longer updated by Apple.
The detailed answer about LAN versus WAN is in the AirPort Express FAQ, but what it comes down to is this: The AirPort Express Ethernet port can either share your Internet connection (WAN) or bridge wireless clients to your existing Ethernet network (LAN), but not both at the same time.

Since AirPort Express is a fully functional wireless access point, it is set by default to share your Internet connection. Your existing Ethernet network probably already has a router sharing your Internet connection, so you simply need to follow these steps to switch AirPort Express into bridge mode:

1. Be sure AirPort Express is still connected to your Ethernet network.
2. Open the AirPort Admin Utility. On a Macintosh it's in the Utilities folder (/Applications/Utilities/). In Windows, it's saved in this path: C:\\Programs\\AirPort\\Admin.
3. Select the base station, then click Configure to continue.
   Tip: The screen shots are from Windows. On a Mac you'll see the same choices.

4. Select the Network tab.
5. Deselect the checkbox for "Distribute IP addresses".

6. Click Update.

That's it. In a minute, after the AirPort Express has time to restart, your wireless clients should be on your network.

Published Date: Feb 19, 2012

Using AirPort Express as a client after being in WDS mode

If you transition AirPort Express to client mode after using it as a WDS station, you'll need to let the other WDS base stations know -- otherwise they might act confused.
This article has been archived and is no longer updated by Apple.
When you set up WDS, each main, remote, or relay makes a record of each of the other stations to which it has a direct, wireless connection. Changing AirPort Express from WDS to client mode does not remove the other base stations' records. They continue to regard it as a WDS station until you remove the record(s). Here are the records the stations keep:

- The main station has a record of relay and remote stations that connect directly to it. It does not have a record of any remote that connects to a relay.
- A relay station has records for both its main and any remote that connects to it.
- A remote only has one record, for the main or relay it connects to.

Suppose you had two AirPort Extreme base stations set up as a main and a relay, with your AirPort Express set up as the remote. If you took the remote out of WDS mode and put it into client mode, you would need to connect to the relay station using AirPort Admin Utility and change its setup. Here's what WDS setup looks like for a relay station:

In the picture, the AirPort Express has a network name of "Maui." So you would select Maui, then click the minus button indicated by the red arrow. Because this relay station has no remotes other than Maui, you should also change it from a relay to a remote station.

Published Date: Feb 19, 2012

AirTunes music doesn‘t play after the computer wakes from sleep

If your AirTunes music stream isn't playing after you wake your computer from sleep, just select Computer from the pop-up list in iTunes, then select the AirPort Express again.

This article has been archived and is no longer updated by Apple.

Published Date: Feb 17, 2012

AirTunes speaker menu missing from iTunes for Windows

If your firewall is blocking the port that iTunes uses to locate AirPort Express, then guess what--you aren't going to see the speaker menu. Fixing this is as easy as opening the right port on your firewall.
This article has been archived and is no longer updated by Apple.
iTunes uses UDP port 5353 to locate AirPort Express base stations that can be destinations for your AirTunes music stream. Make sure this port is allowed through your firewall.

You can learn more about the TCP and UDP ports used by Apple products here.
Published Date: Oct 10, 2016

The beginning of a song is clipped when streaming AirTunes to a digital receiver

Does the King advise you to "be cruel" when he's the first singer in your AirTunes lineup? Well, don't be! If you connect an AirPort Express to a stereo receiver using an optical cable, the first few seconds of your music stream might get cut off, so the song begins in the wrong place.

This article has been archived and is no longer updated by Apple.

This happens only when connecting to certain digital receivers, and it usually only happens to the first song in a stream. These digital receivers are simply synchronizing their clocks with the music stream, which may take a few seconds. This is normal when using such a receiver.

If you change the playlist or select a new track, the stream will get clipped again when the new selection starts. It will also clip if you pause and resume the same song.

Advanced tip: You could make a very short silent track that's the same length as the clipping you hear, then use it as the first track in your playlists.

In the event that you hear clipping between songs but haven't done anything to cause it, try turning on the Crossfade option. To access it: From the **iTunes** menu (Edit menu in Windows), choose **Preferences**, then click the Audio button.

The only time you should not try Crossfade is if you are listening to DTS or Dolby Digital 5.1 (AC-3).

Published Date: Feb 17, 2012

Mac OS X can‘t connect via Comcast Internet service provider

If you have a Comcast cable modem, you might not be able to connect to the Internet. This issue may be intermittent.
This article has been archived and is no longer updated by Apple.
When this happens, the computer does not receive a DHCP lease with a valid IP address from Comcast. Instead, it uses a self-assigned 169.254.x.x address, and cannot access the Internet.

This can happen with Mac OS X 10.2 to 10.3.9 when your connection is configured via DHCP. This is not known to affect PPPoE accounts.

For Mac OS X 10.3

To resolve the issue, try updating to Mac OS X 10.3.5, which you can get here.

If the issue persists after updating, contact Comcast for further assistance. They may need to reset some equipment, specifically the cable modem termination system (CMTS).

For Mac OS X 10.2

Change your computer's configuration using these steps:

1. From the **Go** menu in the Finder, choose **Go to Folder**.
2. In the Go To Folder dialog, type this path:

   ```
   /System/Library/SystemConfiguration/IPConfiguration.bundle
   ```

3. In the resulting window, select the Resources folder.
4. From the **File** menu, choose **Get Info**.
5. Click the disclosure triangle next to Ownership & Permissions.
6. Look at the lock icon. If it's closed, click it to open it. If prompted to authenticate, enter your user password. (You must be logged in as an administrator, or "admin" user.)
7. Change the Owner from "system" to the name of the user account that you're logged in with.
8. Close the Resources Info window.
9. Open the Resources folder, and select the file named IPConfiguration.xml
10. From the **File** menu, choose **Get Info**.
11. Click the disclosure triangle next to Ownership & Permissions.
12. Change the Owner from "system" to the name of the user account that you're logged in with.
13. Close the IPConfiguration.xml Info window.
14. Be sure that IPConfiguration.xml is still selected in the Finder, then go to the **File** menu and choose **Duplicate**.
15. Rename the duplicate "IPConfiguration copy.xml" to "IPConfiguration.xml.orig".
16. Go back to "IPConfiguration.xml", and open it in TextEdit.
17. From the **Edit** menu, choose **Find**.
18. In the Find window, in the Find field, type: InitialRetryTimeSeconds
19. Click the Next button.
20. You should find a section that appears as follows:

    ```
    <key>InitialRetryTimeSeconds</key>
    <integer>1</integer>
    ```

21. Change `<integer>1</integer>` to `<integer>8</integer>`.
22. The section should now appear as follows:

    ```
    <key>InitialRetryTimeSeconds</key>
    <integer>8</integer>
    ```

23. In the Find window, in the Find field enter: MaximumRetryTimeSeconds
24. Click the Next button.
25. You should find a section that appears as follows:

    ```
    <key>MaximumRetryTimeSeconds</key>
    <integer>8</integer>
    ```

26. Change `<integer>8</integer>` to `<integer>12</integer>`.
27. The section should now appear as follows:

    ```
    <key>MaximumRetryTimeSeconds</key>
    <integer>12</integer>
    ```

28. Save the changes to the IPConfiguration.xml file, and quit TextEdit.

29. In the Finder, select IPConfiguration.xml.
30. From the **File** menu, choose **Get Info**.
31. Click the disclosure triangle next to Ownership & Permissions.
32. Change the Owner from the name of the current user to "system".
33. Close the IPConfiguration.xml Info window.
34. Close the Resources window.
35. Select the Resources folder.
36. From the **File** menu, choose **Get Info**.
37. Click the disclosure triangle next to Ownership & Permissions.
38. Change the Owner from the name of the current user to "system".
39. Close the Resources Info window.
40. Restart the computer.

If the issue persists after performing the above steps, contact Comcast for further assistance.

Published Date: Oct 10, 2016

Mac OS X Server 10.3: "Invalid License Type" when using Software Update

While using Software Update on Mac OS X Server, you might see a message that says you have an "Invalid License Type." During the update, you might have also seen "servermgr_smb may have crashed."

This article has been archived and is no longer updated by Apple.

The "invalid" message is incorrect and harmless. It will go away after you restart the server, which is a required part of installing the update. You can also ignore the second message.

Published Date: Oct 10, 2016

AirPort Express Assistant can‘t find AirPort Express when using a firewall

AirPort Express Assistant and AirPort Admin utility both use various IP ports to locate your AirPort Express. If they cant' find Airport Express, it might be because your firewall is slightly more secure than you want it to be!
This article has been archived and is no longer updated by Apple.
But before you go to check out your firewall, be sure you're using the Assistant and Admin applications included with your AirPort Express, or a later version. Earlier versions don't work with AirPort Express.

When using the built-in Mac OS X Firewall (located in Sharing preferences) or a third-party firewall, the simplest test is to temporarily turn it off and try again. If the applications can find AirPort Express with your firewall off, you simply need to turn your firewall back on, and open these ports in the firewall: 192, 5009, and 5353.

For the Mac OS X Firewall, you'd follow these steps

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View**, choose **Sharing**.
3. Click the Firewall tab.
4. Click New.
5. From the Port Name pop-up menu, choose Other.
6. In the Port Number, Range or Series field, type in:

   ```
   192, 5009, 5353
   ```

7. In the Description field type in: AirPort Admin
8. Click OK.

Published Date: Oct 10, 2016

Mac OS X: Server-based users can‘t log in, or don‘t appear in the Login Window user list

After a computer starts up or wakes from sleep, server-based accounts may not appear in the Login Window's user list, or users with these accounts may not be able to log in. However, you may notice that this issue doesn't occur if you have first logged in and out with a local user account.

This article has been archived and is no longer updated by Apple.

Tip: Remember that your preferences and the type of account determine whether a server-based account is supposed to appear in the user list. Some users type their names instead. Thus it may be normal for accounts not to appear in the user list, and you would troubleshoot those accounts based strictly on the ability to log in.

This issue occurs in Mac OS X 10.3 through 10.3.4. To resolve the issue, follow these steps:

1. Update client computers to 10.3.5 or later.
2. Avoid using DHCP Option 95 with a manual or customized Directory Access configuration. (If you do, the issue will persist.)
3. AirPort-connected computers must specify a specific network (see Note 3).

Notes:

1. After updating to 10.3.5, there will still be a 20 to 30 second delay before a network-based user can log in or until the user list starts to populate in the Login Window. That's the normal behavior for this type of configuration.

2. As an alternative to DHCP Option 95 with a manual or customized Directory Access configuration, do only one of the following:
   - If you automate Mac OS X client directory setup and specify the LDAP Directory Server via DHCP Option 95, then don't customize the Authentication Search Path (which is configured via the Search pop-menu, located by clicking the Authentication tab in Directory Access). The Authentication Path must be set to Automatic.
   - If you manually configure any aspect of Mac OS X client Directory Access configuration (this includes manually entering your LDAP Server information) and use a DHCP Server for client IP address configuration, then Option 95 must be disabled on your DHCP Server. If you can't disable Option 95, then your client computers must have manually assigned IP addresses.

3. Here's how AirPort-enabled computers specify a network:

   - From the **Apple** menu, choose **Location**, and from the submenu choose **Network Preferences**.
   - From the **Show** pop-up menu, choose **AirPort**.
   - Click the AirPort tab.
   - From the **By default, join** pop-up menu, choose **A specific network**.
   - Enter the name of the AirPort network in the Network field.
   - If the network requires a password, enter it.
   - Click the Apply Now button.

Published Date: Feb 17, 2012

AirPort Express: "Bad param error -4" when administering from a Windows computer

If you get the message "bad param error -4" when you try to administer your AirPort Express, don't worry--the latest AirPort software update may fix that. And if it doesn't, there's an easy workaround.

This article has been archived and is no longer updated by Apple.

The issue occurs when using AirPort Admin Utility 4.0 for Windows or AirPort Express Assistant 1.0 on a computer with "Intel Centrino mobile technology" wireless capabilities. To resolve the issue:

First, download AirPort 4.1 or later. Next, try checking the Network Connection that you use to connect to the AirPort Express (usually this is your wireless connection) to ensure that it is configured via DHCP; if it is set for a static IP on a different subnet from the AirPort Express, this issue will occur.

If your issue is still unresolved, use this workaround:

1. Connect the computer to the Airport Express using an Ethernet cable.
2. Turn off wireless networking on the computer.
3. Set the computer to use the Ethernet port (restart if necessary).
4. Configure or update your AirPort Express.
5. After a successful update, switch from Ethernet back to your wireless configuration.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 17, 2012

AppleShare IP Migration won‘t finish if you try to migrate mail to 10.3

If you're upgrading to Mac OS X Server 10.3 and select the mail database checkbox in AppleShare IP Migration, the migration won't finish. Some Apple documentation mistakenly says this feature works, but in reality it doesn't for a migration to 10.3. Here's a couple of simple workarounds:

This article has been archived and is no longer updated by Apple.

First, you could temporarily have both AppleShare IP and Mac OS X Server mail servers running, ask clients to configure both email accounts for IMAP, and then simply copy messages between the two.

Second, you could migrate the AppleShare IP mail database to Mac OS X Server 10.2.8 or earlier and then migrate the new database to Mac OS X Server 10.3.x.

Published Date: Feb 17, 2012

AirPort Express: Using Configuration Profiles

This article has been archived and is no longer updated by Apple.

- About configuration profiles
- Creating profiles in Windows
- Creating profiles on the Macintosh
- Editing profiles
- Switching profiles
- Erasing all profiles with a factory default reset
- Determining which profile is active
- Restoring a profile after a hard reset

About configuration profiles

AirPort Express can store up to five different configurations, known as profiles. A profile contains all the settings made in AirPort Admin Utility, such as passwords, network information, and the the iTunes speaker name. The portability of AirPort Express makes this a very convenient feature, since you can save settings for the places you take it most often. Unlike old-style configuration files, profiles reside on AirPort Express itself, not on your computer.

In the Windows operating system, the Profiles pop-up menu is available at any time you are viewing a configuration, regardless of which tab you have selected.

On the Macintosh, you can click the Profiles button in the tool bar any time that you're viewing a configuration.

Note: Configuration profiles are available only on the AirPort Express base station.

Creating profiles in windows

1. Open the Profiles pop-up menu in the lower left corner of the configuration window.

2. Choose Create Profile. This opens the Create Profile window.

3. Give the profile a name. In this example the name is "Terlingua 2 Remote."

4. Click OK.
5. Now you can set options within your profile, such as network name, remote speaker name, passwords, and the Internet connection method. When you are finished setting the options, click Update. The base station will update its settings, which are stored in the Terlingua 2 Remote profile.

If you wish to add another profile, repeat the above steps using a different profile name. You can store 5 separate profiles counting the active profile.

Creating profiles on the Macintosh

To create a new configuration profile:

1. Click Profiles in the toolbar, which will open the configuration profile window.

2. Click Add to create a new profile, and give the profile a name. In this example the name is "Home Configuration."

3. Click OK.
4. Now you can set options within your profile, such as network name, remote speaker name, passwords, and the Internet connection method. When you are finished setting the options, click Update. The base station will update its settings and those are incorporated into the Home Configuration profile.

If you wish to add a second profile, repeat the above steps using a different profile name. Once you have a second profile added, you should see something like this:

Editing profiles

In Windows you can edit an existing profile by choosing Edit Profiles from the pop-up menu.

Here you can duplicate, rename, or delete and existing profile.

On the Macintosh, you simply click the Profile icon in the toolbar and then make the changes in the Profiles windows.

Switching profiles

To switch between profiles in Windows, select the one you want to use from the pop-up menu.

On the Macintosh, go to the main Profiles window and select another profile from the list.

When the base station restarts, that profile will be active.

Erasing all profiles with a factory default reset

If you want to delete all the profiles at once, use the factory default reset.

Determining which profile is active

In Windows, the active profile is the one that appears in the Profile pop-up menu when you first open the configuration, such as Factory Fresh in this image.

On the Macintosh, the active profile appears here:

This helps you keep track of which profile you are using.

Restoring a profile after a hard reset

Profiles remain in the memory of AirPort Express after a hard reset. When reconfiguring using AirPort Admin Utility 4.0 for Windows, you get options for using or replacing any profiles stored in the base station.

Option 1: The default selection reloads the previously selected profile. Pay attention to the warning that goes with this option: When you choose to use the previously selected profile, any issues that existed with the previous configuration may continue, creating the need for an all-new profile.

Option 2: The second option replaces existing profiles with a factory fresh configuration (effectively the same as a factory default reset).

Option 3: This option is best if you had issues your existing profile. Remember that you can only store five profiles in AirPort Express. If you already have five profiles, this option will be dimmed:

On the Macintosh, the process has fewer choices. You get this dialog after a hard reset:

In this example notice that your only options are to select an available profile, since there are five profiles already stored in the base station.

Tip: If you save a base station configuration, it will contain your saved profiles.

Published Date: Feb 20, 2012

NFS volumes on third-party servers fail to mount

Connection to an NFS server may fail in certain configurations, with a server log message that looks like this one:

This article has been archived and is no longer updated by Apple.

```
Aug 4 05:44:43 leeloo kernel: nfsd: request from insecure port (11685b22:50528)!
```

This can happen with any version of Mac OS X. Here's why:

Mac OS X tries to make NFS connections from port numbers outside the traditional range expected by some NFS servers. Configuring your NFS server to accept connections on "insecure" ports above 1024 should resolve the issue. Please consult your server's documentation for configuration information.

Published Date: Oct 10, 2016

What to do if Fiber Channel Utility displays WWNN and WWPN as "unknown"

This article has been archived and is no longer updated by Apple.

If Fiber Channel Utility displays the WWNN and WWPN as "unknown" after updating to Mac OS X 10.3.5, download the Fiber Channel Utility Update.

Published Date: Feb 17, 2012

Safari: Garbled text may appear in the subject line when you click a "mailto" link

When you click a "mailto" link on a webpage, do you see garbled text in place of the expected subject line in the resulting email message?
This article has been archived and is no longer updated by Apple.
If so, a simple update to Mac OS X 10.3.4 or later resolves the issue. This happens when the mailto link includes double-byte characters, such as Japanese.

Tip: A "mailto" link on a webpage is one that automatically creates a new email message when you click it, with the address and subject specified by the webmaster who created the link.
Published Date: Oct 10, 2016

About the Apple Remote Desktop 2.1 Update

Here are some of the enhancements included with the Apple Remote Desktop 2.1 Update.
This article has been archived and is no longer updated by Apple.

Remote Assistance

- Full screen mode: You can now control and observe remote computers in full screen mode, allowing you to view the remote screen on the entire screen of your display.
- Control and observe remote computers with multiple monitors: Administrators can now control and observe remote Mac OS X systems which have two or more displays. The displays are shown in one virtual window.
- Support for mouse scroll wheel and right-click when controlling remote computers.
- Improved control and observation of remote computers that are running applications in full screen.
- Improved opt-out for Guest Access option.
- Improved support for third party VNC Viewers and VNC Servers.
- AppleVNC Server no longer relies on presence of mDNS process.

Remote Administration

- Multi-line output for Send UNIX Command: You can now view all the results from the Send UNIX Command.
- The Install Package command now detects whether a package requires a restart and will optionally restart the client computers after the package installation has completed.
- Send UNIX Command no longer dependent on client side Observe privilege.

Asset Management

- Improved printing of hardware and software reports.
- Improved remote data collection.
- You can now drag results from reports to the Finder. The items will then be copied from the client computers to the administrator's computer.

Software Distribution

- Improved file copy for files that reside on networked home directories.

Other enhancements

- Client authentication using Active Directory: Clients can now be authenticated against directory services groups in Active Directory.
- Improved client authentication using two additional directory services groups, ard_manage and ard_interact. Members of the ard_manage group will be able to perform all commands except for Control and Observe. Members of the ard_interact group will be able to perform all commands under the Interact menu.
- Enhanced column sorting in the Administration application.
- Improved support for managing computers that have Dynamic DNS enabled.
- Administration application now correctly remembers it's settings if it unexpectedly quits.
- The ordering of network scanners is now remembered.
- Includes security fix present in Security update 2004-10-27 (details).

Published Date: Oct 10, 2016

AirPort Express feels warm to the touch

After an extended period of use, or if you surround it with a bunch of insulating material, AirPort Express might feel a bit hot to you. As with all our products, Apple designed AirPort Express to comply with safety agency specifications. With proper usage, the surface temperature of the AirPort Express should not present a safety issue.
This article has been archived and is no longer updated by Apple.
When using your AirPort Express, it's normal for its case to get warm. The case works as a cooling surface, transferring heat inside the unit to the cooler air outside.

Follow these suggestions to reduce the AirPort Express operating temperature.

Orientation

If you plug your AirPort Express directly into the wall, orient the base station in the proper direction. The cables are designed to protrude from the bottom of the AirPort Express.

Note: You should connect all cables to the AirPort Express prior to plugging it into the wall, except when following the printer troubleshooting technique documented here.

Avoid insulating material

Do not place your AirPort Express on a pillow or other soft material (carpets, bedding, etc) when it is on, as the material may restrict the flow of air around the base station and cause it to overheat.

General Placement for use with AirTunes

Place your AirPort Express in an open area where there are few obstructions, such as large pieces of furniture. Try to place the base station away from metallic surfaces.

If you place your AirPort Express behind furniture, keep at least an inch of space between your base station and the edge of the furniture.

If you place your AirPort Express in an entertainment center with your stereo equipment, be sure not to completely surround the base station with audio, video, or power cables. Place the base station so the cables are to one side. Maintain as much space as possible between the base station and the cables.

If you place your AirPort Express behind your stereo equipment, place it on one side or the other. Avoid centering it behind your stereo.

AirPort Express complies with the safety standard for Safety of Information Technology Equipment, IEC 60950. This safety standard has been adopted by many countries and is referred to as UL 60950 in the United States, CSA 60950-00 in Canada, EN60950 in Europe, and ASNZ3260 in Australia and New Zealand.
Published Date: Oct 10, 2016

Apple Remote Desktop 2: Automatic client upgrade does not appear to be complete

If you use the Upgrade Client Software feature to get a client from ARD 1 to ARD 2, the progress window may not correctly report to you when the upgrade is actually finished.

This article has been archived and is no longer updated by Apple.

This issue affects Remote Desktop 2.0. To resolve the issue, update the admin computer to Remote Desktop 2.1 or later.

Published Date: Feb 17, 2012

Network Utility reports IP addresses for inactive Ethernet interfaces

If you use Network Utility to check Info on an inactive Ethernet port, you'll see it has an IP address of 144.3.8.0 or 6.3.6.0.

This article has been archived and is no longer updated by Apple.

This eccentricity of Network Utility does not mean the interface is really active. If you want to avoid this confusion, review the IP addresses of active interfaces in Apple System Profiler, System Preferences, or Terminal (using the ifconfig command).

Published Date: Feb 19, 2012

Macintosh: Monitor and Video Chart (1 of 4)

This article provides a list of Apple Macintosh systems with the monitor and video options each can use.

Related Articles:
Article 15878: **"Macintosh: Monitors and Video Chart (2 of 4)"**
Article 15879: **"Macintosh: Monitors and Video Chart (3 of 4)"**
Article 15881: **"Macintosh: Monitors and Video Chart (4 of 4)"**
This article has been archived and is no longer updated by Apple.

Monitor Specification Chart				
Specifications	**12-in Monochrome**	**12-in RGB**	**Basic Color Monitor**	**Color Plus Display**
Part Number	M0298LL/A	M0297LL/C	M9103LL/B	M2346LL/A
Resolution (pixels)	640 x 480	512 x 384	640 x 480	640 x 480
Power Frequency (Hz)	50 - 60	47 - 63	50 - 60	47 - 63
Power Voltage (VAC)	90 - 270	100 - 120	100 - 125	90 - 134
Vertical Refresh	66.7 Hz	60.15 Hz	59.94 Hz	66.7 Hz
Horizontal Refresh	35 kHz	24.48 kHz	31.5 kHz	35 kHz
Dots Per Inch (DPI)	76	64	N/A	68
Dot Pitch	N/A	0.28 mm	0.39 mm	0.29 mm

LC Family					
LC	**VRAM**	**12-in Monochrome**	**12-in RGB**	**Basic Color Monitor**	**Color Plus Display**
LC, LC II	256K 512K	16 G 256 G	256 C 32,768 C	16 C 256 C	16 C 256 C
LC III	512K 768K	256 G 256 G	32,768 C 32,768 C	256 C 32,768 C	256 C 32,768 C
LC 475	512K 1MB	256 G 256 G	32,768 C 32,768 C	256 C 32,768 C	256 C 32,768 C
LC 630	--	256 G	32,768 C	32,768 C	32,768 C
G = Number of Grays C = Number of Colors					

Performa Family					
Performa	**VRAM**	**12-in Monochrome**	**12-in RGB**	**Basic Color Monitor**	**Color Plus Display**
400,405,410, 430	256K 512K	16 G 256 G	256 C 32,768 C	16 C 256 C	16 C 256 C
450	512K 768K	256 G 256 G	32,768 C 32,768 C	256 C 32,768 C	256 C 32,768 C
460,466,467	512K 768K	256 G 256 G	32,768 C 32,768 C	256 C 32,768 C	256 C 32,768 C
475,476	512K 1MB	256 G 256 G	32,768 C 32,768 C	256 C 32,768 C	256 C 32,768 C
550,560,575,577,578	N/A	N/A	N/A	N/A	N/A
600/600CD	512K 1MB	256 G 256 G	32,768 C 32,768 C	256 C 32,768 C	256 C 32,768 C
630	--	256 G	32,768 C	32,768 C	32,768 C
6200	--	256 G	32,768 C	32,768 C	32,768 C
6300	1 MB	256 G	32,768 C	32,768 C	32,768 C
6400	1 MB	256 G	32,768 C	32,768 C	32,768 C

Mac TV	--	N/A	N/A	N/A	N/A

G = Number of Grays
C = Number of Colors

Macintosh II Family					
Macintosh	**VRAM**	**12-in Monochrome**	**12-in RGB**	**Basic Color Monitor**	**Color Plus Display**
IIsi	--	256 G	256 C	N/A	256 C
IIci	--	256 G	256 C	N/A	256 C
IIvi	512K	256 G	32,768 C	256 C	256 C
IIvx	1MB	256 G	32,768 C	32,768 C	32,768 C
II, IIx, IIcx, IIfx	No built-in video, require a video card.				

G = Number of Grays
C = Number of Colors

Centris/Quadra Family					
Centris/Quadra	**VRAM**	**12-in Monochrome**	**12-in RGB**	**Basic Color Monitor**	**Color Plus Display**
605	512K	256 G	32,768 C	256 C	256 C
	1MB	256 G	32,768 C	32,768 C	32,768 C
610, 650	512K	256 G	32,768 C	256 C	256 C
	1MB	256 G	32,768 C	32,768 C	32,768 C
660AV (1)	1MB	256 G	32,768 C	32,768 C	32,768 C
630	--	256 G	32,768 C	32,768 C	32,768 C
700	512K	256 G	256 C	256 C	256 C
	1MB	256 G	16.7M C	256 C	256 C
	2MB	256 G	16.7M C	16.7M C	16.7M C
800	512K	256 G	32,768 C	256 C	256 C
	1MB	256 G	32,768 C	32,768 C	32,768 C
840AV (1)	1MB	256 G	32,768 C	32,768 C	32,768 C
	2MB	256 G	16.7M C	16.7M C	16.7M C
900	1MB	256 G	16.7M C	256 C	256 C
	2MB	256 G	16.7M C	16.7M C	16.7M C
950	1MB	256 G	32,768 C	32,768 C	32,768 C
	2MB	256 G	16.7M C	16.7M C	16.7M C

G = Number of Grays
C = Number of Colors

(1) For the AV computers, pixel and viewable color numbers are for computer graphics only. When video is enabled, VRAM is split evenly between graphics and video.

Power Macintosh Family					
Power Macintosh	**VRAM**	**12-in Monochrome**	**12-in RGB**	**Basic Color Monitor**	**Color Plus Display**
4400	1MB	N/A	32,768 C	32,768 C	32,768 C
	2MB	N/A	16.7M C	16.7M C	16.7M C
	4MB	N/A	16.7M C	16.7M C	16.7M C
5400	1MB	N/A	N/A	N/A	N/A
6100	HDI45*	256 G	32,768 C	32,768 C	32,768 C
6100AV (1)	2MB	256 G	16.7M C	16.7M C	16.7M C
6500	1MB	N/A	N/A	N/A	N/A
7100	HDI45*	256 G	32,768 C	32,768 C	32,768 C
	1MB	256 G	32,768 C	32,768 C	32,768 C
	2MB	256 G	16.7M C	16.7M C	16.7M C
7100AV (1)	2MB	256 G	16.7M C	16.7M C	16.7M C

7200	1MB 2MB 4MB	256 G 256 G 256 G	16.7M C 16.7M C 16.7M C	32,768 C 16.7M C 16.7M C	32,768 C 16.7M C 16.7M C
7300	2MB 4MB	N/A N/A	16.7M C 16.7M C	N/A N/A	N/A N/A
7500	2MB 4MB	256 G 256 G	16.7M C 16.7M C	16.7M C 16.7M C	16.7M C 16.7M C
7600	2MB 4MB	256 G 256 G	16.7M C 16.7M C	16.7M C 16.7M C	16.7M C 16.7M C
8100 8100AV (1)	HDI45* 2MB 4MB	256 G 256 G 256 G 256 G	32,768 C 16.7M C 16.7M C 16.7M C	32,768 C 16.7M C 16.7M C 16.7M C	32,768 C 16.7M C 16.7M C 16.7M C
8500	2MB 4MB	256 G 256 G	16.7M C 16.7M C	16.7M C 16.7M C	16.7M C 16.7M C
9500/120 (2)	2MB 4MB	256 G 256 G	N/A N/A	16.7M C 16.7M C	16.7M C 16.7M C
9600	4MB	N/A	16.7M C	N/A	N/A
G3 systems	See article 30250, titled "**Power Macintosh G3 & G3 All-in-one: Video RAM Upgrade**"				

G = Number of Grays
C = Number of Colors

* = HDI-45 port makes use of 640K of internal DRAM memory

(1) For the AV computers pixel and viewable color numbers are for computer graphics only. When video is enabled, VRAM is split evenly between graphics and video.

(2) The Macintosh 12-in. RGB display cannot be used with the Power Macintosh 9500 series. This monitor is incorrectly listed as compatible in the booklet included with each unit titled "Technical Information: Specifications for Power Macintosh 9500 series computers."

PowerBook Family					
PowerBook	**VRAM**	**12-in Monochrome**	**12-in RGB**	**Basic Color Monitor**	**Color Plus Display**
160,165,165c, 180,180c	--	256 G	256 C	256 C	256 C
500 Series	--	256 G	256 C	256 C	256 C
3400 Series	--	256 G	32,768 C	--	--
G3	--	256 G	16.7M C	N/A	N/A
Duo Dock	512K 1MB	256 G 256 G	256 C 32,768 C	256 C 32,768 C	256 C 32,768 C
Duo Dock II	--	256 G	32,768 C	32,768 C	32,768 C
MiniDock	512K	256 G	256 C	256 C	256 C

G = Number of Grays
C = Number of Colors

3400 Notes:
1) The computer does not provide a display with 2 bits per pixel.

2) An SVGA monitor's display resolution will be 640 by 480 pixels. The user can switch to a higher resolution by using the Monitors control panel or the control strip. The resolution set by the user will be used the next time the computer is started up.

3) If the external monitor can display 800 by 600 pixels at 60 Hz, the PowerBook 3400 computer can display simultaneously on both the external monitor and the flat panel display. This mode of display, called Simulscan, provides the same information on both displays.

Macintosh Video Cards				
Video Card	**12-in Monochrome**	**12-in RGB**	**Basic Color Monitor**	**Color Plus Display**

Macintosh II	256 G	N/A	N/A	16 C
2-Page Mono Card	N/A	N/A	N/A	N/A
Portrait	N/A	N/A	N/A	N/A
Mono	2 G	N/A	N/A	N/A
High-Res Card (1)	16 G	N/A	16 G	16 G
Ext High-Res Card	256 G	N/A	N/A	256 C
4*8 (2)	256 G	N/A	256 C	256 C
8*24	256 G	16.7M C	N/A	16.7M C
8*24GC	256 G	16.7M C	N/A	16.7M C
Display Card 24 AC	256 G	16.7M C	N/A	16.7M C

G = Number of Grays
C = Number of Colors

(1) Can be upgraded with eight (8) Mac II Video Expansion RAM chips for 256 grays/colors.

(2) The 4*8 can be upgraded to a 8*24 by adding two VRAM SIMMs.

Published Date: Feb 20, 2012

Mac OS: Minimum and Maximum RAM Disk Size

This article lists the minimum and maximum RAM Disk sizes for various versions of Mac OS.

This article has been archived and is no longer updated by Apple.

Mac OS Version	Minimum RAM Disk Size	Maximum RAM Disk Size	Notes
System 6 and earlier	192 K	256 MB	--
System 7.5.2, 7.6.x	416 K	256 MB	Maximum RAM Disk size is based on the amount of installed RAM minus the RAM required to run the system software.
Mac OS 8 and 9	512 K	256 MB	Minimum RAM Disk size is determined by amount of RAM in computer; 512 K for every 128 MB of RAM. Maximum RAM Disk size varies by available RAM, but never exceeds 256 MB.

For additional RAM Disk information, see the following articles:

Article 16809: "**RAM Disk: Description, Setup, and Use**"

Article 16810: "**RAM Disk: Resizing or Deleting**"

Article 17699: "**RAM Disk: Resetting the PRAM Causes Loss of RAM Disk Contents**"

Article 58145: "**Mac OS: Cannot Disable RAM Disk**"

Published Date: Feb 20, 2012

Mac OS: Rescued Items Folder Appears in the Trash

This article describes the Rescued Items Folder that appears in the Trash Can.
This article has been archived and is no longer updated by Apple.
The Rescued Items Folder is created any time a Mac OS computer starts up with items in the Temporary Folder. These items are then moved from the Temporary Folder to the Rescued Items Folder in the Trash so the user can inspect them.

The Temporary Folder sits at the root level of a drive, is invisible to the user and applications can use it for any purpose. Typically, this includes scratch files or temporary data files.
Published Date: Feb 17, 2012

Apple‘s Printer Description Files: Where to Get Them

How does one obtain Apple's PostScript LaserWriter Printer Description Files (PPD's) for use on a Macintosh?
This article has been archived and is no longer updated by Apple.
Apple's PPD's are installed by the Mac OS Install program and are stored in the Printer Description Folder (located in the Extensions folder in the System Folder). Older LaserWriter Software installers too install the PPD's; however, the most recent printer software is only available on the current Mac OS Install CD.

Adobe has Apple PPD's posted on their website at: **http://www.adobe.com/**

Adobe has also posted many third party PPD files.

Note: Beginning with Mac OS 9, the LaserWriter and LaserWriter Plus PPD's are no longer installed by this Mac OS as no testing was performed with these PPDs and printer.
Published Date: Feb 20, 2012

Personal Sharing: File Sharing Can‘t Be Enabled Message

I get the message, "File sharing cannot be enabled", even though I have file sharing turned on. What do I have to do to enable personal file sharing?

This article has been archived and is no longer updated by Apple.
Personal File Sharing was first introduced in System 7, and has been a part of all subsequent releases of Apple system software (Mac OS 7.6, Mac OS 8.0, Mac OS 8.5 and so forth).

Try these steps in the order presented. If a step fails to restart file sharing, proceed to the next one.

Two Volumes With The Same Name

You may receive the "File sharing cannot be enabled" error message if two volumes of the same name are present on the desktop at the same time. For example, if an image was made of a mounted CD and then the image was opened, the error message would appear (if filesharing is enabled). This behavior is normal since the newly mounted image has the same name as the already mounted image.

Third-Party File Sharing Software

Find out if TOPS (a third party filesharing application) or other file sharing software was previously run on your system. Third-party filesharing software that performs this function can modify the System file, disabling Personal File Sharing. If so, do a clean installation of system software.

Adequate Volume Space

Look for adequate space on the volumes being shared on your computer. Mac OS creates an AppleShare PDS file which maintains information about what folders and disks are shared, and with whom. If there is insufficient space on **any** attached disk or partition, file sharing is not enabled. File sharing requires at least 360K of disk space available on each connected disk or partition. More space may be required when there are a large number of folders. If **any** volume (not just the startup volume) has less than 360K available, File Sharing reports "File Sharing Cannot Be Enabled."

The only exception to this requirement concerns locked volumes, such as CD-ROMs. The information required for sharing a locked volume is stored in the Preferences folder on the startup disk instead.

Adequate RAM

File sharing requires about 268K of RAM (Random Access Memory) to operate. Insufficient RAM may prevent Personal File Sharing from starting up. Either disable unnecessary extensions or acquire additional RAM for your computer.

Unmount PC or DOS Volumes

Make sure there are no DOS volumes mounted. If there are, eject the volume and try again.

Reset Parameter RAM

Reset the Parameter RAM (PRAM) by pressing the key sequence Command-Option-P-R while starting your computer. **Note:** This also resets the serial ports, so you may need to reactivate AppleTalk and reconfigure the Ethernet connections on some Macintosh computers.

Conflicting Extensions

Conflicting extensions may prevent Personal File Sharing from starting up. To test for this condition, use the Extensions Manager (if using System 7.5 or newer) to enable only Apple Mac OS extensions and then restart the computer. If Personal File Sharing now works, find the conflicting extension by turning on the extensions one at a time.

Delete the File Sharing Folder

1. Delete the File Sharing folder from the Preferences folder within the System Folder.
2. Restart the computer.
3. Turn File Sharing on.

Third-Party Formatting Software

If you format any media with a third-party utility, check with the vendor for compatibility with Personal File Sharing and replace the driver if necessary.

Recreate the AppleShare PDS File

You can delete an invisible file called AppleShare PDS on the top level of all connected volumes when sharing. The AppleShare PDS file may need to be deleted on each volume on multiple drive systems, or drives with multiple partitions.

To help troubleshoot in multiple drive situations, start the computer with just the startup volume on. If file sharing works in this configuration, add another drive to the chain and test file sharing each time until you find the drive that prevents file sharing from starting. You can then concentrate on the drive that fails and remove its PDS file.

Important: Deleting the PDS file removes all access privileges assigned to folders. You need to reassign access privileges to the folders.

1. Open Stickies from the Apple Menu, open a new note (any note).
2. Type anything (as long as characters are there).
3. Select Export Text from the File Menu.
4. Name the file "AppleShare PDS" (capitalization not necessary, but the spelling and the space is important).
5. Save the file on the first (root) level of the Startup Drive.
6. A dialog box will come up asking if you want to replace the file? Yes, you want to replace it.

Note: If it does not prompt you to replace the file (step 6 above), then it didn't work. Check the file name and saving destination.

If this is an AppleShare IP Server, another option is to use AppleShare IP First Aid (excerpt taken from article number 60021).

The ASIP First Aid utility also allows you to make PDS visible or invisible. Select the option you want from the Utilities menu, then select the appropriate volume. (The AppleShare PDS file, normally invisible, is located at the root level of each local read/write volume on the server's desktop.) By making it visible, you can manually back up the file to a floppy or some other volume. It is not essential that the file be made invisible again, but by doing so, you prevent the file from being inadvertently renamed or moved, which would cause a loss of privileges on the server.

An unsupported alternative is using ResEdit:

1. Use ResEdit or some other disk utility to make the AppleShare PDS file visible so you can drag it to the Trash. If you do not have such a utility, try to replace the Owner Name and Macintosh Name in the File Sharing control panel with different text. You can change them back to their original values later. When you start File Sharing, the system creates a new AppleShare PDS file on the startup volume.
2. Restart the computer.
3. Turn File Sharing on. New AppleShare PDS files are created.

Delete Users & Groups Data File

1. Turn file sharing off using the File Sharing control panel.
2. Move (do not delete) the Users & Groups data file, in the Preferences folder, to another folder outside the System folder.
3. Restart the computer.
4. Open the File Sharing control panel, and enter a new Owner Name, Owner Password, and Macintosh Name, replacing any previous data. Be sure to use new or different names.
5. Turn File Sharing on.

Note: You must reset all access privileges after completing these steps.

If this does not resolve the problem, move the Users & Groups data file back into the Preferences folder.

Reinstall Software

Before reformatting the hard disk, try reinstalling the system software or File-Sharing software and restart the computer.

Reformat

Back up the data and reformat the media. A bad block may be causing the problem.

Important: Be sure to back up your data before reformatting. The formatting process erases all data from the volume.

Published Date: Feb 20, 2012

Apple Color Monitors: Cause of Thin Horizontal Line(s)

Why do some Apple color monitors have a thin line or lines across the screen?
This article has been archived and is no longer updated by Apple.
The CRT has a specially constructed aperture grill that improves its convergence and produces a sharp and clear image. The aperture grill is a grid of vertical wires located just behind the CRT screen. These CRTs require a horizontal stabilizing wire or wires to help support the aperture grill. The stabilizing wires, which are thinner than a human hair, dampen the vibration of the aperture grill wires. If the aperture grill wires were allowed to vibrate then the display quality would suffer, each time somebody tapped the display or bumped the table where the display is located.

Typically, displays with a viewing area of 15 inches or less have a single horizontal grid wire approximately one third from the bottom of the display image. Displays larger than 15 inches typically have two wires, each about one-quarter to one-third of the way from the top and bottom of the display image. Televisions may have up to three stabilizing wires, but because of the constantly changing images are rarely noticed.

These Apple products include a tron-style CRT:

- 13-inch High Resolution RGB Monitor
- 14-inch Macintosh Color Display
- Multiple Scan 17 and 20 Displays
- AppleVision 1710 and AppleVision 1710AV Displays
- Macintosh 16-inch Color Display
- Macintosh Color Classic
- AudioVision 14 Display
- Macintosh TV
- Macintosh LC 520, 550, 575
- Performa 550, 560, 575, 577, 578
- ColorSync 17-inch Display
- ColorSync 20-inch Display
- AppleVision 750 Display
- AppleVision 750 AV Display
- AppleVision 850 Display
- AppleVision 850 AV Display
- Apple Studio Display 17 (16 inch viewable image size)
- Apple Studio Display 17 (ADC) (16 inch viewable image size)
- Apple Studio Display 21-inch (19.8-inch viewable image size)

Published Date: Feb 20, 2012

Macintosh Family: Batteries and Part Numbers

This document provides information and part numbers for backup and system batteries used in portable and desktop Macintosh computers released prior to 1997-11. For Macintosh computers introduced after 1997-11, see technical document 86181, "**Macintosh Family: Batteries and Part Numbers, Part 2**".
This article has been archived and is no longer updated by Apple.
Some Macintosh computers have a backup battery to maintain system settings, such as the date and time, when the computer is turned off . The battery may last up to five years. However, this varies due to the battery's shelf life, and usage patterns of the computer. The batteries used in Macintosh computers are lithium or alkaline, and are commonly 3.6 V to 4.5 V.

If your computer does not retain parameter RAM (PRAM) settings when it is turned off, this generally indicates that the battery needs to be changed. Some Macintosh models may display a black screen when you turn them on if the battery needs to be changed.

If you are uncomfortable changing the battery, an Apple Authorized Service Provider can install one for you.

Desktop Macintosh Computers

Macintosh Model	Battery part no.
Macintosh 128, 512K, 512Ke Macintosh Plus (battery equivalents: Eveready 523-BP, Ray-O-Vac RPX-21, Duracell PX-21, Panasonic PX-21)	742-0003
Macintosh SE 800K, Macintosh II (with leads)	742-0009
Macintosh II with 600-0530 Battery Holder Board	922-4542
Macintosh SE FDHD (with leads)	922-4542
Macintosh Classic (4-chip and 2-chip)	922-4542
Macintosh SE/30, IIx, IIcx, IIci, IIfx, IIsi	922-4542
Macintosh IIvi, IIvx, Performa 600	922-4542
Macintosh LC, LC II, LC III, Performa 400 series	922-4542
Macintosh Quadra 605, LC 475, Performa 475, 476	922-4542
Macintosh LC 520, LC 550, Performa 550	922-4542 (Note 1)
Macintosh LC 575, Performa 575, 577, 578, 580	922-0750
Macintosh Classic II, Color Classic, Performa 200	922-4542 (Note 1)
Macintosh 630 Family including Quadra, LC, Performa	922-0750
Macintosh Centris 610, 650, 660AV	922-4542
Macintosh Quadra 610, 660AV, 650, 700, 800, 840AV, 900, 950	922-4542
Power Macintosh and Performa 5200, 5300, 5400, 5500, 6200, 6300, 6400, and 6500 series computers; Twentieth Anniversary Macintosh	922-0750
Power Macintosh 6100/60, 6100/66, 7100/66, 8100/80, Performa 6100 series	922-4542
Power Macintosh 7100/80, 7200 series, 7300 series, 7500 series, 7600 series, 8100/100, 8100/110, 8500 series, 8600 series, 9500 series, and 9600 series.	922-1262

Battery part number	Type	Voltage
742-0003	Alkaline	4.5 V
742-0009	Lithium	
922-0750	Alkaline	4.5 V
922-1262	Lithium	3.6 V

Portable And PowerBook Computers

Portable/PowerBook Model	System Battery	Backup Battery
Portable, Backlit Portable (Note 7)	076-0376	9 V Alkaline
PowerBook 100 (Note 7)	661-0782	CR-2430 (quantity 3)
PowerBook 140, 145, 170	661-0754	661-0724
PowerBook 150	661-0013	661-0190
PowerBook 160, 180	661-0789	661-0750

PowerBook 165c	661-0013	661-0764
PowerBook 180c	661-0013	661-0685
PowerBook 190 series (Note 2)	661-1028	922-1418
PowerBook Duo 200 series (Note 3)	661-0053	630-6546
PowerBook 500 series (Note 4)	661-0055	922-0786
PowerBook 1400 series (Note 5)	922-2420	922-2429
PowerBook Duo 2300	661-0053	630-6546
PowerBook 2400	922-3076	
PowerBook 3400	922-2471	922-2692
PowerBook 5300 series (Note 6)	661-1028	922-1418

Notes

1. The Color Classic, Macintosh LC 520, and LC/Performa 550 logic boards may also use part 922-0750. Your Apple Authorized Service Provider can determine which battery should be used.
2. Includes the PowerBook 190 and 190cs.
3. Includes the PowerBook Duo 210, 230, 250, 270c, 280, and 280c.
4. Includes the PowerBook 520, 520c, 540, 540c, and 550 (550 sold in Japan only).
5. Includes the PowerBook 1400c and 1400cs.
6. Includes the PowerBook 5300, 5300c, 5300ce, and 5300cs.
7. Batteries for the Macintosh Portable and PowerBook 100 that measure less than 5.4 V are likely sulfated and unusable.
8. The Nickel Cadmium, Nickel Metal Hydride, and the Lithium Ion system batteries can usually be recharged even from a deep discharge. For battery identification, refer to document 16168: "**PowerBook: Battery, Recharger, & AC Adapter Identification**".

Published Date: Feb 20, 2012

Macintosh: Glossary of Terms

This article defines some of the common terms used when discussing Macintosh computers.
This article has been archived and is no longer updated by Apple.

Alias
A file that stands for and points to a file, application, folder, or disk that you use as if it were the original. When you open an alias it opens the original file, application, folder or disk that it points to.

Apple Backup
An application for the Macintosh Performa computers that lets you copy files on your hard disk onto a series of high-density floppy disks. If the original files on your hard disk are lost or damaged, you can use these backup disks to restore your files.

Apple Desktop Bus (ADB)
Input circuitry built into many Apple computers. You use the ADB port to attach the keyboard, the mouse, and other input devices, such as graphics tablets and bar code readers. Universal Serial Bus (USB) has replaced ADB.

Accelerated Graphics Port (AGP)
An interface specification that enables 3-D graphics to display quickly on ordinary personal computers.

Apple Menu
The menu at the left end of the menu bar, indicated by the Apple logo. You choose items from this menu to open items that you have placed in the Apple Menu Items folder, and to get information about programs that are currently running ("About ╔").

Apple Restore
An application program that lets you restore information on your hard disk from a backup disks made with Apple Backup.

AppleTalk Network
A comprehensive network system that runs on a variety of cable systems and protocols. It facilitates communication between network devices, such as your computers, file servers, and printers, which may be a mixture of Apple and non-Apple products. Several elements make up an AppleTalk network system: AppleTalk software and AppleTalk hardware; the latter includes computing components and connectivity components.

AppleTalk Connectivity
AppleTalk's design lets you include a variety of data-link and cabling methods in a network system. Data-link and cabling methods widely used include LocalTalk; EtherTalk, using standard Ethernet media; and TokenTalk, using token ring media.

At Ease
Software that lets you use a Macintosh without using the Finder interface. At Ease provides easy ways to open files and prevents you from deleting files or changing system software. It is particularly suited to homes and classrooms.

Chooser
A program that lets you designate devices such as printers and shared disks on a network for your Macintosh to use.

Clipboard
An area in the computer's memory that functions as a holding place for what you last cut or copied. Information on the clipboard can be pasted into documents.

Control Panels
Programs that let you change various Macintosh features, such as sound, mouse movement, and keyboard options. Control panels are located inside the System folder.

Desk Accessories
Small application programs that you can add to your system. Desk accessories are installed in the Apple menu. Some of those provided with the Macintosh include the Calculator, the Chooser, Control Panels, Key Caps, and the Scrapbook.

Desktop
Your working environment when you are using the Finder interface on the computer (the menu bar and the background area on the screen), on which you work with icons and windows.

Documents Folder
A folder on the desktop that can be set up as the default folder when you save a document.

Finder
The application program that maintains the Macintosh desktop and starts up other programs at your request. You use it to manage documents and

programs, and to get information to and from disks. The Finder is what you see when you start up your computer.

Folder
A container for documents, programs, as well as other folders on the desktop or in directory windows.

Icon
A small pictorial representation of a file, disk, menu, option, or other object or feature.

Launcher
A system extension containing aliases of programs and other items. The Launcher window can be set up to open automatically when you start your computer. You can add to or change the contents of the Launcher to suit your own needs.

NuBus
A bus architecture that lets you add a variety of components to your Macintosh by installing cards into expansion slots (such as video capture cards and networking).

Operating System
Software that coordinates the internal activities of the computer and its peripheral devices. An operating system performs basic tasks such as moving data to and from devices and managing information in memory.

Peripheral Component Interconnect (PCI)
An interconnection system between a microprocessor and attached devices in which expansion slots are spaced closely for high speed operation.

ProDOS
The operating system for Apple II computers.

QuickTime
A system software extension that lets you play synchronized video and sound clips on your Macintosh.

Scrapbook
A desk accessory in which you can save frequently-used graphics, text, and sounds. The scrapbook can store multiple images. You can cut or copy images from the Scrapbook and paste them into documents.

SCSI (Small Computer Systems Interface)
A specification of mechanical and electrical standards for connecting certain peripheral devices (such as CD-ROM drives, external storage drives, and scanners) to a computer.

System File
A software file required for starting up the computer. You can customize it with fonts and desk accessories.

Universal Serial Bus (USB)
A plug and play interface between a computer and add-on devices (such as printers, scanners, digital cameras, keyboards, mice, etc.)
Published Date: Feb 20, 2012

Macintosh: Lists of viruses

This article has been archived and is no longer updated by Apple.

Where can I find a list of "Macintosh viruses"?

You can check the Internet for information about the kinds of viruses that could potentially affect Macintosh computers. Here are a few examples:

"Macintosh Viruses"

(http://www.faqs.org/faqs/computer-virus/macintosh-faq/)

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Published Date: Feb 20, 2012

Fonts: Bitmap, PostScript, and TrueType Compared

This article compares bitmap, PostScript, and TrueType fonts. This article also explains the basics of font terminology and mechanics and answers some of the most frequently asked font questions.

Note: This document covers fonts in Mac OS 7 through Mac OS 9.2.2. It does not pertain to any Mac OS X fonts, but does apply to Mac OS 9 fonts used in the Mac OS X Classic environment.
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Bitmap, TrueType, and PostScript Fonts

Suitcases can contain only bitmap and TrueType fonts; PostScript printer fonts are separate files. A suitcase could contain just bitmap fonts, bitmap fonts and a corresponding TrueType font, or bitmap fonts that correspond to a separate PostScript printer font.

You can mix all three types of fonts in the same document.

Bitmap Font

A bitmap font (also called fixed-size) is a representation of a certain font in an exact size. Bitmap fonts have the single letter "A" shown on their icons. You need a separate font for each size of character you want to use. Fonts are contained in font suitcases in System 7.1 and later, or in the System suitcase in System 7.0 and 7.0.1. Open the suitcase to see which fonts are installed.

Bitmap fonts consist of "pictures" of a typeface at specific sizes. For example, you might have bitmap fonts at 10, 12, and 18 point sizes installed in your Macintosh computer. Times 12 contains each character of the Times font at exactly 12 point.

If you try to use sizes that aren't installed, the Macintosh scales one of the other fonts. First it checks for one half the size of the requested size, then it looks for one twice the size, and finally it uses the largest size. This often results in type that is blocky and less legible. Specifically installed bitmap font sizes look smooth on any screen and print smoothly on PostScript printers.

PostScript Font

PostScript is an industry-standard page description language used for describing text, graphics, and digitized images for printed pages. A PostScript font has two parts to it; a bitmap font that the Macintosh uses like any other bitmap font, and a printer font used only by PostScript printers and Adobe Type manager software. All PostScript printer fonts have corresponding bitmaps; without them, your font does not appear in the Font menu of your applications. Like TrueType, PostScript printer fonts are a scalable outline. However, they require Adobe Type Manager (ATM) software to display without jaggies or print smoothly on a non-PostScript printer. The LaserWriter driver converts fonts to mathematical formulas instead of bitmapped images.

PostScript uses outline font technology to describe characters as a number of PostScript or B-spline curves. These curves are stored as mathematical constructs that form the outline of a character. The print controller processes the constructs to arrive at the desired size, style, and orientation, and then fills in the object with dots at the specific resolution of the printing device.

Several Apple LaserWriter printers support PostScript. PostScript fonts are also used in combination with bitmap fonts to support additional fonts on the Macintosh.

To use PostScript fonts with system software version 7.1and later, install bitmap and PostScript fonts in the Fonts folder. You can drag fonts or font suitcases to the closed System Folder; the system presents a dialog box asking wether you want to place them in the Fonts folder. Click OK.

In system software versions 7.0 or 7.0.1, install bitmap fonts by dragging a font suitcase or font file onto the closed System file. Put PostScript fonts in the Extensions folder.

For versions of System 6, use Font/DA Mover to install bitmap fonts into the System file and put PostScript files into the System Folder.

TrueType Font

TrueType fonts (also called variable-size, outline, or scalable) describe a typeface without rigidly specifying a size, and thus look good regardless of the size you choose. A TrueType font is a representation of a certain font defined by a scalable outline. Your Macintosh uses this outline to generate the size of the font you require. TrueType fonts provide sharp text at any size on any device, whether screen or printer. The TrueType font format is an open-industry standard, so you can mix and match TrueType fonts from various font vendors.

TrueType fonts are mathematical descriptions of text characters that store individual characters as a series of lines and curves, rather than a group of pixels (a bitmap). When an application asks for a character in any size, such as 33 point, the Macintosh enlarges this outline to 33 point and fills in the dots for the display or printer output.

Macintosh computers must be using System 6.0.7 or later to work with TrueType fonts. To use TrueType fonts with System 6, be sure you have at least 1MB of RAM, install version 6.0.7 or later, and install the TrueType INIT. Install the fonts using Font/DA Mover version 4.1.

Versions of System 7 and later don't require the TrueType INIT and the Font/DA Mover. Drag TrueType fonts onto the closed System folder, and system software version 7.1 and later places fonts in the Fonts folder. TrueType is fully compatible with all Macintosh hardware. As part of

the operating system of the Macintosh, it is transparent to the user, making it easier to use and to manage fonts.

TrueType prints on most devices, including PostScript devices. Very little has changed about printing in versions of System 7 and later. Apple provides a TrueType core set that maps to the internal fonts in printer ROM, as they did in System 6. When you print a page that uses a third-party TrueType font, the LaserWriter driver sends the TrueType font and the TrueType scaling software to the printer. This ensures the best match to the screen display, because the printer uses the same font and scaling software.

Low-cost, non-PostScript printers (such as the Personal LaserWriter LS, StyleWriter, HP DeskWriter, and so on), used with a Macintosh computer, can produce excellent type quality with System 7 (or later) and TrueType fonts. Also, direct-connect printers, driven by QuickDraw and TrueType, print with good type quality.

You can recognize TrueType fonts by these characteristics:

1. Multiple letters on the icon TrueType fonts have a scaling "A" shown on their icons.
2. There's no point size in the name.

Using TrueType with PostScript

PostScript is a page-description language, and TrueType is a font technology. They aren't interchangeable. However, if a file requires a PostScript font not available in LaserWriter ROM nor in the System Folder, PostScript can use the available TrueType font to print. Using the TrueType font requires additional processing, and can reduce LaserWriter efficiency.

TrueType fonts don't necessarily take more disk space than PostScript Type 1 fonts. Comparing the size of the downloadable Type 1 font to the size of the TrueType font isn't an accurate comparison, because a raw Type 1 font doesn't work on the Macintosh without the bitmap fonts and metrics contained in the screen font suitcase. When the suitcase is considered, PostScript fonts and TrueType fonts typically occupy about the same space.

TrueType fonts have the potential to become larger in point size than PostScript Type 1 fonts, due to the enhanced functionality offered by the technology. Many high-quality headline typefaces aren't offered in PostScript form, because of limitations in the Type 1 technology -- such as the number of points or contours in a character.

The core set of TrueType fonts (Times, Helvetica, Courier, Symbol, Avant Garde, Bookman, New Century Schoolbook, Palatino, Zapf Chancery, and Zapf Dingbats) have the same metrics as the fonts in the Apple's PostScript LaserWriters.

Using TrueType with Bitmap

Bitmap screen fonts come installed with TrueType fonts on systems using System 7 and later to maintain compatibility with documents created on Macintosh systems that don't have TrueType fonts. If a document uses a font family and size that's available as both a TrueType font and a bitmap font, the Font Manager uses the bitmap font when the application opens the document. If you want the Macintosh to use the TrueType font, you must remove the bitmap font from your system.

For example, if a document uses Times 12, available in that size as a bitmap and as a TrueType font, the system uses bitmap. If a document uses Times 4, the system scales the TrueType font to that size because a bitmap version isn't available.

Using only TrueType fonts produces a closer match between appearance of type on the screen and the printed page. However, any existing documents created with the bitmap fonts will be reformatted with the TrueType fonts, and line breaks in these documents may change. A document created on a system that has TrueType or the Adobe Type Manager installed will have different spacing, kerning, and so on, when opened on a system that doesn't have TrueType or the Adobe Type Manager.

What You Should Use

TrueType and PostScript fonts can be used at the same time. However, don't have both versions of the same font installed. Helvetica, for example, is available in both TrueType and PostScript, so you should decide on one to avoid needless duplication. This table shows what you can expect depending on what kind of font and what kind of printer you have:

Font Type	Screen	Non- Postscript Printer	Postscript Printer
TrueType	Smooth	Smooth	Smooth
Postscript without ATM	Jagged	Jagged	Smooth
Postscript with ATM	Smooth	Smooth	Smooth
Postscript Only (see note below)	No Text	No Text	Smooth
Note: If you have a PostScript font ONLY (no truetype or bitmapped font) and you do NOT have Super Adobe Type Manager, you get no text on the screen and no text on a non-PostScript printer.			

How the Macintosh Displays Fonts on the Screen

These are the steps your Macintosh goes through to display your request on screen:

1. The System Software checks to see if there is a bitmap of the font you want in the exact point size you requested; if found it displays it.
2. If the requested point size is not present, it looks for the TrueType version of the font, which is used to generate the requested point size and then displayed.
3. If the TrueType version of the font is not present, the System Software scales the largest point size available to the requested size and displays it. This is when you see the jaggies on your screen.
4. However, if Adobe Type Manager is present, it steps in. If the PostScript printer file of the requested font is also present, Adobe Type Manager generates the requested point size and then pass it on to the System Software to be displayed.

The 128 Font Limit

Only font files and suitcases count toward the 128 limit. Printer files do not, because they are not resources loaded by the System. Drag any loose font files onto a suitcase and/or combine suitcases by dragging them on top of each other. If you want to make an empty suitcase, simply duplicate any suitcase, open it, and throw away the contents.

Font Corruption

Sometimes a font can become corrupted. The most obvious symptom of this is that it cannot be removed or causes your Macintosh to become unresponsive ("crash") when you choose it. In System 7 and later you can check for font corruption by attempting to open a suitcase or font file. An error message stating that it cannot be opened means you need to replace that suitcase or font from your original disks. In System 7.1 and later, if you get an error message trying to pull a font or suitcase out of the Fonts folder, first make sure you have quit all running applications. Then, drag the Fonts folder out of the System Folder onto the Desktop. You should now be able to remove corrupt font or suitcase. When you're finished, put the Fonts folder back in the System Folder.

Just Drag and Drop

Most font-related problems come from missing pieces; a quick check to make sure everything is installed properly usually results in a quick fix. In System 7 and later, the easiest way to make sure the different components wind up in the right place is to simply drag each item on top of the System Folder icon; the System places things where they need to be for you. Remember not to drag a folder on top of the System Folder; the items inside are not moved to where they need to be.

Viewing Your Fonts

To see what fonts you have installed:

- For versions of System 6, use the Font/DA Mover.
- For versions of System 7 before 7.1, open the System file as you would any other file.
- For system software version 7.1, open the Fonts folder within the System Folder.

If you have a version of System 7 or later, you can see samples of the fonts. Open the font file, and a window appears displaying the font.

Published Date: Feb 20, 2012

Mac OS: Cannot Move Damaged Font Suitcase out of Fonts Folder

A damaged font suitcase cannot be moved out of the Fonts folder in the usual way. This article offers two procedures for eliminating a damaged font suitcase.

This article has been archived and is no longer updated by Apple.

Symptom

When you attempt to move a damaged font suitcase out of the Fonts folder, an alert message appears. For example, trying to move a damaged font suitcase named "New York" to the desktop causes an alert box to be displayed with the message, "You cannot move 'New York' to the 'Desktop', because it is damaged."

Solution

Follow one of these procedures to remove a damaged font suitcase from the Fonts folder.

Create a New Fonts Folder

1. Open the System Folder.
2. Drag the Fonts folder to the desktop.
3. Restart the computer; a new Fonts folder is created within the System Folder.
4. Drag the known-good font suitcases from the Fonts folder on the desktop to the new Fonts folder within the System Folder.
5. Drag the Fonts folder on the desktop, which contains the damaged font suitcase, to the Trash.

Start up from Another Volume

1. Start up from another volume, such as a Software Installation CD-ROM disc, or another hard disk.
2. Open the Fonts folder containing the damaged font suitcase.
3. Drag the damaged font suitcase to the Trash.

Published Date: Feb 20, 2012

LaserWriter: Checking Hard Drive Capacity

How can I check the capacity of a SCSI hard drive attached to an Apple Laserwriter printer? Can I use the Apple LaserWriter Utility 7.4 to do this?
This article has been archived and is no longer updated by Apple.
There are two ways to check the capacity of a SCSI hard drive attached to a hard-drive compatible Apple LaserWriter:

* Use a PostScript program (listed at the end of this article) to check the hard drive's capacity. This works with any hard-drive compatible LaserWriter.

* Connect the hard drive to a Macintosh. This only works if your hard drive is formatted in Macintosh-compatible format, as with the LaserWriter IIf, IIg, and the LaserWriter Pro 630.

Unfortunately, there is no option to check the capacity of any Laserwriter printer's hard drive in any version of Apple's LaserWriter Utility. The LaserWriter IINTX, LaserWriter IIf and IIg, and the LaserWriter Pro 630 are all hard-drive compatible, but they use different types of hard disk formatting.

The LaserWriter IINTX uses the LaserWriter Font Utility to initialize attached SCSI hard disk drive(s) as one logical disk device for the PostScript file system. The LaserWriter IINTX regards all attached hard drives as a single logical unit, therefore these drives are not recognized by the Macintosh file system.

The LaserWriter IIf and IIg, and the LaserWriter Pro 630 use the LaserWriter Utility to initialize attached SCSI hard drives. This utility initializes the hard drive in a Macintosh compatible (HFS) format and supports the PostScript file system.

Here is a simple PostScript program that displays the total and free space available on a LaserWriter's hard drive:

```
/Helvetica findfont 14 scalefont setfont
statusdict begin
30 100 moveto
(A page is 1024 bytes.) show
30 115 moveto
(The total number of pages are) show
diskstatus
10 string cvs show
30 130 moveto
(The number of free pages are) show
10 string cvs show
showpage
```

Cut and paste these 12 lines of code to TeachText and download the file with the appropriate utility.

WARNING:
If you choose to use the PostScript code provided in this article, you assume all risks involved in making these changes. PostScript code, if not entered correctly, can place the LaserWriter into a condition requiring service.
Published Date: Feb 20, 2012

Energy Star: Registered Apple Products

This article lists the Apple products introduced prior to 1997-11 that are Energy Star compliant and are registered with the United States Environmental Protection Agency. For additional information on Energy Star see article 12346: "**Energy Star: Description**". For Apple products introduced 1997-11 or later, see technical document 86193, "**Energy Star: Registered Apple Products, Part 2**".

This article has been archived and is no longer updated by Apple.
Many of these products require the installation of separate software in order to take advantage of the energy saving features. Check with the product user's guide for use, installation, and setup of the energy saving features.

COMPUTERS

Macintosh LC III
LC 475
LC 575

Performa
Performa 410
Performa 460
Performa 466
Performa 467
Performa 475
Performa 476
Performa 550
Performa 575
Performa 630, 630CD
Performa 635CD
Performa 636CD
Performa 637CD
Performa 638CD
Performa 5200CD Series
Performa 5300CD Series
Performa 6200CD Series
Performa 6300CD Series

Quadra
Quadra 605
Quadra 650
Quadra 840AV
Quadra 950

Power Macintosh
Power Macintosh 5200/75 LC
Power Macintosh 5300/100 LC
Power Macintosh 5260/100
Power Macintosh 5400/120
Power Macintosh 7100 series
Power Macintosh 7200 series
Power Macintosh 8100 series

PowerBook
PowerBook 150
PowerBook 520
PowerBook 520c
PowerBook 540
PowerBook 540c
PowerBook Duo 230
PowerBook Duo 280
PowerBook Duo 280c

MONITORS

AudioVision 14-inch. Display

Macintosh Color Display
Multiple Scan 15 Display
Multiple Scan 17 Display
Multiple Scan 20 Display
Multiple Scan 14 Display
AppleVision 1705
AppleVision 1710
AppleVision 1710AV
AppleVision 750
AppleVision 750 AV
AppleVision 850
AppleVision 850 AV

PRINTERS

StyleWriter II
Color StyleWriter 2400
Color StyleWriter Pro
Color StyleWriter 1500
Color StyleWriter 2500
LaserWriter Pro 600 and 630
LaserWriter Select 360
Personal LaserWriter 320
LaserWriter 16/600
LaserWriter 4/600
Color LaserWriter 12/600
LaserWriter 12/640
LaserWriter 8500
Published Date: Feb 20, 2012

Mac OS 7, 8, and 9: How To Take A Snapshot Of Your Screen

This article describes a way of capturing a picture of what appears on your screen, including the menu bar, trash can and all open windows that are visible.

This article has been archived and is no longer updated by Apple.

Press These Keys	To Do This...
Command-Shift-3	Create a picture file of the entire screen.
Control-Command-Shift-3	Copy entire screen capture to Clipboard instead of saving it as a file.
Command-Shift-4	Create a picture file of a rectangular section of the screen. (After pressing and releasing the key combination, drag across the part of the screen you want to take a picture of.)
Control-Command-Shift-4	Copy selected portion of screen to clipboard instead of saving it as a file.
Command-Shift-Caps Lock-4	Create a picture file of a window. (After pressing and releasing the key combination, click the window you want to take a picture of.)

Each screen shot is saved in the PICT file format at the top (root) level of your hard drive directory and labeled "Picture 1". If you keep taking screenshots, you will get "Picture 2", "Picture 3", and so on.

Related Documents

25133 Mac OS 9: Can Not Take a Snapshot Picture of the Screen

61544 Mac OS X: Shortcuts for Taking Pictures of the Screen

Published Date: Feb 17, 2012

Mac OS: Troubleshooting Type 1, Type 2, and Type 3 System Errors

This article offers tips for troubleshooting system errors of Type 1, Type 2, and Type 3.

This article has been archived and is no longer updated by Apple.

Symptom

An application stops responding, and the following error message is displayed: "Sorry, the application 'Application Name' unexpectedly quit because an error of type (1, 2, or 3) occurred."

Solution

Type 1, 2, and 3 errors are Mac OS memory-addressing errors. These are usually caused by incompatible software or software conflicts.

System software compatibility issues usually occur with older software. If your software falls into this category, contact the software vendor for an updated version of the software that works with your installed system software version.

Software application memory allocation may need to be increased to resolve the issue. See document 56042: "**Mac OS: Troubleshooting Out of Memory Errors**".

Software conflicts most often involve faults with extensions and control panels. Depending on which version of system software you have, you can troubleshoot these items in the following way:

System 7.0 to System 7.1.2

1. Restart your Macintosh computer with the Shift key held down until you see the message "Welcome to Macintosh, Extensions off". This procedure temporarily turns off all non-essential extensions and control panels.

2. Try to recreate the failure. If the failure does not reappear, then you have an extension conflict. Go to Step 3.

    - If the failure continues to occur it is probably not related to any third party extension or control panel. You may need to contact the software vendor to upgrade your application.

3. To determine which of your extensions or control panels is causing the failure, create a folder on your desktop and place all your non-Apple extensions and control panels in that folder and restart your computer.

4. One by one, place the items back into your System Folder, restarting and attempting to recreate the failure every time you add an item. When the failure reoccurs, then you know that either the last item you added, or a combination of the items you have added, is causing your conflict. Contact the vendor of the extension or control panel to see if there is an updated version available.

System 7.5 through Mac OS 9

1. Restart your Macintosh and hold down the Space Bar until the Extensions Manager control panel opens.

2. Use the pop-up menu in the Extensions Manager to choose "All Off". Close the Extensions Manager control panel.

3. Try to recreate the failure. If the failure does not reappear, then you have an extension conflict. Go to Step 4.

    - If the failure continues to occur, it is probably not related to any extension or control panel, you may need to contact the software vendor to upgrade your application.

4. Restart your Macintosh and hold down the Space Bar until the Extensions Manager control panel opens. Turn on groups of extensions and control panels by clicking to the left of each item to put a checkmark by the item. Close the Extensions Manager control panel.

5. Try to recreate the failure.

Repeat Steps 4 and 5 until you have isolated the conflict to a single extension or group of extensions.

You can attempt to remedy a conflict by changing the loading order of a given extension or control panel by locating the file in the System Folder and adding a space or spaces to the front of the file's name. There are also third party utilities that allow you to test and manage extensions and

control panels.

For related information on troubleshooting Type 1, 2, and 3 System errors, please see article 30725: "**Macintosh: Random Behaviors When No Printer is Chosen**"

Related Documents

60763 Mac OS 9: Type 3 or Type 10 Error May Occur if Internet Config is Missing

Published Date: Feb 17, 2012

About a monitor‘s contrast and brightness

Brightness
Brightness adjusts the overall level of the screen. The relationship between the level of white and black, or of colors, does not change; that is, white is still white, black is still black, and yellow is still yellow. The brightness control either dims or brightens the entire screen. There is very little change in the screen when the brightness is adjusted.
This article has been archived and is no longer updated by Apple.
Contrast
The contrast adjustment controls the overall gain of the video amplifier. Adjusting the contrast to its maximum "on" position will make the whites appear whiter and the blacks appear blacker. Contrast will make both white and black (also colors, if applicable) move toward each other, i.e. makes the relationship between the white level and the black level change. Turning the contrast down will tend to make both the whites and the blacks look gray. You will see a large swing from very light to very dark when adjusting contrast (the screen will appear to get darker or lighter).

Example:
Consider a room that is painted half black and half white. It has two controls, one for brightness and one for contrast.

If the brightness control is adjusted, it acts like a light dimmer, controlling whether the amount of light in the room brightens or darkens. However, the black half of the room stays black and the white half of the room stays white. There is just less light in the room.

If the contrast control is adjusted, the relationship between the black and white colors of the room actually changes. When the contrast is turned down, the white half of the room will actually become grayer or move toward black, and the black half of the room will become grayer or move towards white; making it harder to differentiate between black and white, as they both now look the same (gray). Turning the contrast up will make a greater difference between the black and white colors, which makes it easier to differentiate between black and white.
Published Date: Feb 20, 2012

World Power Differences Can Limit International Product Use

This article is about using an Apple product outside of its country of purchase, particularly where the electrical power is different.

Find the electrical specifications for an Apple product by click this link: http://www.info.apple.com/applespec/ to go to the Apple Spec Database. This article has been archived and is no longer updated by Apple.

Overview

Apple products that can be used outside of their country of purchase can be categorized into three classes: those that accept a range in voltage, those that accept a range in frequency, and those that accept a range in both voltage and frequency. Knowing the power requirements of a specific product and the characteristics of the electrical power in the foreign location where you plan on using it will help you to determine if you can use your Apple product there.

Universal

These products can be used internationally out of the box. Some of Apple's products are self-configuring devices or "universal" within a certain range. They can accept a range in both voltage and frequency, and only require a plug adapter for the specific locale.

Example: The Apple Power Macintosh G3 accepts 100 V to 240 V, 50 Hz to 60 Hz.

Frequency Independent

These products can be used internationally with a voltage transformer. Generally, they are designed for 120 V power, but are flexible as to the frequency they accept (for example, 47 Hz to 63 Hz) They are known as "frequency independent." These products require a step-down isolation transformer to adapt the voltage, but handle the different frequency on their own.

Example: The North American Apple LaserWriter 8500 accepts 100 V to 120 V, 50 Hz to 60 Hz.

The Apple LaserWriter 8500 uses a switching power supply that works independently of the input frequency. The European and Australian input frequency standard of 50 Hz do not adversely affect this printer. You can use the Apple LaserWriter 8500 overseas with a voltage converter (isolation transformer).

Frequency Dependent

These products generally cannot be used internationally because they only work within a narrow range in frequency. They are "frequency dependent." Transformers or converters only transform voltage, so if the product requires a certain frequency, there's no practical way to convert both voltage and frequency.

These products can be used internationally only in countries with the same frequency as the country for which the product was manufactured. Further, a voltage transformer is required if the destination country has a voltage different from the home country.

Example: The North American Apple Color StyleWriter 2500 accepts 120 V, 60 Hz.

Important: Desktop computers with power outlets for peripherals do not condition the voltage as it passes through. So, a monitor requiring 120 V, 60 Hz power cannot be used in a 220 V, 50 Hz environment even if the computer from which it gets its power is able to accept the local power.

Apple Products

Universal Devices

The majority of Apple's products manufactured after the Macintosh SE (1987) are self-configuring or "universal" between 100 V and 240 V, 50 Hz to 60 Hz. Usage in countries within these ranges may only require a plug adapter. Note that some Apple products have a voltage selector to select between 110 V and 220 V. For these products, you must select the correct voltage before plugging them in.

To verify if a specific product is universal, check its label for the voltage and frequency requirements, or the Apple Spec Database at http://www.info.apple.com/applespec/.

Voltage-Dependent Devices

The Apple products designed to operate at a line voltage ranging from 107 V to 137 V at 50 Hz or 60 Hz (cycles per second) are considered to be voltage-dependant. If the destination country uses a line voltage of 220 V, and the product only accepts 120 V, you'll need a 220 V to 110 V stepdown isolation transformer. This type of transformer is the only one known to give a clean signal.

The transformer's wattage should be 150 percent of the total wattage of the system (computer, monitor, hard disk, printer, and so forth). For example, if the system consumes 250 W of power, use a transformer rated for a minimum of 375 W. A 500 W transformer should be sufficient for an entire Apple system (computer, monitor, and printer). It must also have a third prong for a grounded outlet. Electrical shock to you, or damage

to the hardware may occur if the products are not correctly grounded.

Non-universal Apple power supplies function correctly with voltages between 107 V and 132 V. If line voltage fluctuates outside these specifications, you need to use a power conditioner to ensure uninterrupted operation of your Apple equipment. Operating without the conditioner will probably not result in damage to the hardware, although the voltage fluctuation may cause your computer to be unresponsive. In such an event, you will lose any data in memory and may even lose data stored on disk.

Frequency-Dependent Devices

If the country uses a line frequency other than 60 Hz, then all AC-powered devices attached to your computer system (monitors, printers, and so forth) must be "frequency independent." That is, they must be able to operate on a line frequency of either 50 Hz or 60 Hz. A majority of Apple products are frequency independent, but check the specifications of all equipment prior to using it.

Traveling Tips

When traveling with a computer, protect it from shock, heat, moisture, radiation, and theft. Special hard-shell shipping cases are advertised for most Apple products. These cases can protect computer products from environmental abuse. In addition, they often do not look like computer cases, and usually escape the notice of thieves.

X-rays and other magnetic radiation associated with X-ray machines only pose a slight potential danger. Most airports X-ray all luggage. If the risk in losing software or data is too high, back the files stored on your computer's hard disk.

Due to concern about computers and floppy disks going through security scanners at airports, the American Society for Testing and Materials (ASTM) conducted a study on X-ray induced damage to memory devices, including audio and video tapes and floppy disks. They found that the devices usually have enough shielding to protect the media. The study found that the magnetic field was actually strongest around the scanner's monitor. They taped a disk to the monitor for several hours without damage. A committee member suggested that it would take at least 1000 million passes through the machine before any damage would be evident.

Published Date: Feb 20, 2012

VGA Monitors: Which Macintosh Models Are Compatible

This article explains which Macintosh computers introduced before November 1997 work with VGA monitors.

For computers introduced since November 1997, see technical document 86183, "**VGA Monitors: Which Macintosh Models are Compatible, Part 2**".

This article has been archived and is no longer updated by Apple.
Most Macintosh computers work with VGA monitors, including:

Macintosh LC Computers
LC
LC II
LC III
LC 475
LC 630

Performa Comptuers
Performa 400, 405, 410, 430
Performa 450
Performa 460, 466, 467
Performa 600
Performa 630 series

Centris/Quadra Computers
IIvx/IIvi
Centris/Quadra 610
Centris/Quadra 650
Centris/Quadra 660AV

Quadra Computers
Quadra 605
Quadra 700
Quadra 800
Quadra 900
Quadra 950
Quadra 840AV
Quadra 630

Power Macintosh Computers
Power Macintosh 5200 series
Power Macintosh 6100 series
Power Macintosh 6200 series
Power Macintosh 6300
Power Macintosh 7100 series
Power Macintosh 7200 series
Power Macintosh 7600
Power Macintosh 8100 series
Power Macintosh 8500 series
Power Macintosh 9500 series

PowerBook Computers
PowerBook 160
PowerBook 165c
PowerBook 180
PowerBook 180c
PowerBook 190 Series - Must have external video upgrade
PowerBook 500 Series
PowerBook Duo (with MiniDock or Duo Dock)
PowerBook 2400
PowerBook 3400
PowerBook 5300 Series

Making the Connection

TA21581_VGA_Monitors_Which_Macintosh_Models_Are_Compatible_(TIL12917).pdf

To connect a VGA monitor to the Macintosh video port, an cable adapter may be required. Third-party cable vendors should have these adapters available for purchase. More recent Macintosh computers use a VGA-style connector and do not need an adapter. Refer to your computer's owner guide or Mac OS Help for additional information on connecting a VGA monitor to your computer. For information on display adapters, see technical document 33001, "**Display Adapter Table**".

VGA monitors may have variances when purchased from different VGA monitor vendors. It is best to test a monitor for compatibility with your Macintosh before making a purchase decision. VGA monitors also have different image quality specifications. There may be significant differences between Apple monitors and various VGA monitors. A side-by-side review of the monitors should be done before deciding which monitor to buy.

Published Date: Feb 20, 2012

PowerBook Displays: Active Matrix and Passive Matrix Compared

This article compares active matrix and passive matrix LCD displays used in PowerBook and iBook computers.
This article has been archived and is no longer updated by Apple.
Liquid Crystal Display (LCD) is the technology used on the screens of PowerBook and iBook computers. LCDs are non-emissive (no extra low frequency (ELF) or very low frequency (VLF) emissions); they do not create their own light, but reflect and block light. LCDs use a reflector, backlight, sidelight, or a combination of a reflector and back/sidelight to display an image.

The main difference from a cathode-ray tube (CRT) display is that the pixel (the little dots of light that comprise the picture on a computer or TV screen) is not the source of light. A typical LCD consists of a reflector, rear polarizer, back glass, liquid crystal material, front glass, and front polarizer.

The liquid crystal material is a liquid with rod-shaped molecules inside. The rod-shaped molecules can form a twisting helix, or spiral pattern and bend light that enters the display. When electric current is applied, the rods straighten out and no longer bend the light. The inside surfaces of the glass are treated and polished to induce the rod-shaped molecules in the liquid crystal material to line up with the polarizers.

The display uses two polarizers to line up the light and reduce glare. If the light is out of phase, it can not pass through the polarizer. By using two polarizers 90 degrees out of phase with each other, the light is blocked. The liquid crystal material bends the light 90 degrees so it will pass through the polarizer. When the LCD has power to it, it does not bend the light, hence it does not pass through the polarizer.

This type of display is called an active matrix, or Thin-Film Transistor (TFT), display. Passive matrix, or Film SuperTwist Nematic (FSTN), displays are similar to TFT displays, but the liquid crystal molecules in a SuperTwist Display bend or twists light much farther than in a standard TFT display. In fact, the molecules in a SuperTwist display can bend 270 degrees or more to transmit light. One difference you may notice between passive and active matrix screens is that active matrix has a much wider viewing range than passive matrix. In other words, you can see information displayed on the screen from a wider side angle on an active matrix display than on a passive matrix display.

Passive Matrix

In a passive matrix, or FSTN, display a grid of electronic control wires or lines are placed on the front and back glass. A pixel is located at the junction of each row and column control lines. Passive matrix displays use one transistor to address each row and one to address each column of pixels. Pixels are turned on when both row and column lines are energized and off when both control lines are de-energized. This addressing scheme is called multiplexing.

The residual electrical current that travels down each control line can cause crosstalk at unselected pixels. Crosstalk partially darkens pixels and lowers the display's overall contrast. This usually appears on a passive matrix PowerBook display as two dark boxes, parallel to each other on the display.

Active Matrix

The active matrix, or Thin-Film Transistor (TFT) display is the latest technology used in Macintosh PowerBook computers. Rather than using multiplexing (row and column wires on the glass) techniques to address the matrix of crystals, the active matrix LCD includes a transistor fabricated along with each pixel. You can think of the display as one large Integrated Circuit (IC), with the transistors acting as switches to turn on individual pixels. (An IC is a slice or chip of material on which is etched or imprinted a circuit comprised of electronic components and their interconnections.) Because of the transistors, pixels can be turned on and off at a very fast rate. The transistor at each pixel eliminates the crosstalk phenomenon, which lowers contrast on an FSTN display.

The TFT method eliminates the time dependency associated with multiplexed displays by directly addressing each pixel.

The following charts which PowerBook models have active matrix or passive matrix displays:

PowerBook Model	B&W/Color/Grayscale	Display Type
100	B&W	Passive
140	B&W	Passive
145	B&W	Passive
145B	B&W	Passive
150	Grayscale (4 Grays)	Passive
160	Grayscale (16 Grays)	Passive
165c	Color (256 Colors)	Passive
170	B&W	Active
180	Grayscale (16 Grays)	Active

180c	Color (256 Colors)	Active
190	Grayscale (16 Grays)	Passive
190cs	Color (256 Colors)	Passive
520	Grayscale (16 Grays)	Passive
520c	Color (256 Colors)	Passive
540	Grayscale (16 Grays)	Active
540c	Color (256 Colors)	Active
1400cs	Color (thousands of colors)	Passive
1400 c	Color (thousands of colors)	Active
5300	Grayscale (16 Grays	Passive
5300c/100 8/500	Color (256 Colors) (2)	Active
5300c/100 16/750	Color (thousands of colors) (2)	Active
5300cs	Color (256 Colors)	Passive
5300ce	Color (thousands of colors)	Active
Duo 210	Grayscale (16 Grays)	Passive
Duo 230	Grayscale (16 Grays)	Passive
Duo 250	Grayscale (16 Grays)	Active
Duo 270c	Color (256 Colors) (1)	Active
Duo 280	Grayscale (16 Grays)	Active
Duo 280c	Color (256 Colors) (1)	Active
Duo 2300c	Color (256 Colors) (1)	Active
2400c	Color (thousands of colors)	Active
3400c	Color (thousands of colors)	Active
G3	Color (thousands of colors)	Active
G3 Series	Color (thousands of colors)	Passive
G3 Series	Color (millions of colors) (3)	Active
G3 Series (Bronze Kbd)	Color (millions of colors)	Active
G3 Series (FireWire)	Color (millions of colors)	Active
G4 - all models	Color (millions of colors)	Active
iBook - all models	Color (millions of colors)	Active

Notes:

1. Thousands of colors in 640 by 400 resolution
2. The PowerBook 5300c computer is available in two configurations. One model has 512K of built-in VRAM, the other has 1 MB.
3. Also available in 30 cm STN passive display.
4. Some of the descriptions in this table only apply to computers sold in the United States.

Published Date: Feb 20, 2012

Macintosh: How to Copy or Initialize (Format) a Floppy Disk

How do I copy a floppy disk? How do I initialize or format a floppy disk?
This article has been archived and is no longer updated by Apple.
If your Macintosh has two floppy-disk drives:

1) Insert the disk to be copied in one drive, and the disk you want to copy to in the other drive.

2) Drag the icon of the original disk onto the icon of the "target" or destination disk.

3) You'll be asked if you want to completely replace the contents of the target disk with the contents of the original. Click Yes to continue.

Note: This will replace, not add to, everything that was on the disk you are copying to.

If your Macintosh has only one floppy-disk drive:

1) Insert the disk to be copied in the floppy disk drive.

2) Press Command-E to eject the disk. Its icon will remain on the desktop, but as a dimmed, or grayed-out shadow.

3) Put the disk you want the new copy on in the floppy disk drive. It may be a disk you have used before, or a new, uninitialized disk. If it is uninitialized, click Initialize to format the disk.

4) Drag the icon of the dimmed floppy disk over the icon of the disk you just inserted in the drive.

5) You'll see a warning dialog box that asks if you want to completely replace the contents of the new disk with the contents of the original. Click Yes to continue.

Note: This will replace, not add to, everything that was on the disk you are copying to.

6) You'll be asked to insert disks as needed as the computer makes your copy.

Note: You can stop the copying process at any point by pressing "Command-." (Command-period). You may have to press this key combination more than once.
Published Date: Feb 20, 2012

Video Technologies: Composite versus S-video

What is the difference between composite video and S-video? Also, which Macintosh computers support these video technologies?
This article has been archived and is no longer updated by Apple.

Composite Video

A composite video signal is one in which the luminance, chrominance, and sync information have been combined into a single signal using one of the coding standards: NTSC, PAL, SECAM, and others. This is the form the signal must take before it can be broadcast or recorded by standard means. Composite video is more common than S-video, as televisions, most video- cassette recorders (VCRs), and laser disc players (LDPs) use the composite format.

Chrominance
The color part of a signal, relating to the hue and saturation but not to the luminance (brightness) of the signal. Any colored signal has both chrominance and luminance.

Luminance
The aspect of the video signal carrying information about the brightness of an image.

Sync
Short for synchronous. Refers to signals used to synchronize the horizontal and vertical scans of a video signal. This signal is derived from a composite or combination of horizontal and vertical drives, with some slightly narrowed and delayed pulses as well as the addition of equalizing pulses. When used, is usually accompanied by subcarrier.

S-video

An S-video signal is a consumer form of component video. It is used primarily with Super8 (Hi8 video or 8 mm tape) camcorders and S-VHS recorders (S-video on VHS tape). S-video is a less common -- but higher quality -- video format than composite video.

Component video

Component video is a recording system that does not require NTSC encoding of RGB signals, but uses a means of recording and routing the luminance and color signals separately. This method does not reduce bandwidth nor compromise the RGB components and results in images of higher resolution and better color quality than composite video. Though designed for high-end television production, similar recording methods have recently become available to the consumer market.

Video support

The following Macintosh computers support both composite video and S-video input and output:

Computer	Composite video	S-video
Macintosh Quadra 660AV	Yes	Yes
Macintosh Quadra 840AV	Yes	Yes
Power Macintosh 6100AV series	Yes	Yes
Power Macintosh 7100AV series	Yes	Yes
Power Macintosh 8100AV series	Yes	Yes
Power Macintosh 7500 series	Yes	Yes
Power Macintosh 7600 series	Yes	Yes
Power Macintosh 8500 series	Yes	Yes

The Macintosh Quadra 660AV and 840AV and the Power Macintosh 7500, 7600, and 8500 series computers have separate connectors for composite and S-video. The Power Macintosh 6100AV, 7100AV, and 8100AV series computers have S-video input and output connectors but require an adapter for composite video input and output.

Published Date: Feb 20, 2012

Video Signal: Composite vs. Component

This article defines composite and component video.
This article has been archived and is no longer updated by Apple.

Component video

A term gave to a recording system which does not require NTSC encoding of RGB signals, but uses a means of recording and routing the luminance and color signals separately. This method does not reduce the bandwidth nor compromise the RGB components and results in images of higher resolution and better color quality than composite video. Though designed for high end television production, similar recording methods have recently become available to the consumer market.

Composite video

A composite video signal is one in which the luminance, chrominance and sync information have been combined into a single signal using one of the coding standards: NTSC, PAL, SECAM, and so forth. This is the form the signal must take before it can be broadcast or recorded by standard means. Until recently, most monitors and projectors have accepted only composite video signals, although many now available accept RGB. See NTSC. Compare component video.

The NTSC composite signal format is required for most video recording, manipulation, and display in the United States. The exception is the high-end post-production facilities that use component video for improved signal integrity.

NTSC Composite vs. Component

In a composite signal, the luminance signal and the color signals are encoded together into one signal. When the color components are kept as separate signals, the video is called component analog video (CAV), which requires three separate signals: the luminance signal (Y) and the color difference signals (R-Y and B-Y).

Because component video does not undergo the encoding process, the color quality is noticeably better than composite video.
Published Date: Feb 20, 2012

TA21586_Video_Definitions_NTSC_PAL_SECAM_(TIL13074).pdf

Video Definitions: NTSC, PAL, SECAM

There are currently three standards in the world for composite, color encoded video: NTSC, PAL and SECAM. Standards exist for High Definition Television (HDTV), however, this article will only discuss the broadcast formats currently in wide use.
This article has been archived and is no longer updated by Apple.

NTSC

NTSC represents the National Television System Committee of the Electronics Industries Association, the organization which defined the standard format adopted by the FCC for broadcast television in the United States. NTSC is also the standard used in Japan, Canada, and Mexico.

"NTSC" is usually taken to mean the NTSC color television system itself, or its interconnection standards. This is also called "composite video" because all the video information* sync, luminance, and color are combined into a single analog signal.

"NTSC" is often said to stand for "Never The Same Color." When color broadcasting first became a commercial possibility, the standard was created to allow color television signals to be compatible with existing black and white television. The restriction of compatibility with the earlier technology results in compromises in color image quality.

PAL

"PAL" stands for Phase Alternation by Line, the broadcast video standard used in West Germany, Great Britain and most Western European nations.

By reversing the relative phase of the color signal components on alternate scanning lines, this system avoids the color distortion that appears in NTSC. Otherwise, PAL closely resembles NTSC. Based on the 50 Hz power system, PAL displays 625 lines interlaced at 50 fields per second (25 frames per second).

PAL is not compatible with NTSC or SECAM, though conversion between the standards is possible. Video products to be used in Europe require compatibility with PAL standards.

SECAM

"SECAM" is an abbreviation for Séquential Couleur à Mémoire, the line sequential color system used in France, Russia, Eastern Europe and some Middle Eastern countries.

Like PAL, SECAM is based on a 50 Hz power system, displaying interlaced lines at 50 fields per second. The color information is transmitted sequentially (R-Y followed by B-Y, etc.) for each line and conveyed by a frequency modulated subcarrier that avoids the distortion arising during NTSC transmission.

SECAM is not compatible with NTSC or PAL, although conversion between the standards is possible.
Published Date: Feb 20, 2012

LaserWriter Driver 8.x: How Auto Select Works

I have had problems using the Auto Select feature of LaserWriter Driver 8.x. The Auto Select option in the Print dialog seems to be ignored randomly, or used randomly when not asked for.
This article has been archived and is no longer updated by Apple.
This article explains the LaserWriter Driver 8.x "Auto Select" feature. However, when following the information presented here, you must first make sure that "Auto Select" is selected as the paper source in the LaserWriter 8.x Print dialog.

Installed and Preferred
This setting only affects print jobs coming from the Macintosh you "Configure". Either the 250-sheet or 500-sheet cassette can be chosen as the default paper tray by selecting the printer in the Chooser, clicking on Setup, and then on Configure. Once the Configure dialog box displays, the 500-sheet cassette can be set for Installed and Preferred, which makes it the default paper tray for that paper size. Thus, if there is Legal-sized paper in the 500-sheet tray, then any Legal-sized print job uses the 500-sheet cassette. If the 500-sheet cassette is set only as Installed, then the default paper tray used is the 250-sheet cassette (for all jobs using the paper size installed in that cassette).

To access the Configure dialog box with LaserWriter Driver 8.2 or greater, you must click on Setup once to select the PostScript Printer Description (PPD) file, and then click on Setup again to get the option for Configure.

PostScript and Default Paper Tray
This affects ALL print jobs coming from ANY Macintosh since the value is modified at the printer, not the client (as in the preceding Installed and Preferred procedure).

You can set any of the paper trays (Multipurpose, 250-sheet, 500-sheet, or Envelope) as the default paper tray by downloading the PostScript code (see PostScript Code on page 10) to the printer. The default tray selected is used automatically for any print jobs of the same paper size as in the default tray that you set.

PostScript Code
Use this PostScript code at your own risk. You are responsible for the support of any problems associated with changing the default tray. You should also inform others using the printer that you have changed the default tray. Changing the default tray on the printer may cause the paper out LED to light if there is no paper present in the default tray, or if the wrong size paper is used in the tray. When this happens, there is nothing wrong with the printer's hardware.

This is PostScript Level 1 code:

```
%=========================================================
% Begin PostScript Code
%
serverdict begin 0 exitserver
statusdict begin 1 setdefaultpapertray end
%
% end PostScript Code
%=========================================================
```

VALUE TRAY SELECTION

0 250 sheet cassette
1 Multi-purpose tray
2 500 sheet cassette
3 Envelope tray

Note: The VALUE column pertains to the integer preceding the setdefaultpapertray command on the second line in the PostScript code.

This is the equivalent PostScript Level 2 code:

```
%=========================================================
% Begin PostScript Code
%
serverdict begin 0 exitserver
1 dict dup /InputAttributes 1 dict dup /Priority [2 1 0] put put setpagedevice
%
% End PostScript Code
%=========================================================
```

This sets the paper tray priority to:

1st Priority - Cassette (500 Sheets) - designated by the "2" in the array above.
2nd Priority - Multipurpose Tray - designated by the "1" in the array above.
3rd Priority - Cassette (250 Sheets) - designated by the "0" in the array above.

You can change the paper tray priority order by changing the values in "/Priority [2 1 0]".

For example, /Priority [0 1 2] makes the 250 sheet cassette first priority, then the Multipurpose tray next, then the 500 sheet cassette.

Warning: If you choose to use the PostScript code provided in this article, you assume all risks involved in making these changes. PostScript code, if not entered correctly, can place the LaserWriter into a condition requiring service.

Individual Documents
Tray selection is NOT stored with each individual document, however, page size is. Thus, with "Auto Select" the LaserWriter driver does its best to match the page size with the appropriate tray, depending on how the printer was configured using the preceding procedures.

Sticky Trays?
LaserWriter 8.x DOES NOT automatically use (for the next job) the last paper tray used in the previous job, unless the current print job is of the same paper size as the previous job.
Published Date: Feb 20, 2012

TA21589_AOL.pdf

AOL

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Published Date: Feb 20, 2012

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Until April, 1998, Apple Computer, Inc. maintained a series of forums on CompuServe. This is no longer the case and customers seeking technical and support related content should visit Apple's Support Web site on the Internet at **http://www.apple.com/support/**.
Published Date: Feb 20, 2012

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Some of Intuit's products include Quicken TurboTax, QuickBooks, and Quicken.
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Published Date: Feb 20, 2012

PowerBook: Using SCSI Devices

This article tells how to add peripheral devices to your PowerBook and how to use SCSI Disk Mode, which lets some PowerBook computers connect to a desktop Macintosh and appear as an external hard disk.
This article has been archived and is no longer updated by Apple.
All PowerBook models released up to and including the PowerBook G3 (Bronze keyboard) include an external SCSI port except the PowerBook Duo 200 series. The PowerBook Duo must be connected to a dock of some kind to have a physical SCSI port (SCSI Disk Mode is only supported with the Mini Dock).

The iBook and later PowerBook models do not contain external SCSI functionality. Instead, these models include USB and/or FireWire ports. For information on connecting SCSI devices to these computers, see article 43026: **iMac and iBook: How to Utilize External SCSI Peripherals**

For information on FireWire target disk mode, which has replaced HD target mode on FireWire-equipped PowerBook computers, refer to article 58583: **FireWire Target Disk Mode**

If you are still unsure as to what ports are available on your model of PowerBook, consult the documentation included with your computer or Apple product specifications at http://support.apple.com/specs/powerbook/.

The SCSI Port and Cabling

The SCSI port used in PowerBook computers is called an HDI-30. It is a square connector with 30 pins. There are two different SCSI cables. In addition to one of these cables, you may need a terminator, model number M3503xx/A (in the US all model numbers are LL, thus the terminator would be M3503LL/A). Refer to article 24281: "**PowerBook: SCSI Cables Used**" for images of the various cables.

Apple HDI-30 SCSI Disk Adapter
This adapter, model number M2539xx/A is specifically for SCSI Disk Mode, also known as HD Target Mode. It can be distinguished by its HDI-30 connector having 30 pins (5 rows of 6). The connector on the other end is a standard Centronics 50 connector.

Apple HDI-30 SCSI System Cable
This cable is for connecting external SCSI devices, like CD-ROMs and hard drives, to your PowerBook and it is called the Apple HDI-30 SCSI System Cable, model M2538xx/A. Its HDI-30 connector only has 29 pins. The connector on the other end is a standard Centronics connector.

SCSI Disk Mode (HD Target Mode)

This mode enables the PowerBook hard drive appear on the Finder desktop of the host Macintosh it is connected to. This mode is supported on all PowerBook models with the exception of the 140, 145, 145B, 150, and 170 and is recommended for high speed transfer of information, but is not necessarily intended for long-term usage.

On PowerBook computers equipped with IDE hard drives, such as the PowerBook G3 Series, this functionality is called HD Target Mode though functionally it is the same. Follow these steps to set up SCSI disk mode:

1. In the PowerBook control panel (Portable control panel for the 100) choose the SCSI ID for the PowerBook. Remember, each SCSI device must have a unique ID number. Verify that the hard drive name for the PowerBook is different from the hard drive name of the host computer.

2. Shut down the PowerBook and any additional SCSI devices in the SCSI chain. Attach the HDI-30 SCSI Disk Adapter cable to the PowerBook and a terminator at the other end (the terminator may not be required; check your user manual).

3. Plug the SCSI Disk Adapter cable to either a SCSI cable attached to the desktop Macintosh, or to any existing SCSI device on the SCSI chain.

4. Power on the PowerBook. You should see a diamond shaped symbol moving across the screen with a number corresponding to the SCSI ID you set. Once you see that, power on the desktop computer. After that computer starts up, you should see the PowerBook computer's hard drive appear on the Finder desktop of the host Macintosh.

5. If you find that the host computer does not start up properly, turn both computers off, remove the terminator and then restart both computers.

To end the session, shut down the desktop Macintosh. Then power off the PowerBook pressing and holding the power button for two seconds then releasing. (For the PowerBook 100, press both of the buttons on the left side of the computer.)

Note: The Macintosh Plus and the Macintosh SE without an internal hard disk can use SCSI disk mode. When attaching under these configurations, you do NOT use the terminator between the two SCSI cables.

Adding External Devices

There are many devices that use the SCSI port to connect to your PowerBook. Some examples are hard disks, CD-ROM drives, scanners, and backup devices.

The most important thing to keep in mind when adding devices to a SCSI chain is the ID number. The SCSI chain has an ID range from 0 to 7. ID 7 is reserved for the PowerBook itself; ID 0 is reserved for the internal hard drive on most computers. The other 6 ID numbers are for external devices. Generally, this ID can be set on the device by some external selector -- consult the manual for the device to see how to set this number. The ID number for each device must be unique on the chain. That is, only one device can use a given number. If you are running the Apple System Profiler, the Device Information section will give you more information about which ID numbers are in use.

Officially a SCSI device chain must be terminated at both the beginning and end. Some older PowerBook computers do not supply termination at the beginning of the SCSI chain. Because of this, a second terminator may be needed before the first device in the chain. Check your PowerBook's user manual to determine the placement and quantity of SCSI terminators needed for your PowerBook model in the section titled, "Connecting SCSI devices."

If there is more than one external SCSI device connected in a chain to a PowerBook computer, they can be connected together using the Apple SCSI Peripheral Interface Cable. This cable is a Centronics 50 pin to 50 pin cable. Both the first and last device in the chain need one terminator each, unless one or more of the devices in the chain have termination built in.

Some older SCSI devices are internally terminated. If you are not sure, it is very important that you check the manual for each device. If any of the devices in the middle are terminated, your system will have difficulties seeing all the devices.

Before connecting or disconnecting devices on a SCSI chain, turn the power off for all devices. When you get ready to power up, turn on all external devices first, then turn on the PowerBook. Unpowered device may not supply power to their terminator. When you wish to end the session, shut down the PowerBook first, then turn off all the devices.

Common Problems Q & A

Question: I am attempting SCSI Disk Mode, and the PowerBook does not display the diamond pattern. What is wrong?

Answer: Some PowerBook computers will not show the disk mode icon until the desktop Macintosh is powered on.

Make sure you are using the correct cable. This is the most common difficulty. Refer to the previous Cabling section to verify that you are using the SCSI Disk Adapter cable. Second, be aware that SCSI Disk Mode is only supported in certain PowerBooks. Review the instructions under SCSI Disk Mode to see which PowerBooks are supported.

Be sure to use Apple cables because some third party cables may not have adequate shielding.

Question: I have added an external SCSI device to my PowerBook and when I start up, I get a diamond symbol on my screen. What does this mean?

Answer: You are using the SCSI Disk Adapter Cable instead of the System Cable. See the preceding section on Cabling to see the difference.

Question: I have added an external SCSI device to my PowerBook and when I start up, I get only a flashing question mark (?) over a disk icon. Why?

Answer: Something is preventing your PowerBook from starting up correctly. First, try to start up your computer from its Disk Tools disk or Mac OS system software CD. If it starts up and your hard drive does not appear on the desktop, you may have a SCSI ID conflict. Make sure that the external device is set to an ID number from 1 to 6, and if more than one device is connected, make sure each has a unique ID number. Try opening the Apple HD SC Setup program on the Disk Tools disk or the Drive Setup program on the Mac OS system software CD. If that program can see your hard drive, try selecting the Update button.

This updates the driver software on the hard disk. Check the version of the Drive Setup program. It is possible that a newer version is available which may address your situation. Make sure you are configuring your SCSI chain correctly; refer to the previous section, paying close attention to termination.

Question: In SCSI Disk Mode, the desktop computer tries to start up from the PowerBook computer's drive, rather than its own internal drive. An example is an error message such as the one saying the system software is not correct for this Macintosh. What should I do?

Answer: Power the desktop computer off, and then start up from the Disk Tools disk for that computer. Make sure that both the PowerBook drive and the desktop's internal drive both show up on the screen. Verify that the names of the two drives are different. Open the Startup Disk control panel and verify the desktop computer is selected. Restart and let the Disk Tools disk be ejected; it should then start up from the correct drive.

Published Date: Feb 20, 2012

LaserWriter 8: Printer Driver Version 8.1.1

This document contains important information about the LaserWriter 8 printer driver version 8.1.1. The printer driver is more compatible with Apple printers and non-Apple software than earlier versions of the LaserWriter 8 printer driver.
This article has been archived and is no longer updated by Apple.

Before Installing Printer Driver Software
Before you install LaserWriter 8 software, check the information below about which files in your System Folder will be replaced with newer versions when you install, and what steps you might want to take to keep or remove files:

If You Use System 6
If you use System 6, you may want to make backup copies of your original PrintMonitor and Backgrounder to use if you need the option of sometimes using an older version of LaserWriter driver. (The Installer automatically replaces your original PrintMonitor and Backgrounder with newer versions.)

Drivers Older Than Version 8.0
The Installer doesn't replace versions of the LaserWriter driver that are older than version 8.0. You may remove printer driver files that are older than version 8.0 from your System Folder if you no longer need them.

Drivers For Versions 8.0 or Later
The Installer does remove earlier versions of the LaserWriter 8 driver (for example, version 8.0) and all Apple PostScript Printer Description (PPD) files.

The Installer Places These Files
For System 6, in your System Folder: LaserWriter 8 (version 8.1.1), PrintMonitor (version 7.0.1), Backgrounder (version 1.3), LaserPrep (version 7.2). The Installer also places PPD files for Apple LaserWriter printers in the Printer Descriptions folder in your System Folder.

For System 7, in the Extensions folder: LaserWriter 8 (version 8.1.1), PrintMonitor (version 7.1). It also installs the latest PPD files for Apple LaserWriter printers in the Printer Descriptions folder in your Extensions folder.

Note: Some files on the LaserWriter 8 disks have been compressed (their filenames end with .cmp). You can only install these files with the LaserWriter 8 Installer.

The Installer does not copy the LaserWriter Utility to your computer. You may install the utility by dragging it to your hard disk.

About PPD Files
The LaserWriter 8 printer driver is shipped with PPD files that contain information about specific features of LaserWriter printer models. These files are in the Printer Descriptions folder. PPD filenames indicate the printer model and its version of PostScript.

To take full advantage of your printer's features, follow these tips:

* Select your printer in the Chooser and click the Setup button.

* Click the Auto Setup button in the Setup dialog box. The correct PPD file for your printer is automatically selected.

* If the driver can't find a PPD file that matches your printer, you will be prompted to select one. You may select the generic PPD file, which will work with all LaserWriter printers.

About Creating EPS Files
You can create an Encapsulated PostScript (EPS) file in many applications programs by clicking File in the Print dialog box, then clicking Save. When you create an EPS file, note the following:

Creating EPS Files
Creating EPS files with the All option selected in the Font Inclusion pop-up menu in the EPS dialog box can result in very large files. If you include all fonts in an EPS file and save the file with the Unlimited Downloadable Fonts option selected, an extremely large file may be created.

EPS File With No Fonts
If you create an EPS file with no fonts included and open the document, fonts in the document appear on your screen, but Courier may be substituted when you print.

EPS Files With Preview Information
When creating EPS files with preview information included, applications that create their own PostScript code may not display the EPS file accurately on the screen.

Using the LaserWriter 8 Driver
When using the LaserWriter 8 driver, you should be aware of the following situations. Some happen with all LaserWriter printers and others happen only with specific models.

All LaserWriters
The LaserWriter 8 driver allows some printers to print using a larger imageable print area on the page. If your printer does so, you may find that text flow in some documents has changed or is clipped to fit the new imageable area.

If you print using A4 size paper, have chosen Manual Feed as the Paper Source, and have a B5 size paper tray installed in your printer, the page will be clipped to match the B5 paper size.

Printing multiple documents with the Finder may not work if the documents have been created by different application programs.

LaserWriter IIg and IIf
When selecting paper sources from the First From and Remaining From pop-up menus in the Print dialog box, selecting Manual Feed for either source sets the driver to print the first page from the manual feed tray.

Some form-printing applications can't print forms using the Layout settings in the Page Setup dialog box.

LaserWriter IINT and IINTX
If you select both the Smooth Graphics and the Invert Image options in the Page Setup Options dialog box, a PostScript error results.

Don't use the B5 tray to print envelopes on a IINT. Use the Letter tray instead.

LaserWriter Pro 600 and 630
You can't use Auto Select as the Paper Source in the Print dialog box to print envelopes from the optional envelope feeder.

When you are printing at 600 dots per inch (dpi), bitmapped images may appear with lines across the image.

Personal LaserWriter NTR
When you are printing in the background, no message appears when the printer runs out of paper.

LaserWriter Pro 810
With some graphics applications, bitmap graphics will be reduced by 25% in size when Precision Bitmap Alignment is specified.

Using the LaserWriter 8 Driver with the Kanji System
To print Japanese characters using KanjiTalk or the Japanese Language Kit, your system must have WorldScript II 7.1.1.

Using the LaserWriter 8 Driver with Application Programs
Some application programs don't yet take advantage of the new features of the LaserWriter 8 driver, or have small incompatibilities that result in printing problems. If you experience problems with a program, contact the publisher of the program. In some cases a newer version of the program may be available.

The following list describes some special cases that you should be aware of when working with some application programs. (There may be other problems with these programs, or with other programs, not mentioned in this document.)

Aldus Freehand 3.11
You can't print using Layout options in the Print dialog box. If you choose a layout from the Layout pop-up menu, the document doesn't print and no error message appears.

EPS files created from within Freehand can't be used in other programs.

Selecting the Unlimited Downloadable Fonts option in the Page Setup Options dialog box results in a PostScript error.

Aldus PageMaker 4.2a
You can't scale EPS images in documents printed using the Layout option in the Page Setup dialog box.

Aldus Personal Press 2.0
Using several font style combinations in text can result in spacing problems.

When working with large EPS files in a document, you may need to increase the amount of memory allocated to the application.

Aldus Persuasion 2.1.2
When you print a document that contains gradient fill patterns, the document is printed with solid patterns instead of gradients.

Documents that contain EPS graphics may not print correctly if you select 2-Up or 4-Up printing.

Aldus SuperPaint 3.0
Rotated or filled polygons print as solid gray objects.

Canvas 3.0.6
Printing with substituted fonts may result in incorrect line layout.

CricketDraw III 1.0
You can't import an EPS file created with the LaserWriter 8 driver that has been saved without preview information.

Be sure that enough space is available on your hard disk when printing large documents; otherwise the application may malfunction.

CricketPresents 2.1
You can't import an EPS file created with the LaserWriter 8 driver that has been saved without preview information.

Informed Manager 1.3.5
Shaded headings in a document may not print correctly.

Some documents will print with extra pages.

MacDraft 2.1
When you print using the Cut Marks option, a PostScript error results.

Microsoft PowerPoint
In PowerPoint version 2.01f, you can't import an EPS file created with the LaserWriter 8 driver that has been saved without preview information.

When importing EPS files, you may want to increase the memory allocated to the application.

Microsoft Works 3.0
Printing documents that have rotated objects with rounded corners results in a PostScript error.

More 3.1
When creating EPS files with the LaserWriter 8 driver, be sure you have enough disk space to hold the file. No Disk Full error message appears when your hard disk becomes full and can't hold the entire file.

Publish It! Easy 2.1.9
Use an earlier version of the driver, or contact the publisher of the application program.

QuarkXPress 3.11
You can't print EPS files created by the LaserWriter 8 driver that contain certain TrueType fonts.

Using Calibrated Color results in a PostScript error.

ReadySetGo! 4.5 and 5.0 (DesignStudio)
Use an earlier version of the driver, or contact the publisher of the application program.

Studio/8 and Studio/32
When creating an EPS file with these programs and the LaserWriter 8.0 driver, you must select the QuickDraw Printer option.

Other Troubleshooting Tips

Printer Status Dialog Boxes
When you are printing with some application programs, the Printer Status dialog boxes may appear overlapping or misaligned on the screen, preventing you from canceling printing by clicking the Cancel button. Press Command-Period to cancel printing.

Unexpected Format Results
If you see unexpected format results when you print a document, choose Page Setup and check whether the paper size is shown as Other. If so, select the correct paper size.

Utility Programs That Change Your Printer Without The Chooser
Utility programs that attempt to change your current printer without using the Chooser may produce unexpected results.

Cover Page May Not Print
With some graphics applications, the Cover Page may not be printed at the end of a multi-page document. Use Cover Page: Before Document.
Published Date: Feb 20, 2012

Disk First Aid: What to do when it finds an error

This article has been archived and is no longer updated by Apple.

Learn what to do when Disk First Aid reports an issue with the disk. This document applies to Mac OS 9 and earlier. It does **not** apply to Disk Utility or Mac OS X.

Symptom

After attempting to repair a disk, Disk First Aid reports one or more of the error messages listed below, followed by, "Problems were found but Disk First Aid cannot repair them".

Solution

1. Back up important data from the disk if possible.

2. Start up from CD and use the Repair option of Disk First Aid to try to repair the volume. If Disk First Aid continues to report an issue with the volume, try running Disk First Aid a second or third time to ensure that the disk cannot be repaired by Disk First Aid.

3. If Disk First Aid is not able to repair the disk, consider using a third-party disk utility to try to repair the disk.

4. If Disk First Aid is not able to repair the disk and a third-party utility is either unavailable or unable to repair the disk, back up important data from the disk if possible, and reformat the disk using Drive Setup.

Explanation of selected "error" messages

Message: Missing Thread Record

Disk First Aid reports the following:

- Checking catalog file.
- Problem: Missing thread record, 3499, 160
- Rechecking catalog file.
- Test done. Problems were found, but Disk First Aid cannot repair them.

Meaning

When Disk First Aid reports that the thread for a file is missing and it cannot repair it, this means that it is unable to reconcile the entry for the file in the directory (catalog B-tree) with the location of the file on the volume. This indication can be triggered by the following:

- The file in question may have become damaged and cannot be repaired.
- The catalog B-tree may have become damaged and cannot be repaired.
- An earlier version of Disk First Aid (which cannot repair volumes currently in use as the startup disk) is being used to try to repair the startup volume. Try booting from another volume such as a System Install CD, and run Disk First Aid from the CD.

Message: Disk First Aid Internal Error

Disk First Aid reports an "internal error" during verification or repair of a disk.

Meaning

If Disk First Aid detects a fault with the volume structure that does not conform to what it knows a reliable volume should look like, and it cannot identify it among its list of known issues, Disk First Aid reports the fault as an internal error.

Message: One Item In Trash, Cannot Be Emptied

Sometimes the Trash has one item in it and cannot be emptied.

Meaning

Folders that cannot be thrown away may suggest a directory issue or a Finder flag issue.

Message: "Disk With Bad Name" Error

Disk First Aid reports a "Disk with Bad Name" error. The disk seems fine in every other way.

Meaning

This message may actually indicate other issues with the disk such as bad data in the boot blocks of the hard drive, or possibly a bad pointer.

If an earlier version of Disk First Aid (which cannot repair volumes currently in use as the startup disk) is being used to try to repair the startup volume, try booting from another volume such as a System Install CD, and run Disk First Aid from the CD.

Message: Keys Out of Order

Disk First Aid reports "Keys Out of Order".

Meaning

B-tree records or referenced records have become damaged.

Message: Bad Leaf Node/Index Node

Disk First Aid reports "Bad Leaf Node/Index Node".

Meaning

A node has been changed and no longer correctly refers to other nodes or records.

Message: B-trees Damaged

Disk First Aid reports "B-trees Damaged".

Meaning

The B-tree (part of the disk directory) has become damaged and cannot be repaired by Disk First Aid.

Message: Volume Bitmap Incorrect

Disk First Aid reports "Volume Bitmap Incorrect".

Meaning

The volume bitmap is not accurately reflecting the use of allocation blocks on the drive. Disk First Aid will attempt to repair this, and the extents file, by comparing the two with each other, then comparing against the actual allocation blocks on the drive.

Message: Bundle Bits Need to be Reset

Disk First Aid reports "Bundle Bits Need to be Reset".

Meaning

The Bundle Bit flag needs to be reset for one or more files. (Other Finder flags may also need resetting).

For related information on this topic, please see the following articles:

Article 7565: "**Disk First Aid: Purpose**"
Article 19516: "**Mac OS: Technical Overview of Disk Volume Structures**"
Article 8647: "**Macintosh: File System Specifications and Terms**"
Article 30344: "**Mac OS: About Mac OS Extended Format**"
Article 24601: "**Mac OS Extended Format: Volume and File Limits**"
Published Date: Feb 20, 2012

LaserWriter Select: Toner Cartridge Compatiblilty

Is the LaserWriter Select 300/310 toner cartridge compatible with the LaserWriter Select 360 printer?

This article has been archived and is no longer updated by Apple.

The LaserWriter Select 360 is based on a new 600 dpi print engine, and it is not compatible with the original LaserWriter Select 300/310 toner cartridge (M2029G/A). However, a universal LaserWriter Select toner cartridge (M1960G/A) is compatible with the LaserWriter Select 360, LaserWriter Select 310, and LaserWriter Select 300 printers. The universal LaserWriter Select toner cartridge is also compatible with the LaserWriter Select 610, which is only available outside the United States.

Published Date: Feb 20, 2012

RS-232: Marks/Spaces and Cable Length/Grounding

This article discusses RS-232 cable length, grounding , marks and spaces.
This article has been archived and is no longer updated by Apple.

MARKs and SPACEs

All RS-232 signals (except grounds) will be above + 3 volts or below - 3 volts (commonly + or - 12 volts). The area between + 3 volts and - 3 volts is called the transition region.

No RS-232 signal (excluding ground) should ever be stationary at a voltage in the transition region. If one is found between + 3 volts and - 3 volts, it is a definite indication of an issue.

- A high RS-232 voltage (between + 3 volts and + 25 volts) is called a SPACE.
- A low voltage (between - 3 volts and - 25 volts) is called a MARK.
- All Control and Clock signals are SPACEs when ON and MARKs when OFF.
- All Data signals are SPACEs when a logic ZERO and MARKs when a logic ONE.

CABLE LENGTH

One of the issues in an RS-232 installation is determining the length of cable to be used. Because capacitance increases with cable length and increased capacitance can eventually degrade the signal to the point where it will cause the loss of data integrity.

The RS-232 standard very conservatively recommends that the maximum length of cable be 50 feet (unless special low capacitance cable is used) and that its total capacitance be limited to 2500 uf or less. However, this length can usually be doubled, tripled, and more depending on the BPS rate (the higher the BPS rate used, the shorter the cable may have to be).

If a cable is over 50 feet and a length problem is suspected, try using a lower BPS rate. If the problem goes away, then try using a shorter or lower capacitance cable at the higher data rate. If the problem doesn't reappear then it must have been the longer cable.

CABLE GROUNDING

If long cables (over 50 feet) are used, the cable should be shielded. In this case the shield, SG (pin 7), and CG (pin 1) should be grounded to the chassis on only one side of the interface (either the DTE or DCE).

Published Date: Feb 20, 2012

PowerBook: Quitting SCSI Disk Mode

This article describes the proper method for exiting Target Disk Mode or SCSI Disk Mode on a PowerBook computer.
This article has been archived and is no longer updated by Apple.
Follow the steps in the Macintosh User's Guide (for your PowerBook) for connecting and disconnecting SCSI devices to avoid loss of information and damage to your equipment.

When using SCSI Disk Mode, the proper way to quit SCSI Disk Mode is to:

1. Shut Down the computer (host) your PowerBook is connected to.
2. Press the power button on the PowerBook to turn it off.
3. Turn off any other SCSI devices in the chain.
4. Disconnect the PowerBook from the SCSI adapter cable.
5. Disconnect the SCSI cables from the host Macintosh.

Notes:

- If you leave the adapter cable attached to the PowerBook, the computer will behave as though it is still in SCSI disk mode when you try to restart.
- If you unmount the PowerBook's SCSI icon by dragging it to the trash it may lock up the computer and possibly damage the directory information on any mounted hard drive. The damage may only be repaired by reformatting.

Published Date: Feb 20, 2012

Desktop Macintosh: Power, Reset, and Interrupt Buttons

This document describes the location of power, reset, and interrupt buttons on modular Macintosh models made before November 1997. For models made since 1997, see technical document 86225, "**Desktop Macintosh: Power, Reset, and Interrupt Buttons, Part 2**".

To determine the equivalent Performa model to the Macintosh models listed below, see article13998: "**Macintosh to Performa Comparison Chart**".
This article has been archived and is no longer updated by Apple.

General Information: Power Buttons

The power button on modular Macintosh models is typically located on the back of the computer close to the right or left side (depending on the model).

Power buttons come in different shapes and sizes. Some are push buttons (round or square), which may be plain, or may include a sideways triangle or a circle with a small straight line inside. Others are toggles, which include a 1 and a 0 (1=On, 0=Off).

General Information: Reset and Interrupt Buttons

The reset and interrupt buttons are located in different areas on different models. Refer to model-specific descriptions below.

The reset button is marked with a small triangle as shown in Figure 1. Pushing the reset button restarts the computer.

The interrupt button is marked with a circle; if the button is large enough there is a crooked line in the circle, as shown in Figure 1. It is used by software programmers when writing applications and debugging them.

Reset button icon	Interrupt button icon

Figure 1 Reset and Interrupt button icons

Keyboard Commands

If the computer does not have a reset button, press the Command-Control-Power keys instead.

If the computer does not have an interrupt button, press the Command-Power keys instead.

Modular Macintosh Model Specifics

Model	Power Location	Reset/Interrupt Location
Macintosh II, IIx, IIfx	Back panel.	Right side of the computer near the rear. You must install the buttons.
Macintosh IIcx, IIci	Back panel. Rotate 90 degrees to lock power on.	Front panel, lower left.
Macintosh IIsi, LC, LC II, LC III, LC 475, Quadra 605, Performa 400 series	Back panel.	None. Use keyboard commands.
Macintosh LC 550, Macintosh TV, Performa 550 and 560	Back panel.	None. Use keyboard commands.
Macintosh LC and Performa 575, 577, 578, 580	Back panel.	None. Use keyboard commands.
Macintosh 630 family, Performa 6200, 6300, and 6360 series	Back panel.	None. Use keyboard commands.
Macintosh Performa 6400 series	Back panel.	None. Use keyboard commands.
Macintosh IIvx, IIvi, Performa 600, Centris 650, Quadra 650	Back panel.	Front panel, lower left.
Macintosh Centris/Quadra 610	Front panel, lower right side.	Back of computer.
Macintosh Centris/Quadra 660AV	Front panel, lower right side.	None. Use keyboard commands.
Macintosh Quadra 700, 800	Back panel.	Front panel near bottom.

Macintosh Quadra 840AV	Front panel, upper right.	None, use keyboard commands.
Macintosh Quadra 900, 950	None, use key lock.	Front panel, near top left.
Power Macintosh and Performa 5200 and 5300 series	Back panel.	None, use keyboard commands.
Power Macintosh and Performa 6100 series	Front panel, lower right side.	Back of computer or use keyboard commands.
Power Macintosh 7100 series	Back of computer.	Front panel on left side or use keyboard commands.
Power Macintosh 7200, 7500, and 7600 series	Front panel, left side.	Use keyboard commands.
Power Macintosh 8100 series	Back panel.	Front panel near the bottom or use keyboard commands.
Power Macintosh 8500 and 9500 series	Front panel, near top.	Use keyboard commands.

Published Date: Feb 20, 2012

Language Kits: Text Control Panel

The Text control panel does not appear to save its selection. If I change the script setting in the control panel, close it, then open it again, the setting reverts back to Roman/US.
This article has been archived and is no longer updated by Apple.
The Text Control Panel comes with the Japanese Language Kit, Chinese Language Kit, or System 7.5. This control panel is for use with WorldScript II and System extensions. It provides the user with the ability to view the scripts of the various languages (alphabets, writing systems) which are installed in the system.

When opened, the Text Control Panel defaults to show System script. The menu will always be set to the System script when the user opens the control panel because the System script is their primary script (the one they use most often).

Note: Changing the "Script" menu in the Text control panel does not set a script to being the active script; it simply displays the text attributes for that particular script.

When running a language kit, the operating system might still be Roman. If it is, Roman would be the script that is shown in the Text control panel. If the operating system is Kanji, then the Text control panel would show Kanji rather than Roman, even though a Language Kit might be installed in the system.
Published Date: Feb 20, 2012

You hear "breaking glass" or "musical beeps" when you turn on your Mac

You turn on your Mac and you expect to hear that crisp chord Macs are famous for. But instead of the usual startup sound, you hear a noise that sounds like glass breaking or a series of musical beeps. This is your Mac's way of telling you that something's not right.
This article has been archived and is no longer updated by Apple.
First, shut down the computer, then disconnect or remove any non-Apple hardware: memory (RAM), external disk drives, printers, and so forth. See if the computer starts up without these.

"Breaking glass"
The breaking glass sound means there's something wrong with your Mac's hardware, usually related to memory. Remove any third-party RAM if you haven't already. If you only have memory that was installed at the factory, try swapping it with other RAM.

"Musical" beeps

1. Do you hear four or eight beeps? If you heard eight, skip to Solution B.
2. Shut down the computer.
3. Start from a system software CD or DVD (insert the disc, restart, and hold the C key during start up). If you don't hear any beeps now, continue to Solution A. If you still do, skip to Solution B.

   Tip: If you can't start from the disc using the C key, try using Startup Manager.

Solution A

Restart the computer from its hard disk, but press and hold the Shift key during startup until you see a "Safe Boot" (Mac OS X) or "Extensions off" (Mac OS 9 and earlier) message.

Mac OS X: If the computer starts up (Safe Boot) and you don't hear any beeps, you'll need to troubleshoot other startup issues.

Mac OS 9 or earlier: If the computer starts up with extensions off and you don't hear any beeps, an extension conflict is the likely cause. If you still hear the beeps with the extensions off, perform a clean installation.

Solution B

Remove all third-party memory (RAM) that wasn't installed by the factory. If you only have memory that was installed at the factory, try swapping it with other RAM. If you have installed additional memory, remove it.

If you can isolate the issue to a particular memory card, replace it. If necessary, take your computer to an Apple Authorized Service Provider for additional diagnostic tests to determine the exact cause of the issue. There may be a fee for this service.

Published Date: Feb 20, 2012

Where to find support for Apple products

This article has been archived and is no longer updated by Apple.

Learn where various online Apple support offerings are located.

Apple Software Updates

Apple Software Updates is a collection of updaters, utilities, and full software installs to help keep your Apple Products running smoothly. You should read the posted Apple Software License Agreement before downloading any software.

- Featured English-North American and International Apple Software Updates can be downloaded from this web site: http://www.info.apple.com/support/downloads.html
- Software updates for earlier versions of Mac OS and Apple hardware are available by browsing the **Downloads Web site**. You can look at the **Older Software Downloads page** for a list of all software released prior to 1998-01-01.

Knowledge Base

Apple's Knowledge Base contains product information, technical specifications, and troubleshooting information. The Knowledge Base is updated daily and is available from the following URL:

- Search the Knowledge Base for current articles and read the latest technical information: http://search.info.apple.com. To search for information on older Apple products, select the "Archive" checkbox (also labeled "Include content created prior to 1997").

Apple Product-Specific Support
Apple provides support pages at http://www.apple.com/support for current products that include links to:

- Product-specific software updates
- Relevant Knowledge Base articles
- Apple Discussions. The Apple Discussion forums are filled with thousands of Macintosh and iPod users from around the world. Search for an answer, post your question, or answer other users' questions in the Apple Discussions community.

Fee-Based Support Options and Extended Warranty
Apple has a number of programs designed to help you get the most out of your Apple product:

- **AppleCare Protection Plan** is a comprehensive plan that provides three years of service and support for one economical price, and includes telephone support, powerful diagnostic tools, and Apple-certified repairs.
- **AppleCare Professional Video Support** can help you keep your project running smoothly, whether you are editing HD video, designing motion graphics, or authoring custom DVDs.
- **AppleCare Premium Service and Support Plan** provides integrated service and support for Xserve technologies, including Mac OS X Server.

AppleSpec

- Each of the links on the **AppleSpec** web page will take you to an individual AppleSpec Document. Products featured on this page were introduced from November 1997 to the present, and are listed by name and date introduced.

Apple Manuals

- Each of the links on the **Apple Manuals** web page will take you to a Knowledge Base document containing a list of manuals in PDF format. To view or print these documents, use Preview in Mac OS X or install Adobe Acrobat Reader.

Published Date: Feb 20, 2012

Power Macintosh: L1 and L2 Cache Explained

This article differentiates between Level 1 and Level 2 cache on the Power Macintosh computers.
This article has been archived and is no longer updated by Apple.

Level 1 Cache

Level 1 cache consists of high speed memory built into the PowerPC processor. By using this cache, the processor can access frequently-requested data more quickly. The amount of level 1 cache varies among the PowerPC chips, and you cannot upgrade it.

The PowerPC 601 microprocessor and the PowerPC 604 microprocessor both have 32K internal cache. However, the PowerPC 601 microprocessor has a single 32K cache for both instructions and data, whereas the PowerPC 604 has two 16K sections, one for instructions and one for data. The PowerPC 604e microprocessor has 64K cache, which consists of two 32K sections, one each for instructions and data.

Computer	Level 1 Cache
Power Macintosh 4400 series	32K
Power Macintosh 5200/75 & Performa 5200 Series	16K
Power Macintosh 5260/100, 5300/100 & Performa 5300 Series	32K
Power Macintosh 5400 Series	32K
Power Macintosh 5500 Series	32K
Macintosh Performa 6200 Series	16K
Macintosh Performa 6290CD and 6300 Series	32K
Macintosh Performa 6360/160	32K
Power Macintosh & Performa 6400 Series	32K
Power Macintosh 6500 Series	32K
Power Macintosh & Performa 6100 Series	32K
Power Macintosh 7100 Series	32K
Power Macintosh 8100 Series	32K
Power Macintosh 7200 Series	32K
Power Macintosh 7300 Series	64K
Power Macintosh 7500/100	32K
Power Macintosh 7600/120 and /132	32K
Power Macintosh 7600/200	64K
Power Macintosh 8500/120	32K
Power Macintosh 8500/132	32K
Power Macintosh 8500/150	32K
Power Macintosh 8500/180	64K
Power Macintosh 8600/200	64K
Power Macintosh 9500/120	32K
Power Macintosh 9500/132	32K
Power Macintosh 9500/150	32K
Power Macintosh 9500/180MP	64K
Power Macintosh 9500/200	64K
Power Macintosh 9600/200	64K
Power Macintosh 9600/200MP	64K
Power Macintosh G3	32K
Power Macintosh G3 (Blue and White)	64K
Power Mac G4 (PCI Graphics)	64K
Power Mac G4 (AGP Graphics)	64K

Level 2 Cache

Level 2 cache (L2 cache) is separate from the processor and in older computers it was upgradeable. The L2 cache works in conjunction with the microprocessor's internal cache to provide maximum performance. The total amount of supported L2 cache also varies from computer.

Performance Benefits

* Native PowerPC Software
You see the greatest performance improvement in tightly written native PowerPC software where code is kept close to the microprocessor.

* Non-Native Software

You will likely see marginal or no performance improvements running software applications written for 68000-series microprocessors.

PowerPC Microprocessors

The reason for performance increases with the addition of L2 cache is the PowerPC microprocessor can keep its pipeline full, allowing for faster and more efficient processing. The microprocessor first checks its internal cache, then L2 cache, and finally main memory (DRAM) for instructions. Because cache memory is faster than DRAM, it can be accessed more quickly, thus helping keep the pipeline full.

This also accounts for the lack of uniform performance improvements. Tight code will stay near the processor and run faster, while other code may not. In general, you can expect a 10-15% performance improvement with code that benefits from L2 cache.

Power Macintosh Models

The NuBus-based Power Macintosh computers (the 6100, 7100, and 8100 series) and the PCI-based Power Macintosh computers do not use the same type of L2 cache.

Power Macintosh 6100, 7100, and 8100

The 6100, 7100 and 8100 Power Macintosh models accept an external L2 cache on a Single Inline Memory Module (SIMM). The Power Macintosh 8100/80 shipped with 256K L2 cache already installed; users of Power Macintosh 6100/60, 6100/60AV, 7100/66, and 7100/66AV can install a L2 cache by installing the appropriate cache SIMM into the 160-pin connector on the main logic board.

The Power Macintosh 6100/66, 7100/80, 8100/100, and 8100/110 computers ship with 256K L2 cache installed.

Power Macintosh 7200, 7300, 7500, 7600, 8500, 8600, 9500, and 9600

The Power Macintosh 7200, 7300, 7500, 7600, 8500, and 8600 series all support L2 cache 160-pin Dual Inline Memory Modules (DIMMs). The cache can be increased by adding L2 cache DIMMs to the expansion slot(s) on the logic board.

The Power Macintosh 7200/75, 7200/90, 7200/120 (8 MB configuration), and the 7500 series computers ship with no L2 cache DIMM installed.

The Power Macintosh 7200/120 (16 MB configurations), 7300 series, 7600 series, 8500 series, and the 8600 series include a 256K L2 cache DIMM installed. The Power Macintosh 7200 is theoretically expandable to 1 MB, while the 7300, 7500, 7600, 8500, and 8600 series computers are theoretically expandable to 4 MB, but those configurations have not been tested and are not supported by Apple.

The Power Macintosh 9500 and 9600 series computers ship with 512K L2 cache memory soldered to the logic board. The Power Macintosh 9500 and 9600 series computers do not have a DIMM socket for adding additional L2 cache memory, and therefore are not expandable beyond 512K.

Power Macintosh G3 and later computers have L2 cache built into the processor module and are not upgradeable.

Computer	L2 Cache	Cache Type	Supported Sizes	Max Total Cache
4400	256K	160-pin DIMM	256K	256K
5200	256K	On logic board	N/A	256K
5260	OPTIONAL	160-pin DIMM	256K	256K
5300	256K	On logic board	N/A	256K
5400	OPTIONAL	160-pin DIMM	256K	256K
5500/225	256K	160-pin DIMM	256K	256K
6200	256K	On logic board	N/A	256K
6300	256K	On logic board		256K
6360	OPTIONAL	160-pin DIMM	256K	256K
6400/180	NONE	160-pin DIMM	256K	256K
6400/200	256K	160-pin DIMM	256K	256K
6500/225	256K	160-pin DIMM	256K	256K
6500/250	256K	160-pin DIMM	256K	256K
6100/60	OPTIONAL	160-pin SIMM	128K, 256K	256K
6100/66	256K	160-pin SIMM	128K, 256K	256K
7100/66	OPTIONAL	160-pin SIMM	128K, 256K	256K
7100/80	256K	160-pin SIMM	128K, 256K	256K
8100	256K	160-pin SIMM	128K, 256K	256K
7200/75	NONE	160-pin DIMM	256K (1)	256K
7200/120	256K DIMM	160-pin DIMM	256K (1)	256K
7300 Series	256K DIMM	160-pin DIMM	256K,512K,1 MB	1 MB(2)
7500/100	NONE	160-pin DIMM	256K,512K,1 MB	1 MB(2)

7600 Series	256K DIMM	160-pin DIMM	256K,512K,1 MB	1 MB(2)
8500 Series	256K DIMM	160-pin DIMM	256K,512K,1 MB	1 MB(2)
8600 Series	256K DIMM	160-pin DIMM	256K,512K,1 MB	1 MB(2)
9500 Series	512K	On logic board	N/A	512k
9600 Series	512K	On logic board	N/A	512k
G3 (3)	1 MB	On Processor	N/A	1 MB
G3 Blue & White	512K or 1MB (4)	On Processor	N/A	512K or 1MB (4)
Power Mac G4	1 MB	On Processor	N/A	1 MB
Power Mac G4 (Gigabit Enet)	1 MB	On Processor	N/A	2 MB (5)
Power Mac (Digital Audio)	1 MB (6)	On Processor	N/A	1 MB (6)
Power Mac G4 Cube	1 MB	On Processor	N/A	1 MB
iMac 233 MHz	512K	On Processor	N/A	512K
iMac 266 MHz	512K	On Processor	N/A	512K
iMac 333 MHz	512K	On Processor	N/A	512K
iMac (Slot Loading)	512K	On Processor	N/A	512K
iMac (Summer 2000)	512K	On Processor	N/A	512K
iMac (Early 2001)	256K (7)	On Processor	N/A	256K (7)
iMac (Summer 2001)	256K (7)	On Processor	N/A	256K (7)
iMac (Flat Panel)	256K (7)	On Processor	N/A	256K (7)
iMac (17-inch Flat Panel)	256K (7)	On Processor	N/A	256K (7)
iMac (17-inch 1GHz)	256K (7)	On Processor	N/A	256K (7)
iMac (USB 2.0)	256K (7)	On Processor	N/A	256K (7)
iMac G5	512K (7)	On Processor	N/A	512K (7)
Mac mini	512K	On Processor	N/A	512K (7)

Notes:

The parenthetical product descriptions (Summer 2000) and (Summer 2001) refer to the summer of the Northern Hemisphere.

Apple does not sell cache modules larger than 256K.

Apple does not support cache modules larger than 256K.

1. These computers theoretically support 512K and 1 MB of L2 cache, but these configurations have not been tested and are not supported by Apple.

2. These computers support a theoretical limit of 4 MB of L2 cache, but this has not been tested and is not supported by Apple.

3. G3 computers running at 233 MHz and 266 MHz have 512k L2 cache.
The Power Macintosh 7200/120 configuration with 8 MB of memory does NOT include the L2 Cache DIMM.

4. Power Macintosh G3 (Blue and White): 512K or 1MB backside level 2 cache on processor, running at 150, 175, or 200 MHz depending on processor speed. The backside L2 cache is integrated into the design of the G3 microprocessor module. No cache expansion is possible without replacing the entire module.

5. Power Mac G4 (Gigabit Ethernet) has dual processors on 450 and 500 MHz models. Each processor has 1 MB L2 cache.

6. Power Mac G4 (Digital Audio) 466 and 533 MHz models have 1 MB Level 2 cache. 667 and 733 MHz models have 256K Level 2 cache on the processor and support up to 2 MB Level 3 cache.

7. The built-in L2 cache runs at the same clock speed as the microprocessor, clock speed ratio 1:1. Previous iMac models have a clock speed ratio of 5:2.

Published Date: Feb 20, 2012

Macintosh and LaserWriter: SCSI Termination Outlined

Is there a table that outlines the specific termination requirements and capabilities of the Macintosh and Apple printer product lines?
This article has been archived and is no longer updated by Apple.
Below is a table that includes the SCSI termination specifics for all Macintosh models and LaserWriter printers (current as of this issue) and describes whether termination power (TPWR) is supplied for either the internal or external SCSI bus, depending on which is present (one or both).

Macintosh Models
Here is a description of the information provided in each column of the following table:

Additional Termination - Indicates if additional termination is needed for a separate internal bus.
Internal Device - Indicates if an internal device or BUS TPWR is supplied.
External Bus - Indicates if an external BUS TPWR is supplied.
Term. Type - Indicates the type of terminator required for the external bus.
SCSI Mode - Indicates if the CPU can be used in SCSI disk mode. Currently only some PowerBook models support SCSI Disk Mode.

NOTE: The asterisks in the table correspond to footnotes that follow the table.

CPU Name	Additional Termination	Internal Device	External Bus	Term. Type	SCSI Mode
Macintosh Plus	No	No	No	Gray	No
Macintosh SE	No	Yes	Yes	Gray	No
Macintosh SE/30	No	Yes	Yes	Gray	No
Macintosh Classic	No	Yes	Yes	Gray	No
Macintosh Classic II	No	Yes	Yes	Gray	No
Macintosh Color Classic	No	Yes	Yes	Gray	No
Macintosh II	No	Yes	Yes	Gray	No
Macintosh IIx	No	Yes	Yes	Gray	No
Macintosh IIcx	No	Yes	Yes	Gray	No
Macintosh IIci	No	Yes	Yes	Gray	No
Macintosh IIfx	No	Yes	Yes	Black	No
Macintosh IIvx	Automatic*	Yes	Yes	Gray	No
Macintosh IIvi	Automatic*	Yes	Yes	Gray	No

CPU Name	Additional Termination	Internal Device	External Bus	Term. Type	SCSI Mode
Macintosh LC	No	Yes	Yes	Gray	No
Macintosh LC II	No	Yes	Yes	Gray	No
Macintosh LC III	No	Yes	Yes	Gray	No
Macintosh LC 520	Intrnl hd	Yes	Yes	Gray	No
Quadra 605	No	Yes	Yes	Gray	No
Quadra 610	On last device	Yes	Yes	Gray	No
Macintosh 630 Family	Intrnl hd	Yes	Yes	Gray	No
Quadra 650	Intrnl hd	Yes	Yes	Gray	No
Quadra 700	Intrnl hd	Yes	Yes	Gray	No
Quadra 800	On last device	Yes	Yes	Gray	No
Quadra 900	On cable	Yes	Yes	Gray	No
Quadra 950	On cable	Yes	Yes	Gray	No

CPU Name	Additional Termination	Internal Device	External Bus	Term. Type	SCSI Mode
Performa 200	No	Yes	Yes	Gray	No

Performa 400	No	Yes	Yes	Gray	No
Performa 405	No	Yes	Yes	Gray	No
Performa 410	No	Yes	Yes	Gray	No
Performa 430	No	Yes	Yes	Gray	No
Performa 450	No	Yes	Yes	Gray	No
Performa 460	No	Yes	Yes	Gray	No
Performa 466	No	Yes	Yes	Gray	No
Performa 467	No	Yes	Yes	Gray	No
Performa 475	No	Yes	Yes	Gray	No
Performa 476	No	Yes	Yes	Gray	No
Performa 550	Intrnl hd	Yes	Yes	Gray	No
Performa 600	Automatic*	Yes	Yes	Gray	No

CPU Name	Additional Termination	Internal Device	External Bus	Term. Type	SCSI Mode
Macintosh Portable	No	No	No	Gray	No
PowerBook 100	No	Yes	No	Gray	Yes
PowerBook 140	No	Yes	No	Gray	No
PowerBook 145	No	Yes	No	Gray	No
PowerBook 145b	No	Yes	No	Gray	No
PowerBook 150	No	No	No	Gray	No
PowerBook 160	No	Yes	No	Gray	Yes
PowerBook 165c	No	Yes	No	Gray	Yes
PowerBook 170	No	Yes	No	Gray	No
PowerBook 180	No	Yes	No	Gray	Yes
PowerBook 180c	No	Yes	Yes	Gray	Yes
PowerBook Duo 210	No	Yes	No	Gray	Yes**
PowerBook Duo 230	No	Yes	No	Gray	Yes**
PowerBook Duo 250	No	Yes	No	Gray	Yes**
PowerBook Duo 270c	No	Yes	No	Gray	Yes**
PowerBook 520/520c	No	No	No	Gray	Yes
PowerBook 540/540c	No	No	No	Gray	Yes
PowerBook 540/540c	No	Yes	Yes	Gray	No

CPU Name	Additional Termination	Internal Device	External Bus	Term. Type	SCSI Mode
Power Macintosh 6100!	Last device	Yes	Yes	Gray	No
Power Macintosh 7100!	Intrnl hd	Yes	Yes	Gray	No
Power Macintosh 8100!	Last device	Yes	Yes	Gray	No
! Power Macintosh information is valid for all speeds of the particular Power Macintosh model.					

Apple Workgroup Server	Additional Termination	Internal Device	External Bus	Term. Type	SCSI Mode
AWS 60	Intrnl hd	Yes	Yes	Gray	No
AWS 80	Intrnl hd	Yes	Yes	Gray	No
AWS 95	Intrnl hd	Yes	Yes	Gray	No

NOTES:
* An active termination circuit automatically terminates the internal device when it is the last device on the bus. If a terminated device is attached to

the external SCSI port, the internal termination is deactivated.

** These PowerBook Duos work in SCSI Disk Mode with a minidock.

Printer Information

Here is a description of the information provided in each column of the following table:

Direct Connect - Indicates if the printer includes a direct SCSI connection.
External Port - Indicates if the printer includes an external SCSI port (for additional font storage).
Term. Type - Indicates the type of terminator required for the external port.
TPWR - Indicates if termination power is supplied and, if so, if it is internal or external.
Reserved SCSI IDs - Indicates if the printer includes a reserved SCSI ID and, if so, what ID number is reserved.

NOTE: The asterisks in the table correspond to footnotes that follow the table.

Printer Name	Direct Connect	External Port	Term. Type	TPWR	Reserved SCSI IDs
LaserWriter	No	No	n/a	n/a	n/a
LaserWriter Plus	No	No	n/a	n/a	n/a
LaserWriter IISC	Yes	Yes	Grey	No	7
LaserWriter IINT	No	No	n/a	n/a	n/a
LaserWriter IINTX	No	Yes	Grey	No	7
LaserWriter IINTXJ	No	Yes	Grey	No	7
LaserWriter IIf	No	Yes	Black	No	6
LaserWriter IIg	No	Yes	Black	No	6
LaserWriter Pro 600	No	No	n/a	n/a	n/a
LaserWriter Pro 630	No	Yes	Black	Int-Yes Ext-No	6&7
LaserWriter Pro 810	No	Yes	Gray	Yes	7
LaserWriter Select 300	No	No	n/a	n/a	n/a
LaserWriter Select 310	No	No	n/a	n/a	n/a
LaserWriter Select 360	No	No	n/a	n/a	n/a
Personal LaserWriter SC	Yes	Yes	Gray	No	7
Personal LaserWriter LS	No	No	n/a	n/a	n/a
Personal LaserWriter NT	No	No	n/a	n/a	n/a
Personal LaserWriter NTR	No	No	n/a	n/a	n/a
Personal LaserWriter 300	No	No	n/a	n/a	n/a
Personal LaserWriter 320	No	No	n/a	n/a	n/a
Apple Color Printer	Yes	No	***	No	***
StyleWriter	No	No	n/a	n/a	n/a
StyleWriter II	No	No	n/a	n/a	n/a
Color StyleWriter Pro	No	No	n/a	n/a	

NOTES:
*** The Macintosh model determines which terminator to use.
**** Indicates the SCSI ID is user-selectable.
Published Date: Feb 20, 2012

JLK 1.0: Overseas Power Macintosh Compatibility

This article describes an issue with the Japan Power Macintosh and Japanese/Chinese Language Kit (version 1.0) installer. This does not affect U.S. Power Macintosh computers running version 1.0 of the Japanese/Chinese Language Kits. The Power Macintosh and the Japanese/Chinese Language kits version 1.0 are compatible in the U.S.
This article has been archived and is no longer updated by Apple.
Version 1.0 of the Japanese Language Kit installer will replace the NuScript manager with an older version. Version 1.1 of JLK/CLK is available internationally to fix this problem. This issue does not affect the systems used in the United States in any way.

The following article can help you locate the software update mentioned here:

- Article 14724: "**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.

Published Date: Feb 20, 2012

Power Macintosh: Run Time Environment

This article provides a technical description of the Run Time Environment and the switch from the 680x0 segment loader to the new Code Fragment Manager.
This article has been archived and is no longer updated by Apple.
A run-time environment is a set of conventions that determine how code and data are loaded into memory and managed. The PowerPC run-time environment is significantly different from the one provided in 680x0-based Macintosh System Software. Fortunately, this change is for the better. The most significant change is the use of fragments to organize code and data in memory. Fragments can be an application, import library (such as system software), or extension. Fragments provide the following benefits:

- Fragments let software in import libraries be easily shared with other programs.
- Fragments provide a simplified means for all software components to address global data. With 680x0 systems, it was provided only for applications.
- The use of fragments is one of the elements that allow future modernization of the Macintosh operating system. It lets new system features such as a microkernal be easily implemented.

Fragments

A fragment is a method of organizing code and data. Fragments can loosely be categorized into three areas:

- An Application is a fragment launched by the user.
- Extensions are fragments which extend the capabilities of other fragments.
- Import library -- These fragments can be shared with other fragments. System software is an example of this type of fragment. Since this fragment can be shared, an import library is also referred to as a shared library. In addition, since import libraries are linked dynamically at application launch time (that is, not when the application was created or installed), they are also referred to as dynamically linked libraries.

At application launch time, the Code Fragment Manager makes sure all the necessary fragments are loaded to memory and prepared for execution. This manager uses the Code Fragment Loader to perform the loading into memory.

Fragment Storage

The physical storage for a fragment is called a container. A container can be any logically contiguous memory location such as a data fork of a file, Macintosh ROM, or a resource.

PowerPC executable code is stored in the data fork of the application file. A 'cfrg'0, is added to the resource fork to indicate that this application is a PowerPC application. In contrast, 680x0 applications place executable code as 'CODE' resources in the resource fork

This arrangement of code and resources allows the creation of a single application that can run on both 680x0- and PowerPC-based Macintosh computers. By combining the two structures together, you get what is called a fat application.

Fat Applications

If a fat application is executed on a 680x0-based Macintosh computer, the system software ignores the 'cfrg'0 resource because it is an unknown type and loads just the 680x0 'CODE' resources. If executed on a Power Macintosh, the system software recognizes the 'cfrg'0 resource and loads the PowerPC code from the data fork.

A fat application is very useful when supporting mixed 680x0 and PowerPC environments. However, it may not be desirable to have a fat application. For example, there may be cases where the 680x0 performance is insufficient to run the application. In this instance, a 'CODE' resource should be installed so when the PowerPC-only application is run on a 680x0 system, a dialog box shows up to explain the situation.

A developer can distribute a single fat application. With Installer 4.0, the user has the option of installing only PowerPC or 680x0 executable application or both.

Import Library

An import library (shared library or dynamically linked library) makes applications be smaller. Since import code is loaded dynamically at application launch time, this code does not have to be part of the application. If only one application utilizes this library, there is little advantage unless the import library is stored in ROM (like system software).

The big advantage of an import library is when multiple applications utilize the same import library since a library is loaded into memory only once. Thus, several applications can have access to the library, without each having to have the RAM overhead to support the functionality.

In addition, centralizing functionality lets updates be made easily. By changing only one set of code, many applications are updated simultaneously.

An import library can be created for such sharable functions such as a spell checker. In addition, it can be used to support infrequently used application functions. The Code Fragment Manager can load these functions on demand after application launch. This results in smaller RAM usage and quicker launching.

Memory Organization

The organization of memory in the PowerPC run-time environment is reasonably similar to the 680x0 environment. The system partition occupies the lower memory addresses while applications take the remaining space starting at the higher memory addresses. As with the 680x0 application partition, the Process Manager allocates space for a stack, heap, and global variable space.

The main difference between the PowerPC and 680x0 memory organization is the location of an application's code section and global variables. This difference varies depending on whether the Power Macintosh has virtual memory turned on or not.

In 680x0 environment, virtual memory uses a single monolithic file on a single volume as backing store. This backing store is mapped to a virtual memory address space. Its size is set via the Memory Control Panel. Unused pages of memory are written to this backing store and loaded into main memory as needed.

This backing store is necessary because the Resource Manager is not re-entrant. Since 68K code is found in code resources in the resource fork of an application, it is accessed by the Resource Manager. However, since it is not re-entrant, the manager cannot be accessed at an interrupt level. Therefore when a page fault occurs, the code must be written to the system wide backing file because it cannot be retrieved from its original location.

A backing store sometimes prolongs the launch of an application. This occurs when an application's code is loaded into main memory only to be immediately written out to the backing store file.

This virtual memory delay is eliminated by the use of a scheme called file mapping. The Virtual Memory Manager uses the data fork of the application as the paging file. The entire code fragment is mapped to logical address space. Assuming the application code does not change (this is a guideline), it can be presumed to be read-only. As such, only the needed portions of code are actually loaded into physical memory.

Note: This file mapping only applies to native applications. These applications have code stored in the data fork.

As a result of this file paging scheme, native applications have a special note attached to their Get Info boxes. At the bottom of Get Info window, there is a message indicating that if virtual memory is turned on, the application's RAM requirements change.

The same application's memory requirement changes when Virtual Memory is turned on (which is indicated in the note). This change in memory requirements is made automatically by the system.

If virtual memory is not turned on, code is loaded into the application heap. The Finder and Process Manager will automatically expand the memory as necessary. This is similar to the 680x0 run-time environment.

Published Date: Feb 20, 2012

Macintosh Displays: Overview of Sense Codes and Adapters

This article describes sense codes and sense adapters and why they are used. Additional information can be found in article 15987: "**Macintosh Monitor Sense Codes: Technical Description**".
This article has been archived and is no longer updated by Apple.
Apple computers and video cards rely on sense codes in the display's video cable to determine what resolution at which to run. For example, an Apple 13-inch RGB monitor tells the Macintosh that it supports 640 x 480, so the Macintosh computer responds by displaying that resolution. When an Apple Multiple Scan Display is connected, it signals to the Macintosh that it can run in a range of resolutions. For example, a Multiple Scan 20 Display can support resolutions from 640 x 480 up to 1152 x 870. Sense Code technology is how Apple displays know what resolution to display.

Older Macintosh computers and Apple video cards do not have reprogrammable video drivers that allow them to switch to higher resolutions. If a Multiple Scan Display is connected to an older Macintosh or video card, it will be limited to 640 x 480 resolution.

Macintosh computers and video cards that fall into this class are:

- Video Cards - 4*8, 8*24, and 8*24GC
- LC , LC II, LC III (except 475, 476, and 630)
- Performa (except the 475, 476, and 630 family)
- PowerBook
- Duo Dock and MiniDock*
- Macintosh II family

The sense adapter attaches to the display's video cable, and has a sense code for a higher resolution.

* - The Duo Dock does not require a video adapter to change resolutions when System 7.5 is installed.

Sense Adapters

Sense code cable adapters allow older Macintosh and video cards to display higher resolutions on multiple scan displays. The adapters have a sense code for a higher resolution. This tricks the Macintosh into thinking it is hooked to a fixed frequency display like our 16-inch and 21-inch RGB displays.

The other solution, when using a multiple scan display, is to use a programmable display card like a Macintosh Display Card 24AC. Because this card is fully capable of recognizing the multiple scan sense codes and changing resolutions without restarting, even older Macintosh Systems work fine if they have a 24AC card.

Sense Code Adapter Specifications

832 by 624 Adapter - 16-inch Display

DB15M	DB15F	Pin Assignments
1	1	RED GND
2	2	RED VIDEO
3	3	C SYNC
5	5	GREEN VIDEO
6	6	GREEN GND
9	9	BLUE VIDEO
11	11	C & V SYNC GND
12	12	V SYNC
13	13	BLUE GND
14	14	H SYNC GND
15	15	H SYNC
SHELL	SHELL	

Notes:
PINS 4 & 10 JUMPERED TOGETHER ON DB15 PLUG END.

1152 by 870 Adapter - 21-inch Display

DB15M	DB15F	Pin Assignments

1	1	RED GND
2	2	RED VIDEO
3	3	C SYNC
5	5	GREEN VIDEO
6	6	GREEN GND
9	9	BLUE VIDEO
12	12	V SYNC
13	13	BLUE GND
14	14	H SYNC GND
15	15	H SYNC
11	11	C & V SYNC GND

SHELL ð SHELL

Notes:
PINS 4,7,10,11 JUMPERED TOGETHER ON DB15 PLUG END.

Published Date: Feb 20, 2012

Apple Displays: Model Numbers

This article lists model numbers that appear on the information tag on the back of Apple displays.
This article has been archived and is no longer updated by Apple.
Many times the only information people have is the model number. This chart can be used to determine the monitor they have from the model number.

Number on Monitor	Monitor Name
M0400	Apple High-Resolution Monochrome Monitor
M0401	AppleColor High-Resolution RGB Monitor (13-in Rev A)
M0402	Apple Two-Page Monochrome Monitor (Rev A)
M0404	Macintosh Portrait Display (Rev A)
M1025	Apple Two-Page Monochrome Monitor (Rev B)
M1030	Macintosh Portrait Display (Rev B)
M1050	Macintosh 12-in Monochrome Display
M1212	Macintosh Color Display
M1296	Macintosh 12-in RGB Display
M1297	AppleColor High-Resolution RGB Monitor (13-in Rev B)
M1298	Macintosh 16-in Color Display
M1787 or M2346	Apple Color Plus 14-in Display
M1823	Apple Multiple Scan 20 Display (Rev A and Rev B) (Note 1)
M2001	AudioVision 14 Display
M2494	Apple Multiple Scan 17 Display
M2935	AppleVision 1710 Display
M2935	Colorsync 17-inch Display (formerly named the AppleVision 750 Display)
M2942	AppleVision 1710 AV Display
M2942	AppleVision 750 AV Display
M2943	Apple Multiple Scan 15 Display
M3502	Macintosh 21-in Color Display
M3703	ColorSync 20-inch Display (formerly named the AppleVision 850 Display)
M3705	AppleVision 850 AV Display
M4222	Multiple Scan 14" Display
M4436	Multiple Scan 1705 Display
M4552	Multiple Scan 720 Display
M4681	Multiple Scan 15 AV
M6204	Apple Studio Display with ColorSync (21-inch, Blue and White)
M6221	Apple Studio Display (17-inch, Blue and White)
M4551(A)	Apple Studio Display (LCD 15-inch, original model)
M4551(B)	Apple Studio Display (LCD 15-inch, Blue and White)
M9103	Apple Basic Color Display
M7613	Apple Studio Display (LCD 15-inch DVI)
M2454	Apple Studio Display (LCD 15-inch ADC)
M5662	Apple Cinema Display (DVI)
M8149	Apple Cinema Display (ADC)
M8536	Apple Cinema HD Display
M7649	Apple Studio Display 17 (LCD)
A1038	Apple Cinema Display (20-inch)

Note:

TA21608_Apple_Displays_Model_Numbers_(TIL15087).pdf

1. The Apple Multiple Scan 20 Display Rev. A and Rev. B have the same overall appearance. To distinguish the two versions, check the last three digits of the serial number. The serial number for the Rev.B version ends in one of the following:
- 5B4
- 5J2
- 5JE
- 5JF

Published Date: Feb 20, 2012

The Apple Trackpad: Overview of Technology and Use

This article describes the Apple Trackpad technology.
This article has been archived and is no longer updated by Apple.

Key Points

- A conductive surface (such as a finger) is needed to move the cursor. Pointing devices such as pens, a Newton stylus or even a finger nail won't work. Humidity can also impair contact.
- There is a direct correspondence between the rectangular trackpad and rectangular screen.
- Solid state mechanism allows space to be allocated to larger, longer lasting batteries.
- More reliable than a mouse or a trackball.
- Provides clicking and dragging capability on some PowerBook models.

Description

The Apple trackpad is a pointing device that provides precise control over cursor movement. Based on user testing and feedback, Apple engineers have tuned the interface to make the trackpad a very efficient pointing device for interacting with the computer.

More recent PowerBook models provide the ability to use the trackpad to select and drag icons or text blocks rather than having to use the trackpad button. Check the Trackpad control panel, shown in Figure 1, to see if clicking and dragging are supported on your particular PowerBook model.

Figure 1 Trackpad Control Panel

Technology Overview

The technology works on a principal called coupling capacitance. As your finger moves over the surface, the trackpad evaluates the change in capacitance between two layers of measurement electrodes built into the surface of the trackpad. The electrodes are arranged in a checkerboard configuration, which creates a series of intersections, or couplings, where the capacitance is measured by the trackpad. The horizontal electrodes send out a test pattern signal which the vertical electrodes sense. As a finger approaches the trackpad surface, its presence lowers the capacitance (coupling coefficient) at the closest electrode intersections and modifies the signal received by the sense electrodes.

By monitoring this change in capacitance, the trackpad is able to first locate and then compare the current location of low capacitance (where the finger is touching) to the previous location, and then moves the cursor accordingly. This cycle of sending out a test pattern, sensing the change in capacitance, and moving the cursor is constantly repeated. The high resolution of the trackpad (387 dots per inch in the horizontal and vertical directions) allows precise control over cursor movement down to the pixel level. The Trackpad control panel provides a adjustments over a full range of acceleration to ensure precise control.

Trackpad Speed Adjustments

The faster your finger moves across the pad, the faster and farther the cursor will move across the display. If the finger moves quickly, the cursor will traverse the display completely. If the finger moves slowly, the cursor can be controlled quite precisely. In fact, just rocking the finger tip slightly on the pad gives pixel level accuracy! New trackpad users can experiment with the control settings in the Trackpad control panel to see which acceleration setting works best.

The acceleration curve settings offered range from slow to fast. The higher the curve chosen, the farther the user will be able to traverse the screen with a shorter finger movement on the pad. The setting that is most preferred among users is the fourth setting up from the slowest setting.

Published Date: Feb 20, 2012

Apple Monitors: How To Change Resolution

This article explains how to change screen resolutions on Apple monitors when running Mac OS version 8 or later.
This article has been archived and is no longer updated by Apple.
You can change the resolution of your monitor to zoom in for detail work or to zoom out and see a whole page or more at a time. To change your screen resolution, follow these steps:

1. Select the Monitors control panel from the Apple menu, it may also be called Monitors and Sound.

Note: If you have more that one monitor, a separate Monitors control panel will appear on each display.

2. Click on the resolution you desire in the Resolution section of the control panel.
3. The new resolution will be displayed after you select it.
4. Close the Monitors control panel by clicking the close box in the upper-left corner.
5. If the image is distorted, adjust the video controls in the Monitors control panel or on the monitor itself.

Published Date: Feb 20, 2012

AppleShare and AppleShare IP File Sharing: Chart of All Limitations

This article provides an overview of the limits for AppleShare File Server and Personal File Sharing.

Note: This document does not apply to any version of Mac OS X or Mac OS X Server. This document describes older AppleShare and AppleShare IP products, as well as Personal File Sharing in Mac OS 9 or earlier. For Mac OS X Server, see documents 107684 and 107323. This article has been archived and is no longer updated by Apple.

AppleShare File Server and Sharing Limitations							
	Pro	**IP 5.x & 6.x**	**4.2 & 4.2.1**	**4.0.2 & 4.1**	**3.0.x**	**2.0.1**	**File Sharing (6)**
Maximum # of Connected Users	200	250/500 (6)	250	150	120	50	10
Maximum # of Outstanding Requests	50	-	64	30	15	n/a	5
Maximum # of Open Files	5000	3000(2,9)	3000(2)	346	346	160	346
Maximum # of Volumes	50	50	50	50	50	16	10
Maximum # of Shared Items	50	100	100	50	50	n/a	10
Maximum # of Users in User and Groups(3)	8192	4096	8192	8192	8192	2000	100
Maximum # of Group Membership/User	42	42	42	42	42	16	41
Maximum # of Simultaneous File Launches	200	250(1)	150(1)	150(1)	120	app specific	10
Maximum # of Files per Volume	65,536	65,536 (8)	65,536	65,536	65,536	65,536	65,536
Maximum Volume Size	2 GB	2 TB (4,5)	4 GB	4 GB	4 GB	2 GB	2 TB (4,7)
Maximum File Size	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB

.

Table Notes

1. Depends on application and connected users.
2. 3000 instances of 346 unique open files.
3. 2000 recommended.
4. Mac OS versions prior to System 7.5 support a maximum volume size of 2 GB. System 7.5 and later support volume sizes in excess of 4 GB. However, because AppleTalk Filing Protocol (AFP) version 2.0 is limited to volume sizes of 4 GB or less, the maximum AppleShare volume size remains 4 GB. (see note below)
5. AFP 2.2 adds support for 2 terabyte volumes. Using AppleShare Client 3.7.2 or newer with AppleShare IP 5.0.2 or newer allows the use of these larger volume sizes.
6. Maximum number of connected users is subject to licensing restrictions. The maximum limit of 500 users is only available in ASIP 6.x and may require additional memory. For details, see article 24624:" **AppleShare IP 6: Read Me**"
7. Clients will see all the items on the server but the free space reported will never exceed 1.9 GB.
8. ASIP 5.x and 6.x utilize AFP 2.2, which allows for over 4 billion (2^32) shared files on a volume. In practice, the maximum number of shared files will be the same as the maximum number of files that can be stored on the volume. For HFS volumes, this is 65,536 files. For HFS+ volumes this limit will be significantly higher.
9. The limit of 346 unique open files is a limitation of Mac OS versions prior to Mac OS 9. Mac OS 9 and later support up to 8169 unique open files. AppleShare IP 6.3 and later, when used with Mac OS 9 and later, can support up to 3000 open files, all of which may be unique (depending on file usage by other parts of the system).

See Article 24601: "**Mac OS Extended Format: Volume and File Limits**"

NOTE: With AppleShare Workstation (client) software older than version 3.5, the maximum volume size is a few hundred kilobytes less that 2 GB. This was fixed with version 3.5.

For limitations on Apple File Services in Mac OS X Server, see the following article:

Article 60064 "**Mac OS X Server: Apple File Services Open File Limitation.**"
Published Date: Feb 20, 2012

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Published Date: Feb 20, 2012

LaserWriter Pro 630: Adjusting Print Density

The Users Guide for my LaserWriter Pro 630 states that I can change the print density via the LaserWriter Utility. When I attempt to change the density, I see no noticeable change in the density. Am I missing something?

This article has been archived and is no longer updated by Apple.

The LaserWriter Utility allows you to make changes to the print density. However, the change in density is minimal and may not be visible under normal circumstances.

Published Date: Feb 20, 2012

Macintosh: Monitor and Video Chart (2 of 4)

This article provides a list of Apple Macintosh systems with the monitor and video options each can use.

Related Articles:

Article 11131: **"Macintosh: Monitors and Video Chart (1 of 4)"**
Article 15879: **"Macintosh: Monitors and Video Chart (3 of 4)"**
Article 15881: **"Macintosh: Monitors and Video Chart (4 of 4)"**

This article has been archived and is no longer updated by Apple.

Monitor Specification Chart

Specifications	Performa	Performa Plus	13-in RGB *	14-in Color *	Audio-Vision 14-in	Multiple Scan * 14, 15, 17, 20, 1705, 1710, 1710 AV (640 x 480)
Part Number	M9101LL/D	M9102LL/D	M0401LL/D	M1198LL/B	B1247LL	M3935LL (14) M3089LL (15) M2611LL (17) M2612LL (20) M4434LL (1705) M3322LL (1710) M3323LL (1710AV)
Resolution (pixels)	640 x 480	640 x 480	640 x 480	640 x 480	640 x 480	640 x 480
Power Frequency (HZ)	57-63	57-63	47-63	50-60	50-60	47-63
Power Voltage (VAC)	98-132	98-132	100-240	100-240	100-240	90-132 198-260
Vertical Refresh	66.7 Hz	66.7 Hz	66.7 Hz	66.7 Hz	66.7 Hz	66.7 Hz
Horizontal Refresh	35 kHz	35 kHz	35 kHz	35 kHz	35 kHz	35 kHz
Dots Per Inch (DPI)	67	67	69	69	69	64
Dot Pitch	0.39 mm	0.28 mm	0.26 mm	0.26 mm	0.26 mm	0.26 mm

* All of these monitors display the same video depth at 640 x 480 resolution, so only one column is listed in the chart for all monitors.

LC Family

LC	VRAM	Performa	Performa Plus	13/14-in Displays, Multiple Scan @ 640x480
LC, LC II (1)	256K 512K	16 C 256 C	16 C 256 C	16 C 256 C
LC III	512K 768K	256 C 32,768 C	256 C 32,768 C	256 C 32,768 C
LC 475	512K 1MB	256 C 32,768 C	256 C 32,768 C	256 C 32,768 C
LC 550 (2)	512K 1MB	N/A N/A	N/A N/A	256 C 32,768 C
LC 575 (2)	--	N/A	N/A	32,768 C
LC 630 (3)	--	32,768 C	32,768 C	32,768 C

C = Number of Colors

(1) Requires a display adapter with Multiple Scan 15 Display.

(2) This is a built-in Trinitron display.

(3) The following computers are in the Macintosh 630 family: Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, LC 630, and Quadra 630.

Performa Family

Performa	VRAM	Performa	Performa Plus	13/14-in Displays, Multiple Scan @ 640x480
400, 405, 410, 430 (1)	256K 512K	16 C 256 C	16 C 256 C	16 C 256 C
450, 460, 466, 467	512K 768K	256 C 32,768 C	256 C 32,768 C	256 C 32,768 C
475, 476	512K 1MB	256 C 32,768 C	256 C 32,768 C	256 C 32,768 C
550, 560, 575, 577, 578 (2)	--	N/A	N/A	32,768 C
600, 600CD (1)	512K 1MB	256 C 32,768 C	256 C 32,768 C	256 C 32,768 C
630 series (3)	--	32,768 C	32,768 C	32,768 C
6200	--	32,768 C	32,768 C	32,768 C
6300	--	32,768 C	32,768 C	32,768 C
6400	1 MB	32,768 C	32,768 C	32,768 C
Mac TV (2)	--	N/A	N/A	256 C

C = Number of Colors

(1) Requires a display adapter with Multiple Scan Displays.

(2) This is a built-in Trinitron display.

(3) The following computers are in the Macintosh 630 family: Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, LC 630, and Quadra 630.

Macintosh II Family

Macintosh	VRAM	Performa	Performa Plus	13/14-in Displays, Multiple Scan @ 640x480
IIsi (2)	--	256 C	256 C	256 C
IIci (2)	--	256 C	256 C	256 C
IIvi, IIvx (1)	512K 1MB	256 C 32,768 C	256 C 32,768 C	256 C 32,768 C
II, IIx, IIcx, IIfx (3)	--	N/A	N/A	See note

C = Number of Colors

(1) Requires a display adapter with Multiple Scan 15 Display.

(2) The Multiple Scan 14 and Multiple Scan 15 Display require a special third-party display adapter for use with the Macintosh IIsi and IIci computers.

(3) No built-in video and requires a video card.

Centris/Quadra Family

Centris/Quadra	VRAM	Performa	Performa Plus	13/14-in Displays, Multiple Scan @ 640x480
605, 610, 650	512K 1MB	256 C 32,768 C	256 C 32,768 C	256 C 32,768 C
630 Family (1)	--	32,768 C	32,768 C	32,768 C
660AV (2)	1MB	32,768 C	32,768 C	32,768 C
700	512K 1MB 2MB	256 C 256 C 16.7M C	256 C 256 C 16.7M C	256 C 256 C 16.7M C
800	512K 1MB	256 C 32,768 C	256 C 32,768 C	256 C 32,768 C
840AV (2)	1MB 2MB	32,768 C 16.7M C	32,768 C 16.7M C	32,768 C 16.7M C
900, 950	1MB 2MB	256 C 16.7M C	256 C 16.7M C	256 C 16.7M C

C = Number of Colors

(1) The following computers are in the Macintosh 630 family: Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, LC 630, and Quadra 630.

(2) For the AV computers, pixel and viewable color numbers are for computer graphics only. When video is enabled, VRAM is split evenly between graphics and video.

Power Macintosh Family

Power Macintosh	VRAM	Performa	Performa Plus	13/14-in Displays, Multiple Scan @ 640x480
4400 (1)	1MB 2MB 4MB	N/A N/A N/A	N/A N/A N/A	32,768 C 16.7M C 16.7M C
5400	1MB	N/A	N/A	32,768 C
6100 6100AV (2)	HDI45* 2MB	32,768 C 16.7M C	32,768 C 16.7M C	32,768 C 16.7M C
6500	2MB	N/A	N/A	16.7M C
7100 7100AV (2)	HDI45* 1MB 2MB 2MB	32,768 C 32,768 C 16.7M C 16.7M C	32,768 C 32,768 C 16.7M C 16.7M C	32,768 C 32,768 C 16.7M C 16.7M C
7200	1MB 2MB 4MB	32,768 C 16.7M C 16.7M C	32,768 C 16.7M C 16.7M C	32,768 C 16.7M C 16.7M C
7300	2MB 4MB	16.7M C 16.7M C	16.7M C 16.7M C	16.7M C 16.7M C
7500	2MB 4MB	16.7M C 16.7M C	16.7M C 16.7M C	16.7M C 16.7M C
7600	2MB 4MB	N/A N/A	N/A N/A	16.7M C 16.7M C
8100 8100AV (2)	HDI45* 2MB 4MB 2MB	32,768 C 16.7M C 16.7M C 16.7M C	32,768 C 16.7M C 16.7M C 16.7M C	32,768 C 16.7M C 16.7M C 16.7M C
8500	2MB 4MB	16.7M C 16.7M C	16.7M C 16.7M C	16.7M C 16.7M C

8600	2MB 4MB	N/A N/A	N/A N/A	16.7M C 16.7M C
9500/120	2MB 4MB	16.7M C 16.7M C	16.7M C 16.7M C	16.7M C 16.7M C
9600	4MB	N/A	N/A	16.7M C
G3 systems	See article 30250, titled "**Power Macintosh G3 & G3 All-in-one: Video RAM Upgrade**"			

C = Number of Colors
* = HDI-45 port makes use of 640K of internal DRAM memory.

(1) 13" RGB not supported

(2) For the Power Macintosh AV computers, pixel and viewable color numbers are for computer graphics only. When video is enabled, VRAM is split evenly between graphics and video.

PowerBook Family

PowerBook	VRAM	Performa	Performa Plus	13/14-in Displays, Multiple Scan @ 640x480
160,165,165c, 180,180c	--	256 C	256 C	256 C
190 Series	--	256 C	256 C	256 C
500 Series	--	256 C	256 C	256 C
5300 Series	--	256 C	256 C	256 C
1400 Series	--	256 C	256 C	256 C
3400 Series	--	--	--	32,768 C
G3	--	--	--	16.7M C
Duo Dock	512K 1MB	256 C 32,768 C	256 C 32,768 C	256 C 32,768 C
MiniDock	512K	256 C	256 C	256 C
Duo Dock II	--	32,768 C	32,768 C	32,768 C

C = Number of Colors

3400 Notes:
1) The computer does not provide a display with 2 bits per pixel.

2) An SVGA monitor's display resolution will be 640 by 480 pixels. The user can switch to a higher resolution by using the Monitors control panel or the control strip. The resolution set by the user will be used the next time the computer is started up.

3) If the external monitor can display 800 by 600 pixels at 60 Hz, the PowerBook 3400 computer can display simultaneously on both the external monitor and the flat panel display. This mode of display, called Simulscan, provides the same information on both displays.

Display Cards

Display Card	Performa	Performa Plus	13/14-in Displays	Multiple Scan @ 640x480
Macintosh II	N/A	N/A	16 C	N/A
2-Page Mono Card	N/A	N/A	N/A	N/A
Portrait	N/A	N/A	N/A	N/A
Mono	N/A	N/A	N/A	N/A
High-Res Card (1)	16 C	16 C	16 C	16 C
Ext High-Res Card	256 C	256 C	256 C	256 C
4*8 (2)	256 C	256 C	256 C	256 C
8*24	16.7M C	16.7M C	16.7M C	16.7M C
8*24GC	16.7M C	16.7M C	16.7M C	16.7M C
Display Card 24 AC	16.7M C	16.7M C	16.7M C	16.7M C

C = Number of Colors

(1) Can be upgraded with eight (8) Mac II Video Expansion RAM chips for 256 grays/colors.

(2) The 4*8 can be upgraded to a 8*24 by adding two (2) VRAM SIMMs.

Note: Display adapters are available from several third-party companies such as Enhanced Cable Technology, Griffin Technology, and MacAdapt.

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following Knowledge Base article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"
Published Date: Feb 20, 2012

Macintosh: Monitor and Video Chart (3 of 4)

This article provides a list of Apple Macintosh systems and the monitor and video options each can use.

Related Articles:

Article 11131: **"Macintosh: Monitors and Video Chart (1 of 4)"**
Article 15878: **"Macintosh: Monitors and Video Chart (2 of 4)"**
Article 15881: **"Macintosh: Monitors and Video Chart (4 of 4)"**

This article has been archived and is no longer updated by Apple.

Monitor Specification Chart

Specifications	16-in Color ***	Portrait Display	21-in Monochrome *	MS 14 *** MS 15 *** MS 17 *** MS 20 *** 1710AV *** 1710 *** 1705 *** 832 x 624	MS 17 ** MS 20 ** 1710AV ** 1710 ** 1705 ** 1024 x768
Part Number	M1044LL/A	M0404	M0402	M3935LL/B M3089LL M2611LL M2612LL M3323LL M3322LL M4434LL	M2611LL M2612LL M3323LL M3322LL M4434LL
Resolution (pixels)	832 x 624	640 x 870	1152 x 870	832 x 624	1024 x 768
Power Frequency (HZ)	47-63	47-63	47-63	47-63	47-63
Power Voltage (VAC)	90-270	90-270	85-270	90-132 198-260	90-132 198-260
Vertical Refresh	75 Hz	75 Hz	75 Hz	75 Hz	74.93 Hz
Horizontal Refresh	50 kHz	68.9 kHz	68.7 kHz	49.73 kHz	60.24 kHz
Dots Per Inch (DPI)	70	80	77	69-79	69-79
Dot Pitch	0.26 mm	N/A	N/A	0.31 mm	0.31 mm

* The 21-in. Monochrome display requires the DB-15 to DB-25 cable (590-0615) on all Macintosh computers with built-in video or with graphic cards using the standard DB-15 connector.

** All of these monitors display the same video depth at this resolution (1024 x 768), so only one column is listed in the chart for all monitors.

*** All of these monitors display the same video depth at this resolution (832 x 624), so only one column is listed in the chart for all monitors.

LC Family

LC	VRAM	16-in Color Multi-Scan 15, 17, 20 (832 x 624)	Portrait Display	21-in Monochrome	Multi-Scan 17 and 20 (1024 x 768)
LC, LC II	256K 512K	N/A N/A	N/A N/A	N/A N/A	N/A N/A
LC III	512K 768K	256 C (1) 256 C (1)	16 G 256 G	N/A N/A	N/A N/A
LC 475	512K 1MB	256 C 32,768 C	16 G 256 G	16 G 256 G	16 C 256 C
LC 630 (2, 3)	--	256 C	N/A	N/A	N/A

C = Number of Colors
G = Number of Grays

(1) Requires Display adapter to use Multiple Scan Displays at this resolution.

(2) The Macintosh 630 family computers can use larger monitors such as the Multiple Scan 17 and Multiple Scan 20 however the maximum resolution on these monitors is 832x624, and at this resolution, they cannot support the TV/Video System.

(3) The following computers are in the Macintosh 630 family: Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, LC 630, and Quadra 630.

Performa Family

Performa	VRAM	16-in Color Multi-Scan 15, 17, 20 (832 x 624)	Portrait Display	21-in Monochrome	Multi-Scan 17 and 20 (1024 x 768)
400, 405, 410, 430	256K 512K	N/A N/A	N/A N/A	N/A N/A	N/A N/A
450, 460, 466, 467	512K 768K	256 C (1) 256 C (1)	16 G 256 G	N/A N/A	N/A N/A
475, 476	512K 1MB	256 C 32,768 C	16 G 256 G	16 G 256 G	16 C 256 C
550, 560, 575, 577, 578	--	N/A	N/A	N/A	N/A
600, 600CD	512K 1MB	N/A N/A	N/A N/A	N/A N/A	N/A N/A
630 series (2, 3)	--	256 C	N/A	N/A	N/A
6200	--	256 C	N/A	N/A	N/A
6300	--	256 C	N/A	N/A	N/A
6400	1 MB	256 C	N/A	N/A	N/A
Mac TV	--	N/A	N/A	N/A	N/A

C = Number of Colors
G = Number of Grays

(1) Requires display adapter to use Multiple Scan Displays at this resolution.

(2) The Macintosh 630 family computers can use larger monitors such as the Multiple Scan 17 and Multiple Scan 20. However, the maximum resolution on these monitors is 832x624, and at this resolution, they cannot support the TV/Video System.

(3) The following computers are in the Macintosh 630 family: Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, LC 630, and Quadra 630.

Macintosh II Family

Macintosh	VRAM	16-in Color Multi-Scan 15, 17, 20 (832 x 624)	Portrait Display	21-in Monochrome	Multi-Scan 17 and 20 (1024 x 768)
IIsi	--	N/A	16 G	N/A	N/A
IIci	--	N/A	16 G	N/A	N/A
IIvi, IIvx	512K 1MB	N/A N/A	N/A N/A	N/A N/A	N/A N/A
II, IIx, IIcx, IIfx	--	No built-in video and requires a video card.			

G = Number of Grays

Centris/Quadra Family

Centris/Quadra	VRAM	16-in Color Multi-Scan 15, 17, 20 (832 x 624)	Portrait Display	21-in Monochrome	Multi-Scan 17 and 20 (1024 x 768)
605, 610, 650	512K 1MB	256 C 32,768 C	16 G 256 G	16 G 256 G	16 C 256 C
630 Family (1, 2)	--	256 C	N/A	N/A	N/A
660AV (3)	1MB	32,768 C	256 G	256 G	256 C
700	512K 1MB 2MB	256 C 256 C 16.7M C	16 G 256 G 256 G	16 G 256 G 256 G	N/A N/A N/A
800	512K 1MB	256 C 256 C	16 G 256 G	16 G 256 G	16 C 256 C
840AV (3)	1MB 2MB	32,768 C 16.7M C	256 G 256 G	256 G 256 G	256 C 32,768 C
900	1MB 2MB	256 C 16.7M C	256 G 256 G	256 G 256 G	N/A N/A
950	1MB 2MB	256 C 16.7M C	256 G 256 G	256 G 256 G	256 C 256 C

C = Number of Colors
G = Number of Grays

(1) The following computers are in the Macintosh 630 family: Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, LC 630, and Quadra 630.

(2) The Macintosh 630 family computers can use larger monitors such as the Multiple Scan 17 and Multiple Scan 20 however the maximum resolution on these monitors is 832x624, and at this resolution, they cannot support the TV/Video System.

(3) For the AV computers, pixel and viewable color numbers are for computer graphics only. When video is enabled, VRAM is split evenly between graphics and video.

Power Macintosh Family

Power Macintosh	VRAM	16-in Color Multi-Scan 15, 17, 20 (832 x 624)	Portrait Display	21-in Monochrome	Multi-Scan 17 and 20 (1024 x 768)
4400	1MB 2MB 4MB	256 C 32,768 C 16.7M C	N/A N/A N/A	N/A N/A N/A	256 C 32,768 C 16.7M C
5400 (2)	1MB	256 C	N/A	N/A	N/A
6100 6100AV (1)	HDI45* 2MB	256 C 16.7M C	256 G 256 G	N/A 256 G	N/A 32,768 C
6500 (3, 4)	2MB 2MB 2MB	16.7M C 32,768 C 16.7M C	N/A	N/A	32,768 C
7100 7100AV (1)	HDI45* 1MB 2MB 2MB	256 C 32,768 C 16.7M C 16.7M C	256 G 256 G 256 G 256 G	N/A 256 G 256 G 256 G	N/A 256 C 32,768 C 32,768 C
7200	1MB 2MB 4MB	32,768 C 16.7M C 16.7M C	256 G 256 G 256 G	256 G 256 G 256 G	256 C 32,768 C 16.7M C
7300	2MB 4MB	16.7M C 16.7M C	N/A N/A	256 G 256 G	32,768 C 16.7M C
7500	2MB 4MB	16.7M C 16.7M C	256 G 256 G	256 G 256 G	32,768 C 16.7M C
7600	2MB 4MB	16.7M C 16.7M C	256 G 256 G	256 G 256 G	32,768 C 16.7M C

8100 8100AV (1)	HDI45* 2MB 4MB 2MB	256 C 16.7M C 16.7M C 16.7M C	256 G 256 G 256 G 256 GC	N/A 256 G 256 G 256 G	N/A 32,768 C 16.7M C 32,768 C
8500	2MB 4MB	16.7M C 16.7M C	256 G 256 G	256 G 256 G	32,768 C 16.7M C
8600	2MB 4MB	16.7M C 16.7M C	256 G 256 G	256 G 256 G	32,768 C 16.7M C
9500/120	2MB 4MB	16.7M C 16.7M C	256 G 256 G	256 G 256 G	32,768 C 16.7M C
9600	4MB	16.7M C	256 G	256 G	16.7M C
G3 systems	See article 30250, titled "**Power Macintosh G3 & G3 All-in-one: Video RAM Upgrade**"				

C = Number of Colors
G = Number of Grays
* = HDI-45 port makes use of 640K of internal DRAM memory.

(1) For the Power Macintosh AV computers, pixel and viewable color numbers are for computer graphics only. When video is enabled, VRAM is split evenly between graphics and video.

(2) This is a built-in 15-in display.

(3) 16-bit only supported at 1024 x 768.

(4) 16" supported at 832 x 624 only.

PowerBook Family

PowerBook	VRAM	16-in Color Multi-Scan 15, 17, 20 (832 x 624)	Portrait Display	21-in Monochrome	Multi-Scan 17 and 20 (1024 x 768)
160, 165, 165c 180, 180c	--	256 C (1)	256 G	N/A	N/A
190 Series	--	256 C	256 G	N/A	N/A
500 Series	--	256 C	256 G	N/A	N/A
5300 Series	--	256 C	256 G	N/A	N/A
1400 Series	--	256 C	256 G	N/A	N/A
3400 Series	--	256 C	N/A	N/A	256 C
G3	--	16.7M C	N/A	N/A	32,768 C
Duo Dock	512K 1MB	256 C 32,768 C (2)	256 G 256 G	N/A N/A	N/A N/A
MiniDock	512K	256 C	16 G	N/A	N/A
Duo Dock II	--	32,768 C	256 G	256 G	256 C

C = Number of Colors
G = Number of Grays

(1) Requires display adapter to use Multiple Scan Displays at this resolution.

(2) The Duo Dock requires a video adapter to change resolutions unless System 7.5 is installed.

3400 Notes:
1) The computer does not provide a display with 2 bits per pixel.

2) An SVGA monitor's display resolution will be 640 by 480 pixels. The user can switch to a higher resolution by using the Monitors control panel or the control strip. The resolution set by the user will be used the next time the computer is started up.

3) If the external monitor can display 800 by 600 pixels at 60 Hz, the PowerBook 3400 computer can display simultaneously on both the external monitor and the flat panel display. This mode of display, called Simulscan, provides the same information on both displays.

Display Cards

Display Card	16-in Color Multi-Scan 15, 17, 20 (832 x 624)	Portrait Display	21-in Monochrome	Multi-Scan 17 and 20 (1024 x 768)
Macintosh II	N/A	N/A	N/A	N/A
2-Page Mono Card	N/A	N/A	4 G	N/A
Portrait	N/A	4 G	N/A	N/A
Mono	N/A	N/A	N/A	N/A
High-Res Card (2)	N/A	N/A	N/A	N/A
Ext High-Res Card	N/A	N/A	N/A	N/A
4*8 (3)	256 C (1, 4)	256 C	256 C	256 C
8*24	16.7M C (1, 5)	16.7M C	16.7M C	16.7M C
8*24GC	16.7M C (1, 5)	16.7M C	16.7M C	16.7M C
Display Card 24 AC	16.7M C	16.7M C	16.7M C	16.7M C

C = Number of Colors
G = Number of Grays

(1) Requires Display adapter to use Multiple Scan Displays at this resolution.

(2) Can be upgraded with eight (8) Mac II Video Expansion RAM chips for 256 grays/colors.

(3) The 4*8 can be upgraded to a 8*24 by adding two (2) VRAM SIMMs.

(4) Available with rev. B ROM.

(5) Available with rev. B card.

Published Date: Feb 20, 2012

Macintosh: Monitor and Video Chart (4 of 4)

This article provides a list of Macintosh computers and the monitor and video options each can use.

Related Articles:
Article 11131: **"Macintosh: Monitors and Video Chart (1 of 4)"**
Article 15878: **"Macintosh: Monitors and Video Chart (2 of 4)"**
Article 15879: **"Macintosh: Monitors and Video Chart (3 of 4)"**
This article has been archived and is no longer updated by Apple.

Monitor Specification Chart (1 of 3)

Specifications	21-inch Color *	Multiple Scan 20 Display *	1710 1710AV
Part Number	M5812LL/A	M2612LL/A M2612LL/B	M3322LL M3323LL
Resolution (pixels)	1152 x 870	1152 x 870	1280 x 1024
Power Frequency (Hz)	47-63	47-63	47-63
Power Voltage (VAC)	85-70	90-132 198-260	90-132 198-260
Vertical Refresh	75 Hz	75 Hz	75 Hz
Horizontal Refresh	68.7 kHz	68.7 kHz	80 kHz
Dots Per Inch (DPI)	79	79	--
Dot Pitch	0.26 mm	0.31 mm/A 0.26 mm/B	0.26 mm

* These monitors display the same video depth at this resolution, so only one column is listed in the chart for all monitors.

Monitor Specification Chart (2 of 3)

Specifications	AppleVision 750/750AV and ColorSync 17	AppleVision 850/850AV and ColorSync 20	Apple Studio Display 15" LCD
Part Number(s)	M2942 M2935	M3705 M3703	M6356LL/A
Resolution (pixels)	1280 x 1024	1600 x 1200	1024 x 768
Power Frequency (Hz)	47-63	47-63	50-60
Power Voltage (VAC)	90-132 198-264	90-132 198-260	100-120 AC 200-240 DC
Vertical Refresh	40 Hz-120 Hz	48Hz-120 Hz	--
Horizontal Refresh	30 kHz-82 kHz	30 kHz-94 kHz	--
Dots Per Inch (DPI)	--	--	--
Dot Pitch	0.26 mm	0.26 mm	--

Monitor Specification Chart (3 of 3)

Specifications	Multiple Scan 15AV	Multiple Scan 720
Part Number	M4614LL/A	M6151LL/A
Resolution (pixels)	1024 x 768	1280 x 1024
Power Frequency (Hz)	43-63	50-60
Power Voltage (VAC)	90-132 198-264	100-120 220-240
Vertical Refresh	56 Hz - 75 Hz	48 Hz - 160 Hz
Horizontal Refresh	30 Khz - 56.5 kHz	30 kHz - 69 kHz
Dots Per Inch (DPI)	--	--
Dot Pitch	0.28 mm	0.28 mm

LC Family

LC	VRAM	21-in Color, Multiple Scan 20 Display @ 1152 x 870	1710 1710AV @ 1280 x 1024
LC, LC II	256K 512K	N/A N/A	N/A N/A
LC III	512K 768K	N/A N/A	N/A N/A
LC 475	512K 1MB	256 G 256 G	N/A N/A
LC 520	512K 768K	N/A N/A	N/A N/A
LC 550	512K 1MB	N/A N/A	N/A N/A
LC 575	--	N/A N/A	N/A N/A
LC 630	--	256 G	N/A
C = Number of Colors			

Performa Family

Performa	VRAM	21-in Color, Multiple Scan 20 Display @ 1152 x 870	1710 1710AV @ 1280 x 1024
400,405,410, 430	256K 512K	N/A N/A	N/A N/A
450	512K 768K	N/A N/A	N/A N/A
460,466,4671.85	512K 768K	N/A N/A	N/A N/A
475,476	512K 1MB	256 C 256 C	N/A N/A
550,560,575,577,578	--	N/A	N/A
600/600CD	512K 1MB	N/A N/A	N/A N/A
630	--	N/A	N/A
6200	--	N/A	N/A
6300	1 MB	N/A	N/A
6400	1 MB	N/A	N/A
Mac TV	--	N/A	N/A
C = Number of Colors			

Macintosh II Family

Macintosh	VRAM	21-in Color, Multiple Scan 20 Display @ 1152 x 870	1710 1710AV @ 1280 x 1024
IIsi IIci	-- --	N/A N/A	N/A N/A
IIvi IIvx	512K 1MB	N/A N/A	N/A N/A
II, IIx, IIcx, IIfx	No built-in video, require a video card.		

Centris/Quadra Family

Centris/Quadra	VRAM	21-in Color, Multiple Scan 20 Display @ 1152 x 870	1710 1710AV @ 1280 x 1024
605	512K 1MB	16 C 256 C	N/A N/A
610, 650	512K 1MB	16 C 256 C	N/A N/A
660AV (1)	1MB	256 C	N/A
630 (2)	--	N/A	N/A
700	512K 1MB 2MB	16 C 256 C 256 C	N/A N/A N/A
800	512K 1MB	16 C 256 C	N/A N/A
840AV (1)	1MB 2MB	256 C 32,768 C	N/A N/A
900	1MB 2MB	256 C 256 C	N/A N/A
950	1MB 2MB	256 C 32,768 C	N/A N/A

C = Number of Colors

(1) For the AV computers, pixel and viewable color numbers are for computer graphics only. When video is enabled, VRAM is split evenly between graphics and video.

(2) The following computers are in the Macintosh 630 family: Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, LC 630, and Quadra 630.

Power Macintosh Family

Power Macintosh	VRAM	21-in Color, Multiple Scan 20 Display @ 1152 x 870	1710 1710AV @ 1280 x 1024
4400	1MB 2MB 4MB	256 C 32,768 C 32,768 C	N/A 256 C 256 C
5400	1MB	N/A	N/A
6100 6100AV (1)	HDI45* 2MB	N/A 32,768 C	N/A N/A
6500	1MB	256 C	N/A
7100 7100AV (1)	HDI45* 1MB 2MB 2MB	N/A 256 C 32,768 C 32,768 C	N/A N/A N/A N/A
7200	1MB 2MB 4MB	256 C 32,768 C 32,768 C	N/A (2) N/A (2) N/A (2)
7300	2MB 4MB	32,768 C 16.7M C	32,768 C 32,768 C
7500	2MB 4MB	32,768 C 16.7M C	32,768 C 32,768 C
7600	2MB 4MB	32,768 C 16.7M C	256 C 32,768 C

8100 8100AV (1)	HDI45* 2MB 4MB 2MB	N/A 32,768 C 16.7M C 32,768 C	N/A N/A N/A N/A
8500	2MB 4MB	32,768 C 16.7M C	256 C 32,768 C
9500/120 (2)	2MB 4MB	32,768 C 16.7M C	N/A (2) N/A (2)
9600	4MB	16.7M C	32,768 C
G3 systems	See article 30250, titled "**Power Macintosh G3 & G3 All-in-one: Video RAM Upgrade**"		

C = Number of Colors
* = HDI-45 port makes use of 640K of internal DRAM memory

(1) For the AV computers, pixel and viewable color numbers are for computer graphics only. When video is enabled, VRAM is split evenly between graphics and video.

(2) When the ATI graphics card is used you can get 256 C with 2MB of VRAM on the card. You get 32,768 C with 4MB of VRAM on the ATI card.

PowerBook Family

PowerBook	**VRAM**	**21-in Color, Multiple Scan 20 Display @ 1152 x 870**	**1710 1710AV @ 1280 x 1024**
160,165,165c,180, 180c	--	N/A	N/A
500 Series	--	N/A	N/A
3400 Series	--	N/A	N/A
G3	--	N/A	N/A
Duo Dock	512K 1MB	N/A N/A	N/A N/A
Duo Dock II	--	N/A	N/A
MiniDock	512K	256 C	N/A

C = Number of Colors

3400 Notes:
1) The computer does not provide a display with 2 bits per pixel.

2) An SVGA monitor's display resolution will be 640 by 480 pixels. The user can switch to a higher resolution by using the Monitors control panel or the control strip. The resolution set by the user will be used the next time the computer is started up.

3) If the external monitor can display 800 by 600 pixels at 60 Hz, the PowerBook 3400 computer can display simultaneously on both the external monitor and the flat panel display. This mode of display, called Simulscan, provides the same information on both displays.

Macintosh Video Cards

Video Card	**21-in Color, Multiple Scan 20 Display @ 1152 x 870**	**1710 1710AV @ 1280 x 1024**
Macintosh II	N/A	N/A
2-Page Mono Card	N/A	N/A
Portrait	N/A	N/A
Mono	N/A	N/A
High-Res Card (2)	N/A	N/A

Ext High-Res Card	N/A	N/A
4*8 (3)	16 C (1)	N/A
8*24	256 C (2)	N/A
8*24GC	256 C (2)	N/A
Display Card 24 AC	16.7M C	N/A

C = Number of Colors

(1) Requires Display adapter to use Multiple Scan Displays at this resolution.

(2) Can be upgraded with eight (8) Mac II Video Expansion RAM chips for 256 grays/colors.

(3) The 4*8 can be upgraded to a 8*24 by adding two VRAM SIMMs.

Published Date: Feb 20, 2012

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This article has been archived and is no longer updated by Apple.
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Company Profile:
Provides USB, serial, audio, and display adapters for Macintosh computers.
Published Date: Feb 20, 2012

Macintosh Monitor Sense Codes: Technical Description

The following article provides a detailed explanation of the standard and extended sense codes used to determine which monitor is connected to a particular Macintosh computer or video card. Additional information can be found in article 14890: "**Macintosh Displays: Overview of Sense Codes and Adapters**".
This article has been archived and is no longer updated by Apple.

Sense Lines

The sense line protocol was implemented when Apple recognized the need for a mechanism that would allow a display card to identify the monitor connected to it. For example, the built-in video display circuitry on CPUs such as the Macintosh Quadras and the PowerBook 160 and 165c can configure itself according to the monitor that is connected at boot time. The identification scheme works fine, but there is one problem. There are only three sense lines and this limits the number of different monitors to seven plus the no-connect case. To overcome this limitation, newer display cards and built-in video use extensions to the sense line scheme that allow for new codes.

The first extension, type-7, is based on the following idea: When the display circuitry senses a configuration that in the original scheme signals "no display connected" (i.e. when none of the three sense lines are grounded), the card pulls down each sense line, one by one, and reads what the other lines return. To return a unique code, the only requirement is that the sense lines be interconnected, in the cable or the monitor itself, by wires or diodes. The beauty of this idea is that existing monitors are detected correctly and newer monitors can have their own encoding. The circuitry for detecting new monitors is relatively simple and has no active components. Adding the encoding to new or existing monitors involves only inexpensive diodes and wire. The type-6 extension has a similar approach.

The Original Scheme

In the original scheme, the display circuitry determines the type of monitor attached by reading three sense lines and comparing the signal value to ground. By convention, the sense lines are identified as 2, 1, and 0. Given three lines and two different states, on or off, there are a total of eight possible combinations. For a monitor to be recognized, a sense line on the monitor side is connected to ground to be read as a binary 0, or left unconnected to be read as a binary 1.

The first seven monitors listed in Table S-1 show the required sense line states for them to be recognized using the original sense line scheme. It's worth noting that monitors using the original scheme need only have their sense lines read once to determine the monitor type. As new monitor types became available for the Macintosh, the extended sense line protocol was implemented.

Extended Type-7 Sense Codes

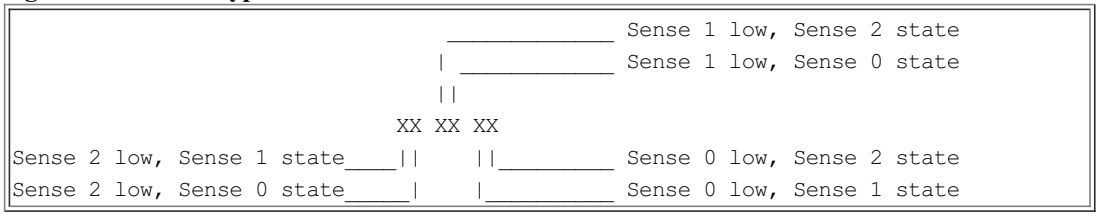
The extended sense line protocol is one of those oddities of software engineering that at first seems to defy logic. The protocol sets a standard for defining a 6-bit binary number that represents how the sense lines must respond for the monitor to be recognized correctly.

With this unusual introduction, let's step back. Under the original scheme, sense lines were compared to ground to determine their state. To reiterate, with three pins there are a total of eight possible combinations, 000 (all grounded) to 111 (none grounded). Seven combinations of the sense line states are assigned to early monitor types. The eighth combination, 111 (signifying "no display connected" in the original scheme), is used to signal the extended type-7 sense line code protocol. This is also known as the no-connect sense line code protocol. The type-7 designation derives from the fact that the three sense lines are high relative to ground and can be represented in binary format as 0b111 or $07.

To implement the type-7 sense line protocol, the sense lines get tied to each other within the monitor using a combination of straight wire and/or diode connections. When the display system software reads the state of the three monitor sense lines and finds that none of them are grounded, it begins dynamic polling. The software tells the video card/hardware to assert each sense line and read the other two lines. Instead of being compared to ground, each line is compared to the asserted line. If a sense line has the same state as the asserted sense line, the state equates to a binary 0, otherwise it is binary 1.

The diagram in Figure 1 illustrates the type-7 sense line protocol notation. There are three pairs of binary numbers. Each pair of binary digits represents the relative state of two sense line pins to the third, which is held low. The pairs are always in the order: sense 2 low, sense 1 low, sense 0 low. Each bit in a pair is sense line specific, with the higher sense line bit to the left.

Figure 1: Extended Type-7 Sense Line Decode Method



Extended Type-6 Sense Line Protocol

When the Display Manager was implemented, the sense line protocol was extended further for a new family of monitors. The same method that gives the extended type-7 sense line protocol its designation applies to the three cases where one sense line is grounded. For the extended type-6 sense line protocol, pin 4, i.e. sense line 0, is grounded to pin 11 (see Table S-3) and the binary notation is expressed as 0b110 ($06) with the least significant bit representing sense line 0.

From Table S-1 below, note that the sense line configuration for this case corresponds to the Apple Hi-Res monitor. To extend the support of monitors in this family, one can add three new codes by connecting sense lines 1 and 2 with a jumper, or a diode in either direction. These new extended type-6 sense codes support three new monitor types that are capable of supporting the standard 640 x 480 resolution and other resolutions. See "Multiple Scan Monitors" below.

Multiple Scan Monitors

The Power Macintosh VRAM expansion cards include support for three new monitor types which use the extended type-6 sense codes. These new types are multiple scan rate monitors, which can display in multiple screen resolutions. The VRAM expansion cards being shipped with the Power Macintosh units will support the multiple scan monitors with the resolutions listed in Table 1.

Note: The Apple Multiple Scan 17 Display is sensed as a multiple scan 16 display type, and the Apple Multiple Scan 20 Display is sensed as a multiple scan 21 display type.

Table 1: Supported Multiple Scan Screen Resolutions

Monitor Type	Screen Resolution	Frame Rate (Hz)
Multiple Scan 14	640 x 480	66.67
	832 x 624	74.55
Multiple Scan 16	640 x 480	66.67
	832 x 624	74.55
	1024 x 768	74.93
Multiple Scan 21	640 x 480	66.67
	832 x 624	74.55
	1024 x 768	74.93
	1152 x 870	75.08

Summary

The three tables below summarize the contents of this tech note.

Table S-1 Sense Line Code Assignments

Monitor Type	Sense 2	Sense 1	Sense 0	Frame Rate (Hz)
RGB 21"	0	0	0	75.08
Full-Page (B&W 15")	0	0	1	75.08
RGB 12"	0	1	0	60.15
Two-Page (B&W 21")	0	1	1	75.08
NTSC Monitor	1	0	0	59.94 á
RGB 15"	1	0	1	75.08
Hi-Res (12-14")	1	1	0	66.67
Multiple Scan 14" *	1	1	0	See Table 1
Multiple Scan 16" *	1	1	0	See Table 1
Multiple Scan 21" *	1	1	0	See Table 1
No Display Connected	1	1	1	N/A
PAL Encoder *	1	1	1	50.00 á
NTSC Encoder *	1	1	1	59.94 á
VGA *	1	1	1	59.94
Super VGA *	1	1	1	55.98
RGB 16" *	1	1	1	74.55
PAL Monitor *	1	1	1	50.00 á
RGB 19" *	1	1	1	74.93
* - These monitors require extended sense line support. á - Interlaced timing.				

Note: The binary values in this table indicate the relative state of the sense pin measured against monitor ground, pin 11, on the DB-15 connector depicted in Table S-3 below.

Table S-2 Extended Sense Line Code Assignments

Monitor Type	Sense 2 Low 1 & 0	Sense 1 Low 2 & 0	Sense 0 Low 2 & 1
Multiple Scan 14" *	00	00	11
Multiple Scan 16" *	00	10	11
Multiple Scan 21" *	10	00	11
PAL Encoder	00	00	00
NTSC Encoder	01	01	00
VGA/Super VGA	01	01	11
RGB 16"	10	11	01
PAL Monitor	11	00	00
RGB 19"	11	10	10
* Type-6			

Note: In this table, the column under "Sense 2 Low 1 & 0" indicates the values the software is reading from monitor sense lines 1 and 0 while driving sense line 2 low. Suppose you have a PowerBook 180c and you want it to believe there is an Apple 16" RGB monitor attached. The sense line code in Table S-2 for this monitor is 10 11 01. As shown in Figure 3, this sense code equates to sense line 2 being connected to sense line 0 with a jumper. Based on Table S-3, your tying pin 4 to pin 10 will make the PowerBook think that the 16" monitor is attached. It's important to recognize that pins 4 and 10 in this example must not be tied to ground, otherwise, a 12" RGB monitor would be indicated.

Table S-3 Signal Assignments for the DB-15 External Video Connector

Pin	Signal Name	Signal Description
1	RED.GND	Red Ground
2	RED.VID	Red Video Signal
3	/CSYNC	Composite Sync Signal
4	SENSE0	Monitor Sense Line 0
5	GRN.VID	Green Video Signal
6	GRN.GND	Green Ground
7	SENSE1	Monitor Sense Line 1
8	Not Connected	Not Connected
9	BLU.VID	Blue Video Signal
10	SENSE2	Monitor Sense Line 2
11	C&VSYNC.GND	Ground for CSYNC & VSYNC
12	/VSYNC	Vertical Sync Signal
13	BLU.GND	Blue Ground
14	HSYNC.GND	HSYNC Ground
15	/HSYNC	Horizontal Sync Signal
Further Reference: * Guide to the Macintosh Family Hardware, Third edition, Video Displays * develop Issue 3, "Macintosh Display Card 8*24GC: The Naked Truth" * Technical Note M.HW.ColorMonitors?HW 8 - Color Monitor Connections		

Note: This information is based on a Macintosh Tech Note titled "HW 30 - Sense Lines."

Article 24493: "**Apple Tech Notes: What They Are, Where To Find Them**" can help you find the Tech Note mentioned in this article.
Published Date: Feb 20, 2012

Power Macintosh: Meaning of Error Type 11

This article discusses troubleshooting Type 11 errors.
This article has been archived and is no longer updated by Apple.
A Type 11 error is listed as a hardware exception error. However, as with all Macintosh Type xx errors, they usually do not identify a particular software or hardware component error. Type xx errors are more general in nature.

Troubleshooting Type 11 Errors

When troubleshooting Type 11 errors, always eliminate software problems first, then check the hardware.

To troubleshoot the problem, follow these steps:

1. Upgrade your hard disk drivers and system software to the latest versions available.
2. Contact the software vendor for compatibility information if the problem only occurs in one application, and you can reproduce it consistently.
3. Turn off all extensions and control panels if the error occurs in an application that is fully compatible with a Power Macintosh computer. Check the application again. If the problem goes away, then troubleshoot your extensions, control panels or fonts. Large numbers of fonts can cause similar errors, troubleshoot by moving them from the Fonts folder to another folder. If you still have problems, follow Step 4.
4. Perform a clean installation of the system software, then test the system performance for a few days. If the problems continue, particularly in the Finder, there may be an issue with your Apple or non-Apple hardware.
5. Disconnect any external or internal SCSI devices that have been may added (or exchanged for the original Apple hardware) and continue testing. Since SCSI device drivers load into memory when the Macintosh is turned on, they can generate conflicts similar to extension conflicts. If you are using a non-Apple formatting utility, contact the vendor of the utility for compatibility information. Removing internal SCSI devices is best performed by an Apple-authorized service provider.
6. Remove any extra third-party RAM and test. This is best performed by an Apple-authorized service provider. Also verify that you are not using composite RAM.
7. Remove Level 2 Cache RAM, if present, and test.

If you continue to get Type 11 errors using a clean version of the system software without any third-party hardware attached (including internal or external SCSI devices, additional RAM, or Level 2 cache RAM), you need to have your computer serviced by an Apple-authorized service provider.

For additional information about the cause of Type 11 errors, refer to article 18912: "**Power Macintosh: Type 11 & No FPU Errors Technote**"
Published Date: Feb 20, 2012

QuickTime: Playing a Startup Movie

Is it possible to have a QuickTime movie play on screen during system startup?
This article has been archived and is no longer updated by Apple.
To have a QuickTime movie play on screen during system startup, take an existing QuickTime movie, rename it "Startup Movie" and put it in your System Folder (root level). Now, when you start up the computer the movie plays automatically when the QuickTime extension loads.

The movie plays in a small window in the middle of your monitor screen. No tools are available (such as pause, rewind, sound). The movie window does not go away until the rest of the extensions finish loading. After that, the screen normally clears itself.
Published Date: Feb 20, 2012

Toner Cartridges: Compatibility List for Other Printers

Does Apple support the use of Apple LaserWriter toner cartridges in printers from other vendors that use the same print engine?
This article has been archived and is no longer updated by Apple.
Apple encourages the use of Apple toner cartridges in laser printers that use a compatible print engine. A comprehensive listing of the current Apple toner cartridges and compatible third-party printers are listed below.
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Apple Toner Cartridge Part Number	Printer Manufacturer	Models Supported
M6002	Apple	LaserWriter IISC, LaserWriter IINTX, LaserWriter IIF, LaserWriter IIG
M6002	Blaser	Blaser II
M6002	Brother	HL-8, HL-8D, HL-8E, HL-8PS/AP, HL-8V
M6002	Canon	LBP-SX, LBP-200V, LBP-8 II, LBP-8 II R, LBP-8 II T, LBP-8 III, LBP-8 III R, LBP-8 III T, LBP-8 III RX, LBP-8 III TX
M6002	Compugraphic	CG408
M6002	Comterm	Laser II
M6002	CPT	LP-8
M6002	Data General	6454
M6002	DEC	DECLASER 2100, DECLASER 2150, DECLASER 2200 DECLASER 2250, DECLASER LN 05, DECLASER LN 06
M6002	EICON	Laser 400, Script 400 Version 1 & 2
M6002	Genicom	6000, Acewriter, Acewriter 6140, Acewriter 6142, Acewriter 6145
M6002	Hewlett Packard	LaserJet II, LaserJet IID, LaserJet III LaserJet IIID
M6002	IDS	LPC3
M6002	Imagen	2308/S, 2308/S Turbo, 3308/S, 3308/S Turbo
M6002	Lasermaster	(original model)
M6002	NBI	LP910, LP911
M6002	NEC	Silentwriter II Model 260, 290, 990
	Newgen Systems	Turbo PS/300, Turbo PS/360, Turbo PS/480, Turbo PS/630, Turbo PS/660, Turbo PS/840, Turbo PS/88
M6002	NEXT	Laser PTR
M6002	Olivetti	LP5000, PG108, PG208, PG303
M6002	QMS	2308/S, 3308/S Turbo Imageserver XP, KISS Plus, Lasergrafix 810, 820, PS 810, PS 815, PS 820 Turbo, PS 825
M6002	Siemens	Highprint 7800
M6002	Star Micronics	LaserPrinter 8, LaserPrinter 8 II
M6002	Tandem	Laser-LX, Laser 5573-LX, Laser 5573-D, Laser 5574, Laser 5574-PC
M6002	Wang	LDP-8, LDP-8 DSK-T, LDP-8 III, LDP-8 III-D
M0180	Apple	LaserWriter, LaserWriter Plus
M0180	Blaser	Blaser, BlaserStar, Blaser Five
M0180	Canon	LBP-CX, LBP-8 A1, LBP-8 A2, LBP-8 D A1
M0180	CompuGraphic	CG300-PS, EP308
M0180	CPT	LP-6, LP-8GS, LP-8S, PS-8
M0180	Data General	4557, 4558
M0180	Eastman Kodak	1306, Keeps
M0180	Hewlett Packard	LaserJet, LaserJet Plus, LaserJet 500 Plus, 1686 TA, 2686 LaserJet, 2686TA LaserJet
M0180	Imagen	8/300, 2308, 3308 Imageserver XP, Designer, Executive, Imagestation
M0180	Interleaf	LP1-306, LPR-308, OPS-2000
M0180	Lasersmith	PS-300, PS-415, PS-415GT, PS-415 MAC, PS-415+, PS-600+, PS-6830GT, PS-830 MAC, PS-830+

M0180	NCR	6416
M0180	QMS	Kiss, Big Kiss, Big Kiss II, PS-800, PS-800+, SmartWriter
M0089LL/A	Apple	Personal LaserWriter LS, Personal LaserWriter SC, Personal LaserWriter NT, Personal LaserWriter NTR
M0089LL/A	Brother	HL-4, HL-4PS, HL-4V, HL-4Ve
M0089LL/A	Canon	LBP-LX, LBP-4, LBP-4+, LBP-4 III+, P110
M0089LL/A	DEC	DECLASER 1100, DECLASER 1150, DECLASER 1152, DECLASER LN 07, DECLASER LN07R
M0089LL/A	Hewlett Packard	33471A, LaserJet IIP, LaserJet IIP Plus, LaserJet IIIP, LaserJet IIIP/MAC
M0089LL/A	Lasermaster	400, 600, 800, 1000/4 AFM, 1000/4 KX, Maxwriter 600, Win Printer 400, Win Printer 800, Win Printer 800I
M0089LL/A	Newgen Systems	Turbo PS300/P, PS/360P, PS/400P, PS/660P, 800P
M0089LL/A	QMS	PS 410
M0089LL/A	Siemens	Highprint 7500
M0089LL/A	Star Micronics	Laserprinter 4, 4 Starscript
M0089LL/A	Wang	LDP-4P
M2045G/A	Apple	Personal LaserWriter 300, Personal LaserWriter 320, LaserWriter 4/600 PS
M2045G/A	Hewlett Packard	LaserJet 4L, LaserJet 4ML, LaserJet 4M Plus, LaserJet 4 Plus
M2029G/A	Apple	LaserWriter Select 300, LaserWriter Select 310
M1960G/A	Apple	LaserWriter Select 360, LaserWriter Select 300, LaserWriter Select 310
M2473G/A	Apple	LaserWriter Pro 600, LaserWriter Pro 630, LaserWriter 16/600 PS
M2473G/A	Canon	LBP-EX, LBP-8 IV, P 270
M2473G/A	Hewlett Packard	LaserJet 4, LaserJet 4M, 4M Plus, 4 Plus
M1853G/A	Apple	LaserWriter Pro 810
M1853G/A	Compaq	PageMarq 15, PageMarq 20
M1853G/A	Data Products	LZR 1500 Series, LZR 2000 Series
M1853G/A	Genicom	7150
M1853G/A	Star Micronics	Newsprinter 20
M1853G/A	Wang	XP-15, XP-20, 8812
M3602G/A	Apple	LaserWriter Pro 810
M3602G/A	Compaq	PageMarq 15, PageMarq 20
M3602G/A	Data Products	LZR 1500 Series, LZR 2000 Series
M3602G/A	Genicom	7150
M3602G/A	Star Micronics	Newsprinter 20
M3602G/A	Wang	XP-15, XP-20, 8812

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Notes

- Apple does not recommend the use of refilled toner cartridges in LaserWriter printers. For more information, search the Knowledge Base using the keywords "LaserWriter,toner, cartridge".
- Toner cartridges made specifically for Canon copiers are not compatible with the LaserWriter, LaserWriter Plus, LaserWriter II, and Personal LaserWriter printers. Cartridges made for the Canon Laser Printer and Hewlett-Packard cartridges made for the HP LaserJet are compatible. The Apple LaserWriter, LaserWriter Plus, and LaserWriter Pro series printers use the EP cartridge type. Apple LaserWriter II series printers use the EPS cartridge type. Apple Personal LaserWriter NT, NTR, and LS printers use the EP-L cartridge type. The Apple Personal LaserWriter 300 uses the EP-P cartridge type. Apple LaserWriter Pro 600 series printers use the EP-E cartridge type.

Published Date: Feb 20, 2012

AppleShare: Platforms and Mac OS Releases Supported

This article explains which versions of AppleShare are supported with which computers and version of the Mac OS.

Note: Supported means users can expect technical assistance from Apple and all issues will be prioritized along with other development efforts. This article has been archived and is no longer updated by Apple.
Note: AppleShare IP is not supported on any Apple computer released after 2001-02-01.

Supported Platforms	
AppleShare Version	**Computers**
AppleShare 3.0.1	Macintosh computers with a Motorola 68000, 68020, or 68030 processor. System 7.0 through System 7.5.1
AppleShare 4.0	All users should update to AppleShare 4.0.1
AppleShare 4.0.1/4.0.2	All Motorola 68040-based computers, except Quadra 660AV and Quadra 840AV. (See Notes 1 and 2)
AppleShare 4.0.2	PowerPC-based computers with clock speeds less than or equal to 80 MHz (except Power Macintosh 6100/66 and 7100/80). (See Note 3)
AppleShare 4.1	All NuBus PowerPC-based computers available through 1995-04 (not Power Macintosh 7200, 7500, 8500, or 9500 computers).
AppleShare 4.2	All NuBus PowerPC-based computers (not Power Macintosh 7200, 7500, 8500, or 9500 computers). All users should update to AppleShare 4.2.1
AppleShare 4.2.1	Works with PCI- and NuBus-based Workgroup Servers and Power Macintosh computers. AppleShare 4.2.1 is compatible with Open Transport on PCI-based Power Macintosh 7200, 7500, 8500, and 9500 computers. AppleShare 4.2.1 will **not** run on any computer with a Motorola 68000-family microprocessor.
AppleShare IP 5.0	Any Apple Power Macintosh or Apple Workgroup Server with a PowerPC 601, 604, or 604e processor. Not supported on Power Macintosh computers with 603 or 603e processors. Not supported on non-Apple computers.
AppleShare IP 5.0.3	Any Apple Power Macintosh or Apple Workgroup Server with a PowerPC 601, 604, 604e, or G3 processor. Not supported on Power Macintosh computers with 603 or 603e processors. Not supported on non-Apple computers.
AppleShare IP 6.0, 6.1, 6.1.1, 6.2	Any Apple Power Macintosh or Apple Workgroup Server with a PowerPC 601, 604, 604e, or G3 processor. Also supported on the Power Macintosh 6500 series. Not supported on Power Macintosh computers with 603 or 603e (except for the Power Macintosh 6500). Not supported on non-Apple computers. All users should update to ASIP 6.1.1; ASIP 6.2 is recommended.
AppleShare IP 6.3, 6.3.1, AppleShare IP Agent Update 6.3.2, AppleShare IP 9.0.4 Update	Any Apple Power Macintosh computer, iMac, or Macintosh Server with a PowerPC 601, 604, 604e, G3, or single G4 microprocessor, or a Power Macintosh 6500 series computer with a 603e microprocessor. Not supported on dual-processor Power Mac G4 computers or Power Macintosh computers with 603 or 603e (except for the Power Macintosh 6500). Not supported on non-Apple computers.
AppleShare IP 6.3.3	Any Apple Power Macintosh computer, iMac, or Macintosh Server released prior to 2001-07-18 with a PowerPC 601, 604, 604e, G3, or G4 microprocessor(s), or a Power Macintosh 6500 series computer with a 603e microprocessor. Not supported on Power Macintosh computers with 603 or 603e (except for the Power Macintosh 6500). Not supported on non-Apple computers. (See Notes 6, 7.)
AppleShare IP 6.3.3 v1.2	Macintosh Server G4 (QuickSilver) with AppleShare IP (See Note 7.)

AppleShare IP 6.3. 3 v1.3	Macintosh Server G4 (QuickSilver 2002) with AppleShare IP (See Note 7.)

Supported Mac OS Releases	
AppleShare Software Version	**System Software Version**
AppleShare 3.0.1	System 7.0 or later. System 7.1 is recommended
AppleShare 4.0.1/4.0.2	System 7.0.1 (with System 7 Tune-Up 1.1.1) through System 7.5.3 with Classic AppleTalk only. It is not compatible with Open Transport networking. System 7.1 is recommended.
AppleShare 4.1	System 7.5.1 only
AppleShare 4.2	System 7.5.1 only (ALL users advised to update to AppleShare 4.2.1.)
AppleShare 4.2.1	System 7.5.3 through Mac OS 7.6. This release is compatible with Open Transport networking.
AppleShare IP 5.0	Mac OS 7.6, and Mac OS 7.6.1 only on computers that cannot run Mac OS 7.6, such as the Power Macintosh 7300/7350/8600/9600/9650 computers.
AppleShare IP 5.0.3	Mac OS 8.0 and Mac OS 8.1; Mac OS 8.1 is recommended.
AppleShare IP 6.0	Mac OS 8.1 with OpenDoc 1.2.1.
AppleShare IP 6.1 and 6.1.1	Mac OS 8.1 minimum, Mac OS 8.5 or 8.5.1 recommended. OpenDoc 1.2.1 required.
AppleShare IP 6.2	Mac OS 8.6 with OpenDoc 1.2.1 required.
AppleShare IP 6.3	Mac OS 9.0 (OpenDoc not required)
AppleShare IP 6.3.1	Mac OS 9.0.3, Mac OS 9.0.4 (OpenDoc not required)
AppleShare IP Agent Update 6.3.2, AppleShare IP 9.0.4 Update	Mac OS 9.0.4 (OpenDoc not required. See Note 5.)
AppleShare IP 6.3.3	Mac OS 9.1 (OpenDoc not required. See Note 7.) **Note:** Not supported with Mac OS 9.2.
AppleShare IP 6.3.3 v1.2	Mac OS 9.2.1 or 9.2.2 (See Note 7.)
AppleShare IP 6.3.3 v1.3	Mac OS 9.2.2 (See Note 7.)

AppleShare Client and Mac OS Releases	
System Software	**Recommended AppleShare Client**
System 7.5 and earlier	AppleShare Client 3.5
System 7.5.1 through 7.5.2	AppleShare Client 3.6.5
System 7.5.3 through 7.5.5	AppleShare Client 3.7.4 with Open Transport 1.1.2
Mac OS 7.6 through 8.0	AppleShare Client 3.8.3
Mac OS 8.1 through 9.0.4	AppleShare Client 3.8.6. (See Note 4)
Mac OS 9.1	AppleShare Client 3.8.8
Mac OS 9.2.1	AppleShare Client 3.9

Notes:

1. From a functional standpoint, AppleShare 4.0.1 is identical to AppleShare 4.0.2 for 68040-based Macintosh computers. There is no need to upgrade AppleShare 4.0.1 to AppleShare 4.0.2. The only differences between these versions are the version number itself, and that AppleShare 4.0.2 was available in a complete retail package, while AppleShare 4.0.1 is available as a tune-up only requiring installation over an existing copy of AppleShare 4.0.
2. If you have a Workgroup Server 95, do not upgrade to System 7.5 or later. A Workgroup Server 95 with A/UX only works with System 7.0.1 and System 7 Tune-Up 1.1.1.
3. AppleShare 4.0.2 for Power Macintosh is no longer sold separately.
4. AppleShare Client 3.8.6 requires Keychain, part of Mac OS 9, to automatically connect to server volumes at system startup time. Mac

OS 8.1 through 8.6 users who rely on this feature may wish to use AppleShare Client 3.8.3 instead. Before doing so, please see article 25038: **"Mac OS 8.6: Cannot Save AppleShare Log-On Password"** for known limitations and other alternatives.
5. Macintosh computers with Mac OS 9.0.4 and Mac OS ROM 4.6 and later require the ASIP Agent Update 6.3.2.
6. AppleShare IP 6.3.3 provides compatibility for dual-processor Power Mac G4 computers but does not provide multiprocessing performance enhancement.
7. AppleShare IP 6.3.3 is supported only on Mac OS 9.1. The Power Mac G4 (QuickSilver) and Power Mac G4 (QuickSilver 2002) computers require minimums of Mac OS 9.2.1 and 9.2.2, respectively. They require minimums of AppleShare IP 6.3.3 v1.2 and 6.3.3 v1.3, respectively. The only changes in v1.2 and v1.3 were made in the Installer Scripts, so they will install on newer computers with versions of Mac OS 9.2.x installed. The appropriate version of AppleShare IP is currently available to education customers with purchase of a new Macintosh Server G4 with AppleShare IP bundle. **This software is not sold separately, and non-education customers do not have this option.**

Updates for AppleShare are available from Apple Software Updates (http://www.apple.com/swupdates/).
Published Date: Feb 17, 2012

PCMCIA for PowerBook: Frequently Asked Questions (1 of 2)

This article contains frequently asked questions (FAQ) regarding the PowerBook PCMCIA Expansion Module for the PowerBook 500 series, and the built-in PCMCIA (PC card) bay used in many other PowerBook computers, with answers to these questions.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. Can I plug PC Cards into my PowerBook on the fly?
2. Will the Apple PCMCIA modem for the Newton work with PowerBook 500 PCMCIA Expansion Module, and other PowerBook models with PC card slots?
3. Will Newton storage cards work with PCMCIA capable PowerBook computers?
4. If I insert a DOS formatted drive card, will it be recognized by my PowerBook?
5. How do I initiate the ejection of a PC Card?
6. How are cards physically ejected from my PowerBook and how do I get them out if that method fails?
7. The card will not eject from my PowerBook even when I insert a paper clip. What now?
8. Can I start my PowerBook from a PC Card?
9. How much power does the PCMCIA Expansion Module draw?
10. What kind of power draw can I expect from PC cards in a PowerBook?
11. How do I protect the PDS connector on the PCMCIA Expansion Module when it is removed?
12. I understand there are three types of PC Cards, how many of each type will PCMCIA-capable PowerBooks accept?
13. Are there standards which assure that every PC Card is the same size?
14. Which PC Cards can I use with the PCMCIA Expansion Module and with the PowerBook 5300/1400 computers?

Question 1: Can I plug PC Cards into my PowerBook on the fly?

Answer: Yes, individual cards can be plugged in at any time the PowerBook is powered on and they will be recognized. If, however, the actual PCMCIA Expansion Module is inserted or removed while the unit is powered on or in sleep mode, the unit will shut down.

Question 2: Will the Apple PCMCIA modem for the Newton work with PowerBook 500 PCMCIA Expansion Module, and other PowerBook models with PC card slots?

Answer: Yes, the Apple PCMCIA modem for the Newton will work with PCMCIA capable PowerBooks provided you are using a communications application that uses the CTB (Communications Toolbox). The vast majority of communications programs currently available are CTB compliant.

Question 3: Will Newton storage cards work with PCMCIA capable PowerBook computers?

Answer: No, Newton storage cards will not work with PowerBook computers. They use a different PCMCIA implementation and many are too wide to properly fit into a PowerBook.

Question 4: If I insert a DOS formatted drive card, will it be recognized by my PowerBook?

Answer: If PC Exchange 2.0.2 or later is installed, the drive will be mounted on the desktop and you'll have full access to its files. PC Exchange itself does not do anything with regard to file format. However, you may or may not have an application on your PowerBook which can do anything useful with the PC files.

Question 5: How do I initiate the ejection of a PC Card?

Answer: PC Cards should eject if the desktop icon is dragged to the Trash or if Put Away is selected from the Special menu.

Question 6: How are cards physically ejected from my PowerBook and how do I get them out if that method fails?

Answer: PC Cards are ejected by a mechanism triggered by a thin bi-metallic wire called NitiNol (Nickel Titanium alloy) which contracts when a voltage is applied to it. This contraction triggers the mechanism to eject the card. If you are having trouble ejecting a PC Card, a paperclip can be inserted into the small hole next to the PCMCIA slot to manually eject the card. Avoid manually pulling the card out of the computer - this could leave the mechanism set in the wrong position (see the next question).

Question 7: The card will not eject from my PowerBook even when I insert a paper clip. What now?

Answer: You can pull the card out yourself with a pair of needle nose pliers or sometimes with your fingers, if you have strong fingernails. Once the card is pulled out, try inserting the paper clip again to release the spring mechanism. If you hear the springs release, you can try inserting the card (or a different card) again. Of course, the issue may recur.

Inspect the card for any obvious physical damage, large scratches, or other irregularities. If the ejection issue recurs, especially with various cards, you should have your PCMCIA Expansion Module or PowerBook inspected by an Apple Authorized Service Provider or returned to Apple by calling 1-800-SOS-APPL.

Question 8: Can I start my PowerBook from a PC Card?

Answer: The PC Card slots are polled at startup, so if a card is inserted which contains the appropriate resources to start up the PowerBook and the startup control panel has the PCMCIA device selected, it will boot from the card.

Question 9: How much power does the PCMCIA Expansion Module draw?

Answer: Idle with no cards: .460 mA...less than 1 milliamp.

Operating with cards: Typical is 56mA plus inserted cards power draw. Maximum is 58mA plus inserted cards power draw.\\

The cards can vary from 150mA for modems to 600mA for rotating media. (New ExCA spec is trying to limit cards to 300mA.) Also, some cards have very high peak requirements (spinning up drive).

The PowerBook 500 series PDS connector is rated at 600mA continuous for the entire PDS module.

Question 10: What kind of power draw can I expect from PC cards in a PowerBook?

Answer: The following numbers are based on initial testing by Apple Computer. Some cards may vary from these numbers.

Type of Card	Plugged In	Active
Modems	100-300mA	100-390mA
Memory	3-21mA	100mA
Hard Disks	200-300mA	300-350mA
Ethernet	285-480mA	285-480mA

Question 11: How do I protect the PDS connector on the PCMCIA Expansion Module when it is removed?

Answer: A small cover for the connector is included with the module. This cover should be in place any time the module is removed from the PowerBook.

Question 12: There are three types of PC Cards, how many of each type will PCMCIA-capable PowerBooks accept?

Answer: There are two card slots which can accept one each Type I or Type II, or a single Type III card in the bottom slot.

Question 13: Are there standards which assure that every PC Card is the same size?

Answer: The PCMCIA PC Card standard only defines a specification for the pin configuration and the height of the card. The most common variations are the width of the card and rounding of the corners. If you have problems with the fit of a PC Card, try using the bottom slot.

The specification defines all dimensions for a Type II except radius of corners. In reality, not all cards (but most) conform to the spec. Some modem Type II specs exceed the 5mm height. The 5mm is a maximum.

What is undefined for Type III cards is the top case minimum dimensions. The maximum is defined, so cards that conform to the maximum work with the connector. Variants of the spec (unusual shapes and divots) in the top case can cause issues.

Question 14: Which PC Cards can be used with the PCMCIA Expansion Module and with the PowerBook 5300/1400 computers?

Answer: With the PCMCIA Expansion Module for the PowerBook 500 series, you can use modem cards that conform to the PCMCIA 2.1 standard and flash cards and hard disk cards that conform to the ATA standard.

PCMCIA on other PowerBook models offer full Card and Socket Services support. This means that any 3rd party developer can modify their software drivers to make their cards available on the Macintosh. Card and Socket Services is part of the PCMCIA industry standard.

Other PCMCIA for PowerBook FAQ's can be found in the following article:

Article 31362: **PCMCIA for PowerBook: Frequently Asked Questions (2 of 2)**

Published Date: Feb 20, 2012

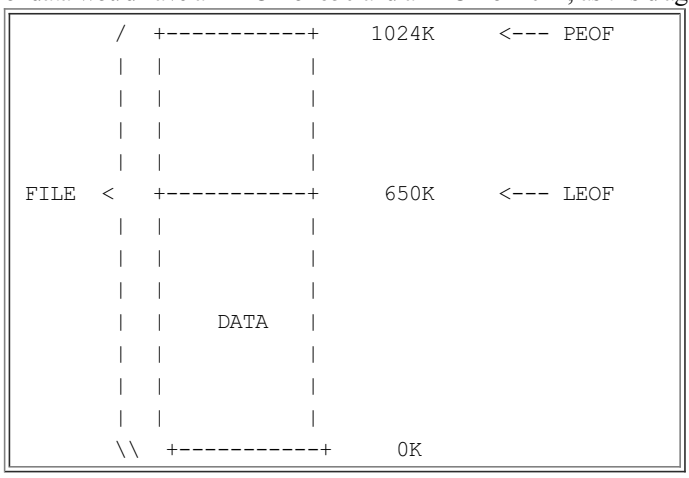
Disk First Aid: Invalid PEOF Error

Disk First Aid reports an "Invalid PEOF" error with some numbers after it. It says it is unable to repair the problem. Norton Utilities Disk Doctor reports no error could be found. What is an Invalid PEOF?
This article has been archived and is no longer updated by Apple.
An "invalid PEOF" is an invalid Physical End Of File.

This error means Disk First Aid found a problem with the length of a particular file and cannot fix it. Macintosh files have two end of file markers -- a Logical End Of File (LEOF) and a Physical End Of File (PEOF). The logical end of file is the number of bytes allocated to data in a file. The physical end of file is the number of bytes currently allocated to the whole file.

The Macintosh allocates "blocks" of space to files on a volume (disk) for efficiency in reading/writing the files. The block size varies depending on the volume size. Most files never completely fill up their allocated blocks.

For example, if a given block size for a volume is set to 512K bytes and a file is allocated 2 blocks (1024 bytes total in file), a file with 650 bytes of data would have an LEOF of 650 and a PEOF of 1024, as this diagram illustrates:



If the PEOF is less than the LEOF, then problems with reading a file may occur. Disk First Aid is finding a PEOF allocation problem. Of course, if this problem is in the Desktop files or the System file, then system crashes and other anomalies may result.

If Disk First Aid cannot repair the problem, you should consider backing up the data and reformatting the drive -- even if other utilities give the drive a clean bill of health. Each disk utility program is good at finding different problems. Trusting your data to only one utility is never wise. The conflicting reports are usually a sign that something is wrong with the file system and it needs to be fixed.

Related Documents

21103 Troubleshooting Hard Drives: Reformatting
2686 Macintosh: List of Disk Recovery Tools

Published Date: Feb 20, 2012

QuickTime: Performance Tips for Digitizing Video

This article provides tips for producing digitized video. There are a number of things you can do to improve capture performance and increase the frame rate of your movies. Some of these tips improve performance, and others only adjust performance marginally.
This article has been archived and is no longer updated by Apple.

PRODUCTION STRATEGIES

One of the most important elements in producing QuickTime video movies is the quality of the original footage. The better the quality of the original video, the better the quality of the final QuickTime movie.

- Hi-8, S-VHS, Beta or 3/4" (Umatic) video produces better results than VHS or 8mm
- Always use a new tape when shooting.
- Add light when shooting indoors to improve contrast and reduce video noise.
- Use a tripod to reduce camera shake.
- Avoid large sudden movements of the camera, either pans or zooms.
- Move the microphone off camera if possible. Purchase a shot-gun microphone.

Making the Connection
Do not overlook the connections between your equipment!

- Use S-Video cable rather than RCA cables (if possible). S-Video signal retains more fidelity than the composite signals.
- Use good quality cables and connectors.
- Use component video (separate RGB cables) rather than S-Video cable if your digitizing board and VCR support this type of connection.

TIPS FOR IMPROVING THE FRAME RATE

Defragment your disk drive!
A badly fragmented drive impacts performance.

Turn Off AppleTalk and Non-Essential Extensions
Turning off AppleTalk improves performance. Turning off other non-essential screen extensions can also improve performance.

Set the Screen Depth to 16 Rather than 24 Bits
If your digitizing card supports both 16 and 24 bit screen depths, then digitize at 16 bits; particularly if you are using the Apple Video Compressor.

A 16 bit image is 2/3 the size of a 24 bit image. The smaller sized image can be passed around much faster. The image quality of 16 versus 24 is very similar. The Apple Video Compressor only saves 16 bit information anyway.

QuickTime relative performance in order of bit-depth, 1 being better performance:

1. 16-bit
2. 24/32-bit
3. 8-bit
4. 1-bit

Reduce the Frame Size
The size of the frame affects the frame rate. Reducing the frame size increases the frame rate of the movie. When adjusting the frame size remember to check the frame size before recording. Note down the frame size and check it before you begin a recording session. It's very easy to adjust the frame size for one or two movies, then forget to adjust it for a second digitizing session.

Use the None Compressor
Capturing using the None Compressor generally produces the highest frames rates (though if you have a fast processor, the Apple Video Compressor may be just as efficient.) Capture using the None Compressor and then recompress using the Apple Video Compressor or the Compact Video Compressor. Several Applications, including VideoShop (Avid) and Movie Recorder (Apple) offer automatic post-compression options. These programs capture using the None Compressor, then immediately recompress using the compressor of your choice. We don't recommend using the Compact Video compressor in these situations.

Note: This does NOT apply to recording using the VideoSpigot with the ScreenPlay application. ScreenPlay uses a special compressor which provides much higher frame rates. Also, if you are using the VideoSpigot, then use the application ScreenPlay to capture movies rather than recording in an application like Premiere or Movie Recorder. Much higher frame rates are possible using ScreenPlay.

Use Faster Equipment
* Faster storage device. A faster hard disk usually improves your capture performance.

QuickTime relative performance on storage devices, 1 being better performance:

1. RAID devices on PCI SCSI cards
2. RAID devices on NuBus SCSI cards
3. Large internal hard disks on direct SCSI interfaces
4. Large internal hard disks on IDE interfaces
5. Small internal hard disks on direct SCSI interfaces
6. Small internal hard disks on direct IDE interfaces
7. Quad speed CD-ROM drives
8. Double speed CD-ROM drives
9. Single speed CD-ROM drives
10. Floppy disks

- Faster processor. A faster processor improves your capture performance. QuickTime relative performance on processors, 1 being better performance:

1. 150Mhz PowerPC 604
2. 132Mhz PowerPC 604
3. 120Mhz PowerPC 604
4. 110Mhz PowerPC 601
5. 100Mhz PowerPC 601
6. 40Mhz Motorola 68040
7. 66/33 MHz Motorola 68040 (includes FPU)
8. 66/33 MHz Motorola 68LC040
9. 117Mhz PowerPC 603e
10. 100Mhz PowerPC 603e

- Hardware compression boards (such as RasterOps MoviePak, SuperMacs DigitalFilm, and Radius VideoVision Studio) produce the highest frame rates possible. All three are capable of 30 frames per second, but they require fast processors (ideally a Quadra), fast hard disks (usually a disk array) and produce very large files which can take a long time to recompress.

Use Special Capture Applications
It is possible to capture high frame rate movies without buying a new computer or hardware acceleration board. The utility Grab Guy (on the Apple QuickTime CD) performs multi-pass captures using a computer controllable Sony VCR (generally only the professional decks with time code support). Grab Guy captures every 6 frames (or so) and does multi-passes to record the whole movie.

VideoToolKit from Abbate Video offers a step-record option. Using just about any controllable VCR, VideoToolKit places the VCR in pause, digitizes the frame, steps the VCR forward a frame, and digitizes the next frame. This requires a VCR with a clean pause, and places extra stress on the tape, but is a cheap alternative for capturing clips.

DETERMINING THE OPTIMUM FRAME RATE
It's important to remember that the optimum frame rate is dependent not just on the capture hardware, but also on the playback platform. If you are recording for distribution on CD-ROM, Apple recommends the following:

180 x 160 at 12 frames per second (compressed using Apple Video Compressor) 240 x 180 at 12 frames per second (compressed using the Compact Video Compressors)

These numbers are designed to provide acceptable performance when playing on an LC from a standard speed CD-ROM. If the processor speed is larger, or a double-speed CD-ROM is assumed, then these figures increase.

KNOW YOUR COMPRESSION ALGORITHM
The more you know about the compression algorithm you are using, the better you will know how to use it, and how to adjust the various parameters for best results. For example, reducing the luminance (brightness information) information in an image will have a greater effect on compression performance than adjusting the chrominance (color). Most compression algorithms make use of the fact that the eye is less sensitive to changes in chrominance information than changes in luminance information . Many algorithms use color-subsampling to reduce the chrominance information. However, reducing the luminance information can reduce the data rate as well.

- Make sure the frame size is divisible by 4. The Compact Video Compressor is most efficient if the frame size (both horizontal and vertical) is evenly divisible by 4. i.e. 240 x 180 is okay, but 242 x 182 is not as efficient.

ADJUST KEY FRAMES
Reducing the frequency of key frames will usually reduce the data rate, and improve performance, however reducing the key frame rate reduces

performance when playing the movie in reverse, or when trying to skip ahead in a movie. Generally the Key Frame rate should be set to one per second of video, but if you know the movie will not be interrupted, searched or played in reverse, then you can increase this figure.

USE FILTERED DOWN SAMPLING
Most of the digitizing boards simply ignore or skip pixels to reduce the image size. For example, to create a 320 x 240 image, every second pixel is ignored. This results in stair stepping (aliasing) effects. To reduce these effects, capture the movie at a larger size, then recompress and resize the movie using filtered down sampling. ConvertToMovie and MovieShop both offer this option.

SOUND

- Capture at 22 kHz. This provides best quality. Downsample to 11 kHz for best quality and smallest size for distribution.
- To adjust the sound track, you can export the sound file from Premiere as an AIFF file and then use Sound Edit or another sound editing program to adjust the sound. Then bring the sound back into Premiere.
- The MacRecorder does not accurately stay at 22 kHz during recording. Use MovieShop to resample the sound during compression.

CREATING QUICKTIME ANIMATIONS
PROMotion exports an animation to QuickTime. MovieWorks saves all of its animation in QuickTime format. MacroMind Director can save movies to QuickTime format, as well as play movies within an animation (you must have version 3.1 to do this. Also, if you are using hardware acceleration, get version 3.2 which fixes a problem in Director.)

3D PROGRAMS SUPPORT QUICKTIME
Many 3D programs now support QuickTime. Typestry from Pixer saves flying logos as a QuickTime movie. Infini-D can export a 3D animation to QuickTime. It also lets you use a QuickTime movie as a surface within an animation (so you can have a QuickTime movie playing within a television set.)

PLAYING MOVIES IN HYPERCARD
Both Apple and Claris have released XCMDs for playing QuickTime movies in HyperCard. The Apple XCMDs are on the Apple QuickTime Developer CD, while the Claris XCMDs are available as part of HyperCard (and were available as an upgrade to owners of HyperCard. These XCMDs are differentÃthe Apple XCMDs offer more sophisticated functions, but are not officially supported. You must license either set to distribute with your HyperCard stacks.

USE JPEG COMPRESSOR TO STORE MOVIES
Movie size can be reduced drastically by recompressing using the JPEG compressor. However, the movie does not play well when compressed using JPEG.
Published Date: Feb 20, 2012

Portable StyleWriter: How to charge the batteries

Is there a special method for charging the Portable StyleWriter battery? Putting it into the Portable StyleWriter battery compartment and connecting the printer to the AC adapter does not seem to charge it no matter how long I leave it plugged in.
This article has been archived and is no longer updated by Apple.
Follow these steps to place the Portable StyleWriter into battery charging mode:

1. Ensure that the power adapter is plugged into a wall outlet and into the printer.
2. Check that the battery switch is in the "1" position (versus the "0" position) on the back of the printer.
3. Turn on the printer with the Power button while holding down the On Line button.
4. When the first beep sounds, release the Power button.
5. When the second beep sounds, release the On Line button.

The POWER LED begins flashing, indicating that the printer has entered the battery charging mode.

The battery charging voltage is 14.8 V DC. The printer controller checks the battery voltage every 2 minutes during the charging process, which normally takes about 10 hours. When the charging is complete the printer automatically stops charging and turns itself off. If the battery voltage is less than 6 V DC at any time during the charging process, the battery is either over-discharged or defective, at which time the controller alternately flashes the POWER and ERROR LEDs to indicate a charging problem. The POWER LED flashes when the battery needs recharging.

Published Date: Feb 20, 2012

Multimedia Glossary: A - F (1 of 3)

This article contains definitions of multimedia terms. For additional terms, see the following articles:

Article 16537: "**Multimedia Glossary: G - R (2 of 3)**"
Article 16538: "**Multimedia Glossary: S - Z (3 of 3)**"
This article has been archived and is no longer updated by Apple.

A/B roll editing
Editing from two source VCRs to a third VCR. This allows for transition effects like dissolves from one source tape to another.

Aliasing
A term used to describe the unpleasant jaggy appearance of unfiltered angled lines. Aliasing is the "beating" effects caused by sampling frequencies being too low to faithfully reproduce an image. There are several types of aliasing that can affect a video image which include temporal aliasing (for example, wagon wheel spokes apparently reversing) and raster scan aliasing (for example, flickering effects on sharp horizontal lines).

Analog Video
A video signal that represents an infinite number of smooth gradations between given video levels. By contrast, a digital video signal assigns a number for each level. The Macintosh video board converts computer-created (or digital) video to an analog signal for output to a monitor.

Analog Recording
The common form of magnetic recording where the recorded wave-form signal maintains the shape of the original wave-form signal. An example of this is a video tape.

Animatic
A limited animation used to work out film or video sequences. It consists of artwork shot on film or videotape and edited to serve as an on screen storyboard. Animatics are often used to plan out film sequences without incurring the expense of the actual shoot.

ANSI
Acronym for American National Standards Institute, which sets standards for many technical fields.

Anti-aliasing
Anti-aliasing is the manipulation of the edges of an image, graphic or text, to make them appear smoother to the eye. On close inspection, anti-aliased edges appear blurred, but at normal viewing distance, the apparent smoothing is dramatic. Anti-aliasing is important when working with high quality graphics for television use. See aliasing.

Aspect Ratio
The ratio of an image's width to its height. For example, a standard video display has an aspect ratio of 4:3.

Assemble Editing
Adding new material to the end of a previously recorded portion of a videotape that involves writing a completely new signal (including the control track) onto the tape. Performing an assemble edit in the middle of an existing program will introduce an undesirable glitch on the tape caused by an abrupt change in the sync information of the video signal. Compare insert editing.

Asynchronous
Not synchronized by a mutual timing signal or clock. Compare synchronous.

Audio Effects Board
The audio effects board is like the switcher, and acts as the main router and mixer for source audio. Here audio levels are adjusted, mixed, and filtered. Usually audio effects are kept to a basic level in a video editing session. More complex audio work is usually performed with a digital audio workstation.

Authoring System
Software that helps developers design interactive applications, titles, or courseware more easily than with conventional programming language

Auto-assemble
If all the editing decisions are made off-line, and the EDL is loaded into the CMX the actual editing is automatic, executing one event after another. This is called auto-assemble mode. During auto-assembly, the editor monitors video and audio levels, but does not need to control each edit. Loading the EDL into the CMS is typically done manually, however, some Macintosh programs can create CMX disks. The EDL generated by computer based editing systems like the Digital F/X and Avid Media Composer are usually perfectly accurate, therefore, they make auto-assembly a breeze since the opportunity for errors in entering the EDL by hand are eliminated.

Backtiming
Method of calculating the in point by subtracting the edit duration from the known outpoint.

Badge
A symbol in the corner of a QuickTime movie window which is pressed to bring the standard QuickTime movie controller into view.

Bandwidth
The frequency range of a video signal, measured in MHz. The bandwidth is directly related to horizontal resolutionÃthe higher number of picture elements defined, the higher the frequency required. The bandwidth describes "how much" information is being transferred. The bandwidth of the Macintosh II video signal can be as high as 33 MHz depending on screen size. By comparison, the bandwidth of broadcast television is 4 MHz High resolution images can be displayed on low resolution monitors, with an obvious loss in quality.

Black Level
The level of the video signal that corresponds to the maximum limits of the black areas of the picture.

Black, Black Burst
In video production, black refers to a composite video signal which has composite sync, reference burst, and a black video signal. Used for genlock purposes.

Blanking
The portion of the video signal that is off, or black, during the retrace interval of the scan. Blanking occurs between each horizontal line and during the vertical retrace between each field.

Blanking is important in broadcast production situations since there are strict FCC rules defining the blanking periods. Not all video products for the Macintosh conform to this aspect of the NTSC broadcast standard. Discuss this issue with vendors if broadcast quality is required.

Related to composite sync, this signal has both horizontal and vertical components and is at its negative level whenever video is to be blanked or turned off.

Blanking Level
The level of a video signal that separates the range that contains the picture information from the range that contains the synchronizing information. The level of the front and back porches is 0 IRE units.

BNC Connector
A connector typically used with professional video equipment for connecting cables that carry the video signal. Compare RCA connector and XLR connector.

Brightness

1. The luminance of the video signal, or the level of brightness on the scale from black to maximum white. One of the three determinants (with hue and saturation) of the color of an image, and the only one of the three that affects a monochrome image.
2. The brightness of a monitor or video projector measured in lumens. See luminance.

Broadcast Quality
An NTSC composite video signal conforming to FCC rules concerning signal properties like video and sync levels, timing and blanking. Devices providing NTSC signals do not necessarily meet FCC broadcast standards. This is important if the video signal or videotape being recorded is going to be used in a broadcast situation.

Bump-up
Making a copy from one recording medium onto a second medium which is more suitable for post-production purposes due to it's higher bandwidth and/or timecode capability. For example, material shot on Hi8 is usually "bumped-up" to 3/4-inch SP or Betacam SP for editing purposes since these formats feature higher resolution, less generation loss, a more robust tape, timecode, better frame-accuracy and faster shuttle speeds.

CAV
Acronym for Component Analog Video.

CCITT
Abbreviation for Consultative Committee on International Telegraphy and Telephony; an international committee that sets standards and makes recommendations for international communication.

CG
Acronym for Character Generator.

CGI
Acronym for Computer Graphic Imagery.

Character Generator
A character generator (CG) is a video device found in on-line editing suites used for titles and credits. A CG is simply a high-end word processor for video with a wide variety of fonts and sizes available. The most common character generator is the Chyron.

Chroma
The color information contained in a video signal, consisting of hue (phase angle) and saturation (amplitude of the color subcarrier).

Chroma Keying
The process of overlaying one video signal over another, the areas of overlay being defined by a specific range of chrominance. For this process to work, the chrominance must have sufficient resolution, or bandwidth. Composite video does not have sufficient bandwidth for acceptable quality chroma keying, therefore analog chroma keyers typically use component sources.

Chrominance
The color part of a signal, relating to the hue and saturation but not to the luminance (brightness) of the signal. Any colored signal has both chrominance and luminance.

Clean List (Clean EDL)
An EDL which does not contain any overlapping or redundant edits. Typically during the off-line editing process changes are made which result in edits that overlap or become redundant. Most computer-based editing systems can clean an EDL automatically. Compare dirty list.

Clip
Small QuickTime Movie. Also used to mean a segment of a larger movie, defined by an in point and an outpoint, usually containing a single scene or take.

Clipping
The process of cutting off the peaks of either the white or the black portions of a video signal.

CMX
The most commonly used editing computer. The EDL is loaded into it and it executes the edits and effects by controlling all of the required video machines. Actually, it may not control all of them. Certain operations may need to be done manually. Most editing computers use the CMX language, which has become an industry standard.

Color Bars
See NTSC color bars.

Color Burst
A portion of the composite video signal used for decoding its color information. Burst is several cycles of 3.58 MHz pulses recorded during the horizontal blanking interval and used to establish phase relationships for determining the hue. The color oscillator of a color television receiver is phase locked to the color burst.

Color Correction
A process in which the coloring in a video image is altered by electronic means.

Color Subcarrier
The 3.58 MHz signal which carries color information. This signal is superimposed on the luminance level. Amplitude of the color sub-carrier represents saturation and phase angle represents hue.

Compelling Conveyance
To use appropriate content and data type to communicate with maximum impact on an audience.

Component Video
A term given to a recording system which does not require NTSC encoding of RGB signals, but uses a means of recording and routing the luminance and color signals separately. This method does not reduce bandwidth nor compromise the RGB components and results in images of higher resolution and better color quality than composite video. Though designed for high end television production, similar recording methods have recently become available to the consumer market. See S-VHS and Hi8. Compare composite video.

Composite Blanking
See blanking.

Composite Sync
A signal consisting of horizontal sync pulses, vertical sync pulses, and equalizing pulses only, with a no-signal reference level.

Composite Video
A composite video signal is one in which the luminance, chrominance and sync information have been combined into a single signal using one of the coding standards: NTSC, PAL, SECAM, and so forth. This is the form the signal must take before it can be broadcast or recorded by standard

means. Until recently, most monitors and projectors have accepted only composite video signals, although many now available accept RGB. See NTSC. Compare component video.

Compositing
Combining two or more video or electronic images into a single frame or display.

Conforming
The process of doing the final editing of a video using an off-line edited master as a guide.

Continuous Branching
A program that enables the user to modify the presentation at any point rather than at specific branch points.

Contrast
The range of light and dark values in a picture or the ratio between the maximum and the minimum brightness values.

Controller
Portion of the QuickTime Movie Playback window with which you interactively control the direction and rate of playback.

Control Track
The portion along the length of a video tape on which sync control information is placed and used to control the playback of the video signal.

Control Track Editing
Editing videotape with equipment that reads the control track information in order to synchronize the editing between two decks. Frame accuracy is not certain as the VTRs can go slightly out of sync during pre-roll. Compare time
code editing.

control-L
See LANC.

Convergence

1. The beam-position accuracy of the red, green, and blue beams of a color monitor or projector. Color systems require exact accuracy of beams, both for position and speed, to properly produce the desired colors from their phosphors.
2. The adjustment of the red, green, and blue electron beams in a monitor or video projector to align the red, green and blue images.

Cross Color
A defect characteristic of NTSC composite video that manifests itself as spurious rainbow patterns on highly textured objects like the one found on a striped shirt or tweed jacket. Cross-color defect is attributed to the make-up of the signal which mixes the high luminance and chrominance information in the same composite baseband spectrum. Johnny Carson used to wear ties with designs specifically designed to create this effect.

Cross Luminance
A defect characteristic of NTSC composite video that appears as a dot pattern crawling up or hanging on the edges of color areas. This is a result of the signal structure where the color information leaks into the luminance signal. Also referred to as dot crawl.

Decoder
A device used to recover the component signals from a composite (encoded) source. Decoders are used in displays and in various processing hardware where component signals are required from a composite source.

Delay Line
A device designed to delay the video signal for a specific length of time. Required when switching between different types of devices or cameras with significantly different cable lengths.

Demodulate
To recover the information being transmitted by a modulated signal. For example, a conventional TV receiver demodulates an incoming broadcast signal to convert it into the luminance and chrominance information displayed by the CRT and the sound emitted by the speaker. Compare modulate.

Demodulator
A device which strip the video and audio signals from the carrier frequency.

Desktop Viewing
The ability to use the computer screen to view the output of a project of in interpersonal and corporate communication.

Dessimation

The loss of lines of data in a movie window as the size of the frame is reduced. Lack of data for certain lines causes undesirable artifacts during movie playback.

Device Interface
A converter box which separates the RGB and sync signals in order to display computer graphics on an RGB video monitor. Vendors include Covid and Extron.

Differential gain (DG) and differential phase (DP)
The distortion characteristics of the chrominance signal expressed as a numerical value which indicates to what degree the amplitude (differential gain as a percentage) and phase (differential phase in degrees) are distorted from the beginning and end of one horizontal scanning line.

Digital Audio Workstations
Computer-based systems for editing and manipulating digital audio. The audio can be synchronized with video for video post-production applications. Some common systems based on the Macintosh include Dyaxis, Pro Tools, Synclavier, and Dawn.

Digital Disk Recorder
A recorder much like a videotape recorder which uses large digital disk memories instead of tape. They can record and play back in single frame steps (with no pre-roll, since there is no tape involved), at variable speeds or at 30 fps. Digital disk recorders are available as both component and composite machines. Very, very, expensive.

Digital disk recorders can usually mix an incoming video signal with a stored one and record the net result simultaneously. Since everything is digital, this mix can be performed repeatedly, producing layer upon layer of moving images.

Digital Video
A video signal represented by binary numbers describing a finite set of colors and luminance levels. In accordance with "CCIR 601," the international digital video standard for sampling, the conversion from analog to digital suffers virtually no loss.

With current technology, the cost of using digital video to represent the range of levels and colors easily handled by analog videotape is prohibitive. Digital video requires more bandwidth than analog video to produce the same results, unless fancy compression techniques are used. As digital memory capacity and processing speeds become more economical, digital video will eclipse analog video. Standards such as QuickTime, DVI, MPEG, and JPEG for video make digital manipulation of video information possible on today's personal computers.
Note: consumer "digital" televisions and camcorders use the term to refer to the use of digital frame buffers for effects or signal processing. The output of these buffers is still converted back into analog signals for display and storage.

Digital Video Effects (DVEs)
A real-time frame buffer that can zoom in and out, reposition, and freeze frame in real time. Some can also warp video frames into trapezoids, cylinders, and spheres to create a variety of special effects. Common trade names include ADO, Encore, Mirage, and Pinnacle.

DIN
Acronym for Deutsche Industrie Normal, a European standards organization.

Dirty List (Dirty EDL)
An EDL containing overlapping or redundant edits. See and compare clean list.

Dither Pattern
The matrix of color or gray-scale values used to represent colors gray shades in a display system with a limited color palette.

Dithering
A technique for alternating the values of adjacent dots or pixels to create the effect of intermediate values. In printing color or displaying color on a computer screen, the technique of making adjacent dots or pixels different colors to give the illusion of a third color. For example, a printed field of alternating cyan and yellow dots appears to be green. Dithering can give the effect of shades of gray on a black-and-white display, or more colors on a color display.

Dot Crawl
See cross luminance.

Dot Pitch
A measure of the distance between dots on the screen. The closer the dots, the sharper and clearer the image.

Dot Space
The horizontal distance between dot centers. This distance depends on the character pitch in effect.

Drop-out
Missing information from magnetic tape caused by dust, lack of oxide, and so forth. Especially noticeable with a format such as Hi8 which packs a tremendous amount of information onto a tiny and fragile tape.

Dubbing
Making a copy from one recording medium to another. See bump-up.

Duration
The length or persistence of a signal in time. Compare frequency.

Dynamic Tracking
The ability for a video head to "bend" back and forth enough to find an adjacent track and follow it. This allows true freeze-frame rather than only freeze-field display. It also allows for variable speed playback, including playing in reverse, which otherwise is not possible.

EBU
European Broadcasting Union.

Edit Decision Lists (EDL)
The Edit Decision List, or EDL, is the data controlling the editing computer during an on-line session. It lists "in-points" and "out-points" for both the source playback decks and the record deck. These "events" can be for video, audio, or both. The EDL may control all sources, various effects machines (for fades and dissolves, for example) and the record deck. An EDL may be created manually after the off-line editing is complete or it may be generated by the edit controller used in more sophisticated off-line systems. Computer based editing systems including the Digital F/X and Avid Media Composer will automatically generate an EDL. See off-line, on-line.

Effects
Effects involve any manipulation or processing of the video or audio signal. Though they are often used for gratuitous gimmickry, they can also be used for valid functional and aesthetic design purposes. Video effects seem to change annually, and are heavily technology-driven. Since they sometimes cannot be simulated in an off-line environment, the best way to prepare to use them is to look over the free demos available from various video facilities and vendors. Off-line systems like the Avid Media Composer allow you to preview most of the standard video effects.

EIA
Electronic Industries Association. The organization which determines recommended audio and video standards in the United States.

EIA sync
see RS-170.

Encoded video
The encoded video signal is formed by starting with an RGB signal from the color television camera. This RGB signal is then processed through an encoder, known as the I and Q encoder, which converts the RGB into a composite NTSC signal. The encoded signal has all of the elements of the composite video signal: sync, burst, chroma, and luminance.

Encoder
A device which transforms NTSC timed red, green and blue signals into a single NTSC composite signal combining luminance, chrominance, and sync information. Compare decoder.

ENG
Acronym for Electronic News Gathering.

Equalizer

1. Equipment designed to compensate for loss and delay frequency effects within a system.
2. A component, or circuit, which allows for the adjustment of a signal across a given band

FCC
Federal Communications Commission. A federal bureau that regulates radio and television broadcast standards. FCC regulations carry the force of law.

Field
One complete vertical scan of the picture, containing 262.5 lines. Two fields make up a complete television frame; the lines of field 1 are vertically interlaced with field 2 for 525 lines of resolution in the NTSC standard.
In many respects, a video signal is best conceptualized as 60 separate images per second. When video is recorded from a video camera, each field represents an independent sample of time. This becomes apparent when video-originated material on a videodisc is still framed, one may see flutter: two different images shot 1/60 of a second apart from each other on the same screen.

Film
While videotape is simple in structure but requires complex machines for recording, film is complex in structure but requires simple recording machines. Film cameras are simple and elegant machines, and when you think about it, the film itself is the recorder.

Film is often used in the production of video for a variety of reasons, including the high image quality of film transferred to video and the ability to record film at any frame rate the camera allows. There are no technical requirements for a particular frame rate as there are with video, each film frame is simply exposed to light, then advanced. Many film cameras have variable frame-rate capabilities--a concept totally foreign to video.

Film Chain
A device used to transfer film to video. They are still used by some TV stations to broadcast programming distributed on 16 mm film. See telecine.

First Generation
The first time the signal is recorded on tape, that tape is called a first generation tape. Each time the tape is dubbed, a generation is added. See generation loss.

Fotovix
The brand-name of a device available from Tamron which provides a relatively inexpensive way to transfer still 35 mm film slides and negatives to video.

Frame
The total area of the picture which is scanned while the picture signal is not blanked. A complete NTSC TV picture consisting of two fields; a total scanning of all 525 lines of the raster area; occurs every 1/30 of a second. In other countries where PAL and SECAM are the video standard, a frame consists of 625 lines at 25 frame/sec.

Frame Grabber
A device allowing the real time capture of a single frame of video in a temporary buffer for manipulation or conversion to selected computer file formats. Some frame grabbers have buffers large enough to store several complete frames, allowing rapid capture of a number of images. The distinction between a frame grabber and a digitizer is that a digitizer captures a sequence of complete frames, and therefore must employ some form of compression and/or acceleration in order to operate in real-time.

Frames
NTSC video plays at 30 frames per second, and each video frame consists of two half-frames called fields. A field consists of every other horizontal line. When the video image is created on a TV set, the little scanning dot of light first scans across the topmost horizontal line, line 1. Rather than scanning along line 2 next, it scans line 3, then line 5, and so on. When it gets to the bottom (in half of the 1/30 second frame time), it begins at the top again but on line 2, then line 4, and so on. This technique is called interlace, and it was invented because most people see a flickering image if television is scanned sequentially at 30 fps.

Frequency
The number of complete cycles transmitted per second. Frequency is usually expressed in hertz (cycles per second), kilohertz (kilocycles per second), or megahertz (megacycles per second). In acoustics, frequency of vibration determines musical pitch. Compare duration.
Published Date: Feb 20, 2012

Multimedia Glossary: G - R (2 of 3)

This article contains definitions of multimedia terms. For additional terms, see the following articles:

Article 16536: "**Multimedia Glossary: A - F (1 of 3)**"
Article 16538: "**Multimedia Glossary: S - Z (3 of 3)**"
This article has been archived and is no longer updated by Apple.

Gamut

The range of voltages allowed for a video signal, or a component of a video signal. Signal voltages outside of the range (exceeding the gamut) may lead to clipping, crosstalk, or other distortions.

Gate Weave

An artifact of poor registration either during the film-to-tape transfer process or the actual filming that manifests itself as a weaving back and forth of the film image. See registration.

GBR

The same signals as RGB. The sequence is often rearranged to indicate the mechanical sequence of the connectors in the SMPTE standard.

Generation Loss

With analog video formats extensive efforts are made to keep generations to a minimum since each successive generation will exhibit some loss of image quality in the form of noise and other artifacts. This characteristic varies from format to format. For example, 1-inch Type C exhibits almost imperceptible loss up to 4 generations while VHS shows considerable degradation each generation. With digital formats such as D-1 and D-2, however, this requirement is no longer necessary, since each copy can potentially be very close to perfect. This is important for applications such as compositing which require images to be dubbed several times.

Generations

The number of times a video clip is copied or processed. See generation loss.

Genlock

The capability to synchronize video signals from one device with those of another video source. This is required when mixing signals together as in overlaying computer graphics on an image from a camera, VCR or videodisc player to prevent screen flicker or rolling.

Genlocking a Macintosh requires changing its video scan rate, switching the video into an NTSC timed interlaced image which can then be synchronized with the other video source. This requires either an encoder box attached to a video card which supports genlock or a scan converter.

Genlock is a process of sync generator locking. This is usually performed by introducing a composite video signal from a master source to the subject sync generator. The generator to be locked has circuits to isolate vertical drive, horizontal drive and subcarrier. The process then involves locking the subject sync generator to the master subcarrier, horizontal, and vertical drives so that the result is that both sync generators are running at the same frequency and phase.

Ghost

A shadowy or weak image in the received picture, offset either to the right or to the left of the primary image. It is the result of transmission conditions where secondary signals are created and received earlier or later than the primary signal caused by a reflected RF signal.

Gray Scale

A series of tones which range from true black to true white, it is usually expressed in ten steps in video applications.

HDTV

High Definition Television. Still, limited to some very high-end applications. The FCC is close to establishing a broadcast standard for HDTV. The SMPTE has proposed a high definition television production standard consisting of 1125 lines, 2:1 interlace, 60 Hz field (30 frames/sec), a 16:9 aspect ratio and 30 MHz RGB and luminance bandwidth.

Hertz (Hz)

The unit of frequency of vibration or oscillation, defined as the number of cycles per second. Named for the physicist Heinrich Hertz.

Horizontal Blanking

The blanking signal that is produced at the end of each scanning line.

Horizontal Blanking Interval

The time between the display of the rightmost pixel on one line and the leftmost pixel on the next line.

Horizontal Drive

See horizontal sync.

Horizontal Resolution

The smallest increment of a television picture that can be discerned in the horizontal plane. This increment is dependent upon the video bandwidth and is measured in frequency or lines.

Horizontal Scan Frequency

The frequency at which horizontal sync pulses start the horizontal retrace for each line. A high frequency is needed for a non-interlaced scan. The horizontal sync frequency for a color Macintosh connected to the 13-inch RGB display is 35 KHz, while the NTSC frequency is 15.75 KHz. Projection of high resolution non-interlaced Macintosh color video requires projectors capable of 35 KHz horizontal sync frequency.

Horizontal Sync

A signal created and used to synchronize the horizontal scan of a video signal, often combined with vertical sync into a composite sync. This signal is derived by dividing sub-carrier by 227.5 and then doing some pulse shaping. The signal is used by monitors and cameras to determine the start of each horizontal line. See horizontal scan frequency.

House Sync

A common sync signal generated by a sync generator and fed to all video devices in an editing facility in order to synchronize the devices. See sync.

Hue

(1) The distinction between colors. Red, blue, green, yellow, and so forth are hues. White, black, and gray are not considered hues. The dimension of color that is referred to a scale of perceptions ranging from red through yellow, green, blue back to red.

(2) The color tint of a video image. The color of an analog video signal is determined by three factors: hue, saturation and luminance. In a composite video signal, the hue is determined by the phase relationship to the color burst.

IEEE

The Institute of Electrical and Electronic Engineers, an organization which sets many of the standards in the electronic industry.

Interactivity

An open-loop control where a programmed system is directed by its user through mutual and simultaneously activity where either can interrupt the other without crashing the operation, where there is limited ability to anticipate, no default path and there is the impression of an infinite database.

In Point/Out Point

The first and last frames of a selected portion of a large clip. Frame notation (00:00:00:00= hours:minutes:seconds:frame) is the used to designate an in point and an out point.

Interlace

An NTSC 525 line frame which is separated into two sequential scans, or fields, of 262.5 lines each. Field one scans the odd numbered lines and field two scans the even numbered lines creating two interlaced images per frame. The process results in 60 fields per second and is used to reduce the flickering which is apparent when the eye is presented with 30 images per second. In standard video, odd-numbered lines are drawn first. Most computer displays are not interlaced.

IRE scale, IRE units

A unit used for the measurement of video levels. The scale used for the graticule on a waveform monitor. 140 IRE represents 1.000 V, 100 IRE represents 0.714 V, while 1 IRE represents 0.007 V.

ISO

Acronym for International Standards Organization.

Jitter

Small and rapid variations in a wave form due to mechanical disturbances, changes in the characteristics of components, supply voltages, imperfect synchronizing signals, circuits, and so forth.

Kelvin

Also expressed as Kelvin or K, the unit of measurement of the temperature of light In color recording, light temperature affects the color values of the lights and the scene that they illuminate.

Keying

The process of replacing part of one television image with video from another image. See chroma keying and insert keying.

Kilohertz (KHz)

One thousand hertz, or cycles per second. See Hertz.

LANC

A protocol defined by Sony which permits the external control of video devices and access to status information from the device. Also referred to as Control-L. See VISCA, Vbox.

Legal Signal

A video signal in which each component does not exceed the specified gamut for the given format. Compare valid signal.

Light Valve Projector

A video projector design with very high light output. An example of a projector using this technology is the Talaria from General Electric.

Longitudinal Time Code (LTC)

Longitudinal time code (LTC) is recorded as an audio signal on the address track or one of the audio tracks of a video tape. It may also be recorded on a track of audio tape. LTC can be read at high tape shuttle speeds, allowing time code readers to stay "in-sync" during rewind or fast forward. Unfortunately, LTC cannot be read at very slow shuttle speeds (such as when you are "crawling" the tape frame by frame) or in pause. See SMPTE time code, compare vertical interval time code.

Looping

A term indicating that a high impedance device has been permanently connected in parallel to a video source.

LTC

See longitudinal time code.

Luminance

The aspect of the video signal carrying information about the brightness of an image.

Macintosh Video

Typically refers to the signal produced by a Macintosh 824 display card or Quadra built-in video. Although several scan rates and resolutions are supported, when connected to the 13-inch RGB monitor the display resolution is 640 by 480 pixels with a 67.7 Hz scan rate.

Matte

1. A film term sometimes used in video production work to denote a keyed effect, an insert of video signal information keyed from one source into a second video signal.
2. A opaque piece of art or a model that leaves a selected area unexposed to be filled on a subsequent pass or in composite. Also referred to as a mask.

Mavica

The name-brand of a popular still video camera sold by Sony, See still video cameras.

Megahertz (MHz)

One million hertz, or cycles per second. See Hertz.

Metal Particle Tape

Videotape using iron in its pure metallic form, instead of as an oxide. Offers improved frequency response and wider dynamic range than traditional oxide formulations.

MIDI

Acronym for Musical Instrument Digital Interface. A standard communications protocol used by electronic music equipment allowing device control from personal computers. MIDI has moved into the audio and video realm for mixing and editing.

MIDI Time Code

A time code system allowing timed device control through MIDI protocols. It has become more important in video post production as more and more people are working with personal computer based systems. Compare SMPTE time code.

Modulate

To modify or alter a signal so as to transmit information. For example, conventional broadcast television transmits the video image by modulating the amplitude and frequency of a carrier signal. Compare demodulate.

Moire

Optical disturbance caused by interference of similar frequencies. The wavy effect produced by the convergence of lines. It usually appears as a curving of the lines in the horizontal wedges of a test pattern. It is a natural optical effect when converging lines in a television picture are nearly parallel to the scanning lines. Compare aliasing.

Monitor

A particular type of television that receives a composite and/or component video signal (as opposed to an RF signal) directly from a VCR, camera, or separate TV tuner for high quality picture reproduction. Does not contain a channel selector. Compare television receiver.

Monochrome Signal

A single color video signal; usually a black and white signal or, sometimes, the luminance portion of a composite or component color signal.

Motion Control Photography

A system for using computers to precisely control camera movements so that different elements of a shot can later be composited in a natural and believable way.

Movie

Movie (in QuickTime) refers to all dynamic data, such as sound, video and animation. The QuickTime movie file format is a container for this timebased data

Multiscan

A term taken by a particular manufacturer often used to refer to any multisync device. See multisync.

Multisync Monitors (and Projectors)

Video displays which accept a wide variety of horizontal and vertical timings, from NTSC to computer video signals. Multisync monitors and projectors will often automatically adjust to the appropriate timing. Since the horizontal frequency range varies among different models, product specifications should be checked to assure a monitor or projector will support the Macintosh connected to it. Multisync monitors manufactured by Apple are called Mulitple Scan Displays.

Neutral Colors

The range of gray levels, from black to white, but without color. For neutral areas in the image the RGB signals will all be equal, in color difference formats the color difference signals will be zero.

NTSC

1. Abbreviation for National Television Standards Committee, which standardized the NTSC color broadcasting system which is used today in the in the US, Japan and elsewhere.
2. The standard video format defined by the NTSC, also called composite because it combines all the video information, including color, into a single signal. See NTSC composite.

NTSC Color Bars

A pattern generated by an NTSC generator consisting of eight equal width color bars. Colors are white (75 percent), black (7.5 percent set-up level), 75 percent saturated pure colors red, green, and blue, and 75 percent saturated hues of yellow, cyan, and magenta. (Mixtures of two colors in 1:1 ratio without third color).

NTSC Composite

A video signal standard proposed by the National Television Standards Committee of the Electronics Industries Association and adopted by the FCC for broadcast television in the United States. The signal is a composite video signal of 525 lines, interlaced, 60 fields per second (30 frames per second) with a bandwidth limited to 4 MHz so that it will fit into a 6 MHz broadcast television channel without interfering with adjacent channels. NTSC is also the standard system for Japan.

The standard was created to allow color television signals to be compatible with existing monochrome (black and white) television. The restriction of compatibility with the earlier technology results in compromises in color image quality. The NTSC composite signal format is required for video recording except with devices which support component video.

Though there are 525 scan lines, more than 40 lines are blanked during vertical retrace periods. Overscanning and poorly adjusted televisions reduce the number of visible lines further, leaving viewers around 360 lines of video information in a normal television picture.

Macintosh video can be converted to NTSC composite using an encoder or scan converter. When using an encoder with a Macintosh video card there is an unavoidable reduction in image quality and single pixel lines, for instance, will flicker (unless the video card supports convolution) due to the interlaced nature of the NTSC signal. Images intended for NTSC use should be designed according to the limitations of the format, unless a more expensive scan converter is being used. See encoder and scan converter.

NTSC RGB

Interlaced red, green, and blue video signals timed to NTSC standards. Refers to three monochrome signals representing the primary colors of the image. This is a superior signal format to composite video which is one signal encoded from the three signals. An NTSC RGB signal differs from a component video signal which consists of Y, R-Y, and B-Y signals.

Off-line, Off-line Editing

The preliminary or rough edit usually done on a low-cost editing system using videocassette work tapes. In an increasing number of situations random-access non-linear editing system using digitized video or laserdiscs are being used for off-line editing. Allows editors to make decisions and gain necessary approvals before making the more expensive and demanding on-line edit.

Since the actual edit session in a professional video facility is very expensive, it is always best to make all editing decisions in advance. This is called off-line editing or off-lining. See window dubs, on-line, special effects.

On-line, On-line Editing

The final edit of a video using original master tapes to produce the finished piece. An on-line edit suite usually has a full range of high-end video devices (switcher, TBCs, DVE, character generator, and so forth) which would normally be too expensive to use during an off-line edit session.

The on-line session is where the actual editing and effects take place. It occurs in an edit suite with a professional editor (known as the on-line editor). Again, the more prepared you are, the better since "things happen." It is very easy to go way over your budget estimate for an off-line edit

if your EDL contains little surprises like a mislabeled in-point. Computer based editing systems like the Digital F/X and Avid Media Composer automatically generate EDLs which are very accurate, reducing on-line time considerably. See CMX, special effects, window-dubs. Compare off-line.

Opticals

Visual effects produced optically using an optical printer that contains one camera head and several projectors. The projectors are precisely aligned in order to produce multiple exposures in exact registration on the film in the camera head. Rapidly being replaced with special high-resolution video devices for all but feature applications.

Overscan

1. The television picture beyond area of normal screen size.
2. A method by which the video image is scanned beyond the normal viewing area of the screen. Compare underscan.

Paintbox

Paintbox is the trade name for a device made by Quantel, however, it is geneneally used to describe a digital video paint program capable of drawing and shading images from scratch or from digitized video frames. The Paintbox creates only still images, but sequences of animated images can be made from the still images by loading frame by frame onto a Harry or equivalent.

PAL

Phase Alternative Line system. The television broadcast standard for most of western Europe. Based on the 50 Hz power system, it displays 625 lines interlaced at 50 fields per second (25 frames per second). By reversing the relative phase of the color signal components on alternate scanning lines, this system avoids the color distortion that appears in NTSC reception. PAL is not compatible with NTSC or SECAM, though conversion between the standards is possible. Video products to be used in Europe require compatibility with PAL standards.

Pedestal

See blanking level.

Period

The time elapsed during one complete cycle of a wave.

Phase

1. A stage in a periodic process; a point in a cycle.
2. The relationship between two periodic signals or processes.
3. The amount by which the cycles of one wave precede or lag behind the cycles of another wave of the same frequency.
4. Some fraction of a wave cycle (measured from a fixed point on the wave).

Posters

A single frame of a QuickTime movie that is designated as a static substitute for the movie's video data. The poster is typically the frame that would be printed if a movie was pasted into a document.

Pre-roll

Almost all videotape decks need a running start to get up to speed. This is called pre-roll, and varies between machines from about 3 to 10 seconds. This means that for every edit, source and record decks must first stop, count backward the exact number of frames required for pre-roll, begin playing simultaneously, then at the precise edit point begin recording. It is a mechanical and electronic marvel that video editing can be frame-accurate at all. See sync.

Primary Colors

Colors, usually three, which are combined to produce the full range of other colors within the limits of a color system. All non-primary colors are mixtures of two or more of the primary colors. In television, the primary colors are a specific set of red, green and blue.

Pulse

A current or voltage which changes abruptly from one value to another and back to the original value in a finite length of time. Used to describe one particular variation in a series of wave motions.

Pulse Distribution Amplifier

An amplifier designed to boost the strength of the sync as well as other control signals to the proper level for distribution to a number of cameras, special effects generators, or other equipment.

QuickTime

An operating system software extension for dynamic media such as sound, video and animation for Macintosh computers. The QuickTime standard file format is a "movie". QuickTime is also available for MS Window computers and FM-Towns (in Japan).

Radio-Frequency (RF) Modulator

A device that makes your television set work as a monitor. See modulator.

Rank

The brand-name of a device used for film-to-video transfer. See telecine.

Raster

The rectangular, repeating pattern of lines scanned in a video monitor or camera pickup tube creating the video image. The scan is a continuous cycle regardless of the image content.

RCA Connector

A connector typically used for audio and video signals, with some professional equipment and most consumer equipment. Compare BNC connector, XLR connector.

Registration

1. An adjustment associated with color monitors and projectors to ensure that the three electron beams (the three primary colors) are hitting the proper color dots/stripes on the phosphor screen, A similar adjustment exists on color tube cameras.
2. The alignment of film frame-by-frame in a camera, projector or telecine. Good registration is critical in order to eliminate gate weave. See gate-weave.

Resolution

A measure that shows to what extent details can be distinguished on the TV screen. Generally called horizontal resolution when referring to a video image. It can be evaluated by establishing the limit to which lines can be distinguished on a test pattern with the naked eye. A broader frequency band of the video signal permits a higher resolution.

Macintosh video has a bandwidth of 30 MHz, resolving color images at 640 pixels by 480 pixels. This exceeds the capabilities of an NTSC composite signal.

RF

Radio Frequency refers to a composite video signal superimposed on a very high (radio) frequency capable of being broadcast through the atmosphere. Standard television sets receive these signals, separate the composite signal from the RF, and then decode and display the composite signal.

Until recently, television sets were designed to receive only RF signals, which were applied to their antenna terminals. VCRs, videodisc players and some computers provide RF signals for use with televisions. The process of mixing composite video with RF, only to have it removed again by the television, further degrades the image quality.

RGB

Red, Green, Blue. Refers to three monochrome signals representing the primary colors of the image. RGB signals are provided on individual outputs with composite sync available either on a fourth output or combined with the green signal. RGB signals can be interlaced (timed to NTSC standards) or non interlaced (at higher sync frequencies).

RGB Monitor

A type of color monitor that receives separate signals for each color (red, green, and blue). See also composite video.

RGB, RGB Format, RGB System

Red, Green, and Blue. The basic parallel component set, in which a signal is used for each primary color; or the related equipment or interconnect formats or standards. The same signals may also be called GBR as a reminder of the mechanical sequence of connections in the SMPTE interconnect standard. See RGB component. Compare component video.

Rise Time

The time taken for a signal to make a transition from one state to another; usually measured between the 10% and 90% completion points of the transition. Shorter, or faster rise times require more bandwidth in a transmission channel.

Rotoscope

A camera set up that projects live-action film one frame at a time onto a surface so that an animator can trace complicated movements. The completed animation film exactly matches the motion of the original action.

RS-170

The EIA (Electronics Industries Association) standard that defines the timing of broadcast video in the United States, Japan, and several other markets. It specifies a 15.75 KHz horizontal and a 60 Hz vertical interlaced scan frequency as well as other aspects of the composite signal such as voltage, sync levels and timing of blanking.

Interlacing is the process by which two fields, called scan lines, are interleaved on the screen. Due to the limitations of video devices at the time the standard was being set in 1957, the speed of broadcast signals and picture tubes required the image to be displayed in parts.

The solution allowed the partial update of video pictures to remain unnoticed to the viewer. An RS-170 video frame contains 525 lines and is displayed 60 times per second for a total of 15Â 750 lines, or 15.75 KHz. Of these lines, only the odd or even lines are displayed with each frame. A total of 60 frames per second allows 30 frames per second, or a 30 Hz update of each line.

Like the RS-343 standard, RS-170 is strictly a timing specification for monochrome video signals. By combining three such signals to control individual red, green, and blue sweep circuits, you can create a full-color system. The RS-170 mode is available with the Macintosh video card as a way for VCRs and large screen projectors, not capable of high-frequency scans, to interface with the Macintosh. Compare RS-343, RS-170A, RS-170 RGB.

RS-170A

Twenty years after the drafting of RS-170, the EIA video signal standard proposal RS-170A evolved into what is known today as the NTSC composite video signal. RS-170A specifies timing of scans (essentially the same as RS-170: 15.732 KHz horizontal and 59.94 Hz vertical) and blanking as well as the 3.58 MHz burst required to decode the color signals. As adopted by the FCC for broadcast use, the standards are precisely adhered to and carry the force of law. For non-broadcast use, EIA standards are merely recommendations and are not enforced. Specifications referring to RS-170A do not necessarily mean the signals are broadcast standard. RS-170 RGB, RS-170.

RS-170 RGB

Refers to RGB signals timed to RS-170 specifications. Since the red, green and blue signals are actually individual monochrome signals representing their respective colors, RS-170 RGB merely refers to three black and white signals sharing one sync signal which is either provided separately as a fourth signal or (usually) combined with the green signal. Compare RS-170A, RS-170.

RS-343

An EIA (Electronics Industries Association) standard for non-broadcast high resolution monochrome video, specifying a 60 Hz non-interlaced scan with a composite sync signal with timings that produce a non-interlace (progressive) scan at 675 to 1023 lines.

While the Macintosh version of the RS-343 signal varies somewhat, it essentially follows the guidelines necessary for connection to RS-343 display devices. Therefore, with a display adapter (available from Covid , Extron, or Inline) the Mac can drive a RS-343 device (i.e. video projector or large monitor).

The major differences between Macintosh video and the RS-343 standard are: a separate TTL level composite sync signal on pin 3, the separate video lines used to produce RGB color, a vertical scan rate of 66.67 Hz to reduce screen flicker, and a voltage white level of 1 volt for its red and blue signals and 1.3 volts on its green signal. RS-343 provides for a 60-Hz signal but has been changed to 66.67 Hz on the Macintosh video card to prevent the screen flicker which is visible at 60 Hz. The inclusion of the analog composite sync found on pin 5 of the video card connector, called the green signal, allows for monochrome composite video.

Published Date: Feb 20, 2012

Multimedia Glossary: S - Z (3 of 3)

This article contains definitions of multimedia terms. For additional terms, see the following articles:

Article 16536: "**Multimedia Glossary: A - F (1 of 3)**"
Article 16537: "**Multimedia Glossary: G - R (2 of 3)**"
This article has been archived and is no longer updated by Apple.

S-Video

A consumer form of component video (Y/C) used primarily with Hi8 and S-VHS equipment.

Safe Title Area

80 percent of the TV screen, from the center of the screen; that area of the display screen (and therefore of the camera scanning area) which will reproduce legible title credits no matter how poorly adjusted the monitor or receiver may be.

SC Phase

The phase of the color subcarrier.

Scan Converter

A device that changes the scan rate of a video signal and may also convert it from non-interlaced to interlaced mode. A scan converter allows computer graphics to be recorded on videotape or displayed on a standard video monitor.

Scan Rate

The scan rate is the time it takes the electron gun to move across one line of the screen or repeat one entire screen. These values are known as the horizontal and vertical scan rates, respectively. The number of times a screen is redrawn each second. Computer display scan rates differ from standard video scan rates.

Scanning

The rapid movement of the election beam in a pickup device of a camera or in the CRT of a television receiver. It is formatted in a line-for-line manner across the photo sensitive surface which produces or reproduces the video picture.

SECAM

Systeme Couleur Avec Memoire. The television broadcast standard for France, Russia and various eastern European countries. Like PAL, SECAM is based on a 50 Hz power system, but it utilizes a different encoding process and displays 819 lines interlaced at 50 fields per second. The color information is transmitted sequentially (R-Y followed by B-Y, etc.) for each line and conveyed by a frequency modulated subcarrier that avoids the distortion arising during NTSC transmission. SECAM is not compatible with NTSC or PAL, although conversion between the standards is possible.

Serial Device Control

Most professional video equipment can be controlled via an RS-232 serial port. The protocols used for controlling these devices varies from vendor to vendor, however, Sony's protocol is supported by most editing systems.

Signal-to-noise Ratio (S/N)

An S/N ratio can be given for the luminance signal, chrominance signal, and audio signal. The S/N ratio is the ratio of noise to actual total signal, and it shows how much higher the signal level is than the level of noise. It is expressed in decibels (dB), and the bigger the value is, the more crisp and clear the picture and sound will be during playback.

SMPTE

Society of Motion Picture and Television Engineers, pronounced "simptee." An organization which studies and proposes standards for the film and television industry.

SMPTE Format, SMPTE Standard

In component video these terms refer to the SMPTE standards for parallel analog component video interconnection. The SMPTE has standardized both RGB and Y, Pr, Pb color difference systems (a version of Y, B-Y, R-Y).

SMPTE Timecode

A coding scheme standardized by the Society of Motion Picture and Television Engineers (SMPTE). Frame accuracy is achieved through timecode, a method of coding a unique "stamp" on each frame. Timecode consists of four numbers representing hours, minutes, seconds, and frames, for example, 23:59:59:29.

Since color video actually runs at 29.97 fps rather than 30 fps, two kinds of timecode have evolved: drop fame and non-drop frame. Drop-frame timecode literally drops certain agreed-upon numbers to compensate for the 0.03 fps discrepancy. Drop-frame timecode allows a 30:00:00:00 tape to really be 30 minutes long, which is critical in broadcast applications. For non-broadcast applications it tends to do nothing but create problems, and non-drop-frame timecode is usually preferred.

Most of the low-end videotape formats, like VHS and Video 8 do not have timecode. They can count frame pulses on the tape, but are not frame-accurate. Sony has introduced "8 mm timecode" in order to support more accurate editing applications with Hi8.

There are two basic techniques used to record SMPTE time code on videotape, see longitudinal time code (LTC) and vertical interval time code (VITC).

Snow

1. Random noise on the display screen, often resulting from dirty videotape heads.
2. TV signal breakup caused by weak or no video reception.

Sound Digitizer

A device for recording natural sounds and voices and storing them as computer files. Once digitized, the audio can be easily edited or used to create various effects. On the low-end there are products like the Farallon MacRecorder or Apple's built-in capability on some Macintosh models. With the AudioMedia card or Pro Tools interface from DigiDesign, CD-quality sound digitizing is possible with the Macintosh.

Split Screen

A special effect utilizing two or more video sources so that two or more scenes are visible simultaneously on each part of the screen. Often used to make window-dubs of multi-camera shoots.

A useful means for comparing two sources simultaneously. Permits a fast visual check of the phase and sync timing between two inputs.

Staircase

A pattern generated by the NTSC generator, consisting of equal width luminance steps of 0, +20, +40, +60, +80, and + 100 IEEE units and a constant amplitude chroma signal at color burst phase. Chroma amplitude is selectable at 20 IEEE units (low stairs) or 40 IEEE units (high stairs). The staircase pattern is useful for checking linearity of luminance and chroma gain, differential gain, and differential phase.

Standard, Interconnect Standard

The specific signal configuration, reference pulses, voltage levels, etc. which describe the input/output requirements for a particular type of equipment. Some standards have been established by professional groups or government bodies (such as SMPTE or EBU). Others are determined by equipment vendors.

Still Video Cameras

Still video cameras are cameras that look like something in-between a still and a video camera. The Sony Mavica records on a two-inch disk that holds 25 frames or 50 fields on flexible disks which are erasable and reusable. The encoding is analog component, but with less bandwidth (and therefore a noticeably lower quality image).

Electronic still photography has been used for "electronic journalism," where images are shot in the field and sent by modem from any available phone. These cameras have already begun to replace still picture film cameras for many applications which do not require the high resolution and image quality of 35 mm still picture film.

Storyboard

A series of panels of pictures (usually sketches) designed to show how a production will look. Comic books are essentially storyboards.

Sub-carrier

A 3.58 MHz signal modulated by color signals and combined with luminance signals to produce an NTSC composite video signal.

Subcarrier (SC, 3.58, 3.58CW)

This is the basic signal in all NTSC sync signals. It is a continuous sine wave, usually generated and distributed at 2 volts in amplitude, and having a frequency of 3.58 MHz. Subcarrier is usually divided down from a primary crystal running at 14.32 MHz, and that divided by 4 is 3.58. All other synchronizing signals are directly divided down from the subcarrier.

Subcarrier Phase Shifter

Special circuitry designed to control the phase relationships of the two portions of the encoded color signal so that they maintain their correct relationship during recording transmission and reproduction.

Switcher, Video Switcher

The switcher is the central router and mixer of video source material in an on-line suite. Switchers are generally analog devices, and are capable of performing analog effects as well as switching incoming channels. These effects include fades and dissolves, wipes and borders, and keys (opaque overlays based on replacing black or a particular color). In earlier days this was called the "special effects generator" or SEG.

Sync

(1) Short for synchronous. Refers to signals used to synchronize the horizontal and vertical scans of a video signal. This signal is derived from a composite or combination of horizontal and vertical drives, with some slightly narrowed and delayed pulses as well as the addition of equalizing pulses. When used, is usually accompanied by subcarrier.

Synchronization Of Video Tape Recorders

In order for any mixing or editing of video signals to occur, all source and record decks must be in sync with each other, running at exactly the same speed and in identical phase. You can picture the process as being similar to transferring goods between high-speed trains running alongside each other. In editing facilities, all decks are fed a common sync signal, called "house sync." See pre-roll.

Without synchronization, each individual transport would all run at slightly different rates. Analog tape transports, being mechanical, have small fluctuations in tape speed called "wow and flutter". The capstans on tape machines can slip over time as well, also generating changes in tape speed.

With disk-based systems there is no mechanical transport and no tape. Instead, the playback and record speeds are controlled by quartz crystal oscillators. However, no two oscillators are exactly the same, and an oscillator's frequency can vary with time and temperature. What all this means is that any two transports, even when started at exactly the same time, will begin to drift apart over time and the audio on the different systems will eventually drift out of sync.

Synchronization is achieved in these systems by constantly checking to see the current SMPTE frame, and adjusting the playback speed to keep all devices locked. In analog systems, this is achieved by automated motor speed control. In digital systems it is achieved by adjusting the playback sample rate. See sync, SMPTE time code.

Synchronous

Able to perform two or more processes at the same time, such as sending and receiving data, by means of a mutual timing signal or clock. Compare asynchronous.

Synchronous Transmission

A transmission process that uses a clocking signal to ensure an integral number of unit (time) intervals between any two characters. Compare asynchronous transmission.

Telecine

1. A device which consists of a projector without the lens and a video camera aimed directly at the illuminated film to record it. A telecine projector incorporates a five-bladed shutter splitting the film into 1/120 second flashes and resulting in two exposures of film for each video field. Since these would not necessarily be of the same film frame, the video fields would often have two different images superimposed. This can cause problems with videodisc still framing.
2. A Rank or Bosch. These are the highest-quality devices for film-to-video transfer. Unlike a telecine projector, they do not use a lens. Instead, a dot of light on one side of the film and a light sensor on the other side is used to scan the film. The Rank uses a small picture tube as the source of the dot of light. This is called a flying-spot scanner. The Bosch uses a one-dimensional CCD array. Both the Rank and the Bosch produce excellent results. The Rank has the advantage of changing the scanning size electronically, allowing control over the size and position of the film area being scanned. Both of these machines have highly developed methods of color correction, allowing very selective

work. For example, a single shade of color in a particular area of the picture can be changed without affecting anything else.

Television Receiver

A device capable of accepting video signals broadcast as RF. Also capable of producing a demodulated video signal output from a off-air input signal. Compare monitor.

Television Set

A display device capable of receiving broadcast video signals (such as commercial television broadcasts) by means of an antenna. Compare RGB monitor.

Test Pattern

An optical guide for television camera reference alignment.

Time Base Corrector (TBC)

A time base corrector, or TBC, is a device which corrects the timing irregularities that occur during VTR playback.

Since synchronization between videotape decks is so important, it is imperative that all decks perform at precisely the same speed. Speeds always vary, at least slightly, due to VCR velocity errors and tape stretch. TBCs are essential for any kind of multiple mixing of input from videotape source decks, including wipes, dissolves, and overlays. Each source deck must have its own TBC, and each must be synchronized to "house sync."

TBCs are also used simply to "clean up" the timing of a recorded video signal. These TBCs act like black boxes, taking in unstable video and putting out stable video. Because they work alone, without house sync, they are often called standalone TBCs.

Time Base Stability

The maintenance of the scanning process to very close tolerances. See time based corrector.

Time Code

See SMPTE time code.

Time Code Editing

By recording a sequential time code along with the video and audio material, you can obtain a precise reference for editing. Each frame has its own number or code which tells the time in hours, minutes, and seconds, and includes a frame number. The industry standard code is called SMPTE time-code . Time code permit very fast and accurate editing. Automatic editing is possible using an edit controller. See EDL, edit controller. Compare control track editing.

Timecode, 8 mm

8 mm timecode is a proprietary form of timecode used by Sony with some of their Hi8 products. Compatibility problems in time-code editing environments is solved by using a third-party device made by Horita that converts the timecode from the Sony EVO-9850 and EVO-9800 editing decks to standard SMPTE time code.

Title Generator

A black and white camera that is used to shoot titles which are electronically superimposed on the video picture while shooting or during editing. Title color can be selected and changed independently. A more sophisticated device know as a character generator (CG) can generate titles directly.

Track

A grouping of homogeneous data within a movie file. Typical track types might include video, sound, transitional effects, closed caption text, MIDI data, etc.

Tracking

The angle and speed at which the tape passes the video heads.

Transcoder

A device used to convert from one video component set to another. For example, to dub a Hi8 tape to Betacam SP with the highest possible results, you would need to use a transcoding TBC which includes a transcoder capable of converting the Hi8 (Y/C) signal to the Betacam SP component (Y, R-Y, B-Y) signal.

TTL RGB

A type of video monitor that can accept only a limited number of digital values and display only a correspondingly limited number of colors. Compare analog RGB.

Underscan

A mode available on professional video monitors which decreases the raster size H and V so that all four edges of the picture are visible on the monitor. Allows viewing of skew and tracking which would not be visible in normal (overscanned) mode. Also helpful when aligning test charts to be certain they touch all four corners of the raster.

Valid Signal

A video signal which will remain legal when transcoded to any other format. Signals which are not valid will be processed without problems in their current format, but problems may be encountered if the signal is transcoded to a different format. For example, the Macintosh will let you generate highly saturated colors which may be legal in the RGB domain, however, when converted to composite video will exceed the NTSC specifications. A valid signal is always legal, but a legal signal is not necessarily valid.

Vbox

The Vbox is a an interface device which can be connected to a personal computer via an RS-232 serial interface. Through the Vbox the computer can control LANC (also called Control-L) compatible video devices. The Vbox translates the VISCA commands from the computer into Sony's LANC protocol. Up to 7 Vboxes can be daisy-chained from one serial port. See LANC, VISCA.

VCR

Video Cassette Recorder. See VTR.

Vectorscope

A round oscilloscope used to analyze and align the amplitude and phase of the color video signal.

Vertical Blanking

See vertical interval.

Vertical Interval

The period of time during which the scan is retraced from the bottom of the screen back to the top. The picture is blanked during this part of the scan. The vertical interval period contains sync pulses and in broadcast use, can contain network information, test signals and closed captioning signals.

Vertical Interval Time Code (VITC)

VITC is recorded within the video signal, each timecode stamp is recorded between the video frames, during the vertical blanking interval. VITC cannot be recorded on audio tracks. With VITC, video devices can capture the timecode from the video deck when it's paused or in "crawl" mode, however, most synchronizers cannot read VITC at speeds exceeding about ten times playback speed, preventing slaved machines from maintaining synchronization during rewind and fast forward. See SMPTE time code, compare longitudinal time code.

Vertical Retrace

The return of the electron beam to the top of a television picture tube screen or a camera pickup device target at the completion of the field scan.

Vertical Scan Frequency

The frequency of the vertical sync pulses, or the frequency of the vertical scan. NTSC vertical scan frequency is 59.9 Hz. The Macintosh video vertical scan frequency is 67.7 Hz.

Vertical Sync

A pulse used to trigger the vertical retrace of a scanning electron gun from the bottom of a frame back to the top.

Vertical Sync Pulse

A portion of the vertical blanking interval which is made up of blanking level and six pulses (92% duty cycle at -40 IRE units) at twice the horizontal sync pulse repetition rate. Synchronizes vertical scan of television receiver to composite video signal. Starts each frame at same vertical position (sequential fields are offset 1/2 line to achieve interlaced scan.

Video

1. A means for reproducing moving visual images by representing them with an analog electronic signal. The images are decomposed into a series of horizontal scan lines. In this way the signal can be stored, transmitted and reproduced. See rasterization, field, frame.
2. Referring to the NTSC composite video standard. This is a widespread standard such that the "video in" of one machine is compatible with the "video out" of another.
3. There are various standards which define this signal, see RS-170, RS-170A, NTSC, PAL, SECAM, RGB, CAV.

Video Distribution Amplifier

A special amplifier for strengthening the video signal so that it can be supplied to a number of video monitors or other devices at the same time.

Video Editing

Editing is the process of selecting the frames and arranging them on the edit master videotape. In professional applications usually edits must be frame accurate. For example. When mastering a laserdisc frame accuracy absolutely essential, especially when single frame elements are involved. See off-line, on-line, et al.

Video Format

A standard determining how a video signal is recorded onto videotape. These include 1-inch Type C, 3/4-inch U-Matic, 3/4-inch U-Matic SP, Betacam, Betacam SP, M-II, D-1, D-2, D-3, VHS, Hi8, Video 8, Beta, and S-VHS.

Video Monitor

A display device that can receive video signals by direct connection only and cannot receive broadcast signals such as commercial television; it can be connected directly to the computer. Compare television set.

Video Recording

Any image, still or moving, can be converted into a video signal, most often through a video camera. Then the video signal can be recorded. By far the most common method of recording video is on videotape.

Video Signal

A dynamic signal which represents the varying levels of a video image but does not contain the sync pulses for its display. The video signal can be combined with sync pulses into a composite signal.

Video Waveform

The pictorial display on a waveform monitor (a special oscilloscope) of the various components of the video signal, used to check the integrity of the signal and signal components.

Videocassette

A self-contained video module played on a specially designed video tape recorder; similar in design to an audio cassette; houses two reels (supply and take-up) with the tape running between them but connected to both.

Videodisc

A double-sided optical disc capable of storing and playing back full-motion video. Videodisc has come to refer to all video media that are disc-shaped, regardless of whether they are optical or magnetic, digital or analog.

Videotape

A magnetic medium capable of storing an electronic signal and consisting of backing, binder, and coating. The coating usually consists of iron

oxide, however, metal particle or metal evaporated coatings are also used.

Videotape Formats

Videotape equipment can be expensive or inexpensive. Nevertheless, both produce the same 525-line, 30-frame-per-second image. The differences lie in visual quality, generation loss characteristics and in control capabilities.

VISCA

Acronym for Video System Control Architecture. VISCA is a device control language designed for synchronized control of multiple video devices. The protocol is device and platform independent. See LANC, V-Box.

VITC

See Vertical Interval Time Code.

VTR

Video Tape Recorder. An electro-mechanical device capable of recording, storing, and reproducing an electronic signal which contains audio, video, and control information. The term VTR includes reel-to-reel and cassette type (VCR) recorders.

Waveform

(1) The shape of a wave (a graph of a wave's amplitude over time).

(2) Slang for waveform monitor.

Waveform Monitor

An oscilloscope used to display the video waveform.

Wavelength

The horizontal extent of one complete cycle of a wave.

Window Dubs

The trick to off-lining is to always have access to the timecode for all of the source material. If the source medium is of professional quality, like Betacam SP, then viewing the material is expensive and complex. But it is also unnecessary: the material can be transferred to a more accessible medium, like 3/4-inch or VHS tape, with the timecode "burned in" on the picture, usually near the bottom. This is called a window dub. Each video frame is marked permanently with the exact timecode number. The advantage this offers is the ability to see the timecode on a VCR without a timecode reader. This assures frame accuracy during off-lining. Window-dubs are the video equivalent of workprints in film.

Wipe

A visual transition between images during which the edge of one image moves across the screen revealing the next image.

Wow and Flutter

Small fluctuations in tape speed. Wow is a gradually occurring change; flutter is a rapidly occurring change. A widely used specification in analog audio and videotape recorders.

XLR Connector

A connector with three conductors used in professional audio applications, typically with a balanced signal. Compare RCA connector and BNC connector.

Y, C1, C2

A generalized set of CAV signals: Y is the luminance signal, C1 is the 1st color difference signal and C2 is the 2nd color difference signal.

Y, I, Q

The set of CAV signals specified for the NTSC system: Y is the luminance signal, I is the 1st color difference signal and Q is the 2nd color difference signal.

Y, Pb, Pr

A version of component video (Y, R-Y, B-Y) specified for the SMPTE analog component standard .

Y, R-Y, B-Y

The general set of CAV signals used in the PAL system as well as for some encoder and most decoder applications in NTSC systems; Y is the luminance signal, R-Y is the 1st color difference signal and B-Y is the 2nd color difference signal.

Y, U, V

The luminance and color difference components for PAL systems; simply the Y, B-Y, R-Y components with new names. The derivation from RGB is identical.

Y/C Delay

Lag of timing between the luminance (Y) and chrominance (C) signals.
Published Date: Feb 20, 2012

RAM Disk: Description, Setup, and Use

What is a RAM disk, and why would I use one?
This article has been archived and is no longer updated by Apple.
You can set aside a portion of your computer's memory to function like a disk drive, called a RAM disk. With a RAM disk, you can save and retrieve files very quickly, but the files are stored only temporarily. This feature is not available on all models of the Macintosh.

Using a RAM disk is faster and conserves power because the computer uses less energy and time to access RAM than it does to access a hard disk or a floppy disk.

PowerBook users may want to use a RAM disk to maximize battery life. Commonly used files could be stored on the RAM disk, which requires less power to access than a hard disk drives. Also, accessing frequently used files from RAM allows the PowerBook to spin down the internal hard disk more often.

Memory assigned to a RAM disk is not available for opening programs, so keep this in mind when you select the size of your RAM disk. It should typically not be more than 25% to 50% of your available memory or other applications may not have enough RAM to function properly.

To create a RAM disk:

1. Select the memory control panel from the control panels menu item under the Apple menu.
2. Click On to create the RAM disk.
3. Drag the lever to choose the percentage of available memory you want to use for your RAM disk. Choose a size large enough to accommodate what you want to put on the RAM disk, but not larger.
4. Close the Memory control panel.
5. Select Restart from the Special menu.

You won't see the RAM disk icon until you've restarted.

Warning: Choosing Shut Down erases the contents of the RAM disk though a dialog box will alert you to this fact.

Since RAM disk storage is temporary, it's a good idea to observe some precautions when using a RAM disk:

- Don't store your only copy of a file on a RAM disk. Keep an extra copy on a hard disk or a floppy disk.
- Before using a program on a RAM disk, test the program on another disk (hard disk or floppy) to make sure it works properly.
- Always save the contents of your RAM disk on another disk before turning off your computer.

You use a RAM disk exactly as you would any other disk, except that you must save your work onto another disk before shutting down.

To erase a RAM disk, you can either :

- Click on the RAM disk icon on your desktop then select Erase Disk from the Special menu
- Drag everything in the RAM disk to the Trash then select Empty Trash from the Special menu
- Shut down your computer, then turn it back on.

These methods won't remove the RAM disk itself or make more memory available for opening programs.

Note: If file sharing is active, you may not be able to erase a RAM Disk. Use the File Sharing control panel to verify the status of file sharing.

For additional RAM Disk information, see the following articles:

Related Articles

16810 RAM Disk: Resizing or Deleting
11136 Mac OS: Minimum and Maximum RAM Disk Size
17699 RAM Disk: Resetting the PRAM Causes Loss of RAM Disk Contents
58145 Mac OS: Cannot Disable RAM Disk

TA21631_RAM_Disk_Description_Setup_and_Use.pdf

Published Date: Feb 20, 2012

RAM Disk: Resizing or Deleting

This article describes how to resize or delete a RAM disk.

This article has been archived and is no longer updated by Apple.

1. Copy any files you want to save onto a hard disk, move any remaining files to the Trash and empty the Trash.

Note: If Multiple Users is turned on, the RAM disk may be shared and you may not be able to move or delete all of its files. In that case, you must have an owner account in order to change the RAM disk's access privileges.

2. Select the Memory control panel from the control panels menu item under the Apple menu.

3. Drag the lever to choose the percentage of available memory you want to use for your RAM disk. Or click the Off button if you want to remove the RAM disk.

Note: You can't change the RAM disk setting while there are files on it.

4. Close the Memory control panel.

5. Choose Restart from the Special menu.

If you resized your RAM disk, a new RAM disk icon appears on the desktop when the computer restarts. If you removed your RAM disk, no icon appears.

For additional RAM Disk information, see the following articles:

Related Articles

16809 RAM Disk: Description, Setup, and Use
11136 Mac OS: Minimum and Maximum RAM Disk Size
17699 RAM Disk: Resetting the PRAM Causes Loss of RAM Disk Contents
58145 Mac OS: Cannot Disable RAM Disk
31339 Macintosh Manager: RAM Disks and Multiple Users Interaction

Published Date: Feb 20, 2012

Power Macintosh: Turn on Virtual Memory for Best RAM Usage

This article explains why virtual memory should be turned on with Power Macintosh computers.
This article has been archived and is no longer updated by Apple.
Application programs written for Power Macintosh computers have code stored in their data fork as one large code fragment, which is loaded into memory when you open the program. For this reason these kinds of applications require larger amounts of memory (RAM) when virtual memory is turned off. When virtual memory is turned on, they require much less RAM.

Virtual memory on the Power Macintosh uses file-mapped virtual memory. This allows the code fragment to be divided up into 4K blocks and to only load when it is executing. If the program branches to code that is not in RAM, it is simply read in from the disk instead of all at once when the program is open.

For maximum memory use, you should turn on virtual memory in the Memory control panel.

Note: There are situations when turning virtual memory on may prevent optimal performance. Turn virtual memory off if you suspect that it may cause issues with certain programs. Be sure to read the system requirements for your application programs. Generally, they say if virtual memory should be on or off.
Published Date: Feb 20, 2012

System 7.5 - Mac OS 8.1: Additional Find File Search Options

This article tells how to use four undocumented search options available in the Find command in System 7.5.x, 7.6.x, Mac OS 8 and Mac OS 8.1.
This article has been archived and is no longer updated by Apple.
The Find command (Command+F) in System 7.5 through Mac OS 8.1 lets you search for a variety of file attributes. There are four additional search options available under the first pop-up menu selection in the Find File dialog box. Hold down the Option key while selecting the "name" pop-up and these additional selections appear:

- **Contents:** Find files containing a specific string or phrase (up to 30 characters)
- **Name/Icon Lock:** Find all locked/unlocked files.
- **Custom Icon:** Find all files that either do or do not have a custom icon.
- **Visibility:** Find all visible/invisible files.

These additional search criteria are "undocumented features" of Find File. As such, their use is not officially supported.

For information related to invisible files and Sherlock, see the following article:

Article 24986: "**Sherlock, Sherlock 2: Finding Invisible Files or Folders**"

Article 30726: "**Sherlock, Sherlock 2: Deleting Invisible Files or Folders**"

Published Date: Feb 17, 2012

Sony Electronics, Inc.

Sony Electronics, Inc. (formerly Sony Corporation of America)
This article has been archived and is no longer updated by Apple.
Dealer Locations and Data Sheets (USA)
1 (800) 352-7669 (Phone)
+ 1 408 955 5107 (BBS)

FAX Retrieval System:
1 (800) 883-7669 (USA)
1 (800) 961-7669 (Canada)

Technical Support:
1 (800) 326-9551 (USA)
+ 1 416 499 1414 (Canada)

For Mavica Digital Camera Products:
1 (800) 222-7669

Sony Service Center Locations - Computer and Consumer Products
1 (800) 282-2848

Sony Service and Parts - Computer Monitors and Consumer Products
1 (800) 488-7669

Sony Service and Parts - Computer Storage Devices
+ 1 408 922 0699

World Wide Web Site for imaging and computer peripherals: **http://www.ita.sel.sony.com/**

For all other Sony products: **http://www.sony.com**

Company Profile:
Formerly Sony Corporation of America, hardware, specializing in communications and computer peripherals.
Published Date: Feb 20, 2012

Apple SCSI Terminator: Description of Active Terminator

This article provides a description and information for the new Apple Active SCSI Terminator part number M3503LL/A.
This article has been archived and is no longer updated by Apple.
The Apple SCSI Active Terminator is the new style of SCSI terminator (service part number 922-1185). It replaces service part number 658-8032.

Question: What does it do?
Answer: The Apple SCSI Active Terminator includes a voltage regulator and capacitors to filter the term power. Active termination is one of the alternatives specified in the new SCSI specifications. The active termination is much less sensitive to variations in the termination power supplied by various SCSI devices.

The active terminator functions as follows:

The terminator voltage supplied by the device, typically between 4.25 Vdc and 5.25 Vdc is applied to a low drop voltage regulator and the output is regulated to 2.85 Vdc which is then applied to 110 ohm series termination resistors.

Question: Does it turn off or turn on?
Answer: No, the regulator is on when ever termination power is supplied to it.

Question: Why isn't there a LED on it indicating activity?
Answer: A complete redesign of the tooling for the terminator housing would be required to fit an LED to the terminator. Since the terminator is at the back of the peripheral, out of sight of the user, the benefit of an LED would be minimal.

Question: Does it adjust for resistance or impedance issues?
Answer: No, its designed for regulating the termination power supplied by SCSI devices.

Question: Why would someone want this one over the old one?
Answer: Improved reliability of the term power signal level.

Question: Did the finished goods part number change to a /B?
Answer: No, this is the first revision of this part, not a revision of the old part. The new part number is M3503LL/A.

Question: How can I differentiate it from the old terminator from the outside?
Answer: The previous non active SCSI terminator has part number 590-0304-A embossed in the plastics. The new active SCSI terminator has part number 590-0772-A embossed in the plastics.

Question: Is it required by any current or future computers?
Answer: This new active SCSI terminator is not required for any specific computer or peripheral from Apple. It is a replacement for the current terminator. The IIfx and some LaserWriter printers still require the black terminator.
Published Date: Feb 20, 2012

AppleShare: Quick Start Instructions

This article will help you set up your AppleShare server.
This article has been archived and is no longer updated by Apple.

Introduction

This Quick Start article will help you set up your AppleShare server. While this article will get you started quickly with your AppleShare server, the documentation supplied with your software -- both printed and electronic -- contains important additional information. The instructions in this section assume you have already performed these tasks:

* You have set up the server computer and connected the server computer to the network.

* You have activated AppleTalk in the Chooser window and selected the appropriate network type in the Network control panel.

* AppleShare 4.0.x (Apple Workgroup Server 60, 80, 6150, or 8150), or AppleShare Pro (Apple Workgroup Server 95) is installed on your Apple Workgroup Server.

If you have not yet performed these tasks, see the documentation that came with either your server computer, or the manual that came with your network cabling system.

Note: Make sure you have all of the components assembled before starting.

Setting Up File Service

---

1) Choose the AppleShare Admin program alias from the Apple menu.

2) Apple Workgroup Server 60, 80, 6150, or 8150: Enter a contact name and telephone number, and the name of your organization, then enter your serial number and click OK.

3) Name the file server.

4) Enter an Admin Key and then click OK.

IMPORTANT: Remember your Admin Key! This is the last time you'll see the Admin Key on the screen. Record it somewhere. Replacing a forgotten Admin Key is difficult and time consuming. See the "Troubleshooting" chapter in your setup manual for instructions on replacing the Admin Key.

5) Confirm the Admin Key and then click OK.

6) Enter your administrator name and password and then click OK.

After a few moments, you see three windows -- the User List, Group List, and User Information windows. For now, you will work only with the User Information window. Each user account you create will have its own User Information window. This one is for you as the administrator.

7) Enter an administrator name in the Name box.

8) Enter a password.

IMPORTANT: Don't use a password that is the same as the Admin Key. Keeping the two distinct provides an added level of server security.

9)
Verify your AppleShare options. These options are explained in the section "Registering Users" in Chapter 2 of the AppleShare administrator's guide.

10) Click Save.

11) Close the User information window.

Allowing or Denying Guest Access

If you allow guest access, anyone connected to the network can log on to the file server. If you deny guest access, only registered users can log on. The program is preset to deny guest access.

IMPORTANT: If you are not sure whether to allow guest access, do nothing for now. You can always change the setting later.

1) Open the User List window, if it isn't already open.

2) Double-click the <Any User> entry in the User List window.

3) Click the Login Enabled checkbox to place an X in it.

4) Click Save.

5) Close the User Information window.

Registering Users

Registering users means assigning each user a personal file server account. Each user you register is listed in the Users and Groups Data File kept in the server's Preferences folder.

1) Choose Create User from the Users menu.

2) Enter the user's name.

3) Enter a password.

4) Select this user's AppleShare options.

Here's a brief summary of how these options function:

Login Enabled lets the user log on to the file server. You must select this option to let the user gain access to the file server.

Change Password Enabled lets the user change his or her own password.

All Privileges Enabled gives the user access to all volumes and folders on the server computer, regardless of whether you've shared them.

Require New Password on Next Login makes the user change the password the first time they log on to the file server.

Program Linking Enabled allows a user to create a link between a program on the server and a program on the user's computer. If other networking services are installed on the server computer, the list of options may be longer.

5) Click Save to confirm the entries.

6) Close the User Information window.

7) Repeat steps 1 through 6 for each user you want to register.

Setting Up and Adding Members to Groups

Creating groups allows you to consolidate access privileges for volumes and folders available on the file server. For more information, see Chapter 2, "Setting Up File Service," in the AppleShare administrator's guide.

1) Choose Create Group from the Groups menu.

2) Enter a name for the group.

3) Click Save.

4) Choose User List from the Users menu, then select the users you want to assign to this group.

5) Drag the icons representing the users you selected to the Members box in the group window.

6) Close the group window.

Sharing Volumes and Folders and Setting Access Privileges

Now that you've registered users and created groups, you need to share volumes on the file server. This means you will indicate which hard disks and folders you want to make available to users on the file server. If you need more than the following information, refer to the documentation for a

complete description of sharing volumes and setting access privileges.

1) Choose Access Information from the Privileges menu.

2) Select a volume -- or a folder from within a volume -- from the Volumes list.

IMPORTANT: When you share an entire hard disk, all of the folders contained on it are available to users. Also, AppleShare Pro does not allow you to share the "/" volume. You must share specific folders within the / volume to share the contents of the / volume. Also, if you choose a mount point for a shared disk within a volume or folder, you cannot share the enclosing volume or folder. Disks that are mounted within a folder must be shared through explicit privileges. See the "AppleShare Pro Administrator's Guide" for additional information.

3) Click Share to share the selected volume or folder.

NOTE: The Share button changes to an Unshare button each time you share a selected volume or folder.

4) For folders, click the Same as Enclosing Folder option to remove the X.

5) If necessary, assign an owner to the volume or folder. You can change ownership if you want, using the following procedure:

5-a) Select the volume or folder in the Shared Items box.

5-b) Select the user or group you're assigning ownership to.

5-c) Select the icon of that user or group and drag it to the Owner box in the Access Information window.

6) Assign a user or group to the volume or folder.

You need to indicate which user or group will have access privileges for each shared item:

6-a) Choose User List from the Users menu or Group List from the Groups menu.

6-b) Select the user or group you're assigning privileges to. You can choose one user or one group.

6-c) Select the icon of that user or group and drag it to the User/Group box in the Access Information window.

7) Select the access privileges for the volume or folder.

8) Select the access privileges for guests by clicking the appropriate boxes for Everyone.

9) If you want to apply the same access privileges to all the folders within the volume or folder you've shared, click the Change All Enclosed Folders checkbox to place an X in it.

10) Click Save.

11) Click the button representing the choice you want and click OK.

12) Repeat steps 2 through 11 for each item you want to share.

13) Close the Access Information window.

14) Quit the AppleShare Admin program.

Starting the AppleShare File Server Program
Choose the AppleShare File Server program alias from the Apple menu.

Setting Up Print Services
This section explains how to capture a printer for spooling documents over the network, set printer options, and begin using print service.

1) Choose the AppleShare Print Server alias from the Apple menu.

2) Select the icon for the type of printer you want to capture in the Printer Types box.

3) If necessary, select the zone the printer is in.

4) Select the printer you wish to capture from the Available list.

5) Click Capture.

6) Select the options you want for this printer.

7) Click OK. The program captures the printer you selected. In a moment, two windows appear -- the Queue and Log windows for the captured printer.

8) Close the Queue and Log windows. You won't need to use these windows until after users begin using the print server.

9) Choose Setup from the File menu. The Setup window appears again.

10) Repeat steps 2 through 8 for each additional printer you want to capture.

11) Verify that all users have the same printer drivers installed on their computers.

NOTE: You will not experience significant Print Server performance differences between AppleShare 3.0.x, AppleShare 4.0.x, and AppleShare Pro because the bottleneck in print server performance is the printer, not the server.

Where to Get More Information
For additional information about AppleShare, you have two other sources of information:

The AppleShare 4.0.x or AppleShare Pro Administrator's Guide -- either the electronic or printed version-and Balloon Help, which is built into the AppleShare software.
Published Date: Feb 20, 2012

QuickTime: Installation Failed Message at Startup

My computer gives me this message each time it starts up: "QuickTime installation has failed because QuickTime was already installed." I do not understand this message because I am not trying to install anything. What is going on?
This article has been archived and is no longer updated by Apple.
If your computer gives you this message each time it starts up, you have two copies of the QuickTime extension somewhere in your System Folder. You may have one in the Extensions folder and one loose in the System Folder. You may have two different versions of the QuickTime extension or two copies of the QuickTime extension that are the same version, but are named differently residing in your Extensions folder of your System Folder.

Try these two procedures to make sure you have only one copy of QuickTime in your System Folder:

Procedure 1
==========

Step 1

Open your System Folder.

Step 2

Click on the Views menu and choose By Name.

Step 3

If you see an item called QuickTime or QuickTime 2.0 loose in the System Folder, drag it to the Trash. Make sure you have disabled the "Protect System Folder" feature in the General Controls control panel first. If you do not see an item called QuickTime, go to Procedure 2.

Step 4

Restart your computer to make sure the error message does not appear.

Procedure 2
==========

If you do not see QuickTime loose in the System Folder, open your Extensions folder. You may see one extension labeled QuickTime and one extension labeled Quicktime 2.0 or other version.

Step 1

Highlight one of the files by clicking it ONE time.

Step 2

Select "Get Info" from the File menu and check the version displayed in the Info window. Keep the later version, (for example, 2.0 is later than 1.6) and move the older one to the Trash. If they are both the same version, it does not matter which one you remove.

Step 3

Restart your computer to make sure the error message does not appear.

Many third-party CD-ROM disc games will add QuickTime when they are first installed on your computer. Some games may contain an older version of QuickTime which may replace your newer version. Any computer which comes with System 7.5 also comes with QuickTime 2.0. If your copy of QuickTime 2.0 has been replaced with an earlier version, you will need to either reinstall it from your original floppy disks or CD, or restore your system software if you have a Macintosh Performa computer.

This article was published in the "Information Alley": Volume II, Issue 1, Page 13
Published Date: Feb 20, 2012

Energy Saver Won‘t Work w/All Power Macintosh Models

When I install the Apple Multiple Scan Display software on a PowerBook 200 Series computer (Duo) running System 7.1.1, everything installs fine. However, when I install the same software on a Power Macintosh 6100/66 or 7100/80/AV running System Software 7.5, the Energy Saver control panel does not install. Why not?

This article has been archived and is no longer updated by Apple.

The Power Macintosh 7100/80, 8100/100 and 8100/110 computers were tested with the energy saver utility software from the Connectix Desktop Utilities which shipped with these models in the Apple Extras folder. That is the only energy saver software that should be installed onto these Power Macintosh computers.

The Apple Multiple Scan Display software does not install on any Power Macintosh computer which is running System Software 7.5. This is because the Multiple Scan Display software functionality (but not the Energy Saver Control Panel) is already included in System Software 7.5.

Published Date: Feb 20, 2012

Broderbund Software, Inc.

Broderbund Software, Inc.
This article has been archived and is no longer updated by Apple.
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Company Profile:
Broderbund Software, Inc., developer of the Print Shop Deluxe, is a diversified consumer software company that offers a broad selection of fun, award-winning products, such as Lode Runner, for use in homes, schools and small businesses.
Published Date: Feb 20, 2012

Extensions Manager: Extensions Off Compared To Shift Down When You Start Up

Does using the Extension Manger "All Off" set do the same thing as holding down the Shift key when starting up?

This article has been archived and is no longer updated by Apple.
The Extensions Manager's All Off set and restarting while holding down the Shift key do not have the same effect. Each method "switches off" or "disables" some types of extensions that the other does not.

Holding the Shift key during startup instructs Mac OS to not load any item that is in the Extension folder, Control Panels folder, or the Startup Items folder. Holding the Shift key during startup does not cause any item to move. The Extensions Manager control panel, however, does physically move items around, but only listed items. When you use the "All Off" set, the Extensions Manager control panel moves all listed items to their respective "Disabled" folder, such as Extensions (Disabled). Items that are not listed in the Extensions Manager control panel are not physically moved, and therefore still load during start up.

Some control panels, including the Startup Disk control panel and the Extensions Manager control panel itself, can be opened after starting up with the "Shift down" method.

The Extensions Manager control panel can also be accessed before most extensions load by holding the Space Bar during start up.

For example, the Extensions Manager switches off Chooser extensions, but holding the Shift key down during restart does not. The Extensions Manager does not display or switch off all extensions, whereas the Shift down restart does disable all extensions.

When you are trying to isolate an extension conflict and are not sure if it is an Apple System extension or a third party extension, restart while holding down the Shift key.

Few third party software items use extension types that the Extensions Manager does not recognize and turn off in the All Off set. If you cannot start up with extension disabled by holding the Shift key, start up from a Mac OS CD or floppy disk. It may be necessary to reinstall your system software, or perform a clean installation of it. If you cannot start up from a Mac OS CD (or floppy disk), there may be an issue with a hardware device attached to your computer, or with an internal hardware upgrade.

Published Date: Feb 20, 2012

LaserWriter 16/600 PS: Configuration Switch Settings

What is the purpose of the two position configuration switch located on the LaserWriter 16/600 PS?
This article has been archived and is no longer updated by Apple.
The configuration switch on the LaserWriter 16/600 PS printer provides flexibility in configuring the LocalTalk, Ethernet, and Parallel ports. When the switch is in the DOWN position all of the ports are placed in a default configuration which cannot be modified. When the switch is in the UP position the printer uses the custom communication settings that have been configured using the Apple Printer Utility. Allowing both a custom and a default switch position ensures that the user will always have communication access to the printer even if the user makes modifications in the custom mode which prevents communication with the printer.

In the default mode (DOWN) the communication ports are configured as follows:

Communication Port	Mode
LocalTalk Port:	PostScript
Ethernet Port:	
EtherTalk:	PostScript
NetWare:	AutoSelect
TCP/IP:	AutoSelect
Parallel Port:	AutoSelect
Speed:	Fast
Protocol:	Raw

In the custom mode (UP) the communication ports can be configured as follows:

Communication Port	Mode
LocalTalk Port:	PostScript*
Ethernet Port:	
EtherTalk:	PostScript*, Off
NetWare:	PostScript*, PCL5, AutoSelect, Off
TCP/IP:	PostScript*, PCL5, AutoSelect, Off
Parallel Port:	PostScript*, PCL5, AutoSelect
Speed:	Fast*, Compatible
Protocol:	Normal*, Raw, Binary, TBCP
An asterisk '*' denotes the default values for the custom mode.	

For more detailed information consult the LaserWriter 16/600 PS User's Guide.
Published Date: Feb 20, 2012

PowerBook: Missing Menu Bar Battery Indicator

This article explains what to do if the Menu Bar battery indicator is not visible.
This article has been archived and is no longer updated by Apple.

Symptom:

Menu Bar battery indicator is not visible.

Products Affected:

- PowerBook computers

Solution:

This issue is probably caused because the "Show the battery level" option is not enabled within the Date & Time control panel. To correct this:

1. Open the Date and Time control panel.
2. Click Clock Options.
3. Click the checkbox to enable the "Show the battery level" option.
4. Click OK.

Published Date: Feb 20, 2012

AppleShare Volumes: Disabling Automatic Log On

When my Macintosh starts up, an AppleShare log on dialog appears for server volumes that no longer exist on the network. How can I get rid of these attempts to log on to nonexistent server volumes?

This article has been archived and is no longer updated by Apple.

For Systems 6, 7 and Mac OS 8.x:

Automatic log on can be disabled by dragging the AppleShare Prep file (System Folder: Preferences: AppleShare Prep) to the Trash. Removing this file will eliminate automatic log on for all server volumes. Restoring automatic connection to specific server volumes at startup can be accomplished in the usual fashion.

For Mac OS 9/AppleShare client 3.8.5 & higher:

Automatic log on can be disabled by dragging to the Trash the server's alias that has been placed in the Servers folder in the System Folder. Each server that mounts at start up has a corresponding alias in the Servers folder.

Note: Some third-party software, such as Suitcase, will also attempt to mount remote volumes at startup. The third-party vendor should be contacted for instructions on disabling automatic log on with such software.

Published Date: Feb 20, 2012

Resetting the PRAM loses the contents of a RAM disk

Resetting Parameter RAM (PRAM) deleted my RAM disk and its contents. Why?
This article has been archived and is no longer updated by Apple.
If you are using a RAM disk, and Parameter Ram (PRAM) is reset, by simultaneously holding down the Command-Option-P-R keys at the initial startup chime, the settings in the Memory control panel revert to their factory defaults.

The default setting for a RAM disk in the Memory control panel is "off". As a result, any contents on a previously active RAM disk are lost when the PRAM is reset.

This happens regardless of whether or not the RAM disk is the startup disk. The presence of the Assistant Toolbox extension (on a Powerbook computer) does not prevent this data loss. You should back up all important items from a RAM disk to another disk before resetting the PRAM.

Note: Restarting the computer does not purge the contents of the RAM disk. Selecting Shut Down from the Special menu or powering the computer off using the power switch erases the contents of the RAM disk, unless the Assistant Toolbox extension for PowerBook computers, or a similar utility for other Macintosh computers is installed. If the computer is shut down in this manner, the contents of the RAM disk cannot be retrieved even if the computer is immediately restarted.

Related documents

16809 RAM Disk: Description, Setup, and Use
16810 RAM Disk: Resizing or Deleting
11136 Mac OS: Minimum and Maximum RAM Disk Size
58145 Mac OS: Cannot Disable RAM Disk

Published Date: Feb 20, 2012

Finder Search Path For Applications

This document lists the order in which the Finder (Mac OS 9 and earlier) searches for an application that can open a file.

This article has been archived and is no longer updated by Apple.
With System 6 through Mac OS 9, the Finder searches its desktop database for an application that can open files with the same file type as the document. The Finder searches for the application in this order:

1. An application that is already open, having the same creator code as the file.
2. An application on the same volume as the document being opened.
3. An application on the startup volume.
4. An application on any available mounted volume.

In the event that multiple versions of the same application are found on one volume, the Finder opens the application whose record in the desktop database was updated last. This is usually the last version installed.

For related information, refer to the following documents:

Document 55381: "**Mac OS: File Type and Creator Codes, and File Formats**"
Document 10182: "**Mac OS: Rebuilding Desktop File and Icon Recovery**"

Published Date: Feb 20, 2012

QuickTime: Erratic Sound & Movies From CD-ROM

Music CD-ROM discs played from my PowerBook 540 computer sound choppy. The same thing happens if I try to play QuickTime movies from a CD-ROM. When I place these CD-ROMs in another computer, they play fine. Why?
This article has been archived and is no longer updated by Apple.
If playback of QuickTime movies and Audio CDs are choppy, slow, skip, or jump around, check the following:

Step 1
If you have a PowerBook, turn off Processor Cycling (in the PowerBook Control Panel).

Step 2
On all Macintosh and PowerBook computers, turn off Virtual Memory (in the Memory Control Panel).

Step 3
Turn off or quit applications running in the background before you try to play the music or the movie.

This article was published in the "Information Alley": Volume II, Issue 4, Page 5
Published Date: Feb 20, 2012

CloseView: Can it Do Screen Inversion Only?

This article provides a solution to having on screen text enlarged and the color inverted.
This article has been archived and is no longer updated by Apple.
There is no ResEdit solution available to do this. However, there is a solution available from the ALVA Access Group's called inLarge.

Note: The following information was take from the ALVA Access Group Web site.

inLARGE is a full featured screen magnification program for the Macintosh which offers 1 to 16 times magnification of all or part of the screen, the ability to invert the screen to white on black with "smart color inversion," an adjustable cross hair option for easy cursor location, three different glass motions, and much, much more.

The wide range of options available with inLARGE is designed to allow users to customize the program to fit their individual needs. inLARGE can be adjusted to give people with low vision access to most Macintosh applications, or it can provide relief from the eye strain caused by spending a lot of time in front of a computer. The "Scan Mode" provides easy hands-free reading on a magnified screen and the "Background" option prevents distraction by blacking out all parts of the screen except that which you are reading. And, the ability to magnify just a portion of the screen is useful for doing detailed graphics work.

inLARGE commands (including Help) are easily accessible by intuitive keyboard commands or from the control panel interface.

inLARGE 2.1 Features

- Full or partial screen magnification
- Magnification levels: 1 to 16
- The ability to stretch and condense the image
- The ability to invert the screen to white on black with "smart color inversion"
- An adjustable Crosshairs option for easy cursor location
- 3 motion settings: Push. Continuous, Centered
- Automatic Scanning for hands free reading
- Alternate view allows you to see the entire screen and the area that will be magnified
- The Background option provides distraction free viewing by focusing only on the magnified portion of the screen
- All commands (including Help) are entered easily from the keyboard or through the control panel interface

inLARGE 2.1 Requirements

- Computer: Any Macintosh computer (68K based or PowerPC based, including PowerBooks, G3's and iMacs)
- Mac OS: Any version of the Mac OS from System 6.0.5 -- including Mac OS 8.6.
- Memory: At least 4MB of free RAM (more if running in high resolution and/or using a 19 inch or larger monitor).

Free inLARGE DEMO!
You can now download and try this latest version of inLARGE on your own Mac -- at no charge and no obligation! The Demo is the full featured version of inLARGE that will run for 20 minutes. (For additional time, simply restart your Mac.) This download also includes the complete User Manual, Reference Guide and other documentation.

Note: This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following Knowledge Base article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"

Note: CloseView is written as a single word, not as Close View.
Published Date: Feb 20, 2012

AppleShare: Explicit and Inherit Access Privileges Explained

I've seen explicit and inherit access privileges with AppleShare File Servers. What do these terms mean? When and why would I use one type or the other? How do I make changes?
This article has been archived and is no longer updated by Apple.

Definitions

The terms explicit and inherit are commonly used when referring to access privileges with AppleShare File Servers. Here are definitions for explicit and inherit access privileges:

Explicit: Retain access privileges regardless of the enclosing folder's privileges.
Inherit: Always change to reflect access privileges of the enclosing folder.

The default on an AppleShare File Server is explicit access privileges. The default on Personal File Sharing is explicit access privileges.

"Default" Folder Privileges

On an AppleShare File server, each folder can have its own privileges assigned to it. When the administrator is setting up the server for the first time, all privileges default to the administrator as the owner, and no one else has privileges. But once the server is set up, and users start creating folders on the server, by default, any new folder will start off with the privileges of its parent--its enclosing folder-- except for the "Owner", which will always be the user who created the folder.

Under normal circumstances, when a folder is moved around on the server, to another enclosing folder, the privileges stay with it. They are "explicit".

There may be times when you want a folder to always adopt the privileges of its parent folder, even as it is moved around on the server. This type of privilege is called "inherited" or "adopted."

Choosing Between Inherited & Explicit Privileges

An advantage to explicit privileges is that they are more secure. It is less likely that access to a folder will be accidentally allowed, because the folder was moved on a server. Explicit privileges would be preferred for confidential information.

One advantage to using inherited privileges is that server startup time may be reduced. When the server is starting up, it must validate the information in the server volume's PDS files. If each folder has explicit privileges, they must all be checked. When folders have inherited privileges, they are using a flag that indicates "same as parent" so privileges for that folder do not need to be validated. If you've got a large volume with lots of folders, and you're noticing that its taking a very long time for the server to start up, consider changing some of your explicit privileges into inherited, where appropriate.

Older versions of AppleShare had an option to "Compact Access Privileges", a process which checked for folders that had the same privileges as the parent folder, and changed those privileges to inherited. AppleShare IP no longer has this feature.

How To Change Privileges From Explicit To Inherited

There are different ways of setting privileges of folders on an AppleShare server.

From the server, using the Web & File Admin program...

-To change a single folder's privileges:

1. Show Disk & Share Points
2. Navigate to the folder whose privileges you want to change.
3. Select that folder and click on the "Privileges" button.
4. Change the radio button to "Use enclosing folder's privileges" if you want the privileges to be inherited, or --"Set privileges for this item" if you want the privileges to be explicit.

-To change the privileges of every folder within a given folder:

1. Show Disk & Share Points
2. Navigate to and select the parent folder
3. Hold down the Option key while selecting the "Enclosing Folder" button, and select explicit or inherited, from the dialog box.

From a workstation...

-To change privileges on a single folder:

1. Log into the file server (you must be the folder's owner or an administrator of the server to change privileges from a workstation; this is determined by the user name you use to log in to the file server).
2. Mount the volume where the folder resides.
3. Select the folder in the Finder.
4. Choose "SharingŠ" from the File menu.
5. Check the "Use enclosing folder's privileges" box to give the folder inherited privileges, or UNCheck the box to give the folder explicit privileges.

To change privileges on all enclosed folders:

1. Use the "Copy these privileges to all enclosed folders" feature. Although the privileges on enclosed folders will be the same as the enclosing folder, they will be explicit privileges. From a workstation, you do not have the option to make all enclosed folders "inherit" their privileges.

Published Date: Feb 20, 2012

CD-ROM: "This disk is unreadable" Message

This document offers troubleshooting tips for an optical drive that has difficulty reading a disc.
This article has been archived and is no longer updated by Apple.

Symptom

When you insert a disc into the drive an alert box with this message appears:

> "This disk is unreadable by this Macintosh. Do you want to initialize the disk?"

Solution

If other discs of the same type seem to work, make sure the disc is clean and free of scratches and debris. See technical document 50448: "**Mac OS 9: How to Handle and Clean CD and DVD Discs**".

When the optical drive does not recognize a particular type of disc, this usually indicates the CD-ROM software is not properly installed, or is missing certain files. In some cases, one or several CD-ROM "Access" files may be damaged or a third-party extension or control panel may be conflicting with the CD-ROM software. Try the following suggestions to resolve this issue:

Make sure you have not started your Macintosh with the Shift key held down; this disables the CD-ROM extensions and all other extensions. Make sure you have not disabled the CD-ROM extensions using the Extensions Manager or a similar third-party utility.

Make sure that these files are in the Extensions folder of your System Folder:

- Apple CD-ROM or Apple CD/DVD Driver
- Apple Photo Access (if you plan to use Kodak Photo CDs)
- Foreign File Access
- High Sierra File Access (not present in Mac OS 9.1 or later)
- ISO 9660 File Access
- Audio CD Access
- UDF Volume Access (not present prior to Mac OS 8.5)

If any or all of these files are missing, search the hard disk to see if they have been moved to a different location, then move the files back into the Extensions folder. You must restart the computer after moving the files to the Extensions folder for the files to work properly.

If the files listed above have been deleted, reinstall the CD-ROM software from your Macintosh System CD or system disks, depending on which one came with your computer. If you have updated the system software to a newer version, install the CD-ROM software using the system CD or disks for the newer system software.

If you do not have the option to custom install the CD-ROM software from your system CD or disks, it may be available for download.

Alternately, you may also reinstall the entire system software for your computer. This restores the necessary CD-ROM files.

If these files are damaged, drag the CD-ROM files mentioned above to the Trash, empty the Trash, then reinstall the CD-ROM software. Restart and test to see if the disc appears on the desktop.

If the preceding steps fail to resolve your issue, an extension may be conflicting with the CD-ROM software. Open the Extensions Manager control panel and choose "Mac OS Base" from the Sets pop-up menu.

When you restart the computer, only the extensions installed with your system software load. Test your CD-ROM discs to see if they work, then add extensions and control panels back one at a time, restarting after adding each one to isolate which extension is causing the conflict.

Note: If you are using system software earlier than System 7.5, you have to manually drag extensions and control panels out of the System Folder and restart each time to isolate the offending file.

Once you isolate the conflicting extension, contact the software manufacturer or vendor for compatibility information, or disable the extension to resolve the issue.

Published Date: Feb 20, 2012

Modem AT Command Set: Description

This article provides a link to the Apple manuals document which contains a link to the pdf version of the AT Commands for the Apple Internal Modem manual.
This article has been archived and is no longer updated by Apple.
To download a pdf of the AT Command set, go to document 50055 "**Miscellaneous Manuals**" and look for the PDF file titled "AT Commands"
Published Date: Feb 20, 2012

LaserWriter: Toner Cartridge Life

Why is there such a difference between the rated life of the LaserWriter toner cartridges and the actual life that I experience?
This article has been archived and is no longer updated by Apple.
It is nearly impossible to provide accurate toner cartridge life information because there are many variables affecting the toner requirements for a document. The formatting of the document, font type, and the inclusion of graphics significantly change the toner requirements.

To provide information about the average life of a toner cartridge, many manufacturers provide consumers with the expected number of pages that can be printed assuming a specific toner density. For instance, the LaserWriter 16/600 PS toner cartridge is expected to last 6,000 pages at 5% coverage. An average double-spaced Letter or A4 page using a single, monospaced font has a density close to 5%. Making a simple modification to the document, such as changing the font or making it bold, may increase the actual density value to 6% or 7%. Changing from a double-spaced to a single-spaced format doubles the amount of toner used.

Because most customers print a variety of different documents, the actual page life of a toner cartridge may vary significantly. For example, with a page density of 5%, the LaserWriter 16/600 PS has a rated life of 6,000 pages. However, if a solid black page (100% density) is printed, then the cartridge will run out of toner after approximately 300 pages [6,000 pages/(100%/5%)]. It is unusual to print solid black pages during normal use so most customers will experience a toner life somewhere between the two extremes.

Many laser printers also have the capability to adjust the toner density using a manual adjustment or software tool such as the Apple Printer Utility. Consult the printer's manual for more detailed information on changing the settings.

The chart below provides the approximate number of pages for the toner cartridges in each of these LaserWriter printers listed.

Printer	Part #	Yield (5% coverage
LaserWriter Pro 810 (Extended Capacity)	M3602G/A	13,000
LaserWriter Pro 600, 630, and 16/600 PS	M2473G/A	6,000
LaserWriter 12/640 PS	M4683G/A	6,000
LaserWriter II series	M6002 (new)	4,000
	M2795G/A (remftd)	4,000
LaserWriter Select 300, 310, and 360	M1960G/A	4,000
LaserWriter and LaserWriter Plus	M0180	4,000
Personal LaserWriter LS, SC, NT, and NTR	M0089LL/A	3,000
Personal LaserWriter 300, 320, and 4/600 PS	M2045G/A	3,000
Color LaserWriter 12/600 PS Color LaserWriter 12/660 PS	Cyan M3757G/A	4,000
	Magenta M3760G/A	4,000
	Yellow M3758G/A	4,000
	Black M3756G/A	4,000
LaserWriter 8500	M5893G/A High-Capacity Toner Cartridge	14,000

Published Date: Feb 20, 2012

Mac OS 8, 9: Starting your computer from floppy or CD-ROM disc

This document describes ways you can start a Macintosh computer from a Utilities or Disk Tools floppy disk, or a system software CD which came with your computer.

Note: This document applies to Mac OS 9.2 and earlier.
This article has been archived and is no longer updated by Apple.
You may occasionally need to start your Macintosh from a device other than your hard drive in order to correctly use software such as Disk First Aid, Apple HD SC Setup, other utilities, or to troubleshoot an issue with other disk volumes.

Macintosh system software normally resides on the hard disk. System software, however, may also be installed on a floppy disk or on a CD-ROM disc, and it may be desirable to start the system using that software in order to investigate issues relating to the system software on the hard disk, or the hard disk itself.

Starting from Disk Tools disk or another startup diskette

1. From the Special menu, choose Shut Down.
2. Insert the Disk Tools disk or other startup disk.
3. Turn on the computer.

The Disk Tools or other startup disk icon will appear in the upper right hand corner of the screen. If your hard disk icon is visible, it should be right below the Disk Tools disk or Utilities disk icon.

Note: To eject the disk, choose "Restart" from your Special menu.

Starting from the Mac OS CD that came with your computer

1. Insert the CD-ROM.
2. From the Special menu, choose Shut Down.
3. Hold down the "c" key (lower-case C). Make sure that Caps Lock is not enabled.
4. Start up your computer.
5. Hold down the "c" key until you see Welcome to Macintosh.

The Mac OS or Power Macintosh CD icon will appear in the upper right hand corner of the screen. If your hard disk or Macintosh HD icon is visible, it should be right below the CD icon.

Note: To eject the CD-ROM disc, choose "Restart" from your Special menu. Immediately after you hear the startup chime, press the eject button on the front of the computer. The CD-ROM caddy will pop out or CD-ROM tray will open.

If the computer, for any reason, fails to start from your CD-ROM drive, follow the instructions described below.

Starting from an Install Me First CD, an Apple Macintosh CD on a non-Power Macintosh system, or a Macintosh Performa CD for a Performa 500 or 630 series computer

1. Insert the CD-ROM.
2. From the Special menu, choose Shut Down.
3. Hold down the Option, Command (Apple), Shift, and Delete keys. If you have a keyboard with a physical latch for the Caps Lock key, make sure the Caps
4. Lock key is in the "up" position.
5. Start up your computer.
6. Continue holding down the Option, Command, Shift, and Delete keys until you see Welcome to Macintosh.

On the top right side of the screen, you should see the Apple Macintosh CD, Install Me First CD icon, or Macintosh Performa CD icon. If your hard disk or Macintosh HD icon is visible, it should be right below the CD icon.

Note: To eject the CD-ROM disc, choose Restart from the Special menu. Immediately after you hear the startup sound, press the eject button on the front of the computer. The CD-ROM caddy will pop out or CD-ROM tray will open.

TA21653_Mac_OS_Starting_your_computer_from_floppy_or_CDROM_disc.pdf

Published Date: Feb 20, 2012

Mac OS 7.x, 8.x 9.x: Fonts Included With Major System Releases

This article contains a comprehensive list of fonts included with major releases of Mac OS.
This article has been archived and is no longer updated by Apple.

System Software Version/Font	TrueType Font	Bitmapped Font
System 7.0		
Courier/Courier Bold	yes	9,10,12,14,18,24
Helvetica/Helvetica Bold	yes	9,10,12,14,18,24
Symbol	yes	9,10,12,14,18,24
Times/Times Bold	yes	9,10,12,14,18,24
Times Italic/Times Bold Italic	yes	9,10,12,14,18,24
Athens	-	18
Cairo	-	18
London	-	18
Los Angeles	-	12,24
Palatino	-	9,10,12,14,18,24
San Francisco	-	18
Venice	-	14
Note: Chicago 12, Monaco 10,12 and Geneva 9,10,12 are available only as ROM bitmaps.		
System 7.0.1		
Chicago	yes	-
Courier/Courier Bold	yes	9,10,12,14,18,24
Geneva	yes	9,10,12,14,18,24
Helvetica/Helvetica Bold	yes	9,10,12,14,18,24
Monaco	yes	12
Symbol	yes	9,10,12,14,18,24
Times/Times Bold	yes	9,10,12,14,18,24
Times Italic/Times Bold Italic	yes	9,10,12,14,18,24
New York	yes	9,10,12,14,18,24
Athens	-	18
Cairo	-	18
London	-	18
Los Angeles	-	12,24
Palatino	-	9,10,12,14,18,24
San Francisco	-	18
Venice	-	14
Note: Geneva 9 bitmap is Italic only.		
System 7.1		
Chicago	yes	-
Courier/Courier Bold	yes	9,10,12,14,18,24
Geneva	yes	9,10,12,14,18,24
Helvetica/Helvetica Bold	yes	9,10,12,14,18,24
Monaco	yes	12
Symbol	yes	9,10,12,14,18,24
Times/Times Bold	yes	9,10,12,14,18,24
Times Italic/Times Bold Italic	yes	9,10,12,14,18,24
Palatino/Palatino Bold	yes	9,10,12,14,18,24
Palatino Italic/Palatino Bold Italic	yes	9,10,12,14,18,24

Athens	-	18
Cairo	-	18
London	-	18
Los Angeles	-	12,24
Mobile	-	18
Palatino	-	9,10,12,14,18,24
San Francisco	-	18
Venice	-	14
Note: Geneva 9 bitmap is Italic only.		
System 7.5		
Chicago	yes	-
Courier/Courier Bold	yes	9,10,12,14,18,24
Geneva	yes	9,10,12,14,18,24
Helvetica/Helvetica Bold	yes	9,10,12,14,18,24
Monaco	yes	12
Symbol	yes	9,10,12,14,18,24
Times/Times Bold	yes	9,10,12,14,18,24
Times Italic/Times Bold Italic	yes	9,10,12,14,18,24
Palatino/Palatino Bold	yes	10,12,14,18,24
Palatino Italic/Palatino Bold Italic	yes	10,12,14,18,24
The Apple Classic Fonts are not provided with System 7.5. They are part of no-charge license for System 7.0.1, and therefore may be distributed freely to Macintosh users.		
Note: Geneva 9 bitmap is Italic only.		
System 7.5.3		
Chicago	yes	-
Courier/Courier Bold	yes	9,10,12,14,18,24
Geneva	yes	9,10,12,14,18,24
Helvetica/Helvetica Bold	yes	9,10,12,14,18,24
Monaco	yes	12
New York	yes	9,10,12,14,18,24
Symbol	yes	9,10,12,14,18,24
Times/Times Bold	yes	9,10,12,14,18,24
Times Italic/Times Bold Italic	yes	9,10,12,14,18,24
Palatino/Palatino Bold	yes	10,12,14,18,24
Palatino Italic/Palatino Bold Italic	yes	10,12,14,18,24
Note: Geneva 9 bitmap is Italic only.		
System 7.6.1		
Chicago	yes	-
Courier/Courier Bold	yes	9,10,12,14,18,24
Geneva	yes	9,10,12,14,18,24
Helvetica/Helvetica Bold	yes	9,10,12,14,18,24
Monaco	yes	12
New York	yes	9,10,12,14,18,24
Symbol	yes	9,10,12,14,18,24
Times/Times Bold	yes	9,10,12,14,18,24
Times Italic/Times Bold Italic	yes	9,10,12,14,18,24
Palatino/Palatino Bold	yes	10,12,14,18,24
Palatino Italic/Palatino Bold Italic	yes	10,12,14,18,24
Note: Geneva 9 bitmap is Italic only.		
Mac OS 8.1		

Charcoal	yes	-
Chicago	yes	-
Courier/Courier Bold	yes	9,10,12,14,18,24
Geneva	yes	9,10,12,14,18,24
Helvetica/Helvetica Bold	yes	9,10,12,14,18,24
Monaco	yes	12
New York	yes	9,10,12,14,18,24
Symbol	yes	9,10,12,14,18,24
Times/Times Bold	yes	9,10,12,14,18,24
Times Italic/Times Bold Italic	yes	9,10,12,14,18,24
Palatino/Palatino Bold	yes	10,12,14,18,24
Palatino Italic/Palatino Bold Italic	yes	10,12,14,18,24
Note: Geneva 9 bitmap is Italic only.		
Mac OS 8.6		
Andale Mono	yes	-
Arial/Arial Bold	yes	-
Arial Italic/Arial Bold Italic	yes	-
Arial Black	yes	-
Capitals	yes	-
Charcoal	yes	-
Chicago	yes	-
Comic Sans/Comic Sans Bold	yes	-
Courier/Courier Bold	yes	9,10,12,14,18,24
CourierNew/CourierNew Bold	yes	-
CourierNew Italic/CourierNew Bold Italic	yes	-
Gadget	yes	-
Geneva	yes	9,10,12,14,18,24
Georgia/Georgia Bold	yes	-
Georgia Italic/Georgia Bold Italic	yes	-
Helvetica/Helvetica Bold	yes	9,10,12,14,18,24
Impact	yes	-
Monaco	yes	12
New York	yes	9,10,12,14,18,24
Sand	yes	
Symbol	yes	9,10,12,14,18,24
Techno	yes	-
Textile	yes	-
Times/Times Bold	yes	9,10,12,14,18,24
Times Italic/Times Bold Italic	yes	9,10,12,14,18,24
Times New/Times New Bold	yes	-
Times New Italic/Times New Bold Italic	yes	-
TrebuchetMS/TrebuchetMS Bold	yes	-
TrebuchetMS Italic/TrebuchetMS Bld/Italc	yes	-
Palatino/Palatino Bold	yes	10,12,14,18,24
Palatino Italic/Palatino Bold Italic	yes	10,12,14,18,24
Verdana/Verdana Bold	yes	-
Verdana Italic/Verdana Bold Italic	yes	-
Webdings	yes	-
Note: Geneva 9 bitmap is Italic only.		
Mac OS 9		

Apple Chancery	yes	-
Capitals	yes	-
Charcoal	yes	-
Chicago	yes	-
Courier/Courier Bold	yes	9,10,12,14,18,24
Gadget	yes	-
Geneva	yes	9,10,12,14,18,24
Helvetica/Helvetica Bold	yes	9,10,12,14,18,24
HoeflerText/HoeflerText Bold	yes	-
HoeflerText Italic/HoeflerText Bld/Ital	yes	-
Hoefler Text Ornaments	yes	-
Monaco	yes	12
New York	yes	9,10,12,14,18,24
Sand	yes	-
Skia	yes	-
Symbol	yes	9,10,12,14,18,24
Techno	yes	-
Textile	yes	-
Times/Times Bold	yes	9,10,12,14,18,24
Times Italic/Times Bold Italic	yes	9,10,12,14,18,24
Palatino/Palatino Bold	yes	10,12,14,18,24
Palatino Italic/Palatino Bold Italic	yes	10,12,14,18,24
VT102	yes	
Note: Geneva 9 bitmap is Italic only; VT102 must be custom installed.		

Published Date: Feb 17, 2012

Disk First Aid: Extra Floppy Disk Shows in Main Window

I am using Disk First Aid 7.2 after booting from Disk Tools. When Disk First Aid's main window opens I see the Disk Tools disk on the Internal Floppy Drive and I see the SCSI ID 0 for the hard drive and I also see a third floppy disk named "unknown disk". What should I do?
This article has been archived and is no longer updated by Apple.
This issue has been occasionally reported to occur on PowerBooks. You should first make sure you do not have a RAM disk turned on in the memory control panel. To remove the extra floppy icon, you must reset your parameter ram using the following procedure:

1. Restart your computer.
2. After you hear the startup chime hold down the Command, Option, P, and R keys on the keyboard.
3. Continue holding these keys down until you hear a second startup chime.

When you restart with the Disk Tools disk and run Disk First Aid, the extra floppy will be gone.

This article was published in the "Information Alley":
Volume II, Issue 8, Page 19
Published Date: Feb 20, 2012

Drive Setup: Compatibility Guide

This article explains which computers can use Drive Setup.
This article has been archived and is no longer updated by Apple.

Power Macintosh computers

Drive Setup is compatible with all Power Macintosh computers. It is not compatible with the Macintosh Processor Upgrade, or the Power Macintosh upgrade card. If the upgrade card is installed in a desktop computer with a Motorola 64040 or 68LC040 microprocessor and an IDE hard drive, open the 601 Processor Upgrade control panel and turn off the card before using Drive Setup.

Desktop computers with a Motorola 68040 microprocessor and an IDE hard drive

Drive Setup is compatible with desktop computers with a Motorola 64040 or 68LC040 microprocessor and an IDE hard drive. These include the Macintosh LC 580, and the Macintosh 630 series (LC 630, Quadra 630, Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, and Performa 640).

Note: Drive Setup cannot be used any desktop computer with a Motorola 68LC040 microprocessor that does not have an IDE hard drive, even if the computer has a Power Macintosh Upgrade Card installed. If you open Drive Setup on one of these computers, an alert box appears with this message, "Drive Setup cannot be launched on this computer."

PowerBook computers with IDE Drives

Drive Setup can be used on all PowerBook computers that have an IDE hard drive (see Note 1), including:

PowerBook 190
PowerBook Duo 2300
PowerBook 1400
PowerBook 3400
PowerBook 5300
PowerBook G3
PowerBook G3 Series
PowerBook G3 Series (Bronze keyboard)
PowerBook (FireWire)
PowerBook G4 computers
iBook computers

Other Macintosh computers

Drive Setup 1.3 and later support all Macintosh and Power Macintosh computers supported by Mac OS 8 (see Note 2).

Notes

1. The only exception is the PowerBook 150, which must use the Internal HD Format utility.

2. See technical document 30363 "**Mac OS 8.1: System Requirements and CPU Compatibility**"

Published Date: Feb 20, 2012

Energy Saving Control Panels: Description & Compatibility

What is the difference between all the different energy-saving control panels, and how do I know when to use them?
This article has been archived and is no longer updated by Apple.

Energy Related Control Panels Overview

There are four different energy-related control panels in System 7.5.

- Auto Power On/Off: Turns the computer ON and OFF at specified times.
- CPU Energy Saver: Turns the computer OFF at specified times, but not ON.
- Screen: Puts an internal monitor into energy-saving mode.
- Energy Saver 1.1: Puts an external monitor into energy-saving mode.
- Energy Saver 2.0: Combines functionality of CPU Energy Saver, Energy Saver 1.1, and Auto Power On/Off. Energy Saver 2.0 is compatible only on PCI-based Power Macintosh computers.

These control panels only work on certain Macintosh computers. In addition, the Energy Saver 1.1 control panel requires an Energy Star-compliant monitor as well as a Macintosh computer compatible with this software. See the chart at the end of this article for a list of compatible systems.

Although many Energy Saver control panels are compatible with many Macintosh Performa computers, not all Energy Saver control panels are bundled with Macintosh Performa computers. Many Macintosh Performa computers include modems and MegaPhone software, which allow you to use your computer as an answering machine. If you have installed Auto Power On/Off, it is possible for your computer to be inadvertently shut down while your computer is set to answer phone messages. To avoid this, Macintosh Performa computers do not ship with the Auto Power On/Off control panel.

None of the energy-related control panels mentioned here are supported on PowerBook or PowerBook Duo systems.

Auto Power On/Off

This feature lets you set your Macintosh computer to power ON and OFF at a pre-determined time, on a daily basis, or for one particular day. It also has a check box labelled "Automatically restart after power failure". If you check this box and the power goes off, the computer automatically restarts. You can use the Auto Power On/Off feature in conjunction with other System 7.5 features. For example, you could set your system to power on at night and run an AppleScript that re-indexes all of your database files or backs up your hard drive.

This control panel can only be used on computers that can be turned off by using the Shut Down command (soft power off) and that have the "Cuda" ADB controller chip or a version of the Motorola 68HC05 microcontroller chip. The chart at the end of this article lists the Macintosh models this control panel is compatible with.

Note: Not included with all system software prior to System 7.5

CPU Energy Saver

This feature lets you set your Macintosh to turn OFF at a specified time. However, you cannot set your system to turn ON with this feature. It can only be used on computers that can be turned off by using the Shut Down command (soft power off), such as the Quadra 700. This feature is only installed by System 7.5 if Auto Power On/Off is NOT compatible with the Macintosh and CPU Energy Saver IS compatible with the Macintosh.

Note: This control panel did not ship with system software older than System 7.5, although it was released separately before System 7.5. The CPU Energy Saver is not available from Apple software updates online services.

Energy Saver 1.1

This feature lets you set your Macintosh to put external monitors into sleep mode. It was originally designed to work with the built-in video of Macintosh LC III, Quadra 610-950, Power Macintosh, and Performa 450-467, 63x, 611x.

This feature requires an Energy Star-compliant monitor. Compliant models include:

- Apple Color Plus 14-in. Display
- Macintosh Color Display (newer M1198LL/B version)
- Apple AudioVision 14 Display
- Apple Multiple Scan 14, 15, 17, and 20 Displays

Note: Not included with system software prior to System 7.5, although it was made available separately.

This feature did not come preinstalled on some Performa 630- and 6110-series systems and was not included on the backup CDs that shipped with these systems. Customers who want the Energy Saver software can copy it from the disk that comes with the Multiple Scan 15 Display. (Be sure not to copy the Display Enabler extension, since the Performa 630- and 6110-series systems have the Display Enabler's functionality built into the hardware.)

If Energy Saver is installed on a computer that has an incompatible monitor, the monitor goes black after the specified inactivity period has passed, but the incompatible monitor is NOT in low power mode, and therefore is NOT saving energy. Monitors that do not support this Energy Saver function, or monitors that use video cards, are not harmed by the installation of this control panel, but they do not save energy with Energy Saver installed.

The Energy Saver control panel has a slider bar to adjust the monitor inactivity period, from 15 to 60 minutes. Energy Saver can be turned on by clicking the check box nearest the slider bar. The settings take effect immediately; you do not need to restart the computer.

When the Apple Energy Star-compliant monitor has been inactive (that is, you have not used the mouse or keyboard) for the time specified in the Energy Saver control panel, the screen of the monitor goes black. This indicates that the monitor is in low-power mode, and is saving energy. The computer is still functioning.

The monitor returns to a fully active state approximately 20 seconds after you use the keyboard or mouse. You hear a number of beeps while the screen is updated to reflect its current state. (The beep volume cannot be adjusted; it is independent of all system sound controls.)

The Energy Saver control panel is available for download from Apple Software Updates sites. The software is named "Monitor Energy Saver". After download and decompression, you will have the Energy Saver control panel.

Screen

This control panel lets you set your Macintosh computer to put internal monitors into sleep mode.

The Screen control panel can only be used on certain "all-in-one" Macintosh systems, such as the LC/Performa 500-series.

This feature shipped with some Performa 630-series systems and appears to work, but does not really save energy. The Screen control panel should be removed from these systems. Use the Energy Saver control panel in its place.

Energy Saver 2.0/3.0

This control panel combines functionality of CPU Energy Saver, Energy Saver 1.1, and Auto Power On/Off. Energy Saver 2.0/3.0 is compatible only on Power Macintosh computers with PCI slots, which includes the Power Macintosh 5400, 7200, 7500, 7600, 8500, 9500, Power Macintosh G3, and Power Mac G4 series computers.

Note: Energy Saver 2.0/3.0 is available only in System 7.5.2 or later (including Mac OS 8 and Mac OS 9) when used on a PCI-based Power Macintosh computer."

When To Use Which Energy-Saving Control Panels

	For Monitors		For Computer	
	Energy Saver	**Screen**	**Auto Power On/Off**	**CPU Energy Saver**
Compact Macintosh Systems				
Macintosh 128K, 512K, 512Ke, XL	No	No	No	No
Macintosh Plus, SE, SE/30	No	No	No	No
Classic, Classic II	No	No	No	No
Color Classic, Color Classic II	No	Yes	Yes	OK
Macintosh II Systems				
Macintosh II, IIx, IIfx	Yes	No	No	Yes
Macintosh IIcx, IIci	Yes	No	No	Yes
Macintosh IIsi, IIvi, IIvx	Yes	No	Yes	OK
Macintosh LC Systems				
Macintosh LC, LC II	No	No	No	No
Macintosh LC III, LC 475	Yes	No	No	No

Macintosh LC 520, 550, 575, 580	No	Yes	Yes	OK
Macintosh LC 630	Yes	No	Yes	OK
Macintosh Centris & Quadra Systems				
Macintosh Quadra 605	No	No	No	No
Macintosh Centris/Quadra 610	Yes	No	No	No
Macintosh Quadra 630	Yes	No	Yes	OK
Macintosh Centris/Quadra 650	Yes	No	No	Yes
Macintosh Centris/Quadra 660AB	Yes	No	No	No
Macintosh Quadra 700	No	No	No	Yes
Macintosh Quadra 800	Yes	No	No	Yes
Macintosh Quadra 840AV, 950	Yes	No	Yes	OK
Macintosh Quadra 900	No	No	Yes	OK
Macintosh Performa Systems				
Performa 200	No	No	No	No
Performa 250, 275	No	Yes	Yes	OK
Performa 400, 405, 410, 430	No	No	No	No
Performa 450, 460, 466, 467	Yes	No	No	No
Performa 475, 476	Yes	No	No	No
Performa 520, 550, 560	No	Yes	Yes	OK
Performa 570-, 580-series	No	Yes	Yes	OK
Performa 600	Yes	No	Yes	OK
Performa 630-, 640-series	Yes	No	Yes	OK
Performa 5200-series	No	Yes	Yes	OK
Performa 6100-series	Yes	No	No	No
Performa 6200-series	Yes	No	OK (2)	No
Performa 6300-series	Yes	No	OK	Yes
Performa 6400-series	Yes (2)	No	Yes (2)	No
Power Macintosh Systems				
Power Macintosh 5200/75 LC	No	Yes	Yes	OK
Power Macintosh 5260	No	Yes	Yes	OK
Power Macintosh 5400	Yes (2)	No	Yes (2)	No
Power Macintosh 6100/60, 6100/66	Yes	No	No	No
Power Macintosh 6200/75	Yes	No	Yes	No
Power Macintosh 7100/66	Yes	No	Yes	OK
Power Macintosh 7100/80	Yes	No	Yes	No (1)
Power Macintosh 7200 Series	Yes (2)	No	Yes (2)	No
Power Macintosh 7500 Series	Yes (2)	No	Yes (2)	No
Power Macintosh 7600 Series	Yes (2)	No	Yes (2)	No
Power Macintosh 8100/80	Yes	No	Yes	OK
Power Macintosh 8100/100, 8100/110	Yes	No	Yes	No (1)
Power Macintosh 8500	Yes (2)	No	Yes (2)	No
Power Macintosh 9500	Yes (2)	No	Yes (2)	No
Power Macintosh G3	Yes (2)	No	Yes (2)	No
Power Macintosh G3 (Blue and White)	Yes (2)	No	Yes (2)	No
Power Mac G4 (all models)	Yes (2)	No	Yes (2)	No
Macintosh Workgroup Servers				

Workgroup Server 95	Yes	No	Yes	No
Workgroup Server 8150	Yes	No	Yes	No
Workgroup Server 9150	Yes (2)	No	No (1)	No

Notes:
1 - These Power Macintosh computers included the Connectix Desktop Utility (CDU) software which made these units Energy Star compliant.

2 - Use Energy Saver 2.0.x included with System 7.5.2 for this function.

For additional information on the Energy Star program, see the following articles:

- Article 12346: **Energy Star: Description**
- Article 12345: **Energy Star: Registered Apple Products**

This article can help you locate the software update mentioned here:

- Article 14724: "**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.

Published Date: Feb 20, 2012

Desktop PrintMonitor: Disabling Manual Feed Dialog

This article discusses how to turn off the manual feed notification that appears when starting a manual feed print job.
This article has been archived and is no longer updated by Apple.
The version of Desktop Printing software being used will determine how the manual feed notification is turned off.

Desktop Printing software prior to version 1.0.3
Turn off Desktop PrintMonitor using the Extensions Manager or remove the desktop printer software. To remove the desktop printer software, refer to the Read Me file for your printer. The Read Me file will also define the steps necessary to use the older PrintMonitor.

Desktop Printing Software version 1.0.3 or later
Desktop Printing Software version 1.0.3 or later will use the PrintMonitor settings for manual feed notification. If manual feed notification is turned off in PrintMonitor, Desktop PrintMonitor's manual feed notification is turned off.

Changing Desktop PrintMonitor
You can change how the Desktop PrintMonitor notifies you about manual feeding, by following the steps below.

1. Hold down the Shift key and restart the computer, keeping the Shift key depressed until the message "Extensions off" or your normal desktop appears.
2. Open System Folder
3. Open Extensions folder
4. Double-click the PrintMonitor application
5. Choose Preferences from the File menu
6. Select preferred Manual Feed options and click OK
7. Close PrintMonitor
8. Restart the computer

This article can help you locate the software update mentioned here:

- Article 14724: "**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.

Published Date: Feb 20, 2012

Macintosh: Video Mirroring Compared To Dual Video

The article discusses the difference between video mirroring and dual video.
This article has been archived and is no longer updated by Apple.
Video mirroring lets you display the same Macintosh image, complete with the menu bar, on two screens simultaneously. The second device can be a monitor, television, or overhead projector depending on the connection you have available. This capability is most useful for those in education or training environments who want to connect large monitors or projection screens to their computer.

Video mirroring is built-in on some PowerBooks, and an add-on option to both the Macintosh LC 580 and Power Macintosh 5200 computers. If you do not have built-in or add-on video mirror support, you can still get the benefits of this type of technology if your computer has a standard DB-15 video-out port, by using the Apple Presentation System or similar products from third party vendors.

Dual Video
Dual video means there are two independent video channels, each with its own dedicated Video RAM (VRAM). On Macintosh computers, this always means there is at least one video card installed. For example, the Power Macintosh 6100 series has built-in video capability, but the addition of a Power Macintosh AV card adds an independent additional video-out capability with a separate amount of VRAM. If you connect one monitor to each port on the Power Macintosh 6100 AV, you would see a "virtual desktop". You could have a window on one screen, your primary display, and a window on the second screen, the secondary display. You can arrange the orientation of the monitors so that the mouse will move between the two monitors at the point where they touch in the Monitors control panel. Only one monitor can display the menu bar, but you can choose which is the main monitor in the Monitors control panel. You do not get two identical images when using dual video.

Due to the highly integrated characteristics of this type of multiple device support, you can theoretically have as many displays as you have slots. You could, for example, populate each available expansion slot on your Macintosh computer with a video card, and have that many monitors creating a large virtual desktop.

There is no processor performance degradation from the use of multiple displays. The relative performance of each display depends on the performance characteristics of the attached video card.

This article was published in the "Information Alley":
Volume II, Issue 11, Page 6
Published Date: Feb 20, 2012

Macintosh: Which Shared Library Manager?

There are 2 extensions in my Extensions folder: the Shared Library Manager and the Shared Library Manager PPC. Does my computer require both files to function correctly, or can I remove one of them?
This article has been archived and is no longer updated by Apple.
Many programs, extensions, and libraries, both by Apple and by other companies, rely on these extensions, and will not function if they are absent.

PowerPC-based computers require both the Shared Library Manager and the Shared Library Manager PPC extensions to be present. You should not remove either of them. This applies to all Macintosh computers with a PowerPC processor, including all Power Macintoshes, the iMac, the iBook, and the more recent Performas and PowerBooks.

Macintoshes with 680x0-series processors (generally manufactured in 1994 or earlier) only need the Shared Library Manager, and do not use the Shared Library Manager PPC.
Published Date: Feb 20, 2012

Apple Remote Access: Frequently Asked Questions

This article contains frequently asked questions (FAQ) regarding Apple Remote Access (ARA), with answers to those questions.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. Why does ARA give me an error whenever I launch it?
2. My modem is not on the list of ARA scripts, where can I get the script for my modem?
3. When I use ARA to dial the another computer, it connects for a few seconds, then hangs up.
4. My modem will not connect at high speed. It is a 14.4 kbps modem and I have selected the appropriate modem script, but I can only connect at 9600 bps. What can I do?
5. I'm connected via ARA, but where is the stuff on my other computer?
6. I can see the host network but the host network machines cannot see me. Why is this?
7. Why can my 1.0 ARA not connect to my 2.0 server?
8. Why does my ARA software refuses to launch?
9. I am using AppleShare and ARA and I cannot access my Users and Groups control panel.

Question 1: Why does ARA give me an error whenever I launch it?

Answer: You need to turn on AppleTalk. ARA cannot function without AppleTalk being turned on in the Chooser. It will give a number of artificial errors if AppleTalk is inactive, such as:

- "Every time I try to use ARA, my computer tells me to reinstall. I've tried reinstalling several times, to no avail."
- "I keep getting some sort of weird error on startup or launch of ARA." Common ones are no description, inits turned off, Error number -5555 or larger.
- "AppleTalk Remote Access Setup Error: No Description"

Question 2: My modem is not on the list of ARA scripts, where can I get the script for my modem?

Answer: If your Modem is not listed in the default set of ARA modem Scripts, please contact your modem manufacturer's technical support staff for information on their specific ARA script. Some modem companies provide a Bulletin Board Service (BBS) and others will mail you a modem script.

Question 3: When I use ARA to dial the another computer, it connects for a few seconds, then hangs up.

Answer: This is most likely a script problem. You need to call the manufacturer of your modem, and get the latest script. Refer to the answer above.

Question 4: My modem will not connect at high speed. It is a 14.4 kbps modem and I have selected the appropriate modem script, but I can only connect at 9600 bps. What can I do?

Answer: Make sure you are using a hardware handshake cable. You can check with the modem manufacturer to verify this.

Question 5: I'm connected via ARA, but where is the stuff on my other computer?

Answer: Connecting via ARA is just like being connected to the network. You still need to go to the Chooser, click on AppleShare, select a server, and so on. Do the things you would normally do if you were connected to the network. **Note:** Other computers cannot see you. Refer to the question below.

Question 6: I can see the host network but the host network machines cannot see me. Why is this?

Answer: ARA only acts as a half router, it only goes one way. The caller can see the remote network but the remote network cannot see the callers network. If you want to set up a full router that will join the two networks you need to use the wide area features of the Apple Internet Router 3.0.

Question 7: Why can my 1.0 ARA not connect to my 2.0 server?

Answer: You need to download the ARA 1.0 Client Enabler which will let a 1.0 client call into a 2.0 server. Otherwise, ARA 1.0 is incompatible with 2.0 servers. However, you can put the 2.0 client into compatibility mode and dial into a 1.0 server.

Question 8: Why does my ARA software refuses to launch?

Answer: You need to be using at least AppleTalk version 57.04. Old installers will sometimes install an old version. Just reinstalling using the ARA installer after running an older installer will fix the issue.

Question 9: I am using AppleShare and ARA and I cannot access my Users and Groups control panel.

Answer: ARA uses the same Users and Groups file that is used by file sharing unless you have installed the AppleShare file server. In order to change the users and groups information under AppleShare you must run AppleShare Admin. The users dialog will have an "allow this user to log in" option below the standard preferences information if ARA has been installed. ARA is incompatible with AppleShare 2.0 and with AppleShare Pro.

Published Date: Feb 20, 2012

QuickTime VR: Questions and Answers

Learn answers to frequently asked questions about QuickTime VR and its requirements.
This article has been archived and is no longer updated by Apple.
Question: What is virtual reality?

Answer: Virtual reality describes a range of experiences that let you interact with and explore a spatial environment through your computer. These environments are typically computer renderings of simple or complex computer models. With QuickTime VR, these environments can be based on photographic representations of real locations.

Question: What is QuickTime VR?

Answer: QuickTime VR lets you rotate your view of a scene through a complete 360-degree horizontal circle. Multiple 360-degree views can be linked together to let you travel around in an area. You can move around in space through as many points as the content developer provides. The content provider can also enable certain objects to be virtual as well, letting you view all sides of an object by turning it around using a mouse. The combination of scenes and objects provides an experience that is like being there. As you change your view of the scene, correct perspective is maintained, creating the effect of being at the location and looking around. QuickTime VR is the first mainstream technology to enable theses experiences based on real world scenes.

Question: How does QuickTime VR differ from other VR systems?

Answer: QuickTime VR differs in several ways:

- QuickTime VR uses high-quality photographic representations of a space for the virtual reality experience, a breakthrough in performance and compression technology. There is no need to model and render an existing space.
- QuickTime VR is a software-only implementation; it is an extension of the QuickTime architecture. It does not require additional hardware.
- QuickTime VR's breakthrough is the proprietary software engine that lets you explore real world spaces on most QuickTime-capable personal computers. This differs from most virtual reality systems, which require a very fast 3D computer with specialized hardware that lets the user explore computer generated virtual spaces.
- Easy panoramic image capture; pictures are taken with a standard, 35 mm camera.

Question: What software comprises QuickTime VR?

Answer: The QuickTime VR software technology includes two components:

- QuickTime VR Authoring Studio is a set of QuickTime virtual reality (QTVR) authoring tools that let you create panoramas, objects, and scenes, and manage QTVR projects. Using QuickTime VR Authoring Studio, you can quickly and easily produce professional-quality QTVR media. No programming is required. QTVR creation software is available from third-party software developers as well. See the QuickTime VR site for more information.
- The QuickTime run-time software provides the environment needed to experience QuickTime VR on your computer. You can experience QTVR movies with the QuickTime Player, a web browser using the QuickTime plug-in, or any software application that uses QuickTime APIs (application programming interfaces). QuickTime is available for Macintosh and Windows environments.

Question: Where can the software be obtained?

Answer: The free QuickTime runtime software is available at Apple's QuickTime web site.

Third-party hardware and software for creating QuickTime VR movies can be found at the QuickTime VR Resources page .

Question: What are the system requirements for QuickTime VR Authoring Studio?

Answer: Here are the requirements:

- Mac OS-based computer with a PowerPC processor
- 16 MB of available RAM
- Mac OS 7.5 through Mac OS 9.2.2, or the Mac OS X Classic environment.
- 20 MB of hard disk space
- CD-ROM drive

- Monitor that supports at least thousands of colors
- Video input capability (required for object movies only)

Question: How large are QuickTime VR files? Do I need special equipment to view them?

Answer: QuickTime VR files are exceptionally small, which makes them easy and fast to download without using much computer disk space. In fact, a typical panoramic scene can be as small as 200K. Besides the computer, no additional hardware--such as accelerator boards, helmets, goggles and gloves--is needed to view QuickTime VR scenes.

Question: Where can I download QuickTime VR scenes?

Answer: Try these locations:

- QuickTime VR site
- QuickTime site

Published Date: Feb 20, 2012

DHCP: What Is It?

This article provides some basic information about Dynamic Host Configuration Protocol (DHCP) and how it relates to the AirPort Base Station. This article has been archived and is no longer updated by Apple.
DHCP (Dynamic Host Configuration Protocol) is a protocol that lets network administrators centrally manage and automate the assignment of Internet Protocol (IP) addresses. Its purpose is to enable individual computers on an IP network to obtain their configurations from the DHCP server or servers, in particular, servers that have no exact information about the individual computers until they request the information. This can be used in a LAN environment or by an ISP.

The ability to do this reduces the work necessary to administer a large IP network. Without DHCP, the IP address must be entered manually at each computer, and if computers move to another location in another part of the network, a new IP address must be entered. DHCP lets a network administrator supervise and distribute IP addresses from a central point and automatically sends a new IP address when a computer is connected in a different place in the network, or reconnects to an ISP.

The following definitions will be helpful when setting up the AirPort Base Station for use with your Internet Service Provider:

What is an IP address?

An IP address (also called an IP number) is a number (typically written as four numbers separated by periods, for example 107.4.1.3 or 84.2.1.111) which uniquely identifies a computer that is making use of the Internet. It is analogous to your telephone number in that the telephone number is used by the telephone network to direct calls to you. The IP address is used by the Internet to direct data to your computer such as the data your Web browser retrieves and displays when you surf the Internet. One task of DHCP is to assist in the problem of getting a functional and unique IP number into the hands of the computers that make use of the Internet.

What is a MAC address?

A MAC address (also called an Ethernet address or an IEEE MAC address) is a number that uniquely identifies a computer that has an Ethernet interface. It is typically written as twelve hexadecimal digits, 0 through 9 and A through F, or as six hexadecimal numbers separated by periods or colons, for example, "0080002012ef" or "00:80:0:2:20:ef". Unlike the IP number, it includes no indication of where your computer is physically located. In DHCP's typical use, the server uses a requesting computer's MAC address to uniquely identify it.

What is a DHCP lease?

A DHCP lease is the amount of time that the DHCP server grants to the DHCP client permission to use a particular IP address. A typical server allows its administrator to set the lease time.

Notes

1. This article provides information that did not originate at Apple, Inc. Apple Computer is not responsible for its content. This information is provided for your information.

2. Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**"

Published Date: Feb 20, 2012

QuickTime VR: Glossary of Terms

This article describes some of the common terms used when discussing QuickTime VR technology.
This article has been archived and is no longer updated by Apple.

Authoring

The process of developing a multimedia title. With QuickTime VR, the authoring process includes four steps:

- Planning
- Capturing images
- Digitizing the images
- Authoring/compositing

Dicing

A QuickTime VR authoring process that compresses source and object PICT files, and creates MooV files. During dicing, PICT files are compressed using a compressor specified by one of the MPW scripts for dicing.

Hot spot

An interactive area in a QuickTime VR movie. Link hot spots allow a movie viewer to navigate from one node to another in the scene. Object hot spots allow a movie viewer to pick up, examine, or get more information about an object in the scene.

MPW

Macintosh Programmers Workbench. Part of the development environment (along with HyperCard) required for authoring QuickTime VR movies.

Navigable movie

A type of VR object that allows you to manipulate a photographically captured or computer-rendered object. Also known as an object movie.

Node

A position in a scene from which you view a 360 panoramic image. Multiple nodes linked together comprise a scene. In a multi-node scene, users can jump from node to node to navigate about the scene.

Object movie

See navigable movie.

Panorama

A 360 photographic view from a position called a node. A panorama is captured for each node in a scene.

Panoramic movie

A VR movie based on a photographically captured 360 node.

Panoramic PICT

A 360 band of blended photographic images, created by the Stitcher.

Photo CD

A compact disc that contains digitized images made from photographic negatives. Photo CD is a Kodak technology.

QuickTime VR

Apple's technology for creating VR experiences. With QuickTime VR, you can create scenes based on high-quality real-world photographic images. QuickTime VR movies can be played back on Macintosh and Windows-based computers; no specialized hardware, software, or accessories are needed.

Scene

An environment for which you create a QuickTime VR movie. Scenes can be photographed or rendered on the computer.

Scene Editor

A QuickTime VR authoring tool that lets you add and position nodes in a scene, link nodes, and link objects to nodes.

Stitching

A QuickTime VR Authoring process that creates a panoramic PICT of blended photographic images of a node.

Title

A multimedia product usually distributed on CD-ROM.

Virtual Reality (VR)

The experience of exploring and interacting with a spatial environment through a computer.

Published Date: Feb 20, 2012

Macintosh 5200/5300/6200/6300: PlainTalk and 16-bit Sound

This article discusses an issue with the Power Macintosh 5200/75 LC computer and Speech Recognition.

This article has been archived and is no longer updated by Apple.
PlainTalk Speech Recognition requires 16-bit sound input in order to work properly. The recently produced versions of the Macintosh LC 5200 and Performa 5200CD and 5215CD computers support 16-bit internal sound as well as 16-bit CD sound. Early production models of Macintosh 5200 series computers support 8-bit internal sound and 16-bit CD sound. However, you can still use the Text-to-Speech feature if your computer only supports 8-bit input.

NOTE: PlainTalk 1.4.1 Speech Recognition is supported on the Macintosh 5200CD family, Macintosh 6200CD family, Macintosh 5300CD, and Macintosh 6300CD computers.

You can use the model number information below to determine whether your computer supports 8-bit or 16 bit sound. Please note that product specifications are subject to change. Check with an Apple reseller for the most current information about product specifications and configurations.

Order Number	Product Name	Sound
M3947LL/A	Power Macintosh 5200 LC 8/500/CD	8-bit
M3917LL/A	Power Macintosh 5200 LC 8/500/CD/VI/TV	8-bit
M3947LL/B	Power Macintosh 5200 LC 8/500/4XCD	8-bit
M3940LL/A	Macintosh Performa 5200CD 8/500	8-bit
M3941LL/A	Macintosh Performa 5200CD 8/500/TV/VI	8-bit
M4110LL/A	Macintosh Performa 5200CD 8/790/14.4	16-bit
M4107LL/A	Macintosh Performa 5215CD 8/1000/14.4	16-bit

If you don't know your model number, you can also use this procedure below to determine if your computer supports 16-bit sound input:

1. Choose Control Panels from your Apple menu.

2. Open the Sound control panel.

3. Choose "Sound Out" from the "Alert Sounds" pull down menu. If the 16-bit sound input radio button is dimmed, you have only 8-bit input, and English Speech Recognition will not work.

   If 16-bit is not dimmed, make sure there is a dot in the radio button next to it.

4. Use the close box in the upper left corner to close the Sound control panel.

For help with installing the PlainTalk 1.4.1 Speech software, see article 18263: "**PlainTalk 1.4.1: Can't Install Recognition on 8-bit Mac**".

Notes:

1. The following computers are in the Macintosh 5200CD family: Macintosh 5200/75 LC, Performa 5200, Performa 5210, Performa 5215, and Performa 5220.

2. The following computers are in the Macintosh 6200CD family: Performa 6200, Performa 6214, Performa 6216, Performa 6218, Performa 6220, and Performa 6230.

3. Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

Published Date: Feb 20, 2012

Mac OS: Assigning more memory to an application program

This article explains how to assign more memory to an application program that is running under Mac OS 9 or earlier.

This article has been archived and is no longer updated by Apple.

You can set up your application to request more memory from Mac OS. Follow these steps to allocate additional memory to an application program:

1. Quit the application if it is open.

2. Locate and click once on the desired application icon on your Macintosh hard disk (not the icon in the Launcher or an alias to the application).

3. Choose Get Info from the File menu.

4. Make sure the Kind: is application program and not folder, alias, or document. If it does not say application program, there is no Memory Requirements area.

5a. For System 7.1 through Mac OS 8.1, select the number next to the Preferred Size box in the Memory Requirements area.

5b. For Mac OS 8.5 through 9.1, select Memory from the Show pop-up menu. (See figure 1)

Figure 1 Show pop-up menu

6. Increase the amount of memory allocated to the application in the Preferred Size box by 25 to 50 percent. (Example: change 1000 K to 1500 K)

7. Close the Get Info window.

The next time the application is opened, the system is asked to allocate the amount of memory in the preferred memory size box. If the system does not have the requested free RAM available, it tries to allocate a progressively decreasing amount of RAM until it decreases to the amount in the minimum requirements box in the Get Info window. If the amount of free RAM available falls below the minimum, the system reports there is not enough memory open the application.

Published Date: Feb 20, 2012

Apple Ink-Jet Printer Supplies

This article contains a list of Apple ink-jet (StyleWriter) printer supplies, and some third-party replacement equivalents.
This article has been archived and is no longer updated by Apple.
Damage to the printer caused by the use of third-party printhead cartridges or ink refill kits that do not meet Apple's rigid standards will void the warranty.

Although not supported by Apple, the use of Canon, Hewlett-Packard, or other third-party cartridges and ink refill kits that meet Apple's rigid specifications do not void the Apple warranty. Canon and Hewlett-Packard cartridges and tanks are the only third-party equivalents that are approved by Apple. Apple does not make public its testing procedures.

For best print quality, Apple recommends using the Apple Ink Cartridges and Ink Tanks for any of Apple's ink-jet printers.

Printer	Description	Apple part #	Canon part #
Apple StyleWriter Apple StyleWriter II Apple StyleWriter 1200 Apple Portable StyleWriter Canon BJ-200, 200ex, BJ-100, BJ1200E	Black Cartridge	M8041G/C	BC-02
Apple Color Printer Canon BJC-800 Lexmark 4079	Black Cartridge	M6901G/A	BJI643 F470081400
	Cyan Cartridge	M6904G/A	BJI643 F470091400
	Magenta Cartridge	M6903G/A	BJI643 F470101400
	Yellow Cartridge	M6902G/A	BJI643 F470111400
Apple Color StyleWriter Pro Canon BJC-600, BJ-600E, BJC-610 Textronic Phaser 140	Black Cartridge	M3822G/A	BCI-201 Bk
	Cyan Cartridge	M1949G/A	BCI-201 C
	Magenta Cartridge	M1950G/A	BCI-201 M
	Yellow Cartridge	M1951G/A	BCI-201 Y
Apple Color StyleWriter 2400 Apple Color StyleWriter 2500 Canon BJC-410, BJC-4000, BJC-4000e, BJC-4100	Black Cartridge	M3240G/A	BC-20 High Performance Black
	Color Cartridge (including black and color ink tanks)	M3328G/A	BC-21
	Black Ink Tank (for color cartridge)	M3330G/A	BCI-21 Black
	Color Ink Tank (for color cartridge)	M3329G/A	BCI-21 Color
	Color PhotoGrade Ink Cartridge (Color StyleWriter 2500 only)	M5579G/A	BC-22
Apple StyleWriter 2200 Canon BJC-70	Black Cartridge	M3909G/A	BC-10 Black
	Color Cartridge	M3908G/A	BC-11 Color
	Black Ink Tank, for black cartridge	M3910G/A	BCI-10 Black
	Black Ink Tank, for color cartridge	M3912G/A	BCI-11 Black
	Color Ink Tank, for color cartridge	M3911G/A	BCI-IIC Color
Apple Color StyleWriter 1500 Canon BJC-210	Black Cartridge	M8041G/C	BC-02 Black
	Color Cartridge	M4609G/A	BC-05 Color

For the following printers, we are supplying information on compatible refills from Hewlett-Packard.

Printer	Description	Apple part #	HP part #

Apple Color StyleWriter 4100	Black Cartridge	M5693G/A	51629A
	Color Cartridge	M5694G/A	51649A
Apple Color StyleWriter 4500	Black Cartridge	M5693G/A	51629A
	Color Cartridge	M5694G/A	51649A
	Color PhotoGrade Ink Cartridge	M5692G/A	C1816A
Apple Color StyleWriter 6500	Black Cartridge	M5658G/A	51645A
	Color Cartridge	M5659G/A	51641A

Published Date: Feb 20, 2012

How to clean up fuser oil of a Color LaserWriter 12/600 PS printer

What should I use to clean fuser oil that has spilled onto my Color LaserWriter 12/600 PS?
This article has been archived and is no longer updated by Apple.
The Color Laserwriter 12/600 PS and Color LaserWriter 12/660 PS printers uses a silicone based oil that can easily be cleaned up from the exterior plastic case using a lint free cloth and a mild non-abrasive household cleaner/degreaser such as Fantastik or 409. Spray a small amount of the cleaner onto the cloth and wipe the plastic case. Do not allow any cleaning solution to enter into the printer.

Oil that has spilled onto the photoconductor, transfer drum, or paper feed rollers can be cleaned by printing on lint free paper until all of the oil is absorbed. Usually anywhere from 5 to 50 sheets of paper will remove the oil. Do not use ammonia- or alcohol-based cleaners on or near the Color LaserWriter 12/600 PS or Color LaserWriter 12/660 PS printers.

To prevent damage to the photoconductor, do not touch or use any cleaning materials on the delicate gray roller that is the photoconducting surface.

The photoconductor may be damaged from scratches or contamination due to oil or fingerprints. Image quality defects in the printed output may result with areas of light print, scratches or banding that repeat vertically down the page every 5.07" (129mm). The defects are typically visible in areas that have toner applied to them.
Published Date: Feb 20, 2012

Mac OS: -39 or -192 Error Opening Launcher

This article describes an issue that causes an error when you open the Launcher.

This article has been archived and is no longer updated by Apple.

Symptom

An error message stating: "The control panel Launcher could not be opened because of error type -192." appears when the Launcher is opened. Error -39 may also appear. If the Launcher is reinstalled, it works fine for a few days, but the symptom returns.

Solution

When a control panel is opened, the Finder adds a resource to the control panel that stores the window position. This is so that the control panel window opens in the same place the next time it is opened.

The addition of this resource to the Launcher can cause the Launcher to function incorrectly. To correct this, follow these steps:

1. Start up the computer from the Mac OS Install disc.
2. Find the Launcher Items folder in the System Folder of the hard disk.
3. Drag the Launcher Items folder out of the System Folder to the hard disk. **Do not throw it away.**
4. Locate the Launcher Preferences in the Preferences folder, which is in the System folder on the hard disk.
5. Drag the Launcher Preferences file to the Trash.
6. Locate the Launcher in the Control Panels folder, which is in the System folder on the hard disk.
7. Drag the Launcher to the Trash.
8. Perform a custom installation of the Launcher from Mac OS Install disc. For more information on this procedure, please see article 31288: "**Mac OS 9: Installing or Removing Individual Components**"
9. Open the Control Panels folder in the System Folder on the hard drive and select Launcher.
10. Choose Get Info from the File Menu.
11. Choose General Information from the pop-up menu.
12. Click Locked. Selecting the Locked option prevents the Finder from modifying the file.
13. Start up the computer from the hard disk.
14. Open the Launcher.
15. Close the Launcher.
16. Drag the Launcher Items folder from the hard disk back into the System Folder on the hard disk.

Published Date: Feb 20, 2012

MacPPP Access: Modem Initialization Strings

This article lists some modem initialization strings for MacPPP using point-to-point protocol (PPP) access. This article does not have initialization strings for every modem, only those which the modem vendor provided to Apple.
This article has been archived and is no longer updated by Apple.

MacPPP ships with Apple Internet Connection Kit (AICK) and requires you to know your modem's initialization string. Many initialization strings are listed in the AICK setup, however, if your modem is not listed, you should consult your modem manual, or contact your modem vendor, or check with your Internet Service Provider.

Name of Modem	Flow Control	Speed
Accex 1414 v.32bis		
AT&F&D0\\N3\\Q3	CTS&RTS (DTR)	14400
Apple Express Modem (PowerBook)		
AT&F\\N3	CTS&RTS (DTR)	14400
AT%C1\\N3	CTS&RTS (DTR)	14400
AT&F\\N3&K3		
AT\\G1\\X1		
Apple GeoPort Modem		
AT&F\\N3		
Applied Engineering Datalink 14		
AT&F&C1	CTS&RTS (DTR)	14400
AT&F&C1&K0		
AT&T DataPort 14.4		
AT\\N7%C1&C1&D0\\Q3	CTS&RTS (DTR)	14400
AT&F&D0		
AT&F&D0\\Q0%C0		
AT&T DataPort 14.4		
AT\\N7%C1&C1&D0\\Q3	CTS&RTS (DTR)	14400
AT&F&C1&D0		
AT&F&C1&D0\\Q0%C0		
Best Data Smart One 14.4		
AT&Q5%C1&D0&K0	CTS&RTS (DTR)	14400
AT&F&C1		
AT&F&D0&K3		
Boca 14.4Kbps v.32bis		
AT&F&C1\\N3	CTS&RTS (DTR)	14400
AT&F&D0&K3		
Boca 288MV28K Series		
AT&F&C1\\N3	CTS&RTS (DTR)	57600
AT&F\\N3		
Boca Research V.32bis		
AT&Q5%C1&C1&D0&K3		
Cardinal 14.4		
AT&F&C1&D0&Q5	CTS&RTS (DTR)	14400
AT&F&C1&D0&K0&Q5%C0	None	
Cardinal 28.8		
AT&F&C1&D0&Q5	CTS&RTS (DTR)	57600
AT&F&C1&D0&K0&Q5%C0	None	
Compudyne 1442F		
AT&F&C1	CTS&RTS (DTR)	14400
AT&F&C0		

CPC Turbo Modem+
AT\\N6%C1&C1&D0\\Q3\\V1

Data Race Apex V.32/V.32bis
AT\\N7%C1&C1&D0\\Q3

Data Race APL 1496
AT\\N7%C1&C1&D0\\Q3

Digicom Eagle 9600/Scout
AT&F&D0 None 9600
AT&F

Digicom Eagle 9600/Scout
AT&F&D0 None 9600
AT&F*F3&D0

Focus 14.4
AT&Q5%C1&C1&D0&K3S36=7 CTS&RTS (DTR) 14400
AT&F&D0 CTS&RTS (DTR) 14400

Global Village PowerPort Gold/Silver
AT&F1\\Q3 CTS&RTS (DTR) 14400
AT&F1&C1&D0 CTS&RTS (DTR) 14400
AT&F&D0\\Q3

Global Village PowerPort Mercury
AT\\F1 None 9600
AT&F\\N3 None 9600
AT&F&D0\\N1

Global Village PowerPort/Teleport
AT&F1%C1&K3 CTS&RTS (DTR) 57600
AT&F1S95=1 CTS&RTS (DTR) 57600
AT&F&D0\\N3&K3&Q5

Global Village PowerPort Gold/Silver
AT&F1\\Q3 CTS&RTS (DTR) 14400
AT&F1&C1&D0\\N3%C0 CTS&RTS (DTR) 14400
AT&F&D0\\Q3

Global Village PowerPort/Teleport Gold
AT&F1%C1W1 CTS&RTS (DTR) 14400
AT&F&K3\\N3\\Q3 CTS&RTS (DTR) 14400
AT&F&D0&K3

Global Village PowerPort/Teleport Gold IIv
AT&F1&K3 CTS&RTS (DTR) 14400
AT&F&C1 CTS&RTS (DTR) 14400
AT&F&K3&D0\\N0

Global Village PowerPort/Teleport Silver
AT&F1&K3 None 9600
AT&F1\\Q0%C0 None 9600
AT&F&D0&K3

Global Village PowerPort/Teleport Platinum
AT&F1%C1&K3 CTS&RTS (DTR) 28800
AT&F1W1S95=44 CTS Only 28800
AT&F&D0\\N3&K3&Q5

Global Village Bronze
AT&F&D0 ? 6/27/95

GVC 14.4 v.32bis
AT&F&D0\\N3 CTS&RTS (DTR) 14400
AT&F&D0%C0\\Q0\\N3
AT\\N6%C1X4&C1&D0\\G0\\J0\\Q3\\V1

GVC 288 Fax Modem
AT&F&D0 CTS&RTS (DTR) 57600
AT&F&D0%C0\\Q0

Global Village 56k (see Note 1)
(see Note 1)

Hayes Accura 144
AT&F None 9600
AT&F&C1 CTS&RTS (DTR) 14400
AT&F&D0&K3&Q5S48=7S36=7

Hayes Accura 28.8
AT&F&C1 CTS&RTS (DTR) 28800
AT&F&C1&K0

Hayes Optima 14400 v.32bis
AT&F&D0 CTS&RTS (DTR) 14400
AT&F&C1 CTS&RTS (DTR) 14400
AT&F&&D0&C1
AT&F&D0&K3&Q5S48=7S36=7

Hayes Optima 28800
AT&F&D0 CTS&RTS (DTR) 57600
AT&F&C1 CTS&RTS (DTR) 57600
AT&F&D0

Hayes V-Series Ultra 9600
AT&Q5S36=7&C1&D0&K3 CTS&RTS (DTR) 14400
AT&F&D0 CTS&RTS (DTR) 14400

Intel 14.4 EX
AT&F&D0 CTS&RTS (DTR) 14400
AT&F&D0\\Q3
AT\\N3%C1&C1&D0\\Q3

Intel 96EX
AT\\N3%C1&C1&D0\\Q3

Line Link 14.4E
AT&F&C1 CTS&RTS (DTR) 14400
AT&F&C1\\N3 CTS&RTS (DTR) 14400
AT&F&C1&DO

Macintosh Express Modem (comm slot)
AT&F\\N3&D3&Q5

Macronix
ATS36=7&Q5%C1&C1&D0&K3

Macronix MaxLite 14.4
AT&F&C1&Q9\\N3 CTS&RTS (DTR) 14400
AT&F&Q9\\N3

Magic 14.4 V.32bis
AT&F&C1 CTS&RTS (DTR) 14400
AT&F&D0&C1

Magnum 14.4
AT&F0 None 14400

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Magnum 288 Fax/Modem
AT&F0                                   CTS&RTS (DTR) 57600
AT&F&D0&K3

Megahertz 14400/P2144
AT&F&C1&D0                              None          9600
AT&F&D0&K3

Megahertz A2144
AT&F&C1&D0\\N3                           None          14400
AT&F&D0&K0%C0\\N3

MegaHertz V.32bis
ATS36=7&Q5%C1&C1&D0&K3

Microcom Desk Porte
AT&F&D0                                 CTS&RTS (DTR) 14400
AT&F&D0&K3                              CTS&RTS (DTR) 14400

Microcom Deskporte 28.8
AT&F&C1&D0                              CTS&RTS (DTR) 28800
AT&F&D0\\Q3

Microcom Deskporte 288 EP
AT&F&D0                                 CTS&RTS (DTR) 28800

Microcom Desk Porte/QX/4232 bis
AT&F&D0                                 CTS&RTS (DTR) 14400
AT&F&D0\\Q3

Microcom QX/V.32c
AT&Q5%C3&C1&D0\\J0\\Q3

Microcom Travelporte 288 Fast
AT&F&D0                                 CTS&RTS (DTR) 28800

Motorola UDS CELLect 14.4
AT&F&C1\\N3\\Q3                           RTS (DTR)Only 14400

Motorola UDS Codex 3260
AT&F&C1*FL3                             None          9600

Motorola UDS Codex 3261
AT&F&C1*FL3                             None          9600

Motorola UDS Codex 3265
AT&F&C1*FL3                             None          9600

Motorola UDS Fastalk V.32 bx/V.3225
AT&F&C1\\N3\\Q3                           CTS&RTS (DTR) 14400
AT\\N3%C1&C1&D0\\G0\\J0\\V1\\Q3

Motorola UDS V.3225L/3229L
AT&F&C1\\Q3                              CTS&RTS (DTR) 28800
AT&F&D0\\Q3
AT&F&D0&C1\\Q3

Multitech MT 932 series
AT&F&D0&E4                              None          9600

Multitech MT1432 Series
AT&F&D0&Q1&E11                          CTS&RTS (DTR) 14400
AT&F&D0&E11                             CTS&RTS (DTR) 14400
AT&F&D0&E4&E13
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Multitech MT1432 ZDX
AT&F&D0                                 CTS&RTS (DTR) 14400
AT&F&D0&E4&E13

Multitech MT2834 Series
AT&F0                                   CTS&RTS (DTR) 57600
AT&F&D0&E11                             CTS&RTS (DTR) 57600
AT&F&D0&E3&E14

Multitech Multimodem 2 Series
AT&E1&E15&C1&D0&E4$BA0                  CTS&RTS (DTR) 14400
AT&F&D0&E4                              CTS&RTS (DTR) 14400
AT&F&D0&E14&E3

MultiTech Multimodem 224E/V.32
AT&E1&E15&C1&D0&E4$BA0

NEC 9635 E
AT&F&C1\\Q3                              CTS&RTS (DTR) 14400
AT&F&C1\\Q0%C0

Phoebe V.34
AT&F1

PowerUser 14.4E
AT&F&C1                                 CTS&RTS (DTR) 14400
AT&F%C0&K0\\N3

Practical Peripheral MC144MT II
AT&F1&D0                                CTS&RTS (DTR) 14400
AT&F1&D0&K0

Practical Peripherals 14400FXMT
AT&F&C1                                 CTS&RTS (DTR) 14400
AT&F&D0&K3

Practical Peripherals 14400FXSA
AT&F&C1S37=9N0                          None          9600
AT&F&C1                                 None          9600
AT&F&C1&K0

Practical Peripherals 9600SA
AT&F&C1                                 None          9600
AT&F&C1&K0
ATS36=7&Q5&C1&D&K3

Practical Peripherals MC28
AT&K3&D0&C1                             CTS&RTS (DTR) 57600
AT&F1&D0

Practical Peripherals MC288MT
AT&F3                                   CTS&RTS (DTR) 57600
AT&F1&D0

Practical Peripherals PM288MT
AT&F3                                   CTS&RTS (DTR) 57600
AT&F1&D0

Prometheus Home Office 14.4
AT\\N3%C1&C1&D0\\J0\\V1\\Q3                  CTS&RTS (DTR) 14400
AT&C1&D0*E1*F3*S1

Prometheus Pro Modem Ultima
AT&F&D0                                 CTS&RTS (DTR) 57600
```

```
AT&F&D0&K0%C0

Prometheus Promodem 144
AT&F&D0                                 CTS&RTS (DTR) 57600
AT&F&C1\\N3                              CTS&RTS (DTR) 57600

Prometheus Ultima/Home Office
AT\\N3%C1&C1&D0\\J0\\V1\\Q3

Prometheus Ultima/Home Office
AT\\N3%C1&C1&D0\\J0\\V1\\Q3

PSI Comstation V
AT&F&C1&D0&K3&Q5\\N3                     None          9600
AT&F                                    None          9600

PSI Power Modem II/IV
AT&Q5%C1&C1&D0&K3                       CTS&RTS (DTR) 14400
AT&F                                    CTS&RTS (DTR) 14400
AT&F&C1&D0&K3&Q5\\N3

Quicktel Xeba 14.4
AT&F&C1                                 CTS&RTS (DTR) 14400
AT&F&C1&D0                              CTS&RTS (DTR) 14400
AT&F&C1&D0&K3

Racal ALM 3223
AT&F&D0                                 CTS&RTS (DTR) 57600
AT&F&C1&D0

Racal ALM 3226 V.32 bis
AT&F&C1                                 CTS&RTS (DTR) 57600
AT&F&D0&K3

Spectra Pocket Modem 14.4
AT&F                                    CTS&RTS (DTR) 14400
AT&Q3S36=7%C1&C1&D0&K3

Supra 14.4 LC
AT&F1                                   CTS&RTS (DTR) 14400
AT&F1&D0

Supra 2400 V.42bis
AT&Q5S36=7%C1&C1&D0&K3

Supra Fax 288 modem
AT&F1                                   RTS (DTR) Only 57600
AT&F1&C1                                RTS (DTR) Only 57600
AT&F&D0&Q5&K3\\N3

SupraFAXModem V.32bis
AT&F1                                   CTS&RTS (DTR) 14400
AT&F1&D0                                CTS&RTS (DTR) 14400
AT&F1&K4%C0

SupraFAXModem V.32/V.32bis
AT&F1&Q5S36=7%C1&C1&D0&K3

SupraFAXModem V.34
AT&F1 (probably. 7/18/95)

Telebit 3000                            None          9600
ATS180=2S190=1S51=252S58=2S68=2         None          9600
AT&F&C1S58=2
```

Telebit Fastblazer 8840
AT&F&C1&E1 None 9600

Telebit QBlazer
ATS180=2S51=252S58=2S68=2 None 9600
AT&FS58=2 None 9600
AT&FS58=2S180=1S190=0

Telebit QBlazer/T1600/T3000
ATS180=2S190=1S51=252S58=2S68=2

Telebit T1600
ATS180=2S190=1S51=252S58=2S68=2 None 9600
AT&FS58=0S190=0

Telebit T2500
AT&FS58=2 None 9600

Telebit Worldblazer
AT&F9X2 CTS&RTS (DTR) 14400
AT&F&C1S58=2
AT&F&D0S58=2

U.S. Robotics ??
AT&M4&K1B0&A3&B1&D0&H1&I0&N0&R2

U.S. Robotics Courier HST Dual
AT&F&C1&D0 CTS&RTS (DTR) 57600
AT&F1&D0

U.S. Robotics Courier V.32 bis/as
AT&F&D0&H1&K2 CTS&RTS (DTR) 14400
AT&F1&D0

U.S. Robotics Courier V.34
AT&F1&K3&D0

U.S. Robotics Mac & Fax 14.4
AT&F&D0&H1&R2

USRobotics Mac & Fax 28.8 V.34
AT&F1

U.S. Robotics Sportster 14.4
AT&F&H1&C1&D0X4 CTS&RTS (DTR) 14400
AT&F1&D0 CTS&RTS (DTR) 14400
AT&F1&H1&C1&D0X4
AT&F&H1&C1&D0

U.S. Robotics Sportster 28.8
AT&F1 CTS&RTS (DTR) 57600
AT&F1&D0

U.S. Robotics Sportster 14.4
AT&F&H1&C1&D0X4 CTS&RTS (DTR) 14400
AT&F1&D0 CTS&RTS (DTR) 14400
AT&F1&H1&C1&D0X4

U.S. Robotics Sportster 28.8
AT&F1 CTS&RTS (DTR) 57600
AT&F1&D0

U.S. Robotics Sportster 9600
AT&F&H1 CTS&RTS (DTR) 9600
ATZ

U.S. Robotics Worldport 14.4 Fax
ATZ CTS&RTS (DTR) 14400
ATZ&F&A1&B1&M4&H1&R2Q0E0V1X4

Viva 14.4
AT&F&C1 CTS&RTS (DTR) 14400
AT&F&C1&D0

Viva 9642 e
AT&F&C1 None 9600
AT&F&C1&K0%C0

Wang 14.4
AT&F&C1&D0 CTS&RTS (DTR) 14400

Zoltrix 14.4
AT&F&C1&D0 CTS&RTS (DTR) 14400
AT&F&D0 CTS&RTS (DTR) 14400
AT&F&C1&D0&K3

Zoom 14.4
AT&F&C1 CTS&RTS (DTR) 14400
AT&Q5S36=7%C1&C1&D0&K3

Zoom 14.4 V.32/V.32bis
AT&F&C1 CTS&RTS (DTR) 14400
AT&Q5S36=7%C1&C1&D0&K3 CTS&RTS (DTR) 14400 AT&F&C1&D3&K3&Q5%C3\\N3S7=60S36=7S46=138

Zoom 14.4 V.32/V.32bis
AT&F&C1 CTS&RTS (DTR) 14400
AT&Q5S36=7%C1&C1&D0&K3 CTS&RTS (DTR) 14400 AT&F&C1&D3&K3&Q5%C3\\N3S7=60S36=7S46=138

Zoom 2400 v.42bis
AT&Q5%C1W1&C1&D0S36=7&K3

Zoom 28.8 V.32/V32bis
AT&Q5S36=7%C1&C1&D0&K3 CTS&RTS (DTR) 57600
AT&F&C1&K3 CTS&RTS (DTR) 57600

Zoom VFX v.32 bis
AT&F&C1&D3&K3&Q5%C3\\N3S7=60S36=7S46=138 CTS&RTS (DTR) 14400

Zyxel U-1496
AT&F&D0 CTS&RTS (DTR) 14400
AT&F&D0&H0 None 9600

Zyxel U-1496 plus
AT&F&D0&H0 None 9600

Zyxel U-1496B
AT&F&D0 CTS&RTS (DTR) 14400
AT&F&D0&H0

Zyxel U-1496B plus
AT&F&D0 None 9600
AT&F&D0&H0

Zyxel U-1496E
AT&F&D0 None 9600

Zyxel U-1496E plus
AT&F&D0 None 9600

Zyxel V.32bis

TA21670_MacPPP_Access_Modem_Initialization_Strings.pdf

```
AT&C1&D0&H3&K4&N0
```

Notes:

1. See the following Tech Info Library article for information on your modem: Article 30208: "Power Macintosh 6500 or G3 w/56K Modem: AT Command Reference Location"

2.Refer to Tech Info Library article 24708: "**iMac: Modem Initialization Strings**" for information on your iMac modem.

Published Date: Feb 20, 2012

Apple Printers: LaserWriter Support Under Windows 95

What Apple LaserWriters are supported under Microsoft Windows 95?
This article has been archived and is no longer updated by Apple.
Microsoft Windows 95 ships with PostScript PPD files for most Apple LaserWriters including:

Apple LaserWriter
Apple LaserWriter Personal NT
Apple LaserWriter II NTX
Apple LaserWriter IIf
Apple LaserWriter IIg
Apple LaserWriter Plus
Apple LaserWriter Pro 600
Apple LaserWriter Pro 630
Apple LaserWriter Pro 810
Apple LaserWriter Select 360
Apple Personal LaserWriter NTR

These PPD files were created and are supported by Microsoft.

Apple provides Windows 95 drivers online for the following LaserWriter printers:

LaserWriter 8500
LaserWriter 12/640
LaserWriter 16/600
LaserWriter Pro 630
LaserWriter Pro 600
LaserWriter Select 360
Color LaserWriter 12/660 PS
Color LaserWriter 12/600 PS

Some Apple LaserWriter printers not listed above may work fine under Windows 95 by selecting another printer from the lists above.

These articles can help you locate the PPD software for the Color LaserWriter 12/600 PS and LaserWriter 16/600 PS mentioned here:

- Article 14724: "**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.

Published Date: Feb 20, 2012

Mac OS: Reblessing Old System Folder After Clean Install

This article describes the process for possibly reactivating (re-blessing) the original system folder, after a clean installation, if the original System Folder was not thrown away.
This article has been archived and is no longer updated by Apple.
Startup Disk version 9.2 and later allow you to easily switch between System Folders on the hard disk volume. Startup Disk 9.2.1 is available from Apple Software Downloads (http://www.apple.com/swupdates/).

If you are using Mac OS 9, consider using this version of Startup Disk to more easily select and change the active System Folder.

If the steps listed below do not work, you will have to reinstall system software, then complete the steps listed in your clean install instructions.

Note: The following instructions are applicable to Mac OS 8 as well.

Due to the wide variety of situations a clean restore can be used to troubleshoot, be sure to read the instructions below carefully, in order to determine whether your overall initial issue would benefit from this procedure. If you are troubleshooting SCSI issues in particular, make sure you have resolved those issues before proceeding. If you are not sure, do not follow these steps.

To re-bless your System Folder:

1. Start the computer from an external floppy disk or a startup CD.

2. Close all your windows, then open your hard disk.

3. Choose by Name from the View menu. Verify that the System Folder has a small picture of an original Macintosh in the middle of its icon. This will resemble a picture of a monitor. This is the currently blessed system folder that is running your computer.

4. Open this System Folder. Move the System suitcase into the Preferences folder. Close the System Folder.

5. Verify that this System Folder no longer has the original Macintosh icon.

6. Rename the System Folder Clean System Folder.

7. Rename the original System Folder (the one you wish to use again, not the one from Step 6) back to System Folder.

A. If you used System 7.5's Clean Install option, open the System Folder, double-click on your System suitcase. Close the window which appears, then close the System Folder.

1) If a picture of an original Macintosh does not appear in the middle of this folder's icon, open the System Folder again.

2) Drag the System suitcase and the Finder to your hard disk icon.

3) Close the System Folder.

4) Open your hard drive and drag the System suitcase and the Finder on top of the System Folder icon. The original Macintosh icon should appear on the System folder immediately.

B. If you used another type of clean restore, you ordinarily would have had to separate the System suitcase and the Finder from each other. One of these files would have been placed in the Trash, or in your Preferences folder, or someplace other than loose in the System Folder. You need to find the System suitcase and the Finder, move them to your hard disk, close your System Folder, and drag them on top of your System Folder icon. The original Macintosh icon should appear on the System Folder icon immediately.

8. Restart your computer. It should start up from the original System Folder. If it does not, repeat the original clean install steps.

9. Put Clean System Folder into the Trash and empty the Trash. You will lose all data in this System Folder, so make sure that you have not installed any software in that System Folder except for the basic system software.

Published Date: Feb 20, 2012

Energy Saver Control Panel: Sleep and Power Management

This article provides details about the "Sleep" and power management functions of the Energy Saver control panel shipping with the Power Macintosh 7200, 7500, and 8500 series computers.

Questions answered in this article:

1) Is the central processing unit (CPU) still responsive when the Energy Saver control panel spins down the hard disk in sleep mode?

2) Is it possible to spin down the hard disk, but not put the monitor into sleep mode?

3) Can the Energy Saver control panel spin down any hard disk attached to the SCSI bus, or only the startup disk?

4) When does the Energy Saver control panel begin the countdown before putting the computer to sleep or shutting down? Is there a specified delay, or does the countdown begin as soon as the computer is idle?

5) If the computer is in sleep mode, and a fax call comes in (assuming the fax software is set to receive faxes), does my computer wake up and receive the fax?

This article has been archived and is no longer updated by Apple.

1) Question: Is the central processing unit (CPU) still responsive when the Energy Saver control panel spins down the hard disk in sleep mode?

Answer: While in sleep mode, the CPU responds to mouse, keyboard, and serial port activity. If an activity requires disk access, the hard disk is spun up.

2) Question: Is it possible to spin down the hard disk, but not put the monitor into sleep mode?

Answer: Yes, it is possible for the hard disk to spin down even though the monitor is not in sleep mode. When the hard disk is spun down, the arrow is unresponsive (as if the system is unresponsive), but pressing a key spins the hard disk back up. However, there is a delay before the drive spins back up, and there is no notification that the drive is spinning back up.

3) Question: Can the Energy Saver control panel spin down any hard disk attached to the SCSI bus, or only the startup disk?

Answer: The Energy Saver control panel may or may not spin down all hard disks attached to the SCSI bus. Apple has not tested The ability to spin down a hard disk is dependent on the formatting software used on the hard disk. In limited testing, the Energy Saver control panel has spun down external drives formatted with Drive Setup.

4) Question: When does the Energy Saver control panel begin the countdown before putting the computer to sleep or shutting down? Is there a specified delay, or does the countdown begin as soon as the computer is idle?

Answer: The countdown to shutdown or sleep begins as soon as the computer is idle. Your computer is idle if when all of the following conditions are met:

- No Apple Desktop Bus (ADB) routines other than routine monitoring of the bus
- No Input/Output (I/O) calls to firmware (Read, Write, Control, Format, Status)
- No changes in the cursor (for example, the rotation of a hand in the clock icon)
- No post-event calls (for example, a call resulting from insertion of a disk)
- No communication through the serial port

5) Question: If my computer is in sleep mode, and a fax call comes in (assuming the fax software is set to receive faxes), does the computer wake up and receive the fax?

Answer: A modem that uses the serial port's 'wake on ring' pin setting, and that has software that reads it, can wake the CPU from sleep. The GeoPort Telecom Adapter from Apple features this capability. Depending on background activity, some fax software may keep the CPU busy and not allow the computer to enter "sleep" mode.

Published Date: Feb 20, 2012

StyleWriter Printers: How to generate a test page

This article explains how to generate a test page with some of the StyleWriter family printers.
This article has been archived and is no longer updated by Apple.

StyleWriter

1. Turn printer off.
2. Press and hold the Form Feed button.
3. Press the Power button and release both the Form Feed and Power buttons simultaneously.

Portable StyleWriter

1. Turn printer off.
2. Press and hold FWD ADJ and REV ADJ buttons.
3. Press and hold Power button. Wait for a single beep and release the power button.
4. Wait for another beep and release the FWD ADJ and REV ADJ buttons.
5. Immediately press the LF/FF button.
6. The Portable StyleWriter prints a small test pattern.

StyleWriter II
StyleWriter 1200
Color StyleWriter Pro
Color StyleWriter 2200
Color StyleWriter 2400

1. Turn printer off.
2. Make sure the printer has paper loaded.
3. Press and hold power button.
4. Release power button when orange light turns off.

Color StyleWriter 2500

1. Turn printer off.
2. Turn printer on.
3. Hold down the online key for at least 6 seconds or until the test page prints.

Color StyleWriter 4100

Generating a Test Page: The test page for the Color StyleWriter 4100 is built-in.

1. Make sure the printer is turned on.
2. With the printer's power light on, press and hold down the power button.
3. Then press once(hold briefly) the resume button.
4. Release the power button.

5. The power light should start to blink, and continue until the sample print is completed.

Color StyleWriter 4500

Generating a Test Page: The test page for the Color StyleWriter 4100 is built-in.

1. Make sure the printer is turned on.
2. With the printer's power light on, press and hold down the power button.
3. Then press once(hold briefly) the resume button.
4. Release the power button
5. The power light should start to blink, and continue until the sample print is completed.

Color StyleWriter 6500

Generating a Test Page: The test page for the Color StyleWriter 6500 is built-in.

1. Make sure the printer is turned on.
2. With the printer's power light on, press and hold the resume button until the orange light goes out.

Published Date: Feb 20, 2012

UUencode & UUdecode: Explained

This article describes UUencoding and UUdecoding, a popular method to transfer binary information on the Internet.
This article has been archived and is no longer updated by Apple.

What is UUencode?
UUencode stands for Unix-to-Unix Encode. It is a text-based binary encryption protocol in wide use on the Internet to transfer files across multiple platforms including UNIX, Windows, MS-DOS, Macintosh, and other operating systems. UUencode is the UNIX name for the encryption program; it is normally used with another UNIX program, UUdecode, which decodes an encrypted message.

Why UUencode files?
The basic idea behind UUencoding a file is to translate a binary representation of data -- which could be a graphic image, compressed file, or other type of binary data -- into an encrypted text representation of that file.

There are two reasons for doing this:

1) Many mail systems used on the Internet cannot handle binary transmissions since they are designed for text data. However, if a file is UUencoded, it can be included as text in the message.

2) Many mail systems and gateways have size limitations, often less than 50 kilobytes (K). It is sometimes necessary to use a text editor to split or combine such files. Since a binary representation of that data would make the editing of data very difficult, and since software that automatically joins these binary files is relatively rare, UUencoding a binary file allows common text editors to be used to join such files.

How can you tell it's a UUencoded file?
There is no standard file name convention, although most UNIX-based systems use a .uu as a suffix. DOS-based computers, with their standard three-digit suffixes, generally use .uue. This is one general method of telling whether or not it is a UUencoded file. Another method is actually looking at the first line of the file.

A UUencoded file can be identified by the first line of the file:

-> begin 644 myfile.gif

This line is followed immediately by the start of the data. The first character of every line is the letter M. If the file has other characters other than M, the file is either not a UUencoded file, or has been damaged:

-> MuVAA=baI<RabzvYHyw@_cpUbzvYHyw@@zwl@xF]TzbaAhgmE=baOyBaA<gaL

The block ends with a single line containing the statement:

-> end

The first line signals the start of the block. The number 644 is a UNIX permissions flag (in this case, giving the owner of the file full read and write permissions) while giving other users read permissions only). The third part is the file name that uudecode will expand the file as.

What are the versions of UUencode?
UUencode is a standard, but a number of implementations of the software exist. Most implementations are based upon source code from versions of the UNIX software which are in the public domain.

Macintosh and most Windows versions tend to combine both the UUencode and UUdecode functions into a single program, and simply allow you to choose if you want to encode or decode a message.

What issues should I be aware of?
UUencoded data should be line-terminated with a single carriage return. Some mail systems append multiple line feeds or carriage returns, which can confuse some implementations of UUdecode.

UUencode is intended for use with a straight binary file. Since Macintosh files contain both a data fork and a resource fork, you should use Binhex to send Macintosh binary files. There are some types of files that you can UUencode, but you should limit these to files you know are going to other people using different operating systems.

Types of Files You Can UUencode

- Graphics (includes GIF, JPEG, and TIFF files)*
- Word processing files
- Miscellaneous non-Macintosh specific files

* PICT files are Macintosh based, so you should use Binhex to transmit these types of graphics.

Type of Files You Should Not UUencode

- Applications
- Control panels
- Extensions
- Fonts
- Macintosh-specific compressed files (StuffIt, Compacter)

Note: You should use Binhex to transmit these types of files.

UUencode and UUdecode Tips

- Do not imbed "white space" in the file. The first line of the file should start with the begin line and the last line of the file should be the end statement.
- If you UUencode a file, the only to determine if your file starts with begin and finishes with end is to open it in a text editor or word processing application and check it.
- If a message was received as multiple email messages, intervening message headers and "white space" should be removed. Some UUdecode utilities cannot handle the additional returns and headers.
- Since there are a large number of UUencoding and UUdecoding applications on various computer platforms, you may get some errors during the decoding process.
- If you encounter errors decoding a file and are sure the source (input) file is correct, try a different UUdecoding utility. If the errors persist, have the sender of the data encrypt the data using a different version of UUencode.

Published Date: Feb 20, 2012

LaserWriter Printers: Available Line Screens

This article provides the line screen for all Apple LaserWriter printers, plus some common questions about line screen and printers
This article has been archived and is no longer updated by Apple.

Line Screen of Apple LaserWriter Printers

Here are the default line screens for Apple LaserWriter printers. These values are taken from the PPD files. Many applications such as Quark Xpress, PageMaker, and Illustrator allow you to change the line screen since these applications create their own PostScript code.

Model	LPI	Screen Angle
LaserWriter	60	45 degrees
LaserWriter Plus	60	45 degrees
LaserWriter IINT	60	45 degrees
LaserWriter IINTX	60	45 degrees
LaserWriter IIf	60	45 degrees
LaserWriter IIg	106	45 degrees
LaserWriter Pro 600	85	45 degrees
LaserWriter Pro 630	85	45 degrees
LaserWriter Pro 810	60	45 degrees
LaserWriter Select 360	85	45 degrees
LaserWriter 4/600	106	45 degrees
LaserWriter 16/600 PS	106	45 degrees
Color LaserWriter 12/600 PS	200/141	-
Color LaserWriter 12/660 PS	200/141	-
Personal LaserWriter NT	60	45 degrees
Personal LaserWriter NTR	60	45 degrees
Personal LaserWriter 320	53	45 degrees

Common Line Screen Questions

Question: Is line screen dependent on DPI or the printer? - meaning will
every 300 DPI printer have the same line screen.

Answer: Not necessarily. There are two different issues here:

1) Line screen IS partially dependent on dpi, and enhancements like PhotoGrade.

2) The line screen on any printer can be changed with programs that generate their own PostScript.

Two 300 dpi printers can have the same line screen, however, may produce different results if one has PhotoGrade; PhotoGrade technology in effect increases dpi.

Line screens (LPI) are based on the number of horizontal dots in a halftone cell and the printer's DPI. Thus, a halftone cell of 2x2 has 2 dots horizontally which provides a 150 line screen on a 300 DPI printer, or a 300 line screen on a 600 DPI printer. A halftone cell of 1x1 has 1 dot horizontally, so produces a 300 line screen on a 300 DPI printer, or a 600 line screen on a 600 DPI printer. Note that line screens equal to the printer's DPI are only useful when printing text since the levels of gray equals 2, black and white -- gray value of 2 is calculated by the following:

((300/300)**2) + 1, or ((600/600)**2) + 1.

Note:
The maximum line screen can never exceed the dpi of the printer
(for example, 300 LPI maximum for a 300 DPI printer), and programs such as Quark Xpress only allow certain line screen values between 15 and 400.

Question: Is line screen a fixed number on the printer, or can all printers print at different line screens?

Answer: Line screen is changeable on most all Apple printers. In our tests with the LaserWriter IINTX, for example, you are able to change the line screens to values like 15 LPI, 50 LPI, and 61 LPI and observe noticeable changes - greater levels of gray. On older printers like the LaserWriter IINTX, changing the line screen to greater than half of the dpi (for example >150 LPI on 300 DPI printers) resulted in no noticeable change. These printers have a "threshold" value that they do not exceed. For most of the older 300 DPI printers, the threshold line screen is 150 lpi since that provides 5 levels of gray ((300 DPI/150 LPI)**2) + 1. Any line screen value above 150 for a 300 DPI printer would produce less than 5 levels of gray (which the printer's ROM deems as useless), so the printer does not go beyond a 150 line screen.

Line Screen Summary
==========

The following relationship best summarizes what LPI really means:

* Increased LPI results in increased resolution, but decreased levels of gray.
* Decreased LPI results in decreased resolution, but increased levels of gray.
* Basically, as lpi approaches dpi, resolution is increased but the number of dots in a halftone cell decrease, resulting in less number of grays.

The best way to see all of these effects is by printing a picture of a person's face with some large text in the background, at 50 LPI and 100 LPI on a printer like the LaserWriter Pro 630.
Published Date: Feb 20, 2012

Open Transport and PPP: Frequently Asked Questions

This article contains frequently asked questions (FAQ) regarding Open Transport and Point-to-Point Protocol (PPP), with answers to those questions.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. Is Open Transport compatible with existing Internet Service Providers?
2. Which mdevs are currently supported?
3. Doesn't Apple offer a solution for SLIP or PPP dial-up to the Internet?
4. Does the Apple Internet Connection Kit require Open Transport?
5. If I need an updated copy of one of these mdevs, how can I get the software?
6. Are there other known limitations to backward compatibility mdev support?
7. Is there documentation available to assist with configuring Open Transport/TCP?
8. What additional updates are planned for Open Transport to improve compatibility with dial-up internet access?
9. When will Open Transport 1.1 be available?
10. Will Apple provide a SLIP or PPP solution for Open Transport?

Question 1: Is Open Transport compatible with existing Internet Service Providers?

Answer: Open Transport/TCP currently supports dial-up connectivity to TCP/IP networks, including the Internet, through backward compatibility with select third party software models know as "mdevs".

With the appropriate mdev software installed, end-nodes can use either Serial Line Internet Protocol (SLIP) or PPP to connect to Internet Service Providers and other dial-up IP-access points. However, not all versions of all mdevs are supported by Open Transport backward compatibility services. It is important that the recommended versions of software be installed for the greatest level of compatibility.

Question 2: Which mdevs are currently supported?

Answer: Open Transport 1.0.7 works with the following MacTCP Link Access Modules (mdevs), with these known caveats.

- FreePPP - version 1.0 or more recent; compatible with Open Transport.
- InterSLIP - Version 1.0.1 is not compatible with Open Transport, you need a later version. InterCon should be contacted directly.
- InterPPP - use version 1.2.9 or more recent.
- InterPPP II - use the most current version.
- MacSLIP - use version 3.0 or more recent; compatible with Open Transport.
- MacPPP - use version 2.1.3sd or more recent (2.2.0 not recommended).

Apple is continuing to work with developers to better support existing mdevs; contact the third party developer of interest for the most recent information on compatibility.

Question 3: Doesn't Apple offer a solution for SLIP or PPP dial-up to the Internet?

Answer: The Apple Internet Connection Kit is a selection of the most popular Internet applications from third party companies, including the Netscape Navigator and RealAudio Player from Progressive Networks, as well as Claris Emailer Lite.

The kit includes MacPPP 2.1.4 along with the Apple Internet Dialer - software designed to make it simpler for Macintosh customers to register with a qualified Internet Service Provider (ISP) and get connected to the Internet. To help users work with their Internet applications, the Apple Internet Connection Kit includes Apple Guide software for on-line assistance.

Question 4: Does the Apple Internet Connection Kit require Open Transport?

Answer: No, the Apple Internet Connection Kit works with either MacTCP 2.0.6 or with Open Transport/TCP 1.0.7 or later.

Question 5: If I need an updated copy of one of these mdevs, how can I get the software?

Answer: Sources for mdev software will vary, as some of the recommended products are commercial and some are shareware or public domain.

- FreePPP is shareware and can be found on a variety of internet sites; typically at "info-mac" mirror sites in the comm/tcp directory.

Question 6: Are there other known limitations to backward compatibility mdev support?

Answer: Yes. Due to differences in the underlying architectures between MacTCP and Open Transport/TCP, and some current shortcomings in the backward compatibility services, there are some additional limitations to mdev support:

- Some mdevs, when used with Open Transport, may not be able to auto-dial, that is, automatically connect to the service provider when launching a TCP/IP application. This is being addressed by updated versions of mdevs.

- Some Internet Service Provider do not strictly follow standards practices, which call for assigning end-node IP addresses on the same subnet as the router (gateway). Open Transport strictly enforces this requirement in versions prior to 1.0.7. Beginning with Open Transport 1.0.7, the TCP/IP configuration utility software will automatically generate a compatible router address to facilitate connectivity to the ISP if the user leaves the router address field empty.
- Once a TCP/IP application launches and uses a SLIP or PPP mdev, use of a different mdev may require restarting the Macintosh. Disconnecting from and redialing a service provider may also require restarting the Macintosh. This is planned to be addressed in Open Transport v1.1.

Question 7: Is there documentation available to assist with configuring Open Transport/TCP?

Answer: Yes. Although a full user's guide is planned for release with Open Transport v1.1, configuration tips for Open Transport 1.0.x are already available on various sites.

Question 8: What additional updates are planned for Open Transport to improve compatibility with dial-up internet access?

Answer: Open Transport 1.1 is planned to include:

- Support for reconnection of a dial-up session without restart.
- Fix for a compatibility problem that could interfere with Qualcomm Eudora users sending short messages.

Question 9: When will Open Transport 1.1 be available?

Answer: Open Transport 1.1 is already available. In fact, version 1.1.2 was posted to Apple Software Update sites on December 13, 1996

Question 10: Will Apple provide a SLIP or PPP solution for Open Transport?

Answer: Apple is developing an implementation of PPP for Open Transport as a part of the next generation of Apple Remote Access products. This is planned to support dial-up access to both AppleTalk and TCP/IP networks. Additional details will announced at a later date.

Note: Some urls that are included with the Read Me have been removed from this article. Please visit the Open Transport Developers web site for up-to-date information on this software:

http://developer.apple.com/dev/opentransport/

Published Date: Feb 20, 2012

Power Macintosh: Type 11 & No FPU Errors Technote

This Technote explains some of the causes of "Type 11" and "No FPU Installed" errors, along with debugging hints to help you find and fix them. It also focuses on what you as a programmer can do to prevent such errors.
This article has been archived and is no longer updated by Apple.
Both Type 11 and No FPU Installed errors occur on Power Macintosh computers, depending on various factors. Both error messages are the result of programming errors. The No FPU Installed error usually means that your program is executing data rather than instructions. The Type 11 error is any error (such as a bus error) in native code.

Note: In this Technote, I will occasionally mention third-party products by name. If a third-party product is mentioned by name, it's meant to be a possible solution for you to investigate, not a recommendation. DTS (Developer Technical Support) doesn't evaluate third-party tools, nor maintain complete lists of possible third-party solutions. You should consult catalogs of development tools.

See technical document 16004 "**Power Macintosh: Meaning of Error Type 11**" for specific end-user troubleshooting information.

About "No FPU Installed" Errors

On a Power Macintosh computer, the error message No FPU Installed usually means your code has jumped to a non-code area and is executing garbage. Somewhere in that data (which is being interpreted as instructions) is an instruction whose op code begins with the hex value F. No FPU Installed is equivalent to a Type 10 Error ** i.e., your program has attempted to execute an unknown instruction op code starting with the hex value F.

On a Power Macintosh, No FPU Installed means that some program has jumped to an area of data and has tried to execute any data word starting with the hex value F. The PowerPC chip has floating point support built in, but that floating-point support is different from the Motorola 680x0 family floating- point support. The Motorola 680x0 family uses an external floating-point unit. (There are also external memory management units (MMUs) and other specialized coprocessors.) Motorola 680x0 CPUs use instructions starting with hex value F as instructions for these coprocessors.

680x0 Microprocessor Instructions

All Motorola 680x0 microprocessors have instructions consisting of at least one word (the operation word); some instructions can have up to eleven words (see the Motorola MC68020 32-bit Microprocessor User's Manual, Third edition, page 3-1.) The operation word determines what kind of instruction is to be executed. For example, the instruction

MOVE.B D1, D2

translates to the hexadecimal value

1401

This instruction starts with the hex value 1. The instruction

FMOVE.X FP3,-(A7)

translates to

F227 6980

This instruction starts with the hex value F.

F-line Instructions

The Motorola 680x0 architecture was originally designed to support a floating- point coprocessor chip. This chip, the Floating Point Unit (FPU), communicates with the CPU via a special set of instructions called F-line instructions. These instructions always start with an operation word beginning with the hex value F.

A program can be compiled to take advantage of the hardware assistance the FPU provides, and thus yield faster floating-point calculations than would be available with SANE (the Standard Apple Numerics Package). Such programs would have instructions in the program which start with the hex value F. A program only using SANE would never have an instruction starting with the hex value F.

Note: Some Macintosh models, such as the Macintosh SE/30, the Macintosh IIci, and the Macintosh IIfx, shipped with an FPU coprocessor installed. Other 680x0-based Macintosh computers, such as the Macintosh IIsi and the Macintosh Color Classic, had an optional FPU coprocessor. For these machines, it was possible to purchase an optional card with an FPU coprocessor.

68040 & 68040LC Microprocessors

With the introduction of the 68040 and 68040LC chips, things got a bit more complicated. The 68040 microprocessor has most of the 68882 FPU included on the chip. Not everything in the 68881/68882 FPU is in the 68040 chip, however ** just the routines that Motorola determined were most frequently used. The rest of the FPU routines are automatically emulated by software. Because the FPU is "built-in," as it were, the 68040 chip handles instructions that start with an operation word beginning with the hex value F by itself. There is no way to add a coprocessor to a 68040 chip; the instructions are never brought out of the chip itself.

The 68040LC is a cost-reduced version of the 68040 chip. Savings came about by removing the FPU portion of the chip. Not only does a 68040LC chip have no FPU, there is no way to add one.

The Power Macintosh

Power Macintosh computers emulate a Motorola 68040LC, i.e., a machine without FPU support. When you get a bomb with the message No FPU installed, it means some instruction has been executed with an operation word starting with the hex value F, and that your program is running on a machine without a FPU. This machine could be one of the following:

* a Macintosh with a 68020 or 68030 microprocessor and no FPU coprocessor
* a Macintosh with a 68040LC microprocessor (which can never have a FPU)
* a Macintosh with a PowerPC chip running 68K code in emulation (since the 68K emulator emulates a 68040LC microprocessor).

Power Macintosh computers contain very fast floating-point support as part of the CPU. This floating-point support is different from the floating-point support provided by the Motorola 680x0 microprocessors. Inside Macintosh:PowerPC Numerics, describes Power Macintosh floating-point support.

Defining a Type 11 Error

A Type 11 error means an illegal interrupt vector on a 680x0 machine. On a Power Macintosh, a Type 11 error is any exception in native code not handled by one of the installed exception handlers. On a Power Macintosh, a Type 11 error can be almost any error that occurred in native code. Type 11 errors may include:

* an address error
* a bus error
* an illegal instruction error that occurred in native code.

The exception handlers installed for native code don*t correctly handle the particular condition which was raised, and the error is returned back to the System Error manager via the Mixed Mode manager. The System Error manager maps all such exceptions to the system error Type 11 Error.

If you install Macsbug 6.5.2 or later, some Type 11 errors may be reported as a PowerPC unmapped memory exception. This is equivalent to a bus error, i.e., an error indicating your program is accessing memory that doesn*t exist.

The Modern Memory Manager was designed to be less forgiving than the classic (68K) Memory Manager. Disposing of something twice, disposing of memory that was never allocated, and other memory handling problems will often generate a Type 11 error, while on a 68K machine the problem may go unnoticed.

Programming Mistakes Causing Type 11 Errors

The following sections give you examples of programming mistakes that may cause Type 11 errors.

Example #1: Writing Past the End of an Array

Writing past the end of an array can be a subtle and difficult-to-find bug. Example #1 shows you why.

```
;=========
;Begin C Code
;
void IAmGoingToCrash(void)
{
Str27 badArray;
BlockMoveData("\\pThis string is too long for this array", badArray, 39);
```

```
}
;
;End C Code
;=========
```

NOTE: I've made the bug very obvious; it may not be quite so obvious, however, in your code. In this example, I*ve put a string of 39 characters into an array defined to hold 27 characters. This overwrites the stack, which contains such useful things as your return address. On a 68K Mac, this causes a bus error. On a PowerPC Mac in 68K emulation, this causes a bus error. On a Power Macintosh in native code, this causes a Type 11 error.

Example #2: Using a Poorly Initialized Pointer or Handle

If your program tries to use an uninitialized or badly initialized pointer, it can generate a Type 11 error. Here is what happens in Example #2:

```
;=========
;Begin C Code
;
Ptr badPointer = (Ptr)-2;
*badPointer = 0;
;
;End C Code
;=========
```

NOTE: I've made the bug very obvious; it may not be quite so obvious, however, in your code. In this example, I*ve created a pointer to non-existent memory (-2 isn*t a valid address) and then tried to access the memory to which the pointer refers. On a 68K Mac, this causes a bus error. On a PowerPC Mac in 68K emulation, this also causes a bus error. On a Power Macintosh in native code, this causes a Type 11 error.

Other Situations Causing Type 11 Errors

The following sections document some of the known bugs in various products that may cause Type 11 errors.

Color Picker vs Third-Party SCSI Drivers

One reproducible problem stems from a known bug in several third-party SCSI hard disk drivers. The bug causes the Color Picker to crash when trying to resolve a boot volume alias it makes at startup time. This problem exists in any system when Color Picker 2.0 or 2.0.1 is installed and the boot volume is not a removable drive. The fundamental cause of the problem is that the SCSI driver incorrectly marks the boot drive as a removable drive during the boot process and changes it to be properly marked as a fixed device after startup. To find its code, the Color Picker resolves the boot volume alias it made during startup. Since the alias passed to the Alias Manager is for a removable drive, the Alias Manager can*t resolve the alias (since the device is now marked as fixed.) The Color Picker design did not anticipate the boot volume not being found. This results in a Type 11 error. The fix is to upgrade your SCSI driver to a later version.

Calling a Routine That May Move Memory at Interrupt Time

The Apple Media Kit, release 1.2, had a problem that could cause random errors. During a VBL task, AMK was calling SetCCursor. SetCCursor can possibly move memory. Moving memory during interrupt time is a very bad idea. The Memory Manager may be in an unstable state, such as compacting memory, when an interrupt routine gets called. This can cause a Type 11 error in native code.

A replacement cursor.c file has been provided in the Apple Media Tool/Programming Environment Runtime folder, and we do have a replacement Runtime Maker:Codes:Program file for Apple Media Tool. If you are currently developing titles, replacing these files and rebuilding your projects will remove the bug.

Not Enough Heap Space

There are some situations where having small amounts of memory available in the system heap may lead to a Type 11 error. As an example, if the shared library manager can't load a shared library, you may get a Type 11 error. This can happen when QuickTime tries to load a decompressor for certain kinds of images.

Writing Past the End of an Array

In OpenTransport 1.0.5 or earlier, there was a bug in the TCP/IP control panel code that could corrupt memory if there were more than 256 zones and a MacIP server was found in a zone past the 256th zone. Under these conditions, the control panel code wrote past the end of one of its buffers. This bug would manifest itself if the user opened the select zone dialog and the TCP/IP control panel was left open long enough for the

NBP lookup calls for zones past the 256th zone to complete. This is corrected in OpenTransport 1.0.6 and later, but is given here as an example of a Type 11 error.

Insufficient Stack Space

Heavy use of local variables or recursion may cause your program to run out of stack space. When this happens, you may have crashes that are difficult to track down. Increasing your program*s stack is one solution. Whenever you are using a large number of local variables or recursive routines, you should increase your program's stack (using the procedure listed in Inside Macintosh: Memory on page 1-40).

As an extreme example, a faceless background application (documented in Technical Note PS 2) has only a 2K stack by default. A 68K application has 24K of stack on most modern machines (8K if no Color QuickDraw is installed, 32K if A/UX is installed.) You can use the low memory accessor function LMGetDfltStack to find your current stack size. Native QuickDraw has several changes in algorithms that have increased the size of some structures. PowerPC alignment issues may cause the size of data structures to increase. Check your compiler documentation for further details.

To help detect collisions between the stack and the heap, a *stack sniffer* VBL task is installed that compares the current ends of the stack and heap and generates a system error 28 in case of a collision. Unfortunately, the Thread Manager is forced to disable the stack sniffer whenever it is installed. (This is because threads can have a stack in places where the stack sniffer doesn't expect them; if the stack sniffer is enabled, it would generate a system error 28.) This means you don't have the same level of protection as you did under older system software versions without the Thread Manager installed.

Too Much Recursion in QuickDraw

Native QuickDraw before version 2.4.1 used a recursive routine to handle regions. This recursive code could cause your stack to run into the heap when handling certain region shapes. Version 2.4.1 of QuickDraw changed to a non-recursive routine which eliminates this error. (You can detect the version of QuickDraw using the Gestalt selector *qd *which returns a version.) In general, recursion on PowerMacs is dangerous unless you have substantial stack space available; PowerPC stack frames are very large, and putting many of them on the stack may quickly exhaust available stack.

Interrupts Not Handled by Device Drivers

Some Type 11 errors may legitimately be illegal interrupt vector errors, rather than simply unhandled exceptions in native code. If a device driver for a NuBus or PCI card does not install an interrupt service routine, but the card raises an interrupt, you will receive a Type 11 error. This will happen whether you are running in 68K code or PowerPC code. The only solution for such a problem is to update the driver to correctly handle the interrupt issued by the card.

Other Programming Errors

Common programming errors may cause Type 11 or No FPU Installed errors. These include the same kinds of errors that usually result in address errors on 680x0-based Macintosh computers. For example:

* Indexing through an array incorrectly so that your program goes outside the memory allocated for that array (as demonstrated above).
* Disposing of memory twice
* Disposing of memory that was never allocated
* Calling DisposeHandle on a resource handle (use DisposeResource instead, to ensure that the Resource Manager doesn*t lose handles behind its back.)

Some Techniques To Help Avoid Type 11 Errors

The following techniques may help resolve situations that might lead to Type 11 errors:

* Test your code carefully.
* Install the Debugging Modern Memory Manager, available on the Tool chest Developer CD. This version of the Modern Memory Manager has additional checks installed which allow you to track down and eliminate many memory management bugs.

* Use extensions such as EvenBetterBusError (found on the Tool chest Developer CD) in conjunction with Macsbug 6.5.2 or later, to detect use of uninitialized pointers or handles.
* Use third-party testing tools such as QC* by Onyx or MemoryMine* by Adianta.

IMPORTANT: It goes without saying that good testing before you release a product will prevent expensive customer support calls later on.

User-Level Recommendations

Here are some user-level suggestions recommended by Apple for unexplained Type 11 or No FPU installed errors:

1. Upgrade your hard disk driver(s) to the latest version available. There are some known problems between SCSI Manager 4.3 and some SCSI disk drivers. Starting with System 7.5, the SCSI Manager 4.3 is installed on all Macintosh Quadras and Power Macintosh computers. There are some known programming problems in some older third-party disk drivers.

2. Upgrade to the latest System Software appropriate for your system. Several significant bug fixes in system updates should reduce the number of Type 11 and No FPU Installed errors you encounter.

3. Do a clean install of your System Software. Use the Extensions Manager control panel to determine if any additional control panels or extensions are conflicting with your system software.

4. Some Type 11 errors may result from corrupted PRAM. Unfortunately, most of extended PRAM is undocumented. (See Inside Macintosh:Operating System Utilites, chapter 7, Parameter RAM Utilities, for what details are documented.) You can restore your default PRAM values by holding down Command-Option-P-R at system startup time, or by using a shareware utility such as TechTool.

5. Make sure you are not using composite RAM in a Power Macintosh. Memory specifications are in the developer hardware notes for each computer.

6. Some users claim that installing the shareware extension SoftwareFPU cuts down on No FPU Installed problems. This extension emulates the Motorola FPU (at a considerably slower speed), thus preventing bombs from software which incorrectly makes FPU calls. This may alleviate no FPU Installed errors, but it doesn't address the fundamental problem, namely that some software is executing unexpected data or making illegal calls to a non-existent FPU.

7. Upgrade any software you find that causes repeatable errors.

Summary

There are no easy solutions for handling Type 11 Error or No FPU Installed errors. Only careful debugging and testing can reduce the number and frequency of these errors. Most problems stem from common programming errors.

Further Reference

* Inside Macintosh, PowerPC System Software, Addison-Wesley
* Inside Macintosh:PowerPC Numerics, Addison-Wesley
* Macsbug Reference and Debugging Guide, Addison-Wesley
* Macsbug Release Notes, part of the distribution of Macsbug
* Motorola MC68020 32-bit Microprocessor User*s Manual, Third edition (available from Motorola)
* PowerPC Microprocessor Family: The Programming Environment (available from IBM or Motorola)
* Inside Macintosh:Memory, Addison-Wesley

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

AppleVision 1710AV, AppleVision 750 AV: Shortened startup sound

With an AppleVision 1710AV Display connected to a Macintosh computer, when start up the computer, sometimes only part of the startup tone is played. When the audio cable from the computer to the display is disconnected, the entire tone plays.
This article has been archived and is no longer updated by Apple.
This behavior can also occur with the AppleVision 750 AV Display.

When the Macintosh audio is connected to these displays, you cannot hear the complete startup tone. Because of the additional features in the these displays, there is a slight delay in power reaching all the components. Depending on how quickly the speakers in the display are able to power up, you may hear a partial startup tone, no startup tone, or the entire startup tone.

There is nothing wrong with your display or your computer. If you want to hear the startup chime, unplug the sound out cable that connects from your computer to the display. Once this cable is removed, you hear the chime from the built-in speaker of your computer. Until you reconnect the sound cable, all sound goes through the internal computer speaker.
Published Date: Feb 20, 2012

Mac OS: Minimizing Memory Fragmentation

This article explains what memory fragmentation is, when it is likely to occur, and how to minimize it.
This article has been archived and is no longer updated by Apple.

Symptom

A dialog box appears with the message that there is not enough memory to continue even though you are sure your computer has plenty of memory. At other times, the Largest Unused Block information in the About This Computer window does not change even after quitting an application program.

Solution

Memory fragmentation is similar to hard disk fragmentation, but files stored on a disk can easily be broken up into fragments if there is not enough contiguous space on a disk. Programs that are loaded in memory, however, cannot be fragmented, and thus need a contiguous area of memory. Your computer may have several unused blocks of memory mixed in with the used blocks of memory, but Mac OS can make only a single unused block available to a program.

Memory becomes fragmented more frequently if virtual memory is turned off.

To defragment memory, use one of the following techniques:

Technique 1

1. Quit all open applications and desk accessories.
2. Open the applications you need to use.

Open applications appear in the Application menu. To quit an application, choose it from the Application menu, and then choose Quit from the File menu. The Largest Unused Block in About This Macintosh increases as more contiguous memory is made available, but it doesn't necessarily increase with each program you quit.

Technique 2

Restart your computer.

To avoid fragmentation again, carefully plan the order in which you open and quit programs:

1. Open first the applications and desk accessories you are least likely to quit.
2. Open last the applications and desk accessories you are most likely to quit during a work session.

By opening and closing applications and desk accessories this way, the memory you free up is contiguous with the rest of the Largest Unused Block. When you quit programs in random order, you are likely to have fragmented memory.

Other Solutions

- On a Power Macintosh computer, you may experience less memory fragmentation if virtual memory is turned on. For more information see article 16889: **Power Macintosh: Turn on Virtual Memory for Best RAM Usage**
- Deselect "Load only when needed" in the TCP/IP control panel. For more information see article 19484: **Open Transport 1.1: Memory Fragmentation**
- You should update to system software version 7.5.5 or later, which is available from http://www.apple.com/swupdates/ . For additional update information see article 20081: **System 7.5.3: What Updates Do I Need for System 7.5.5?**

Published Date: Feb 17, 2012

AppleVision 1710AV: Frequently Asked Questions

This article contains frequently asked questions (FAQ) regarding the AppleVision 1710AV Display and the AppleVision 1710 Display, with answers to those questions.

Note: The only differences between the AppleVision 1710AV and AppleVision 1710 Display are the speakers and built-in microphone included on the AppleVision 1710AV Display.

This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. I have a conflict between the AppleVision 1710AV Display Enabler and the Now Toolbox system extension. My Now Startup Manager disables the Display Enabler every time. How can I correct this?
2. When starting up, the Conflict Catcher and QuickTime system extensions load, then the Display enabler loads, but erases the Conflict Catcher and Quicktime icons and the Mac OS logo before the rest of the icons load.
3. During startup, why does my Macintosh Performa 630CD and AppleVision 1710AV Display pause at the Display Enabler system extension and then continues with just the single progress bar, without the "Welcome to Macintosh" display?
4. Using Display enabler and the AppleVision Setup control panel, my system is unusable. When I remove Display enabler and AppleVision Setup control panel everything works fine. Is there something wrong with the software for the AppleVision 1710AV Display?
5. I am using a Power Macintosh 7500 computer with an AppleVision 1710AV Display. After I re-calibrate the monitor, why does the display have a lavender (purple) color or spirals of faint diagonal lines across the entire screen?
6. Why are there a number of barely visible colored lines running diagonally across the screen when the display is blank (during startup or when the screen saver is on)?
7. We have experienced some incompatibilities with the AppleVision 1710AV Display, some third party boards, and the internal video on the Macintosh II VX. Are there any known issues with a setup like this?

Question 1: I have a conflict between the AppleVision 1710AV Display Enabler and the Now Toolbox system extension. My Now Startup Manager disables the Display Enabler every time. How can I correct this?

Answer: First, there is a known issue with Now's Startup Manager and AppleVision Software (specifically the Display Enabler). The solution is to disable Now Startup Manager and use Extension Manager. Now is aware that they have an issue and are working on a fix for it. This fix did not make into Now Utilities 5.0.2.

Second, AppleVision Software requires Display Enabler 2.0. The Display Enabler extension is needed for any 040 or nubus based Macintosh.

Question 2: When starting up, the Conflict Catcher and QuickTime system extensions load, then the Display enabler loads, but erases the Conflict Catcher and Quicktime icons and the Mac OS logo before the rest of the icons load.

Answer: AppleVision Software requires Display Enable 2.0. The Display Enabler extension is needed for any 040 or nubus based Macintosh.

Question 3: During startup, why does my Macintosh Performa 630CD and AppleVision 1710AV Display pause at the Display Enabler system extension and then continues with just the single progress bar, without the "Welcome to Macintosh" display?

Answer: As it states in the Read Me: "With some system software and hardware configurations, your screen may not redraw correctly during the startup process. This will not affect display performance." This is referring to issues like the one above. When the Display Enabler is loading, the screen may redraw, leaving the user with only a thermal bar left with no welcome to Macintosh window.

Question 4: Using Display enabler and the AppleVision Setup control panel, my system is unusable. When I remove Display enabler and AppleVision Setup control panel everything works fine. Is there something wrong with the software for the AppleVision 1710AV Display?

Answer: AppleVision Monitors require both of these software components to be loaded and they also require that the ADB cable is connected to the monitor. Otherwise the user will only get 640x480.

Question 5: I am using a Power Macintosh 7500 computer with an AppleVision 1710AV Display. After I re-calibrate the monitor, why does the display have a lavender (purple) color or spirals of faint diagonal lines across the entire screen?

Answer: This is usually caused by an error in recalibration. You only need to recalibrate a couple of times to recover from this situation. However, if the issue continues to occur there may be a hardware issue. Since the color data is transmitted over ADB, you should also avoid pressing the keyboard or bezel buttons during the recalibration.

Question 6: Why are there a number of barely visible colored lines running diagonally across the screen when the display is blank (during startup or when the screen saver is on)?

Answer: The diagonal lines are caused by the redraw gun inside the monitor resetting. You will see this under two circumstances.

First, brightness and contrast are turned all the way up to full. You should turn brightness down to about 50% and leave contrast all the way to full and see if the lines go away. Brightness at 50% and contrast at 100% is the suggested viewing level to get the brightest, clearest picture.

Second, the diagonal lines may appear if there is an error in recalibration. If lowering the brightness does not help, recalibrate the monitor a few times. When an error in recalibration does occur the monitor is supposed to be reset to its previous setting. Unfortunately there is no sure way of catching all of the recalibration errors. You may have to recalibrate up to 4 times before the monitor's color settings are properly restored from an incorrect calibration.

Question 7: We have experienced some incompatibilities with the AppleVision 1710AV Display, some third party boards, and the internal video on the Macintosh II VX. Are there any known issues with a setup like this?

Answer: AppleVision Monitors were only qualified on the supported built-in monitor ports (for all 68040 and PPC Macs) and on the 24AC NuBus card and the ATI PCI card. The third-party would have to revise its driver to work with our monitor and software.

Published Date: Feb 20, 2012

Color LaserWriter: Excessive Background Toner

My Color LaserWriter 12/660PS sometimes leaves a light dusting of colored toner on the white areas of my printed output. Is this normal? Can I do anything to reduce the amount of background toner that is deposited?
This article has been archived and is no longer updated by Apple.
Background toner is especially noticeable near the leading edge of the paper where an abrupt transition is visible approximately 7/16" (8mm) from the top edge of the paper. This region is where the paper is gripped by the transfer drum, and cannot be printed on. When viewed under a microscope or magnifying lens the background toner consists of randomly deposited toner particles from one or more of the cyan, magenta, yellow, or black toner cartridges.

The majority of customers reporting background toner issues are either using toner cartridges that are almost at the end of their useful life, or are located in areas where the relative humidity drops significantly as the cool winter months approach. In many cases the relative humidity is below the range recommended in Appendix A of the Color LaserWriter 12/600 PS user's manual. The manual recommends that the relative humidity be between 35 and 70% for optimum print quality, although the allowable range is 20 to 80% non-condensing when the temperature is between 59 to 86 F (15 to 30C). The relative humidity can drop to as low as 10% if the room temperature is maintained at or above 68 F (20 C). The low temperature value of 50 F(10 C) listed in some versions of the user's manual is in error.

Recommendations
In order to reduce the amount of background toner try the following recommendations:

Operate the Color LaserWriter 12/600 PS in an environment with a relative humidity that falls between 35 and 70% with the temperature between 68 and 82 F (20 to 27.5 C) for best print quality. Low cost digital hygrometers/thermometers that measure temperature and humidity can be purchased at many consumer electronics stores. A humidifier that is appropriate for the room size where the printer will be used may be necessary to increase humidity. Buildings located in dry climates may have humidifiers integrated into their heating and ventilation systems.

If the background toner is predominantly one color (cyan, magenta, yellow, black) when printing color documents then try replacing the corresponding toner cartridge. Background toner can appear when printing black & white documents, however the background toner will contain only black toner particles because the printer switches to a single pass black-only printing mode. Replacing the corresponding toner cartridge(s) has been successful in some cases, however further investigation is necessary to understand the relationship between adding a new toner cartridge and background toner.

Store the paper and consumables in the same area as the Color LaserWriter 12/600 PS so that they are exposed to the same temperature and humidity conditions. Leave each ream of paper in its protective paper wrap until it is ready to be loaded into the cassette tray.
Published Date: Feb 20, 2012

LaserWriter 8.2.3f: Read Me

This article contains the Read Me file included with the LaserWriter 8.2.3f software posted online. The driver has been posted separately for the benefit of Mac OS 8 customers, as the software installer does not work with Mac OS 8. If you are using Mac OS 7.6.1 or earlier, please download the four LaserWriter 8.2.3f disk images.
This article has been archived and is no longer updated by Apple.

About the LaserWriter 8 Fax Printer Driver Version 8.2.3f

This document contains some important reminders and some information that is not in the manual that comes with your printer. You may want to print this document and keep it for future reference.

The software on this disk includes version 8.2.3f of the Apple LaserWriter 8 fax printer driver, which works with the LaserWriter Select 360f, LaserWriter Pro 810f, and the LaserWriter 16/600 PS Fax. This document includes information about the software, as well as about several of the printers.

About the LaserWriter 8f Printer Driver

When you set up your printer, you install the LaserWriter 8 printer driver and the fonts and printer software that you need. When you install the fax card option, you also must install the LaserWriter 8 fax printer driver to enable the printer's faxing capabilities. Both drivers are installed in the Extensions folder in your System Folder. They provide identical printing capabilities. To use the fax capabilities of your printer, you should open the Chooser and select the fax driver whenever you want to use the printer for faxing.

Installing the Printer Driver Software

The manual that comes with your printer contains detailed installation instructions. You cannot install the software by dragging icons; you must use the Installer program as described in the printer manual.

IMPORTANT Before installing the printer software, you should restart your system with all Extensions turned off. To do this, hold down the Shift key while you restart your computer.

The Installer places the following files in the System Folder on your hard disk:

LaserWriter 8f is placed in the Extensions folder.

- The PostScript Printer Description (PPD) files that are used by LaserWriter 8 are in the Printer Descriptions folder located in the Extensions folder.
- The Apple Printer Utility and Read Me information are placed in the Apple LaserWriter Software folder.
- The LaserWriter Fax Utility and LaserWriter Fax Log are installed in a folder called LaserWriter Fax Software (placed within the System Folder).
- The Chooser 7.3 desk accessory is placed in your Apple Menu Items folder if you have an older version.
- The PrintMonitor 7.1.2 is placed in your Extensions folder if you have an older version.

About PPD Files

The LaserWriter 8f driver uses PostScript Printer Description (PPD) files to determine the characteristics of the printers it uses. PPD files contain information about individual PostScript printers. For example, PPD files describe the paper-handling capabilities of printers: the number of paper trays, their capacity, and the paper sizes they handle. Installing the fax card software for the printer installs an additional PPD that supports the faxing capabilities of the printer.

To take full advantage of your printer's features, click the Setup button in the Chooser when selecting your printer for the first time or after installing an additional option. This procedure causes the LaserWriter driver to query the printer for its characteristics and associate a particular PPD file with the printer. The driver will automatically select the PPD that supports the faxing capabilities of your printer.

About Creating EPS Files

You can create an Encapsulated PostScript (EPS) file in many application programs by clicking File in the Print dialog box, then clicking Save. When you create an EPS file, note the following:

Creating EPS files with the All option selected in the Font Inclusion pop-up menu in the EPS dialog box can result in very large files. If you include all fonts in an EPS file and save the file with the Unlimited Downloadable Fonts option selected, an extremely large file may be created.

If you create an EPS file with no fonts included and open the document, fonts in the document appear on your screen, but Courier may be substituted when you print.

When you create EPS files with preview information included, other applications that create their own PostScript code may not display the EPS

file accurately on the screen.

About the LaserWriter Fax Utility and the Apple Printer Utility
Installing the LaserWriter Fax printer driver software installs the LaserWriter Fax Utility, which you should use to configure the faxing capabilities of the printer.

When you installed the LaserWriter 8 driver and printer software, the Installer placed the Apple Printer Utility program in a folder named "Apple LaserWriter Software." The Apple Printer Utility program is designed to configure your LaserWriter printer.

Using a Hard Disk to Store Fax Data
If a hard disk is attached to your printer, you can use it to hold incoming fax data before it is printed, and to hold outgoing fax data before it is transmitted. (By default, fax jobs are stored in printer RAM.)

Because more space is typically available on a hard disk than in RAM, storing fax data on a hard disk allows you to receive and transmit longer faxes without having to divide them up into smaller transmissions.

To configure your printer to use an attached hard disk to store fax jobs, open the Apple Printer Utility and choose Send PostScript File from the File menu. Select the file "UseDiskForFax" in the LaserWriter Fax Software folder in the System Folder, click Add, then click Send.

To configure your printer to use RAM to store fax jobs, open the Apple Printer Utility and choose Send PostScript File from the File menu. Select the file "UseRAMForFax" in the LaserWriter Fax Software folder in the System Folder, click Add, then click Send.

After downloading either file to the printer, you must restart the printer for the change to take effect.

IMPORTANT If you use a hard disk to hold fax data and you later want to disconnect the hard disk from the printer, be sure to configure the printer to use RAM to store fax jobs before you remove the hard disk. Otherwise, your printer will take a little longer to start up the first time when it detects that the hard disk has been removed.

Using the LaserWriter 8 Fax Printer Driver With LaserWriter Printers

When using the LaserWriter 8.2.3f driver, you should be aware of the following situations. Some happen with all LaserWriter printers, and others happen only with specific models.

All LaserWriter Printers
The LaserWriter 8.2.3f driver allows some printers to print using a larger imageable print area on the page. If your printer does so, you may find that text flow in some documents has changed or is clipped to fit the new imageable area. To maintain your document format when printing to different printer models, deselect the Larger Print Area option in the Page Setup Options dialog box.

Some older printers with small amounts of memory will not print documents containing large numbers of fonts unless the Unlimited Downloadable Fonts option is selected in the Page Setup Options dialog box. If a document using multiple fonts doesn't print using the LaserWriter 8 driver, try selecting Unlimited Downloadable Fonts in the Page Setup Options dialog box and print again.

Printing multiple documents with the Finder may not work if the documents have been created by different application programs.

If you encounter a time-out (PostScript error -8993) when printing multiple copies of large and complex documents in the background, print the documents one at a time or select foreground printing to avoid this problem.

Note the following when you create rotated text, saved as a PICT file, and import it into a document as a graphic: Though you may position rotated text in the frame so that parts of it should not be visible and should not print (is clipped), the text will still appear on the printed document.

LaserWriter 16/600 PS
If Tray Switching is turned on and you have installed the optional 500-sheet feeder, and it contains the same paper size as the 250-sheet feeder, you should set up the driver to use the 500-sheet feeder as the preferred paper source for optimal printing performance. See the manual that came with your printer for instructions on selecting the 500-sheet feeder as the preferred paper source.

LaserWriter Pro 810
With some graphics programs, bitmapped graphics will be reduced by 25% in size when printed with the Precision Bitmap Alignment option in the Page Setup Options dialog box.

When you create a PostScript file with a LaserWriter Pro 810 selected as the printer and send the file to a printer that uses PostScript Level 1, a PostScript error will occur.

LaserWriter Pro 600 and 630
You cannot use Auto Select as the Paper Source in the Print dialog box to print envelopes from the optional envelope feeder.

When you print at a resolution of 600 dots per inch (dpi), bitmapped images may appear with lines across the image.

LaserWriter II NT and II NTX
If you select both the Smooth Graphics and the Invert Image options in the Page Setup Options dialog box, a PostScript error results.

Do not use the B5 tray to print envelopes on a LaserWriter II NT. Use the letter tray instead.

LaserWriter IIg and IIf
When you select paper sources from the First From and Remaining From pop-up menus in the Print dialog box, selecting Manual Feed for either source sets the driver to print the first page from the manual feed tray.

The US Legal paper size has been changed on some LaserWriter IIf/IIg printers to be more compatible with other Apple LaserWriter printers. If your legal-sized documents no longer fit on the page, select Larger Print Area in the Page Setup Options dialog box.

Some form-printing programs cannot print forms using the Layout settings in the Page Setup dialog box.

Using the LaserWriter 8 Driver With the Kanji System
To print Japanese characters using KanjiTalk or the Japanese Language Kit, your system must have WorldScript II version 7.1.1 or later.

Using the LaserWriter 8 Driver With Application Programs

Some application programs do not yet take advantage of the new features of the LaserWriter 8 driver or have small incompatibilities that result in printing problems. If you experience problems with a program, contact the publisher of the program. In some cases a newer version of the program may be available.

The following list describes some special cases that you should be aware of when working with some application programs. (There may be other problems with these programs, or with other programs, not mentioned in this document.)

With many programs, you cannot use the Flip Horizontal, Flip Vertical, landscape page orientation, and Layout option in the Page Setup dialog box in combination.

Aldus Freehand 4.0
Documents do not print correctly when you choose a page layout from the Layout pop-up menu in the Page Setup dialog box.
EPS files created using the LaserWriter 8 driver from within Freehand cannot be used in other programs.

Aldus PageMaker 5.0
Rotated graphics may not print correctly when you hold down the Option key and click Print in the Print dialog box.
You cannot print legal-size documents from the paper cassette of the Personal LaserWriter 320; print such documents by selecting Manual Feed or by holding down the Option key and clicking Print in the Print dialog box.

Aldus SuperPaint 3.5
Rotated or filled polygons print as solid gray objects.
Gradient fills may not print when copied into other programs.

Canvas 3.5
When you select the Substitute Fonts option in the Page Setup Options dialog box, text may be incorrectly spaced if fonts Geneva, New York or Monaco are used.

CricketDraw III 2.01
When you choose a page layout from the Layout pop-up menu in the Page Setup dialog box, underlined TrueType fonts may not print.

CricketPresents 2.1
You cannot import an EPS file created with the LaserWriter 8 driver when it has been saved without preview information.

FileMaker Pro 2.1
When you choose a page layout from the Layout pop-up menu in the Page Setup dialog box, documents that contain EPS graphics may appear clipped when printed.

Freehand 5.0
When you are printing with Freehand 5.0, make sure to set the Output Device Setup in the Print Options dialog box to "Use defaults."If you have a PPD selected, the QuickDraw GX driver will only print a blank page.

Informed Manager 1.4
When you select the Unlimited Downloadable Fonts option, some graphic elements may shift or disappear when printed.

Lotus 1-2-3 1.1
Text printed with the Outline or Shadow text style appears filled with gray.

MacDraft 3.01 and earlier versions
When you print using the Cut Marks option, a PostScript error results.

Microsoft PowerPoint 3.0
Polygons and ovals filled with gradients and without a border line may shift locations on the page when printed.

Microsoft Works 3.0
Printing documents that have rotated objects with rounded corners results in a PostScript error.

Painter 2.0
When you print using the Invert option, images do not print inverted correctly.

PixelPaint Pro 3.0
When you print using the Invert option, images do not print inverted correctly.

QuarkXPress 3.3
Be sure to use the PPDs provided with QuarkXPress when you choose a page layout from the Layout pop-up menu in the Page Setup dialog box.

RagTime 3.2
You cannot print documents that contain PICT or TIFF files.

ReadySetGo! 6.0
Use ReadySetGo! version 6.0 with the LaserWriter 8 printer driver; earlier versions will not work.
You cannot print documents that use pen patterns.

SoftWindows
When you print with Autosend on, don't select the option to print before the print job has finished spooling to the Macintosh, or PostScript syntax errors will occur.

Studio/8 & Studio/32
When creating an EPS file with these programs and the LaserWriter 8 driver, you must select the QuickDraw Printer option.

WordPerfect 3.0
When you select the Unlimited Downloadable Fonts option and print rotated text in Watermark, the entire document rotates when printed.

How to Get Updated Printer Software
These articles can help you locate the software update mentioned here:
"**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.

Printing With QuickDraw GX

Using Manual Feed
If you select manual feed, and the printer still prints from the cassette, try to print by selecting Automatic Paper Feed from the GX Print dialog box first. Then, print again by selecting Manual Feed.

Freehand 5.0
When you print with Freehand 5.0, make sure to set the Output Device Setup in the Print Options dialog box to "Use defaults." If you have a PPD, selected the QuickDraw GX driver will only print a blank page.

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Published Date: Feb 20, 2012

PowerBook: Password Security Frequently Asked Questions

This article contains frequently asked questions (FAQ) regarding the PowerBook password protection software, with answers to those questions. This article has been archived and is no longer updated by Apple.

Questions answered in this article:

1. What do I do if I forget my PowerBook computer's password? Is there a way to bypass it?
2. I activated password protection on my PowerBook computer. Now when I try to access it, it does not recognize my password. I know I am entering the correct password. I also see an arrow in the password field. What does the arrow mean?
3. I opened the password Security Control Panel, clicked the ON button, and I get a message that says "You must turn off password protection before using this PowerBook in SCSI disk mode." What should I do?
4. I am at the password entry screen for my PowerBook computer, and the OK button is dimmed. Also, there is no cursor in the window so I can't enter my password.

Question 1: What do I do if I forget my PowerBook computer's password? Is there a way to bypass it?

Answer: If you forget your password, you cannot bypass the hard drive by booting the PowerBook with extensions off. The password is written to the hard drive on the driver partition. You should take your PowerBook, with your proof of purchase (receipt), to an Apple Authorized Service Provider where a technician has the means to bypass the password security.

Question 2: I activated password protection on my PowerBook computer. Now when I try to access it, it does not recognize my password. I know I am entering the correct password. I also see an arrow in the password field. What does the arrow mean?

Answer: The arrow indicates the caps lock key is down. Since password protection is case sensitive, simply releasing the caps lock key causes the arrow to disappear and solve the problem.

Question 3: I opened the password Security Control Panel, clicked the ON button, and I get a message that says "You must turn off password protection before using this PowerBook in SCSI disk mode." What should I do?

Answer: Simply click on the OK button or press the Return key. This is just a general warning message. Once you press OK the password entry screen will come up.

Question 4: I am at the password entry screen for my PowerBook computer, and the OK button is dimmed. Also, there is no cursor in the window so I can't enter my password.

Answer: You will not get a blinking cursor in the password entry area. Simply enter the password and you will see security dots (bullets) appear in the window. This is to prevent someone from reading your password when you enter it. Once these dots appear in the window, the OK button will darken, and you can complete activating your password.

Published Date: Feb 20, 2012

MacDNS 1.0: Importing Existing BIND Zones

Import existing BIND files containing DNS information for a zone, instead of having to input the host and IP address data manually.
This article has been archived and is no longer updated by Apple.
MacDNS supports importing existing BIND files, although there are a few issues associated in doing this. Here are the steps to follow:

1. After downloading the appropriate resource database files for a particular zone with ftp from a UNIX DNS server, be sure that the file is saved in generic text format.

2. Edit the downloaded text file, be sure the Start of Authority (SOA) resource record is at the beginning of the file.

IMPORTANT: Do not have comments (";") or $ORIGIN listed at the top of the file.

Below is an example of a proper SOA resource record:

company.com. IN SOA host.company.com. root.host.company.com. (

```
19950927  ; serial number
    21600     ; secondaries refresh (6 hours)
    3600      ; secondaries retry (1 hour)
    3600000   ; secondaries expire (41 days)
    108000 )  ; minimum default TTL (30 hours)
```

Once edited, save the file again as text.

3. With MacDNS active, choose Message Log from the Window Menu and set the Log Threshold to Microscopic. This will assist in debugging if a problem occurs importing the file.

4. Choose Open Zone File from the File menu, to open the SOA resource record file. MacDNS will import the resources. If at any point MacDNS does not import successfully, check the Message log for help in determining the failure point.

5. Once imported, choose Set Zone Information from the Hosts menu and verify that the information is correct.

At this point, MacDNS is the primary name server for that zone. The PTR Records are internally created by MacDNS.
Published Date: Feb 20, 2012

LaserWriter 8 Driver: Printing an EPS File

I print an EPS file with the LaserWriter 8 printer driver options, I then click the Save button, and a dialog box appears with EPS and font options as shown below:

Option Format: PostScript print EPS Mac standard preview EPS Mac enhanced preview EPS no preview Font Options: No fonts All fonts

I want to print to an EPS file with all fonts included and then import the EPS file into Quark Express. In order to ensure the import is correct a preview of the EPS file in Quark Express should be available after importing. With the options listed above it seems this would be possible, however, I cannot get Quark Express to work this way.

How does preview in EPS files work? What are the differences between standard and preview format? What format should I use to enable standard Macintosh applications preview the content of a EPS file?
This article has been archived and is no longer updated by Apple.
We have enclosed a description of all of the options when you select a destination of Save to disk. The EPS Standard Preview contains an equivalent 72 dots per inch (dpi) bit image copy of the original applications image. The Enhanced Preview is a copy of the file as originally generated by the application. Quark XPress can import and print EPS, but it has an issue displaying these images -- an issue Quark intends to resolve. They could not provide a time frame for when the fix will be available, so you may wish to check back with them periodically.

Being able to import and/or display EPS files are options you will find in some but not all applications. It is up to the discretion of the developer to support or not support this feature.

In a EPS file, the PostScript is stored in the data fork, and the screen image is stored as a PICT resource #256. For a third-party application to display the EPS file, the application must look for the PICT resource to read and display the image. Again, not all applications support this feature.

Save option descriptions

The LaserWriter 8 dialog offers many options including the ability to select a Destination that specifies where to send the driver's output:

Printer: send to hardcopy printer.
File: send to a disk file.

If you are using LaserWriter 8f or Fax PPD, another Destination becomes available:

Fax: send to a fax-capable output device for fax transmission.

After selecting the Save you are given a choice of formats in which to save the file:

PostScript Job

A copy of the driver's PostScript output, exactly as it would have been sent to the output device. The file is formatted for the currently targeted output device with whatever features and options are currently in effect, and conforms fully to Adobe Document Structuring Convention (DSC).

EPS Mac Standard Preview

A single page image (typically an illustration) in Encapsulated PostScript form in the file's data fork, along with an equivalent 72-dpi bit image in the resource fork for displaying the page on the Macintosh screen. The bit image is obtained by playing back and rasterizing the 'PICT' resource representing the page in the document's spool file, as originally generated by the client program.

EPS Mac Enhanced Preview

A single page image (typically an illustration) in Encapsulated PostScript form in the file's data fork, along with an equivalent 'PICT' resource in the resource fork for displaying the page on the Macintosh screen. This is a copy of the same 'PICT' representing the page in the document's spool file, as originally generated by the client program.

EPS No Preview

A single page image (typically an illustration) in Encapsulated PostScript form in the file's data fork, but without an associated preview image in the resource fork. This form is intended for transfer to other, non-Macintosh platforms.

Font Inclusion controls the inclusion of downloadable fonts in the PostScript output file:

None

Includes no fonts; assume all needed fonts are already available on the target device. In place of the fonts themselves, the PostSript output will include a DSC %%IncludeFont comment for each font used in the document.

All

Include all fonts used in the document that are available on the host Macintosh.

All But Standard 13

Include all fonts used in the document that are available on the host Macintosh, except the core set of thirteen standard typefaces that are built into virtually all PostScript printers (Times-Roman, Times-Bold, Helvetica-Bold, Helvetica-Oblique, Helvetica-BoldOblique, Courier, Courier-Bold, Courrier-Oblique, Courier-BoldOblique, and Symbol).

ASCII/Binary

Specifies whether to save the output file in 7-bit ASCII or 8-bit binary format:

ASCII Save file in 7-bit ASCII format.

The resulting file contains no characters outside the range 32127 ($20$7F). In particular, it contains no control characters, and thus is suitable for transmission across ASCII-transparent communication channels such as asynchronous serial.

Binary Save file in 8-bit binary format.

The resulting file is typically smaller than the corresponding file in ASCII format (particularly if it contains sampled image data), but is suitable for transmission only across 8-bit-transparent communication channels.

Level 1 Compatible/Level 2 Only

Specifies the level of PostScript compatibility for the output file:

Level 1 Compatible: Compatible with all PostScript devices.

The file includes code to test the level of the device's PostScript interpreter and emulate the effects of Level 2 features on devices that do not support them directly. Level 2 features that cannot be emulated efficiently in Level 1 are suppressed.

Level 2 Only: Compatible with PostScript Level 2 devices only.

Assumes the availability of all Level 2 features and generates no level-checking or emulation code. The file may include Level 2 features (such as data compression for sampled images) that cannot be emulated efficiently in Level 1. Output files in Level 1 Compatible format tend to be larger than Level 2 Only files, both because of the additional emulation code they contain and because they cannot take advantage of Level 2 data-compression techniques. Files in Level 2 Only format are smaller, but will typically cause PostScript errors when printed on a Level 1 device.

The default setting is Level 1 Compatible.
Published Date: Feb 20, 2012

Open Transport: Memory Fragmentation Discussion

This article discusses memory fragmentation issues related to the use of TCP/IP with Open Transport 1.1, and the effect of the 'Load Only When Needed' option in the TCP/IP control panel.
This article has been archived and is no longer updated by Apple.
Memory may not be released efficiently when the 'Load only when needed' option is selected in the TCP/IP control panel. This is a normal condition for the Mac OS, especially if non-TCP applications are opened after a TCP/IP application is opened.

When opening TCP/IP applications, if TCP is not loaded Open Transport loads the TCP/IP stack into the memory reserved by Mac OS for applications (application heap) after the TCP/IP application. After the last TCP/IP application is quit, the TCP/IP stack unloads from memory. However, if other non-TCP/IP applications have been loaded before quitting the TCP/IP application, memory can become fragmented.

For instance, if you load TCP/IP application A and another non-TCP/IP application B, memory may be arranged as follows (from top of memory to bottom):

Free Memory
APP B
TCP/IP STACK
APP A

When you quit Application A memory may look like this:

Free Memory Block 2
APP B
Free Memory Block 1

At this point, the memory is fragmented because the free memory block is split into two parts by application B. If you choose About this Computer from the Apple menu and look at the memory usage information, the Largest Unused Block would be smaller than it was before opening applications A and B. The Largest Unused Block is the largest block of contiguous memory, and with application A in the middle of two free memory blocks, blocks 1 and 2 cannot be joined together to form a larger contiguous block.

The workaround is to deselect the 'Load Only As Needed' option in the TCP/IP control panel (but leave TCP/IP active). This forces Mac OS to load TCP/IP into memory before applications use any of the application heap, thereby preventing memory fragmentation. The drawback is that memory is always be allocated to the TCP/IP stack, defeating the benefits of the 'Load Only As Needed' option.

The TCP/IP stack unloads from memory about two minutes after there is no TCP/IP activity. With some PPP connections, the stack does not unload. PPP users should always have TCP/IP loaded.

Published Date: Feb 20, 2012

Mac OS: Technical overview of disk volume structures

This article provides a technical overview of the elements of a disk volume or partition, including the partition map, boot blocks, master directory block, volume bitmap, B-trees, and more.
This article has been archived and is no longer updated by Apple.
A disk can contain several partitions, which are treated as separate virtual disks by the system. Each partition contains information similar to that shown here:

Layout of a Disk Partition

Note: Floppy disks are not partitioned and do not have all the elements described in this article. The first block on a floppy disk contains the boot block for its single volume.

Driver Descriptor Map
A disk's first block (block 0) contains the driver descriptor map-information on the number and location of the drivers on the disk.

Partition Map
The second block begins the disk's partition map. It specifies the start and length of each partition as well as its type (Macintosh, A/UX, MS-DOS, and so forth). The partition map itself is actually a partition and contains an entry for itself.

Device Driver
The device driver is located after the partition map. It is used for communication with the drive. (Note that if the device driver is updated after the drive is initialized, the driver may be moved to the end, depending on space constraints.)

Boot Blocks
Mac OS Standard format (HFS) volumes begin with two boot blocks. This is where startup instructions are stored along with directions for locating the System and Finder files.

Master Directory Block
The master directory block contains volume information such as the date and time of a volume's creation, the number of files the volume contains, and the allocation block size.

The allocation block size is the minimum number of bytes that can be allocated for a file. With Mac OS Extended format, it is 4K for most volumes regardless of their size. With Mac OS Standard format, the allocation block size is dependent upon the size of the volume. A Mac OS Standard volume can have no more than 64K allocation blocks. Therefore, the larger the volume, the larger the allocation block size. Whenever a file is written to the disk, it is allocated a certain number of logical blocks or "clumps. This slows down the process of fragmentation, but can result in open space being left at the end of each file's allocation.

When the master directory block is read, the volume is mounted and an area is created in memory called the Volume Control Block (VCB).

Volume Bitmap
The volume bitmap is a record of which blocks are allocated to files. It contains one bit for each allocation block on the volume. If the block is taken, the bit is set. If the block is available, the bit is cleared.

Catalog File/Tree
Contains hierarchical information about the relationship and structure of files and folders and their location on a volume.

Specifically, it contains the parent directory for each file. In order to determine the full path, a directory's parent is found, and so on, until the root level is reached. The catalog file and extents file are each in the form of a "B-tree" (and are the source for all B-tree type errors). See below for a discussion of B-trees.

Extents File/Tree
An "extent" is a contiguous range of blocks that are allocated to a file. The extents file (also called Extents Overflow File) keeps track of the location of records that cannot be placed contiguously. This information is used to locate pieces of a file when it is loaded. Some extent information is contained within the MDB and VCB. The first three file extents are always retained in memory with the VCB.

Given this information, it is understandable why optimizing, or "defragmenting," a disk is so effective. Making files contiguous reduces seek time and reduces the number of accesses to the extents file.

All of the items listed before the catalog and extents files are contiguous. The catalog and extents files can be anywhere on the volume and are not contiguous.

The catalog file also stores Finder information for each file. This information consists of:

file type: Identifier of one of several categories.
file creator: Name of the application that created it.
file's location in window: Relative position in the window when it's opened.
directory that contains file: The directory path of the file.
Finder flags: These are information items (bits) that can be set to on or off.

The Finder takes these into account when it reads them. Here is a list of the Finder flags:

Finder Flags

Flag	Description
isInvisible	File won't appear in dialog box listings or windows.
hasBundle	File is associated with a custom icon.
nameLocked	File can't be renamed or have another icon assigned to it by a user.
isStationery	File is a stationery pad.
isShared	File has its own customized icon.
hasCustomIcon	File has its own customized icon.

The rest of the volume contains application/data files, the catalog file, extents overflow file, and open space.

A Discussion of B-Trees
Catalog and extents files are organized into B-trees, a structure that allows for optimum read speeds.

Both of these files contain only data forks; there are no resource forks. The location of the start of the catalog and extents B-tree is contained at the beginning of the MDB and is stored in memory.

This illustration offers a rough diagram of what the disk structure of the catalog and extents files look like:

Disk structure of the catalog and extents files

A directory, which consists of the catalog B-tree and the extents B-tree, keeps track of file locations (as well as other information). The catalog B-tree contains a unique entry for every file, specifying its name, attributes, location, and other information. It functions as an index or a table of contents for the disk. The extents B-tree contains information about file fragments.

The bottom level of a B-tree structure is occupied exclusively by leaf nodes. A catalog file leaf node can contain four different types of records, one of which is the file thread record. A file thread record provides a link between a file and its parent directory. It enables the File Manager to find the name and directory ID of the parent of a given file.

B-tree structures are complex. If one becomes damaged, erroneous information is read by the File Manager and the referenced files can also become damaged. This is why it is vital to run Disk First Aid or similar utilities on a regular basis.

Related documents

8647: Macintosh: File System Specifications and Terms
30344: Mac OS: About Mac OS Extended Format
24601: Mac OS Extended Format: Volume and File Limits
7565: Disk First Aid: Purpose
13628: Disk First Aid: What to do When It Finds an Error
Published Date: Feb 20, 2012

Newton Print Pack: HP LaserJet print solutions

I have an Apple MessagePad and an HP LaserJet printer. How can I print from the Apple MessagePad to the HP LaserJet?
This article has been archived and is no longer updated by Apple.
You have two possible options:

1- Use the "Choose Network Printer" option in Newton OS 1.0 and 2.0.
2- Use the Newton Print Pack

Use the "Choose Network Printer" option in Newton OS 1.0 and 2.0

All Apple MessagePads have a built-in PostScript/AppleTalk driver, very similar to the Mac OS printer driver "LaserWriter8". This means any AppleTalk-based networked laser printer is compatible with the Apple MessagePad. Some HP LaserJet printers have PostScript and AppleTalk built-in, and almost all models can be upgraded to support these features. HP Technical Support recommended checking the startup page for individual printers.

The Apple MessagePad functions as a LocalTalk device and supports several physical connections, so a serial cable can be used for a direct connection. LocalTalk connectors allow the Apple MessagePad to print to any supported printer on the AppleTalk network.

Use the Newton Print Pack

LaserJet printers with a parallel port can print from an Apple MessagePad using the Newton Print Pack. The Newton Print Pack is sold separately, and only has some specific LaserJet models lists. However, any Hewlett-Packard PCL-based printer should work with the Newton Print Pack.

The Newton Print Pack provides both a physical connection (serial to parallel conversion) and a PCL driver for the NewtonOS.

Troubleshooting note:

If you are trying to print to an HP LaserJet that you believe has PostScript/AppleTalk support, and you cannot see it in the "select a Printer" window, try printing directly to the printer with a serial cable. Sometimes an AppleTalk networking problem prevents the Apple MessagePad from seeing the printer properly.

This article appeared in the 15 April 1996 Information Alley.
Published Date: Feb 20, 2012

Macintosh 5200/5300/6200/6300: Repair Extension Program (1/97)

The pointer on the screen of my Power Macintosh 5200/75 computer seems to freeze when I am working in different applications. The color hue also seems to change over time. What can I do?

This article has been archived and is no longer updated by Apple.

**** Note: This Repair Extension Program expired June 28, 2002. ****

Apple has identified the causes for the issues you describe and has created a Repair Extension Program to address them. This is NOT a product recall. Rather, it is a program designed to resolve the sporadic freezing and color hue changes on your computer.

Quality is a top priority at Apple, and this repair program addresses certain quality issues that have surfaced with these products. Apple is putting these repair programs in place as part of the company's goal to provide a high level of customer satisfaction.

ISSUES ADDRESSED
==========
The Repair Extension Program for Power Macintosh and Performa 5200, 5300, 6200, and 6300 series computers addresses two key quality issues:

1) System freezes caused by specific, known component issues that have been identified by Apple.

2) Sudden or intermittent changes in the monitor's color hue on Power Macintosh and Performa 5200 and 5300 series computers due to a particular cable.

MODELS INCLUDED
==========
* Power Macintosh 5200/75 LC, 5300/100 LC
* Macintosh Performa 5200, 5215, 5300
* Macintosh Performa 6200, 6205, 6214, 6216, 6218, 6220, 6230, 6290, 6300

*Note:
The recently introduced Power Macintosh 5260 and 6320 are not included in this program because Apple corrected all the known issues with this product prior to manufacturing.

REPAIRS INCLUDED IN PROGRAM
==========
The Repair Extension Program will include some or all of the following, as appropriate, for a particular computer:

* Check the logic board and replace as appropriate.
* Check revision of the unit and replace a cable to correct the sudden or intermittent changes in color hue.

IMPORTANT NOTES
==========
* System freezes or video issues can occur for reasons unrelated to the component problems described above. Any such issues would not be covered by this Repair Extension Program.

* If your computer is affected by either of the two specific issues identified above, call 1-800-SOS-APPL (in the United States) or contact an Apple-authorized service provider (outside the United States) to schedule your system for repair.

* This program will remain in effect for 7 years.

This article was published in the Information Alley on 9 May 1996.

Article Change History:
17 Jan 1997 - Added info about models not included.
Published Date: Feb 20, 2012

Acrobat or Adobe Type Manager: Substitution Fonts Missing

This article discusses missing substitution fonts in Acrobat or Super Adobe Type Manager.

This article has been archived and is no longer updated by Apple.

Symptom

An alert box appears with the following error message:

> "The Substitution fonts necessary for Acrobat or Super Adobe Type Manager are missing. Please reinstall either software package."

Solution

Reinstall Adobe Acrobat Reader, which installs the proper substitution fonts and should correct this error.

Acrobat Acrobat Reader can be found on the Mac OS install CD that came with your computer. It is also available from Adobe's Web site at http://www.adobe.com.

Published Date: Feb 20, 2012

WorldScript: Component Names & Version History Questions

This article discusses the differences between "WorldScript Updater", "WorldScript Pieces Install", and "7.5.1 WorldScript Updater".

Also, why the WorldScript Power Adapter extension is installed by the System 7.5.3 installer, when the rest of the required software (when using WorldScript) is not?

This article has been archived and is no longer updated by Apple.

Different Names For The Same Thing

"WorldScript Updater", "WorldScript Pieces Install", and "7.5.1 WorldScript Updater" are all the same thing. The next WorldScript Update is expected to have only one name.

Worldscript Updater Versions

There are two versions of the "Worldscript Updater" currently available, version 1.0 and version 1.0.1. Version 1.0 is currently posted online. New machines, such as the Power Macintosh 5400/120, include version 1.0.1, which should be used in place of version 1.0.

The changes in 1.0.1 are as follows:

Version 1.0	Version 1.0.1
InputBackSupport (7.5.1)	InputBackSupport (7.5.3)*
WorldScript I (7.5.1)	WorldScript I (7.5.2)**
WorldScript II (7.5.1)	WorldScript II (7.5.1)***

* Version 7.5.3 of InputBackSupport includes changes for the Korean Language Kit (KLK) support.

** Version 7.5.2 of WorldScript I fixes a bug that occurred when used with Adobe Type Manager and fixes a problem in the Hebrew and Arabic Setting control panels.

*** Version 7.5.1 of WorldScript II was not revised for version 1.0.1.

Why The WorldScript Power Adapter Is Always Installed

The WorldScript Power Adapter extension includes patches that improve overall printing performance. These improvements are independent of Language Kit software. This is why it is installed by the System 7.5.3 installer while the rest of the required Language Kit/Worldscript software is not. The name of this extension may be misleading, except that it also includes some WorldScript enhancements.

Published Date: Feb 20, 2012

LaserWriter 12/640 PS: Text on envelopes smears

I am printing envelopes using a LaserWriter 12/640 PS printer and some of the text on the envelopes is getting smeared. How can I prevent this?
This article has been archived and is no longer updated by Apple.
There will be some level of smearing when you print envelopes. Smearing occurs where the envelope is thickest, most commonly appears near the edge of the envelope. In order to minimize the amount of smearing, you should avoid printing close to the edge of the envelopes.
Published Date: Feb 20, 2012

LaserWriter 12/640 PS: Duplex Unit Constantly Jams

I have a LaserWriter 12/640 PS printer with the optional duplex unit attached. I am having a problem with paper constantly getting jammed in the duplex unit. How can I correct this?
This article has been archived and is no longer updated by Apple.
Make sure that the duplexer paper guide and connector clips are installed correctly. The instructions for installing the duplex printing unit are on pages 133-141 of the LaserWriter 12/640 PS User's Guide. These instructions are also listed below for your convenience.

Installing the Duplex Printing Unit
==========

With the optional duplex printing unit, you can print on both sides of the paper (often called duplex printing or two-sided printing). You can only duplex print from the paper cassettes. You cannot duplex print from the multipurpose tray.

Note: The duplex printing unit requires a minimum of 12 MB memory in the printer. For instructions on adding printer RAM, see pages 152-158 in your LaserWriter 12/640 PS User's Guide.

If you want to	You need this much printer memory
Turn on PhotoGrade or use the duplex printing option	12 MB
Turn on PhotoGrade and duplex print on all size paper (except legal)	20 MB
Turn on PhotoGrade and duplex print on all size paper (including legal)	24 MB

Follow these instructions for installing the LaserWriter 12/640 PS duplex printing unit.

Before you install the duplex printing unit:

- The printer must be turned off and the power cord unplugged.
- The printer must be disconnected from your computer or network.

The duplex printing unit adds approximately 2 inches to the height and 4 inches to the depth of the LaserWriter 12/640 PS. Begin by selecting a location for the LaserWriter 12/640 PS that provides enough room to accommodate the increased height and depth of the printer.

If you intend to keep the printer in its current location, make sure that adequate room will be available for opening the top cover and the duplex printing unit door, and maintaining the printer. You will also need to temporarily move the LaserWriter 12/640 PS from its current location to place the duplex printing unit in its place. When moving the printer, be sure to place it on a strong, flat, and, stable surface that can support its weight.

IMPORTANT:
You must remove the optional 500-sheet cassette and feeder from the LaserWriter 12/640 PS if it is already attached. The duplex printing unit must be installed between the LaserWriter 12/640 PS and the 500-sheet cassette and feeder. For instructions on removing the 500-sheet cassette and feeder, see "Removing the 500-sheet Cassette and Feeder" later in this chapter.

1) Turn off and unplug the printer, and disconnect the network cables.
2) Unpack the duplex printing unit and remove any packing materials. Set aside the small package of items.
3) Lift up the back end of the duplex printing unit and slide the metal brace onto the post.

The brace is located on the left side of the duplex printing unit near the back.

4) Unpack the duplex printing unit key.

5) Remove the three covers located in the back of the printer. Remove the two top covers by inserting the key into the side of the covers and pushing gently on the key (the covers will snap off). Remove the bottom cover by inserting the key into the bottom side of the cover and pushing downward (you may need to use some force to remove this cover.)

IMPORTANT: Be careful when removing the covers so that they do not fall inside the LaserWriter 12/640 PS.

6) Place the bottom cover and the duplex printing unit key in a safe place in case you need them in the future.

If you decide to remove the duplex printing unit, use the cover to prevent dust and other material from getting inside the printer.

7) Place the duplex printing unit where you want the LaserWriter 12/640 PS to be located.

Orient the duplex printing unit so that its tray and the printer's multipurpose tray and paper cassette will be on the same side when the printer is attached.

8) Insert the paper guide for the duplex printing unit into the opening in back of the printer.

Hint: There are two tabs on the bottom of the paper guide that fit into slots in the back of the printer. When inserting the paper guide, slide it back and forth to easily locate these slots.

The paper guide helps direct the paper to the duplex printing unit.

9) Insert the locking connectors into the slots located on the bottom of the paper guide and push the connectors until they snap into place.

The locking connectors secure the paper guide to the printer.

10) Lift the LaserWriter 12/640 PS, position it directly over the duplex printing unit and gently lower the printer until it sits evenly on the duplex printing unit.

As you lower the printer, align the corners of the printer directly over those of the duplex printing unit.

11) Remove the cassette from the printer and the tray from the duplex printing unit.

12) Insert the four locking connectors into the slots located on the front and back of the printer and duplex printing unit.

The locking connectors secure the printer to the duplex printing unit.

13) Insert the cassette into the printer and the tray into the duplex printing unit.

14) Gently close the duplex printing unit door until it latches into place against the printer. If the door does not close easily, check to make sure the brace is not locked in place.

15) Reconnect the power cable to the printer and reconnect the printer to the network, then turn on the printer.

16) Configure your printer to use the duplex printing unit.

Published Date: Feb 20, 2012

LaserWriter 12/640 PS: Duplex Option Dimmed

I installed the optional duplexer on my LaserWriter 12/640 PS printer, but the duplex option is dimmed. How do I use the duplex option?
This article has been archived and is no longer updated by Apple.
In order to use the optional duplex accessory, you must have a minimum of 12MB of RAM in your LaserWriter 12/640 PS printer. The table below shows the options available depending on the amount of RAM you have installed. The LaserWriter 12/640 PS printer uses industry standard 72-pin SIMMs (70ns or faster). The Tech Info Library article titled "LaserWriter 12/640 PS: Memory Configurations" contains a complete list of possible memory configurations.

RAM Installed	Options Available
4MB (Standard)	None. You cannot access either PhotoGrade or duplex printing.
12MB	You can enable either PhotoGrade OR duplex printing.
20MB	You can enable both PhotoGrade and duplex printing. Duplex printing is available up to US letter.
24MB and greater	You can enable both PhotoGrade and duplex printing. Duplex printing is available for all paper sizes including US legal.

Note: Additional memory also enables you to download additional fonts and provides greater document caching.
Published Date: Feb 20, 2012

LaserWriter 12/640 PS: Memory Configurations

This article contains the possible memory configurations of the LaserWriter 12/640 PS printer.
This article has been archived and is no longer updated by Apple.
The LaserWriter 12/640 PS printer ships with 4MB of RAM. Installing additional memory provides additional features.

RAM Installed	Options Available
4MB (Standard)	None. You cannot access either PhotoGrade or duplex printing.
12MB	You can enable either PhotoGrade OR duplex printing.
20MB	You can enable both PhotoGrade and duplex printing. Duplex printing is available up to US letter.
24MB and greater	You can enable both PhotoGrade and duplex printing. Duplex printing is available for all paper sizes including US legal.

Note: Additional memory also enables you to download additional fonts and provides greater document caching.

RAM Upgrade Specifications
To increase the printer's RAM, purchase SIMMs with the following specifications:

SIMM Dimensions

- Length: 107.95 mm +/- 0.20 mm (4.25 in. +/- .008)
- Height: 25.53 mm (1.005 in.) maximum

SIMM Sizes and Speeds

SIMM Size	Configuration	Speed	Connector type
4 MB SIMM	1 M X 32 bit (one 4 MB bank)	70 ns or less	72-pin
8 MB SIMM	2 M X 32 bit (two 4 MB banks)	70 ns or less	72-pin
16 MB SIMM*	4 M X 32 bit (one 16 MB bank)	70 ns or less	72-pin
32 MB SIMM*	8 M X 32 bit (two 16 MB banks)	70 ns or less	72-pin
* Must have a 2 KB row (11 bit x 11 bit) refresh configuration. 16 MB SIMMs with a 4 KB row (10 bit X 12 bit) refresh configuration are not compatible with the printer.			

Installing RAM
Your printer comes with 4 MB of RAM installed in Bank A/B. The table below lists RAM configurations you can use.

Amount of Memory (megabytes)	Bank C/D (left slot)	Bank A/B (right slot)
4 MB	0 MB	4 MB
8 MB	4 MB	4 MB
	0 MB	8 MB
12 MB	4 MB	8 MB
	8 MB	4 MB
16 MB	8 MB	8 MB
	0 MB	16 MB
20 MB	4 MB	16 MB
24 MB	8 MB	16 MB
32 MB	16 MB	16 MB
	0 MB	32 MB
36 MB	4 MB	32 MB
40 MB	8 MB	32 MB
48 MB	16 MB	32 MB
	32 MB	16 MB

64 MB	32 MB	32 MB

Note: Pages 152-158 in the LaserWriter 12/640 User's Guide provides detailed instructions on installing additional memory in your LaserWriter printer.

Published Date: Feb 20, 2012

LaserWriter 8.4: Read Me Document

This article contains the LaserWriter 8.4 Readme document released in 1996-06-14.

This article has been archived and is no longer updated by Apple.

About Your Apple LaserWriter Printer Software for the Mac OS.

This document contains some important reminders and some information about your Apple LaserWriter Printer Software for Mac OS-based computers. You may want to print this document and keep it for future reference. The topics are:

* Desktop PrintMonitor Version 2.0

* Apple Printer Utility Version 2.1

* LaserWriter 8 Printer Driver Version 8.4

Desktop PrintMonitor Version 2.0

New Features in Version 2.0

* Desktop printer icons can be moved off the desktop and into folders.
* A printer menu located on the right-hand side of the menu bar provides a convenient means to switch the user's default printer (custom install).
* A control strip module with functionality identical to the printer menu is provided for PowerBook systems and other systems employing the Control Strip software.
* Enhanced user interface.

Hints and Shortcuts

* The Desktop Printers folder in the Apple Menu provides a convenient shortcut to desktop printers. This is especially helpful if you have moved your desktop printer icons off the desktop.
* Command-L key combination is a shortcut equivalent to the Set Default Printer command in the Printing menu.
* Holding down the Option and Shift keys makes the Hold and Resume buttons function as Stop Print Queue and Start Print Queue.
* To print additional copies of a file, you can select the spool file waiting in the print queue and choose Duplicate from the File menu.

Creating Desktop Printers

To create a desktop printer, select a printer in the Chooser and click the Create/Setup button. If you have System 7.5 or later, you can create multiple desktop printers from within the Chooser, but if you're running an older version of system software, you can only create one desktop printer per Chooser session.

System Software Requirements for Desktop Printing

Desktop printing requires System 7.1 or later of the Macintosh Operating System (Mac OS). If you have System 7.0 or earlier and you want to use desktop printing, you can upgrade your Mac OS-based computer to use a later version of system software. Contact your Apple-authorized dealer.

Using Desktop PrintMonitor on a Non-English System

If no desktop printer icon appears after you install the printer software, it may mean the Installer installed PrintMonitor 7.1.2 and did not install the Desktop PrintMonitor. (PrintMonitor 7.1.2 is installed if you have an earlier version of the PrintMonitor. Later versions of the PrintMonitor are not replaced.) You have three choices:
* Use PrintMonitor 7.1.2 (or a later version).
* Obtain a set of installation disks for the printer software in the language of your system software from your Apple-authorized dealer and install it.
* Upgrade your system software to System 7.5.1 and install the printing software again. An English language version of the Desktop PrintMonitor software is installed.

Using the Desktop Printer Menu and the Printer Selector Control Strip

The desktop printer menu extension can be installed using the Custom Install option.

The Desktop Printer menu appears on the right-hand side of your menu bar. It will normally appear to the immediate left of the Guide menu. The Desktop Printer menu lists the names of all active desktop printers. A check mark is displayed next to the name of the default printer. Selecting the

name of a printer from this list makes the printer the new default.

The Printer Selector control strip module is installed only on computers that already have control strip software installed. The Printer Selector adds an item to the control strip that provides functionality identical to the Desktop Printer menu.

Support and Compatibility Information

* Some third-party printers do not support desktop printing. If your printer is not an Apple product, and no desktop printer icon is created after you select your printer in the Chooser, it is likely that your printer does not support Desktop PrintMonitor. Please contact the vendor of your printer to see if there is a version of the driver that is compatible with Desktop PrintMonitor.

* When you choose Save or Open in your application programs, you will see your desktop printers listed as if they were folders, but you should not save or open any documents in them. If you do, you will not be able to access your documents.

* Desktop PrintMonitor supports drag-and-drop printing for all files that cause the Print Command in the File menu to become enabled. Since clipping files do not enable the Print command, drag and drop printing is not supported for them.

* Apple's Fax Sender software is not supported by Desktop PrintMonitor. Fax Sender is fully functional when Desktop PrintMonitor is installed, however, it does not get the benefit of Desktop PrintMonitor's features. When you select Fax Sender in the Chooser you will not have a default desktop printer until you choose a printer icon and select "Set Default Printer" from the Printing menu.

* Spool files and desktop printers must use the same version of the LaserWriter 8 driver. You may encounter errors if you drag spool files that were created with one version of LaserWriter 8 to a desktop printer created with another version of the LaserWriter 8 driver.

Tips for Desktop Printing Troubleshooting

Error message "-192" or "15"

* Problem: After installing Desktop PrintMonitor and restarting your Mac OS computer you see error messages "-192" or "15" when you try opening files or folders in the Finder. This may occur when Now Startup Manager's preferences file has become corrupted.

Solution: Restart your computer with extensions disabled (hold down the Shift key while restarting), delete Now Startup Manager's preferences file, and restart the computer again with extensions enabled. Important: Before deleting your Now Norton Startup preferences, you may want to record them or write them down before you delete this file.

Desktop printer cannot be found

* Problem: When you try to print, your spool files are moved to the Trash and an alert is displayed saying that the desktop printer could not be found.

Solution: There are two likely solutions to this problem. First, it is possible that your desktop printer has somehow become damaged. To fix this, drag the desktop printer icon to the Trash and reselect the printer in the Chooser. A new desktop printer icon will be created.

Second, your printer software may not be using a file format that is completely compatible with Desktop PrintMonitor. If your printer software is not published by either Apple Computer or Adobe Systems, it is possible that it is not making proper and legitimate use of PrintMonitor. If this is the case, your printer software will not work properly with Desktop PrintMonitor. The only resolution to this problem is to disable Desktop PrintMonitor and use old PrintMonitor.To print the documents you were working on follow these steps:

1. Empty the Trash.
2. Go to the Chooser and turn off background printing.
3. Print documents again.

To correct desktop printing:

4. Drag the desktop printer to the Trash.
5. Go to the Chooser and turn background printing back on.
6. Create a new desktop printer.

Not enough memory message when dragging files to desktop printer

* Problem: When you drag documents created by different software applications to your desktop printer icon, a message is displayed indicating that there is not enough memory to continue.

Solution: You may not have enough memory available to launch all of the software applications corresponding to the documents you have selected. You can resolve this situation by printing your documents individually or in smaller groups.

Options dimmed in Printing menu

* Problem: "Get Printer Info" and "Change Setup" appear in your Printing menu, but can't be selected.

Solution: These are two new functions supported by LaserWriter v8.4. If these or other items in the menu appear dimmed and cannot be selected, it is because you are using a version of the printing software that doesn't support their respective functions.

Apple Printer Utility Version 2.1

The Apple Printer Utility program works with all Apple PostScript Level 2 printers.

Printing the Font Sample List

Duplicate fonts in the printer's ROM, RAM or hard disk, may not print on the font sample sheet and font totals may be incorrect. However, these fonts are available and will print correctly on any documents printed by the user. Note: the hard disk option is not available for all Apple printers.

Working with a Large Number of Downloaded Fonts

If you plan on working with a large number of downloaded fonts, you will need to increase the memory allocation for the Apple Printer Utility. To do this, quit the Apple Printer Utility, select its icon and choose Get Info from the File menu. Increase the memory in the Preferred Size box, then close the Get Info window. The amount of memory required grows dynamically as the number of fonts in the printer increase. Increase the Apple Printer Utility's Preferred Size memory by 100K to 500K and try printing again.

Working with Kanji Systems

The script mode changes to Kotoeri when clicking into an input field. To recover from this problem select a one-byte script from the script menu in the upper right corner of the screen.

Working with Kanji/Japanese Fonts

Downloading Kanji fonts is not a supported feature of this software and program errors may occur. Increase the Apple Printer Utility's Preferred Size memory by the size of each Kanji font you want to download.

Downloading PostScript Fonts on a GX System With the Apple Printer Utility

When GX is installed, any PostScript fonts (often called Type 1 fonts) in the Fonts folder are converted to GX fonts, and the original PostScript fonts are copied to a new folder called *Archived Type 1 Fonts* which is created in the System Folder. If you want to download these fonts to your printer using the Apple Printer Utility, you must send the fonts in the *Archived Type 1 Fonts* folder, not the GX-converted versions in the Fonts folder. Downloading GX fonts that were not previously Type 1 fonts and converted by GX works correctly.

Removing Fonts From a Hard Disk Attached to a Printer

This paragraph is relevant if you are using a printer that will have a hard disk drive attached to it. The LaserWriter 12/640 PS does not support a hard disk drive attachment.

If a font is downloaded to both the printer's RAM and the printer's hard disk with the same name, and you remove the font on the hard disk, the RAM font will also be removed. If you remove the RAM font, the font on the hard disk will not be removed.

LaserWriter 8 Printer Driver Version 8.4

The software includes version 8.4 of the Apple LaserWriter 8 printer driver, which works with many Apple LaserWriter printers. This section contains information about LaserWriter 8 and information on using it with several of the printers.

What's New in Version 8.4

LaserWriter 8.4 provides a new user interface that is simpler and easier to use. It also provides single-pass printing for foreground print jobs, more background printing options, and more layout options.

Larger Print Area

Some printers support both US Letter and US Letter Small paper sizes. To prevent text from clipping or wrapping to the next line on different printers, use US Letter Small. To get the widest possible margins from your printer model, use US Letter.

Using PostScript Fax

PostScript Fax is an option for the LaserWriter Select 360, the LaserWriter 16/600 PS, and the LaserWriter Pro 810. If you use a PostScript Fax option with any of these printers, you should use LaserWriter 8f version 8.2.3f. PostScript Fax is no longer supported with LaserWriter drivers 8.3.x and beyond. See the section "How To Get Updated Printer Software"at the end of this Read Me for information on obtaining LaserWriter 8f version 8.2.3f if you don't already have it.

Using Color Matching

When ColorSync 2.0 is installed and the ColorSync Profiles folder contains printer profile(s), there are two options in addition to color/grayscale output:

* PostScript Color Matching/Printer's Default is the preferred color-matching choice. When you are printing to a PostScript Level 2 printer, and it is efficient to let the printer do most of the work, this option is a good choice.

* ColorSync Color Matching is an alternative color-matching selection. It invokes the ColorSync system software to perform color matching for the printed document, matching your monitor and printer's profile and sending the correct color information to the printer. With ColorSync Color Matching, most of the work is done by your Macintosh.

Here are some tips on using color matching:

* Color output will vary depending on the application you are using.

* Documents that use ColorSync 1.0 embedded profiles convert to the profile set up in the ColorSync 2.0 System Profile control panel.

* When you print with PostScript Color Matching selected and ColorSync 2.0 is not installed, the driver uses the Apple 13" RGB Standard profile.

* Application programs that generate their own PostScript may have problems color matching EPS or TIFF images correctly. Converting the image to a PICT file corrects the problem.

PPD Files

The LaserWriter 8 driver uses PostScript Printer Description (PPD) files to determine the characteristics of the printers it uses. PPD files contain information about individual PostScript printers. For example, PPD files describe the paper-handling capabilities of printers: the number of paper trays, their capacity, and the paper sizes they handle.

To take full advantage of your printer's features, you need to go through a simple setup procedure. When selecting your printer for the first time, or after installing an additional option, click the Create/Setup button in the Chooser. This procedure causes the LaserWriter driver to query the printer for its characteristics and associate a particular PPD file with the printer.

If you get an error about the preferences file when you choose an option that is specific to your printer, you may have an outdated PPD file. You should contact the vendor of your printer for an update.

Creating EPS Files

You can create an encapsulated PostScript (EPS) file in many application programs by clicking File in the Print dialog box, then clicking Save. When you create an EPS file, note the following:

* Creating EPS files with the All option selected in the Font Inclusion pop-up menu in the EPS dialog box can result in very large files. If you include all fonts in an EPS file and save the file with the Unlimited Downloadable Fonts option selected, you may create an extremely large file.

* If you create an EPS file with no fonts included and open the document, fonts in the document appear on your screen, but Courier may be substituted when you print.

* When you create EPS files with preview information included, other programs that create their own PostScript code may not display the EPS file accurately on the screen.

Using the LaserWriter 8 Driver With the Kanji System

To print Japanese characters using KanjiTalk or the Japanese Language Kit, your system must have WorldScript II version 7.5.1 or later.

Using QuickDraw GX Fonts on a non-QuickDraw GX System

If you are using the QuickDraw GX versions of the fonts Hoefler Text or Skia with a non-QuickDraw GX system, you may encounter line-layout problems on screen or with your print-outs.

Using the LaserWriter 8 Driver With Applications

Some programs do not yet take advantage of the new features of the LaserWriter 8 driver or have small incompatibilities that may result in printing problems. If you experience problems with an application, please contact the publisher of the program. In some cases a newer version of the program may be available.

The following list describes some special cases that you should be aware of when working with some applications. (There may be other problems with these programs, or with other programs, not mentioned in this document.)

* Foreground vs Background Printing: LaserWriter 8.4 offers both foreground and background printing. In foreground, LaserWriter 8.4 doesn't spool the file being printed. An application may fail when printing in the foreground if the application assumes the driver will make a spool file.

When printing in the foreground you may experience problems with these applications: Persuasion, Photoshop, PowerPoint 4.0, Excel 5.0, Quicken, PageMaker 6.0, ClarisDraw, and Claris Impact.

If you experience problems with foreground printing, change to background printing and try again.

* Color output will vary depending on the application you are using.

* With many application programs, you cannot use the Flip Horizontal, Flip Vertical, landscape page orientation, and Layout option in the Page Setup dialog box in combination.

* Some programs may print in color even when Black and White mode is selected.

* Programs that generate their own PostScript may have problems color matching EPS or TIFF images correctly. Converting the image to a PICT corrects the problem.

* Tray Selection: Applications that don't utilize LaserWriter 8.4's new capabilities have some limitations with tray selection when printing from Finder. To work around these problems, print from within the application and contract the vendor of the application.

Adobe Acrobat 2.1

* Acrobat retains the settings used for one printout and applies these settings to subsequent print jobs, unless options are reset by the users.

Adobe Illustrator 5.5

* Multiple-page documents may not print correctly when you choose a page layout from the Layout pop-up menu in the Page Setup dialog box.

Adobe Type Manager 3.9

* Documents may sometimes generate PostScript errors when printing outline fonts frm a Macintosh 9500 using ATM 3.9. This can be fixed by replacing ATM 3.9 with an earlier version.

Aldus Freehand 4.0 & Freehand 5.0

* Documents do not print correctly when you choose a page layout from the Layout pop-up menu in the Page Setup dialog box.

Aldus PageMaker 5.0

* Documents that have been set up using a page layout from the Layout pop-up menu may not print correctly with the Print-Option command; use the Print command with PageMaker's Thumbnail option.

* When using a page layout from the Layout pop-up menu with the Print-Option command, the document will be printed in reverse order.

* Rotated graphics may not print correctly when you hold down the Option key and click Print in the Print dialog box.
* You cannot print legal-size documents from the paper cassette of the Personal LaserWriter 320; print such documents by selecting Manual Feed or by holding down the Option key and clicking Print in the Print dialog box.

Aldus SuperPaint 3.5

* Rotated or filled polygons print as solid gray objects.
* Gradient fills may not print when copied into other programs.

Canvas 3.5.2

* When you select the Substitute Fonts option in the Page Setup Options dialog box, text may be incorrectly spaced if you use the Geneva, New York, or Monaco fonts.

ClarisDraw 1.0

* Some shapes that contain gradients may not print correctly.

CricketPresents 2.1

* You cannot import an EPS file created with the LaserWriter 8 driver when it has been saved without preview information.

DeltaGraph Pro 3.0.4

* Printing with Unlimited Downloadable Fonts may cause some elements to be shifted and fonts to substitute Courier.

FileMaker Pro 2.1

* When you choose a page layout from the Layout pop-up menu in the Page Setup dialog box, documents that contain EPS graphics may appear clipped when printed.

Informed Designer/Manager 1.4.2

* Do not print documents that contain JPEG images in Black and White mode; your system will restart.

* When you select the Unlimited Downloadable Fonts option, some graphic elements may shift or disappear when printed.

MacDraw Pro 1.5

* Rotated text within a frame that is placed in another application may not print correctly.

Microsoft Excel 5.0

* Colored horizontal cell borders will often not appear in the printout. This happens with any color printing option and on most printers.

* When you select Page Setup, Excel displays its own dialog box. Click the Options button to open the Page Setup dialog box generated by the LaserWriter driver. Most of the settings in Excel's window match the corresponding option in the driver's window. However, the scaling size may be different in the two dialog boxes. The size displayed in the Excel window is the size that will be used when you print from Excel.

Microsoft PowerPoint 3.0

* Polygons and ovals filled with gradients and without a border line may shift locations on the page when printed.

Microsoft Works 3.0

* Printing documents that have rotated objects with rounded corners results in a PostScript error.

Microsoft Works 4.0

* Works 4.0 color print outs may not match what appears on your screen. Experiment with the color options to determine which one generates the best printout for your needs.

Microsoft Word 6.0

* Each section of a document is treated as a separate file when printed.

Netscape 2.0.1

* Netscape may print a pale gray background to an older LaserWriter printer.

* When printing a multiple-page document, Netscape may print below the margins on the intermediate pages.

* Graphics that seem to be transparent on screen will be printed on your documents.

Painter 3.0

* When you print using the Invert option, images do not print inverted correctly.

QuarkXPress 3.3.1

* Be sure to use the PPDs provided with QuarkXPress when you choose a page layout from the Layout pop-up menu in the Page Setup dialog box.
* Some imported JPEG files may not print correctly.

RagTime 3.2

* You cannot print documents that contain PICT or TIFF files.

ReadySetGo! 6.0

* Use ReadySetGo! version 6.0 or later with the LaserWriter 8 printer driver; earlier versions will not work.
* With the Unlimited Downloadable Fonts option selected, you may not be able to print complex documents.
* Documents that use pen patterns will print patterns as solid gray.

How to Get Updated Software

Apple Software Updates are available on CompuServe (GO APLSUP), America Online (keyword: applecomputer), and on the Internet at:

* US, WWW site: Older Software Downloads

Published Date: Feb 20, 2012

LaserWriter 12/640 PS: Acceptable Paper Sizes & Weights

What paper sizes and weights can I use in the LaserWriter 12/640 PS?
This article has been archived and is no longer updated by Apple.
The LaserWriter 12/640 supports US Letter, A4, B5, Executive and US Legal sized paper in the standard (250 sheet) cassette. The multipurpose tray can hold 80 sheets of standard US Letter paper and other paper sizes from postcard to US Legal. An optional 500 sheet cassette is available that supports US Letter, A4, and US Legal. An envelope cassette that can automatically feed up to 50 envelopes is also available.

The LaserWriter 12/640 PS supports 16 to 28 pound laser quality bond (60-90g/m^2) in the paper cassettes and up to 50 pound (190g/m^2) stock when fed manually through the multipurpose tray and exited through the face-up output tray. This printer also accepts most textured and colored stock, medium-weight photocopier transparencies, and laser labels. Envelopes can be printed from the multipurpose tray or from the optional envelope cassette.

The paper you use should not scorch, melt, transfer material, or release hazardous emissions when heated to 200 C (393F) for 0.1 seconds.

Paper type and size:

Paper Type	Size
US Letter	8 1/2 x 11" (215.9 x 279.4 mm)
US Letter Small	8 1/2 x 11" (215.9 x 279.4 mm)
US Legal	8 1/2 x 14" (215.9 x 355.6 mm)
US Legal Small	8 1/2 x 14" (215.9 x 355.6 mm)
A4	8.27 x 11.69" (210 x 297 mm)
A4 Small	8.27 x 11.69" (210 x 297 mm)
A5	5.84 x 8.26" (148 x 210 mm)
Executive	7 1/4 x 10 1/2 (184.2 x 266.7 mm)
B5	7.17 x 10 1/2" (182 x 257 mm)

Envelope sizes and weights:

Envelope	Weight	Size
Comm 10	24 lb	4 1/8 x 9 1/2" (104.7 x 241.3 mm)
Monarch	24 lb	3 7/8 x 7 1/2" (98.4 x 190.5 mm)
EuroPostcard	50lb	4.13 x 5.83" (105 x 148 mm)
DL	80g/m^2	110 x 220 mm
C5	90g/m^2	162 x 229 mm

Published Date: Feb 20, 2012

RealAudio: Number of Simultaneous Streams

This article describes the number of simultaneous streams RealAudio supports on Apple Internet Software Solution server computers.
This article has been archived and is no longer updated by Apple.
The RealAudio software which shipped with the Apple Internet Software Solution has a 5 user license. The following are excerpts from the Administration Guide that come with the product:

Streams
The RealAudio Server and the accompanying encoding application enable you to create and deliver RealAudio content. The number of simultaneous users who can listen to content sent from your server at any given time is referred to as the "number of streams." The number of streams a server can deliver depends upon three factors: the type of RealAudio Server you have, the power of your Server computer, and the bandwidth between your Server and the Internet (each audio stream requires 10 KB per second of network bandwidth).

The maximum number of simultaneous audio connections your server can support is five. This entry allows you to set a limit less than or equal to this number. To specify a different value, enter it into the Audio field. The maximum number of connections cannot usefully exceed the maximum number that the bandwidth of your Internet connection will support.
Published Date: Feb 20, 2012

LaserWriter 12/640 PS: Paper Sizes & Imageable Area

This article lists the page sizes and imageable areas for the LaserWriter 12/640 PS printer.

This article has been archived and is no longer updated by Apple.
The LaserWriter 12/640 PS printer supports the following page sizes and imageable areas:

Paper Type	Physical Page Size (points)	Imageable Area (points)
Letter	612 x 792	587.52 x 767.88
Lettersmall	612 x 792	562 x 742
Legal	612 x 1008	587.52 x 983.88
Legalsmall	612 x 1008	562 x 958
A4	595 x 842	572.16 x 817.8
A4small	595 x 842	545 x 792
A5	420 x 595	399.36 x 570.84
B5 (JIS)	516 x 729	491.52 x 704.88
Executive	522 x 756	499.2 x 732.48
EuroPostCard	284 x 420	272.64 x 391.50

Envelope Type	Physical Size (points)	Imageable Area (points)
COM-10	297 x 684	272.64 x 656
Monarch	279 x 540	257.28 x 512
C5	459 x 649	433.92 x 621
DL	312 x 624	288 x 596

Notes:

- The fractions are due to conversion from pixels to points.
- To convert from points to inches divide the number by 72 (1 inch = 72 points).

LaserWriter Printable Area Margins

- Left = 4.0 mm (0.157 in or 11.34 points)
- Right = 4.0 mm (0.157 in or 11.34 points)
- Top = 4.0 mm (0.157 in or 11.34 points)
- Bottom = 4.0 mm (0.157 in or 11.34 points)
- For heavy paper (Postcard and Envelopes) the top margin is 6.00 mm.
- Maximum printable line: 208 mm (8.19 in) standard mode
- The default paper size is lettersmall.

Published Date: Feb 20, 2012

Network Assistant 4.0.x: Sys Information Report Maximum Width

I am using Network Assistant to create a System Information report for the Macintosh computers on my network. I have a maximum of 630 pixels that can be used for the report. How can I efficiently predetermine the items I want to select for a report and stay within the 630 pixel maximum?
This article has been archived and is no longer updated by Apple.
The maximum width of the System Information report is determined by the resolution of your monitor. When the screen resolution is 640 X 480 the maximum width of the report is 630 pixels. If the screen resolution is set to 1024 X 768 the maximum width of the report is 1,014 pixels.

The workstation is always the first field in the report. When you generate a new report, this field along with the report window require 167 pixels. When the monitor resolution is set to 640 x 480, you have 463 Pixels for the remaining fields.

Since you are not going to be able to get all the fields into one report, a good strategy would be to generate reports with like fields. Multiple reports can be left open for on screen viewing.

You can also print or export the report to a text file. If you want to know more about printing or exporting a report please refer to Part 3 in the Apple Network Administrator Toolkit manual page 55 "Printing and Exporting to a text file".

The table below shows the number of pixels each field uses:

Field	Pixels	Field	Pixels
System SW Version	75	Mouse Connected	75
Built-In Memory	65	Keyboard Connected	75
Virtual Memory	65	Printer Type	130
System SW Memory	75	Printer Version	65
RAM Disk Size	75	Printer Name	130
Free Disk Space	75	Network Type	75
Total Disk Space	75	Appletalk Version	75
File Sharing	60	Appletalk Zone	130
Processor	85	Appletalk Network #	75
Monitor Size	85	Appletalk Node #	75
Monitor Setting	110	TCP/IP Address	110
2nd Monitor Size	85		
2nd Monitor Setting	110		

This article was published in the Information Alley on 08 July 1996.
Published Date: Feb 20, 2012

Network Assistant 4.0.x: Talk - Requires Dual Channel Sound

Will the "Talk" feature in the Apple Network Administrator Toolkit work with all Macintosh computers?
This article has been archived and is no longer updated by Apple.
The "Talk" feature in the Apple Network Administrator Toolkit requires a Macintosh with dual channel sound capabilities that can record and playthrough sound at the same time.

The "Talk" feature will not work with the systems listed below:

Macintosh Classic
Macintosh Classic II
Macintosh Color Classic
Macintosh Color Classic II
Macintosh SE/30
Macintosh IIci
Macintosh IIvi
Macintosh IIvx
Macintosh LC
Macintosh LC II
Macintosh LC III
Macintosh LC 475
Macintosh LC 520
Macintosh LC 550
Macintosh LC 575
Macintosh Quadra 605

Macintosh Performa 200
Macintosh Performa 250
Macintosh Performa 275
Macintosh Performa 400
Macintosh Performa 405
Macintosh Performa 410
Macintosh Performa 430
Macintosh Performa 450
Macintosh Performa 460 Series
Macintosh Performa 475
Macintosh Performa 476
Macintosh Performa 520
Macintosh Performa 550
Macintosh Performa 560
Macintosh Performa 570 Series
Macintosh Performa 600 Series

Macintosh PowerBook Duo 200 Series
Macintosh PowerBook Duo 2300 *
Macintosh Duo MiniDock
Macintosh Duo Dock
Macintosh Duo Dock II
PowerBook Duo Dock Plus

* Although the Macintosh PowerBook Duo 2300 is able to record and playthrough sound simultaneously, the Talk feature is disabled on this system due to a software issue discovered late in the process.
Published Date: Feb 20, 2012

Macintosh Computers: Available Options for lpr Printing

This article describes software that allows a Macintosh computer to print using lpr/lpd over an Ethernet network.
This article has been archived and is no longer updated by Apple.

LaserWriter 8.5.1 Driver Adds Support for IP Printing

With LaserWriter driver 8.5.1 and later you can print to IP-capable Apple LaserWriters using the LPR protocol. The minimum system requirements for LPR printing with LaserWriter 8.5.1 are:

- a Macintosh computer with a 68030 processor
- System 7.5 or later

Download LaserWriter 8.5.1 or later software from Apple Software Updates at http://www.apple.com/swupdates/. The LaserWriter 8.5.1 driver can be found within the Older Software Download section.
Published Date: Feb 20, 2012

Energy Saver Sleep Settings: Stored in Preferences Not PRAM

This article discusses where the settings for Energy Saver sleep and default sleep time are stored.
This article has been archived and is no longer updated by Apple.

Energy Saver sleep settings

Energy Saver sleep settings on PCI-based Macintosh computers are stored in the Energy Saver Preferences file, not parameter RAM (PRAM). The Energy Saver Preferences file is located in the Preferences folder within the System Folder.

Energy Saver default sleep time

Moving or discarding the Energy Saver Preference file and restarting the computer resets the Energy Saver control panel to the default sleep time of 30 minutes.

Additional information

With some Mac OS versions, the Energy Saver control panel may place an alias of itself in the Startup Items folder if no preference file exists. Once the control panel is opened, the alias is removed from the Startup Items folder and a preference file is created. Mac OS 9 and later creates a default preference file without opening the control panel at system startup time.

Published Date: Feb 20, 2012

Energy Saver Modes: Different Sleep Modes Explained

If I choose Sleep from the Special menu on my computer, it powers down my monitor and the monitor cools down. However, if I use the timed delay sleep mode in the Energy Saver control panel, the video signal disappears, but the monitor never cools. Why?
This article has been archived and is no longer updated by Apple.
There is a difference in the way the two sleep functions work. Choosing the Sleep mode from the Special menu puts the monitor into a low-power state, but using the Energy Saver software merely blanks the video with composite and vertical sync. still present.

The Energy Saver Control Panel was designed this way so that you would not have to wait a long time for the display to warm up from a cold start if the Display sleep was set separately at under 30 minutes.

Below is a table showing the video signals in the various modes.

Pin	Signal	Description	W/Video	Sleep Menu	Energy Saver
1	RED.GND	Red vid. ground	GND	GND	GND
2	RED.VID	Red vid. signal	Video	No video	No video
3	/CSYNC	Comp. sync. signal	*Sync.	No sync.	Sync.
4	SENSE0	Monitor sense 0	--	--	--
5	GRN.VID	Green vid. signal	Video	No video	No video
6	GRN.GND	Green vid. ground	GND	GND	GND
7	SENSE1	Monitor sense 1	--	--	--
8	+12V	12-volt from computer	Sync.	No sync.	No sync.
9	BLU.VID	Blue vid. signal	Video	No video	No video
10	SENSE2	Monitor sense 2	--	--	--
11	GND	CSYNC & VSYNC ground	GND	GND	GND
12	/VSYNC	Vertical sync.	*Sync.	No sync	Sync.
13	BLU.GND	Blue video ground	GND	GND	GND
14	HSYNC.GND	HSYNC ground	GND	GND	GND
15	/HSYNC	Horizontal sync.	Sync.	No sync.	No Sync.

Note:
Bullets (*) indicate where the differences are in the two sleep functions.

Going Into a True Sleep Mode (No Power)

Here is one method you can use to have the display go into a true sleep mode (no power).

Step 1
Open the Energy Saver control panel

Step 2
Set the System sleep option to the minimum value (30 minutes).

Step 3
If you want the display to go into a low-power sleep mode (loss of video only) then select display sleep and set the time for under 30 minutes. If

you want the display to go into a true sleep mode (loss of power), deselect display sleep and have the system sleep set at 30 minutes or greater. If you have an option for never, all three options for sleep including the display are set for never.

Step 4
Close the Energy Saver control panel

The CPU sleep blanks all Video, Horizontal and Vertical Sync, and Composite Sync. With the display sleep function selected and set at under 30 minutes, you lose only video and composite sync. The display will not lose power until the CPU goes to sleep.
Published Date: Feb 20, 2012

Network Assistant 4.0.x: Control Window Behavior

This article contains questions and answers concerning Network Assistant's Control Window behavior.
This article has been archived and is no longer updated by Apple.
Question: Should the user be getting a full screen view when trying to control a single workstation from the multiple view observation window, or is documentation incorrect?

Answer: The screen you will be controlling will fill the 640 x 480 "observing" window, not the whole screen unless your administrator's station has only a 640 x 480 screen. Here, the manual is correct.

Question: When you can see a partial desktop is there a way to scroll around to observe or control the entire desktop?

Answer: No.

The Network Administrator Toolkit (ANAT) Read Me says that if you view a workstation with a smaller monitor, you will see only part of the shared screen. Also, if you share, control or observe a workstation that has a larger display (or bit depth greater than the administrator display) then you will see only part of the shared display. This can be an issue in that you may not see the Hard Disk of the remote Macintosh. A possible workaround would be to type the name of the hard disk and use the Finders "open" command. This may allow you to see the contents of the window if the window is not off the viewable display.

Question: Can I use other applications on my computer while I am controlling another computer?

Answer: No. The documentation states in Section 3 page 84, "You cannot use other applications on your workstation while using the control feature."

Question: What are the requirements for the administrators workstation monitor?

Answer: If you share, control or observe a workstation, the administrators workstation monitor should have an equal or higher resolution than the remote workstation.

Question: Are there any restrictions for the workstation monitor?

Answer: You cannot observe, control or share a display that is displaying millions of colors. If the colors on the workstation monitor are set to millions, you can use the "Change System Settings" feature to adjust colors below millions.
Published Date: Feb 20, 2012

Network Assistant 4.0.x: Using the Network Performance Report

This article comes from the Apple Network Administrator Toolkit (ANAT) manual and describes how the information from the Network Performance Report can be used.
This article has been archived and is no longer updated by Apple.
The Network Performance Report includes information that can be use to evaluate the performance of your network. Here are some suggestions for using the Network Performance Report:

- The number of routers between your workstation and another workstation can affect the time the packets take to return. When you evaluate the times for a workstation, you should compare them to the times for a workstation in the same area of the network or with the same number of intervening routers.
- If the number of routers is not what you expect, there may be a network issue.
- If the maximum time for a packet to return from a workstation is significantly greater than the times for other workstations in the same area of your network, there may be a workstation issue.
- If a single workstation has many lost packets, there may be a problem with the network connection to that workstation.
- If several workstations in the same area of the network have many lost packets, there may be a network connection issue or an intervening router or bridge issue.

Published Date: Feb 20, 2012

Network Assistant 4.0.x: Interpreting Status Messages

This article describes what the Network Assistant, part of the Apple Network Administrator Toolkit (ANAT) workstation, status messages mean and how to respond to them.
This article has been archived and is no longer updated by Apple.
The Workstation Status window shows you the name and the status of each workstation in a list of workstations. Usually the status is the name of the application program running on each workstation, but other messages may appear in the Status column.

If a message appears in red, the last command you tried to execute on a particular workstation failed. These messages remain in the Status column for about 30 seconds, or until you perform another command on the workstation.

Access denied

The password for this workstation is no longer valid. If you know the new password for the workstation, choose Workstations from the Setup menu and use the Workstations dialog box to remove the workstation from the list then add it to the list again, entering the new password when requested.

Applications are open
You tried to replace the System Folder or delete all of the other items on a workstation's hard disk when an application was open on the workstation. You must first quit all of the open applications on the workstation. Ask the user to quit all of the applications, or choose Quit Applications from the Manage menu to quit the applications. You can also choose Control from the Interact menu, then quit any open applications.

Application not found

You tried to open an application or a document of an application that is not installed on the workstation. Use the Copy Items command to copy the application to the workstation. (Make sure that your licensing agreement allows you to copy the application.)

AVP: Channel XX

The workstation is displaying TV channel XX using the Apple Video Player.

Command failed

The last command failed to execute on the workstation. This may be because of the applications that are open on the workstation. Ask the user to quit all of the applications, or choose Quit Applications from the Manage menu to quit the applications. You can also choose Control from the Interact menu, then quit any open applications. After you quit the applications, try the command again. If the command still fails, try restarting the workstation.

Command not authorized

You do not have permission to perform the command you tried on the workstation. Before you can use the command, either you or the user must change your access privileges on the workstation using Network Assistant Security. You may have permission to perform other commands on the workstation.

Communication error

Network Assistant was unable to send the last command to the workstation because the workstation is not operating properly or there was a high level of network activity. Create a Network Performance Report for this workstation and several workstations near it to determine whether there are issues communicating with this particular workstation. If the report indicates that all the workstations are performing at the same level, try the command again. If the command continues to fail, try restarting the workstation. If this issue occurs often, there may be a issue with your network.

Copying Items

This message appears when items are being copied to a workstation using Network Assistant. If the message is dimmed, the Copy Items or Copy Hard Disk command is being executed from another administrator's workstation.

Deleting Items

This message appears when items are being deleted from a workstation using Network Assistant. If the message is dimmed, the Delete Disk or Delete Selected Items command is being executed from another administrator's workstation. The workstation would not be available for other commands until it has finished deleting the items.

Disk Full

You tried to copy items to the workstation, using the Copy Items or Copy Hard Disk command, and it doesn't have enough free disk space for the

new items. To determine how much free disk space is available on the workstation, create a System Information Report. If you want to delete items from the workstation, you can create a Software Search Report and delete any unnecessary items. You can also choose Control from the Interact menu, then delete items from the workstation's hard disk.

File transfer error

An error prevented you from copying items to this workstation. Restart the workstation and try the command again. If this issue continues, use the Disk First Aid application (available on the Disk Tools disk or the system software CD-ROM that came with your computer) to check the workstation's hard disk.

Generating Report

This message appears when Network Assistant is creating a report that includes the workstation. If this message is dimmed, the report is being created from another administrator's workstation. The workstation would not be available for other commands until the report is complete.

Incompatible hardware

You tried to copy system software to a workstation that cannot support this software. You can copy the System Folder from a 680XX workstation only to other 680XX workstations. You can copy the System Folder from a Power Macintosh only to other Power Macintosh computers.

Incompatible printer

You tried to update printer settings on a workstation that has printing software different from that on your workstation. You can update the printer settings only on workstations that have the same printing software as your workstation. For example, if your workstation has QuickDraw GX installed, the other workstation must have QuickDraw GX installed.

Item exists

You tried to copy an item to a location on the workstation that has an item with the same name. After you cancel the copy command, this message indicates which workstations already have the item. Create a Software Search Report to find out more information about the item. You can then delete or replace it.

Item not found

You tried to open or delete an item that could not be found on the workstation. If you want to open the item on the workstation, choose Copy Items from the Manage menu to copy the item to the workstation.

Item in use

You tried to delete or replace an item on the workstation when the item is open or in use by an application. Ask the user to close the item or quit the application, or choose Quit Applications from the Manage menu to quit the application. You can also choose Control from the Interact menu, then close the item or quit the application. After you have closed the item or quit the application, try the command again. If the command continues to fail, try restarting the workstation.

Locked Screen

This message appears when a workstation's screen is locked using Network Assistant. Choose Lock Screen to unlock the screen. If the message is dimmed, the screen was locked from another administrator's workstation.

Modal dialog on screen

A dialog box appears on the workstation's screen and must be closed before the command can be performed on the workstation. Ask the user to close the dialog box. You can also choose Control from the Interact menu, then close the dialog box. Once the dialog box is closed, try the command again.

Monitor setting invalid

You tried to change the monitor settings for a workstation (using the Change System Settings command) to a number of colors that is not supported by that workstation.

Network Assistant open

Certain commands, such as Restart, Control, and Share Screen, cannot be executed on a workstation where Network Assistant is open. Ask the user to quit Network Assistant.

Not enough memory

There is not enough free random-access memory (RAM) on the workstation to execute the last command. Many of the commands you can perform on another workstation using Network Assistant require some memory on the other workstation. For example, sharing a screen can require several hundred kilobytes of free memory. To free memory on the workstation, ask the user to quit all open applications, or choose Quit Applications from the Manage menu to quit the applications. You may be able to choose Control from the Interact menu, then quit open applications. After you have quit the applications, try the command again.

Old Assistant software

This message appears when a workstation has a version of the Network Assistant workstation software that is older than the version of Network Assistant you are using. You must install the new version of the workstation software on the workstation before you can administer it.

Rebuilding Desktop

This message appears when the workstation's desktop database is being rebuilt using Network Assistant. If the message is dimmed, the Rebuild Desktop command was executed from another administrator's workstation. The workstation would not be available for other commands until rebuilding the desktop database is finished.

Screen: name

This message appears when the screen of workstation name is being displayed on this workstation's display. Choose Share Screen to stop sharing the screen on the workstation. If the message is dimmed, the Share Screen command was executed from another administrator's workstation.

Screen sharing active

Certain Network Assistant commands cannot be executed on a workstation that is currently using screen sharing. Before you can use this command, you must choose Share Screen from the Interact menu to stop screen sharing on the workstation.

Slow network connection

Your network connection does not support screen sharing, controlling, or observing. To use these features of Network Assistant, the workstations must be connected to Ethernet or another network of similar performance.

Sound hardware in use

You tried to talk to a workstation where an application is recording a sound using the computer's sound input hardware. Ask the user to stop recording sound on the workstation, then choose Talk from the Interact menu again.

Talk not supported

You tried to talk to a workstation that does not have a built-in microphone or does not allow you to play a sound while it is recording a sound. You can still use the announce feature of Network Assistant with the workstation.

Unable to delete item

The command to delete an item failed for an unknown reason. You may be able to choose Control from the Interact menu, then delete the item. If this fails, use the Disk First Aid application (available on the Disk Tools disk or the system software CD-ROM that came with your computer) to check the workstation's hard disk for issues.

Unavailable
This message appears when Network Assistant is unable to communicate with a workstation; for example, if the workstation is turned off. The message also appears in these cases:

- If the Network Assistant software has been removed from the workstation
- If there is an issue with the workstation's network connection
- If the workstation has moved to a different zone on the network
- If the workstation's Macintosh name has been changed

To fix these issues, perform the following procedures:

1. Open Network Assistant Security on the workstation to determine whether the Network Assistant software is installed correctly. If the software is not installed correctly, a message appears when you open the program telling you that there is a issue.

2. Open the Chooser on the workstation to see if the workstation is connected to the network and to verify that the workstation is in the zone it was in when you added it to the workstation list. If the workstation is in a different zone, choose Workstations from the Setup menu and use the Workstations dialog box to remove the workstation from the list then add it to the list again.

3. Open the Sharing Setup control panel on the workstation to verify that the Macintosh name has not changed since you added it to the

workstation list. If the workstation's Macintosh name has changed, choose Workstations from the Setup menu and use the Workstations dialog box to remove the workstation from the list, then add it to the list again. If you cannot identify the issue or the workstation continues to be unavailable, try restarting the workstation.

Published Date: Feb 20, 2012

Network Assistant 4.0.x: Monty Python‘s Pythonizer Screen Saver

The Network Assistant, part of the Apple Network Administrator Toolkit (ANAT), seems to have a issue with Monty Python's Pythonizer Screen Saver. If a workstation is setup to be administered by Network Assistant, the workstation's status will show as 'Unavailable" when the screen saver is activated.
This article has been archived and is no longer updated by Apple.
Every 30 seconds, the computer running the Network Assistant application will poll the network to verify the availability of workstations configured under Network Assistant. Any workstations that fail to answer this "are you there" request will be marked unavailable. As the request is continually delivered, correcting for the workstation's inability to respond will automatically make it available again after a subsequent status request is answered.

It is possible (though uncommon) that an application may delay, prohibit, or otherwise interfere with other background processes, such as the process that allows the workstation to respond to this status request. Some applications preempt these background processes in order to allow the application to perform optimally for the user, though in such cases they will usually provide user-definable options to "allow background processes" or "monitor system activity," and the like. Check with the manufacturer of your software to confirm this possibility.

Finally, it could be that the software allows background processes, but is simply conflicts with the Network Assistant.

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.
Published Date: Feb 20, 2012

Network Assistant 4.0.x: Copying a Hard Disk

This article contains questions and answers about copying a hard disk using Apple Network Assistant.
This article has been archived and is no longer updated by Apple.
In addition to the steps below, Apple recommends that you download and install the Network Assistant 4.0.4 update, available from technical document **120050**.

Question: I have a two identical computers, and I am trying to copy the hard disk from one computer to another using the Apple Network Assistant, part of the Apple Network Administrator Toolkit (ANAT). I'm choosing All other items in the Copy Hard Disk dialog box. The target computer has a 400 MB hard disk; the information I am trying to copy is 390 MB. When I try to copy, I get a message that there is not enough space on the target disk to copy. What is wrong?

Answer: Make sure your target computer does not have virtual memory turned on. Virtual memory allocates space, for its use, on the hard disk in the amount set in the Memory control panel. Turn off virtual memory and restart; this should let you copy to the target computer.

Question: When using Network Assistant's "Copy Hard Disk" feature, it stops responding at the "Connecting" phase when copying the System Folder if: Network Assistant was opened from a mounted server volume or a floppy disk.

Answer: Open Network Assistant from the workstation hard disk instead of a mounted volume or floppy disk.
Published Date: Feb 20, 2012

Macintosh Computers: Cause of CD-ROM Drive Vibration

This article describes a vibration that may be felt or heard when playing a CD in an 8X or faster CD-ROM drive.
This article has been archived and is no longer updated by Apple.
This behavior is not related to a particular computer model. Rather, it is related to the speed of the CD-ROM drive in the system.

CD-ROM drives running at 8x and faster spin CD-ROM discs very quickly. Because of the high rotational speed, CD-ROM discs with artwork or a label on one side are unbalanced and can cause the computer to vibrate. For example, the label on the CD-ROM disc may be noticeably thicker on one side than the other.

This vibration affects very few CD-ROM discs and does not damage your computer or the CD-ROM disc itself, but you should be aware of the vibration in case it occurs.

Note: This can affect all 8x or faster drives.

Published Date: Feb 20, 2012

LaserWriter 12/640 PS: Paper jam light remains on

I had a paper jam in my LaserWriter 12/640 PS printer, however, after clearing the jam by following instructions in the manual, the jam light remains on. What is wrong?
This article has been archived and is no longer updated by Apple.
Check the following two places again because it is easy to miss jammed paper in these locations.

- Look carefully in the duplexer by removing the duplex tray and pivoting the vertical duplexer portion away, then look in the lower rear portion (removing the 250 cassette will also help in improving visibility).
- Remove the black diverter (it has two white clothes pin type clips on it) and look into the exit of the fuser region (WARNING: it may be hot in this region) for a potential accordion style paper jam. After removing the jammed paper from the fuser region, put the black diverter back into position with the two white clothes pin type clips.

Published Date: Feb 20, 2012

LaserWriter 12/640 PS: Communication Switch Settings

This article contains the settings for the communication switch on the back of the LaserWriter 12/640 PS printer.

This article has been archived and is no longer updated by Apple.
The following table shows the default communication settings.

Normal (in) Switch Position

Port	Network Protocol	Mode	Default
LocalTalk	LocalTalk	PostScript	PostScript
Ethernet	EtherTalk	PostScript, off	PostScript
Ethernet	NetWare	PostScript, PCL5, Auto, off	Auto
Ethernet	TCP/IP	PostScript, PCL5, Auto, off	Auto
Parallel	TBCP	PostScript, PCL5, Auto, off	Auto
Parallel	Normal	PostScript, off	PostScript
Parallel	Raw	PostScript, PCL5, Auto, off	Auto

Reset (out) Switch Position

Port	Network Protocol	Mode
LocalTalk	LocalTalk	PostScript
Ethernet	EtherTalk	PostScript
Ethernet	NetWare	Auto Select
Ethernet	TCP/IP	Auto Select
Parallel	Parallel	Auto Select

Note: When the communication switch is set in the Reset position, a startup page is printed each time the printer is turned on and the Extended Job Status settings are removed.
Published Date: Feb 20, 2012

European Customer Contact Centers: Technical Support Numbers

This article describes where to get technical support for Apple products in Europe.
This article has been archived and is no longer updated by Apple.
Refer to the printed materials that came with your computer.

Contact information is also available at the Contacting Apple - Phone Contacts Web site (http://www.apple.com/contact/phone_contacts.html).

Published Date: Feb 20, 2012

LaserWriter 12/640 PS: Paper Weight for Duplexer

The specifications in the LaserWriter 12/640 PS User's Guide for paper weight are confusing. The User's Guide, in a section about the duplexer, mentions 16-24lb paper is supported from the cassette and 16-32lb from the manual feed slot. The page listing the specifications of the LaserWriter lists 50lb paper through the manual feed slot.

Does the LaserWriter 12/640 PS printer support a different range of paper depending on where the paper is feed from? Also, does the duplexer support irregular paper sizes if my application does?
This article has been archived and is no longer updated by Apple.
The LaserWriter 12/640 PS User's Guide is a little confusing. Here are the correct specifications for paper used with this printer.

Printer from paper cassette (either 250 or 500 sheet feeder): 16lb to 28lb

Printing Duplex: 16lb to 28lb

Printing from Multipurpose Try to optional Face Up Tray: 16lb to 50lb

Printing from Multipurpose Try to Face Down Tray: 16lb to 28lb

Duplexer Paper Size Support

The duplexer supports letter, legal and A4 paper sizes. These sizes are supported by the engine and LaserWriter driver software. Any other sizes will likely cause jamming due to timeouts and handling problems.
Published Date: Feb 20, 2012

Apple Products: Multihoming and Multinode Support

This article contains information about the implementation of multihoming and multinode support in Apple products. This is an advanced technical article provided for informational purposes only. Apple will not provide assistance with interpreting or understanding this information.

Questions answered in this article:

What is meant by the terms multihoming and multinode support?

Which Apple products include multihoming or multinode support?

How does the network connectivity for the DOS and Mac OS environments on the enhanced PCI-based Power Macintosh computers differ from previous Macintosh computers using DOS or PC Compatibility Cards?

If I have a PC Compatibility card installed in an enhanced Power Macintosh**, can I install an additional network adapter card for use in the DOS environment?

This article has been archived and is no longer updated by Apple.

Question: What is meant by the terms multihoming and multinode support?

Answer: Multihoming is the term applied to the capability to communicate using more than one network interface (card), at the same time, using the same protocol. In such a situation, the different network cards can each be connected to different zones and have different addresses, but each must be using the same protocol, such as TCP/IP, AppleTalk, and so on.

Multinode support (often referred to as Single link multi-homing), however, is the capability to communicate using multiple network protocol addresses through a single network interface (with different datalink addresses) using a single protocol.

	Network Interface Cards	**Hardware Addresses**	**Protocol Addresses**	**Protocols**
Multihoming	Multiple	Different	Different	Same
Multinode	Single	Different	Different	Same

Question: Which Apple products include multihoming or multinode support?

Answer:

Multihoming Support

Open Transport 1.1 introduced AppleTalk multihoming support to developers at the API level. This change allowed developers to re-write existing applications to take advantage of this feature.

With the release of Open Transport 1.1, AppleShare 4.2.1 incorporated AppleTalk multihoming support. With AppleShare 4.2.1, you can install multiple network interface cards into the server allowing users to connect to volumes and servers with the same name in different zones, allowing multiple network interfaces to be active simultaneously.

By supporting multiple network connections, multihoming support provides additional "pipelines" to the server, which increases the amount of network traffic that can reach the server. This enables servers to support more clients, to offer greater total performance, and to increase the reliability of mission critical applications.

Please note that multihoming does not bridge or route those network segments into a LAN. The network segments will not see each other by being connected to this one computer, but clients on the unique network segments will all see the AppleShare server.

AppleShare IP 5 and 6 also take advantage of multihoming. Note that multihoming support is still limited to AppleTalk.

The Apple Internet Router v3.0 modifies the Classic AppleTalk stack to allow multihoming. A re-write of the router is required to use the built-in AppleTalk multihoming capabilities of version 1.1 of the Open Transport/AppleTalk stack.

The ARA Client supports AppleTalk multihoming for a single limited case: two ports only--one LAN and one serial, in both Classic and Open Transport network configurations.

Multinode Support

- Open Transport 1.3 introduced single link multihoming (Multinode support), a mechanism by which Open Transport can support multiple IP

addresses on the same hardware interface. Synonyms for this feature include IP Aliasing, Secondary IP address support, IP Masquerading, "Multihoming", and IP Multinode support. This is useful for sites like Internet Service Providers (ISPs), that want to give each of their clients a distinct IP address, without requiring separate computers for each address. Web server software packages or server plug-ins that utilize this feature can offer virtual domain support that supports all web browsers.

- The ARA Personal Server uses AppleTalk multinode capability in both the Classic and Open Transport/AppleTalk protocol stacks and is compatible with both network systems.
- The ARA Multiport Server uses AppleTalk multinode capability in both the Classic and Open Transport/AppleTalk protocol stacks and is compatible with both network systems.
- The Apple IP Gateway modifies MacTCP to allow TCP/IP multinode capability using Classic networking. A re-write of the IP Gateway is required to use the TCP/IP built-in multihoming capabilities that are planned for future Open Transport releases. Open Transport 1.1 does not include TCP/IP multinode support.
- Starting with the Enhanced PCI-based Power Macintosh computers**, and later with the PowerMacintosh G3 computers, built-in Ethernet hardware allowed PC Compatible cards and the Mac OS environment to share the built-in Ethernet interface, therefore allowing simultaneous network connections in both environments. Each environment uses a separate physical layer address. Depending upon the capabilities of each protocol stack being used in a given environment, multinode support may or may not be available. For example, you can connect the DOS and Macintosh environments to the same network using the same protocol (such as TCP/IP).

This configuration could also be loosely defined as multihoming because even though the Mac OS and DOS environments use the same network controller protocols, they appear as separate hardware addresses on the network. Essentially, one physical network interface appears as two.

To further describe the full capabilities of these advanced Apple systems, the implementation of a protocol stack in the Mac OS or DOS environment may itself include multinode support. For example, the TCP/IP protocol stack installed in the DOS environment may support assigning multiple IP addresses to a physical interface using the primary hardware address. In this type of configuration, a Macintosh computer with the enhanced Ethernet controller, Open Transport 1.1 or later and a PC Compatibility Card can accept connection to three or more IP addresses.

Note: By default, Open Transport/TCP can only be configured to use one port at a time. IPNetLink, a utility from Sustainable Softworks, http://www.sustworks.com/~psichel, removes this limitation.

Tenon's MachTEN, http://www.tenon.com, and Vicom's SoftRouter and SurfDoubler products, http://www.vicomtech.com, also allow a Macintosh to use two or more ports concurrently with TCP/IP.

Question: How does the network connectivity for the DOS and Mac OS environments on the enhanced PCI-based Power Macintosh computers differ from previous Macintosh computers using DOS or PC Compatibility Cards?

Answer: In other Macintosh computers that use DOS or PC Compatibility Cards, you do not have multinode or multihoming support. Instead, you only have one effective instance of an TCP/IP protocol stack. You can be connected using either the Mac OS or DOS environment, but you cannot be connected using both environments simultaneously.

Question: If I have a PC Compatibility card installed in an enhanced Power Macintosh** or a Power Macintosh G3, can I install an additional network adapter card for use in the DOS environment?

Answer: No. The installed PC Compatibility Cards are hard-coded to use the built-in Ethernet interfaces. However, you can add an additional network card to provide additional network services, such as AppleTalk for the Mac OS. The Mac OS and DOS environments would then use the built-in Ethernet for TCP/IP, and the Mac OS could use the Ethernet card for AppleTalk.

Even though you are providing another network interface for the computer to use, you do not get any network performance advantage by doing this. However, this is a viable solution if the DOS and Mac OS environments need to be physically located on different networks.

****Note:** Following are the Enhanced Power Macintosh computers:

- Power Macintosh 7200/90 (Europe ONLY)
- Power Macintosh 7200/120
- Power Macintosh 7300 series
- Power Macintosh 7600 series
- Power Macintosh 8500/132
- Power Macintosh 8500/150
- Power Macintosh 8500/180
- Power Macintosh 8600 series
- Power Macintosh 9500/150
- Power Macintosh 9500/180MP
- Power Macintosh 9500/200
- Power Macintosh 9600 series

TA21725_Apple_Products_Multihoming_and_Multinode_Support_(TIL20378).pdf

Published Date: Feb 20, 2012

LaserWriter 12/640 PS: Printing two-sided letterhead paper

I am using letterhead stationary with a LaserWriter 12/640 PS printer. I have the duplexer installed, and sometimes need to print on both sides of the letterhead stationary. When I do, the letterhead ends up at the top of page 2 instead of page one. How can I get the letterhead on page one?

This article has been archived and is no longer updated by Apple.
When printing using the Duplex Printing Unit to print on both sides of the page, the printer is designed to print in the reverse order.

For example, a two page document prints page 2, then page 1. Four page documents print in the following order; page 2, page 1, page 4, then page 3.

When printing letterhead, position the paper so the letterhead is facing down and towards the back of the printer. This makes the letterhead appears on the top of the first page, instead of page two.

If you print both single-sided and double-sided documents, you can use the built-in multipurpose tray, you should use the 250-sheet cassette for single-sided paper, and the Multipurpose tray for double-sided.

Published Date: Feb 20, 2012

Network Assistant: How to Get Software Versions

I am using the Network Assistant application which is part of the Apple Network Administrator Toolkit (ANAT), and need the software version information about one of the workstations. When I select the Software Version menu item from the Reports menu, a window reports, "This report displays version information for software installed on (name of remote workstation)". However, the window only lists the software installed on my local computer.

How do I get information about the workstation that I selected?
This article has been archived and is no longer updated by Apple.
In this window, is a Get Report button. Click on one of the software items in the list then click Get Report, and the version information from the remote workstation will be returned. The main window will only list software located on the local computer.
Published Date: Feb 20, 2012

Cyrillic Lang Kit: Does It Follow Stnrd Keyboard Layout?

Does the phonetic transliterated keyboard layouts used by the Russian language in the Cyrillic Language kit follow the same standard set by the American Teachers of Slavic and Eastern European Language (ATSEEL) or the American Association for the Advancement of Slavic Studies (AASSS)?

This article has been archived and is no longer updated by Apple.

ATSEEL and AAASS have not yet officially agreed upon a recognized standard set of keyboard layouts. However, ATSEEL's Ad Hoc Committee on Standardization of Computer Keyboards for Cyrillic does have a suggestion for keyboard layout usage.

Apple has included as shareware on the CD, Matvey Palchuk's keyboard layout which is based on the work of ATSEEL's Ad Hoc Committee. Since, there was no agreed upon standard at the time Apple's Cyrillic Language Kit was released, it was decided that this was the most appropriate approach for Apple to take.

Note: This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Published Date: Feb 20, 2012

LaserWriter Printers: Renaming and Turning Off Startup Page

I have a PostScript Apple LaserWriter and would like to change the name that shows up in the chooser under "select a LaserWriter". Also, I would like to turn off the startup page.
This article has been archived and is no longer updated by Apple.
In order to change the LaserWriter name, your LaserWriter printer needs to be a network PostScript printer and its current name is listed in the Chooser when selecting the LaserWriter or LaserWriter GX icon. You cannot change the name of the LaserWriter Select 310, which is a PostScript printer, because it is not a networkable printer, and does not broadcast a name through AppleTalk.

To change the name of the printer you will need either a copy of LaserWriter Utility or Apple Printer Utility. These utilities are on the first disk of the printer disk set, or you can install them with the custom install feature. If you are running system 7.5.x, you can custom install either utility directly using the system 7.5 installer.

Using LaserWriter Utility To Rename a Printer

To access the printer using LaserWriter utility, you must already have your LaserWriter properly configured in the Chooser. The easiest way to determine if your printer is properly configured is to print to the printer. If you can print to the LaserWriter printer, then it is properly configured.

1. Launch the LaserWriter Utility. The LaserWriter Utility tries to make a connection to the current printer when the initial screen appears. If the connection is successful, the splash screen disappears and three menus appear in the Menu bar. If the LaserWriter Utility does not make a connection, make sure you have the proper printer selected in the Chooser, and verify that you can print to the printer.
2. Choose Name Printer from the Utilities menu.
3. Type the new name for the printer.
4. Click the Rename button.

Using LaserWriter Utility To Turn Off The Startup Page

1. Launch the LaserWriter Utility. The LaserWriter Utility tries to make a connection to the current printer when the initial screen appears. If the connection is successful, the splash screen disappears and three menus appear in the Menu bar. If the LaserWriter Utility does not make a connection, make sure you have the proper printer selected in the Chooser, and verify that you can print to the printer.
2. Choose Set Startup page from the Utilities Menu. A dialog appears allowing you to select Startup page on or off.
3. Choose if you want the Startup page on or off.
4. Click OK.

Using Apple Printer Utility (1.x)

To access the printer using Apple Printer Utility, you must already have your LaserWriter properly configured in the Chooser. The easiest way to determine if your printer is properly configured is to print to the printer. If you can print to the LaserWriter printer, then it is properly configured.

1. Launch the Apple Printer Utility. A window appears with a list of printers. This is similar to the way printers appear in the Chooser.

2. Select the printer you want to connect to.

3. Click the Open Printer button. A status window appears informing you that it is checking the status of your LaserWriter printer. After this is complete, a window with all the printer information appears. The information is subdivided into two sections, printer information and printer preferences.

4. Click the triangle next to printer preferences to set the startup page or rename the printer.

Note: Steps 5 through 7 explain how to rename a LaserWriter printer. Steps 8 through 10 explain how to change the startup page status. Continue only if you wish to perform these actions.

To rename the LaserWriter printer:

5. Click the triangle next to Name. The name of the current printer appears.

6. Type over the current name of the printer.

7. Click the Send button at the top of the window. Changes will not be made unless you click the Send button.

To change the Startup Page status:

8. Click the triangle next to Startup Page. Most printers will have a check box for Print a startup page each time the printer is turned on.

9. Click the check box to change the status. An X in the box indicates a startup page prints when the printer is powered on. The default is to generate a startup page.

10. Click the Send button at the top of the window. Changes will not be made unless you click the Send button.

Note: Some printers such as the Color LaserWriter 12/600 PS and Color LaserWriter 12/660 PS have more than one test page. You can select which pages, if any, you want to print at startup.

Using Apple Printer Utility (2.x)

To access the printer using Apple Printer Utility, you must already have your LaserWriter properly configured in the Chooser. The easiest way to determine if your printer is properly configured is to print to the printer. If you can print to the LaserWriter printer, then it is properly configured.

1. To access the printer using Apple Printer Utility, first ensure you have a working connection to the printer. Next, launch the Apple Printer Utility application. A window appears with a list of printers. This is similar to the way printers appear in the Chooser.

2. Select the printer you want to connect to.

3. Click the Open Printer button. A status window appears informing you that it is checking the status of your LaserWriter printer. After this is complete, a window with all the printer information appears. The information is subdivided by category.

Note: Steps 4 through 6 explain how to rename a LaserWriter printer. Steps 7 through 9 explain how to change the startup page status.

To rename the LaserWriter printer:

4 . Click the triangle next to Name. The name of the LaserWriter printer appears.

5. Type over the current name of the printer.

6. Click the Send button to send the new name to the printer. Changes will not be made unless you click the Send button.

To change the Startup Page status:

7. Click the triangle next to Startup Page. A check box for Print a startup page each time the printer is turned on appears.

8. Click the check box to change the status. An X in the box indicates a startup page prints when the printer is powered on. The default is to generate a startup page.

9. Click the Send button at the top of the window. Changes will not be made unless you click the Send button.

Note: Some printers such as the Color LaserWriter 12/600 PS and Color LaserWriter 12/660 PS have more than one test page. You can select which pages, if any, you want to print at startup.

Published Date: Feb 20, 2012

Drive Setup: Common Reasons Why it Cannot Update Driver

This article describes reasons why Drive Setup options many not be available (options are dimmed) on both SCSI and IDE drives.
This article has been archived and is no longer updated by Apple.
The update driver option may be dimmed because of the following:

Insufficient disk space to install a driver
The driver cannot be placed on the drive without sufficient space in the first part of the hard drive. Once created, the size of partitions cannot be safely changed. They must be removed and recreated. This requires erasing your drive. Be sure to back up all data before erasing.

Mac OS X Disk Utility did not install Mac OS 9 drivers
If you choose not to install Mac OS 9 disk drivers when using the Mac OS X disk utility, space will not be allocated on the disk for Mac OS 9 drivers. See technical document 107285, "**Macintosh: Computer Can Start Up From Mac OS X But Not From Mac OS 9**".

The hard disk was formatted with a third-party utility
Drive Setup will not attempt to update the drivers on a device being controlled by a third party driver. A reason for this, is to not replace a security driver which may have moved vital data on the hard disk. The next time the user starts the computer, the hard disk may now be corrupted and unusable.

The installed driver is newer than the version supplied in Drive Setup
Check the version of the hard disk driver by selecting the hard disk and choosing the Get Info command in the File menu. The Info window will show the version information for the driver in the Where field. For instance, a drive formatted with Apple's Drive Setup might show:

Macintosh HD, Bus 0, SCSI ID 0, (v8.0.4)

The driver version is listed between the parentheses. If the version is newer than the version of the driver installed by Drive Setup, Drive Setup will not be able to update the driver. You do not want to place an older version of the driver on the hard disk so the update option is disabled in this circumstance.

For additional information on updating the driver see the following article:
Article 22167: "**Apple Hard Disk Driver Matrix**"

You can refer to the last two digits of the driver version number to determine whether the version of Drive Setup will have a newer driver. For example, if in the Get Info window, the driver version number is 8.0.5 and the version of Drive Setup is 1.0.4, Drive Setup will not update the driver (.0.5 is newer than .0.4).

Some PCI-based Power Macintosh computers shipped with Drive Setup 1.0.4 and with hard disks that contain SCSI driver version 8.0.5. Driver version 8.0.5 has fixes specific to the Power Macintosh 9500/200 and Workgroup Server 8550/200. The 9500/200 and Workgroup Server 8550/200 ships with a Drive Setup Updater program that will let users update their SCSI driver to version 8.0.5 after formatting with Drive Setup 1.0.4. If either the 9500/200, or 8550/200 is reformatted using Drive Setup, the driver installed will be listed, when performing a Get Info, as version 8.0.4.

The Drive Setup Updater when used to update the driver to version 8.0.5 will still be listed, in Get Info, as 8.0.4 -- the driver itself gets updated, but the version string does not. Other PCI-based Power Macintosh computers, like the Power Macintosh 7600 and 8500, may also ship with hard disks that have driver version 8.0.5. Drive Setup 1.0.4 will not update these drivers resulting in the update option being dimmed.

Do not be concerned with Drive Setup 1.0.4 not being able to update the driver on computers other than the Power Macintosh 9500/200. Due to manufacturing efficiency, the 8.0.5 version of the SCSI driver is being installed on all SCSI hard disks. If you are not using a Power Macintosh 9500/200, there is no harm in formatting the hard disk with Drive Setup 1.0.4 and having the driver revert to version 8.0.4. Also, there is no need to format a hard disk and revert to driver version 8.0.4 just because the update option in Drive Setup is dimmed.

PowerBook Password Security
If you are using a PowerBook, you need to first disable the password protection feature in the Password Security control panel. Password security prevents Drive Setup from updating the driver.

Media Not Partitioned
The first IDE drives installed in Macintosh computers were initialized with the Internal HD Format 1.x utility, and did not have partitioning information. Drives that show "Where: Macintosh HD, AT_0" in the volume's Get Info window are such drives. IDE drives partitioned with Drive Setup include partition information. This is why Apple's Internal HD Format utility does not recognize newer IDE drives. For more information search for the following articles:

- article 18360: **"Internal HD Format: Cannot See IDE Drives"**
- article 15826: **"Macintosh Desktop & PowerBook Computers: IDE Hard Drive"**

TA21731_Drive_Setup_Common_Reasons_Why_it_Cannot_Update_Driver.pdf

When a volume is selected in Drive Setup, the application looks for partition information on the hard disk. If it finds this partition information, the option to update the disk's driver is available. If this partition information is absent, you have to re-initialize the hard disk to properly format it to include this partition information in order to access the other options.

WARNING: Reformatting or re-initializing your hard drive erases all information on your disk. Make sure you have a backup of all files you may have created and any pre-installed software that came with your computer.

You are strongly encouraged to run Disk First Aid (or equivalent 3rd party utility) before updating the hard disk's driver. If the utility program cannot repair the damage, then update the driver. Updating a corrupted disk's driver could lead to data loss, so backup all data before updating the driver.

If updating the driver fails to correct the issue, then you may need to reformat the hard drive. Again, backup all data, as reformatting the hard drive will erase all data.

The latest version of Drive Setup is available from the Apple Software Updates Web site at http://www.apple.com/swupdates.

The following computers should use the Drive Setup program:

- All computers with PowerPC or PowerPC G3/G4 microprocessors
- Macintosh LC 580 series
- Macintosh LC 630 series
- Macintosh LC 630 DOS Compatible
- Macintosh Quadra 630 series computers
- Macintosh Performa 580 series computers
- Macintosh Performa 630 and 640 series computers
- PowerBook 150 series computers
- PowerBook 190 series computers

All other computers should use Apple HD SC Setup.

NOTES:

- Drive Setup does not work with PowerPC Upgrade Cards. You can use Apple HD SC Setup to update your driver or initialize a disk, but you need to turn off the PowerPC upgrade card before using Apple HD SC Setup.
- PowerBook 150 computers do not need to update the internal hard disk driver. That driver is contained in your computer's ROM. If you try using either utility program to update the driver, nothing will happen.

Published Date: Feb 20, 2012

When to Update Hard Disk Drivers: General Tips

When should I use the update driver function of my disk formatting software?
This article has been archived and is no longer updated by Apple.
All Macintosh hard disk drives contain a small partition containing low level drive support code that are loaded into memory at start-up time to support the functions of the hard disk.

If your hard disk does not mount on the desktop normally, updating the driver with a formatting utility, such as Drive Setup or HD Setup from Apple, may be the solution.

You are strongly encouraged to run Disk First Aid (or equivalent 3rd party utility) before updating the hard disk's driver. If the utility program cannot repair the damage, then update the driver. Updating a corrupted disk's driver could lead to data loss, so backup all data before updating the driver.

If updating the driver fails to correct the issue, then you may need to reformat the hard drive. Again, backup all data, as reformatting the hard drive will erase all data.

As a general rule, you should use the same formatting utility to update the drivers as you used to format the disk originally. If you are updating drivers with a different utility, you should backup existing data when possible and consult the vendor of the new utility to see if their new driver can safely replace the old drivers. Drives with multiple partitions could be at risk of data loss.
Published Date: Feb 20, 2012

LaserWriter 8.x: Changing the Default Paper Size

This article explains how to set the default paper size in the Page Setup dialog box.

This article has been archived and is no longer updated by Apple.
To set the default paper size selection:

1. Choose Page Setup from the File menu.
2. Choose the desired default paper size (and any other settings).
3. Hold down the Option key while you click OK. A dialog "Save the current Page Setup settings as the default settings?" appears.
4. Click Save.

Note: If you reinstall the Mac OS or your printing software, you may need to reset the preferred default settings.

As different printers have different physical margin limits, if you created a document that was close to the margin limits that would print on one printer, that document might get cropped when printed on another. The US Letter Small, US Legal Small, and A4 Small page sizes were developed to help avoid possible Page Layout issues.

Additional Information

A drawback to these "safe" paper sizes is that you loose about 5 mm on each margin. Nevertheless, the additional printable area is rarely used and a document formatted to fit this "small" size prints the same on any printer. Those who need to print to a larger printable area can select A4 or US Letter, and make it the default for all print jobs.

Prior to the creation of US Letter Small and A4 Small, the printable area for US Letter and A4 was in fact the same as for US Letter Small and A4 Small. Some customers, however, selected US Letter or A4 in conjunction with an option "Larger Print Area" that gave them larger margins, and this size is now the same size as the present "US Letter" or "A4" sizes.

Selecting US Letter or A4 requires more printer memory for an area of margin that is rarely used when printing standard business documents. This causes slower print times as well as prevents some complex documents from printing if the printer runs out of memory. Therefore, the default is (and has always been) the smaller margin area.

Note: Paper size options are obtained from the printer's PPD. If a particular paper size is not listed in Page Setup, for instance US Letter or US Legal Small, it may not be an available option for that printer.

Published Date: Feb 20, 2012

CD-ROM Discs: Joliet & Romeo Name Definitions

When creating compact discs using CD-R drives, you may encounter the names Joliet and Romeo. This article discusses these file naming conventions noting the implications for Apple DOS and PC Compatibility cards.
This article has been archived and is no longer updated by Apple.
After the release of Windows 95, Microsoft developed two variations of the ISO-9660 format, named Romeo and Joliet.

Joliet File-Naming Convention

When you choose Joliet, two file lists are maintained on the compact disc. The first file list is for long Windows 95 filenames (up to 64 characters). The second file list is for DOS-compatible filenames that are truncated from the Windows 95 filenames. The way this works for the second file list is that the first six or seven letters of each long filename are used, with the tilde(~) added at the end. A unique number appears after the tilde to prevent duplicate filenames.

Romeo File-Naming Convention

The Romeo file naming convention is used only on Windows 95 or Windows NT computers. Do not use Romeo if you want to read the compact disc on operating systems other than Windows 95 or Windows NT. When you choose Romeo file naming convention during the writing of a CD session, only one file list is maintained on each CD. The Romeo file naming convention uses long Windows filenames (up to 128 characters).

Romeo Format Compatibility

The Romeo format is not currently compatible with the PC and DOS Compatibility Cards. Most Joliet formatted CD-ROM discs are compatible provided the programs used recognize the second short-name file list that was created.

PC Compatibility Cards and CD-ROM Disc Support

ISO-9660 Only: Apple PC Compatibility cards were designed to support only the ISO-9660 CD-ROM format. Whether a particular driver is 16-bit or 32-bit is irrelevant.

No Apple Update for Romeo and Joliet: There will probably not be an Apple update for Romeo compatibility or for Joliet CD-ROM discs that do not function correctly. If Romeo and Joliet were incorporated into an ISO standard, then it is possible that a Mac OS CD-ROM driver could allow these discs to work. Microsoft would have to submit these as standards, they would have to be accepted, and then a CD-ROM driver vendor (or Apple) would need to update their software to accommodate the new standard.

Real Mode (16-bit) versus Protected Mode (32-bit): The PC Compatibility cards all access the drives (floppy, CD-ROM, and hard drive) in Real or DOS Compatibility Mode. There are some programs (usually programs that are Windows 95-only) that require Protected Mode drivers. Unless these programs have a Real Mode compatible version, they will not work with the PC Compatibility cards. Apple has no plans at this time for Protected Mode drivers for the PC Compatibility cards.

Using Incompatible CD-ROM discs: For CD-ROM discs that are neither Romeo or Joliet or ISO-9660, you may be able to set them up as shared drive in PC Setup. An example of this would be a CD-ROM disc recorded as a High Sierra format disc (the precursor to ISO-9660). Mac OS can read this format. Anything that Mac OS can read should be able to be mounted as a shared disc.
Published Date: Feb 20, 2012

Iomega Zip Drive: Purpose of Iomega Guest Application

This article describes the Iomega Guest application included with Iomega Zip drives.
This article has been archived and is no longer updated by Apple.
Iomega Guest is a utility that allows you to temporarily use a Zip drive on a Macintosh computer without having to install the Iomega Driver in the System Folder. Running Iomega Guest provides the same access to your Zip drive as having the Iomega Driver permanently installed as an extension--it allows you to read files from a Zip disk, write files to a Zip disk, and run the Tools or other software from your Zip disks. The only difference is that when using the Guest program to provide access to your Zip drive, the Iomega Driver does not load automatically each time you start or restart the Macintosh.

Why use Iomega Guest?

There are many reasons to use Iomega Guest:

* If you want to use a portable Zip drive on multiple computers, but you do not want to install the full Iomega software package.

* If you want to start your Macintosh computer with the extensions disabled, but you still want access to you Zip drive. This is particularly useful when troubleshooting.

* If you do not want to install the Iomega Driver permanently in order to reduce the chances of extension conflicts.

How to use Iomega Guest

* To use the Guest program on you own computer, for instance if you have installed Iomega software but are starting your computer with the extensions disabled, simply open the Iomega Tools folder and double-click the Guest icon.

NOTE: You must have the drive connected to the computer before running Guest. Also, the Iomega driver is not installed permanently on a Macintosh computer using this connection method.

Alternative to loading Iomega Guest

An alternative to loading Guest is to simply to have a Macintosh formatted Zip disk inserted when you start your computer. Macintosh-formatted Zip disks contain a driver which will automatically run when the computer starts. To use this simply alternative:

1. Insert a Macintosh formatted Zip disk into the Zip drive.
2. Start the computer following your normal startup procedures.
3. Once your Macintosh has started with the Zip disk inserted, you will be able to use your drive just like any other removeable drive on your system.

NOTE: The Iomega driver is not installed permanently on a Macintosh using this connection method.

Troubleshooting

* The following message may appear when you are attempting to run the Iomega Guest utility, "
The driver version 5.0.1 is loaded and ready to run your drive(s)." This message generally indicates that the Iomega Driver is already loaded. Since the Iomega Driver is already loaded, you do not need to use the Iomege Guest utility. In this case, you need only to close the message dialog box and access the Zip drive.

Note: This information comes directly from the online Iomega Guest Help manual, which was included with your Macintosh computer.

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.
Published Date: Feb 20, 2012

Iomega Zip Drive: Tools FAQ

This article contains frequently asked questions about using the Tools application included with Iomega Zip drives on some Macintosh computers.

Questions in this FAQ

1) How can I change a PC-formatted Zip disk to Macintosh format?

2) How can I change the password on a protected Zip disk?

3) How can I change the Zip drive sleep time?

4) How can I password protect a Zip disk?

5) How can I read/write protect a Zip disk?

6) How can I repair a Zip disk?

7) How can I unprotect a protected Zip disk?

8) How can I write protect a Zip disk?

9) What does Disk Protection do for me?

10) If I use Disk Protection, can someone else bypass it and access files on my Zip disk?

11) What is the difference between Erase and Erase with Surface Verify?

12) What happens if I forget my password for a Zip disk?

This article has been archived and is no longer updated by Apple.

1) Question: How can I change a PC-formatted Zip disk to Macintosh format?

Answer: You can change a PC-formatted Zip disk to a Macintosh format by erasing the disk. If you are not using PC Exchange, you can use Erase Disk from either the Finder or the Tools application to change the disk format.

NOTE: If you are using PC Exchange, you must use Erase or Initialize Disk in the Tools application program to change the disk format. PC Exchange will not allow the format to be changed when using the Finder.

If you need to change a Macintosh-formatted Zip disk to a PC format, use the Tools program on a PC to reformat the disk.

2) Question: How can I change the password on a protected Zip disk?

Answer: To change the password on a protected Zip disk you must know the current password. Then, follow the steps below.

1. Insert the disk for which you want to change the password.
2. Click on the disk icon in the main Tools window.
3. Click on the Change Disk Protection tool.
4. Select Change Password from the Disk Protection Options window.
5. Enter the current disk password, and then enter the new password you want to use.
6. When prompted, retype the new password to confirm it.
7. Close the Disk Protection Options window.

NOTE: You must close any open files and quit all applications running from a disk before you can change its password. If the disk is being shared, you must first turn off sharing. After you have changed the password, you can turn sharing back on.

3) Question: How can I change the drive sleep time?

Answer: There are two ways to change your drive sleep time:

Iomega Drive Options Control Panel

1. Open the Control Panel folder and double-click Iomega Drive Options.

2. Select the drive on which you want to change the drive sleep time.
3. Using the up and down arrows, change the Drive Sleep Time to your desired length of time. You can change the period of inactivity before drive sleep occurs from a minimum of 1 minute to a maximum of 60 minutes.
4. Press Save to implement the changes you have made.

Note: If you do not want to save the changes, choose Don't Save instead.

Tools Menu

1. Select the disk icon in the main Tools window for the drive where you want to change the drive sleep time.
2. Click on the Set Drive Options tool.
3. You will see the current sleep time setting for the selected drive in the drive options window.
4. Use the slide bar to set the sleep time you desire to use, then click on the Set button at the bottom of the Drive Options window.

4) Question: How can I password protect a Zip disk?

Answer: The Tools application provides two options for protecting your Zip disks: Write protection and Read/Write protection.

If you wish, you can use a password when you write-protect a disk. When you do this, no one can write files to the disk or change files on the disk without first using the password you have assigned.

When you read/write protect a disk, you must assign a password. In this case, no one can access any information on the disk without first using the password. This means that if you forget the password, there is no way to recover the information on the disk.

NOTE: You must close any open files and quit all applications running from a disk before you can protect it. If the disk is being shared, you must first turn off sharing. After you have protected the disk, you can turn sharing back on.

Follow these steps to assign password protection to a disk:

1 - Insert the disk you want to protect with a password.
2 - Click on the disk icon in the main Tools window.
3 - Click on the Change Disk Protection tool.
4 - Select the type of protection you want to use (either Write Protection or Read/Write Protection) from the Disk Protection Options window.

CAUTION! If you forget the password for a Read/Write protected disk, the data on the disk cannot be recovered (even by Iomega!).

5 - Follow the prompts to assign the password you want to use.

5) Question: How can I read/write protect a Zip disk?

Answer: You can use Tools to read/write protect a Zip disk. When you do this, you must assign a password that will be required before anyone can access any information on the disk. Take care to use a password you will not forget. If you forget the password, there is no way to recover the information on the disk. In order to use the disk at all, you will have to reformat it, which will destroy all files on the disk.

NOTE: You must close any open files and quit all applications running from a disk before you can read/write protect it. If the disk is being shared, you must first turn off sharing. After you have protected the disk, you can turn sharing back on.

Follow these steps to read/write protect a Zip disk:

1. Insert the disk you want to protect.
2. Click on the disk icon in the main Tools window.
3. Click on the Change Disk Protection tool.
4. Select Read/Write Protection from the Disk Protection Options window.
5. Follow the prompts to assign the password you want to use.

CAUTION! If you forget the password for a Read/Write protected disk, the data on the disk cannot be recovered. Because the actual disk protection mechanism is secured in the drive hardware and is not software-based, it cannot be bypassed using other software programs.

6) Question: How can I repair a Zip disk?

Answer: If a Zip disk begins to develop read/write errors, it is probably due to bad sectors on the disk. You can use Erase Disk with Surface

Verify in the Tools application to repair a disk that has developed read/write errors due to bad sectors. However, this will erase all data on the disk. To save the information on the disk, copy all files to another disk before you repair the disk.

Follow these steps to repair a disk that has developed read/write errors:

1. Copy all information on the disk you need to repair to another disk.
2. Insert the disk you want to repair.
3. Open the Tools application.
4. Click on the disk icon in the main Tools window.
5. Click on the Erase Disk tool.
6. Select the Erase Disk with Surface Verify option.

CAUTION: All of the information on a disk is lost when a disk is erased. Make sure that any information you may need has been copied before you erase the disk.

7) Question: How can I unprotect a protected Zip disk?

Answer: Tools offers two options for unprotecting a protected Zip disk: Temporarily Unprotect and Remove Protection. Note that if the disk is protected with a password, you must use the password in order to use either unprotect option.

* Temporarily Unprotect gives you temporary access to a protected disk. When you temporarily unprotect a write-protected disk, it will be automatically write-protected again when ejected. If you temporarily unprotect a read/write-protected disk, you must restart your Mac to restore protection.

* Remove Protection completely removes either write protection or read/write protection.

NOTE: You must close any open files and quit all applications running from a disk before you can unprotect it. If the disk is being shared, you must first turn off sharing. After you have unprotected the disk, you can turn sharing back on.

Follow these steps to unprotect a protected disk:

1 - Insert the disk you want to unprotect.
2 - Click on the disk icon in the main Tools window.
3 - Click on the Change Disk Protection tool.
4 - Select the unprotect option you want to use (either Temporarily Unprotect or Remove Protection) from the Disk Protection Options window.

CAUTION: If you temporarily unprotect a read/write-protected disk, you must restart your Mac to restore protection.

5 - If prompted for a password, enter the current password for the disk.

8) Question: How can I write protect a Zip disk?

Answer: Iomega Zip disks can be write protected using the Tools application instead of a mechanical write-protect switch. Write protection means anyone can read or copy files from the disk, but no one can write files to the disk or change files on the disk without first removing the write protection. If you wish, you can assign a password that must be used in order to remove the write protection. (This is a great way to make sure your kids cannot accidentally overwrite your important information.

NOTE: You must close any open files and quit all applications running from a disk before you can protect it. If the disk is being shared, you must first turn off sharing. After you have protected the disk, you can turn sharing back on.

Follow these steps to assign write protect a Zip disk:

1. Insert the disk you want to protect.
2. Click on the disk icon in the main Tools window.
3. Click on the Change Disk Protection tool.
4. Select Write Protection from the Disk Protection Options window.
5. If desired, select the password option and follow the prompts to assign the password you want to use.

9) Question: What does Disk Protection do for me?

Answer: This tool increases your Zip disk protection options beyond the functionality provided by a conventional write-protect tab. Disk Protection allows you to set write protection that acts just like that from a physical write-protect tab or switch, but it also allows you the option of assigning a password that must be used to remove the write protection. Or you can set read/write protection to make highly sensitive data

completely unreadable by anyone who doesn't know the password you assign. Other options allow you to temporarily unprotect a disk or remove protection completely if desired.

10) Question: If I use Disk Protection, can someone else bypass it and access files on my Zip disk?

Answer: If you set either read/write protection or write protection with a password, no one can remove the protection without using the correct password. Because the actual disk protection mechanism is secured in the drive hardware and is not software-based, it cannot be bypassed using other software programs.

11) Question: What is the difference between Erase and Erase with Surface Verify?

Answer: Erase in Tools works just like Erase from the Finder. Choosing this option quickly erases the header information on a disk, allowing the rest of the data on the disk to be overwritten with new data as you work. Erase with Surface Verify is a longer format that erases the entire disk and verifies the integrity of the entire disk surface. If a disk develops read/write problems, use Erase with Surface Verify to repair it. (CAUTION: All information on a disk is lost when the disk is erased, so make sure you copy any information you need before erasing the disk.)

12) Question: What happens if I forget my password for a Zip disk?

Answer: If you forget the password for a write-protected disk, you can use the Finder to copy the data on that disk to another disk, then use Erase with Surface Verify to erase and reclaim the protected disk. If you forget the password for a disk that is read/write-protected, the data on the disk cannot be recovered in any way. In order to use the disk again, it must be reformatted using Erase Disk with Surface Verify, and all data on the disk will be lost.

Published Date: Feb 20, 2012

Iomega Zip Drive: Troubleshooting FAQ

This article contains frequently asked questions about troubleshooting Iomega Zip drives and disks, with answers to those questions.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. Why does the Iomega driver appear crossed-out at system startup time?
2. Why doesn't the Zip disk icon appear on the desktop?
3. Why does a disk with flashing "?" appear at system startup time?
4. Why would the startup process fail after the Iomega driver is loaded?
5. How can I test for possible conflicts with my Zip drive?
6. Why is my Zip disk ejected immediately when inserted?
7. What would cause a Zip disk to fail to erase or format?
8. Why won't the Zip disk eject when the disk icon is dragged to the Trash?
9. What would cause the Zip drive to have intermittent read/write errors?
10. When I attempt to use the iomega Tools applications an error message appears stating that "... Tools cannot load/run..." What is causing this?
11. What does the light on the front of the Zip drive opening indicate?
12. How can I verify that my Zip drive is properly connected?
13. Zip disks do not appear on the desktop or eject, and the green status light is flashing. What can I do to remedy this?
14. Writing to a Zip 100 disk in my Zip 250 drive seems very slow. Is this normal?

Question 1: Why does the Iomega driver appear crossed-out at system startup time?

Answer: After the Iomega Driver is installed on the computer's startup disk, it normally loads at system startup time. If the driver is installed in the startup disk's Extensions folder, but is unable to load successfully, a red X appears over the Iomega driver extension at system startup time.

If the Iomega driver does not load at system startup time, but you are still able to access your Zip drive, a non-Iomega driver may be loading before the Iomega driver and taking over control of the Zip drive.

To identify the driver that is controlling the Zip drive, select a Zip disk icon in the Finder, then choose Get Info from the File menu. The driver appears in parentheses at the end of the line titled Where.

If a non-Iomega driver is controlling the Zip drive, try the following steps to eliminate the conflict:

- Make sure no disks other than the startup disk are inserted when you turn on the computer. A disk formatted using a non-Iomega driver could be loading that driver onto the system.
- Try renaming the Iomega driver so that it loads earlier. (These types of files are loaded in alphabetical order.)

If you intend to use a non-Iomega driver to control the Zip drive, you should remove the 5.0.1 Iomega driver from the system.

Note: Non-Iomega drivers may not provide full functionality for the Zip drive. (For example, a non-Iomega driver may not support Zip disk protection.)

Question 2: Why doesn't the Zip disk icon appear on the desktop?

Answer: One of the following suggestions should solve this:

- Shut down the entire system (the computer and everything connected to it). Restart the system, making sure the computer is the last device turned on.
- Open the Iomega Guest program.
- Make sure a Zip disk is fully inserted in the drive. A Zip disk icon can only appear on the Desktop when a disk is inserted.
- If the Iomega driver is installed on your startup disk, make sure it is loading successfully. If the driver is correctly installed but does not load at system startup time, follow the steps in question 1.
- A non-Iomega driver may be trying to control the Zip drive. Follow the steps in question 1.

Question 3: Why does a disk with flashing "?" appear at system startup time?

Answer: This indicates that the computer cannot find a startup disk and is often due to a hardware issue. Try the following:

If you are using a Zip disk as the startup disk, make sure it is fully inserted in the drive before turning on the computer, and that you hold down the Option key at system startup time. Also make sure there are no disks in the computer's floppy disk drive.

If this does not resolve the situation, test the computer by disconnecting all external SCSI devices and restarting from the hard drive or from the CD-ROM disc that came with the computer.

Question 4: Why would the startup process fail after the Iomega driver is loaded?

Answer: This can be caused by hardware conflicts or by conflicts with non-Apple or third-party control panels or system extensions.

- If you identify a conflicting system extension, remove it from the system.
- Make sure the Iomega driver is correctly installed on your startup disk.

If you cannot identify a conflicting system extension and the driver is correctly installed on your startup disk, test for a source of conflict by following the steps in question 5.

Question 5: How can I test for possible conflicts with my Zip drive?

Answer: Use the following steps to determine the source of a conflict that prevents successful startup:

1. Turn off system extensions by pressing and holding down the Shift key while the computer starts up. (You should see the note "Extensions off" or "extensions disabled" if not, repeat step 1.)

2. Load the Iomega driver manually by double-clicking on the Iomega Guest utility. If the Guest program installs the driver successfully, it suggests that there is a conflict with a non-Apple control panel or extension.

If you encounter conflicts between the Iomega driver and non-Apple control panels or system extensions, you must first try to identify the control panel or extension that is causing the conflict and then remove it from the system.

Question 6: Why is my Zip disk ejected immediately when inserted?

Answer: There are two likely possibilities:

A Zip disk may be immediately ejected if the format on the disk is bad and PC Exchange is running on the Macintosh computer. You may or may not see a dialog box indicating that disk initialization failed. If you can see the dialog box, click on the default button. If you cannot see the dialog box, just press the Return key and your system returns to normal. To fix the format on the Zip disk, first turn off the PC Exchange control panel. Then reformat the disk using Erase Disk with Surface Verify in the Tools program. You can also perform an Erase Disk with Surface Verify from the Finder by holding down the Option key when you start the format. Make sure you hold down the Option key until the format begins.

A Zip disk may be immediately ejected if the capacity of the disk being inserted is higher than the drive can support. For example, if your computer is equipped with a 100 MB Zip drive, the highest capacity Zip disk it would be able to read is 100 MB. If you insert a 250 MB Zip disk, the Zip drive would eject it because it is unable to read it. Internal Zip drives that come with Macintosh computers (as of 1999-10) are 100 MB drives.

Question 7: What would cause a Zip disk to fail to erase or format?

Answer: Difficulties with formatting Zip disks are usually due to a conflict caused by a non-Apple control panel or system extension.

If you cannot identify or resolve the conflict, try turning off system extensions while formatting Zip disks, and follow these steps:

1. Hold down the Shift key and restart your computer. Make sure you hold down the Shift key until you see the message saying extensions are disabled or off.

2. Open Iomega Guest to load the Iomega driver.

3. Openb the Iomega Tools program.

4. Insert a Zip disk and click the Erase or Initialize Disk button. Select the options you want to use and click OK.

If this procedure works, you should use it whenever you erase or format Zip disks. If the disk still does not format, try formatting a different disk. If you are able to format the second disk, it indicates that the first disk may be bad.

Question 8: Why won't the Zip disk eject when the disk icon is dragged to the Trash?

Answer: Try the following suggestions:

- If the disk icon is still on the desktop, drag it to the Trash again.
- Try restarting the computer. The disk may lock in the drive if the system has stopped responding or "crashed."

Question 9: What would cause the Zip drive to have intermittent read/write errors?

Answer: If read/write errors occur only with a specific Zip disk, reformat the disk using Erase Disk with Surface Verify.

Question 10: When I attempt to use the iomega Tools applications an error message appears stating that "... Tools cannot load/run..." What is causing this?

Answer: The Tools program is unable to run if:

- you try to run Tools and the Iomega driver is not loaded on the system.
- you try to run a version of Tools different from the version of the driver currently loaded on the system.
- you try to run Tools and the Iomega driver is unable to find any supported Zip drives.

Question 11: What does the light on the front of the Zip drive opening indicate?

Answer: The light provides information that may be helpful when troubleshooting.

After inserting a Zip disk, look for an amber light in the lower right corner of the Zip drive opening. There should be some initial blinking, but after the disk has become available on the desktop, the light should not blink. If the light continues to blink, it could suggest:

Slow blinking amber light

- check installation of software
- check SCSI connection of hardware
- hardware malfunction (communication)

Fast blinking amber light

- check Zip disk for mis-alignment
- check Zip disk for damage
- hardware malfunction (media detection)

Question 12: How can I verify that my Zip drive is properly connected?

Answer: Here is a procedure to verify that the Zip drive is properly connected and getting power:

1. Shut down the computer.
2. Disconnect all external SCSI devices from the computer.
3. Start up from the CD-ROM disc that came with your computer. (Hold down the 'c' key on the keyboard to start up from the disc)
4. Once the system has started up, open the Drive Setup application.
5. After scanning the SCSI bus, Drive Setup should list the hard drive, the CD-ROM drive and the Zip drive. The Zip drive should be listed as "<not supported>" at SCSI ID 5.

Question 13: Zip disks do not appear on the desktop or eject, and the green status light is flashing. What can I do to remedy this?

Answer:

Try the following:

1. Choose Shut Down from the Special menu.
2. Reset the Parameter RAM (PRAM) described in article 2238: "**Macintosh: How to Reset PRAM and NVRAM**".
3. After resetting the PRAM, use the Startup Disk control panel to reselect your startup disk.
4. You should now see the Zip disk on the desktop, and you should be able to eject it.
5. If the situation persists, try the suggestions listed in the answer to Question 2.

Question 14: Writing to a Zip 100 disk in my Zip 250 drive seems very slow. Is this normal?

Answer: According to Iomega technical document #30146 "**Why does my Zip® 250 drive slow down when I write large files to a 100MB Zip disk?**" this is normal. See the Iomega document for complete details.

Published Date: Feb 20, 2012

LaserWriter 12/640 PS: Configuring TCP/IP for Text or PCL

I am trying to print a PCL file to my LaserWriter 12/640 PS printer from my UNIX workstation. Every time I try, it does not print the file correctly. I can print PostScript files correctly. Why?
This article has been archived and is no longer updated by Apple.
When Apple Computer shipped the LaserWriter 12/640 PS printer, the TCP/IP port interpreter was set for PostScript only. You need to change this to either PCL or Autoselect.

Determining TCP/IP Configuration

1. Print a startup page.
2. Look at the upper right corner for the TCP/IP field.

The TCP/IP field has the interpreter's setting.

Changing the TCP/IP Configuration

If the LaserWriter 12/640 PS printer has either a Mac OS or Windows computer attached, you can use the Apple Printer Utility (Mac OS), or LaserWriter Utility for Windows software to change the interpreter to either Autoselect or PCL.

If you do not have a Mac OS or Windows computer connected to the LaserWriter 12/640 PS, follow these steps to set the printer to autoselect:

1) Configure your UNIX workstation to print PostScript as described in its manual.

2) Ensure the LaserWriter 12/640 PS communication switch is depressed (this is the normal setting).

3) Change the setting using PostScript. Below is PostScipt code to the printer to change the settings.

```
%=============================================================
% Begin PostScript code
%
%!PS
(%LPR_NV%) <</Interpreter /AutoSelect >> setdevparams
%
% End PostScript code
%=============================================================
```

4) Restart the printer.

Resetting the LaserWriter 12/640 PS to PostScript Only

To reset the printer to PostScript only, follow these steps:

1. Press and hold the communications switch, so it is in the up position.
2. Restart the printer.
3. Release the communications switch.

The LaserWriter 12/640 PS TCP/IP port is now set to PostScript.
Published Date: Feb 20, 2012

Macintosh Infrared: Is It IrDA Compatible?

Does the built-in infrared technology used in the PowerBook 190, 1400, 2400, 3400, 5300, PowerBook G3 and G3 Series, PowerBook (FireWire), PowerBook G4, and iMac support the IrDA (Infrared Data Association) standard? If so, can I use them to communicate with my Newton MessagePad or other IrDA device?
This article has been archived and is no longer updated by Apple.

PowerBook 190, 5300, and 1400

The PowerBook 190, 5300, and 1400 series computers are not IrDA-compliant. Hence, these computers will not work with third-party devices which are IrDA compliant, such as some of Apple's MessagePad devices and some Hewlett Packard printers. Instead, these products use a protocol named IRTalk.

The infrared implementation used in these PowerBook computers is designed to share information with other infrared-equipped PowerBook computers and the Farallon Air Dock (a wireless LocalTalk file sharing solution). The Apple IR File Exchange transfer rate is 230.4kbs, the same as LocalTalk.

PowerBook 3400, PB 2400, and PowerBook G3 and G3 Series

The PowerBook 2400, 3400, G3 and G3 Series computers are IrDA compliant. Additionally, they have the option to switch to the IRTalk protocol via the Infrared Control Panel. These computers can communicate with other IRTalk-capable devices (such as other PowerBook computers), using either the IrDA or IRTalk protocol.

Note: PowerBook G3 Series computers support IrDA 1.1 with speeds up to 4 Mbps.

While the PowerBook 2400, 3400, G3 and G3 Series computers have the hardware necessary to communicate with other IrDA compliant devices such as the Apple eMate 300 or the Newton MessagePad 2000, at this time Apple does not have a software solution to communicate with them.

For information about whether the 2400, 3400, G3 and G3 Series computers can communicate with other IrDA compliant devices, contact the manufacturer of the device.

iMac

There are several versions of the iMac computer. The first two versions (referred to as revision A and revision B) were colored Bondi Blue. The next version (referred to as revision C) was introduced in January 1999 and came in five different colors.

Revision A and B iMac computers support IrDA, but not IRTalk. Revision C iMac computers do not support infrared communication of any type.

For additional information see the following articles:

- Article 30707: "**Macintosh: Printing to a PostScript Printer via IrDA**"
- Article 30861: "**PowerBook: Printing to an IrDA Printer**"
- Article 58012: "**iMac: Infrared Communications**"

For general information on IrDA, see **http://www.irda.org**

PowerBook G3 Series (Bronze Keyboard)

PowerBook G3 Series computers are IrDA compliant. This is the first PowerBook model which does not support IrTalk. Any older PowerBook model, which can only communicate with IrTalk, will not be able to connect to the PowerBook G3 Series (Bronze Keyboard) models.

Note: See PowerBook 3400, PB 2400, and PowerBook G3 and G3 Series information listed above.

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, read article 24604: "**PowerBook G3, G3 Series: Identifying Different Versions**"

PowerBook (FireWire)
The PowerBook (FireWire) supports IrDA.

PowerBook G4 and PowerBook G4 (Gigabit Ethernet)
The PowerBook G4 and PowerBook G4 (Gigabit Ethernet) support IrDA.
Published Date: Feb 20, 2012

LaserWriter 12/640 PS: Legal-Sized Pages Printing Issues

Questions

1. We have a LaserWriter 12/640 PS and are unable to select the face-up output tray when we print Legal-sized pages. When I attempt to select the Face-Up tray in the Print dialog, it is dimmed. We have tried various versions of LaserWriter 8 printer driver including the latest v8.4.2, and have also tried this with and without a duplexer. Is this a supported feature with Legal-sized pages?
2. I want to feed thick Letter stock through the 12/640's straight-through paper path and am using the multipurpose tray (set for Letter) as the input tray, and the face-up tray as output. When the 250-sheet cassette is set for Legal-sized paper, output is always directed to the face-down tray instead.

This article has been archived and is no longer updated by Apple.

Answers

1. The LaserWriter 12/640 PS User's Guide on page 184 "Selecting the output tray" states: "You cannot direct the output to face-up when duplex printing. You cannot direct U.S. legal-size paper to the face-up output." The face-up tray cannot accommodate a legal-sized page. Because of this, it was decided that limiting the face-up tray for use with legal-sized pages would be a more elegant solution than having the paper fall off the tray.

2. We have verified this problem with the LW 12/640, and have reported it to engineering, however there is an easy workaround (see below).

Workaround

Temporarily adjust the 250-sheet cassette for Letter size and your print jobs will now exit on the face-up tray if you specify it as the output tray.

This article appeared in the 7 February 1997 issue of the Information Alley.
Published Date: Feb 20, 2012

The Hindi Learning Stack: Read Me

This article contains the Read Me file for the Hindi Learning Stack v1.0, which is included with the Indian Language Kit. This document provides information for installing and using the Hindi Learning Stack.
This article has been archived and is no longer updated by Apple.

What is the Hindi Learning Stack?
The Hindi Learning Stack 1.0 is a Hypercard application. It helps to teach the Hindi alphabet, especially to children. It also contains three games aimed at testing alphabet recognition skills.

The Hindi Learning Stack 1.0 contents
the Hindi Learning Stack 1.0 consists of the following files:
- Hindi Learning Stack 1.0
- Hindi Learning Stack
- Gaayab!!
- Hindi Learning Stack 1.0 Read Me

System Requirements
The Hindi Learning Stack 1.0 requires
- Macintosh Computer (Power Macintosh or 68K system)
- System 7.5 or better
- Color or gray scale monitor capable of atleast 256 colors / grays
- Display resolution of 640 by 480 pixels or better
- At least 6.5 MB of available RAM

Installing the Hindi Learning Stack
To install the Hindi Learning Stack, drag the the Hindi Learning Stack 1.0 folder from Indian Language Kit CD on to your hard disk.

Running the Hindi Learning Stack
Open the Hindi Learning Stack 1.0 folder and double-click on the Hindi Learning Stack 1.0 icon. A poem and background music will play while a welcome screen is being displayed. Click on the Hindi Learning Stack screen to continue. You will see the parrot (Sonu) and the girl (Monu) flying across the screen. Sonu and Monu will lead you to the first alphabet card.

Using the Hindi Learning Stack
The Hindi Learning Stack has two sections - Alphabet Teacher and the Games.

Alphabet Teacher
Alphabet teacher takes you through a series of alphabetical cards and teaches you the Hindi alphabet.

Each alphabet card has the following buttons at the bottom:
1. Left button - Goes to the previous alphabet card.
2. Music button - Toggles the background music on or off.
3. Help button - Gives a brief description of all buttons.
4. Games button - Plays Hindi Learning Stack games.
5. Main menu - Shows the main menu of all letters in the alphabet. Click on any letter to go directly to that particular alphabet card.
6. Right button - Goes to the next alphabet card.

Each alphabet card teaches two or three related alphabets. It includes the letter itself, simple words beginning with the alphabet and pictures of familiar objects. When you come into any alphabet card, Sonu will pronounce the letters of that card for you. Repeat the pronunciation by clicking on the letter or the word again. Try clicking on the picture objects or on Monu.

Hindi Learning Stack Games
The Hindi Learning Stack includes the following three games
1. Talking Tree Game (Batooni Paed)
2. Card game (Bataon to Jaane)
3. Find the missing alphabet game (Gaayab))

- Talking Tree game: You can play this game at three levels. The first level is simple. It displays a tree with 5 letters. You will be asked to click on a particular letter. Click on the letter that Sonu asks you to select. You receive 2 points for every correct answer, reflected in your final score. Levels 2 and 3 will display a tree with 10 letters. Be careful in level 3! You will lose 2 points for every wrong guess. Sonu will repeat the letter to be selected when you click on the repeat button. If you find it difficult to pick the right letter, click on the clue button and the Hindi Learning Stack will flash the alphabet card with the correct letter.

- Flashcards game: The Hindi Learning Stack will display 3 pictures for you. You will be asked to identify the picture for the letter or word displayed. You get 2 points for every correct guess.

- Find The Missing Letter game: The Hindi Learning Stack will display a sequence of letters, with one letter missing. Sonu will also give you five likely answers. You are expected to identify the missing letter.

After completing one round, the Hindi Learning Stack will start a new round for you. You may also click on the right arrow at any time to discard the current round and start a new round.

To finish using the Hindi Learning Stack application, click on the door icon in main menu or press <Command> + Q keys.
Published Date: Feb 20, 2012

Devanagari Typing Shikshak: Read Me

This article contains the Read Me file for the Devanagari Typing Tutor, which is included with the Indian Language Kit.
This article has been archived and is no longer updated by Apple.

Installation

To install, drag the file Devanagari Typing Shikshak on to your hard disk. Make sure that the Indian Language Kit is installed prior to launching the tutor.

Minimal System Requirements

* Macintosh Computer (PowerPC or 68K)
* Indian Language Kit 1.0
* Monitor capable of 640 x 480 pixels or better

Features

The Shikshak teaches you to type using the Inscript keyboard (default keyboard layout for Indian languages).

The Shikshak organizes lessons in "practice sessions" and "drills." Before you begin a lesson, read the introduction which describes the keys, their location and the fingers you need to use to type them. The Shikshak shows a preview of the key to be typed. The key is shown highlighted. If the key to be typed is a shifted one, shift is also highlighted.

Once you have completed practicing keystrokes, you will be shown words to type, formed with the keys you have learned. The Shikshak beeps when an incorrect key is entered.

Once the drill is complete, a dialog box showing the accuracy and speed during the lesson is displayed.

Use the "View" menu option to navigate between the lessons. The "Next" and "Prev" menu items take you to the next or previous lesson from the current one. The "Go To..." menu item allows you direct access to any lesson of Shikshak.

Use the navigation buttons, "Next Lesson" and "Prev Lesson" (same as Next and Prev menu option), to go to the next or previous lesson from the current one. The "Start Drill" button ends the practice and starts the drill. Choose "Restart Drill" to start the drill again.

The keyboard shown in the Shikshak depicts the Apple Extended keyboard. Some keys are positioned differently on various Apple keyboards. One such key is the backslash (\\) key, positioned above the return key in the Extended keyboard. It is situated to the right of the space bar on Apple standard keyboards.

The Inscript keyboard provides various conjuncts on the shifted number row of the keyboard. The conjuncts are covered in the lessons which teach the required keys. These conjuncts can be typed using the individual letters which make them or using the shifted number key directly.

Extensions Compatibility

The Typing Shikshak has known incompatibilities with the Aaron extension. The most prominent is the disappearing of text in the drills. This incompatibility is not consistent.

Keys not covered by the Shikshak

Some keys of the Inscript keyboard have not been covered in this Shikshak. These keys are used in southern scripts or are not used very often in Devanagari. These letters, as per their ISCII reference are:

Vowel Sign O (southern scripts)
Vowel Sign AWE (Devanagari script)
Vowel Sign E (southern scripts)
Vowel O (southern scripts)
Vowel AYE (Devanagari script)
Vowel Sign AYE (Devanagari script)
Vowel RI
Consonant NGA
Vowel AWE (Devanagari script)
Consonant Hard Ra (southern script)
Vowel E (southern script)
Consonant NA (Tamil)
Consonant ZHA (Tamil & Malayalam)
Consonant Hard LA
Consonant JYA (Bengali, Assamese & Oriya)

Published Date: Feb 20, 2012

Indian Language Kit: Which Scripts & Languages Supported?

This article discusses the scripts and languages supported by the Indian Language Kit.
This article has been archived and is no longer updated by Apple.
The different languages on your computer are supported by software known as the script system. A script system makes a character set available for a particular language, tells your computer which characters to display when you type, specifies the direction of text flow, and provides other information such as sort order, date, time, number, and currency formats. If you are working in English on your computer, your system uses the Roman script.

If you are working in an Indian language, your system uses one of the Indian scripts provided by this kit. The script system generates the complex combinations of characters used in Indian languages in response to different sequences of keystrokes.

The Indian Language Kit supports several North Indian scripts. These scripts have letters representing consonants and vowel sounds. Many North Indian scripts depict words with a bar above all of the letters in the word. Also, when two consonants are joined together, a composite letter--a consonant conjunct--is formed. So, although there are a relatively small number of letters, there may be many more consonant conjuncts for a particular script.

The Indian Language Kit supports three North Indian scripts. Devanagari, Gurmukhi, and Gujarati. The same script can be used by several languages if they share most of the same characters and behaviors. For example, Devanagari is used for four languages: Hindi, Marathi, Nepali, and Sanskrit. Gurmukhi for the Punjabi language; and Gujarati for the Gujarati language. So, the Indian Language Kit supports three different scripts and six different Indic languages.
Published Date: Feb 20, 2012

Indian Language Kit: Using Different Keyboard Layouts

I installed the complete version of the Indian Language Kit, but I am not sure which keyboard layout I should use. What is the differences among the several different layouts?
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The Indian Language Kit offers two different layouts--Inscript and QWERTY--for each of the three Indian language scripts it presently supports (Devanagari, Gujarati, and Gurmukhi). An additional layout, Nepalese, is also provided for the Devanagari script only. Choose the layout according to the script and language you are using.

Inscript
The default layout--Inscript--is available for all three scripts. Inscript uses the ISCII (Indian Script Code for Information Interchange) character set and is used for "normal" or phonetic typing. It is generally accepted as the standard Indian language keyboard layout as defined by an Indian standards organization in the Indian Government. It is optimized to be the fastest form of keyboard input for each script.

Using the Inscript layout, the computer combines these characters to form the large number of conjuncts used in Indian languages. This means that when you are typing in an Indian language, you do not have to search for the correct half-character sets to form a conjunct. When you type a certain sequence of consonants and vowels, the computer automatically generates the required character. Using the Inscript layout you can type the words according to how they sound, rather than how they finally appear on your screen. The computer automatically reorders vowels and consonants to produce the desired words in all three languages.

The default (Inscript) keyboard layouts for all three Indian language scripts also support the Roman script when you hold down the Option key.

QWERTY
The QWERTY keyboard layouts place Indian language characters on a QWERTY keyboard, in positions that correspond to Roman characters with similar pronunciation. They also provide a set of Roman numerals in the Option position. QWERTY is used primarily for Romanized typing.

Note: The QWERTY keyboard layout is used in the United States and displays the top-left keys on the keyboard in that order--Q W E R T Y. The Indian Language Kit currently does not provide a way to customize the layouts for AZERTY (French), QWERTZ (German and Swiss-French), QZERTY (Italian) or any other transliterated layout. Instead, use the Typing Tutor, included in the CD-ROM disc, to learn the Inscript keyboard.

Nepali
The Nepali keyboard layout is used only with the Devanagari script and is compatible with the mechanical keyboard layout used in Nepal. The Nepali layout was added for Nepali users used to the traditional Nepali typewriters and is simply a rearrangement of the other Devanagari layouts.

Layout Installation
If you install all the keyboards in the Indian Language Kit, they appear in this order in your Keyboards menu:

- Devanagari
- Devanagari QWERTY
- Nepali
- Gurmukhi
- Gurmukhi QWERTY
- Gujarati
- Gujarati QWERTY

Published Date: Feb 20, 2012

Network Assistant 4.0.x: Copying Invisible Files

This article describes which invisible files Network Assistant can be copied from a hard disk.
This article has been archived and is no longer updated by Apple.
Network Assistant, part of the Apple Network Administrator Toolkit (ANAT), will not copy invisible files at the root (first) level of the hard disk. This includes the desktop folder, trash, temporary items folder, and others.

Network Assistant can copy invisible files that are not at the root level of the hard disk.

This article was published in the 18 February 1997 "Information Alley."
Published Date: Feb 20, 2012

Mac OS 7.6: System Requirements

What are the system requirements for installing Mac OS 7.6?
This article has been archived and is no longer updated by Apple.
The following computers can install Mac OS 7.6:

- Computers with PowerPC microprocessors
- Computers with 68040 microprocessors
- Computers with "32-bit clean" 68030 microprocessors. All computers with 68030 microprocessors are 32-bit clean except the Macintosh SE/30, Macintosh IIx, and the Macintosh IIcx.

In addition, to install Mac OS 7.6, a computer must have at least 8 MB of RAM (random-access memory). If your computer has less than 16 MB of built-in RAM, you must use virtual memory. (Mac OS 7.6 automatically turns on virtual memory when you install it.)

To install the recommended software, you need about 70 MB of free space on your hard disk. To install all the optional components, you may need up to 120 MB of disk space; if you install just the minimum set of system software, you may only need 40 MB. The exact amount of space needed varies for different computer models and hard disk sizes.

Published Date: Feb 20, 2012

Laser Printers: Printing In Binary Data Mode

I have a Windows NT Server based network with a group of laser printers. I want to output print jobs in binary data format to the printers. I have not been able to find a way for Mac OS-based computers to print using binary mode. Can you help?
This article has been archived and is no longer updated by Apple.
By default, Mac OS-based computers communicate using ASCII data format mode. Although Mac OS-based computers do not have an option to print directly using binary data format mode, there is a way it can be done.

Using the LaserWriter 8 driver, you can save the PostScript file in binary data format. The resulting PostScript file can then be sent to the printer using the Apple Printer Utility or the LaserWriter Utility.
Published Date: Feb 20, 2012

Power Macintosh: Setting up for Use Without a Monitor

This article explains how to set up a Power Macintosh computer so you can use it without a monitor.
This article has been archived and is no longer updated by Apple.
In some cases you may want to use a Power Macintosh computer without a monitor connected to it. For example, if the computer is an AppleShare IP server, running it without a monitor provides an additional level of security. Using a computer this way is sometimes called "headless" operation. Without a monitor, you can only administer the server using the remote administration software.

To use a Power Macintosh computer without a monitor connected to you it, you will need to connect a display adapter to make the computer behave as if a monitor were connected to it. You can use the monitor adapter that came with your computer if it was part of the accessory kit, or you can use a non-Apple adapter available from several third-party companies. Use the search keyword "monitor adapter" at the Macintosh Products Guide (http://www.apple.com/guide/) to find a third-party adapter. See Note 1.

For additional information on using a computer without a monitor connected to it, refer to these articles:
58186: "**Power Macintosh G3 (Blue and White): Video Adapter Necessary for Headless Operation**"
24417: "**Macintosh Server G3: Setting Up For Remote Administration**"

Apple Monitor Adapters

This table outlines the Apple monitor adapters for use with specific Power Macintosh computers.

Computer	Adapter	Availability
Macintosh Server G3		Included in accessory kit
Macintosh Server G3 (Blue and White)	part 922-3764	Included in accessory kit
Power Mac G4 (PCI Graphics) Power Mac G4 (AGP Graphics) Power Mac G4 (Gigabit Ethernet) See Note 2.	part 922-3764	Purchase from Apple Authorized Service Provider

Notes

1. You can also make a simple jumper plug to run a computer without a monitor connected to it. For additional information refer to article 15987: "**Macintosh Monitor Sense Codes: Technical Description".**
2. The Power Mac G4 (Digital Audio), Power Mac G4 (QuickSilver), Power Mac G4 (QuickSilver 2002), and Power Mac G4 (Mirrored Drive Doors) computers do not require an adapter in Mac OS 9.
3. Most Power Macintosh computers not listed in the table above can be used without a monitor connected to them, and without a monitor adapter connected to the monitor port. If the computer does not work without a monitor connected to it, connect a monitor adapter to the computer's monitor port.
4. If you use the computer without a monitor connected to it, you should turn off any screen savers.

Published Date: Feb 20, 2012

MacDNS: Recursive DNS Server or Not

This article discusses recursive lookup, recursive DNS servers, and MacDNS.
This article has been archived and is no longer updated by Apple.
In a "recursive" lookup, the DNS server is always expected to find the definitive answer for any query. Sometimes the response to a lookup is not the actual answer, but a pointer to another name server which might know the answer. A non-recursive DNS server simply returns this pointer, rather than the final answer. A recursive DNS server contacts the new name server and asks it the original question, and repeats the process until the answer is found.

MacDNS 1.0.x functions as a "forwarding" name server. In order to resolve a name which is outside of the domain(s) it serves, MacDNS forwards the request to a parent DNS server, which then performs a recursive lookup. Normally, this parent server is your ISP's DNS server. MacDNS does not perform the recursion itself. However, from the perspective of a DNS client, recursive service is delivered.
Published Date: Feb 20, 2012

MacDNS: Exporting Zone Files & Zone Transfers

This article explains how to export the zone files from MacDNS to a UNIX server.
This article has been archived and is no longer updated by Apple.
Zone transfers are used to propagate changes between domain name servers. Typically zone transfers occur on periodic basis controlled by timers at the secondary server. If your UNIX workstation is configured as a secondary server for this domain, it will automatically initiate zone transfers periodically. The zone transfer model uses a "pull" methodology governed by the secondary server rather than a "push" initiated by the primary server (MacDNS). Page thirty of the MacDNS Administrator's Guide provides some description of these timers.

On UNIX workstations, zone transfers can be initiated (that is "pulled") using the named-xfer command. To force an immediate transfer you can use a command like this:

named-xfer -z company.com -f /tmp/db.company -s 0 primary.company.com

This requests a transfer of zone files for the domain "company.com" from the domain name server named "primary.company.com". The -f option specifies that the resulting zone file will be saved in file named /tmp/db.company. The -s flag forces an immediate transfer since a serial number of zero will always be less than the primary server's zone file serial number and indicates that a zone transfer is needed to update the local copy.

If what is desired is merely an ascii file containing the zone file, this already exists in standard format on the workstation running MacDNS and can be copied as needed. By default this file bears the same name as the domain it contains entries for (for example, company.com).

Published Date: Feb 20, 2012

Modem Control Panel: Modem Not Listed

This article describes what to do if a particular modem is not listed in the Modem control panel.
This article has been archived and is no longer updated by Apple.
Ideally, you should obtain a modem script from your modem vendor and place it in the Modem Scripts folder (System Folder:Extensions:Modem Scripts). The scrollable list of modems in the Modem control panel corresponds to the scripts in this location.

If you are unable to obtain a script from you modem vendor, you can request a recommended initialization string to use with PPP connections. With that connection script in hand you can use the following workaround:

1. Select "Null Modem 57600" in the Modem window of the PPP control (example: AT&F0) panel and close the window.
2. Select "Options" at the bottom of the PPP control panel.
3. Select the Protocol tab.
4. Place an "X" beside "Connect to a command line host" and beside "Use terminal window" and close this window.
5. Click "Connect". NOTE: At this point you have a terminal window and any text input from the keyboard will go directly to the modem after pressing the return key.
6. Enter the recommended initialization string from your modem vendor followed by the return key. The modem should respond with "OK" in the terminal window.
7. Enter the command string to dial your ISP's PPP server (example: ATDT9,555-1212).
8. Respond to the ISP server's prompts for username and password. If the login is successful, the terminal window will close and you will be prompted to save a connection script based upon the terminal window session.
9. To use this script for future PPP connections, select the "Options" button once again in the PPP control panel. This time in the Protocol section place an "X" beside "Connect to a command line host" and "Use a connect script".
10. Select the "Import Script" button.
11. Select the script saved in step 8 above and click "Open".

Subsequent PPP connection attempts will now use this custom script.
Published Date: Feb 20, 2012

Voltage and TV Standards: Europe

The listing below contains the voltage, cycles (Hz), plug type, and TV standards for most of Europe.
This article has been archived and is no longer updated by Apple.
The number to the right of the TV standard denotes the number of lines of the display:

Country	Volts	Hz	Plug Type	TV
Austria	220	50	CEE 7/7	PAL (2)
Belgium	220	50	CEE 7/7	PAL (2)
Denmark	220	50	Afsnit 107	PAL (2)
Finland	220	50	CEE 7/7	PAL (2)
France	220	50	CEE 7/7	SECAM (2)
Greece	220	50	Special	SECAM (2)
Ireland	220	50	13 A Sq.	PAL (1, 2)
Italy	220	50	CEE 7/7	PAL (2)
Luxembourg	220	50	CEE 7/7	PAL/SECAM (2)
Netherlands	220	50	CEE 7/7	PAL (2)
Norway	230	50	CEE 7/7	PAL (2)
Portugal	220	50	CEE 7/7	PAL (2)
Spain	220	50	CEE 7/7	PAL (2)
Sweden	220	50	CEE 7/7	PAL (2)
Switzerland	220	50	SEV 1011	PAL (2)
U.K.	240	50	13 A Sq.	PAL (2)
W. Germany	220	50	CEE 7/7	PAL (2)

1 = 405 lines, Vision modulation Pos, Sound modulation AM.
2 = 625 lines, Vision modulation Neg, Sound modulation FM.
3 = 625 lines, Vision modulation Pos, Sound modulation AM.
4 = 525 lines, Vision modulation Neg, Sound modulation FM.

Note: The information for some countries is incomplete. To obtain complete information, it will be necessary to contact that country's local consulate.

For other countries, see the following articles:
Article 2203: "**Voltage and TV Standards: Africa**"
Article 2204: "**Voltage and TV Standards: Asia**"
Article 2205: "**Voltage and TV Standards: Central America and Caribbean**"
Article 2207: "**Voltage and TV Standards: Near and Middle East**"
Article 2208: "**Voltage and TV Standards: Pacific**"
Article 2209: "**Voltage and TV Standards: South America**"
Article 2211: "**Voltage and TV Standards: North America and Greenland**"
Published Date: Feb 20, 2012

Apple Language Kit: Sending email In Other Languages

This article discusses using an Apple Language Kit with an email application and the associated obstacles.
This article has been archived and is no longer updated by Apple.
There are numerous obstacles to having multilingual email over the Internet which include:

1. The email application
2. Requirements for fonts or language kits to be installed
3. Gateways
4. The need for Unicode, 32-bit file systems

Here's why:

1) The e-mail application
With the possible exception of CyberDog, we are not aware of an Internet email program that is 2-byte font aware. A "closed" system (without Internet access) like QuickMail, may work properly if other requirements like fonts, language kits, gateways, and so on are met.

2) Requirements for fonts or language kits to be installed
The correct font is required to view the associated glyphs or characters. As an example, if the receiving font is missing a glyph (for instance, a "y"), then the word might appear "gl_ph" with a square (control character) or other character, based on various character mapping possibilities. Since different platforms map their fonts differently, another level of complexity gets added. Additionally, a secondary language script associated with a language kit like JLK may also be required. There's also setting a font like Osaka for JLK (in the Views control panel), so 2-byte filenames and folder names can be used by the Finder. For anyone who has used the Apple Language Kits, this should already be clear.

3) Gateways (This term means any intervening steps through which an email message passes--not the strict network definition.)
On a recent email test from Japan that we received, the KanjiTalk examples were corrupted by intervening gateways.

4) The need for Unicode 32-bit filesystems, which would (theoretically) support any font in filename space, and eventually across all major platforms.
The Mac OS today, as well as DOS/Windows, NeXTStep, OpenStep, and others may use 7-bit filesystems (with some variances). So the answer, ultimately, is to have files and directories on all platforms map to a common Unicode 32-bit name space which would allow for names to appear properly.
Published Date: Feb 20, 2012

AppleShare IP: Simultaneously Mounting Two Servers Over TCP/IP

I have two AppleShare servers on my network. I can connect to either one individually just fine. However, if I try to log on to the second server after I already have a volume from the first server mounted, I get a message that I am already logged on.
This article has been archived and is no longer updated by Apple.
When the client connects to a new server, it checks to see if the server is already mounted. It does this by comparing server signatures. The server signature is an identifier which is unique to each server. If no signature is present it will check the server addresses and server names. If the server signature is the same, the client will think that you are trying to log into the same server again and will give you a choice of volumes from the original server.

The server signature is derived from the serial number, so if there is difficulty mounting two servers, check that each server is using a unique serial numbers.

If you are using AppleShare 6.0, 6.1, or 6.1.1, there is an issue which can prevent the server signature from being properly updated. This can come up if you change the serial number on the server, or if you are upgrading with an old User & Groups data file which has an AppleShare 4.x serial number. AppleShare 6.2 addresses this issue.
Published Date: Feb 20, 2012

Voltage and TV Standards: Pacific

The listing below contains the voltage, cycles (Hz), plug type, and TV standards for most of Pacific.
This article has been archived and is no longer updated by Apple.
The number to the right of the TV standard denotes the number of lines of the display.

Country	Volts	Hz	Plug Type	TV
Australia	240	50	AS C112	PAL (2)
Fiji Is.	240	50	AS C112	----
New Caledonia	220	50	----	----
New Zealand	230/240	50	AS C112	PAL (2)
Papua New Gu.	240	50	AS C112	----
Solomon Is.	240	50	AS C112	----
Tahiti	127	60	----	----
Tonga	230	50	AS C112	----
West. Samoa	230	50	----	----

1 = 405 lines, Vision modulation Pos, Sound modulation AM.
2 = 625 lines, Vision modulation Neg, Sound modulation FM.
3 = 625 lines, Vision modulation Pos, Sound modulation AM.
4 = 525 lines, Vision modulation Neg, Sound modulation FM.

Note: The information for some countries is incomplete. To obtain complete information, it will be necessary to contact that country's local consulate.

For other countries, see the following articles:
Article 2203: "**Voltage and TV Standards: Africa**"
Article 2204: "**Voltage and TV Standards: Asia**"
Article 2205: "**Voltage and TV Standards: Central America and Caribbean**"
Article 2206: "**Voltage and TV Standards: Europe**"
Article 2207: "**Voltage and TV Standards: Near and Middle East**"
Article 2209: "**Voltage and TV Standards: South America**"
Article 2211: "**Voltage and TV Standards: North America and Greenland**"
Published Date: Feb 20, 2012

AppleShare IP 5.0: Mail Forwarding

This article describes how to set up an AppleShare IP mail server on separate Workgroup Server using only one AppleShare IP serial number.
This article has been archived and is no longer updated by Apple.
Follow the instructions below:

1. Setup the primary AppleShare IP server.
2. Create user accounts on this primary server.
3. For mail users, set Mail Forwarding to enable for each user to be installed on the second mail server. Type the DNS name for the second mail server in forwarding field. (Pages 205 to 210 of the AppleShare IP 5.0 Administrator's Manual describe this process in greater detail). Export the Users and Groups file and copy it for the second mail server.
4. Install the mail server plus the Web/File server options on the second mail server. Run the AppleShare Easy IP Setup program on this Mail server and use the same serial number as the primary AppleShare IP server. When prompted to start the servers, DO NOT DO SO.
5. Using the AppleShare IP Mail Admin application, manually start the AppleShare IP Manager application.
6. Import the previously created Users and Groups file.
7. Edit users with the IP Manager and enable mail for each user on this mail server.

Published Date: Feb 20, 2012

AppleShare IP 5.0 and Multi-Launch Applications

This article describes how AppleShare IP 5.0 works differently from AppleShare 4.x with regard to multi-launch applications.
This article has been archived and is no longer updated by Apple.
AppleShare IP 5.0 works differently with multi-launch applications. AppleShare 4.x servers would let the server administrator set from one to 250 concurrent launches for any application, whether it supported multiple launches or not.

The Finder supports a file flag called "isShared" which reports if a program is designed to be launched by multiple simultaneous users. AppleShare IP Admin now looks at that field, and enforces its setting. To summarize:

AppleShare 4.x

- isShared Finder bit is ignored
- AppleShare Admin lets up to 250 concurrent launches (250 is the default)
- Concurrent launches are restricted to the number set in this AppleShare Admin panel

AppleShare IP 5.0

- isShared Finder bit is used to determine "configurability" of concurrent launches
- If bit is clear, AppleShare IP Admin cannot configure concurrent launches, only one launch is allowed
- If bit is set, AppleShare IP Admin can allow up to 250 concurrent launches

Published Date: Feb 20, 2012

Voltage and TV Standards: South America

The listing below contains the voltage, cycles (Hz), plug type, and TV standards for most of South America.
This article has been archived and is no longer updated by Apple.
The number to the right of the TV standard denotes the number of lines of the display.

Country	Volts	Hz	Plug Type	TV
Argentina	220/225	50	Euro/Aust.	PAL (2)
Bolivia	230/115	50	US	NTSC (2,4)
Brazil	127/220	60	European	PAL (4)
Chile	220	50	European	NTSC (4)
Columbia	110/120	60	US	NTSC (4)
Ecuador	110/127	60	US/CEE 7	NTSC (4)
Fr. Guiana	220/127	50	European	SECAM (2)
Paraguay	220	50	European	PAL (2)
Peru	225	60	Euro/US	NTSC (4)
Surinam	115/127	50/60	Euro/US	NTSC (4)
Uruguay	220	50	European	PAL (2)
Venezuela	120/240	60	US/CEE 7	NTSC (4)

1 = 405 lines, Vision modulation Pos, Sound modulation AM.
2 = 625 lines, Vision modulation Neg, Sound modulation FM.
3 = 625 lines, Vision modulation Pos, Sound modulation AM.
4 = 525 lines, Vision modulation Neg, Sound modulation FM.

Note: The information for some countries is incomplete. To obtain complete information, it will be necessary to contact that country's local consulate.

For other countries, see the following articles:
Article 2203: "**Voltage and TV Standards: Africa**"
Article 2204: "**Voltage and TV Standards: Asia**"
Article 2205: "**Voltage and TV Standards: Central America and Caribbean**"
Article 2206: "**Voltage and TV Standards: Europe**"
Article 2207: "**Voltage and TV Standards: Near and Middle East**"
Article 2208: "**Voltage and TV Standards: Pacific**"
Article 2211: "**Voltage and TV Standards: North America and Greenland**"
Published Date: Feb 20, 2012

Mac OS 8: AppleShare IP 5.0 Memory Issue

I installed Mac OS 8.0 and AppleShare IP 5.0.x on my server. Now I cannot launch other applications even though my largest unused block of memory is enough to launch those applications. What can I do?
This article has been archived and is no longer updated by Apple.
AppleShare IP places its file memory cache in the Mac OS segment as listed in the About this Computer command under the Apple Menu. With Mac OS 8.0, the About this Computer allocation for Mac OS does not account for the cache AppleShare IP sets aside for its use. As a result, it appears a larger amount of memory is accessible in the Largest Unused Block than is actually available. The AppleShare IP file cache memory is in use, but is not accounted for in this window.

You need to adjust the cache allocated for other applications in the AppleShare IP Web & File Admin application. Open AppleShare IP Web & File Admin and choose Web & File Server Settings command under the Server menu. Select Cache from its pop-up menu and increase the memory allocated for other applications. Save the new cache setting before closing the window.

Note: This does not occur with Mac OS 7.6.x.
Published Date: Feb 20, 2012

Power Macintosh G3: Ethernet Fails

This article describes a situation with a Power Macintosh G3 attached to an auto-sensing 10/100 MB Ethernet hub or switch, where the computer fails to attach to the network.
This article has been archived and is no longer updated by Apple.
A 10/100 MB auto-sensing hub polls the interface to determine the speed. In the process of the hub attempting to determine the interface speed, the Ethernet driver in the Power Macintosh G3 computers is performing a self diagnostic. Unfortunately the Ethernet driver completes the self diagnostic before the hub has determined the link speed and therefore determines that the network is down.

Products Affected
Power Macintosh G3 Desktop 233
Power Macintosh G3 Desktop 266
Power Macintosh G3 Minitower 233

Solution
Updating the Ethernet driver to Power Macintosh G3 Ethernet (Built-in) v2.0.4 will solve this issue. The driver Power Macintosh G3 Ethernet (Built-in) v2.0.4 is available on Apple Computer's software update locations.

This article can help you locate the software update mentioned here:

- Article 14724: "**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.

Published Date: Feb 20, 2012

Power Macintosh G3: Does Not Have a Comm Slot

Does the Power Macintosh G3 have a Comm Slot?

This article has been archived and is no longer updated by Apple.

The Power Macintosh G3 comes with a modem slot on the Personality Card. This slot lets you install Apple's 56kbps modem card which is available as a build-to-order option. While this slot has the same dimensions as those found with Comm Slot II, it does not use Comm Slot II protocols. Comm Slot II cards other than Apple's 56kbps modem card will not work in the Personality Card's modem slot.

Published Date: Feb 20, 2012

Internet Assistant 1.0 and Apple Remote Access 3.0 Incompatibility

This article discusses a compatibility issue with Internet Assistant 1.0 and Apple Remote Access (ARA) 3.0.
This article has been archived and is no longer updated by Apple.
There is a known incompatibility between Internet Assistant 1.0 that ships with Mac OS 8 and ARA 3.0. One of the symptoms is the lack of a CCL list. To resolve this issue, you need to upgrade Internet Assistant to version 1.0.3 which is available on Apple's Software Update locations.

This article can help you locate the software update mentioned here:

- Article 14724: "**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.

Published Date: Feb 20, 2012

Power Macintosh G3: Error in Apple Video Player on Second Monitor

This article discusses an issue with Power Macintosh G3 computers with multiple monitors using Apple Video Player.
This article has been archived and is no longer updated by Apple.
The Power Macintosh G3 desktop and minitower computers include an ATI 3D RAGE II+DVD Graphics Controller chip on the logic board to provide on-board video. Power Macintosh G3 computers use the audio/video card option to provide video in/out capabilities. The audio/video card works in conjunction with the on-board ATI 3D RAGE II+DVD Graphics Controller chip to provide video-in services.

When an application is trying to capture video on a monitor attached to a PCI video card, the ATI chip's services are not available and returns an error to the application (ie. Apple Video Player) requesting video-in services. This symptom can also occur if the menu bar is on the monitor attached to the PCI video card.

For this reason, Power Macintosh G3 users should always capture video on the monitor that is attached to the on-board video connector to avoid this error message. Addtionally, the menu bar should be on the monitor attached to the on-board video connector.
Published Date: Feb 20, 2012

Power Macintosh G3: A/V Personality Card Only Support Video Mirroring

This article discusses using the A/V Personality Card for video mirroring and issues associated with adding a second monitor.
This article has been archived and is no longer updated by Apple.
The A/V personality card that comes with some Power Macintosh G3 configurations can only mirror the built-in video port.

If you wish to add a second monitor (or TV) and use it as an extended desktop, that can be accomplished by the addition of a third-party PCI video out card.

Notes:
1) It is not necessary for the Power Macintosh G3 to have 4 MB SGRAM to do video mirroring. You can attach a TV or second monitor to the RCA video out jacks of the A/V Personality card and do video mirroring with only 2 MB SGRAM.

2) Power Macintosh G3 All-In-One models will also support video mirroring from the DB-15 port on the back of the computer. This port does not support extended desktop viewing.
Published Date: Feb 20, 2012

Mac OS 8.1: FM Radio Installation

After the Mac OS 8.1 Update, the installer reported it is unable to replace the Apple FM Radio application. I then reinstalled the software that came with my TV/FM Radio System, but when I opened Apple FM Radio I got the following error message, "The FM Radio Component in the Extensions folder is not the correct version."
This article has been archived and is no longer updated by Apple.
Mac OS 8.1 Update installs Apple FM Radio application v1.4.1 and FM Radio extension v1.2. (These versions are required by Mac OS 8.1.)
The Mac OS 8.1 Update installer will not install this Apple FM Radio software if the older versions have not been previously installed, or the software is not located where the installer expects to find them.

The Mac OS 8.1 Update installer looks in the follows locations for older versions of the FM Radio software:

- Apple FM Radio - in the Applications folder of the Hard Drive
- FM Radio - in the Extensions folder of the System Folder

Important: The Apple FM Radio application should reside at the root level of the Applications folder. If the Apple FM Radio application is not in this location, the Mac OS 8.1 Update installer will not find the application and will not update it.

If you do not have the original installation disks for the TV/FM Radio System, you can force the Mac OS 8.1 Update installer to install the correct version of Apple FM Radio and FM Radio by placing "dummy" files (not folders) in the locations specified above. Follow the steps below

1. Create two SimpleText documents.
2. Save one with the name "Apple FM Radio" and the other with the name "FM Radio Extension".
3. Put the "Apple FM Radio" file in the Applications folder, and the "FM Radio Extension" file in the Extensions folder.
4. These "dummy" files will then be replaced with the real software by the Mac OS 8.1 Update installer.

Also, the Mac OS 8.1 Update installer does not provide a new Apple FM Radio Guide file which has not been revised since the original version. If you need the FM Radio Guide file, it can be found on the install disks for the TV/FM Radio System.

Published Date: Feb 20, 2012

Printers & Imaging: Frequently Asked Questions

This article contains frequently asked questions (FAQ) regarding Printers & Imaging, with answers to those questions.

Note: This document applies to Mac OS 9 and earlier.

If the questions below do not contain an answer to something you are looking for, you can continue to search for an answer by using the Search function here within the Knowledge Base or you can go to the **Older Apple Products** Discussions.

This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. I have a Power Macintosh G3 computer running Mac OS 8.1, and a printer connected via LocalTalk to my printer port. However, when I click on the printer driver in the Chooser, the printer name does not show up in the Chooser. Why is the printer not seen?
2. Since installing Mac OS 8, I receive various desktop printing error messages. What is causing this and how can I resolve it?
3. I have a Color LaserWriter which has a background haze over the entire printable surface, I have changed toners, and photo conductor along with cleaning the transfer drum. What is causing this haze?
4. After installing Mac OS 8 or 8.1, when I try to scan an image with my Color OneScanner the computer freezes. Is the software not compatible with Mac OS 8.0 or later?
5. How can I connect multiple serial devices to my Macintosh when I have no serial ports available?
6. What communication mode do the switches on the back of my LaserWriter place the ports in?
7. My Color StyleWriter 2400 keeps giving me an error indicating that the waste ink tank absorbers are full and will not let me print. Why am I getting this error message and how do I correct it?
8. I am having problems printing to my LaserWriter using TCP/IP. Is there documentation that may assist me?

Question 1: I have a Power Macintosh G3 computer running Mac OS 8.1, and a printer connected via LocalTalk to my printer port. However, when I click on the printer driver in the Chooser, the printer name does not show up in the Chooser. Why is the printer not seen?

Answer: Removing or disabling the LocalTalk PCI extension should resolve the issue. For more information, refer to article 24476: "**LocalTalkPCI Extension: LocalTalk Printing Difficulties**."

Question 2: Since installing Mac OS 8, I receive various desktop printing error messages. What is causing this and how can I resolve it?

Answer: If you revive any of the following errors, follow the troubleshooting steps in article 24306: "**Mac OS 8: Desktop Printing Troubleshooting**."

- choose print and nothing happens or jobs hang in the queue
- choose print and get "printer not found" message
- choose print and get message "The file 'XXX' will be moved to the desktop because it is not a valid print file"
- setup printer in chooser and no desktop printer created (exception being StyleWriter 4000 series)
- -192 errors caused by desktop printing
- multiple desktop printers for same printer created on desktop
- "flashing" desktop printer icon (disappears and reappears)
- cannot create a desktop printer icon

Question 3: I have a Color LaserWriter which has a background haze over the entire printable surface. I have changed toners, and photo conductor along with cleaning the transfer drum. What is causing this haze?

Answer: The background haze is usually caused by a low humidity condition. Generally, the background will be grayish in color, however, the background haze color can be, predominately, any of the colors. To eliminate the background haze try to raise the humidity level with a humidifier. Also, keep the media you print on in the same room that you have the printer in.

Question 4: After installing Mac OS 8 or 8.1, when I try to scan an image with my Color OneScanner the computer freezes. Is the software not compatible with Mac OS 8.0 or later?

Answer: The issue you are describing is caused by Virtual Memory being set to On in the Memory control panel. The issue is resolved with the Dispatcher-Ofoto driver 4.2, described in article 21132: "**Dispatcher Software: Virtual Memory Issue**."

Question 5: How can I connect multiple serial devices to my Macintosh when I have no serial ports available?

Answer: There are third-party solutions that provide multiple serial ports, such as PCI and NuBus cards along with external hardware devices. Third-party solutions are supported by the manufacturer. Three third party manufacturers are:

- Momentum
- Silicon Valley Bus Company
- Keyspan

Refer to article 21119: **"Mac OS: Third-Party Software and Hardware Guide."** for help in searching for third-party solution:

- A

Question 6: What communication mode do the switches on the back of my LaserWriter place the ports in?

Answer: The communication mode is dependent upon which LaserWriter you have. To find out which communication mode the switch(s) place the ports in on various LaserWriter printers, refer to article 24318: "**LaserWriter: Communication Mode Switch Setting Articles**."

Question 7: My Color StyleWriter 2400 keeps giving me an error indicating that the waste ink tank absorbers are full and will not let me print. Why am I getting this error message and how do I correct it?

Answer: Before taking the printer to a service provider try clearing the EEPROM. Step by step instructions can be found in the following Knowledge Base articles.

- Article 17045: "**Color StyleWriter 1500, 2400 & 2500: Waste Ink Absorbers Full Error**."
- Article 21234: "**Color StyleWriter 2200: Resetting Waste Ink Amount**."

Question 8: I am having difficulty printing to my LaserWriter using TCP/IP. Is there any documentation that may assist me?

Answer: Yes, Knowledge Base article 20148: "**LaserWriter Printers: TCP/IP Solutions Guide**." may help resolve your issue.

Published Date: Feb 20, 2012

Power Macintosh: MacIPX Errors

The two errors below may occur when using NetWare Client for Mac OS v5.11 with Power Macintosh computers:

1. When attempting to configure MacIPX on a Power Macintosh G3, the following error is reported: "Network interface Ethernet could not be selected due to error: -43 (0xffd5) please configure the Ethernet interface to ensure that the network driver can open properly."
2. When attempting to log in to the NetWare file server using the Novell Login Menu or mounting a volume through the NetWare Directory Browser, the following error is reported: "There may be a problem with your network connection or MacIPX may not be configured properly. Use the MacIPX control panel to configure MacIPX."

This article has been archived and is no longer updated by Apple.
The MacIPX Ethernet extension was updated to let MacIPX initialize normally when attempting to log into the NetWare file server.

The error message returned in item 2 above indicates that the MacIPX driver has not been opened. If you open the MacIPX control panel, you will see the Network Number and Node Number displayed as "N/A (driver not open)", which is normal after restarting the computer.

Note: NetWare is now owned by Prosoft Engineering. Refer to their website for additional information on updates.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.
Published Date: Feb 20, 2012

7.6 Device Mgr Server Update and Mac OS 8.x

Should I remove the 7.6 Device Mgr Server Update extension if I've upgraded my server to Mac OS 8 or 8.1? Is it essential to the operation of AppleShare IP (ASIP) 5.0.x?

This article has been archived and is no longer updated by Apple.

The 7.6 Device Mgr Server Update extension gets installed by ASIP 5.0.2 if the target system is Mac OS 7.6.x. The extension is not installed if the file server has Mac OS 8.0 or 8.1. If Mac OS 7.6.x is then updated to Mac OS 8.x, the 7.6 Device Mgr Server Update extension is not removed during the installation process. This extension also shows as part of the ASIP 5.0.2 package in the Extensions Manager. The functionality of this extension has been rolled into Mac OS 8 and 8.1, therefore you should remove the 7.6 Device Mgr Server Update extension.

Published Date: Feb 20, 2012

Disk First Aid 8.1: What‘s New

This article describes the differences between Disk First Aid 8.1 and 7.2.4 and why version 8.1 larger than 7.2.4.
This article has been archived and is no longer updated by Apple.
Here are the differences between Disk First Aid 8.1 and 7.2.4:

- Disk First Aid 8.1 has been updated to support Mac OS 8.1's new Mac OS Extended Format.
- Disk First Aid 8.1 now incorporates the File Manager's built in verification and repair functionality called "MountCheck". By including the MountCheck code in Disk First Aid (DFA) 8.1, DFA guarantees that it will catch all the same things MountCheck finds during startup.
- Disk First Aid 8.1 is more thorough than Disk First Aid 7.2.4 at rebuilding directory catalogues if minor problems are found.
- Disk First Aid 8.1 now checks for custom icon problems for all folders, not just the root of the hard drive.
- Users can now mount a drive by double-clicking the drive's icon in Disk First Aid 8.1.
- Disk First Aid 8.1 includes more error messages than DFA 7.2.4.

To incorporate all of these updated features, Disk First Aid 8.1 has grown to about 156K in size for the version included on the Mac OS 8.1 CD. A smaller version of Disk First Aid 8.1 is included on the Mac OS 8.1 Disk Tools PPC disk which is around 96K. This version functions identically to the CD version but has compressed and reduced resources that enable it to fit on the Disk Tools disk.
Published Date: Feb 20, 2012

QuickTime: Frequently Asked Questions

This document contains frequently asked questions (FAQ) regarding QuickTime in general, with answers to those questions. For FAQs about QuickTime 4, refer to the QuickTime 4 FAQ.

This article has been archived and is no longer updated by Apple.

Questions answered in this article:

1. How do you obtain support for QuickTime?
2. What is QuickTime Pro?
3. How do I obtain QuickTime Pro software?
4. What options do I have for ordering QuickTime Pro access keys?
5. How can I obtain a QuickTime CD-ROM?
6. If I am not completely satisfied with QuickTime Pro how do I get a refund?
7. I ordered a QuickTime Pro access key for the wrong operating system. How can I exchange my key?
8. I placed an order via the web and did not receive an email confirmation. What should I do?
9. I believe I was charged multiple times for a single transaction. What should I do?
10. My system disconnected while downloading QuickTime. How can I download the software without being charged again?
11. What should I do if my QuickTime Pro access key does not work?
12. Will the QuickTime installer remove any older versions of QuickTime?
13. What technical support resources are available for QuickTime (or QuickTime Pro)?
14. I've lost my access key for QuickTime Pro. Where can I find my key?
15. My credit card has been charged incorrectly. Who should I call?

Question 1: How do you obtain support for QuickTime?

Answer: You may call + 1 512 674 8700 to get complimentary installation and launch support. If you have recently purchased a Macintosh computer or a new Mac OS release, you may also be eligible to receive technical support with a toll free call. Refer to your in-box materials for support options included with your purchase. In addition to telephone technical support, Apple has extensive online support for QuickTime. Online support and other information for QuickTime can be found at these sites:

http://www.apple.com/quicktime
http://www.apple.com/support/quicktime/

Question 2: What is QuickTime Pro?

Answer: QuickTime Pro is the same software package as QuickTime (either downloaded or on CD-ROM). By entering a special "Pro Key" in the QuickTime Settings control panel, you unlock several new features to your existing software. See "QuickTime: Differences Between QuickTime and QuickTime Pro."

Question 3: How do I obtain QuickTime Pro software?

Answer: The QuickTime software can be downloaded from Apple's QuickTime site. QuickTime contains all the QuickTime Pro functionality, but the Pro features are locked out until you enter the access key.

Question 4: What options do I have for ordering QuickTime Pro access keys?

Answer: You can order through the the QuickTime Upgrade page and the Apple Store from most countries using a credit card. You can also call 1 (800) 676-2775 (a toll-free number) from the US and Canada using a credit card.

Question 5: How can I obtain a QuickTime CD-ROM?

Answer: Apple does not provide QuickTime on CD, it is only available as a software download.

Question 6: If I am not completely satisfied with QuickTime Pro how do I get a refund?

Answer: Refunds are not available for QuickTime Pro.

Question 7: I ordered a QuickTime Pro access key for the wrong operating system. How can I exchange my key?

Answer: You should contact Apple for assistance.

Question 8: I placed an order via the web and did not receive an email confirmation. What should I do?

Answer: If a Confirmation of QuickTime Pro Upgrade message was not displayed by your browser at the time of purchase, then your order did not go through successfully. You should place a new order. If a Confirmation of QuickTime Pro Upgrade message was displayed by your browser at the time of purchase and you have not received an email, it is likely we have the wrong email address. If you printed the confirmation message,

keep this for your files. It is adequate proof of purchase. If you did not print the confirmation and need to know your access key, call 1 (800)676-2775.

Question 9: I believe I was charged multiple times for a single transaction. What should I do?

Answer: Due to address verification problems on your credit card, it may appear that you were charged multiple times. If this happened, we apologize but the authorization should only remain for a day or two. Your card should only be charged once and for the correct amount.

Question 10: My system disconnected while downloading QuickTime. How can I download the software without being charged again?

Answer: There is no charge for downloading QuickTime. You are only charged for the access key(s). If your download did not complete successfully, then please download the software again.

Question 11: What should I do if my QuickTime Pro access key does not work?

Answer: Please verify that you have downloaded QuickTime and are entering the correct access key. Open your QuickTime Settings control panel, choose Registration from the popup menu, and enter your name and key exactly as they appear on your Confirmation of QuickTime Pro Upgrade message. Be sure you do not enter any additional characters, including spaces. Also note that QuickTime Pro access keys are case-sensitive.

Question 12: Will the QuickTime installer remove any older versions of QuickTime?

Answer: **Mac OS:** The QuickTime installer replaces your older versions. Your QuickTime plug-in is also replaced with the new backward compatible plug-in. If your QuickTime folder is in the root level, your original version of MoviePlayer or QuickTime Player is updated.

Windows: QuickTime 3 does not replace QuickTime for Windows 2.1.2 because older versions of titles and applications may depend on these files. QuickTime for Windows beyond version 3 does replace versions later than 2.1.2.

Question 13: What technical support resources are available for QuickTime (or QuickTime Pro)?

Answer: Apple offers a variety of support options for QuickTime.

Question 14: I've lost my access key for QuickTime Pro. Where can I find my key?

Answer: It is very important to retain a printed copy of your Confirmation of QuickTime Pro Upgrade message. If you need your access key, call 1 (800)676-2775.

Question 15: My credit card has been charged incorrectly. Who should I call?

Answer: If you ordered by phone, call 1 (800) 676-2775; they will investigate the charge. If you ordered through the World Wide Web, call your credit card company and have them investigate the charge.

Question 16: Can I purchase QuickTime Pro if there is no online Apple Store for my country?

Answer: Unfortunately there is no way to purchase QuickTime Pro in countries where there is no online Apple Store.

Published Date: Feb 20, 2012

Apple Hard Disk: Driver Matrix

This article provides a table showing the SCSI or ATA (IDE Disk) driver version associated with the drive utility listed. This information is available by highlighting the hard disk and selecting Get Info under the File menu.
This article has been archived and is no longer updated by Apple.

Drive Utility Name	SCSI Driver	ATA (IDE disk) Driver
Drive Setup 2.0.7	v 8.1.4	ATA 0, v3.2.8
Drive Setup 1.8.1	v 8.1.4	ATA 0, v3.2.4
Drive Setup 1.8	v 8.1.3	ATA 0, v 3.2.3
Drive Setup 1.7.3	v 8.1.2	ATA 0, v 3.2.2
Drive Setup 1.7.2	v 8.1.2	ATA 0, v 3.2.1
Drive Setup 1.7.1	v 8.1.2	ATA 0, v 3.2
Drive Setup 1.7	v 8.1. 1	ATA 0, v 3.2
Drive Setup 1.6.1	v 8.1.1	ATA 0, v 3.14
Drive Setup 1.6	v 8.1.0	ATA 0, v 3.13
Drive Setup 1.5.1	v 8.1.0	ATA 0, v 3.13
Drive Setup 1.5	v 8.0.9	ATA 0, v 3.10
Drive Setup 1.4	v 8.0.9	ATA 0, v 3.0.8
Drive Setup 1.3.1	v 8.0.8	ATA 0, v 3.0.7
Drive Setup 1.3	v 8.0.8	ATA 0, v 3.0.5
Drive Setup 1.2	v 8.0.6	ATA 0, v 3.0.3
Drive Setup 1.1	v 8.0.4	--
Drive Setup 1.0.5	v 8.0.4	--
Apple HD SC Setup 7.3.5	v 7.3.5, async	--

Published Date: Feb 20, 2012

Apple Studio Display 15-inch LCD: No sound from external speakers

I have an Apple Studio Display 15" LCD, and I have connected external speakers to it. However, I am not getting any sound from the speakers. What am I doing wrong?

This article has been archived and is no longer updated by Apple.

The Studio Display will not provide audio output unless the display is in video mode. In other words, if you are using the 15-pin video connector and monitoring computer video output but not monitoring the C-video or S-video input , you will not get sound. For more information, consult page 50 of the Studio Display user manual.

If you are monitoring the C-video or S-video input, for example from a VCR, follow these steps:

1. Wire the audio output from the VCR to the audio input on the display.
2. Use amplified speakers connected to the audio output of the display.
3. Be sure the amplified speakers have power.

For more information on connecting external speakers and video devices to the display, as well as how to switch video modes, consult Chapter 5 of the Studio Display user manual.

Published Date: Feb 20, 2012

QuickTime: Playback and Export of MPEG Video Files in QuickTime Player

QuickTime Player supports playback and export of different types of MPEG video files. This document details the MPEG video formats and how they are handled in QuickTime Player.
This article has been archived and is no longer updated by Apple.
The Moving Picture Experts Group (MPEG) is the name of a working group of the International Standards Organization (ISO). The MPEG formats standardized by the group are used for compressing and decompressing video and audio data in a digital format. MPEG files offer quality playback at much smaller file sizes than uncompressed video and audio files.

QuickTime is able to play standard MPEG-1, MPEG-2 (see Note 1) and MPEG-4 files. With QuickTime Player's Pro features unlocked (see Note 2), support is included for exporting MPEG-4 files.

- The MPEG-1 format was approved in 1991 and features quality approximating that of VHS video. Export and conversion of MPEG-1 video files is not supported in QuickTime.
- The MPEG-2 format is capable of very high quality, and is used for DVD-Video and digital television transmission. Apple's Final Cut Pro 4 and DVD Studio Pro include tools for encoding in the MPEG-2 format.
- The MPEG-4 format features scalable quality, and is ideally suited for audio and video streams over a wide range of bandwidths. MPEG-4 features the very high quality AAC audio codec.

Notes

1. Playback of MPEG-2 program and elementary streams is available via the QuickTime 6 MPEG-2 Playback Component, sold separately at the **QuickTime web site**.
2. A QuickTime Pro key unlocks export and media authoring capabilities in QuickTime Player. **Upgrade to QuickTime Pro**.

Related Documents

42617 "**QuickTime Pro: About Supported File Types**"

Published Date: Feb 20, 2012

5500/6500 L2 Cache Disable Extension: What is it?

This article describes the software extension named "5500/6500 L2 Cache Disable" and whether it is needed on your computer.
This article has been archived and is no longer updated by Apple.
The "5500/6500 L2 Cache Disable" extension is obsolete and is no longer needed.

When the Power Macintosh 5500/225, 6500/225 and 6500/250 computers first began to ship in March, 1997, Apple received several reports of users having difficulty installing various software packages on their hard drive.

The symptom was typically an error message from an installer application stating that there was some kind of installation error. After a complete investigation, Apple found that a limited number of Power Macintosh 5500 and 6500 computers would experience this symptom depending on 256K L2 cache and logic board configuration.

During this investigation period, Apple distributed the "5500/6500 L2 Cache Disable" extension to temporarily disable the 256K L2 cache DIMM on the logic board until users could have their computer serviced by an authorized Apple service provider. This allowed users to install software on their computer without difficulty.

All Power Macintosh 5500/225, 6500/225 and 6500/250 computers in production after April, 1997 should not experience this issue. This issue can occur in only a small percentage of Power Macintosh 5500 and 6500 computers that fall within these serial number ranges:

- PM 5500 from TY705xxxxx to TY716xxxxx
- PM 6500 from XB708xxxxx to XB718xxxxx

Note: The L2 Cache Disbale Extension was removed from Apple Software Updates in May, 1998 and is no longer available.
Published Date: Feb 20, 2012

Mac OS 8: Internet Applications Require Certain Extensions

Internet application such as Internet Setup Assistant, a Web browser, or an email client require certain extensions. Error messages stating that files or extensions are missing indicate that certain extensions must be enabled or reinstalled.

This article has been archived and is no longer updated by Apple.

Symptom

Error messages appear when you open an Internet application such as Internet Setup Assistant, a Web browser, or an email client. The error messages state that one or more of these files or code fragments is missing:

- InternetAccessPPC
- SOM
- AppleScriptLib
- OTUtilityLib

Solution

This behavior may occur if you held the Shift key down at system startup time or if you chose the Mac OS Base Set of extensions in the Extensions Manager control panel, causing one or more extensions to be disabled.

1. Use the Extensions Manager to enable these extensions:
   - Internet Access
   - SOMobjeccts for Mac OS
   - AppleScriptLib
   - Shared Library Manager
   - Shared Library Manager PPC
   - all Open Transport extensions
2. Restart the computer.

If you still get error messages, the extension(s) may be unusable; perform a custom reinstallation of the affected extension(s).

Published Date: Feb 17, 2012

PowerBook G3 Series: Menu Bar Items are Covered

This article discusses a menu bar viewing issue with PowerBook G3 Series computers, Now Up To Date, and Now Contact.
This article has been archived and is no longer updated by Apple.
After you install Now Up To Date and Now Contact, you may notice menu bar items are covered by other items or they are not drawn completely. To correct this situation, you need to turn the QuickContact control panel and QuickDay control panel off.
Turning off the QuickContact and QuickDay control panels should get the menu bar back to normal again. Another workaround is to turn off the clock using the Date and Time control panel.

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. To visually identify which type of computer you have, close the display and inspect the display case. A Macintosh PowerBook G3 has a small, six-color Apple logo on the display case. A Macintosh PowerBook G3 Series computer has a large Apple logo on the display case that is not six-colored.
Published Date: Feb 20, 2012

Apple Studio Display 15" LCD: PC Compatibility Card Error Message

This article provides a workaround to an error message with the Apple Studio Display 15" LCD and the PC Compatibility Card.
This article has been archived and is no longer updated by Apple.
There is an issue where you cannot use the APPLEVDO.INF file in the PC environment of a DOS Compatible Macintosh. The error message, "The specified location does not contain information about your hardware" appears. To correct this situation, copy the .INF file to a PC-formatted floppy, and when choosing have disk, point Windows to the floppy (A:) instead of the CD.

When the display is connected correctly and the software is installed in the Macintosh environment of the computer, the front controls are bypassed in favor of using the Monitors and Sound control panel. This is why you cannot access the built-in controls from the PC environment of the computer.

Temporarily disable the Monitors and Sound control panel by disabling the AppleVision extension, or disconnect the display ADB and start the Macintosh with the keyboard and mouse connected directly to the computer. Switch to the PC and adjust the display accordingly using the built-in controls on the front of the display. When finished activate the AppleVision extension, shut down, connect the ADB cabling, then restart.
Published Date: Feb 20, 2012

Drive Setup 1.5: Read Me

Name: Drive Setup
Version: 1.5
Released: June 9, 1998

Requires:
Mac OS versions 7.6, 7.6.1, 8.0 or 8.1. If you are using a version of Mac OS prior to 7.6, it is not necessary to use Drive Setup 1.5 to update your hard disk drive.

Note: Drive Setup 1.5 was tested with and is supported with U.S. English System 7.1.2 through U.S. English Mac OS 8.1.

Description:
Drive Setup installs software (called a disk driver) that allows your computer to communicate with the hard disk. Use Drive Setup 1.5 to update your disk driver or to reinitialize a disk. Version 1.5 adds support for Power Macintosh G3 computers and fixes a bug where the write cache on some ATA drives was disabled following a restart. Please refer to the documentation included with this software for complete details.

Instructions:
This software consists of a self-mounting Disk Copy compressed image (.smi) file. Download this software to your hard drive and then double-click it to use it. You do not need Disk Copy to access .smi files.
This article has been archived and is no longer updated by Apple.
About Drive Setup 1.5

This document provides important information about Drive Setup 1.5.

Drive Setup installs software (called a disk driver) that allows your computer to communicate with the hard disk. Use Drive Setup 1.5 to update your disk driver or to reinitialize a disk. When you initialize a disk, all of its contents are erased. A version history is at the end of this document.

IMPORTANT: Using earlier versions of Drive Setup to update the driver can reintroduce issues resolved with Drive Setup 1.5

When to use Drive Setup 1.5

- Immediately after you set up your computer for the first time.
- Any time you install Mac OS versions 7.6, 7.6.1, 8.0 or 8.1 on your computer, you should use Drive Setup 1.5 to update the driver on your hard disk again. If you are using a version of Mac OS prior to 7.6, it is not necessary to use Drive Setup 1.5 to update your hard disk drive.

Note: Drive Setup 1.5 was tested with and is supported with System 7.1.2 through Mac OS 8.1.

At Ease and Drive Setup 1.5
If you are using At Ease 4.0, 4.0.1, or 5.0, and wish to update your hard disk driver using Drive Setup 1.5, please follow these steps before using Drive Setup 1.5. (If you are using At Ease 3.0 or earlier, these steps are not applicable.):

- Launch the At Ease Administration program.
- From the Security menu, choose System Settings.
- Make sure that the option "Prevent users from bypassing security by starting up from a floppy disk." is not selected.

Using Drive Setup 1.5 to Update a Hard Disk

This section describes how to use Drive Setup 1.5 to update your hard disk. You may have Drive Setup 1.5 on a CD or you may have downloaded Drive Setup 1.5 from an Apple Web site.

To use Drive Setup 1.5 to update your hard disk, follow these steps:

1. Back up your hard disk and turn off any hard disk security software. Using Drive Setup to update a hard disk driver with security software turned on may cause problems.

IMPORTANT: Apple strongly recommends that you make a copy of the information on your hard disk before you update the disk using Drive Setup.

2. Insert your system software CD in the CD-ROM drive and restart your computer using the CD.

To learn how to start up your computer using a system CD, see the user's manual that came with your computer.

3. Locate Disk First Aid on the CD and open the program.

4. Select your hard disk and click Repair.

Disk First Aid checks your hard disk and repairs problems it finds. For more information about Disk First Aid, see the user's manual that came with your computer.

5. When you're finished, quit Disk First Aid and restart your computer.

6. When your computer restarts, eject the system CD and use Drive Setup 1.5 as follows.

7. Open Drive Setup 1.5.

WARNING When Drive Setup opens, do not click Initialize. Doing so erases all the information on your hard disk.

8. Select your hard disk in the List of Drives list.

9. Choose Update Driver from the Functions menu.

IMPORTANT: If Update Driver is not available, your hard disk may be protected by security software. See the manual that came with the software to learn how to turn off security while you update the disk.

10. Click OK when a message appears telling you that you must restart your computer.

11. Quit Drive Setup when you see the message, "Driver update was successful."

12. In the Finder, choose Restart from the Special menu.

If you have problems or Drive Setup fails to update the disk, see the troubleshooting chapter in the user's manual that came with your computer.

IMPORTANT: If your computer has one or more previous versions of Drive Setup on the hard disk, Apple recommends that you replace these older version(s) of Drive Setup with version 1.5 of Drive Setup.

Recovering From Disk Problems

If, when you start up your computer using a system software CD, you see a message asking you to initialize your hard disk, do not click Initialize. It may be possible to recover the hard disk using Disk First Aid or another disk utility. To learn how to use Disk First Aid, see the troubleshooting chapter in the user's manual that came with your computer. If you are using another disk utility, see the manual that came with the software.

Initializing Your Hard Disk

If you need to initialize your hard disk, see the user's manual that came with your computer or the system software CD you are using to learn how to do so. When you are finished initializing and installing system software on your hard disk, use Drive Setup 1.5 to update your hard disk. See "Using Drive Setup 1.5 to Update a Hard Disk" earlier in this document.

Tips and Troubleshooting

* Update Driver command is dimmed

If the Update Driver command is dimmed, the desired disk is either not supported, or it's previously been updated with a non-Apple utility. If the disk isn't supported, check the instructions that came with your computer or disk to see if the manufacturer includes or recommends a disk utility, and use that utility to update the driver. If you have updated or formatted the disk with a non-Apple utility, you will need to use that utility again to perform the update. To ensure a successful update, obtain the latest version of the utility.

* Using Drive Setup with Energy Saver

Before you use Drive Setup to perform an extended operation, such as testing the disk, open the Energy Saver control panel and select Never for the Hard Disk Sleep option to prevent the hard disk from spinning down before Drive Setup is finished.

* Manually mounting volumes

TA21784_Drive_Setup_Read_Me.pdf

Drive Setup allows you to partition a hard disk into several volumes when you initialize the disk. You can also select whether or not to mount a volume automatically when you start up your computer by using the "Automount on startup" option. Beginning with Drive Setup 1.3, a more reliable method of mounting volumes automatically is being used, to ensure correct operation with virtual memory. You cannot use a disk utility program (for example, SCSI Probe version 4.3) to mount volumes manually if the program does not support the new way volumes are mounted. However, you can use Drive Setup to mount volumes manually.

* Reinstalling Additional Software

Some computers come with additional software installed. If you want to reinstall this additional software using the "restore" CD that came with your computer, quit Drive Setup before you reinstall the software. Icons will not appear on the desktop if Drive Setup is open when you reinstall the software.

* Waiting for initialization to complete

Sometimes Drive Setup indicates that it has finished initializing a disk when it has not completely finished. Wait for your new volumes to appear in the Finder before continuing.

Improvements to Drive Setup (version history)

* Version 1.5--Added support for Power Macintosh G3 computers. Fixes a bug where the write cache on some ATA drives was disabled following a restart.

* Version 1.4--Added support for Mac OS Extended format for Mac OS 8.1. Supports all Macintosh computers that are supported by Mac OS 8.1 as well as all computers supported by Drive Setup version 1.3.x.

* Version 1.3.1--Fixed a problem on ATA drives that in rare cases could cause the loss of files/hard drive after a shutdown with Mac OS 7.6.1 and 8.0 systems.

* Version 1.3--Updated to work with all Macintosh computers that are supported by Mac OS 8. Incorporates Mac OS 8 appearance. Takes full advantage of the increased throughput of Ultra SCSI-2 Fast/Wide drives.

* Version 1.2.5--Limited release for Power Macintosh Workgroup Servers 7350 and 9650. NOT RECOMMENDED for other computers. Superseded by later versions.

* Version 1.2.4--Updated to access drives with SCSI IDs greater than 7 (SCSI-2 Fast/Wide). Added the ability to repair a disk that is damaged by updating with Drive Setup 1.2.2 after initializing with Apple HD SC Setup 7.1.2 or earlier.

IMPORTANT Apple HD SC Setup should only be used with older 68k-based Mac OS computers.

* Version 1.2.3--Fixed a problem in which large reads and writes on the hard disks of Performa 6400 series computers could cause hangs. Added the ability to update from Apple HD SC Setup drivers.

* Version 1.2.2--Improved recognition of secured volumes. Made minor changes for compatibility with the Mac OS 7.6 Installer.

* Version 1.2.1--Limited release for a few Power Macintosh computers sold in some European markets. NOT RECOMMENDED for other computers. Superseded by later versions.

* Version 1.2--Includes SCSI MESH patch for PCI Power Macintosh computers. Added support for selected 68k-based Mac OS computers with internal ATA hard drives.

Published Date: Feb 20, 2012

QuickTime 3: Routing MIDI Information

This article answers the following questions regarding QuickTime 3 and MIDI instruments:

- How do I route QuickTime MIDI information to a MIDI sound module or MIDI keyboard?
- The QuickTime Settings control panel only lists choices for "QuickTime Music Synthesizer" and "(No Synthesizer)." How do I add a new synthesizer configuration?
- How do I configure QuickTime to use my sound card for playing music and MIDI files, instead of using the QuickTime Music Synthesizer?

This article has been archived and is no longer updated by Apple.
You must first install a MIDI transport system in order to route QuickTime MIDI information to and from MIDI devices, or MIDI applications. Once installed, you will see additional pop-up menu choices for configuring the Synthesizer, MIDI port, and Channel options in the QuickTime Settings control panel.

NOTE: QuickTime 3 for Windows does not yet support MIDI output. As of June 1998, the QuickTime Music Synthesizer is the only available option.

The QuickTime Music Architecture supports MIDI input and output with the following MIDI transport systems:

- MIDI Manager developed by Apple Computer, Inc. **http://www.apple.com/**
- Open Music System (OMS) developed by Opcode Systems, Inc. **http://www.opcode.com/**
- FreeMIDI developed by Mark of the Unicorn, Inc. **http://www.motu.com/**

Published Date: Feb 20, 2012

PowerBook G3 Series: Battery Adjustment

This article describes securing the battery in a PowerBook G3 Series computer.
This article has been archived and is no longer updated by Apple.
The batteries used in the PowerBook G3 Series require a slight push to get them to lock into place. You will hear a click as the battery locks in. To ensure that the battery is locked in place, try pulling the battery out by the bottom lip.

If the battery is not locking into position, perform the following simple procedure:

1. Place the PowerBook on its back on a soft surface to avoid damage to the case.
2. Using a T8 Torx driver, loosen the long screw on the front side of the PowerBook expansion bay half a turn. This is the screw directly under the release mechanism.
3. Remove and reseat the battery several times, ensuring that the battery locks into place.
4. Repeat if needed for the other expansion bay.

Replacement Caution: It is not necessary to remove any of these screws during this procedure. If you do remove them, the two long screws go in the outside holes on the front edge. Installing them in any of the other screw holes could cause the screws to push through the plastics or cause the plastic to dimple.

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, read article 24604: "**PowerBook G3, G3 Series: Identifying Different Versions**"

Published Date: Feb 20, 2012

ClarisWorks 5.0v2 Updater: Read Me for Macintosh

ClarisWorks 5.0v2 Update was released on June 24, 1998. It requires U.S. English 5.0v1 of ClarisWorks for Macintosh or Windows and is available for downloading from the Apple Software Updates Web site at http://www.apple.com/swupdates .

Description: ClarisWorks 5.0v2 Updater will upgrade U.S. versions 5.0v1 to the current U.S. release, 5.0v2. This Updater WILL NOT update any international versions of ClarisWorks. ClarisWorks 5.0v2 is a maintenance release which addresses 23 bugs on both platforms. On Mac OS, the ClarisWorks application, HTML translator, and HTML config assistant are updated. On Windows, the application and HTML filter are updated. Please see the updated "Read Me" document included with this software for a complete list of issues addressed with this update.

This update includes the following:
* (Mac OS) In 5.0v1, the Microsoft Word 6 translator ("MS Word 6 Mac [MacLink]") would not appear in the list of available translators in the Open or Save As dialog boxes if Microsoft Word 6 was installed. It will now appear correctly.
* (Mac OS & Windows) Spaces that have been formatted with the underline style will now print correctly.

January 30, 1999: Apple released AppleWorks 5.0.3 Updater which updates U.S. versions of ClarisWorks 5.0v1 and 5.0v2 for Macintosh to the current U.S. release of AppleWorks 5.0.3 for Macintosh.
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ClarisWorks 5.0v2 Updater Read Me

Thank you for investing in Claris software. From time to time, we produce maintenance releases of our software. We'll add minor functionality, correct defects, or respond to customer requests. We'd like to make it as convenient as possible for you to obtain these new versions and enjoy their benefits.

Updates, in contrast to upgrades, contain few changes from the previous version. Instead of distributing the full, revised application, we can provide just the files necessary to incorporate the new functionality and fixes. When you run the accompanying Updater, it will combine your original ClarisWorks 5.0v1 files with the new changes to create new ClarisWorks 5.0v2 files.

The following files are updated with this updater:

1. ClarisWorks 5.0v1 application
2. Read Me - ClarisWorks 5.0 - document that describes general release information
3. HTML Translator (located in the Claris Translators folder)
4. HTMLConfig Assistant (located in the ClarisWorks Assistants folder)

This document provides information about:
I. Installing the ClarisWorks 5.0v2 Update
II. Problems and Issues Addressed in 5.0v2

I. INSTALLING THE CLARISWORKS 5.0v2 UPDATE

Before running the updater make sure all of your computer's System software extensions are turned off. To do this:

1. Save all open files and quit all of the programs running on your computer.
2. Hold down the Shift key on your keyboard.
3. Choose Restart from the Special menu.
4. Do not release the Shift key until the words "Welcome to Macintosh. Extensions off." appear on your screen.

IMPORTANT
Please note that if you have renamed your ClarisWorks application file to something other than 'ClarisWorks', this updater will not be able to update a file used to change Internet settings. Please make sure that your ClarisWorks 5.0v1 application file is named 'ClarisWorks' to ensure all files are updated correctly.

The ClarisWorks 5.0v2 Updater will upgrade U.S. versions of 5.0v1 to the current U.S. release, 5.0v2. This Updater WILL NOT update any international versions of ClarisWorks.

To update the ClarisWorks 5.0v1 product currently installed on your computer:

1. Double-click the "ClarisWorks 5.0v2 Updater" installer icon.
2. Read the Claris splash screen and click OK.
3. The ClarisWorks 5.0v2 installer will install the updater file on your hard disk and automatically launch it. The updater will search your hard disk for eligible files for updating. Note: Only ClarisWorks 5.0v1 may be updated using this updater. Earlier versions are not supported

by this updater.
4. Click Update. The updater will begin updating the selected 5.0v1 application. Once the updater is finished, the original 5.0v1 file is moved to the trash. Then click OK to quit and you can begin using the updated version of ClarisWorks.

II. Problems and Issues Addressed in 5.0v2

The ClarisWorks 5.0v2 Update corrects several minor problems with the initial release of ClarisWorks 5.0.

- In 5.0v1, the Microsoft Word 6 translator ("MS Word 6 Mac MacLink would not appear in the list of available translators in the Open or Save As dialog boxes if Microsoft Word 6 was installed on the computer. It will now appear in all cases.
- Spaces that have been formatted with the underline style will now print correctly in all cases.
- Curly quotes now appear correctly after section and page breaks.
- Outline styles can now be imported correctly when overwriting an existing style.
- Custom indents can now be applied correctly when editing an outline style.
- In 5.0v1, using the Print button from the Button Bar to print a spreadsheet would cause the cell grid, row, and column headings to be printed even if these options were turned off in the Display dialog box. Using the Print button now prints the file correctly as it looks on the screen.
- Documents can now be saved when ClarisWorks is run from a locked or read-only volume.
- When using a third-party Word Services-compatible spell checker, corrections are no longer misapplied to text on the previous line.
- 5.0v2 corrects a conflict with Spell Catcher which caused the scroll bars to disappear and the document unable to edit after Spell Catcher was run.
- Double-clicking on a file icon, when there are two similarly named files in the same folder, now opens the correct file.
- In 5.0v1, repeated copying and pasting of graphics within word processing files would sometimes result in insufficient memory alerts. This is corrected in 5.0v2.
- The Register ClarisWorks Assistant no longer runs automatically when the application is first launched.
- The combined 68K/PowerPC ("Fat") version of the application requires about 450K less memory than it did in 5.0v1.
- In 5.0v1 setting page numbering to begin with 0 would in some cases cause improper page ranges to be printed, and it was not possible to start a print job with the page numbered 1. 5.0v2 corrects these problems.

Mention of third party products and companies is for informational purposes only and constitutes neither an endorsement nor a recommendation.

ClarisWorks
ClarisWorks is being renamed AppleWorks and will be bundled with the forthcoming iMac computer.
Published Date: Feb 20, 2012

LaserWriter 12/640 PS: IP Address Reads 0.0.0.0

My LaserWriter 12/640 PS printer's Startup Page reads that it has an IP address of 0.0.0.0 even though I've configured it via ping to have an IP address, and I can print to it over TCP/IP. Why does the Startup Page not show an IP address?
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If you configured your Laserwriter 12/640 PS printer's IP address with ping, RARP, or BOOTP and you can print to the printer through TCP/IP, the Startup Page will always report an IP address of 0.0.0.0. If the IP address is set using the Apple Printer Utility or telnet, the address will appear on the Startup Page and Configuration Page. However, the printer will not save configuration changes if the Communication switch is in the Reset (out) position, or when a serial cable is connected to its LocalTalk port.

More in-depth information follows, based on actual observations of the LaserWriter 12/640 PS printer:

Initial Factory Setup
TCP/IP default setting is enabled with the IP address set to 0.0.0.0.

When the LaserWriter 12/640 PS first starts up, it issues a RARP request and a BOOTP request every 5 seconds for approximately one minute.

If the printer receives no responses to these initial requests, it will not respond to ICMP echo or ARP requests and cannot be printed to with TCP/IP. However, the printer will accept an ICMP echo request when the destination Ethernet address matches its Ethernet address (ping assignment) - the printer will adopt the destination IP address as its IP address, and then will respond to ARP and echo requests and accept lpd print jobs. It will also report its new IP address through utilities and on the Configuration Page (but not the Startup Page).

Behavior On Restarting (TCP Port Enabled)
What happens depends on how the IP address was previously set:

- Initial factory setup (or reset via a utility to 0.0.0.0): described above.
- IP address previously set through ping assignment: the Startup Page shows the IP address as 0.0.0.0. The pinter issues RARP and BOOTP requests and will take a new IP address if a response is received. If no response is received, the IP address previously set through the ping assignment will be used.
- IP address previously set through RARP or BOOTP: the Startup Page shows the IP address as 0.0.0.0. The printer transmits RARP and BOOTP requests and will take a new IP address if a response is received. If no response is received, the IP address previously obtained through RARP or BOOTP is used.
- IP address set through Apple Printer Utility, Apple LaserWriter Utility for Windows, or telnet: the Startup Page shows the IP address as set by the utility. The printer will not transmit RARP or BOOTP requests. The IP address can not be changed through ping assignment. ICMP echo requests with a different target IP address are ignored.

Behavior On Restarting (TCP/IP Port Disabled)
In all cases the printer does not respond to ARPs or ICMP echo packets, and no packets in the IP protocol suite are transmitted by the printer. All indications are that IP is completely turned off. Whether the IP address is printed on the startup page and reported through the utilities depends on how it had been previously set:

- IP address previously set through ping assignment: the Startup Page shows the IP address as 0.0.0.0. Utilities show the address as the value previously set through ping assignment.
- IP address previously set through RARP or BOOTP: the Startup Page shows the IP address as 0.0.0.0. Utilities show the address as the value previously set.
- IP address set through Apple Printer Utility, Apple LaserWriter Utility for Windows, or telnet: The Startup Page and utilities show the IP address as set via the utility.

Behavior With DHCP
With a Windows NT server, per Microsoft's documentation, the DHCP implementation in version 3.5.1 Service Pack 5 only responds to DHCP requests and, BOOTP requests are discarded. If you are using DHCP on Windows NT version 3.5.1 Service Pack 5, devices using BOOTP will have to be assigned a fixed IP address. Microsoft indicates a subsequent version supports BOOTP, and should let IP addresses be picked from a range of addresses. In both cases, the address would be given an "infinite lease".

The RFC 1534 document describes how a compliant DHCP server should support BOOTP clients as described below:

> The format of DHCP messages is defined to be compatible with the format of BOOTP messages, so that existing BOOTP clients can interoperate with DHCP servers. Any message received by a DHCP server that includes a 'DHCP message type' (51) option is assumed to have been sent by a DHCP client. Messages without the DHCP Message Type option are assumed to have been sent by a BOOTP client. Support of BOOTP clients by a DHCP server is optional at the discretion of the local system administrator. If a DHCP server that is not configured to support BOOTP clients receives a BOOTREQUEST message from a BOOTP client, that server silently discards the BOOTREQUEST message.

If a DHCP server is configured to support BOOTP clients, it may be configured to supply static addresses, automatic addresses or both. Static addresses are those that have been previously assigned by a system administrator and are stored in a database available to the DHCP server. Automatic addresses are those selected by the DHCP server from its pool of unassigned addresses.

Since BOOTP clients may not be prepared to receive automatic addresses, the decision to allow a DHCP server to return automatic addresses must be under the control of the system administrator. If a DHCP server supports supplying automatic addresses to BOOTP clients, this feature must be configurable and the feature must default to off. Enabling of the feature must be the result of an active decision by the system administrator.

If a DHCP server returns a automatic address, the BOOTP client will not be aware of the DHCP lease mechanism for network address assignment. Thus the DHCP server must assign an infinite lease duration for automatic addresses assigned to BOOTP clients. Such network addresses cannot be automatically reassigned by the server. The local system administrator may choose to manually release network addresses assigned to BOOTP clients.

A DHCP server that supports BOOTP clients MUST interact with BOOTP clients according to the BOOTP protocol. The server MUST formulate a BOOTP BOOTREPLY message rather than a DHCP DHCPOFFER message (i.e., the server MUST NOT include the 'DHCP message type' option and MUST NOT exceed the size limit for BOOTREPLY messages). The server marks a binding for a BOOTP client as BOUND after sending the BOOTP BOOTREPLY, as a non-DHCP client will not send a DHCPREQUEST message nor will that client expect a DHCPACK message.

DHCP servers MAY send any DHCP Options to a BOOTP client as allowed by the "DHCP Options and BOOTP Vendor Extensions" RFC [2].

The BOOTP request packets issued by LaserWriter 12/640 PS printer correctly follow the BOOTP specification.
Published Date: Feb 20, 2012

LaserWriter 12/640 PS: Stealing an IP Address

Can a LaserWriter 12/640 PS steal and attempt to use an IP address assigned to another node? I've heard one unconfirmed report suggesting this occurred, that a LaserWriter 12/640 PS acquired the address of another device, even though it was never assigned an IP address nor was being printed to over IP.
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What you describe could occur with a LaserWriter 16/600 PS with a pre-v3.0 IOP ROM which had a known bug. The LaserWriter 16/600 PS failed to check the BOOTP transaction ID and incorrectly accepted a broadcast BOOTP reply intended for another device, which should not occur to a LaserWriter 12/640 PS. The LaserWriter 12/640 PS was tested and confirmed to properly reject broadcast BOOTP packets not intended for itself.

Assuming there are no BOOTP or RARP servers on the network, an address could be acquired through ping assignment, but only a correct assignment because the LaserWriter 12/640 PS will not accept IP addresses through broadcast multicast ICMP echo requests.

It is possible a corrupt ARP table could cause an ICMP request to be generated that would cause the printer to accept the address. However, in order for this to occur the ARP table would have to associate the printer's correct 48-bit Ethernet address with the to-be-stolen IP address of another device which seems unlikely.

Based on the known characteristics of the LaserWriter 12/640 PS, Apple believes it is far more probable that the printer was inadvertently assigned an incorrect IP address through any method specified in the manual without the administrators knowledge.

Should the LaserWriter 12/640 PS retain IP addresses obtained through BOOTP or RARP when restarted? For more information please refer to Tech Info Library article #22217: "**LaserWriter 12/640 PS: IP Address Reads 0.0.0.0.**"

One way the printer could be perceived to steal IP addressees is as follows:

1. The administrator assigns an IP address to the printer through BOOTP or RARP.
2. The printer is restarted and stores the address in non-volatile memory.
3. The administrator decides to remove the printer from IP by removing the printer from the BOOTP or RARP server.

Published Date: Feb 20, 2012

Mac OS: About the Euro Currency Symbol

This document describes Apple's support of the euro glyph, including answers to the following questions:

1. How do I type the euro symbol?
2. What character does it replace in the character set?
3. Which fonts have the euro glyph?
4. How do I print the euro glyph?
5. How is it encoded?
6. Where can I find more detailed, in-depth information?

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Figure 1 The euro symbol (glyph)

On 2001-01-01 twelve member states of the European Union replaced their national currencies with a single European currency called the euro. The European Commission, the EU's primary executive body, has created a symbol for the new currency. It is used to designate the euro in the same way as dollar, pound, and yen symbols are used. Because the euro symbol (or glyph) is not a part of the character sets used by computers and printers around the world, equipment manufacturers must revise or update their products to accommodate the new symbol's use.

Apple introduced support for the euro glyph in Mac OS 8.5. This, and future versions of the OS, including localizations for nations that are not part of the euro zone, support the euro glyph as well as any existing currency characters.

Question 1: How do I type the euro symbol?

Answer: See technical document 61586: "**Mac OS: How to Type the Euro Glyph (€)**".

Question 2: What character does it replace in the character set?

Answer: The international currency symbol. (See Figure 2 below.)

Figure 2: The international currency symbol.

Question 3: Which fonts have the euro glyph?

Answer: Under Mac OS 8.5:

- Apple Chancery
- Capitals
- Charcoal
- Chicago
- Courier
- Gadget
- Geneva
- Helvetica
- Hoefler Text
- Monaco
- New York
- Palatino
- Sand
- Skia
- Symbol
- Techno
- Textile
- Times

Question 4: How do I print the euro glyph?

Answer: When an application prints using the euro glyph in a given font, LaserWriter 8.6 switches to the Symbol font and prints the glyph in that font. PostScript Level 3 printers have the euro glyph in the Symbol font, and therefore present no special problems.

Printers having interpreters prior to Level 3 do not contain the euro glyph and to compensate, LaserWriter 8.6 downloads a euro glyph character and maps it into the resident Symbol font.

In either case, LaserWriter driver 8.6 (part of Mac OS 8.5) is required to print the euro glyph.

Question 5: How is it encoded?

Answer: The euro character is encoded in the Unicode Standard as U+20AC EURO SIGN, MacRoman Encoding decimal 219, hex 0xDB. For Symbol, the glyph has been added at Option-t (MacRoman Encoding decimal 160, hex 0xA0, previously unused).

Question 6: Where can I find more detailed, in-depth information?

Answer: For detailed and in-depth information about Apple's support for the euro, see Tech Notes 1140 and 1143. The following document can help you find the Tech Notes mentioned here: 24493: "**Apple Tech Notes: What They Are, Where To Find Them**"

For more information about the euro, consult the European Union's Web site at: **http://europa.eu.int/euro/**.
Published Date: Feb 20, 2012

ClarisWorks 5.0 for Windows Updater: Installer Error

While using the ClarisWorks 5.0v2 Updater for Windows, I got the following error message, "Patch Error - Old File not found. However, a file of the same name was found. No update done since file contents do not match." What's going on?
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Here is what's happening. The updater asks you to locate the ClarisWorks application (executable) and later the HTML filter (html.f32). In the latter case, it chooses a default location, but gives you the option to click No. Clicking No causes the updater to search for an alternate location. Eventually you may find that you are presented with a standard looking Open dialog box, the updater still looking for the HTML filter. The Open button is available, even though the updater has most likely arrived at a directory that does not contain the filter, like the ClarisWorks application folder.

This scenario can be compounded in situations where you have multiple ClarisWorks installations (including previous versions of ClarisWorks), or have moved or renamed any ClarisWorks components or directories. If you click Open with the wrong directory chosen, the patch error will result. In such cases, the application is updated but not the filter.

The best remedy to this is make sure that the selected folder has an html.f32 file in it before clicking Open or OK. If you are unsure of the location of the HTML filter, it is recommended that you use Windows Find to locate it, make a note of its location, and then run the updater.
Published Date: Feb 20, 2012

Power Macintosh G3: Network Assistant & Printer Share

After installing Network Assistant on my Power Macintosh G3-based computer, I get the following message when I try to enable printer sharing for my printer, "You must install the Printer Share extension to share you printer. Use the installer on the disks that came with your printer to install the software you need." What is wrong?

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Apple has discovered an issue with Network Assistant 2.0 and 3.01 and print sharing on Power Macintosh G3-based computers running Mac OS 8.1 with System Enabler 777 (v.1.0). If the Network Assistant Startup extension loads before the Printer Share extension on some Power Macintosh G3-based computers, they will not enable printer sharing.

Workaround

Move the Network Assistant Startup extension out of the Extensions folder to the System Folder. The Network Assistant Startup extension will then load after the Printer Share extension.

Note: This workaround will also eliminate the following false error messages generated by the combination of Network Assistant 2.0.x or 3.0.x with either of the following third party programs:

- FaxSTF: message "STFinit sys ext had an error loading the ACD1.drvr"
- InterAxcess/PrinterAxcess: message "This is an illegal duplicate copy of TCPAxcess. Please purchase more copies of TCPAxcess."

Published Date: Feb 20, 2012

Power Macintosh G3: Locating Iomega Zip Driver on CD

This article explains where to find the Iomega Zip Driver on the Power Macintosh G3 Desktop and Minitower Software Install or Restore CD. This article has been archived and is no longer updated by Apple.
In the past, Power Macintosh G3 system software CD-ROM discs included the Iomega Driver extension in the Iomega folder on the compact disc. With the roll-in of Mac OS 8.1 into the Power Macintosh G3 product line, this extension was only installed into the System Folder's Extensions folder by the system software installer.

In August, 1998, Apple began shipping a newer Power Macintosh G3 system software CD-ROM disc for Power Macintosh G3 Desktop and Minitower Computers which includes the Iomega Driver extension.

The Software Install or Restore compact disc is titled: *Power Macintosh G3 Desktop and Minitower Computers Software Install or Restore*

The version and part number for this compact disc is listed as:

© 1998 Apple Computer, Inc.
SSW Version 8.1
CD Version 1.0
691-2008-A

If you would like to install just the Iomega Driver extension from the Power Macintosh G3 system software CD-ROM disc to the System Folder on the hard drive, it is located in the following folder path:

Power Macintosh G3->Full Install Pieces->Software Installers->System Software->Power Macintosh G3 Update->Parts->Iomega Driver
Published Date: Feb 20, 2012

iMac: Transferring Files Modem to Modem

This article describes how to transfer files between two computers connected to each other via modem.
This article has been archived and is no longer updated by Apple.
Yes, you can connect two modems with a phone cable and transfer data, however, Ethernet is a much better way to transfer data if your older Macintosh is Ethernet capable.

Here are the steps to transfer files via modem using a data communications terminal program, in this case AppleWorks 5. It is also helpful to use a file compression program to create one single file for simplicity when sending. Here are the steps:

1. Connect both modems with a standard telephone cable.

2. In AppleWorks, open a new Communications document.

3. For both computers, under the Settings menu set the Connections Settings for:
Method: Serial Tool
Baud Rate: 57600
Parity: None
Data Bits: 8
Stop Bits: 1
Handshake DTR & CTS
Current Port : Internal (or appropriate port)

4. For both computers, under the Settings menu set or leave the default File Transfer Settings as:
Protocol: XMODEM Tool
Method: MacBinary
Transfer Options: Standard

5. On the receiving computer running AppleWorks, pull down the Edit menu and select Preferences. In the Topic for Communications click Receiving Folder and select a receiving folder.

6. Select Open Connection from the Session menu (this will let you type modem AT commands).

7. On the sending computer, type:
ATX3D

8. On the receiving computer type:
ATA

9. The modems should begin to negotiate and indicate a connection speed.

10. Once the modems are connected, select Send File from the Session menu on the sending computer.

11. Click the Send button from the Session menu and select the document's StuffIt archive file.

12. On the receiving computer, select Receive File from the Session menu.

The computers should start to send and receive the file via XMODEM.
Published Date: Feb 20, 2012

iMac: Game Controller Support

I just installed a new game on my iMac and it does not work with the USB mouse.

This article has been archived and is no longer updated by Apple.

The iMac should support the game using the Apple USB mouse or a game controller as long as you have the proper system software extensions installed. Depending upon the version of the Mac OS installed on your iMac, you may need to download the current version of Apple Game Sprockets. You may search for the current version on the Apple Software Updates Web site at http://www.apple.com/swupdates.

Published Date: Feb 20, 2012

iMac: Editing AOL Modem Initialization String for 33.6 Kbps Connection

This article describes how to modify an America Online (AOL) modem connection script to connect at slower speed such as 33.6 kilobits per second (Kbps).
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To modify a modem profile in AOL follow the steps outlined below:

1. Select the Setup button from the Sign On window.
2. Select the Expert Setup button from the AOL Setup window.
3. Select the location you wish to edit and select the Edit button.
4. Select the Modem Options button in the Edit Location window.
5. Select the Advanced Settings button in the Modem Options window.
6. In the Advanced Settings window, change the name of the modem to something you will be able to identify at a later time, for example, iMac Internal 56K (33.6 kbps).
7. The box labeled Configuration should contain the following string: "Q0E0V1X4S95=1"
   To force the modem to use V.34 (33.6 kbps maximum speed), add "+MS=11,1" to the end of the configuration string. The result should look like:
   "Q0E0V1X4S95=1+MS=11,1"

If you have never made a successful connection to America Online, the steps above will vary somewhat. Enter the Expert Setup mode and locate the button that allows modem settings to be edited.
Published Date: Feb 20, 2012

Zip Drive: Reinstalling Software

This article explains how to reinstall Zip software after reinstalling System Software.
This article has been archived and is no longer updated by Apple.
After initializing the hard disk and reinstalling the System Software, the internal Zip drive no longer works. What happened?

Reinstalling the Zip software for your computer is a separate process. Here are the steps:

1. Drag the Iomega Tools folder from your Apple Macintosh CD to your hard drive. (The Iomega Tools folder is in the CD Extras folder on the CD.)

2. Drag both the Iomega Drive Options control panel and the Iomega Drive extension to the System Folder on your hard drive. You will be asked whether you would like to put these files in the appropriate locations. Click "OK".

3. Restart your computer.

Published Date: Feb 20, 2012

MacDNS: Incoming Requests With Additional Domain Name

This article explains why an additional domain name may appear on incoming requests in the MacDNS log file.
This article has been archived and is no longer updated by Apple.
Incoming requests in the MacDNS log file may appear with the local domain name tacked on at the end (for example, "www.apple.com.mydomain.com".) This usually occurs due to the way the client application and TCP/IP are configured on the client end. If you try to look up a name that is not terminated with a dot, the client assumes that the name is not a fully-qualified domain name and appends the default domain name to the end before sending off the request.

If your DNS client is using MacTCP, try setting '.' as the default domain name; on the client machine, type a period in the box to the left of where you entered the IP address of the DNS server.
Published Date: Feb 20, 2012

AppleShare IP: Setting Up TCP/IP On Standalone Network

This article discusses how to set up TCP/IP on a standalone network.
This article has been archived and is no longer updated by Apple.
First, make sure that Open Transport 1.1.2 and AppleShare Client 3.7 software are installed on each client in your network.

If you are planning to connect your network to the Internet, you must obtain your domain name and network address from an official internet registry. If you are not planning to connect your network to the Internet, you can still set up TCP/IP on your network without obtaining an official address. Note that if you plan on connecting to the Internet in the future, you would then need to change the configuration of your entire network, so you may want to go ahead and get an address assigned.

If you have determined that none of your computers will have external IP connectivity then you can assign IP address from the following blocks without consulting with any Internet registry:

10.0.0.0 - 10.255.255.255 (a Class A Network - 24 bits of address space)
172.16.0.0 - 172.31.255.255 (16 contiguous Class B Networks - 20 bits of address space)
192.168.0.0 - 192.168.255.255 (255 contiguous Class C Networks - 16 bits of address space).

[source: RFC 1597, "Address Allocation for Private Internets"]

An address with all host bits set to 0 refers to the network itself. An address with all host bits set to 255 is a broadcast address and goes to all hosts on the network.

Example - 192.168.0.0 refers to the Class C network 192.168.0. The address 192.168.0.255 is the broadcast address for the Class C network 192.168.0. Addresses 192.168.0.1 through 192.168.0.254 are addresses of individual computers on network 192.168.0.

Localtalk networks and hosts connected to your network through Apple Remote Access cannot carry TCP/IP traffic, only AppleTalk. If you want hosts using Localtalk to have TCP/IP access, it must be done by encapsulating TCP/IP within AppleTalk. This requires the use of a DDP-IP gateway, also known as a MacIP server. Apple IP Gateway is an example of a MacIP server.

Published Date: Feb 20, 2012

AppleShare: Mounted Volumes Limits

This article explains how many volumes a Mac OS-based AppleShare client or an AppleShare server may safely mount and operate.
This article has been archived and is no longer updated by Apple.

AppleShare Clients

With pre-3.7 Clients, AppleShare is limited by AppleTalk to 20 server connections. You can mount more than 20 volumes, but you can connect with only 20 different servers.

With AppleShare Client 3.7 you can connect to about 250 different servers over TCP/IP and 20 over AppleTalk. The practical limit here is memory in the System heap. Each connection allocates about 10k of data structures for TCP/IP, or 4k for AppleTalk.

One of the causes of the long "pauses with the network arrows" is that the client must poll each mounted volume to see if the modification date has changed. The Client sends a GetVolParms command to each mounted volume every 10 seconds. The more volumes you have mounted the more polling takes place. Usually this is a very quick operation, but response time may vary.

AppleShare IP 5.0 Servers and the 3.7 Client have fixed this problem by adding Server Notifications. The 3.7 Client does not poll the Server. Instead, the Server notifies the Client when a volume has changed. This is one of the new things in AFP 2.2.

AppleShare Servers

In the case of a server mounting volumes from other servers, the limit is the same as above, although for best performance avoid keeping remote volumes mounted.

The maximum number of volumes is 50 in all versions since AppleShare 3.0. The maximum number of items that can be shared on these 50 volumes is 100 in AppleShare 4.2.1, AppleShare IP 5.0.x, and AppleShare IP 6.x. In previous versions of AppleShare it was 50.

Published Date: Feb 20, 2012

Mac OS 8: Late Breaking Information

This article includes late-breaking information regarding Mac OS 8 (as of 1997-07-06).
This article has been archived and is no longer updated by Apple.

Installer Alias does not work to the Geoport/Express Modems Installer on the Mac OS 8 CD
The error: "The alias Installer could not be opened because the original item cannot be found" will appear if the icon is opened.

Workaround: The correct installer application can be found two folders down in: Net Install: Apple Telecom - Disk 1. Selecting the Installer alias, and choosing Get Info from the File menu will display the correct path.

Cannot Boot from Mac OS 8 CD When AppleTalk is Off
Some customers have reported that they are unable to boot from the Mac OS 8 Install CD. During the startup process, a dialog appears with the following message: 'Sorry, a system error has occurred. Bus Error Type 11. Restart with Shift key held down.' This issue is currently under investigation.

Possible Workarounds (Not all of them may be necessary):

- Make sure the computer is running from the startup disk. Activate AppleTalk (in the Chooser for classic networking, or in the AppleTalk control panel for Open Transport networking). With the Mac OS 8 CD in the CD-ROM drive, restart the computer while holding down the 'c' key.
- With the Mac OS 8 CD in the CD-ROM drive, startup your computer, while pressing the letter 'c' (or Command-Option-Shft-Delete if appropriate). When the Happy Macintosh icon appears, release all keys and hold down the Shift key until the screen appears with the 'extensions disabled' message.
- Using the Mac OS 8 CD, create a startup Disk Tools disk. To make a Disk Tools disk, open the Disk Tools folder on the Mac OS 8 CD, then open the Make Disk Tools floppies application. When you startup from the Disk Tools disk, you will then be able to run the Mac OS 8 Installer from the CD. (This will only work with Apple CD-ROM drives).
- Use the Extensions Manager to select a minimum (base) set of the Mac OS extensions. Boot from the hard disk and install from the Mac OS 8 CD. If the installer finds any issues with the hard disk, it will not be able to correct them.
- Clear the Parameter RAM (PRAM). After doing this, restart holding down the 'c' key to start up from the Mac OS 8 Install CD.

No Compatibility Issues With Mac OS 8 and Personal Web Sharing
The Read Me for Personal Web Sharing (posted separately on the Internet) incorrectly states that there are compatibility issues, and this misinformation has been posted on other web sites. There are no known incompatibilities with Mac OS 8 and Personal Web Sharing. There is no need to turn off Virtual Memory (VM), nor is there an issue with the PCI Enet driver.

Intermittent issue Copying a Large Number of Files in Low Memory Situation
Apple has identified an intermittent issue with Mac OS 8 relating to copying large number of files between volumes when memory is low. If memory is low and a very large copy is performed between two local volumes or a local volume and a shared volume, all items may not be copied correctly and no indication is given. The size of the copy necessary to produce the bug is related to how little memory remains when the copy is started but the issue most often occurs with copies of more than several thousand items. Apple is working on a fix for this issue.

Workaround: Make sure several megabytes of memory is available before starting a large copy and copy fewer files at a time. To verify that the issue has not occurred, compare the number of items in the result with that in the source. Select the source and result and select Get Info from the File menu. Compare the number of items shown in the Size field. If the number are the same, the copy finished correctly. Note that the total sizes may differ depending on the size of the source and destination volumes. Different total sizes do not indicate an issue with the copy.

Starting a 68040 computers from a CD-ROM using the c key depressed or "command-option-shift-delete" does not work when the SCSI-ID is 5

Typically, to start up using a bootable CD, holding down the "c" key or"command-option-shift-delete" will force the computer to ignore the default startup volume, and boot from the CD in the CD-ROM drive. This will not work on 68K computers if your CDdrive is set to SCSI-ID 5. The computer will chime, and display the sad Mac, which usually denotes a hardware issue.

Workaround: Select the CD as the startup disk in the Startup control panel or set the SCSI-ID to anything but 5 will work around this issue.
Note: internal CD drives shipped from Apple are not set to SCSI-ID 5.

In a pop-up window, selecting make alias or duplicate from the contextual menu (Control-click) will cause a system crash
Workaround: Selecting "make alias" from the menu, and using the contextual menu when not in a pop-up window work correctly. Option-dragging the file also works correctly.

Duplication of a folder with more than 20 items on a remote server can unexpectedly fail
When a folder with more than 20 items in it is duplicated, sometimes the copy will not complete, and no indication is given to the user. The copy failure can depend on the size of the files, and the order they are copied (which is dependent on the B-tree). The issue results in the process being

put to sleep, and thus neither computer is doing anything. Neither computer inoperative, and the copy can be terminated from the workstation by clicking the Stop button.

Workaround: Workarounds include copying the folder to another volume and back again; copying less than 20 files at a time; compressing the files into one large file, duplicating, and decompressing them again. Copying the folder to another volume will always work, the issue only occurs when duplicating some folders on another computer over a network.

MBDF virus infection can result in visual defects when the "System-wide platinum appearance" is turned off
On a virus infected computer with the System-wide platinum appearance check box unchecked in the Appearance control panel, visual defects such as issues in menus, menu items that were white turning grey when the mouse tracks over them. This indicates that the system has probably been infected with the MBDF virus. This virus causes no issues other than this color discrepancy, but should be removed by a virus removal utility.

Workaround: Use a virus utility to disinfect your computer.

Adobe Type Manager (ATM) v 4.0.2 Installation Instructions
The latest version of Adobe Type Manager, version 4.0.2, is included with Mac OS 8. Previous versions of ATM did not load properly when running the new QuickDraw GX Graphics extension. ATM version 4.0.2 addresses this issue.

Note: This version of ATM does not work with ATM Deluxe version 4.0. If you are running ATM Deluxe, do not install this updated version ATM 4.0.2.

To install ATM 4.02, you need to run the QuickDraw GX Installer located in the folder QuickDraw GX in the Software Installers folder. Here are the steps:

1. Double-click Install QuickDraw GX
2. From the main installer screen click on the Easy Install pop-up menu.
3. Select Custom Install.
4. Select ATM for QuickDraw GX.
5. Click the Install button.
6. At the end of the installation you will need to restart your computer.

Incorrect Version of Dial-up Application for MacLink Plus 9.0
The incorrect version of the automatic dial-up registration application for MacLinkPlus 9.0 was included on the Mac OS 8 CD.The International version was included instead of the U.S. version. U.S. customers who want to register MacLinkPlus 9.0 electronically can do so by visiting DataViz at: http://www.dataviz.com/register . Customers can also register by printing out the registration form, and mailing it to DataViz using the address found in the 'Contacting DataViz' file.

Mac OS Runtime for Java version 1.5 Now Available
Apple has released version 1.5 of the Mac OS Runtime for Java. This is a major update that includes performance enhancement technology that can run your Java applets and applications up to 10 times faster.

Now Utilities Not Fully Compatible with Mac OS 8
Now Software is evaluating the situation and will announce their plans in the near future. In the meantime, they recommend that you do not install Now Utilities with Mac OS 8 or if you do, that you do so at your own risk.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

- The Knowledge Base article titled "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.

This article can help you locate the software update mentioned here:

- Article 14724: "**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.

Published Date: Feb 20, 2012

LaserWriter 12/640 PS: Cannot change sleep mode timing

I have noticed that my LaserWriter 12/640 PS printer powers itself down into a sleep mode after every print job. It occurs about 5-10 seconds after the job finishes. I would like to change that. The LaserWriter Printer Utility software does not allow me to change the "sleep setting" on my LaserWriter 12/640 PS. I am able to change it on other Apple laser printers; how can I change the sleep setting on my LaserWriter 12/640 PS?
This article has been archived and is no longer updated by Apple.
The LaserWriter 12/640 PS engine (the fuser, scanner and other internal parts, not including the main controller board) goes to sleep 10 seconds after the completion of a job. This is a low-level sleep feature and is a built-in, static characteristic of that print engine. It cannot be changed by the Apple Printer Utility or by downloading PostScript code.

Note: The LaserWriter 12/640 PS is Energy Star compliant and is registered with the US Environmental Protection Agency (EPA) as such.
Published Date: Feb 20, 2012

Mac OS: "There Is A Problem With The Disk..." Error Message

This article discusses the following error message: "There is a problem with the disk <disk name>. Some information may have been lost. Check any recently-used files for data loss, and use a disk-repair program on the disk."
This article has been archived and is no longer updated by Apple.
This message is displayed when an error is encountered writing data from the disk cache to the hard disk, indicating an issue with the disk named in the message. You should run Apple Disk First Aid or another drive utility application to address this issue.

Since this error does not occur when data is saved but when the disk cache is written to the hard disk, the operating system displays the message and not the application that was used to edit the data.

Published Date: Feb 17, 2012

Mac OS 8: New Icons in Finder Windows

After installing Mac OS 8, I have noticed icons to the left of the "number of items" and "amount of disk space available" at the top of a window. What are these for and why do they change?

This article has been archived and is no longer updated by Apple.
The icons you describe are related to the View Options available under the View Menu in the Finder, shown in Figure 1. These options are also available in later versions of the Mac OS.

Figure 1 View Options Window

Each window you open in the Finder can have a separate view set, which is why one window may look different than another. When a window is set in Icon Mode, the view can have three options for the arrangement of icons:

- **None** has no specific arrangement, no little icon at the top of the window as shown in Figure 2.

Figure 2 None View

- **Always Snap to Grid** always aligns the icons neeatly, shows the small "grid" icon as shown in Figure 3.

Figure 3 Always Snap To Grid View

- **Keep Arranged** shows the four folder icons as shown in Figure 4.

Figure 4 Keep Arranged Icon View

The "Keep Arranged" choice has the following options:

- By Name
- By Date Modified
- By Date Created
- By Size
- By Kind
- By Label

Additionally, the View Options window allows you to choose between large or small icons.
Published Date: Feb 17, 2012

Power Macintosh G3: Read Me

This article contains the Read Me document for the Power Macintosh G3.

This article has been archived and is no longer updated by Apple.

Important Information For Your Power Macintosh G3 Computer

This document provides information about your Power Macintosh G3 computer that supplements the information in the Setting Up Your Power Macintosh manual. Read this document for information about known conditions with this release and possible solutions. Also read the About Mac OS 8 document located in the Mac OS Read Me Files folder on your hard drive. For up-to-date news and compatibility information, please see the Apple Support web site at http://www.apple.com/support/

Notes about installing additional memory, PCI cards, or SCSI devices

- Important safety information
  Please read your manual, Setting Up Your Power Macintosh, for important installation and safety information before attempting any equipment installation. This manual may be downloaded in PDF format from http://www.info.apple.com/manuals/manuals.taf . Pay particular attention to the chapters Connecting Additional Equipment and Installing PCI Expansion Cards, Additional Memory, and Internal Storage Devices.
- Connecting additional SCSI devices
  One of the most common mistakes made when installing SCSI devices is incorrect termination. Please refer to the manual chapter Installing PCI Expansion Cards, Additional Memory, and Internal Storage Devices for information on how to correctly terminate the SCSI bus.
- Removing external SCSI devices
  Never remove an external SCSI device without turning off the power to your computer. Removing an external SCSI device when the computer is powered on may result in the SCSI bus hanging. If this occurs, you must power down the computer to correct the situation.

Notes about features on your Power Macintosh G3

- RAM Disk
  The RAM Disk on the Power Macintosh G3 computer will be reinitialized on every restart or reboot. Any data you have stored on a RAM Disk should be copied to the hard drive before a restart or shutdown. The RAM Disk feature should only be used to store data and applications which will be used between restarts and shutdowns.
- TV Mirroring
  The TV Mirroring feature allows you to record to a VCR or view on a television, what is displayed on the computer monitor connected to the built-in graphics port. This feature is available on Power Macintosh G3 computers with video input and output ports.
  The feature is accessed by using the TV Mirroring Control Strip. For more information on TV Mirroring, refer to the section in the manual on Connecting video equipment for output from the computer.
  When TV Mirroring is turned on, the frequency and resolution of the computer monitor is changed to match that of the television. Because the television frequency is not commonly supported by many computer monitors, the monitor display may become distorted or black. In such a case, it is better to turn off the monitor by deselecting the Leave Monitor On option in the TV Mirroring Control Strip. Since fixed frequency monitors by definition cannot change frequency to match the television, they are automatically turned off, and the Leave Monitor On and Overscan options are made unavailable.
  If you inadvertently turn on TV Mirroring, the feature will automatically turn itself off in 10 seconds unless you select the OK button in the confirmation dialog.
- Video Capture
  Video capture is available on Power Macintosh G3 computers with video input and output ports.
  The video capture feature will work with VM on, but the quality of captured video will improve if VM is turned off. AppleTalk should also be made inactive while capturing to prevent network activity from introducing slight variations in the quality of captured video.
  To achieve the best video quality, the monitor connected to the built-in graphics port should be set to Thousands of Colors and the capture window size should not exceed 320 x 240 pixels. The best compression to use with this computer is Component Video.
  If you have problems capturing video or the captured video looks very pixelated, try reducing the resolution and/or number of colors on the monitor connected to the built-in graphics port. Your computer may not have enough video memory to capture video and display high resolution graphics at the same time. Refer to the Setting Up Your Power Macintosh manual for information on installing more video memory.
  If you have a monitor connected to the built-in graphics port and another monitor connected to a PCI graphics card, then to capture video you must have the video capture window of whichever application you are using completely contained on the monitor connected to the built-in graphics port.
- Sound source selection
  There is a new SoundSource Control Strip which allows you to select the sound source your computer will use. This feature is similar to selecting a sound source (tuner, CD, tape, phono,...) to listen or record, on your home stereo system. Alternately, the sound source on your computer may be selected in the Sound panel in the Monitors & Sound Control Panel.

Notes about compatibility

- Apple PC Compatibility cards
  The Apple PC Compatibility card with 100MHz 586 processor (7 inch card) and 166MHz Pentium processor (12 inch card) are supported using PC Setup 1.6.3 software version or greater. Updates to PC Setup may be downloaded from the Internet at http://www.apple.com/support/
  The Apple PC Compatibility card with 100MHz Pentium processor (12 inch card) is not supported by the Power Macintosh G3 computer.

- QuickTake 150 camera
  The QuickTake 150 camera should be connected to the modem port and not the printer port. The printer port will not reliably communicate with the camera.
  Some of the QuickTake scripts under the Script menu in the Apple PhotoFlash 2.0.1 application may not work.
- Apple Telecom software
  The GeoPort modem is not supported by the Power Macintosh G3 computer.
- QuickTime Conferencing and Apple Media Conferencing
  QuickTime Conferencing and the Apple Media Conferencing application are not supported by the Power Macintosh G3 computer.
- Apple QuickTime Conferencing camera
  The QuickTime Conferencing camera may be used with the Power Macintosh G3 computer with video In/Out ports, by using an RCA to RCA video composite cable along with the cable supplied with the camera. Connect the cable supplied with the camera to the S-Video In port on the computer. On the split end of the cable, connect the power connector to the camera's power port. Instead of connecting the video portion of the split cable to the camera, use an RCA to RCA video composite cable to connect between the camera and an RCA Video In port.
- Apple Video Player and 3rd party video capture hardware
  The Apple Video Player application which comes with your computer is intended to work with Apple video capture hardware. Using Apple Video Player with 3rd party video capture hardware, may not work or result in poor quality video capture. Contact the 3rd party video capture hardware manufacturer to find a compatible video capture application.
- Apple Token Ring card
  The Apple Token Ring PCI card is not supported by the Power Macintosh G3 computer.

Notes about known conditions

- No sound or cannot record from an application
  If you do not hear any sound or are not able to record from an application or system utility such as Alerts in the Monitors & Sound Control Panel, then you may not have the correct sound source selected. Some applications and system utilities require the user to select an appropriate sound source to use. Use the SoundSource Control Strip or the Sound Monitoring Source pop-up menu in the Sound panel of the Monitors & Sound Control Panel. For more information on sound source selection, see the Help Guide in the Monitors & Sound Control Panel.
- Connecting to both LocalTalk and Ethernet
  If you have Ethernet selected in the AppleTalk Control Panel, you should disconnect any LocalTalk cable. A software condition prevents having a LocalTalk cable connected to the computer if the AppleTalk Control Panel is not set to the Modem or Printer port. If you wish to switch between Ethernet and LocalTalk, you must disconnect the LocalTalk cable when you switch to Ethernet.
- Slower performance when printing to a LocalTalk printer
  A software problem may cause your computer to exhibit slow performance while printing over LocalTalk on a high traffic network. During printing, the mouse pointer may appear to move sluggishly.
- Loss of Ethernet after installing new software
  Some software installers will inadvertently replace newer extensions with older versions which are not compatible with this computer. This frequently occurs with the Ethernet (built-in) extension. If Ethernet is unavailable after installing software, check that the Ethernet (built-in) extension is version 2.0 or greater. If it is older, then you will have to reinstall your system software from the System Software CD which came with your computer.
- Booting from the wrong hard drive or device
  If your computer has more than one hard drive and it is booting from the wrong drive, check the setting in the Startup Control Panel. You must select a device in the Startup Control Panel or the computer will select the first device it finds to boot from.
  If you have a bootable CD in the CD-ROM drive and restart, the computer may boot from the CD instead of the device selected in the Startup Control Panel. To get around this condition, restart the computer again, and press the eject button on the CD-ROM drive to eject the CD.

Miscellaneous

- Removing System Software items using the PowerMac G3 Installer
  The Remove feature of the PowerMac G3 installer does not work and should not be used. Instead, the individual pieces you wish to remove must be dragged from the System Folder manually.

Published Date: Feb 20, 2012

Apple Displays Software 1.5.5: Read Me

This article is the Read Me for Apple Displays Software 1.5.5
This article has been archived and is no longer updated by Apple.
Apple Displays Software 1.5.5 was released on November 7, 1997. It requires US System 7.5 or greater running on a 68040 or PowerPC based Mac OS computer. System 7.1.x customers should use AppleVision 1.5.3 or earlier.

Previously known as AppleVision software, this version includes the following changes from AppleVision 1.5.3:

- AppleVision 750 and AppleVision 850 displays were renamed the Apple ColorSync Displays.
- Mac OS compatibility is 7.5 and later.
- Name of the disk set and installation changed to Apple Displays Software.
- DigitalColor Meter changed so magnification and RGB values work on a non-AppleVision monitor.
- The Sound Volume control strip module was added to the disk set.

This software consists of two Disk Copy NDIF (New Disk Image Format) compressed images, which require Disk Copy 6.1 or later to use. Download this software to your hard drive and then double-click it to use it. Disk Copy is available in the Utilities folder in the Apple Software Updates Library.

Disk Copy 6.1 (or later) or Disk Image Mounter 2.1 (or later) from Apple are the recommended applications to access all disk images released by Apple and are the only supported applications to access NDIF disk images.

Information About Your Apple Displays Software

This document contains important reminders and the latest product information.

Installation and usage tips

- Follow the instructions in the manual that came with your monitor to install the Apple Displays software.

Important: If you upgrade your system software, you should reinstall the Apple Displays software.

- For a complete list of files installed by the Apple Displays software installer see the last section of this Read Me.

The Apple Displays software version 1.5.5 can be used by all Apple monitor customers, including ColorSync Displays and other Mutiple Scan monitors. Any references to an AppleVision Display is the same as the Apple ColorSync Display.

- For the latest version of the Apple Displays software, visit the product updates section of Apple's web site (**http://www.apple.com**).
- The Sound control panel installed in the Apple Displays Software Extras folder (inside the Apple Extras folder) is for use with third party (non-Apple) specialized audio hardware. See the documentation that came with your audio hardware to determine if you need to use the Sound control panel.
- The Monitors control panel installed in the Apple Displays Software Extras folder (inside the Apple Extras folder) is for use with monitor extensions on Macintosh 68040 computers and Power Macintosh 6100, 7100 and 8100 computers.
- Some application programs do not properly support resolution changes you make to your monitor. You may have to close and restart your program for the program to recognize the resolution changes.
- If you get an error message when opening the Monitors & Sound control panel that says the System AV extension needs to be installed, and you already have the extension installed, there probably isn't enough memory available to load the extension. Try disabling some extensions or control panels, or turning on Virtual Memory, in order to allow the extension to load during startup.
- On Macintosh Quadra computers with EnergySaver version 1.1, always wake up your monitor by moving the mouse. Waking up the monitor by using the keyboard can cause your computer to freeze and scramble the screen image.
- References to "Pantone" in the manual for this product pertain to PANTONE trademarks of Pantone, Inc.

For Apple ColorSync Displays

- Be sure to attach the ADB cable to the ADB port on the back of your Mac OS-based computer. This connection is required in order to use the advanced features of your monitor. See your monitor manual for instructions on how to attach this cable.
- After you set up your monitor and install the Apple Displays software, use the Monitors & Sound control panel to adjust the color and geometry settings. The monitor is pre-adjusted at the factory, but you can change the settings to better suit your viewing environment and preferences. You can adjust the color, brightness and contrast, image rotation and size, and many other screen geometry settings. See the "Monitors (Apple Displays Extras)" topic in Mac OS Guide for more information.
- If you're upgrading from previous AppleVision or Apple Displays software, and you have custom color settings you want to retain, export the settings as ColorSync profiles before using the new software. Otherwise, your old settings will be lost when you use the new software. For information on exporting ColorSync profiles, see your ColorSync Display manual.
- PANTONE Computer Video Simulations used in DigitalColor Meter software may not match PANTONE-identified solid color standards. Use current PANTONE Color Reference Manuals for accurate color. All trademarks used in DigitalColor Meter software are the property of Apple Computer, Inc, Pantone, Inc., or other companies.

- If the corners of the screen image appear discolored, the monitor rotation setting may need to be adjusted. See the topic "How do I adjust the screen geometry settings" in the "Monitors (Apple Displays extras)" section of Monitors & Sound Guide for instructions.
- If you set the Auto Recalibration feature so that it activates after a resolution change, your monitor will recalibrate when you start up or restart your computer. This happens because the monitor changes resolutions during the startup process. You can turn on the "Ask before recalibrating" option to display a dialog box that will allow you to cancel the recalibration before it occurs. Or, turn off Auto Recalibration for resolution changes to prevent recalibration. Refer to Macintosh Guide for more information about recalibration settings.
- If the shutdown dialog box erroneously appears when you use the AppleVision monitor with an Apple PowerBook Duo MiniDock or similar third-party product, try using an external keyboard connected to the monitor instead of the PowerBook computer's keyboard.
- Changes you make to screen geometry apply only to the monitor's current resolution. When you change resolution, the geometry of the screen may also change.
- If you have the Radius Soft Precision Color extension (version 3.1.1) installed, you should remove it before using the AppleVision software. The extension provides multi-resolution support for Built-in video on Quadra and Centris computers using system software without the Display Manager software. It is not needed with the Apple Displays Software because Display Manager is automatically installed as part of the Display Enabler extension.
- When you're adjusting the monitor using the buttons on the front of the monitor, press one button at a time. If you press more than one button at once, the settings might change to all the way up or down. If you are using an AppleVision 1710, pause for a second between pressing one button and another. Rapidly switching which button you press can sometimes lead to errors.
- If you change from an AppleVision or ColorSync monitor to a small-screen (14" or less), fixed-resolution monitor, set the resolution of the AppleVision or ColorSync monitor to 640 x 480 before turning off your computer and disconnecting the monitor. This will prevent scrambled video during the startup process on the small-screen monitor.
- The Apple Displays Software supports resolutions of up to 1600 x 1200 on some ColorSync monitors. See the documentation that came with your monitor to determine if your model supports this resolution. Some video cards, such as ATI's XCLAIM GA, will support this resolution but may require an updated monitor driver from the manufacturer. ATI is currently creating this update; please contact ATI customer service for more information.
  Note: The ATI graphics card included with the Power Macintosh 9500 does not support 1600 x 1200 resolution and cannot be modified with the new XCLAIM GA driver.

Sound tips

If your Apple monitor has speakers and a built-in microphone, the following tips may help you:

- At high volume levels, playing some sounds may cause patterns or distortion of the screen image. The audio circuitry in the monitor is high-powered in order to provide excellent sound quality, not loud volume. Reducing the volume setting will prevent the image from being affected by the sound.
- If an audio or video application, such as Apple Video Player, is in use, you might not be able to change the sound input setting in the Monitors & Sound control panel. This occurs because the application is using the sound driver and won't allow Monitors & Sound to change the setting. To change the Sound Input setting, quit the other application; then change the setting.
- On Macintosh Quadra 840AV & Macintosh Quadra 660AV, and PowerBook 540c computers, the Mute checkbox in the Sound window of Monitors & Sound does not mute the sound. If you select the checkbox, the X is removed automatically and sound is not muted.
- On Macintosh Quadra 630, Macintosh LC 630, and Power Macintosh 6200 computers, make sure you specify the correct sound input setting in the Monitors & Sound control panel. For these computers, choose Line In in the Sound Input pop-up menu.
- On Macintosh Centris 650 computers, sound input is automatically set to microphone if you have one connected to your computer. In order to record from another source, such as the internal CD player, disconnect the microphone from the computer.
- On the AppleVision 850AV monitor, in some cases when the monitor goes to sleep or the computer restarts, sound may briefly play through the monitor speakers even when the speakers are muted. This occurs when you have a live, line-level microphone (or other audio device) plugged into the monitor's sound input port and the Monitor Sound Preferences are set to "Mute Monitor Speakers while in Energy Saver Mode".

Notes about Macintosh (or Mac OS) Guide

- Some topics in Macintosh Guide may contain information that is incorrect after you install the Apple Displays software. If a Guide directs you to use the Sound control panel or the Monitors control panel, refer to the instructions under the topics "Monitors (standard settings)," "Monitors (Apple Displays extras)," and "Sound" for correct information about using your ColorSync monitor.

Files installed with Apple Displays Software version 1.5.5

The following files are installed by the Apple Displays software installer, unless a newer version of the same file is already installed on your system.

Filename	Version	Location
DigitalColor Meter	1.1	Apple Menu Items
Monitors & Sound	1.3.2	Control Panels
ColorSync System Profile	2.1	Control Panels
Control Strip	1.4.1	Control Panels

Energy Saver (only installed for non-PCI Macintosh users)	1.1	Control Panels
Display Enabler (note space before the D in the name)	2.2.2	Extensions
73/75/76/8500 Graphics Driver	1.4	Extensions
Apple Guide	2.1.1	Extensions
ColorSync	2.1.2	Extensions
PANTONEColor Picker	2	Extensions
Sound Manager	3.2.1	Extensions
SystemAV	1.3	Extensions
Â°AppleVision	1.5.5	Extensions
AV Monitors Guide	2.1.2	Extensions:Global Guide Files
DigitalColor Meter Guide	1.1.2	Extensions:Global Guide Files
Monitors & Sound Guide	2.2.1	Extensions:Global Guide Files
Monitor Bitdepth	1.0.2	Control Strip Modules
Monitor Resolution	1.0.2	Control Strip Modules
Sound Volume	1.4.1	Control Strip Modules
ColorSync Profiles	-	Preferences:ColorSync Profiles
Apple Displays Read Me	1.5.5	Apple Extras:Apple Displays Software Extras
SimpleText	1.3.1	Apple Extras:Apple Displays Software Extras
Monitors	7.5.6	Apple Extras:Apple Displays Software Extras
Sound	8.0.5	Apple Extras:Apple Displays Software Extras

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Published Date: Feb 20, 2012

PowerPC G3 Processor: Description

This article describes the PowerPC G3 microprocessor.
This article has been archived and is no longer updated by Apple.
The emergence of the PowerPC G3 processor marks the third generation in the development of advanced processor technology. The PowerPC G3 builds on many of the features pioneered by the PowerPC 603 and 604. However, this chip differs from the earlier implementations of PowerPC processor technology in several significant ways, all designed to further increase performance:

Mac OS optimization

The PowerPC G3 is the first processor specifically optimized for the Mac OS. Optimization designs were based on many popular Macintosh applications to ensure minimal branching and the shortest data transfer routes -- resulting in a very efficient processor.

Innovative level 2 backside cache design

The level 2 cache is the link between level 1 on-chip cache and main memory. By relocating the level 2 cache from the logic board to the processor card (hence the name "backside"), the CPU can access level 2 cache directly using a dedicated bus specifically designed for this purpose. This enables the more effective use of level 2 cache, because even relatively large amounts of data can be stored and accessed rapidly and efficiently.

As processor speed increases, so does the performance value of the backside cache. This design significantly speeds access to the level 2 cache and dramatically increases the overall system performance.

Large level 1 (on-chip) data and instruction caches

Level 1 cache is a small amount of high speed memory built into the processor and in the PowerPC G3 this cache has been doubled from 32k to 64k. With 32k dedicated to instructions and 32k dedicated to data, the processor can store frequently requested data in the cache and access it more rapidly.

State-of-the-art manufacturing process technology

Finally, the 0.25-micron process used to produce the PowerPC G3 processors does more than merely boost performance; it also enables the creation of smaller, cooler processors with extremely low power requirements.

Backside Cache -- Unleashing Processor Performance

By far the biggest boost to performance that the PowerPC G3 offers can be credited to its incorporation of an approach to level 2 cache memory known as backside cache. This approach effectively bypasses limitations on the speed at which transactions between the processor and the level 2 cache can occur. Earlier PowerPC processors used the system bus to access both the level 2 cache memory and the main memory, which could result in conflicts. For example, under the previous approach, at processor clock speeds above 200 megahertz, the CPU would often stall as it waited for data to arrive from the level 2 cache. To prevent such slowdowns, the PowerPC G3 processor features a new dedicated bus that handles only the CPU/cache transactions. This bus can operate at higher speeds than the system bus -- speeds that relate incrementally to the clock speed of the processor. This enables the more effective use of level 2 cache, because even the relatively large amounts of data they can store can be accessed by the process
or rapidly and efficiently. In fact, as clock speeds increase, so does the performance value offered by the backside cache design.

Learning to Look Beyond Megahertz

The performance enhancements of the PowerPC G3 processor significantly reduce the usefulness of clock speed in attempting to compare computer performance. Apple systems based on this processor consistently outperform systems with higher clock speeds -- in fact, they also outperform Pentium II- based systems. Some examples follow.

- A 250-megahertz Macintosh PowerBook G3 is faster than a 266-megahertz Pentium II desktop.*
- A 233-megahertz Power Macintosh G3 is faster than the Power Macintosh 6500/300 and the Power Macintosh 8600/300.**
- A 266-megahertz Power Macintosh G3 provides performance that is on average 30 percent faster than that of a comparable 266-megahertz Pentium II system.*

All of which means that it's more important than ever to consider overall product design -- megahertz alone does not tell the whole story.

* Based on Apple internal tests running 15 separate Adobe Photoshop filters.
** Based on Apple internal testing using MacBench 4.0 processor performance scores. Actual performance on applications may vary. MacBench is a subsystem-level benchmark that measures the relative performance of Mac OS-based systems.
Published Date: Feb 20, 2012

PowerBook G3: Video Out Specifications

This article describes the PowerBook G3 built-in video out specifications.
This article has been archived and is no longer updated by Apple.
Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, please see the following article:

Article 24604: "**PowerBook G3 & G3 Series: Identifying Different Models**"

The PowerBook G3 computer has a VGA connector built into the backplane for an external video monitor. The connector is standard DB9/15 for use with VGA or SVGA monitors.

You can connect a VGA or SVGA monitor all the way up to a 21" monitor with 1024 x 768 resolution projected in thousands of colors (16-bit). Video projection devices can also be attached via the VGA connector.

Video Adapter
An optional video adapter allows the user to connect a standard Apple video cable to the computer. The adapter is identical to that shipped with PowerBook 2400 and 3400 series systems. The adapter is black and enables the PowerBook G3 computer to recognize a wider range of monitor types. The Apple part number for the new adapter is 590-0289-A.

Video RAM
The PowerBook G3 ships with 2MB of VRAM which enables it to support up to 24 bits per pixel on most monitors.

NOTE: The video RAM (VRAM) is not upgradeable.

Video Mirroring
There is no video mirroring control panel/strip. If the external monitor can display 800 by 600 pixels at 60 Hz, the PowerBook G3 computer can display simultaneously on both the external monitor and the flat panel display. This mode of display, called Simulscan, provides the same information on both displays.

Examples: When connected to a 17" Multiscan monitor:

- 640x480 67Hz - Millions of colors (external monitor available only)
- 800x600 60Hz - Thousands of colors (Simulscan "Mirroring")
- 800x600 75Hz - Millions of colors (external monitor available only)
- 832x624 75Hz - Millions of colors (external monitor available only)
- 1024x768 75Hz - Thousands of colors (external monitor available only)

Important Information About Using an External Monitor

If you connect an external monitor to your PowerBook G3 and it remains black, you can try the following: While holding down the Control Key, click on the Monitors Resolution Control Strip module. A list of all the supported resolutions will be shown. You can click on the appropriate resolution for your monitor and the PowerBook G3 will start displaying video on it. If you use this procedure, you will need to repeat it once you shut down or put the PowerBook to sleep. Please consult your monitor specifications in order to decide which resolution is the most appropriate.

Monitor Pixel Depths

The following table lists the pixel depths supported for each type of monitor.

Monitor Pixel Depths		
Monitor type	Resolution	Bits per pixel
12-inch color	512 by 384	8, 16, 24
12-inch monochrome	640 by 480	8, 16, 24
13-inch and 14-inch color	640 by 480	8, 16, 24
VGA and SVGA (1)	640 by 480	8, 16, 24
SVGA	800 by 600	8, 16, 24
SVGA	1024 by 768	8, 16
Full-page monochrome	640 by 870	8
Full-page color	640 by 870	8, 16
16-inch color	832 by 624	8, 16, 24
Apple 15-inch multiple scan	640 by 480	8, 16, 24

Apple 15-inch multiple scan	800 by 600	8, 16, 24
Apple 15-inch multiple scan	832 by 624	8, 16, 24
Apple 17-inch multiple scan	640 by 480	8, 16, 24
Apple 17-inch multiple scan	800 by 600	8, 16, 24
Apple 17-inch multiple scan	832 by 624	8, 16, 24
Apple 17-inch multiple scan	1024 by 768	8, 16
Apple 20-inch multiple scan	640 by 480	8, 16, 24
Apple 20-inch multiple scan	800 by 600	8, 16, 24
Apple 20-inch multiple scan	832 by 624	8, 16, 24
Apple 20-inch multiple scan	1024 by 768	8, 16
NTSC TV monitor (1, 2)	512 by 384	8, 16, 24
NTSC TV monitor (2)	640 by 480	8, 16, 24
PAL TV monitor (1, 2)	640 by 480	8, 16, 24
PAL TV monitor (2)	768 by 576	8, 16, 24

Table Notes	
1	Indicates the startup resolution for non-multiple scan monitors. Other resolutions can be selected using the Monitors control panel or the control strip.
2	Requires Apple Presentation System (M2895LL/A) or similar adaptor.
-	When connected to a non-multiscan monitor you will only get the external monitor at the set resolution. Example: Apple 16-inch monitor, 832 by 624 at 75Hz - Thousands of colors

Apple Presentation System (M2895LL/A)
The Apple Presentation System makes it easy for you to create a presentation on your Macintosh, then display it to an audience on a larger television screen exactly as it appears on your Macintosh display. You can also connect your Macintosh to a VCR and record your presentation on videotape for easy and inexpensive distribution. The Apple Presentation System comes with software, cables, and video converter box. Unlike the Apple Video and Apple Video/TV systems, the Apple Presentation System can be used with any Macintosh that has a VGA or Apple 13/14-inch RGB output. This list includes, but is not limited to, any PowerBook with VGA or Apple 13/14-inch RGB output, Macintosh LC, Performa 400-600 models, Centris, Quadra, or other Macintosh systems with VGA video out.
Published Date: Feb 20, 2012

Power Macintosh G3: Audio and Audio/Video Card Internal Connectors

This article describes the internal connectors on Audio and Audio/Visual cards.

This article has been archived and is no longer updated by Apple.
There are five different connectors used on the two cards. A description of each card's connectors is below.

Audio Card

The Audio card has two connectors on the circuit board itself.

Figure 1, Audio card connector locations

Connector J8
This connector is for a Front Control Panel module which includes infrared, headphone jack and volume controls. This connector is not used in the Mini-Tower and Desktop Power Macintosh G3 systems.

Connector J10
This connector is used for adding an internal modem to your Power Macintosh G3. Currently the Apple/GV 56K Flex modem is the only modem qualified for this slot.

Audio/Video Card

The Audio/Video card has four connectors on the circuit board itself.

Figure 2, Audio/Video card connector locations

Connector J2
This is a DAV connector. The Digital Audio Visual (DAV) connector permits PCI cards that have DAV connectors to manipulate audio and video signals directly from the Audio/Video card.

Connector J4
This connector is for a Front Control Panel module which includes infrared, headphone jack and volume controls. This connector is not used in the Mini-Tower and Desktop Power Macintosh G3 systems.

Connector J6
This connector is for a TV/FM Tuner module. This connector is not used in the Mini-Tower and Desktop Power Macintosh G3 systems.

Connector J7
This connector is used for adding an internal modem to your Power Macintosh G3. Currently the Apple/GV 56K Flex modem is the only modem qualified for this slot.

Published Date: Feb 20, 2012

Power Macintosh G3: Monitor Power Port Not Switched

This article explains why the display doesn't power off when the system is shut down.
This article has been archived and is no longer updated by Apple.
This behavior is normal for your computer. The monitor power port on the Power Macintosh G3 Mini-Tower and some Power Macintosh G3 Desktop enclosures is not switched off when the computer is powered off. This means a display connected to this port will not power off when the computer is powered off. This port acts as if you plugged your display directly into a power outlet.

Note: The Power Macintosh G3 (Blue and White), Power Mac G4 (PCI Graphics), and Power Mac G4 (AGP Graphics) have the same type of monitor power port.

For example, if you connect a non-EnergyStar compliant display such as the Apple High Res RGB Display, the power light will stay on even if your G3 is powered off. If you connect an EnergyStar compliant display such as the Multiple Scan 17-inch display, the monitor will go into a sleep state indicated by an amber light instead of the green power light when your G3 is powered off.

If your monitor is not powering off or going into a sleep state when your Power Macintosh G3 is shut down, you will need to manually power it off using the power switch.

Note: Most Power Macintosh G3 Desktop computers have a switched monitor power receptacle (AC power to the monitor power recepticle is cut once the computer is powered off).
Published Date: Feb 20, 2012

Apple Software Restore: How to Perform a Single Disc Restoration

This article explains how to use Apple Software Restore to reinstall the operating system and application programs that came with your computer.

Note: This article is not about the Apple Restore program that came with some Macintosh Performa computers.

This article has been archived and is no longer updated by Apple.
Important: If your computer came with only Mac OS 9.1 or earlier installed on the hard disk, you should follow the steps in this article. If your computer came with both Mac OS 9.1 and Mac OS X installed on the hard disk, you should follow the steps outlined in article 60847: "**Apple Software Restore: How to Perform a Multiple Disc Restoration.**"

Apple Software Restore allows you to restore the operating system and application programs that came with your computer.

Follow these steps to restore software to your hard disk:

1. Find the Software Restore CD that came with your computer.
2. Insert the disc into the drive.
3. Choose Restart from the Special menu to restart the computer.
4. Press the C key until the "Welcome to Macintosh" message appears. (This key allows the computer to start up from the CD.)
5. Locate and double-click the Apple Software Restore icon.

Figure 1 Apple Software Restore configurations
Note: Versions of Apple Software Restore prior to 1.3.1 do not have the Volume Format option.

6. Select the configuration you wish to restore, then click Restore.
7. When the process is finished, Restart your computer to use the new software.

Published Date: Feb 20, 2012

PowerBook: SCSI Cables Used

This article provides pictures and descriptions of SCSI cables used with PowerBook computers.
This article has been archived and is no longer updated by Apple.

HDI-30 System Cable (No graphic shown)
Attaches an external SCSI device (hard drive, Zip drive, CD-ROM, scanner, etc.,) to the PowerBook. Has 29 pins (one corner pin "missing") in the small end that attaches to the PowerBook.

HDI-30 SCSI Disk Adapter
Makes the PowerBook act like a hard drive when attached to another computer (referred to as SCSI or Target Disk Mode). Has 30 pin in the small end that goes into the PowerBook. The 30th pin tells the PowerBook to act like a hard drive. When booted this way, the PowerBook's monitor will show a SCSI icon floating across the display.

Figure 1, HDI-30 SCSI Disk Adapter

Pass-through SCSI Terminator
Used between the PowerBook and another SCSI Device.

Figure 2, Pass-through SCSI Terminator

Peripheral Interface Cable
Used to connect one SCSI device to another.

Figure 3, Peripheral Interface Cable

Extender Cable
Used as an extension between two devices on the SCSI chain.

Figure 4, Extender Cable

Published Date: Feb 20, 2012

Power Macintosh G3 Desktop and Minitower: CD Contents

What are contents of the white Power Macintosh G3 "Apple Macintosh CD" that ships with the desktop and minitower computers?
This article has been archived and is no longer updated by Apple.
Below are the contents of the white Power Macintosh G3 "Apple Macintosh CD". This is only for the Power Macintosh G3 CDs with the following version and part number information:

SSW Version 8.0
CD Version 1.0
691-1533-A

Power Macintosh G3 (Root level of CD)

Installing Mac OS 8 (Read Me) 8.0.1
Mac OS Install (Installer App.) 1.1
PowerMac G3 Install (Installer Script) 1.0
PowerMac G3 ReadMe (Read Me) 1.0

Power Macintosh G3: America Online

Before You Install 1.0.1
Install AOL 3.0 (PPC) 4.0

Power Macintosh G3: CD Extras

About CD Extras 8.0.1
Acrobat Reader 3.0

- Install Acrobat Reader 3.0
- ReadMe-Reader

Additional Desktop Patterns

- Additional Desktop Patterns 1.0

Additional Desktop Pictures

- Acropolis
- Beach on Ko Samui
- Birds in Flight
- Cancun Sunset
- Cliffs of Moher
- Fish Eagle
- Galway Bay
- Glacier National Park
- Highway 395
- Hong Kong at Night
- Islamorada Sunrise
- Lily Pad
- Long Island Sound
- Mac OS Background
- Midsummer Night
- Moraine Lake
- Oasis in Baja
- Red Clouds
- Toronto Skyline
- Tuolumne Meadows
- Yosemite Valley
- Yucatan

Additional Modem Scripts

- About Additional Modem Scripts 1.0
- Archive 1.0

- Install Modem Scripts 1.0
- Installer 4.0.6

AppleCD Player

- About Enhanced CDs 1.0
- AppleCD Player 1.0
- AppleCD Player Guide 1.0
- AppleCD Player Read Me 1.0
- Click here if you have Explorer 1.0
- Click here if you have Netscape 1.0
- At Ease 3 CDROM Prefs Patch
- At Ease 3 CDROM Prefs Patch 1.0
- At Ease 3 CDROM Prefs Read Me 1.0
- At Ease 3.0.3 Updater
- At Ease 3.0.3 Updater 3.0.3
- At Ease 3.0.3 Updater Read Me 1.0
- At Ease-IDE Utility
- At Ease-IDE Utility 1.0
- At Ease-IDE Utility Read Me 1.0
- Eric's Solitaire Read Me 1.0
- Eric's Solitaire Sample 1.0.2

HyperCard Updates

- About Mac OS 8 Stack Update 1.0
- HyperCard Player
- Addresses 2.3
- Audio Help 2.3.6
- Home 2.3
- HyperCard Player 2.3.5
- What is HyperCard? 2.3
- Place in AppleScript Stacks
- HyperCard AppleScript Reference 2.3.6
- Place in HyperCard Help
- Help Extras 2.3.6
- HyperCard Help 2.3.6
- HyperTalk Reference 2.3.6
- Place in HyperCard Stacks
- Audio Help 2.3.6
- Iomega Driver 5.0.3
- Copy Machine 1.2.2
- Copy Machine Help 1.2
- Iomega Drive Options 1.2
- Iomega Guest 5.0.3
- Manuals and Help
- Iomega Drive Options Help v4.7
- Iomega Guest Help v4.7
- Iomega Software Manual v4.7
- Tools Online Help v4.7
- Tools 5.0.3

Movie Player Extras

- About MoviePlayer Extras
- Animation
- QT Clock 30fps
- MoviePlayer Extras
- Authoring Extras 2.5
- Goodies 2.5
- Music
- BACH1.MOV
- BACH2.MOV
- BEETHOV.MOV

TA21816_Power_Macintosh_G_Desktop_and_Minitower_CD_Contents.pdf

- MOZART1.MOV
- Photos
- PHOTOS.MOV
- Model Masters
- Globe
- Model Masters Read Me
- Viewpoint Datalabs Intl.
- Manatee
- Raptor
- Viewpoint Datalabs Read Me
- Wraptures textures
- Wraptures Read Me
- Bricks-Scoured
- CloudScape
- Clover
- Jelly Beans
- Marble
- Marble-Blue
- Satin-Silver
- Tile-Blue
- Water-Pool
- wood-Floor
- Xaos Fresco textures
- Foam
- Grade
- Spear
- Xaos Tools Read Me
- Yarrow
- Adapters
- Cumulus 2.0.1.add 2.0.1
- Cumulus Frame Module 2.0.1
- Cumulus Illustrator Adapter 2.0d1
- Cumulus Photoshop PlugIn 2.5b1
- Cumulus RT Adapter 2.0
- Cumulus XTension 2.0.2
- Canto*s Distributors.pdf
- Cumulus Network Network 2.5b2
- Documentation
- About the Adapters
- About Cumulus Frame Module
- About Cumulus Photoshop PlugIn
- About Illustrator Adapter
- About PageMaker Addition
- About RagTime Adapter
- About the Cumulus XTension
- About the File Filters
- About 3D Metafile Filter
- About AIFF Filter
- About Canvas 3.5.2 Filter
- About EPSF Filter
- About Frame-Filter
- About FreeHand 3 Filter
- About FreeHand 4 Filter
- About FreeHand5 Template Filter
- About GIF-Filter
- About JPEG/JFIF Filter
- About Movie Filter
- About MultiAd-Filter
- About PageMaker 5 Filter
- About PDF Filter
- About PhotoCD Filter
- About Photoshop 2.5 Filter
- About Photoshop Filter
- About PICS Filter
- About PICT Filter

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- About PowerPoint 3 Filter
- About QuarkXPress Filter
- About RIFF Filter
- About Scitex CT Filter
- About Scitex LW Filter
- About the Persuasion Filters
- About TIFF Filter
- About topCAD Filter
- Cumulus 2.5 and AppleScript.pdf
- Export Formats
- Empty Image Database
- File Filters
- 3D Metafile Filter 2.5b1
- 3D Metafile Text Filter 2.5b1
- AIFF Filter 2.0.1
- Canvas 3.5 Filter 2.5 D-2.0
- EPSF Filter 2.5b2
- Frame Filter 2.0.1
- FreeHand 3 Filter 2.0.2
- FreeHand 4 Filter 2.0
- FreeHand 5 Template Filter 2.5 D-2.0
- FreeHand Reader 1.2
- GIF Filter 2.0.1b1
- JFIF Filter 2.5b1 2.5b2
- JPEG Filter 2.5b1 2.5b2
- MacPaint Filter 2.0
- Movie Filter 2.0.1
- MultiAd Filter 2.0.1
- PageMaker 5 Filter 2.0.1
- PDF (TEXT) Filter 2.0.3
- PDF 2.0 Filter 2.0.3
- Persuasion 2 Filter 2.0.1
- Persuasion 3 Filter 2.0.1
- PhotoCD Filter 2.0
- Photoshop 2.5 Filter 2.0.1
- Photoshop Filter 2.0
- PICS Filter 2.0.1
- PICT Filter 2.0.3
- PowerPoint 3 Filter 2.0
- QuarkXPress Filter 2.0.2b1 2.0.2
- RIFF Filter 2.0
- Scitex CT Filter 2.0
- Scitex LW Filter 2.0
- TIFF Filter 2.5b2
- topCAD Filter 2.0
- More Scripts
- count file types
- Cumulus->FileMaker
- Cumulus->FileMaker
- Cumulus2FileMaker
- CumulusContactSheet
- Hot Folder
- Hot Folder.Script
- keywords as one text
- keywords to text
- make new rows
- new keyword from current date
- Open DB with Remote Cumulus
- PICT File to Thumbnail
- Remove All Keywords
- text to keywords
- Thumbnails to PICT Files
- update database users
- Read Me
- Scripts

- Assign Multiple Keywords
- Catalog QuickTake Camera 2.0
- Copy DCS Files to Single Folder
- Folder Has Moved
- Join Duplicate Keywords
- Move Folder
- Optimize DB for Information
- Optimize DB for Safety
- Optimize DB for Speed
- Redirect File Reference
- Server Has Changed
- Gerbils! 1.0.3
- Gerbils! Read Me
- Models Folder
- Red Truck
- X29 Jet
- Textures Folder
- Foam
- Jelly Beans
- QuickDraw 3D Extras Read Me

QuickTime Sample

- The Old Apartment - BNL

Spanish Text-to-Speech 1.5

- Installer 4.0.3
- Mexican TTS 1
- Installer 4.0.3
- Mexican Spanish TTS Tome 1 1.5
- Mexican TTS Install Script 1.5
- SimpleText 1.2
- Using Mexican Spanish TTS 1.4.1
- Mexican TTS 2
- Mexican Spanish TTS Tome 2 1.5
- Mexican TTS 3
- Mexican Spanish TTS Tome 3 1.5
- Mexican TTS Install Script 1.5
- Using Mexican Spanish TTS 1.4.1

Power Macintosh G3:Disk Tools

Disk Tools.img 1.1.2

Power Macintosh G3:Internet Explorer

Before You Install 1.0.1

Internet Explorer 3.01Installer 4.5

Internet Explorer Readme

Power Macintosh G3:Internet Extras

Before You Install 1.0.1

Castanet Tuner v1.0d

- Castanet Tuner Installer 1.0d 4.5

International Internet Access 1.0

ISP Information Form 1.0

The PointCast Network

- Install PointCast Network -PPC 4.5
- What is the PointCast Network? 4.7.5

Power Macintosh G3:Mac OS Read Me Files

About English Text-to-Speech 1.5

About Mac OS 8 8.0.1

About Multiprocessing Software 1.0.2

About QuickDraw GX 1.1.6

About QuickDraw 3D 1.0.6

Mac OS 8 Install Manual.pdf 1.0

Open Transport Information

- About Open Transport 1.2 1.0
- Open Transport UG 1.0
- OT 1.2 Technical Info 1.0

Open Transport/PPP Information

- About Open Transport/PPP 1.0.1
- OT/PPP User*s Manual.pdf 1.0

Power Macintosh G3:Software Installers

- AppleTalk Files
- AppleTalk 58.1.5
- EtherTalk Phase 2 2.5.7
- Network 3.0.2
- Network Resources 1.5
- Remote Only 2.1
- TokenTalk Phase 2 2.5.7
- Installer 4.0.3
- Modem CCLs
- 3Com Impact Analog 14.4 2.1
- 3Com Impact ISDN 56K 2.1
- 3Com Impact ISDN 64K 2.1
- Apple Modem 2400 2.1
- AT&T Dataport 288 2.1
- AT&T KeepInTouch 2.1
- Dayna CommuniCard 28800 2.1
- Farallon Netopia 56K 2.1
- Farallon Netopia 64K 2.1
- GeoPort/Express Modem 2.1
- GeoPort/Express Modem CNG 2.1
- Global Village Gold/Silver/Merc 2.1
- Global Village Platinum 2.1
- Hayes Accura 288 2.1
- Hayes Optima 14.4 2.1
- Hayes Optima 288 2.1
- Megahertz CruiseCard 14.4 2.1
- Megahertz CruiseCard 28.8 2.1
- Metricom Ricochet Wireless 2.1
- Microcom MicroPorte 4232bis 2.1
- Microcom QX/4232bis 2.1
- Motorola 326xV34 2.1
- Motorola BitSURFR 56K 2.1
- Motorola BitSURFR 64K 2.1
- Motorola Power/Lifestyle 28.8 2.1
- Practical Peripherals V.34 2.1

- Prometheus ProModem 144e 2.1
- Prometheus ProModem 96 2.1
- PSI PowerModem II 2.1
- PSI PowerModem III/IV 2.1
- Supra 144 2.1
- Supra 288 2.1
- TDK DF2814 2.1
- Telebit QBlazer 2.1
- Telebit T3000 2.1
- Telebit Worldblazer 2.1
- US Robotics Universal 2.1
- Zoom V-series 2.1
- Read Me 2.1
- Remote Access Clnt Install 2.1.1
- Remote Access Files
- Remote Access Files Archive 2.1
- Remote Access Resources 2.1
- Cyberdog Disk 1
- Cyberdog Archive 1 2.0
- Cyberdog Install Script 2.0
- Install Cyberdog 4.0.6
- Cyberdog Disk 2
- Cyberdog Archive 2 2.0
- Cyberdog Disk 3
- Cyberdog Archive 3 2.0
- Cyberdog Archive 4 2.0
- Cyberdog Disk 4
- Cyberdog Archive 5 2.0
- Cyberdog Resources
- Cyberdog Install Script 2.0
- Install Cyberdog 4.0.6
- English TTS 1
- English TTS Install Script 1.5
- English TTS Tome 1 1.5
- Installer 4.0.3
- SimpleText 1.2
- Using English Text-to-Speech 1.5
- English TTS 2
- English TTS Tome 2 1.5
- English TTS 3
- English TTS Tome 3 1.5
- English TTS 4
- English TTS Tome 4 1.5
- English TTS 5
- English TTS Tome 5 1.5
- English TTS Install Script 1.5

Published Date: Feb 20, 2012

Power Macintosh G3 makes no sound from the internal modem

The loss of internal modem sound should first be distinguished from the loss of modem functionality in general.
This article has been archived and is no longer updated by Apple.
This article assumes that the modem is functional in other respects besides not providing audio feedback during the course of the connection sequence, which typically proceeds through a brief dial tone, then the usual touch tones as the telephone number is dialed, and finally the modem handshaking tones (squealing, static, and so forth). If all of this audio feedback is absent, but the modem otherwise works, proceed as follows:

1. Open the Monitors & Sound control panel and click on the "Sound" button at the top of the control panel.
2. Adjust the "Computer System Volume" slider such that it is at a level at which the system beep can be heard distinctly (the system will beep each time the slider is adjusted).
3. Click on the "Sound Monitoring Source" pop-up menu and ensure that "Internal Modem" is selected. The audio feedback from the modem should now return.

Published Date: Feb 20, 2012

Vicom Internet Gateway: Running TCP/IP Applications On Gateway

I am running AppleShare IP, MacDNS, and Vicom Internet Gateway. With the server set to load at startup, or MacDNS in the startup items folder, the system crashes after the Finder loads.
This article has been archived and is no longer updated by Apple.
This issue is documented in the Read Me file accompanying Vicom Internet Gateway updaters available on their website.

From the Vicom Read Me:

> **Running TCP/IP server applications on the Gateway machine**
>
> If any TCP/IP server applications are run on the Gateway machine the mirror port should be set as follows:
>
> - If the Internet Proxy port has a static address then this port should be mirrored. Users accessing the server from inside the network access it at this address, as do users on the Internet.
>
> - If the Internet Proxy port has a dynamic address then the Internal (normally Ethernet) port should be mirrored. Users inside the network access the server at the internal address. Users on the Internet access the server at the address of the Internet Proxy port. Users from the Internet would of course need to know the address the Internet Proxy port had obtained.
>
> To mirror a port, select the port required in the status window and select "Mirror This Port" from the "Ports" menu.
>
> Please note that the Internet Gateway must be loaded and turned ON, before any server applications are loaded.

Vicom recommends TCP/IP be set to load only when needed. Set AppleShare Web & File Server not to load at startup. This can be done in the Server Settings window of AppleShare Web & File Admin. To have the server launch at startup along with Vicom and MacDNS place aliases of each application in the Startup Items folder. Rename Vicom Internet Gateway alias so that it comes first alphabetically. Vicom also needs to be set to turn itself on when it launches. Refer to Vicom documentation for information on how to accomplish this.
Published Date: Feb 20, 2012

Power Macintosh G3: Ethernet/Comm Slot Support

This article explains the Communications Slot (Comm Slot) on Power Macintosh G3 computers, and which kinds of cards may be used with them.

This article has been archived and is no longer updated by Apple.
The Communications Slot architecture was introduced in 1994 as an extra slot that would provide customers with the ability of using inexpensive communications cards, such as Ethernet and modem cards. These slots were mainly made available on entry-level systems. This architecture predated the widespread adoption of the Peripheral Component Interconnect (PCI) architecture by the computer industry, which turned out to be another way for users to inexpensively add capabilities to their computers.

The original Comm Slot architecture was known as Comm Slot I, and was the one used on computers such as the Power Macintosh 6200, 6300, 5200, and 5300.

The Comm Slot II architecture is used with the Power Macintosh 5400, 6360, 6400, and 6500 series computers, as well as the Twentieth Anniversary Macintosh.

The two architectures share similar features, but they are not identical. To prevent the wrong card from being used, notches are placed on the connector in various locations. This prevents the wrong card from being used.

Cards which are designed for both types of slots are called "universal" cards.

G3 computers support a new "personality card" architecture, which is used in a slot, known as a PERCH slot, on the logic board. Two personality cards are currently available for this slot. Each card provides sound support for the computer, as well as a modem slot on the card. The A/V card also works with video in and out.

The PERCH slot on the logic board is not a Comm Slot. This slot cannot be used for any type of Comm Slot II-capable card.

The slot on the personality card uses the same connector as a Comm Slot II connector, and Comm Slot II cards will fit. However, the slot on the personality card is a modem slot, only providing serial support for Comm Slot II-capable modems. This slot does not work with Ethernet cards, and should not be regarded as a Comm Slot II slot.

When a modem is plugged into the slot on the personality card, the external modem port on the back of the computer is disabled.

If you require an alternate Ethernet solution beyond that which is provided with the RJ-45 10T port that comes with all G3 computers, you may wish to explore a third-party PCI Ethernet card.
Published Date: Feb 20, 2012

Mac OS 8: Desktop Picture Control Panel Troubleshooting

This article offers troubleshooting tips for the Mac OS 8 Desktop Pictures control panel.

This article has been archived and is no longer updated by Apple.

Troubleshooting tips

- The Desktop Pictures control panel requires AppleScript to operate correctly. Using the Extensions Manager control panel, ensure that the Desktop Pictures control panel is active.
- Some extensions may prevent the Desktop Pictures control panel from operating correctly. Conflict Catcher 3 from Casady & Greene may not work with Desktop Pictures. Casady & Greene released a newer version, Conflict Catcher 4, that resolved the issue. If you have Conflict Catcher, make sure you have the current version which you can obtain from Casady & Greene.
- Use the Extension Manager control panel to switch to either Mac OS 8 Base or All extensions, and restart your computer.
- If Desktop pictures does not work with Mac OS 8 Base extension set selected, locate the Desktop Pictures Prefs file in the Preferences folder inside your System Folder and drag it to the Trash. Restart the computer and try again. If it still does not work, delete the prefs file again and reinstall the Desktop Picture control panel from your original CD (it is listed in Control Panels in the Custom Install options).
- If it works with Mac OS 8 extensions, but does not work with all your extensions active, it is likely that another extension is conflicting with the Desktop Pictures control panel and you will need to troubleshoot each extension.

For more information on the Desktop Pictures control panel introduced in Mac OS 8, refer to article 24175: **Mac OS 8: Limitations of Desktop Pictures Control Panel**.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

Article 17159: "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.

Published Date: Feb 20, 2012

Mac OS: Desktop Printing Troubleshooting

This article offers a procedure to resolve issues related to desktop printing.
This article has been archived and is no longer updated by Apple.
Some users have reported the following difficulties with desktop printing:

- choose print and nothing happens or jobs hang in the queue
- choose print and get "printer not found" message
- choose print and get "The file 'XXX' will be moved to the desktop because it is not a valid print file" message
- setup printer in Chooser and no desktop printer created (except the StyleWriter 4000 series)
- -192@18 error caused by desktop printing
- -43@87 error caused by desktop printing
- multiple desktop printers for same printer created on desktop
- "flashing" desktop printer icon (disappears and reappears)
- cannot create a desktop printer icon

Solution

If you have printing difficulties that are eliminated by disabling desktop printing, the following steps will usually restore desktop printing functionality:

1. Start with desktop printing disabled (this is important). You can disable desktop printing using the Extensions Manager control panel.
2. Drag all desktop printer icons from the desktop to the Trash.
3. Drag the printing prefs folder (located inside the Preferences folder, which is inside the System folder) to the Trash.
Note: If necessary, save your watermark files before deleting the printing prefs folder, or re-install the watermark files after troubleshooting is complete.
4. Drag the PrintMonitor documents folder (in System folder) to the Trash.
5. Add 100 Kilobytes (100K) to minimum and preferred memory sizes of the Desktop PrintMonitor application (in Extensions Disabled folder) by selecting the application and Choosing Get Info from the File menu.
6. Re-enable desktop printing extensions using the Extensions Manager control panel.
7. Restart and rebuild the Desktop file by pressing the Apple and Option keys down until a few seconds after the rebuild is complete.
8. Try renaming AppleTalk printers (for example, most LaserWriter printers) using the Apple Printer Utility.

If you are experiencing any of the above issues, you should upgrade to Mac OS 8.1 or later available from the Apple Software Updates Web site at http://www.apple.com/swupdates. Many desktop printing issues are resolved in this update.

For more information on issues with desktop printing, refer to Knowledge Base article 30413: "**Macintosh Desktop Printing: 'Endless Loop' Issue**"
Published Date: Feb 20, 2012

Power Macintosh G3: Modem Software Read Me

This article contains the Power Macintosh G3 Modem Software Read Me document.

This article has been archived and is no longer updated by Apple.

Necessary Information for Using Your Optional Internal Modem

If you ordered an internal modem when you purchased your Build-to-Order Macintosh computer, you need to install some of the software on this CD for the modem to reach its maximum data transfer speed and send and receive faxes. This Read Me describes the software and includes instructions for installing it on your computer.

The software you need is in the two folders alongside this Read Me file. These items are:

- a modem script that enables the Apple/GV 56K modem to reach its maximum 56.6 K data transfer speed
- an electronic document called "ATCom56flex(apple).pdf," which contains technical information required for creating customized modem scripts
- FaxSTF software, which lets you use your modem to send and receive faxes
- an electronic document containing instructions for using the FaxSTF software (You can find and read this document after you install the FaxSTF software.)

Important: Installing the modem script does not guarantee that your modem will always reach its maximum speed. Data transfer speed depends on several factors.

To open the electronic documents, you need to install Acrobat Reader 3.0 on your computer. You can find the application in the CD Extras folder on the Power Macintosh CD that came with your computer.

Installing the Modem Script

To install the modem script, follow these steps:

1. Double-click the Modem Script folder to open it.
Inside the folder you see two icons: "Apple/GV 56K" and "ATCom56flex(apple).pdf."

2. Double-click your computer's hard disk icon to open it.

3. In the window that appears, find the System Folder icon and double-click it to open it.

4. In the window that appears, find the Extensions folder icon and double-click it to open it.

5. Locate the Modem Scripts folder within the Extensions folder.

6. Drag the "Apple/GV 56K" icon from the CD into the Modem Scripts folder.

7. Close all the windows.

8. Open the Modem control panel by opening the Apple menu, then choosing the menu item Control Panels and the submenu item Modem.
The Modem control panel appears.

9. Choose Modem Port from the "Connect via" pop-up menu.
Your internal modem is connected to the modem port.

10. Open the Modem pop-up menu and choose Apple/GV 56K.

11. Close the Modem control panel.
Your modem will now use the new modem script.

To read "ATCom56flex(apple).pdf," a technical document, you must install the application Adobe Acrobat Reader 3.0, which you can find on the Power Macintosh CD that came with your computer.

Installing FaxSTF software

FaxSTF software allows you to use your modem to send and receive faxes. The software includes an electronic manual that gives detailed instructions about using the application.

To install the software, follow these instructions:

1. Double-click the FaxSTF folder that appears on the CD alongside this Read Me file.
2. Double-click the Installer 56K icon inside the folder.
3. Follow the instructions on the screen.
4. Restart your computer.

After you restart, an electronic document called "FaxSTF Manual.pdf" appears in the FaxSTF folder. The document contains instructions for setting up and using the FaxSTF software. To read the manual, you must use the application Adobe Acrobat Reader 3.0. If the application is not already installed on your computer, you can find it in the CD Extras folder on the Power Macintosh CD that came with your computer.

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Published Date: Feb 20, 2012

PowerBook G3: Pictures of Monitors & Sound Control Panel

This article contains pictures of the Monitors & Sound control panel on the PowerBook G3.

This article has been archived and is no longer updated by Apple.

Figure 1 Monitor options

Figure 2 Sound options

Figure 3 Alerts options

Published Date: Feb 20, 2012

Port Numbers Used by Mac OS and AppleShare IP Services

This article lists the default port numbers for the services offered by Mac OS, AppleShare IP, and other Apple TCP/IP networking products.
This article has been archived and is no longer updated by Apple.
This content has been combined with the information in technical document 106439, "**"Well Known' TCP and UDP Ports Used By Apple Software Products**".
Published Date: Feb 17, 2012

Power Macintosh G3: Difficulty using ATI Xclaim GA video card

This article discusses an issue with using an ATI Xclaim GA video card in a Power Macintosh G3.
This article has been archived and is no longer updated by Apple.
Users trying to use an ATI Xclaim GA video card in a Power Macintosh G3 may encounter scrambled video on their monitor. ATI Technologies, Inc. is offering a free BIOS ROM upgrade for those customers attempting to use their Xclaim GA card in a Power Macintosh G3.

If you wish to upgrade the BIOS ROM, contact ATI Technologies directly to request the upgrade for use on Power Macintosh G3 systems.

You must provide your name, address and phone number as well as the current BIOS ROM part number in order to receive the upgrade. The part number of the BIOS ROM is located on top of the BIOS ROM chip itself on a white label. The number is 11 digits and will be formatted like this:

XXX-XXXXX-XXX

You can request priority shipping but will be charged for the shipping and handling of the upgrade.

All information above is from ATI Technologies, Inc.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.
Published Date: Feb 20, 2012

LaserWriter 8500: Blinking Ready Light

I have a LaserWriter 8500 on which the ready light flashes back and forth between yellow and green. The printer seems to operate normally otherwise. Can you explain?

This article has been archived and is no longer updated by Apple.

The flashing lights indicate that the printer is in point-of-sale mode. The printer will go into point-of-sale mode by holding down the ready light LED (which is also a button) while turing on the printer. When the printer comes to a ready state, pressing the ready button will produce a demo page from the printer. The printer will continue to function normally when in point-of-sale mode.

To turn this function off, simply hold the ready LED down at power on once more. Alternatively, connect to the printer using Apple Printer Utility (version 2.2 or higher) and turn the "Enable Demonstration Page Button" feature on or off.

For more information, see Chapter 1 and Appendix A in the LaserWriter 8500 user guide.

Published Date: Feb 20, 2012

Power Macintosh G3: 10/100Base-T Ethernet Card Information

This article contains important information and specifications for the 10/100Base-T Ethernet card k option for Power Macintosh G3 computers.
This article has been archived and is no longer updated by Apple.
If your computer came with the 10/100Base-T Ethernet option, a 10/100Base-T Ethernet card is installed in one of your computer's PCI slots. You can connect a cable for a 10/100Base-T Ethernet network to this card.

Note: The type of twisted-pair cable you use depends on whether you connect to 10Base-T or 100Base-T Ethernet. Category 5 twisted-pair cable must be used to connect to 100Base-T if you want to get the maximum speed from this connection.

Checking the Status of a 10/100Base-T Network Connection

If you connect your computer to a network using the 10/100 Fast Ethernet card, you can check the card's LED indicators to monitor network activity. There are four indicators:

ACT (Activity)	Blinks when the 10/100 Fast Ethernet card is active.
COL (Collision)	Glows when a network collision has occurred (a temporary condition that occurs when two computers on a network try to send date simultaneously).
LNK (Link)	Glows when a reliable 10 megabit (Mbit) or 100 Mbit network connection has been established.
100Mb	Glows when a reliable 100 Mbit link is established

10/100Base-T Ethernet Card Specifications

Open Transport	Mac OS 7.5.2 or later, AppleShare, AppleTalk, NetWare for Macintosh, TCP/IP
Connector	RJ-45 (for 10Base-T and 100Base-T)
Media,10Base-T	Cat 3, 4, or 5 UTP on 2 pairs up to 100 meters (m)
Media, 100Base-T	Cat 5 UTP on 2 pairs up to 100m
Bus interface	PCI revision 2.0 and 2.1, share interrupt A
Channel speeds	IEEE Auto Negotiation of 10Base-T and 100Base-TX
Communications	IEEE 802.3u 100Base-TX; IEEE 802.3i 10Base-T
Controllers	DECchip 21140, 32-bit internal processor per channel
Power	1.2 amperes (A) @ 5V typical

Published Date: Feb 20, 2012

Power Macintosh G3: Ultra Wide SCSI Hard Drive Information

This article contains important information and specifications for the Ultra Wide SCSI internal hard disk option for Power Macintosh G3 computers.
This article has been archived and is no longer updated by Apple.
If your computer came with an Ultra Wide SCSI hard disk drive, the following additional components are installed in your computer:

- An internal Ultra Wide SCSI hard disk drive (in place of the standard IDE hard disk drive).
- An Ultra Wide SCSI card in one of your computer's PCI slots.
- An internal Ultra Wide SCSI-3 chain that supports your internal hard disk and up to two additional internal devices. (The Ultra Wide SCSI-3 chain can transfer data at up to 40 MB per second.)

Important: Do not connect any SCSI devices to the external 68-pin SCSI-3 connector or the internal 50-pin SCSI-2 connector on the PCI card that supports the internal hard disk. Connecting even one external SCSI device to the external 68-pin connector extends the overall cable length of the SCSI bus beyond the limit for which error-free operation can be guaranteed; the combined length of the internal cable and the external cable reduces the reliability of all the devices connected to the Ultra Wide SCSI-3 bus. Connecting a device to the internal 50-pin SCSI-2 connector on the Ultra Wide SCSI card will cause your Ultra Wide SCSI-3 devices to transfer data at the slower, SCSI-2 rate. However, you can still connect a device to the internal 50-pin SCSI-2 connector on the logic board without affecting the performance of the PCI card.

About the Ultra Wide SCSI-3 Bus

You can connect up to three internal devices (including your internal hard disk) to the Ultra Wide SCSI-3 bus on this card. (You can't connect more than three because there isn't enough space in the computer.) All devices on the same SCSI bus must have unique ID numbers, but devices on different SCSI buses may use the same SCSI ID number. (For example, you could have a removable media drive with ID number 3 connected to the Narrow SCSI-1 bus and a hard disk with ID number 3 connected to the Ultra Wide SCSI-3 bus.)

The hard disk that was installed in your computer at the factory, as well as the SCSI card itself, have already reserved certain SCSI ID numbers on the Ultra Wide SCSI-3 bus. Other ID numbers are available for assignment to SCSI devices that are added later, as described in the following table.

Ultra Wide SCSI ID number	Device
0	Factory-installed hard disk drive (terminated)
1 through 6	Available
7	SCSI PCI card (terminated)
8 through 15	Available

Important: The factory-installed internal hard disk and the SCSI card are both terminated. Other SCSI devices that you install and connect to the Ultra Wide SCSI-3 bus must not be terminated. If you attach a terminated device to the internal SCSI interface, the computer will malfunction. You use the internal ribbon cable with the 68-pin connectors to connect an internal SCSI device to the Ultra Wide SCSI bus.

Ultra Wide SCSI Card Specifications

- Automatic termination
- Advanced Data Streaming Technology (ADS)
- RAID ready
- Embedded RISC I/P processor
- Ultra SCSI connector: Fine pitch 68-pin "P"
- Flash ROM BIOS
- PCI 2.1 compliant
- Large command FIFO
- Supports disconnect/reconnect
- Asynchronous I/O support
- Multiple initiator support
- SCSI-3 tagged command queuing
- SCSI Manager 4.3 compatible

Published Date: Feb 20, 2012

Power Macintosh G3: No Controls On Apple Video Player

This article explains why some controls may not be available for use on Apple Video Player in certain configurations.
This article has been archived and is no longer updated by Apple.
When using Apple Video Player, you may not be able to see the controls for Video Input selection, Video Capture, Video adjustments, and so forth. The most probable cause of this is that you do not have a monitor connected to the built-in video of your Power Macintosh G3. Apple Video Player is designed to work with the built-in video port of your Power Macintosh G3, so if you have added a PCI video card and have your monitor connected to that, you will be missing the necessary controls for Apple Video Player to display and capture video. The solution in this case would be to shut down your computer and connect your monitor to the built-in video port.

If you have two monitors attached (one to the built-in video port and one to a PCI video card), you will see all the controls in Apple Video Player. However, you will only be able to use them if Apple Video Player is being displayed on the monitor connected to the built-in video. For more information on the two-monitor scenario, please see the following article:

Article 22129: "**Power Macintosh G3: Error in Apple Video Player on Second Monitor**"
Published Date: Feb 20, 2012

Power Macintosh G3: Drivers For 10/100BaseT, Video, and Ultra Wide SCSI

This article describes how to install the drivers for the 10/100baseT and IxMicro Video cards.
This article has been archived and is no longer updated by Apple.
The drivers for these new Build To Order options are not installed with the Mac OS. In order for these options to be used to their fullest potential the drivers need to be in the System folder during startup.

The drivers for the 10/100baseT and IxMicro Video cards are located in a new folder on the Apple Macintosh CD, part number 691-1919, that came with your system. To install these drivers:

1. Insert the Apple Macintosh CD into the CD-ROM drive.
2. Once the CD is mounted, locate the folder named "Important Extra System Software" and open it.
3. Drag all four files on top of the closed System folder on your startup drive.
4. After the files are copied into your System folder, restart the system in order for the drivers to become available.

The names of the driver files are:

Apple 10/100 Fast Ethernet
Apple IX3D RAVE Engine
Apple IX3D Graphics Accelerator
Apple IX3D Video Memory Manager

No driver file is necessary for the Ultra Wide SCSI Card. The Ultra Wide SCSI Card has all appropriate drivers necessary for operation loaded into an onboard ROM or SIM chip. Thus, no software drivers are necessary.

Published Date: Feb 20, 2012

Power Macintosh G3 (Desktop): 128MB Memory DIMM Support

This article explains which kinds of memory modules work with the Power Macintosh Desktop G3.
This article has been archived and is no longer updated by Apple.
The Power Macintosh Desktop G3 supports SDRAM DIMMs as defined by the mechanical JEDEC MO-161 specification, and the electrical specification as defined by the JEDEC Standard.

Electrically, the Power Macintosh Desktop can support 384MB of memory, using three low profile 128 MB DIMMs. Without low profile 128 MB DIMMs, the computer is limited to three 64 MB DIMMs for a total of 192 MB.

Note: Power Macintosh G3 computers (Desktop and Minitower) that have revision 3 logic boards can support 256MB DIMMs for a total of 768MB of installed RAM. Refer to Kbase article 24924: "**Power Macintosh G3: Identifying The Logic Board Revision**" to identify which logic board a Power Macintosh G3 came with.

Some third party vendors have redesigned their 128MB DIMMs to be slightly shorter and to fit in the desktop case. If the developer has followed the electrical JEDEC specification and verified the design and functionality for the Power Macintosh G3 Desktop, then these shorter DIMMs should work without issue in the Power Macintosh Desktop G3.

In addition, it is the responsibility of the third party manufacturer, not Apple, Inc., to verify the design and ensure the reliability of their memory modules, including standardized parts, designed for the Macintosh.

Published Date: Feb 20, 2012

Mac OS: AppleTalk "Port in Use" Error

While trying to print an error message appears stating the port is in use and AppleTalk needs to be inactive. Trying to disable AppleTalk using the Control Strip or the Chooser does not disable AppleTalk.

This article has been archived and is no longer updated by Apple.

Making AppleTalk Inactive

The default networking option for the Macintosh is to use the printer port for AppleTalk. In order to use the printer port for a serial device it is necessary to stop using the printer port for AppleTalk. There are two ways to accomplish this. The first is to move AppleTalk to another port such as Ethernet (if you are connected to an active Ethernet network). The second method is to make AppleTalk inactive.

During the migration from Classic Networking to Open Transport, older components of the networking software have not been upgraded to fully support Open Transport. Two such components are the Chooser and the AppleTalk Switch Control Strip Module. If AppleTalk is made inactive using either the Chooser or the Control Strip then only Classic AppleTalk components are made inactive. Open Transport AppleTalk components are still active. When you attempt to use the printer port for a serial device, the following error messages (or similar messages) may result:

"Printer port is in use by another application"
"Cannot find printer"
".[XXX printer driver] requires that AppleTalk is inactive. Please make AppleTalk inactive."

Follow these steps to make AppleTalk inactive under Open Transport:

1. Open the AppleTalk control panel.
2. Select User Mode under the Edit menu (or Command-U).
3. Select Advanced user mode and click OK.
4. Click on the Options button.
5. Select Inactive and click OK.
6. Close the AppleTalk control panel.
7. Save the changes.

For information on making AppleTalk inactive within the Classic Networking architecture, please see article 30168: "**Mac OS: Chooser Defaults to Modem Port**"

For Mac OS 8.1 users, Apple Location Manager 2.0.1 offers a convenient way to turn AppleTalk on and off. For more information, please refer to the Read Me included with Apple Location Manager 2.0.1.

For more information on Apple Location Manager 2.0.1, please see article 26162: "**Apple Location Manager 2.0.1: Description**"

Published Date: Feb 20, 2012

Power Macintosh G3: No video w/ Blank or Solid-color Screen.

This article explains why the video window of Apple Video player may appear as a blank or solid-colored screen on Power Macintosh G3 computers, and how to avoid this situation.
This article has been archived and is no longer updated by Apple.
When there is insufficient VRAM to display video in the video window, Apple Video Player will default to a blank or solid-colored screen. Depending upon how much VRAM is installed, the resolution and bit-depth at which this will occur will vary.

For example, on a stock Power Macintosh G3 with the base 2 MB VRAM configuration, any resolution 800 x 600 or higher will cause the video window to turn blue if the system is configured to display millions of colors. Lowering the bit-depth and/or resolution will correct. Therefore a 640 x 480 at 24-bit color configuration would be possible and not result in a blue/green screen.

It may be useful to keep in mind that some video codecs, such as the Apple Video codec that Apple Video Player is designed to use (as opposed to Cinepak or Component video, for example), only saves video information at 16-bit color (thousands of colors) anyway. For the vast majority of video capture applications, 16-bit color is all that is needed and is indistinguishable to the eye from 24-bit color in this context.
Published Date: Feb 20, 2012

PowerBook G3, 3400, 5300, 190: Battery Interchangeability

The PowerBook G3, 3400, 5300 and 190 all use the same shape battery. Are the batteries interchangeable between the PowerBooks?
This article has been archived and is no longer updated by Apple.
To a certain extent, the batteries are interchangeable. The information below specifies which computers support which batteries.

PowerBook G3

The PowerBook G3 battery, model number M4895, it is a Lithium Ion (LiIon) 47 watt-hour battery. The G3 will recognize and charge all three models of batteries, M4895, M5139 and M3254. However, the battery life with the other batteries will be much less than when using the intended battery.

PowerBook 3400

The PowerBook 3400 battery, model number M5139, is a Lithium Ion (LiIon) 32 watt-hour battery. The 3400 will recognize and charge all three models of batteries, M4895, M5139 and M3254. The battery life when using the M3254 battery will be much less than when using the intended battery.

In order for the PowerBook 3400 to be able to charge the PowerBook G3 battery, M4895, you will need to upgrade to Mac OS 8.1. The Mac OS 8.1 update includes the necessary software that will allow the PowerBook 3400 to recognize and charge PowerBook G3 batteries. If you are using Mac OS 8.0 (or older), you will not be able to charge the battery.

PowerBook 5300 and 190

The PowerBook 5300 and 190 battery, model number M3254, is a Nickel Metal Hydride (NiHM) 29 watt-hour (approximate) battery. The PowerBook 5300 and 190 will only recognize their own battery. They do not have the circuitry to be able to recognize and charge a Lithium Ion (LiIon) battery.

Published Date: Feb 20, 2012

Power Macintosh G3: Obtaining Optimal Video Capture Frame Rates

This article describes how to get the best video capture frame rate with your Power Macintosh G3 computer.
This article has been archived and is no longer updated by Apple.

Optimizing Video Capture Performance

In general, there are a few things you can do to optimize video capture performance.

The Power Macintosh G3 minitower with the Audio/Video card can support up to 320- by 240-pixel video capture at 30 frames per second. This rate is for capturing video only. This rate decreases if both audio and video are captured simultaneously.

Most video capture applications use standard QuickTime Video and Audio settings. How you set these settings can affect the performance of video capture significantly. The PowerMac G3 Read Me included every Power Macintosh G3 computer states:

Video capture is available on Power Macintosh G3 computers with video input and output ports.

- The video capture feature works with Virtual Memory (VM) on, but the quality of captured video improves if VM is turned off. AppleTalk should also be made inactive while capturing to prevent network activity from introducing slight variations in the quality of captured video.
- The monitor connected to the built-in graphics port should be set to Thousands of Colors and the capture window size should not exceed 320 x 240 pixels. The best compression to use with this computer is Component Video.
- If you have difficulty capturing video or the captured video looks very pixelated, try reducing the resolution and/or number of colors on the monitor connected to the built-in graphics port.
- If you have a monitor connected to the built-in graphics port and another monitor connected to a PCI graphics card, then to capture video you must have the video capture window of whichever application you are using completely contained on the monitor connected to the built-in graphics port.

The following are general settings that can help optimize video capture performance on a Power Macintosh G3 Minitower computer under Mac OS 8.1. You may need to change settings depending upon what application and OS version you are using. Check with the developer of the application you are using for their recommended settings.

System Configuration:

Extensions Manager Settings:

- Select Mac OS 8.1 or 8.5 base Set
- Duplicate set and save as QuickTime Capture (this will be your Extensions set when you want to capture video).

Load only the following control panels at startup:

- Control Strip
- Memory
- Monitors & Sound
- QuickTime Settings

Load only the following extensions at startup:

- ATI 3D Accelerator
- ATI Graphic Drivers
- ATI Graphics Accelerator
- ATI Video Memory Manager
- QuickTime
- QuickTime PowerPlug

Memory Settings set in the Memory control panel:

- Disk Cache = 256K
- VM Off
- No RAM Disk

AppleTalk Settings:

- AppleTalk turned off in the AppleTalk Control Panel

Monitors & Sounds Settings:

- Color Depth = Thousands
- Resolution = 832 x 624, 75Hz

Sample Capture Settings for Video Capture Application

Not all settings below are available in Apple Video Player.

Video Capture Window location:

Place the video capture window in the lower right corner of the screen. Video capture performance is optimized when the video capture window is outside the rect 0,0,320,240.

Audio Input Settings:

- Sound Off

Video Input Settings:

- Record at 320 x 240 Compression

Compressor:

Component:

Video Depth:

Color Quality: High (75) Frames per second: 29.97 (29.97 fps is the actual NTSC standard)

Mac OS 8.5 Video Capture Enhancements

The video capturing software for both Power Macintosh G3 and PowerBook G3 Series computers has been significantly enhanced for Mac OS 8.5. In addition two compression settings now directly support capturing. These are the Component Video and Photo-JPEG compressors.

Figure 1 Video settings (compression settings shown)

At quality settings of Medium or less, full rate captures (29.97 frames/second for NTSC, 25 frames/second PAL and SECAM) can be achieved for capture sizes of 320 x 240 or less.

Additionally, under Mac OS 8.5, video capturing is now more tolerant of other system activity. Full rate captures can now be achieved when using Component Video or Photo - JPEG at 320 x 240 or less, even with AppleTalk enabled, File Sharing active, Virtual Memory enabled, and sound being captured.

Note: 320 x 240 captures using Component Video result in over 4.5 MB/second of data being written to the hard disk. Apple uses hard drives from a wide variety of hard drive vendors, and some hard drives might not be able to sustain that data rate. This results in dropped frames.

Published Date: Feb 20, 2012

QuickTime: Windows installation error message

This article has been archived and is no longer updated by Apple.

While trying to install or uninstall QuickTime for Windows an error message appears, and the install/uninstall fails. The message may indicate that you must exit all programs using QuickTime.

Check to make sure no other applications that use QuickTime are open (including iTunes). If there are no other open applications, then make sure the QuickTime control panel window is closed to install or uninstall QuickTime. Close the Control Panel window, then try to install or uninstall again.

To uninstall some older versions of QuickTime, use the uninstall application available in the Programs menu under QuickTime.

Related documents

93976 "Trouble installing iPod, iTunes, or QuickTime software in Windows"
Published Date: Feb 20, 2012

QuickTime for Windows: Slow Video

When using Quicktime for Windows, you may experience some videos that play slowly.
This article has been archived and is no longer updated by Apple.

Under Windows, DirectDraw is recommended for optimal performance. Since QuickTime can take advantage of DirectDraw and DirectSound, it is important to have the latest drivers for your video and sound cards. You also need the current version of DirectX.

Check your computer vendor for latest drivers and check Microsoft for updates to DirectX.

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Published Date: Feb 20, 2012

ARA 3.0: Configuring TCP/IP and Personal Web Sharing

This article explains how to set up the ARA server to use TCP/IP and share web pages using Personal Web Sharing.
This article has been archived and is no longer updated by Apple.
Here are the steps required for configuring the server:

1. Set TCP/IP control panel to connect via AppleTalk (MacIP).
2. Select Configure Using MacIP Manually. Type in 10.1.1.1 for the IP address. The rest of the fields can be left blank.
3. Open the AppleTalk control panel.
4. If you have an AppleTalk printer connected to the printer port, select the Printer Port in the control panel; otherwise, select Remote Only.
5. In the Remote Access control panel, open up the Answering dialog box from the RemoteAccess menu. Under "PPP server setup" check on the box "Allow TCP/IP clients to connect using PPP." Fill in the Default clients IP address to be 10.1.1.2. Make sure answer calls is selected.
6. Start Personal Web Sharing (or any other TCP/IP server you may have).

Next, configure the client:

1. The TCP/IP control panel should be configured to Connect via PPP, Configure Using PPP Server. All other fields may be left blank.
2. Fill in the PPP or Remote Access control panel for a username and password for a user with dial-in access to the server, and the phone number on the server
3. If you have the Remote Access control panel (instead of PPP), click on the "Options" button, select the Protocol tab, and select PPP. The default settings for the checkboxes which appear will work OK.

Now any computer can dial into your server, connect via PPP, and browse your web pages. To pull up the page server by Personal Web Sharing, connect to the server and type 10.1.1.1 in your web browser (instead of a name like "www.apple.com").

Any system, regardless of operating system (Mac OS, Windows, and so on) should be able to connect to the server with a standard PPP connection and web browser.
Published Date: Feb 20, 2012

Mac OS: Time Zone Info Not Saved After Resetting PRAM

This article explains why after resetting the PRAM Time Zone and Daylight Savings Time information is changed, but not the current date and time.
This article has been archived and is no longer updated by Apple.
Only the Time Zone and Daylight Saving Time settings are saved only in PRAM, not the current date or time. After resetting the PRAM, Time Zone and Daylight Saving Time settings are restored to their default factory settings which are:

- No Time Zone has been specified
- Daylight Saving Time checkbox is unchecked

The current date and current time settings are retained in a separate clock chip on the logic board. This clock is not reset unless the computer's external power and battery power are removed from the computer. Additionally, some Macintosh computers include a reset button on the logic board which also resets the current date and current time.
Published Date: Feb 20, 2012

Mac OS 8.1: Mac OS Extended Format and Performas

This article explains how to install Mac OS 8.1 onto a Performa computer and how to restore the Performa software onto the hard drive initialized in Mac OS Extended format.
This article has been archived and is no longer updated by Apple.
The software included with Performa computers was tested with the version of system software orignally included on the hard disk and the Performa Restore CD. If the system software is upgraded beyond what is included on the CD (such as upgrading from System 7.5.x to Mac OS 8.1), some of the Performa bundled software may not be compatibile. Performa users should check with the respective developers of the bundled Performa software for the latest compatibility information with Mac OS.

Mac OS 8.1 is supported on 68040 or PowerPC processor-based Mac OS-compatible systems; 68030-based systems with PowerPC upgrade cards are not supported. The computer must also have at least 12 megabytes of physical RAM, with virtual memory set to at least 20 megabytes.

Below is an example of the steps one could take to update a Performa 6300CD to Mac OS 8.1 using the Mac OS Extended Format feature. You may have to modify these steps slightly depending on the Performa computer and configuration you are using.

Configuration

- Performa 6300CD with 12 MB of RAM (8 MB of RAM will not work)
- Performa 6300CD Macintosh Performa CD (system software 7.5.1)
- Mac OS 8.1 CD
- Mac OS 8.1 PPC Disk Tools diskette (available from Apple Software Updates sites)

Steps to install the Performa 6300CD Bundle with Mac OS 8.1 and Mac OS Extended Format

1. Back up any information from the Performa's internal hard drive that needs to be saved, because these steps include reinitializing the internal hard disk.

2. Start up the computer and put the Performa Restoration CD in the drive.

3. Restart the computer and boot from Mac OS 8.1 Disk Tools diskette, while leaving the Performa CD in the CD-ROM drive. This will allow the CD to appear after booting from the Disk Tools diskette.

4. After starting up from the Disk Tools diskette, you should also see the Performa Restoration CD.

5. Launch Drive Setup Lite from the Disk Tools diskette and initialize the internal hard disk as a Mac OS Extended volume.

6. Open the "Hard Disk Files" folder on the Performa CD.

7. Drag all folders to the internal hard disk which has just been initialized.

8. Once the copy has been completed, change the name of the folders you just copied to remove the word "Files". For example, "System Folder Files" should be renamed to "System Folder", "Applications Files" should be renamed "Applications", and so on. This System Folder is system software 7.5.1.

9. Eject the Performa CD.

10. Insert the Mac OS 8.1 CD.

11. Run the Mac OS 8.1 installer to update the System Folder on the internal hard disk. (We only custom installed Mac OS 8.1)

12. After updating the System Folder to Mac OS 8.1, open the new System Folder on the hard disk and remove the extension named "Screen Posters" if it is present. (On our test computer, we experienced an "Unimplemented Instruction" error if this extension loads at startup.)

13. Restart the computer, eject the Mac OS 8.1 CD and remove the Disk Tools diskette.

14. The computer should now start up with Mac OS 8.1 with Mac OS Extended volume support.

Important Note: Some software that was included with your original Performa may not be compatible with Mac OS 8.1 or Mac OS Extended Format. Please check with the respective developer of the software for the latest versions and compatibility.

This article can help you locate the software update mentioned here:

- Article 14724: "**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.

TA21840_Mac_OS_Mac_OS_Extended_Format_and_Performas.pdf

Published Date: Feb 17, 2012

Apple CD-ROM Driver: Support For ATAPI CD-ROM Drives

This article describes the support provided by Apple's CD-ROM driver for ATAPI drives.
This article has been archived and is no longer updated by Apple.
Support for ATAPI CD-ROM drives (such as in the PowerBook 1400) was first introduced in version 5.2 of the Apple CD-ROM driver.

The current version of the Apple CD-ROM driver supports both Apple and industry standard ATAPI CD-ROM drives. Qualified ATAPI version 2.6 compliant drives should have full multimedia support. UDF support has been included in all drivers.

There are CD-ROM drives that do not support all of the ATAPI specification, and therefore cannot be accessed by the Apple CD-ROM driver.

Apple has not tested or qualified any third party drives. Nonetheless, if the drive manufacturer conforms fully to the ATAPI 2.6 standard, it should work.
Published Date: Feb 20, 2012

Macintosh Server G3: Read Me

This article contains the Read Me document for the original, platinum Macintosh Server G3.
This article has been archived and is no longer updated by Apple.
Important Information For Your Macintosh Server G3

This document provides information about your Macintosh Server G3 that supplements the information in your Setting Up Your Macintosh Server manual and your Macintosh Server Administrator's Manual. Read this document for information about known issues discovered after the manuals were completed as well as possible solutions.

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Macintosh Server G3 Custom Mac OS Information

Your server comes with Mac OS 8.1. It is the same as the retail version of Mac OS 8.1 with the addition of software extensions that enhance the performance and features of your server.

The unique files included with your server are: SoftRAID 2.0.2, Virex 5.8.1, Apple Enet 10/100D extension, and Ethernet (Built In) 2.0.2.

Macintosh Server G3 Bundled Apple and Third-Party Software Information

Mac OS 8.1 for the Macintosh Server G3
AppleShare IP 5.0.2
Apple Network Administrator Toolkit 2.0
Dr. Solomon's Virex 5.8.1 WS
Conley SoftRAID 2.0.2

Please consult documentation that came with your Virex software for support information.

Apple Support Information

Macintosh Server G3 Product's Supported
Apple supports the following bundled software versions in the Macintosh Server G3:

Mac OS 8.1
AppleShare IP 5.0.2
Apple Network Administrator Toolkit 2.0
Conley SoftRAID 2.0.2

Telephone Support

In the United States, if you have questions about your Macintosh Server G3 that are not answered by the provided manuals, call the Apple Assistance Center at 1-800-APL-CARE (1-800-275-2273) during live telephone support hours (Monday through Friday, 6 am to 6 pm Pacific time). After-hours support is provided for critical server issues. When prompted, enter the support access number provided on the back of your Apple Support Card and follow the instructions.

If you are located outside of the United States, refer to the support information that came with your Macintosh Server G3 for instructions.

Web Site

If you have an Internet connection, check the Apple Support Information Web site at **http://www.apple.com/support** for software updates that may become available after the release of this server.

Software License Info

AppleShare IP 5.0.2 that is included with your server has an unlimited user license. The licenses are outlined in the booklet inside the AppleShare IP CD package.

Apple Network Administrator Toolkit 2.0 has a license for 10 computers, whether clients or servers. This applies individually to the software suite of At Ease 5.0, Network Assistant 3.0, and User & Group Manager.

Dr. Solomon's Virex 5.8.1 WS and Conley SoftRAID 2.0.2 have a 1-server license.

Communications Regulation Information

FCC statement

This equipment has been tested and found to comply with the limits for a Class B digital device in accordance with the specifications in Part 15 of FCC rules. See instructions if interference to radio or television reception is suspected.

Radio and Television interference

The equipment described in this manual generates, uses, and can radiate radio-frequency energy. If it is not installed and used properly--that is, in strict accordance with Apple's instructions--it may cause interference with radio and television reception.

This equipment has been tested and found to comply with the limits for a Class B digital device in accordance with the specifications in Part 15 of FCC rules. These specifications are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

You can determine whether your computer system is causing interference by turning it off. If the interference stops, it was probably caused by the computer or one of the peripheral devices.

If your computer system does cause interference to radio or television reception, try to correct the interference by using one or more of the following measures:

- Turn the television or radio antenna until the interference stops.
- Move the computer to one side or the other of the television or radio.
- Move the computer farther away from the television or radio.
- Plug the computer into an outlet that is on a different circuit from the television or radio. (That is, make certain the computer and the television or radio are on circuits controlled by different circuit breakers or fuses.)

If necessary, consult an Apple-authorized service provider or Apple. See the service and support information that came with your Apple product. Or, consult an experienced radio/television technician for additional suggestions.

Important: Changes or modifications to this product not authorized by Apple Computer, Inc., could void the FCC Certification and negate your authority to operate the product.

This product was tested for FCC compliance under conditions that included the use of Apple peripheral devices and Apple shielded cables and connectors between system components. It is important that you use Apple peripheral devices and shielded cables and connectors between system components to reduce the possibility of causing interference to radios, television sets, and other electronic devices. You can obtain Apple peripheral devices and the proper shielded cables and connectors through an Apple-authorized dealer. For non-Apple peripheral devices, contact the manufacturer or dealer for assistance.

Industry Canada statement

This Class B device meets all requirements of the Canadian interference-causing equipment regulations.

Cet appareil numerique de la Class B respecte toutes les exigences du Reglement sur le materiel brouilleur du Canada.

VCCI Class 2 statement

Late Breaking Issues and Known Issues

- The Macintosh Server G3 and Multifunction PCI Cards
  The Macintosh Server G3 provides limited support of multifunction PCI cards.
  A multifunction card is any PCI card which exhibits itself as multiple PCI devices.
  These cards generally contain internal logic which supports the correct distribution of interrupts between virtual devices, however, some cards do not. Please contact your PCI card vendor to verify the card will work with the Macintosh Server G3.
  For additional information and a list of compatible cards, please check the Apple Support Information Web site at http://www.apple.com/support.
- Loss of Ethernet After Installing New Software
  Some software installers inadvertently replace certain extensions with older versions that do not work with this Macintosh Server G3. This frequently occurs with the Ethernet (built-in) extension. If Ethernet is unavailable after installing software, check that the Ethernet (built-in) extension is version 2.0.2 or later. If it is an older version, then reinstall your system software from the system software CD that came with your server.
- Open Transport 1.3.1 and Older Versions of Network Application Software
  The Macintosh Server G3 ships with Mac OS 8.1, which contains version 1.3.1 of Open Transport. Some network software installers inadvertently replace this version of Open Transport with an older version which does not work with the Macintosh Server G3. If networking is unavailable after installing software, check that the Open Transport extension is version 1.3.1 or later. If it is an older version, then reinstall your system software from the system software CD that came with the Macintosh Server G3.
- Booting with a CD-ROM Inserted and DVD
  If you have a DVD CD-ROM drive in your Macintosh Server G3, and you boot from a non-DVD CD-ROM disk, you will need to restart your Macintosh Server G3 to use DVD media. This occurs only when you boot from media which does not contain DVD drivers.
- Headless Server Support
  The Macintosh Server G3 may be configured to function without a monitor attached. To do so, a few instructions must be followed correctly in order for headless operation to work. These instructions are in the Technical Info manual. Additionally, the provided Video Terminator needs to be installed.
  Network Assistant 3.0 is bundled to help remotely administer this server. It is part of the application suite for Apple Network Administrator's Toolkit 2.0.
- Switch Settings for Video Terminator
  Below are the recommended switch settings for the provided video terminator. This video terminator is required to support headless booting. You may wish to change these settings when connecting to a non-Macintosh monitor.

Figure 1, Terminator switch settings

- HFS+ Volumes
  The Macintosh Server G3 hard disk drives are formatted with Macintosh HFS+, Extended Volume Format at the factory. Mac OS Extended Format optimizes the storage capacity of large hard drives by decreasing the minimum size of a single file. As an example, on a 2 GB hard drive a file containing only 2K of information requires 64K of space in Mac OS Standard Format, whereas with the Mac OS Extended Format, it will require the actual 2K on the 2 GB hard drive.
  Existing hard drives formatted with Mac OS Standard Format will continue to function and be supported by Mac OS 8.1. To find out

whether or not a drive was initialized with Mac OS Standard Format or Extended, select the drive, and choose "Get Info" from the File menu.

- Macintosh Server G3 Ultra Wide SCSI Information
  - The Macintosh Server G3 User's Guide states that the Ultra Wide SCSI card is in slot C1, closest to the floor of the computer. In actuality, the card is located in PCI slot A1, nearest the system power supply.
  - External drives do not work on the Ultra Wide SCSI PCI card's 68 pin external connector. A sticker has been placed on the external port to remind you of this limitation. Please do not to remove this sticker. If you plan to use external Ultra Wide SCSI devices, please purchase another Ultra Wide SCSI card and attach external devices to it. Please contact your card vendor for compatibility information with the Macintosh Server G3.
- AppleShare IP 5.0.2 and Mac OS 8.1 Compatibility
  AppleShare IP 5.0.2 ships with your Macintosh Server G3.
  There is a performance update to AppleShare IP 5.0.2 Web and File Server.
  Additionally, the Apple intends to release AppleShare IP 5.0.3 shortly, in order to take full advantage of new Mac OS 8.1 features. When AppleShare IP 5.0.3 is made available, please download this update from the Apple Downloads page.
- Apple Network Administrator Toolkit 2.0 and Mac OS 8.1 Compatibility
  Apple Network Administrator's Toolkit ships with your Macintosh Server G3.
  Apple intends to update At Ease 5.0 and Network Assistant 3.0 for improved compatibility with Mac OS 8.1. Please download these software updates from the Apple Technical Support web site at http://www.apple.com/support.
- Disk Recovery Utilities and Mac OS 8.1
  The Macintosh Server G3 ships with Mac OS 8.1. Due to changes in the file format, specifically the addition of HFS+, many older versions of disk recovery utilities do not work with this version of Mac OS. Please make sure you are running disk recovery utilities which will work with Mac OS 8.1 and HFS+.
- Dr. Solomon's Virex 5.8.1 and the Macintosh Server G3
  The Macintosh Server G3 comes with Virex Virus Detection Software. You will have to install and turn on Virex as well as restart the server for Virex to function.
  You can improve the server's start-up time by enabling SpeedScan and select option to Scan Compressed Files on your server in the Virex Control Panel.
- Apple HD SC80 Hard Drives and Macintosh Server G3
  The Apple HDSC 80 and smaller hard drives do not work with the Macintosh Server G3.
- SoftRAID 2.0.2 and Macintosh Server G3 Issues
  - For optimum performance and data reliability, RAID users should not create a mirror of a stripe volume which spans the same spindles as the stripe volume itself. This changes the volume type within RAID and may cause reliability errors.
  - The Macintosh Server G3 has a limit for the minimum stripe unit block size when Virtual Memory is enabled. This limit is 8 blocks. Setting the stripe unit block size below 8 blocks with Virtual Memory ON will cause the machine to stop responding. If you need to run with a stripe unit size of <8 blocks, turn off Virtual Memory.
- FTP Applications and the Macintosh Server G3
  When downloading data via FTP over 100 Mbit Ethernet, many FTP client applications may appear to hit a limit of 90-95KB/s as a file transfer rate.
  This is caused by the connection buffer size for the client application being too small. While default buffer sizes may vary, you can increase performance by increasing the connection buffer size to 32KB or larger in the corresponding network preference setting. This is known to occur with Fetch and Netscape Navigator. In Navigator, the connection buffer size is in the connections tab of the Network Preferences menu item under the Options menu of your client software.
- Installing Acrobat Reader Software from the System Software CD
  To install Acrobat Reader software on your server

  1. Make sure that Server HD is selected as the startup disk.

  2. Insert the Server System Software CD into your CD-ROM drive.

  3. Open the Adobe Software folder on the CD.

  4. Open the Acrobat Reader 3.0 folder on the CD and follow the installation instructions.
  If your server hard drive is not the startup disk, see the onscreen Mac OS Guide for instructions on how to make Server HD the startup disk.

- Disk Drives Compatible with Soft RAID Software
  For information about compatible disk drives please check the Apple Support web site at <**http://www.apple.com/support**> or contact Conley, the manufacturers of SoftRAID.

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Published Date: Feb 20, 2012

Mac OS 8: Resetting Disk Cache

This article tells how to reset the Disk Cache after a clean install of Mac OS 8.0 or 8.1.
This article has been archived and is no longer updated by Apple.
In various configurations, it may be possible for the Memory control panel's Disk Cache setting to be reset to 96K after a clean install of Mac OS 8.0 or 8.1. Having the Disk Cache set this low will adversely impact Mac OS performance.

The Memory control panel has a "Use Defaults" button which will correct this situation. You can accomplish the task in either of these two ways:

Through the Apple menu and the Control Panels folder

1. Pull down the Apple menu (but do not release your mouse button).
2. Highlight the "Control Panels" menu item (but do not release the mouse button).
3. Slide across the "Control Panels" menu item, moving the pointer into the submenu (but do not release the mouse button).
4. In the submenu, highlight the Memory control panel and release the mouse button to open the Memory control panel.
5. Click on the Use Defaults button in the Memory control panel window.
6. Close the Memory control panel.
7. Select Restart from the Special menu.

or

Through the System Folder

1. Open the System Folder on your hard drive.
2. Open the Control Panels folder, which is in the System Folder.
3. Double click on Memory to open the Memory control panel.
4. Click on the Use Defaults button in the Memory control panel window.
5. Close the Memory control panel.
6. Select Restart from the Special menu.

Published Date: Feb 20, 2012

AppleShare IP 5.x: Release History

This article contains an historical look at the AppleShare IP 5.x product line and the purpose of each update release.
This article has been archived and is no longer updated by Apple.

AppleShare IP 5.0 - First Retail Release

AppleShare File service over AppleTalk and TCP/IP,

FTP server

Web server

Mail Server for Post Office Protocol (POP) clients over TCP/IP and AppleTalk.

New administration programs for all of the services

Completely rewritten Print Server.

AppleShare Client v3.7

System Requirements for Running AppleShare IP 5.0

- CPU: Any Apple Power Macintosh computer or Workgroup Server with a PowerPC 601, 604, or 604e microprocessor.
- RAM: 32 MB of memory with virtual memory turned on; 48 MB with virtual memory turned off.
- System Software: 7.6 or later with OpenDoc 1.1.2 or later, except for the Workgroup Server 7350 and the Workgroup Server 9650, which require system software 7.6.1
- Networking Software: Open Transport 1.1.2 or later

System Requirements for Running AppleShare Client 3.7

- System Software: 7.5.3 or later
- Networking Software: Open Transport 1.1.2 or later

AppleShare IP 5.0.1

AppleShare IP 5.0.1 provides minor issue fixes which are only applicable to the Japanese language version of the AppleShare IP server software. An updater is not available for an upgrade to 5.0.1. If you are currently using the English version of AppleShare IP 5.0, there is no need to upgrade to AppleShare 5.0.1.

AppleShare IP 5.0.2

Mac OS 8.0 compatibility

AppleShare Client v3.7.2

Web server plug-in support for Web* API 1.1

Ability to configure ARA user information for Web & File User accounts

Full compatibility with At Ease 5.0 and ARA 2 and 3 personal server
software.

AppleShare IP Mail

- Better behaved with regards to DNS to remove potential delays in mail delivery.
- Much faster performance for user accounts, deleting large messages, and deleting many small messages.
- Supports more than one outgoing SMTP connection.
- There is a new window to check current status of outgoing SMTP connections. Choose the "Show Outgoing SMTP Activity" option from the "Server" menu

Changes to System Requirements for Running AppleShare IP 5.0.2

- System Software: Mac OS 8.0, which includes Open Transport 1.2 and OpenDoc 1.2.1, is strongly recommended. The minimum

requirement is Mac OS 7.6 or later with OpenDoc 1.1.2 or later and Open Transport 1.1.2 or later, except for the Workgroup Server 7350 and the Workgroup Server 9650, which require Mac OS 7.6.1 or later.

Changes to System Requirements for Running AppleShare Client 3.7.2

- None

*Available as an Updater via AppleShare IP web site. Requires AppleShare IP 5.0 to be currently installed on the computer.

AppleShare IP 5.0.3

Mac OS 8.1 compatibility

Macintosh G3 desktop support

AppleShare IP Web & File

- A fix for instances where the web server would stop responding when restarting the system under heavy load.
- A fix for instances where HTTP KeepAlive sessions were not always properly timed-out by the server.

AppleShare IP Mail

- A fix for an issue where delivery of remote mail was delayed under some circumstances. The length and duration of the delay would depend upon the complexity of your TCP/IP network and the load on the AppleShare IP Mail Server.

AppleShare IP Print

- A fix for a "network time out" issue. This would cause random print jobs not to print, mostly on non-Apple printers.
- A fix for an issue where print jobs were sometimes "dropped" on busy servers.
- Better compatibility with PostScript files generated by applications other than Apple laser printers. This fixes issues with printing from many graphics applications.

Changes to System Requirements for Running AppleShare IP 5.0.3

- System Software: MacOS 8.0 or later; MacOS 8.1 recommended. Open Transport 1.2.1 or later.

*Requires AppleShare IP 5.0.2 to be currently installed on the computer.
Published Date: Feb 20, 2012

Mac OS 8.1: PC Setup Sound Issue

I have a Power Macintosh 7300/200 with a PC Compatibility Card installed, running PC Setup 1.6.4 and Mac OS 8.1. When I switch to the PC side I don't get any sound. If the sound source is set to CD, I can hear the audio from the PC.

The sound source didn't have to be set manually in Mac OS 8.1. What is different?

This article has been archived and is no longer updated by Apple.
The sound architecture in Mac OS 8.1 is different from that of previous versions of Mac OS. The sound source must be set to CD to be able to hear PC audio.

PC Setup used to take the setting of the sound source when switching to the PC. When switching back to Mac OS, PC Setup would switch the sound source back to whatever it was. This no longer functions under Mac OS 8.1, so you must manually set the sound source to CD for PC audio to work properly.
Published Date: Feb 20, 2012

Macintosh Server G3: Setting Up For Remote Administration

This article gives instructions on how to set up the original, platinum Macintosh Server G3 for remote administration.
This article has been archived and is no longer updated by Apple.
This is the complete instruction set for setting up your Macintosh Server G3 for headless booting and remote control from an admin workstation.

The basic instructions for setting up the server to run without a monitor are on page 21 of the 'Setting Up Your Macintosh Server' manual. It does not include instructions on installing the Network Assistant software that is required to remotely administer the server. Network Assistant instructions are found on page 43 of the 'Macintosh Server Administrator's Manual.'

Setting Up Your Server to Run Without a Monitor

You can use software such as the Apple Network Administrator Toolkit to run your server remotely from another computer. To run your server without a monitor, you will need to use the video terminator included in the Macintosh Server G3 Accessory Kit.

Step 1: Set Up Your Server

Set up your server, including connecting a monitor, mouse, network cabling, and keyboard.

Be sure network services are operating properly.

Step 2: Install and Set Up Network Assistant On Server As A User Workstation

You need to perform these tasks while sitting at the server; you can't perform them over the network.

Note: For complete instructions on using the Network Assistant software, see Chapter 6 in Install and Set Up and Part 3 in Using Your Software, located in the Electronic Library folder on the Apple Network Administrator Toolkit CD-ROM disc.

1. **Name the Server**
If the workstation hasn't been given a name before you install the software, Network Assistant will automatically generate a name for it. But you might find it easier to recognize and remember the workstation's name later if you give it a name you choose.
To give the workstation a name:
    1. Open the File Sharing control panel
    2. Enter the name in the Computer Name text box.
2. **Install Network Assistant**

    1. On your server, open the Server Extras folder.

    2. Open the Apple Network Admin Toolkit folder.

    3. Open the Workstation Install folder.

    4. Launch the Installer.

    5. Click Continue.

    6. Agree to the Software License.

    7. In the Install ANAT Workstation window, click in the box for Network Assistant Workstation Software.

    8. Click the Install button.

    9. Press Continue to quit all applications.
    The security dialog box appears.

    10. Set Access Privileges [None or Full].

    11. Enter a unique password to access the server remotely. Type that password in the Password field and click OK.

    12. Restart the server.

3. **Setup Access Privileges with Network Assistant Security**
    - To further look at access privileges for the server:
        1. Open Network Administrator Toolkit folder inside Server HD.

        2. Open Network Assistant Security.

3. Type the password you set at installation and click OK.

4. Click to select "Allow administrators to," and then select each privilege you want to have with this workstation.When you select an option, the access privilege takes effect immediately.

- If you want to enter information about the server:

  1. Click the Change Info button in the Network Assistant Security window. The Change Info dialog box appears.

  2. Type the text you want to appear in workstation reports in one or more of the boxes. You can type only one line of text in each box.

  3. Click Change.
  You will be able to see the information you entered in the Network Assistant Security window (on screens with 640 by 480 resolution or better).

4. **Complete the Server Setup**
Once you've set up a workstation, you may want to remove Network Assistant Security as an extra security measure (to prevent users from changing the administrator access privileges you set up). If you need to change the access privileges or password for the workstation later, you can copy the application back onto the workstation from an administrator workstation.
5. **Install The Admin software on a workstation**
Use the Admin Install installer to place the Network Assistant Admin software on a workstation. After all other instructions below are completed, you will be able to control and observe the Macintosh Server G3 from another admin workstation.

Step 3

Turn off the server, then disconnect the monitor.

Step 4

Attach the provided video terminator to the monitor port on the back panel of the server.

Step 5

Turn on the server.

Follow the instructions that came with your remote access software for logging in to and controlling the server.

Note: If you want to connect a monitor at a later time, you must turn off the server before you connect the monitor.
Published Date: Feb 20, 2012

Mac OS 8.1: Can‘t Disable Sound Playthrough From Monitors & Sound

In system software versions previous to Mac OS 8.1, the Monitors & Sound (or Sound) control panel provided a Playthrough checkbox to allow or disallow playing the sound of any audio source through the speakers. This option was typically used to listen to audio CD's. As of Mac OS 8.1, this option is no longer available in the Monitors & Sound control panel. Why was this option removed?
This article has been archived and is no longer updated by Apple.
Every application that utilizes audio input has the responsibility of configuring the sound input driver for use by the user. Unfortunately, there are some applications that rely on the user settings in the Monitors & Sound control panel instead of managing audio themselves. From a technical standpoint, it has become increasingly difficult for Apple to maintain global audio settings through the Monitors & Sound control panel while also allowing "well-behaved" applications to set them up locally.

For this reason, the Monitors & Sound control panel now provides for the selection of a "Sound Monitoring Source". Any audio source chosen from this pop-up menu will always play through the sound output port (internal speakers, external speakers, or headphones).

What implications will this have?

Any application that uses a microphone for sound input should provide options for the user to configure the audio settings. A simple QuickTime dialog can be used if the application is using QuickTime to record sound. If the application does not provide a way for the user to configure audio, the user will have to select Sound In from the Sound Monitoring Source pop-up menu in the Monitors & Sound control panel and the sound from the microphone will play through the speakers. If the volume is too loud, this may cause a feedback loop. In this situation, the user can turn the volume down or plug something into the headphone jack, redirecting the sound from the speakers and preventing the feedback. The same situation will also occur with Apple's PlainTalk Speech Recognition software.

Are there any workarounds?

Any user experiencing this problem with an application should contact the developer and ask that they upgrade the application to offer control of the audio input through QuickTime. In the short term, the user can try turning the system volume down or plug something into the headphone jack to prevent feedback from the microphone from occurring.

Note: The following contains information about software not written by Apple Computer. Apple does not make specific recommendations on third party utilities nor does Apple support or assume liability for any problems incurred by the use of third party applications. The following is merely mentioned for informational purposes as it may serve as a workaround for customers needing to disable playthrough either globally or for specific programs that do not yet offer the ability to disable playthrough.

At the following website, there are a pair of small applications that allow you to toggle the Playthrough status on and off:

http://ic.net/~platkus/ftpsite.html

Apple has received reports that this software is effective.
Published Date: Feb 20, 2012

Chinese Language Kit 2.0: Read Me

This article contains the Read Me document for the Chinese Language Kit version 2.0
This article has been archived and is no longer updated by Apple.

Chinese Language Kit 2.0

Introduction

The Chinese Language Kit (CLK) provides the software you need to enter Chinese characters on your Mac OS computer including Simplified Chinese and Traditional Chinese. This Read Me provides information about the Chinese Language Kit, version 2.0 not contained in the Chinese Language Kit Users Manual.

System Requirements

To install the Chinese Language Kit, you need the amount of hard disk space shown in the table below. To use the Chinese Language Kit, you need at least the amount of Random Access Memory (RAM) shown.

Installed Configuration	Minimum RAM Requirements Normally	Minimum RAM Requirements With GX	Hard Disk Space
Easy Install of Simplified Chinese	12 MB	16 MB	19 MB
Minimum Install of Simplified Chinese	12 MB	16 MB	4 MB
Full Install of Simplified Chinese	12 MB	16 MB	33 MB
Easy Install of Traditional Chinese	12 MB	16 MB	21 MB
Minimum Install of Traditional Chinese	12 MB	16 MB	6 MB
Full Install of Traditional Chinese	12 MB	16 MB	34 MB

The amount of disk space shown is an estimate. The actual amount of disk space required depends on the size of your hard disk and the system software you have installed on your computer.

Installation

You can install several Apple language kits on your Mac OS computer. However, you should install the Chinese Language Kit version 2.0 after you install other language kits that are older than it is, to be sure you have the most recent language kit software installed on your computer.

Chinese Language Kit, version 1.1.1 and version 1.2

Particularly when installing over the Chinese Language Kit versions 1.1.1 and 1.2, you may see a message telling you that the fonts that are already installed are newer than the ones you are about to install. In this case, click Older to install the fonts from Chinese Language Kit 2.0.

Printing With Chinese Characters

Chinese documents you create using the Chinese Language Kit can be printed with a variety of printer drivers. However, you need version 8.4.1 or later of Apple's LaserWriter 8 driver to print Chinese characters to laser printers.

Compatible Application Programs

The Chinese Language Kit can be used with many application programs that use the Apple WorldScript or QuickDraw GX technologies, including applications that are localized for Chinese. If you encounter any application that does not display Chinese characters, contact the appropriate application developer.

The following list includes a few applications that support these technologies:

- HyperCard
- SimpleText, including localized versions
- LightningDraw GX
- Ready, Set, Go GX
- WorldWrite
- NisusWriter
- Netscape, including localized versions
- WordPerfect
- FrameMaker
- Photoshop
- ClarisWorks, including localized versions (see note)

- QuarkExpress, including localized versionsPageMaker, including localized versions

Note: You cannot use Traditional Chinese with ClarisWorks 4.0v5 unless you are using the Chinese Mac OS.

Apple makes no warranties regarding the quality or compatibility of third party products. Warranties, if any, relating to such third party products are between the developers and their customers.

Known Issues

1. Using Simplified Chinese Input Method
If you press Command-Space to choose a keyboard, the Simplified Chinese Input Method may get selected even though you have not selected a Simplified Chinese font to view Finder items.
If you have issues using the Simplified Chinese Input Method, increase the virtual memory setting in the Memory control panel.

2. Printing

If you print a file from a localized application, such as Simplified Chinese SimpleText, the name of the file will appear as "Untitled" in the desktop printer or PrintMonitor window.
The text in some LaserWriter print dialog boxes may not display correctly if you print a document from a localized application, such as Simplified Chinese SimpleText, and your computer has a version of the Mac OS localized for a non-Roman language, such as Japanese.

3. Using with Japanese Mac OS
If you are running the localized Japanese Mac OS 8.0 or 8.1, it includes the LaserWriter TrueType Booster. LaserWriter TrueType Booster is an extension that improves the printing speed of documents with the Chinese Language Kit. This extension may cause your system to stop responding when printing Chinese characters.
To correct this situation you need to update the "LaserWriter TrueType Booster" to version 1.0.1. To update, you must first re-boot with extensions disabled. To do this:

1. Hold the <shift> key down while the system starts up.
2. Go to the "For Japanese Localized Systems" folder on the CD.
3. Drag "LaserWriter TrueType Booster" to your closed System Folder.
A message will ask if it is ok to replace the LaserWriter TrueType Booster with the newer version.
4. Click on "Yes".
5. Restart your system.

4. Using with System 7.6 on 68030 and 68040 machines
If you have issues printing on 68030 and 68040 systems with Mac OS 7.6, you need to do two things. First, run the Mac OS 7.6.1 Update. Second, upgrade the LaserWriter driver to 8.4.1 for your system. Installers for both of these are included on the CD in several of the localized languages in the "Updaters for 7.6" folder. If installers for the language of your system are not on the CD, then please consult your local Apple support site or the Apple Web site at **http://www.apple.com**.

5. Using with Mac OS 7.6 and 7.6.1
If you are using a version of the Mac OS that is earlier than version 8.0 and you have used a Chinese font to display Finder items, the names of items in the Finder that use Chinese characters will not appear if you remove the font. To correct this situation, open the Views control panel and choose a new font from the "Font for views" pop-up menu.

Published Date: Feb 20, 2012

Chinese Language Kit 2.0: About The TrueType Font Editor

This article contains the document titled "About TrueType Font Editor", that is part of the Chinese Language Kit version 2.0.
This article has been archived and is no longer updated by Apple.
Disclaimer: This is an unsupported tool. Apple makes no warranty or representation, expressed or implied, with respect to this program, its quality, performance or fitness for a particular purpose.

About TrueType Font Editor

Known Incompatibilities

When you're using the TrueType Font Editor application, it controls the TrueType fonts installed on your system. If you select another application to use while TrueType Font Editor is open, the fonts in the menu bar and in dialog boxes may not display correctly. If this situation should occur, follow these steps:

1. Open TrueType Font Editor.
2. Select Finder from the Applications menu (right side of the menu bar).
3. Select TrueType Font Editor from the Applications menu.
4. Quit TrueType Font Editor.

If you continue to experience this situation, restart your computer.

You should be able to print fonts you create with the TrueType Font Editor on most LaserWriter printers. However, you may not be able to print the fonts on some printers. If this happens, you may see a message that there is a PostScript error.

Introduction
The TrueType Font Editor lets you create Traditional Chinese and Simplified Chinese characters that you can enter in your documents. These non-standard or customized characters are called gaiji. The name gaiji refers to characters other than the standard 13,000 Traditional Chinese characters and 6,763 Simplified Chinese characters which are already part of the Chinese Language Kit. This document provides brief instructions on how to use the True Type Font Editor version 1.0.2.

Note: You can also create Korean and Roman characters using the TrueType Font Editor.

Overview

The TrueType Font Editor allows you to create new font suitcase files and to copy character outlines out of existing fonts, modify them and then save them in your newly created suitcase files.

The Font View window shows you the contents of a font suitcase file. From this window, you can select characters for editing and also change the code number allocated to each character. In this way you can manage your custom characters as a collection in one window by adding, deleting and arranging the characters according to their code numbers.

The Character Editor window enables you to combine and arrange shapes from any number of source fonts to form a new individual character. When you select a character from any location, a copy is made and shown in the Character Editor window. You do not see or modify the original outline. It is always a copy in the Editor window. In order to preserve the shapes you have edited, the contents of the Character Editor window has to be saved into a font suitcase by you. This is done at any stage of editing by using the Add In Font command from the Character Menu.

The activity of using the TrueType Font Editor falls into three parts:

1. Creating and opening font suitcase files.
2. Selecting fonts and characters within them by typing.
3. Editing the shapes and saving them into your suitcases.

Before You Start

Before creating a font, you need to set the Advance Width in the preference dialog box. This setting affects the size of the character, the position of the character and the distance between the characters.

Figure 1 Preferences

Click on the Use Defaults button. This sets the values shown. However the default values are not suitable for all fonts. For best results, set the value according those in your chosen starting font. To get the value from the existing font, follow these steps:

1. Choose Open from the File menu and open the chosen font file.
2. Choose Preferences from the Edit menu.
3. If necessary, click the TrueType icon on the left side of the dialog box.
4. Note the value of the "Advance width" option.
5. Close the dialog box and the font file.
6. With no windows open, go back to the Preferences window, type in the Advance width value you noted in 4. above and click OK.

Note: The Preferences settings will apply to font files which you create after changing the value. They do not change the values in existing font files.

Character Encoding

Each character you create must have a code number. If you are creating a Traditional Chinese character, it has a Big5 code, which is a hexadecimal number. If you are creating a Simplified Chinese character it has a Quwei code, which is a decimal number. The Big5 and Quwei codes are divided into three ranges for symbols, frequently used characters, and other characters respectively.

When you create a character, the default code number will not always fall in the correct range. The TrueType Font Editor has the ability to edit or overwrite any character in a font, including the existing standard characters. Therefore you must take care in choosing code numbers for your characters. Use the following guidelines to assign a code number to your character.

Traditional Chinese Big5 Code Ranges

The three ranges for the Big5 codes for Traditional Chinese characters are:

1. 1. For symbols, the full range is $A140 to $A3FE. Create new characters in the range $A3C0 to $A3FE.
2. For frequently used characters, the full range is $A440 to $C67E. Create new characters in the range $C6A1 to $C8FE
3. For other characters the full range is $C940 to $F9D5. Create new characters in the range $F9D6 through $FCFE.

Simplified Chinese Quwei Code Ranges

The three ranges for the Quwei codes for Simplified Chinese characters are:

1. For symbols, the full range is 0101 to 1194. Create new characters in the range 1201 to 1594.
2. For frequently used characters, the full range is 1601 to 5589. There is no open space in this range for new characters. Either modify an existing character or create new characters in the ranges for symbols or other characters.
3. For other characters, the full range is 5601 to 8794. Create new characters in the range 8801 to 9294.

Setting up a Font Suitcase File

To create new font suitcase for your collection of custom characters, follow these steps:

1. Choose New Normal Font from the File menu to create a font file. This will show you with the standard Save File dialog in which you must enter a name for the new font suitcase file and choose a folder to save it in. When you have chosen a folder and entered a name, then click Save. In the illustration below, the file has been named "ExampleSuitcase".
Note: Do not save the new font file in the System Folder.

Figure 2 New Font File

2. Clicking Save will take you to the New Font File dialog, shown below. Type a Family Name for your new font and select Traditional Chinese or Simplified Chinese from the Script pop-up menu. Then click OK to save the file to disk. In the screenshot below, the Font Family Name has been entered as "TCFamilyName".
Note: At this point the new empty font file has been created on disk with the Advance Width value you set earlier in the preferences

window.

3. After clicking OK, the Font View window appears, as shown below. From the script you have selected, the application automatically assigns a Family ID number within the correct range. Characters added to the font will appear in the main display area at 24 point size.

Figure 3 ExampleSuitcase

Creating and Designing a Character

To create a new character using the TrueType Font Editor, start by copying an existing Chinese character and then changing it. Typically a Chinese character consists of several radicals, so you might delete one radical of a character and add a radical of another character to it. You can also move radicals that make up the character you are creating.

To create new character in the character editor window, follow these steps:

1. Choose New Character Editor from the Window menu. The Character Editor window appears. The proportions of this window are determined by the four values entered in the Preferences, including the Advance width. If you already have a Chinese font selected the input mode palette will also automatically appear floating next to it, as shown below.

Figure 4 Character Editor 2

2. Choose Show Tool Panel from the Window Menu. The tool palette provides three character editing tools:

Figure 5 Tool Panel palette

- The Select tool lets you select parts of a character in the window so that you can copy, delete, or move it.
- The Zoom tool lets you zoom in and out. Hold the Option key down to zoom out.
- The Scale tool lets you change the size of a radical.

3. Choose a font from the Select Font Template item in the Character menu.
You will use one or more characters of this font as the template for the character you are creating. Choose a Traditional Chinese font if you are creating a Traditional Chinese character. Choose a Simplified Chinese font if you are creating a Simplified Chinese character.
For example: With Traditional Chinese you could choose Apple LiSung Light or Apple LiGothic Medium. With Simplified Chinese you could choose Kai or Song.

4. Enter a character in the Character Editor window.

5. Choose an input method from the Keyboard menu and an input mode from the Pencil menu. For example, choose Pinyin to create a Traditional Chinese character or ABC Standard to create a Simplified Chinese character. You must also select a Traditional or Simplified Chinese font from the font menu in order to be able to select a character correctly.

6. Press the keys to enter the character you want to start with then press the Space bar. Select the character in the selection palette and press return. The character now appears in the Character Editor window.

Figure 6 Character Editor 3
Note: See the Chinese Language Kit Manual for detailed instructions on using the various Chinese input methods.

7. Enter additional characters in the Character Editor window.
If you want to combine radicals from two or more characters, you can enter more than one character in the same Character Editor window. The characters will superimpose on top of each other aligned at their bottom left corners, as shown below. You must then edit and re-position the shapes as required to form your new character.

8. Create Multiple Character Editor windows
Alternatively, you can create separate Character Editor windows for each source character and then cut, copy and paste between them to do the editing. Do this by selecting New Character Editor from the Window menu for each character you need.

Figure 7 Character Editor 3

9. Zooming in
Select the Magnification tool then click in the Character Editor window to zoom in. Hold down the Option key and click to zoom out. (Use the scroll bars to adjust your view when zoomed in.)
10. Selecting and editing parts with the Selection and Scale tools.
You are now ready to change the character. Here are some ideas of what you can do:

- Double-click to select a radical of a character, then choose Clear from the Edit menu to remove the radical from the character.
- In another Character Editor window, double-click to select a radical then choose Copy from the Edit menu. Switch to the first Character Editor window and choose Paste from the Edit menu to add the radical to the character you are creating.
- Double-click to select a radical, then drag to move it.
- Double-click to select a radical, then select the Scale tool. Drag to make the radical larger or smaller.

The example below shows combining of parts from previous two screens. The upper grass radical cao-zi-tou has been moved up from its starting position.

Figure 8 Suitcases

Saving a Character to a Font Suitcase

To save the character you have created in the character editor window, follow these steps:

1. To add the character to a font, select Add In Font from the Character Menu. In the file selection dialog box that appears, select the font suitcase file you created and click Open.

Figure 9 ExampleSuitcase
The Font View window for the selected file will then appear, including the newly added character, as shown below:

Figure 10 Character Code

2. You now need to check the code for the new character. Click the button at the bottom of the font view window called Change Selected Character Code. This will take you to the Character Code window.

Figure 11 Warning dialog

3. Compare the value in the dialog to the code ranges given in "Character Encoding" earlier in this document. If the default code value is within the appropriate range, then click OK. If it is not, then type in an appropriate value. When you're finished, click OK.
TrueType Font Editor checks the code value you have given with any other characters you have created and stored in the same font suitecase file. If there is a conflict with an existing character, you will be warned that the code is already in use.

Figure 12 Save Changes dialog
Either choose to replace the older character with the one you have just given the code value to, or cancel to go back and enter another non-conflicting code value.
You can now create other characters or you can quit from the TrueType Font Editor.

4. Choose Save from the File menu to save the font in the file. If you forget to save, you will be reminded when you close the Font View window or quit the application.

Preparing to Use Your Character

To enter the character you have created in a document:

1. Locate the font file you created.

2. Drag it to the System Folder. A message asks you if you want to place the file in the Fonts folder.

3. Click OK.

4. You must now restart your workstation.

When your computer starts up, you can enter the character in a document. See the chapter in the Chinese Language Kit User's Manual for the input method you are using for instructions on entering the character.

Working with a Collection of characters in a suitcase file

As you create new characters by using Add In Font from the Character Menu, your font suitcase file will gradually accumulate characters. These will be displayed, arranged in ascending code value order, at 24 point size in the main area of the Font View window.

Figure 13 ExampleSuitcase

- Click to select a character in the window. The character will be highlighted and its character code will be displayed at the bottom of the screen in Hexadecimal and Decimal notation.
- Change the relative position of characters in your collection by using Change Selected Character Code as described earlier.
- To be able to make further modifications, either double-click on a character or click to select it and then click on Export Selected Character. This will create a new Character Editor window and copy the character to it. When you Add it back into the Font Suitcase file, it will be automatically added to the collection as a new character, leaving the original intact.
- To delete a character from the collection, click on it to select it and then choose Clear from the Edit menu. Alternatively overwrite the character by changing the character code of another character to be equal to it.

Published Date: Feb 20, 2012

Mac OS 8: System File Damage

With Mac OS 8.1 installed, when I double-click the System suitcase, the Finder displays an error message stating that the file is damaged.

This article has been archived and is no longer updated by Apple.

Symptom

With Mac OS 8.1 installed, when I double-click the System suitcase, the Finder displays an error message stating that the file is damaged.

This is caused by having Appearance Extension version 1.0.2 installed. Mac OS 8.1 installs version 1.0.1 and Mac OS 8.0 installs version 1.0. It is important to note that the System suitcase is not damaged.

Solution

If you need to add or remove items from the System suitcase, you can do this by using the following workaround.

1. Option-drag the System file to the desktop.
2. Open the copy you just made and make the changes.
3. Close the window for the copy.
4. Drag the System suitcase from the System Folder to the Trash.
5. Drag the copy from the desktop to the System Folder.
6. Make sure the System Folder is blessed by making sure the System Folder icon has the Mac OS logo on it.
7. Restart the computer.
8. Empty the Trash to delete the old System suitcase.

Published Date: Feb 20, 2012

QuickTime 3: Choosing A PPD In Desktop Printer Utility

Since I installed QuickTime 3 for the Macintosh, whenever I try to create a desktop printer using the Desktop Printer Utility and select a PPD file, I get a dialog asking to select either "Desktop Printer Utility with QuickTime translation" or "Desktop Printer Utility." Can you explain and offer a solution?

This article has been archived and is no longer updated by Apple.

Because of the new way in which QuickTime 3 checks for media files, this dialog will appear the first time you select a PPD with the Desktop Printer Utility. Proceed by selecting "Desktop Printer Utility" in the dialog box. After making this selection once, Mac OS Easy Open remembers your preference and won't present the dialog in the future.

If you receive an error stating "The document cannot be translated because an unexpected problem has occurred (-2048)" then you probably selected "Desktop Printer Utility with QuickTime translation" instead of "Desktop Printer Utility". To correct this, open the Mac OS Easy Open control panel and click the Delete Preferences button. Then select the PPD and this time choose "Desktop Printer Utility" from the dialog box.

Published Date: Feb 20, 2012

Mac OS 8.1: Daylight Saving Time & Mac OS Extended Volumes

Using Mac OS 8.1 on a Mac OS Extended hard disk with Daylight Saving Time selected in the Date & Time control panel, both the creation and modification times of files change by one hour. However, when using Mac OS 8.1 on a Mac OS Standard format hard disk, the times do not change.
This article has been archived and is no longer updated by Apple.
The reason the times change is that Mac OS Extended format stores the creation and modification times in Greenwich Mean Time (GMT). This time is also known as Universal Time (UTC). The offset from GMT is stored in PRAM. This value is added to the time stored for the file to determine the correct creation or modification time.

The GMT offset is stored when you select a time zone in the Date & Time control panel. This offset is modified when Daylight Saving Time is checked. Since the value is stored as seconds, 3600 is either added to or subtracted from the GMT offset depending on whether entering or exiting Daylight Saving Time.

For example, a file was created at 12:00 PM Pacific Standard Time. The value stored was 8:00 PM GMT since there is an 8 hour difference. When Daylight Saving Time is in effect, the difference is only 7 hours. This causes the creation time of the file to be displayed as 1:00 PM PST, not 12:00 PM.

Changing time zones also affects the creation and modification dates.

Drawbacks of this are that aliases may break, and backups may be effected.

Note: This issue has been addressed in Mac OS 8.5 and later and no longer occurs.

Published Date: Feb 20, 2012

AppleShare IP: Retaining File & Folder Permissions After Clean Install

This article describes how to perform a clean system install of the Mac OS on an AppleShare IP server while preserving file and folder privileges. This article has been archived and is no longer updated by Apple.

Introduction

This procedure will work on Workgroup Servers and other Macintosh computers running AppleShare IP. This will not cure issues due to a damaged Users & Groups Data File or AppleShare PDS file. This is the procedure to use if your system software on a Mac OS AppleShare server has become unusable, and you want to replace it while preserving privileges and sharing information.

Note: Before proceeding with Step 1, ensure that you have a backup of your file server that can be used for recovery purposes. Many times, backup servers may be used to test the quality of a file server backup to ensure recoverability.

To backup your file server properly, the AppleShare server software must be active to retain users, groups, permissions and sharepoints.

Step 1: Startup from the Mac OS CD-ROM.

1. Start up with the "Workgroup Server Software" CD-ROM disc that came with your Workgroup Server, or a bootable Mac OS CD that contains Mac OS 7.6 or later. For full information on compatibility between versions of AppleShare and Mac OS, see the following article:
Article 16145: "**AppleShare: Platforms & Mac OS Releases Supported**"
You can force the machine to start up from the CD by pressing and holding the "c" key after restarting until you see the "Welcome To Macintosh" screen. You should see a desktop pattern with CDs flying in the background. At the desktop, the CD-ROM's icon should be in the upper-right corner of your screen; your hard drive's icon should be below it. If a hard drive appears above the icon for the CD-ROM, open the Startup Disk control panel, and select the CD-ROM. Close all open windows and restart the computer. The CD-ROM icon should now appear in the upper-right corner above any other drives that show up on the desktop.
2. Run Disk First Aid (in the "Utilities" folder on the CD) and repair any problems found. If Disk First Aid cannot repair the drive, you should back up your data, format the drive, and then restore the data.

Warning: Be sure to back up data **before** formatting a drive because all data will be lost during the formatting process.

Step 2: Start Clean Install

If you are installing Mac OS 7.6 or 7.6.1

1. Step through the four-step installation process until you get to the screen entitled "Software Installation."
2. Click the "Options" button at the bottom of the screen.
3. In the window that appears, click the checkbox next to "Create new System Folder."
4. Click "OK".

If you are installing Mac OS 8.x

1. After you get the welcome screen, click "Continue." The next screen should say "Select Destination."
2. For Mac OS 8.0 and 8.1, click the checkbox at the bottom of the screen to select "Perform Clean Installation."
3. For Mac OS 8.5 or 8.6, click the Options button to find the Clean Install option.
The Installer should walk you through the rest of the installation.

After the clean installation is complete, install any supported Mac OS Updates.

Step 3: Set up the File Sharing information

When the installation is finished, restart the computer normally so that it restarts from the hard drive. If you get a dialog box from the Energy Saver Control panel, be sure to set the preferences to never spin down the hard drive or put the computer to sleep.

If you have Mac OS 7.6

If you are installing 7.6, open the Sharing Setup control panel and fill out the Owner Name, the Owner Password, and the Machine name. Make careful note of the exact Owner Name and Owner Password you enter. Later on these will be the AppleShare Administrator name and password.

If you have Mac OS 8.x

The Mac OS Setup Assistant should launch when you start up. Complete that. Make careful note of your answers to the questions "What is your Name" and "What password would you like to use on your computer?" Later, this will be the AppleShare Administrator name and password. When the setup assistant asks you if you want to share a folder on this computer, select "No."

Step 4: Move the old User & Group Data File to the new System Folder

Open the System Folder, and inside the System Folder open the Preferences folder. Drag the Users & Groups Data File to the Trash. Close the Preferences folder.

Locate the folder named Previous System Folder and open it, then open the Preferences folder. While pressing and holding the Option key on your keyboard, drag the Users & Groups Data File to the desktop. (Holding down the Option key will let you copy the Users & Groups Data File instead of moving it.) Close the Preferences folder and the Previous System Folder.

The System Folder should still be open (if it is not, open it). Drag the Users & Groups Data File from the desktop to the Preferences folder of the open System Folder.

Step 5: Install ASIP

Restart and install AppleShare IP Software. Be sure to install any necessary updates prior to launching the AppleShare IP Easy Setup. Restart the computer.

Step 6: Run Easy Setup

Run AppleShare IP Easy Setup. It should detect your serial number from the previous Users & Groups Data File. Once you finish walking through Easy Setup, your server should be running with the previous user list and access privileges.

Published Date: Feb 20, 2012

PowerBook G3, PowerBook G3 Series: No Contrast Control

This article explains how to adjust the display on a PowerBook G3 or PowerBook G3 Series computer.
This article has been archived and is no longer updated by Apple.
The PowerBook G3 and G3 Series computers have a fixed-contrast liquid crystal display like the PowerBook 2400. You cannot change the contrast on these displays.

You can, however, make some adjustments to the display by using ColorSync:

1. Install the latest version of ColorSync.
This article can help you locate the software update mentioned here:
Article 14724: "**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.

2. Open the Monitors and Sound control panel and click the Color button. On the bottom of the window you will see a list of ColorSync Profiles and a Calibrate button.

3. Click the button to launch the Apple Monitor Calibration Assistant.

4. Walk through this series of adjustments until you get the screen the way you want it. Disregard the contrast setting instruction, but experiment with the other settings. The Target Gamma page will probably provide you with a contrast setting that will satisfy you.

5. Save the setting and you will return to the list of profiles.

6. Select the new one and you are done.

You can make multiple calibrations and create a choice of various settings for use in different applications or environmental settings.

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, read article 24604: "**PowerBook G3, G3 Series: Identifying Different Versions**"

Published Date: Feb 20, 2012

Mac OS 8: Cannot Launch Apple Video Player or FM Radio

This article explains an error message that may appear when trying to use Apple Video Player or Apple FM Radio after upgrading to Mac OS 8.x.
This article has been archived and is no longer updated by Apple.

Symptom

After upgrading to Mac OS 8.x, some users of Apple Video Player or Apple FM Radio will receive an error message saying they need the proper version of these applications or that the Video Startup extension did not load.

Solution

Background

Prior to Mac OS 8, the Apple Video Player and the Apple FM Radio programs were stored in the "Apple Extras Folder" which is at the root level of the hard drive. However, Mac OS 8 installs both of those applications in the "Applications" folder (also at the root level of the hard drive). Either way, there are aliases to those programs stored in the "Apple Menu Items" folder (which resides in the System Folder) and that is how they are displayed under the Apple Menu.

How The Situation Can Occur

If you have a version of the Mac OS prior to 8.0, and then you install Mac OS 8.x on top of that, the Mac OS 8.x Installer will add the updated FM Radio and Apple Video Player applications, but it may not update those aliases in the Apple Menu Items. So, after installing Mac OS 8.x, you will have the older versions of those applications in the "Apple Extras" folder and you will have the new Mac OS 8.x compatible versions of those applications in the "Applications" folder. However, since the aliases under the Apple Menu are pointing to the old versions of those programs, it tries to launch those and you get the error messages.

To resolve this issue, perform the following steps:

1. Open the Apple Menu Items folder (located in the System Folder).
2. Drag the "Apple Video Player" and "Apple FM Radio" aliases to the Trash.
3. Open the Applications folder (root level of the hard drive).
4. Make aliases for the Apple FM Radio program and the Apple Video Player.
5. Drag those new aliases to the Apple Menu Items folder.

At this point you should be able to launch both applications from the Apple Menu.

Please note that the Mac OS 8.1 Installer will **not** install the updated versions of these applications if the older versions are not already installed. For more on this issue, please see the following article:

Article 22141: "**Mac OS 8.1: FM Radio Installation Issues & Version Error**"

For information on what versions of Apple Video Player and FM Radio are installed by the various different versions of the OS, please see the following article:

Article 30342: "**Apple TV/Video System: Not Recognizing The TV Tuner**"

Published Date: Feb 17, 2012

PowerBook G3 Series: Description

This article provides a description of Macintosh PowerBook G3 Series computers.
This article has been archived and is no longer updated by Apple.
Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. To visually identify which type of computer you have, close the display and inspect the display case. A Macintosh PowerBook G3 has a small, six-color Apple logo on the display case. A Macintosh PowerBook G3 Series computer has a large Apple logo on the display case that is not six-colored.

The Apple Macintosh PowerBook G3 Series sets new standards for portable design and performance. At first glance, you'll be struck by the extreme elegance of these computers. On closer examination, you'll find their advanced features and outstanding flexibility even more striking. Most impressive of all, though, is their performance. These innovative notebook systems outperform comparable Pentium and Pentium II processor-based notebook and desktop systems.*

The Macintosh PowerBook G3 Series truly offers "something for everyone"-- from creative professionals to educators and students to business professionals. Built around the high-performance PowerPC G3 processor-- the same innovative chip that sparked the success of Apple's current line of desktop systems--these notebook systems provide the power to handle even the most demanding tasks.

To complement their power, the PowerBook G3 computers incorporate the impressive multimedia capabilities that are a must for today's educators and professionals. And since Apple understands that individual needs are just that--individual--these systems offer flexible configuration options. Each system includes a high-speed CD-ROM drive and supports the latest storage technology--DVD-ROM. They also include built-in video output, and several configurations include S-video output for connecting to a TV.

The innovative design of these computers is as functional as it is attractive, with features such as two hot-swappable expansion bays for multiple storage options and lithium-ion batteries, and a flip-up keyboard for fast, easy access to the RAM expansion slot and removable hard disk drive.

The PowerBook G3 computers' communications offerings include built-in Ethernet--a requirement in most educational environments as well as in business. An optional K56flex modem lets you tap into your organizational network or the Internet.**

The Macintosh PowerBook G3 Series: Truly customizable portable systems that give you unmatched performance and capabilities to meet your needs at a price you can afford.

Features

Astounding performance at affordable prices

- Features the PowerPC G3 processor, for the fastest performance ever in a notebook computer
- Incorporates performance-boosting backside level 2 cache**
- Uses SDRAM and SGRAM for the fastest memory architecture available
- Supports two lithium-ion batteries for up to 7 hours of normal use
- Offers flexible configuration options to meet your needs and your budget

Advanced multimedia capabilities

- Features a high-quality display--up to 14.1 inches (diagonal)
- Includes up to 4MB of video memory, for displaying millions of colors on an external monitor
- Provides outstanding 2D/3D graphics acceleration through an integrated controller
- Includes a high-speed CD-ROM drive and supports the latest performance breakthrough in storage--DVD-ROM
- Allows you to connect an external monitor, video projector, or TV**

Striking style and stellar efficiency

- Combines aesthetics and ergonomics to create an elegantly efficient system
- Includes two expansion bays for a variety of storage and battery options
- Provides easy access to the memory expansion slot and removable hard disk drive through its flip-up keyboard
- Accommodates CardBus cards and PC Cards for additional networking, storage, and modem capabilities

Integrated communications

- Includes built-in 10BASE-T Ethernet
- Accommodates K56flex technology for the ultimate in modem connectivity**
- Comes with built-in 4-Mbps IrDA technology for easy, wireless LAN access and file sharing

Macintosh PowerBook Performance Comparisons

Figure 1 Graph

Notes
*Based on BYTEmark integer index.
**Available in some configurations; see Configurations chart for product details.
***Based on Apple internal testing using MacBench 4.0 processor performance scores. Actual performance on applications will vary. MacBench is a subsystem-level benchmark that measures the relative performance of Mac OS-based systems.

Ordering Information

For detailed information about configurations, see the chart below. All models also include a built-in keyboard and trackpad; all necessary cables, such as an Ethernet cable, modem cable, composite to S-video adapter and VGA-to-Macintosh connector cable; Mac OS 8.1 (which includes Internet access software); third-party software titles (FAXstf, Now Contact & Up*to*Date, and WebWhacker); complete setup, learning, and reference documentation; and limited warranty.

Build-to-order (BTO) options

These systems can also be ordered through the online Apple Store, which allows you to custom-configure your computer in such areas as processor speed, display size, RAM, hard disk size, modem, and expansion bay modules such as a DVD-ROM drive and lithium-ion battery.

Configurations			
With 12.1-inch display	**Order No.**	**M6359LL/A**	**M6477LL/A**
	Processor speed	233 MHz	233 MHz
	Memory (SDRAM)	32MB	32MB
	Video Memory	2MB	2MB
	Backside level 2 cache	-	-
	Backside bus speed	-	-
	System bus speed	66 MHz	66 MHz
	Hard disk drive	2GB IDE drive	2GB IDE drive
	CD-ROM drive module	20x-speed (maximum)	20x-speed (maximum)
	Floppy disk drive module	-	Yes
	Ethernet	Built-in 10BASE-T	Built-in 10BASE-T
	Modem	-	K56flex
	S-video output	-	-
With 13.3-inch display	**Order No.**	**M6481LL/A**	**M6357LL/A**
	Processor speed	233 MHz	250 MHz
	Memory (SDRAM)	32MB	32MB
	Video Memory	4MB	4MB
	Backside level 2 cache	-	1MB
	Backside bus speed	-	125 MHz
	System bus speed	66 MHz	83 MHz
	Hard disk drive	2GB IDE drive	4GB IDE drive
	CD-ROM drive module	20x-speed (maximum)	20x-speed (maximum)
	Floppy disk drive module	Yes	Yes
	Ethernet	Built-in 10BASE-T	Built-in 10BASE-T
	Modem	-	K56flex
	S-video output	Yes	Yes

With 14.1-inch display	**Order No.**	**M6484LL/A**	**M6541LL/A**
	Processor speed	233 MHz	292 MHz
	Memory (SDRAM)	32MB	64MB
	Video Memory	4MB	4MB
	Backside level 2 cache	-	1MB
	Backside bus speed	-	146 MHz
	System bus speed	66 MHz	83 MHz
	Hard disk drive	2GB IDE drive	8GB IDE drive
	CD-ROM drive module	20x-speed (maximum)	20x-speed (maximum)
	Floppy disk drive module	Yes	Yes
	Ethernet	Built-in 10BASE-T	Built-in 10BASE-T
	Modem	-	K56flex
	S-video output	Yes	Yes

Accessories	
PowerBook G3 Series Power Adapter	M6384LL/A
PowerBook G3 Series Power Adapter (for Europe and U.K.)	M6548LL/A
PowerBook G3 Series Lithium-ion Rechargeable Battery	M6385LL/A
PowerBook G3 Series DVD-ROM Expansion Bay Module	M6387LL/A
PowerBook G3 Series Floppy Disk Drive Expansion Bay Module	M6396LL/A
Apple HDI-30 SCSI Disk Adapter for SCSI disk mode	M2539LL/A
Apple SCSI Peripheral Interface Cable for SCSI-to-SCSI connection	M0207
Apple HDI-30 SCSI System Cable for PowerBook-to-SCSI connection	M2538LL/A

Published Date: Feb 20, 2012

LaserWriter And LaserWriter Plus: Port Illustration

This article contains a picture of the communication ports on LaserWriter and LaserWriter Plus printers, along with information on the ports' capabilities.
This article has been archived and is no longer updated by Apple.

Figure 1 Ports

The 9-pin socket supports an AppleTalk connection with the Apple Locking LocalTalk Connector Kit. The four position rotary mode switch must be set to the "AppleTalk" position in order to communicate with a Mac OS compatible computer. Serial communications to a DOS/Windows compatible computer can be achieved by selecting either 1200 or 9600 on the rotary switch.

The 25-pin socket will allow for RS-232c serial communication to a DOS compatible computer. It does not allow communication with a Mac OS compatible computer.

The LaserWriter and LaserWriter Plus do not support simultaneous communications.

Related Documents

24474 LaserWriter II Series: Port Illustrations
24473 Personal LaserWriter Series: Port Illustrations
24475 LaserWriter Pro Series: Port Illustrations
24478 LaserWriter Select Series: Port Illustrations
24479 Color LaserWriter Series: Port Illustrations

Published Date: Feb 20, 2012

Personal LaserWriter Series: Port Illustrations

This article contains pictures of the communication ports on Personal LaserWriter series printers, along with information on the ports' capabilities. The following models are included:

- Personal LaserWriter SC
- Personal LaserWriter LS
- Personal LaserWriter NT
- Peronsal LaserWriter 300
- Personal LaserWriter 320
- Personal LaserWriter 4/600PS

This article has been archived and is no longer updated by Apple.

Personal LaserWriter SC

There are two SCSI connections on the rear of the printer; they are not parallel connectors. The Personal LaserWriter SC communicates with a Mac OS compatible computer via SCSI and follows standard SCSI rules. If it is the only SCSI device connected, one port must be terminated, while the other port accepts the SCSI cable that goes to the computer. (The ports are the same; it does not matter which port gets the terminator and which gets the cable.) There is no support for printing to a DOS/Windows compatible computer.

Personal LaserWriter LS

The mini DIN-8 connection supports serial communication **only** with a Mac OS compatible computer via a serial Peripheral 8 cable. AppleTalk is not an option with the Personal LaserWriter LS. There is no support for communication with DOS/Windows compatible computers.

Personal LaserWriter NT

The mini DIN-8 connection supports AppleTalk communication with Mac OS compatible computers via LocalTalk connectors.

The The 25-pin socket will allow for RS-232c serial communication with a DOS compatible computer. This is not compatible for communication with a Mac OS compatible computer. The pushwheel switch determines what rate the serial communication will be and what protocols they will follow. This is not a SCSI ID number.

Personal LaserWriter 300

The mini DIN-8 connection supports serial communication **only** with a Mac OS compatible computer via a serial Peripheral 8 cable. AppleTalk is not an option with the Personal LaserWriter 300. There is no support for communication with DOS/Windows compatible computers.

Personal LaserWriter 320 and LaserWriter 4/600

The Personal LaserWriter 320 and LaserWriter 4/600 support only AppleTalk connections to the mini DIN-8 port with LocalTalk connectors. There is no support for printing to DOS/Windows compatible computers.

Related Documents

24471 LaserWriter and LaserWriter Plus: Port Illustration
24474 LaserWriter II Series: Port Illustrations
24475 LaserWriter Pro Series: Port Illustrations
24478 LaserWriter Select Series: Port Illustrations
24479 Color LaserWriter Series: Port Illustrations

Published Date: Feb 20, 2012

LaserWriter II Series: Port Illustrations

This article contains pictures of the communication ports on LaserWriter II series printers, along with information on the ports' capabilities. The following models are included:

- LaserWriter IISC
- LaserWriter IINT
- LaserWriter IINTX
- LaserWriter IIf
- LaserWriter IIg

This article has been archived and is no longer updated by Apple.

LaserWriter IISC

There are two SCSI connections on the rear of the printer; they are not parallel connectors. The LaserWriter IISC communicates with a Mac OS compatible computer via SCSI and follows standard SCSI rules. If it is the only SCSI device connected, one port must be terminated, while the other port accepts the SCSI cable that goes to the computer. (The ports are the same; it does not matter which port gets the terminator and which gets the cable.) There is no support for printing to a DOS/Windows compatible computer.

LaserWriter IINT

The Apple Desktop Bus (ADB) connector is not used on this printer. The 25-pin connection allows serial communication with a DOS/Windows computer; you can change communication rates and protocols via the Switch Bank. The mini DIN-8 connector allows AppleTalk communication with Mac OS compatible computers via LocalTalk connectors. This printer does not support simultaneous communications.

LaserWriter IINTX

The Apple Desktop Bus (ADB) connector is not used on this printer. The 25-pin connection allows serial communication with a DOS/Windows computer; you can change communication rates and protocols via the Switch Bank. The mini DIN-8 connector allows AppleTalk communication with Mac OS compatible computers via LocalTalk connectors. The SCSI connector is used for external hard drives to store downloaded font files; the SCSI connector is **not** used for SCSI printing directly from a Macintosh. This printer does not support simultaneous communications.

LaserWriter IIf

The LaserWriter IIf supports AppleTalk connections through the mini DIN-8 port to Mac OS compatible computers via LocalTalk connectors. The 25-pin port supports serial communication with DOS/Windows computers. The push button switch is used to change the communication rates and protocols for only the 25-pin port. The SCSI connector is used for external hard drives to store downloaded font files; the SCSI connector is **not** used for SCSI printing directly from a Macintosh. This printer does support simultaneous communications.

LaserWriter IIg

The LaserWriter IIg supports AppleTalk connections through the mini DIN-8 port to Mac OS compatible computers via LocalTalk connectors. The Ethernet connection supports Ethernet communication via an AUI-15 connection with transceiver. The 25-pin port supports serial communication with DOS/Windows computers. The push button switch is used to change the communication rates and protocols for only the 25-pin port. The SCSI connector is used for external hard drives to store downloaded font files; the SCSI connector is **not** used for SCSI printing directly from a Macintosh. This printer does support simultaneous communications.

Related Documents

24471 LaserWriter and LaserWriter Plus: Port Illustration

24473 Personal LaserWriter Series: Port Illustrations

TA21860_LaserWriter_II_Series_Port_Illustrations.pdf

24475 LaserWriter Pro Series: Port Illustrations
24478 LaserWriter Select Series: Port Illustrations
24479 Color LaserWriter Series: Port Illustrations

Published Date: Feb 20, 2012

LaserWriter Pro Series: Port Illustrations

This article contains pictures of the communication ports on LaserWriter Pro series printers, along with information on the ports' capabilities. The following models are included:

- LaserWriter Pro 600
- LaserWriter Pro 630
- LaserWriter 12/640PS
- LaserWriter 16/600PS
- LaserWriter 8500
- LaserWriter Pro 810

This article has been archived and is no longer updated by Apple.

LaserWriter Pro 600

The mini DIN-8 connection supports AppleTalk communication with Mac OS compatible computers via LocalTalk connectors. The 9-pin connector supports serial communication with DOS/Windows computers. The configuration switch allows you to change communication rates and protocols. The Centronics (parallel) port allows for parallel printing from DOS/Windows computers. All ports are active which allows for simultaneous communications.

LaserWriter Pro 630

The mini DIN-8 connection supports AppleTalk communication with Mac OS compatible computers via LocalTalk connectors. The 9-pin connector supports serial communication with DOS/Windows computers. The configuration switch allows you to change communication rates and protocols. The Centronics (parallel) port allows for parallel printing from DOS/Windows computers. The Ethernet connection supports Ethernet communication via an AUI-15 connection with transceiver. The HDI-30 connection supports a SCSI hard drive used for font storage. All ports are active which allows for simultaneous communications.

LaserWriter 12/640PS

The mini DIN-8 connection supports AppleTalk communication with Mac OS compatible computers via LocalTalk connectors. The Communication Switch allows you to change communication rates and protocols. The IEEE-1284 Bi-Directional Centronics (parallel) port allows for parallel printing from DOS/Windows computers. The Ethernet port supports Ethernet communication via an AUI-15 connection with transceiver. All ports are active which allows for simultaneous communications.

LaserWriter 16/600PS

The mini DIN-8 connection supports AppleTalk communication with Mac OS compatible computers via LocalTalk connectors. The configuration switch allows you to change communication rates and protocols. The Centronics (parallel) port allows for parallel printing from DOS/Windows computers. The Ethernet connection supports Ethernet communication via an AUI-15 connection with transceiver. The HDI-30 connection supports a SCSI hard drive used for font storage. The RJ-11 port is present if the optional LaserWriter 16/600 PS Fax Card is installed. All ports are active which allows for simultaneous communications.

LaserWriter 8500

The mini DIN-8 connection supports AppleTalk communication with Mac OS compatible computers via LocalTalk connectors. The Communication Switch allows you to change communication rates and protocols. The IEEE-1284 Bi-Directional Centronics (parallel) port allows for parallel printing from DOS/Windows computers. The Ethernet connection supports Ethernet communication via an AAUI-15 connection with transceiver or the RJ-45 connection. You can only use one Ethernet port at a time, not both simultaneously. The SCSI connector allows for connection of an external hard drive for font storage.

LaserWriter Pro 810

The mini DIN-8 connection supports AppleTalk communication with Mac OS compatible computers via LocalTalk connectors. The 9-pin connector supports serial communication with DOS/Windows computers. The Ethernet connections support Ethernet communication via two RJ-45 connections. The 25-pin SCSI connection supports a SCSI hard drive used for font storage. All ports are active which allows for simultaneous communications.

Related Documents

24471 LaserWriter and LaserWriter Plus: Port Illustration
24474 LaserWriter II Series: Port Illustrations
24473 Personal LaserWriter Series: Port Illustrations
24478 LaserWriter Select Series: Port Illustrations
24479 Color LaserWriter Series: Port Illustrations

Published Date: Feb 20, 2012

LaserWriter Select Series: Port Illustrations

This article contains pictures of the communication ports on LaserWriter Select series printers, along with information on the ports' capabilities. The following models are included:

- LaserWriter Select 300
- LaserWriter Select 310
- LaserWriter Select 360

This article has been archived and is no longer updated by Apple.

LaserWriter Select 300

Figure 1 LaserWriter Select 300 ports

The mini DIN-8 connection supports serial communication with only Mac OS compatible computers via a serial Peripheral 8 cable. AppleTalk is not an option with the LaserWriter Select 300. There is no support for communication with DOS/Windows compatible computers.

LaserWriter Select 310

Figure 2 LaserWriter Select 310 ports

The mini DIN-8 connection supports Postscript Level 1 serial communications with only Mac OS compatible computers via a serial Peripheral 8 cable. AppleTalk is not an option with the LaserWriter Select 310. The Centronics (parallel) port allows for parallel printing from DOS/Windows computers, using Postscript Level 1. The LaserWriter Select 310 does not support simultaneous communications.

LaserWriter Select 360

Figure 3 LaserWriter Select 360 ports

The mini DIN-8 connection supports AppleTalk communication via LocalTalk connectors to Mac OS compatible computers. The 25-pin connector supports serial communication with DOS/Windows computers. The Configuration Switch allows you to change communication rates and protocols. The Centronics (parallel) port allows for parallel printing from DOS/Windows computers. The RJ-11 port is present if the optional LaserWriter Select 360 Fax Card is installed.

Related Documents

24471 LaserWriter and LaserWriter Plus: Port Illustration
24474 LaserWriter II Series: Port Illustrations
24473 Personal LaserWriter Series: Port Illustrations
24475 LaserWriter Pro Series: Port Illustrations
24479 Color LaserWriter Series: Port Illustrations

Published Date: Feb 20, 2012

Color LaserWriter Series: Port Illustrations

This article contains pictures of the communication ports on Color LaserWriter series printers, along with information on the ports' capabilities. The following models are included:

- Color LaserWriter 12/600PS
- Color LaserWriter 12/660PS

This article has been archived and is no longer updated by Apple.

Color LaserWriter 12/600PS and Color LaserWriter 12/660PS

Figure 1 Ports

The mini DIN-8 connection supports AppleTalk communication with Mac OS compatible computers via LocalTalk connectors. The IEEE-1284 Bi-Directional Centronics (Parallel) Port allows for parallel printing from DOS/Windows computers. The Configuration Switch allows you to change communication rates and protocols. The Ethernet connection supports Ethernet communication via an AAUI-15 connection with transceiver. The HDI-30 connection supports a SCSI hard drive used for font storage. All ports are active which allows for simultaneous communications.

Related Documents

24471 LaserWriter and LaserWriter Plus: Port Illustration
24474 LaserWriter II Series: Port Illustrations
24473 Personal LaserWriter Series: Port Illustrations
24475 LaserWriter Pro Series: Port Illustrations
24478 LaserWriter Select Series: Port Illustrations

Published Date: Feb 20, 2012

FAXstf: Not Picking Up Fax Phone Calls

Summary:
The FAXstf fax software, installed in some Macintosh configurations, is not picking up the phone line, so faxes cannot be received.
This article has been archived and is no longer updated by Apple.
Apple bundled FAXstf on a number of systems, including desktop Power Macintosh G3 and PowerBook G3 systems . FAXstf is a product of Smith Micro Software-- **not** Apple Computer and all technical support related issues are handled by Smith Micro Software, Inc. However, one common issue is listed below.

Issue:
Occasionally, the modem goes into data mode instead of the idle (fax) mode. When this happens, the modem no longer answers an incoming fax call.

To check what mode the modem is in:

1. Select "Fax Status" in the Apple Menu.
A window is displayed with a Macintosh icon on the right side. Below the Macintosh icon is text that states "Data Mode" or "Idle".
2. On the right side of the window a Macintosh icon is displayed with text below reading "Data Mode" or "Idle". If it is set to Data mode you must reset the FAXstf Answer On settings.

Resetting the Answer On settings:

1. Open the FAXstf folder.
2. Open Fax Settings (older versions) or
Open Fax Browser (later versions)
3. Choose settings from the Edit menu.
4. Choose Fax Modem.
5. In the "Answer On" option change it to "Never".
6. Click Done.
7. Reopen the settings and change the "Answer On" selection back to one, two, or more rings (your preference).

At this point the modem should say "Idle" in the Fax Status and is ready to answer a call.

If the modem still does not answer the fax but works correctly in other applications, contact Smith Micro Software, the publisher of FAXstf software. Apple has documented this issue with STF Technologies (the previous owners of FAXstf). Smith Micro Software may have a newer version of the software that addresses the issue.

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following Knowledge Base article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"
Published Date: Feb 20, 2012

56Kbps Modems: Getting The Fastest Connection

My 56K modem is not connecting at the speed I expected. I understand that regulations in North America and some other countries limit connections to 53 kilobits per second, but my modem seldom connects at greater than 36 Kbps. Is it malfunctioning? Can anything be done?
This article has been archived and is no longer updated by Apple.
A modem is unlikely to malfunction only to the extent that it is unable to achieve its top speeds. Lesser speeds are common and generally reflect limitations imposed by the operating conditions:

- Impairments in the telephone network path
- Interoperability issues between modems
- Modem settings

This article provides an overview of these conditions as they affect the connection speed and reliability of 56K modems, though much is equally relevant to other modems. It joins a large body of complementary material available online from many modem manufacturers and modem-related web pages.

But first, just how fast is that connection?

MEASURING CONNECTION SPEED

Initial connection speed. The PPP or Remote Access control panel (see Figure 1) shows the speed initially established, not the current or average connection speed, which often differs.

Figure 1: Remote Access, showing an initial connection speed of 40000 bits per second (40 Kbps)

If operating conditions permit a faster connection, the modem will attempt to speed up (fall forward). If conditions prevent sustaining a speed without incurring excessive transmission errors, the modem will slow down (fall back). Because these adjustments are common but not reflected in the software, do not base performance measurements solely upon initial connection speed.

DTE speed (modem-to-computer speed or port speed) is generally represented by the static numbers 38400, 57600, or 115200, as configured in the software. It is not a measurement of connection speed. The ARA modem scripts (selected in the Modem control panel) for all Apple 56K modems correctly configure the DTE speed for a maximum of 115200 bps.

Determining the average Data Transfer Rate. Data Transfer Rate (DTR), or throughput, describes how fast data is being transferred, expressed in bits per second. The following method of obtaining the average DTR is a truer method of assessing modem performance than observing the initial connection speed or the fluctuating throughput indicators of web browsers or FTP clients. Because the upload (transmit) speeds of analog modems cannot exceed 33.6K, the discussion is confined to download (receive) speeds.

1. Connect to the internet and, preferably, open an FTP client application rather than a web browser. Anarchie, Fetch, NetFinder, and Vicomsoft FTP Client are popular shareware examples.

2. Log in to an FTP server. Many Internet Service Providers make local FTP servers available for their members, and most FTP clients include a selection of public FTP server bookmarks. If you know of any FTP servers that are not very busy or are geographically nearby, use them. The more frequently the modem has to wait for a busy server to respond, the less accurate the test results will be. The greater the server's distance, the more likely the connection will pass through additional line impairments that may slow the connection.

3. Download a compressed file of approximately 500K or larger. Most compressed files have a file name extension of .sit, .sea, .cpt, or .zip. Apply the formula **file size (bytes)/download time (seconds) x 9 = average DTR (bits/second)**, as shown:

Figure 2: Formula for computing the average Data Transfer Rate

Example
For a 500K file that takes 2 minutes 5 seconds to complete downloading, the equation reads:

500,000 / 125 x 9 = 36,000

The average DTR was 36K (kilobits, not kilobytes) per second, though the actual DTR at any moment may have been higher or lower.

About File Size
The file sizes shown in FTP client windows are generally approximate. Convert kilobytes to bytes using the decimal format appropriate to measuring data transfer rates, where 1K = 1,000 bytes. To convert the average DTR from bits per second to kilobits per second, always divide the result by 1,000.

About Download Time
The FTP client's download progress indicator may appear shortly before the file begins downloading. Do not begin timing until the download appears to be underway. Use your own timer instead of relying upon any download time that may be reported by the FTP client.

Why the Formula Is Not Perfect
Average DTR will be greater than calculated when transmission errors require data to be re-sent, thus increasing download time without changing file size. And if the modem negotiates a connection requiring start and stop bits (2 bits added to the baseline 8 bits per byte), DTR will be greater by an additional 1 bit per byte transferred. Because all connections require transmission of some amount of extra data, using 9 as the third variable in the formula provides a serviceable if not always entirely accurate compromise.

4. Disconnect, then repeat the procedure using different FTP servers at different times of the day, especially during the off-hours of early morning or late evening. The averaged results best represent what the modem is able to achieve under its current operating conditions, so look for improvement by making the operating conditions more suitable for faster connections.

OPERATING CONDITIONS AFFECTING CONNECTION SPEED & RELIABILITY

Impairments in the telephone network path

1. Multiple analog/digital conversions. Connections are limited to a maximum of 33.6 Kbps where more than one analog section exists in the telephone network path between modems. The first analog section begins with your modem. Internet Service Providers fully supporting 56K modem connections must provide a completely digital connection, but additional analog sections may be introduced elsewhere in the path.

What you can do
Nothing. The telephone company can confirm the presence of multiple A/D conversions in a path, but consider that no two calls are necessarily routed through the same path, even when dialing the same number. This is one reason why throughput can vary with each connection. There is always the hope that the telephone network in your area will be upgraded.

2. Signal interference & distortion. The telephone network path between modems must be sufficiently free of noise and frequency distortion to permit the desired speed. The modem analyzes these line impairments as they affect the quality of the transmission signal. Poor signal quality causes transmission errors, reduced throughput, reduced connection speed, and even dropped connections.

What you can do
a. Experiment with eliminating potential sources of line impairments in the home:

- Any device connected to any telephone outlet, especially if used by the modem, and even if on a different line: telephones, including cordless telephones and their base stations, answering machines, fax machines, caller ID boxes, and other modems
- Telephone line splitters, cable extenders, faulty or overly long telephone cables (shorter is better)
- Surge protectors, including those that offer telephone line protection
- Alarm systems, especially those that are connected to the telephone system
- Computer equipment, including speakers
- Fluorescent light fixtures and light dimmers
- Satellite dish receivers
- Appliances such as air conditioners, refrigerators, dryers, microwave ovens, and televisions
- Any AC power source and related cabling
- All other things electrical, including issues with the premises wiring: loose or corroded connections, too many splices or bridges, insulation deterioration and exposed wiring, non-twisted pair telephone wiring

Start with a direct, unobstructed, modem-to-outlet connection using a short, high-quality telephone cable. As a way of confirming the issue prior to isolating it any further, there is the option of testing with a direct connection to the external telephone box located at the back or side walls of the residence. It provides one or more standard telephone jacks supplying the home telephone connections but bypassing most impairments inside.

b. Listen for noise. Because the telephone company is only obligated to provide voice-quality phone lines, it is unlikely to address the many and varied off-premises sources of line impairments that can affect connection speed but don't cause audible noise. Connect a telephone to the wall jack used by the modem, then pick up the line, dial the number 1 to stop the dial tone, and listen. Contact the telephone company if the line is not quiet (loud hiss, pops, static, voices), but first disconnect other telephone devices and check again.

c. Use a local dial-in number to your Internet Service Provider. Long distance and 800 numbers aren't typically a concern, but may cause the call to be routed through more facilities, indirect paths, and different carriers with different types of equipment and lines. Local calls may be auto-

forwarded in the same manner, but most reputable ISP's don't engage in this practice. Finally, note that if you are dialing 9 to get an outside line, you are probably using a phone system that will limit throughput to around 33.6K or less.

Interoperability issues between modems

1. The modems on both the client and server side must support the same protocol. Apple 56K modems support K56flex and V.90, but not X2. Apple/GV 56K modems that have been flash-ROM updated support either K56flex or V.90, depending upon the modem updater used.

What you can do
Confirm with your ISP that you are dialing in to a number answered by a modem of the same 56K protocol as yours.

2. Where modems of different makes, models, firmware/flash-ROM revisions, and chipsets are concerned, one modem may have an incompatible method of implementing a connection that it has negotiated with the other modem, or the negotiation itself may fail. For example, if a modem cannot sustain the current connection speed but is unable to successfully negotiate a slower connection with the other modem, the connection will incur excessive transmission errors, decreasing throughput and potentially forcing a disconnect.

What you can do
a. If your modem can be flash-ROM upgraded via software, apply the most recent modem update available. Apple 56K modem updates are available online. The latest firmware code may make the two modems more compatible--or less.

b. Force a slower connection from the very start, such as by disabling 56K protocols in favor of V.34. This change is incorporated into the "V.34 Only" modem scripts available for some Apple 56K modems. A variety of other modem manufacturers supply similar ARA modem scripts for their modems. If you are connecting to the internet using software that does not use modem scripts, supply the software with a custom initialization string for your modem. Your ISP may be able to assist you, or you can teach yourself the proper initialization string by studying the AT command guide provided with your modem or available online from the manufacturer.

c. Ask your existing Internet Service Provider whether different modems are available via an alternate dial-in number, or switch to an ISP that provides different modems (call them first, as they may already know of issues they are having supporting the modem you are using). If all else fails, you may wish to go so far as to try a different modem yourself--one that your ISP recommends for best compatibility.

The settings of either modem

The default configuration of either modem may be altered to enforce one type of modulation over another (Apple's V.34 modem scripts enforce V.34, for example); disable or change the type of compression, error correction, and flow control; change the maximum and minimum speeds allowed, and respond differently when, for example, error correction fails. These settings are changed from their defaults--the factory settings--by the modem initialization string. Depending upon the connectivity software used, the modem initialization string is either entered manually into the software or is part of an Apple Remote Access modem script.

What you can do
a. Be certain that you are using the correct modem script for your modem. Macintosh computers that ship with internal modems already include the necessary modem script, and many manufacturers also provide them online separately or with modem firmware updates.

b. Try an alternate modem script if the software or the modem manufacturer provides one. A different modem script may contain an initialization string more suitable to your operating conditions. Externally contributed modem scripts may also be found in the Communications directory of Info-Mac FTP servers and elsewhere on the Internet.

c. Edit the initialization string contained in your modem script or use software that provides the option of entering an initialization string directly, such as FreePPP or MacPPP. Your Internet Service Provider may be able to tell you what initialization string, if any, they recommend for best compatibility with their modems. They may require that you fax them the AT and S-register command set from the modem's documentation, as these can vary among modems. Don't expect too much: the modem's default settings and those defined in the modem script typically place the modem into its most robust and flexible configuration, so changes often amount to turning off features that are beneficial in most circumstances. That is why Apple does not provide end-user instruction in modifying ARA modem scripts, other than to make an unsupported tool, the Modem Script Generator, available online.

A failed modem

Again, a modem is unlikely to malfunction only to the extent that it is unable to achieve its top speeds, but it's a possibility that cannot be discounted outright. To find out, use your modem in place of another **identical** modem that is able to attain higher speeds. Conversely, use an **identical** modem that is able to attain higher speeds in place of your own modem.

If you don't see similar results using the formula provided above, and both modems are using the same modem cable and power supply (if present), and both have been updated to the same firmware revision, there may be a hardware issue with the slower modem.

FREQUENTLY ASKED QUESTIONS:

Q. I found a new ARA modem script on the Internet that claims to make my modem faster, and sure enough, I'm now connecting at 48000 bps every time.

A. Be wary of modem scripts that always report the same initial connection speed or that claim to exploit supposedly hidden features in the modem. When evaluating a new modem script or modem initialization string, base your judgement upon the modem's stability and apply the formula for obtaining the average DTR. A modem script can force a high initial connection speed (or lie about it), but cannot force the modem to sustain that speed without dropping the connection. It is of little benefit to have a fast but unreliable connection, or one that always starts fast before slowing down dramatically.

Q. My Internet Service Provider advised me to disable error correction and compression in order to boost my connection speed. Is this advisable?

A. Rarely. That advice is grounded in the notion that, over heavily impaired lines, the overall throughput of the modem may decrease when the error-correction protocol is forced to retransmit data to correct the errors. But without error correction and compression, the integrity of the data being transferred cannot be maintained. The Remote Access control panel provides an "allow error correction and compression in modem" checkbox that may be disabled if you wish to experiment.

Q. Would it help to connect with something else besides Remote Access or Open Transport/PPP?

A. Probably not, but feel free to experiment. Examples of other connectivity software are FreePPP, MacPPP, LinkUPPP!, and SonicPPP. The first two do provide a more convenient method of changing the modem initialization string than software that uses Apple Remote Access modem scripts.

Q: I'm making a connection between my home and office 56K modems using Apple Remote Access Personal Server, but I cannot exceed 33.6 Kbps, despite achieving faster rates when connecting to my ISP. Is this normal?

A. Yes. In order to provide the fully digital server-side connection required to exceed 33.6 Kbps (see part 1 of "Impairments in the telephone network path"), an Internet Service Provider uses high speed digital servers and modem racks quite unlike the consumer modem setup. The home-to-office scenario described not only introduces an additional analog segment to the network path, but cannot avoid the 33.6K upload (transmit) limit now affecting both sides of the connection instead of just the client side. Note that the connectivity software (ARA, Timbuktu, a terminal application) is not relevant to these limitations.

Q. Is it possible to determine the highest connection speed attained during a connection, instead of just the average DTR?

A. After terminating the connection, issue an AT&F and AT&V1 command from a terminal program. This works for most modems. The results will look something like this:

```
AT&F
OK

AT&V1
TERMINATION REASON.......... LOCAL REQUEST
LAST TX rate................ 21600 BPS
HIGHEST TX rate............. 21600 BPS
LAST RX rate................ 24000 BPS
HIGHEST RX rate............. 24000 BPS
PROTOCOL.................... LAPM
COMPRESSION................. V42Bis
Line QUALITY................ 035
Rx LEVEL.................... 023
Highest Rx State............ 67
Highest TX State............ 67
EQM Sum..................... 00C3
Min Distance................ N/A
RBS Pattern................. FF
Rate Drop................... FF
Digital Loss................ None
Local Rtrn Count............ 00
Remote Rtrn Count........... 00
Flex fail
```

HIGHEST RX rate (or MAX RX and similar) represents the highest connection speed attained. Note also the line QUALITY entry: values greater than approximately 020 suggest a line quality that is unlikely to permit connections greater than 33.6K, but results may vary.

Useful Links:

Article 24775: "**Remote Access: Using the Terminal Window to Send AT Commands**"
Article 17931: "**Modem AT Command Set: Description**"
Apple Software Updates: **http://www.apple.com/swupdates**

Published Date: Feb 20, 2012

AppleShare IP: Support For Mac OS Extended Volumes

This article discusses using Extended volumes with AppleShare IP.
This article has been archived and is no longer updated by Apple.
AppleShare IP 5.0.3 provides support for Mac OS 8.1 and volumes formatted with Mac OS Extended format, also referred to as HFS Plus. Earlier versions of AppleShare IP are not supported with Mac OS 8.1, and therefore do not support Mac OS Extended formatted volumes.

For customers using earlier versions of AppleShare IP, updaters are available on Apple Software Updates.

If you own Mac OS 8.0, you can find the updater to Mac OS 8.1 on Apple Software Updates.

This article can help you locate the software update mentioned here:

- Article 14724: "**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.

Published Date: Feb 20, 2012

DVD-Video: Overview

This article provides information and a general overview of Digital Versatile Disc (DVD) Video technology, particularly as it relates to Apple. Included in the article are the following sections:

- Acronyms Explained
- DVD-Video Compared
- DVD-Video Quality
- Video
- Audio Options
- Interactive Video
- Subtitles

This article deals only with DVD-Video. For an overview of DVD technology, see the following Tech Info Library article:

Article 24451: "**DVD Technology: Overview**"
This article has been archived and is no longer updated by Apple.

Acronyms Explained

There are 4 main areas that digital video can be divided into:

- physical, shiny disc distribution (similar to distribution on VHS video tape)
- collection of original footage (similar to Hi8/VHS/S-VHS camcorders)
- over-the-air broadcast television
- cable/satellite broadcast television

DVD-Video is the physical, disc based distribution channel. All of the DVD-xxx variations are based on the same shiny disc. However, the format used by the differing versions can create compatibility issues.

DV (and its variations) is the most common collection of original digital footage.

DTV is used fairly often to describe the overall digital over-the-air broadcast method. With specific formats noted as:

- **HDTV** - High Definition TV, a 16 x 9 ratio image at greater than a 1000 lines of horizontal resolution. There are two resolutions defined by the United States Federal Communications Commission (FCC). Both can be presented in progressive (typical of computer monitors) or interlaced (typical of NTSC televisions).
- **SDTV** - Standard Definition TV, a 4 x 3 ratio image at approximately 720 lines of horizontal resolution. Also available in interlaced and progressive. Takes only a small part of the HDTV bandwidth allowing as much as four separate programs to be sent down the same HDTV channel.

DSS is the generic term for the small dish satellite systems used to deliver multitudes of channels to the home. Cable TV operators deliver a similar digital signal via cable to their subscribers.

The one thing to remember about all of these different digital video formats is that hardly any of them are directly compatible with any other format. To get from one format to another will require some form of transcoding.

DVD-Video Compared

Let's look at DVD-Video and how it relates to the other formats.

DVD-Video uses a MPEG-2 based compression technique for the video image. MPEG-2 is also used with DSS, digital cable, HDTV and SDTV.

However, DVD-Video employs a variable bit-rate compression scheme. Variable bit-rate compression allows the compressionist (the person making the decisions about how much compression to use) to apply a higher compression ratio to a low detail, low action scene; while allowing a high detail, high action scene to be compressed at a lower ratio. You want to do this because the higher detail/action scene would show artifacts more as the compression ratio is increased. A lower detail/action scene doesn't change as often and thus can be compressed at a higher ratio without artifacts appearing. A disadvantage of variable bit-rate compression is that it is not a real time operation. At a minimum, two passes are required to achieve any advantage.

Another element of the MPEG-2 stream used with DVD-Video is the additional information encoded in the video stream. Navigation information, language information, subtitle information, parental control information, Dolby Digital audio, and so forth are all contained in the DVD-Video

MPEG-2 video stream.

DSS and digital cable use a constant bit-rate compression. Since these distribution channels are dealing with real time events, there is no time for the two pass method used in variable bit-rate compression. Therefore, the image is always compressed the same amount whether it is a low detail/action scene or a high detail/action scene.

DSS and digital cable do not provide navigation, subtitle, parental control and alternate language abilities found in DVD-Video. These delivery channels would not be able to understand these data elements.

The MPEG-2 stream coming from over-the-air broadcast channels contains a different structure than either of the other MPEG-2 based data streams. Resolution is one of the first things that differs from the other two.

DV tapes do not use an actual MPEG-2 compression. While the basic theory used for compression is the same for DV and MPEG-2, the DV compression is not MPEG-2.

DVD-Video Quality

DVD-Video uses MPEG2 compression. Any time an image is compressed there is the opportunity for image degradation. A good compressionist can create such a good image that 90% of the viewers will not be able to see any compression artifacts in the movie. However, a less than average compressionist can totally ruin a movie by not paying attention to detail.

There is also the issue of viewing a movie on a computer screen versus a television screen. A computer screen is capable of providing a much higher quality image than does a NTSC television screen. There are titles which may be perfectly acceptable on an NTSC television that will look very poor on a computer screen. This difference will most likely be traced back to a less than ideal job of compressing the original material--but the viewer may likely believe it to be the fault of the computer.

Video

General Video Information

There is DVD-ROM. There is MPEG-2. There is DVD-Video.

- DVD-ROM is the big picture.
- DVD-Video is one way to use DVD-ROM.
- DVD-Video is one way to use MPEG-2

Thus, DVD-Video is a specific use of MPEG-2 video on DVD-ROM in a specific manner.

A DVD-Video disc contains a stream (a track) of MPEG-2 (Main Profile@Main Level, also known as MP@ML) video compressed and encoded in either a Constant Bit Rate (CBR) or in a Variable Bit Rate (VBR). The DVD-Video specification also allows the lower resolution MPEG-1 CBR and VBR video.

An interesting aspect of DVD-Video is the ability to have the 24 frames per second (fps) film encoded at 24 frames a second. With other forms of home video, the 24 fps film standard has to be converted to the NTSC spec of 29.97 fps via a process called 3:2 pulldown. (NTSC consists of 30 frames with 2 fields each.) What 3:2 pulldown does is double one field creating 3 fields for one of 24 film frames - and does this often enough to turn the 24 film frames into 30 video frames (well, actually 29.97 video frames - but that's another math story.) In order to display these 24 frames on an average television, the DVD-Video playback device does an 'on-the-fly' 3:2 pulldown.

So, why have 24 frames encoded and do on the fly conversion? With current computer displays and with future digital TVs it will be possible to display the actual 24 fps in which the film was shot. As a result, a more correct feel will be imparted to the playback of movies shot on film and transferred to video.

Video Image Information

The number of pixels in a DVD-Video frame are typically 720 x 480 of NTSC source material. The traditional method of measuring of NTSC devices has been "lines of horizontal resolution". Using this method:

- VHS source material is rated at approximately 230 lines for standard 4:3 screens (approximately 172 for 16:9 screens)
- laserdisc is approximately 425 for 4:3 (approximately 318 for 16:9)
- DVD-Video is approximately 540 for 4:3 (approximately 405 for 16:9).

In practical terms, DVD-Video will most likely be rated at approximately 500 lines of horizontal resolution.

A 720 x 480 pixel count should not be confused with a "lines of horizontal resolution" measurement. The numbers may be different. Here's why:

"lines of horizontal resolution" (LoHR) comes from the ability of a device to resolve an industry-standard reference image. Part of the image has groups of lines printed at various distances from one another. LoHR is determined at the point where these printed lines are resolvable into individual lines. So while it is possible to have 720 horizontal pixels, if you cannot visually distinguish each line, you don't have 720 LoHR.

MPEG uses temporal compression. Temporal compression uses a key frame to record everything in the frame. This complete frame is an I-frame. During temporal compression, subsequent frames consist of only the differences from the I-frame. So a still image can be an I-frame. The still frame can be displayed for a specified amount of time; or it can be displayed indefinitely--generally with a "continue" button on the screen. Still frames can play sound. Menus are generally still frames.

Subpictures are not still frames. Subpictures are much more restrictive. Subpictures do not have the color range or detail of MPEG-2 video. They are used as overlays on the MPEG-2 video stream for subtitles, closed-captioning; karaoke, menus, and very simple animation. A portion of the DVD-Video interactive command set allows a title developer to perform effects such as scroll, move, color, highlight and fade subpictures. There are 32 subpicture streams available within the DVD-Video spec. Subpictures can contain 4 colors from a palette of 16 colors and four contrast values out of 16 levels from transparent to opaque.

Audio Options

A DVD-Video disc can have up to 8 audio tracks (tracks are sometimes referenced as streams). Each of these tracks can be one of three formats:

- Linear PCM -- from 1 to 8 channels
- Dolby Digital (also known as AC-3) -- from 1 to 5.1 channels
- MPEG-2 audio -- from 1 to 5.1 or 7.1 channels

Note: tracks (or streams) are composed of channels

Additionally, the Digital Theater Sound (DTS) format is an optional format. DTS is another 5.1 channel format which was developed to improve the audio experience in movie theaters. There is reserved within the DVD standard an audio stream format for DTS. DTS format DVD-Video discs first appeared in late spring of 1998.

Linear PCM
Linear PCM is generally the default audio track. It will be sampled at a rate of 48kHz or 96kHz. Audio CDs are sampled at 44.1kHz. A sample size of 16, 20 or 24 bits is allowed. Audio CDs use a sample size of 16 bits.

According to the DVD-Video specification it may contain up to 8 channels. There is a maximum bit rate of 6.144 Mbps. Linear PCM is uncompressed audio which means the choice for the number of channels may limit the sample rate or sample size used. Typically up to 5 channels should be able to use the highest data rates and sizes.

While DVD-Video playback devices are required to support any of the above variations, the device could subsample from 96kHz down to 48kHz while not using the full 20 or 24 bits. Still the lowest output from the PCM track would be 48kHz @ 16 bits--better than Audio CDs using 44.1kHz @ 16bits.

Dolby Digital
If PCM is not the default audio track, then the default will most likely be Dolby Digital. The Dolby Digital format is compressed data using the AC-3 technique. The source material is normally taken from PCM recordings at 48kHz at up to 24 bits.

Typically you will find Dolby Digital to be a 5.1 channel format. The "5" breaks down to left, center, right, surround left and surround right. The ".1" channel is the low frequency effects (LFE) channel--the channel that would be directed to a subwoofer. However, there are a number of valid channel formats in DVD-Video Dolby Digital:

- single mono
- dual mono channels
- standard stereo
- left/center/right
- stereo w/single surround
- left/center/right/single surround
- stereo w/dual surrounds
- left/center/right/dual surrounds

With each of the above the ".1" (LFE) channel is optional. Again, the most common channel format you will find for Dolby Digital is the 5.1 arrangement (the last one in the list plus the LFE). You will also find that most regional 1 DVD-Video discs contain a Dolby Digital track. Although as of the late spring 1998 a number of DTS DVD-Video discs are starting to appear.

MPEG-2 Audio
The definition of MPEG-2 audio allows it to be a multi-channel format, although some playback devices provide only basic stereo left/right

delivery. Somewhat like Dolby Digital there are a number of channel configurations available with MPEG-2 audio, including:

- single mono
- stereo
- stereo w/single surround
- stereo w/dual surround
- left/center/right
- left/center/right/single surround
- left/center/right/dual surround
- left/left-center/center/right-center/right/dual surrounds

As with Dolby Digital, the LFE channel is optional on all of the above channel configurations. When the LFE is added to the last item in the above list, it is often labeled as "7.1".

Both MPEG-2 and MPEG-1 formats are supported, although MPEG-1 Level III (also known as MP3) is not supported.

DTS (Digital Theater Sound)
DTS is an optional DVD-Video multi-channel audio format (typically 5.1). The DTS format can provide a data rate nearly 4 times as much as Dolby Digital - meaning less possibility for audio artifacts from compression. It also means that other options in the overall data stream may have to be dropped (like less language tracks or no alternate angle tracks, and so forth).

DTS has several possible channel configurations, including:

- single mono
- stereo
- left/center/right
- stereo w/single surround
- stereo w/dual surrounds
- left/center/right/dual surrounds

All have the option to include the LFE channel.

Nearly all playback devices prior to the spring of 1998 do not support DTS. After that time only specific playback devices support DTS. The devices which do support DTS are normally marked with an official "DTS Digital Out" logo.

SDDS (Sony Dynamic Digital Sound)
Another option for multi-channel audio is SDDS in 5.1 or 7.1 configurations. However, Sony has not announced any plans to provide support for SDDS in the DVD-Video arena.

General Audio Info
The DVD-Video specification calls for all NTSC discs to contain either PCM audio or Dolby Digital audio on at least one track. Additional audio tracks may be any of the other formats.

DVD-Video playback devices are expected to have a resident Dolby Digital 2-channel decoder (chip, software, etc.) which mixes a 5.1 Dolby Digital down to Dolby Surround stereo so that a standard stereo playback can be achieved.

All of the standard or optional audio formats provide support for karaoke mode. This consists of 2 channel stereo (L/R) with an optional melody channel and two optional vocal channels.

Interactive Video

DVD-Video allows a limited amount of interaction with the disc contents. This interaction is far less than people would be accustomed to with CD-ROM on computers, but it is more than people would expect from a video tape or laser disc.

The primary method of interaction is through the use of menus. Most DVD-Video discs provide a menu for selecting a variety of elements from the disc, such as playing the movie, playing the background video, hidden easter eggs, and even simple games. Some discs provide alternate story lines which can be selected via the menu system.

The menus consist of a backdrop image with up to 36 buttons which are selected by using a remote control with left-right-up-down arrows (or a mouse/trackpad on a Macintosh with DVD-Video). Once a button is selected, a select button on the remote control will activate the selected activity.

Supporting the menus is a very basic command instruction set (not available to the person playing the movie, but available to the disc developer). There are 24 system registers which contain information such as language code, audio and subpicture settings, parental level, and so forth. There

are also 16 general purpose registers for command instructions.

Using the commands provide a method to branch to other commands. Commands are used to control the player's settings, move to different sections of the disc and control such elements as the selection of which audio streams, video streams, camera angles, subpicture, and so forth.

The content of a DVD-Video disc is organized by 'title' (movie) and 'sections of titles' (chapters). The chapters can be organized through the use of a program chain or 'PGC'. For example, a PGC can be created which will be able to play back only the chapters that would cause an 'R' rated movie to become a 'G' rated movie if the parental control level was set in such a way. Or the PGC could create an alternate story line. PGCs can be used to construct other sequences of chapters as well.

Following a PGC is seamless. There are no breaks in the flow of the movie - like there is when two sided laser discs are flipped. Different PGCs are different paths through the same material.

Subtitles

Subtitles are not generated by the Macintosh computer--they are placed on the disc by the DVD pressing operation. The subtitles are therefore a part of the MPEG2 data stream that can either be "turned on" or "turned off". If they are "turned on" they are composited over the top of the video image. If "off" they are ignored by the process and simply are not displayed. On most DVD-video discs there will be more than one language available for subtitles. Each of these different language subtitles are a part of the MPEG2 data stream. If a specific language is selected to be displayed, that part of the data stream is composited over the video image.

This means that the Mac OS does not have access to the subtitles such that different fonts can be used. The font is selected and recorded in a subpicture stream prior to the pressing of the DVD-video disc.
Published Date: Feb 20, 2012

Mac OS 8.1: Controlling Volume On NuBus-Based Power Macintosh

After installing Mac OS 8.1 on a NuBus-based Power Macintosh (including 6100-, 7100-, and 8100-based machines), the volume control in the Monitors & Sound control panel will not control the volume of speakers or headphones connected to the sound out jack.
This article has been archived and is no longer updated by Apple.

Symptom

After installing Mac OS 8.1 on a NuBus-based Power Macintosh (including 6100-, 7100-, and 8100-based machines), the volume control in the Monitors & Sound control panel will not control the volume of speakers or headphones connected to the sound out jack.

Solution

Update to Mac OS 8.5.

Note: The volume control will work fine for the internal speaker on the computer, but will not adjust the volume of any device connected to the sound out/headphone jack on the back of the computer. If you are using external speakers, the volume control on the speakers can be used to control the volume. Also, some applications have a separate volume control that can be used to adjust the volume.

Published Date: Feb 20, 2012

Apple Tech Notes: What They Are, Where To Find Them

This article describes Apple's Tech Notes and tells where to find them on the Internet.

Note: Tech Notes are intended for developers. If you are not a developer, they may be too technically detailed for your purposes. Nonetheless, many people have derived some benefit from reading various Tech Notes.
This article has been archived and is no longer updated by Apple.
Tech Notes provide you with the latest technical documentation on Apple technologies and system updates, fixes and errata to Inside Macintosh (a reference for the Mac OS operating system), as well as programming tips and techniques to advance your development efforts. New Tech Notes are published monthly and are reviewed by Apple engineers for technical accuracy and robustness.

Apple Tech Notes can be found at this address on the World Wide Web:

http://developer.apple.com/technotes/

For additional developer-related information, visit the Apple Developer site at this address on the World Wide Web:

http://www.apple.com/developer/

Published Date: Feb 20, 2012

Apple Studio Display 15" LCD: "No Computer Signal" Message

This article explains and provides a solution for why the message "No Computer Signal" may appear in sleep mode.
This article has been archived and is no longer updated by Apple.

Symptom:

I have an Apple Studio Display 15" LCD and when my computer goes into sleep mode the Apple Studio Display does not go into sleep mode. Instead a message saying "No Computer Signal" is displayed.

Solution:

The Apple Studio Display should go into sleep mode when you select sleep or when Energy Saver is set to put the system or display to sleep. If you see the message "No Computer Signal" remain on the screen, then the Apple Studio Display needs to be reset to clear a value from its internal memory. To do this, press the reset button on the front of the Apple Studio Display (far left button with the triangle icon) until the LED starts to flash.

Published Date: Feb 20, 2012

Apple Studio Display 15 LCD: No Video When 1024 x 768 At 72Hz Selected

This article explains and provides a workaround for a situation in which no video is available on a Apple Studio Display 15" LCD when set at 1024x768 at 72Hz.
This article has been archived and is no longer updated by Apple.
Symptom:

I have an Apple Studio Display 15" LCD connected to a Power Macintosh 8500. When I select the resolution 1024 x 768 @ 72Hz my display loses video and the message "Signal out of Range" is displayed. I have tried restarting the computer and selected the reset button on the front of the display but the situation remains. How can I restore the video?

Solution:

Although the 1024 x 768 @ 72Hz resolution setting is available before you install the Apple Display Software 1.6 on a Power Macintosh 7500, 8500, 7600 and 8600 CPU, this setting does not work with the Apple Studio Display. If selected, the display will lose video and the following steps must be performed in order to restore video:

1. Press the power on key on the keyboard (arrow pointing left on the upper right hand corner of the keyboard). You should hear an alert sound.
2. Press the R key to restart the computer.
3. At the startup tone, hold down the Command, Option, P, and R keys on the keyboard to reset PRAM. Continue to hold down these keys until video is restored.

The software included on the CD with the Apple Studio Display, Display Software 1.6, needs to be installed after you restore video in this way. This software will not list the 1024 x 768 @ 72Hz resolution as available for use on the Apple Studio Display.

Published Date: Feb 20, 2012

Apple FireWire Card: Read Me

This article contains the Read Me document for the Apple FireWire DV card.
This article has been archived and is no longer updated by Apple.

Introduction

The Apple FireWire DV product lets you use digital video (DV) equipment, such as camcorders and tape decks, with your computer. Using a FireWire (IEEE 1394) connection, you can transfer digital video between your computer and your DV equipment. You can also control your DV equipment from the computer. Apple FireWire DV supports full-quality DV (full frame size and full frame rate), and video equipment that supports either the NTSC or PAL video standards.

Apple FireWire DV works with QuickTime and takes advantage of new features in QuickTime 3.0. Most applications that support QuickTime will work with this product.

This document describes how to use the Apple FireWire DV product to capture a movie, export a movie and control DV devices.

Setup and Installation

Setup
You will need the following in order to capture a DV movie:

- The Apple FireWire Card
- The Apple FireWire Card Software Installation CD
- A camera or tape deck that supports DV and IEEE 1394
- A FireWire cable
- A QuickTime-based application with capture/export capability

The FireWire Card is a standard PCI card with three FireWire ports. You can attach your DV equipment to any of the three ports.

The Installation CD includes the system software pieces that enable FireWire DV capture, FireWire DV export, and device control. The following four items are added to the extensions folder:

- DV Support
- DV Enabler
- FireWire Support
- FireWire Enabler

The following two items are added to the Adobe Premiere(TM) Plug-Ins folder:

- DV Device Control
- DV Export

Additionally, a folder titled FireWire is created. This contains the FireWire Card Tester application and the plug-ins for Adobe Premiere.

Connect your DV equipment to the FireWire card using the FireWire cable. The small connector attaches to the DV equipment and the large connector attaches to the computer. The connection point on your DV equipment may be marked "DV IN/OUT" or "IEEE 1394." The small connector must be oriented carefully when it is connected. If it doesn't seem to fit, examine it carefully, and try again without using too much force.

Several QuickTime-based applications with capture/export capability are available. These include Adobe Premiere(TM), Strata VideoShop(TM), and others. A QuickTime application that supports capture may not support export.

Installation
If you ordered the Apple FireWire card as an option with a new Macintosh computer, the card should already be installed.

The Apple FireWire DV software requires QuickTime 3.0, which is included. But, some QuickTime-based applications may replace QuickTime 3.0 with an older version when they are installed. If you are installing such an application, install it first, and then install the Apple FireWire DV software, to ensure that QuickTime 3.0 is correctly installed.

To install the Apple FireWire DV software, follow these steps:

1. Insert the Apple FireWire Card Software Installation CD.
2. Open the Apple FireWire DV Installer.

3. Click the Install button.

The Apple FireWire DV software will be installed. QuickTime 3.0 will also be installed if you do not already have it.

Capturing a Movie

Once you have installed the software and connected a DV device to the card, you can capture a DV movie. Turn on your DV equipment. Then open the FireWire Card Tester application provided on the CD. If there are any problems with the card or the FireWire connection, a warning will be displayed.

To use a capture application to capture a DV movie:

1. Open a capture window.
2. Select the DV device as the video input.
3. Make sure that DV is the selected compression format.
4. Select DV audio as the audio input.
5. Select 32 kHz as the audio sample rate.
6. Record a DV movie.

Each of these steps is described in detail below. Some applications may not support all the features described here.

Open a Capture Window
In Premiere, select Movie Capture from the Capture submenu, under the File menu. This will open the video preview window.

Selecting the Video Input
Many QuickTime applications allow you to change video and compression settings with the Video Input panel. Select Video Input from the Movie Capture menu to use this panel. The Movie Capture menu is on the menu bar only when the video preview window is active.

The left side of the Video Input panel can be used to change several groups of settings. Use the main menu to select the Source settings. Then change the settings (if needed), so that they match those shown below. If your DV equipment uses the PAL video standard, select PAL instead of NTSC. By making these settings, you have selected your DV equipment to be the input source.

Figure 1 Video Input Panel

Selecting the Proper Compressor
It is important to select a compressor that is matched to your DV equipment, in order to obtain maximum video quality. Change the main menu from Source to Compression, and then change the settings to those shown below. If you selected PAL in the previous settings, select DV-PAL in these settings. You can also select other compressors, but these may cause a reduction in the quality of the video that you capture. Click OK when the settings are correct.

Figure 2 Video Compression Panel

Selecting the Sound Input
QuickTime allows you to record audio and video at the same time. You can choose to record the audio that comes from your DV equipment, or audio from another source. To select the audio source, select Sound Input from the Movie Capture menu. The Sound Input panel will appear. The left side of the Sound Input panel can be used to change several groups of settings. Use the main menu to select the Source settings. Then change the settings (if necessary) so that they match those shown below.

Figure 3 Sound Input Panel

Selecting the Audio Sample Rate
It is important to select a sample rate that is matched to your DV source, in order to obtain maximum audio quality. Change the main menu from

Source to Sample, and then change the settings to those shown below. Click OK when the settings are correct.

Figure 4 Sound Input Panel

Capturing Video and Audio

Video and audio can be captured from a DV source in the same way as with an analog device. You should still have the capture window open. If not, select Movie Capture from the Capture submenu under the File menu.

Figure 5 Movie Capture Window

Make sure there is a tape in your DV equipment. Press the Play button or put your DV equipment in the same mode. Wait for video to appear in the Movie Capture window. Press the Record button in the Movie Capture window. Wait for a few seconds, and then press the mouse button to stop the recording. During recording, images may not appear at full frame rate.

Your DV movie is complete, and you can save it to disk or work with it immediately.

DV Movie Export to a DV Device

You can record QuickTime movies onto DV tape using the export function in Premiere. To use this function, select DV Export from the Export submenu, under the File menu.

The export quality will be best if you export a QuickTime movie that is already in DV format, such as the movie you recorded using the steps described above.

If you export a movie that has multiple audio tracks, they will be combined into a single (stereo) DV audio track.

You can either record the data being exported, or you can preview it. If you want to record the data, put the device in record mode before activating the export function. If recording is not selected, then previewing will happen automatically.

A dialog box will be displayed during the export operation. A progress bar will indicate the time remaining and a message will be displayed if a data conversion is taking place for some reason. Optimal export quality is obtained when no conversion is taking place. If the DV movie to be exported is not full size (720 x 480 NTSC, 720 x 576 PAL), the exporter will try to convert the movie.

Device Control

You can control DV equipment, connected using FireWire, from your computer. To use this feature, you must select the correct device control method. Select Device Control from the File menu. Then select DV Device Control from the menu in the Device Control window as shown below, and click OK.

Figure 6 Device Control Window

After you select DV device control, the Movie Capture window will look different. You can perform basic videotape operations like play, stop, pause, jog, and shuttle using the controls in this window.

Figure 7 Movie Capture with Device Control

Frequently Asked Questions

Q: Can I use other QuickTime editing applications to capture and edit DV movies?

A: Yes. Apple's DV hardware and software extensions allow most applications that work with QuickTime to capture, edit, and play back DV movies.

Q: When exporting movies to a DV camera or VCR, the frame rate is slow.

A: Several things can cause degradation of movie export to DV devices. Make sure that you have rendered the movie in DV format, with a size of 720x480 for NTSC or 720x576 for PAL. Make sure that the chosen compressor matches the video standard used by your equipment (DV NTSC or DV PAL).

Q: When I watch the movie being exported, it looks blocky.

A: Blocky movies usually indicate that the video has been scaled. Make sure that the size of the movie is 720x480 for NTSC or 720x576 for PAL.

Q: How do I capture movies from my DV camera or VCR without losing quality?

A: The key to making a perfect capture is the proper settings in your capture application. In Premiere, choose settings of 720x480 for NTSC or 720x576 for PAL within the Record Settings dialog. You also need to click the Record at: button.

Q: Can I connect more than one DV device to the computer?

A: Yes, but only one device can be used at a time. For best results, turn on only one DV device at a time.

Q: When I watch movies, the frame rate seems slow.

A: Frame rate is directly related to two things: the rate chosen at the time you grab, and the ability of the computer to decode the movie. If your movie is playing slowly, make sure that you chose the correct frame rate in the Compression panel under Video Input when you recorded the movie.

When grabbing large images, the computer may not decode the images at full frame rate. Try resizing the movie playback window to make it smaller.

Q: When capturing a movie, the image looks blocky.

A: When grabbing movies, some applications will display DV movies at a lower quality, in order to increase the decompression speed. These movies are actually stored at their full quality. To play back these movies at the highest possible quality, use MoviePlayer or another application that fully supports QuickTime 3.0.

Q: Can I control my DV device from the computer?

A: Yes. All DV devices support a minimal set of commands over FireWire. The standard commands include stop, pause, rewind, fast forward, and play. Many devices support additional commands.

To control a device from your computer, you must use an application such as Adobe Premier that supports device control. See the instructions above for selecting device control.

Q: Do I need any additional cables to control DV devices from the computer?

A: No. DV devices use the FireWire cable to transmit and receive device control commands.

Q: After capturing a movie, I do not hear audio when playing it.

A: You might not have selected DV Audio in the audio selection dialog.

Q: The captured audio sounds distorted.

A: Most DV devices support either 32 kHz or 48 kHz audio. Set the audio sample rate to match that being used by your DV equipment, as described above in the section titled "Selecting the Audio Sample Rate."

Q: My DV camera has gone into sleep mode and when it wakes, I no longer see video in the capture window.

A: Some DV devices behave unusually when they sleep. Try closing the Movie Capture window and reopening it. If the video does not reappear, close the movie capture window, unplug the FireWire cable from the DV device, then wait a moment before reattaching the FireWire cable to the device. Then open the Movie Capture window again.

Q: When I try to capture a movie greater than 9 minutes long, Premiere stops recording.

A: The Macintosh file system has a maximum file size of 2 gigabytes. About 9 minutes of video and audio can fit into a 2 gigabyte Macintosh file.

Q: Why does the video look blocky when I use filters, transitions, or titles?

A: Some applications do not decompress DV frames in the highest possible quality when applying a filter, using a transition, or adding titles. Currently, there are only two ways to apply effects without a significant loss of video quality.

One way is to transcode the frames to another video format, such as Component Video. Apply the effects and then transcode the result back into DV format.

Another way is to use another application such as Adobe After Effects to apply effects to the necessary frames.

Q: When grabbing movies, I don't get all the frames.

A: Check to make sure the proper DV compressor is selected in the Video Input panel. Make sure that the best frame rate is selected (best frame rate is implied when the frame rate field is blank in the video dialog).

Q: I can't select the DV Video option from the Video Input panel.

A: Use the FireWire Card Tester application to make sure that the card and DV device are working properly. Make sure that your DV equipment is turned on.

Q: I don't hear any audio while capturing.

A: Audio playthrough during capture is not supported.

Q: What are the suggested capture settings?

A: The recommended capture settings for DV are:

- capture size 720x480 (NTSC) or 720x576 (PAL)
- audio sample rate should be the same as the source (typically 32 kHz or 48 kHz)
- compressor type should be the same as the DV device (either DV - NTSC or DV - PAL)

Q: Can I record multichannel audio such as 4 channel, 12 bit, 32 kHz?

A: Yes. You can select the audio input mode.

Some DV devices can record one stereo channel of audio at 32 kHz, 44.1 kHz, or 48 kHz. When operating in these modes, the Sound Input selector will indicate "First 2 channels."

Some DV devices can also record two stereo channels (four mono channels) of audio in 32 kHz mode. It is possible to dub audio onto the second stereo channel with some DV equipment. When operating in this mode, there are three options available: "First 2 channels," "Second 2 channels," and "Mix 4 channels." The options operate as follows:

- First 2 channels: camera audio is recorded
- Second 2 channels: dubbed audio is recorded
- Mix 4 channels: camera audio and dubbed audio are recorded

Q: If I capture from a blank spot on the tape, the movie has audio/video synchronization problems.

A: The DV specification and camera operating manuals state that blank areas in the tape may cause interruptions of the camera time code. The camera will not transmit valid frames during the blank transition, but Quicktime will still be marking time. It is recommended that you avoid recording over blank tape spots.

Q: How do I get the fastest DV movie playback on the computer screen?

A: The DV decompressor is optimized for speed when the following conditions are met:

- Low Quality decompress mode
- Quarter Screen video window size
- "Thousands of colors" screen mode

- Sound is a separate "AIFF" track and not "dvca," or sound is disabled

Q: How do I get the highest quality DV movie playback?

A: The DV decompressor is optimized for quality when the following conditions are met:

- High Quality decompress mode
- Full Screen video window size (720x480 NTSC, 720x576 PAL)
- "Millions of colors" screen mode

Q: Can I export 16 bit, 48 kHz audio?

A: No. The only supported audio format is 12-bit 32 kHz audio.

Q: What are NTSC and PAL?

A: They are video formats used in various regions of the world. Consult the manuals that came with your DV equipment.

Q: How do I determine if I should choose 32 kHz or 48 kHz audio?

A: Some DV equipment indicates 32 kHz as 12-bit and 48 kHz as 16-bit. Refer to the manuals that came with your DV equipment.

Q: My DV movie doesn't play back smoothly in MoviePlayer.

A: Try increasing the partition size of MoviePlayer. This can be set selecting "Get Info" from the Finder's File menu, while MoviePlayer is selected. DV playback requires more memory than most video compression formats.

Q: My DV equipment is putting out 4 channel audio, but I can only select "First Two Channels" from the Sound Input panel.

A: The DV software is not able to determine the format of audio until valid samples have been received. Make sure your DV equipment is transmitting and then open the Sound Input panel. You should see the level meters strobing. Three audio channel choices should now be available.

Q: Adobe Premiere does not work properly after a system crash?

A: If you hot plug or unplug the camera while the capture window is opening, Adobe Premiere may quit with a Type 1 error. In this case the Adobe Premiere Preferences file is damaged. You need to put the "Adobe Premiere 4.2 Prefs" file in the trash and restart Premiere with the default preferences. This problem can be avoided in the future by not changing the camera state while opening the capture window.

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Published Date: Feb 20, 2012

Your iMac doesn‘t respond to the keyboard or mouse

If my iMac does not respond to the keyboard or mouse, what should I do?
This article has been archived and is no longer updated by Apple.
To isolate the issue, try the following troubleshooting steps:

Confirm Connectivity

Check to see if the keyboard and mouse cables are securely connected.

Bypass Other USB Devices

If the keyboard or mouse is connected to the USB port of a device other than the iMac itself, try bypassing that device by connecting the keyboard or mouse directly to the iMac.

Try Alternate Ports

Confirm that a particular USB port isn't at fault by trying the keyboard or mouse in the alternate USB ports: both devices can be connected to either of the two USB ports under the iMac's side I/O door. The mouse can additionally be connected to either of the keyboard's two USB ports, though if the keyboard is unresponsive, don't trust either of its ports for testing the mouse--use the ports under the I/O door instead.

It is not necessary to power off or restart the computer before or after switching ports.

Rule Out Software

Make sure the issue is not caused by a software conflict or damaged software, which will usually affect both keyboard and mouse, and often intermittently. Note, however, that if the keyboard power button cannot be used to power on the iMac, the issue is not in software.

Software issues can be ruled out by attempting such basic troubleshooting steps as starting up with extensions off or starting the computer from the system CD, though note that neither of these steps may be possible if there is a hardware issue with either device or the USB port.
Published Date: Feb 20, 2012

AppleShare IP 6.0: IMAP Admin Access Port

This article explains the purpose of the IMAP Admin Access Port of AppleShare IP 6.0 Mail Server and how to use it.
This article has been archived and is no longer updated by Apple.
The AppleShare IP (ASIP) 6.0 Mail Server's Advanced Settings lets you turn on access to the IMAP Administrator Access port (port 626). Mail administrators can remotely access the mail server at this port, view outgoing mail waiting to be delivered to other SMTP hosts, and view mail in users' mailboxes. The messages can be read, forwarded, and deleted. This is a very powerful feature that is useful in troubleshooting and mail server management; care should be taken to restrict this access to only trusted administrators.

To use the IMAP Administrator's Access Port, you'll need to do the following:

1. Turn on access to the IMAP Admin Access port in the Advanced Settings of the Mail Server Admin program.
2. On the Server, set up a user with which to access the port. The user called "Mail Administrator" (internet alias: Postmaster) could be used for this purpose, but any account that meets the following three criteria could be used: The user must: 1) have privileges to log into the file server, 2) be authorized to administer the file server, and 3) have mail enabled (IMAP).
3. To access the IMAP Admin Access port, you must use an IMAP client that supports nested folders and allows you to change the default port for IMAP connections. (Microsoft Outlook Express is an example of software that supports these features.) Set up an account for the Postmaster, entering the information for the server (as you would for any user account) but change the port to 626 (in Outlook Express, this option is under the "Advanced" button when creating the account in Preferences).
4. Log in from the IMAP client using the Postmaster account.

Published Date: Feb 20, 2012

What Is LPR?

This article explains what LPR/LPD is, and what it does.
This article has been archived and is no longer updated by Apple.

Definition of LPR/LPD

LPR/LPD is a platform-independent printing protocol that runs over TCP/IP. Originally implemented for BSD unix, its use has spread into the desktop world and is a de facto industry standard. The specification for LPR is defined in Request for Comment (RFC) 1179.

Terminology

LPR: Line Printer Remote. Refers to the process that sends jobs to the printer or print queue. This is analogous to the print client software and is often called the 'LPR client'.

Apple has included an LPR client starting with the LaserWriter 8.5.1 printer driver, which shipped with Mac OS 8.1. It is also available separately. This software enables you to send print jobs to any LPD printer or print server.

LPD: Line Printer Daemon. Refers to the process that accepts print job from the line printer daemon client (the LPR client). This is analogous to the printer or the print server software and is often called the 'LPD server'.

The print server waits for the client to send it jobs. A print server may be capable of handling multiple printers and print queues at once. Since it (usually) has only a single IP address, the queue name must be used to specify the intended print queue.

LPR and LPD also refer to the protocol defined by the LPR/LPD specification (RFC 1179).

How LPR Works

LPR is a lot like sending a file, except you're sending a print job instead. Also, there are two parts to each print job: the data file (the data to be printed) and the control file (instructions that describe the data file and specify what to do with the data file).

When you click the 'Print' button in the print dialog, the computer spools the print job to disk and generates the PostScript data (the data file). It then sends the data file and control file to the IP address specified in the LPR desktop printer. Since there may be more than one queue at the destination IP address, the queue name is sent at the very beginning to identify the intended queue.

If the destination is a printer, the printer prints the job. If the destination is a print server, it may do some additional processing (for example, security checking) and then forward the job to the next destination in the path (usually the printer).

Advantages Of Using LPR

- Migration to single-protocol environments
- More cross-platform; platform-independent
- Accessible via the Internet

Advantages Of Using PAP (Printer Access Protocol, the Appletalk protocol for printing)

- Better status info (idle, busy, and so forth)
- Better error info (out of paper, tray out)
- Easier to set up (autodiscovery versus manual entry/selection)

Apple LaserWriter Printers With Built-in LPD

- LaserWriter 8500
- LaserWriter 12/640PS
- Color LaserWriter 12/660PS
- Color LaserWriter 12/600PS
- LaserWriter 16/600PS
- LaserWriter Pro 810

Since these printers support LPD, you can print from any LPR client (for example, LaserWriter 8.5.1) directly to the printer. In essence, the printer itself is an LPD print server.

Other LPR clients and LPD servers

LPR and LPD have been widely adopted by other communities, including:

- Many flavors of unix.
- Windows NT: LPR client included in NT Workstation and Server. LPD server only included in NT Server.
- Windows 3.1x/95/98: LPR and LPD not included but available by third parties.

For more information on LaserWriter driver 8.5.1 and LPR printing, please see the following article:
Article 24409: **"LaserWriter 8.5.1: Configuring For IP Printing (LPR)"**
Published Date: Feb 20, 2012

AppleShare IP: Help With Access Privileges and Security

This article contains explanations for overcoming some common difficulties encountered when setting up access privileges with AppleShare File Server software.
This article has been archived and is no longer updated by Apple.

Volumes Are Grayed Out In The Chooser

When volumes are dimmed in the Chooser, it means that the user does not have any access privileges for that volume. You must give your users a minimum of "Read Only" access to any share point if you want them to be able to log in.

"Guest" Is Dimmed In The Chooser

If the "Guest" option is dimmed in the Chooser, the server administrator may not have enabled user "Guest" to log in. Double-click on the user named "Guest" in the Users & Groups list to enable login. Also, don't forget to give "Everyone," which will include user "Guest," at least read-only access to share points and other folders along the path where information for "Guests" will be stored.

Creating Drop Boxes

Drop boxes are folders that users can drop files and folders into, but they cannot access the files in the folder. A good example of a use for a drop box would be a folder that students could drop their homework assignments in.

Drop boxes have the following access privileges and requirements:

- Read & Write privileges for the owner (the owner is the person for whom items are being dropped off).
- "Write Only" privileges for "Everyone."
- The drop box must be within another folder to which everyone has at least read-only access (so that they can get to the drop box).

A drop box cannot be a share point. No one would be able to mount the volume, with "write only" privileges.
Published Date: Feb 20, 2012

TCP/IP: Ports And Firewalls Explained

This article defines and describes two software components associated with TCP/IP networks: ports and firewalls. The article also explains the relationship between the two.
This article has been archived and is no longer updated by Apple.

Ports

A port is a number used to uniquely identify a transaction over a network by specifying not only the host, but the service. For example, you may have a single network server running many different IP services, such as Web service (HTTP), mail service (SMTP), LPD, AFP over TCP, and file transfer (FTP). When clients attempt to connect to your server they need your IP address, but the clients also need to indicate which service they want to communicate with so that the data can be sent to the appropriate server application. The port number is what uniquely identifies that service on that host.

For example, the default port number for SMTP is 25 and the default for HTTP is 80. If a packet comes in to host "asip.company.com" port 80, then the data is transferred to the HTTP web server. If the packet is going to port 25, the data is transferred up to the SMTP mail server.

Each host can only have one application "listening" on each port. This means that you couldn't have AppleShare IP Web Service and Personal Web Sharing both operating on the same computer unless you changed the port number for one of them (Personal Web Sharing 1.5 gives you the option to change the port number).

The port numbers used are often transparent to the end user; the client software will specify the port number. However, sometimes the user can override the defaults. For example, if you changed your Personal Web Sharing control panel so that it was using port 8080, then users could specify that port number in their URL to make a connection to Personal Web Sharing instead of AppleShare IP Web Server. The URL would look like this:

http://asip.company.com:8080

Firewalls

Port numbers are often used in creating "Firewalls", which provide security on a network. For example, if you didn't want anyone outside of your intranet to be able to access your web server, you could set up a firewall that would prohibit any packet destined to port 80 (the port assigned to your web server) from passing through your routers. Or you might set up a firewall to prevent all packets except those destined to port 25 to pass; this would allow SMTP (mail) service for your intranet, but nothing else. Firewalls can also be set up in other ways, such as allowing or refusing access based on the network number of the source computer.

Related Documents

106439 "Well Known" TCP and UDP Ports Used By Apple Software Products

Published Date: Feb 20, 2012

AppleShare IP: Setting Up Program Linking

This article explains how to set up program linking on AppleShare IP File servers.

This article has been archived and is no longer updated by Apple.
Program linking allows applications to send Apple Events to other applications, either locally (on the same computer), or to applications across a network. For example, using Program Linking, you could use Hypercard to send a "mouseup" event to another Hypercard stack on a user's computer across the network.

To enable program linking on a file server, there are three steps which help provide security for its use:

1. Enable Program Linking for the Server.
Program linking must be enabled for the whole computer. This is done in the File Sharing control panel by clicking "Start". (The button name subsequently changes to "Stop".)

2. Enable Program Linking for the User(s).
Program linking must be enabled for each user that needs to use it. This allows you to give access only to users you know have a need for it. This is done by opening the user in the Users & Groups list on the server, and checking the box that allows program linking.

3. Enable Program Linking for the Application(s).
Each application that will be linked to--such as Hypercard--must be enabled for program linking. This is done by selecting the application in the Finder, and selecting "SharingŠ" from the File menu.

Note: the Finder application itself does not need to be enabled in this way.

Published Date: Feb 20, 2012

AppleShare: Updating Software, Hardware, Security

I want to move my AppleShare services to a newer, faster machine. How can I do this without losing my user information and access privileges?
This article has been archived and is no longer updated by Apple.
When updating both server software and moving services to another computer (updating server hardware), there are two goals:

- Bring over the Users & Groups from the old server so that you don't need to re-enter them.
- Bring over the shared data, including access privileges, so that you don't need to re-establish them.

For more information on access privileges, please see the following Tech Info Library article:

Article 30635: "**AppleShare: How Privileges Are Stored**"

Users & Groups

Here are the guidelines for moving the Users & Groups data file and the shared data to another server:

Step 1: Set up new server

1. Install Mac OS system software, if needed.
2. Configure Date & Time, AppleTalk and TCP/IP control panels
3. Set up Owner name, password, and Macintosh name in File Sharing control panel. These do not need to be the same as on the old server.
4. Install the AppleShare or AppleShare IP server software (making sure minimum system requirements are met).
5. Restart.

Step 2: Transfer Users & Groups

At the old server, copy the Users & Groups data file from the System Folder:Preferences to a floppy disk (or across the network, so that it can be accessible to the new server).

At the new server:

1. Drag the existing Users & Groups data file from the System folder:Preferences folder to the desktop.
2. Drag the copy of the Users & Groups file from the old server to System Folder:Preferences on the new server.
3. Restart the new server--don't forget this step!
4. Proceed with setting up the new server; if using AppleIShare IP, go through ASIP Easy Setup.

After setting up the services, open the Web & File admin program, and verify that users & groups have successfully been brought to the new server.

Transfer Shared Data

Use a backup utility, such as Retrospect, which will back up both the data and the access privileges. Then restore the data to the new server. Note that AppleShare must be running during both the backup and restore process, and the Users & Groups data file must be the same for privileges to be properly restored.

If you do not have such a backup utility, here are alternate methods:

If The Shared Data Is On An External Hard Drive

1. Shut down the old server and the new server.
2. Connect the external hard drive to the new server (make sure you've already transferred Users & Groups by this point).
3. Turn on external hard drive and boot new server.
4. Launch Web & File Services, and verify that external hard drive has privileges intact.

If desired, use the "Duplicate Folder" command of the Web & File Admin program to copy share points from the external drive to an internal drive.

If The Shared Data Is On An Internal Hard Drive

If the shared data is on an internal hard drive, you have several options:

Install the internal drive in the new server,

or

Use Server Admin's "Copy Volume" or "Duplicate Folder" (depending on version you're using) command to move the data from an internal to a spare external drive, then follow instructions above for moving data on an external drive.

Note that "Duplicate Folder" and "Copy Volume" commands only work on local disks. You cannot use these commands to copy data to a shared volume mounted on the server's desktop.
Published Date: Feb 20, 2012

AppleShare Client 3.8: Read Me

This article provides information on AppleShare Client 3.8.
This article has been archived and is no longer updated by Apple.
Note: AppleShare Client 3.8.1 has been released but the Read Me is the same as AppleShare Client 3.8.

AppleShare Client 3.8 was released on July 28, 1998. It requires System Software 7.6 or later, Open Transport 1.1.2 or later.

AppleShare Client 3.8 can be installed on the following international versions of Mac OS as well as North American English Mac OS: British, Bulgarian, Czech, Danish, Dutch, Finnish, French, German, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Simplified Chinese, Spanish, Swedish, Traditional Chinese, and Turkish. In order for AutoRemounter functionality to work properly, AppleShare Client 3.8 requires AutoRemounter Control Panel version 1.3, which is included with Mac OS 8.1.

Description:

This software allows you to connect a Mac OS computer to an AppleShare file server. Computers that are running system software earlier than system software 7.5.1 should use AppleShare Workstation 3.5. Computers that are running system software 7.5.1 or later (up to but not including 7.5.3) should use AppleShare Workstation 3.6.5. Computers running system software 7.6 or later should use AppleShare Client 3.8. Please refer to the Read Me file included with with this software for complete details. Please refer to the documentation included with with this software for complete details.

Instructions:

This software is available two different ways. Either method of obtaining this software will provide you the exact same software.

(a.) One self-mounting Disk Copy image

(b.) 5 parts of a self-mounting Disk Copy image

If you choose (a.), download this self-mounting image to your hard drive and then double-click it to mount the compressed disk image on your desktop. Please read the documents included on this disk image before installing the software.

If you choose (b.), download all 5 parts to your hard drive and then double-click on the first part to mount the compressed disk image on your desktop. Read the documents included on this disk image before installing the software.

You may wish to download the 5 parts instead of the individual self-mounting image if you are a using a modem connection or if you wish to transport AppleShare Client 3.8 to another machine via floppy disk.

Key Changes from AppleShare Client 3.7.2 & 3.7.4

- Works correctly with the AutoRemounter 1.3 control panel.
- Dialogs center correctly when the user has more than one monitor.
- Aliases made of servers mounted via AppleTalk will not try to switch to TCP/IP. If you want a TCP/IP alias, you must first mount the server via TCP/IP.
- Much of the Login process is asynchronous, you can cancel out of the connection attempt.
- The 3.8 Client supports a new, transport independent UAM (User Authentication Module) Interface. This allows UAM plug-in modules to connect to Servers using AFP over TCP/IP. You will need to contact your UAM vendor to obtain a new UAM that conforms to this interface. The old UAMs will still work.

Using the New Features of the AppleShare Client 3.8 Software

The AppleShare Client 3.8 software automatically uses TCP to make connections when users choose an AppleShare IP file server that is set up for TCP connections. If you want to use AppleTalk to make the connection, press the Option key when you double-click the name of an AppleShare IP file server in the "Select a file server" list in the Chooser window or when you click the OK button in the Chooser window.

When you want to use TCP to connect to an AppleShare IP file server that does not appear in the "Select a file server" list in the Chooser window, click the Server IP Address button. When you click the Server IP Address button, a dialog box appears in which you can type the DNS name (such as shasta.acme.com) or the IP address of the AppleShare IP file server (such as 172.16.156.52).

If the AppleShare IP file server is running on a computer behind a firewall, you can reach it by appending a colon (:) and the TCP port number (by default, 548) to the IP address or DNS name.

Known Incompatibilities and Limitations

- If you have problems using AppleShare Client 3.8 to connect to an AppleShare IP file server, use MacTCP Ping (available from Apple

Computer) to make sure that you can ping the computer that is running the AppleShare IP file server software. If you can't ping successfully, there is a connectivity issue. Check cabling and the configuration of the TCP/IP control panel.

- AppleShare Client 3.8 does not work with versions of RunShare prior to version 3.0. Computers on which they are both installed will stop responding. Be sure to upgrade to RunShare version 3.0 or later before you install the AppleShare Client 3.8 software.
- If a user makes an alias to an AppleShare IP volume and uses TCP to connect to that volume, AppleTalk must be active on the user's computer. AppleTalk must be active due to an issue with the Alias manager.
- The AppleShare IP 5.0 Web & File Server uses a new set of access privileges based on combinations of the original access privileges (See Files, See Folders, and Make Changes). The new privileges are Read Only, Read & Write, Write Only, and None. When you connect to an AppleShare IP file server volume and choose Sharing from the Finder's File menu, the dialog box that appears displays the original AppleShare access privileges. If you use the dialog box to change a folder's privileges to a combination of privileges that is invalid on the AppleShare IP file server, the file server automatically applies the most secure access privilege that approximates the change. If you close the dialog box and choose Sharing again, the checkboxes that are checked may be different than the checkboxes that you checked earlier. Mac OS 8 Finder Sharing dialog box uses the AppleShare IP access privilege model.
- When you install Open Transport 1.1.2 on a PowerBook 3400, immediately install the Mac OS 7.6.1 Update for PowerBook 3400. The update fixes a situation that could cause the computer to stop responding when you switch between Infrared and LocalTalk.
- Some old HyperCard XCMDs that mount AppleShare volumes do not work with the AppleShare Client 3.8 software.
- Microsoft Office Manager (Office 4.2.1) causes the AppleShare Client 3.7 software to stop responding when you try to connect to an AppleShare file server. To correct this situation, install Office Manager Updater, available from Microsoft.
- NetWare User Authentication Modules (UAMs) earlier that 5.11 do not work with AppleShare Client 3.7 and later. Contact Novell for an update.
- Utilities that mount disk images from AppleShare File Servers may have issues with the AppleShare Client 3.8 software. If you have issues, contact the vendor for a new version.
- Versions of Santorini Server Manager earlier than 4.0 are not fully functional when used with the AppleShare Client 3.8 software. Santorini Server Manager 4.0 is available on the AppleShare IP 5.0 Companion CD-ROM disc. Otherwise, contact Santorini for an update.
- Server management applications that mount AppleShare volumes may have issues with the AppleShare Client 3.8 software. Contact the vendor for an update.
- If there are volumes set to mount at startup and the server administrator disables the "Enable users to save password for automatic log on" checkbox in Web & File Admin, you will be unable to change the startup mounting settings for those volumes. If this happens, throw away the AppleShare Prep file in the Preferences folder inside the System Folder, and reselect the server volumes you wish to mount at startup.
- In order to allow startup mounting via TCP be sure to delete the AppleShare prep file in the preferences folder, and reselect the volumes you wish to have mount at startup. This ensures that the TCP address of the server will be saved in the AppleShare prep file.
- If you are having difficulty making the Client use TCP/IP for startup mounting try setting TCP/IP to always load. If that doesn't work, try turning on VM (this will allow the OT libraries to load in less memory).
- If you have a pre ASIP 5.0 server set to mount at startup and the server is upgraded to ASIP 5.0 (or later), you should throw away the AppleShare Prep file and reselect the server volumes you wish to mount at startup. This will prevent issues with server volumes mounting twice.
- If you are receiving "Server not responding" errors when connecting via TCP over PPP, use the AppleShare Client Setup utility (available on the AppleShare IP Web site at to increase the TCP Lookup timeout from 20 seconds to the time it takes your PPP link to come up plus 20 seconds.
- If the Chooser stops responding for 2 minutes when trying to connect to a TCP server, use the AppleShare Client Setup utility (available on the AppleShare IP Web site at to reduce the TCP Connect Timeout from 120 seconds to 20 seconds. Reducing the TCP Connect Timeout may make connecting to AFP servers over the Internet impossible.
- If you have TCP/IP set to use PPP to connect, and open an alias to an ASIP server (or any other that supports AFP over TCP/IP), the Client will try to connect using TCP/IP first before using AppleTalk. If you do not want this, you may use the the AppleShare Client Setup utility to disable TCP/IP support in the Client.
- If you have an alias to a server that supports AFP over TCP/IP, and the server is behind a firewall that doesn't allow pings through, you will not be able to connect via the alias unless you use the AppleShare Client Setup utility (available on the AppleShare IP Web site at to disable address verification via pings.
- If you have a Global Village K56 flex card modem and are using OT PPP 1.0.1 to provide TCP/IP connectivity, you need to disable the menubar status lights, or launch PPP manually and connect to your ISP, before using the Chooser to connect to an AppleShare file server over TCP/IP.
- If the Chooser hangs when mounting volumes (after the OK button has been clicked in the volume list dialog). Try disabling the Apple Menu Options Control Panel.
- If you experience crashes while mounting a volume as the Administrator after you have mounted a sharepoint contained on the volume as a regular user, be sure to mount a different volume in between. The sequence should be:
    1. mount sharepoint as user
    2. unmount sharepoint
    3. mount other server volume
    4. mount volume as administrator
    5. unmount other volume.

  This issue will be fixed in a future version of the Finder.

This article mentions an Apple software update. You may search for software updates at the Apple Software Updates Web site at http://www.apple.com/swupdates.

TA21881_AppleShare_Client_Read_Me.pdf

Published Date: Feb 20, 2012

eMate 300 Update 2.1 (737246)

This article provides information on eMate 300 Update 2.1 (737246).
This article has been archived and is no longer updated by Apple.

eMate(TM) 300 Update 2.1 (737246)

Description:

This package contains the latest System Update for eMate 300. All customers should load this package onto their eMate 300.

This document describes the product enhancements included in the system update file named "eMate 300 Update 2.1 (737246)." The eMate 300 Update 2.1 (737246) is for Apple eMate 300 customers in the United States.

eMate(TM) 300 Update 2.1 (737246) version 737246 was released on July 22, 1998. It requires an eMate 300 and any Mac OS package installer. This version will install over the following system software version for eMate 300:

- version 2.1 (737041)

Important: Before you install any system update, you should back up your Apple eMate300 using the Newton Connection Utilities application or a PC storage card (also known as a PCMCIA card). For more information, see the documentation that came with the software or your eMate 300. Apple is not responsible for any lost data.

eMate(TM) 300 Update 2.1 (737246) is provided to you free of charge. It does not include free telephone support from Apple Computer.

Instructions:

This software consists of a self-extracting archive. To use, download it to your hard drive and then double-click it to decompress the software.

Checking battery status

- The battery level indicator in the Extras Drawer now accurately displays the amount of battery charge. The fix allows the eMate to get a full first charge cycle on new batteries and provides a normal battery run time.

Memory

- In earlier system software versions, the eMate may seem to not have enough memory when in fact it does. This issue is fixed.

Printing

- You can now print to a StyleWriter 6500 printer over a LocalTalk network. This requires the 3.0 version of the StyleWriter 6500 printer driver as well as this system update.
- In earlier system software versions, if you printed ink text to a StyleWriter Printer 4500 or 6500 at 600DPI, your eMate would stop responding. This issue is fixed so that when you print, the text gets truncated if there is a full text buffer. More text may be printed if the printer's DPI is set to 300.
- Flipped shapes are printed correctly to PostScript printers.

Faxing

- Text on the cover page of a fax is now clear.
- You can drop or add fax numbers before faxing a document without getting an error message.
- You can access eMates on extended networks that previously appeared not to be visible.

Using PC cards

- The eMate 300 can now recognize a greater variety of PC cards.
- In earlier system software versions, you might get the message "Newton still needs the card..." when certain communication cards are ejected. This issue is fixed.

Published Date: Feb 20, 2012

DOS Format Fixer 1.0

This article is about DOS Format Fixer 1.0
This article has been archived and is no longer updated by Apple.

DOS Format Fixer 1.0

DOS Format Fixer version 1.0 was released on July 28, 1998. It requires North American English Mac OS 7.6, 7.6.1, 8.0 or 8.1.

DOS Format Fixer 1.0 is a utility that corrects format information on some DOS format floppy disks for use with PC Exchange 2.1.1 (referred to as PC Exchange in this update). The DOS Format Fixer 1.0 will prevent some kinds of corruption. If you have a floppy disk that is already unusable, DOS Format Fixer 1.0 will not repair the damage. Floppy disks formatted with Windows 3.1 or DOS 5.0 can experience data corruption when they are used on a Macintosh with PC Exchange. This issue is resolved in PC Exchange 2.2, which is included with Mac OS 8.1. If you are using Mac OS 8.0, you can download the Mac OS 8.1 Update for free. If you are using Mac OS 7.6 or Mac OS 7.6.1, you can use the DOS Format Fixer 1.0 to avoid the situation.

Technical Information

Certain floppy disks have erroneous information written to the first sector. Floppy disks normally have a 12-bit file allocation table (FAT), but the floppy disks with erroneous information have "FAT16" written to the first sector. This indicates to PC Exchange that the floppy disk should have a 16-bit FAT when it actually has a 12-bit FAT. This causes PC Exchange to incorrectly read the FAT and PC Exchange subsequently may either overwrite data in used sectors or read data from the wrong sectors. The DOS Format Fixer 1.0 changes the data on the first sector of the floppy disk. It replaces "FAT16" with "FAT12" so PC Exchange will now treat the floppy disk as having a 12-bit FAT.

Instructions:

This software consists of a self-mounting Disk Copy compressed image (.smi) file. Download this software to your hard drive and then double-click it to use it. You do not need Disk Copy to access .smi files.

Follow the steps below to use DOS Format Fixer 1.0. It is recommended that you check your floppy disks using Scandisk or some other disk repair utility in DOS or Windows first, as the DOS Format Fixer 1.0 does not repair floppy disks that have already become unusable.

1. Turn off PC Exchange by opening the PC Exchange control panel and clicking the "Off" button.
2. Open DOS Format Fixer 1.0. A message will remind you to turn off PC Exchange. Click OK.
3. Make sure DOS Format Fixer 1.0 is the active application.
4. Insert each floppy disk you wish to fix. DOS Format Fixer 1.0 will correct the first sector on the floppy disk and then eject it.
5. After all floppy disks have been fixed, quit DOS Format Fixer 1.0.
6. Turn PC Exchange back on.

You will now be able to use the floppy disks with any version of PC Exchange.
Published Date: Feb 20, 2012

HyperCard 2.4 Update

This article has information on the HyperCard 2.4 Update.
This article has been archived and is no longer updated by Apple.
HyperCard 2.4 Update was released on April 26, 1998. It requires US English Hypercard 2.3 or 2.3.5.

Description:

This HyperCard 2.4 Update adds some new features, including QuickTime functionality, and fixes issues with the HyperCard application. This product updates HyperCard 2.3 or 2.3.5 to HyperCard 2.4. The full release of HyperCard 2.4, bundled with software including QuickTime 3.0, and new Help stacks and manuals, is available at your Apple-authorized dealer.

Instructions:

This software is available two different ways. Each method of obtaining this software will provide you the exact same software.

(a.) One 5.4 MB self-mounting Disk Copy image
(b.) 5 parts of a 5.4 MB self-mounting Disk Copy image

If you choose (a.), download this self-mounting image to your hard drive and then double-click it to mount the compressed disk image on your desktop. Please read the documents included on this disk image before installing the software.

If you choose (b.), download all 5 parts to your hard drive and then double-click on the first part to mount the compressed disk image on your desktop. Read the documents included on this disk image before installing the software.

You may wish to download the 5 parts instead of the individual self-mounting image if you are a using a modem connection or if you wish to transport HyperCard 2.4 Update to another machine via floppy.

New Features

Several exciting features have been added with the release of HyperCard 2.4, including:

- an improved movie button task that allows you to open any QuickTime-readable file
- ability to open movie and some image files by dragging them onto the HyperCard application icon
- a new Link to URL button task and HyperTalk command for connecting to a web site
- ability to manipulate QuickTime movies using HyperTalk
- keyboard navigation of QuickTime VR movies
- ability to open a nearly unlimited number of files using HyperTalk
- enhanced script editor window for easier navigation
- improved Picture XCMD
- more script commands and new syntax

For more information on these features and how to use them, see Using HyperCard 2.4.

Issues Fixed In This Update

These changes have been made to HyperCard since version 2.3.5:

- Fixed an issue that prevented HyperCard's floating windows from collapsing properly under Mac OS 8.0 or later.
- Fixed an issue that could cause the system to stop responding when a very large stack was opened on a fast computer.
- Fixed an issue that occurred on PowerPC-based computers when a field contained more than 32K of text and style information.
- Fixed an issue that could cause the movie command callback ExtToStr to return bad data.
- Fixed an issue that prevented HyperCard from properly playing uncompressed 16-bit mono sounds.
- HyperCard now quits properly when a script window is active.
- The beta character in the Symbol font is no longer treated as a word delimiter in fields.

For more product information, see these Web sites using your Web browser application:

- For information about QuickTime, go to **http://www.apple.com/quicktime**
- For information about Apple software updates, go to **http://www.apple.com/swupdates**

Published Date: Feb 20, 2012

iMac: Microphone Only Records At 44.100 kHz Sampling Rate

Summary:
Using SimpleSound version 1.1 on an iMac computer sounds can only be saved at a sample rate of 44.100 kHz.

This article describes how to change the sample rate to 22.050 kHz on iMac computers.
This article has been archived and is no longer updated by Apple.
The iMac computer supports 16-bit CD-quality stereo input/out; additionally, the iMac computer has a fixed sampling rate of 44.100 kHz. Since the sampling rate is fixed at 44.100 kHz, sampling at 22.050 kHz is not possible on iMac computers.

How to resample sounds to 22.050 kHz

The iMac computers ship from Apple with QuickTime 4 basic edition. One of the most useful applications included with QuickTime 4 is QuickTime Player. With QuickTime 4 basic, QuickTime Player is simply a media player. With the QuickTime Pro Player, users can import/export any sound document into and out of QuickTime Player. For information on updating QuickTime 4 to the Pro version, check out Apple's QuickTime web site on the internet at:

<**http://www.apple.com/QuickTime/**>

QuickTime Player can easily downsample SimpleSound documents to lower sample rates. To downsample a SimpleSound document to a lower sample rate, QuickTime Pro users can do the following:

1. After saving the sound document using SimpleSound, open the document using QuickTime Player.
2. Confirm the sound document's Sample Rate by choosing "Get Info" from the Movie menu and select Sound Track from the left pop-up menu and Format from the right pop-up menu. You should see 44.1 kHz.
3. Close the sound document's Get Info window.
4. Choose Export... from the File menu.
5. Select which type of file you want to export (Movie, AIFF, System 7 sound, Wave or ulaw).
6. Click the Options... button.
7. Click the Settings... button in the sound section of the dialog box.
8. Pick the new sampling rate you want by picking the pop-up menu next to kHz.
9. Click OK twice.
10. Click the save button.

You will have your sound at the new sampling rate.

Why Resample?

Sounds stored in 44.100 kHz can take up large amounts of file space. For example, one minute of music audio can be 10 MB in size using 44.100 kHz, whereas by resampling the same audio to 22.050 kHz the file will be 5 MB in size. Further reduction to the file can be made using various compression formats. However, as a general rule, as audio files are compressed and resampled, they lose quality. Depending on type of audio file this may be acceptable.

Published Date: Feb 20, 2012

USB: Transfer Speed Compared to Other Technologies

This document compares the data transfer rates of USB and different peripheral technologies such as ADB, Serial, SCSI, and FireWire.
This article has been archived and is no longer updated by Apple.
Below is a comparison of speeds of different technologies, from slowest to fastest. Please note that these are theoretical maximum throughputs of the different technology.

Technology	Theoretical Maximum Throughput
Apple Desktop Bus (ADB)	0.01 Mbps or 10 Kbps
Serial Port	0.23 Mbps or 230 Kbps
Geoport Port	2 Mbps
USB 1.1 at low data transfer rate	1.5 Mbps
USB 1.1 at high data transfer rate	12 Mbps
FireWire 400	400 Mbps
SCSI	1-40 MB/sec
Fast SCSI	8-80 MB/sec
Ultra SCSI-3	18-160 MB/sec
USB 2.0 at high data transfer rate	480 Mbps
FireWire 800 at 800 Mbps	800 Mbps

Published Date: Feb 20, 2012

iMac: How To Force a Restart

Summary:
Sometimes the Command-Control-Power key combination does not always force the iMac computer to restart when the computer stops responding. This article provides other restart methods for the iMac computer.
This article has been archived and is no longer updated by Apple.
Because the iMac uses a USB keyboard, there may be occasions when you cannot restart it using the Command-Control-Power keys during startup or following a system crash. In such cases it may be necessary to use the hardware reset button. There are unique methods for performing a hardware reset depending upon which model iMac you have.

Original iMac

To get to the reset button, open the cover on the right side of the iMac and locate the reset hole between the Ethernet and modem ports. It has a small triangle icon next to it. Carefully insert the end of a large straightened paper clip into the hole and push gently on the button inside. Do not use excessive force. Your computer should restart.

If the reset button fails to force a restart, unplug the computer, wait at least 30 seconds, then reconnect the power plug and turn the computer back on in the normal way.

iMac (Slot Loading) and iMac (Early 2001)

The iMac (Slot Loading) does not require the use of a paper clip as the reset and interrupt switches now have a button to activate them. The reset and interrupt buttons are located below the modem port on the right hand side of the iMac (Slot Loading). The reset button is marked with a small triangle and is the front-most of the two buttons.

In the event that the iMac's Reset button does not reset your computer, press and hold power button on the front of the computer for at least 5 seconds to force a restart. If this fails, remove the power cord from the wall and then reconnect it.

Published Date: Feb 20, 2012

Power Macintosh G3 Ethernet (Built-In) Driver v2.0.4

This article provides a description and installation instructions for Power Macintosh G3 Ethernet (Built-In) Driver v2.0.4.
This article has been archived and is no longer updated by Apple.
Power Macintosh G3 Ethernet (Built-In) driver version 2.0.4 was released on May 8, 1998. It has been posted to the Apple Software Updates Web site at http://www.apple.com/swupdates.

Requires:

- Power Macintosh G3 Desktop (233, 266, 300)
- Power Macintosh G3 Minitower (233, 266, 300)
- Power Macintosh G3 All-in-one (233, 266)
- Power Macintosh Server G3 (233, 266, 300)
- PowerBook G3 Series (233, 250, 292)

Description:

This driver is used by the Power Macintosh G3 built-in Ethernet interface. The 2.0.4 driver fixes a problem present in the 2.0, 2.0.1, 2.0.2, and 2.0.3 drivers, where there is a possibility that the system could lose network services when using the built-in Ethernet interface with the machines listed above. Please refer to the Read Me file included with with this software for complete details.

Instructions:

This software consists of a Disk Copy NDIF (New Disk Image Format) self-mounting compressed image. Download this software to your hard drive and then double-click it to use it.

Products Affected

- Power Macintosh G3 Desktop (233, 266, 300)
- Power Macintosh G3 Minitower (233, 266, 300)
- Power Macintosh G3 All-in-one (233, 266)
- Power Macintosh Server G3 (233, 266, 300)

This document provides information about version 2.0.4 of the Power Macintosh G3 Ethernet (Built-In) driver. The driver is used by the Power Macintosh G3 built-in Ethernet interface. The 2.0.4 driver fixes a problem present in the 2.0, 2.0.1, 2.0.2, and 2.0.3 drivers.

Loss of Network Services

Using the 2.0, 2.0.1, 2.0.2, or 2.0.3 driver there is a possibility that the system could lose network services when using the built-in Ethernet interface.

In some situations a dialog might be displayed:

"Access to your AppleTalk Network is no longer available.
When the network becomes available again, a message on your screen will notify you."

In other situations no dialog would be displayed but any attempt to use Ethernet-based services would fail. For example, opening the Chooser would result in no zones and no devices being listed.

Identification

The Ethernet driver is located in the "Extensions" folder which is located inside the "System Folder". To determine if you have the 2.0, 2.0.1, 2.0.2, or 2.0.3 version of the driver, do the following:

1. Double click on the "System Folder" icon to open the folder.
2. Double click on the "Extensions" icon to open the folder.
3. Locate the file "Ethernet (Built-In)".
4. Click once on the file to select it.

5. Select "Get Info" from the "File" menu to view the version information.

If you have version 2.0, 2.0.1, 2.0.2, or 2.0.3 you will need to upgrade the driver. Please use the following instructions to upgrade the driver.

Installation

The following procedure will install the new driver into the Extensions folder replacing the old driver. To install the 2.0.4 Ethernet driver, do the following:

1. Drag the new driver "Ethernet (Built-in)" on to your "System Folder" icon.

2. The following dialog box will be displayed:
"This extension needs to be stored in the Extensions folder in order to be available to this computer. Put "Ethernet (Built-in)" into the Extensions folder?"
Click "OK" to continue.

3. The following dialog box will be displayed:
"An older item named "Ethernet (Built-in)" already exists in this location. Do you want to replace it with the one you're moving?"
Click "OK" to continue.

4. Reboot.

5. Verify the new driver is installed by following the steps under "Identification". The new driver will display as version 2.0.4.

Published Date: Feb 20, 2012

iMac: Infrared Does Not Work With TV Remote Controls

Although the iMac has an infrared receiver, like the Power Macintosh 5200 computer, the remote control from the Power Macintosh 5300 cannot be used with the iMac.

This article has been archived and is no longer updated by Apple.

The infrared feature of the iMac is unlike the one-way infrared receivers of previous Power Macintosh 5xxx and 6xxx series computers. It is intended for two-way communications with other compatible IrDA-compliant devices and does not respond to the television-type remote controls used with the Apple TV/Video systems of those earlier Macintosh models.

Published Date: Feb 20, 2012

AppleShare IP 6.0: Using Secure Printing

This article explains how to use secure printing with AppleShare IP 6.0.
This article has been archived and is no longer updated by Apple.
The Print Admin application in AppleShare IP 6.0 provides security features to help network administrators manage access to printers and printer queues. When creating or editing a queue in the Print Admin program you see a security tab. This tab enables the administrator to provide "casual" security features to print queues. The administrator is able to restrict access to specific users and groups, and to require a password.

When specifying which users have access to a queue, the user name must match the owner name for the computer. This is because the owner name is inserted into the postscript document when it is created, using the DSC command %%For. The print server checks to see if the owner name inserted into the PostScript document matches any users in the authorized user list. If these names do not match an error message such as "A PostScript error has occurred. Go to Finder for details" may appear. (There may be no further details in the Finder). Check the print queue's Server Log to see if there is Security Violation error. If so, adjust the names so that they match by changing the owner name to match a current user, or by changing the user name in the Users & Groups list so that it matches the owner name on the user's computer.

Troubleshooting:

To verify that the owner name of the client and the user name on the server match:

1. Open the client's File Sharing control panel (pre Mac OS 8 open the Sharing Setup control panel).
2. Determine the owner name of the computer.
3. Using the ASIP Print Server Admin application, open the queue in question for editing.
4. Verify that one of the names in the list of users approved to print to the queue matches the owner name on the client's workstation.
5. If the entries do not match, change either the owner name on the workstation, or the user's name on the server so that they match.

Some operating systems, including Window NT, use PostScript drivers that do not work with the %%For command as outlined above. On these operating systems using a secure queue is not possible using the default print driver.

Mac OS clients require LaserWriter 8 version 8.6.1 or higher to take advantage of secure PostScript print queues. LaserWriter 8.6.1 and higher are designed for Power Macintosh clients only. (They do not work with computers that have a 68000-family microprocessor.)

If the user is trying to use the secure feature on a Windows computer:

1. Verify that a compatible PostScript driver is installed by printing a document to a file, not the printer.
2. Open the document in a text editor and look for the %%For command.

Published Date: Feb 20, 2012

AppleShare IP: Support For Server-Side Includes And Plug-ins

This article describes server-side includes and plug-ins that may allow them to work with AppleShare 5.0.2 and later.
This article has been archived and is no longer updated by Apple.
A server-side include is an instruction contained in the HTML source of a web page that instructs the web server to include another section of HTML from elsewhere on the server within this web page. Server-side includes are often used to display common information within different pages on the same site. The use of server-side includes will increase the load on the web server, since it requires the server to parse each page before displaying it.

Neither AppleShare IP nor Personal Web Sharing provide inherent support for server-side includes. However, AppleShare IP version 5.0.2 and later provide support for plug-ins that work with the WebStar API. Some third-party plug-ins may provide support for server-side includes on your AppleShare IP web server. For more information on using plug-ins with AppleShare IP, please see the following article:

Article 45066: "AppleShare 5.0.2: Addendum Notes"

Personal Web Sharing version 1.5.x and earlier do not work with plug-ins.
Published Date: Feb 20, 2012

ARA 3.0: "AppleTalk Network Not Available" Message

This article describes an intermittent issue resulting in a message stating "Access to your AppleTalk Network has been interrupted." In some cases AppleTalk services become available again, in other cases the AppleTalk network does not become available again.
This article has been archived and is no longer updated by Apple.
There is a known issue with Apple Remote Access 3.0. ARA processes incoming Router Table Maintenance Protocol (RTMP) packets. ARA 3.0 incorrectly processes these packets. On certain networks, this can cause the Macintosh to assume that the network is inaccessible. An alert is posted to notify the user that access to the AppleTalk network has been interrupted. If additional RTMP packets are processed correctly, the network is assumed to be available again.

This issue is resolved in ARA 3.0.2 and later. ARA 3.0 users may download and install the ARA 3.0.2 Updater to resolve this issue. The Personal Server and client updates are available from the Apple Software Updates Web site at http://www.apple.com/swupdates.

ARA Client versions 3.1.2 and later (included with Mac OS 8.5 and later) also contain this fix, so there is no need to update these versions.

Note: iMac Rev. A (Mac OS 8.1) and PowerBook G3 Series systems that shipped with Mac OS 8.1 use ARA 3.0 as the remote access client. Therefore, customers with these systems may encounter this issue and not realize that it is being caused by Remote Access.

Newer systems shipping with Mac OS 8.5 include ARA 3.1.2 which has resolved this issue.

For The Technically Curious

ARA processes incoming RTMP packets. The RTMP packets consist of tuples that contain network information. Extended network information is contained in 6 byte tuples and non-extended network information is contained in 3 byte tuples. ARA 3.0 maintains a pointer that moves down the list of network tuples.

The bug description: Instead of moving the pointer by 6 bytes for extended networks, the pointer would only move 3 bytes. Eventually, ARA would be reading non-valid data which would result in the determination that the network was no longer valid.

This article can help you locate the software update mentioned here:

- Article 14724: "**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.

Published Date: Feb 20, 2012

iMac: Using Multiple Internet Access Configurations

This article describes how to setup multiple internet configurations using Internet Setup Assistant.
This article has been archived and is no longer updated by Apple.
Internet Setup Assistant is an easy way to quickly enter internet access and configuration information. Internet Setup Assistant automatically configures AppleTalk, Modem, Remote Access and TCP/IP control panels under the configuration name you provide.

Most dialup connections rely on a server to provide internet (network) information. When relying on a server, one setting in each AppleTalk, Modem and TCP/IP control panel can be used for multiple connections.

Apple Remote Access offers the ability to save multiple unique dialup configurations. Start by using the Internet Setup Assistant to enter a descriptive name for each setup you need, for example, Home or Work. Each time you do this, Internet Setup Assistant will add a configuration to your Remote Access preferences.

For convenience, Apple has provided a Remote Access control strip module (pre-installed) that allows you to change configurations quickly from the control strip. The control strip can be used to change configurations, connect and disconnect, and show time connected or remaining.

The AppleTalk, Modem and TCP/IP control panels can also have multiple configurations, or in some cases, it may be necessary to set "manual" configurations that do not use a server to provide the computer with internet (network) information. In these cases, you may have more than one setting in each control panel.

An alternative to manually switching configurations from each control panel is to install Apple Location Manager from the iMac Software Install CD. Location Manager allows settings to be saved as a group, so that selecting a Location Group from the control strip makes changes to all settings: AppleTalk, Dial Assist, Modem, TCP/IP, Remote Access. In our example, a Location called "Work" includes AppleTalk, Remote Access and TCP/IP settings. By changing the location to "Work" using the control strip, all three settings are quickly changed and ready for use.

To install Apple Location Manager, locate the program "Mac OS Install" on the iMac Software Install CD. After launching the Mac OS Install program, select the option to "add/remove" software. A list will appear, allowing you to select Apple Location Manager in the custom install list. The installer will only install that portion of the software necessary for use with Apple Location Manager.

For more information, please see the following Knowledge Base article:

30118: "Apple Location Manager: Frequently Asked Questions"
Published Date: Feb 20, 2012

AppleShare IP 6: Print Server FAQ

This article contains frequently asked questions (FAQ) regarding AppleShare IP 6 Print Server, with answers to those questions.

This article has been archived and is no longer updated by Apple.

Questions answered in this article:

1. Does the AppleShare IP Print Server provide logging that can be used for accounting purposes?
2. Can I store fonts on the Print Server for use by everyone sending print jobs to its queues?
3. Is it possible to run the Print Server component of AppleShare IP on a 680x0 computer?
4. Does the new AppleShare IP 6 Print Server handle print jobs sent over TCP/IP?
5. Does the new Print Server work with the LaserWriter 8 driver?
6. Does the AppleShare IP 6 Print Server work with the LaserWriter 8.5 IP printing features?
7. Does the new AppleShare IP 6 Print Server work with queue names with spaces?
8. Do print queues error logs note the IP address of the printer or the queue in question?
9. Does secure printing work for non-Mac clients?
10. Does AppleShare IP 6 Print Server work with localtalk printers?
11. How are print jobs assigned to the printers in a queue?
12. Can I use the "Allow binary data" and "Allow color printing" options for IP print queues?
13. Can I print a Postscript file that another client gave me?

Question 1: Does the AppleShare IP Print Server provide logging that can be used for accounting purposes?

Answer: This is not currently available with AppleShare IP 6.0.Â

Question 2: Can I store fonts on the Print Server for use by everyone sending print jobs to its queues?

Answer: No. The client will have to store needed fonts locally.

Question 3: Is it possible to run the Print Server component of AppleShare IP on a 680x0 computer?

Answer: No, the new Print Server is a PowerPC native application, and cannot run on 680x0 computers. With the introduction of AppleShare 4.2, the server software is now only PowerPC compatible.

Question 4: Does the new AppleShare IP 6 Print Server handle print jobs sent over TCP/IP?

Answer: AppleShare IP 6 supports IP and LPR printing from any client including Mac, WinTel, and Unix.

Question 5: Does the new Print Server work with the LaserWriter 8 driver?

Answer: The AppleShare IP 6 Print Server requires LaserWriter 8 version 8.4 or later.

Question 6: Does the AppleShare IP 6 Print Server work with the LaserWriter 8.5 IP printing features?

Answer: AppleShare IP 6 works with the IP printing feature in this Apple-provided driver.

Question 7: Does the new AppleShare IP 6 Print Server work with queue names with spaces?

Answer: Spaces are handled correctly with AppleTalk queues. LPR queues with spaces in the Queue name will be recognized by the client up to the first space. Thus, if a LPR client wants to print to the "Accounting Dept" queue--the queue name to select is "Accounting." Leading spaces are not recognized.

Question 8: Do print queues error logs note the IP address of the printer or the queue in question?

Answer: Error logs will identify the IP address of the printer to note error conditions.

Question 9: Does secure printing work for non-Mac clients?

Answer: Yes. However, a limitation in Windows NT print drivers is not compatible with secure printing for print queuing.

Question 10: Does AppleShare IP 6 Print Server work with localtalk printers?

Answer: The AppleShare IP 6 Print Server works with LocalTalk laser printers that use the LaserWriter 8 driver. Printers that cannot use the LaserWriter 8 driver cannot be used with the AppleShare IP 6 Print Server.

Question 11: How are print jobs assigned to the printers in a queue?

Answer: Print jobs are assigned in a round robin fashion. The printer server will ping the printers until one is available to send a new print job. You can drag jobs to a specific printer while at the Print Server Admin console.

Question 12: Can I use the "Allow binary data" and "Allow color printing" options for IP print queues?

Answer: No. They are only available to AppleTalk printers.

Question 13: Can I print a Postscript file that another client gave me?

Answer: Yes. However, if secure printing is activated, printing the Postscript file may not work.

Published Date: Feb 20, 2012

How To Use America Online To Register With Apple

This article describes how to register an Apple product via America Online.
This article has been archived and is no longer updated by Apple.
If you wish to use America Online to register your iMac over the Internet, open America Online and connect to the Internet. Go to the AOL Web Browser, and enter the following Apple Registration Server URL:

http://www.apple.com/register/

If you would rather NOT use the AOL Web Browser, after you open America Online and connect to the Internet, open the "Register with Apple" application on the desktop.

Once you see the dialog window above, click the "Connect Now" button. This opens the configured browser and takes you to the Apple Registration Server.

Note: The only purpose of the "Register with Apple" application is to take you to the Apple Registration Server (www.applereg.com) through the Internet browser of your choice.

For more information on the "Register with Apple" application, please see article 58025: "**iMac: How To Get Onto The Internet**"
Published Date: Feb 20, 2012

AppleShare IP 6: Web Service FAQ, Part 1

This article contains frequently asked questions (FAQ) regarding AppleShare IP 6 Web Service, with answers to those questions. For the second part of this article, see article 88011: "**AppleShare IP 6: Web Service FAQ, Part 2"**

This article has been archived and is no longer updated by Apple.

Questions answered in this article:

1. Does guest access need to be on to allow Web access?
2. Are there any common CGI's that do not work with with AppleShare IP 6?
3. Does the AppleShare IP 6 Web Server work with keep-alive requests?
4. Does the AppleShare IP 6 Web Server binhex Macintosh files on-the-fly?
5. Does the AppleShare IP 6 Web Server have WebStar API plug-in support?
6. How many simultaneous connections can this Web Server handle?
7. Is it possible to change error messages that are returned by the server?
8. What is MIME?
9. I'm a WebStar customer moving to ASIP. How do I get "default.html" files to load as the default file when requesting an HTTP directory?

Question 1: Does guest access need to be on to allow Web access?

Answer: No. But if Guest log-in is not enabled, only registered users, who have at least Read access to the Web Folder, will be able to access. If you want the public to access your web site, the Guest log-in must be enabled and the guest must have at least Read access to the Web Folder.Â

Question 2: Are there any common CGI's that do not work with with AppleShare IP 6?

Answer: Due to the huge number of publicly available CGI's, Apple cannot test them all for compatibility. If they are written to the WebStar CGI API or version 1.2 of the WebStar plug-in API, they should be compatible. Please contact the CGI or plug-in developer for this information.

Question 3: Does the AppleShare IP 6 Web Server work with keep-alive requests?

Answer: Yes. Support of keep-alive requests, now used by most popular browsers, effectively doubles the number of requests per second the server can handle.

Question 4: Does the AppleShare IP 6 Web Server binhex Macintosh files on-the-fly?

Answer: Yes. When the URL for a HTTP request ends with the .hqx suffix, the corresponding file is automatically converted to binhex format.

Question 5: Does the AppleShare IP 6 Web Server have WebStar API plug-in support?

Answer: Yes. Support for WebStar API plug-ins was introduced in AppleShare IP 5.0.2.

Question 6: How many simultaneous connections can this Web Server handle?

Answer: The number of simultaneous connections is limited by your physical network connection and amount of RAM installed on your AppleShare IP 6 Server.

Question 7: Is it possible to change error messages that are returned by the server?

Answer: Yes. For AppleShare IP 6, error messages files are now contained in Error Files folder inside the Web Folder. You can edit or delete these files at will.

Question 8: What is MIME?

Answer: MIME stands for Multipurpose Internet Mail Extensions. It is the standard for attaching non-text files to standard Internet mail messages. Non-text files include graphics, spreadsheets, formatted word-processor documents, sound files, and so forth.
MIME types are also used by web servers. When responding to a request, the ASIP web server returns the MIME type of the data along with the response data. The web browser on the client uses the MIME type information to determine how to process and display the data. Handlers for common MIME types are built into popular browsers. For specialized MIME types such as audio and video files, web browsers invoke external applications designed to handle specific MIME types.
Note: Apple does not provide technical support to customers using the ResEdit application to modify Resource files.

Question 9: I'm a WebStar customer moving to ASIP. How do I get "default.html" files to load as the default file when requesting an HTTP directory?

Answer: AppleShare IP 6 allows you to select your default html file via the Web & File Admin application. Go to the Server menu, select Web & File Server Settings, and choose Web from the pop-up menu. You will see a button to select your Current Default Home Page File.Â

Published Date: Feb 20, 2012

AppleShare IP 6: MacDNS And Miscellaneous FAQ

This article contains frequently asked questions (FAQ) regarding AppleShare IP 6 (Mac DNS and miscellaneous), with answers to those questions.

This article has been archived and is no longer updated by Apple.

Questions answered in this article:

1. Should I set up my MacDNS server to point to itself for domain name services?
2. I want to set up an Intranet which will not have access to the Internet. Can this be done with MacDNS?
3. How do I set up an MX-record with Mac DNS?
4. Can I still use ARA MultiPort Server on my AppleShare IP file server?
5. Can I use ARA Personal Server on my AppleShare IP Server?
6. What are the port numbers used by the various AppleShare IP Services?
7. What is Multi-Homing? Does it mean I can route different network segments thru my AppleShare IP server?
8. Why do I get an error -5000 or "File or volume access denied" message?
9. PutQuestionNineHereOnThisLine
10. PutQuestionTenHereOnThisLine

Question 1: Should I set up my MacDNS server to point to itself for domain name services?

Answer: Yes. You should list the server's domain name in the Name Server Address field of the TCP/IP control panel. You can also include a second DNS server, such as your ISP's.

Question 2: I want to set up an Intranet which will not have access to the Internet. Can this be done with MacDNS?

Answer: Yes. Please see the MacDNS Frequently Asked Questions (FAQ) for details. Also refer to the "MacDNS Admin Guide," which is included with the AppleShare IP install.

Question 3: How do I set up an MX-record with MacDNS?

Answer: There are instructions and examples on setting up the MX-record in the "MacDNS Admin Guide" included with the AppleShare IP install. For additional information, also see MacDNS Frequently Asked Questions.

Question 4: Can I still use ARA MultiPort Server on my AppleShare IP file server?

Answer: ARA MultiPort Server 2.0 and later are not supported by AppleShare IP 6.

Question 5: Can I use ARA Personal Server on my AppleShare IP Server?

Answer: Yes. However, you must install ARA Personal Server first and then install AppleShare IP 6. AppleShare IP 5.0.2 or later will allow you to make additional changes to user's dial-in access options from AppleShare IP.

Question 6: What are the port numbers used by the various AppleShare IP Services?

Answer: Here is a table:

Service	Port
AFP over TCP	548
FTP	21
HTTP	80
POP3	110
SMTP	25
IMAP	143
IMAP Admin	626
Domain Name Server	53

Question 7: What is Multi-Homing? Does it mean I can route different network segments thru my AppleShare IP server?

Answer: Multi-homing provides the ability for one computer to be connected to up to four different and unique AppleTalk network segments. This is possible thru network ports installed in the computer via built-in ports and network expansion cards. Please note that multi-homing does not bridge or route those network segments into a LAN. The network segments will not see each other by being connected to this one computer, but clients on the unique network segments will all see the AppleShare IP 5.0 server. This multi-homing feature can only be enabled with the AppleShare IP 6 File Server.

Note: AFP over TCP services can only be available on one of the four AppleTalk Network segments.

Question 8: Why do I get an error -5000 or "File or volume access denied" message?

Answer: An application may be attempting to copy a file that's located in a write-only folder. You will have to either see if it is the application not using proper read and write procedures in its activities or the folder's access privileges need to be set to read and write.

Published Date: Feb 20, 2012

AppleShare IP 6: AppleShare Client FAQ Part 1

This article contains frequently asked questions (FAQ) regarding AppleShare IP 6 client software, with answers to those questions. For the second part of this article, see article 88012: "**AppleShare IP 6: AppleShare Client FAQ Part 2"**

This article has been archived and is no longer updated by Apple.

Questions answered in this article:

1. What are the main enhancements of AppleShare Client 3.8 from versions 3.7.2 and 3.7.4?
2. What are the requirements for AppleShare Client 3.8?
3. Which versions of the AppleShare Client and the Mac OS work well with 4 GB or greater hard drives?
4. Is Open Transport required on the Mac OS client?
5. Can I force an AppleTalk connection to an AppleShare IP server?
6. How do I connect to a server via TCP when that server does not appear in the Chooser?
7. Does the AppleShare Client v3.7 resolve the performance problem of earlier clients such as System Software v.7.5.3 Finder's asynchronous calls?
8. Is there a Windows client included with AppleShare IP 6?
9. How do I connect to a server that is running behind a firewall?
10. How do I connect from home to a server via my local dial-up ISP?

Question 1: What are the main enhancements of AppleShare Client 3.8 from versions 3.7.2 and 3.7.4?

Answer: The key changes of AppleShare Client 3.8 from 3.7.2 and 3.7.4 are:

- Much of the Login process is asynchronous. You can cancel out of the connection attempt.
- The 3.8 Client supports a new, transport independent UAM (User Authentication Method) Interface. This allows UAM plug-in modules to connect to servers using AFP over TCP/IP. You will need to contact your UAM vendor to obtain a new UAM that conforms to this interface.The old UAMs will still work.
- Aliases made of servers mounted via AppleTalk will not try to switch to TCP/IP. If you want a TCP/IP alias, you must first mount the server volume via TCP/IP.
- Works correctly with the AutoRemounter 1.3 control panel.

Question 2: What are the requirements for AppleShare Client 3.8?

Answer: AppleShare Client 3.8 requires Mac OS 7.6 or later and Open Transport 1.1.2 or later. In order for AutoRemounter functionality to work properly, AppleShare Client 3.8 requires AutoRemounter Control Panel version 1.3, which is included with Mac OS 8.1.

Question 3: Which versions of the AppleShare Client and the Mac OS work well with 4 GB or greater hard drives?

Answer: Refer to Article 15460 "**AppleShare File Sharing: Chart Of All Limitations**" for further information.

Question 4: Is Open Transport required on the Mac OS client?

Answer:

Question 5: Can I force an AppleTalk connection to an AppleShare IP server?

Answer: Yes, if you use Client v3.7 or later then Open Transport 1.1.2 or later is required. The pre-3.7 Client does not require Open Transport, but you will only have a regular AppleTalk connection, and you won't see the increased performance that TCP/IP connections can provide.

Question 6: How do I connect to a server via TCP when that server does not appear in the Chooser?

Answer: When you want to use TCP to connect to an AppleShare IP file server that does not appear in the "Select a file server" list in the Chooser window, click the "Server IP Address" button. When you click that button, a dialog box appears in which you can type the DNS name or the IP address of the AppleShare IP file server.

Question 7: Does the AppleShare Client v3.7 resolve the performance problem of earlier clients such as System Software v.7.5.3 Finder's asynchronous calls?

Answer: Yes. The Read Me file for AppleShare Client v3.7 details all such software improvements.

Question 8: Is there a Windows client included with AppleShare IP 6?

Answer: No. AppleShare IP 6 has built-in SMB over TCP/IP support for Windows 95/98 clients. No additional client software from Apple needs to be installed. Set up your AppleShare IP Web & File Server for SMB support in the Web & File Server Admin. Additional information is in the Help manual.

Question 9: How do I connect to a server that is running behind a firewall?

Answer: If an AppleShare IP server is running on a computer behind a firewall, you can reach it by appending a colon (:) and the TCP port number (by default, 548) to the IP address or DNS name. For example, when you go to the Chooser, select the AppleShare icon, and click on the Server IP Address button. In the dialog, type in:

```
myasipserver.com:548
```

Question 10: How do I connect from home to a server via my local dial-up ISP?

Answer: AppleShare Client includes the "Server IP Address" button in the Chooser window. This allows you to connect to an AppleShare IP server from your home via your local dial-up ISP. You can access the AppleShare IP server by typing in its IP Address in the dialog box that is displayed when you click the "Server IP Address" button.

Published Date: Feb 20, 2012

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Published Date: Feb 20, 2012

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Published Date: Feb 20, 2012

iMac: "Disk Locked" Message When Installing FaxSTF

This article describes why a disk is locked error is generated when installing FaxSTF software after starting up from the Software Installation CD.
This article has been archived and is no longer updated by Apple.
The disk is locked error message appears because you started your computer from CD. While a majority of the FaxSTF files are installed to the folder you specify on the computer's hard disk, some of the files must be installed into the active system folder. When you start up from the CD, the active system folder is on the CD which is considered locked, so the installation fails.

To install the software, restart your computer from the hard drive then launch the FaxSTF installer.
Published Date: Feb 20, 2012

USB: Third Party Keyboards May Not Have Command, Option Keys

Third Party USB keyboards may not always have similar configurations or key icons as Apple keyboards. In particular, they may not have a Command key or an Option key. This article lists the equivalent keys on a PC-style keyboard.

This article has been archived and is no longer updated by Apple.

Third party USB keyboards not specifically designed for the Mac OS may not have a "command" key on the keyboard. Not all third party keyboards use Apple standard icons. The following table lists keyboard equivalent for Microsoft Windows icons.

Keyboard Equivalents	
Mac OS	**Windows**
Command key	Windows key (icon on keycap looks like Windows logo)
Option key	Alt key

Finally, some keyboards may have a key which looks like a cursor pulling down a menu. This key has no equivalent in the Mac OS. It will generate a "*" character when pressed.

Published Date: Feb 20, 2012

AppleShare IP 6: File Service FAQ

This article contains frequently asked questions (FAQ) regarding AppleShare IP 6 File Service, with answers to those questions.

This article has been archived and is no longer updated by Apple.

Questions answered in this article:

1. Will the fastest network connection be selected between the client and AppleShare IP Server? Or will it always try TCP/IP when both TCP/IP and AppleTalk are available?
2. How does the AppleShare client know how to connect to the Server using TCP/IP?
3. Does AppleShare IP now support sharing volumes larger than 4GB?
4. Can I change the AppleShare Server's port?
5. Will my Windows clients be able to use AFP (Apple File Protocol) over TCP/IP as well?
6. Will my Windows SMB clients be able to use AppleTalk to access the AppleShare IP 6 server?
7. AppleShare IP 6 now provides support for SMB clients. Can I install PC software from the AppleShare IP server?
8. Can I access the AppleShare IP 6 server over multiple SMB subnets?
9. Why can't I see the files on the AppleShare IP server from my Win95/98 client?
10. Can Windows clients change their User password?
11. What is the Network Trash Folder?

Question 1: Will the fastest network connection be selected between the client and AppleShare IP Server? Or will it always try TCP/IP when both TCP/IP and AppleTalk are available?

Answer: The AppleShare IP file server will default to an AFP over TCP/IP connection unless it is unavailable. AFP over TCP/IP is considered the fastest connection. The client can force an AppleTalk connection as mentioned in the AppleShare 3.7 Client FAQ.

Question 2: How does the AppleShare client know how to connect to the Server using TCP/IP?

Answer: The AppleShare IP Server sends its IP address to the client in an AppleTalk packet when it's selected in the client's Chooser. The AppleShare Client then knows to select the TCP/IP protocol for connection.

Question 3: Does AppleShare IP now support sharing volumes larger than 4GB?

Answer: Yes. When used in conjunction with AppleShare Client v3.7 for the Macintosh client, server volume sizes are read correctly up to 4GB. If the volume is actually larger than 4GB, the volume size information shown will reflect the remaining available disk space up to 4GB. Note that this is a limitation of the MacOS system software and not AppleShare IP.

For example, if the volume is 9GB and 5.5GB of disk space is used--the Macintosh client will see 3.5GB as available. In turn, if the volume is 10GB and 5.5GB of disk space is used--the Macintosh client will only see 4GB as available, because server volume sizes are read correctly up to 4GB.

Question 4: Can I change the AppleShare Server's port?

Answer: The AppleShare Client looks for the AppleTalk over TCP/IP port number to be 548. The AppleShare Client won't be able to connect to the server if this is changed. There are two ways you can connect to an AppleShare Server whose PORT resource has been changed.

- Use the Chooser's "Server IP Address..." button to manually specify the IP address of the Server, followed by a colon and the new port number.
  For example: `www.yourdomain.com:xxxx`
- Change the default AppleShare port number from the Macintosh client by using a resource editor (such as ResEdit*) to alter the 'DATB' resource (ID=1407) to match that of the server's new AFP port number.

Note: The client won't be able to connect to another AppleShare IP 6 Server whose port number has not been altered, unless you manually connect via Chooser's "Server IP Address..." button and explicitly specify the port number after the "colon" notation.

Question 5: Will my Windows clients be able to use AFP (Apple File Protocol) over TCP/IP as well?

Answer: Cooperative Printing Solutions (makers of COPSTalk) and Miramar have announced product updates that will include support for AFP over TCP. Please contact these vendors for more information.

For AppleShare IP 6, set up Window File Sharing (SMB) in the Web & File Server Admin.

Question 6: Will my Windows SMB clients be able to use AppleTalk to access the AppleShare IP 6 server?

Answer: No.

Question 7: AppleShare IP 6 now provides support for SMB clients. Can I install PC software from the AppleShare IP server?

Answer: Yes, but please note the following conditional requirements:

- Hybrid Mac/PC CDs can be shared, but not all PC files will be visible. Network installs of PC software on a hybrid CD may not work.
- A PC application installer partitioned on multiple floppy disks needs to be copied and collected in one folder. Each floppy disk's content has to be in its own sub-folder inside the main folder. Share the main folder and notify clients to install the software in this manner.
- An alert may come while installing a Windows application from AppleShare IP server. It is "Can not find <drive>:\\<installer filename>. Window needs this file to run." If the name of the folder containing the installer program is more than 8 characters in length (i.e. APPLICATION INSTALLER), change it to one containing 8 characters or less (such as INSTALL).
- Some installer programs may also require that you spell out the drive and directory path to the folder. Please consult your application's installation instructions for information on how map a drive.

Question 8: Can I access the AppleShare IP 6 server over multiple SMB subnets?

Answer: A Windows NT server has to be set up to provide this multiple subnet access.

Question 9: Why can't I see the files on the AppleShare IP server from my Win95/98 client?

Answer: Windows clients should Refresh from the View menu any server folder window whose access privileges have changed since their last login into the AppleShare IP server.

Question 10: Can Windows clients change their User password?

Answer: No. The Windows client may not receive the dialog box asking the password to be changed. Do not check the box "Require new password on next log" for a new SMB User in the Web & File Server Admin.

Question 11: What is the Network Trash Folder?

Answer: The network trash folder serves the same purpose as the invisible Trash Folder at the root of a local volume. The client Finder uses it when a user puts something into the trash from a shared volume. You will have one network trash folder at the root of every sharepoint. Within that folder will be a file called Trash Can Usage Map which is used by the Finder on the client computer to claim a Trash Can #x folder to use as the trash can for the server volume.

When a client throws away a file on a remote volume the Finder tries to get a lock on the first byte of the Trash Can Usage Map. If that byte is locked, it tries to get a lock on the second byte and so on. When it gets the lock it "claims" the corresponding Trash Can folder. It then moves the file to be thrown away into its Trash Can folder. When the User selects Empty Trash, the Finder will empty its Trash Can Folder. If the client computer breaks the connection via crashing or being disconnected, the Trash Can folder will not be emptied. However when a client Finder claims a Trash Can folder, it will delete anything that was in the folder previously.

Warning: The instructions in this article refer to using ResEdit to alter your system software. Apple, Inc., is not liable for any damage done to your software through the use of ResEdit to alter the software.

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following article can help you search for a particular vendor's address and phone number:

- Article 17159: "**Locating Vendor Information**"

Published Date: Feb 20, 2012

AppleShare IP 6: Mail Service FAQ Part 1

This article contains frequently asked questions (FAQ) regarding AppleShare IP 6 Mail Service, with answers to those questions. For the second part of this article, see article 88008: "AppleShare IP 6: Mail Service FAQ Part 2"
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. What are the differences between SMTP, POP, and IMAP?
2. Why are there so many different options for user mail inboxes?
3. How do I increase the number of concurrent connections for POP & IMAP?
4. What is the purpose of the Internet Alias for a user?
5. Why would I want to make a Finger request to the AppleShare IP 6 Mail Server?
6. Is there an easy way to send mail to a list of users on the mail server?
7. How do I setup and use the NotifyMail(TM) feature?
8. What is the IMAP Admin port?
9. Can mail clients have accounts on the Mail Server if the available network only supports AppleTalk?
10. Can the Mail Server support TCP/IP and AppleTalk clients simultaneously?
11. How can I adjust the number of hours the Mail Server will attempt to deliver mail before returning it to the sender?

Question 1: What are the differences between SMTP, POP, and IMAP?

Answer: SMTP (Simple Mail Transfer Protocol) is used to transfer mail from client applications to a mail server, or to transfer messages from one mail server to another. It is used only for email message uploads. POP (Post Office Protocol) is used to download email from a mail server to a client. Once the mail message has been received by the email client the message is then deleted off of the server. The mail is then stored only on the client machine. IMAP (Internet Message Access Protocol) is a new mail protocol used in AppleShare IP 6. IMAP (the latest version is IMAP4) is a standard client-server protocol in which email is received and held for you by your mail server. Since all the mail is stored on the server it is accessible from anywhere you have an IMAP client, you can be at home or work and still view all your email. Another advantage is the ability to view only the parts of an email that interest you, you don't have to download the entire message in order to read it. For instance you can read the sender, subject, and text body of a message before you download the 40MB attachment that is included with the message. You can also create and manipulate mailboxes on the server as well as delete messages, or search for certain parts of a message.

Question 2: Why are there so many different options for user mail inboxes?

Answer: The typical email user will log in via POP or IMAP exclusively. For these users it is best to enable POP only or IMAP only since these settings only need one inbox as a location for new mail. With a user setting of "Both POP and IMAP", there are lots of choices for how the users inbox will be handled. There can be a shared inbox, which means that (1) all new mail goes into one inbox, and (2) when the user logs in via either protocol they view the same inbox. This setup can result in issues if the user has a POP client that routinely checks mail. When the POP client downloads and deletes the mail from the shared inbox it will become unavailable to the IMAP client and will seem to disappear from the IMAP clients' inbox. This issue can be solved by using separate inboxes for POP and IMAP. Separate inboxes mean that all new mail is placed in two mailboxes "INBOX" for IMAP & "POP3 INBOX" for POP. This way the different email clients do not conflict with each other when accessing the same users mail. An additional option for this type of setup is to make the "POP3 INBOX" visible to the IMAP client in the IMAP folder list. This can be useful for clearing out email that builds up in the "POP3 INBOX" if the POP client does not check the account regularly.

Question 3: How do I increase the number of concurrent connections for POP & IMAP?

Answer: Increase the amount of memory allocated to the AppleShare IP Mail Server application located in the System Folder's Extensions folder. Do a "Get Info" on the file and change the "Preferred Memory Size" to a larger value. Giving the server more memory allows for more users to be connected to the server at one time. It also increases the overall performance of the server. The default memory size allows only 18 users. A memory allocation of 15 MB for the mail server will allow 94 simultaneous users and 35 MB will allow for 250. Give the mail server as much memory as possible for the best performance.

Question 4: What is the purpose of the Internet Alias for a user?

Answer: The Internet Alias is only needed when the user name contains spaces or other characters that are not valid on the internet. For example, the user name "Robert Smith" would need an internet alias of "rsmith" in order to receive email or log into the file server via FTP. If the user name is valid for the internet there is no need for an Internet Alias, such as "alice.jones".

Question 5: Why would I want to make a Finger request to the AppleShare IP 6 Mail Server?

Answer: Finger is an internet protocol for making user account information requests. You may wish to do this in order to see user account status such as number of unread messages, last login time, or simply to verify that the user account exists. You can also get host information such as last connect time or number of queued messages.

Question 6: Is there an easy way to send mail to a list of users on the mail server?

Answer: Yes. Create a group that has an internet savvy name and assign users to this group. When you send email to the group, all members of the group will receive a copy of the message. You can also add users to the group that have autoforward setup to send the message to users that

are not in the local Users & Groups file.

Question 7: How do I setup and use the NotifyMail(TM) feature?

Answer: The ASIP 6 Mail Server now supports mail notification in conjunction with the NotifyMail(TM) software (available at **http://www.notifymail.com**). This feature is usually only used with POP clients to notify them when new mail has arrived. First you need to install and configure the NotifyMail(TM) software on all your client computers. Then go into the mail settings panel for each user and turn on "Enable NotifyMail(TM)" using either of the IP notification settings. Lastly turn on the NotifyMail(TM) protocol in the Advanced Mail Settings, Network panel of the Mail Admin.

Question 8: What is the IMAP Admin port?

Answer: It is a special port number (626) that can be used with any IMAP client that supports changing of the IMAP port and supports nested folders. Admin port users must have the "enable user to administer server" checkbox set in order to log in. This port allows the administrator to view all the mail on the server, including user accounts, disabled user accounts, and outgoing mail for hosts. Administrators can view, move, delete, search, or perform any IMAP command to any message on the server.

Question 9: Can mail clients have accounts on the Mail Server if the available network only supports AppleTalk?

Answer: Yes, using Claris Emailer's Officemail account will allow users to log into the server via AppleTalk to check their mail via POP only.

Question 10: Can the Mail Server support TCP/IP and AppleTalk clients simultaneously?

Answer: Yes. However, TCP/IP is the preferred method because it is faster and there are more clients to choose from that support it.

Question 11: How can I adjust the number of hours the Mail Server will attempt to deliver mail before returning it to the sender?

Answer: Open the Mail Admin program. Choose the Mail Server Settings, Mail Out panel and type a new number in the Message Expiration field. Click Save. By default this value is set to 72 hours.

Published Date: Feb 20, 2012

AppleShare IP 6: FTP Service FAQ

This article contains frequently asked questions (FAQ) regarding AppleShare IP 6 FTP Service, with answers to those questions.

This article has been archived and is no longer updated by Apple.

Questions answered in this article:

1. How are 'put' files stored on the server?
2. Are files uploaded to the FTP Server automatically binhexed?
3. Are they also compressed?
4. Are files downloaded from the FTP Server automatically decoded?
5. How do I FTP from Netscape Navigator or Internet Explorer if a name and password are required?
6. When I log on to an AppleShare IP 6 Server via AppleTalk and the Chooser, I can 'upload' files in a drop folder. However, when I log on via FTP, the FTP application says "Access Denied" when 'putting' files in the same drop folder.
7. Why can't I 'put' files in a folder with "Drop Box" permissions?
8. Does the FTP server resolve aliases that reside on it?
9. Why can't I use "mget" to get a list of files?
10. Can I do 'get' or 'put' to ASIP FTP server from BBEdit?
11. Is it normal to see folders listed that I do not have read- and/or write-access to?
12. Can I share graphic files with a PC/Windows client using FTP?

Question 1: How are 'put' files stored on the server?

Answer: Files are stored in their original format. You do not need to convert files to MacBinary or BinHex before uploading to the FTP server. The FTP server will do this automatically.

Question 2: Are files uploaded to the FTP Server automatically binhexed?

Answer: The encoding of a file in any format is specific to the client used. The most common formats are MacBinary and Binhex. Many Macintosh FTP clients will automatically encode the file before posting it to the server in the format selected by their preference setting.

When a file is received by the AppleShare IP server, it will automatically decode any file in the MacBinary or Binhex format.

Question 3: Are they also compressed?

Answer: The compression of a file is entirely dependent on the FTP client being used. Some Macintosh FTP clients have the ability to compress a file before sending it to the server, if that function is enabled by their preference setting.

The AppleShare IP FTP is **not** capable of decompressing files.

Question 4: Are files downloaded from the FTP Server automatically decoded?

Answer: Not all transmitted files are encoded, so sometimes decoding is not necessary. If decoding is necessary, most of the FTP clients for the Macintosh are capable of decoding automatically. The behavior in this matter is entirely dependent on the FTP client.

Here are the rules the FTP server uses to determine what type of encoding is necessary:

If the transfer mode is "text" (ASCII) and the target file is a text file, then it is encoded in the text format. If the transfer mode is "text" (ASCII) and the target file is **not** a text file, then it is encoded in the Binhex format. If the transfer mode is "binary" (Image), then just the data fork of the file is transferred with **no** encoding. If the transfer mode is "binary" (Image) and a "MACB E" command has been issued, then the file is encoded in MacBinary format.

Fetch (3.0.2 and greater) has been modified to be AppleShare IP friendly. It will automatically take care of all encoding/decoding needs if left in the "Automatic" mode.

Question 5: How do I FTP from Netscape Navigator or Internet Explorer if a name and password are required?

Answer: Use this URL format: ftp://username:password@ftp.site.com/

Question 6: When I log on to an AppleShare IP 6 Server via AppleTalk and the Chooser, I can 'upload' files in a drop folder. However, when I log on via FTP, the FTP application says "Access Denied" when 'putting' files in the same drop folder.

Answer: In order to use a common AppleShare IP dropbox, the FTP client needs to have the "store unique" option available. Currently, Fetch does not support this feature. Most Unix clients will support this "store unique" option. Macintosh FTP clients may or may not support the "store unique" option.

Store Unique supported:

- Vicom FTP Client 2.8.1 (under Preferences: Default Server Settings: Files, choose "Make Unique Files").

Store Unique unsupported:

- Fetch 3.0.3
- Anarchie Pro 3.5
- NetFinder 2.0

If you choose to use a Unix-compatible FTP client to upload files, you must be sure to have the "store unique" feature toggled on. Otherwise, you'll get the same "Access Denied" message. To toggle "store unique" on most clients, simply type "sunique" at the ftp prompt. For further information, refer to the online documentation included with your particular Unix-based distribution.

Question 7: Why can't I 'put' files in a folder with "Drop Box" permissions?

Answer: In order to maintain security and a consistent user experience across all services, the FTP client must use the "Store Unique" option in order to put files in a "Drop Box" folder. While most Mac clients currently do **not** support this feature, many Unix FTP clients do, as does NCSA Telnet when used as an FTP client.

Question 8: Does the FTP server resolve aliases that reside on it?

Answer: AppleShare IP 5.0 does not resolve aliases to ensure server security. AppleShare IP 6 does resolve aliases. User privileges may have to be set to allow access to folders where the application or file is located.

Question 9: Why can't I use "mget" to get a list of files?

Answer: You can use the "mget" command on some FTP clients to retrieve a list of files rather than one at a time. However, the list must consist of full filenames. Wildcarding filenames (e.g. *.jpg) are not supported in this release of the FTP server.

Question 10: Can I do 'get' or 'put' to ASIP FTP server from BBEdit?

Answer: Yes.

Question 11: Is it normal to see folders listed that I do not have read- and/or write-access to?

Answer: Yes. This is standard policy for all types of ftp servers.

Question 12: Can I share graphic files with a PC/Windows client using FTP?

Answer: The AppleShare IP FTP server will place files in a shared folder, with a suffix of .bin is attached to the name. In other words, if I have a file called graphic1 and place it in a shared folder called graphicFiles, when viewed from an FTP client program, the files shows up as graphic1.bin. This is not a problem for the Mac clients but it turns out to be a problem for the PC/Windows clients. When the PC/Windows clients access the file and downloads it, the file is unreadable. However, if on a Mac client, I FTP the file using Fetch or ICQ directly to the PC/Windows clients computer, the problem with reading the file disappears.

The logic is as follows:

If a file contains a resource fork, it is automatically served up as a MacBinary file regardless of its file extension. It was necessary for us to implement this behavior in order to get the Netscape browsers to download files properly via FTP.

In the "AppleShare Web & File" extension, there is a 'pref' resource that can be changed to prevent the the above behavior. In the meantime, resource editor savvy users (with a resource editor such as ResEdit*) can change the value of the 'pref' resource ID 1755 from "0001" to "0000" to disable auto MacBinary encoding.

*** Warning:** The instructions in this article refer to using ResEdit to alter your system software. Apple, Inc., is not liable for any damage done to your software through the use of ResEdit to alter the software.

Published Date: Feb 20, 2012

AppleShare IP 6.0: General FAQ

This article contains frequently asked questions (FAQ) regarding AppleShare IP 6.0 in general, with answers to those questions.

This article has been archived and is no longer updated by Apple.

Questions answered in this article:

1. What is AppleShare IP 6.0?
2. Do I have to upgrade to AppleShare IP 6.0?
3. What does the AppleShare IP 6.0 license agreement mean?
4. Can I install AppleShare IP 6.0 on a MacOS clone computer?
5. Can I install AppleShare IP 6.0 on a Macintosh 603 PowerPC computer?
6. When I want to change my Open Transport control panel settings, the server will hang.Why is that?
7. Is there a hard-coded limitation in Web & File Admin (or the Registry?) which limits a UG file to having a maximum of 10,000 users?
8. Is this more of a practical limitation by not recommending people to have more than 4000 users since it slows down Web & File Admin's screen updates, and so forth?
9. On my AppleShare Web & File Server computer, if I restart using another disk with a different system folder with Personal File Sharing Enabled, I lose all my sharepoints and access information. Why?
10. Importing a Users & Groups list sometimes brings up a prompt to select an application that can read the file. What do I do?
11. What does the high performance mode available in AppleShare IP 6.0 do for me?
12. Can I use the high performance mode for AppleTalk clients?
13. I saw the AppleShare MMgr Init on the AppleShare IP 6.0 CD. Can I install it on my AppleShare IP 5.0 server as well?
14. Can I have Virtual Memory turned ON on my AppleShare IP server?

Question 1: What is AppleShare IP 6.0?

Answer: AppleShare IP 6.0 is a complete set of LAN and Internet services--including everything you need to set up Web, File, Mail, and Print servers, as well as FTP. New for version 6, AppleShare IP now provides built-in support for Windows file sharing and the AppleShare IP Mail Server now supports the Internet standard IMAPv4 protocol. Support for these open standards means that AppleShare IP is fully compatible with Macintosh and Windows clients. A single administration console makes it simple to manage AppleShare users, groups, passwords and security, retaining the hallmark ease of use which makes AppleShare IP the easiest server operating system available.

AppleShare IP 6.0 provides support for any Apple Power Macintosh computer or Macintosh Server with a PowerPC(TM) G3, 604e, 604, 603e 6500 series, or 601 microprocessor. It is compatible with Mac OS 8.1.

Question 2: Do I have to upgrade to AppleShare IP 6.0?

Answer: No. Earlier versions of AppleShare can continue to be used, but AppleShare IP 6.0 brings performance enhancements, improved scalability and many new features such as native support for Windows clients. We expect most customers running AppleShare 4.x and AppleShare IP 5.0 will be interested in upgrading to acquire the new accessibility offered by AppleShare IP 6.0.

Question 3: What does the AppleShare IP 6.0 license agreement mean?

Answer: The license specifies the terms and conditions under which the AppleShare IP 6.0 software may be used. The license agreement allows the customer to split the software into three pieces and install them on separate systems. Ideally, for the best performance, the File/Web, Mail, and Print services should be installed on separate systems. The license does not allow multiple copies of a single server to be installed on multiple computers.

The number of computers that may interact with the Server Software is specified by the Serial Number Card packaged with the Apple Software.

Note: The actual number of simultaneous connections is dependent upon system software, hardware, and server usage.

Question 4: Can I install AppleShare IP 6.0 on a MacOS clone computer?

Answer: No. AppleShare IP 6.0 was not tested for compatibility with Mac OS clone computers. If you were to install AppleShare IP 6.0 on a Mac OS clone and problems were to occur, contact the clone manufacturer for support.

Question 5: Can I install AppleShare IP 6.0 on a Macintosh 603 PowerPC computer?

Answer: You can install AppleShare IP 6.0 on a 603e 6500 series computer.

Question 6: When I want to change my Open Transport control panel settings, the server will hang.Why is that?

Answer: As noted in the AppleShare IP 6.0 documentation, OpenTransport settings should not be changed while any of the AppleShare IP services are running. It will result in a server hang condition and you will have to restart your server hardware. In order to change you your networking configuration in OpenTransport, quit all of the AppleShare IP services, make the necessary changes to OpenTransport, and restart your AppleShare IP services.

Question 7: Is there a hard-coded limitation in Web & File Admin (or the Registry?) which limits a UG file to having a maximum of 10,000 users?

Answer: No. However, having a large amount of Users may cause the Admin application to run out of memory.

Question 8: Is this more of a practical limitation by not recommending people to have more than 4000 users since it slows down Web & File Admin's screen updates, and so forth?

Answer: Yes, this is correct. It is a practical limitation. In fact, people can exceed 4096 but performance could degrade above this number. You can exceed 4096 users but you may suffer from performance issues at larger numbers.

Question 9: On my AppleShare Web & File Server computer, if I restart using another disk with a different system folder with Personal File Sharing Enabled, I lose all my sharepoints and access information. Why?

Answer: Personal File Sharing and AppleShare use different formats for the AppleShare pdf file that stores privileges, so one will overwrite the other. To avoid having to recreate sharing information, do not start up your server using a disk that has Personal File Sharing Enabled, and do not enable Personal File Sharing after starting your server from any disk.

Question 10: Importing a Users & Groups list sometimes brings up a prompt to select an application that can read the file. What do I do?

Answer: A file type translator program on your computer may bring up this prompt. If this occurs, select Open Doc as application that can read the file.

Question 11: What does the high performance mode available in AppleShare IP 6.0 do for me?

Answer: AppleShare IP 6.0 Web & File Server, upon first launch, checks how much random access memory (RAM) is available. If there is 12 MB of RAM available, the Web & File Server will start in this high performance mode. This mode works for AFP over IP and TCP/IP client access. It will take an additional 3MB of RAM to run in this mode. Benefits provided are: greater performance, scalability through an increased number of internal buffers, larger buffer sizes, a maximum concurrent limit for file services of 500, and a maximum concurrent limit for web server requests of 150.

It is highly recommended that customers utilizing this feature have AppleShare IP 6.0 running on a Power Macintosh G3 computer with minimum of 128MB RAM.

Question 12: Can I use the high performance mode for AppleTalk clients?

Answer: No. Maximum number of clients that can connect via AppleTalk is still set at 250. The rest of the clients have to connect via TCP/IP to reach the 500 limit.

Question 13: I saw the AppleShare MMgr Init on the AppleShare IP 6.0 CD. Can I install it on my AppleShare IP 5.0 server as well?

Answer: The AppleShare MMgr Init can be installed in the System folders of AppleShare IP 5.0.3 and 6.0 servers. The Init will install but not load if you are running a previous of AppleShare IP 5.0.x. The Init fixes a condition where the AppleShare IP server may stop responding. This Init is also available on the Apple Support web site's Apple Software Updates section.

Question 14: Can I have Virtual Memory turned ON on my AppleShare IP server?

Answer: Yes. It is only recommended for AppleShare IP servers that have 32MB RAM, are running a light load of connected and active clients. Install additional memory if the server load gets heavier. A server with 64MB RAM or greater should not need Virtual Memory turned ON.

Published Date: Feb 20, 2012

AppleShare IP 6 Admin: FAQ

This article contains frequently asked questions (FAQ) regarding AppleShare IP 6 Admin, with answers to those questions.

This article has been archived and is no longer updated by Apple.

Questions answered in this article:

1. What can I do if I forget my AppleShare IP 6 Admin password?
2. Are volume access privileges still stored in the AppleShare PDS file?
3. Is the Users & Groups Data File shared by all of the AppleShare IP 6 Services?
4. What information is stored in the AppleShare IP 6 preference files?
5. Is the "copy volume" command still available?
6. Can I still compact access privileges?
7. What AppleShare IP Services can I move to different servers?
8. What is the Users & Groups Data File backup file?
9. Where is the serial number stored?
10. Can I move my Users & Groups data file to a new System folder after I do a clean install or when I want to move the Server to a different computer?
11. How can I delete an entire group of users, for example the Class of '98 group and all of its users?
12. Is the Users and Groups Manager Lite compatible with AppleShare IP 6?

Question 1: What can I do if I forget my AppleShare IP 6 Admin password?

Answer: Please see the following article for complete details:

Article 8662: "**AppleShare Admin: What To Do If You Lose The Password**"

Question 2: Are volume access privileges still stored in the AppleShare PDS file?

Answer: Yes. Each volume still contains an invisible AppleShare PDS file at the root level of its directory. You will need to make it visible with a utility such as Norton Disk Editor or ResEdit in order to trash it. This is normally done when the privileges are unusable and privilege changes cannot be made to a folder or volume.

Question 3: Is the Users & Groups Data File shared by all of the AppleShare IP 6 Services?

Answer: The Data File is shared by all AppleShare IP 6 Services and is stored in the Users and Groups Data File. It is best to keep those Services on one server. If separated, do a Custom Install of each service so that Web & File Server Admin is installed. This is installed for access to the Users & Groups list. Please refer to the Mail Server Help manual for steps to separate the Mail Server to its own server hardware.

Question 4: What information is stored in the AppleShare IP 6 preference files?

Answer: There are 8 separate sections to the answer:

General AppleShare IP Information

Version number for this record, version number for file server, user activity limit expressed as a percentage, maximum client connections, maximum number of guest and anonymous logins, minutes until shutdown, number of serial numbers in struct, serial number, name and phone, organization.

AppleShare IP File Server Information
Login greeting, memory to be reserved for other applications, maimumx number of minutes for idle users, disconnect message, AFP over TCP/IP enabled, AFP over AppleTalk enabled.

AppleShare IP Web Server Information
Web server enabled, web Log enabled, web server maximum client connections, whether guests are allowed for web server, HTML folder path vRefNum, HTML folder path volume name, HTML folder path volume creation date, HTML folder path DirID, partial path to HTML file starting from the Web folder, IP Filters.

AppleShare IP Windows File Sharing Information
Windows File Server name, Windows Workgroup Name, WINS Server name (if applicable).

FTP Information
FTP server enabled, FTP Anonymous login enabled.

AppleShare IP 6 Print Server Attributes
Starting up, running, shutting down, autolaunch print server.

AppleShare IP 6 Mail Server General Information
Minimum Free Space for Mail File, Maximum Server Log File Size, Maximum Error Log File Size, Message for Delivery Expiration Hours, Maximum Message Size, Mail Store Volume Name, Bounce Server Name, Bounce Zone Name, Bounce DNS. Name

AppleShare IP 6 Mail Server Attributes in each user record
AppleTalk Forward Name, AppleTalk Forward Server, AppleTalk Forward Zone, SMTP Forward, Fingerprint Length, MU Attributes.

Question 5: Is the "copy volume" command still available?

Answer: Yes. It is now the "Duplicate Folder" command.

Question 6: Can I still compact access privileges?

Answer: No. It is not necessary.

Question 7: What AppleShare IP Services can I move to different servers?

Answer: All AppleShare IP services have to be installed on Apple Power Macintosh computers. Mail and Print services can be installed on separate servers. Make sure you copy the Web & File Admin application to these servers so the Users & Groups Data File can be accessed. A Custom Install of these servers will, by default, install Web & File Admin application.

In addition, all services use the same Users & Groups Data File. You will have to copy the Users & Groups Data File to each server's System Folder Preference folder.

Question 8: What is the Users & Groups Data File backup file?

Answer: This file is created the first time you install AppleShare IP 6. It is intended as a backup of the current Users & Group Data File in case you want to go back to earlier versions of AppleShare server software. It does not get updated after AppleShare IP 6 is installed.

Question 9: Where is the serial number stored?

Answer: This is stored in the Users & Groups Data File if Easy Setup was selected.

Question 10: Can I move my Users & Groups data file to a new System folder after I do a clean install or when I want to move the Server to a different computer?

Answer: Yes, see the AppleShare IP 6 Help online manual section--Changing the Startup Disk.

Question 11: How can I delete an entire group of users, for example the Class of '98 group and all of its users?

Answer: There is no easy way to do this. The group can be eliminated simply enough but the flexibility of users belonging potentially to different groups makes it difficult to do batch user deletions. There are some workarounds described in the AppleShare IP 6 online Help.

Question 12: Is the Users and Groups Manager Lite compatible with AppleShare IP 6?

Answer: No.

Published Date: Feb 20, 2012

AppleShare IP 6.0: What‘s New

This article describes what's new in AppleShare IP 6.0.
This article has been archived and is no longer updated by Apple.
AppleShare IP 6.0 is a follow-on release to AppleShare 5.0. In addition to issue fixes and performance improvements over ASIP 5.x, version 6.0 provides many new features for administrators and client, listed below by major component:

General

Support for more Macintosh Systems: ASIP is works on any Apple Power Macintosh or Workgroup Server with a G3, 604, 604e, or 601 microprocessor. The Power Macintosh 6500 (603e microprocessor) has also been tested and qualified as an ASIP server.

Issue fixes.

Online update to manual:

ASIP 6.0 includes on line help files in html format (opens in Microsoft Internet Explorer), to assist in setting up and configuring the server.

File Services

Dynamic RAM Allocation:

On Macintosh Server G3 computers with 128 MB of RAM or more, the maximum number of concurrent clients is increased from 250 to 500, when a sufficient amount of memory (12MB) is free when the Web & File Server launches.

Idle Disconnect:

This feature allows the administrator to set a time after which idle connections will be terminated. Separate settings can be configured for guests and registered users, and clients with open files can be exempted.

Separate web guest privileges:

You can now allow guest access to your Web pages, while restricting guest access to file services.

Performance improvements:

Improved data caching and overall system optimization.

SMB Services:

The Windows file sharing protocol is "Server Message Block" (SMB), used for file sharing in Microsoft's LAN Manager, Windows for Workgroups, Windows 95, and Windows NT.

SMB runs on top of a protocol called NetBIOS, which can run on top of several other protocols such as NetBEUI, Novell IPX, and TCP/IP.

AppleShare IP only supports SMB via TCP/IP.

FTP Services

Alias Resolution:

FTP clients can now open aliases on the server's local volumes (requires sufficient access privileges to the original).

Separate FTP guest privileges:

Anonymous FTP can be enabled, separately from guest access to other file services.

ISO Character Support:

Improves interoperability with Windows clients, that in the past had problems due to differences in character sets. Version 6.0 maps names to ISO characters sets.

Web Services

W*API 1.2 support:

Maintains compatibility with third-party plug-ins.

User Editable Error files:

User-created error.html and noaccess.html files, if present in the Web Folder, will override ASIP's default error messages.

Alias Resolution:

Web clients can resolve aliases to other folders on the server's local volumes (requires appropriate access privileges).

HTTP 1.1 support:

The Web Server now supports HTTP 1.1, including persistent connections, byte-range requests, and file upload.

Separate web guest privileges:

Guest access to the Web server can be enabled, independent of other services.

Enhanced security options:

Administrators can enable/disable directory listing and turn on copy protection.

Mail Services

IMAP Support:

New to version 6.0 is support for IMAP, enabling mail clients to retain their messages and folders on the server.

Integration of V-Twin:

The mail server uses Apple's V-Twin technology to search mail server database. (There is no human interface component with this feature).

Domain/address access control:

The administrator can allow or reject mail on a host-by-host basis. An anti-spamming feature allows the administrator to verify that mail purported to be from the ASIP mail server user is actually from a valid user who has mail service enabled.

Print Services

LPR Support:

Print queues can support AppleTalk (via PAP, Printer Access Protocol), TCP/IP (via LPR, Line Printer Remote) or both. Printers can be attached via PAP or LPR.

Extensible by third-parties for accounting.

User Authentication:

Administrators can create print queues that will accept print jobs only from designated users or groups.

AppleShare Client 3.8

Asynchronous Login:

The main dialogs will be moveable modal, and a status dialog box will enable the user to cancel lookups and pending connections.

Published Date: Feb 20, 2012

AppleShare IP 6: Troubleshooting Installation Problems

This article offers troubleshooting information for difficulties that may be encountered during the installation of AppleShare IP 6.
This article has been archived and is no longer updated by Apple.
If you have any issues during the installation process of AppleShare IP 6 (ASIP), here are some suggestions:

- Verify that your computer meets the minimum system requirements for ASIP. (details below)
  - CPU type
  - Version of Mac OS
  - Version of Open Transport
  - Version of OpenDoc
  - Amount of memory
- Verify that your startup disk has sufficient free space for the ASIP files.
- Run Disk First Aid on your startup disk and all server volumes before the installation.

If the disk utility finds problems it cannot repair, do the following:

1. Backup all data

2. Reformat the drive using your favorite disk driver utility (Now would be a good time to put the drive in HFS+ format, for more efficient file storage.)

3. Do a clean system install.

4. Configure your control panels as needed (Date & Time, File Sharing, AppleTalk, TCP/IP)

5. Try reinstalling ASIP again.

6. Restore other data to the disk, as needed.

- Turn off non-Mac OS extensions during the install.
- If a previous version of ASIP is installed, remove those files (or move them to a new location). The installer may have issues replacing files that are unusable.
- You may be able to use the Installer's "Custom Remove" option. Leave the Users & Groups data file and the PDS files in place in order to retain privileges and user information.

If none of the above works, you may have some unusable system files that are preventing the installation. Try the following:

1. Perform a clean system install

2. Reconfigure your control panels (Date & Time, File Sharing, AppleTalk, TCP/IP).

3. Try the install again.

Can't find ASIP Serial Number

If you purchased an ASIP upgrade kit, no serial number is included. Use the serial number from your previous version of AppleShare or ASIP.

If you cannot find the serial number card from the previous version of AppleShare, you should be able to find the serial number in the AppleShare Admin Server Settings or in the Web & File Admin program, if the server is still up and running.

If the server is not currently up and running, remember that the serial number information is stored in the Users & Groups data file. If you backed up your server's Users & Groups data file, you can restore that file to the new server, and the serial number will be restored at the same time. See the section on moving Users & Groups data file to a new server for details on how to do this.

If you purchased a full version of ASIP, the serial number will be on the CD jacket, on an adhesive sticker, which can be placed in your manual, if you wish. Be sure to keep the serial number in a safe place, but do not stick it to the CD itself (it might come off while inside the CD-ROM drive).

Moving User & Group information to another server

It's often useful to be able to carry users & groups from one server to another, for example, if you wanted to move mail services to another computer. Instead of creating all users a second time on the new mail server, you can move the data from one server to another. There are different approaches to doing this:

Move the Users & Groups data file.

All the data on users & groups are stored in the Users & Groups data file, located in the System Folder:Preferences. Moving this file from one computer to another will move ALL users & groups, and will replace any user data that is currently set up on the second computer. To move this file from Server A to Server B, follow these steps:

1. Configure Server B with Mac OS and install ASIP.
2. Verify that the "Network identity" fields in the File Sharing control panel contain the name of the server (Server names for A and B do not need to be the same).
3. Drag Server B's existing Users & Groups data file to the desktop.
4. Drag a copy of Server A's Users & groups data file to Server B's System Folder:Preferences.
5. Restart the server
6. Open Web & File Admin program to verify that Users & Groups have successfully been carried over.

Note: the Users & Groups data file also contains the serial number. If Web & File services are going to offered on both machines, be sure to change the serial number on one of them (Mail Services and Print Services don't look for the serial number). See "Duplicate Serial Numbers" for more info.

Export/Import Users & Group data

AppleShare IP allows you to export Users & Group data to a tab-delimited text file, then imported into another ASIP server.

To export data:

1. Select the Users you want to export. Shift-click to select multiple Users. Command-A will select all (but you will get a warning that 'Guest' and groups cannot be exported).
2. Select "Export Users & Groups" from the File menu of the Web & File Server Admin program. You can elect to export Internet Alias, Comments, and Email attributes. If you select Email attributes, you should also select Internet alias. The email attributes will be either "nomail", "hasmail", "forwardInternet" followed by the address. For example, user Mary Smith's exported file looks like this:
Mary Smith smith.m HasMail NoRequireAPOP BothPOPIMAPShare NoNotification

Passwords are not exported for security reasons, but they can be imported. You can open the text file with a spreadsheet or word processing program, enter default passwords for the users in the appropriate field, and then import the passwords along with the other user information.

To import data, select "Import Users & Groups" from the File menu of the Web & File Server Admin program. In addition to the name, you have the option of importing Internet Alias, Password, Comment, and Email Attributes.

If importing users with passwords, be sure to add the passwords in the appropriate field. For example, if you wanted to import internet aliases and e-mail attributes (skipping "Comments"), the password would be entered between these two fields. Using Mary Smith as an example again, her record for importing with a password "secret1", would be as follows (note that tabs would separate the fields in the text file you were importing from. Here, the tabs are indicated with a "->". Each record would be indicated with a hard return or carriage return, here indicated with a <CR>.)

Mary Smith ->smith.m -> secret1 -> HasMail->NoRequireAPOP-> BothPOPIMAP->Share->NoNotification <CR>

For AppleShare IP 6 system requirements, please see article 88015: "**AppleShare IP 6: Server and Client Requirements**"

Published Date: Feb 20, 2012

AppleShare IP 6.0: Troubleshooting Web & File Services

This article includes tips for troubleshooting common problems with Web & File Sharing. Some of the tips included below are also in the AppleShare IP 6.0 (ASIP) Help files.
This article has been archived and is no longer updated by Apple.

General Web & File

You can't open the Web & File Admin program

- Verify that ASIP and OpenDoc extensions are installed and loaded.
- Verify sufficient memory is free to open the application.
- If password is being rejected, verify CapsLock key is not down. (See the section of forgotten passwords, if that's the problem.)
- If attempting to open the Admin program from the ASIP Manager application, try to open it by simply double-clicking on the Web & File Server Admin application from the Finder.
- Try opening other Admin programs, such as Mail Server Admin. Success opening another admin application would indicate that there are no problems with Open Doc and Users & Groups data file. Try reinstalling the Web & File Admin program itself.
- Test to see if the Users & Groups data file and PDS files are unusable. Replace the Users & Groups Data File with a recent backup copy, if available.
- You should back up your Users & Groups Data File regularly, as well as all the shared data on the server.

Not enough memory to start other programs.

- Choose Reset Cache from the Web & File Admin program's Server menu to flush the cache. Flushing the cache temporarily reduces the amount of memory used by the Web & File Server, thereby making memory available for other programs.
- If flushing the cache corrects the issue, you may not have reserved enough of your computer's random-access memory (RAM) for programs other than the Web & File Server. To do so:

    1. In the Web & File Admin program, choose Web & File Server Settings from the Server menu.

    2. Choose Cache from the pop-up menu.

    3. Increase the number in the "Reserved memory for other applications" box to allow other applications to run.
    (To see the memory requirements of each application, select its name in the Finder and choose Get Info from the Finder's File menu.)

- An alternative to resetting cache size is to start other programs before you start the Web & File Server. If you are trying to start the Mail Server, set it up to start automatically when you restart the computer. Start other programs when you restart the computer by creating an alias for them in the Startup Items folder, inside the System Folder of your computer. The Startup Items will be launched in alphabetical order. It helps to rename the aliases with numbers, indicating the order in which you want them to start up.

File Sharing takes a long time to start up

ASIP must verify the privileges for each folder against information in the Users & Groups Data file whenever file sharing starts up. A very large number of folders, each with explicit privileges, can result in this being a long process (allow at least 15 minutes). Any unusable PDS files can also cause the server to never finish starting up.

If the server eventually does start up , then try changing explicit privileges to inherited, where appropriate. See the related topic on explicit versus inherited privileges, for more details.

If the server never starts up, make sure that each volume on the desktop has sufficient disk space for a PDS file to be created. If so, one or more of the server's PDS files may be unusable. See the related topic on how privileges are stored for assistance in troubleshooting this issue.

Duplicate serial number on the network

When the Web & File Server starts up, it checks the network on which your computer resides for other computers using the same serial number as the one registered on your computer. If the same serial number is detected, an unauthorized copy of AppleShare IP software is running in violation of the Apple software licensing agreement.

Determine which computer is running software in violation of the agreement and cease using that copy of the software.

You cannot open the Users & Groups control panel

The Users & Groups control panel cannot be used once you have installed the AppleShare IP software. You use the Web & File Admin program to register users and groups instead.

If you have installed Apple Remote Access Personal Server, the instructions may tell you to go to the Users & Groups control panel to enable your clients to dial in. You'll find these dial in options have been added to your users' settings when you view them with the Web & File Admin program.

Creation and modification dates or times are incorrect

If the server's clock is incorrect:

1. Stop the Web & File Server.
2. Open the Date & Time control panel.
3. Check the time zone.
4. Reset the date and time as necessary.
5. Restart the Web & File Server.

If the computer's internal battery needs replacing, have the battery changed and then set the clock.

If the clock of a user's computer is incorrect, instruct the user to log off the Web & File Server, reset his or her computer's clock, and then log on again.

Note that the ASIP server will make adjustments for clients in a different time zone creating or modifying files on the server. When viewed at the server itself, the creation and modified dates & times will reflect the server's local time, not the time at the client's location. But when viewed from a client workstation in another time zone, the date and time will reflect the client's local time.

Administrator's Password Forgotten

Please see the following article for complete details:

Article 8662: "**AppleShare Admin: What To Do If You Lose The Password**"

Users login become disabled

Re-enable users login in the "General" setting for that user (check "User may log on")

If this is a continuing issue, check Web & File Server Settings:Password for the option to disable login after X failed attempts. If this is a relatively low number, increase it to allow for users who may be uncertain of their password.

The access privileges you assigned to all folders, or to a single folder, on a volume are lost

Access privileges can be lost if:

- The PDS file is corrupted.
- A shared folder was moved or restored in a way that didn't preserve privileges.
- The PDS files and Users & Groups data file are out of sync.

See Related Topics on Access privileges for more info.

If you have backed up the PDS file for that volume, you can restore it to the root level of the volume. Otherwise, use the Web & File Admin program to set up privileges for the volume or folder again.

Problems creating drop boxes

Drop boxes must be created inside a share point. Assign the Read Access Privilege to the share point and assign Write Only access to folders inside the share point that are to be used as drop boxes. Give the owner of the Drop Box all privileges.

Users have access to your personal files

In general, keep personal files in a separate folder that is not shared.

Verify that you have not inadvertently given administrative privileges to users.

Guest access grayed out

Server administrator must allow user "Guest" privileges to log into the file server.

Volumes grayed out

Server administrator must allow users at least "read" access to share points in order for users to mount the volume.

Users can't access new folders created on the server

Access privileges to the parent folder not set up correctly. See Related Topic on common privileges problem for more information.

Web visitors see "authorization failed" message

If logging in as a guest, verify that server administrator has allowed guest Web access.

Verify that proper privileges have been set up for the folder designed the "Web" folder; this folder needs privileges enabled, but does not have to be made a share point.

Verify that correct username and password are being used.

Published Date: Feb 20, 2012

AppleShare IP 6.0: Troubleshooting Mail Service

This article includes tips for troubleshooting common issues with AppleShare IP 6.0 Mail service.

This article has been archived and is no longer updated by Apple.
As a general rule when dealing with mail server issues, check the mail server log and error log first. They will most likely indicate what the situation is.

Mail Server won't start up

Check the Mail Server log and Error logs from the Mail Admin program for indications of what the problem is. Possible issues include:

- Mail Server requires version 8.1 or later. Mail Server requires OT 1.3 or later.
- Mail Server requires ASIP 6.0 or later. Users & Groups services have become disabled.
- Insufficient memory.
- Another service is using the SMTP TCP/IP port.
- Another service is using the POP3 port. Another service is using the SMTP AppleTalk port.
- Another service is using the POP3 AppleTalk port.
- Disk space on volume is insufficient for creation of mail database.
- Mail Server requires thread manager.
- Mail Server requires a PowerPC processor. The processor is too old.
- Machine name must be set up in File Sharing control panel.
- No transports are available.
- OT TCP/IP is not available.
- The Mail database is unusable.
- Version mismatch of mail server and mail database.
- File system error.
- Wrong file error.
- Not enough disk space to start up.
- TCP/IP not configured properly.
- Mismatches between mail database and current Users & Groups Data file. This can occur if:
    - User accounts are deleted when mail server is not running.
    - A Users & Groups database is restored from backup.
    - The mail database was moved to another machine with a different Users & Groups data file.
    - The mail database is corrupt.

Note: Issues with the mail database itself may be corrected using the ASIP Mail Tool, which can update and repair databases, as well as allow assignment of mail in disabled mailboxes to other users.

Clients can't connect to ASIP Mail Server

- Verify that mail server is running.
- Check mail server log and error log for indication of problems; you may see messages such as:
    - Logon failed due to incorrect password
    - Logon failed because log on was disabled
    - Log on failed because user does not have mail enabled.
    - POP3 user is already logged on; duplicate POP3 sessions not allowed.
    - POP3 Server-unknown mail user
    - APOP Authentication for user failed.
    - Logon failed because APOP is required. User must delete mail to access older messages. No mail has been lost.
- Verify that affected clients have mail enabled, and client software supports protocols enabled (POP, IMAP).
- Verify settings in mail client software.
- If the user's mail account is set up for an APOP-encrypted password, make sure that the user's client is configured appropriately.
- If the user is having trouble receiving replies to mail that he or she has sent previously, make sure that the user's E-mail address is correctly set up in the client mail application's return information field.
- Check IP connectivity between clients and server.

Clients can't send mail to ASIP Server

- Check mail server log and error log.
- If mail is addressed to a user on the ASIP server, verify that mail is enabled for that user.
- If message includes enclosures, verify that size does not exceed limitations set at the server (Mail Server Settings: Mail in). Also verify that there is sufficient volume space on the volume where mail is stored (Mail Server Settings:General).
- If messages are being returned to user marked "no such user" or "host unknown", verify destination email address.

ASIP Mail Server has problems sending/receiving mail

- Verify that mail server is running.
- Check mail server log & error log.
- Verify IP connectivity at the server.
- For problems receiving mail, verify DNS entries are correct.
- Mail server should have static IP address
- Mail exchangers for mail server should point back to itself, with lowest preference value. For example, server "mail.acme.com" should have MX record of "10 mail.acme.com"
- If using domain name for email addresses instead of a permanent host (for example, user@acme.com instead of user@mail.acme.com), verify that an MX-only record has been created for "acme.com" with mail exchanger pointing to the actual mail server "mail.acme.com".
- Verify that the domain name is registered on the Internet. You can do so by using a Web-interface to the "whois" command; search on your domain name and verify that primary name server's IP address is correct.
- Check restrictions that you've set up on the mail server:
- Check Mail Server Settings: Mail In: Is "Reject Mail if destination is not in Host List checked"
- If so, 'Show Host Lists' and add hosts as needed.
- Check 'Show Host List': if host is listed, check settings: Mail From: Is "allow mail from host" enabled.

Mail server can't connect to one particular mail server

- Check mail server log & error log.
- Check restrictions that you've set up on the mail server:
- Check Mail Server Settings: Mail In: Is "Reject Mail if destination is not in Host List checked."
- If so, 'Show Host Lists' and add hosts as needed.
- Check 'Show Host List': if host is listed, check settings: Mail From: Is "allow mail from host" enabled.
- SMTP mail servers use port 25 for the exchange of mail with mail servers. If possible, verify that port 25 is enabled on the other computer by Telnetting to port 25. If your browser is configured to use a supporting application for Telnet connections, such as NCSA Telnet, you can use the following URL from the mail server to attempt to connect to the other host:

  ```
  telnet://other.host.com:25
  ```
- Or, if using a Telnet application, such as NCSA Telnet, simply enter the host name, a blank space, and the port number in the "open connection" window, for example:

  ```
  other.host.com 25
  ```
- The host, if listening on port 25 (SMTP port), should respond that it is "ready":
  If this connection is refused, try pinging the other mail server with a ping utility. If you can ping the host, but get no connection at port 25, then the problem could be one of the following:
  - Perhaps mail service is not running at the moment; wait and try again later.
  - Firewalls may be preventing the connection.
  - Perhaps you are using the wrong address; the host may not be a mail server at all.
- If you can neither ping nor telnet to the other mail host, test pinging another device on the Internet to verify your own connections.
- If your connections work, perhaps a router is down somewhere between your mail server and the other host, or the other server is down temporarily for maintenance.

Users report that "Reply All" doesn't work

Verify that the reply uses a fully qualified domain name for each recipient.

If the recipient is a group, make sure that mail or mail forwarding is enabled for each group member.

Published Date: Feb 20, 2012

AppleShare IP 6.0: Troubleshooting Network Connectivity

This article includes general tips for troubleshooting common problems connecting to the ASIP Services.
This article has been archived and is no longer updated by Apple.

No Zones in Chooser

Zones are created by AppleTalk routers, and divide network devices into logical groupings. When a computer tries to get on the network (either at system startup, or when the AppleTalk port is switched from one port to another), it does the following:

- Tries to obtain an AppleTalk address dynamically
- Checks for routers on the network
- Verifies its address against information it received from the router
- Requests information for the network from routers, such as zone names
- Registers its own services, such as its Macintosh name for file sharing.

If, on a zoned network, no zones appear in the Chooser, check the following:

- Is the correct port selected in AppleTalk control panel?
- Are network cables connected properly? Can other devices on the network see zones? If not, the problem may be the router is down or a problem with network in general; report the problem to the network administrator.
- Can you swap networking hardware with another device that's working, and see zones? If so, suspect networking hardware.

Otherwise, suspect software, and try the following:

- Reset PRAM Re-select correct port in AppleTalk control panel.
- Restart with Mac OS only extensions Toss AppleTalk preferences, restart, try again.
- Test IP connections on the port, if possible, to verify that the network itself is available.
- Run Disk First Aid or other disk utility.
- It may be necessary to reinstall Open Transport, or a clean system folder.

File Server not appearing in Chooser

Verify file server name and zone name. See if anyone else can see it in the Chooser (may be network problems). Verify that the Web & File server is running. Verify port selected in AppleTalk control panel on both server and client.

Guest access grayed out

User "guest" does not have file service enabled at Web & File server. Server administrator must allow guests to log into the file server.

Volumes grayed out

If the volumes that appear in the File Server's volume list in the Chooser appear disabled or grayed out, it indicates that the user does not have any "read" privileges to the share point. Server administrator must allow users to at least "read" at the share point level, for users to mount the volume.

"Server not responding" message

AppleShare IP servers with AFP over TCP enabled will attempt an IP connection whenever the client and the server are configured for TCP/IP. Occasionally, although both client and server are configured for IP, there is no IP connectivity between them. (This might happen is there were no IP router between the client's network and the server's network.). In these cases, try to force an AppleTalk connection, instead of allowing the software to attempt an IP connection. See next step for details.

Forcing an AppleTalk connection

AppleShare client software 3.7 and above will attempt to make an IP connection to the AppleShare IP server whenever this feature has been enabled at the server, and the client is also configured for TCP/IP. To prevent this, and force an AppleTalk connection:

Open Chooser. Select AT zone of file server (if on a zoned network) Select AppleShare Client icon in upper-left quadrant of the Chooser. Hold down the Option-Key when selecting the file server's name in the upper-right quadrant of the Chooser.

Try this whenever you see a "server not responding" message, as indicated in the question above.

Can't connect using TCP/IP

If the client's connection is made via AppleTalk instead of TCP/IP (this should be done behind the scenes if everything is set up right), check the

following:

- Verify that the client is configured for TCP/IP (control panel).
- Verify that the server is an ASIP server with "AFP over TCP/IP" enabled. Personal File Sharing does not support AFP over TCP/IP, nor do previous versions of the AppleShare Server Software (pre-ASIP 5.x), and possibly other types of file servers; in these cases, you can only connect using AppleTalk.
- Attempt the connection using the "Server IP Address..." button in the AppleShare client software. If this button is missing, update client software to version 3.7.4 or later.
- Test IP connectivity between the client and server.

Client stops responding when logging in to the server.

This problem is currently under investigation at Apple. The symptom is that the client stops responding when attempting to log into the server, just at the point where the server volumes are expected to mount. Force-quitting the Chooser sometimes allows the client to continue. Many have reported that this issue does not affect the administrator user, only other registered users.

Workaround: Disable the "Remember Recent" feature of Apple Menu Options control panel. (Changing values to "0" is not sufficient, the feature must be turned off).

IP Connections

Verifying IP connections

Whenever clients report issues accessing IP services, it's good practice to verify IP connectivity at the client and at the server. Even if the client connected successfully in the past, many different things could cause unsuccessful attempts at any time, such as:

- TCP/IP settings accidentally changed
- Routers down
- DNS services down
- Duplicate IP address appears on the network.
- Address server (DHCP, BootP) not functioning/not accessible.
- Some system files or TCP/IP preference files may be unusable.

Ping Utilities

Testing IP connectivity is often done using utilities that send ping packets. Ping packets are simply small packets from one host to another, that request a response from the recipient. Many ping utilities are available for free download on the Internet. One favorite is MacTCP Watcher. Some sort of ping utility is invaluable when troubleshooting IP connections, and the following suggestions are assuming that some ping utility is available.

If no ping utility is available, then use whatever IP applications are at hand, the simpler the better. Remember that the device you're attempting to contact has to support the service that the client software is trying to reach. For example, you may be able to use a Web browser to test a connection with another computer that has Personal Web Sharing enabled, but you can't use it to test a connection to your router.

Here's a suggested troubleshooting path for isolating issues with a client trying to connect to the host.

1. Ping the host using its Domain name.
If pinging succeeds, then there's no issue with the client or the IP connection between client and host. Next step would be to check the applications at client and host, and look for problems there (Web server, file server, mail client, etc.).
If pinging fails, it could indicate an issue with the routers or DNS servers, not necessarily with the workstation itself. Go on to the next step.

2. Ping device on local subnet using IP address.
Pinging a device on your same subnet using its IP address does not require routers or DNS servers to be successful, so it verifies that each machine is able to communicate, at least on its own subnet, using TCP/IP.
Note: Be sure that the workstation you are attempting to ping has its IP stack (i.e., protocol set) initialized. Most Macintosh computers do not initialize the IP stack until an application that uses IP is launched. On the computer you'll be pinging, launch an IP application, such as the Web browser or a ping utility, to initialize the stack before attempting the ping.
You can determine which other devices are on the same subnet by checking the physical connections (are they connected to the same hub? or same bus?) or by checking their IP addresses (are the network portions of the IP addresses identical? You have to consider the IP address AND the subnet mask to determine this).
If pinging a device on the same subnet is successful, you've verified that the computer's IP connections are working, but there still may be some issue with external network devices, such as routers, DNS servers. Continue on with the next step.
If pinging a device on the same subnet fails, then you need to check carefully the local software and hardware configurations. Here's some tips on how to do that:

3. See if any other device on same subnet can ping other devices. This will let you know if the local network is functioning, and if basically

the IP addresses have been set up correctly.

4. If server addressing is being used, see if you can test with a manual address, to see if problem is with communications between the client and address server.

5. Check TCP/IP configurations carefully; compare them with that of a computer that is working properly: verify link being used, IP address, subnet mask, and router information, whether "802.3" is checked (Advanced mode).

6. Check network connections to make sure they're not loose.

7. Swap out non-working hardware with a working machine to test AppleTalk on the same link if possible.

Published Date: Feb 20, 2012

AppleShare IP 6.0: Sharing Files With Windows Clients

This article reviews some important guidelines when sharing files with Windows clients.
This article has been archived and is no longer updated by Apple.
Since Mac OS and Windows computers store and maintain files differently, you should understand the differences to avoid any issues. This information is also found in the AppleShare IP (ASIP) Help files.

The general Windows file sharing guidelines are as follows:

Separate Shared Folders
Create separate shared folders for Windows users and ask them to use only these folders. Windows users can damage Macintosh files (especially applications) by opening or moving them. Keeping the two types of files in separate folders minimizes accidental damage.

Access privileges
Use access privileges to prevent Windows users from inadvertently making changes to Macintosh-only files. Some Mac OS file information, such as the resource fork of files and applications, is lost when a file is copied from a Mac OS computer to a Windows computer. Don't grant Windows users access to folders containing Mac OS-only files.

Use the correct application when modifying files
When users modify files, they should use the same application that created them to open and change them. Although many files can be opened by applications other than those that were used to create them, using a different application to make changes can permanently make a file unusable.

Use DOS file-naming conventions
Whenever possible, use the DOS file-naming convention for naming shared files. The DOS file system supports file names of eight or fewer characters with an optional extension consisting of a period and three or fewer characters. Most special characters (spaces, asterisks, brackets, and so forth) are not allowed. DOS file names are not case-sensitive.

Use Short Name Command
The Web & File Server processes names of files that do not conform to DOS naming conventions so that Windows users can see them. This functionality is always enabled in AppleShare IP 6.

Remember 31-character length limitation
The Web & File Server truncates Windows 95 file names that are longer than 31 characters to 31 characters.
Published Date: Feb 20, 2012

AppleShare IP 6.0: Setting Up Mac OS LPR Client

This article describes how to configure the LPR Client Software--Desktop Printer Utility--on a Macintosh.
This article has been archived and is no longer updated by Apple.
LPR Client Setup Setting Printer-Specific Options

Requirements:

LaserWriter 8.5.1 requires:

- System 7.1.1 or later Minimum 8 MB of RAM

LPR printing in LaserWriter 8.5.1 requires:

- Mac OS 7.5 through 7.5.1 or Mac OS 8.1 (Mac OS 8.0 users need to upgrade to Mac OS 8.1) Open Transport

Availability:

The Desktop Printer Utility (DPU) is automatically installed with Mac OS 8.1 It is also available on Apple Software Updates.

The DPU will be installed in one of two places:

- Installed with Mac OS 8.1: Hard Drive:Apple Extras:Apple LaserWriter Software
- Installed from LaserWriter 8.5.1: Hard Drive:Apple LaserWriter Software

Instructions:

1. Launch the Desktop Printer Utility.

2. Select "Printer (LPR)" and click "OK".

3. Click "Change..." in the PostScript Printer Description (PPD) File section. This brings up the hard drive:System Folder:Extensions:Printer Descriptions folder. Select the PPD for your printer. The icon for your printer will now show up in the upper box.

4. Click "Change..." in the Internet Printer section.

5. For Printer Address, enter the IP address or the domain name of the ASIP print server.

6. For Queue, either the queue name exactly as specified by the print server (get this information from the server administrator). Leaving this section blank will cause the print job to go to the default Print queue specified by the server administrator.
Important: The queue name is case-sensitive.

7. Verify: The optional verify button will check to see if there is an LPD printer or print server at the specified printer address (packet sent to port 515). This does not verify the queue name. However, it is a good idea to click the verify button to make sure that the computer can at least reach the destination printer or print server.

8. Click on "OK" when you are finished with this window.

9. Select Save from the File menu or hit Command-S.

10. Change the name and decide where the file will be saved. The default name is the IP address or domain name that you entered for the internet address. The default location is the desktop. Click "Save" and the desktop printer will be created.

Next:

1. Select New from the File menu if you wish to create another desktop printer, or Select Open from the File menu if you wish to modify an existing desktop printer, or Quit the Desktop Printer Utility.

2. To make the new desktop printer the default printer, select it on the desktop, and choose "Set Default Printer" (command-L) from the Printer menu.

Setting Printer-Specific Options:

Unlike when printing via AppleTalk, the Desktop Printer will not be able to automatically detect the printing options installed on your printer (such as duplex unit, or cassettes installed). To configure your printer-specific settings:

1. Select your desktop printer.

2. Go to the Printing menu and select "Change Setup..."

   Selecting the "Change..." button will allow you to change the PPD in case you selected the wrong one earlier.

   Selecting the "Change:" pull-down list will allow you to select one of the installable options. The list of options will vary depending on the PPD you selected. * Selecting the "To:" pull-down list will allow you to select a setting for the currently selected installable option.

3. Click OK when you're done setting the options.

This article can help you locate the software update mentioned here:

- Article 14724: "**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.

Published Date: Feb 20, 2012

AppleShare IP 6.0: Print Server Security

This article provides detailed information about how AppleShare IP 6.0 Print Server security works.
This article has been archived and is no longer updated by Apple.

How ASIP Print Server Provides Security

The security implementation in ASIP 6.0 is a 'casual' security measure. It simply checks authorization to print to the print queue.

The security feature of ASIP Print server WILL:

- match the user name in the print job with the list of authorized print users.
- check AppleTalk printing and LPR printing.
- use the Web & File Server Users and Groups database.

It will NOT:

- encrypt data
- check against the computer's name
- check against the computer's hardware address, AppleTalk address, or IP address
- affect behavior (i.e.: you cannot change priority or switch queues based on user name)

How it works

When you print using a Postscript driver such as the LaserWriter 8 driver, a PostScript print job is created. The beginning of each print job contains certain information about the print job. These comments are defined by Adobe as part of the Document Structuring Convention (DSC) for the PostScript language. Here is an example of the beginning of a LaserWriter 8.5.1 print job:

```
%!PS-Adobe-3.0
%%Title: (security.htm)
%%Creator: (Claris Home Page 3.0: LaserWriter 8 8.5.1)
%%CreationDate: (2:32 PM Thursday, May 28, 1998)
%%For: (Raines, Claude)
%%Pages: 1
%%DocumentFonts: Times-Bold Times-Roman
%%DocumentNeededFonts: Times-Bold Times-Roman
%%DocumentSuppliedFonts:
%%DocumentData: Clean7Bit
%%PageOrder: Special
%%Orientation: Portrait
%%DocumentMedia: Default 612 793 0 () ()
%ADO_ImageableArea: 8 11 603 782
%%EndComments
```

When security is enabled, the print server looks at the print data for the first instance of "%%For:" (There may be more than one in the print job). The LaserWriter 8 driver fills in the "%%For:" comment with the Owner Name in the File Sharing control panel. Other operating systems usually use a login name.

The Print Server reads the name after the "%%For:" and tries to match it in the authorized list of users for that print queue. If there is a match, the job may continue. If there is not a match, the print request will be refused.

Since the security checking is done by looking at the PostScript data itself, this security method works the same way for both AppleTalk and LPR printing.

Known Issues

Security doesn't work when printing from Windows NT.

Security may not work with some PostScript printer drivers, operating systems.

The Windows NT PostScript driver does not include the "%%For:" DSC comment. Since the security mechanism doesn't include a name to match with the list of authorized users, it refuses the connection. A security violation will appear in the Print Server log.

Any PostScript printer driver/operating system that does not include the "%%For:" DSC comment will have this issue. The error message may vary from OS to OS.

Identification: Print to file. Open the file in a text editor. Look for a line that starts with "%%For:".

Solution:

Turn off security or find a driver that includes the "%%For:" DSC comment.

Security follows the data, not the user.

The name in the "%%For:" comment is determined at the time the PostScript data is generated, not at the time the PostScript data is sent to the printer.

Scenario: Person #1 prints to a file and hands the file to person #2. Person #2 sends the job to a secured ASIP print queue. ASIP will check security against person #1, not against person #2, because the PostScript file has person #1's name.

Solution:

Turn off security or open the file in a text editor and change the name.

The Apple Printer Utility does not work with security activated

The Apple Printer Utility does not follow the DSC standard. The connection is refused as soon as you try to open the print queue in APU.

Solution:

The main reason to use APU on a print queue is to download a PostScript file. In LaserWriter 8.5.1, you can now drop PostScript files on the desktop printer icon.

Published Date: Feb 20, 2012

AppleShare IP 6.0: Description

This article provides a description of AppleShare IP 6.0.
This article has been archived and is no longer updated by Apple.
If you need a powerful yet simple way to communicate and exchange information, you'll find AppleShare IP 6.0 software an invaluable tool. Just install any combination of its integrated file, print, mail, and web servers as needed. Basic setup takes only minutes, and all administration is done through a single, easy-to-use interface. The services of AppleShare IP 6.0 work over TCP/IP and AppleTalk networks, and its native SMB support for Windows clients means it looks just like a Windows NT file server in the Network Neighborhood on Windows.

Because it offers SMB and FTP as well as traditional AppleShare file sharing, AppleShare IP 6.0 lets authorized users access information via an AppleTalk network, your intranet, or the Internet. Version 6.0 is optimized for exceptional performance across today's high-speed networks. The included AppleShare Client software for Mac OS-based computers automatically uses the faster TCP/IP protocol when both it and AppleTalk are available. For FTP clients, files are encoded on the fly, eliminating the need to store separate files for AFP and FTP users.

Printers and workstations can be on any combination of AppleTalk and TCP/IP networks. AppleShare IP 6.0 software can reduce time wasted waiting for printouts by automatically sending each print job to the next available printer.

Electronic mail has become an indispensable service for any organization. AppleShare IP 6.0 supports the SMTP, POP, and IMAP protocols, allowing you to select the best client- or host-based solution for your users. Intelligent mail handling saves bandwidth and disk space when the same message is going to multiple recipients. Flexible and powerful administrative features ensure that your mail system continues to run smoothly.

AppleShare IP 6.0 software even includes a built-in web server so your organization can set up its own intranet and Internet web sites to share information. Built-in support for plug-ins and CGIs lets you add your own powerful features to the server, while storage of all web files in one protected folder protects other files on the server from access by web users.

For maximum ease of use, all AppleShare services share the same administrative console. You can set up basic services in minutes and assign privileges for any service through a consolidated "Users and Groups" list. You can even use the same list for multiple functions within one server, such as defining both access privileges and group e-mail addresses.

Key Features

Powerful file transfer capabilities

- Transfer files faster than ever
- Access files over an AppleTalk network, your intranet, or the Internet
- Provide native (SMB) file services to Windows clients
- Store a single copy of each file for both FTP and AFP users
- Use aliases to reduce disk space requirements

Efficient print services

- Support users and printers on any combination of TCP/IP and AppleTalk networks
- Control user access on a per-queue basis
- Enjoy automatic load balancing across as many as 10 printers per queue
- Use server-side PPDs so that client systems don't have to have a PPD for every different printer

Versatile e-mail support

- Offer any combination of IMAP, SMTP, and POP
- Permit users to have both IMAP and POP mail-boxes for greater flexibility in retrieving their mail
- Save disk space and bandwidth use with single-copy message storage for multiple recipients
- Enable sophisticated searches on mail content

Ready-to-use web server

- Provide high-speed throughput with up to 25 million connections per day
- Let your users share information efficiently and creatively by publishing their own web pages
- Add functionality through plug-ins and CGIs
- Protect other files on the server by storing all web files in one secure folder

Integrated administration

- Set up, manage, and reconfigure all AppleShare IP 6.0 services through a single interface
- Leverage the same "Users and Groups" list to define multiple services or multiple functions within a single service
- Add custom user authentication modules for more control over server access

Ordering Information

All packages include:

- AppleShare IP 6.0 software CD
- Mac OS 8.1 software CD
- AppleShare IP 6.0 Getting Started manual

AppleShare IP 6.0 10-Client Version
Order No. M6636Z/A

AppleShare IP 6.0 50-Client Version
Order No. M6637Z/A

AppleShare IP 6.0 Unlimited-Client Version
Order No. M6631Z/A

AppleShare IP 6.0 11- to 50-Client Upgrade
Order No. M6638Z/A

AppleShare IP 6.0 51- to 250-Client Upgrade
Order No. M6639Z/A

AppleShare IP 6.0 4.x/5.x to 6.0 Upgrade
Order No. M6632Z/A
Published Date: Feb 20, 2012

AppleShare IP 6: Technical Specifications

This article provides the technical specifications for AppleShare IP 6.0.
This article has been archived and is no longer updated by Apple.

File server

- File-sharing protocols supported:
  - Apple Filing Protocol (AFP) over TCP/IP and AppleTalk
  - Server Message Block (SMB) over TCP/IP
  - File Transfer Protocol (FTP) over TCP/IP
- Files automatically encoded by AppleShare IP when requested by an FTP client
- Dynamic file and directory caches for expedited delivery of frequently requested files
- Support for anonymous FTP sessions (users get the same privileges as AppleShare "Guest" accounts)
- Maximum number of connected users (depending on your license agreement); 10, 50, or 500 over TCP/IP; 10, 50, 250 over AppleTalk. **Note:** If you expect your network usage to exceed 250 connected users, Apple recommends a minimum of 128 MB of RAM and Macintosh Server G3 or Power Macintosh G3 as the server.
- Maximum unique open files: Approximately 300
- Maximum number of all open files: 3,000 forks (data and resource)
- Maximum number of physical volumes: 50
- Maximum number of share points: 100
- Maximum number of users and groups in the Users and Groups data file: 10,000. **Note:** If you expect to have more than 5000 users, Apple recommends a Macintosh Server G3 or Power Macintosh G3 as the server.
- Maximum group memberships per user: 42
- Maximum number of simultaneous launches of network applications: Up to 250 (depending on application licensing and the number of connected users).
- Maximum volume size: 2 terabytes
- Maximum number of multihomed ports (AppleTalk only): 4
- AppleShare file sharing TCP port number: 548
- FTP port numbers: 20 and 21
- Windows file sharing TCP port number: 139
- Windows network neighborhood UDP port number: 138
- Windows name service UDP port number: 137

Print server

- Supported protocols: PAP (AppleTalk) and LPR/LPD (TCP/IP)
- Supported printers: Apple LaserWriter printers, third-party PostScript printers that support the LaserWriter 8.4 (or later) printer driver, and LPR/LPD-compatible printers
- Font storage on server to minimize downloads from client system
- Maximum number of attached printers: 30
- Maximum number of queues: 10
- Maximum number of printers per queue: 10
- Maximum number of concurrent connections: 32
- Maximum total number of jobs: 500
- Maximum log file size: 64k

Mail server

- Mail protocols supported:
  - Internet Mail Access Protocol (IMAP)
  - Simple Mail Transfer Protocol (SMTP)
  - Post Office Protocol (POP)
  - Authenticated Post Office Protocol (APOP)
  - (PASS), port 106
  - Finger, port 79
  - Notify Mail, port 79
- Shared folder support conforms to Internet standard RFC 2086
- Mail storage in a single database instead of as separate mail files
- Maximum message size: 512MB
- Maximum recipients per message (before expansion of group names): 512
- Supported character sets: 1-byte and 2-byte (through 8-bit transparency)
- Maximum number of transfers per POP connection: 2,048
- Maximum number of incoming connections: 1,024

- Maximum number of POP and IMAP connections: 2,048
- Maximum number of IMAP folders per user: 1,000
- Maximum number of messages per IMAP folder: 1,000
- Maximum number of outgoing SMTP connections: 64
- Maximum folder name size: 128 bytes
- Maximum IMAP folder path depth: 32 folders or 256 characters
- Maximum number of unique messages stored on the mail server: Approximately 1,000,000
- Maximum size of the AppleShare IP Mail 6 Data file: 2GB
- Maximum size of the mail database folder: 4GB

Note: You may need to increase the amount of memory allocated to the Mail Server program (in the Extensions folder in the System Folder on your server's startup disk) in order to achieve these maximum settings.

Web server

- Maximum number of connected users: 150 **Note:** A computer connected through the AppleShare IP Remote Admin program is included as one connection.
- Idle connection timeout: 60 seconds
- CGI timeout: 60 seconds
- Keep alive: supported
- Web protocol supported: Hypertext Transfer Protocol (HTTP) 1.1
- Common Gateway Interface (CGI) support for extending the capabilities of the web server
    - Access logs
    - Directory browsing
    - Customizable error pages
    - Support for keepalives
    - WebSTAR API support: Version 1.2
- Web service port number: 80
- Remote Admin port number: 311

Minimum System Requirements

- Power Macintosh computer with a PowerPC G3, 604e, 604, or 601 processor; Macintosh Server G3; Apple Workgroup Server with a PowerPC 604e, 604, or 601 processor; or Power Macintosh 6500 computer
- Mac OS 8.1 or later.
- Open Transport 1.3 or later. **Note:** TCP/IP Filtering requires Mac OS 8.5 and Open Transport 2.0 or later.
- OpenDoc 1.2.1 or later software (included)
- 48MB of RAM with virtual memory turned on; 64MB of RAM without virtual memory
- CD-ROM drive
- AppleTalk or TCP/IP network connection

Published Date: Feb 20, 2012

Hard Disk Driver: Identifying It And Ensuring Compatibility

This article explains what a hard disk driver is and how to identify it by name and version number--information essential to establishing its compatibility with the Macintosh operating system.
This article has been archived and is no longer updated by Apple.
The identity and version of a hard disk's driver can usually be obtained from the Get Info window:

1. Select the hard disk icon on the desktop.
2. Choose Get Info from the File menu.

Figure 1 Macintosh HD Info window

The "Where:" section shows first the drive's name, then information (highlighted in the example shown) that will vary with the program used to install the driver, such as:

- The manufacturer of the driver.
- The version number of the driver--often the same as the version of the disk utility that installed it.
- The SCSI ID, SCSI bus number, or ATA bus number, depending upon the drive type and where it is connected.
- Other technical information, such as whether the driver is asynchronous or has blind writes enabled.

Distinguishing an Apple driver from a third party driver

Disk drives that have been initialized with Apple's Drive Setup will show something like the following for a SCSI drive and an IDE or ATA drive, respectively:

Where: Macintosh HD, SCSI ID 0 (v8.0.9)
Where: Macintosh HD, Internal (ATA 0, v3.1.0).

When a third party driver is installed, the content or arrangement of this information will frequently differ, and a manufacturer's name is the most common indicator. The following list identifies some of the most common driver manufacturers and the utilities they have made to install them. Thus, in the example pictured, "CharisMac" confirms that a driver created by CharisMac Engineering, Inc. is present, and Anubis version 2.5.6 is the utility that installed it.

- Hard Disk Toolkit, by FWB Software
- Silverlining, by La Cie, Ltd.
- FormatterFive, by Software Architects, Inc.
- Anubis, or APS PowerTools, by CharisMac Engineering, Inc.
- DiskWorks, and Micronet Utility, by Micronet Technology, Inc.
- Drive7, and Formation, by ProSoft Engineering, Inc.

Once the driver's name and version have been determined, compatibility with the Mac OS version in use can be confirmed with the driver manufacturer. An incompatible hard disk driver can cause software conflicts, formatting structure corruption, and data loss.

For more specifics on the driver version numbers that Drive Setup installs, please see the following article:

Article 22167: "**Apple Hard Disk Driver Matrix**"

About Hard Disk Drivers and Why They Are Important

Devices communicate with applications and with the operating system through special programs called device drivers. A device driver typically controls a specific hardware device.

The device driver for a hard disk controls the process of reading from and writing to the disk. It resides outside of the Macintosh volume, which is the accessible part of the physical disk represented by the hard disk icon. As such, it is not a visible resource that can be created or modified in the usual way, requiring instead the use of a specialized disk utility like Apple's Drive Setup.

When troubleshooting for the causes of software conflicts and data corruption, the influence of the hard disk driver is often overlooked. When a later version of the Mac OS is installed, a later version of the hard disk driver must often be installed as well. The system installers for Mac OS 8

and later check for the presence of an Apple hard disk driver and update it automatically, but if a third party hard disk driver is detected, such as on a third party hard drive or a drive that was formatted with a third party disk utility, the installer will only warn that the driver may need to be updated for compatibility. There is nothing wrong with having a third party hard disk driver installed, so long as it is compatible with the Mac OS.

Finally, note that though Drive setup can often, via its initialization function, install its driver onto a third party drive, the Apple driver's compatibility in that configuration is untested and unsupported. Conversely, it is acceptable to use Drive Setup in that fashion to replace the third party driver on an Apple drive.

Published Date: Feb 20, 2012

Apple LaserWriter Drivers: Windows 98 Compatibility

Is the Apple LaserWriter driver software for Windows 95 v.4.2.2 compatible with Windows 98?
This article has been archived and is no longer updated by Apple.
Apple has not tested any version of the Apple LaserWriter Driver for Windows 95 with Windows 98. However, both Microsoft and Adobe Systems have PostScript drivers that have been tested under Windows 98. Apple recommends you use the Microsoft or Adobe driver with Windows 98.

Adobe

Adobe's PostScript Printer Driver, AdobePS, provides full support for Windows 98 as of version 4.2.4. This driver is available at their web site. During installation, you may need to know the location of the PPD file for your printer. Most Apple LaserWriter printers will show up under "Apple" in the list of printers drivers that are included with Windows 98. The major exception is the Apple LaserWriter 8500. Apple LaserWriter 8500 customers can find the PPD file for this printer in the following directory of the CD-ROM disc that shipped with their printer:

```
\\WIN_OS\\WIN_95\\APPLE\\DISK3
```

Microsoft

Microsoft includes a PostScript driver with Windows 98 that will allow you to print to most Apple LaserWriter printers. Since this is not an Apple printer driver, we will be unable to assist you with any issues you may encounter with this PostScript driver.

Most Apple LaserWriter printers will show up under "Apple" in the list of printers drivers that are included with Windows 98. The major exception is the Apple LaserWriter 8500. Apple LaserWriter 8500 customers should follow these steps to use the Microsoft-supplied PostScript driver with this printer:

1. Open the Printers folder.
2. Run "Add printer"
3. Follows the instructions on the first couple of screens.
4. You will get a list of printers from which to choose.
5. Click on "Have Disk..."
6. Insert the Apple LaserWriter 8500 CD-ROM disc that came with your printer
7. At the prompt, enter `D:\\WIN_OS\\WIN_95\\APPLE\\DISK3`. If your CD-ROM drive is not drive D:, substitute the drive letter with the drive letter of your CD-ROM drive.
8. Click OK.
9. Select Apple LaserWriter 8500 from the list that appears.
10. Click on Next.
11. Follow the rest of the directions on the screen.

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following Knowledge Base article can help you search for a particular vendor's address and phone number:

17159: "Locating Vendor Information"
Published Date: Feb 20, 2012

Mac OS X Server: Setting File And Folder Permission

This article describes how to prevent others from changing the contents of files and folders.
This article has been archived and is no longer updated by Apple.
To prevent others from changing the contents of files or folders:

1. In the Workspace Manager, select the file or folder.
2. Choose Inspector from the Tools menu.
3. Choose Access from the Inspector pop-up menu.
4. Use the Access table to change the Write permission.

If the Write permission is not selected, others will not be able to change the contents of the file or folder selected.
Published Date: Feb 17, 2012

AppleShare IP 6.0: Share Point Names Shortened For SMB

If I create a share point with a name longer than 12 characters, the name is converted to a DOS-style 8.3 file name when I view it from a Windows SMB client. Why is this?

This article has been archived and is no longer updated by Apple.

Some Windows clients (Windows 95 for example) do not support share names longer than 12 characters. To ensure compatibility, AppleShare IP 6.0 will automatically convert long share names into the 8.3 (short) naming convention.

Example: If the actual share is named "IS Applications", it will show up on Windows SMB clients as "ISAppl~1".

Published Date: Feb 20, 2012

Mac OS 8, 9: Mac OS Extended Format - Volume and File Limits

What are the limits of file and volume sizes in Mac OS Extended Format (also known as HFS Plus)? What is the maximum number of files on a volume?
This article has been archived and is no longer updated by Apple.
The following table provides detailed information on Mac OS Extended Format volume and file limits for Mac OS 8 and 9.

Mac OS Extended Format: Volume and File Limits	
Maximum number of volumes	21 (2)
Maximum volume size	2 terabytes
Maximum file size	2 terabytes (3)
Maximum data fork size	2 terabytes (4)
Maximum resource fork size	16 megabytes (5)
Maximum number of files	more than 2 billion (1)
Maximum number of files/folders in a folder	32,767

Notes:

1) The actual number of files that can be stored on an HFS Plus volume depends on the size of the volume and the size files. For example, a 4 GB HFS Plus volume with the default block size of 4K, will have one million available blocks. Thus the volume could hold up to a million small files or fewer larger ones. A larger volume with the same default block size could hold proportionately more files.

2) At system boot, the event queue for the Finder can accept 20 volumes plus the startup volume. Once the computer has completed the boot process, you may use a disk utility to mount as many additional volumes as there are available file control blocks. This number is variable depending upon how many applications are running, files open, or other operating system processes which require file control blocks.

3) Under Mac OS 9. Mac OS 8 only supports file sizes of up to 2 GB in size.

4) Mac OS 9 with Mac OS Extended savvy applications can access a fork this size. Mac OS 8.x and Mac OS 9 with applications using the standard HFS APIs can access forks up to 2 GB in size. It not possible to access any data in a fork larger than 2 GB without using the Mac OS Extended APIs.

5) This limit is imposed by the Resource Manager.

6) For Mac OS X 10.2 (or later) and Mac OS X 10.2 Server (or later), the maximum volume size is 8 TB.

For definitions of some of these terms, and for information about Mac OS Standard Format (HFS), please see the following Knowledge Base article: Article 8647: "**Macintosh: File System Specifications & Terms**".

Related documents

25557: "**Mac OS X: Mac OS Extended Format - Volume and File Limits**"
30344: "**Mac OS: About Mac OS Extended Format**"
106843: "**Mac OS X: About Long File Names**"

Published Date: Feb 20, 2012

You see "Open Firmware" text and a prompt on your PowerBook‘s screen

When you turn on your PowerBook you see a white screen with this text:

```
Open Firmware, X.XX
To continue booting the Mac OS type:
BYE<return>
To continue booting from the default boot device type:
BOOT<return>
ok
0)
```

This article has been archived and is no longer updated by Apple.

- What is this screen?
- How did I get to this screen?
- How can I get back to the regular Mac OS?
- Which PowerBooks use this?

This screen is the Open Firmware screen. Beginning with Power Macintosh computers equipped with PCI slots, Apple has used a firmware operating system called Open Firmware for controlling hardware.

Open Firmware is a cross-platform firmware standard for controlling hardware and is used by all PCI-based Mac OS computers. Open Firmware is used mainly by Apple hardware developers and rarely is there a need to start up into Open Firmware.

While it is difficult to start up into Open Firmware, it does happen if you hold down the Option-Command-O-F keys when the computer starts up after having been shut down. The PowerBook should never start up into Open Firmware on its own.

If you are at the Open Firmware screen and want to go back into Mac OS, type "BYE" without the quotes at the command prompt, then press the Return key. This exits Open Firmware and continues starting up into Mac OS.

Only PCI-based PowerBooks will start up into Open Firmware. These started with the PowerBook 2400, 3400, and G3/G3 series computers. Previous PowerBook models will not start up into Open Firmware.
Published Date: Feb 20, 2012

PowerBook G3 Series: Battery FAQ

This article contains frequently asked questions (FAQ) regarding PowerBook G3 Series batteries, with answers to those questions. Note that they pertain to the PowerBook G3 Series models that were released in September, 1998.

See also the following Frequently Asked Questions articles pertaining to the September 1998 models of the PowerBook G3 Series computer:

Article 24608: "**PowerBook G3 Series: General FAQ**"
Article 24611: "**PowerBook G3 Series: Features, Configurations, Performance FAQ**"
Article 24612: "**PowerBook G3 Series: Memory FAQ**"
Article 24613: "**PowerBook G3 Series: Design Elements FAQ**"
Article 24614: "**PowerBook G3 Series: Video, Graphics, And Sound FAQ**"
Article 24615: "**PowerBook G3 Series: DVD, CD-ROM, and Hard Drive FAQ**"
Article 24616: "**PowerBook G3 Series: Communications FAQ**"

This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. How long does it take to charge the PowerBook G3 Series batteries?
2. How long do you have to swap in a new battery if the PowerBook G3 Series computer is in sleep mode?
3. How long is the battery life of the PowerBook G3 Series computer?
4. What is the watt-hour rating of the battery in a PowerBook G3 Series computer?
5. Who manufactures the battery for the PowerBook G3 Series computer?
6. Does the battery charge while the PowerBook G3 Series computer is in sleep mode? How long does it take to charge?
7. What is the function of the lights on the side of the battery on a PowerBook G3 Series computer?
8. Can I charge the battery or power the PowerBook G3 Series computer with a PowerBook 3400 adapter?
9. Can I use the PowerBook Duo adapter with a PowerBook G3 Series computer? The connectors are the same.
10. Are the PowerBook G3 Series computer's batteries hot-swappable?

Question 1: How long does it take to charge the PowerBook G3 Series batteries?

Answer: If the system is in shutdown or sleep mode, it takes approximately 2 hours to recharge one battery inside the system. Two batteries charge in about 4 hours. The system charges only one battery at a time, just as it discharges one battery before switching to the other one.

Question 2: How long do you have to swap in a new battery if the PowerBook G3 Series computer is in sleep mode?

Answer: You have approximately 2 minutes to swap a battery in sleep or you may lose data.

Question 3: How long is the battery life of the PowerBook G3 Series computer?

Answer: Battery life with one battery installed, power cycling enabled, and some basic power conservation functions is up to 3.5 hours. With two batteries, you will get up to 7 hours of battery life.

Question 4: What is the watt-hour rating of the battery in a PowerBook G3 Series computer?

Answer: The lithium-ion battery is rated at 49 watt-hours.

Question 5: Who manufactures the battery for the PowerBook G3 Series computer?

Answer: We do not reveal the names of our commodities vendors. However, we work with the key manufacturers in the lithium-ion battery market.

Question 6: Does the battery charge while the PowerBook G3 Series computer is in sleep mode? How long does it take to charge?

Answer: The battery does receive a charge while the system is in sleep mode. The following table shows the charging time for the battery.

Machine off - Full Charge, 80% level one battery in around 2 hrs
Machine in sleep - Full Charge, 80% level one battery in around 2 hrs
Machine on (no PC Card, two batteries) - 80% level one battery in around 3 hrs
Machine on (no PC Card, one battery) - 80% level one battery in around 3.5 hrs
Machine on (has PC Card, one battery) - 80% level one battery in around 4.5 hrs

Question 7: What is the function of the lights on the side of the battery on a PowerBook G3 Series computer?

Answer: The four lights on the outside edge of the battery are the battery charge indicators. By pressing the button next to the lights, you will see how much charge is left in the battery. The battery indicates how much it is charged in one-quarter increments, from 25% to 100%. These lights

also illuminate when the system is plugged into AC power and is charging, to let you know how much the battery has charged over a period of time.

Question 8: Can I charge the battery or power the PowerBook G3 Series computer with a PowerBook 3400 adapter?

Answer: You can charge the battery or run the system using AC power with a PowerBook 3400 adapter. However, charging times will vary, especially when you charge while the system is on.

Question 9: Can I use the PowerBook Duo adapter with a PowerBook G3 Series computer? The connectors are the same.

Answer: You can use the PowerBook Duo adapter to charge the system, but it is not as powerful as the PowerBook G3 Series adapter and will therefore take much longer to charge the battery. The Duo adapter will only charge the battery when the PowerBook is sleeping or off. We do not recommend using this adapter. It is always best to use the adapter that came with your system.

Question 10: Are the PowerBook G3 Series computer's batteries hot-swappable?

Answer: If the system is connected to AC power or operating with two batteries, then the batteries can be hot swapped. When using a single battery, the battery should be swapped only when the system is in sleep mode or shut down. Otherwise, the system will crash because you have removed the primary power source.

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, read article 24604: "**PowerBook G3, G3 Series: Identifying Different Versions**"

Published Date: Feb 20, 2012

PowerBook G3 Series: Features, Configurations, Performance FAQ

This article contains frequently asked questions (FAQ) regarding PowerBook G3 Series features, configurations, and performance, with answers to those questions. Note that they pertain to the PowerBook G3 Series models that were released in September, 1998.

See also the following Frequently Asked Questions articles pertaining to the September 1998 models of the PowerBook G3 Series computer:

Article 24608: "**PowerBook G3 Series: General FAQ**"
Article 24610: "**PowerBook G3 Series: Battery FAQ**"
Article 24612: "**PowerBook G3 Series: Memory FAQ**"
Article 24613: "**PowerBook G3 Series: Design Elements FAQ**"
Article 24614: "**PowerBook G3 Series: Video, Graphics, And Sound FAQ**"
Article 24615: "**PowerBook G3 Series: DVD, CD-ROM, and Hard Drive FAQ**"
Article 24616: "**PowerBook G3 Series: Communications FAQ**"

This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. Why don't the 800x600 and 640x480 pixel resolutions look as sharp as the 1024x768 native resolution on my PowerBook G3?
2. Can I add the resolution scaling capability to the PowerBook I already own?

Question 1: Why don't the 800x600 and 640x480 pixel resolutions look as sharp as the 1024x768 native resolution on my PowerBook G3?

Answer: Traditionally notebooks have been limited to one resolution because LCD displays are digital in design and have a fixed number of pixels-the native resolution (e.g. 1024x768). You can now increase the size of, or zoom, the images on your PowerBook computer's built-in 14-inch display by switching from the native 1024x768 resolution to a scaled resolution--either 800x600 or 640x480. The new larger image is remapped into the fixed pixel space of LCD display. This remapped image is optimized by interpolation and anti-aliasing technology. Because they are being remapped, the scaled resolutions will not appear as sharp as the native resolution.

Question 2: Can I add the resolution scaling capability to the PowerBook I already own?

Answer: No. The resolution scaling feature is enabled by a combination of software and hardware provided with the new PowerBook G3 Series.

Published Date: Feb 20, 2012

PowerBook G3 Series: Memory FAQ

This article contains frequently asked questions (FAQ) regarding PowerBook G3 Series memory, with answers to those questions. Note that they pertain to the PowerBook G3 Series models that were released in September, 1998.

See also the following Frequently Asked Questions articles pertaining to the September 1998 models of the PowerBook G3 Series computer:

Article 24608: "**PowerBook G3 Series: General FAQ**"
Article 24610: "**PowerBook G3 Series: Battery FAQ**"
Article 24611: "**PowerBook G3 Series: Features, Configurations, Performance FAQ**"
Article 24613: "**PowerBook G3 Series: Design Elements FAQ**"
Article 24614: "**PowerBook G3 Series: Video, Graphics, And Sound FAQ**"
Article 24615: "**PowerBook G3 Series: DVD, CD-ROM, and Hard Drive FAQ**"
Article 24616: "**PowerBook G3 Series: Communications FAQ**"

This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. Is it possible to add more memory to the PowerBook G3 Series computer?
2. What is the maximum amount of memory that can be installed on a PowerBook G3 Series computer?
3. Are special memory modules or standard SO-DIMMs required for a PowerBook G3 Series computer?
4. Can memory from the original PowerBook G3 systems that were introduced in November 1997, be used in the PowerBook G3 Series computer?

Question 1: Is it possible to add more memory to the PowerBook G3 Series computer?

Answer: Yes. There are two slots for memory on the daughter card that also houses the processor, cache, and ROM. The bottom slot is usually filled by the factory, which installs the base memory of either 32MB or 64MB. The top slot, which is accessible to the user, is open if the system comes with 64MB of memory or less; the user can install more memory in this slot.

Question 2: What is the maximum amount of memory that can be installed on a PowerBook G3 Series computer?

Answer: The system supports up to192MB of RAM using standard 64 megabit-based SO-DIMMs.

Question 3: Are special memory modules or standard SO-DIMMs required for a PowerBook G3 Series computer?

Answer: Standard SO-DIMMs can be used. We recommend choosing memory that has been tested and approved for use with the new PowerBook G3 Series. Check with the memory manufacture to verify this.

Question 4: Can memory from the original PowerBook G3 systems that were introduced in November 1997, be used in the PowerBook G3 Series computer?

Answer: No, the memory types and sizes are incompatible. But memory from the PowerBook G3 Series that was introduced in May 1998 continues to be compatible in the new configurations.

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, read article 24604: "**PowerBook G3, G3 Series: Identifying Different Versions**"

Published Date: Feb 20, 2012

PowerBook G3 Series: Design Elements FAQ, Part 1

This article contains PowerBook G3 Series frequently asked questions (FAQ) regarding its design elements, with answers to those questions.

For Part 2 of this article, see article 88020: "**PowerBook G3 Series: Design Elements FAQ, Part 1**"
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. Why doesn't the PowerBook G3 have a reset button?
2. Why doesn't the system have a locking mechanism near the expansion or battery bay?
3. Why aren't both expansion bays the same size?
4. Is the hard disk drive removable?
5. Can you run the system with the lid closed?

These questions and answers pertain to the PowerBook G3 Series models released in September, 1998.

Question 1: Why doesn't the PowerBook G3 have a reset button?

Answer: The computer has the equivalent of a reset button using a key sequence. To do a hardware reset, press the Shift-Function-Control-Power keys simultaneously.

Question 2: Why doesn't the computer have a locking mechanism near the expansion or battery bay?

Answer: The Kensington cable lock slot on the PowerBook G3 Series is located at the back of the computer. Because there are two expansion bays, the lock slot was placed on the back, since the highest priority was to keep the base computer secure.

Question 3: Why aren't both expansion bays the same size?

Answer: The 5.25-inch expansion bay on the right side of the computer can accommodate either 5.25-inch or 3.5-inch devices. There is a small door that folds back when you insert a 5.25-inch module, such as a CD-ROM drive. The left bay can accommodate only 3.5-inch modules, such as a battery or a floppy disk drive.

Question 4: Is the hard disk drive removable?

Answer: The hard disk drive can be removed for security or servicing. You simply loosen the one screw that holds down the casing around the hard disk drive. The screw stays with the hard disk drive casing to prevent loss.

Question 5: Can the computer run with the lid closed?

Answer: You should not run the computer with the top casing or lid down, and this feature is no longer available. One of the main ways the computer cools is by allowing hot air to escape through the keyboard, and closing the lid impedes the cooling process.

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, read article 24604: "**PowerBook G3, G3 Series: Identifying Different Versions**"

For additional information read the following Frequently Asked Questions articles pertaining to the September 1998 models of the PowerBook G3 Series computer:

Related Articles

24608 PowerBook G3 Series: General FAQ
24610 PowerBook G3 Series: Battery FAQ
24611 PowerBook G3 Series: Features, Configurations, Performance FAQ
24612 PowerBook G3 Series: Memory FAQ
24614 PowerBook G3 Series: Video, Graphics, and Sound FAQ
24615 PowerBook G3 Series: DVD, CD-ROM, and Hard Drive FAQ
24616 PowerBook G3 Series: Communications FAQ

Published Date: Feb 20, 2012

PowerBook G3 Series: Video, Graphics, And Sound FAQ, Part 1

This article contains frequently asked questions (FAQ) regarding PowerBook G3 Series video, graphics, and sound, with answers to those questions. Note that they pertain to the PowerBook G3 Series models that were released in September, 1998.

For Part 2 of this article, see Article 88021: **"PowerBook G3 Series: Video, Graphics, And Sound FAQ, Part 2"**

See also the following Frequently Asked Questions articles pertaining to the September 1998 models of the PowerBook G3 Series computer:

Article 24608: "**PowerBook G3 Series: General FAQ**"
Article 24610: "**PowerBook G3 Series: Battery FAQ**"
Article 24611: "**PowerBook G3 Series: Features, Configurations, Performance FAQ**"
Article 24612: "**PowerBook G3 Series: Memory FAQ**"
Article 24613: "**PowerBook G3 Series: Design Elements FAQ**"
Article 24615: "**PowerBook G3 Series: DVD, CD-ROM, and Hard Drive FAQ**"
Article 24616: "**PowerBook G3 Series: Communications FAQ**"

This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. How does the S-video port work on a PowerBook G3 Series computer?
2. Who makes the video controller on a PowerBook G3 Series computer?
3. Is the SGRAM (or video RAM) upgradeable on a PowerBook G3 Series computer?
4. What resolution can you use on screen on a PowerBook G3 Series computer?
5. What resolution can you use on an external monitor on a PowerBook G3 Series computer?
6. Can you use a projection device with a PowerBook G3 Series computer?
7. Can you use multiple-monitor mode with a PowerBook G3 Series computer?

Question 1: How does the S-video port work on a PowerBook G3 Series computer?

Answer: Simply plug the PowerBook into an S-video cable that attaches to your TV. If you don't have direct S-video support on your TV, you can use the S-video-to-composite cable that came with the PowerBook. Once both systems are on, you can choose the NTSC or PAL resolutions from the resolution panel in the control strip.

The 12.1-inch TFT display configuration now has an S-video port, but the 12.1-inch STN display configuration does not. Also, for optimum video quality on an 800 x 600 resolution display on a system with 2 MB of VRAM, the bit depth should be set to thousands of colors.

Question 2: Who makes the video controller on a PowerBook G3 Series computer?

Answer: The new 14-inch PowerBook G3 uses the ATI RAGE LT Pro video controller for 2D/3D graphics acceleration. This is the mobile version of the same controller used in our desktop line.

Question 3: Is the SGRAM (or video RAM) upgradeable on a PowerBook G3 Series computer?

Answer: No, the SGRAM is soldered onto the logic board, not socketed. The 12.1-inch STN configurations have 2MB of SGRAM, and the 14.1-inch TFT systems have 4MB of SGRAM.

Question 4: What resolution can you use on screen with a PowerBook G3 Series computer?

Answer: The table below lists the possibilities.

Configuration	Display		
	12.1-inch TFT (active matrix) Display	**12.1-inch STN SVGA Display**	**14.1-inch TFT XGA Display**
233/no cache, 250, or 292	Will support scaling 640 x 480 but the standard is still 800 x 600 so you can only simulscan at 800 x 600.	You can use 800 x 600 pixel resolution up to thousands of colors.	Displays at 1,024 x 768 pixel resolution up to a palette of millions of colors.

233 w/cache, 266, or 300	Will support scaling 640 x 480 but the standard is still 800 x 600 so you can only simulscan at 800 x 600.	Options for scaled resolutions of the internal display are 640 x 480 and 800 x 600. Although it can support these resolutions on the internal display, the simulscan option is available only at the standard resolution of 800 x 600.	Options for scaled resolutions of the internal display are 640 x 480 and 800 x 600. Although it can support these resolutions on the internal display, the simulscan option is available only at the standard resolution of 1024 x 768.

Question 5: What resolution can you use on an external monitor with a PowerBook G3 Series computer?

Answer: Depending on the monitor and the amount of SGRAM (video memory), you can use all the way up to 1,280- x 1,024-pixel resolution in thousands of colors or 1152 x 870 in millions o f colors on a 20-inch monitor with 4MB of SGRAM. For the image to appear on both the internal display and the external display at the same time, the PowerBook needs to be set at its simulscan resolution--1,024 x 768 pixels for 14-inch PowerBook G3 systems, and 800 x 600 pixels for 12-inch STN PowerBook G3 systems.

Question 6: Can you use a projection device with a PowerBook G3 Series computer?

Answer: Yes, you can attach a projection device to the new PowerBook G3 computers through the video output port on the back plane.

Question 7: Can you use multiple-monitor mode with a PowerBook G3 Series computer?

Answer: You can use multiple-monitor or extended-desktop mode with a Road Rocket CardBus card from IXMICRO. This card can be connected to an external monitor or projection device.

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, read article 24604: "**PowerBook G3, G3 Series: Identifying Different Versions**"

Published Date: Feb 20, 2012

PowerBook G3 Series: Communications FAQ

This article contains frequently asked questions (FAQ) regarding PowerBook G3 Series communications, with answers to those questions. Note that they pertain to the PowerBook G3 Series models that were released in September, 1998.

See also the following Frequently Asked Questions articles pertaining to the September 1998 models of the PowerBook G3 Series computer:

Article 24608: "**PowerBook G3 Series: General FAQ**"
Article 24610: "**PowerBook G3 Series: Battery FAQ**"
Article 24611: "**PowerBook G3 Series: Features, Configurations, Performance FAQ**"
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Article 24615: "**PowerBook G3 Series: DVD, CD-ROM, and Hard Drive FAQ**"

This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. Is the PowerBook G3 Series computer's Ethernet on the main logic board or on a card, as in the PowerBook 3400?
2. Who makes the modem for the PowerBook G3 Series computer?
3. Can the modem for the PowerBook G3 Series computer be upgraded to the new v.90 standard?
4. How fast is the modem on the PowerBook G3 Series computer?
5. Does any fax software come with the PowerBook G3 Series computer?
6. Does the PowerBook G3 Series computer's modem have protection against PBX systems?
7. Can you use a cellular phone with the PowerBook G3 Series computer's modem?
8. Does the PowerBook G3 Series computer's modem work internationally?
9. Does the PowerBook G3 Series computer have infrared capability?

Question 1: Is the PowerBook G3 Series computer's Ethernet on the main logic board or on a card, as in the PowerBook 3400?

Answer: Yes, 10BASE-T Ethernet capabilities come from a chip on the main logic board. The K56flex/v.90 modem is on a separate card.

Question 2: Who makes the modem for the PowerBook G3 Series computer?

Answer: We do not reveal the names of our commodities vendors.

Question 3: Can the modem for the PowerBook G3 Series computer be upgraded to the new v.90 standard?

Answer: The modem comes with v.90 capability already installed.

Question 4: How fast is the modem on the PowerBook G3 Series computer?

Answer: The modem is a K56flex modem and will connect to equivalent devices at rates up to 56 Kbps. (Data speeds up to 56 Kbps, fax speeds up to 14.4 Kbps. Acutal download speeds vary with line conditions and your Internet service provider's modem capabilities. FCC regulations limit ISP transmission speeds to 53Kbps in the U.S.)

Question 5: Does any fax software come with the PowerBook G3 Series computer?

Answer: We bundle FAXstf software with all of our systems. This software allows you to use your PowerBook to send and receive faxes.

Question 6: Does the PowerBook G3 Series computer's modem have protection against PBX systems?

Answer: Yes, it does have protection. However, we advise customers to ask about the connection before plugging the modem into an unfamiliar socket.

Question 7: Can you use a cellular phone with the PowerBook G3 Series computer's modem?

Answer: No, the modem is not capable of attaching to cellular phones. However, if customers need a modem with cellular attachment capability, they can purchase a PC Card modem to use in the CardBus/PC Card slots on the PowerBook G3 Series.

Question 8: Does the PowerBook G3 Series computer's modem work internationally?

Answer: Due to certification requirements in different countries, there are unique internal modems for various countries. Each modem is only certified for use in that specific country. See your manual under Communications Regulation Information, or the certifications listed on the computer to see if your PowerBook is certified for use in the country you are travelling to. If you need a modem that has been certified for every country, you can purchase a PC Card modem to use in the CardBus/PC Card slot on the PowerBook G3 and PowerBook G3 Series computers.

Question 9: Does the PowerBook G3 Series computer have infrared capability?

Answer: Yes, it has 4-Mbps IrDA capabilities.

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, read article 24604: "**PowerBook G3, G3 Series: Identifying Different Versions**"

Published Date: Feb 20, 2012

SNMP: Load OT at System Startup time

I've installed the SNMP (Simple Network Management Protocol) agent that ships with Mac OS 8.5, but when I try to access the workstation from my console, I get the message "unreachable via SNMP". I've verified that TCP/IP is working on my computer. What else could be wrong? Is this a known issue with OT/SNMP?
This article has been archived and is no longer updated by Apple.
Background: SNMP is a network management protocol that allows a console to collect and analyze data from agents on the network. Mac OS 8.5 includes SNMP agent software that will allow Macintosh workstations to report information to third-party consoles using SNMP.

To run SNMP agent software on a Macintosh, you must initialize the TCP/IP at system startup time for the software to load and for your computer to respond to SNMP queries. On any workstation running the SNMP agent software:

1. Open the TCP/IP control panel.
2. Go into "Advanced" mode (using Command-U to bring up the User-level dialog window, select "Advanced" radio button. Click OK).
3. Click "Options" button.
4. Deselect the "Load only when needed" option; this will cause TCP/IP to initialize at system startup time.
5. Restart the workstation.

Upon restart, the workstation should be listening for SNMP communications. SNMP uses ports 161 and 162.
Published Date: Feb 20, 2012

Mac OS: Desktop Printing Icons Change To Display Status

I have desktop printing installed on my computer. I notice that sometimes the icon for my printer changes. Can you tell me why? What do the different icons mean?

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Desktop printer icons show the status of the printer. Using a LaserWriter printer as an example, here are what the various desktop printer icons mean.

- **Plain** icon indicates a printer that is not currently chosen for printing.
- **Default** icon indicates the printer you have currently chosen to print on.
- **Printing** icon indicates a document is printing on this printer.
- **Stopped** icon indicates you have stopped the print queue.
- **Error** icon indicates there is an error on this printer. Double-click the icon to see a message.
- **Disabled** icon indicates this desktop printer is not available.

You can rename desktop printer icons, make aliases of them, and throw them away, just like other Finder icons.

Note: You can't throw away a desktop printer icon while the printer is printing a document.

If you throw away the icon for the default printer, another desktop printer is automatically selected as the default printer. If you do not have another desktop printer another icon is automatically created for the desktop printer you are throwing away. To throw away the last desktop printer icon, you must select a printer in the Chooser that does not support desktop printing.

Published Date: Feb 20, 2012

AppleShare IP 6: SMB Logon Behavior

This article discusses the AppleShare IP 6 (ASIP) logon behavior for Windows File Sharing (SMB) clients.
This article has been archived and is no longer updated by Apple.
The logon behavior for Windows File Sharing (SMB) clients is different from the logon behavior for AppleShare clients. The following discusses the behavior for connecting via SMB:

Guest access disabled

ASIP will require a valid user name and password for the user to be given access.

- If the user name and/or password is invalid, access is denied.
- If the account is disabled, access is denied.

Behavior varies from client to client if access is denied. For example,

- Windows 95: allows password reentry.
- Windows 98: allows password reentry.
- Windows NT 4.0: allows user name and password reentry.

Guest access enabled

ASIP will determine the access level based on the following criteria:

- If the user name and password are valid, it will log the user on with user privileges.
- If the user name is valid but the password is incorrect, it will log the user on as guest.
- If the user name is not valid, it will log the user on as guest.
- If the account is disabled, it will log on the user as guest.

Published Date: Feb 20, 2012

AppleShare IP 6.0: Read Me

This article contains the Read Me document for AppleShare IP 6.0.

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Introduction
Installation and Documentation
Requirements for Running AppleShare IP 6
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Late Breaking Information
Known Incompatibilities and Limitations

Introduction

AppleShare IP 6 is a complete set of LAN and Internet services - including everything you need to set up Web, File, Mail, and Print servers, as well as FTP. New for version 6, AppleShare IP now provides built-in support for Windows file sharing and the AppleShare IP Mail Server now supports the Internet standard IMAPv4 protocol. Support for these open standards means that AppleShare IP is fully compatible with Macintosh and Windows clients. A single administration console makes it simple to manage AppleShare users, groups, passwords and security, retaining the hallmark ease of use which makes AppleShare IP the easiest server operating system available.

Installation and Documentation

Complete installation instructions are contained in the AppleShare IP 6.0 Getting Started manual. Additional help can also be found in the AppleShare Client 3.8 User's Guide, and in the AppleShare IP Help, all of which came with your AppleShare IP 6 software.

Requirements for Running AppleShare IP 6

Macintosh computers running AppleShare IP Server 6

- CPU: Any Apple Power Macintosh computer or Macintosh Server with a PowerPC(TM) G3, 604e, 604, 603e 6500 series, or 601 microprocessor.
- RAM: 48 MB of memory with virtual memory turned on; 64 MB with virtual memory turned off. More memory may be needed if you are using one or more web server plug-ins.
- System Software: MacOS 8.1 is required with Open Transport 1.3 or later and OpenDoc 1.2.1 or later.

Macintosh computers running AppleShare Client 3.8

- System Software: MacOS 8.1 or later with Open Transport 1.3 or later is recommended. The minimum requirement is MacOS 7.6 or later with Open Transport 1.1.2 or later.

Support

Telephone Support

- In the United States, if you have questions about AppleShare IP 6 that are not answered by the AppleShare IP Getting Started Manual or AppleShare IP Help, call the Apple Assistance Center at 1-800-APL-CARE (1-800-275-2273) during telephone support hours (Monday through Friday, 6 am to 6 pm Pacific time). When prompted, enter the support access number provided on the back of your Apple Support Card and follow the instructions.
- If you are located outside of the United States, refer to the support information that came with your AppleShare IP 6 software for instructions.

Web Sites

- If you have an Internet connection, check the Apple Support Web site at http://www.apple.com/support. For recent downloads, refer to the Apple Downloads page at http://www.apple.com/support/downloads/ and search AppleShare IP.

Late Breaking Information

- The AppleShare IP 6 Web & File Server will automatically adjust the configuration of the server according to the amount of memory

available. When 12MB or less of memory is available to the AppleShare IP Web & File Server, the server will configure itself in standard mode, similar to AppleShare IP 5.x. When there is more than 12MB of additional free memory available at the time the server launches, the AppleShare IP Web & File Server configures itself in high performance mode, at the cost of an extra 3MB of memory. High performance mode provides greater performance and scalability through an increased number of internal buffers, larger buffer sizes, a maximum concurrent connection limit for file services of 500, and a maximum concurrent connection limit for web server requests of 150.

- The AppleShare IP 6 Web & File Server now supports up to 500 concurrent file server connections, subject to the limits of the underlying hardware and operating system software. The maximum number of connections supported with AppleShare over AppleTalk is still 250. To support 500 concurrent file server connections, the remaining connections must be made over TCP. Apple recommends that you have a G3 based computer and 128MB of RAM or more if you are connecting more than 250 users.
- The AppleShare IP Mail Server documentation refers to settings available when modifying the default host settings. One of the settings available is the ability to turn ETRN (remote mail polling) on or off. This setting has been removed from the "Default Host Settings", but can be enabled or disabled on a "per-host" basis. Please review the AppleShare IP Mail documentation for further information about the remote mail polling features of AppleShare IP Mail 6.

Known Incompatibilities and Limitations

MacOS 8.1

- When sharing a CD ROM disc from a server which is running MacOS 8.1, clients may encounter errors when accessing the files on the CD. If you encounter this issue, install the Apple CD/DVD Driver that is included on the AppleShare IP 6.0 CD. See the Read Me file in the Apple CD/DVD Driver folder for more details.
  There is an issue in the MacOS Memory Manager that may cause your server to freeze or crash. A cosmetic indicator of this issue may be seen in the "About this Computer" window, where the Mac OS would appear to use 3.9 GB of memory. To avoid the issue, install the AppleShare MMgr INIT that is included on the AppleShare IP 6.0 CD. Please note that the AppleShare MMgr INIT does not fix the cosmetic indicator. See the Read Me file in the AppleShare MMgr INIT folder for more details.
- You can run AppleShare IP under light to moderate load with virtual memory turned on. For increased stability when your server needs to handle a very heavy load with hundreds of server connections, install additional memory and turn virtual memory off.

Installer

- The AppleShare IP 5.0 folder is not removed when installing AppleShare IP 6. This folder is kept for critical files you may need to update or move over to the AppleShare IP 6.0 folder.

Web & File Admin

- In low memory situations, you may encounter issues with Web & File Admin. If necessary, quit other applications. In addition, make sure that you set aside ample memory in the AppleShare IP Cache settings panel for your other applications to launch, including Web & File Admin.

Registry

- The AppleShare IP Registry will convert your Users & Groups Data File to run with AppleShare IP 6 the first time you reboot with AppleShare IP installed. Since this file will no longer work with Personal File Sharing after the conversion, a copy of the original file is placed in your Preferences folder. The file is named Users & Groups Data File Backup. The copy of the original file may be used if you decide to restore your machine to Personal File Sharing after de-installing AppleShare IP 6.

Web & File Server

- If a computer that is running the Web & File Server stops responding, check your hard disks by running Disk First Aid before you start the Web & File Server again. Disk First Aid is located in the Utilities folder on your MacOS CD ROM disc.
- The Adobe Acrobat(TM) Installer cannot be used while the Web & File Server is running. Be sure to install Adobe Acrobat before you start the Web & File Server.
- AppleShare IP 6 is not compatible with ARA Multiport Server software. You should not run them on the same computer.
- Under some circumstances you may not be able to install PC applications from Windows File Sharing Server. To perform net installations of applications that are partitioned on multiple floppy disks, create a folder 'X' and copy each disk as a separate subfolder. Then make the parent folder 'X' a share point. From the client, connect to the share point and perform the installation.
- You may experience issues with installing a Windows application from an installer residing on an AppleShare IP 6 server. The following alert

may appear: "Can not find <drive>:\\<installer filename>. Windows needs this file to run." If the name of the folder containing the installer program is more than eight characters in length (i.e. APPLICATION INSTALLER), change it to one containing eight characters or less (i.e. INSTALL). Some installer programs may also require that you spell out the drive and directory path to the folder. Please consult your application's installation instructions for information on how map a drive.

- Windows clients should Refresh from the View menu any server folder window whose access privileges have changed since their last login into server.
- Hybrid Mac/PC CDs can be shared, but not all PC files will be visible. Network installs of PC software on a hybrid CD may not work.
- Windows files and folders with names containing more than thirty-one characters will be truncated when copying them to an AppleShare IP 6 server. To avoid issues, rename the files and folders so that their names contain thirty-one characters or less.
- The Windows File Sharing service is not compatible with DAVE SMB client. To access AppleShare IP server from a Macintosh client, use AppleShare client.
- If you do not need to customize the Web Server Error files, you may remove them in order to increase Web server performance.
- Booting your AppleShare IP server with a volume whose system software has Personal File Sharing enabled erases your AppleShare IP share point and access privileges. Do not enable Personal File Sharing if you need to boot the server computer with a different volume.
- If you need to enable an additional Web & File service (such as Web, FTP, Windows File Sharing, etc) while the Web & File Server is already running and is under a heavy load, reset the cache before enabling the new service.
- The Web folder no longer needs to be shared or be inside a share point for the Web service to work.
- For an improved client compatibility, the FTP server automatically displays files that contain resource forks as "<filename>.bin".
- Under Windows File Sharing, if you share a volume that is larger than 2 Gigabytes, the bytes used and free space amounts displayed may be incorrect from Windows 95 clients (they show correctly from Windows NT clients). Ordinarily, this has no impact on using the server, but it can lead to "out of disk space" warning for large copies. If you experience this issue, share smaller volumes for Windows.

AppleShare Client 3.8

- If you have issues connecting, make sure that you can ping the server. If you can ping the server but you cannot connect, report the issue to Apple Technical Support. If you can't ping the server you have a connectivity issue.
- If the Chooser hangs when mounting volumes (after the OK button has been clicked in the volume list dialog), try disabling the Apple Menu Options control panel on the client computer.
- If a user makes an alias to an AppleShare IP volume and uses TCP to connect to that volume, both TCP/IP and AppleTalk must be active on the user's computer. Due to a limitation in the Alias Manager, AppleTalk must be active to resolve the alias.
- The Finder copy performance on mounted AppleShare volumes is slow with MacOS 8.0. Upgrade your MacOS software on your client computer to version 8.1 to improve the copy performance.
- If you have a Global Village K56 flex card modem and are using Open Transport PPP 1.0.1 to provide TCP/IP connectivity, you need to disable the menu bar status lights, or launch PPP manually and connect to your ISP, before using the Chooser to connect to an AppleShare file server over TCP/IP.
- The NetWare User Authentication Module prior to version 5.11 is incompatible with the AppleShare Client 3.8 software. Contact Novell for an update.
- The AppleShare Client 3.8 software is not compatible with versions of RunShare prior to version 3.0, and it may cause the computer to stop responding. Be sure to upgrade to RunShare version 3.0 or later before you install AppleShare Client Software 3.8.

Mail Server

- The AppleShare IP 6 Mail Server can not directly use previous versions of the AppleShare IP mail database. In order to access your existing mail messages, there are two methods available for completing the upgrade from AppleShare IP 5.0.1 or greater to AppleShare IP 6.
  Note: If you use AppleShare IP 5.0 Mail Server, you will need to use the AppleShare IP 5 Mail Tool to update the version 5.0 mail database to version 5.x prior to using AppleShare IP 6 Mail Tool.
  - Method 1:

    1. First, all users can download all existing mail from the AppleShare IP Mail Server.

    2. Verify that there is no mail waiting to be sent.

    3. After all users have downloaded all of their mail, and there is no mail waiting to be sent, you can simply "Quit" the AppleShare IP 5.0 Mail Server and run the AppleShare IP 6 Mail Server. This will create a new empty mail database and future mail data will be stored in this new mail database file.

  - Method 2: If the first option doesn't meet your needs, the AppleShare IP 6 Mail Tool can also convert existing AppleShare IP 5.0.1 or greater database files to the AppleShare IP 6 file format.

    1. This will require you to run the AppleShare IP 6.0 Mail Tool prior to starting the AppleShare IP 6 Mail Server.

    2. After running the Mail Tool, run the AppleShare IP 6 Mail Server. All delivered and outgoing mail will be converted to the

AppleShare IP 6 database format.

- The AppleShare Mail Tool cannot be used while the Mail Server is running.

Print Server

- It is recommended that a queue only contain printers of the same model and type. Also, printer features present in the first printer attached, but not present in subsequent printers, may cause print errors when jobs are printed to one of the subsequent printers.
- LPD Print Server error codes are available on the AppleShare IP 6 tutorial located in the AppleShare IP CD Tutorials folder. In addition, they are available on the Apple Support Web site at http://www.apple.com/support.
- The "Allow binary data" and "Allow color printing" options are only used with AppleTalk print queues.
- Some LPR clients cannot handle queue names that include spaces. Therefore, ASIP Print Server will also recognize the name up to the first space. For example, if the print queue name is 'Accounting Department', the queue name 'Accounting' must be used for some LPR clients.
- Windows NT printer drivers are not compatible with the secure printing feature for print queuing. Do not enable security on a print queue if Windows NT clients use it.
- With secure printing activated, a Postscript file copied or sent from one client to another for printing may not work.

Documentation

- If you are experiencing any issue while printing the PDF documents that are included on the AppleShare IP 6.0 CD, increase the memory allocated to Adobe Acrobat(TM) application by 2MB.

Published Date: Feb 20, 2012

AppleShare IP 6.0: Mail Tool Read Me

This article contains the Read Me document for the AppleShare IP 6.0 Mail Tool.

This article has been archived and is no longer updated by Apple.

Contents

- Notes
- Tool Purpose
- Tool Requirements
- Tool Features
- Tool Questions & Answers and Troubleshooting

Notes

A prudent safety precaution would be to save/backup the original AppleShare IP Mail Database and Users & Groups file before running the AppleShare IP Mail Tool on it.

Tool Purpose

The AppleShare IP Mail Tool allows administrators to manage the AppleShare IP Mail Server database. While this database requires no management or intervention by users under normal circumstances, it is possible for the database to become unusable if the system stops responding. The AppleShare IP Mail Tool also allows reassignment of mail messages for disabled mailboxes, and can be used to update and compress existing databases. The tool will also be necessary to upgrade an existing 5.0.x Databases into 6.0 Databases that can then be used by the 6.0 Mail Server.

Tool Requirements

The 6.0 version of the AppleShare IP Mail Tool requires AppleShare IP 6.0 or later. You will also need a 5.0.x version of the Mail Database if you intend to upgrade it to a 6.0 Database.

Note: Running the Mail Tool on a very large Database file can take a long time. Running the Mail Tool using a G3 Server on a Database that was 1.5 GB took 4 hours. It would be wise to backup your Mail Database nightly to prevent a long downtime if the server happens to stop responding during the day. Just remember to backup your Users & Group File at the same time you backup your Database.

Tool Features

- Mail Database Updating

  Users of AppleShare IP 5.0.1 or later will need to upgrade their Mail Databases to be compatible with the 6.0 version of the Mail Server. Please note that the name of the Database has changed from "AppleShare IP Mail Database" for 5.0.x, into "AppleShare IP Mail 6.0 Data" for 6.0. If you use the default settings during the upgrade the tool will use the proper name for the new database. Be sure that the new database is placed inside the "AppleShare IP Mail Folder" with the correct name to complete the upgrade operation.

  Note for AppleShare IP 5.0 Users: The 6.0 version of the AppleShare IP Mail Tool will not create or modify an AppleShare IP 5.0 compatible mail database. AppleShare IP 5.0 users will need to upgrade their Mail Server and Mail Database to version 5.0.1 or later before they will be able to run the 6.0 version of the mail tool. In order to upgrade a 5.0 Database to a 5.0.x Database you will need the 5.0.2 version of the mail tool found on the AppleShare IP web site. Once you have upgraded your 5.0 Database to a 5.0.x Database you can then run the 6.0 Mail Tool to upgrade your Database so that it can be used by the 6.0 version of the Mail Server.

- Mail Database Compression and Verification

  The AppleShare IP Mail Tool offers the ability to compress, verify and/or repair an AppleShare IP Mail Database. A database may become unusable for a variety of reasons that include (but are not limited to) power failure, hardware failure, and if the system stops responding. In addition to being a database verification tool it is also sometimes useful to run the tool on mail databases since the verification removes unused free space inside the original mail database, with the potential of greatly compressing the size of a mail database which may have grown over time.

- Disabled Mailbox Reassignment

  The mail server uses a special "fingerprint" to ensure that a user's mailbox in the mail database matches the correct user record in the current

AppleShare IP Users & Groups. The fingerprint is a unique number that is stored in both the user's record and the user's mailbox in the AppleShare IP Mail Database.

The mail server checks for fingerprint mismatches each time it starts up. When it finds a mailbox in the AppleShare IP Mail Database whose fingerprint does not match the fingerprint of a user in the currently active Users & Groups file the server disables that mailbox. No mail is deleted from the disabled mailbox, however, the mailbox in inaccessible to a user trying to login under that account. To retrieve mail from a disabled mailbox, use the AppleShare IP Mail Tool to assign the disabled mailbox to a valid user in the AppleShare IP Users & Groups file.

You can prevent mailbox mismatch problems by taking these precautions:

- Treat the Users & Groups file and the AppleShare IP Mail Database as a set. Always back up and restore them together. If you were to restore the AppleShare IP Users & Groups file without also restoring the mail database, the mail server could disable mailboxes that have no matching user in the current Users & Groups file. If you must restore the Users & Groups file, make sure that all current users have retrieved their mail first (if possible). Then restore the Users & Groups file and the mail database from the same backup. Alternatively, you can restore the Users & Groups file, start the mail server, note the mailboxes that are disabled, and use the AppleShare IP Mail Tool to assign the disabled mailboxes to valid users.
- If you move the AppleShare IP Mail Database to another computer, move the AppleShare IP Users & Groups file also. If you were to move the AppleShare IP mail database to another computer without moving the Users & Groups file, the mail server would disable most if not all mailboxes and create new, empty mailboxes for all users in the Users & Groups file for whom mail is enabled. Note that moving the Users & Groups file to another computer that is running the Web & File Server will cause any access privileges that have been assigned on that computer to be lost because the access privileges no longer match the Users & Group File.
- When you delete users for whom mail is enabled, make sure the AppleShare IP Mail Server is running. If the mail server is not running when you delete users for whom mail is enabled, the next time the mail server starts up, it will report that each deleted users' mailbox does not have a matching entry and it will disable their mailboxes.

Note: It is always safe to throw away a mail database that is empty (as indicated by a zero in the "Number of Messages" field in the mail server Activity window). When you restart the mail server, it will create a mailbox for each user in the AppleShare IP Users & Groups file for which the Enable Mail radio button is selected.

Tool Questions & Answers and Troubleshooting

Question:

What is the "Indexes" folder that is inside the Mail Database Folder?
Answer:

That folder is used by the V-Twin search engine that is a part of the Mail Server. It stores temporary files used to index mail messages for quick searching. It can be thrown away and will be recreated when a user issues a new search of their mailbox. The folder should be backed up along with the Mail Database in order to speed up search operations, but you are not required to do so.

Question:

How do I export mail that is in a user's mailbox to a text file?
Answer:

The 5.0.2 version of the mail tool had a button that did this operation, but that button has been removed for the 6.0 Mail Tool. This functionality has been moved over to the IMAP Admin port. In order to export a user's mailbox, you log into the mail server via the IMAP Admin port using any IMAP client. Then you rename the mail folder that you would like to export with the suffix of ".xdump". (For example, a folder named "Accounting" would be renamed to "Accounting.xdump") All the mail in this folder will appear in a text file that is created inside the AppleShare IP Mail Folder.

Question:

What else does the tool scavenge out of the old Mail Database besides email?
Answer:

The Mail Server stores server and host preferences inside the Mail Database. After running the tool you will not have to re-enter your server and host settings.

Question:

Can I AppleScript the AppleShare IP Mail Tool to compress the AppleShare IP Mail Database before making a backup with my normal backup software?
Answer:

No. The AppleShare IP Mail Tool does not support AppleScript. We are evaluating adding AppleScript support to a future version.

Question:

Can I run the AppleShare IP Mail Tool while the Mail Server and Mail Admin are running?
Answer:

No. The Mail Server and Admin must be shutdown for the AppleShare IP Mail Tool to function.

Question:

I've noticed in the AppleShare IP Reassignment screen that some entries in the User's list are in italics, and I can't click on these users. Why is that?
Answer:

The AppleShare IP Mail Tool only allows the selection of users that have no mail in their accounts, or are not enabled for Mail. Users who are enabled for mail and have 1 or more messages in their Mailboxes can not be a target for reassignment. These users are shown in italic in the list to indicate their non-selectable status.

Question:

Can I Reassign disabled Mailboxes and continue to use AppleShare IP Mail 5.0.x?
Answer:

No. The AppleShare IP Mail Tool only supports account reassignment for 6.0 Mail Databases. If you have to reassign accounts in a Mail 5.0.x Database you will first need to "update" the Mail Database file using the AppleShare IP Mail Tool.

Question:

Do I have to reassign all the disabled mailboxes in an AppleShare IP Mail Database?
Answer:

No. The AppleShare IP Mail Tool supports the direct deletion of disabled mailboxes. This feature is useful for clearing out the mail of a user whose account record has been deleted from the Users & Groups file.

Question:

Can I run the AppleShare IP Mail Tool on a different computer than where the mail server runs?
Answer:

Yes, but it is not recommended. While the AppleShare IP Mail Tool is reassigning accounts or updating/repairing a Mail Database, it uses and updates user-mail information present in the Users & Groups file on the server. It is best if you use the tool on the computer with the same Users & Groups file as the database originally used.

Question:

After running the AppleShare IP Mail Tool I've noticed that the resulting mail database file is much smaller than the original file. Does this mean I have lost mail?
Answer:

No. In the normal day to day use of the mail server it can occasionally grow the mail database file to a large size to accommodate large messages and/or a large number of smaller messages. Over time this space is released and the mail server then reuses space inside the file. When running the AppleShare IP Mail Tool a new copy of all the information present in the original file is created. Many times the space requirements of this information are far less than the maximum file size represented by the old database.

Question:

After running the tool, some of my users received duplicates of some messages that they had already downloaded and deleted. Is this expected?
Answer:

Yes. Depending on when, where, and how bad the damage is to an AppleShare IP Mail Database it is sometimes difficult for the tool to determine if the message was actually deleted by the user. In cases like this the ASIP Mail Tool errors on the side of caution, and will post a copy of a message with an ambiguous deletion state. This can lead to message duplicates for mail that users have already received. We apologize for these messages, but felt that this was better than risking the loss of mail that wasn't actually deleted by the user.

Question:

The AppleShare IP Mail Tool makes a copy of my users and groups file. Why is this?
Answer:

TA21937_AppleShare_IP_Mail_Tool_Read_Me.pdf

The AppleShare IP Mail Database tool needs to modify the fingerprints of users inside the Users & Groups file while performing: verification, compression, or an upgrade of an existing AppleShare IP Mail Database. After the AppleShare IP Mail Tool updates the fingerprints, the old AppleShare IP Mail database file will no longer match the updated user fingerprints. Therefore as a safety measure the AppleShare IP Mail Tool makes a copy of the User & Groups data before any modifications are performed. This gives an AppleShare IP Administrator the option to revert to an old AppleShare IP Mail Database file (if necessary) and still use the old Mail Database file, rather than the newly created AppleShare IP Mail Database.

Question:

I pressed the cancel button during a Mail Database compression operation. Does this mean I have to restore the Users & Groups file in order to use my preexisting AppleShare IP Mail database file?
Answer:

No. The last step in the verification the AppleShare IP Mail Tool performs is the update of the fingerprints in the current Users & Groups file. And while the tool is updating the fingerprints the "cancel" button is disabled. This operation is normally so fast that unless your Users & Groups file has thousands of users it will be virtually instant (and even then it only takes a few seconds). During verification, the old Mail Database is moved into a backup folder for safe keeping. This folder is also where the Users & Groups file copy is placed. If the Users & Groups file copy is absent from this folder, then the existing mail database file is usable with out the need to restore the Users & Groups file.

Question:

What is the worst that can happen if I don't restore the Users & Groups data file; but after running the AppleShare IP Mail Tool I choose to reuse the old mail database rather than the new mail database?
Answer:

Good question. First issue: NO mail will be lost as a result of using an old AppleShare IP Mail database after running the tool. If you choose to re-use an older AppleShare IP Mail database after running the AppleShare IP Mail Tool (instead of using the new database file). When the AppleShare IP Mail server is run for the first time, it will most likely disable all mailboxes found in the old mail database (since the old mailboxes don't match the current fingerprints in the Users & Groups file). This then requires that you quit the Mail Server, run the AppleShare IP Mail Tool and reassign the disabled mailboxes. After reassigning the mailboxes, launching the AppleShare IP Mail server will work fine, and all users will have access to all of their mail.

Question:

Wow, the previous two answers sound complicated, how do I avoid all this?
Answer:

The above situation is only applicable if you've run the AppleShare IP Mail Tool, created a New AppleShare IP Mail Database (as the result of a compress, verify, or upgrade function); and after running the tool you wish to continue using the old AppleShare IP Mail database file. The universal rule is that when using an older copy of an AppleShare IP Mail database you have to also restore the Users & Groups file, otherwise you risk disabling mailboxes when you launch AppleShare IP Mail Server.

Published Date: Feb 20, 2012

Microsoft Internet Explorer: Configuring For MacBinary

If not set up correctly, Microsoft Internet Explorer may experience difficulty downloading and expanding MacBinary formatted files.
This article has been archived and is no longer updated by Apple.
If you experience difficulties with downloading Macbinary files using Microsoft Internet Explorer, be sure you have Stuffit Expander selected in the File Helpers of your Internet Explorer Preferences.

To make sure that this is the setting, perform the following procedure:

1. Open Internet Explorer.
2. Choose Preferences from the the Edit menu; the Preferences window appears.
3. In the Preferences window, locate the preference item"Receiving Files" and select "File Helpers". A list of File Helper settings should appear on the right side of the Preferences window.
4. Scroll down the list until you find the entry labeled "MacBinary". Select that entry and click on the "Change" button.
5. In the "Edit File Helper" dialog that appears (see Figure 1 below), click the Browse button and select the "Stuffit Expander" application from the hard disk.
6. Click OK in the "Edit File Helper" dialog.
7. Click OK in the "Internet Explorer Preferences" dialog to save this change.

Figure 1 The Edit File Helper dialog

This enables Internet Explorer to successfully download, identify, and expand MacBinary formatted files regardless of the content of the file name.

If the file does not successfully expand on its own after the download is complete, try double-clicking on the downloaded file to open Stuffit Expander. Alternatively, drag the downloaded file and drop it on Stuffit Expander to convert the file.

For more information on the MacBinary file format and downloading, please see the following Knowledge Base articles:

Article 7328: "**MacBinary: File Format Description**"
Published Date: Feb 20, 2012

Safety Instructions: Read Me Document

This article contains the "Safety Instructions and Regulatory Agency Information" document included with many Apple products.
This article has been archived and is no longer updated by Apple.
Important Safety Instructions and Regulatory Agency Information

Safety Instructions for Setting Up Your Computer

When you set up your computer or device, keep these important safety instructions in mind:

Plugging In the Power Cord

Important Your computer or device has a three-wire grounding plug that will fit only a grounded AC outlet. If you are unable to insert the plug in the outlet, contact a licensed electrician to replace the outlet with a properly grounded outlet.

Important The plug on the power cord must be completely inserted into the computer's power socket and firmly seated for your computer to operate correctly.

Connecting a Phone Line to the Modem Port

Important Make sure you connect the modem to an analog phone line, the kind typically used in homes.

Turning On the Computer Using the Power Button on the Computer or Keyboard

Important The only way to completely disconnect power from the computer is to unplug the power cord from the outlet or from the back of the computer.

General Safety Instructions

For your own safety and that of your equipment, always take the following precautions. Disconnect the power plug (by pulling the plug, not the cord) if any of the following conditions exists:

- you want to remove any parts (leave the cord disconnected as long as the cover is off)
- the power cord or plug becomes frayed or otherwise damaged
- you spill something into the case
- your computer or device is exposed to rain or any other excess moisture
- your computer or device has been dropped or the case has been otherwise damaged
- you suspect that your computer or device needs service or repair
- you want to clean the case (use only the recommended procedure described later)

Be sure that you always do the following:

- Keep your computer or device away from sources of liquids, such as washbasins, bathtubs, shower stalls, and so on.
- Protect your computer or device from dampness or wet weather, such as rain, snow, and so on.
- Read all the installation instructions carefully before you plug your computer or device into a wall socket.
- Keep these instructions handy for reference by you and others.
- Follow all instructions and warnings dealing with your system.

Warning Electrical equipment may be hazardous if misused. Operation of this product, or similar products, must always be supervised by an adult. Do not allow children access to the interior of any electrical product and do not permit them to handle any cables.

To clean the case, do the following:

1. Disconnect the power plug. (Pull the plug, not the cord.)
2. Wipe the surfaces lightly with a clean, soft cloth dampened with water.

Warning Never push objects of any kind into this product through the openings in the case. Doing so can cause a fire or a dangerous electric shock.

Communications Regulation Information

FCC Compliance Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. See instructions if interference to radio or television reception is suspected.

Radio and Television Interference
The equipment described in this manual generates, uses, and can radiate radio-frequency energy. If it is not installed and used properly--that is, in strict accordance with Apple's instructions-it may cause interference with radio and television reception.

This equipment has been tested and found to comply with the limits for a Class B digital device in accordance with the specifications in Part 15 of FCC rules. These specifications are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

You can determine whether your computer system is causing interference by turning it off. If the interference stops, it was probably caused by the computer or one of the peripheral devices.

If your computer system does cause interference to radio or television reception, try to correct the interference by using one or more of the following measures:

- Turn the television or radio antenna until the interference stops.
- Move the computer to one side or the other of the television or radio.
- Move the computer farther away from the television or radio.
- Plug the computer into an outlet that is on a different circuit from the television or radio. (That is, make certain the computer and the television or radio are on circuits controlled by different circuit breakers or fuses.)

If necessary, consult an Apple-authorized service provider or Apple. See the service and support information that came with your Apple product. Or, consult an experienced radio/television technician for additional suggestions.

Important Changes or modifications to this product not authorized by Apple Computer, Inc., could void the FCC Compliance and negate your authority to operate the product.

This product was tested for FCC compliance under conditions that included the use of Apple peripheral devices and Apple shielded cables and connectors between system components. It is important that you use Apple peripheral devices and shielded cables and connectors between system components to reduce the possibility of causing interference to radios, television sets, and other electronic devices. You can obtain Apple peripheral devices and the proper shielded cables and connectors through an Apple-authorized dealer. For non-Apple peripheral devices, contact the manufacturer or dealer for assistance.

Responsible party (contact for FCC matters only): Robert Steinfeld, Apple Computer, Inc., 1 Infinite Loop, Cupertino, CA 95014-2084, 408-974-2618.

Industry Canada Statement
This Class B device meets all requirements of the Canadian interference-causing equipment regulations. Cet appareil numÃ©rique de la Classe B respecte toutes les exigences du RÃ¨glement sur le matÃ©riel brouilleur du Canada.

VCCI Class B Statement

Warning Making adjustments or performing procedures other than those specified in your equipment's manual may result in hazardous radiation exposure.

Do not attempt to disassemble the cabinet containing the laser. The laser beam used in this product is harmful to the eyes. The use of optical instruments, such as magnifying lenses, with this product increases the potential hazard to your eyes. For your safety, have this equipment serviced only by an Apple-authorized service provider.

If you have an internal Apple CD-ROM drive in your computer, your computer is a Class 1 laser product. The Class 1 label, located in a user-accessible area, indicates that the drive meets minimum safety requirements. A service warning label is located in a service-accessible area. The labels on your product may differ slightly from the ones shown here.

Figure 1 Class 1 label

Figure 2 Service warning label

High-Risk Activities Warning
This computer system is not intended for use in the operation of nuclear facilities, aircraft navigation or communications systems, or air traffic control machines, or for any other uses where the failure of the computer system could lead to death, personal injury or severe environmental damage.

Telephone and Modem Information
Your computer may contain an optional internal modem. Some telephone companies require that you notify the local business office when you hook up a modem to their lines.

Information You Need in the United States
The internal modem complies with Part 68 of the FCC rules. On the back of this equipment is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN). If requested, provide this information to your telephone company.

- Ringer equivalence number (REN): 0.8 The REN is useful to determine the quantity of devices you may connect to your telephone lines and still have all those devices ring when your telephone number is called. In most, but not all areas, the sum of the RENs of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to your line, as determined by the REN, you should contact your local telephone company to determine the maximum REN for your calling area.
- Telephone jack type: USOC, RJ-11 An FCC-compliant telephone cord and modular plug are provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack that complies with Part 68 rules. See the installation instructions for details.

Telephone Line Problems
If your telephone doesn't work, there may be a problem with your telephone line. Disconnect the modem to see if the problem goes away. If it doesn't, report the problem either to your local telephone company or to your company's telecommunications people.

If disconnecting the modem eliminates the problem, the modem itself may need service. See the service and support information that came with your Apple product for instructions on how to contact Apple or an Apple-authorized service provider for assistance.

If you do not disconnect your modem when it is adversely affecting the telephone line, the telephone company has the right to disconnect your service temporarily until you correct the problem. The telephone company will notify you as soon as possible. Also, you will be informed of your right to file a complaint with the FCC.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of your equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications to maintain uninterrupted service.

The internal modem will not work with party lines, cannot be connected to a coin-operated telephone, and may not work with a private branch exchange (PBX).

Telephone Consumer Protection Act
The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device to send any message via a telephone fax machine unless such message clearly contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it was sent and an identification of the business or other entity, or individual sending the message and the telephone number of the sending machine of such business, entity, or individual.

Information You Need in Canada
The Industry Canada (IC) label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational, and safety requirements. The Department does not guarantee the equipment will operate to a user's satisfaction.

Before installing this equipment, make sure that you are permitted to connect to the facilities of the local telecommunications company. Be sure you use an acceptable method of connection to install the equipment. In some cases, you may extend the company's internal wiring for single-line individual service by means of a certified telephone extension cord. Be aware, however, that compliance with these conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any equipment malfunctions or repairs or alterations that you make to this equipment may cause the telecommunications company to request that you disconnect the equipment.

In Canada, contact Apple at: 7495 Birchmount Road, Markham, Ontario, L3R 5G2, 800-263-3394

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Warning Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority or electrician.

- Load number: 0.3 The load number (LN) assigned to each terminal device denotes the percentage of the total load to be connected to the telephone loop that is used by the device, to prevent overloading. The termination of a loop may consist of any combination of devices, subject only to the requirement that the sum of the load numbers of all devices does not exceed 100.
- Telephone jack type: CA-11

Informations destinÃ©es aux utilisateurs canadiens
L'Ã©tiquette d'Industrie Canada identifie un matÃ©riel homologuÃ©. Cette Ã©tiquette certifie que le matÃ©riel est conforme Ã certaines normes de protection, d'exploitation et de sÃ©curitÃ© des rÃ©seaux de tÃ©lÃ©communications. Le MinistÃ¨re n'assure toutefois pas que le matÃ©riel fonctionnera Ã la satisfaction de l'utilisateur.

Avant d'installer ce matÃ©riel, l'utilisateur doit s'assurer qu'il est permis de le raccorder au rÃ©seau de l'entreprise locale de tÃ©lÃ©communication. Le matÃ©riel doit Ã©galement Ãªtre installÃ© en suivant une mÃ©thode acceptÃ©e de raccordement. Dans certains cas, le cÃ¢blage appartenant Ã l'entreprise utilisÃ© pour un service individuel Ã ligne unique peut Ãªtre prolongÃ© au moyen d'un dispositif homologuÃ© de raccordement (cordon prolongateur tÃ©lÃ©phonique).

L'abonnÃ© ne doit pas oublier qu'il est possible que la conformitÃ© aux conditions Ã©noncÃ©es ci-dessus n'empÃªche pas la dÃ©gradation du service dans certaines situations. De fait, les entreprises de tÃ©lÃ©communication ne permettent pas que l'on raccorde un matÃ©riel aux prises d'abonnÃ©s, sauf dans les cas prÃ©cis prÃ©vus par les tarifs particuliers de ces entreprises.

Les rÃ©parations de matÃ©riel homologuÃ© doivent Ãªtre effectuÃ©es par un centre d'entretien canadien autorisÃ© dÃ©signÃ© par le fournisseur. La compagnie de tÃ©lÃ©communications peut demander Ã l'utilisateur de dÃ©brancher un appareil suite Ã des rÃ©parations ou Ã des modifications effectuÃ©es par l'utilisateur ou en raison d'un mauvais fonctionnement.

Veuillez contacter Apple pour des informations supplÃ©mentaires :
Apple Canada, Inc.
7495 Birchmount Road
Markham, Ontario
Canada L3R 5G2
Service Ã la clientÃ¨le d'Apple Canada: 800-263-3394

Pour sa propre protection, l'utilisateur doit s'assurer que tous les fils de mise Ã la terre du secteur, des lignes tÃ©lÃ©phoniques et les canalisations d'eau mÃ©talliques, s'il y en a, soient raccordÃ©s ensemble. Cette prÃ©caution est particuliÃ¨rement importante dans les rÃ©gions rurales.

Avertissement L'utilisateur ne doit pas tenter de faire ces raccordements lui-mÃªme; il doit avoir recours Ã un service d'inspection des installations Ã©lectriques ou Ã un Ã©lectricien, selon le cas.

- NumÃ©ro de charge : 0,3 L'indice de charge (IC) assignÃ© Ã chaque dispositif terminal indique, pour Ã©viter toute surcharge, le pourcentage de la charge totale qui sera raccordÃ©e Ã un circuit tÃ©lÃ©phonique bouclÃ© utilisÃ© par ce dispositif. La terminaison du circuit bouclÃ© peut Ãªtre constituÃ©e de n'importe quelle combinaison de dispositifs pourvu que la somme des indices de charge de l'ensemble des dispositifs ne dÃ©passe pas 100.
- Type de prise tÃ©lÃ©phonique : CA-11

Information You Need in the United Kingdom
This terminal equipment is intended for direct connection to the analogue Public Switched Telecommunications Network and is approved for use within the United Kingdom with the following features:

- Modem facility
- Autocalling facility
- Autoanswer facility
- DTMF signaling
- Operation in the absence of proceed indication or upon detection of proceed indication

This product is in conformity with relevant regulatory standards following the provisions of European Council Directives 73/23/EEC (Low Voltage Directive) and 89/336/EEC amended by 92/31/EEC (EMC Directive).

Information You Need in Germany
Diese Modem-Karte ist als Endeinrichtung vorgesehen und muss an ein TAE mit F-Kodierung angeschlossen werden.

Diese Endeinrichtung ist in KonformitÃ¤t gemÃ¤ss Niederspannungsrichtlinie 73 / 23 / EWG sowie EMC-Richtlinien 89 / 336 / EWG und 92 / 31 / EWG.

Information You Need in France
Ce matÃ©riel est conforme aux normes applicables de sÃ©curitÃ© Ã©lÃ©ctrique d'aprÃ¨s la directive 73 / 23 / CEE et aux normes applicables de comptabilitÃ© Ã©lÃ©ctromagnÃ©tique d'aprÃ¨s la directive 89 / 336 / CEE, modifiÃ© par la directive 92 / 31 / CEE.

Mouse Information
This product complies with the requirements of European Directives 72/23/EEC and 89/336/EEC.
Complies with the Canadian ICES-003 Class B Specification.

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033-1025-A
Printed in U.S.A.
Published Date: Feb 20, 2012

Mac OS X Server: Mounting A CD-ROM Disc In Single User Mode

This article is about mounting a CD-ROM disc in single user mode.
This article has been archived and is no longer updated by Apple.
Mounting a CD-ROM disc in single user mode can be a little tricky.

1. Start up into single user mode by holding down the "s" key during startup with the disc in the CD-ROM drive. When you reach the # prompt the startup is complete.

2. In order to mount the CD you must determine the device number that Mac OS X Server has assigned to it during startup. There are two possible types of CD-ROM drives: IDE and SCSI. This information is listed while you are starting up into single user mode. Scan the lines of information for "CD-ROM". At the beginning of this line you will see the letters "sd" followed by a number, for example "sd2." This is the device number that Mac OS X Server has assigned to your CD-ROM drive.

3. The next step in mounting your disc is to determine on which slice (partition) the UFS (UNIX file system) information is stored. For example, the UFS slice on the Mac OS X Server Installation disc is on slice a. Other CD-ROMs may vary. To determine which slice your information is on, try mounting slices (a, b, c, etc), or contact the disc's manufacturer.

4. Lastly, you will need a place to mount the disc. You can mount the disc at any directory (mount point). The /tmp directory is usually a good one, or you can create a /mnt directory using the mkdir command.
Example: To mount the Mac OS X Server Installation disc to directory /mnt, use the following command from the single user mode prompt:

```
mount /dev/sd2a /mnt
```

The /dev/sd2a directory structure is used because the /dev directory is where information about that device is stored. The /dev directory has many devices already entered. You probably will not need to add any.

Published Date: Feb 17, 2012

Mac OS: Finder Lists Are In Reverse Order

When I look at some windows in the Finder, the items listed are not in alphabetical order. They are in reverse alphabetical or some other unrecognizable order. Can you explain?

This article has been archived and is no longer updated by Apple.
Starting with Mac OS 8.1, there is an option to reverse the order of any Finder window in list view. There is an icon on the upper right side of the window that looks like a pyramid made out of lines (see Figure 1 below).

Figure 1: Sort Order icon

If you click on it, it will reverse the order of the window. The exact order depends on how the window is arranged. Whichever column heading is selected is the criterion by which the window will be sorted. For example, if you have the window sorted by date, then clicking the Sort Oder icon will reverse the date-ordering of the file names.

This Sort Order icon only appears in List View under versions Mac OS 8.1 or later. Balloon Help contains information about this and many other Mac OS features. This feature can also be toggled with AppleScript.

Rearranging The Order Of Columns

Starting with the release of Mac OS 8.5, it is also possible to rearrange the order of the columns in a Finder window. For more information on this topic, please see the following article:

Article 24659: "**Mac OS 8.5: Columns In Finder Windows Rearranged**"

Published Date: Feb 20, 2012

iMac: Ringer Equivalency Number (REN) For Internal Modem

What is the Ringer Equivalency Number(REN) for the iMac's internal modem?
This article has been archived and is no longer updated by Apple.
The Ringer Equivalency Number (REN) for the iMac modem is 0.3. This information can be obtained from the product label on the modem card itself.

The maximum REN for a home telephone system is typically 5.0. A customer should contact their local phone company to determine what their maximum REN is.

For information on Ringer Equivalency Numbers and troubleshooting, please see the following Knowledge Base article:

Article 30056: "**Modem: Not Answering Calls**"
Published Date: Feb 20, 2012

Power Macintosh G3 All-in-one: Button Disabler Not Compatible

This article is about the Button Disabler control panel not working with Power Macintosh G3 All-in-one computers.
This article has been archived and is no longer updated by Apple.
The Button Disabler control panel depends on specific controller hardware that is present on the older All-in-one Power Macintosh computers but not on Power Macintosh G3 All-in-one computers. For this reason, Button Disabler will not work on Power Macintosh G3 All-in-one computers. There are currently no plans to add Button Disabler functionality to Mac OS to specifically support the Power Macintosh G3 All-in-one computer. Apple will evaluate the necessity of this feature for future OS releases.

The Button Disabler control panel version 1.2 lets you disable the bezel buttons on the front of certain computer models. If you have a Performa or Power Macintosh 52xx, 53xx, 62xx, 63xx, 5400, 6400, 5500, or 6500 series computer you may use this control panel while running Mac OS 7.6.1 or later. Version 1.2 of the control panel does not work with any Quadra or LC series computers or computers with a PowerPC upgrade card. You may continue to use version 1.1 of the Button Disabler with Quadra and LC series computers.
Published Date: Feb 20, 2012

Mac OS X Server: NetInfo Hostname Requirements

This article give the requirements for Netinfo Hostname.
This article has been archived and is no longer updated by Apple.
The host name of each computer must be unique. The host names must not contain spaces, and the characters must be alphanumeric. Special characters allowed are:

- "." period
- "_" underscore
- "-" hyphen

Published Date: Feb 17, 2012

Modem: V.34 Script With Unusual Modem Types

This article describes how to create a modem script. This is useful when you have a modem model not listed in the Modem control panel, or you are having problems connecting to your Internet Service Provider (ISP) with your existing modem script.
This article has been archived and is no longer updated by Apple.
The following steps can be followed when using "PPP" or "Remote Access" to connect to an Internet Service Provider when either you have a modem which has no script in the Modem control panel or you wish to achieve the same result as the "V34 Modem Script" which Apple issued for both the PowerBook G3 Series and also as a workaround for those having difficulty with V.90 on their iMac computer.

The following steps do not have to be repeated for subsequent connections. After successful completion, the whole process is automated.

1. In the "Modem" control panel select the modem script named "Null Modem 115200".
The 115200 refers to the baud (or data) rate used to communicate with the modem. Most modems can communicate at this fast speed to the Macintosh. If necessary you can select a slower script. Your choices are "Null Modem 19200", "Null Modem 57600", or "Null Modem 9600". However, remember that it is better to select a script that is faster than the line speed (which is usually 33600-56000).

2. In the "Remote Access" or "PPP" control panel click the "Options..." button.

3. Click the "Protocol" tab at the top.

4. Check the box "Connect to a command-line host:".

5. Check the radio button "Use Terminal window".

6. Click "OK" to close the "Options" window.

7. Click "Connect".
Instead of dialing a terminal window appears.

8. Type "AT", then press the Return key.
You should get a message back from the modem saying "OK". If you get no response then there's a possibility that the modem is not connected to the Macintosh, or plugged into the wrong port. You must correct this before continuing.
Note: If your modem replies "0" instead of "OK", that's alright--proceed to the next step.

9. Type "AT&F", then press the Return key.
This resets the modem to the factory profile. This is done to ensure that any special settings made by previous communications programs are restored back to a known state. Look for the "OK" response.

Important: Perform step 10 only if you wish to prevent a 56K connection (as in the V.34 Modem Script). If you are creating a modem script because your modem is not in the Modems control panel, you can skip step 10.

10. Type "AT+MS=11", then press the Return key.
Look for the "OK" response.

11. Type "ATDT" followed by your Internet Service Provider's the telephone number, then press the Return key.
Watch for the "CONNECT" response.
Example: `ATDT 90500555555`

12. Click the "Settings..." button.

13. Check the "Prompt to save Connect Script" box.

14. Click "OK" to close the dialog.

15. Your Internet host should prompt you for your "Account Name". Type your account name, then press Return.
The account name is sometimes case sensitive, so be careful to type it exactly as your ISP has suggested.

16. Your Internet host should prompt you for your "Password". Type your password, then press Return.
The password is sometimes case sensitive, so be careful to type it exactly as your ISP has suggested.

17. If prompted for "Protocol", enter "PPP" followed by Return.

18. Your host should give a welcome greeting. Click the "Continue" button.

This may happen automatically.

19. A "Save As..." dialog box appears. Save the script to the desktop with a name such as "MyScript".

20. Disconnect by clicking the "Disconnect" button.

The remaining steps automate the entire process.

21. Click "Options...".

22. Click the radio button "Use connect script...".

23. Click the button "Import Script...".

24. Choose the file "MyScript" as saved in Step 19.

25. Test by clicking "Connect".

The entire process is now automated.
Published Date: Feb 20, 2012

Mac OS X Server: Changing a File‘s Default Application

This article describes how to change the default application for opening a particular a file.
This article has been archived and is no longer updated by Apple.
The default application is the one which opens when you open a file.

Mac OS X Server matches applications with files they can open automatically. You can't influence the available default applications for files in any way other than by installing or removing applications.

To change a file's default application, follow these steps:

1. In the Workspace Manager, select the file by clicking on it.
2. Open the Tools menu and choose Inspector.
3. Choose Tools from the Inspector pop-up menu.
4. Select an application's icon from the center of the window.
5. Click Set Default.

Published Date: Feb 17, 2012

Mac OS X Server: Boot and Install Log Locations

This article explains where to find the boot and install logs are found on Mac OS X Server.
This article has been archived and is no longer updated by Apple.
The system log has the boot information in it and located at /var/log/system.log.

The installer log is located at /var/log/Installer.log.

You must have administrative access to the server to view these log files.
Published Date: Feb 17, 2012

Mac OS: Help Viewer Quits With Type 3 Error

This article describes a situation where Help Viewer quits with the alert box: "The application "" has unexpectedly quit because an error of Type 3 occurred."

This article has been archived and is no longer updated by Apple.

Symptom

Help Viewer quits and displays an alert box with these messages:

> "The application "" has unexpectedly quit because an error of Type 3 occurred. You should save your work in other open applications and restart the computer."

Figure 1 Help Viewer alert box; earlier version of Internet Config extension installed.

> " The Help Viewer application requires Internet Config 2.0 to run."

Figure 2 Help Viewer alert box; Internet Config extension not installed.

Note: If the computer becomes unresponsive rather than quitting with an alert box, please see article 60228: "**Mac OS 8.5: System Freezes When Opening Help Viewer.**"

Solution

Make sure that Internet Config Extension version 2.0.2 or later is installed in the Extensions folder of the System Folder. If necessary, use the Mac OS Installer to perform a custom installation of the Internet control panel. Both the Internet control panel and Internet Config Extension are installed this way.

Proceed as follows:

1. Open the Mac OS Install application.
2. Click Continue.
3. Select the destination disk from the pop-up menu and click Select.
4. Click Continue twice and then Agree.
5. Click Customize.
6. Make sure Mac OS 8.5 (or your version of Mac OS) is the only check box that is selected.
7. Choose Customized Installation from the pop-up menu.
8. Scroll down to the bottom of the list; click the disclosure triangle to the left of Control Panels.
9. Select the Internet check box.
10. Click OK.
11. Click Start.

This also addresses the requirement for Internet Config expressed in the alert shown in Figure 2. For more information about how Internet Config relates to Mac OS 8.5, please see the following article:

Article 24679: "**Mac OS 8.5: Internet Control Panel Or Internet Config?**"
Published Date: Feb 20, 2012

AppleShare IP 6.x: Earliest Mac OS Client Supported

This article explains what versions of the AppleShare Client and the Mac OS are supported for connecting to an AppleShare IP (ASIP) 6.0 server.
This article has been archived and is no longer updated by Apple.
The earliest supported client varies depending on the largest volume size that is shared on the ASIP 6.0 server.

For servers with volumes smaller than 2 GB:

- AppleShare Client 3.5 or later.
- System 6.0.7 or later.

For servers with volumes larger than 2 GB:

- AppleShare Client 3.5 or later.
- System 7.5 or later.

Volume sizes will be reported incorrectly for volumes larger than 4 GB unless the client is running AppleShare Client 3.7.4 or later and Mac OS 8.1 or later.

Also, file sizes may be reported incorrectly on Mac OS Extended format volumes (also referred to as HFS+ volumes) unless the client is running AppleShare Client 3.8 or later.

For these reasons, Apple strongly recommends that you upgrade your client Macintosh computers to Mac OS 8.1 or later and AppleShare Client 3.8 or later.
Published Date: Feb 20, 2012

AppleShare IP 6.x Mail Server: Automatically Dials Out

This article is about why the AppleShare IP 6.x Mail Server automatically dials out upon starting the Mail Server, and provides a workaround. This article has been archived and is no longer updated by Apple.

Symptom:

I have an AppleShare 6 Mail Server and I am interested in the scheduled dial-out access feature. I have set up my server with dial-out access to my Internet Service Provider (ISP), but every time I start the Mail Server, it dials out immediately and stays connected. Why is it not following the schedule?

Solution:

The AppleShare IP 6 Mail Server, like the AppleShare IP 5 Mail Server, will open TCP/IP on launch and wait for incoming connections on standard mail ports (in the case of AppleShare IP 6, it waits for SMTP, IMAP, and POP). If you have TCP/IP on the server configured to dial out to a PPP server, one of two things will happen:

1. If "Connect automatically when starting TCP/IP applications" is checked in the PPP control panel, then the machine will try to dial out when the Mail Server launches, and it will stay connected as long as the Mail Server is running. Local machines will not be able to connect to the server via TCP/IP.

2. If the "Connect automatically when starting TCP/IP applications" check box is not checked, the Mail Server will appear to start up normally, but nobody will be able to connect via TCP/IP, the AppleShare Mail Server will not connect to an off-site mail server, and the error log will say that Open Transport TCP/IP is not available.

In order for the Mail Server to work properly, TCP/IP on the mail server must be configured for the local network so that it will look on the Ethernet port for incoming connections. In addition to this you must have a router or gateway on the network that dials out on demand. This may be hardware (such as an ISDN router), or software (such as Vicom's Internet Gateway or Sustainable Softworks' IPNetRouter). Once this is set up, the server will try to access the remote mail server on the specified schedule, and the gateway will handle the dial-out connection to the Internet.

For more information on setting up an ASIP Mail Server to connect on a schedule, please see the following article:

Article 30570: "**AppleShare IP Mail Server: Send & Receive Setup**"

Published Date: Feb 20, 2012

AppleShare IP Mail Server: Shows IP Address Instead Of DNS Name

This article discusses a few symptoms where an AppleShare IP server will display IP addresses instead of the DNS name.
This article has been archived and is no longer updated by Apple.
When the AppleShare IP server first starts up, it does a reverse DNS lookup for the IP address of the server as entered in the TCP/IP control panel. If this fails, the server uses its IP address to refer to itself (instead of its DNS name). This can result in a few symptoms:

1. The IP Manager's "Network Info" window lists the DNS name as either Unavailable or as the IP address.
2. The user's email address is listed as user@xx.xx.xx.xx where xx.xx.xx.xx is the server's IP address.
3. On an AppleShare IP 5.x server, this failure will cause a message in the error log that Open Transport is not loaded.
4. On an AppleShare IP 6.x server, the error log will note that the reverse lookup failed, but it will still exhibit symptoms (1) and (2) above.

One of the following troubleshooting steps should resolve this issue:

1. Make sure the proper name servers are listed in the TCP/IP control panel of the server.
2. Make sure the name server containing the DNS record for the server is configured properly to do reverse DNS lookups (a TCP/IP troubleshooting utility like the shareware WhatRoute or Neon software's OTTool can help determine this). If you are using MacDNS, this is done automatically when you add a permanent host.
3. If the above steps indicate everything is okay and you are still having problems, trash the TCP/IP preferences on the server and set them up again from scratch. Be sure not to change the TCP/IP setting while any of the AppleShare servers are running.

For more information on DNS lookups, please see the following article:

Article 24693: "**AppleShare IP Mail Server: DNS Configuration**"
Published Date: Feb 20, 2012

AppleShare IP 6.0 - 6.2: Importing/Exporting Users and Groups FAQ

This article contains frequently asked questions (FAQ) regarding importing and exporting users and groups with AppleShare IP versions 6.0 through 6.2, with answers to those questions.

For information about importing users with AppleShare IP 6.3, please see article 25116:

"**AppleShare IP 6.3: Import/Export Retains Passwords, Settings, Relationships**."

This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. How do I export my Users & Groups?
2. How do I import my Users & Groups?
3. What is the format for the import/export file?
4. What is the format for the "E-mail Attributes" section for a user?
5. Why can't I import a file into ASIP 6.0 that I exported with ASIP 5.0.x?
6. How can I create an import file using a spreadsheet program?
7. Is there an easier way to transfer Users & Groups to another computer?

Question 1: How do I export my Users & Groups?

Answer: You can create a tab-delimited text file that contains much of the user information needed to populate the "Users & Groups List". Selecting users and groups in the Users & Groups List and choosing Export Users & Groups from the File menu can generate this text file . You must then choose the fields you would like to export (Internet Alias, Comments, Mail Settings). Be sure to keep track of the fields you've selected. You need to remember them when you import the file. During the export a text file is created that includes the information you choose. This file does not contain peripheral user information such as "User may administer server", "Require new password on next login", or "User may log on" (These attributes can be modified after importing the users by using the batch change user attributes). When a group is selected for export, all members of that group are exported. However, the file does not contain any group membership information. For security reasons it is not possible to export the user passwords.

Question 2: How do I import my Users & Groups?

Answer: Importing users requires a properly formatted import file. When the Users & Groups List is the frontmost window, choose Import Users from the File menu and select the file to be imported. Then choose the fields you would like to import. Be sure to select only the fields that were selected when the file was exported or created. Once all the users are imported you can recreate any groups that you require. Be sure to double check at least one of the users to make sure the import was successful. **Note:** If you choose to import the Mail Settings you must also import the Internet Alias.

Question 3: What is the format for the import/export file?

Answer: The file format changes depending on the fields you select to import or export. An example of the basic format is below (selecting to import all fields):

Note: <tab> in these examples means the tab character that is produced when you press the Tab key on the keyboard. <carriage return> in these examples means that a Return character, which is generated by the Return key, should be placed in that spot.

```
UserName<tab>Internet Alias<tab>Password<tab>Comment<tab>

E-mail Attributes<carriage return>
Jan Wu<tab>j.wu<tab>easypassword<tab>Nice person<tab>

NoMail<carriage return>
```

Note: The example above should occupy only two lines; it has been artificially wrapped to four lines in this article to conform to web browser constraints.

If you do not want to import the "Comment" field you remove the <tab> and comment text. The E-mail Attributes would slide over to the left and look like this:

```
UserName<tab>Internet Alias<tab>Password<tab>

E-mail Attributes<carriage return>

Jan Wu<tab>j.wu<tab>easypassword<tab>NoMail<carriage return>
```

Note: The example above should occupy only two lines; it has been artificially wrapped to three lines in this article to conform to web browser constraints.

Question 4: What is the format for the "E-mail Attributes" section for a user?

Answer: The import section for user email settings can have many different attributes. Here is the general layout for the "E-mail Attributes", the format changes depending on the Mail Account Setting (No Mail, Has Mail, Autoforwarding).

```
Mail Account Setting <tab> APOP setting <tab>

Login & Mailbox setting <tab> Notification Preference
```

Note: The example above should occupy only one line; it has been artificially wrapped to two lines in this article to conform to web browser constraints.

The following is a list of all the possibilities for each mini-field in E-mail Attributes. The keywords indicate the mail setting. Do not put in spaces before or after the TABs.

```
NoMail
ForwardAppleTalk <tab> Username <tab> Server name <tab> Zone name
ForwardInternet <tab> user@domain.com
HasMail <tab> RequireAPOP <tab> POPOnly <tab> NoNotification
HasMail <tab> NoRequireAPOP <tab> POPOnly <tab> NoNotification
HasMail <tab> NoRequireAPOP <tab> IMAPOnly <tab> NoNotification
HasMail <tab> NoRequireAPOP <tab> BothPOPIMAPShare <tab> NoNotification
HasMail <tab> NoRequireAPOP <tab> BothPOPIMAPSeparate <tab> NoNotification
HasMail <tab> NoRequireAPOP <tab> BothPOPIMAPSeparateShowPOP <tab> NoNotification
HasMail <tab> NoRequireAPOP <tab> BothPOPIMAPShare <tab> EnableNotifyIP <tab> x.x.x.x
HasMail <tab> NoRequireAPOP <tab> BothPOPIMAPShare <tab> EnableNotifyLastIP
```

Here is an example including the mail settings for a user (this should all be on one line):

```
Jan Wu <tab> j.wu <tab> password <tab> HasMail <tab> NoRequireAPOP <tab>

 BothPOPIMAPShare <tab> NoNotification<carriage return>
```

Note: The example above should occupy only one line; it has been artificially wrapped to two lines in this article to conform to web browser constraints.

Question 5: Why can't I import a file into ASIP 6.0 that I exported with ASIP 5.0.x?

Answer: The format of the "E-mail Attributes" section has changed between ASIP 5.0.x and ASIP 6.0. You must modify the file before you can import it into ASIP 6.0.

Question 6: How can I create an import file using a spreadsheet program?

Answer: As long as the file you create has the proper format described above you can use whatever method you prefer to generate your import file. Most spreadsheet programs allow you to export the spreadsheet document inserting a tab between cells. Make sure the file that you create matches the format that is expected when you choose the fields to import. If you choose to import only the Internet Alias and Mail Settings be sure that your file doesn't include an extra tab that would indicate where the Comments field would go.

Question 7: Is there an easier way to transfer Users & Groups to another computer?

Answer: Yes. If you have your Users & Groups configured to your liking on one computer you only need to move over the Users & Groups Data File from the Preferences folder of the first computer into the Preferences folder of the second computer. Keep the name of the Users & Groups Data File the same when you copy it to the other computer. You must also restart the other computer with the extensions turned off so you can replace the existing Users & Groups File with the new one. If the extensions are loaded this error appears: "The file is in use and cannot be replaced." Once you've restarted with the new Users & Groups File in place you must open Easy Setup again on the second computer. You must also enter a valid serial number. It can be the same if you are running the File Server on one computer and the Mail Server on another. If you run the File Server on two computers you need two serial numbers.

Published Date: Feb 20, 2012

Apple Mail Server: DNS Configuration

This article explains the most common Domain Name Server (DNS) configurations used with a mail server.
This article has been archived and is no longer updated by Apple.

DNS Fundamentals

The following section will go over DNS fundamentals. A Domain Name Server's primary duty is to take IP addresses and return host names, and vice versa. For example, a computer's IP address of 15.1.1.10 will be converted to 'starfury.zone.com' by the DNS. There are several different types of records that are used with a DNS. The most important is the A-record, which returns an IP address for a host name. The A-record's inverse is the PTR record, which returns a host name for an IP address. The PTR record is a little strange because it is created by reversing the IP address and adding 'in-addr.arpa.' to the end. There is also a CNAME record which is a host name alias to another host, this allows multiple host names to resolve to one IP address. These three record types are illustrated below.

```
A-record   name -> IP address     host.domain.com -> 12.1.8.51

PTR        IP address -> name     51.8.1.12.in-addr.arpa.  -> host.domain.com

CNAME      host name alias        name.domain.com (A-record name) = othername.domain.com
```

The next type of DNS record is only used by SMTP Mail Servers. It is called an MX record, or mail exchanger. An MX-list is used with a host to specify how mail for that host should be delivered. The MX-list contains all the possible mail exchanger hosts along with preference values indicating which host should be the final recipient of mail. A host with a lower number value has higher preference (a host with a value of 10 would be preferred over a host valued at 15). If two hosts have the same preference value, they do load-balancing between them. MX records are best explained by example.

MX-list record for mail.company.com
10 mail.company.com
20 mail-backup.company.com
30 isp-backup.isp.net

In this example a mail server attempting to deliver mail to 'mail.company.com' will ask DNS for the MX-list shown here. The server will then try and deliver the mail to the host on the MX-list that has the lowest numerical preference value. In this case it would be 'mail.company.com'. The server will then look up the IP address for 'mail.company.com' and deliver the mail to that address. If that host is not available the mail server will attempt to connect to the next best host, 'mail-backup.company.com'. If 'mail-backup.company.com' is also not available the mail server will then try 'isp-backup.isp.net'. Supposing 'isp-backup.isp.net' was up it would accept the mail and then assume responsibility for forwarding it on to 'mail.company.com' because that host is the preferred final destination for mail addressed to 'mail.company.com'. If all three of these hosts are down the attempting mail server will wait for a while (usually around 5-20 minutes) and try all three again in preference order.

There is a lot more complexity to DNS than what has been described, but that is enough background information to get started. This next section will describe the ways in which the Apple Mail Server uses DNS to deliver mail.

How the Apple Mail Server uses DNS

The Apple Mail Server uses DNS to discover what host names should be considered "local" and to properly deliver mail to other mail servers. Without a DNS available the mail server will be essentially nonfunctional. Many mail delivery problems are the result of a misconfigured DNS server. The Apple Mail Server is designed to use the information returned by DNS to auto-configure itself so that it "knows" what names it can be called by.

Who am I?

One of the first things the mail server does when it starts up is determine what its own names are. It will use DNS to look up the PTR record for the server computer's IP address to discover the name or names that goes with it (Example server IP 15.0.0.21 = 'mail.zone.com'). This name will be marked as a "local" host in the host list. The server will also mark any hosts that end up being local when resolved through DNS. If a mail comes in that is addressed to 'alias.zone.com' and this name maps to 'mail.zone.com' using a CNAME record, then it will be marked local as well. MX-list hosts can also become "local" hosts if they point to the same computer, (zone.com MX-list; 5 mail.zone.com 10 nowhere.zone.com) 'zone.com' will be "local". All mail addressed to "local" hosts will be delivered to users in the mail servers Users & Groups list. Any hosts which are not local will need to be contacted for message delivery.

Server IP address 15.0.0.21
PTR for 21.0.0.15.in-addr.arpa. -> mail.zone.com
A-record for mail.zone.com -> 15.0.0.21
CNAME for mail.zone.com -> alias.zone.com

MX-list for zone.com
5 mail.zone.com
10 nowhere.zone.com

Local Host Names: mail.zone.com, alias.zone.com, zone.com

Using MX-lists
MX-lists are usually used in two ways. (1) Providing an alternative/backup mail server for a host, and (2) mapping a domain wide address to a specific mail server. It is important to have a backup mail server available to handle mail for your domain when your primary mail server goes down. You should configure an MX-list for your host which indicates mail for your mail server 'mail.wigit.com' should be delivered to 'mail.wigit.com' unless it is down, in which case it should be delivered to your backup server, 'mail-backup.wigit.com', or your Internet Service Provider's mail server, 'mail-backup.isp.net'.

MX-list for mail.wigit.com
10 mail.wigit.com
15 mail-backup.wigit.com
20 mail-backup.isp.net

The second use for the MX-list is to provide a "shortcut" email address for your mail users. An MX-list can be created for a host that doesn't have an A-record, this is called an MX-only record. It is used to simplify email addresses, instead of having an email address of 'user@mail.wigit.com' you can simply use 'user@wigit.com'. To do this, create an MX-only record which indicates mail for 'wigit.com' should go to 'mail.wigit.com'. You'll also want to include your mail server backups in this MX-list.

MX-only list for wigit.com
10 mail.wigit.com
15 mail-backup.wigit.com
20 isp-backup.isp.net

The mail server will also use the MX-list for all outgoing mail. It will look up the MX-list for each host and determine which computer should be contacted to deliver the mail. If the mail server comes across a host that does not have an MX-list it will attempt to connect to the A-record address for that host. The server will also try the A-record address if all hosts on the MX-list are unreachable.
Published Date: Feb 20, 2012

Microsoft Internet Explorer: "Java VM Could Not Be Loaded" Message

This article describes how to fix the Microsoft Internet Explorer error message that "Apple MRJ" could not be loaded.
This article has been archived and is no longer updated by Apple.
Usually the Java error message, shown in figure 1., appears because you have not installed Apple MRJ (MacOS Runtime for Java - Apple's implementation of a Java virtual machine).

Figure 1 MRJ error message

By default, when installing Internet Explorer 4.0.1 (either from Microsoft's standalone installer or via the Mac OS 8.5 installer), the preference is set for Internet Explorer to use Apple MRJ. If Apple MRJ software has not been installed, any time you visit a web site that contains java you will receive this error message. There are two ways to resolve this:

Solution One

Set the preference for Internet Explorer to use it's own java machine as opposed to Apple MRJ (see Figure 2). To do this, while you are using Internet Explorer, perform the following steps:

1. Choose Preferences from the Edit menu.
The Preferences window appears.
2. Select Java from the Web Browser drop-down list on the left side of the window.
3. Check Enable Java (if needed)
4. Select Microsoft Virtual Machine instead of Apple MRJ from the Java Virtual Machine pull-down menu.
5. Click OK.

Figure 2 Microsoft Internet Explorer Preferences dialog.

Solution Two

Another option is to install Apple MRJ. The installer can be downloaded from Apple Software Updates sites. The Apple MRJ installer is also available on the Mac OS 8.x and Mac OS 9 CD.

This article can help you locate the software update mentioned here:

- Article 14724: "**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.

Published Date: Feb 20, 2012

Power Macintosh G3 Desktop: CD does not mount

When I insert a CD into the CD-ROM drive in my Power Macintosh G3 (Desktop model), the CD icon does not appear on the desktop.
This article has been archived and is no longer updated by Apple.
Here are some steps you may want to try to resolve this issue:

Step 1
Try using a known good compact disc. The CD you are currently using may be unusable. Try a known good CD to see if the icon will show up on the desktop.

Step 2
Verify that the CD-ROM software is installed. You can do this by opening the Apple Menu Items and making sure the Apple Audio Player is present. If it is not present, go to step 3.

Step 3
Start up from the Power Macintosh G3 Desktop and Minitower Computers Software Install or Restore CD that came with the computer, and reinstall the CD-ROM software by reinstalling the System Software. Perform this step to assure a good copy of the CD-ROM software is installed in the System Folder.

Step 4
If the above steps don't solve the issue, you can get further assistance from the following support resources:

- The Apple Support website.
- A local Apple Authorized Service Provider. You can find a Service Provider through the Apple Support website.
- Apple, Inc. Call the number on the back of your Apple Support Card.

Published Date: Feb 20, 2012

Modem Initialization Strings

This article contains the initialization string for the iMac's internal 56K modem.

Note: The modem used in the iMac and the Power Macintosh G3 (Blue and White) are similar, thus the information provided in this article is relevant to the Power Macintosh G3 (Blue and White) also.
This article has been archived and is no longer updated by Apple.
The iMac modem init string is embedded in the modem script (CCL) that is stored in the Modem Scripts folder located in the Extensions Folder. These files can be inspected using a text editing application.

NOTE: Apple does not provide support for CCL file editing or support the use of any CCL's other than those included in the Mac OS.

The initialization strings that have been provided for the iMac modem scripts are as follows:

iMac Internal 56K:
AT&FE0Q0V1X4&C1&K3S95=1S7=75S0=0\\13

iMac Internal 56K (v.34 Only):
AT&FE0Q0V1X4&C1&K3S95=1S7=75S0=0+MS=11\\13

But these strings can be condensed even further.

Broken apart, we have "AT &F E0 Q0 V1 X4 &C1 &K3 S95=1 S7=75 S0=0 \\13"

Given that a number of these items are there for use within the CCL, they are not typically required for basic initialization of the modem.

Q0, V1, X4, &C1, &K3 and S0=0 are default settings for the modem.

These additional settings are used in the interface coding guidelines for the CCL so as to provide error checking redundancy during initialization.

If a register setting fails to initialize properly during this process, the CCL has additional logical statements that will provide feedback to the application that is dialing the modem.

So in removing them, we get: AT &F E0 S95=1 S7=75 \\13

While E0 disables echo in command mode, whether it remains here will be largely dependent upon whether the particular dialing program can make use of it. It is typically not required, so we remove it. The \\13 is for nothing more that a carriage return, to instruct the program to interpret the line. This with be handled by the dialing program, so is not required.

So now we have: AT&FS95=1S7=75

Finally, the W2 command implements connection rates for the connection. Other connection information that is defined by the "S95=1" is hardly ever used and can also be removed. So with the substitution of W2 for S95=1,

we get: AT&FW2S7=75

and, for V.34: AT&FW2S7=75+MS=11

For more information on AT commands, see the document "AT Commands.pdf," located in the Internal Modem folder in the Apple Extras folder on you hard drive.

You can also download the AT Commands PDF document. To download a pdf of the AT Command set, go to the Apple Manuals Web site query screen at **http://www.info.apple.com/manuals/manuals.qry**. Enter AT Command as your search string to locate then download the pdf document.
Published Date: Feb 20, 2012

Mac OS: Out Of Memory Errors With File Synchronization

The computer may stop responding when using the File Synchronization control panel to synchronize folders with custom icons.
This article has been archived and is no longer updated by Apple.

Symptom

An alert box appears with an error message that says: "Out of Memory", and the system stops responding. This happens when you use the File Synchronization control panel at the same time a dialog box is on the screen, and one of the folders you're synchronizing has a custom icon. For example, you've opened Preferences from the Edit menu while synchronizing a folder with a custom icon and this error occurs.

Solution

Download and install Mac OS 9.1, which is available in article 75103 "**Mac OS 9.1: Software and Before You Install Document**" .

You can work around the issue by eliminating custom icons on the folders you want to synchronize. Follow these steps to remove custom folder icons:

1. Close the File Synchronization control panel.
2. Find and select the folder with the custom icon.
3. Choose Get Info from the File menu.
4. Click the custom icon in the Get Info window to select it.
5. Choose Cut or Clear from the Edit menu, or press the Delete key.
6. Close the Get Info window.

Published Date: Feb 17, 2012

AppleShare IP: Improving Client Finder Performance

This article is about improving Client finder performance while using AppleShare IP.
This article has been archived and is no longer updated by Apple.

Symptom:

One of the share points on my AppleShare IP file server is a drop folder. Sometimes this folder contains many files, some of which are very large. When this happens, the clients logging into this share point experience slow performance in the Finder when mounting the directory.

Solution:

Reducing the information displayed about files in a shared directory on the server will improve client performance when mounting the shared directory. For example, disabling the option to calculate folder sizes (on the server) will improve client performance as the client will not need to display that information.

The following changes may be made on the server to improve performance in the Finder.

Mac OS 7.6.x

Open the Views control panel. Under List Views, choose the smallest icon and deselect all options that are not necessary.

Mac OS 8.1 and Mac OS 8.5

Open the shared directory and under the View menu, select View as List. Then under the View menu, select View Options. In the View Options window, choose the smallest icon and deselect all options that are not necessary.

All Mac OS Clients

All clients will benefit from disk cache settings of between 256K or higher under Mac OS 7.6.x, and 512K or higher under Mac OS 8.1. Clients using Mac OS 8.5 should use the default setting in the Memory control panel.

Virtual memory, when enabled on the client, will allow paging of Finder information to disk. The time necessary to page information to disk may cause temporary delays in the Finder.

In general, clients should connect to the server via TCP/IP rather than AppleTalk when possible. This should happen automatically, but can be ensured by entering the IP address of the server in the Chooser or in the Network Browser under Mac OS 8.5. However, if the client's TCP/IP setting is configured for MacIP, then TCP/IP connections may be slower than AppleTalk.

Clients should make aliases of server volumes rather than using the Chooser. This will save time and network bandwidth when opening a connection to the server.

Lastly, the client should close all open windows on the server volume if not actively being used. Making aliases of embedded directories, or accessing embedded directories from within an open application are also good ways to reduce network traffic.

Published Date: Feb 20, 2012

PowerBook G3 Series: How to Reset the Modem

This article explains how to reset the PowerBook G3 Series modem without restarting the PowerBook.
This article has been archived and is no longer updated by Apple.
Yes. You can reset the modem using AppleWorks or ClarisWorks or another communications application such as Zterm.

1. In AppleWorks, open a new Communications document.

2. Set the Connections Settings as follows:

- Method: Serial Tool
- Baud Rate: 57600
- Parity: None
- Data Bits: 8
- Stop Bits: 1
- Handshake DTR & CTS
- Current Port : Internal (or appropriate port)

3. Select Open Connection from the Session menu (this will let you type modem AT commands)

4. Type the following:

```
AT&F
```

Then press the Return key on your keyboard. Wait for the computer to return the OK message.

5. Type the following:

```
ATZ
```

Then press the Return key on your keyboard. Wait for the computer to return the OK message. This should reset the modem to the factory default settings.

Alternate Method

Here is an alternate, simpler method of resetting the modem, though it will work only if the software you intend to use relies upon the Modem control panel (for example, ARA 3.0 or OT/PPP):

Open the modem control panel and change the Connect via: to modem/printer port and then change it back to internal modem.

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, read article 24604: "**PowerBook G3, G3 Series: Identifying Different Versions**"
Published Date: Feb 20, 2012

Power Macintosh G3: No sound output quality setting available

I have a Power Macintosh G3 with a DVD ROM drive and I have installed OS 8.1 onto it. When I open the Monitors and Sound Control panel, the only available sound output quality is 0.00 kHz and there is no choice for sound monitoring source.
This article has been archived and is no longer updated by Apple.
These symptoms are very similar to those that occur when the personality card is poorly seated or malfunctioning. It may, however, be caused by the wrong CD being used to install Mac OS onto the computer. The following CDs will cause this behavior:

691-1924-A
691-1969-A
691-2042-A

The way to resolve this situation is to reinstall Mac OS from the CD that came with the computer.

For more information on this topic, please see article 24503: "Power Macintosh G3: Loose I/O Card Affects Monitors & Sound Control Panel"
Published Date: Feb 20, 2012

Mac OS X Server: ps Command (Process Status)

This article discusses the ps command in Mac OS X Server.
This article has been archived and is no longer updated by Apple.
Determining what processes are **already** running can be an important step in troubleshooting. The command 'ps' (entered on the command line in a Terminial window) with a variety of flags can give information on what is running for the user, the process id, the parent process id, and so forth.

Included in any ps display:

PID	the process id	the number used to identify this process when halting, killing or resuming this process
TT	control terminal	the session that initiated this process AND when ended, typically ends this process
STAT	state	for example (I)dle, (S)leeping, s(T)opped
TIME	-	cpu time used by the process
COMMAND	-	which command

Notice that shells (sh, csh, tcsh, bash, for example) show up as processes in most lists.

Following are some common examples of using ps.

ps

Issued alone, ps displays the processes running for that user. So, if you are logged in as mary and run ps, you will see the processes you, mary, are running.

```
[mowed:~] george% ps
PID TT STAT  TIME COMMAND
1749 p1 I     0:00 -tcsh (tcsh)
```

ps -a

Displays all processes with terminals. Typically, a user can only view their own processes.

```
[mowed:~] george% ps -a
PID TT STAT  TIME COMMAND
1749 p1 I     0:00 -tcsh (tcsh)
1775 p2 I     0:00 login -h 555.555.555.555 -p
1776 p2 I     0:00 -tcsh (tcsh)
1789 p2 I     0:00 -csh (csh)
1822 p2 S     0:00 -tcsh (tcsh)
1906 p2 R     0:00 ps -a
```

ps -l

Asks for a long listing, with fields PPID, CP, PRI, NI, ADDR, VSIZE, RSIZE and WCHAN as described below.

```
[mowed:~] george% ps -l
       F  UID   PID  PPID CP PRI BASE VSIZE RSIZE WCHAN STAT TT  TIME COMMAND
    4006 32561  1749  1730  0  10   10 2.75M 1.07M     0  I   p1  0:00 -tcsh (tc
    4006 32561  1776  1775  0  10   10 2.75M 1.08M     0  I   p2  0:00 -tcsh (tc
    4006 32561  1822  1789  0  10   10 2.75M 1.05M     0  S   p2  0:00 -tcsh (tc
```

new items:

F	-	flags associated with process.
UID	-	numerical user-id of process owner.
PPID	parent process id	gives the id of the process that started this process.
CP	-	short-term cpu utilization factor (used in scheduling).
PRI	-	process priority (non-positive when in non-interruptible wait).
VSIZE	-	virtual size of the process (in bytes).

RSIZE	-	real memory (resident set) size of the process (in bytes).
WCHAN	-	event on which process is waiting (an address in the system).

ps -x

Asks even about processes with no terminal. The most common processes with no terminal are daemons or other processes started by the system.

The flags can be combined. For instance, 'ps -alx' is commonly used to view system processes and their parent process ids. 'ps' can be used to display percent of cpu use or memory use as well as other nifty information not covered here. For more information, consult the System Reference Manual by typing the following command at the Terminal prompt:

```
man ps
```

Published Date: Feb 20, 2012

Sound Input: Difference between External Mic and Sound In

After installing Mac OS 8.5 or later, I have options for both "External Microphone" and "Sound In" in the SoundSource Strip and the Monitors & Sound control panel. What is the difference between the two?
This article has been archived and is no longer updated by Apple.
Mac OS 8.1 gave you the option of using the external sound-in jack by selecting the "Sound In" option in the Control Strip or the Monitors & Sound control panel. However, the sound would play through to the speakers by default which could cause feedback when the external sound source was a microphone.

Mac OS 8.5 and later, addresses that issue by offering an "External Microphone" source which uses the same sound-in jack, but turns speaker playthrough off by default.
Published Date: Feb 20, 2012

Power Macintosh G3: Where Is IomegaDrive Option Application?

Learn where to find the IomegaDrive Option Application for the Power Macintosh G3.
This article has been archived and is no longer updated by Apple.
The Power Macintosh G3 Rev2 (blue) CD, as well as the Power Macintosh G3 All-in-one CD, does not have the IomegaDrive Option application. You can download "IomegaWare Tools Package" from Iomega and also get IomegaDrive Options and other useful software. The package installer will put IomegaDrive Options into the Control Panels Folder.

The IomegaDrive Options application is used to set the drive, and to replace the driver on any inserted Zip disk with the same version as in the System Folder.
Published Date: Feb 20, 2012

AppleWorks 5.0.3: Where Is The Introduction to AppleWorks Tour?

The AppleWorks 5 User's Manual and Quick Help refer to an Introduction to AppleWorks menu item. This item was not included on the AppleWorks CD. This article explains why it was not included.
This article has been archived and is no longer updated by Apple.
When ClarisWorks 5.0.x was being updated to AppleWorks 5.0.3, the Introduction to ClarisWorks tour was removed from the installer because the tour referred to ClarisWorks instead of AppleWorks. Since the AppleWorks team wanted to focus on making sure AppleWorks 5.0.3 was compatible with the latest Power Macintosh G3 and iMac computers, Mac OS 8.1, Mac OS 8.5 and PC computers running Windows 98.

Although the references to ClarisWorks in the AppleWorks User's Manual and Help were changed to AppleWorks, unfortunately, the references to the Introduction to AppleWorks tour were not removed before AppleWorks 5.0.3 shipped. However, **all** information that was in the Introduction to ClarisWorks tour is in the AppleWorks 5 User's Manual and AppleWorks Help.
Published Date: Feb 20, 2012

Power Macintosh G3: Maximum Wattage Used By PCI Cards

This article provides the electrical specifications for four of the cards currently offered through the Build To Order (BTO) web page.
This article has been archived and is no longer updated by Apple.
Following are the electrical specifications for four of the cards currently offered through BTO:

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Card	Maximum Wattage
Ultra Wide SCSI card	10 watts maximum
128-bit 2D/3D graphics accelerator card	8.925 watts maximum
Firewire card	10 watts maximum (1)
10/100 Ethernet card	6 watts maximum
Notes (1) With all three ports of the firewire card in use, the card uses approximately 1 watt. However, since the firewire specification allows the card to provide "bus power" to connected devices which don't provide their own power, and the card is fused at a maximum of .75 amps (at 12v), that adds another possible 9 watts, for a maximum of 10 watts.	

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The contents of the Power Macintosh G3 Technical Information Guide can be found in the following article:

Article 24213: "**Power Macintosh G3: Technical Information Guide**"
Published Date: Feb 20, 2012

AppleShare IP: Application Launching and Saving

This article discusses several issue with launching and saving applications while using AppleShare IP.
This article has been archived and is no longer updated by Apple.
There are several issues here for discussion:

- Privileges set at the AppleShare IP server
- Read vs. read/write will affect how an application is launched, and its ability to open and save documents.

There have been several updates including ClarisWorks 5.0v2 and HyperCard 2.4.1 to correct issues when using these applications located on a server.

ClarisWorks 4

ClarisWorks 4.0v6 allows the saving of documents on volumes that are larger than 2 gigabytes. To update to version 4.0v6 from version 4.0v1, two updates must be run.

Select the appropriate ClarisWorks 4.0v5 Updater (for Education or Retail.) After updating to 4.0v5, use the ClarisWorks 4.0v6 Updater. Both updates may be found at Apple Software Updates sites.

Customers who have ClarisWorks 4.0 must upgrade to ClarisWorks 4.0v1 or 5.0 to resolve this particular issue.

ClarisWorks 5

There are two issues that may affect ClarisWorks 5 users.

ClarisWorks 5.0v2 corrected an issue when saving documents when the application was launched from a read-only volume. Customers can upgrade to ClarisWorks 5.0v2 from version 5.0 directly using the 5.0v2 updater found at Apple Software Updates sites.

Second, privileges set at the AppleShare IP server, read vs. read/write, will affect how an application is launched, and its ability to open and save documents.

HyperCard 2.4.1

Hypercard 2.4.1 corrected an issue which would result in an erroneous "Can't open stack. File is busy." error message.

If a HyperCard stack is copied to an AppleShare server, then that stack is opened from the server, Hypercard will give an error: "Can't open Stack. File is busy." Workstations can still access the stack over the network. The Hypercard 2.4.1 updater can be found at Apple Software Updates sites.

The updater works on HyperCard 2.3, 2.3.5, or 2.4.

This article can help you locate the software updates mentioned here:

- Article 14724: "**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.

Published Date: Feb 20, 2012

Sherlock: Internet Config Conflict

I am having trouble using Sherlock. When I try to perform an Internet search, I get an error dialog stating, " A network error occurred. Check your network connections and settings, then try again." Can you help?
This article has been archived and is no longer updated by Apple.
This error message may appear for a number of reasons. One possible cause is having an older version of Internet Config.

There is an Internet Config preference property (kICUseHTTPProxy) that is defined to be a boolean (1 byte). It has not been determined exactly which application does this, but at least one application sets this to be a word (2 bytes). When Sherlock asks Internet Config for this preference property, an error is returned because Sherlock is asking for a byte, but the property is stored as two bytes.

Follow these steps to work around the issue (Mac OS 9.1 users should skip Steps 2 and 3):

1. Open the Internet control panel.
2. Choose User Mode from the Edit menu; a dialog box appears.
3. Choose Advanced User Mode by clicking its radio button; then click OK to dismiss the dialog box.
4. Click the Advanced tab in the Internet control panel.
5. Click the Firewalls icon in the scrolling list.
6. Click the Web Proxy checkbox to select it.
7. Choose Save Settings from the File menu.
8. Click the Web Proxy checkbox to deselect it.
9. Choose Save Settings from the File menu.

This resets the kICUseHTTPProxy Internet Config preference property to be stored as a byte instead of 2 bytes.

For related information, please see the following articles:

Article 24841: "**Sherlock: 'A Network Error Has Occurred' Message**"
Article 24894: "**Sherlock: Can't Find ICAp;InternetConfigLib**"
Article 60763: "**Mac OS: Type 3 or Type 10 Error May Occur if Internet Config Is Missing**"
Published Date: Feb 20, 2012

AppleShare IP 6.1: Upgrading To AppleShare IP 6.1 Read Me

This article is comprised of the Read Me for Upgrading To AppleShare 6.1. This software was released by Apple on December 4, 1998 and is available for download from the Apple Software Updates Web site at http://www.apple.com/swupdates.
This article has been archived and is no longer updated by Apple.

Upgrading to AppleShare IP 6.1

This document contains important information and upgrading instructions for AppleShare IP 6.1. You may want to print this document and keep it for future reference.

The 6.1 update of AppleShare IP provides several new features and enhancements, and fixes problems from previous releases. You must have a retail version 6.0 of AppleShare IP to install this update. The 6.1 update will not install on seed releases of AppleShare IP.

New Features

- Mac OS 8.5 compatibility
- remote administration-the ability to securely administer your server from any Web browser-capable Macintosh or PC-compatible computer.
- TCP Filter software for extra security
- ability to host multiple Web sites on a server
- file sharing performance improvements
- ability to log into a user's account with the administrator's password for access privileges verification
- support for shared mail folders over IMAP
- a First Aid tool for verifying, repairing, and backing up key AppleShare IP data files
- an advanced configuration tool for the Web & File Server
- Password-protected printing support (requires LaserWriter 8.6.1 or later)

New System Requirements

The following additional system requirements are new with AppleShare IP 6.1. Previous system requirements still apply; see your AppleShare IP 6.0 Getting Started manual for details.

- Mac OS 8.5 is recommended. TCP Filter software requires Mac OS 8.5; all other features require Mac OS 8.1 or later.
- Installation requires approximately 75 MB of free disk space.

Installation Instructions

Preparing Your Computer

Before installing AppleShare IP 6.1, you need to back up your System Folder using a backup application that can copy invisible files. Backing up will allow you to restore a copy of the previous Users & Groups Data File and the AppleShare PDS file (an invisible file installed on every volume), and make it possible for you to switch back to your previous version of AppleShare IP if you desire. When you make your backup copy, make sure that the AppleShare IP Web & File Server is running.

Installing AppleShare IP Software

You can install the AppleShare IP software using either the Easy Install or the Custom Install option. In the Installer, be sure to select the disk that holds the current AppleShare IP 6.0 folder.

To perform an Easy installation, double-click the icon labeled Installer and follow the instructions onscreen for an Easy Install.

To perform a Custom installation, follow these steps:

1. Double-click the icon labeled Installer and follow the instructions onscreen.
2. When the Install AppleShare IP window appears, choose Custom from the pop-up menu.
3. Select the checkboxes next to the software you want to install, then click OK.
4. Click Install to install the software, then follow any remaining instructions that appear onscreen.

Installing AppleShare 3.8.1 Client Software

To update client computers to AppleShare 3.8.1, see the Read Me in the Client Software 3.8.1 folder on your hard disk. See your license agreement for the number of clients your AppleShare IP server may have.

Installing Mac OS 8.5 and AppleShare IP 6.1

If you are installing Mac OS 8.5 at the same time as you are installing AppleShare IP 6.1, be sure to install Mac OS 8.5 first following the instructions that come with that software, then restart with Extensions off by holding down the shift key while restarting, and then install AppleShare IP 6.1.

To preserve your AppleShare IP 6.0 setup, which requires OpenDoc, do not select the "Clean Install" for Mac OS 8.5.

If you choose to do a clean install of Mac OS 8.5, you will need to install the following software in this order after the Mac OS 8.5 installation:

1. Reinstall OpenDoc from the Mac OS 8.1 CD and restart.
2. Reinstall AppleShare IP 6.0 and restart the computer with Extensions off by holding down the shift key.
3. Install the AppleShare IP 6.1 update.
4. Copy the file "Users & Groups Data File" from the Preferences folder in the backup copy of your System Folder to the Preferences folder inside your newly-created System Folder.

Setting Up AppleShare IP

Using Easy Setup

You need to use the AppleShare IP Easy Setup program before you can use AppleShare IP. AppleShare IP Easy Setup asks a few questions about how you plan to use AppleShare IP and sets up your AppleShare IP servers accordingly.

To use AppleShare IP Easy Setup, open the AppleShare IP folder on your startup disk and double-click the AppleShare IP Easy Setup icon. Follow the instructions that appear onscreen. Your previous serial number will appear automatically; you do not need to enter a new serial number.

If you need more help using AppleShare IP Easy Setup, see your AppleShare IP 6.0 Getting Started manual.

Setting Up Remote Admin for the First Time

To use the Web browser-based remote administration feature in AppleShare IP, you need to enable it in the Web & File Admin program. You also must be designated as an administrator in that program's Users & Group List.

For extra security, you can use TCP Filter software to allow access to the AppleShare IP Remote Admin application only from specific computers. See the TCP Filter section of AppleShare IP Help for details.

Follow these steps:

1. Click the Open Web & File Admin program button in the AppleShare IP Manager. Enter your name and password in the Administer Web & File Server dialog box, then click OK.
2. Make sure the Web & File server is running by checking the status line in the Web & File Server Activity window. If it's not running, choose Start Web & File Server from the Server menu.
3. Choose Web & File Server Settings from the Server menu.
4. Select the "Allow remote administration via a Web browser" checkbox.
5. Choose Web from the pop-up menu.
6. Make sure the Enable Web Service checkbox is selected.
7. Click Save.

Your changes take effect immediately. To administer your server remotely from any computer on the network, type the following URL in any industry-standard Web browser:

http://<your Web server's DNS name>/.admin

Contents of This Update

This update installs a folder called AppleShare IP 6.1 on your hard disk. If you use the Recommended Installation option, the folder will include the following files:

- AppleShare IP 6.1 Read Me, which contains late-breaking information
- AppleShare IP Easy Setup, a program that you use after installing AppleShare IP to perform first-time setup tasks.
- AppleShare IP First Aid folder, which contains the AppleShare IP First Aid application for repairing key AppleShare IP data files, and the First Aid Read Me file.
- AppleShare IP Help and AppleShare IP Remote Help, HTML documents that explain how to administer your servers.
- AppleShare IP Manager, a program that allows easy access to the AppleShare IP administration programs.

- Mail Server folder, which contains the Mail Admin program, the AppleShare IP Mail Tool, the Mail Tool Read Me file, an alias to the Mail Server, and two Apple Guide (Help) files.
- Print Server folder, which contains the Print Admin program and two Apple Guide (Help) files.
- Web & File Server folder, which contains the Web & File Admin program, an alias to the AppleShare IP Web & File Server, and two Apple Guide (Help) files.
- Help Files folder, which contains the HTML documents for AppleShare IP Help.
- SimpleText, a simple word-processing program that opens Read Me files.
- TCP Filter folder, which contains the TCP Filter Admin application and two Apple Guide (Help) files.

Other folders and files are installed in the following locations:

- AppleShare Client folder is placed on your hard disk. This folder contains the Installer program, the AppleShare IP Client 3.8 User's Manual, a Read Me file, and the AppleShare Client 3.8.1 Chooser extension.
- Web Folder is placed on the hard disk. It contains a file named Default.html (your default home page) and associated image file, Plug-ins folder, Error Files folder, and the Remote Admin folder, which contains files for the AppleShare IP Remote Admin application. (Note: Existing Default.html files and associated images are not lost during the upgrade process.)
- AppleShare IP Preferences folder is installed in the Preferences folder inside the System Folder.
- AppleShare IP Editors folder is installed in the AppleShare IP Admin Libraries folder in the Editors folder in the System Folder.

The following files and folders are installed in the Extensions folder inside the System Folder on your startup disk:

- Apple Browser Launcher
- AppleShare IP Libraries
- AppleShare IP Mail Config
- AppleShare IP Mail Server
- AppleShare IP Print Config
- AppleShare IP Print Server
- AppleShare IP Registry
- AppleShare IP Registry API
- AppleShare IP UAM folder
- AppleShare IP Web & File
- AppleShare IP Web & File Config
- AppleShare IP Web & File Server
- MWRuntimeLib
- PC Net Exchange
- TCP Filter

If you use the Custom Install procedure, a subset of these files and folders is installed on your installation disk.

For More Information

See AppleShare IP Help. You can open AppleShare IP Help by choosing AppleShare IP Help from the Help menu within any AppleShare IP administration program, or by double-clicking the AppleShare IP Help icon in the AppleShare IP 6.1 folder.

If you are using Remote Admin, see AppleShare IP Remote Help. To access Help while you are using the Remote Admin application, click the Help link at the bottom of any Remote Admin page in your Web browser. You can also double-click the AppleShare IP Remote Help icon in the AppleShare IP 6.1 folder.

For recent downloads, refer to the Apple Downloads page at http://www.apple.com/support/downloads/ and search AppleShare IP.
Published Date: Feb 20, 2012

Mac OS 8, 9: More Time Servers For Date & Time Control Panel

This article lists other time servers that can be used with the Mac OS 8 and 9 Date & Time control panel.
This article has been archived and is no longer updated by Apple.
The US Naval Observatory has definitive information on time servers at: http://tycho.usno.navy.mil/ntp.html

Public NTP Time Servers are divided into stratum 1 and stratum 2 servers. Further information on their usage can be found at:

http://www.eecis.udel.edu/~mills/ntp/servers.html

The National Institute of Standards and Technology (NIST), an agency of the Department of Commerce maintains several Time servers across the USA.

NIST Network Time Servers		
Name	**IP Address**	**Location**
time-a.nist.gov	129.6.16.35	NIST, Gaithersburg, Maryland
time-b.nist.gov	129.6.16.36	NIST, Gaithersburg, Maryland
time-a.timefreq.bldrdoc.gov	132.163.135.130	NIST, Boulder, Colorado
time-b.timefreq.bldrdoc.gov	132.163.135.131	NIST, Boulder, Colorado
time-c.timefreq.bldrdoc.gov	132.163.135.132	NIST, Boulder, Colorado
utcnist.colorado.edu	128.138.140.44	University of Colorado, Boulder
time.nist.gov	192.43.244.18	NCAR, Boulder, Colorado
nist1.datum.com	209.0.72.7	Datum, San Jose, California

How to Add a Time Server to the Date & Time control panel

1. Open the Date & Time control panel
2. Check "Use a Network Time Server".
3. Click the "Server Options" button.
4. Select Edit List from the Network Time Server menu.
5. Click the Add button in the Edit Server List window.
The Add window appears.
6. Enter the location from above into the Descriptive Name field
7. Enter either the name or IP address into the Server Address field.
8. Click the "Add" button to complete the entry.
9. Select a Time Server in the list.
10. Click the "Done" button in the Edit Server List window.

Your computer is now ready to set the time using a Time Server.

How to Activate the Time Server Option

1. Click one of the first two radio buttons for a periodic time update for your Macintosh, or to set the time immediately, click the third radio button "Set Time Now".
2. Click the "OK" button to complete the Server Options window.

Published Date: Feb 20, 2012

AppleWorks for Windows: Importing Pictures Changes Bit Depth

When I import a 24-bit image in AppleWorks for Windows when the color is set to 8-bit (256 colors), the image is dithered to 256 colors. When the document is saved and opened with the color set to 24 or 32-bit, the image still appears to be only 256 colors. Can you help?

Note: AppleWorks is the new name for ClarisWorks.
This article has been archived and is no longer updated by Apple.
AppleWorks for Windows does indeed change the color depth of imported graphics. To work around this, set the color depth to the maximum before importing pictures. The image will be imported with correct bit depth. The image will be dithered on those systems with smaller bit depths but will display properly on systems with matching or greater bit depths.
Published Date: Feb 20, 2012

Drive Setup: Checking For Bad Blocks

Does the Apple Drive Setup program re-map the hard disk to set aside bad or unusable sectors like a low-level format, or does it simply set up blocks and mark them all as available?
This article has been archived and is no longer updated by Apple.
Drive Setup reallocates (spares) bad blocks on all SCSI and Ultra-Wide Apple hard drives only. You must select Test Disk or initialize the drive with the write zero option selected. Selecting the low level format option however, results only in the drive rewriting the header.

Erasing the data portion of each block.

The SCSI low level format option does not verify, and thus does reallocate bad blocks. Choose low level format carefully as any difficulties encountered once the format begins can prevent use of the drive. Specifically, power failure, or otherwise interrupting the drive before format is complete may cause the drive to appear as unusable. To remedy this situation, you must run Drive Setup and initialize with the low level format option selected and allow the format process to complete. As a rule, use initialization with only the write zero option selected followed by Test Disk to achieve the best level of block data integrity.

ATA (IDE) drives internalize tracking and sparing of bad blocks. Drive Setup and ATA drivers thus have little control over this process. Which is why the low-level format option is dimmed when initializing an ATA (IDE) hard drive. Reallocation (sparing) of bad blocks that the ATA drive tracks will occur when the block is subsequently written to. Thus the best way to force the drive to reallocate bad blocks is to initialize using the write zeros feature. Use Test Disk to verify surface integrity only. Given this strategy, there on occasion may be a need to initialize using write zeros, verify using Test Disk and if any errors occur, attempt to reinitialize using write zeros again.

Selecting initialize without selecting either low level format, write zeros or both for an SCSI drive, or without selecting write zeros for an ATA drive will only write zeros to the first 1000 blocks of the drive. It will also write the partition map area including drivers (generally blocks 0 through 700), and in cases of Mac OS Standard or Mac OS Extended partitions, call on the operating system to initialize each volume and write the appropriate volume information.

Test Disk performs only a read-only test of all blocks. You should not rely on Test Disk to force reallocation of bad blocks on ATA drives.

Related Documents

30020 Drive Setup: Version History
21103 Troubleshooting Hard Drives: Reformatting

Published Date: Feb 20, 2012

iMac: Firmware Update Message Keeps Showing At Startup

I just installed the iMac Firmware Update on my iMac and now every time I start up my computer, I get a message "Your iMac's firmware is up-to-date." What is happening, and what can I do about it?
This article has been archived and is no longer updated by Apple.
Typically the iMac Firmware Updater will place a copy of itself in the "Startup Items" folder before it updates the firmware. Upon restarting, the update will launch again. If the firmware has been updated, the following message will appear.

Figure 1: Dialog box noting iMac firmware update.

After clicking OK, the application will automatically move itself to the trash.

The behavior you describe results from the application not being moved to the trash. In that case, the dialog will appear every time the computer is restarted.

Evidently, there is a file or folder named "iMac Firmware Updater" in the trash.

Solution

To make the dialog quit appearing, simply empty the trash or remove the file named "iMac Firmware Updater" from the Startup Items folder.

Published Date: Feb 20, 2012

Power Macintosh G3: Error -2004 When Playing System Sounds

I am getting the error message -2004 when double-clicking system sounds on a Power Macintosh G3 Desktop or Mini Tower computer when the system is started up from the system CD, even if double-clicking on system sounds contained in the System Folder on the CD. What is causing this to occur?

This article has been archived and is no longer updated by Apple.

This can occur if the personality card in the computer has become unseated. Once the personality card is reseated properly (following all appropriate safety precautions), the error should go away and the system sound should operate properly. If you hear no sound after reseating the card, try these things (in order):

- Check all external speakers/headphones as possible sources of the problem.
- Check the speaker connection to the logic board. (An Apple Service Provider may need to do this for you.)
- Replace the speaker. (An Apple Service Provider will likely have to do this for you.)

Published Date: Feb 20, 2012

Apple Modem Update 1.3: Read Me

Apple Modem Update, version 1.3, was released on December 23, 1998. It requires the internal modem that came with the PowerBook G3 or iMac computer. This software consists of a self-mounting Disk Copy compressed image (.smi) file. Download this software to your hard drive and then double-click it to use it. You do not need Disk Copy to access .smi files. The software can be downloaded from the Apple Software Updates Web site at http://www.apple.com/swupdates.
This article has been archived and is no longer updated by Apple.

Important Information About the Apple Modem Updater

This updater supports the internal modem which came with your PowerBook G3 Series or iMac computer.

Your existing modem was originally shipped with the latest firmware available, however, 56K modems are still in their infancy and will be undergoing changes over the next several months. If your modem supports only the K56flex protocol (shipping in the first PowerBook G3 Series computers) or if you are experiencing unreliable connections on your V.90 internal modem, Apple recommends that you upgrade your modem firmware. The Apple Modem Updater installs the latest Rockwell firmware, based on version 2.2.

Updating Your Modem

Before updating your modem, make sure the modem and modem port are not in use. Turn Fax Answering off and log off any open Internet/modem connections. (Disconnecting the phone line will also work.)

IMPORTANT Do not cancel the installation process once you start updating. This modem updater takes approximately five minutes to complete.

To update your modem firmware:
1. Double click on the icon Apple Modem Updater.
2. Click Start. Status messages appear as the updater locates the modem and checks for the current firmware version and type of modem.
3. Click Done when the update is complete.
You do not need to restart your computer after updating the modem firmware.
4. If you already installed a V.34 modem script, open the Modem control panel and select:
-- PowerBook G3 Internal 56K (for PowerBook G3 Series users)
-- iMac Internal 56K (for iMac users)
Note: This script forces the V.90 modem to connect at V.34 speeds and was necessary if you had problems connecting in V.90 mode.

If you experience a problem with the Apple Modem Updater, shut down your computer. This resets the modem. Then update the modem firmware again. Restarting the computer will not work; it must be shut down to reset the modem.

If V.90 connection reliability issues still exist after updating the modem, reselect the V.34 modem script.

If the problem still exists, see Apple's support web site (http://www.apple.com/support/) for up-to-date information on the Apple Modem Updater.

Future Modem Firmware Updates

New firmware updates may continue to be released for 56K modems until the technology stabilizes. For more information on V.90 modem upgrade information, see Apple's support Web site: http://www.apple.com/support

Additional information regarding this update is available in Knowledge Base article 24773: "**Modem Updater: Revised Read Me**"

Published Date: Feb 20, 2012

Apple Modem Update 1.3: Revised Read Me

This article contains additional information regarding the Modem Update 1.3 software.
This article has been archived and is no longer updated by Apple.
Revised Apple Modem Update 1.3 Read Me

If your modem supports only the K56flex protocol (shipping in the first PowerBook G3 Series computers) or if you are experiencing unreliable connections on your V.90 internal modem, Apple recommends that you upgrade the modem firmware. The Apple Modem Updater installs the latest Rockwell firmware, based on version 2.2. For additional information, please see the Read Me included with this software.

Which version of the Apple Modem Updater 1.3 should I use?

If the modem was purchased in:

- United Kingdom - use the UK version
- France - use the FR version
- Germany - use the DE version
- Any country other than: France, Germany, the U.K., The Americas (North, Central, and South), Hong Kong, Taiwan, Singapore, and Japan - use the Z version
- The Americas (North, Central, and South), Hong Kong, Taiwan, and Singapore - use Apple Modem Updater 1.2.1

IMPORTANT INFORMATION NOT CONTAINED IN THE ORIGINAL READ ME:

Modem performance:

After you have updated the modem you may notice that the connection speed that is reported when you first establish a connection may be lower than it was prior to the upgrade, however the modem throughput will be at least as good and often better than before the upgrade. Throughput is the measure of how quickly a certain amount of data is transferred from one modem to another. It is important to remember that the connection speed that is reported is only the initial connection speed. The modems will adjust their communications speed as line conditions require. A faster connection speed does not necessarily indicate a higher throughput, factors like resending data due to noise on the phone lines will lower overall throughput. This is discussed in more detail in the following Knowledge Base articles:

Article 30734: "**V.90 Protocol: Connectivity Discussion**"
Article 24482: "**A56Kbps Modems: Getting The Fastest Connection**"

PowerBook G3 Series:

When you are updating a modem in a PowerBook, connect the PowerBook to the AC adapter to guarantee an uninterrupted supply of electricity to the PowerBook.

PowerBook G3 Series Modem Extension, v 1.0.2

The PowerBook G3 continues to supply power to the built in modem for 30 seconds after an application has used the modem. This minimizes the time it takes to start the next connection.

With version 1.0 of the modem extension, if the PowerBook G3 is put to sleep immediately after terminating a connection, the modem will continue to draw power which reduces the amount of charge left in the battery.

Version 1.0.1 corrects this problem by turning power off to the modem when the PowerBook G3 is put to sleep.

Version 1.0.2 replaces version 1.0.1 and includes the following fixes:

- Changes the sound monitor source to 'None' while powering the modem on or off in order to prevent the 'pop' sound.
- At close time, restores the sound monitor source to whatever it was at open time, unless the user has changed it in the meantime.
- Improves power on/off and reset strategy to recover from possible modem error conditions.

All PowerBook G3 Series computers with the Apple built in modem should upgrade to version 1.0.2 of the modem extension which is available from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Installation:

1. Drag the PowerBook G3 Series Modem extension on top of the System Folder.
2. You will be informed that extensions need to be placed in the Extensions Folder. Click OK.

3. You will be informed that an extension with the same name already exists in the Extensions Folder. Click OK to replace the existing extension.*
4. Restart the PowerBook.

* If the name of the existing modem extension is not exactly the same as the name of the newer extension it will not be replaced by the newer extension as indicated in step 3 above. If you do not see the dialog described in step 3, please manually drag the older modem extension out of the Extensions folder and onto the Desktop. This will guarantee that the newer modem extension will be used. The older extension may be deleted after the PowerBook is restarted.

Communicating at an unknown rate:

If your modem originally supported only the K56flex protocol (shipping in the first PowerBook G3 Series computers), the original modem script (CCL) does not include all the possible V.90 rates. Updated and localized modem scripts will be posted in the future. The Z version of the Apple Modem Updater 1.3 contains US-English V.90 modem scripts that can be used in the interim.

The full content of the original read me is available in Knowledge Base article 24772: "**Apple Modem Update: Read Me**"
Published Date: Feb 20, 2012

Remote Access: Using the Terminal Window to Send AT Commands

This article describes how to configure Remote Access for sending AT commands from the terminal window.
This article has been archived and is no longer updated by Apple.
1. Open the Modem control panel and choose one of the Null Modem scripts as shown in Figure 1.

Figure 1 The Modem control panel configured for Null Modem

2. Close the control panel and save the changes when asked.

3. Open the Remote Access (or PPP) control panel and enter any name and number as shown in Figure 2. A password is not required. There's no need to change any information already entered there.

Figure 2 Remote Access control panel

4. Click the Options button and configure the Protocol pane to enable "Connect to a command-line host" and "Use terminal window," as shown in Figure 3.

Figure 3 Remote Access Options window

5. Click OK, then click Connect in the Remote Access window. A terminal window will appear, as shown in Figure 4. AT commands can be entered here.

Figure 4 Remote Access PPP Terminal window

6. Click Cancel when finished.

Published Date: Feb 20, 2012

iMac Update 1.1: Misidentified With Apple System Profiler 2.1.2

I have encountered a few difficulties since installing the iMac Firmware Update and the iMac Update 1.1. Thinking that they may be associated with one of the updates, I used the Apple System Profiler to check the version numbers and it appears that Mac OS ROM version is not as recent as the one that was previously installed. Should I put the older Mac OS ROM file back?
This article has been archived and is no longer updated by Apple.
First, Apple does not recommend going back to the previous Mac OS ROM file.

Your confusion results from the incorrect information being displayed in the Product Information section of Apple System Profiler 2.1.2.

Mac OS ROM file version as seen in Apple System Profiler 2.1.2 under Production Information:

```
iMac Update 1.0     1.1.5
iMac Update 1.1     1.1b2
```

This is not correct.

Use the information found in About This Computer or the Get Info box for the Mac OS ROM file to see what it should say.

After installing the iMac Update 1.1, About This Computer states that the Mac OS ROM file is version 1.2.1.

You can also use the USB section of "Devices and Drivers" of Apple System Profiler. If you have the iMac Update 1.1 installed the USB version will show up as 1.1. If you see 1.0.1 or 1.0, then you have an older Mac OS ROM file on your iMac and should install the update.
Published Date: Feb 20, 2012

iMac: Bundle Info Available In Hard Drive "Get Info"

When I get "Info" on my iMac hard drive, I have noticed the following number in the "Comments" window: `694-1108`. What does that mean?
This article has been archived and is no longer updated by Apple.
That number identifies the software bundle that came with your computer. This numbering system is being used on all Macintosh computers at this time. Here is a chart that lists the software bundle number associated with each iMac release.

Configuration	Software Bundle
Original iMac (/A version)	694-1108
Original iMac (/B version)	694-1134
iMac 266	694-1155

The Apple System Profiler also provides this information in its Product Information section, listed under "Bundled Software".
Published Date: Feb 20, 2012

No Modem Dial Tone Due to Voice Mail System

This article describes a situation where phone company based voice mail systems may interfere with the operation of an internal modem.
This article has been archived and is no longer updated by Apple.
Some telephone companies use an audible message waiting indicator or a stutter tone that you hear when you pick up the phone. The stutter tone will prevent your modem (including the iMac's) from detecting the dial tone.

There are three possible workarounds:

- Check your voice mail before attempting to use the modem. The stutter tone should go away and the modem will operate as designed.
- Delay the dialing until after the stutter tone by adding a comma or two in front of the telephone number. This will cause the modem to pause long enough to allow the stuttering to complete. (A comma tells the modem to wait one second. Hence, three commas will cause a three-second delay.)
- Selecting "ignore dial tone" in the Modem control panel. This will allow the dialing to proceed without the modem listening for a dial tone.

In the case of America Online (AOL) and other PPP dialing applications, the Modem control panel is not used. A more advanced workaround may be required. For example, adding the AT command "X1" in the initialization string will enable blind dialing which is the same as "ignore dial tone." AOL users should check with AOL support for additional recommendations on this issue.

If you do not have voice mail on your phone line, plug in a regular phone to the jack that your modem is using and try dialing. You could have lost service to the jack, in which case you need to contact your telephone service provider.
Published Date: Feb 20, 2012

iMac and iBook: World Book Encyclopedia Serial Number

When trying to install the World Book Encyclopedia software that came with my new computer, the installer tells me to type in the serial number, and states that the serial number is located on the back of the package that the CDs came in. Where can I find this serial number?
This article has been archived and is no longer updated by Apple.
Note: This issue does not apply to Rev. A or Rev. B iMac computers.

During the installation for the World Book Encyclopedia software, the installer program will pause for you to enter the 12-character CD-Key code. The regular instructions ask the user to look for the CD-Key code on the back of the disc holder containing the World Book discs.

For the iMac bundled version, the CD-Key code may be on the back of the "World Book Macintosh QuickStart" card that comes inside the accessory kit box of your iMac, or on a label affixed to the CD sleeve itself.

Input all the letters and numbers without hyphens or spaces; capitalize all letters.

If you experience problems installing or using World Book * Macintosh Edition, first consult the Read Me file located in the World Book folder on the hard disk; and then if necessary visit World Book's Web site, which can be found at this address:

http://www.worldbook.com
Published Date: Feb 20, 2012

Adobe Premiere: Sync Problems When Exporting Using DV Plug-in

When I export an Adobe Premiere project using the Apple DV Export plug-in, the resulting audio and video do not stay in sync. Why is this?
This article has been archived and is no longer updated by Apple.
The DV Export plug-in is designed to take a completed movie and export it to a camera or deck. To maintain synchronization, first export the project as a DV movie, then open the movie in Premiere, and send it to the camera or deck using the DV Export option.

The lowest supported version of Adobe Premiere is 4.0.2, however Apple recommends using version 5.x or higher.

Note: The Apple DV Export plug-in for Adobe Premiere is not supported with QuickTime 4 or later.
Published Date: Feb 20, 2012

Digital Video: Movies Look Bad When Played Back on Mac and/or TV

Sometimes when I play back a digital video (DV) clip that I captured with my DV camera, it appears blotchy, blocky, out of focus, and the colors are washed out. Why is this?
This article has been archived and is no longer updated by Apple.
Reason: The process of decoding DV data, even over FireWire, requires large amounts of data and many computations. To maintain frame rate and view the movie at a normal size, only about one-fourth of the DV data is used in displaying the movie to the screen. However, the underlying DV data is still at full quality.

Computer Display Solution: The QuickTime Pro-enabled QuickTime Player can be used to display a DV movie at High Quality. To do this, open the movie with QuickTime Player, and select Get Movie Properties from the Movie menu. In the Movie Info window, select Video Track in the left popup menu, and select High Quality in the right popup menu. Check the High Quality Enabled checkbox to view the movie at full quality.

Frame rate will decrease substantially with this setting. The movie can be saved with this setting and from then on, when the Movie is played back in any application, it will be played at High Quality.

In order to maintain full frame rate during the editing and playback of DV clips, Final Cut Pro, iMovie, and other QuickTime-based applications typically default to using Low Quality. The important thing to remember is that Low Quality is strictly a **playback** mode for computer monitors, and does not affect the quality of the DV image that is sent out through FireWire to the DV device or NTSC monitor. The Apple FireWire output is always High Quality.

Note: NTSC is a set of standard protocols for television (TV) broadcast transmission and reception in the United States.

NTSC Monitor Solution: If you are using a NTSC monitor to view the DV video during capture, you should see full-quality, full-frame rate video. However, if the video is choppy on the NTSC monitor you can determine if this choppiness is cosmetic or a symptom of actual frame loss. To determine this import the clip, then export the clip to tape and view it on a NTSC monitor. If the video is still jumpy on the NTSC monitor turn off AppleTalk and TCP/IP.

Note: If you are using iMovie and you have 64 MB of RAM, enable virtual memory in the control panel. When using iMovie with more than 64 MB of RAM, virtual memory should be disabled.

Other items that can cause choppy, jittery, or what may appear as dropped frames during video capture/playback:

- conflicts with third party DV extensions and Apple's FireWire extensions
- capturing to a volume connected via FireWire
- conflicts with hard disk configuration/formatting software
- corrupt Final Cut Pro or iMovie Preferences
- overlapping windows within Final Cut Pro

If these steps do not help then be sure to run through basic troubleshooting steps such as:

- Disk First Aid
- extension isolation
- remove and reinstall software

Published Date: Feb 20, 2012

Troubleshooting "No Dial Tone"

This article explains how to troubleshoot a modem that cannot detect or acquire a dial tone.

Note: While this article specifically mentions iMac computers, it is equally applicable to the PowerBook G3 Series (Bronze keyboard) and Power Macintosh G3 (Blue and White) computers because they use a variation of the same modem.
This article has been archived and is no longer updated by Apple.

Symptom

When the modem cannot detect or successfully acquire a dial tone, the connection attempt fails, and Remote Access responds with this message:

Figure 1: ARA dialog

Or, when using America Online 4.0:

Figure 2: Connection warning

Solution

Use the troubleshooting path in this article to identify the source of the issue.

(If Open Transport/PPP is installed, substitute "PPP control panel" for "Remote Access control panel" throughout these instructions.)

Step One

Don't Confuse a No Dial Tone Error With a Silenced Modem

The audio feedback of some Apple internal modems, including those in iMac and Power Macintosh G3 (Blue and White) computers, is passed through the computer's speakers. If the speaker volume is turned off, you cannot hear if the modem is able to detect and acquire a dial tone.

Turn the computer volume up in the Sound Volume portion of the Control Strip, the Sound control panel, or the Monitors & Sound control panel. Increasing the volume automatically deselects Mute in the Sound, or Monitors & Sound control panel.

Figure 3: Control strip

Step Two

Verify Physical Connectivity

a. Check the telephone line connection at the wall outlet and the modem. For computers with internal modems, ensure the line is not connected to the Ethernet port (if available) by mistake. Push firmly in on the connectors at both ends, or disconnect and reconnect them, to seat them securely.

Figure 5: Modem port

b. External modems provide an additional jack for connection to a telephone. Do not connect the line from the wall outlet to this jack, which is often identified by an icon of a telephone (see Figure 6).

Figure 6: Icon representing the wrong modem jack for a modem-to-wall connection

Note: Most analog modems do not work with digital/PBX phone lines. If an ordinary residential consumer telephone works in the same outlet, it is a compatible analog line.

Step Three

Set Up the Modem Control Panel

Set up the Modem control panel to use the appropriate modem script. Apple internal modems use these scripts, by computer:

Computer	Modem Scripts
Power Macintosh G3 (Blue and White)	PowerMac G3 Internal 56K, Power Mac G3 Int56K (v.34 Only)
PowerBook G3 Series	PowerBook G3 Internal 56K, PowerBook G3 Int56K (v.34 Only)
iMac	iMac Internal 56K, iMac Internal 56k (v.34 Only)
Power Macintosh G3	Apple/GV 56K
Power Macintosh 6500	Apple/GV 56K
PowerBook G3	PowerBook 3400/G3 Internal 33.6
PowerBook 3400	PowerBook 3400/G3 Internal 33.6
GeoPort Telecom Adapter (internal or external)	GeoPort/Express Modem

Figure 7: Modem control panel

Step Four

Configure the Remote Access Control Panel and Test

a. Open the Remote Access control panel. Enter a name (user ID), password, and telephone number.

Inaccurate entries do not prevent detection of a dial tone. However, if a prefix such as "9" must be dialed to reach an outside line, enter it before the telephone number, followed by a comma as shown in Figure 8.

Figure 8: Remote Access control panel

b. Click Connect and listen for a dial tone, number tones, or handshaking (squealing sound). If they are audible, or if the Status field shows "Starting PPP," "Starting network protocols," "Communicating at 24000 bps," or any other such indicator that appears after acquiring a dial tone, the issue is fixed.

c. If it is convenient to perform step 8 (test the line with a telephone), it may save some time to do so now. If it is not convenient, proceed through the steps in order.

Step Five

Disable Dial Tone Checking and Try Again

If the dial tone does not conform to what the modem expects to hear (because of poor signal level or quality, or non-standard frequency, for example) it may be difficult for the modem to recognize a dial tone. In such cases the modem software can be configured to assume that a dial tone is present without first checking for it.

a. Open the Modem control panel and click "Ignore dial tone", then close the control panel and save the changes.

b. Open the Remote Access control panel and click Connect, as in step 4. Watch and listen.

Important: Because "Ignore dial tone" is selected, you may only hear the number tones as dialing occurs, and not the dial tone or modem handshaking. The "modem is not responding properly" alert may then appear. If so, the problem persists.

c. Voice mail. Disabling dial tone checking may work around the issue posed by some voice mail services that use an altered dial tone, or a series of initial tones, to notify the user of waiting voice mail. If a voice mail service is enabled on the line and the problem persists, try entering one or two commas (,) before the telephone number in the Remote Access control panel. Each comma represents a pause of a few seconds. The idea is to delay dialing until after the voice mail tones have ended. If this works, it may not be necessary to leave "Ignore dial tone" selected in the Modem control panel, though doing so does not affect modem performance.

Step Six

Delete Preferences

Damaged Remote Access preferences may be at fault. Considering that Remote Access was able to successfully detect and initialize the modem prior to checking for the dial tone, the odds of this are very unlikely, but it is easy to confirm prior to the more time-consuming tasks ahead.

a. Move these two preference files to the desktop (or anywhere outside of the Preferences folder):

If you are using Apple Remote Access:

- System Folder : Preferences : Modem Preferences
- System Folder : Preferences : Remote Access : Remote Access Connections

If you are using Open Transport/PPP:

- System Folder : Preferences : Modem Preferences
- System Folder : Preferences : PPP Preferences

b. Repeat steps 3 and 4 to set up the control panels and test. If the symptom persists, the preferences were not at fault. To reclaim the configuration information they contained (optional), move them back to their original locations and allow them to replace the newer preference files that were created.

Step Seven

Hardware-Isolate the Line

Establish a point-to-point, one cable (the shorter the better) connection between the modem and the wall outlet, isolating the modem, the line, and the outlet from all other devices, including telephones, answering machines, fax machines, caller-ID boxes, cable extenders, line splitters, and so forth. Then retest as per step 4.

If that works, one or more of the removed devices was impairing the line quality (thus affecting the dial tone) or pushing an already poor line past the breaking point. It may be necessary to attach those devices to different outlets or experiment with other devices, cables, splitters, and combinations thereof. Sometimes the inside or outside home wiring is at fault, requiring a telephone technician to diagnose.

Step Eight

If possible, check the modem with Apple Hardware Test.

If the computer came with Apple Hardware Test (included with iMac (Summer 2000), Power Mac G4 (Gigabit Ethernet), Power Mac G4 Cube, or PowerBook (FireWire) computers), start up with the Apple Hardware Test CD-ROM disc and open the Quick and Extended tests. If the Apple Hardware Test detects a modem error, note the error code, and contact Apple or an Apple Authorized Service Provider.

Step Nine

Confirm That the Cable and Outlet Are Good

Disconnect the telephone cable from the modem (leave it attached to the wall outlet) and plug it into a telephone. Listen for a dial tone with the telephone handset. If it cannot be heard, there is a problem with the outlet or the cable. Try a different telephone cable and, if necessary, a different outlet.

It does not matter that a telephone used to work on the wall outlet at some earlier date, or that it worked there while using a different telephone cable. Unless the outlet and the cable were tested with a telephone just prior to connecting the modem to the same cable and same outlet, this must now be done.

Note: If you arrived at step 9 directly from step 4, continue troubleshooting at step 5.

Step Ten

Perform a Clean Installation or Clean Restore

The Mac OS may be unusable.

a. Perform a clean installation or clean restore of the operating system. If there is any connectivity software or modem drivers to be installed separately (GeoPort modems, for example, require the reinstallation of Apple Telecom), do so immediately afterward.

b. Repeat steps 3 and 4 to retest. If the problem continues, there may be a hardware issue with the modem.

Published Date: Feb 20, 2012

Mac OS: Maximum Number of Items in the Fonts Folder

This article lists the maximum number of items that can be placed into the Fonts folder for various versions of Mac OS, and explains how to work within the limits.
This article has been archived and is no longer updated by Apple.
Mac OS versions earlier than Mac OS 9 are limited to a maximum of 128 files in the Fonts folder. Mac OS 9 includes support for up to 512 files in the Fonts folder. "Files" include font suitcases and individual font files such as bitmapped (screen) or TrueType fonts. PostScript (or printer) fonts are not included in the file limit.

Suitcases can contain multiple font families and can be as large as 16 MB. If you have more files installed in your Fonts folder than the Mac OS limit allows, place individual bitmap or TrueType font files into suitcases, or merge suitcases. To create a suitcase, duplicate an existing suitcase and empty its contents. To merge suitcases, drag an existing suitcase file onto another suitcase file.

Do not store fonts within folders in the Fonts folder. Such an arrangement makes the fonts inaccessible to Mac OS.

Published Date: Feb 17, 2012

Language Kits: Underlined Text Using Japanese, Chinese And Korean Fonts

This article explains how to underline text while using fonts from the Japanese, Chinese, and Korean language kits.
This article has been archived and is no longer updated by Apple.
The ability to display and print underlined 2-byte (Japanese, Chinese and Korean) characters is actually handled by the Mac OS. This feature was introduced in Mac OS 8.5. The following 2-byte Language Kits are supported by Mac OS 8.5:

- Japanese Language Kit 1.2
- Chinese Language Kit 2.0 or 1.2
- Korean Language Kit 1.0

For more information on using Apple's Language Kits with Mac OS 8.5, please see the following Tech Info Library article:

Article 24799: "**Language Kit Updater For Mac OS 8.5 Read Me**"
Published Date: Feb 20, 2012

AppleShare IP 6: Windows Client Troubleshooting

This article is a discussion pertaining to the troubleshooting of Windows File Sharing connections with AppleShare IP 6. A detailed discussion of AppleShare IP Windows File Sharing may be found in the following article:

Article 24448: "**AppleShare IP 6.0: Using Windows File Sharing Feature**"
This article has been archived and is no longer updated by Apple.
The following steps may be used to setup and troubleshoot Windows clients connecting to an AppleShare IP 6 server.

Mac OS Server TCP/IP Configuration

The TCP/IP control panel should be defined as: Connect via: Ethernet and Configure: Manually. The IP range 11.1.1.1 may be used on single domain networks not connected to the Internet. If your server is connected to the Internet, consult with your ISP about obtaining a dedicated IP address range for your network.

AppleShare IP 6 Web and File Admin

In the AppleShare IP 6 Web and File Admin application, enable both TCP/IP and SMB connectivity.

Under the AppleShare menu, in the Web and File Server Settings window, select the option to "Enable File Server Clients to Connect over TCP." Next, under the Windows File Sharing menu, select the option to "Enable Windows File Sharing (SMB)." Make sure that you have chosen a compatible Server Name (15 or fewer and no special characters), as well as the appropriate workgroup name and description.

Tip: Some users have found success with using the IP address of the server as the server name. This prevents entering the incorrect server name from the Windows client. This approach is practical for networks with one ASIP server, but may be confusing on networks with multiple servers.

Windows Network Control Panel Configuration (Properties)

Open the Network control panel from the Start menu: Settings: Network control panel **or** right click on the Network Neighborhood icon on the desktop and select Properties from the pop-up menu:

Adapter: Use the appropriate ethernet adapter for your computer (for example,NE2000 Compatible). Use the Bindings tab to ensure that the TCP/IP protocol is bound to the adapter.

Protocols: Microsoft TCP/IP. Use the Bindings tab to ensure that Client for Microsoft Networks is bound to the Microsoft TCP/IP protocol.

Client: Client for Microsoft Networks.

Service: File and printer sharing for Microsoft networks. Make sure that that Browse Master is set to "enabled" if this is the only PC in the domain.

Windows Network Control Panel Identification

In the Network control panel, under the Identification tab, the computer name should be the name that you use to both logon to the Windows computer at startup and the name of the Windows client account on the AppleShare IP server.

To prevent identification or authentication issues, the Computer Name, TCP/IP Host Name and AppleShare IP client account name should be the same. If an authentication error does occur, the client may continue to log in as "guest" with no feedback to the user.

Unless a named network workgroup already exists, the default workgroup name "Workgroup" should be used, or the workgroup name entered in the AppleShare IP Web and File Server Settings.

Connecting to an AppleShare IP Server

Using a Windows 95 client, for example, you can click on the Start icon and choose Find: Find Computer, then enter the name of the server. It is important that this name exactly matches the name entered in the Web and File Server Settings.

If this is a server that will be mounted frequently, create a shortcut to the server volume for access from the Windows desktop.

Note: The Map Volume feature in Network Neighborhood may be used to assign a drive letter to the network volume. Mapping a network volume will also allow you to Find and Save from common Windows dialog boxes.

Note: Due to the length of time between SMB updates, it may take up to an hour for a network volume to appear in the Network Neighborhood window.

Troubleshooting Notes

AppleShare IP Web Sharing may be used to test TCP/IP connectivity. The DOS Ping utility found under the Start Menu can be used to ping the ip address of the AppleShare IP server. The Windows client web browser may also be used to test connectivity, as well as the Windows client account on the ASIP server.

Windows PC Peer-to-Peer File Sharing or Macintosh SMB Client may be used to test communication within the workgroup. If you have another PC in the workgroup, you can verify that SMB file sharing is operating properly by file sharing to another PC. SMB file sharing clients for the Mac OS such as Dave from Thursby Systems may also be used to verify SMB communication.

An LM Hosts file is a static method of resolving domain names when the client and server are in different network segments or subnets. To use the LM Hosts file, first make a copy of the LM Hosts file to retain the original sample copy. The LM Hosts file contains text describing the proper syntax and usage. Because the LM Hosts file is a static method for resolving host names, changes will need to be entered manually for host name resolving to function properly.

Windows NT Server can provide WINS Registration (domain name services) for Windows clients connecting across network segments. However, the Windows client option to "Enable WINS Registration" is off by default. Also, Mac OS TCP/IP services do not recognize WINS Registration as a way to resolve host names. As an alternative, MacDNS or other third party solutions offer an "industry standard" method of resolving names.

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"
Published Date: Feb 20, 2012

Apple Remote Access: Disconnects After Ten Minutes

Every time I connect to my Internet service provider(ISP) Apple Remote Access disconnects me after about ten minutes. Why is this happening?
This article has been archived and is no longer updated by Apple.
There is an option in the PPP application that automatically disconnects services when the dial up services are idle for a designated period of time. This feature saves long distance telephone charges or reduces idle use of PPP server telephone lines.

If you don't need this feature active it can be turned off in Apple Remote Access. Other dial up applications may have a similar option. Here is how to change the setting in Apple Remote Access:

1. Open the Remote Access control panel.
2. Select the "Options..." button.
3. Uncheck the reminder "disconnect if idle for ten minutes."

Published Date: Feb 20, 2012

Troubleshooting Phone Line Issues That Affect Modem Connections

This document provides information for troubleshooting possible issues with phone line quality that may affect your dial-up modem connection.
This article has been archived and is no longer updated by Apple.
This document focuses only on line phone line quality, not modem troubleshooting as a whole. For a complete modem troubleshooting strategy, see these technical documents:

106748: "**Mac OS X: Troubleshooting a Dial-Up/PPP Internet Connection**"
106871: "**Mac OS 8, Mac OS 9: Troubleshooting a Dial-Up/PPP Internet Connection**"

When using a dial-up modem, it should be considered normal if you occasionally lose a connection, given the nature of phone lines and typical operating conditions. An "unreliable" connection would be when disconnects occur more frequently, often shortly after the connection has been established.

Important: Be sure you are not perceiving the "disconnect if idle" feature as a phone line issue. The "disconnect if idle" feature allows you to specify that your modem will automatically disconnect when you do not use it for a certain number of minutes, thus freeing the line for use by others. If the disconnect always occurs after a specific interval of time (such as 10 minutes), or only after a period of inactivity, you may simply need to adjust this setting. Additionally, your Internet service provider may have its own "disconnect if idle" setting, which is beyond your control. If you seem to be disconnected after a fixed interval, then you should ask your Internet service provider what its idle disconnection policy is. The following steps describe how to check your idle disconnect setting.

Mac OS 8 and 9

1. Open the Remote Access control panel (or PPP control panel in some earlier versions).
2. Click the Options button.
3. Click the Connection tab (see Figure 1).
4. Click the "disconnect if idle" checkbox to disable it if necessary, or enter a larger number.

Figure 1: Remote Access control panel options--Connection tab.

Mac OS X:

1. Open System Preferences.
2. Click the Network icon.
3. Choose Internal Modem from the Show pop-up menu (the Configure menu prior to version 10.1).
4. Click the PPP tab.
5. Click the PPP Options button.
6. Click the "disconnect if idle" checkbox to disable it if necessary, or enter a larger number.

Once you have verified that the "disconnect if idle" feature is not the cause of your disconnects, you should troubleshoot your phone line.

Checking for phone line interference and distortion

The telephone network path between modems must be sufficiently free of noise and frequency distortion to permit a stable connection. The modem analyzes these line impairments as they affect the quality of the transmission signal. Poor signal quality causes transmission errors, reduced throughput, reduced connection speed, and dropped connections.

a. Experiment with eliminating potential sources of line impairments in the home:

- Any device connected to any telephone outlet, especially if used by the modem, and even if on a different line: telephones, including cordless telephones and their base stations, answering machines, fax machines, caller ID boxes, and other modems
- Telephone line splitters, cable extenders, faulty or overly long telephone cables (shorter is better)
- Surge protectors, including those that offer telephone line protection
- Alarm systems, especially those that are connected to the telephone system
- Computer equipment, including speakers
- Fluorescent light fixtures and light dimmers
- Satellite dish receivers

- Appliances such as air conditioners, refrigerators, dryers, microwave ovens, and televisions
- Any AC power source and related cabling
- All other things electrical, including problems with the premises wiring: loose or corroded connections, too many splices or bridges, insulation deterioration and exposed wiring, non-twisted pair telephone wiring

Start with a direct, unobstructed, modem-to-outlet connection using a short, high-quality telephone cable. As a way of confirming the problem prior to isolating it any further, there is the option of testing with a direct connection to the external telephone box located at the back or side walls of the residence. It provides one or more standard telephone jacks supplying the home telephone connections but bypassing most impairments inside.

b. Listen for noise. Because the telephone company is only obligated to provide voice-quality phone lines, it is unlikely to address the many and varied off-premises sources of line impairments that can affect the connection but don't cause audible noise. Connect a telephone to the wall jack used by the modem, then pick up the line, dial the number 1 to stop the dial tone, and listen. Contact the telephone company if the line is not quiet (loud hiss, pops, static, voices), but first disconnect other telephone devices and check again.

c. Use a local dial-in number to your Internet Service Provider. Long distance and 800 numbers aren't typically a concern, but may cause the call to be routed through more facilities, indirect paths, and different carriers with different types of equipment and lines. Local calls may be auto-forwarded in the same manner, but most reputable ISP's don't engage in this practice.

If daunted by these varied and uncertain possibilities, consider carrying the computer to a local Apple service provider for testing on analog lines of confirmed quality.

Published Date: Feb 20, 2012

Claris Software: Compatibility With Windows 98

Are any of the former Claris software titles, that Apple supports, compatible with Windows 98?

Note: AppleWorks is the new name for ClarisWorks.
This article has been archived and is no longer updated by Apple.
The only former Claris product that Apple has tested with Windows 98 is AppleWorks 5.0.3.

All of the others are certified for Windows 95, but not for Windows 98. Using the most recent version of an application may be worth a try, but it would be strictly at your risk.

There are no plans to certify any of these (formerly) Claris titles for Windows 98.

Published Date: Feb 20, 2012

Modems and call waiting

I have the Call Waiting service offered by my local phone company. How can my modem be affected if I am using call waiting and someone tries to call me?
This article has been archived and is no longer updated by Apple.
If you have Call Waiting, an incoming call can interrupt your modem connection. If this happens, you may hear a slight "click" or "pop" sound as the modem disconnects. Shortly after, your phone may begin ringing.

If you know that Call Waiting is enabled on the telephone line used by the modem but have not taken steps to disable it when dialing out, enter `*70,,` before the telephone number. If your line requires pulse dialing, use `1170,,` instead. (The extra comma, signifying an additional pause, is optional but occasionally necessary to allow the command sufficient time to be acknowledged.) Call waiting will be disabled only for the duration of the current connection.

Tip: Your local telephone company may require different numbers or may not automatically provide this feature. Check with your telephone company.

In special circumstances, such as when expecting an important call, one might wish to have the current modem connection drop to allow the incoming call to be answered. In such cases, you will need to enable Call Waiting by removing the `*70,,` (or `1170` if using pulse dialing) preceding the phone number.

It should be noted that due to various modem designs, phone line quality and many other technical variables, your modem may not necessarily drop the connection when an incoming call arrives.

Tip: The number sequence used to disable call waiting may vary between countries and regions. In some areas, the numbers used may connect you to a recorded message confirming the disabling of call waiting. In this case, including the numbers as part of the dialup number may prevent you from connecting to your ISP. As a workaround, enter the call-waiting-disable digits on the handset of a regular phone, then use the modem to connect to your ISP.
Published Date: Feb 20, 2012

iMac: Troubleshooting Address and Illegal Instruction Errors During Startup

This article discusses Mac OS 9 and older address errors or Illegal instruction errors that occur during startup and how to help prevent them.
This article has been archived and is no longer updated by Apple.

What causes this error?

- damaged hard disk driver
- damaged or incompatible extension
- damaged Finder
- damaged System file

Note: When troubleshooting address errors, make sure the Install or Restore CD is **not** in the drive during startup. If the install or Restore CD is in the drive, the address error might be eliminated. However, after the disc is ejected and the computer restarted, the problem will reoccur.

Solutions

1. Start up with the Shift key down; this disables system extensions.
If the computer starts up and displays the desktop, the problem is not with the Finder or System file but likely with an extension in the Extensions folder within the system folder. Use the Extensions Manager control panel to selectively enable extensions to determine which is causing the problem. Once the problem returns, delete and reinstall the last extension that was enabled.

2. Next, try starting up into the Extensions Manager (hold the Space Bar down and start up the computer).
When the Extension Manager window appears, select the "Mac OS 8.x All" set of extensions and allow the system to continue starting up. If that fixes the problem, then you know the problem is an extension conflict.

3. If the error still occurs, the next thing you should try is starting up from a different source, such as the iMac install CD or any other bootable system software volume.
If the computer starts up properly from the CD (or other startup volume), then you can be confident that the computer does not have a hardware problem.

4. The next thing you should try is updating the hard disk driver using Drive Setup.
After updating the hard disk driver on the suspect hard disk, try restarting. If the computer still exhibits the problem continue with the steps below.
For more specifics on the hard disk driver, please see Knowledge Base article 24585: "**Hard Disk Driver: Identifying It And Ensuring Compatibility**"

5. Consider resetting Parameter RAM (PRAM); sometimes the issue can be resolved by performing this procedure.
For instruction on resetting Parameter RAM, please see Knowledge Base article 2238: "**Macintosh: How To Reset PRAM And NVRAM**"

6. If the computer started up and ran properly from a different volume (as described in step 3 above), and the computer still exhibits the problem then the last step is to perform a clean install of the system software.

Published Date: Feb 20, 2012

Mac OS: Generic Alias Icons And CD-ROM Discs

I want to keep several aliases of different CD-ROM games in my Launcher window without actually installing the software on my hard drive.

If I insert a CD-ROM disc, make an alias of one of its games, eject the CD-ROM, and restart, the alias reverts to a generic icon and will not ask for the CD-ROM disc if I click on it.

I have rebuilt my desktop, but the icon remains generic. What should I do?
This article has been archived and is no longer updated by Apple.
The issue is currently under investigation by Apple Computer.

Suggested workarounds:

- Install the software on your hard drive and make an alias.
- Copy the application to your hard drive and make an alias.
- Copy one of the application's documents (such as a game save file) to your hard drive, then create an alias to the application on the CD-ROM disc.
- Paste the original custom icon using Get Info. To do this:
    1. single-click on the original application.
    2. choose Get Info from the file menu.
    3. In the Get Info window, click the custom icon (upper left corner).
    4. select Copy from the Edit Menu.
    5. close the Get Info window.
    6. eject the CD-ROM disc or removable media.
    7. single-click the alias.
    8. choose Get Info from the file menu.
    9. In the Get Info window, click the custom icon (upper left corner).
    10. select Paste from the Edit Menu.
    11. close the Get Info window

The (invisible) Desktop Database files will not be updated to reflect the custom icon unless the original application (or a document belonging to the application) are present on the hard drive.

If the application or document is removed from the hard drive, the behavior may return.

Note: This issue may occur with Mac OS 7.6, 7.6.1, 8.0, 8.1, 8.5, and 8.5.1. Other removable media (including Zip disks or DVD-RAM discs) may exhibit this issue as well. System Software prior to Mac OS 7.6 may not exhibit this issue.

For more information on this subject, please see the following Tech Info Library articles:

Article 18727: "**Desktop Manager And Desktop Databases: What Are They?**"
Article 15200: "**Generic Icons: Applications On Removable Media**"
Article 7828: "**Macintosh: Meaning Of The Desktop DB & Desktop DF Files**"
Published Date: Feb 19, 2012

AppleShare IP: Server Enhancement Products

This article provides information about software and hardware products that work with AppleShare IP to provide enhanced or additional capabilities. Products are grouped by areas of functionality. Sales and support of these products are the responsibility of the vendor.
This article has been archived and is no longer updated by Apple.

Server Management & Administration

Security Suite, from Open Door Networks, Inc. includes an integrated set of components that provide additional security for your AppleShare IP server. Included within the software suite are DoorStop v1.0, AFP Logger v1.0, The LogDoor Real-time Server Monitor v2.2, and Documentation and examples. In additional Security Suite can provide enhanced security for your whole network. Refer to the Open Door Networks, Inc. site for more information on this product.

DoorStop, from Open Door Networks, Inc., is a software-based "firewall" product for Macintosh servers. Unlike conventional firewalls, which are usually expensive dedicated hardware devices, DoorStop is software which you install directly on the servers which you wish to protect. DoorStop is significantly easier to set up and use than a hardware firewall and provides the same capabilities at lower cost. With DoorStop, you can specify precisely which machines should have access to which services, and you can keep track of both allowed and denied access attempts to those services. DoorStop works well with a wide range of Macintosh-based Internet servers, including AppleShare IP, WebSTAR, and Open Door's ShareWay IP product line. Check the Open Door Networks, Inc. site for more information.

MacCoach by Neuron Data Systems is the next generation server monitoring and recovery tool essential to keep your unattended server running 24x7. The MacCoach monitoring function supports all existing and yet to be released applications out of the box, in contrast to previous solutions which required applications to be especially adapted. In addition MacCoach does not spend valuable system resources or CPU cycles to perform its application monitoring. MacCoach is a combination of software and ADB-based hardware and is tightly integrated with the Mac OS. MacCoach thus detects and logs all incidents of when the system stops responding and application errors and optionally performs a restart. The detailed log of events can also be specified to be in HTML format, making the log accessible from any place in the world. Visit the Neuron Data Systems Website for more information.

PowerKey Pro is an essential tool for maintaining unattended Macintosh servers, providing remote control, automation and reliability. Power to a computer and its peripherals can be controlled remotely via telephone; on a timed basis through powerful scheduling; programmatically through AppleScript; and automatically using powerful crash detection and recovery. Apple built direct support for PowerKey Pro right into AppleShare IP 6, allowing PowerKey Pro to detect and respond to server problems even before they cause the system to stop responding.. Visit the Sophisticated Circuits web site for more information on its award-winning server reliability products.

Rebound! is an automatic restart device for Macintosh servers that have stopped responding. A tightly integrated hardware and software solution, Rebound! continuously monitors a server to see if it stops responding, and automatically restarts the computer when necessary by sending the keyboard reset key combination. Apple built direct support for Rebound! right into AppleShare IP 6 allowing Rebound! to detect and respond to server problems even before they cause the system to stop responding. Visit the Sophisticated Circuits web site for more information on its award-winning server reliability products.

The Retrospect Network Backup Kit includes the Retrospect application and ten Mac OS clients making it the ideal backup solution for networked personal computers. All of Retrospect's features extend to your network-unfailing reliability, unattended operation, single step restores from multiple incremental backups, seamless support for nearly every SCSI tape drive and storage device, and something you won't find in any other backup software: Backup Server. Use the unique Backup Server to automatically monitor the network looking for computers in need of backup, even watching for mobile computers when they reconnect to the network. From Dantz Development Corporation.

AppleShare File Server (AFP)

Server Management

AFP Logger is an application which works with your AppleShare IP file server to log accesses to that server. Items logged include the name and address of users logging into the file server, bytes transferred, time connected, and files opened and deleted by those users. AFP Logger also provides a real-time display summarizing overall access to the file server. From Open Door Networks, Inc.

Assimilator is a powerful Macintosh lab management tool designed for situations where you wish to make a large number of Macintoshes look virtually identical. Assimilator periodically restores the content of the local hard disks from a source image on an AppleShare file server. From Stairways Software.

Disk Quota For years, AppleShare administrators have yearned for a system of automatically enforcing limits on the amount of disk space users can have on a server. Now, with Disk Quota, an administrator can easily set up such limits for each user on each AppleShare server, without having to continually monitor disk usage and notify users when they have exceeded their limits. From Santorini consulting & design, inc.

IPNetMonitor provides a set of ten integrated Internet tools which allow Macintosh users to monitor their connection to the Internet. With IPNetMonitor, you can see how the Internet is working, monitor the flow of data to and from your computer, and trace the route by which the data is flowing. This gives the user the information to both optimize internet service and diagnose issues. The tools include Test Connectivity, Trace

Route, Name Server Lookup, Who Is, Finger, Monitor, TCP Info, Connection List, Address Scan, and Subnet Calculator. Check the Sustainable Softworks web site for more information or to download an evaluation copy.

John's Lab Pak is a collection of small applications written by John Ostrowick, to provide a complete mac lab solution. Includes tools for remote manipulation of macs, the addition and removal users, plus a login system. Freeware, Labtools. Some parts still under development.

MacAdministrator works on your network to provide a raft of administration, auditing and control features including logon, protection, printing control and software distribution. From Hi Resolution.

OT Advanced Tuner allows you to optimize TCP/IP network performance under Macintosh Open Transport by tuning internal TCP/IP parameters to match your network environment. The Tuner supports over 30 adjustable parameters including the TCP Window Size, Time Out intervals, Maximum Segment Size, and MTU. Check the Sustainable Softworks web site for more information or to download an evaluation copy.

OTSessionWatcher is a TCP network and application debugging tool. It allows you to examine the data transmitted through Open Transport TCP streams such as those used in AppleShare IP connections as well as those used by web browsers and FTP clients. From Stairways Software.

PageSentry is the "virtual assistant" that constantly watches all of your servers and lets you know if any critical service fails. Use PageSentry to monitor all types of servers, including AppleShare, Web, Mail, FTP and DNS. The key to PageSentry's reliability is that it tests your servers by making actual client requests of the server. Visit the Maxum Development Web site for more information and a free demo copy.

Server Manager is comprehensive management software for AppleShare servers. With Server Manager you can manage your servers remotely, from any Macintosh, anywhere, manage multiple servers simultaneously, share data between them, build related server reports and restrict server access and disconnect idle users. From Santorini consulting & design, inc.

Server Tools is a comprehensive suite of ten utilities that allows you to more effectively and efficiently manage your servers, including AppleShare servers, mail servers, database servers, or any other type of server. With Server Tools, you can detect and avert issues, improve security, manage disk space, and maintain audit trails. Santorini consulting & design, inc.

Server Tracker is the only product that allows you to track changes to your AppleShare servers' folders and files. Server Tracker records which users open, delete, rename or move folders and files, along with the time at which these events occurred. Santorini consulting &design, inc.

TCP/IP Routers

IPNetRouter provides IP multihoming and routing under Macintosh Open Transport. With IPNetRouter, you can use multiple IP interfaces at the same time (such as Ethernet and OT/PPP for example), and specify additional routes for communicating with more than one IP gateway. The built-in IP Masquerading feature allows an entire network to simultaneously share a single Internet connection and end user account. IPNetRouter's OT native design offers superior performance with greatly reduced cost and complexity. Check the Sustainable Softworks web site for more information or to download an evaluation copy.

The VICOM Internet Gateway allows an entire network of users to simultaneously share Internet access via one Internet account, one access device (including modem/ ISDN/ cable-modem/ ADSL/ T1/ existing router) and one phone or ISDN line.

The Internet Gateway is a flexible, fully featured, easy to configure TCP/IP software router that incorporates a DHCP server for easy client set-up, a full PPP server for dial-in access with support for multiple users, and a firewall to protect your LAN from the Internet. CyberNot filter support can prevent access to inappropriate sites, and protocol blocking enables restrictions to be made on the type of Internet traffic allowable. Can be used to interconnect different TCP/IP networks, both local area and wide area--such as head and branch offices--with full support for dial-on-demand and leased line networking, and now supports VICOM Multihosting. Check the Vicom Technology web site for an evaluation copy.

VICOM SoftRouter is a fully featured, easy to set up TCP/IP software router. It routes traffic between ethernet, token ring, MacIP, leased line and dial-up TCP/IP networks, with the added feature of true IP Multi-hosting.

VICOM Multi-hosting allows Web Masters to run multiple Web servers (domain names) on a single Mac OS computer. SoftRouter works with any Web server and is transparent to all web browsers. SoftRouter can be used to interconnect different TCP/IP networks, both local area and wide area, with full support for dial-on-demand networking. A full PPP Server is incorporated supporting dial-in users. Check here for a live example of Multi-hosting. Check the Vicom Technology web site for an evaluation copy of SoftRouter.

Server Extensions

ShareWay IP Gateway brings the benefits of AppleShare IP's file service over TCP/IP to other servers on your network, such as personal file sharing servers. With ShareWay IP, all your servers can now provide Internet and intranet-based file service. From Open Door Networks, Inc.

VICOM DHCP Server is a MacOS-based application that automatically allocates TCP/IP addresses and configuration information to computers on your network. Over 1000 addresses can be distributed to any modern OS computer, including MacOS, Windows95 and NT and Unix. Check the Vicom Technology web site for an evaluation copy.

AFP Clients

AFP Engage! URL Processor works with Web browsers, email readers and most other Internet applications to enable those applications to process AFP (AppleShare) URLs. With the AFP Engage! URL Processor, you can publish URLs to your AppleShare server on Web pages and send them in email messages. Works with URLs over both IP and AppleTalk. From Open Door Networks, Inc.

COPSTalk is a suite of applications and utilities designed to connect Wintel computers to AppleTalk networks. COPSTalk 2.51 is expressly designed for Windows 95 and supports most LocalTalk and Ethernet adapters. COPSTalk for NT is designed for use with Windows NT 4.x and higher. For legacy versions of Windows (Windows 3.1, Windows for Workgroups), COPS offers COPSTalk 1.3. COPS, Inc.

MountIP is an OSAX (AppleScript extension) that adds a new command to the AppleScript language, enabling users to write scripts that can mount AppleShare IP-based servers. It supports both anonymous as well as authenticated logins via the standard AFP URL syntax. MountIP is FREEWARE, so use it and enjoy.

PC MACLAN Pro for Windows 95 is the only software suite to combine IP (Internet Protocol), LAN and remote access technology into one package for file and printer sharing between PCs and Macs. This powerful networking suite is the ideal cross-platform integration tool for applications in pre-press, content development, education and other Apple-dominated markets. Miramar's IP (Internet Protocol) Client technology lets users expand their networking capabilities by accessing any AppleShare IP 5.0 Server, whether located locally, at a branch office on the company WAN, or across the globe over the internet. From Miramar Systems.

Unmounter is a shareware application that automatically unmounts unused shared disks and allows the user to remount them easily from the desktop. Unmounter is especially useful in remote access and dial-on-demand environments, where phone and ISDN lines stay open while AFP sessions are active. From DouWere.

VICOM SurfDoubler allows two computers to share Internet access via one connection device (including modem/cable modem/ISDN/ADSL) and one ISP account at the same time. An Automatic Set-up Wizard makes configuration simple for even the non-technical! More information and a free evaluation copy can be found at the Vicom Technology web site. From Vicom Technology Ltd.

Web Engage! enables the Web and FTP components of your AppleShare IP server to be easily found and accessed using the Chooser. The Web Engage! plug-in registers these services on AppleTalk, and the Web Engage! and FTP Engage! Chooser extensions let you browse for these services by zone and initiate access to the services through the Chooser--just the way you'd expect on a Macintosh! From Open Door Networks, Inc.

Web Server

Document Management

WebSonar is a complete drag, drop, search and deliver, document management system optimized for AppleShare IP. WebSonar allows users to dynamically publish information quickly and easily on either the Internet or an intranet by simply dropping their existing files into a folder. WebSonar can archive then search very large databases, standard legacy documents, PDF and html documents all at the same time. Based on Virginia Systems' Sonar Professional search engine, WebSonar can search over 12,000 pages per second, displaying the full content and exact page numbers of all found documents. Searching can be performed by any computer running a web browser. Files are dynamically translated to html and a download link can be displayed on every page to allow the client to retrieve the original file. Try it out on the WisdomQuest eLibrary, served on a G3 with AppleShare IP, now containing over 123,000 searchable documents with more being added every day.

Site Mangement

ClickLog makes it easy to log people who click on Ad banners. When someone clicks on the ad, their IP address, date/time, and what they click on is logged to a file. They are then redirected to the location in the search arguments. It allows the tracking of people who click on links that are not on your website. From Clear Ink.

InfoAgency CGI provides a means of monitoring computers on your network. You may, for example, wish to see what applications are being run on each computer, idle time, Kerboros user, installed RAM, printer selected etc etc. The Info Agency software will allow you to do this. From Hi Resolution.

LogDoor Multi-domain Web Site Monitor provides real-time statistics on each site on your server, plus site-by-site summaries and logfiles. LogDoor also displays information about AppleShare IP plug-ins. From Open Door Networks, Inc.

LOG FM is a full-featured web-server log-analysis and real-time statistics application for WebSTAR API 1.2 compatible web servers that is powered by the runtime database engine of FileMaker Pro. Web Broadcasting

TombStone is a collection of 3 plug-ins, which prevent proxies and client caches from caching your data. There is one plugin each for HTML files, GIF files and JPEG files. This plug-in is really useful for images used in the LOWSRC attribute. From Clear Ink.

Virtual Hosting

ClearlyHome is a WebServe plugin that allows Macintosh WebMasters to point multiple domain names at a single Macintosh WebStar server. From Clear Ink.

HomeDoor Multi-domain Web Service Manager was the first multi-domain Web service manager on the Macintosh. With HomeDoor your AppleShare IP Web server can serve pages for multiple independent domains. From Open Door Networks, Inc.

Pardeikes Welcome Plugin combines three basic functions: Virtual Hosting of an unlimited number of domains or sites, Dynamic URL Manipulation and Realtime Graphical Statistics. For more information visit Pardeikes.

Searching and Indexing

FindFile is a WebSTAR plugin that allows you to search your entire Macintosh web server for all files that contain a given keyword in their name. FindFile will search all volumes on the web server's desktop, including remotely mounted file servers. For each file that is found, FindFile will list its full name, location, creation and modification dates, and a link that you can click on to download (via FTP) the file to your desktop. FindFile is freeware from Xperts, Inc.

Phantom is the Web crawler and search engine that makes your Web site accessible. Phantom is the easiest way to add searching capability to your site, but Phantom does much more. Since it can crawl sites via the Web as well as local files, it can index a group of sites on a related topic. Phantom is also ideal for creating a central index for all of your organization's intranet servers. Visit the Maxum Development Web site for more information and a free demo copy.

Image Maps

FastMap is a plug-in for handling server side NCSA style image maps quickly and efficiently. From Clear Ink

Publishing and Web Site Creation

ChoosePage is a plug-in that allows you to put a pop-up dialog on a web page. When someone clicks the submit button, they are redirected to the location specified in the pop-up. An example of this technology in use is at the bottom of the pages on the ClearInk website. From Clear Ink

DynaMorph is a cross platform server side scripting engine and integrated database that enables web site developers to easily construct and maintain large or dynamic web sites. DynaMorph supports the following platforms and web servers: Macintosh, UNIX, and Windows NT/96. DynaMorph's intelligent document caching system provides peak performance and keeps your site up-to-date as you make changes. From Morph Technologies, Inc.

NetCloak, the 1996 winner of MacUser Magazine's "Eddy" award for "Best New Internet Server Application," gives you dozens of HTML extension commands that make it easy to build dynamic, compelling Web pages. Add dynamic information like date and time to your pages, as well as headers, footers, counters, and more. All with no programming required! Visit the Maxum Development Web site for more information and a free demo copy. From Maxum Development Corporation

NetForms makes it easy to create interactive Web sites. NetForms makes your users an active part of your Web site, but keeps you in complete control. With NetForms on your Web server, you can turn data from HTML forms into text files, e-mail messages, even new Web pages. Create mailing list maintenance pages, guestbooks, surveys and online discussion forums with no programming required! Visit the Maxum Development Web site for more information and a free demo copy. control. From Maxum Development Corporation

PICT FM is the first web server picture add-on product for Claris Corporation's FileMakerÂ® Pro 3.0v4 for Macintosh. PICT FM enables on-the-fly PICT to JPEG conversion of graphic images stored or referenced in FileMaker Pro container fields. From Web Broadcasting

SiteCam adds a full-featured webcam to your Macintosh! Stream live video and/or automatically captures JPEG, PICT, GIF images and QuickTime movies. Visit Rearden Technology to see it in action and purchase it on-line. From Rearden Technology

SMTPMaillT is an AppleScriptable, lean, mean, multi-threaded, asynchronous, fat, Open Transport aware SMTP Mail sending application. It's a great solution for Web servers, monitoring applications, debugging, 'back-ending' and more. From Hi Resolution.

WEB FM enables FileMaker Pro developers to quickly and easily build wicked fast, truly dynamic and interactive online database applications for the World Wide Web or a corporate Intranet. The feature list mirrors that of FileMaker Pro with support for relational and portal fields; browsing, sorting, creating and editing database records; even running ScriptMaker scripts. From Web Broadcasting

Java

JRun Servlet Engine is an extension to AppleShare IP that allows you to run Java Servlets (server-side Java). JRun works in conjunction with the web server to allow you to run sophisticated server-side Java applications. Java servlets are an attractive alternative to CGI (Common Gateway Interface) or Perl scripts because servlets are platform independent, easier to develop, faster to deploy, and more cost-effective to maintain. JRun is available for free to end users. Visit the Live Software web site to download the JRun Servlet Engine.

ServletExec for Mac OS is a W*API-compatible plug-in that runs Java servlets. Servlets are alternatives to traditional CGIs and web server plug-ins for extending web server functionality. Written in Java to a standard API, servlets can run with any leading web server (Microsoft IIS, Netscape FastTrack and Enterprise, Apache, JavaSoft JavaWebServer) on any computing platform (Mac OS, Windows 95/NT, Unix). ServletExec for Mac OS takes advantage of the Mac OS Runtime for Java (MRJ). New Atlanta Communications, LLC

Mail Server

ClickMail Central Directory provides a master list of users' email addresses integrated with AppleShare Users and Groups. Users can find addresses and build personal address books in their mail client (Netscape, Eudora, QuickMail Pro, Microsoft Outlook, etc.) via LDAP (Lightweight Directory Access Protocol). ClickMail can also serve private/public contact information of any kind (phone, address, public key, etc.) via LDAP. Allows remote changes, imports, exports of AppleShare users.

This article provides information about non-Apple products. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"
Published Date: Feb 20, 2012

PowerBook: I Forgot My Password for Password Security

What do I do if I forget my password for the Password Security control panel? Is there a way to access my hard disk?

This article has been archived and is no longer updated by Apple.

The Password Security control panel is software designed to protect the data on the PowerBook computer's hard disk. If you forget your password, you cannot access the system because the password is written to your hard disk at the driver level.

The recommended option is to carry your PowerBook, with a proof of purchase (receipt), to an Apple Authorized Service Provider (AASP). Using approved Apple procedures, a technician can access the hard disk without data loss and reset the password control panel.

If you must access the hard disk without your password, it can be done at the cost of losing all the data on your hard disk. The procedure is listed below.

Warning: **Following this procedure will erase all data on the hard disk.**

Procedure

- Startup from the system CD or Disk Tools disk that came with your PowerBook.
- Click Cancel when the Password Security window appears. This should let the PowerBook start without the hard disk mounting to the desktop.
- Open Drive Setup, select the hard disk, and choose to initialize it.

Published Date: Feb 20, 2012

Printer Troubleshooting: Printer Does Not Appear In Chooser

What do I do when my printer does not appear in the Chooser?
This article has been archived and is no longer updated by Apple.

Does The Printer Appear In The Chooser Icon List?

Icons representing Chooser extensions appear in the Chooser icon list (see figure 1). Chooser extensions include those enabling the use of software and devices such as printers, AppleShare, fax modem software, some scanners, and so on.

Figure 1: The parts of the Chooser window. Not all networks are configured to have zones.

When an icon does not appear in the Chooser icon list, the extension it represents is:

- not installed (missing).
- located somewhere outside the Extensions folder of the System Folder.
- damaged.

Confirm that the extension is present in the Extensions folder of the System Folder, or turned on in the Extensions Manager control panel (System 7.5 and later). When searching, remember that its name may only be an abbreviated form of the printer's name. If you have recently performed a clean installation of the operating system, look for it in the previous System Folder. The extension will function only if it is in the Extensions folder of the active System Folder. If the correct name is not known, consult the printer documentation. If the extension cannot be found, reinstall the printer software.

If the extension is present but the filename is followed by any of these suffixes, the printer software is not properly installed: .sea, .sit, .hqx, .smi, .img, .cpt, .bin. These represent files still compressed or encoded for Internet delivery. Remove them from the Extensions folder and consult the printer documentation for instructions on how to decompress/decode these files and perform a proper installation.

Finally, if the extension is located correctly and appears intact (attempting to open it should produce a system alert to the effect that it is an extension belonging in the Extensions folder), it may nevertheless be damaged. Remove and reinstall it from the original source.

Does The Printer Name Appear In The Chooser Device List?

Only networked and USB printers will show a printer name in the device list (see figures 1 and 3) and, importantly, **only after being selected in the icon list**.

The device list for non-networked and non-USB printers shows only the port names: printer port and modem port, or printer/modem port (see figure 2). However, when the serial printer is being adapted for network use with a hardware adapter, such as the LocalTalk and Ethernet adapters available for some Apple StyleWriter printers, the printer name will typically appear beneath the port names.

Figure 2: The Chooser configured for a serial printer.

Networked Printers

- If the network has zones, and the printer is in a different zone than the computer, be sure to select the printer's zone from the zone list before checking the device list.
- If other networked printers and volumes are also absent from the device list, confirm that the Network control panel or AppleTalk control panel is configured correctly for the type of network in use, and be sure AppleTalk is set to "Active" in the Chooser. Otherwise, troubleshoot the network hardware and connections and if possible verify the printer itself by looking for it in the Chooser of other networked computers.
- If the printer is configured for TCP/IP printing instead of AppleTalk, it cannot be set up through the Chooser. The details of configuring for TCP/IP printing are beyond the scope of this article. Consult your network administrator.

USB Printers

- Troubleshoot as you would any other USB device: Check the USB cable connections at both ends and test with a direct connection to one of the computer's primary USB ports, bypassing all other USB devices. Swap the USB cable with another known-good cable if possible, or verify it with another USB device. Use the Apple System Profiler to confirm that the device is logically present to the computer.
- A variety of USB printers on the market ship with separate printer software installers supporting either serial or USB connections. Be sure you are using the software appropriate for USB. Not all USB printer drivers will show the printer name in the device list as shown in Figure 3. Others may show a generic designation, like "USB."
- Check for any alert lights on the printer. These may indicate an issue which is preventing the printer from showing in the Chooser. Refer to you printer's manual or online documentation for the meaning of any alert lights.

Figure 3: The Chooser configured for a USB printer.

Serial Printers

Assuming the computer in use has serial ports, it is rare for the port names to be absent from the device list after having selected a serial printer icon. Remove and reinstall the printer software if this occurs, and perform other basic software troubleshooting as necessary.
Published Date: Feb 20, 2012

Macintosh: How to Test FireWire Ports

This article explains how to test the FireWire ports on a Macintosh computer.
This article has been archived and is no longer updated by Apple.
Before testing the FireWire ports, make sure FireWire software is installed. The FireWire software is installed by default on any computer with built-in FireWire ports. It is also available from Apple's Web site at http://www.apple.com/swupdates/ .

FireWire PCI Card (for original Power Macintosh G3 computer)

The disc included with the FireWire PCI card installs an application named FireWire Card Tester in the FireWire folder of your hard disk.

When opened, the application displays one of the three alert boxes shown below, detailing the status of the card's FireWire ports. See Figures 1 through 3.

Figure 1 FireWire alert; no response

The message in Figure 1 indicates that the computer cannot detect the card. Try removing the card from its PCI slot, and firmly reinserting it. Make sure the card's internal power connector is connected to one of the hard drive power connectors, which originates from the power supply.

Figure 2 FireWire alert; no camera

If you see the alert box shown in Figure 2, make sure the camera is turned on, and is not in sleep mode. Try opening the application again. If you continue to see this alert box, check cabling, and try a different camera.

Figure 3 FireWire alert; functioning properly

The message shown in Figure 3 indicates that the card is functioning as it should.

Power Macintosh G3 (Blue and White) with Mac OS 8.5 or 8.5.1

The FireWire Card Tester application is not compatible with the FireWire ports on the Power Macintosh G3 (Blue and White) computer. Use the Apple Video Player application installed in the Applications folder on the hard disk to test the ports instead.

Note: Apple Video Player is not designed to capture digital video (also referred to as DV) and Apple does not support using it for that purpose. However, it can be used to test the ports. Also, note that this method of testing the FireWire ports is not reliable if another video capture device is installed on the computer.

Figure 4 Apple Video Player; camera sensed

Confirm the camera is connected to the FireWire port and turned on prior to opening Apple Video Player. If Apple Video Player senses the camera, the Apple Video Player Controls window will look like the one shown in Figure 4, which indicates that the ports and the computer are functioning properly.

Figure 5 Apple Video Player; camera not sensed

If Apple Video Player does not sense the camera, only one option will appear in the Apple Video Player Controls window. See Figure 5. Double-check the connection from the camera to the computer, and make sure that the camera is on and not in sleep mode.

If this fails, perform a clean installation of the system software, and update to the version of FireWire software available from Apple's Web site at http://www.apple.com/swupdates/ .

Macintosh computer with built-in FireWire ports and Mac OS 8.6 or later

The version of Apple System Profiler that came with Mac OS 8.6, and subsequent versions, have the ability to check the built-in FireWire ports

and report the version of the FireWire software installed.

Apple System Profiler steps

1. Choose Apple System Profiler from the Apple menu.
2. Click the Devices and Volumes tab. The information for FireWire appears. See Figure 6.

Figure 6 FireWire information in Apple System Profiler.

The camera must be turned on prior to opening Apple System Profiler or it will not be detected. Figure 7 is similar to what you should see if a camera is detected.

Figure 7 Camera detected by Apple System Profiler

Published Date: Feb 20, 2012

Sherlock: "A Network Error Has Occurred" Message

This article describes the Sherlock error message, "A network error has occurred, check your connections and try again."
This article has been archived and is no longer updated by Apple.
Here are some common reasons why this occurs:

- An unusable or outdated Sherlock plug-in. To locate the troublesome plug-in, disable all of your Sherlock plugins. Next, enable one at a time, attempting to search Sherlock with each new addition until the issue reappears. Once you have isolated the problematic plug-in, either replace the plug-in with a fresh copy, or try using the "update search sites" feature of Sherlock.

  Note: Sherlock2 automatically updates the search site plug-ins so you cannot manually update them.
- No network connection. If you are using a dial up connection to the Internet, you must be connected.
- Incompatible version of Internet Config software. For more information, see the following Knowledge Base article 24736: "**Sherlock: Internet Config Conflict**"

Published Date: Feb 20, 2012

AppleShare IP: Multihoming And FileMaker Pro Web Companion

Using the single-link multihoming (multinode) capability provided by Open Transport, I am hosting several websites (each with unique IP addresses) from my AppleShare IP 6.1 server. Most of these sites are served through AppleShare IP's Web Services, but one site is served with Filemaker Pro 4.1 Web Companion. I have set up MacDNS to include zone files for each site, and I have entered my IP addresses in the Secondary IP Addresses file in my System Folder. However, it appears as if the two services are fighting with each other: if Filemaker starts first, Web and File Services will not start, and if Web and File Services starts first, my Filemaker site cannot be accessed. How can I get these two applications to co-exist peacefully?

This article has been archived and is no longer updated by Apple.

When setting up AppleShare IP Web Services in conjunction with a Filemaker Pro Web Companion database, administrators may run into a situation in which the two services prevent each other from operating as expected. The solution is to assign FileMaker Web Companion a different port than that which is typically reserved for http services.

Both Filemaker Pro Web Companion and AppleShare IP Web Services use TCP/IP port 80 by default. Therefore, you must assign a new port to Filemaker Pro. Although any unused port will suffice, your first choice should be port 591, as Filemaker, Inc. has registered this port with the Internet Assigned Numbers Authority for use with Web Companion. See Figure 1.

Figure 1: FileMaker Pro Web Companion Configuration window.

After you have changed this port, the IP address by which the site can be accessed will now be followed by a colon and the port number. For example:

```
your.website.com:591
```

In order to save visitors to your site the inconvenience of having to type in the port number, you should then create an HTML document at the top of the website folder served by Filemaker Web Companion with a hyperlink to your database.

Published Date: Feb 20, 2012

Epson Printers: Installer Says Disk Is Locked

When trying to install various Epson printer drivers from a Power Macintosh G3 (Blue & White) System Software CD, the installer fails. This article provides the steps to install the software from the System Software CD.
This article has been archived and is no longer updated by Apple.

Symptom

When the System Software CD is the startup disk and you try to install Epson printer drivers from the Power Macintosh G3 (Blue & White) System Software CD, the installer fails with an error message that the selected disk is locked.

Affected Products

- Power Macintosh G3 (Blue & White)
- Epson Stylus Color 440 Printer driver
- Epson Stylus Color 600 Printer driver
- Epson Stylus Color 640 Printer driver
- Epson Stylus Color 740 Printer driver
- Epson Stylus Photo Ex Printer driver

Solution

To successfully install these drivers, follow these steps:

1. Open the Startup Disk control panel (under the Apple menu), and choose your hard drive as the startup disk.

2. Restart the computer holding down the Shift key until you see the screen saying "Welcome to Mac OS Extensions Disabled" (the Power Macintosh G3 CD should still be in the drive).

3. Once the desktop appears, open the CD Extras folder, the USB Device Drivers folder, and then the Epson Printers folder. Open the folder whose name corresponds to your Epson printer. Select the disk image(s) within, and open them, mounting the disk image(s).

4. Launch the installer for your printer, and verify that the destination disk is your hard drive.

5. Once the installation is successfully completed, restart the computer. The Power Macintosh G3 CD can now be removed.

The Epson drivers on the CD were the most recent versions available when the CD was created. Check with the product vendor for the latest updates. If installation problems persist, please review the support information included with your printer and contact Epson technical support for further assistance.

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"

Published Date: Feb 20, 2012

Mac OS Runtime for Java: Inconsistent Results Running Applets

Why does my Java applet work with Netscape Navigator but not Microsoft Internet Explorer, and sometimes the reverse occurs?

Why does my Java applet work with Netscape Navigator but not the Apple Applet Runner, and sometimes the reverse occurs?
This article has been archived and is no longer updated by Apple.
The answer to these questions has to do with which Java Virtual Machine (JVM) is being used. Your applet is probably running in two different virtual machines.

The Apple Applet runner always uses the Mac OS Runtime for Java (MRJ) JVM.

Netscape uses its own JVM for both Navigator and Communicator (at least, through version 4.5).

Microsoft Internet Explorer has had the option to use either a Microsoft JVM or the MRJ JVM, but since Mac OS 8.5, it is installed and configured to use the MRJ JVM by default.

One other possibility that could result in differences when running an applet is that you may not have configured the JVM in question properly, especially for proxy servers and firewalls. For further information, see the following Tech Info Library article:

Article 60051: "**Mac OS Runtime for Java 2.1: Configuring For Proxy Servers**"
Published Date: Feb 20, 2012

PowerBook G3 Series: "Apple DVD Player Cannot Open..." Error

This article explains what to do when a DVD movie will not play on a PowerBook G3 Series computer and the error message "Apple DVD Player cannot open because the required hardware was not found." is generated.
This article has been archived and is no longer updated by Apple.

Symptom:

When trying to play a DVD movie on a PowerBook G3 Series computer, the following error message appears:

Figure 1: DVD Error Message

Affected Products:

PowerBook G3 Series computer

Solution:

There are several things that can cause this particular hardware error message to appear.

DVD PC Card Not Being Inserted Properly

Only the bottom PCMCIA slot supports Zoomed Video, which is needed to play DVD movies. Eject the DVD PC Card, wait 8-10 seconds, and then reinsert it back into the bottom PCMCIA slot.

DVD PC Card Is Not A Custom Icon, But A Generic One

Reinstall the DVD Software. You may want to check Apple Software Updates to make sure you have the latest version.

Speech Recognition Is Installed

If it is installed and listening is turned on, Speech Recognition will take control of the Sound Monitoring Source option within the Monitors & Sound control panel and set it to the Built-In Mic. To properly play the DVD movie, either disable Speech Recognition or change the Sound Monitoring Source back to the ZoomedVideo.

Notes:

1. Before having the computer serviced, you should completely eliminate software as a possible cause of the issue. First, set the Extensions Manager to the OS extensions plus those needed for the DVD Software, reset Parameter RAM, restart the computer, and then test the system to see if the error still occurs. To do this, perform the following steps:

- Open the Extensions Manager

- Select 'PBG3 Series All' or 'Mac OS 8.5 All' as the Selected Set

- Duplicate the locked set, naming it "test" or similar name. The Locked Extension set cannot be modified.

- Choose 'as Packages' from under View on the MenuBar

- Check the box next to 'Apple DVD Software'.

If necessary, run Disk First Aid on your hard drive. Finally, perform a clean install of Mac OS and reinstall the DVD Software only, then retest.

2. For information on performing a Clean Installation of system software, see the following articles:

- Article 26055: "**Mac OS 8.0 & 8.1: Clean Install Instructions**"

- Article 50055: "**Miscellaneous Manuals**". Select Troubleshooting Handbook - Performing a Clean Installation.

- Article 58176: "**Mac OS 8.5: Performing a Clean Install**"

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, read article 24604: PowerBook G3, G3 Series: Identifying Different Versions

TA22011_PowerBook_G_Series_Apple_DVD_Player_Cannot_Open_Error.pdf

Published Date: Feb 17, 2012

Mac OS: What is a Game Sprocket?

I see several files in my System Folder with the word "Sprocket" in the title. The Info window shows that these are copyright Apple Computer. What are they and what are they for?

This document applies to Mac OS 9 and earlier.
This article has been archived and is no longer updated by Apple.
Apple Game Sprockets is a set of technologies designed to make writing Macintosh games easier for developers. They are designed specifically to provide the functionality that games need on the Macintosh: drawing to the screen, handling input devices, setting up multiplayer games, and simulating 3D sound sources.

There are four kinds of game sprockets: InputSprocket, DrawSprocket, NetSprocket and SoundSprocket.

InputSprocket allows games to support a wide variety of input devices including joysticks, gamepads, steering wheels and flight sticks without having to write customized routines for each.

DrawSprocket gives game developers a way of using different graphics hardware (video cards/chips) without having to write customized routines for that hardware. DrawSprocket allows the user to select among any connected monitor that meets the requirements of the game.

NetSprocket gives game developers standard ways to configure networking preferences and to send and receive information to other players.

SoundSprocket gives game developers an easier way to use sound including simulating 3D sound. SoundSprocket will display a dialog for configuring the sound options supported by the game.

Additional information

See http://developer.apple.com/documentation/macos8/MultimediaGraphics/GameSprockets/applegamesprockets.html

Published Date: Feb 20, 2012

AppleShare IP 6.1: "Bad file format" Opening Files In QuarkXPress/Win

When saving a QuarkXPress 4.04 for Windows file to an AppleShare IP (ASIP) 6.1 server using Windows File Sharing, the file saves properly. When the file is reopened, it displays the error message ""Bad file format (70)".
This article has been archived and is no longer updated by Apple.

Problem

When saving a QuarkXPress 4.04 for Windows file to an AppleShare IP (ASIP) 6.1 server using Windows File Sharing, the file saves properly. When the file is reopened, it displays the error message ""Bad file format (70)".

Products Affected

AppleShare IP (ASIP) 6.1 server

Solution

This issue has been corrected in AppleShare IP 6.2. You need to upgrade to AppleShare IP 6.2 to resolve this issue.

Published Date: Feb 20, 2012

Mac OS: Modem Unexpectedly Dials

The modem may unexpectedly dial out, automatically attempting to connect to the Internet. Several things may cause this behavior.
This article has been archived and is no longer updated by Apple.

Symptom

The modem unexpectedly dials out. This may occur at startup, after disconnecting from an Internet service provider, or at other unexpected times.

Solution

An application or control panel setting can trigger an automatic connection to the Internet.

To prevent unexpected behavior, check the following items to be sure they are set up as you desire. Any of these items could cause automatic connection to the Internet:

- An Internet application or its alias is in the Startup Items folder.

  How to address: Remove undesired items from the Startup Items folder in the System Folder.

- The TCP/IP control panel is set to always load.

  How to address: Open the TCP/IP control panel. Choose User Mode from the Edit menu and make sure Advanced is selected. Click Options. The Options window appears. Be sure the "Load only when needed" checkbox is selected.
- Web Sharing is active.

  How to address: Open the Web Sharing control panel. If you use Web Sharing over a dial-up connection, be sure to click the Stop button when you are finished.

- File Sharing over TCP/IP is enabled.

  How to address: Open the File Sharing control panel. Look for the setting "Enable File Sharing clients to connect over TCP/IP." Deselect the checkbox for this feature after you finish File Sharing. If you never accept File Sharing connections over your dial-up connection, always leave this unchecked.

- Email application connects to the Internet.

  How to address: Go to the preferences panel in your email application. Look for an option such as "automatically check mail," and disable it.
- The Date & Time control panel is set to "Use a Network Time Server".

  How to address: To prevent undesired connections, be sure the checkbox for this feature is deselected in the Date & Time control panel.
  Note: You can still synchronize manually when you are already connected to the Internet: Open the Date & Time control panel. Click the checkbox to select "Use a Network Time Server". Click the Server Options button. Click the Manually radio button. Click the Set Time Now button. Click OK. Click the checkbox for "Use a Network Time Server" again to leave the feature disabled.

- The Software Update control panel is set to "Update software automatically".

  How to address: Open the Software Update control panel. Deselect the checkbox for "Update software automatically".
  Note: Alternatively, you can check for updates at a more convenient time by clicking the Schedule button. Set a new time by clicking on the hour, minute and AM/PM indicator and then adjusting with the up/down arrows. Check the day or days you prefer.

- The Remote Access control panel is set to connect automatically.

  How to address: To check this, open the Remote Access control panel and click Options. The Options window appears. Click the Protocol tab, then select the PPP protocol. Deselect the checkbox for "Connect automatically when starting TCP/IP applications". Close the Remote Access control panel.
  Note: After deselecting this option, you must click "Connect" in the Remote Access control panel or the Remote Access portion of the Control Strip prior to opening your Internet applications.

Published Date: Feb 20, 2012

AppleShare IP: Setting Up Guest Access To Web Folder

How do I set up my AppleShare IP Web Folder so that my website is accessible to everyone?
This article has been archived and is no longer updated by Apple.
In order for guests to access your website without a user name and password, you must specify the proper web folder and set the privileges to the folder correctly. This includes any folders that are nested inside the web folder.

1. Open the AppleShare IP Web & File Admin program, choose Web & File Server Settings from the Server menu, click on General and select Web. Make sure that the web services are enabled and that the correct web folder is listed and that the correct default document is selected.
2. Choose Show Users & Groups List from the Users menu and select the guest user from the list. Open the user by double-clicking the user's name or selecting the Open User button which is the middle button at the top of the Users & Groups window; make sure that the checkbox for web access has a checkmark.
3. Choose "Show Disks & Share Points" from the Server menu. Select your web folder in the Disks & Share Points window and click the privileges button (upper left hand corner of window) to show the privileges window.
4. On AppleShare IP 5.x servers, you must select "Make this a share point and set privileges". On AppleShare IP 6.x servers, the Web Folder does not have to be a separate sharepoint, so you may simply select "Set privileges for this item."
5. Set Read-only privileges (the eyeglasses icon) for "Everyone", then click the Save button.
6. Click the "Make all enclosed folders like this one" button and close the window.

Test your web services; your web page should now be accessible to everyone.
Published Date: Feb 20, 2012

Macintosh: Using Command-Option-Shift-Delete To Start Up From CD

This article describes the proper key sequence to startup from a CD-ROM disc, which is incorrectly described in some Mac OS 8.5 Troubleshooting Handbooks.
This article has been archived and is no longer updated by Apple.
On page 25 of the Mac OS 8.5 Troubleshooting Handbook that ships with the iMac and Power Macintosh G3 (Blue and White), a procedure is listed for starting up the computer from a CD by holding down the Command, Option, Shift, and Delete keys.

This procedure is intended for certain older Macintosh computers, and does not apply to the iMac and Power Macintosh G3 (Blue and White). For these, and later, Macintosh computers, the recommended method of starting up from the CD is to hold down the C key during startup.

Older Macintosh computers that did not support the C key as a method of starting up from the CD can use the Command-Option-Shift-Delete key sequence.

Published Date: Feb 20, 2012

Network Connection Troubleshooting

This article describes known iMac, PowerBook G3 Series (Bronze Keyboard), and Power Macintosh G3 (Blue and White) networking issues and provides workarounds to these issues.
This article has been archived and is no longer updated by Apple.

Connecting To A 10/100Base-T Network

When you connect your computer to an Ethernet network, the computer automatically senses whether it is connected to a 10Base-T network or to a 100Base-T network. Some (possibly all) ports on some network hubs/switches support both speeds. If you are using this type of hub/switch, there may be a delay in establishing a network link. The delay may last for several seconds after you start or restart the computer and a message may appear stating the network is not available or just become available. In order to prevent delays, connect your computer to an Ethernet network port that is not auto-sensing (10 or 100 megabits per second (Mbps) only). For more information, contact the manufacturer of the Ethernet hub/switch or your network administrator.

Performance Issues Using Ethernet

If your computer experiences performance issues on your Ethernet network, check with your network administrator. Your computer performs best when the Ethernet port is set to auto-negotiation.

Important: The duplex mode of an Ethernet link to a switch is not detected if the switch's port is not auto-negotiating. If the switch's port is not auto-negotiating, your computer detects the appropriate speed but defaults to half-duplex. If the switch's port at the other end of the link is configured for full-duplex, a large number of late events can occur on the link. Set the switch's port to auto-negotiation where possible. If this is not possible, then set the switch's port to half-duplex. For more information, see the documentation that came with the Ethernet switch.

NetBoot Issues

If your iMac, PowerBook G3 Series (Bronze keyboard), or Power Macintosh G3 (Blue and White) is having difficulty starting up from a NetBoot server, check that the Ethernet switch port it is connected to is set to auto-negotiation or locked to half-duplex.

Because of the way NetBoot works, your computer will not startup from a NetBoot server if the switch's port is locked to full-duplex. If your computer is still having trouble starting up from a NetBoot boot server on a regular basis, try plugging your computer into a Ethernet hub , then plug the hub into the switch.

Starting up from a NetBoot server may also fail on some switches due to how NetBoot and Ethernet switches function. As a workaround, placing a 10/100 Mbit repeater (hub) between the computer and switch.

Published Date: Feb 20, 2012

Sherlock: Can‘t Find ICAp;InternetConfigLib

I just installed some software and now when I try to access Sherlock, I get the following message:

The application "Sherlock" could not be opened because "ICAp;InternetConfigLib" could not be found.

What happened and how can I correct it?
This article has been archived and is no longer updated by Apple.

Figure 1: Error dialog.

The software you installed probably also installed an older version of Internet Config. The following article has information on how to use the Mac OS 8.5 Installer to perform a custom-install, which should remedy the situation.

Article 24679: "**Mac OS 8.5: Internet Control Panel Or Internet Config?**"

Published Date: Feb 20, 2012

Mac OS X Server: Binding Local NetInfo Database To An NIS Domain

Network Information System (NIS) is similar to NetIfno in that it allows multiple computers to share administrative data that is stored on one computer. It is different because NIS uses the standard UNIX flat files for this administrative data, while NetInfo uses a distributed database. Configuring Mac OS X Server to be an NIS client should not affect NetInfo.
This article has been archived and is no longer updated by Apple.
Note: Configuration of Mac OS X Server as an NIS client is not supported by Apple. This document is provided as is with no warranty. Screen shots in this document depict Mac OS X Server versions 1.x, though this information also applies to versions 10.x of Mac OS X Server. The loginwindow process in Mac OS X 10.2 or later only supports Directory Services, so 10.2 clients bound to an NIS master will not be able to log in at the Login Window.

This article assumes knowledge of NetInfo and its structure. For more information on NetInfo, please read the following article:

Article 60038: "**Mac OS X Server: What Is NetInfo?**"

Article 60038 also contains instructions on backing up the database which should be done before continuing.

For Mac OS X Server to bind to an NIS domain, the /etc/hostconfig file must be changed and lookupd must be configured to use NIS. The user must be logged in as root, or be a member of the wheel group in order to make these changes.

Edit the hostconfig file

Open the /etc/hostconfig file with TextEdit or a command line text editor. Find the "NISDOMAIN" entry. This is set to "-NO-" by default. Remove "-NO-" and type in the NIS domain name that the computer will bind to. This information can be obtained from the NIS administrator.

Configure lookupd

To properly configure lookupd to use NIS directories, properties, and values must be added to NetInfo. For a description of how these are used in NetInfo read article 60038, mentioned above.

Open /System/Administration/NetInfoManager. The window that opens will be for the local NetInfo domain. (See Figure 1.) In this window find the "Directory Browser" heading in the top left corner of the window. Below this heading are three columns, that show the directories contained in NetInfo. In the middle column select the "locations" directory and click the new directory button. A "new_directory" is created.

In the lower half of the NetInfo window two columns are listed, "Property" and "Value(s)". Change "new_directory" in the value column by double clicking on it and typing lookupd. The window should now look like Figure 1.

Figure 1: NetInfo window.

You will not be prompted to save the changes until another directory in NetInfo is selected. Save the changes when prompted. After the changes are saved, another dialog box will appear asking for confirmation of the update. Click "Update this copy" for the changes to be finalized.

Now the correct properties and values must be added to the lookupd directory. In the lower half of the window click "lookupd" under the Property column; the entire line is now selected. Open the "Directory" menu from the menubar. It is now possible to edit properties and values. Until this line was selected the options in this menu were dimmed.

Use Figure 2 as a guide to add the properties and values to the lookupd subdirectory.

Figure 2: NetInfo window with properties and values filled in.

Now the lookupd directory has the properties and values that it needs. To finish the configuration, subdirectories for "users", "groups", "hosts", and "netgroups" must be added to the lookupd directory. These directories also need properties and values. If any of these subdirectories are not added NIS will not be consulted for this information. Use Figures 3, 4, 5, and 6 as a guide for adding the new subdirectories, properties, and values. The computer must be restarted for the changes to take effect.

Figure 3: NetInfo window; users directory.

Figure 4: NetInfo window; groups directory.

Figure 5: NetInfo window; hosts directory.

Figure 6: NetInfo window; netgroups directory.

Published Date: Feb 17, 2012

Power Macintosh G3 (Blue and White): Using SCSI Cards with Color OneScanner

This article describes a situation where the scanner appears when using SCSI probe to scan the bus, but there is an X through the extension at startup.

This article has been archived and is no longer updated by Apple.

Symptom

Scanner extension has an X through it upon startup and the scanner itself cannot be used.

Solution

To use the scanner with an Adaptec SCSI card (and possibly others) you must do two things:

- Place the most recent version of the SCSI Probe control panel (available from Adaptec's website) in your Control Panels folder, open it, select Preferences, and choose to "Mount SCSI volumes during startup."
- Place version 4.3 of the scanner extension in your System Folder (not in the Extensions folder or any other folder within your System Folder).

When you restart your computer, the scanner extension will load last and will not have an X through it, assuming the scanner is powered on and properly connected. If the extension still loads with an X through it, contact Adaptec to verify the ROM's on the SCSI card are version 4.3 compliant.

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information. The following article can help you search for a particular vendor's address and phone number: Article 17159: "**Locating Vendor Information**"

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): PowerBook SCSI Disk Mode

I would like to use a PowerBook in SCSI Disk Mode with my new Power Macintosh G3 (Blue and White). How do I connect the PowerBook to the computer?

This article has been archived and is no longer updated by Apple.

To use a PowerBook in SCSI Disk mode with a Power Macintosh G3 (Blue and White), the Power Macintosh G3 (Blue and White) must be configured with one of Apple's SCSI card options. The recommended solution is to use the Apple Ultra PCI SCSI card which is available as a Build To Order option from the Apple Store. This card ships with an HD50 to 25 pin adapter for use with a standard SCSI system cable. Make sure the PowerBook has password security disabled before using the PowerBook in SCSI Disk mode. Also, you must make sure the PowerBook SCSI Disk Mode control panel is set up with the correct SCSI ID information. Do not use a SCSI ID that is already in use by other devices on the SCSI bus.

Here are the steps to connect a PowerBook in SCSI Disk Mode to a Power Macintosh G3 (Blue and White):

1. If necessary, disable the PowerBook password security option.
2. Set up the SCSI Disk Mode control panel to use a unique SCSI ID.
3. Shut down the PowerBook.
4. Shut down the Power Macintosh G3 (Blue and White).
5. Connect the HD50 to 25 Pin adapter to the SCSI card's external connector.
6. Connect a standard SCSI system cable to the adapter.
7. Connect a PowerBook HDI-30 Disk Adapter cable to the SCSI System Cable.
8. Connect the small connector on the HDI-30 Disk Adapter cable to the SCSI port on the back of the PowerBook.
9. Turn on the PowerBook; this should display the SCSI symbol with the SCSI ID number in the middle of it on the screen.
10. Turn on the Power Macintosh G3 (Blue and White).

The PowerBook's hard disk volume(s) should show up on the desktop of the Power Macintosh once the computer has started up.

Note: The Apple Single Channel Ultra2 SCSI PCI card may not function correctly with the PowerBook in SCSI disk mode, treating the SCSI bus as unterminated. In that case, multiple hard drive icons will appear on the desktop of the Power Macintosh G3 (Blue and White). This is an issue with the way that the card interacts with the PowerBook SCSI Disk mode software.

Published Date: Feb 20, 2012

Macintosh: "Port in Use" Alert With Palm Computing Software

This document explains what you should do if you see an alert box with a message that says "HotSync can not be enabled because the port is in use by another application."
This article has been archived and is no longer updated by Apple.

Symptom

When your computer starts up or when you try to enable HotSync settings, an alert box with this message appears:

> "HotSync can not be enabled because the port is in use by another application."

Solution

Please refer to Palm Knowledge Finder document 5906 for more specific information:

http://www.palm.com/support/macintosh/portinuse.html

If other software is open that is dedicated to using the serial port chosen in HotSync Manager, this alert can be expected to occur.

Here is a three-step process:

1. Use the AppleTalk control panel to verify that AppleTalk is not active through this port. Either set AppleTalk to another port, or while in the Advanced User Mode (Edit menu: User Mode) click the Options button and choose Make AppleTalk inactive. Try again to enable HotSync in HotSync Manager.
2. Disable any other software dedicated to using the serial port chosen in HotSync Manager. This may include fax or modem software. (You may need to turn off these extensions with the Extensions Manager control panel; refer to the documentation that came with the software or serial device for more information.) Restart the computer, and try again to enable HotSync in HotSync Manager.
3. If the error message persists at startup, it is because you have a conflict with other software as described above, and HotSync Manager is set to be enabled at system startup. In HotSync Manager, under HotSync options, deselect the box labeled "Enable HotSync software at system startup."

For more information, contact Palm.

For more information on troubleshooting extension conflicts, please read "Resolving system extension conflicts" in Mac OS Help, or read technical document 30929: "**Mac OS 8.x: Extensions Troubleshooting/Extensions Manager Features**".

For more information about the "port in use" error, and how to make AppleTalk inactive using the AppleTalk control panel, read technical document 24346: "**Mac OS: AppleTalk "Port In Use" Error**".

This document provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following article can help you search for a particular vendor's address and phone number:

Document 17159: "**Locating Vendor Information**"
Published Date: Feb 20, 2012

AppleWorks: Document Recovery Techniques

This article explains how to recover AppleWorks (or ClarisWorks) documents that have become unusable, or "damaged."

This article has been archived and is no longer updated by Apple.
Unless specifically stated otherwise, all references to AppleWorks in this article also refer to ClarisWorks.

AppleWorks cannot recover unusable Communications documents.

If you cannot open the document

Programs are available from third-party companies that can open unusable files. One of these may successfully open and recover your AppleWorks document.

With ClarisWorks 5 or later, and with all versions of AppleWorks, you may be able to insert the unusable document into a new document, using these steps:

1. Open AppleWorks.
2. Open a new document of the same type as the unusable document. For example, open a new word processing document if you have an unusable word processing document. If you are recovering a database document, create a new database document whose fields are the same as those in the unusable database document.
3. From the **File** menu, choose **Insert**. A dialog box appears.
4. Select the unusable document.
5. Click Insert.
6. Save the new document with a different name.

If you can open the document

This procedure may recover any data in the document, but may lose some of its formatting (font styles and sizes, spreadsheet calculations, database layouts and field names, and so forth).

Step 1

Open the document.

Step 2

Choose Save As from the File menu. In the dialog box that appears, choose a file format that is different than the native AppleWorks file format from the File Format pop-up menu. For example, save an AppleWorks word processing document as a Rich Text Format (RTF) document.

Various versions of ClarisWorks and AppleWorks have different Save As file format options. This is particularly true between Mac OS and Windows versions of the program. Further, your computer may have additional translators installed. Therefore, you may not have the same set of choices shown in the table below. The table shows various file formats for each type of AppleWorks document, ordered from the most likely to the least likely to successfully recover your unusable document.

Document type	File format
Macintosh	
Word Processing(1)	RTF, Text
Drawing(2)	PICT, GIF, JPEG
Painting	GIF, JPEG, TIFF
Spreadsheet(2)	SYLK, ASCII Text, DBF
Database(3)	SYLK, ASCII Text, DBF
Windows	
Word Processing(1)	Rich Text Format, Text File
Drawing(2)	Macintosh Picture File, BMP File, Microsoft Windows Metafile
Painting	Macintosh Picture File, BMP File, Microsoft Windows Metafile
Spreadsheet(3)	SYLK Files, DBF, ASCII Text Files
Database(3)	SYLK, DBF, ASCII

Table Notes:

1. ASCII Text and Rich Text Format (RTF) are text-only file formats. ASCII omits all text attributes and saves only the text characters. RTF saves some text attributes such as the size, font, and style of the text. Neither format saves formatting such as Document, Paragraph, Section, Rulers or Tabs. Columns are omitted, for example.
2. If the Drawing contains text, move the text to Word Processing, and recover it as a separate Word Processing document. Copy and paste to move the text.
3. SYLK, DBF, DIF, and ASCII are types of spreadsheet files. Using SYLK format saves the calculations in a database or spreadsheet, while the other formats only save the results of the calculations.

After choosing a file format, give the document a unique name and click Save. If an alert box appears while saving, note the error message for future reference. Then try saving the document using a different file format.

Step 3

Close the document.

Step 4

Open the newly created document by choosing Open from the File menu. A dialog box appears. Choose the correct document type from the Document Type pop-up menu, and choose the correct file format from the File Format pop-up menu. Click Open.

If an alert box appears while the document is opening, note the error message for future reference. Then try this procedure again, starting at Step 1 with a different file format.

Step 5

Save the document in its native AppleWorks format.

Use the newly saved AppleWorks document and avoid the older, unusable document.

Published Date: Feb 20, 2012

AppleWorks: Paintable Area and Margins in Paint Documents

This article explains how to change both the page margins and paint area in an AppleWorks paint document.
This article has been archived and is no longer updated by Apple.
In ClarisWorks 2.0 through AppleWorks 5.0.3, page margins and the size of the paint area, in pixels, are independent of each other. When you set the page margins in a paint document, you must change the pixels to enlarge or reduce the work area.

Changing the Work Area

1. Choose Document from the Format menu.
2. Enter the new page margins (if required) in the Document window.
3. Enter the new work area in the size section of the Document window.
4. Click OK.

How to Determine the Number of Pixels in a Work Area

1. Determine your page margins.
2. Add the left and right margins together.
3. Subtract the sum of the left and right margins from 8.5.
8.5 is the page width in inches.
4. Multiply the result by 72.
(one inch = 72 at 72 DPI or 300 at 300 DPI)
5. Enter this result in Pixels Across.
6. Add the top and bottom margins together.
7. Subtract the sum of the top and bottom margins from 11.
11 is the page length in inches.
8. Multiply the result by 72.
9. Enter this result in Pixels Down.

Example

To change the margins from 1-inch to one-half inch (0.5), the pixel size would be

- .5 +.5 = 1
- 8.5 - 1 = 7.5
- 7.5 x 72 = 540 pixels across
- .5 +.5 = 1
- 11 - 1 = 10
- 10 x 72 = 720 pixels down

If you want to use a different paint resolution substitute that screen size in place of 72.
Published Date: Feb 20, 2012

QuickTime Streaming Server: Making Streamable Files Available

How are streamable, stored movies made available for streaming through QuickTime Streaming Server?
This article has been archived and is no longer updated by Apple.
Here are the steps for making streamable files available with QuickTime Streaming Server (QTSS):

Step One
Verify that the released version of QTSS has been installed. Type the following in a terminal window:

```
QuickTimeStreamingServer -v
```

It should produce information including:

```
QTSS/v66 Built on: Apr 16 1999 , 18:10:07
```

Step Two
Verify the location of the "Movies" directory. The Movies directory contains all files that will be made available through QTSS. The location of this directory listed in the Admin application. (In the Apple menu, under Administration, open QuickTimeStreamingServerAdmin.)

Step Three
Place self-contained, hinted movies in the Movies directory. Note that the server does **not** need to be restarted when movies are added. It must be restarted only if settings for the server are changed.

Step Four
Verify that QTSS is running. In the Admin app, the status will indicate if the server is running. If needed, start the server here. The process may also be viewed in the process list in the Applications menu or in terminal.app with this command:

```
ps ax |grep QuickTimeStreamingServer
```

There are two processes with this name.

At this point, a client request should have access to files in the Movies directory. With the QuickTime 4 (or later) client, pull down the File menu and choose Open URL. In the resulting window, type the server name and file name in the following format, where filename.mov is a file available on the server at the root level of the Movies directory:

```
rtsp://servername/filename.mov
```

Published Date: Feb 20, 2012

PowerBook G3 Series: Video Controllers

I have a PowerBook G3 Series computer and want to know what type of video controller it uses.
This article has been archived and is no longer updated by Apple.
The original PowerBook G3 Series computer, released in May 1998 (Family number M4753), uses the the ATI 3D RAGE LT video controller.

The PowerBook G3 Series computer configuration released in September 1998 (Family number M4753) uses the ATI RAGE LT Pro video controller. You can differentiate this PowerBook G3 Series configuration from the previous configuration because it has multiple resolutions built-in.

The PowerBook G3 Series (Bronze keyboard) computer released in May 1999 (Family number M5343) also uses the ATI RAGE LT Pro video controller but has additional VRAM (8MB) and a different architecture, which allows Simulscan (Mirroring) and Extended Desktop mode. Extended Desktop mode was not built into the earlier configurations, but is available through third-party PC card solutions.

For additional information, please visit the following site: **http://www.ati.com**

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, read article 24604: "**PowerBook G3, G3 Series: Identifying Different Versions**"
Published Date: Feb 20, 2012

Power Macintosh G3: Identifying The Logic Board Revision

Some Apple articles and third party product documentation mention different logic board revisions in platinum colored Power Macintosh G3 computers. This article tells how to identify which revision you have.
This article has been archived and is no longer updated by Apple.
Apple, Inc. may make revisions or changes to a product line at any time without notification. This is noted in the materials that came with your computer.

Note: The following information does not apply to Power Macintosh G3 (Blue and White) computers.

Use the Apple System Profiler, located in the Apple menu, to help determine which logic board revision you have. Open Apple System Profiler, click the System Profile tab within the window, and then look at the Production Information section. Compare it to the table below to determine which revision of the logic board is in your Power Macintosh G3 (platinum) computer.

ROM Versions	Logic Board Revision
$77D.40F2	**revision 1**
$77D.45F1	**revision 2**
$77D.45F2	**revision 3**

Note: All Power Macintosh G3 All-in-one computers and (platinum) Power Macintosh G3 300Mhz and 333Mhz Desktop/Minitower computers have revision 2 or newer logic boards.

If further identification of this or any Apple hardware component is needed, you should contact an Apple-authorized service provider in your area. To find the nearest Apple-authorized service provider visit: http://buy.apple.com/ .
Published Date: Feb 20, 2012

Imation SuperDisk Disk Drive: Ejecting Disks During Installations

This article describes how to eject a floppy disk from an Imation SuperDisk disk drive in situations where the disk does not eject. Typically this happens during software installation.
This article has been archived and is no longer updated by Apple.
Version 1.0 of the USBSuperDiskDriver extension might not eject the first floppy disk during certain software installations which require multiple floppy disks.

Imation has updated the drivers to remedy this situation. Versions 1.1 and later are not affected by this issue. You can download the latest version of the SuperDisk software from Imation's web site.

Version 1.31 of the USBSuperDiskDriver extension is included as part of Mac OS 8.6.

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"

Published Date: Feb 20, 2012

Apple Studio Displays: Video Pinout Information

This article contains video pinout information for the following Apple Studio Displays:

- Apple Studio Display 15 (revision A)
- Apple Studio Display 17
- Apple Studio Display 21
- Apple Studio Display 15 (flat panel monitor)

This article has been archived and is no longer updated by Apple.

Apple Studio Display 15 (revision A)

Figure 1: Apple Studio Display 15 (revision A) video pinouts

Apple Studio Display 17

Figure 2: Apple Studio Display 17 video pinouts

Apple Studio Display 21

Figure 3: Apple Studio Display 21 video pinouts

Apple Studio Display 15 (flat panel monitor)

This monitor has a Digital Visual Interface (DVI) connector. Here are the pinouts:

Pin	Signal
1	TMDS Data2-
2	TMDS Data2+
3	TMDS Data2 Shield
4	No Connection
5	No Connection
6	DDC Clock
7	DDC Data
8	No Connection
9	TMDS Data1-
10	TMDS Data2+
11	TMDS Data1 Shield
12	No Connection
13	No Connection
14	+5 V Power

15	Ground (for +5 V)
16	Hot Plug Detect
17	TMDS Data0-
18	TMDSData0+
19	TMDS Data0Shield
20	No Connection
21	No Connection
22	TMDS Clock Shield
23	TMDS Clock +
24	TMDS Clock <

Published Date: Feb 20, 2012

USB: Keyboard Should Not Be Plugged Into USB Hub

If a Universal Serial Bus (USB) keyboard is plugged into a self-powered USB hub, pressing the keyboard's Power key does not start up the computer. However, if the keyboard is plugged into the computer the Power key works.
This article has been archived and is no longer updated by Apple.
This behavior is normal as most USB hubs do not become active until they receive a signal from the computer.

If the computer will not power on with the keyboard plugged into a hub, you must either use the power button on the front of the computer or plug the USB keyboard directly into the computer.

Note: On USB equipped PowerBooks in closed clamshell mode, the power on button is not accessible.
Published Date: Feb 20, 2012

QuickTime Streaming Server: Determining Adequate Server Bandwidth

What connection size (bandwidth) do I need for my QuickTime Streaming Server configuration?
This article has been archived and is no longer updated by Apple.
If all of the expected connections for your QuickTime Streaming Server are the same size, then computing your needed bandwidth is relatively simple. Multiply the maximum number of users you expect to support by the bit rate of the files they will view. Here are two examples:

Thirty clients viewing 1.5 megabits per second (Mbps) files would take up a 45Mbps connection which could be carried on 100Mbps Ethernet LAN.

One thousand clients viewing 22 kilobits per second files (Kbps) would take up a 22Mbps connection which could be carried on 100Mbps Ethernet LAN or externally on a fractional T3.

If the bit rates differ between the files (for example, you serve both over the Internet with 22Kbps files and on a LAN with 1.5Mbps files) your connection is more difficult to compute. You may use the formula above **but** keep in mind that there is no check on the client's bandwidth use. If you allow five hundred users, there is no method to require four hundred of them to connect to the smaller files. The total bandwidth of the server can be set so that as soon as that bandwidth is reached, new users will be turned away until current users disconnect from the server.

Consider that the server may take the entire bandwidth up to the maximum set in the Admin. Also, consider that other network traffic is not part of this calculation; if there are other services on the network, take care to plan for a network and QuickTime Streaming Server configuration that will allow all the expected traffic.
Published Date: Feb 20, 2012

AppleShare IP Mail Server: Protecting Against Unsolicited Email

Unsolicited commercial email, sometimes called "spam", is generally sent out in large batches frequently through mail servers that are unprotected. This document explains features available in the AppleShare IP 6 mail server that help protect your server against spam.
This article has been archived and is no longer updated by Apple.
On a protocol level, Simple Mail Transfer Protocol (SMTP; the protocol for sending email from one server to another) is not secure and provides no user authentication. Any user can connect to an SMTP server and send mail to any other user. Because of this, email servers usually implement their own form of user authentication and protection against unauthorized users. In addition to this, network administrators often design network firewalls to prevent abuse of the company mail server.

AppleShare 6 provides some features to help administrators prevent unauthorized users sending email through the AppleShare mail server.

Prohibit SMTP Relay

If your mail server is on the Internet, an unknown user could potentially use your server to relay a large batch of emails to other users anywhere on the Internet. You can prevent this by editing the default host profile and enabling the "Deliver mail from this host to local addresses only (no SMTP relay)" option. When this is turned on, the mail server will look at the "MAIL FROM" and RCPT TO" commands of the SMTP session. If the mail is coming from another server, then it must be sent to a user on this server. The mail server will reject email if a remote server connects to the AppleShare mail server to send mail to a third server.

By modifying the default host profile, you are ensuring that any new host that connects to the mail server will have SMTP relay disabled. If you do this when you first set the server up (before an extensive host list is created), that will ensure that all hosts will be unable to use the mail server as an SMTP relay.

Check For Local Users

This is an added protection to the step above. Rather than just looking at the host part of the email address listed in the "from:" field, the mail server verifies that the user from whom the mail is coming is a valid user in the User & Group list, and that the user has mail enabled.

This option is located in the Mail Server Settings window, under the "Mail In" tab.

Reject Mail For A Specific Host

The AppleShare IP mail server also gives you the ability to reject mail on a host-by-host basis. If you notice that you are receiving unwanted email from a particular host, you can edit that host in the host list to reject all incoming mail from that server.

TCP Filtering (Requires Mac OS 8.5 & AppleShare 6.1 And Later)

SMTP works over TCP/IP port 25. TCP Filtering (available with AppleShare 6.1 and later) will block this port, effectively blocking all incoming and outgoing email with a specified IP address (or range of IP addresses).

TCP filtering works on a lower level of network protocols than the mail server. If you are blocking a mail server with TCP filtering, your AppleShare IP mail server will not even know that the remote user is trying to connect. From the remote server's perspective, the AppleShare mail server is not on the network. Also TCP Filtering works on IP addresses, rather than Host names as the mail server does.

RealTime Black Hole List (AppleShare 6.2 and later)

The AppleShare IP mail server allows you to prevent unwanted mail by checking and blocking a connection. When you enable this option, the mail server compares the incoming connection's originating address against an active list on a server maintained by a private company. If the originator is on this list, the connection is refused and the originator's mail will not be delivered to the users on your AppleShare IP mail server.

This option is located in the Advanced Server Settings under the Anti-Spam tab. The checkbox titled "check Incoming SMTP Connections" allows you to enable/disable the option. The default server is the Realtime Blackhole List.

Reject Connection If Name Does Not Match Address (AppleShare 6.2 and later)

Mail servers identify themselves when they start a connection (with the HELO command). The mail server verifies the self-reported name against a reverse DNS lookup of the IP address. If the two do not match, the connection is terminated. While this command can prevent unsolicited email, it can also keep you from receiving legitimate email from servers that are misconfigured.

This option is located in the Advanced Mail Server Settings under the Anti-Spam tab. You must first enable "Log connections if SMTP name does not match address" to enable this option.

Published Date: Feb 20, 2012

QuickTime 4: Support For TIFF File Format

I heard that QuickTime 4 supports Tagged-Image File Format (TIFF). However I cannot get some TIFF images to open using QuickTime. Why is this?
This article has been archived and is no longer updated by Apple.
QuickTime 4 does indeed support the TIFF file format, as do previous versions of QuickTime. However, there are several different compression formats used by TIFF, and not all of them are currently supported by QuickTime 4.

Supported TIFF codecs

- None
- PackBits
- LZW
- CCITT 1D

Unsupported TIFF codecs

- Group 3 Fax
- Group 4 Fax

Published Date: Feb 20, 2012

Japanese Language Kit: Selecting The Kana Keyboard

This article describes how to select a Kana Keyboard within the Japanese Language Kit (JLK), so users may input Katakana characters that match the keyboard labels that came with the JLK.
This article has been archived and is no longer updated by Apple.
Reference is made to a Kana Keyboard in the Japanese Language Kit Input Method Guide (copyright 1993; pages 10, 50 and 51 for example), and in the Installation and User's Manual (copyright 1995; page 12 for example). Some customers find it unclear whether the documentation refers to an actual hardware keyboard, distinct from the Apple keyboard, or to a specific setting within the JLK. The Kana Keyboard is selected within the Kotoeri (Japanese Input Method) preferences dialog, not from within the Keyboard control panel, or the Keyboard menu.

Because the menus and preference settings for the JLK are in Japanese, it may be difficult for a non-Japanese speaker to identify the appropriate selections to make. The steps below will identify the appropriate selections with graphical clues that allow a non-Japanese speaker to correctly select the Kana Keyboard and thereby enable one-keystroke Katakana input.

To select the Kana Keyboard, so that a user may enter Katakana characters with one keystroke (entering characters which match the keyboard labels provided with the JLK), follow these steps:

Step One: Switching to the Japanese Input Method

Figure 1: The Keyboard menu.

Select the Kotoeri input method from the Keyboard menu in the upper right corner of the menubar, just to the left of the Applications menu. The Keyboard menu icon is a blue diamond when a US input method is selected. The icon for the Kotoeri input method is a red circle with a 6-color Apple logo over it.

Note: If you are trying to change input methods while in the Finder, and the Kotoeri input method is dimmed in the Keyboard menu, you must set your Views Font to Osaka. For more information, see the following Tech Info Library article:

Article 17999: "**Japanese Language Kit: Common Troubleshooting Steps**"

Step Two: Opening the Kotoeri Preferences Window

Figure 2: The Pencil menu.

When the Kotoeri input method has been selected, a Pencil menu appears just to the left of the Keyboard menu (its icon in the menubar is a pencil). Select the Preferences option from the Pencil menu. The Preferences option can be identified in the menu by its keyboard shortcut, option-shift-U. You can also click the Preferences button in the Kotoeri input method palette.

Step Three: Changing the Keyboard Input Setting

Figure 3: Keyboard Layout pop-up menu.

The Keyboard Layout pop-up menu is above the Punctuation pop-up menu (both menus are directly above the OK and Cancel buttons, which are in a recognizably standard position within the window). The Keyboard Layout pop-up menu contains two options. The first option, which is the default, is for Roman input. The second option is for Kana input. Select this option. Press the Return key on your keyboard or click the button with the black ring around it to exit the Preferences window and save the new setting.

Step Four: Using the Kana Input Method

Figure 4: Window with palette.

Open the SimpleText Japanese application, or another WorldScript compliant application, switch to the Kotoeri input method, select the Katakana button on the Kotoeri palette, and type several keys. Each keystroke will result in a Japanese katakana character being displayed on the screen, which should correspond to the keyboard labels that were included with the JLK. This behavior is different from the default input method for the JLK, in which a sequence of keystrokes generates a series of Roman letters on the screen, which are converted to Kana as you type.

For a description of the terms Kanji and Kana, see the following Tech Info Library article:

Article 3199: "**Japanese Language Kit: Definition of Kanji, Kana, and Romaji**"

Published Date: Feb 20, 2012

Apple Remote Access: No DNS Servers When Using PPP

I am using Remote Access to dial out to the Internet. Even though I set the TCP/IP control panel to configure using the PPP server, I do not see the DNS server field populated, and I cannot see any sites once I am dialed in to my Internet Service Provider (ISP).
This article has been archived and is no longer updated by Apple.
Support for handling DNS negotiation was a feature added in Apple Remote Access 3.1, which shipped with Mac OS 8.5. If you are using the version of Remote Access bundled with 8.5 or later, you will not see the numbers displayed in the TCP/IP control panel, but they will be honored and used for DNS lookups. If the servers obtained automatically fail to respond, the addresses entered into the TCP/IP control panel will be used next.

If you are using a version of Remote Access client earlier than version 3.1, you must manually enter any DNS server addresses that you want to use. Your ISP or network administrator can supply you with this information.

Note that the most current version of ARA Personal Server as of July 1999 is 3.0.2. If you have installed the Apple Remote Access Personal Server on your computer, you must manually enter valid DNS addresses, and this feature is not supported.
Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White) and G4: Small Gap In Internal Cable

This article describes the small gap in the IDE ribbon cable connected to the CD-ROM drive.
This article has been archived and is no longer updated by Apple.
This cable is called the IDE/ATA ribbon cable and connects the CD or DVD drive, and Zip drive to the logic board. This connector is located on the left side of the logic board, near the hard drive(s), and is closest to the rear panel. The small hole or gap is 1mm x 4mm and is on the 67th lead (counting from the first lead at the rear of the computer) of the cable shown in Figure 1.

Figure 1: IDE/ATA ribbon cable (gap highlighted).

The IDE/ATA ribbon cable was designed to have this small gap, there is no need to have the cable or computer serviced.
Published Date: Feb 20, 2012

QuickTime: Error Messages On Startup

This article explains why you may receive alert messages appear during startup stating that there was an error starting up QuickTime Musical Instruments or QuickTime PowerPlug.
This article has been archived and is no longer updated by Apple.
Some multimedia programs install older versions of QuickTime, replacing certain extensions and causing the remaining extensions not to load. This causes the error messages. Consequently, all sound and video functions are disabled.

Important: If you purchased QuickTime Pro, make sure to write down your registration key before you go any further.

To remedy the situation, open the Extensions folder (inside the System Folder) and move the following files to the Trash:

- Sound Manager
- QuickTime Extensions folder (if present)
- QuickTime
- QuickTime MPEG Extension
- QuickTime Musical Instruments
- QuickTime PowerPlug
- QuickTime VR

Next, reinstall QuickTime. If you were using the version of QuickTime that came with your computer, you can custom install QuickTime from the system CD that came with it (iMac owners, use the Software Install CD). If you downloaded QuickTime from the Internet, run the installer that you downloaded or, if you've installed QuickTime 4.x, run the QuickTime Updater from the QuickTime Folder on your hard disk.

You can find the latest version of QuickTime at:

http://www.apple.com/quicktime/
Published Date: Feb 20, 2012

Mac OS: Application Will Not Open Due To "Lib File Not Found" Errors

Sometimes when I try to open an application program I get an error message such as:

"The application <name> could not be opened because "<some>Lib" could not be found."

The file that the computer could not find always has "Lib" in its title. Is there some common thread to this kind of error message?

This article has been archived and is no longer updated by Apple.
Yes. "Lib" is short for "Library." System software can be packaged as reusable libraries. The same libraries can be used by many different applications or control panels. For this reason, they are called "Shared Libraries." Shared Libraries are most commonly contained in pieces of the system software such as the System suitcase file, System Resources, Mac OS ROM or extensions.

Unfortunately, any of these can (and almost always do) contain many shared libraries. Therefore, the error messages referring to the missing library do not always refer to a specific file. However, the error message can still help you narrow down to a few files.

For example:

Suppose you try to open the File Sharing control panel and get a message about "OTUtilityLib" missing. If you know that "OT" is a common abbreviation for "Open Transport", the networking software for Mac OS (since System 7.5.2), then you would know to look for extensions with "Open Transport" in the title. This makes sense since the File Sharing control panel is for letting us share files over a network. Naturally, we need the networking software.

In this case, some of the required files also have names starting with "OpenTpt". Sometimes the abbreviation of file names makes this harder than it would otherwise be.

You can get these error messages if the file is disabled in the Extensions Manager control panel, missing from the hard drive altogether or damaged.

To turn on disabled extensions:

1. Open the Extensions Manager control panel.
2. Find extensions that seem like they might be related and turn them on.
3. Click the restart button and try again.

Alternately, you can use the "Mac OS" sets of extensions to turn on Apple sets. The sets provided by Apple have all the pieces that Apple requires for the system software to work. However, it only turns on the files that are disabled. If the files are not on the hard drive at all, or are outside the System Folder, you must reinstall them.

To reinstall missing or damaged extensions:

1. Run the system software installer for Mac OS or Apple Software Restore CD that came with your computer.
2. If you are running the Mac OS installer (but **not** an Apple Software Restore CD), then you can choose a customized package with just the component that you are trying to reinstall. This is the quickest way to re-install a few things. This will not touch parts of your System Folder whose components you are not reinstalling.

Published Date: Feb 20, 2012

AppleShare IP Mail 6.x: Configuring For A Network Address Translation (NAT) Environment

How do I set up an AppleShare IP 6.x Mail Server within the private network set up by a router that performs Network Address Translation (NAT, also known as IP Masquerading)?
This article has been archived and is no longer updated by Apple.
There are five main steps to setting up ASIP 6.x mail services inside a NAT environment:

1. Configuring external DNS.
2. Mapping incoming traffic.
3. Setting up the AppleShare IP (ASIP) Host Name list.
4. Configuring internal DNS.
5. Changing the SMTP Response Name.

Step One: Configuring External DNS

You must coordinate with your Internet Service Provider (ISP) to set up external DNS. Your ISP must configure DNS so that there is a permanent host name (or A Record) for the public IP address of the NAT router.

If you have your own domain name, you may also want your ISP to set up a mail exchange record (MX Record) in their DNS so that any mail addressed to your domain name will be sent to the NAT router through the NAT router's permanent host name.

For example, if your ISP created a host name (A Record) of "mail.company.com" for your public IP address, any email sent to user@mail.company.com would be sent to your NAT router. If your ISP created an MX Record for "company.com", any email sent to user@company.com would be sent to mail.company.com, which is again your NAT router.

For specifics on how DNS should be set up to handle a mail server, see the following article:

Article 24693: "**AppleShare IP Mail Server: DNS Configuration**"

Step Two: Mapping Incoming Traffic

Once you have service directed to your NAT router, you need to configure the NAT router to forward email traffic to your mail server.

You will need to map incoming SMTP traffic (TCP port 25) on the NAT router to the private, internal IP address of the machine running the AppleShare IP Mail Server. This tells the NAT router to send all SMTP traffic to the mail server.

If you want to provide external mail retrieval, you must also map POP3 (TCP port 110) and/or IMAP (TCP port 143) on the NAT router to the private IP address of the mail server. This will allow email clients to connect to the mail server through the NAT router.

See the documentation for your particular NAT product for help setting up these port mappings.

Step Three: Setting Up the ASIP Host Name List

The ASIP Mail Server now needs to be configured to recognize that any email addressed to the public host name (for example, mail.company.com) should be considered local.

1. Launch AppleShare IP Mail Admin.
2. Start the Mail Server.
3. Choose "Show Host List" from the Server menu.
4. Click the "New Host" icon in the Host List window.
5. Enter the public host name of the NAT server (for example, mail.company.com).
6. Wait for this host to appear in the host list.
7. Select the host name you just entered.
8. Click the "Edit Host" icon.
9. Click the tab labeled "Mail To".
10. Check the box labeled "Relay all SMTP mail via".
11. Enter the private IP address of the ASIP mail server.
12. Click "Save" and close the window.

The ASIP Mail Server will now treat this host as "itself" and properly deliver the mail to the mail accounts on the local system instead of trying to forward the mail back to the public host name.

Note: The Host List window will not immediately list the host as "local". Instead, the first time the mail server encounters a message with a recipient for that host name, it will "resolve" the host and mark it as local. This process is deferred to avoid unnecessary DNS traffic until the mail server uses the hostname for the first time.

At this point, email services are fully configured for sending and receiving email through the outside network. Email clients on the outside network should now be configured as follows:

SMTP server: <public host name>
POP/IMAP server: <public host name>
Account name: user@public_host_name

The domain name may be substituted for the public host name if a mail exchange record has been set up.

If you have not configured internal DNS, any email clients trying to connect to the server from within the private network must be configured by IP address. If internal DNS has not been set up, mail clients on the private network should be configured as follows:

SMTP server: <private IP address of server>
POP/IMAP server: <private IP address of server>
Account name: user@public_host_name

The domain name may be substituted for the public host name if a mail exchange record has been set up.

Note: If internal DNS is not set up, the mail server error logs will show reverse lookup errors on mail server startup. For more information, see the following article:

Article 24689: "**AppleShare IP Mail Server: Shows IP Address Instead Of DNS Name**"

Step Four: Configuring Internal DNS

Configuring internal DNS allows clients on the private network to connect to the server by host name instead of by IP address.

If you are using MacDNS for your internal DNS, see the MacDNS Administrator guide for a full explanation of how to set up MacDNS. For help with basic setup, see the following article:

Article 31067: "**Mac DNS: Configuration & Setup**"

When you set up internal DNS, note the following two points:

1. The TCP/IP settings on all machines inside the NAT router (including the mail server) must point to the internal DNS.
2. The parent server of the internal DNS must be set to the public IP address of one or more of your ISP's DNS servers. This allows the ISP's name server to resolve any host names not specified in the internal DNS.

Once internal DNS is configured, email clients on the private network should be configured as follows:

SMTP server: <internal host name of server>
POP/IMAP server: <internal host name of server>
Account name: user@public_host_name

The domain name may be substituted for the public host name if a mail exchange record has been set up.

Step Five: Changing the SMTP Response Name

Finally, to ensure that other mail servers accept your email, you should set the name of the SMTP in and out response name to match your public host name.

In AppleShare IP Mail Admin:

- Open the Advanced Settings under the Server menu.
- Select the Protocols tab.
- For SMTP in and out, enter the public host name of the NAT router.

- Click "Save" and close.

Published Date: Feb 20, 2012

AppleShare IP 6.2 : Sherlock Share Point indexing

I can index the volumes of my AppleShare server, but in order to perform a Sherlock search, I have to be logged in as the Admin or otherwise have access to the server volumes' root level. How can I index the Share Points so that my users can perform Sherlock searches with their own user logins?

This article has been archived and is no longer updated by Apple.

When a volume is indexed from within the Sherlock application an invisible index file is written to the root level of that volume. AppleShare IP 6.2 allows one to perform indexing on a per Share Point basis. This method instead writes a similar index file to the root of the Share Point. With previous versions of AppleShare IP, Sherlock searches could only be conducted if a user had read access to the entirety of a given volume.

Indexing a Share Point through AppleShare IP 6.2 allows the administrator to set Find By Content privileges. The following steps will create a searchable Share Point:

Step One
Launch the AppleShare IP Web & File Admin.

Step Two
Select the "Show Disks & Share Points" item under the Server menu.

Step Three
Create a Share Point or select an existing one that you desire to have indexed.

Step Four
Set Privileges for that share point and click the "Sherlock Indexing..." button in the Privileges window. See Figure 1.

Figure 1: Privileges window.

Step Five
Set access privileges to the index based on the access privileges set for the share point. See Figure 2.

Figure 2: Setting privileges to the index.

Step Six
Mount the configured Share Point and perform a Find By Content search.

Published Date: Feb 20, 2012

Mac OS: Matching Mac OS ROM File To Mac OS Version

This document contains a chart that matches the various versions of the Mac OS ROM file with the correct version of Mac OS. Your computer must have the appropriate Mac OS ROM file in order to function properly.
This article has been archived and is no longer updated by Apple.
Your computer must have the appropriate Mac OS ROM file for the version of Mac OS that is installed. Using the wrong Mac OS ROM file can cause the computer to behave unpredictably and may even prevent it from starting up.

The chart below matches the applicable Mac OS ROM file to the applicable Mac OS.

Mac OS	Mac OS ROM Version
Mac OS 8.1 (iMac, Rev A Bundle)	1.1
iMac Update 1.0	1.1.2
Mac OS 8.5 (Retail CD)	1.1.2
Mac OS 8.5 (iMac, Rev B Bundle)	1.1.5
Power Macintosh G3 (Blue and White) Mac OS 8.5.1 Bundle	1.2
Macintosh Server G3 (Blue and White) Mac OS 8.5.1 Bundle	1.2
iMac Update 1.1	1.2.1
Mac OS 8.5.1 (Colors iMac 266 MHz Bundle)	1.2.1
Mac OS 8.6 (Retail CD)	1.4
Mac OS 8.6 (Colors iMac 333 MHz Bundle)	1.4
Power Macintosh G3 (Blue and White) Mac OS 8.6 Bundle	1.4
Macintosh PowerBook G3 Series 8.6 Bundle	1.6
Mac OS ROM Update 1.0	1.6
Mac OS 8.6 bundled on Power Mac G4 (PCI)	1.7.1
Power Mac G4 ROM 1.8.1 Update	1.8.1
Mac OS 8.6 bundled on iMac (Slot Loading)	2.3.1
Mac OS 8.6 bundled on iBook	2.3.1
Mac OS 8.6 bundled on Power Mac G4 (AGP)	2.5.1
Mac OS 9.0 bundled on iBook	3.1.1
Mac OS 9.0 bundled on Power Mac G4 (AGP Graphics)/ iMac (Slot-Loading)	3.1.1
Mac OS 9.0 bundled on PowerBook G3 Bronze	3.0
Retail Mac OS 9.0 installed on iMac	3.0
Retail Mac OS 9.0 installed on Power Macintosh G3 (Blue and White)	3.0
Mac OS 9.0.2 bundled on Power Mac G4 (AGP) and iBook	3.5
Mac OS 9.0.2 installed on PowerBook (FireWire)	3.5
Mac OS 9.0.3 bundled on iMac (Slot Loading)	3.6
Mac OS 9.0.4 Retail/Software Update	3.7
Mac OS 9.0.4 installed on PowerBook (FireWire) (Summer 2000) (CPU software 2.4)	3.7

Ethernet Update 1.0	3.8
Mac OS 9.0.4 installed on iMac (Summer 2000)	4.6.1
Mac OS 9.0.4 installed on Power Mac G4 (Summer 2000)	4.6.1
Mac OS 9.0.4 installed on Power Mac G4 MP (Summer 2000) (CPU software 2.3)	4.9.1
Mac OS 9.0.4 installed on Power Mac G4 (Gigabit Ethernet)	4.9.1
Mac OS 9.0.4 installed on Power Mac G4 Cube (CPU software 2.4)	5.2.1
Mac OS 9.0.4 installed on iBook (Summer 2000) (CPU software 2.5)	5.3.1
Mac OS 9.0.4 installed on Power Mac G4 (with Radeon) (CPU software 2.6)	5.5.1
Mac OS 9.1 installed on iMac (Early 2001)	7.5.1
Mac OS 9.1 installed on iMac (Summer 2001)	7.5.1
Mac OS 9.1 installed on Power Mac G4 (Digital Audio)	6.7.1
Mac OS 9.1 Update	6.1
Mac OS 9.2 installed on iMac (Summer 2001)	8.3.1
Mac OS 9.2 installed on Power Mac G4 (QuickSilver)	8.3.1
Mac OS 9.2.1 Update	8.4
Mac OS 9.2.1 installed on Power Mac G4 (QuickSilver)	8.4
Mac OS 9.2.2 Update	8.7
Mac OS 9.2.2 installed on iMac (Summer 2001)	9.0.1
Mac OS 9.2.2 installed on iMac (Flat Panel)	9.0.1
Mac OS 9.2.2 installed on eMac	9.2.1
Mac OS 9.2.2 installed on Power Mac G4 (QuickSilver 2002)	9.0.1
Mac OS 9.2.2 installed on PowerBook G4 (12-inch)	Classic only. Cannot start up in Mac OS 9.
Mac OS 9.2.2 installed on PowerBook G4 (17-inch)	Classic only. Cannot start up in Mac OS 9.
Mac OS 9.2.2 installed on Power Mac G4 (FW 800)	Classic only. Cannot start up in Mac OS 9.
Mac OS 9.2.2 installed on iMac (17-inch Flat Panel)	9.5.1
Mac OS 9.2.2 installed on iMac (17-inch 1GHz)	Classic only. Cannot start up in Mac OS 9.
Mac OS 9.2.2 installed on iMac (USB 2.0)	Classic only. Cannot start up in Mac OS 9.

Note: The parenthetical product descriptions (Summer 2000) and (Summer 2001) refer to the summer of the Northern Hemisphere.

Published Date: Feb 20, 2012

AppleWorks 5.x: Error Printing Fax Cover Sheet 3

When I attempt to print the "Fax Cover Sheet 3", a stationery document that is included with AppleWorks 5, the document does not print properly; a PostScript error is displayed. How can I print this document?
This article has been archived and is no longer updated by Apple.
If you receive a PostScript error when attempting to print the Fax Cover Sheet 3, try this workaround:

1. Open the Fax Cover Sheet 3 stationery.
2. Click on the graphics of the fax machine. (Four grow handles should appear at each corner of the fax machine.)
3. Grab one of the grow boxes (click on it and hold the mouse button down) then shrink the size of the fax machine (drag the grow box).

You do not need to change the size of the graphic very much and after doing so, the document should now print. If it doesn't, merely reselect the graphics and change the size a bit more.

Additional information

The behavior was verified with AppleWorks and ClarisWorks versions 5.x, on Macintosh computers using Mac OS 8.5.1 and 8.6. The error encountered is "undefined," and the offending command is @r.
Published Date: Feb 20, 2012

Macintosh: Can I Have A Password At Startup?

Is there any way that I can have my computer prompt me for a password at startup? There is a Password Security control panel for PowerBooks, but will it work with my desktop computer?
This article has been archived and is no longer updated by Apple.
Using Mac OS 9's Multiple Users feature you can have a password at startup. If you need very strong security, or are not running Mac OS 9 you may need to purchase a third-party solution such as a screen saver, or other security software.

The Password Security control panel is not compatible with certain Macintosh computers, including:

- Desktop Macintosh computers such as the iMac or Power Macintosh G3.
- iBook

Published Date: Feb 20, 2012

AppleShare IP: Users Cannot Save Name And Password

From my Macintosh I am unable to save my name and password for automatic log-on to the AppleShare IP file server; the option is dimmed. Can you help?

This article has been archived and is no longer updated by Apple.

Figure 1 shows the dialog box you describe. The option is dimmed because the setting "Enable users to save password for automatic log on" is disabled on the server.

Figure 1: Save My Name and Password is disabled.

The option to allow users to save their name and password can be enabled by running the AppleShare IP Web & File Admin program. Follow these steps:

1. From the server, open the AppleShare IP Web & File Admin program.
2. Choose Web & File Server Settings... from the Server menu. The window shown in Figure 2 will appear.
3. Select Password from the window's pop-up menu.
4. Enable the checkbox titled "Enable users to save password for automatic log on."

Figure 2: Web & File Server Settings window; Password options displayed.

Published Date: Feb 20, 2012

Sherlock: Find By Content Indexing Issues

When trying to index a hard disk, sometimes an error message appears saying the index stopped because there is not enough room on the disk. However, the disk has several megabytes of space available.

Also, Sherlock does not correctly update the index files under the Find By Content option. After deleting the FBC Indexing Preferences file, it still does not update the index files.

This article has been archived and is no longer updated by Apple.
Sherlock sometimes erroneously reports that the disk is full when there is sufficient room. If Sherlock encounters other disk errors, it may report the issue as insufficient disk space.

Since the Find by Content indexing relies upon the integrity of the hard disk, run Disk First Aid to verify that it is free from errors. Extensions or control panels may cause interference with the indexing operation, so check for extension or control panel conflicts or issues.

If Sherlock cannot properly index the hard disk, you can eliminate the index files and reindex the hard disk which creates new indexes. Here are the steps:

1. Quit Sherlock.
2. Delete the file named FBC Indexing Preferences; it is located in the Preferences folder within the System Folder.
3. Open Sherlock and click More Choices to enable a second search criteria.
4. In the first criteria line, set 'name is TheFindByContentFolder'. In the second criteria line, hold down the Option key to select visibility from the popup menu. The second criteria line should then read 'visibility is invisible'.
5. Click the Find button.
6. Select the found item in the Items Found window.
7. Choose Move To Trash from Sherlock's File menu. Click OK in the resulting dialog box; the item is deleted immediately.
8. Choose Index Volumes from Sherlock's Find menu.
9. In the Index Volumes window, select the desired disk for indexing, then click Update Index.
10. Click Update to index immediately, or Schedule for indexing later.

Published Date: Feb 20, 2012

Drive Setup 1.7.x: Low Level Format Not Selectable For ATA Drives

It seems that Drive Setup 1.7 does not allow me to perform a low level format of my ATA hard drive; the option is dimmed. I tried newer versions of Drive Setup, and they behave the same. Can you explain?
This article has been archived and is no longer updated by Apple.
Beginning with Drive Setup 1.7, the low level format option for all ATA drives has been disabled. This test was not performing a low level format. This test instead wrote zeros and performed subsequent reads to verify drive calculated checksums on the written data. With the exception of the read portion, this test was the same as the write zeroes option. The combination of both tests and the larger capacity drives that Apple is shipping provides unnecessary redundancy at the expense of the user experience.

Drive Setup users can achieve the same functionality by selecting the "Zero all data" initialization option before initializing the hard drive followed by the Test Disk... function in the Function menu.
Published Date: Feb 20, 2012

AppleWorks: Print Options Vary Depending Upon Print Driver

In the Macintosh version of AppleWorks, I have several print options that do not appear in the Windows version. Why is this?
This article has been archived and is no longer updated by Apple.
Many print options are specific to the printer driver used. Different printers yield different print options even on the same operating system.

For example, under Mac OS the LaserWriter 8 printer driver offers options for layout, font settings, and color matching while the StyleWriter 1200 driver does not. In turn, the StyleWriter 1200 driver offers a watermarks feature which is not available using LaserWriter 8.

In addition, the same model printer may offer different options when used on different platforms (Mac OS, Windows, UNIX, and so forth) since different platforms use different print drivers to print to the same printer model.

Customers interested in print features that are not available when using a particular printer driver should provide feedback to the manufacturer of the driver.
Published Date: Feb 20, 2012

Sherlock, Sherlock 2: Finding Invisible Files or Folders

This article tells how to use Sherlock or Sherlock 2 to find invisible files or folders.
This article has been archived and is no longer updated by Apple.
Sherlock is a part of Mac OS 8.5 and 8.6. Sherlock 2 is a part of Mac OS 9.

As the name implies, invisible files and folders are those that cannot be seen in the Finder, whether they reside on the desktop or in a window. Invisible files and folders have an internal flag set that tells the Finder not to display them.

Important: A file or folder is typically invisible for a reason. Deleting or modifying one of them may cause unpredictable results. Unless you know the outcome of your modification, you should not make changes to an invisible file or folder.

Sherlock: Finding Invisible Files or Folders

Step 1

Open Sherlock.

Step 2

Click the Find File tab within the Sherlock window.

Step 3

Choose the volume(s) you wish to search from the Find Items pop-up menu.

Step 4

While holding down the Option key, click the leftmost Search Criteria pop-up menu. The pop-up menu contains four additional search criteria at the bottom of the menu. (See Figure 1.) Choose Visibility and release the Option key. (See Figure 2.)

Figure 1 Additional search criteria

Figure 2 Visibility search criteria

Step 5

Click Find .

Sherlock 2: Finding Invisible Files or Folders

Step 1

Open Sherlock 2.

Step 2

Click the Files channel. (See Figure 3).

Figure 3 Files channel

Step 3

Enable custom searching by clicking the Custom radio button and then clicking Edit (See Figure 4). The More Search Options window opens.

Figure 4 Custom search criteria

Step 4

Click the checkbox to enable the "is Invisible" option. (See Figure 5.)

Figure 5 Advanced options

Step 5

Click OK.

For more information on deleting invisible files and folders found by Sherlock and Sherlock 2, please see article 30726: "**Sherlock, Sherlock 2: Deleting Invisible Files and Folders**"

For information on how to find invisible files and folders with system software prior to Mac OS 8.5, please see article 16989: "**System 7.5-Mac OS 8.1: Additional Find File Search Options**"

Published Date: Feb 20, 2012

Mac OS X Server: Macintosh Manager, Access To Applications Not Allowed

This article explains why when using Macintosh Manager users are able to open application programs not in their Workgroup approved items.
This article has been archived and is no longer updated by Apple.
There are several settings that can allow access to items not in a users Workgroup approved items. First, the Administrator has the option to allow applications to be opened by other applications (sub-launched), on a per application basis. This option is accessed by choosing Application Preferences from the Configuration menu. For the sake of tighter security, the default setting is to not allow applications to be sub-launched.

If an Administrator sets the option to allow sub-launching of an application, then that application can be opened from the Restricted Finder. Macintosh Manager does not see this situation as a security risk and allows it to happen.

To work around this, simply disable the "Allow this Application to be opened by other Applications" option for all applications that you do not want users to be able to access. The application will show up in Application Preferences once it has been added to any workgroup.

To enable helper applications for something such as a web browser without granting access to the helper application itself, enable the "Applications can open other applications, such as helper applications" option in the Security tab of the Computers tab. This setting does not apply to the shell application (Finder or Panels) so it will not override the approved application settings for the workgroup. Finder and Restricted Finder are environments where the Finder is shell application and the Panels environment has Panels as its shell application.

A user will also be able to launch non-approved items in the following situations:

- The application or an alias to the application is in the Apple menu and the workgroup has access to other items in the Apple menu. This is set in the Apple Menu section of the Privileges tab of the Workgroups tab.
- The application or an alias to the application is in the Control Panels folder and the workgroup has access to Control Panels. This setting is also in the Apple Menu section mentioned above.
- The application or an alias to the application is in the Startup or Shutdown Items folder and the workgroup can open items in this folder. This setting is in the Options tab of the Workgroups tab.
  Note: The checkbox is labeled Startup Items but pertains to both folders.
- The workgroup is set for "members can open any items on local volumes." If this is set any member of the workgroup can launch any application on a local volume. This setting is in the Items tab of the Workgroups tab. Local volumes do not include AppleShare, CD-ROM, or removable media (such as floppy or Zip) volumes.
- If access to all CD-ROMs in the Computers: Security Tab is allowed, all items on all CD-ROM disks are available to all users. The Removable Media setting in the Workgroup: Privileges Tab only affects removable media which can be accessed in the Finder such as Zip disks and floppy disks.
- The workgroup has an approved document created by a non-approved application. This can be done by dragging a document into the approved items list. Approving a document will automatically approve the creator application. Removing the document from the approved items list will also remove approval for the application, if the application and other documents are not approved.

Published Date: Feb 17, 2012

Mac OS X Server: Macintosh Manager - Resetting Default Password

The default Macintosh Manager User password sent to Mac OS X Server when a Macintosh Manager user attempts to log in is reset by running the NetBoot Setup Assistant.
This article has been archived and is no longer updated by Apple.
It is routine that a Mac OS X Server administrator may use AppleFileServer Remote Administration to change user passwords. If the password for Macintosh Manager User is changed, though, a conundrum results. Although the password that Macintosh Manager Server expects from a system logging on as "Macintosh Manager User" has been changed successfully, there is no direct way in which the password that is automatically sent by these systems to the server can be changed to match. This password is embedded and implicit.

The matter can be resolved by the following actions:

1. Quit and restart MacintoshManagementServer
2. Reboot the server (which accomplishes the same thing)

This works, because each time MacintoshManagementServer is restarted (which also happens when the system is rebooted), a new password is formulated and applied to the Macintosh Manager User account.
Published Date: Feb 17, 2012

AppleWorks 5: Equation Editor Symbol Font Error

When opening the Equation Editor, an alert box appears with an error message that says the Symbol font installed is not the correct one.

This article has been archived and is no longer updated by Apple.

Symptom

When opening the Equation Editor, an alert box appears with an error message that says the Symbol font installed is not the correct one.

Solution

1. Quit all open applications.
2. Drag the Symbol font from the Fonts folder to the Trash.
3. Use the AppleWorks installer to perform a custom installation of the Equation Editor (one of the Writing Tools).

This installs a version of the Symbol font that is compatible with AppleWorks.

Published Date: Feb 20, 2012

Apple DVD Player: "Disc may be dirty or scratched" message

This article has been archived and is no longer updated by Apple.

The Apple DVD Player application displays an alert box with an error message about the disc being dirty or scratched. This document applies to Mac OS 9.2 or earlier.

Symptom

The Apple DVD Player application displays an alert box with the following error message:

> "Apple DVD Player has stopped because it's having problems playing the disc. The disc may be dirty or scratched, or the disc manufacturer may have encoded the disc incorrectly."

Solution

Upgrade to the latest version of the Apple DVD Player for your computer.

If you have a Macintosh with hardware-based DVD decoding, use Apple DVD Player 1.3, which is part of Mac OS 9. If your Macintosh has software decoding (if it came with Apple DVD Player 2.0 or later), check Apple Software Updates for the latest available version of Apple DVD Player.

If you have not upgraded to Mac OS 9, try these steps:

1. Eject the DVD-Video disc.
2. Press the Command, Option, and I keys while inserting the DVD-Video disc. This causes the computer to read the disc as an ISO 9660 formatted disc, rather than a UDF formatted disc. If the disc appears on the desktop, but has the DVD emblem on its icon, then it has not been accessed in the correct format. To access it correctly, control-click the icon and select "Mount as ISO 9660" from the contextual menu. The disc will become available with a generic icon.
3. Quit the Apple DVD Player application if necessary.
4. Open the Apple DVD Player application.
5. Play the movie. It should play, but you may still see the error message if the DVD-Video disc doesn't have an ISO 9660 volume.

Turn off AppleTalk by opening the AppleTalk control panel, choosing User Mode from the Edit menu, clicking Advanced, clicking Options, clicking Inactive, then OK.
Published Date: Feb 20, 2012

PowerBook G3 Series: Upgrading Memory

This article provides the necessary information for upgrading memory in the PowerBook G3 Series computer. These directions are taken from the PowerBook G3 Series User Manual, Chapter 4, titled "Installing a RAM Expansion Card And Removing Your Hard Disk."
This article has been archived and is no longer updated by Apple.
This information is available in:

Français | Deutsch | Español | Italiano | Nederlands | Svensk | Japanese

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, please see article 24604: "**PowerBook G3 & G3 Series: Identifying Different Models**"

For information on upgrading memory in a PowerBook G3 Series (Bronze keyboard) computer, see article 58325: "**PowerBook G3 (Bronze keyboard): Upgrading Memory**"

Warning: To avoid damage to your computer, Apple recommends that only an Apple-certified technician install additional RAM. Consult the service and support information that came with your Apple product for instructions on how to contact an Apple-authorized service provider or Apple for service. If you attempt to install additional RAM yourself, any damage you may cause to your equipment will not be covered by the limited warranty on your computer. See an Apple-authorized dealer or service provider for additional information about this or any other warranty question.

Getting Ready

Before you open your computer, make sure that you have a Phillips or a Torx T-8 screwdriver (available from a hardware or electronics supply store).

Removing the Keyboard and Internal Heat Sink

The design of your Macintosh PowerBook allows you to easily access the internal components of the computer by removing the keyboard. The steps in this section explain how to remove the PowerBook keyboard and internal heat sink to access the RAM expansion slot.

1. Place your PowerBook on a hard, flat surface.

2. If your PowerBook is turned on, press the Power button. In the Shut Down dialog box, click Shut Down.

> **Warning:** The internal components (including the internal heat sink) of your PowerBook may be hot. If you have been using your PowerBook, wait 10 minutes before continuing, to let the internal components cool down.

3. Unplug the power adapter and any other devices from the back of your PowerBook. Unplug any phone line from the internal modem.

4. Adjust your display so that it is at a 90-degree angle to the computer.

> If your display is tilted too far back, your PowerBook may tip backward when the expansion bay modules are removed in the next step.

5. Pull out both expansion bay release levers to eject the modules or batteries in both the expansion bays. See Figure 1.

Figure 1 Pulling the expansion bay release levers.

6. Remove the modules or batteries from both the expansion bays.

7. With your thumbs positioned slightly below the keyboard, place your fingers inside the expansion bays and locate the small plastic tabs that hold the keyboard in place. The plastic tabs have small ridges on them and are located on the underside of the top shell of the PowerBook approximately one inch inside each expansion bay. See Figure 2.

Figure 2 Plastic tabs inside the expansion bays.

8. Slide the plastic tabs toward you until you see the lower portion of the keyboard pop up.

9. Lift the lower portion of the PowerBook keyboard up slightly and pull it back enough to displace the five metal tabs that hold the front of the keyboard in place. See Figure 3.

Figure 3 Removing the keyboard.

10. Flip the keyboard over and lay it on the palm rests and trackpad. See Figure 4.

Figure 4 Flipping the keyboard over.

11. Remove the two screws that secure the internal heat sink (using a Phillips or Torx T-8 screwdriver) and then lift it up by pulling on the small metal tab. See Figure 5.

Warning: The PowerBook internal heat sink may be hot. If you have been using your PowerBook, wait 10 minutes before continuing to let the internal components cool down.

Figure 5 Internal heat sink with two screws and small metal tab.

You now have access to the internal components of your PowerBook.

Installing A RAM Expansion Card

To install a RAM expansion card in your PowerBook, follow these steps:

Important: Make sure that the RAM expansion card you are installing is made for your Macintosh PowerBook model. Components designed for other PowerBook models will not work with your computer.

1. Locate the empty RAM expansion slot. See Figure 6.

Note: If you ordered your PowerBook with additional memory, this slot may already have a RAM card installed.

Figure 6 RAM expansion slot.

2. Gently touch the metal surface on the right side of the inside of the computer to discharge any static electricity built up on your body. This prevents damage to your Macintosh PowerBook or RAM card. See Figure 7.

Figure 7 Safely discharging static electricity.

Don't walk around while installing the card. If you do, touch the metal surface again to discharge any static electricity.

3. Position the RAM expansion card at a 30-degree angle. Line up the notch in the PowerBook RAM expansion card with the small

tab in the RAM expansion slot. See Figure 8.

Figure 8 Positioning the RAM card.

4. Push the RAM expansion card into the plastic expansion slot. You may feel some resistance. If you are having trouble inserting the card, try pushing one side at a time.

Gently push the RAM expansion card down until the two snaps on either side of the card lock into place. See Figure 9.

Figure 9 Locking the RAM card into place.

Your RAM expansion card is now ready to use.

Replacing the Keyboard and Internal Heat Sink

Follow the steps in this section to replace your PowerBook keyboard.

1. Insert the internal heat sink and replace the two screws to secure it in place. See Figure 10.

Figure 10 Heat sink and screws.

2. Press down on the bottom portion of the heat sink to secure it into place.

3. Flip the keyboard back on top of the opening in your PowerBook.

4. Insert the five small tabs at the top of the keyboard into the opening in the PowerBook case. See Figure 11.

Figure 11 Aligning the keyboard tabs.

5. Press down on the lower portion of the keyboard until it snaps into place.

6. Replace the expansion bay modules.

You are now ready to start working with your PowerBook again.

Warning: Never turn on your PowerBook G3 Series computer unless all of its internal and external parts are in place. Operating the computer when it is open or missing parts can be dangerous, and can damage your computer.

Published Date: Feb 20, 2012

Mac OS: "International Utilities Not Present" Error During Startup

This article discusses the "International Utilities Not Present" message that can appear during startup when the computer was not shut down properly.
This article has been archived and is no longer updated by Apple.

Issue

If your computer was not shut down properly the next time the computer starts up Disk First Aid checks the system and hard drive. During the Startup Disk First Aid check, the following error can appeared: "Sorry, a system error occurred. International Utilities not present. To turn off extensions, restart and hold down the Shift key."

When restarting with extensions disabled, the computer starts correctly and Disk First Aid can be run. However, upon the next restart, the same error appeared.

Solution

1) Solution

- Start up with extensions disabled
- Disable the "Warn me if computer was shut down improperly" option in the General Controls control panel
- Run Disk First Aid manually to ensure that the hard disk is in good condition.
- Enable the warning option in General Controls control panel
- Restart the computer

2) Solution

The Shutdown Check file may be corrupt. To replace the Shutdown Check file, follow these steps:

- Make a Stickies note called "Shutdown Check" and save to the hard disk.
- Click "OK" in the dialog box to replace the existing Shutdown Check file.
- Open the Macintosh hard disk.
- Delete the Stickie note named "Shutdown Check"
- Restart the computer

Published Date: Feb 20, 2012

QuickTime 4: Adobe Premiere DV Plug-in Compatibility Issue

After updating to QuickTime 4, I am experiencing difficulties using Adobe Premiere 5.0.1 or earlier with the DV plug-ins that came with my Power Macintosh G3 (Blue and White). Are the plug-ins compatible with QuickTime 4?
This article has been archived and is no longer updated by Apple.
The DV plug-ins that Apple ships with the Apple FireWire PCI card and the Power Macintosh G3 (Blue and White) are not supported with QuickTime 4. Users of Adobe Premiere running QuickTime 4 should contact Adobe for information on a version of Premiere with native DV support.

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following Knowledge Base article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"
Published Date: Feb 20, 2012

Mac OS: File, Folder And Volume Name Limitations

This article describes the limitations of file, folder and volume names in the Mac OS.
This article has been archived and is no longer updated by Apple.
For all Mac OS versions up to and including Mac OS 9.x:

File and Folder names are limited to 31 characters.

Volume names are limited to 27 characters.

Names cannot include the colon (:) character. This character is reserved by Mac OS to denote catalog hierarchy. A colon typed in a character name will be replaced by a dash (-) automatically by Mac OS.

Note: There are a few known instances where a volume name can be over 27 characters, but in order for the volume name to work correctly with file sharing and all Mac OS versions, file names should not exceed 27 characters.
Published Date: Feb 20, 2012

AppleWorks 5: "View Document in Browser" Opens Wrong Browser

This article explains how to view an AppleWorks 5 document in a browser.
This article has been archived and is no longer updated by Apple.

Viewing HTML documents

With AppleWorks 5, you can view HTML documents in a browser by following these steps:

1. Click the down arrow on the Button Bar and select Internet.
2. In the Internet Button bar, there is a button to use the default browser to view your document (see Figure 1). This button sends an 'Open file' command to Internet Config, not an HTTP request.

Figure 1: The AppleWorks 5 "Launch Browser" button.

Changing browsers

To change the setting for which browser you want to use to view AppleWorks HTML files, follow these steps:

1. Open the Internet control panel, which is in the Apple menu.
2. If the Internet control panel does not display an 'Advanced' tab in its window, choose User Mode from the Edit menu, set the User Mode to Advanced, and click OK.
3. Click on the Advanced tab, then click the Helper Apps icon.
4. Select the item for 'open file' from the list on the right. You can change the settings by clicking the Change... button.

You can now set the Helper Application for 'open file' to your browser of choice.
Published Date: Feb 20, 2012

AppleShare IP 6.2: Setting Up Home Directory Folders

I am setting up an AppleShare IP 6.2, and I am interested in taking advantage of the new Home Directory feature. How do I set this up, and how does it work?

This article has been archived and is no longer updated by Apple.
The following is an excerpt from the ASIP 6.2 Tutorial found in the Tutorials folder on the AppleShare IP 6.2 CD:

"The AppleShare IP 6 administrator can create home directory folders which can contain user folders for each user. After the administrator creates the home folder and sets access privileges, a folder for a user is automatically created when the user logs in for the first time to the AppleShare file server. When the name of the user is displayed in the volume list in the Chooser, the user can log on to his own folder to save and store information. Each home directory folder can be viewed and accessed only by its owner. This automatic feature will save Administrators time in setting up individual sharepoints for each new User."

As an example, Figure 1 shows an administrator creating a share point that will contain users' home directory folders the next time each user connects to the server.

Figure 1 Privileges window.

Notes:

1. if a user has already logged on to the server prior to the creation of the home directory folder, the folder will not be created until the user's next login.

2. Privileges for the initial Home Directory folder need to be set as Read only for the User/Group section. For additional information see article 31294: "**AppleShare IP 6.2/6.3: Saving to the Home Directory Share Point**" .

When a home directory user now connects to the server, the user is presented with the option of mounting his or her home directory. For example, let's say that the user named "Average User" has logged onto the server. In the following picture of Disks and Share Points (see Figure 2), we see that a folder named "Average User" has now been created.

Figure 2 Disks & Share Points window.

If we examine the privileges for Average User's home directory (see Figure 3), we find that Average User is the owner of the folder and has Read/Write privileges, although the administrator retains ownership of the enclosing folder:

Figure 3 Home Directory's privileges.

Published Date: Feb 20, 2012

Power Macintosh G4 (PCI Graphics): 10.2GB Hard Drive Issue

Western Digital Corporation announced that they are implementing a limited recall of certain Caviar hard drives to address possible long-term reliability issues. This article explains the issue, how to determine if your Power Macintosh G4 (PCI Graphics) is affected, and what steps to take if it is.
This article has been archived and is no longer updated by Apple.
Western Digital Corporation is implementing a limited recall of certain capacities of their Caviar hard drives. Only a small number of the Power Macintosh G4 (PCI Graphics) built with the Western Digital 10.2 GB hard drive are affected. By looking at the serial number of the computer, you can determine if your system may be affected.

Here are the steps to follow to identify whether your Power Macintosh G4 (PCI Graphics) has an affected Western Digital hard drive:

Step One
Verify the computer serial number is xx938xxxxxx or xx939xxxxxx, where the x can be any letter or number. The serial number is located on the rear of the Power Macintosh G4, just below the AC receptacle.

If the serial number matches the above format, then go on to step two. If the serial number does not match, then your hard drive is not affected by this issue.

Step Two
Use Apple System Profiler to verify the model number and serial number of the Western Digital drive installed.

1. Open Apple System Profiler.
2. Select the Devices and Volumes tab.
3. In the Devices and Volumes window, click on the Hard Drive triangle that is to the right of the Internal ATA 1 line.

A small box will open containing the information regarding the installed hard drive. The information will look similar to this:

Hard drive

```
Driver version:      3.2.2f1
Mac OS partitions:   1
Removable media:     No
Vendor:              WDC
Revision number:     83.10A83
Product ID:          WD102AA
Serial number:       WD-WM6570248884
Unformatted size:    9.55 GB
```

The relevant information is the Product ID and Serial Number.

Product ID
If the Product ID is WD102AA, then look at the Serial Number. Otherwise, the drive is not affected by this issue and does not fit the recall parameters set forth by Western Digital.

Serial Number
If the Serial Number is in the range WD-WM6570248884 to WD-WM6570432919, inclusive, the drive is affected by the issue and should be replaced. Please contact your local Apple Authorized Service Provider to have the drive replaced.

If the Serial Number is not in the above range, the drive is not affected by this issue and does not fit the recall parameters set forth by Western Digital.

Note: Apple strongly recommends that you back up your hard drive before having your computer serviced. Apple is unable to retrieve data left on the hard drive once it has been replaced.
Published Date: Feb 20, 2012

PowerBook (Bronze Keyboard, FireWire and G4): Consequences of Serial Device on S-Video Port

When a serial device is connected to a PowerBook G3 (Bronze Keyboard and FireWire) or PowerBook G4, the computer may not startup properly.
This article has been archived and is no longer updated by Apple.

Symptom

If a serial or LocalTalk device is connected to the S-Video port on the PowerBook G3 Series (Bronze Keyboard and FireWire) or PowerBook G4, the computer will not startup properly. The Mac OS splash screen and extensions along the bottom of the screen do not appear during startup. When the desktop loads, there is no menu bar however some icons may appear on the desktop area.

Affected Products

- PowerBook G3 Series (Bronze Keyboard)
- PowerBook G3 Series (FireWire)
- PowerBook G4

Solution

Do not connect serial or LocalTalk devices, such as printers, hand-held to the S-Video port on the PowerBook G3 Series (Bronze Keyboard and FireWire)or PowerBook G4 computers.

When a serial device is connected to the S-Video port, the computer believes an external display is attached. Under normal circumstances when an external display is connected to the S-Video connector, the built-in display becomes a secondary display and the external display becomes the primary screen. This is why the menu bar, welcome screen, and extensions do not appear on the built-in display.

If the computer is put into the sleep mode and the serial device is removed from the S-Video port, then taken out of the sleep mode, the computer will return to its normal display mode.

Published Date: Feb 20, 2012

Mac OS X Server: Determining Which Version Is Installed

This article explains how to check which version of Mac OS X Server is installed on a computer.
This article has been archived and is no longer updated by Apple.
There are several ways to determine which version of Mac OS X Server is installed, or whether a specific patch has been applied successfully.

About this Mac

If you are running Mac OS X Server 10.x, select 'About this Mac' from the Apple Menu to find out the version.

Console Window
A direct way of verifying the version of Mac OS X Server is to open the Console from the Tools Menu within Workspace Manager. Besides displaying system messages related to the opening of applications and the initialization of various services, the Console writes the currently installed Mac OS X Server version at login.

Listed below are the readouts in the Console screen with each version of the OS:

- Mac OS X Server 1.0 (Initial release): "Software Version Mac OS X Server (Hera1O9)"
- Mac OS X Server 1.0.1: The output is identical to that found in the 1.0 release.
- Mac OS X Server 1.0-2 (update posted 1999-07-22): "Software Version Mac OS X Server+Mac OS X Server 1.0-2 Patch (Hera1O9+Loki2G1)"
- Mac OS X Server 1.2: Software Version Mac OS X Server 1.2 (Pele1Q10)
- Mac OS X Server 10.x: "Mac OS X Console"
  Note: This does not indicate which version of Mac OS X Server10.x is installed.

Installer Receipts
Alternatively, locate the package used to install the patch (in /Local/Library/Receipts/), double-click it to open the Installer.app, and examine the status in the window that opens. You may also verify the installation of each component of the patch directly after running the Installer by looking at the log file that is created in the process.

uname command
A third method is to open a terminal window and type the uname command. This command takes a variety of arguments, but if the -a argument is used, the command outputs all available information to the terminal screen, including hardware name, node name, operating system name, operating system release and operating system version.

For example, here is the printout received from issuing uname -a on the current version 1.2:

```
Rhapsody sfk 5.6 Kernel Release 5.6: Tue Nov 23 15:07:38 PST 1999;
root(rcbuilder):Objects/kernel-187.obj~2/RELEASE_PPC Copyright (c)
1988-1995,1997-1999 Apple Computer, Inc. All Rights Reserved.  Power
Macintosh
```

The Kernel Release will vary depending on the version of Mac OS X Server that is installed as the following chart shows.

Mac OS X Server version	Kernel Release version
1.0	5.3
1.0-1	5.4
1.0-2	5.5
1.2	5.6

Mac OS X Server 10.x returns "Darwin" with no version information. Therefore, this is not a way to determine which version of Mac OS X Server 10.x is installed.

For further details on the uname command, please refer to the online manual page.

Note: To find the most recent version of this software, please visit Apple Software Downloads at
http://www.info.apple.com/support/downloads.html

Published Date: Feb 17, 2012

Mac OS: Controlling Window Scrolling, Menu Pulldown

This article describes how to slow the scrolling of menus and windows.
This article has been archived and is no longer updated by Apple.
When scrolling through a menu that is longer than your display, there is a small triangle at the bottom of the menu (see Figure 1). When scrolling up, the triangle is at the top of the menu.

Positioning the pointer on the same line as the arrow will slow the scroll speed. Going below (or above if scrolling up) the arrow will invoke the normal scroll speed.

Figure 1: Small triangle at the bottom of a long menu.

When scrolling documents, you can click once in the gray area above or below the scroll box to move up or down a screen. You can also move the scroll box up and down directly by dragging it up or down. See Figure 2.

Figure 2: Scroll box in a scrollbar.

Some programs may also have keyboard shortcuts for moving up or down a page.

Published Date: Feb 17, 2012

AppleWorks 5: Select Dictionary Window Appears

I have created a document in AppleWorks 5. When I try to use the Check Document Spelling feature, a dialog box appears asking me to select my dictionary and type. Can you explain?
This article has been archived and is no longer updated by Apple.
Note: This discussion applies to both AppleWorks 5 and its predecessor, ClarisWorks.

The default dictionary is stored in the Claris folder inside your System Folder. If the dictionary has been moved or deleted, AppleWorks 5 opens the dialog shown in Figure 1.

Figure 1: Dictionary Dialog.

When this situation occurs, often it is because a clean install of system software was performed. Reinstall AppleWorks to restore all the necessary components of AppleWorks 5 to your System Folder. If you have a computer that shipped with AppleWorks 5 already installed, you can start up the computer from the Software Restore CD and perform a Restore in Place to install all the AppleWorks components.

Important: If you use Apple Software Restore to perform a Restore in Place, some of your System and Internet preferences will be reset to factory settings. Before using Apple Software Restore, please read the following Knowledge Base article:

Article 31063: "**Apple Software Restore: Some Preferences May Be Lost**"

For more information about performing a clean install of system software, see the following Knowledge Base article:

Article 30691: "**Mac OS: When & Why To Perform A Clean Install**"
Published Date: Feb 20, 2012

Macintosh: No Internet After Installing KeySpan USB to Serial Adapter

My internal modem no longer functions after installing the Keyspan USB Serial Adapter. Can you help?
This article has been archived and is no longer updated by Apple.
Note: This issue applies to any Macintosh equipped with USB and an internal modem, including the iMac, Power Macintosh G3 (all varieties), Power Macintosh G4, PowerBook G3 Series, and iBook.

The Keyspan USB Serial Adapter software registers additional ports with Mac OS. The Modem control panel preferences are not properly updated to reflect the additional serial ports so the wrong port can end up being selected.

To resolve this issue, simply edit the currently active Modem control panel configuration with the correct settings for your internal modem. To do this:

1. Open the Modem control panel.
2. Select Internal Modem from the Connect Via pop-up menu.
3. Close the Modem control panel to save your changes.

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following Knowledge Base article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"
Published Date: Feb 20, 2012

AppleShare IP 6.2: Creating New Mail Database Without Losing Messages

This article explains how to create a new AppleShare IP 6.2 mail database without losing any existing email.

This article has been archived and is no longer updated by Apple.
You may export the messages from the old mail database and then reimport them into a new mail database by following these steps:

1. Stop the mail server and quit AppleShare IP Mail Admin.
2. Make a backup of your AppleShare IP mail database.
3. Open AppleShare IP Mail Tool and export the messages for every account that currently has email messages stored on the mail server. The mailboxes will export to the BSD-standard mailbox format. If you suspect corruption and are familiar with this format, you may edit these with a text editor.
4. Move the existing mail database out of the AppleShare IP Mail Folder (for example, to the desktop).
5. Start the mail server. This will create a new mail database in the AppleShare IP Mail Folder, but user mailboxes will not yet exist.
6. Send a test message to all accounts that were exported. This will create the user mailboxes.
7. Stop the mail server and quit AppleShare IP Mail Admin
8. Launch AppleShare IP Mail Tool and import the mailbox for every account that was exported.
9. Quit AppleShare IP Mail Tool and start the mail server.

For additional information on exporting and importing users, see the following article:

Article 24692: "**AppleShare IP 6.x: Importing/Exporting Users & Groups FAQ**"
Published Date: Feb 20, 2012

PowerBook, iBook: Voice Mail/Speakerphone Compatibility

Can I use the PowerBook G3 Series, PowerBook G3 Series (Bronze keyboard), PowerBook (FireWire), or iBook as a speakerphone and voice mail system?
This article has been archived and is no longer updated by Apple.
The modems in PowerBook G3 Series, PowerBook G3 Series (Bronze keyboard), and iBook computers do not support voice and cannot function as a speakerphone. The modem may work with some third-party voice mail applications, but Apple does not support the use of these applications.

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, please see the following Knowledge Base article:

Article 24604: "**PowerBook G3 & G3 Series: Identifying Different Models**"
Published Date: Feb 20, 2012

Mac OS: Avoid Using Duplicate Computer Names With Apple Network Management Products

If you allow client computers on your network to have the same computer name (as defined in the File Sharing panel), you may encounter unexpected behavior and privileges issues with these Apple network management products: Apple Network Assistant, Apple Remote Desktop, and Macintosh Manager.

This article has been archived and is no longer updated by Apple.

Symptom

- You see alert messages in Macintosh Manager, but their origin is unclear or unknown.
- Privileges are not enforced as expected.
- Network Assistant indicates that you have added a computer that you know you have not added.
- Apple Remote Desktop displays incorrect information and "unavailable" workstations.

Solution

One or more client computers may have the same name, as defined in the Computer Name field. This is located in the Sharing pane of System Preferences for Mac OS X, and in the File Sharing control panel for earlier Mac OS versions. This name is used for AppleTalk and SLP applications, such as Chooser, Connect to Server, and Network Browser.

When File Sharing is turned off at the computers with duplicate names, they affect Macintosh Manager, Network Assistant, and Apple Remote Desktop, but otherwise appear to work normally. If File Sharing is enabled on pre-Mac OS X systems, an alert message indicates that the name is already in use on the network.

To resolve or prevent the issue, be sure that each computer has a unique computer name.

Published Date: Feb 20, 2012

AppleWorks 5: Creating and Printing Labels

AppleWorks 5 can be used to create and print out labels.
This article has been archived and is no longer updated by Apple.
In order to create labels in AppleWorks 5, you must create and use an AppleWorks database document. Here are the steps:

Step One
Open the AppleWorks 5 application program by double-clicking the AppleWorks icon inside your AppleWorks 5 folder on your hard drive. You will then be presented with a window named New Document. This window allows you to choose the kind of new document AppleWorks will create.

Step Two
Select the Database option with your mouse and then click OK. This will bring up a window titled Define Database Fields. The Define Database Fields window allows you to choose how many different fields there will be for your database, what kinds of fields they will be, and what their names will be.

Step Three
The first field in the label created for this demonstration is the Name field. Type `Name` and then click Create. This will add the Name field to the list up above. Using this same method, enter in the other field names. Simply name the fields for Address, City, State and Zip Code and click Create after naming each one. You will then see the names of all the fields you have created in the list above. See Figure 1.

Figure 1: Define Database Fields window.

Step Four
Click Done after you have defined all the fields you need for your label. This will create a new database document with one blank record containing the fields you have defined. See Figure 2.

Figure 2: The First Record.

Step Five
Fill in the fields of this first record by selecting the individual fields with your mouse and entering text into each one. In order to create a new record, choose New Record from the Edit menu. Repeat the actions in Step Five until you have created a record in your database for each of the labels you want to create. See Figure 3.

Figure 3: The completed list.

Step Six
Choose AppleWorks Assistants... from the Help menu. You will then see a window titled Select Assistant. For a database document, the only available AppleWorks Assistant is the Create Labels Assistant. Select it from the list and click OK. This will start the Create Labels Assistant. This Assistant will walk you through setting up a layout for printing your labels.

For information on AppleWorks 6 labels, please see article 25264: "**AppleWorks 6: Creating Labels**"

Published Date: Feb 20, 2012

Mac OS: Do Not Remove Multiprocessing Folder

I notice that there is a folder called Multiprocessing in my Extensions folder. Since I do not have multiple processors in my Macintosh, can I safely remove this folder?

This article has been archived and is no longer updated by Apple.

The files in this folder do not occupy any significant RAM or hard disk space, so you will not benefit by removing it. Although your Macintosh may have a single processor, we strongly discourage removing the Multiprocessing folder. Applications which are multiprocessor-aware rely on the software in this folder and may crash if it is not present. Also, some recent Macintosh models may not wake from sleep if this folder is removed.

Published Date: Feb 17, 2012

Mac OS 9.x: Incorrect Version for CD Update 2.0

I just installed Mac OS 9.x, and I went to install the iMac CD update 2.0. I get a message that states I have the incorrect system version and it works best on system 7.x or greater. It also states that I should proceed at my own risk. Don't I have the latest version of Mac OS?
This article has been archived and is no longer updated by Apple.
Note: This issue also applies to the Power Macintosh G3 CD Update 2.0.

The CD update incorrectly identifies Mac OS 9.x, and gives the alert shown in Figure 1.

Figure 1: Alert dialog.

The CD-ROM firmware updaters were created before Mac OS 9.x existed. The installers are unaware of the Mac OS 9.x environment and the message should be interpreted with this in mind. The firmware update should be applied, regardless of the Mac OS level. It is fine to continue.

Before running the CD update, refer to the following articles for more information on when and how to install the CD update 2.0.

Article 24714: "**Power Macintosh G3 CD Update 2.0: Read Me**"
Article 60458: "**iMac CD Update 2.0: Read Me**"
Article 31090: "**iMac CD Update 2.0: Frequently Asked Questions**"

Published Date: Feb 17, 2012

AppleWorks 5: ‘The file "QuickHelp" couldn‘t be found‘ Error

When I try to use help in AppleWorks 5, I get this error: 'The file "QuickHelp" couldn't be found'. What is causing this message?
This article has been archived and is no longer updated by Apple.
ClarisWorks 5 used the QuickHelp engine for the Frequently Asked Questions component of help. ClarisWorks has been renamed to AppleWorks 5, and it continues to use QuickHelp.

The QuickHelp file is stored in the Claris folder inside your System Folder. If QuickHelp has been moved or deleted, AppleWorks will display the error dialog mentioned above. The most common cause of this behavior is that a clean install of system software was performed (in other words, system software was reinstalled and a new System Folder created).

Reinstall AppleWorks to restore all the necessary components. If you have a computer that shipped with AppleWorks already installed, you can start up the computer from the Software Restore CD, and perform a Restore in Place to install all the AppleWorks components.

Important: If you use Apple Software Restore to perform a Restore in Place, some of your System and Internet preferences will be reset to factory settings. Please read the following article before using Apple Software Restore:

Article 31063: "**Apple Software Restore: Some Preferences May Be Lost**"

For more information about performing a clean install of system software, see the following article:

Article 30691: "**Mac OS: When and Why To Perform A Clean Installation**"
Published Date: Feb 20, 2012

AppleWorks 5: ‘MacLink Import Translators‘ File Appears On Hard Drive

Whenever I run AppleWorks 5, two files appear on my hard drive:

- MacLink Import Export Translator
- MacLink Export Translators

Can you explain?
This article has been archived and is no longer updated by Apple.
This may occur on computers with Dataviz MacLink Plus installed, if the Claris folder is missing from your System Folder. The most common cause of this behavior is that a clean install of system software was performed (in other words, system software was reinstalled and a new System Folder created). Reinstall AppleWorks 5 to restore all the necessary components. If you have a computer that shipped with AppleWorks 5 already installed, you can start up the computer from the Software Restore CD, and perform a Restore in Place to install all the AppleWorks 5 components.

Important: If you use Apple Software Restore to perform a Restore in Place, some of your System and Internet preferences will be reset to factory settings. Before using Apple Software Restore, please read the following Knowledge Base article:

Article 31063: "**Apple Software Restore: Some Preferences May Be Lost**"

For more information about performing a clean install of system software, see the following Knowledge Base article:

Article 30691: "**Mac OS: When & Why To Perform A Clean Install**"
Published Date: Feb 20, 2012

USB Mouse: Intermittently Loses Tracking In One Axis

My USB mouse will intermittently lose tracking in either the horizontal or vertical axis. Can you help?
This article has been archived and is no longer updated by Apple.
If your USB mouse occasionally loses its ability to track in one direction then it is possible that it is caused by one of the following:

The mouse may need to be cleaned. The USB mouse contains a ball that must remain clean in order for it to roll properly. In addition, there are several rollers inside your mouse which can accumulate debris. If either the ball or the rollers are dirty the USB mouse may not track properly. See the following article for instructions on cleaning a mouse:

Article 6491: "**How To Clean A Mouse**"

The mouse is broken. If cleaning the mouse does not resolve the situation then it is possible that the mouse is broken. If you find that unplugging and then re-plugging the mouse into the USB port restores functionality of the mouse then it is possible that the mouse is broken and may need to be replaced. Contact Apple for assistance in getting your USB mouse replaced.
Published Date: Feb 20, 2012

iMac (Slot Loading): Computer Stops Responding at Startup with Multiple USB Devices

In some cases, the iMac (Slot Loading) does not respond when starting up. This typically occurs when two USB peripherals are connected and turned on. The USB drivers may not be installed, or may be installed but disabled through the Extensions Manager. The symptom does not occur if one of the peripherals is disconnected.
This article has been archived and is no longer updated by Apple.
This intermittent issue has been verified with the Epson Stylus printer and an Iomega Zip drive or Imation SuperDisk drive, though it can occur with other USB peripherals in combination with the Epson Stylus printer.

The issue is related to the USB software in Mac OS 8.6 and has been resolved in Mac OS 9.

As a workaround, you may disconnect the peripheral that is not in immediate need. Since a USB device can be plugged in while the computer is running, disconnect one of the peripherals during system startup and reconnect it after the computer has successfully started.

Although this specific issue is not related to the driver version for the USB device, always make sure you are using the most current drivers.

Published Date: Feb 20, 2012

Mac OS: Menu Differences Between Simple Finder and Regular Finder

What are the differences between the menus in Simple Finder and regular Finder?
This article has been archived and is no longer updated by Apple.
Starting with Mac OS 8.0, Apple has offered a Finder Preference item called Simple Finder. When this option is selected, the menu item choices are reduced to a minimal, simplified set of choices that still enable most basic operations.

This reduction in menu commands can be best shown with the following screen shots. Note that the menus shown here are for Mac OS 9 and will be slightly different from Mac OS 8. Figure 1 shows the standard Finder menus.

Figure 1: Standard Finder menus.

Figure 2 shows the menus available when the Simple Finder option is selected.

Figure 2 Simple Finder menus.

Menu Items Not Available in Simple Finder

Here is a summary listing of the menu items not available in Simple Finder:

File Menu

- Print
- Move To Trash
- Get Info
- Label
- Make Alias
- Add To Favorites
- Put Away
- Encrypt (Mac OS 9)
- Show Original
- Page Setup
- Print Window

Edit Menu

- Undo
- Clear
- Select All
- Show Clipboard

View Menu

- as Window
- as Pop-up Window
- Clean Up
- Arrange
- Reset Column Positions
- View Options

Special Menu

- Erase Disk
- Sleep
- Restart

Note that no command key equivalents are supported using Simple Finder. For example, Command-N does not create a new folder; you must select the New Folder menu item for this action.

Also note that since Pop-up Window is removed from the View menu, Pop-up Windows are not available in Simple Finder. If you have Pop-up windows established and you turn on the Simple Finder preference, all Pop-up windows are redrawn as normal windows on the desktop. Turning off Simple Finder does not restore them to being Pop-up windows, because the window state has been changed to normal.

Simple Finder can be enabled or disabled by choosing Preferences from the Edit menu and clicking to place or remove the check mark next to Simple Finder.
Published Date: Feb 17, 2012

iBook: Adapters Needed When Traveling

I will be traveling and will be taking my iBook computer with me. Which adapters do I need for the power and modem?
This article has been archived and is no longer updated by Apple.
iBook computers can use 110 V and 220 V power. If the power in the country you are traveling to is different from your home country's, you need a power cord adapter. You can purchase one at an electronics or travel retailer. Review the following Knowledge Base article for more details:

Article 129: "**World Power Differences Can Limit International Product Use.**"

Most modems are not certified for use in other countries. It is best to use an external USB modem that complies with the regulations of the country you are travelling to.
Published Date: Feb 20, 2012

AppleShare IP 6.3: Creating User Folders Automatically

This article explains how to automatically create user folders using AppleShare IP 6.3 (ASIP).

This article has been archived and is no longer updated by Apple.

Objective

Create home directories that automatically set up a user folder for each registered user. The folder has the user's login name and is set up when they log on to the file server for the first time through AppleShare or Windows file sharing. The folder's Owner and Everyone privileges are inherited from the enclosing share point, and the User/Group privileges are set to the user's account with Read & Write access.

After the folder is created, the user can access it in the Chooser, over FTP, and over Windows file sharing services.

Note: Privileges for the initial Home Directory folder need to be set as Read only for the User/Group section. For additional information see article 31294: "**AppleShare IP 6.2/6.3: Saving to the Home Directory Share Point**" .

Affected Products

- AppleShare IP 6.3

Solution

There are two sets of directions listed below. If the home directory is already a sharepoint, use the first set of steps. If the home directory is not already a sharepoint, use the second set of steps.

Setting up a home directory using a folder that's already a sharepoint

To set up a home directory folder that's already a sharepoint:

1. Open Mac OS Server Admin and log on to the server you want to administer
2. Click Privileges
3. Choose Show Disks & Shared Items
4. Select the folder you want to be the home directory folder
5. Click Privileges
The Access Privileges window opens.
6. Select "Automatically create user folders inside this shared item"
7. Click Users and Groups button
8. Select "Show Users & Groups List"
9. Drag a user or group from the list to the User/Group box in the Access Privileges window
See Note about Groups and Access Privileges section
10. Choose Read only from the User/Group pop-up menu. For additional information see article 31294: "**AppleShare IP 6.2/6.3: Saving to the Home Directory Share Point**" .
11. Close the Access Privileges window

Setting up a home directory using a folder that's not yet a share point

1. Open Mac OS Server Admin and log on to the server you want to administer
2. Click Privileges
3. Select "Set Privileges"
4. Select the folder you want to be the home directory folder
5. Click Choose

The Access Privileges window opens

6. Select "Share this item and its contents"

7. Select "Automatically create user folders inside this shared item"

8. Click Users and Groups

9. Select "Show Users & Groups List"

10. Drag a user or group from the list to the User/Group box in the Access Privileges window
See Note about Groups and Access Privileges section

11. Choose Read only from the User/Group pop-up menu. For additional information see article 31294: "**AppleShare IP 6.2/6.3: Saving to the Home Directory Share Point**" .

12. Close the Access Privileges window

Note about Groups and Access Privileges

When any member of a group logs in for the first time, selects and mounts this sharepoint, a directory is created for the member. While giving "everyone" read-write access accommodates guest users, this does not specify any ownership. Only members of a group defined to have access to the home directory folder will have home directories made automatically. Guests will not have home directories made for them.

Published Date: Feb 20, 2012

Macintosh Manager, Mac OS 8.1: "Unable to Start the Requested Environment" Message

Use this solution for an issue, sometimes called "looping login," in which Macintosh Manager returns you to the login screen after displaying an alert message.
This article has been archived and is no longer updated by Apple.

Symptom

After logging in to Macintosh Manager, an alert box with this message appears:

> "Unable to start the requested environment because of an unknown problem."

You are logged out and returned to the login screen.

Products affected

- Macintosh Manager (all versions)
- Mac OS 8.1 and earlier

Note: Mac OS versions prior to 8.1 are not supported by Macintosh Manager 2.0 or later.

Solution

There are several possible solutions:

- Upgrade to Mac OS 8.5 or later. Mac OS 8.6 or later is recommended.
- Use the Extensions Manager to disable Macintosh Easy Open.

If the issue persists, refer to article 58820: "**Macintosh Manager: Client Login Troubleshooting**".
Published Date: Feb 17, 2012

Macintosh Manager: Wrong Icons in Panels Environment

In the Panels environment, application icons appear as a large, pink letter "M".
This article has been archived and is no longer updated by Apple.

Symptom

In the Panels environment, application icons appear as a large, pink letter "M".

Solution

Clear the custom icon from the font.

1. Drag the font out of the Fonts Folder to the desktop.
2. Select the font and choose Get Info from the File menu.
3. Select the icon in the Get Info window.
4. Choose Clear from the Edit menu. The custom icon should disappear and the font should appear as a suitcase.
5. Drag the font back to the Fonts folder.
6. Repeat this procedure for all fonts with custom icons.

Published Date: Feb 17, 2012

USB: Duplicate Device Appears in Apple System Profiler

This article explains a situation where a duplicate USB modem appears in the Apple System Profiler Devices and Volumes tab. When connecting the USB modem after starting up the computer, only one appears.
This article has been archived and is no longer updated by Apple.
This issue was fixed in Mac OS 9, as well as in the Mac OS software that shipped with the iBook, iMac (Slot Loading), and Power Mac G4 computers.

Updating older computers to Mac OS 9 will resolve the issue. Alternatively, connect the modem to the Macintosh after starting up the computer.
Published Date: Feb 20, 2012

AppleShare IP 6: Too Many Aliases in a Folder Hangs Server During ftp Access

This article describes a condition that may cause AppleShare IP to hang when some ftp clients access the server.

This article has been archived and is no longer updated by Apple.
An AppleShare IP 6 server may hang if an ftp client issues a LIST command for a folder that contains 17 or more aliases to items on a volume that is not the startup volume (some ftp clients use the LIST command when reading the contents of a directory).

Solution

Do not put more than 16 aliases to items not on the startup volume into the same folder if the folder is accessible through ftp.

Published Date: Feb 20, 2012

Macintosh Management Server: Error -5047

None of my clients can connect to my Macintosh Management server. I keep getting an error: "Searching for the Macintosh Manager Server (Unknown problem #-5047)." What is causing this?
This article has been archived and is no longer updated by Apple.
This is the error you will see on your client computers if you have selected "Restrict users to single active logon per account" on the AppleShare IP server. Launching the Macintosh Manager Admin program shows a similar error: "Unable to open databases on "MM Server" because of an error: An unknown error has occurred (-5047)."

The first computer to log on either as a client or using the administrator program will work normally, but all subsequent attempts to access the Macintosh Manager server will give one of the errors mentioned above.

As noted in the Read Me for Macintosh Manager Server, this option must be disabled on any AppleShare IP server being used as a Macintosh Manager server.
Published Date: Feb 20, 2012

Mac OS X Server: How to Upgrade a NetBoot Image to Mac OS 9

This article explains how to upgrade a NetBoot image to Mac OS 9.
This article has been archived and is no longer updated by Apple.

System Requirements

Upgrading a NetBoot image to Mac OS 9 requires:

- Mac OS X Server 1.0-2 (or Mac OS X Server 1.2)
- Mac OS 9 CD
- NetBoot Desktop Admin 1.1 recommended

Note: If you are using Macintosh Management Server, upgrade to version 1.2 or later of this software, available from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Introduction

Early versions of Mac OS X Server came with Mac OS 8 NetBoot images. It is possible to upgrade these images to Mac OS 9.

Note: If you wish to NetBoot an iBook, iMac (Slot-loading), or Power Mac G4 computer, you must upgrade your NetBoot image to Mac OS 9 or later.

Summary of Upgrading the NetBoot HD Disk Image to Mac OS 9

To upgrade the NetBoot HD disk images to Mac OS 9, you have to log on to a NetBoot client computer, connect to the NetBoot server volume, and open the NetBoot Desktop Admin program several times. You must also have a Mac OS 9 installation CD to upgrade the image. Changes are not available to you or other users until after the NetBoot client computer restarts the last time.

Before You Start

Before you start, you need the following information:

- Name and password for a Global Administrator who belongs to the System Access workgroup.
- Name and password of the root user.
- Make sure that no users are NetBooting during the upgrade procedure.

Performing The Upgrade

To upgrade the NetBoot HD disk image to Mac OS 9:

1. Log on to a NetBoot client computer as a Global Administrator who belongs to the System Access workgroup.
2. Mount the NetBoot Server volume. Open the NetBoot Desktop Admin application.
3. Using NBDA, increase NetBoot HD.img image so that there is at least 250 MB of free space. You cannot reduce the size of an image without reverting to a backup copy.
4. Click Make Private Copy. NetBoot Desktop Admin creates copies of the disk images that you can change. This may take several minutes and you should not interrupt the process. When it finishes, your NetBoot client computer restarts automatically.
    - **Important:** Because the copies of the disk images are associated with the NetBoot client computer you used to create them, you must make the changes to the images using the same computer. If you change computers, you will not be able to see the changes you have made and your changes will not be available to users. In addition, you increase the risk of unauthorized persons making changes to the disk images.
5. Log on to the NetBoot client computer again as the same user.
6. Using the Chooser on the client, locate and mount the Mac OS format volume on the Mac OS X Server on the client. Log on as a user with read and write access privileges (for example, the Administrator of the Mac OS X Server).
7. Open the volume and locate the Shared Images folder.
8. Locate the Mac OS ROM file and change its name to something other than Mac OS ROM. Do not throw it away, you will need it later.
9. Insert the Mac OS 9 CD.
10. Locate the System Folder on the Mac OS 9 CD. Open it and locate the Mac OS ROM file.
11. Drag the Mac OS ROM file from the Mac OS 9 CD to the Shared Images folder.
12. Open the Mac OS 9 installer and install an upgrade on the NetBoot HD. The client will restart after the upgrade. If the NetBoot HD is not

set as the startup disk, hold down the N key to make the client start up from the NetBoot HD.

13. After the restart, the client will start up the Mac OS 9 Setup Assistant. Do not use the Setup Assistant. Choose Quit from the File menu. If you have other upgrades to install, do so at this time.
    Important: Before you finish customizing the NetBoot image, be sure to install the latest version of Macintosh Manager client software, available from Apple Software Updates at http://www.apple.com/swupdates/. Then be sure to use the Multiple Users control panel to turn on Macintosh Manager and choose "Macintosh Manager account (on network)" in the Options... Other tab.
14. Using the Chooser on the client, locate and mount the Mac OS format volume on the Mac OS X Server on the client. Log on as a user with read and write access privileges (for example, the Administrator of the Mac OS X Server).
15. Locate the Shared Images folder and open it. Locate the Mac OS ROM file and name it something else. Locate the Mac OS ROM file you renamed in Step 8 and change its name back to Mac OS ROM.
16. Open the NetBoot Desktop Admin utility. Locate the System Folder and open it. Locate the Recent Documents, Recent Applications, and Recent Server folders and drag the contents of each folder to the Trash. Then close all the windows except for NetBoot Desktop Admin. Save the changes in NetBoot Desktop Admin. Note that this step prevents the user from seeing the various installers and other applications that were run during the modification of the images, but it is not a mandatory step.
17. The client restarts, this time using the operating system version you were upgrading from.
18. Open the NetBoot Desktop Admin utility one last time, and save changes.
19. When the client restarts, it should restart with Mac OS 9.
20. Verify that the file named Mac OS ROM in the SharedImages folder is the correct version for the version of Mac OS just installed. You can do this by selecting it and choosing Get Info from the Finder's File menu.

Published Date: Feb 17, 2012

Unauthorized Changes To Hardware Void Warranty

This article explains Apple's warranty as it relates to hardware modifications. The information applies to all Apple products in all regions of the world.
This article has been archived and is no longer updated by Apple.
Changes made to Apple hardware that are not authorized by Apple may void the warranty. Accordingly, you can expect your service provider to charge you for service to that product if it requires service after the modification has been made. Further, if the modification alters a part so as to make it unfit and ineligible for parts exchange with Apple, a new part must be purchased. Note that pricing is typically significantly higher when parts cannot be sent to Apple for exchange.
Adding DRAM, VRAM or other user-installable upgrade or expansion products to an Apple computer is not considered a modification to that Apple product.

For more information, please see the following Knowledge Base articles:

Article 30284: "**Apple One-Year Limited Warranty: US & Canada**"
Article 58127: "**iMac: Modifying Logic Board Voids Warranty**"
Article 17402: "**Power Macintosh: Oscillator Chip & Warranty Implications**"
Published Date: Feb 20, 2012

Final Cut Pro: Switching between Targa and DV Capture Settings

This article offers tips on how to switch back and forth between using a Targa 2000 Pro card and the built-in Apple FireWire interface to capture video. One solution takes advantage of the Multiple Users feature, available only to users of Mac OS 9.
This article has been archived and is no longer updated by Apple.
When using the Targa Driver software version 3.1 with a Targa 2000 Pro capture card and Final Cut Pro, difficulties may arise when you change the capture preferences from Targa to DV and then back to Targa. Afterward, when adjusting the Clip Settings for Brightness and Contrast in the Log and Capture window, the application may appear to freeze while waiting for these settings to update.

Solution One: Delete Preferences And Restart

You can delete the preferences file and restart the computer to eliminate this behavior when it occurs. Afterward, Final Cut Pro will function normally.

Solution Two: Multiple Users

A better solution is to use the Multiple Users control panel in Mac OS 9 to create multiple users, allowing you to quickly and easily switch between settings without having to restart the computer or discard the preferences file. This may be done even after the Targa Card and Final Cut Pro have been installed.

Assuming you chose the Targa settings when installing Final Cut Pro:

1. Make sure that Final Cut Pro is not currently running.

2. Open the Multiple Users control panel. Create two new users, one named "DV" and one named "Targa." Be sure to create Normal users and not Limited users, and give both equal read/write privileges. For more information on creating new users, please see article 31171: "**Mac OS 9: Set-up and Management of The Multiple Users Control Panel**"

3. From the Finder, open the Special menu and choose Log Out.

4. Log in as the user named "DV."

5. Open Final Cut Pro and change the capture settings to DV.

6. Quit Final Cut Pro.

Each user created in the Multiple Users control panel possesses its own set of preferences for each application. When you wish to capture DV material, simply quit Final Cut Pro, open the Special menu in the Finder and choose Log Out, log back in as the "DV" user, and open Final Cut Pro again. When you wish to capture with the Targa card, simply log out and log in as the "Targa" user. Each set of preferences is kept separate from the other, so there will be no conflict.

Published Date: Feb 20, 2012

Final Cut Pro: Deleting Render Files

This article describes how to delete render files that apparently cannot be as a result of copying a sequence from one project to another.

This article has been archived and is no longer updated by Apple.
If you have copied a sequence from one project to another in Final Cut Pro, both sequences may end up sharing one or more of the same render files. This will result in not being able to delete the render files for the copied sequence. To change this, open up the sequence whose render files you wish to delete and change the parameter settings of any clips with filters or transitions attached. (For example, go into the Motion tab of a given sequence clip and toggle "Drop Shadow" on and off) This will break the link between the new sequence clip and the old render file.
Published Date: Feb 20, 2012

Final Cut Pro: "Out of Memory Errors" When Exporting EDL Files

This article discusses how to avoid getting Out of Memory errors when exporting EDL files from Final Cut Pro. It also covers how to correct this situation should it occur.

This article has been archived and is no longer updated by Apple.
When an Edit Decision List (EDL) of any format is exported from a sequence containing video transitions in video tracks other than V1, Final Cut Pro may give an "Out of Memory" error message, possibly causing the computer to hang. To avoid this, remove all video transitions in video tracks other than V1.

EDL files support only A/B roll transitions, (called the V1 track in Final Cut Pro terms) so making this correction will not hinder you from creating desirable EDLs for export. To add transitions in other tracks, using Opacity Levels on superimposed video tracks instead of transitions will result in Key values being added to the EDL. This will produce the desired effect.

Published Date: Feb 20, 2012

Apple Remote Access: Supported Versions and Configurations

This article contains a chart that lists which Mac OS versions are compatible and supported with each version of Apple Remote Access.
This article has been archived and is no longer updated by Apple.
The following chart indicates which Mac OS versions are compatible and supported with each version of Apple Remote Access.

Apple Remote Access Version	Supported Mac OS Version
1.0	System 7.0.x
2.x (Client)	System 7.0 - Mac OS 8.5
2.x (Personal Server)	System 7.0 - Mac OS 8.5
3.0 (Client)	System 7.1 and System 7.5.3* - Mac OS 8.5
3.0 (Personal Server)	System 7.1 and System 7.5.3* - Mac OS 8.6**
3.1, 3.4 (Client)	Mac OS 8.6
3.5 (Personal Server)	Mac OS 9

Notes:
* Apple Remote Access 3 also requires Open Transport 1.1.1 or later.
**Apple Remote Access Personal Server 3.0 is not compatible with the version of Mac OS 8.6 that was pre-installed on iBook computers, slot-loading iMac computers and most Power Macintosh G4 computers.

Published Date: Feb 19, 2012

Mac OS: Some Applications List Invisible Folders and Files in Open/Save Dialog

In some of my applications, I have noticed that I see folders that I do not normally see in the Finder. Should I save my documents in these folders?

This article has been archived and is no longer updated by Apple.
When an application calls for an Open/Save dialog, it notifies Mac OS of what kinds of folders and files should be listed for the user to choose from. Sometimes the application will list folders into which the user should not ordinarily be saving files.

Some of these folders include:

- Temporary Items
- Move&Rename
- TheVolumeSettingsFolder
- TheFindByContentFolder
- Cleanup At Startup

Desktop printers are also sometimes listed as folders in Open/Save dialogs.

You should avoid saving to folders that are not normally visible in the Finder because it may make locating the file more difficult later. Additionally, the file may later be deleted or moved to the Trash by Mac OS if saved into some of these folders.

It is up to each application to properly specify what kinds of folders and files should be listed in Open/Save dialogs. Please consult with the application vendor if you believe a folder or file is displayed in error.

Published Date: Feb 17, 2012

iMovie: About Using with NetBoot, Macintosh Manager, or Multiple Users

This document describes iMovie's compatibility with NetBoot, Macintosh Manager, and Multiple Users environments.
This article has been archived and is no longer updated by Apple.
iMovie 1.0 and later is not compatible with NetBoot clients. In a typical NetBoot environment, the user's documents are stored on a central server, accessed over the network. The throughput requirements for capturing digital video are too high for actual the network speeds.

If you have NetBoot clients with Macintosh Manager authentication using iMovie 2, you should not use the NetBoot Applications volume feature of NetBoot, for best performance. Note: When you do not use the NetBoot Applications volume feature, you are limited to a 2GB NetBoot volume size limit for system and applications combined.

iMovie can be used with Macintosh Manager 1.2, or Multiple Users in certain environments. In Macintosh Manager, iMovie can be used by Finder and Restricted Finder workgroups. In order to give access to iMovie in a Restricted Finder workgroup, follow these steps:

1. Make sure that the iMovie folder is at the root level of the workstation's hard disk.
2. In Macintosh Manager admin, open the appropriate workgroup. Under the Items tab, add the iMovie application to the list of approved items for the workgroup.
3. Then, under Privileges tab, enter iMovie in the box next to "Folder on the startup disk named" and select Read & Write access.

In Multiple Users, iMovie can be used by Normal, Limited, and Panels users. For Limited and Panels users, simply movie the iMovie folder to the Shared Documents folder inside the Users folder on your hard disk. Access to this shared folder is on by default for Limited and panels users.

Note: By following these steps you will allow users to open iMovie, but you will also allow access to iMovie program files. You must take steps to ensure that users do not move or delete these files.
Published Date: Feb 18, 2012

AppleShare Client: Crash When Logging on to iDisk or Mac OS X Server Volume

Occasionally, customers will experience system crashes when trying to log in to an iDisk or Mac OS X Sever volume after entering an invalid username or password at least once. The Finder or Login may unexpectedly quit, or an error Type 10 may result.
This article has been archived and is no longer updated by Apple.
This issue is related to the implementation of the DHX User Authentication Method used with AppleShare Client 3.8.5 to encrypt passwords before transmission to the server. Users who experience this issue with Mac OS 9, including all iDisk users, should upgrade to AppleShare Client 3.8.6 available from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Users running another version of the Mac OS should refer to article 58523: "**AppleShare Client 3.8.6: Read Me**" to determine if an upgrade is appropriate.
Published Date: Feb 17, 2012

Final Cut Pro: Targa Video Capture Cards Issues

This article describes known issues you may encounter when using Targa 1000/Pro and 2000/Pro video capture cards with Final Cut Pro.
This article has been archived and is no longer updated by Apple.

Known Issues

1. **Removing Targa cards from Final Cut Pro systems and switching to DV for capture**

When physically removing any Targa capture card, be sure to also remove the Targa Control Panel. Failure to remove the control panel can make it so you cannot adjust video settings for DV devices.

2. **Viewing External Video using the Targa series cards.**

For best performance with a Targa series card, the "View External Video Using" pop-up menu in the "General" tab of the Preferences window should be set to Rendered Frames, not "Targa." Failure to do so may lead to dropped frames.

3. **Installing a Targa 2000 non-pro card after installing Final Cut Pro.**

If, after installing a Targa 2000 non-pro card, no video appears in the capture preferences tab, do the following:

a) Go the Settings Folder in the Final Cut Pro Application Folder
b) Delete the file named "Capture Settings."
c) Go to the Final Cut Pro Data folder in the preferences
d) Delete the "Preferences" file.
e) Restart the computer

You can now go the Capture Preferences and adjust them to suit your needs.

4. **Using a Pinnacle Targa series card with an Apple 17-inch Studio Display.**

When you use a Pinnacle Targa series card with an Apple 17-inch Studio Display, the display is all green. For the monitor to display correctly, you must use the small black adapter cable that comes with the Pinnacle video card.
a) Turn off your computer and the monitor.
b) Connect one end of the adapter cable to the video card port on the computer
c) Connect the other end to the monitor cable.
d) Turn on your computer and monitor.

Colors should now display properly.

5. **Monitor resolution changing outside of user control when using some Targa cards**

If your monitor is connected to a Targa card, the monitor's resolution may change after you restart your computer and the image on the monitor may be scrambled. To view images correctly, connect a VGA-to-Mac converter, supplied with the card, to the card's port on your computer. Then connect a standard 15-pin VGA adapter (also called a VGA-to-Macintosh adapter) to the converter. Connect the monitor cable to the VGA adapter, then restart your computer.

6. **You must set sound input and output when using a TARGA card**

To hear audio from a TARGA card, use the Sound control panel to set the Sound In and Out to Targa. If the Sound control panel is not in the Control Panels folder within your System Folder, locate it in the Apple Extras folder on your hard disk and set the Sound In and Out to Targa.

7. **Truevision Targa audio issue: Audio Channel 2 (A2) inadvertently recording onto Audio Channel 1 (A1)**

When using Truevision hardware, if you capture audio from A2, you will get A1 from the deck. To work around this issue, capture A1+A2, then use the target track controls when editing the clip into a sequence to use only CH2.

8. **Setting resolutions when using PAL with a Targa card**

If you are using PAL with a Targa card installed, you need to confirm the resolution setting is correct after you install the Targa driver software. To do this:
a) Choose Preferences from the Edit menu
b) Click the Capture tab
c) Click Video under QuickTime Settings
d) Choose Compression from the pop-up menu.

e) Click Options
f) Select PAL (720 x 576)

9. **Capture fails while using a Pinnacle Targa series card**

If you're using a Pinnacle Targa series card, capturing clips can fail if the card does not have a good, steady signal during the capture process.

10. **Playing non-Targa clips when using the Targa board for display may result in poor playback**

Clips compressed with non-Targa codecs may perform poorly during playback when using the Targa 2000 as the video card.

11. **Targa 1000 and 2000 incompatibility with Medea hard drive arrays**

The Targa 1000 and 2000 (both normal and pro versions) are incompatible with hard drive arrays from Medea. Targa DTX and SDX cards do not have this issue and work properly with Medea arrays.

Published Date: Feb 20, 2012

Final Cut Pro: 60 Hz Monitor Refresh Rate Interferes With Playback

This article describes how a 60 Hz monitor refresh rate can interfere with playback in Final Cut Pro.

This article has been archived and is no longer updated by Apple.
While playing clips in Final Cut Pro, you may notice dropped frames if the monitor is set to 60 Hz. To avoid this, be sure to set your monitor to a refresh rate above 60 Hz using either the Monitors control panel or the Monitor Resolution control strip module.

When setting a new refresh rate, 75 Hz is acceptable, but 85 Hz provides the best playback performance.

Published Date: Feb 20, 2012

AppleWorks 6: Documents Open at Startup

If I have AppleWorks documents open and my computer stops responding or shuts down unexpectedly, the AppleWorks documents I was working on opens automatically when I restart. I would like to disable this function, but I cannot find a way to turn it off in AppleWorks preferences. Why does this happen and how I do I turn it off?
This article has been archived and is no longer updated by Apple.
This behavior is part of the new Auto-Save feature of AppleWorks 6. It allows you to recover work that you might not have saved if your computer stops responding for any reason. When you restart, AppleWorks automatically opens any document you were working on. If you made any changes since the last time you saved the document, you can recover those changes by selecting the Auto-Saved version of the document.

To prevent these documents from ever appearing on startup, disable the Auto-Save feature in the Files section of the Preferences panel. This prevents you from taking advantage of any Auto-Save features.

Alternatively, you can prevent these documents from appearing on a startup-by-startup basis. There are two ways to prevent these documents from appearing on restart:

Method One

1. Observe the startup process as extensions load and their icons appear at the bottom of the screen.

2. At any time after extensions begin loading but before the desktop appears, hold down the Shift key and keep it held down until startup is complete.

This prevents any startup items from being loaded during this startup.

Method Two

1. Hold down the space bar when you hear the startup chime.

2. When the Extensions Manager window appears, release the space bar.

3. Choose "View as folders" from the "Selected Set:" popup menu.

4. Scroll down to the Startup Items folder and deselect any AppleWorks document that you do not wish to open on startup.

5. Click Continue.
Your computer finishes starting up normally.

This prevents the deselected items from opening at startup until they are re-enabled.

Note: Any item you deselect is moved to the "Startup Items (Disabled)" folder inside the System Folder. You may wish to delete these items to prevent this folder from becoming cluttered. The items that AppleWorks places here are aliases, so they can be deleted without affecting the original document.

Published Date: Feb 20, 2012

Final Cut Pro 1.2.1: Truncated Serial Number

When I try to register my Final Cut Pro software by entering the Final Cut Pro serial number, the OK button remains dimmed and I cannot continue. I am using the serial number found on the sleeve that holds my Final Cut Pro CD.

This article has been archived and is no longer updated by Apple.
There is an issue with the Final Cut Pro 1.2.1 serial number labels on some of the CD sleeves. The last two or three digits were not printed due to an internal printing fault. This issue has already been corrected in manufacturing.

If Final Cut Pro will not accept the serial number as it is entered, verify that the last four characters are "-340" (dash, three, four, zero) at the end of the serial number. It these any of these numbers are missing, please add them so that Final Cut Pro will correctly recognize the serial number as valid.

Also, make sure that you are not attempting to use the serial number for the QuickTime Pro upgrade that is also a part of the Final Cut Pro package. Additionally, be sure that the characters you enter are the same as the ones on the label. For example, don't confuse the letter "I" with the number "1", or the number "0" with the letter "O".

Published Date: Feb 20, 2012

PowerBook, iBook: Compatibility With Norton DiskLight

This article discusses compatibility between both the PowerBook (FireWire) and iBook computers and a third-party utility, Norton DiskLight. This article has been archived and is no longer updated by Apple.
When Norton DiskLight is installed and the "Preserve Memory Contents On Sleep" feature is enabled in the Energy Saver control panel, a PowerBook (FireWire) or iBook computer may crash when going to sleep. To avoid this, either disable the Norton DiskLight extension or deselect "Preserve Memory Contents On Sleep" in the Advance Settings part of the Energy Saver control panel.

Note: For compatibility reasons, the Preserve Memory Contents on Sleep feature has been removed in Mac OS 9 versions 9.0.4 and later. You may still see the option in the Energy Saver control panel but it will be dimmed.

Published Date: Feb 20, 2012

iMac (Slot Loading): Network Activities Prevent Deep Sleep Mode

If I manually put my iMac (Slot Loading) to sleep, the screen goes black and the power light changes to amber and pulses. If I set the computer to automatically sleep after 30 minutes, the power light stays green, which seems to indicate to me that the computer is not fully asleep. What can cause this behavior?

This article has been archived and is no longer updated by Apple.

When you set your iMac to automatically sleep after a specified period of time, an internal counter measures the amount of time your computer has been inactive. When the counter's time matches the amount of time you specified, the computer will go to sleep and display the pulsing amber light.

Network activities listed below can continually reset the idle counter so that the computer never fully sleeps:

- Having Personal File Sharing turned on.
- Leaving a Web page open in your browser which auto-refreshes itself every few minutes.

In these cases the display will sleep but the processor will continue to be awake and the power light will remain green.

To put your iMac (Slot Loading) computer into a deep sleep state you can do either of the following:

- Turn off File Sharing and quit other applications which could keep the computer active.
- Manually put the computer to sleep, either by selecting Sleep from the Special menu or by pressing the Power button on the keyboard and clicking the Sleep button in the resulting dialog.

Published Date: Feb 20, 2012

Mac OS 9.0.4: Requires Apple DVD Player 2.2

Mac OS 9.0.4 requires Apple DVD Player 2.2 when installed on certain computers.
This article has been archived and is no longer updated by Apple.

Symptom

After updating to Mac OS 9.0.4, the Apple DVD Player 2.0 application displays the following message:

> "Apple DVD Player does not support the video card used for the main screen."

Solution

Use the Software Update control panel to install Apple DVD Player 2.2, or later, or download it from the Apple Software Updates Web site at http://www.apple.com/swupdates/.

Note: Apple DVD Player 1.3, when used with DVD decoding hardware installed in Power Mac G4 (PCI Graphics), Power Macintosh G3, Power Macintosh G3 (Blue and White), PowerBook G3 Series, and PowerBook G3 Series (Bronze keyboard) computers, does not require an update. Apple DVD Player 1.3 is included with Mac OS 9.

Published Date: Feb 17, 2012

AppleWorks 5 for Windows: Compatibility with Windows 2000

Is AppleWorks 5.0.3 for Windows compatible with Windows 2000?

This article has been archived and is no longer updated by Apple.
AppleWorks 5 has not been tested with Windows 2000.

Published Date: Feb 20, 2012

Mac OS: Using Multiple Note Pads and Scrapbooks

Can I have more than one Note Pad or Scrapbook file?
This article has been archived and is no longer updated by Apple.
You may wish to create multiple Note Pad or Scrapbook files to organize your work, or to work around limitations of the Note Pad or Scrapbook applications.

System 7.1 and earlier
When the Note Pad's pages are filled up, rename its file stored in the System Folder to something like "NOTE 1". A new pad is created the next time you choose Note Pad from the Apple menu. If you need to look at something in the original pad, just rename your current file to something like "NOTE 2", and rename your original file (NOTE 1) back to "Note Pad File". The next time you choose Note Pad from the Apple menu, you access the one you just renamed. You can continue creating storage files for notes in this fashion until the disk fills up.

The same procedure can be applied to the Scrapbook File.

System 7.5 and Later
Included with Mac OS 7.5 and later are versions of these applications that support opening Scrapbook and Note Pad files from anywhere outside of the System Folder.

To create a new empty Note Pad or Scrapbook file, move the existing Note Pad File or Scrapbook File out of the System Folder, and then open the Note Pad or Scrapbook. A new empty data file is created in the System Folder.

To open a specific Note Pad or Scrapbook File, simply open the data file directly in the Finder instead of opening the Note Pad or Scrapbook application itself. By default, opening the Scrapbook or Note Pad application opens the data file in the System Folder.
Published Date: Feb 17, 2012

iBook, PowerBook (FireWire): Issue With Preserve Memory Contents On Sleep

This article provides a workaround for an issue that may prevent your iBook or PowerBook (FireWire) from waking up from sleep.
This article has been archived and is no longer updated by Apple.
Note: For compatibility reasons, the Preserve Memory Contents on Sleep feature has been removed in Mac OS 9 versions 9.0.4 and later. You may still see the option in the Energy Saver control panel but it will be dimmed.

Apple has identified an issue in its system software that in very rare circumstances can prevent your computer from properly waking up from sleep. Though you will most likely never encounter this issue, all iBook and PowerBook (FireWire) owners should download and install the Sleep Memory Extension software patch, which eliminates this issue.

Note: This issue is addressed in Mac OS 9 Update (9.0.4). You do not need to install the Sleep Memory Extension if your computer is using Mac OS 9.0.4. Use the Software Update control panel to download and install the update. You can also download it from http://www.apple.com/support/downloads.

Installing the Sleep Memory Extension

To install the Sleep Memory Extension, do the following:

1. Download the extension.
2. Open the file named "Sleep Memory Extension.smi".
3. Read the Software License Agreement and click "Agree".
4. Open the volume named "Sleep Memory Extension".
5. Drag the Sleep Memory Extension onto the closed System Folder on your iBook or PowerBook (FireWire) hard disk. A dialog asks if you would like to place the item in the Extensions Folder.
6. Click Yes.
7. Restart your computer.

After restarting your computer, the "Preserve memory contents on sleep" checkbox still appears in the Energy Saver control panel, but the checkbox is dimmed and unavailable.
Published Date: Feb 20, 2012

Mac OS 9: Can Not Take a Snapshot Picture Of The Screen

In some situations you cannot use the keypad keys to take a picture of the screen (a screenshot) using the Command-Shift-3 or Command-Shift-4 key combination.
This article has been archived and is no longer updated by Apple.
With Mac OS 9, use the 3 or 4 key at the top of the keyboard instead of the keypad.

This may occur with either a USB or ADB keyboard.

Related Documents

12555 Mac OS 7, 8, 9: How to Take a Snapshot of Your Screen

Published Date: Feb 17, 2012

Mac OS 9: Temporary Items Not Moved to Trash

This article discusses an issue where Mac OS 9.0.x does not move items from the Temporary Items folder to the Trash if the computer stops responding or "freezes".
This article has been archived and is no longer updated by Apple.

Symptom

The amount of available space on your computer's hard disk seems to be dramatically decreasing even though you're not saving any large files on it. This symptom seems to occur especially after the computer stops responding or "freezes" when you are using a graphics application like Photoshop.

Solution

Install Mac OS 9.1. An update to Mac OS 9.1 is available from Apple Software Updates (http://www.apple.com/swupdates/).

In Mac OS 9, there is an invisible folder named Temporary Items that applications can use to store temporary files. For example, a graphics application can save changes to an image as temporary files so that the user can undo, or revert back to previous changes. Normally, these temporary files are deleted when the user quits the application.

If, however, the pointer "freezes" or the computer does not respond, the Finder moves any files in the Temporary Items folder to a Rescued Items folder in the Trash when the computer restarts. You can look in this folder for any items you wish to recover, or you can empty the Trash to recover the disk space.

With Mac OS 9.0.x, the Finder does not move files from the Temporary Items folder to the Trash. This can result in a noticeable loss of available space depending on how large the files are. This situation has been corrected in Mac OS 9.1.

If you don't update to Mac OS 9.1 you can use the AppleScript below as a startup item. Follow these steps to make the AppleScript applet:

1. Open the Script Editor, located in the AppleScript folder of the Apple Extras folder on the hard disk.
2. Copy and paste the AppleScript statements below into the Script Editor window.
3. Choose Save from the File menu and type a filename, such as Temporary Items Cleaner.
4. In the Save As dialog box, choose classic applet from the Format pop-up menu; two additional options appear in the dialog.
Note: If using Mac OS 8.6 or earlier, the Save As dialog reads Application, not classic applet.
5. Click Never Show Startup Screen.
6. Navigate to the Startup Items folder of the System Folder, and click Save.

This creates a small startup applet that works only with the versions of Mac OS 9.0.x that have this condition. It emulates the Finder's expected behavior by creating a folder called Rescued Items in the Trash that will contain any items found in the Temporary Items invisible folder. You can look in this folder for any items you wish to recover, or you can empty the Trash to recover the disk space.

```
--Begin AppleScript
tell application "Finder" to get the version
set FinderVersion to the result as text
if FinderVersion is less than "9.0" then
display dialog "This AppleScript requires Mac OS 9 or later."¬
 with icon stop buttons "OK" default button 1
return
end if

if FinderVersion is less than "9.1" then -- version with problem
tell application "Finder" to set BootVol to name of startup disk
set TmpItems to BootVol & ":Temporary Items:" as text

try
 set FolderContents to list folder TmpItems without invisibles
 if (count of FolderContents) is 0 then return
on error
 return -- probably no folder exists
end try

--Are there Rescued Items folders in the Trash already?
tell application "Finder" to get every item of trash ¬
```

```
 whose name begins with "Rescued Items"
set RescuedCnt to count of the result
if RescuedCnt is 0 then
 set RescuedItemName to "Rescued Items"
else
 set RescuedCnt to RescuedCnt + 1
 set RescuedItemName to "Rescued Items " & RescuedCnt as text
end if

tell application "Finder"
 --Finder cannot create new folders in the trash, so make one
 --on the desktop...
 make new folder at desktop with properties {name:RescuedItemName}
 -- and then move it to the trash
 move folder RescuedItemName of desktop to trash
end tell
--construct the rescue target path
set RescuedItemsPath to BootVol & ":Trash:" & RescuedItemName & ":" ¬
   as text

repeat with FolderItem in FolderContents
 set ItemPath to TmpItems & FolderItem as text
 set ItemInfo to info for alias ItemPath
 set ItemIsFolder to folder of ItemInfo
 if ItemIsFolder then -- It's a folder
  set ItemCanBeMoved to true
 else -- It's a file
  --busy check requires Mac OS 9 Standard Additions
  set ItemCanBeMoved to not busy status of ItemInfo
 end if
 if ItemCanBeMoved then
  try
   tell application "Finder" to move alias ItemPath to ¬
   alias RescuedItemsPath
  on error
   --something unexpected happened, keep going
  end try
 end if
end repeat
else
-- probably fixed after this release
end if
--End AppleScript
```

Note: A compiled version of this AppleScript is available at:

ftp://ftp.info.apple.com/Apple_Support_Area/Apple_Software_Updates/English-North_American/Macintosh/Misc/AppleScript/Remove_Temp_Items.bin

Published Date: Feb 20, 2012

Final Cut Pro: Better Performance With Virtual Memory Turned Off

This article discusses why Virtural Memory should be turned off when using Final Cut Pro.

This article has been archived and is no longer updated by Apple.
Using Final Cut Pro with Virtual Memory turned on is not advised. Virtual Memory can potentially cause dropped frames on capture and playback, as well as sluggish performance.

To turn off Virtual Memory, quit Final Cut Pro, open the Memory control panel, and click the Off radio button (see Figure 1).

Figure 1 Memory control panel with Virtual Memory turned off

Once this is done, close the control panel and restart the computer for this change to take effect.

Published Date: Feb 20, 2012

Mac OS 9.0.2, 9.0.3: Computer Stops Responding When USB Device Is Connected

Some Macintosh computers with Mac OS 9.0.2 or 9.0.3 may stop responding when certain Universal Serial Bus (USB) devices are connected.
This article has been archived and is no longer updated by Apple.

Symptom

The computer may stop responding at system startup time if a USB device, like a floppy drive, is connected.

Products affected

- Power Mac G4 with Mac OS 9.0.2
- iBook with Mac OS 9.0.2
- PowerBook (FireWire) with Mac OS 9.0.2
- iMac (Slot loading) with Mac OS 9.0.3

Solution

Install Mac OS 9 Update (9.0.4) using the Software Update control panel. You can also download it from Apple Software Updates at http://www.apple.com/swupdates/ .

You can also work around this issue by waiting until the computer has started up before plugging in any USB devices. They should then work normally.

Published Date: Feb 20, 2012

AppleCare Protection Plan CD cannot start up all Macintosh computers

The AppleCare Protection Plan CD contains its own operating system and a diagnostic program named TechTool Deluxe. The operating system on this CD does not work with all Macintosh computers.
This article has been archived and is no longer updated by Apple.
TechTool Deluxe can still perform some tests if you copy it from the AppleCare Protection Plan CD to your computer's hard disk.

In order for TechTool Deluxe to perform any write-based tests or perform repairs, the computer must be started up from the AppleCare Protection Plan CD or from a Mac OS 9 Install CD (for computer models that will start up in Mac OS 9).

This document addresses three possible situations:

- If your computer will start up in Mac OS 9 and you have a Mac OS 9 CD that can start up the computer
- If your computer will start up in Mac OS 9 but does not have a Mac OS 9 CD that can start up the computer
- If your computer will not start up in Mac OS 9

Your computer can start up in Mac OS 9 and you have a Mac OS 9 CD that can start up the computer

The following steps will only work with the Mac OS 9 version of the TechTool Deluxe application versions 2.5.2 through 2.5.7. The Mac OS X versions of TechTool Deluxe, versions 3.0 and later, cannot be used in this manner.

The Mac OS 9 and Mac OS X versions of TechTool Deluxe have similar tests. If your computer can start up from Mac OS 9 and you have a CD that can be used as a Mac OS 9 startup disk, you only need to use the Mac OS 9 version of TechTool Deluxe to test your computer.

1. Make sure you have the latest update of TechTool Deluxe.
2. Start up the computer up from the hard disk.
3. Insert the AppleCare Protection Plan CD.
4. If you had to update your copy of TechTool Deluxe, the TechTool folder is already on your hard disk. If you did not have to update, copy the TechTool Deluxe folder (for your language only) from the TechTool Deluxe (Mac OS 9) partition of the AppleCare Protection Plan CD to your computer's hard disk.

   There are three versions of the TechTool Deluxe folder on the AppleCare Protection Plan CD. Copy the folder that is for your language version--you do not need to copy all three folders.
   - "TechTool Deluxe" is the English version
   - "TechTool Deluxe F" is the French version
   - "TechTool Deluxe J" is the Japanese version
5. Eject the AppleCare Protection Plan CD
6. Insert the Mac OS 9 System CD that came with your computer.
7. Restart your computer.
8. Press C to start up from the CD.
9. Use TechTool Deluxe in the folder that you copied to your hard disk.

If your computer will start up in Mac OS 9 but does not have a Mac OS 9 CD that will start up the computer

If your computer did not come with a CD that will start the computer up in Mac OS 9 and the AppleCare Protection Plan CD that came with your AppleCare Protection Plan does not start your computer, contact Apple to obtain the latest version of the AppleCare Protection Plan CD.

If your computer does not start up in Mac OS 9

If your computer does not start up in Mac OS 9 and the AppleCare Protection Plan CD that came with your AppleCare Protection Plan does not start your computer, contact Apple to obtain the latest version of the AppleCare Protection Plan CD.

Published Date: Feb 19, 2012

AppleWorks 6: Generic White Icons in Web Starting Points

The Newsletter and/or Templates icons in AppleWorks 6 Starting Points may appear with a generic white icon. Clicking the icon does not open any content.
This article has been archived and is no longer updated by Apple.
The Newsletter and/or Templates icons in AppleWorks 6 Starting Points may appear with a generic white icon. Clicking the icon does not open any content. This symptom is a result of unusable cache files.

This happens when using:

- AppleWorks 6.0 and later

Take these steps to resolve the issue:

For AppleWorks versions 6.0.x:

1. Quit AppleWorks.
2. Open the AppleWorks folder.
3. Open the Starting Points folder.
4. Drag the Cache folder to the Trash.
5. Open AppleWorks.

For AppleWorks 6.1 and later:

1. Quit AppleWorks.
2. Open your Documents folder.
3. Open the AppleWorks User Data folder.
4. Open the Starting Points folder.
5. Drag the Cache folder to the Trash.
6. Open AppleWorks.

Appleworks will create a new Cache folder with new contents which should resolve the issue.
Published Date: Feb 20, 2012

Macintosh Manager: Scheduled Shutdown

This article explains how to set up Macintosh Manager workstations to shut down at a specific time.
This article has been archived and is no longer updated by Apple.
You can use the Macintosh Manager administration application to schedule times for Macintosh Manager workstations to start up and shut down (on computers that support this feature). These settings overwrite those made in the Energy Saver control panel of individual workstations.

To specify startup and shutdown times for a group of workstations, open the Computer panel, and click the Control tab. Select the appropriate check boxes for scheduled shut down and startup times, and specify the time for each.

Workstations may not shut down on schedule if they are connected to the server at the login screen. To avoid this, select "Disconnect from the server if no user logs in within <> minutes," and specify a suitable amount of time. This ensures that idle clients are ready to be shut down when scheduled.

Published Date: Feb 17, 2012

Mac OS 9: Stops Responding at System Startup Time

In certain circumstances a hard disk can become extremely fragmented and fail to work as a startup disk when Mac OS 9.0.x is installed. When starting up you may see the "happy Macintosh" icon, but then the computer stops responding.
This article has been archived and is no longer updated by Apple.

Symptom

In certain circumstances a hard disk can become extremely fragmented and fail to work as a startup disk when Mac OS 9.0.x is installed. When starting up you may see the "happy Macintosh" icon, but then the computer stops responding. This may happen if the hard disk is nearly full, or if there are a very large number of files and constant file activity on the hard disk, such as a busy AppleShare IP server running Macintosh Manager.

Solution

1. Download Disk First Aid 8.6 from Apple Software Updates at http://www.apple.com/swupdates/.
2. Use Disk First Aid 8.6 to repair the disk.

Note: Disk First Aid 8.6 is not a defragmentation utility. If you are operating an AppleShare IP server or Macintosh Manager server under heavy load you should also download and install AppleShare IP 9.0.4 Update from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Installing Disk First Aid 8.6 onto a computer that will not start up

There are many ways to work around this issue. The method you use depends on whether the affected computer is on a network, what types of removable media (floppy, Zip, and SuperDisk disks, for example) are available to the affected computer, and which types of available removable media can be used when started up from a CD-ROM disc. Consider some of these methods:

- When the affected computer is on a network and will not finish starting up, download Disk First Aid 8.6 to another computer on the network. Start up the affected computer from a CD-ROM disc, then use AppleShare in the Chooser to connect to the computer that has Disk First Aid 8.6.
- When the affected computer has a partitioned hard disk or more than one hard drive, start up from an alternate partition or drive, then download Disk First Aid 8.6 directly to the affected computer. If there is not a System Folder on the alternate drive or partition, start up from a CD-ROM disc to install one.
- When the affected computer is connected to a removable media drive that can be used when started up from a CD-ROM disc but is not on a network and is not partitioned or connected to more than one hard drive, download Disk First Aid 8.6 at a remote location and place it on the removable media. Start up the affected computer from a CD-ROM disc and use the removable media to access Disk First Aid 8.6.
- If you have access to a CD burner, you may create a startup disc that has Disk First Aid 8.6 on it.

Published Date: Feb 17, 2012

Ethernet Update 1.0: Description

This article describes the Ethernet Update 1.0. Ethernet Update 1.0 improves the reliability of Ethernet in certain rare network configurations. The update addresses an Ethernet issue where a Macintosh after a period of time that varies by network topology, infrastructure and traffic may continue to transmit but does not receive packets.
This article has been archived and is no longer updated by Apple.

Products Affected

- iMac (Slot Loading) computers manufactured since early November 1999
- Power Mac G4 (AGP Graphics) computers manufactured since late November 1999
- PowerBook (FireWire)
- iBook (pre-FireWire)

Solution

It is not necessary to install this update unless you are experiencing reliability issues with your Ethernet networking configuration.

Nor is it necessary to install the Ethernet Update 1.0 if your Macintosh has Mac OS ROM 3.8 or later, as these versions of the Mac OS ROM already contain the Ethernet Update. The Mac OS ROM is stored in the System Folder and the version is listed by Apple System Profiler in the System Tab under Product Info.

Ethernet Update 1.0 improves the reliability of Ethernet in certain rare network configurations. These configurations are typically 10 Mbit networks which include coax (10Base5 or 10Base2) network segments in large single collision domains (not separated by switches, for example) that use much smaller than standard interpacket gaps or have carrier collision dropout. This update replaces the Mac OS ROM file with a new version, 3.8.

The Ethernet Update 1.0 requires Mac OS 9.0.4. Both the Ethernet Update and Mac OS 9.0.4 are available from Apple Software Updates at http://www.apple.com/swupdates/ .

For more information on this issue, please see article 25147: "**Ethernet Update 1.0: Determining Whether to Install It.**"
Published Date: Feb 20, 2012

Ethernet Update 1.0: Determining Whether to Install It

This article discusses whether it is advisable to install Ethernet Update 1.0 on your Macintosh computer. It also offers a procedure for determining whether a Macintosh computer is affected by the issue that Ethernet Update 1.0 resolves.

This article has been archived and is no longer updated by Apple.
It is not necessary to install this update unless you are experiencing reliability issues with your Ethernet networking configuration.

Ethernet Update 1.0 addresses an issue where a Macintosh in certain rare network configurations may continue to transmit data but not receive data. Manually putting the Macintosh to sleep and then waking it, or restarting the computer enables it to temporarily reestablish network connectivity. After a period of time, which varies by topology and infrastructure, the computer again ceases to receive packets. The computer functions normally on isolated networks.

Products Affected

- iMac (Slot Loading) computers manufactured since early November 1999
- Power Mac G4 (AGP Graphics) computers manufactured since late November 1999
- PowerBook (FireWire)
- iBook (pre-FireWire)

Determining if the Issue Exists
The existence of the issue described in this article can be determined with the SNMP Administrator program. Follow these steps to install it:

1. Perform a custom installation of system software from the Mac OS 9 CD, installing only the SNMP agent.
2. Copy the SNMP Administrator program from the CD to the hard disk. (Mac OS 9 CD: CD Extras: Network Extras: OT Extras: SNMP Admin: SNMP Administrator)
3. Restart the computer.

When you suspect your Macintosh has lost connectivity to the network, then:

1. Open the SNMP Administrator. The Community List dialog box appears.
2. Open the "public" community in the Community List dialog box.
3. Click the Interface Agent tab; the ifNumber and ifTab are shown.
4. Double-click ifTable (the name, not the tab); the Variables Values window appears.
5. Scroll through the window until you locate ifInOctets and ifOutOctets.
6. Write down the Value for the ifInOctets and ifOutOctets.
7. If AppleTalk is active, open the Chooser. Click the AppleShare icon, then the LaserWriter icon, and perhaps even the AppleShare icon once again, then close the Chooser. Alternatively, open a web browser and load a page such as www.apple.com . (Note that these actions should not display AppleShare servers or LaserWriter printers in the Chooser, nor display the web site you entered.)
8. Click the SNMP Administrator window to make it active.
9. Click Update.
10. Record the ifInOctets and ifOutOctets counts again.
11. Compare the ifInOctets and ifOutOctets values:
    - If the ifInOctets count does not increase in value after the fault occurs and the ifOutOctets does increase in value, make sure you performed steps 7 through 9. If you did perform steps 7 through 9 and the IfInOctets did not increase in value, then this computer has encountered this Ethernet issue and would benefit from installing the Apple Ethernet Update 1.0.
    - If the ifInOctets and ifOutOctets values both continue to increase in value then this Macintosh has not encountered this issue, but instead has encountered some other difficulty. It may require additional network troubleshooting. You may wish to search the Knowledge Base for troubleshooting tips or for other known issues such as with the Spanning Tree Protocol: Article 30922: "**Spanning Tree Protocol: AppleTalk Issues**"

After conducting this test with SNMP Administrator, you may wish to remove or disable the following extensions if you don't intend to routinely use SNMP Administrator or other SNMP Management Consoles or tools:

- Open Transport SNMP
- OpenTptSNMPLib

Published Date: Feb 20, 2012

Macintosh Manager: Using the Update Package

The Macintosh Manager Read Me files released with 1.2 - 1.3 refer to files that do not exist. The following document addresses these name issues and has the correct instructions for using the update package.

This article has been archived and is no longer updated by Apple.
In the Macintosh Manager Read Me, the following appears under the topic "Using the update package":

"To use the auto-update package, do the following:

1. Open the Macintosh Manager Installer disk image and locate the "MM Update Package" file, which should be inside the Update Package folder.

2. Copy the "MM Client Package" file to the top level of your Multi-User Items folder on the server. This folder should be located inside the Macintosh Manager share point on the server."

The file names "MM Update Package" and "MM Client Package" are supposed to read "Update Package 1.x" (1.x being the version of the Updater you are using).

The steps to use this feature are the same and the software will update as it is intended. However, the references in the Read Me are incorrect. The correct version is:

"To use the auto-update package, do the following:

1. Open the Macintosh Manager Installer disk image and locate the "Update Package 1.x" file, which should be inside the Update Package folder.

2. Copy the "Update Package 1.x" file to the top level of your Multi-User Items folder on the server. This folder should be located inside the Macintosh Manager share point on the server."

Published Date: Feb 17, 2012

Final Cut Pro: Setting Real-Time Audio Mixing Tracks Preference

The Real-Time Audio Mixing setting in the General Preferences tab is a useful tool for optimizing playback performance in Final Cut Pro. This article describes its use, as well as the use of the Mixdown Audio command to force render multiple audio tracks in situations where it may improve playback performance.

This article has been archived and is no longer updated by Apple.
The Real-time Audio Mixing setting in the General Preferences tab (see Figure 1) defines how many audio tracks Final Cut Pro attempts to mix without rendering. If too many tracks are set, video playback performance may suffer. If too few tracks are set, Final Cut Pro renders audio prior to playback when more audio tracks are used in an edit than are specified.

Figure 1 Real-time Audio Mixing setting in the General Preferences tab
The maximum number of tracks you can enter into this field varies depending on CPU speed and type, hard disk performance, available memory, and other factors. To determine the maximum number of audio tracks that will play along to video without having to render, follow these steps:

1. Create a new project. Import one video clip and one audio clip.

2. Set the Real-Time Audio Mixing field of the General Preferences tab to a deliberately high number, such as 16. This is to prevent Final Cut Pro from making any assumptions about what can be played back without rendering. Also, be sure to enable the Report Dropped Frames option in the Capture Preferences tab.

3. Edit the video and audio clip into the timeline of Sequence 1, occupying the same area of the timeline.

4. Now, a track at a time, edit additional clips of audio into additional audio tracks so that they overlap the previously edited material, and play them back. As long as Final Cut Pro does not report any dropped frames, continue adding tracks.

5. As soon as a dropped frame is reported, you know that you are one track over the maximum number of tracks that you can enter into the Real-Time Audio Mixing field.

Adding audio filters and mixing levels reduces the number of tracks that play back without rendering. In these cases, it may be prudent to lower the number specified in the Real-Time Audio Mixing field to prevent inconsistencies during playback.

In cases where there are perhaps too many tracks or effects applied to allow for real-time audio mixing, the Mixdown Audio command (see Figure 2) forces Final Cut Pro to render all audio tracks in order to optimize playback performance. Using this command does not result in all tracks being destructively mixed into one track in the Timeline. It simply refers to the process of all tracks being rendered to cache files in advance of playback.

Figure 2 Mixdown Audio menu item

Note: If you have complex multi-layered audio and want to recut your visuals without constantly re-rendering, please see article 31218: "**Final Cut Pro: Avoiding Rendering of Audio Clips When Using Filters**"
Published Date: Feb 19, 2012

Final Cut Pro: Using Serial Device Control with FireWire Capture

This article describes how to use Serial Deck control when capturing or outputting with RS-232 or RS-422 DV decks.

This article has been archived and is no longer updated by Apple.
Serial device control is most commonly used with high-end VTRs (such as those for the BetaSP and Digi-Beta tape formats). If you have a high-end DV deck, (for example, the DSR-40) and wish to capture video using the FireWire interface, you can still use serial device control to capture the timecode. Use a USB to Serial adapter to connect an RS-232 or RS-422 cable from the deck to the Macintosh. See Figure 1.

Figure 1 Cabling diagram

After connecting the serial adapter and the FireWire cables, specify the Protocol (RS-232 or RS-422), Time Source (LTC+VITC), and the Port (Printer Port USB), in the Device Control Preferences tab. See Figures 2-4.

Figure 2 Device Control Preferences tab as seen from the Log and Capture window

Figure 3 Device Control Protocol options

Figure 4 Time Source options

Make sure your FireWire device is connected and turned on. Then, in the Capture tab, open the video source window by clicking the Video button, then choosing Source in the upper left hand popup menu. Set the source to DV Video. See Figure 5. In this way, the timecode is recorded from the serial adapter, even though the video is from FireWire.

Figure 5 Video Source popup accessed through the Video button in the Capture Tab

Published Date: Feb 20, 2012

Final Cut Pro: How to Calibrate Serial Timecode

This article has been archived and is no longer updated by Apple.

Unless you're capturing a DV or HD video format via FireWire, the timecode and audio/video signals are received separately by Final Cut Pro. Timecode is captured via the serial device control cable (using RS- 422 format in most cases), while audio/video is captured via the cable connected to the video capture interface (composite, S-video, component, or SDI). Because the signals are separate, they can possibly arrive at different times, causing the wrong timecode number to be recorded onto captured video frames. In the case of formats captured over FireWire, the FireWire cable is used for both.

You can calibrate your timecode and video capture setup by adjusting the number of frames that timecode signals are offset from video input by using the Capture Offset field. Apple-qualified video capture devices include software with pre-configured Easy Setups. The supplied Easy Setups will set the Capture Offset to a correct value for that device and media format when using many VTRs and configurations.

If timecode is an important part of your workflow, it's a good idea to check the calibration prior to beginning a project (see steps below). After the initial accuracy of the timecode is verified, there are a number of factors that might require adjustment of the Capture Offset value:

- Capturing media acquired with unknown or known faulty equipment (for instance, if you did not shoot the video yourself, or if it is otherwise of unknown origin).
- Changes in the type of timecode used during captures (i.e. LTC, VITC, etc.).
- Changing from one make and/or model deck to another.
- Even between two decks of the same make and model, if one is programmed with a different firmware version than the other, there may be slight differences requiring calibration. Many higher end and multi-format capable decks are programmed with firmware that can be updated as revisions are made available. You should consult the literature that accompanied the deck or contact the manufacturer to determine how to identify and update the firmware versions.
- Using a serial device control switcher or router.
- Switching from one port to another.

If you find you are impacted by any of these factors that are causing variance in timecode accuracy, it's a good idea to create separate device control presets, with different Capture Offsets for each configuration. The pre-calibrated presets let you quickly change configurations without having to go though the whole calibration procedure again. For more information the topics covered in this document, see the Final Cut Pro User's Manual.

Note: The Final Cut Pro User Manual suggests that you need to calibrate the video and timecode signal every time you change decks or cables. While it's a good idea to calibrate for different decks, changing cables alone is not likely to affect timecode accuracy.

Determining and Entering the Timecode Offset
You can easily determine if there is a difference between the timecode and video signals by capturing test footage that has timecode "burned in" to the video picture information. By comparing the numbers in the timecode track to the timecode numbers in the video picture, you can determine the offset between them.

If there is an offset, you can calibrate your timecode and video capture setup by entering the number of frames by which the timecode signals are offset from the video in the Capture Offset field of the current device control preset.

To determine the timecode offset:

1. Do one of the following:
   - Create a window-burn (or window dub) test tape for timecode offset testing. You can do this by transferring a tape with timecode to another tape of the same format, making sure you connect an output that can display timecode information visually.
   - Connect the *monitor out* (or *super out*) output of your VTR to the input of your video interface. A monitor output is a dedicated output for displaying VTR status information such as a timecode counter superimposed (or "burned-in") over the video information. Some VTRs don't have a separate monitor output, but instead have an option for turning on the deck status display and timecode information on the main output. Enable this option.
2. Capture a clip of video from a tape with LTC (Longitudinal TimeCode) or VITC (Vertical Interval TimeCode) timecode on it.
3. Compare the timecode value recorded in the captured media file (in the Current Timecode field) with the burned-in timecode on the video frame.
   If both timecode values match, then there is no offset, so no adjustment is necessary. If the timecode values do not match, there's an offset and you'll need to compensate for this to capture your video properly.

To enter a timecode offset:

1. Choose **Final Cut Pro** > **Audio/Video Settings**.
2. Click the Device Control Presets tab.
3. Make sure your current method of device control is checked, then click Edit.
   If you're using a locked preset, a new copy of the preset is created.

4. Enter a new name and description for this device control preset indicating which camcorder or deck it is calibrated for.
5. Enter a number of frames in the Capture Offset field, then click OK.

Enter a negative number if the clip's timecode track has higher numbers than the burned-in timecode. For example, if the clip's Media Start timecode is 01:00:00:04, and the first video frame has a burned-in timecode number of 01:00:00:00, enter -4 in the Capture Offset field.

After entering the timecode offset, it's a good idea to capture a few more clips and compare the timecode track numbers with the burned-in timecode to determine if the timecode offset you entered is correct.

Some devices may require fractional offsets to maintain accuracy over long batch captures. For example, if in a single clip capture an offset of 2 yields the desired results, but a 10 clip batch capture shows some clips accurate and others not, try an offset of 2.5. You may wish to consult the device documentation for specific tips on which offsets to use.

Published Date: Feb 19, 2012

Final Cut Pro: Resolving Timecode Errors

Final Cut Pro has been designed to reliably capture frame accurate timecode from a variety of sources, but certain situations may impede this accuracy. Incorrect reel numbers, breaks in timecode, and failure to calibrate the Timecode Offset Preference can all adversely affect timecode accuracy. This article describes these situations, and how to get resolve them.

This article has been archived and is no longer updated by Apple.
There are two ways that Final Cut Pro can capture timecode while importing video clips. One is through FireWire (the solution available on most consumer DV equipment), the other is through serial device control (either RS-232 or RS-422) on professional VTRs.

FireWire Device Control

There is one important issue to note when using FireWire timecode to capture DV material. When capturing video recorded with miniDV camcorders, it is important to remember that every tape you record starts at hour 00:00:00:00. Unlike DVCam or other professional formats, miniDV does not have user selectable timecode (the ability to manually set at what hour the timecode starts). When batch capturing material from of multiple tapes, it is important to assign individual reel numbers to each tape, and to physically write these reel numbers on the tapes themselves so there is no confusion.

With this in mind, be aware that any timecode break on a miniDV tape results in the timecode resetting itself back to 00:00:00:00. When this happens, it means that there are essentially two or more reels on one tape. This should be avoided because it causes unnecessary confusion, but when it does occur you should note this fact on the tape. Give each section of the tape its own reel number. For example:

- Tape 10
- (timecode break)
- Tape 10a

Be sure to always fast forward the tape to the appropriate section when prompted by Final Cut Pro for Tape 10a before pressing the Okay button.

Serial Device Control

There are two common sources of timecode errors you may encounter when using Serial device control to capture timecode, and both are easily avoided if you are conscientious.

The first occurs when there are timecode breaks on a tape. Timecode breaks occur when a tape is started or stopped while it is being recorded, and a gap appears in the timecode track. This can happen if the camera is powered off while being used in the field, or for any one of a number of other reasons. Timecode breaks do not appear after every shot, but they are not infrequent in typical source material. You may be tempted to record long video clips when logging tapes and capturing material in Final Cut Pro, but the danger in doing so indiscriminately lies in the possibility of capturing a clip with a timecode break somewhere within it.

When this happens, the timecode of the clip is incorrect, resulting in an incorrect offset of the timecode starting at the point of the clip where the timecode break occurred. Video clips with this error can not be recaptured, which can cause significant difficulties. Final Cut Pro warns you of this, but in the case of a large batch capture, it may be difficult to determine which clip is at fault.

The solution to this is simply to take more care in logging and capturing video clips. Shorter, rather than longer, clips should be captured so that when a timecode break occurs, it only affects one or two shots rather than ten minutes worth of material. Furthermore, any visible glitches on the tape should be noted and avoided during the logging process.

The second source of timecode errors occur when the Timecode offset in the Device Control Preferences tab is not calibrated properly.

Figure 1 The Timecode Offset in the Device Control Preferences tab

This can be especially problematic if project files are moved frequently from location to location, between different Final Cut Pro editing workstations. If any of the workstations in question are not calibrated properly and video material is recaptured, all recaptured clips will be offset incorrectly, and all of the in and out points in that project's various sequences will be incorrect. The solution is simply to delete the problematic video clips, recalibrate the Timecode Offset, and recapture the material. For more information on recalibration, please see article 25154: "**Final Cut Pro: How to Calibrate Serial Timecode**"

Published Date: Feb 19, 2012

PowerBook (FireWire): Computer Does Not Recognize FireWire Devices

Under certain circumstances, a PowerBook (FireWire) computer may not recognize FireWire devices. This article tells how to resolve the situation.

This article has been archived and is no longer updated by Apple.

Symptom

A computer stops responding "freezes," and after it is restarted it does not recognize any FireWire devices.

Solution

Install PowerBook Firmware Update 2.7, available from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Published Date: Feb 20, 2012

Macintosh Manager: Error -5019

Attempts to connect to a Macintosh Manager server result in a connection failure with error -5019. The solution lies in repairing AFP privilege information on the server.
This article has been archived and is no longer updated by Apple.

Symptom

Attempts to connect to Macintosh Manager server as either administrator or client result in connection failure, with a -5019 error (AFP Parameter error). Deleting the Multiple Users user and letting the server make a new one automatically does not resolve the situation.

Solution

This behavior is likely due to damaged AFP privilege information on the server, which can occur if the Admin workstation or the server stops responding ("crashes" or "freezes") or is force-restarted while privileges are being altered. Here are some possible solutions:

- Use Disk First Aid to fix any damaged directories that may cause this error.
- Verify that the entire Macintosh Manager folder (directory tree) is still owned by "Multiple Users User". To do this, select "Set Privileges" in Mac OS Server Admin, and choose the Macintosh Manager directory. It will probably show that Multiple Users User owns it, and has read-write privileges, but this doesn't prove that everything inside is set the same
  way.
- Click the "Copy" button ("Copy these privileges to all enclosed folders"). This will ensure that Macintosh Manager's Multiple Users User can access everything within the entire directory tree. *****
- It may be necessary to reconstruct either Users and Groups Datafile or each volume's AppleShare PDS file, or both, using AppleShare IP First Aid. (Be sure to read the "Read Me" file for AppleShare IP First Aid before using it. Make backups as suggested before proceeding with reconstruction.)

***** **Note**: This procedure may take several minutes, depending on the number of items involved, the degree of directory branching, and the speed of the host computer.

Published Date: Feb 17, 2012

Macintosh Manager: Settings Disappear After Logging In

After logging in to a computer using Macintosh Manager, some settings seem to have disappeared, and other features no longer work.
This article has been archived and is no longer updated by Apple.

Symptom

You log in to the computer, and find that one or more of the following symptoms occur:

- Your computer no longer has access to the network.
- The Control Strip does not work.
- Settings you've made in the Internet control panel no longer work.

When you log on as a user to the Limited Finder or Panels environment, Macintosh Manager moves certain items to the Secured Items folder within the System Folder as a safety measure. When you log off, Macintosh Manager restores these files to their prior location. Some of the folders include:

- Secured Extensions
- Secured Control Panels
- Secured Apple Menu Items
- Secured Desktop Items
- Secured Desktop Printers

If you do not log off completely and successfully (for instance, a power failure occurs, or the computer "freezes" or stops responding and you restart the computer), files from these folders do not get moved back to their correct locations.
Published Date: Feb 17, 2012

Macintosh Manager: How to Set up for Email

This article explains how to configure Macintosh Manager to check email for users when they log in.

This article has been archived and is no longer updated by Apple.

Step One

Make sure the user has a POP email account.

Step Two

Open the Macintosh Manger Admin application program.

Step Three

Enter the email and account information into the Computers:Control:Generate User E-Mail Addresses section. See Figure 1.

Figure 1 Email Account Information

Step Four

Enable the "check for e-mail when members log in" option. See Figure 2.

Figure 2 Enabling Email Check

Step Five

Enable "Put e-mail info in Internet Preferences." See Figure 3.

Figure 3 Internet Preferences

Step Six

Allow access to Control Panels (at least once) for this workgroup, and enter the email account password in the email section of the Internet control panel while logged in as the user. See Figure 4.

Figure 4 Entering Email Password

The user sees an alert box regarding email after logging in. See Figure 5.

Figure 5 Email Alert Box

Published Date: Feb 17, 2012

AppleWorks 6: "Main Spell Dictionary Not Installed" Error Message

This article tells what to do if the error message, "The Main Spell Dictionary is not installed" appears in AppleWorks while checking spelling.

This article has been archived and is no longer updated by Apple.
An alert box appears when you try to check spelling. The error message states:

> "The Main Spell Dictionary is not installed."

This happens when using:

- AppleWorks 6.0 through 6.1.2

The AppleWorks application has been moved from its original folder and now cannot find the Main Spell Dictionary file. Follow these steps to resolve the situation:

1. Quit AppleWorks.
2. Move the AppleWorks application program icon back to the AppleWorks 6 folder that was created by the installer.
3. Open AppleWorks.

Published Date: Feb 20, 2012

Apple DVD Player: Version 1.3 and Earlier Do Not Play Through USB Speakers

When playing a movie from a DVD-Video disc, sound does not play through USB speakers connected to the computer. This article lists the affected computers and offers a solution.

This article has been archived and is no longer updated by Apple.

Symptom

When playing a movie from a DVD-Video disc, you can't hear the movie through USB speakers connected to the computer. Other sounds, such as alert sounds and CD audio, can be heard through the USB speakers. You can hear the movie if you use the computer's built-in speaker(s) instead of the USB speakers.

Products affected

- Apple DVD Player 1.3 or earlier
- PowerBook G3 Series (Bronze keyboard)
- Power Macintosh G3 with third-party USB card
- Power Macintosh G3 (Blue and White)
- Power Mac G4 (PCI Graphics)

Solution

- Use the computer's built-in speaker(s).
- Connect external speakers or headphones to the computer's analog sound output port. (Some USB speakers accept analog input. Check the documentation that came with the speakers to see if they can be simultaneously connected to the sound output port on the back of your computer.)

Published Date: Feb 17, 2012

PowerBook, iBook: Processor Cycling

This article defines processor cycling, tells how to turn it off, and explains its effect on a computer.

This article has been archived and is no longer updated by Apple.

Processor Cycling Defined

Processor cycling is an energy-saving feature built into PowerBook and iBook computers. It increases battery life by slowing down the processor when the computer is not being used. Processor cycling slows the processor to approximately 25 percent of its normal speed.

Turning off Processor Cycling

PowerBook and iBook computers come with processor cycling turned on when running on battery power. You can disable processor cycling by following these steps:

1. Open the Energy Saver control panel.
2. Click Advanced Settings.
3. Click the checkbox to deselect the "Allow processor cycling" option.

There are certain events that prevent processor cycling from working, even when it is enabled:

- moving the mouse
- typing on the keyboard
- saving or reading files on the hard disk
- reading a CD-ROM or DVD-ROM disc

Side Effects

If a program is running and you're not using the mouse, keyboard, hard disk, or CD-ROM/DVD-ROM discs, processor cycling can cause the program to slow. For example, Macromedia Flash animations, which run entirely from RAM, may become choppy due to processor cycling.

Published Date: Feb 20, 2012

Belkin ADC to DVI Connector Cable Overview

This document describes the Belkin ADC to DVI connector cable which allows you to connect either an Apple Cinema Display or Apple Studio Display with a DVI connector to a Power Mac G4 computer with an Apple Display Connector (ADC).
This article has been archived and is no longer updated by Apple.
The original Apple Cinema Display and the Apple Studio Display-which use the digital video interface (DVI) connector-were designed to work with the graphics card in the Power Mac G4 (AGP Graphics) computer. The graphics card in later Power Mac G4 computers utilizes an Apple Display Connector (ADC) video card. Refer to technical document 58692: "**Power Mac G4: Display Compatibility**" for images and additional information on the video connectors.

Belkin offers an ADC to DVI cable adapter that allows you to connect either monitor to a computer with an ADC video card. Refer to Table 1 to determine compatibility. Figures 1 through 3 offer views of the cable adapter.

Computer	Computer Video Port	Apple Studio Display	Apple Cinema Display
Power Mac G4 (AGP Graphics)	DVI	Yes	Yes
Power Mac G4 (Gigabit Ethernet) and (Digital Audio)	ADC	Yes (with adapter)	Yes (with adapter)
Power Mac G4 Cube	ADC	Yes (with adapter)	Yes (with adapter)

Table 1 Computer and display compatibility

Figure 1 Connector Cable

Figure 2 View of connector plug

Figure 3 View of connector socket

Notes

1. The cable adapter only carries the video signal to the display. You must also plug in the display's power cord, and connect the display to one of the computer's USB ports.

2. This adapter is designed only to allow DVI based displays to be connected to an ADC video card. This adapter does not allow you to connect ADC displays to a video card with a DVI port.

This document provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

Document 17159: "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Feb 19, 2012

iMovie 2.0.1 Update "File not found" Error Message

Do not install iMovie Update 2.0.1 if your computer already has iMovie 2.0.1.
This article has been archived and is no longer updated by Apple.

Symptom

Installing iMovie 2.0.1 Update on a computer that already has iMovie 2.0.1 results in an alert box, shown in Figure 1, with the following error message:

> "An error occurred that prevented the installation from completing. File not found: Find iMovie."

Figure 1 iMovie error message

Solution

Do not install iMovie Update 2.0.1 if your computer already has iMovie 2.0.1.

iMovie Update 2.0.1 updates iMovie from version 2.0 to version 2.0.1. The updater specifically searches for iMovie 2.0. If your computer does not have iMovie 2.0, the updater presents the alert box.
Published Date: Feb 18, 2012

Cannot Start up From Third-Party USB Drive

Your computer may not start up correctly from a USB hard disk if the manufacturer's hard disk driver is outdated.

This article has been archived and is no longer updated by Apple.

Symptom

Your computer may not start up correctly from a USB hard disk if the manufacturer's hard disk driver is outdated.

Solution

Check with the USB hard disk driver manufacturer for updated driver software. In the meantime, you may be able to start up from the USB hard disk by removing the manufacturer's hard disk driver extension from the Extensions folder in the System folder, and then starting up from the USB disk.

Published Date: Feb 20, 2012

TechTool Deluxe: Features

This document lists the features of the TechTool Deluxe application included on the Apple Protection Plan CD.
This article has been archived and is no longer updated by Apple.
The Apple Protection Plan CD contains a diagnostic program named TechTool Deluxe.

TechTool Deluxe is an abridged version of the TechTool Pro diagnostic utility made by MicroMat. TechTool Deluxe is available only through Apple by purchasing the Apple Protection Plan for your Macintosh computer. Through the AppleCare Protection Plan, Apple provides technical support for TechTool Deluxe.

TechTool Deluxe for Mac OS 9 offers these features:

- Mac OS 9 compatible
- Mac OS Extended Format (HFS Plus) compatible
- PowerPC compatible
- Checks logic board
- Checks RAM
- Checks PRAM
- Checks video RAM
- Checks ROM
- Checks CPU
- Checks FPU
- Checks cache
- Checks clock chip
- Disk structure repair
- Bad block reassignment
- File integrity check
- Rebuilds directories instead of patching
- Checks drive mechanism
- Repair preview

On the Mac OS 9/Mac OS X dual Apple Protection Plan startup CD, there is a Mac OS X compatible version of TechTool Deluxe.

TechTool Deluxe for Mac OS X offers these features:

- Mac OS X compatible
- Mac OS Extended Format (HFS Plus) compatible
- PowerPC compatible
- Checks processor
- Checks RAM
- Checks video RAM
- Checks USB
- Checks drive mechanism
- Checks volume directory structure
- Rebuilds directories instead of patching
- Repair preview

TechTool Deluxe can repair certain faults if detected, but only if the computer started up from the CD.

It is possible to upgrade from TechTool Deluxe to TechTool Pro. For more information on upgrading contact MicroMat (http://www.micromat.com/).

Published Date: Feb 19, 2012

PowerBook: How to Determine if Firmware Update 2.7 Is Needed

This article explains how to determine whether your PowerBook computer needs the PowerBook Firmware Update 2.7.

This article has been archived and is no longer updated by Apple.
Follow these steps to determine whether your PowerBook computer needs the PowerBook Firmware Update 2.7:

1. Open the Apple System Profiler application program; the Apple System Profiler window appears.
2. Reveal the product information by clicking the Product Information disclosure triangle.
3. Note the Boot ROM version. If it is $0003.27f2 or later, the PowerBook does not require PowerBook Firmware Update 2.7. If an earlier Boot ROM version is listed, such as $0003.24f1, you should install PowerBook Firmware Update 2.7.

For the PowerBook Firmware Update 2.7 software and Read Me document, please see article 88042: "**PowerBook Firmware Update 2.7 Document and Software**"
Published Date: Feb 20, 2012

Mac OS X Server: How to Upgrade Mac OS for NetBoot Clients

This article tells how to upgrade the version of Mac OS used by NetBoot Clients, and how to deal with Mac OS ROM startup issues that may arise during the process.

This article has been archived and is no longer updated by Apple.
This article assumes the reader is familiar with using NetBoot Desktop Admin to upgrade the images used by the NetBoot Clients. If not, consult the NetBoot Desktop Admin Read Me before continuing.

Create the private images

1. Log on to a NetBoot client computer as a Global Administrator who belongs to the System Access workgroup.

2. Connect to the NetBoot Server volume. Open the NetBoot Desktop Admin application program.

3. Using NetBoot Desktop Admin, increase NetBoot HD.img image so that there is at least 250 MB of free space. (You cannot reduce the size of an image without reverting to a backup copy.)

4. Click Make Private Copy. NetBoot Desktop Admin creates copies of the disk images that you can change. This may take several minutes; you should not interrupt the process. When it finishes, your NetBoot client computer restarts automatically. The disk images have been copied to the client's folder.

Upgrade Mac OS

5. Upgrade Mac OS using the Installer. You may want to perform a custom installation because some Mac OS installers offer a custom installation of additional software for NetBoot clients. After the upgrade, the computer does not need to be restarted.

The next time the client starts up it downloads the old Mac OS ROM from the SharedImages folder on the server but attempts to start up with the new version of Mac OS.

If the client no longer starts up

6. Start up the client from the CD you used to upgrade Mac OS.

7. Log in to the NetBoot Server as an administrator using the Chooser.

8. Locate and open the SharedImages folder.

9. Rename the Mac OS ROM in the SharedImages folder; it may be needed later. (For example, name it "Mac OS ROM-Previous".)

10. Copy the Mac OS ROM file from the System Folder on the CD to the SharedImages folder.

11. Restart the client from the NetBoot server again.

Saving changes

12. After the client restarts, log in to the NetBoot server as an administrator.

13. Open NetBoot Desktop Admin, and click Save to save the new images. The system restarts and the disk images in the client's folder now have '+' appended to them.

If you had to do steps 6 through 10 again the computer may not restart. This is because the computer restarts from the original images, but the Mac OS ROM file has been upgraded.

If the computer does not restart again

14. Start up the client from the CD again.

15. Log in to the server as an administrator.

16. Locate and open the SharedImages folder.

17. Rename Mac OS ROM file; it may be needed later. (For example, name it "Mac OS ROM-New".)

18. Rename the Mac OS ROM file from step 9 back to "Mac OS ROM".

19. Restart the client from the NetBoot server.

Using the newly updated images

20. Log in to the server as an administrator.

21. Open NetBoot Desktop Admin.

22. Click Restart after choosing whether to save the previous images. This moves the images in the SharedImages folder, moves the images from the client's folder to SharedImages, and renames them properly.

23. Verify that the file named Mac OS ROM in the SharedImages folder is the correct version for the version of Mac OS just installed. You can do this by selecting the files and choosing Get Info from the Finder's File menu.

All clients should now start up using the updated images.

Published Date: Feb 17, 2012

Macintosh: How to Reinstall Bugdom

This article explains how to reinstall Bugdom.

This article has been archived and is no longer updated by Apple.
Follow this procedure to reinstall Bugdom:

1. Insert your Restore CD into the computer.
2. Open the Configurations folder on the CD.
3. Open the restoration image file. For an iMac, the file is named iMac HD.img; for an iBook the file is named iBook HD.img.
4. After the licensing agreement and the checksum verification occur, an icon representing the contents of the image file appears on the desktop. Double-click to open it.
5. Open the Applications folder.
6. Locate the Bugdom folder.
7. Drag the entire Bugdom folder into the Applications folder on your hard disk.

You can now play Bugdom.

Published Date: Feb 20, 2012

Apple DVD Player: Error 301

This article explains one reason why the Apple DVD Player application may not work properly when using an external CD-R or CD-RW drive on a computer with an internal DVD drive.
This article has been archived and is no longer updated by Apple.

Symptom

The following alert box appears after opening the Apple DVD Player program:

> "This Macintosh does not support the Apple DVD Player. Error number (301)."

Figure 1 Apple DVD Player alert box

Solution

1. Open the Extensions Manager control panel.
2. Turn off the Toast CD Reader extension by clicking its checkbox.
3. Restart the computer.

The CD-R/CD-RW drive is still operational with the Toast CD Reader extension disabled. If you also need to use the external drive as a CD-ROM reader, then you may need to turn on this extension and restart the computer.

For more information on error 301 with the Apple DVD Player program, please see article 25177: "**iMac (Summer 2000): Error 301 When Opening Apple DVD Player**"

Published Date: Feb 17, 2012

Power Mac G4 (Gigabit Ethernet): DVD-RAM Available Space Issue

When you insert and eject DVD-RAM disc from a Power Mac G4 (Gigabit Ethernet) computer, all subsequent DVD-RAM discs appear to have the same amount of free space available as the first disc.
This article has been archived and is no longer updated by Apple.

Symptom

After you eject a DVD-RAM disc, any other disc inserted prior to restarting the computer appears to have the same amount of free space available as the first disc. This also occurs between the two sides of a dual-sided DVD-RAM disc.

Warning: To prevent the potential for data loss caused by misreporting, follow the solution described here.

Solution

Note: Upgrading to Mac OS 9.1 resolves this issue. If you already use Mac OS 9.0.x, you may download the Mac OS 9.1 Update from Apple Software Updates (http://www.apple.com/swupdates).

Otherwise, when you need to switch between DVD-RAM discs or disc sides:

1. Eject the disc from the computer.
2. Restart the computer.
3. Insert the new disc or disc side.

Published Date: Feb 20, 2012

WebObjects 4.5: Using Cookies With IIS Web Servers

Internet Information Server (IIS) Web servers handle cookies in a way that WebObjects 4.5 applications must accommodate. This article offers two solutions.

This article has been archived and is no longer updated by Apple.

Symptom

When running on an Internet Information Server (IIS) Web server, WebObjects 4.5 applications that set cookies cannot retrieve them later.

Solution

An IIS Web server modifies the standard Hypertext Transfer Protocol (HTTP) "Cookie" header to be "HTTP_COOKIE". A WebObjects 4.5 application, which looks for "Cookie" headers, is therefore unable to retrieve cookies. WebObjects 4.5 applications running through IIS must look for an "HTTP_COOKIE" header. There are two possible solutions:

Solution 1: Application Code

In the "Application" object dispatchRequest method, before you call super.dispatchRequest(), take the request object and read all the "HTTP_COOKIE" headers. Add a new header for each one, using "cookie" as the header key instead.

In Java, add this to Application.java:

```
public WOResponse dispatchRequest(WORequest aRequest) {
   NSArray isapiCookieHeaders = aRequest.headersForKey("HTTP_COOKIE");
   if (isapiCookieHeaders != null) {
       for (int i=0; i<isapiCookieHeaders.count(); i++)
           aRequest.setHeader((String)isapiCookieHeaders.objectAtIndex(i),
               "cookie");
       }

   return super.dispatchRequest(aRequest);
}
```

In Objective-C, add this to Application.m

```
(WOResponse*) dispatchRequest:(WORequest *) aRequest {
NSArray *isapiCookieHeaders = [aRequest headersForKey:@"HTTP_COOKIE"];
int i;
if (isapiCookieHeaders != nil) {
for (i = 0; i < [isapiCookieHeaders count]; i++)
[aRequest setHeader:[isapiCookieHeaders
objectAtIndex:i] forKey:@"cookie"];
}
return [super dispatchRequest:aRequest];
}
```

Solution 2: ISAPI Adaptor Code

There are no code changes to your WebObjects application, but it does require recompilation of the ISAPI adaptor.

In config.h, look for the following #define:

```
   #define COOKIE "cookie"
```

and change it to:

```
   #define COOKIE "HTTP_COOKIE"
```

Published Date: Feb 19, 2012

Mac OS 9: Software Update Control Panel Lists Are Unreadable

When using the Software Update control panel to check for updated software, the list of updates returned doesn't appear to contain any text. Changing the view font and point size settings in the Appearance control panel resolves this issue.

This article has been archived and is no longer updated by Apple.

Symptom

When using the Software Update control panel to check for updated software, the list of updates returned doesn't appear to contain any text. See Figure 1.

Figure 1 Software Updates list with no visible text

Solution

The Software Update control panel uses the font and point size specified by the Appearance control panel to display list items. Using a large point size setting or an incompatible view font may cause this symptom. This is only a cosmetic issue; you can still use the Software Update control panel to download and install available updates.

You can change the font and point size used by the Software Update control panel by following these steps:

1. Open the Appearance control panel.
2. Click the Fonts tab.
3. Choose a font from the Views Font pop-up menu, and a point size from the adjacent Size pop-up menu. The default setting in Mac OS 9 is Geneva 10-point.
4. Close the Appearance control panel.

All applications that use the Appearance control panel settings, including the Software Update control panel, display the font and point size you specify.

Note: The update log available in Software Update control panel 1.2 may also contain text that is not visible because of font and size settings in the Appearance control panel. Follow the steps above to solve this issue.

Published Date: Feb 17, 2012

.Mac HomePage: QuickTime Movies Do Not Display Properly

This article outlines several things to check when a .Mac HomePage movie does not display properly in your Web browser.

This article has been archived and is no longer updated by Apple.

Symptom

A QuickTime movie on a HomePage iMovie Theater theme does not display properly in your Web browser.

Solution

There are several things to check, including:

Filename
Be sure the filenames of the movies stored in the Movies folder on your iDisk end with ".mov".

QuickTime Format
QuickTime movies must be in QuickTime 4.0 (or later) format. QuickTime movies exported from iMovie meet this criteria, but QuickTime movies from other applications may not. QuickTime Pro can convert some other media formats into QuickTime movies. For more information or to purchase QuickTime Pro, visit Apple's QuickTime site at http://www.apple.com/quicktime/ .

Web Browser
Be sure your Web browser is using the most recent version of the QuickTime plug-in. You can download the most recent version from Apple's QuickTime site at http://www.apple.com/quicktime/

Published Date: Feb 20, 2012

Setup Assistant: Repeated Attempts to Transmit Registration Information

The Network Browser application program may display an item named "littlebuddy.apple.com" when Setup Assistant attempts to send your registration information to Apple. This article tells how to stop this behavior if it occurs repeatedly.

This article has been archived and is no longer updated by Apple.

Symptom

The Network Browser displays an item named "littlebuddy.apple.com". Network administrators using network traffic monitoring tools may see periodic traffic to this URL.

Products affected

- Setup Assistant
- Mac OS 9

Solution

1. Open the Extensions folder, which is inside your System folder.
2. Locate the file named "Setup Info Dispatcher" and drag it to the Trash.
3. Restart your computer.

The Setup Assistant application program, which is included with all new Macintosh computers, attempts to send your registration information through a secure Internet connection to an Apple product registration server. During this transmission, littlebuddy.apple.com may appear in the Network Browser. When the transmission has been received successfully by an Apple product registration server, it transmits an acknowledgement back to your computer.

If your computer does not receive acknowledgement, it attempts to send registration information again. This can occur repeatedly, for example, if your computer is behind a firewall that blocks the incoming acknowledgement from an Apple registration server. Dragging the Setup Info Dispatcher file to the Trash stops your computer from making any more attempts to send registration information.

Published Date: Feb 20, 2012

Mac OS: "AppleGuideGlueLib" Cannot Be Found

Some applications require access to a code library named AppleGuideGlueLib, which is part of the Apple Guide system extension. If the Apple Guide system extension is turned off or not installed, the application cannot operate.

This article has been archived and is no longer updated by Apple.

Symptom

When opening an application program, an alert box appears with an error message that says:

"The application cannot be opened because 'AppleGuideGlueLib' cannot be found."

Products affected

- application programs
- control panels, such as the Mac OS 9.1 Monitors control panel

Solution

The Apple Guide system extension is turned off or not installed.

- If the Apple Guide system extension is turned off, use the Extensions Manager to turn on the Apple Guide system extension and then restart your computer.
- If the Apple Guide system extension is not installed, perform a custom installation of Mac OS Help from your original system software.

Published Date: Feb 17, 2012

Macintosh: Wake-on-LAN Packets Issue

In certain rare cases, a computer that wakes up by a wake-on-LAN packet may not properly return to sleep. It may wake up again, or stop responding.

This article has been archived and is no longer updated by Apple.

Symptom

There are two symptoms:

The computer wakes up by a wake-on-LAN packet and then goes to sleep, but immediately wakes up again.

The computer wakes up by a wake-on-LAN packet and if you change its TCP/IP setting to something other than Ethernet but don't access the network before the computer goes to sleep again, the computer stops responding ("freezes") after it goes to sleep.

Solution

Use one of these methods to avoid the issue:

- Disable "Wake for network administrative access" in the Energy Saver control panel.
- If TCP/IP is set to Ethernet, set AppleTalk to Ethernet as well.
- Access the network after the computer wakes up by a wake-on-LAN packet but before it goes to sleep again.

Notes

1. The parenthetical product description (Summer 2000) refers to the summer of the Northern Hemisphere.

Published Date: Feb 20, 2012

USB Adapter Cards: Limited Functionality With Some Input Devices

Some USB keyboards connected to a PCI-based USB adapter card do not offer alternate keyboard layouts, nor the use of Easy Access software.

This article has been archived and is no longer updated by Apple.

Symptom

Alternate keyboard layouts, such as Dvorak and AZERTY, do not work with a USB keyboard that is connected to a USB adapter card.

*Includes the Macintosh Performa variations of these models.

Solution

The USB Adapter Card Read Me file notes that you may experience limited functionality using some USB input devices in certain applications, including Easy Access and the Keyboard control panel.

To use alternate keyboard layouts, or to use Easy Access, use an ADB keyboard with your computer.

For more information on the USB Adapter Card Support software, please see article 31132: "**USB Adapter Card Read Me Document and Software Download**"

Published Date: Feb 20, 2012

AppleWorks: Tips for Setup With Macintosh Manager

This article offers tips for setting up AppleWorks with Macintosh Manager.
This article has been archived and is no longer updated by Apple.
Here are some tips for setting up AppleWorks with Macintosh Manager:

AppleWorks 5

- If you see XTND errors when opening or saving as HTML, GIF, or JPG, install the Security Bypass extension if running Maciintosh Manager 1.3. If running Macintosh Manager 1.4, disable File Level Security for WorkGroups that contain AppleWorks. You may also need to delete the xtnd translator list file from the user's AppleWorks preferences. See article **88115** for additional information.

AppleWorks 5 and 6

- Documents that require DataViz MacLink Plus translators in order to open with AppleWorks may not open in AppleWorks when their icon is double-clicked, unless the Security Bypass extension is installed for Maciintosh Manager 1.3, or the Workgroup has file level security disabled for Maciintosh Manager 1.4. As an alternative, choose Open from the File menu of AppleWorks to open such documents.

AppleWorks 6

- Update to AppleWorks 6.1.2 - this update resolves many compatibility issues with Macintosh Manager, resolving issues with Recent Items, Web Starting Points, and eliminates the need to use Security Bypass and the Other Applications folder.

Published Date: Feb 19, 2012

Mac OS 9: Brief Delay When Desktop First Appears

If you have set up your computer to automatically open a file server volume at system startup time, or have an alias of your hard disk in the Apple Menu Items folder, there may be a brief delay when the desktop first appears.

This article has been archived and is no longer updated by Apple.

Symptom

At system startup time, when the desktop first appears, the Finder appears to "freeze" for a brief period. For example, you cannot open a menu from the menu bar.

Solution

There are two reasons this may occur: if an alias of the hard disk is put into the Apple Menu items, or if a file server volume is opening at startup time.

Alias of Hard Disk in Apple Menu Items

If an alias of the hard disk is placed in the Apple Menu Items folder, the Finder must index the hard disk and build the menu for every item it finds. This can take a long time depending on the number of items and directory structure of the hard disk.

To prevent the delay at startup time, remove the hard disk alias.

File Server Opens at Startup Time

The brief delay may occur while the computer is attempting to connect to the file server volume(s) that you have chosen to automatically open at system startup time. Turning off this feature eliminates the brief delay.

If the server volume is available on the network, follow this procedure to no longer have it opened automatically at system startup time:

1. Connect to the network.
2. Open the Chooser.
3. Click the AppleShare icon to select it.
4. Log on to the AppleShare file server containing the volume(s) you no longer wish to open at system startup time.
5. Click the appropriate checkbox to deselect the volume(s) you no longer wish to open at system startup time (see Figure 1).
6. Click OK.
7. Close the Chooser.

Figure 1 The checked volume will open automatically at system startup time

If the server volume is not available on the network, follow this procedure to no longer have it opened automatically at system startup time:

1. Open your computer's startup disk.
2. Open the System Folder.
3. Open the Servers folder.
4. Locate the alias(es) of the file server volume(s) you no longer wish to open at system startup time.
5. Drag the alias(es) to the Trash.

For more information on this issue and system responsiveness, please see the following articles:

Article 60544: "**Mac OS 9: What Is The Servers Folder In The System Folder?**"
Article 31175: "**Macintosh: Reducing Startup Time**"
Article 10182: "**Mac OS: Rebuilding Desktop File and Icon Recovery**"
Article 17697: "**AppleShare Volumes: Disabling Automatic Log On**"
Article 60400: "**Mac OS 8.6: Computer Pauses Every Five Minutes On DHCP**"
Article 22059: "**Macintosh: Startup Sequence**"

Published Date: Feb 20, 2012

Network Assistant 4.0.x: Some AppleWorks 6 Items Do Not Appear on Shared Screens

Some AppleWorks 6 items do not appear on client screens when sharing screens with Network Assistant. Changing the screen sharing preference resolves the issue.

This article has been archived and is no longer updated by Apple.

Symptom

When sharing a screen through Network Assistant, some AppleWorks 6 items do not appear on client screens. For example, thumbnails in the Starting Points window, QuickTime movies, and AppleWorks presentations.

Solution

Follow these steps to set up screen sharing so that all screen changes are displayed:

1. Open the Network Assistant application program.
2. Choose Preferences from the Setup menu; the Preferences dialog box appears (see Figure 1).

Figure 1 Network Assistant Preferences

3. Set the screen sharing preference to "Send all screen changes (requires Ethernet)."
4. Click OK.
5. Quit Network Assistant.

Published Date: Feb 20, 2012

Mac OS 9: Command-Shift-0 Puts System to Sleep

Command-Shift-0 cannot be used as a keyboard shortcut by applications with Mac OS 9. This keyboard shortcut puts the system to sleep.

This article has been archived and is no longer updated by Apple.

Symptom

If you attempt to use Command-Shift-0 (zero) as a keyboard shortcut within an application program, the system goes to sleep.

Solution

Do not use Command-Shift-0 as a keyboard shortcut. If there is a menu item for the command, use it instead. Alternatively, you may be able to use Command-Shift-0 with the zero key on numeric keypad; some applications recognize this sequence.

Command-Shift-0 is used by Mac OS 9 as a keyboard shortcut to put the system to sleep. The command is intercepted by Mac OS 9 and processed; it is never sent to the application.

Command-Shift-number key sequences are reserved for system use. Prior to Mac OS 9, Command-Shift-0 was used by PowerBook computers as a keyboard shortcut to put the system to sleep. Mac OS 9 brings this feature to desktop Macintosh computers, too. Apple developer documentation has noted the following for many years:

"You shouldn't assign a Command-Shift-number key sequence to a menu item as its keyboard equivalent; Command-Shift-number key sequences are reserved for use as 'FKEY' resources. Command-Shift-number key sequences are not returned to your application, but instead are processed by the Event Manager. The Event Manager invokes the 'FKEY' resource with a resource ID that corresponds to the number that activates it."

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"

Published Date: Feb 19, 2012

iMac: Modem Extension Required for Dialing With Remote Access

If the proper modem extension is not installed and turned on, Remote Access cannot dial the modem and the Modem control panel does not show an available serial port.

This article has been archived and is no longer updated by Apple.

Symptom

When attempting to use your computer's modem to make a connection through Remote Access, the following error message is displayed: "The connection attempt failed: An unexpected Open Transport error occurred." Additionally, the Modem control panel does not show an available serial port in its "Connect via" area.

Solution

Use the Extensions Manager to make sure the appropriate modem extension is installed and turned on:

Computer	Extension
iMac	iMac Modem Extension
iMac (Slot loading)	Internal V.90 Modem
iMac (Summer 2000)	Internal V.90 Modem

If the extension is turned off, turn it on and restart the computer.

If the extension is not installed, (re)install the Mac OS 9 Update, which updates Mac OS to version 9.0.4.

If you choose not to install Mac OS 9 Update, you can perform a custom installation of the modem software from the iMac Software Install CD.

For related information on this topic, please see the following articles:

Document 50055: "**Miscellaneous Manuals**" Troubleshooting Handbook.
Document 30917: "**Power Macintosh G3 (Blue and White): Installing Internal Modem Software**"

Note: The parenthetical product description (Summer 2000) refers to the summer of the Northern Hemisphere.

Published Date: Feb 20, 2012

Mac OS 9: Delay in Audio Play-Through

Mac OS 9 introduces audio routing capabilities to accommodate digital audio devices such as USB speakers and microphones. Routing of the input audio signal to the current output audio devices introduces a small amount of latency. This happens only when "Play sound through output device" is selected for that input source in the Sound control panel.

This article has been archived and is no longer updated by Apple.

Symptom

There is a slight delay in sound output. For example, if you are talking through a PlainTalk microphone and "Play sound through output device" is selected in the Sound control panel, your voice may sound like an echo coming through the speakers.

Solution

Turn off "Play sound through output device" in the Sound control panel to eliminate this effect.

In most cases, playing the audio through to the speakers is not necessary. If you need to monitor the input source, monitor it at the source device (with a headphone jack) or with an audio mixer instead of using the computer's audio output.

Note: The parenthetical product description (Summer 2000) refers to the summer of the Northern Hemisphere.

Published Date: Feb 17, 2012

QuickTime for Macintosh: How to determine which edition and version is installed

This article has been archived and is no longer updated by Apple.

Learn how to determine which edition and version, such as Pro Player, of QuickTime is installed on your Macintosh computer.

For Windows-compatible computers, see "QuickTime for Windows: How to Determine Which Edition and Version Is Installed."

How to determine which edition and version is installed

Mac OS X

The steps depend on whether you have QuickTime 6 or QuickTime 7 installed.

QuickTime 7

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **QuickTime**. The QuickTime pane appears.
3. Click Register. If there is a QuickTime Pro key entered, you'll see the registration information and QuickTime 7 Pro will display below the registration number:

QuickTime 7 Pro is installed here. To find the specific version of QuickTime, click About QuickTime to see the installed version:

QuickTime 7.0.2 is installed here.

QuickTime 6

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **QuickTime**. The QuickTime pane appears.
3. Click Registration. A sheet appears with the edition. The field named QuickTime indicates which edition of QuickTime is installed.

QuickTime 6 Pro is installed. To find the specific version, click Cancel to close the registration screen and then click About QuickTime. A sheet appears that displays the installed version number of QuickTime.

QuickTime version 6.5.1 is installed here.

Mac OS 9

1. Open the QuickTime Settings control panel.
2. Choose Registration from the pop-up menu.

TA22179_QuickTime_for_Macintosh_How_to_determine_which_edition_and_version_is_insta

The field named QuickTime Key indicates which edition of QuickTime is installed.

QuickTime 5 Pro is installed here. To find the specific version of QuickTime that is installed, choose About QuickTime from the pop-up menu. The version number appears below the pop-up menu.

QuickTime version 5.0.1 is installed here.

Upgrading to QuickTime Pro

For information on upgrading to QuickTime Pro, visit the QuickTime web site.

For information on the differences between QuickTime and QuickTime Pro, see "Differences Between QuickTime and QuickTime Pro"

Published Date: Feb 20, 2012

Power Mac G4: Connecting Additional Displays

This document explains how to connect additional displays to a Power Mac G4 computer.
This article has been archived and is no longer updated by Apple.

Power Mac G4

The Power Mac G4 display card can accommodate one display at a time, regardless if it has one or two connectors on it. Depending upon the card installed, the display can use a VGA-, DVI-, or ADC-style connector. Refer to technical document 58692: "**Power Mac G4: Display Compatibility**" for images of the connectors.

To connect additional displays, install an additional PCI display card. Be sure the card and display have matching connectors.
This includes the following models:

- Power Mac G4 (PCI Graphics)
- Power Mac G4 (AGP Graphics)
- Power Mac G4 (Gigabit Ethernet)
- Power Mac G4 (Digital Audio)

Power Mac G4 (QuickSilver)

You can simultaneously connect two displays to Power Mac G4 (QuickSilver) computers that have the optional nVidia GeForce2 MX TwinView video card installed. **Important:** This card has two connectors: one VGA monitor and one Apple Display Connector (ADC) display port. Be sure the displays match the connectors.

To connect additional displays, install an additional PCI display card. Be sure the card and display have matching connectors.

Power Mac G4 (QuickSIlver 2002)

You can simultaneously connect two displays to Power Mac G4 (QuickSilver 2002) computers that have either the nVidia GeForce4 MX or the ATI Radeon 7500 video cards installed. **Important:** Both of these cards have two connectors: one VGA monitor and one Apple Display Connector (ADC) display port. Be sure the displays match the connectors.

To connect additional displays, install an additional PCI display card. Be sure the card and display have matching connectors.

Power Mac G4 Cube

Only one display, with either a VGA- or ADC-style connector, can be connected to a Power Mac G4 Cube computer.

See technical document 58418 "**Power Mac G4: How to Differentiate Between Models**" if you are unsure which Power Mac G4 you have.
Published Date: Feb 17, 2012

LaserWriter 12/640 PS: Changing Settings with Serial Connection

You must use an Ethernet or LocalTalk connection in order to change the printer name or startup page setting of a LaserWriter 12/640 PS printer.

This article has been archived and is no longer updated by Apple.

Symptom

Using a serial connection, you are unable to change the printer name or startup page setting of a LaserWriter 12/640 PS printer.

Products affected

- LaserWriter 12/640 PS

Solution

You must use an Ethernet or LocalTalk connection to make these changes.

For more information on this and other configuration issues, please see article 22217: "**LaserWriter 12/640 PS: IP Address Reads 0.0.0.0**"

Published Date: Feb 20, 2012

QuickTime Pro: How to Enter the Registration Key Under Mac OS 9

This article explains how to enter the QuickTime Pro registration key.

This article has been archived and is no longer updated by Apple.

The QuickTime Pro key unlocks the professional features of the current version of the free QuickTime Player. To obtain the latest version of QuickTime or to purchase a QuickTime Pro key, see the QuickTime website (**http://www.apple.com/quicktime**).

Note: See technical document 31335 "**QuickTime: Not All Keys Enable Pro Features**" for information on if your key will work with the current version of QuickTime.

Follow these steps to enter your QuickTime Pro registration key:

1. Open the QuickTime Settings control panel.
2. Choose Registration from the pop-up menu (see Figure 1).

Figure 1 Pop-up menu

3. Click Enter Registration; a dialog box appears (see Figure 2).

Figure 2 Registration dialog box

4. Enter the name and registration number exactly as they appear on your Confirmation of QuickTime Pro Upgrade message.

When entering the name, do not enter a nickname, abbreviated name, or anything other than the name as it appears on your Confirmation of QuickTime Pro Upgrade message.

The QuickTime Pro registration number consists of five sets of characters, each separated by a hyphen (see Figure 2). You must include the hyphens when entering the QuickTime Pro registration number. If the name or registration number are not entered exactly, an alert box appears (see Figure 3).

Figure 3 Alert box

For related information on this topic, please see the following articles:

Article 25227: "**QuickTime Pro for Windows: How to Enter the Registration Key**"
Article 42564: "**QuickTime Pro: How to Enter the Registration Key Under Mac OS X.**"
Article 25220: "**QuickTime: Determining Which Edition and Version is Installed**"

QuickTime software can be found at:

http://www.apple.com/quicktime/

Published Date: Oct 10, 2016

QuickTime Pro for Windows: How to Enter the Registration Key

This article explains how to enter the QuickTime Pro for Windows registration key.

This article has been archived and is no longer updated by Apple.

The QuickTime Pro key unlocks the professional features of the current version of the free QuickTime Player. To obtain the latest version of QuickTime for Windows or to purchase a QuickTime Pro for Windows key, see the QuickTime website (**http://www.apple.com/quicktime**).

Note: See technical document 31335 "**QuickTime: Not All Keys Enable Pro Features**" for information on if your key will work with the current version of QuickTime.

Follow these steps to enter your QuickTime Pro for Windows registration key:

1. Click the Start menu, then choose Control Panel (see Figure 1).

Figure 1 Opening the Control Panel window

2. Click Other Control Panel Options (See Figure 2).

Figure 2 Opening the Other Control Panel Options window

3. Open the control panel named QuickTime (see Figure 3).

Figure 3 QuickTime control panel

4. Click Enter Registration; a dialog box appears (see Figure 4).

Figure 4 Registration dialog box

5. Enter the name and registration number exactly as they appear on your Confirmation of QuickTime Pro Upgrade message.

When entering the name, do not enter a nickname, abbreviated name, or anything other than the name as it appears on your Confirmation of QuickTime Pro Upgrade message.

The QuickTime Pro registration number consists of five sets of characters, each separated by a hyphen (see Figure 3). You must include the hyphens when entering the QuickTime Pro registration number. If the name or registration number are not entered exactly, an alert box appears (see Figure 5).

Figure 5 Alert box

Related Documents

25220 QuickTime: Determining Which Edition and Version is Installed
25226 QuickTime Pro: How to Enter the Registration Key Under Mac OS 9
25227 QuickTime Pro: How to Enter the Registration Key Under Mac OS X

QuickTime software can be found at:
http://www.apple.com/quicktime/

Published Date: Feb 17, 2012

Macintosh Manager 1.3: Setting Up and Using a FireWire Drive

This article tells how to set up and use a FireWire hard disk drive with Macintosh Manager 1.3.

This article has been archived and is no longer updated by Apple.
Four areas must be considered when setting up a FireWire disk drive for use with Macintosh Manager 1.3:

- Admin setup
- Client setup
- How to connect to a FireWire volume
- Privileges

Additionally, this article tells what to do if a user encounters difficulty saving documents to a particular folder.

Admin Setup

A FireWire hard drive is treated as removable media by Macintosh Manager 1.3. To connect to a FireWire (IEEE 1394) hard drive volume the workgroup must have at least Read only access to removable media. Follow these steps to set up privileges for removable media:

1. Open the Macintosh Manager administration program.
2. Connect to a Macintosh Manager server; a window appears.
3. Click the Workgroups tab in the window.
4. Select the workgroup for which you want to set privileges.
5. Click the Privileges tab.
6. Use the pop-up menu titled "Removable Media (except CDs)" to set privileges. (If privileges are set to Disabled, workgroup members cannot use FireWire drives and media.)

Client Setup

The client computer(s) must have the appropriate driver software installed for the FireWire drive.

Connecting to a FireWire Volume on a Client

1. Make sure the FireWire drive is disconnected from the client computer.
2. Log in from a client computer.
3. When the log-in process has completely finished, connect the FireWire drive.

If you encounter difficulty, log out and start over at step 1.

Disconnecting a FireWire Drive on a Client

1. Put away the FireWire drive volume by selecting it on the desktop and choosing Put Away from the File menu, or by dragging the volume's icon to the Trash.
2. Disconnect the FireWire drive.

All removable media are put away automatically when a user logs out from Macintosh Manager, so a FireWire drive can safely be disconnected when the login screen reappears.

Privileges Issue

The removable media access privileges assigned to a workgroup apply to the entire volume for every member of the workgroup. Even though individual user folders are created on the volume, all members of the workgroup have equal access to the entire contents of the removable media volume. For example, a user in a workgroup that has read only privileges for removable media has read only access to all folders on a removable media volume.

Difficulty Saving to a Specific Folder

If you encounter difficulty saving documents to a particular folder on a FireWire drive, and you know you have read and write privileges for removable media, delete the folder and create a new one. Follow these steps to delete the folder and create a new one:

1. Log in as a user who has system access.
2. Temporarily move all files out of the faulty folder, then delete the folder.
3. Log out.
4. Log in as the user to whom the folder will belong.
5. Create a new folder.
6. Move the files that were in the faulty folder into the newly-created folder.
7. Log out.

Published Date: Feb 17, 2012

QuickTime Player: Accessing Special Editing Commands

This article explains how to access the following QuickTime Pro editing commands available in the QuickTime Player application: Replace, Add, Add Scaled, and Trim. These commands are available only if QuickTime Pro is installed.

This article has been archived and is no longer updated by Apple.

The special QuickTime Pro editing commands available in QuickTime Player are accessed through the Edit menu. With a movie open in QuickTime Player, hold down the key(s) indicated in Figures 1, 2, or 3, open the Edit menu, and choose the command.

Figure 1 Add and Trim
Mac OS keystroke Option
Windows keystrokes Ctrl-Alt

Figure 2 Replace
Mac OS keystroke Shift
Windows keystroke Shift

Figure 3 Add Scaled and Trim
Mac OS keystrokes Option-Shift
Windows keystrokes Ctrl-Alt-Shift

The Selection Start and Selection End markers (Figure 4) are used with all of these editing commands.

Figure 4 QuickTime Player Selection Start and Selection End markers

For more help with QuickTime Player, open its Help menu and choose On-line QuickTime Player Help.

For information on upgrading to QuickTime Pro, visit the QuickTime Web site at http://www.apple.com/quicktime/

For information on the differences between QuickTime and QuickTime Pro, see article 24374: "**Differences Between QuickTime and QuickTime Pro**"

Published Date: Feb 17, 2012

Final Cut Pro 1.2.5: "Late Breaking News" Items

This article contains the "Late Breaking News" items for Final Cut Pro 1.2.5 that were published when the software was released. These items apply to Final Cut Pro version 1.2.5 and earlier.

This article has been archived and is no longer updated by Apple.

Aborting a batch capture after updating files

If you update a project from earlier versions of Final Cut Pro, do a batch capture or recapture of these clips, and then abort the capture, clip icons may change from offline video clips to offline audio clips. This does not affect the clips. To correctly capture the clips, restart the batch process.

Exporting a still image several times

If you export a still image more than two times without changing the filename, the export fails the third time and nothing happens. The first time you export a still image using default settings, the exported file has the name you entered. If you export this file a second time without changing the filename, a file is created with the same name followed by ".1". To export an image more than two times, make sure you change the filename each time before exporting.

Exporting DV NTSC to DV PAL and vice versa

If you want to export digital video from NTSC format to PAL format or from PAL format to NTSC format, you must use professional conversion equipment to get good results. Converting video formats using the computer will give unsatisfactory results and is not recommended.

Opening projects encrypted using Mac OS 9

Project files that have been encrypted with the Apple File Security feature of Mac OS 9 must be decrypted before you can use them in Final Cut Pro. If you try to open an encrypted project file, a message says your computer was unable to open the project file. To open the encrypted project, quit Final Cut Pro, then double-click the encrypted project's icon. Follow the onscreen instructions to decrypt the project file.

Getting dropped frames with video mirroring on

If you're using Final Cut Pro on a computer with video mirroring turned on in the Monitors control panel, frames may be dropped during playback. For the best performance, turn off video mirroring on your computer. For more information, see Mac Help.

Using more resolutions on an Apple 15-inch or 17-inch Studio Display

If your resolution settings are limited to 640 by 480 when using the Apple 15-inch or 17-inch Studio Display, you can get additional resolutions by turning off the Data Display Channel (DDC) control using the on-screen display (OSD) feature of your display. To do this, follow these steps:

1. Press the OSD Enter button on the left of the monitor; the Basic Adjustments menu appears.
2. Choose the ETC icon and press the Enter button.
3. Choose Off to turn off DDC.
4. Press the OSD Exit button.

Using a Pinnacle TARGA series card with an Apple 17-inch Studio Display

When you use a Pinnacle TARGA series card with an Apple 17-inch Studio Display, the monitor displays in all green. For the monitor to display correctly, you must use the small black adapter cable that comes with the Pinnacle video card.

To connect the adapter cable, follow these steps:

1. Turn off your computer and monitor.

2. Connect one end of the adapter cable to the video card port on the computer, then connect the other end to the monitor cable.

3. Turn on your computer and monitor.

Colors should now display properly.

Using a Sony DVMC-DA1 or DVMC-DA2 converter box

The Sony DVMC-DA1 or newer converter box does not provide FireWire or any other form of device control. It only converts analog video and audio signals to DV, which can then be transmitted over FireWire.

If you are using this converter box with a video device that supports serial device control, such as RS-422, set the supported device control protocol. Choose Preferences from the Edit menu, click the Device Control tab, then choose a setting from the Protocol pop-up menu.

Make sure you do not select FireWire device control (do not choose a FireWire option from the Protocol menu). If you select FireWire device control, frames will be dropped.

If your analog video device does not support device control, turn off device control. To do this, choose Preferences from the Edit menu, click the Device Control tab, then make sure the checkbox next to Enable Device Control doesn't have a checkmark in it.

Two audio capture rates are available for this box, 32 kHz and 48 kHz. To choose one, hold down the DV In button on the top of the unit. The light on the unit changes between green and red; green indicates a 32 kHz sample rate and red indicates a 48 kHz sample rate.

Using a Hammer SCSI card

If you install the HammerTime extension that comes with a Hammer SCSI card, the extension interferes with QuickTime and playing video is erratic and may cause your system to stop responding ("freeze"). If you have already installed the extension, delete it, then restart your computer. For more information, contact the card's manufacturer.

No communication with a DV device

If you are having trouble communicating with your DV camera, shut down your computer and turn off your camera. Wait a few minutes, then turn on your computer and the camera. Device control is not available when your camcorder is in Camera mode.

Disable disk monitoring utilities

For best performance, do not use disk monitoring software, such as Symantec's DiskLight, while using Final Cut Pro.

Open video clips in one application only

Do not open a video clip in multiple applications at the same time. A DV file playing in Final Cut Pro while simultaneously open in Movie Player does not play back properly. and may cause your clips to be marked "offline."

Published Date: Oct 10, 2016

Apple Pro Speakers: Compared to Power Mac G4 Cube Speakers

This article has been archived and is no longer updated by Apple.

Although the Apple Pro Speakers look very similar to the speakers that come with the Power Mac G4 Cube computer, they are functionally very different. The table below outlines these differences.

Characteristic	Apple Pro Speakers	Power Mac G4 Cube Speakers
Power Source	Apple Speaker sound output port	USB
Sound Connection	Apple Speaker sound output port	USB
Harmon Kardon iSub	compatible	compatible with Mac OS X 10.1 or later

The Apple Pro Speakers cannot be used with any computer that does not have an Apple Speaker sound output port. The following computers have an Apple Speaker sound output port:

- Power Mac G4 (Digital Audio)
- Power Mac G4 (QuickSilver)
- Power Mac G4 (QuickSilver 2002)
- Power Mac G4 (Mirrored Drive Doors)
- Power Mac G4 (FW 800)

- iMac (Flat Panel)
- iMac (17-inch Flat Panel)
- iMac (1GHz Flat Panel)
- iMac (USB 2.0)

Refer to article 58764 "**Power Mac G4 (Digital Audio) and (QuickSilver): Sound Output Ports**" for more information about the sound capabilities of the Power Mac G4 (Digital Audio) and Power Mac G4 (QuickSilver) computers.

For information on how to differentiate between Power Mac G4 models, refer to article 58418: "**Power Mac G4: How to Differentiate Between Models**."

Published Date: Feb 17, 2012

Macintosh Manager 1.3, AppleShare IP 6.3.x: Setting up Workgroup Items on Local or Server Volumes

The "About AppleShare IP/9.0.4 Update" and "About AppleShare IP 6.3.3" documents inadvertently suggest that all items for all workgroups must be stored only on clients' local volumes when setting up Macintosh Manager 1.3 with an AppleShare 6.3.x server.
This article has been archived and is no longer updated by Apple.
The documents contain statements suggesting that items for all workgroups should be found and stored on clients' local volumes. This may create an impression that this is the only way Macintosh Manager can be set up. The suggestion was presented in the interest of reducing network traffic from applications that are not required to operate from a server.

Ideally, applications that are designed for use on a client computer's local disk (volume) should be used in that way to reduce unnecessary traffic. However, applications that must reside on a server volume--or that are designed to be used from a server volume--may still be used in that manner.

If an application must be stored on an AppleShare 6.3.x server, Macintosh Manager 1.3 can be set up appropriately. Here are some recommendations:

- Avoid using Macintosh Manager Admin on the Macintosh Manager server. Instead, open the Macintosh Manager Admin program on a computer set up like those of your clients. If Workgroup Items are appropriately added, the client workstations will be less likely to search the server inappropriately for items that exist locally, resulting in less network traffic.
- Add the server-based applications (using the Macintosh Manager Admin program) from the server volume the client workstations use, rather than from a local volume on the admin system.
- Add local applications from a local volume on the Macintosh Management admin system.

If these recommendations are followed, the most appropriate setting for "Find Chosen Items" is "on item's original volume only".
Published Date: Feb 17, 2012

USB: High Bandwidth and Isochronous Devices Must Be Separated

Two high-bandwidth devices or two isochronous devices cannot be connected to a single Universal Serial Bus (USB).

This article has been archived and is no longer updated by Apple.

Symptom

When connected to the same bus, certain combinations of USB devices experience intermittent difficulties, or do not work at all. If one of the devices is disconnected or moved to another USB bus, everything works properly

Solution

Connect only one high bandwidth or isochronous USB device to each USB bus.

If your computer has a single USB bus, adding a USB interface card provides a second USB bus. Without a second USB bus, you may have to completely disconnect one high bandwidth or isochronous USB device in order to utilize another.

In general, two high bandwidth devices cannot share the same USB bus. Each USB bus has a maximum bandwidth of 12 Mbits/s. A USB device can request up to 6 Mbits/s of bandwidth. Depending on how they operate, high bandwidth devices may compete with each other and therefore may need to be placed on separate USB busses to work properly.

Isochronous devices cannot be shared on a single bus. USB supports isochronous devices, which can be high or low bandwidth. Examples of common isochronous devices include cameras and CD-R drives.

Published Date: Feb 17, 2012

Macintosh starts up to Open Firmware or gray screen after upgrading hard drive

If you upgrade your Macintosh computer from its original hard drive to a new hard drive that is larger than 8 GB, you may see some odd symptoms, such as one of these:

This article has been archived and is no longer updated by Apple.

- When the computer starts up, it displays a gray screen. The desktop never appears.
- When the computer starts up, it shows a white screen, with text that includes the phrases, "Open Firmware" and "default catch".
- When the computer starts up, you may see an alert message such as "unimplemented trap" or "segment loader error".
- When you try to install Mac OS X on the computer, the hard disk is dim and can't be selected in the installer.

This only happens with certain Macintosh computers that originally had a hard drive smaller than 8 GB, and that have now been upgraded with a hard drive larger than 8 GB. These computers include:

  - iMac 233 MHz
  - iMac 266 MHz
  - iMac 333 MHz
  - Power Macintosh G3 Desktop
  - Power Macintosh G3 Mini Tower
  - Power Macintosh G3 All-In-One
  - iBook
  - iBook (FireWire)
  - PowerBook G3 Series

If you have just upgraded the hard drive on one of the computers listed above and you see this issue occurring, here's how to get everything running smoothly again:

1. Back up all your data. (This is a good thing to do regularly, not just now!)
2. Start up from your Mac OS installation or restore disc.
3. Use Drive Setup (in Mac OS 8 or 9) or Disk Utility (Mac OS X) to partition the drive. Make the first partition smaller than 8 GB, and any other partitions can be any size you want.
4. Install the Mac OS in the first drive partition.

Published Date: Oct 10, 2016

Power Mac G4: Video Driver Selected At System Startup Time

The Power Mac G4 (Digital Audio) and Power Mac G4 Cube computers both have two different sets of video card driver software installed--NVIDIA and ATI. When the computer starts up, only the appropriate video driver software is loaded. If an NVIDIA video card is installed, the ATI video card driver software is not loaded, and an icon with a red X through it is displayed. This is normal.

This article has been archived and is no longer updated by Apple.

Symptom

When the computer starts up, an icon with a red X through it appears on the screen. See Figure 1.

Figure 1 ATI driver not loaded

Solution

There is nothing wrong; the computer is functioning normally.

The video card driver software for two different video cards--NVIDIA and ATI--are installed in the System Folder of Power Mac G4 (Digital Audio) and Power Mac G4 Cube computers. When the computer is turned on, it detects which card is installed and loads its driver software. If the ATI driver software is not needed, an icon with a red X through it appears at system startup time. If the NVIDIA driver software is not needed, its icon does not appear. Each of these behaviors is normal.

If the computer does not have an ATI video card, and you do not want to see its icon during startup, use the Extensions Manager control panel to turn off the ATI Graphics Accelerator extension.

Published Date: Oct 10, 2016

Mac OS X: Font file formats

This article has been archived and is no longer updated by Apple.

Mac OS X introduces a new font format and adds support for certain font formats used by Microsoft Windows. This article discusses the formats and the implications for users.

Data Fork Suitcase Format

One of the innovations offered by Mac OS X is that font suitcases can be completely stored in a file's data fork. All of the resource fork's data is stored in the data fork, which allows more efficient access to font data as well as the ability to copy font suitcases to and from file systems that do not recognize resource forks.

The data fork suitcase format is different from the data fork TrueType font format used by Microsoft Windows. Data fork suitcases contain all of the resources associated with a Macintosh font, including 'FOND' and 'NFNT' resources, which are used with QuickDraw Text.

Data fork suitcases must have the filename extension ".dfont." They may optionally be given the file type "dfon."

Microsoft Windows Font Formats

Mac OS X also works with font formats used by Microsoft Windows. These fonts have all their data in the data fork and do not have the additional resources found in Macintosh fonts. Mac OS X works with these font formats:

- TrueType fonts (with the extension .ttf)
- TrueType collections (with the extension .ttc)
- OpenType fonts (with the extension .otf)

Older Macintosh Fonts

Font suitcases used by Mac OS 9 and earlier that contain TrueType fonts continue to work with Mac OS X. No revision or conversion is necessary. Font suitcases containing only bitmap fonts will be available in Classic applications but not in Mac OS X applications.

Additional information

(The following information is from the Mac OS X 10.3: Fonts Technology Brief.)

Mac OS X delivers industry-leading support for popular font formats:

- PostScript Type 1 (with double-byte support). Adobe PostScript fonts launched the desktop publishing industry and are used today by publishers, corporations, and government agencies for high-quality output to laser printers, imagesetters, and platesetters. Each PostScript font requires two files, one for the screen and one for use by the printer's RIP (raster image processor). Mac OS X is the only operating system that provides native PostScript Type 1 font support.
- OpenType. OpenType fonts (extension .otf) can contain 65,000 different glyphs, so type can be set in non-Roman languages such as Japanese, Chinese, and Korean. There are Macintosh- and Windows-specific OpenType formats; Mac OS X supports both.
- TrueType. TrueType fonts (extension .ttf) are typically used in home and office environments. A single file contains both screen and printer font information. Mac OS X supports both Macintosh- and Windows-specific TrueType formats.
- Multiple Master. This special type of PostScript font allows variation of one or more font parameters (such as weight) to create a large number of custom styles, also known as instances. Mac OS X can activate already created instances of Multiple Master fonts.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

Mac OS 9.1: Cannot Install Apple DVD Player 2.2

Apple DVD Player 2.2 software cannot be installed on a computer when Mac OS 9.1 is already installed. This article explains how to install Apple DVD Player software onto a computer with Mac OS 9.1.
This article has been archived and is no longer updated by Apple.

Symptom

When installing Apple DVD Player 2.2 software on a computer with Mac OS 9.1, an alert box appears with the following error message:

> "Apple DVD player cannot be installed onto a volume which does not contain a US, British, or International English release of Mac OS 9.0.1 or newer."

Solution

Note: Updated versions of Apple DVD Player currently address this issue. See article 26201 to download Apple DVD Player 2.4 or article 120022 to download Apple DVD Player 2.7.

If the computer came with Apple DVD Player 2.3 or later, you must install (or reinstall) that version. Use the Software Installers disc that came with your computer to perform this custom installation.

If the computer did not come with Apple DVD Player 2.3 or later, and you upgraded to Mac OS 9.1 by buying the Mac OS 9.1 CD, use the Mac OS 9.1 CD to perform a custom installation of Apple DVD Player 2.3 off the Mac OS 9.1 CD.

If neither of the solutions are applicable to your situation, then follow these steps:

1. Perform a clean installation of Mac OS 9.0.x.
2. Install Apple DVD Player 2.2.
3. Install the Mac OS 9.1 update.

If you have updated to Mac OS 9.1 using the free download version and are experiencing this issue, please see article 60803: "**Apple DVD Player 2.0: Not Compatible with Mac OS 9.1**"

Related Articles

60803 Apple DVD Player 2.0: Not Compatible with Mac OS 9.1

Related Software Downloads

26201 Apple DVD Player 2.4 and 2.2 Document and Software
120022 Apple DVD Player 2.7 Document and Software

Published Date: Oct 10, 2016

Power Mac G4 (Gigabit Ethernet): DVD-RAM Drive Audio Channels Reversed

This article explains how to check and correct reversed audio channels for the DVD-RAM drive in a Power Mac G4 (Gigabit Ethernet) computer.

This article has been archived and is no longer updated by Apple.

Symptom

The left and right audio channels are reversed.

Solution

Follow these steps to check and correct the issue:

1. Make sure the speakers are in the correct left and right positions.
2. If you are creating audio, make sure the software is sending the audio to the correct channel(s).
3. If the symptom still persists, one of these actions will resolve it:
   - Switch the position of the left and right speakers.
   - Replace the DVD-RAM drive. Contact Apple Support for assistance with replacing the drive.

Published Date: Oct 10, 2016

Apple Pro Keyboard: USB Device Extension Software

The Apple Pro Keyboard is not recognized by the computer if its extension, "USB Device Extension", is missing or turned off.

This article has been archived and is no longer updated by Apple.

Symptom

When the computer starts up, an alert box with this message appears:

> "Software needed for the USB device 'Apple Extended USB Keyboard' is not available. Would you like to look for the software on the Internet?"

Solution

One of these actions will resolve the situation:

- Use the Extensions Manager control panel to verify that the extension named "USB Device Extension" is turned on. If it is off, turn it on and restart the computer.
- If USB Device Extension is not in the Extensions folder, use Sherlock to find it. Drag the file into the Extensions folder.
- If USB Device Extension is not on the hard disk, install it by performing a custom installation from the Software Install disc. (The USB Device Extension software is an item within the system software's Network & Connectivity component.) For more information on custom installation of Mac OS 9 components, please see article 31288: "**Mac OS 9: Installing or Removing Individual Components**."

Note: The USB Device Extension adds the additional functionality of the new keys: volume up, volume down, mute, and the media eject keys. The rest of the keyboard will function normally without the extension.

Starting up with Extensions Disabled will still allow you to use the keyboard as basic keyboard functionality is built into the Mac OS ROM File. However, all function keys and extended keys will loose functionality.

Published Date: Feb 17, 2012

AppleWorks 6: Troubleshooting Web Connections

If the icons in the Web tab of the AppleWorks 6 Starting Points window appear as generic icons (with or without a red X through them), there are several things to check.

This article has been archived and is no longer updated by Apple.

One of these two symptoms occurs:

- The icons in the Web tab of the Starting Points window appear as generic white icons. Nothing happens when you click them.

Starting Points icons

- The icons in the Web tab of the Starting Points window appear as generic white icons for a period of time ranging from several seconds to 45 seconds, and then appear with a red X through them. Nothing happens when you click them.

Starting Points icons with red X

If the first symptom occurs (generic white icons that do not change appearance), read "**AppleWorks 6: Generic White Icons in Web Starting Points**"

If the second symptom occurs (generic icons whose initial appearance changes to that shown in Figure 2), it indicates that AppleWorks is unable to access Web-based content. There are several things to check:

AOL Users

You should first read "**AppleWorks 6: AOL Users Must First Connect to Internet to Use Web Clippings**". If the symptom still exists, continue reading this article.

Server Is Busy

If the computer's connection to the Internet does not pass through a proxy server, and the computer is able to connect to the Internet with other applications, it may indicate that the AppleWorks server is busy. Try accessing the AppleWorks Web-based content at various times to determine whether this is the case.

Proxy Server

If the computer's connection to the Internet passes through a proxy server, check the Firewall settings in the Internet control panel. Follow these steps:

1. Open the Internet control panel.
2. Choose User Mode from the Edit menu, click Advanced, and then click OK.
3. If the Settings tabs are not visible within the Internet control panel window, click the Edit Sets disclosure triangle to reveal them.
4. Click the Advanced tab.
5. Select the Firewalls icon from the scrolling list.
6. Select the Web Proxy server option by clicking its checkbox, and enter the Web Proxy server name and port number. (See your network administrator for the proxy server name and port number.)
7. Close the Internet control panel window; when asked to save changes, click Save.

If the computer is still unable to connect through the proxy server, repeat steps 1 through 5 and enter the following into the Bypass Proxy Servers list:

```
awpicts.apple.com
```

TA22199_AppleWorks_Troubleshooting_Web_Connections.pdf

Published Date: Feb 17, 2012

AppleWorks 6: How to Create Labels

Learn how to create labels using AppleWorks 6.

This article has been archived and is no longer updated by Apple.

To create labels, you must use the Label Layout which is available only in an AppleWorks database document. You can use either an existing database, or the Address List Assistant to create an address database.

Address Assistant

With your database document open, follow these steps to create a label layout:

Step One

Choose New Layout from the Layout menu or the layout pop-up menu located on the left side of the document window.

New Layout Menu

Tip: The easiest way to create a Labels layout is to choose New Label Layout from the Layout menu. This will open an Assistant which steps you through the process to create a label layout for your database.

Label Layout Assistant

Note: You will only see the Label Layout Assistant screen if you choose "New Label Layout" from the Layout menu. If you use the Label Layout Assistant then you do not need to continue on to Step Two. If you chose "New Layout" from the Layout menu then continue on to Step Two.

Step Two

Type a name for the layout, and click the Labels radio button.

Label Name and Type Dialog Box

Step Three

If you're using Avery labels, choose the number of the Avery label from the pop-up menu. Otherwise, choose Custom. Then click OK.

Choosing Label Menu

Step Four

If you chose Custom, enter the number of labels across the page and the horizontal and vertical dimensions of your labels. Then click OK.

Number and Size

Note: Include the space between labels in your horizontal and vertical measurements. In other words, the horizontal measurement is the distance from the left edge of one label to the left edge of the next; the vertical measurement is from the top of one label to the top of the next.

Horizontal and Vertical Measurement

Step Five

From the field List, select each field you want to include on the label, then click Move. The order in which you move fields is the order in which they appear on the label.

Tip: You can also double-click a field name to move it.

Set Field Order Dialog Box

Step Six

If necessary, choose Layout from the Layout menu and arrange the fields or otherwise customize the layout.

For additional assistance with layouts see "Creating and working with database layouts."

For information on creating labels with AppleWorks 5, see "AppleWorks 5: Creating and Printing Labels"

Published Date: Feb 17, 2012

WebObjects 4.5: JDK and Pentium 4 Compatibility Issue

This article describes an incompatibility between Sun's Java Development Kit (JDK) 1.1.8, which ships with WebObjects 4.5, and Intel's Pentium 4 processor. This issue prevents Java applications from successfully opening or compiling.

This article has been archived and is no longer updated by Apple.
The version of the JDK that ships with WebObjects 4.5 fails to properly identify Intel's Pentium 4 processor. When you attempt to open a Java application, Windows generates a Dr. Watson error against jrew.exe. The fault lies in the Symantec Just in Time compiler that ships with Sun's JDK. There is a workaround provided below that some customers have reported using successfully. However, it has not yet been tested or certified by Apple Computer. A certified solution will be provided in the near future.

Current workaround

1. Download Sun's updated JDK 1.1.8_006 from http://java.sun.com/products/jdk/1.1/download-jdk-windows.html. This update adds support for the Pentium 4.
2. Back up the old JDK shipped with WebObjects 4.5 located at $NEXT_ROOT/Library/JDK.
3. Unpack and install the updated JDK into the $NEXT_ROOT/Library/JDK. See Sun's web site for detailed instructions and requirements before performing this step.

Published Date: Feb 19, 2012

Downloading files from a .Mac HomePage File Sharing webpage

If you're having trouble downloading files from a .Mac (pronounced "dot Mac") HomePage File Sharing webpage, there are a few things you can do.

This article has been archived and is no longer updated by Apple.

You might see one of these symptoms:

- The computer does not recognize the file you downloaded.
- Instead of downloading the file, the Web browser opens a new window with the contents of the file (for example, a picture).
- The file opens in an application installed on the system (for example, a movie may open in Windows Media Player).

Each of the symptoms listed in this article has specific solutions.

File Not Recognized
The filename of the downloaded file may have extra characters appended to it, which can prevent the computer from recognizing the three-character filename extension. Check the downloaded file's full filename, and make sure the three-character filename extension is the last part of the filename. The computer may be set up to hide the filename extension. If so, you must set up the computer to display complete filenames before you can check the three-character filename extension.

File Displayed In New Window
Save the contents of the new window using the Save command in your Internet browser. Alternatively, on a PC, you can right-click the link in the .Mac HomePage File Sharing webpage and choose "Save Target As" from the shortcut menu. This downloads the file to the PC, and prevents a new window from opening with the file's contents.

Opens instead of downloading
You can usually save the file by choosing Save or Save As from the application's File menu. You can also right-click or command-click the link in the .Mac HomePage File Sharing webpage and choose "Save Target As" from the shortcut menu.

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Published Date: Oct 10, 2016

Mac OS X Server: AppleShare Client Delay After Stopping A File Copy

When copying a file to a Mac OS X Server host through AppleShare, the Copy progress dialog box may remain for a time after you click Stop to stop the operation. Wait for the dialog box to close; do not force-quit the Finder or reset the computer.

This article has been archived and is no longer updated by Apple.

Symptom

If you click Stop in the Copy progress dialog box while a file is being copied from the computer to the server, the dialog box may remain for a long period of time. Sometimes, the wait is so long it seems as if the computer has stopped responding.

Solution

Wait until the dialog box closes. Do not force-quit the Finder or reset the computer.

The length of time that the dialog box remains open depends upon how large a file is being copied and how early in the copy process you click Stop. Larger files and earlier stoppages result in longer waits. For example, clicking Stop when a 2 GB file begins to copy may result in a 90-second wait for the Copy progress dialog box to close.

The Finder allocates space for the entire file when the copy is started. When you click Stop, the Finder attempts to close the file so it can be deleted. However, since the entire file has not been written, Mac OS X Server writes zeros over the portion of the disk allocated to the file that the Finder did not write over. This is to prevent data on previously unused sections of the disk from being incorporated into the file. Once this zero fill has completed, the client returns to normal operation.

Published Date: Oct 10, 2016

Mac OS X: Do Not Use Leading Zeros in IP Address

Mac OS X and Mac OS X Server treats IP addresses with leading zeros as if they were octal numbers. Therefore, do not use leading zeros when setting up the Mac OS X Server IP address through Network Preferences.
This article has been archived and is no longer updated by Apple.

Symptom

A Mac OS X or Mac OS X Server computer cannot make a network connection. Additionally, the IP address shown in Network Preferences is different than the address originally entered.

Product affected

- Mac OS X
- Mac OS X Server

Solution

Do not use leading zeros when setting up a Mac OS X or Mac OS X Server IP address in Network Preferences.

If an IP address is entered with leading zeros, Mac OS X interprets and converts the numbers to octal form rather than decimal form. For example, an IP address entered as 010.011.012.013 is converted by Mac OS X to 8.9.10.11 rather than 10.11.12.13.
Published Date: Oct 10, 2016

TechTool Deluxe: False "Problems" Reported When Used With Mac OS X 10.0

Use TechTool Deluxe with Mac OS 9. With Mac OS X 10.0, a variety of false "problems" are reported.

This article has been archived and is no longer updated by Apple.

Symptom

After copying TechTool Deluxe to your Mac OS X 10.0 hard disk and opening it to test your computer, TechTool Deluxe generates a report with one or more false "problems".

Solution

Start up the computer with Mac OS 9 before testing with TechTool Deluxe.

For related information on TechTool Deluxe, please see article 25141: "**Apple Protection Plan CD: Cannot Be Startup Disk on All Macintosh Computers**"

Important: This does not apply to the dual system version of the AppleCare Protection Plan CD (Includes both Mac OS 9 and Mac OS X on a single CD). This CD contains a version of the TechTool Deluxe application that works correctly using Mac OS X. Follow the directions on this CD on how to run TechTool Deluxe for Mac OS X.

Published Date: Oct 10, 2016

Network Assistant 4.0.x: Set Energy Saver Settings Do Not Work

Energy Saver settings on client workstations cannot be changed by Network Assistant if the administrator's computer has Mac OS 9.1.

This article has been archived and is no longer updated by Apple.

Symptom

You are unable to change the Energy Saver settings of a Network Assistant client workstation. An alert box appears with the message, "This workstation does not support Energy Saver."

Solution

Energy Saver settings on client workstations cannot be changed by Network Assistant if the administrator workstation is one of the above computers.

Note:

- Network Assistant 3.6.x client software is for use with Mac OS 8.1 through Mac OS 8.6.
- Network Assistant 4.0.3 client software is the only version of the Network Assistant 4 client software that is compatible with Mac OS 8.1 through Mac OS 8.6.

Published Date: Oct 10, 2016

DVD Studio Pro: Requirements for Importing Multi-Segment MPEG-2 Streams

This article lists the requirements for importing multi-segment MPEG-2 streams into DVD Studio Pro.

This article has been archived and is no longer updated by Apple.
If you intend to import multi-segment streams into DVD Studio Pro, the streams must meet **all** of the following criteria:

- They must be numbered in sequence by adding a suffix to the filenames, using the form ".1" to ".99" or ".01 to .99", such as:

```
filename.01
filename.02
filename.03
```

- Video streams must have continuous timecode. In other words, the timecode for the last frame of the first file must be exactly one frame before the timecode for the first frame of the second file (and so on.)
- The total length of any selected audio streams should match the total length of the video streams.

Background

Prior to the advent of the Mac OS Extended (HFS Plus) disk format, Mac OS file sizes could not exceed 2 GB. Consequently, some third-party MPEG-2 encoders create multi-part MPEG streams, with each segment smaller than 2 GB. Now that Macintosh computers come with disks that use the HFS Plus format, it is no longer necessary to split MPEG-2 files larger than 2 GB. However, some MPEG-2 encoders still do this.

Published Date: Oct 10, 2016

DVD Studio Pro: Image Files Stored in DVD/CD-R Master Format

DVD Studio Pro saves a disc image file as a UDF, ISO 9660 DVD/CD-R master.

This article has been archived and is no longer updated by Apple.
After selecting "Build and Format Disc", there is an option for "Save as Image File". DVD Studio Pro saves the image file as a UDF, ISO 9660 disc in DVD/CD-R master format. If you are using DVD Studio Pro 1.5 for Mac OS X, you can make this disk image available using Disk Copy, which is located in /Applications/Utilities. If you have a DVD-R drive, you can also burn this type of image using Disk Copy.

If you are using DVD Studio Pro 1.0 through 1.5 for Mac OS 9, you must use a third-party disc image utility such as Roxio Toast to make available or burn the image.

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

The following document can help you search for a particular vendor's address and phone number:

Document 17159: "**Locating Vendor Information**"

Published Date: Oct 10, 2016

AirPort 1.3: PPPoE and Private Network 192.x.x.x Addresses

AirPort 1.3 has a PPPoE feature, so there is no need for a separate PPPoE application in order to connect to the Internet. With AirPort 1.3, you cannot enter a private network address (in the range 192.x.x.x) into an AirPort Base Station. This article tells how to set up an AirPort Base Station with AirPort 1.3 software and PPPoE to connect to the Internet.

This article has been archived and is no longer updated by Apple.
Some Internet Service Providers (ISP) who require PPPoE for their DSL service may require that a private 192.x.x.x IP address be assigned to the AirPort Base Station. These ISPs use a PPPoE application (for example, MacPoET) for authentication purposes. In the past, to use the PPPoE application, the client had to be set up with a private static IP address of 192.x.x.x. However, AirPort 1.3 software includes a PPPoE feature and no longer requires a separate PPPoE application.

An ISP might not know that you are using an AirPort Base Station with AirPort 1.3. Because of this, they may try to have you enter a private IP 192.x.x.x address into the AirPort Admin Utility. However, AirPort 1.3 does not allow you to manually assign an IP address.

Follow these steps to set up an AirPort Base Station with AirPort 1.3 software and PPPoE for a connection to the Internet:

1. Open the AirPort Admin Utility and select your Base Station.
2. Click Configure and enter your password.
3. Click the Internet tab.
4. Choose PPP over Ethernet (PPPoE) from the Connect using pop-up menu.
5. If required by your ISP, enter your user name, password and service name in the appropriate fields.
6. Click Update.
7. After the base station restarts itself, quit the AirPort Admin Utility.

You can now open the AirPort application and connect.

Note that you can also configure the AirPort Base Station to connect automatically. In that case, simply open your Web browser (or other Internet-based application) to connect to your ISP.

Published Date: Oct 10, 2016

Mac OS 9: Incompatible Resolution or Scan Rate Could Cause Blank Screen at System Startup Time

An improper shutdown while the monitor is set to an incompatible resolution or scan rate could cause a lack of video at system startup time.

This article has been archived and is no longer updated by Apple.

Symptom

The monitor does not display any video when the computer is turned on, or displays a video image briefly at but then goes blank part way through the startup process. An alert box may appear with a message about the monitor's sync rate or resolution.

Solution

The system is attempting to use an incompatible display resolution or scan rate. Follow these steps to restore the monitor:

1. Reset the computer's parameter RAM (PRAM). For information on resetting PRAM, please see article 2238: "**Macintosh: How To Reset PRAM and NVRAM**"

2. Start up the computer with extensions off. To do this, hold down the Shift key when you turn on the computer until the message, "Extensions Off" appears.

3. After the desktop appears, drag these items from the Preferences folder (within the System Folder) to the Trash:

    - Display Preferences file
    - Monitor Preferences folder
    - preferences file for third-party resolution switching software, if installed

4. Restart the computer.

5. Set up the monitor's resolution as desired.

Resetting PRAM affects other settings, as noted in article 2238. You may need to reconfigure these settings, too.

Note: If you have more than one hard disk or partition, the computer may start up using a different System Folder than the one in use when the issue occurred. If so, be sure to remove the Display Preferences and Monitor Preferences from the System Folder that was in use when you experienced the issue.

Background

This behavior may have immediately followed a forced restart or other improper shutdown while the monitor was using an incompatible resolution or scan rate. An incompatible resolution is one that does not appear in the Monitors control panel.

There are several ways an incompatible resolution or scan rate can be set. Certain games change the resolution and/or scan rate when loading, and some utilities allow display resolutions to be selected that are not available in the Monitors control panel.

Published Date: Oct 10, 2016

PowerBook G4: Display Options With External Monitor

This article lists the available picture size, frame rate, and pixel depth settings for the original PowerBook G4 display when combined with an external monitor for dual display.

This article has been archived and is no longer updated by Apple.
The original PowerBook G4 has a built-in connector for an external VGA, SVGA, or XGA monitor or projection device. An optional adapter allows the user to attach a standard Apple video cable. The PowerBook G4 also has an S-video connector that supplies a video signal for an NTSC or PAL video monitor or VCR. An external monitor or projection device connected to the computer can increase the amount of visible desktop space. This way of using an external monitor is called dual display to distinguish it from mirror mode, which shows the same information on both the external display and the built-in display.

With the included adapter, the PowerBook G4 computer can be used with any Apple monitor except those that have only an ADC or DVI connector. The computer also supports VGA, SVGA, and XGA monitors. The table below lists the picture sizes and frame rates supported.

PowerBook G4			
Picture Size (pixels)	**Frame Rate**	**Pixel Depth (Flat Panel Inactive)**	**Pixel Depth (Flat Panel Active)**
512 by 384	60 Hz	24 bpp*	24 bpp
640 by 480	60 Hz	24 bpp	24 bpp
640 by 480	67 Hz	24 bpp	24 bpp
640 by 480	72 Hz	24 bpp	24 bpp
640 by 480	75 Hz	24 bpp	24 bpp
640 by 480	85 Hz	24 bpp	24 bpp
640 by 870	75 Hz	24 bpp	24 bpp
800 by 600	56 Hz	24 bpp	24 bpp
800 by 600	60 Hz	24 bpp	24 bpp
800 by 600	72 Hz	24 bpp	24 bpp
800 by 600	75 Hz	24 bpp	24 bpp
800 by 600	85 Hz	24 bpp	24 bpp
832 by 624	75 Hz	24 bpp	24 bpp
1024 by 768	60 Hz	24 bpp	24 bpp
1024 by 768	70 Hz	24 bpp	24 bpp
1024 by 768	72 Hz	24 bpp	24 bpp
1024 by 768	75 Hz	24 bpp	24 bpp
1024 by 768	85 Hz	24 bpp	24 bpp
1152 by 870	75 Hz	24 bpp	24 bpp
1280 by 960	75 Hz	24 bpp	16 bpp
1280 by 1024	60 Hz	24 bpp	16 bpp
1280 by 1024	75 Hz	24 bpp	16 bpp
* bpp=bits per pixel			

The PowerBook G4 includes 8 MB of video memory, which is enough to provide pixel depths up to 24 bits per pixel on all supported monitors when the flat panel display is inactive (display closed). When an external video monitor and the flat panel display are operating at the same time, half the video memory is available for each. In that case, the maximum pixel depth available on the external monitor at the 1280-by-960 and 1280-by-1024 picture sizes is only 16 bpp.

To identify which model PowerBook G4 computer you have, see technical document 88248, **"PowerBook G4 Computers: How to Identify Different Models"**.

Published Date: Oct 10, 2016

Final Cut Pro 2.0: Exporting Audio in OMF Format For Use With Pro Tools

This article explains how to obtain best results when you export audio from Final Cut Pro 2 to OMF format for use with Digidesign's Pro Tools audio software.

This article has been archived and is no longer updated by Apple.

Background

Final Cut Pro 2.0 introduces the option to export audio to Open Media Framework (OMF) format. Final Cut Pro exports OMF version 2.0. OMF is a file format that facilitates the transfer of digital media from one application to another. For example, Final Cut Pro 2 can export audio to an OMF file, which can then be converted into a Pro Tools project file for further audio manipulation.

To use one of the Digidesign Pro Tools digital audio applications, you must first convert the OMF file to a Pro Tools project file. There are two applications from Digidesign that can be used to convert OMF files into Pro Tools project files:

- OMF Tool
- DigiTranslator

These two applications have different capabilities; DigiTranslator has more features than OMF Tool. For best results, it is important to export your audio from Final Cut Pro 2 into an OMF file in a way that these conversion applications can best handle. The considerations are explained later in this article.

There are also three different Pro Tools digital audio applications:

- Pro ToolsFree
- Pro ToolsLE
- Pro ToolsTDM

The Pro Tools application you use may also affect how you export OMF files from Final Cut Pro.

Considerations for Best Results

To obtain best results with the OMF conversion utility and Pro Tools digital audio application you use, you must consider these factors:

- Whether or not to export Crossfades.
- How many tracks are supported by each version of Pro Tools
- Which sample rates work with each version of Pro Tools
- What to do if you discover audio artifacts at the end of your imported tracks after conversion.

When to Export Crossfades in OMF Files

OMF Tool 2.0.8 is a free utility from Digidesign that has many useful features such as sample rate, bit depth, and edit rate conversion. OMF Tool 2.0.8 does not, however, support Final Cut Pro audio transitions (such as audio crossfades). If you are going to be using OMF Tool to convert OMF files that you exported from Final Cut Pro, make sure that you deselect the Include Crossfade Transitions box in the OMF Audio Export window when exporting from Final Cut Pro. This results in the crossfades in your project being left out of the resulting OMF file so that it can be easily converted using OMF Tool.

Digidesign's other OMF file conversion utility is DigiTranslator. DigiTranslator is a robust conversion application that has full support for Crossfades exported from Final Cut Pro, so you can leave the Include Crossfade Transition option in the OMF Audio Export window selected.

Figure 1 Final Cut Pro 2 OMF Audio Export dialog box

Audio Artifacts at the End of Tracks

When translating OMF files using OMF Tool 2.0.8, the resulting converted Pro Tools project file may contain an audio artifact just after the last clip on each track. To avoid this, you can add audio slug after the last clip on every track.

DigiTranslator does not exhibit this behavior.

Track Limits when Exporting OMF Files

Final Cut Pro exports a maximum of 99 audio tracks when using the OMF Audio Export command. How many of these tracks can be imported into Pro Tools depends on which of the three versions of Pro Tools you use.

Application	Audio Playback Tracks
Pro Tools Free	8
Pro Tools LE	24
Pro Tools TDM	72

Which Sample Rate to Use When Exporting OMF Files

When you export a Final Cut Pro project to OMF, all of the audio in the newly exported OMF file is converted to the same sample rate. For example, your Final Cut Pro project file may have several QuickTime video clips with 48 kHz audio, mixed with several AIFF music clips at 44.1 kHz. When you export the audio tracks from this project using the OMF Audio Export command, all of the audio from your Final Cut Pro project is converted to the same rate, as specified in the Sample Rate pop-up menu of the OMF Audio Export window. The sample rate you use when you export partially depends on whether you are using OMF Tool or DigiTranslator, and which version of Pro Tools you use.

OMF Tool 2.0.8 does not support OMF files that are exported with a sample rate of 32 kHz. DigiTranslator supports all three sample rates.

While Pro Tools LE and Pro Tools TDM both have support for 32 kHz, 44.1 kHz, and 48 kHz audio, Pro Tools Free supports only 44.1 kHz audio. When exporting OMF files for use with Pro Tools Free, set the Sample Rate pop-up menu in the OMF Audio Export window to 44.1 kHz.

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The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"

Published Date: Feb 20, 2012

AppleWorks 6: How to Set the Clippings Cache Size

This article explains how to set the Clippings cache size in AppleWorks 6. This can be a way for Macintosh Manager administrators to affect workstation performance and hard disk storage space, particularly with AppleWorks 6.1.x.

This article has been archived and is no longer updated by Apple.

Follow these steps to change the Clippings cache size:

1. Open AppleWorks.
2. If the Clippings window is not open, choose Show Clippings from the File menu; the Clippings window appears.
3. Control-click in the Clippings window to open the contextual menu; choose Clippings Settings from the menu.
4. In the Clippings Settings window (see Figure 1), set the cache size to a new value.

Figure 1 Clippings Settings window

Set the cache size to 0 if you do not want any clippings data cached.

Note: The cache size setting only limits the size of the folder after quitting AppleWorks, and does not prevent AppleWorks from storing clippings data in the cache while running.

The Clippings cache is used to store downloaded Web clippings files. Cached clippings can be retrieved instantly, which increases performance. Decreasing the cache size can increase how often clippings must be downloaded again. If the Clippings cache is set to 0 MB, clippings are downloaded each time they are used.

Macintosh Manager administrators may choose to set the Clippings cache on workstations to affect performance or hard disk usage/storage. This is particularly true with AppleWorks 6.1.x, which stores the cache within a user's documents folder.

Published Date: Feb 17, 2012

AppleShare IP: Web Server Plug-Ins Must Be on Startup Disk

Web plug-ins in the AppleShare IP Plug-Ins folder will load only if the Web Folder is on the startup disk of the server. This article explains how to move the Web Folder to the correct location.

This article has been archived and is no longer updated by Apple.

Symptom

Plug-ins in the Plug-Ins folder inside the Web Folder do not appear under the Plug-Ins tab in the Web Server Settings window of Mac OS Server Admin.

Solution

1. Open the Mac OS Server Admin application and log on to the server; a miniwindow with graphic buttons appears (see Figure 1).

   Figure 1 Miniwindow with graphic buttons

2. Choose Stop Web Server from the Web Services button in the Mac OS Server Admin miniwindow. (The Web Services button is portrayed with a global image of Earth.)
3. Drag the Web Folder to the server's startup disk.
4. Choose Configure Web Server from the Web Services button in the Mac OS Server Admin miniwindow; a window appears.
5. Click the General tab within the window.
6. Click Current Web Folder .
7. Navigate to the Web Folder on the server startup disk.
8. Click Choose.
9. Click Save.
10. Choose Start Web Server from the Web Services button in the Mac OS Server Admin miniwindow.
11. If you wish, choose Disconnect (or Quit) from the File menu of the Mac OS Server Admin application.

Published Date: Feb 17, 2012

AppleWorks: List of Available File Formats

AppleWorks 6.1.2 can read from and save to many different kinds of file formats. This article lists the file formats available with AppleWorks 6.1.2.

This article has been archived and is no longer updated by Apple.

The table below lists the file formats with which AppleWorks 6.1.2 can work, including whether AppleWorks 6.1.2 can read ("import") or save ("export") documents in each format.

File Format	AppleWorks 6.1.2 Can...
Formats Included With AppleWorks	
AppleWorks 5.0	Read and Save
ClarisWorks 4.0	Read and Save
ClarisWorks for Kids	Read and Save
ClarisWorks 2.0/2.1/3.0	Read
ClarisWorks 1.0	Read
Formats Available Through XTND Filters	
ASCII	Read and Save
EPSF	Read
HTML	Read and Save
RTF	Read and Save
Text	Read and Save
Formats Available Through QuickTime	
3DMF	Read
AIFC	Read
AIFF	Read
Animated GIF	Read
Apple MPEG Import	Read
Audio CD	Read
AutoDesk Animator	Read
BMP	Read and Save
DV	Read
EPSF	Read
Flash	Read
FlashPix Image	Read
GIF	Read
HTML document	Read
JFIF	Read and Save
MacPaint	Read and Save
Movie	Read
MPEG Layer-3 Audio	Read
Photoshop	Read and Save
PICS	Read
PICT	Read and Save
PNG	Read and Save
QUALCOMM PureVoice	Read
QuickDraw GX	Read
QuickTime Image	Read and Save
Real Time Streaming	Read

Session Description	Read
SGI	Read and Save
Slow Movie	Read
SMIL	Read
Sound Designer II	Read
Sound	Read
Standard MIDI	Read
TGA	Read and Save
TIFF	Read and Save
Wave	Read
µLaw	Read
Formats Available Through MacLink Plus Translators	
MS Word Mac 6.0/95	Read and Save
MS Word Mac 98/2001	Read and Save
MS Word Win 6.0/7.0	Read and Save
MS Word Win 97/2000	Read and Save
Microsoft Excel 5.0/95	Read and Save
Microsoft Excel 98/2001	Read and Save
Microsoft Excel 5.0/7.0 (Windows format)	Read and Save
Microsoft Excel 97/2000 (Windows format)	Read and Save

More information on MacLinkPlus translators is available from Dataviz.

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"

Published Date: Feb 17, 2012

AppleWorks 6: Opening Documents Created by Other Programs

This article explains how to use AppleWorks 6 to open documents created by other programs such as MS-Word, and generic formats such as RTF, ASCII text, and others.

This article has been archived and is no longer updated by Apple.

You can use AppleWorks to open documents created in a variety of other applications, including documents in text-only and other generic formats. AppleWorks attempts to preserve the original document's text, colors, layout, and other formatting options.

To open a document created with another application:

1. Choose Open from the File menu.
2. Choose the type of document that you want the imported document to become in AppleWorks from the Document Type pop-up menu (see Figure 1). For example, you can open an ASCII text or RTF file as a word-processing or spreadsheet document.

   Figure 1 Choosing a Document Type

3. Choose a file format from the File Format pop-up menu (see Figure 2).

   Figure 2 Choosing a File Format

4. Select the document and click Open. The scrolling list shows all documents of the selected file format in the folder specified above the list.

If you don't see the file you're trying to open:

Choose All Types from the Document Type pop-up menu and All Available from the File Format pop-up menu (see Figure 3). If you still don't see the file, the AppleWorks translators are not able to translate the file. Try using a generic file format. For example, use Text or RTF for word-processing files.

Figure 3 Choosing All Types and All Available Formats (Mac OS 9)

Note: In Mac OS X, the files may be visible, but the icons will be slightly dimmed regardless of which document type or file format is selected. If you attempt to click the file and nothing is selected, then the file cannot be opened with the current document type or file format. Figure 4 below shows a file being successfully selected after choosing All Types as the Document Type and All Available as the File Format.

Figure 4 Choosing All Types and All Available Formats (Mac OS X)

For a list of file formats that AppleWorks 6 can use, please see article 25300: "**AppleWorks 6: List of Available File Formats**"

Published Date: Feb 17, 2012

Mac OS X 10.0, 10.1: How to Import Email Addresses From Outlook Express

This article explains how to import email addresses from Microsoft Outlook Express (in the Classic environment) to the Mac OS X application Mail.

Important: This document only applies to versions of Mail which were included in Mac OS X 10.0 through 10.1.5. For information about importing addresses with Mac OS X 10.2, see technical document 106996: "**Mac OS X 10.2: About Import Addresses and Other Mail Scripts**".

This article has been archived and is no longer updated by Apple.
Follow these steps to import email addresses from Microsoft Outlook Express to the Mac OS X application Mail:

1. Open Outlook Express in the Classic environment.
2. Choose Export Contacts from the File menu.
3. Save the Contacts Export file in your Home directory for convenience.
4. Quit Outlook Express.
5. Open the Mac OS X Mail application.
6. Choose Addresses from the Window menu.
7. Choose Import from the File menu.
8. Select the Contacts Export file.

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"

Published Date: Oct 10, 2016

Mac OS X 10.0: Using Mac OS 9 Control Panels in Classic Environment

This article describes the functions of Mac OS 9 control panels within the Mac OS X Classic environment.
This article has been archived and is no longer updated by Apple.
Note: This information applies to Mac OS X 10.0 to 10.0.4 when used with Mac OS 9.1 Classic environment control panels. If you use Mac OS 10.1 with Mac OS 9.2.1, Classic environment control panels may give results differing from those described below. For example, the Mac OS 9.2.1 Software Update control panel works with Mac OS 10.1 (for updating Classic environment software items).

You can use some Mac OS 9.1 control panels in the Mac OS X Classic environment to make and change system settings. However, not all Mac OS 9.1 control panels work in the Classic environment. Some control panels may have limited capabilities, and others may be turned off. In these cases, the Mac OS X System Preferences application replaces these control panels and their functions. Below is a list of control panels and a description of their functions in the Mac OS X Classic environment.

Appearance control panel

- Changes to Desktop picture are not apparent in Classic. Click the Finder icon in the Dock, and choose Preferences from the Finder menu in Mac OS X instead.
- Sound Track only works in Classic applications.
- If you change the System or Views font it will only affect the Classic environment and Classic applications.

Note: Changes you make in this control panel that are not apparent in the Classic environment are apparent when you start up the computer from the Mac OS 9.1 System Folder.

AppleTalk control panel

You can adjust AppleTalk settings for the Classic environment. Settings made in this control panel do not change those made in the Mac OS X Network pane of System Preferences. AppleTalk settings for Mac OS X and the Classic environment can be configured independently.

Control Strip control panel

The Mac OS 9 Control Strip is disabled in Classic. Use Mac OS X System Preferences instead. Mac OS X includes Dock extras that you can use to change certain settings from the Dock, such as monitor resolution and color depth. You will find these in the Applications folder on your Mac OS X disk. To use a Dock extra, drag it to the Dock, and click its icon to choose a command from the pop-up menu. Dock extras can also indicate the status of certain items, such as the computer's battery level.

Date & Time control panel

This control panel can be used to set the date and time notation used in Classic applications, and to adjust the menu bar clock's appearance and hourly chime within the Classic environment only. Use the Date & Time pane in Mac OS X System Preferences to set the computer's date and time.

Energy Saver control panel

Use the Energy Saver pane instead.

Extensions Manager control panel

With Mac OS 9.1 as the Classic System Folder, this control panel allows Mac OS 9.1 system software components to be turned on and off as expected, though turning off certain components causes the Classic environment to work incorrectly. For related information, see article 106249: "**Mac OS X 10.0: Unexpected Classic Behavior When Using Mac OS 9.1 All or Base Extension Sets**".

File Sharing control panel

Volumes and folders cannot be selected for sharing. Guest and other user access may not work as expected. File sharing over TCP/IP (which is required for Mac OS X peer-to-peer networking) cannot be enabled. Instead, use the Sharing pane of Mac OS X System Preferences to share a Public folder, or enable FTP access and remote login.

General Controls control panel

Options that affect only the Classic environment are available; those which do not are dimmed.

Infrared control panel

This control panel does not work in the Classic environment.

Keyboard control panel

Use the Keyboard pane in Mac OS X System Preferences to set the Key Repeat Rate and the Delay Until Repeat. For information on the other settings available in the Mac OS 9 Keyboard control panel, please see article 106268: "**Mac OS X 10.0: Using the Keyboard Control Panel in Classic**"

Location Manager

This control panel does not work in the Classic environment.

Memory control panel

With Mac OS X 10.0, this can be used to adjust only the Disk Cache setting. You should not typically need to adjust this, but may set it to the minimum setting to conserve available memory. **Note:** If you start up the computer using the Mac OS 9.1 System Folder, you should reset the Disk Cache to its default setting.

Modem control panel

Use the Network pane instead. To change modem settings, choose the modem from the Configure pop-up menu in the Network pane, then click the Modem tab.

Monitors control panel

Use the Mac OS X Displays pane instead when possible. Certain Classic applications may require that you set the color depth to 256 colors, or the resolution to 640-by 480-pixels. In this case, you can use the Mac OS 9 Monitors control panel.

Mouse control panel

Use the Mouse pane instead.

Multiple Users control panel

Use the Users pane instead.

Password Security control panel

This control panel does not work in the Classic environment. To require a password, open the Login pane, click the Login tab, and deselect "Automatically log in".

PowerBook SCSI Disk Mode control panel

The PowerBook SCSI Disk Mode control panel does not work with the Mac OS X Classic environment.

Remote Access control panel

Remote Access does not work in the Classic environment. Instead, use the Internet Connect application and the PPP tab of the Network pane.

Software Update control panel

The Software Update control panel does not work in the Classic environment. For more information, please see article 106276: "**Mac OS X 10.0: Classic Does Not Allow Use of Software Update**"

Sound control panel

The Sound control panel in Classic can be used to choose the alert sound and alert volume for Classic and to change the master volume and mute settings for the underlying Mac OS X audio system. In Mac OS X 10.1, changes made to the master volume and mute settings through Classic will be effective across all of Mac OS X, but beware that the Sound pane of System Preferences will not update its display to reflect changes made by Classic. The Sound control panel in Classic will update its display to reflect changes made by the Sound pane of System Preferences or any other client of the Mac OS X audio system.

Startup Disk control panel

Use the Startup Disk pane instead.

TCP/IP control panel

Use the Network pane instead. Adjustments made with the Mac OS 9 TCP/IP control panel do not take effect.

Trackpad control panel

Use the Mouse pane instead.

Web Sharing control panel

Use the Sharing pane instead.

Published Date: Feb 17, 2012

Power Mac G4 (Digital Audio): Apple Hardware Test 1.1 Reports False Error

Apple Hardware Test 1.1 may report a false error when testing a hard drive on a Power Mac G4 (Digital Audio) computer that has two or more ATA hard drives installed. Use a later version of Apple Hardware Test, or start up the computer from the Apple Hardware Test 1.1 CD before running the test.

This article has been archived and is no longer updated by Apple.

Symptom

The Apple Hardware Test (AHT) 1.1 Hard Drive test reports this error code the first time it is run after starting up:

ata1/6/3 HD:2,1

Solution

Apple Hardware Test 1.2 resolves this issue.

Follow these steps to work around the issue with Apple Hardware Test 1.1:

1. Restart the computer with the Apple Hardware Test CD. (Do not shut down and start up; you must click Restart in the Hardware Tests window.)
2. Re-run the diagnostic.

If the hard disk is functioning properly, the error should not be reported by Apple Hardware Test 1.1.

Published Date: Feb 20, 2012

Mac OS X 10.0: (2Z691-3064) CD Installation Information

This article provides installation and compatibility information about the Mac OS X 10.0 (2Z691-3064) CD, which is not available in all regions (including the United States).
This article has been archived and is no longer updated by Apple.

Which Mac OS X 10.0 CD Do I Have?

The Mac OS X 10.0 CDs may be distinguished by the part number printed on the white CD silkscreen:

- Mac OS X 10.0 CD part number 1Z691-2974-A (released 2001-03-24)
- Mac OS X 10.0 CD part number 2Z691-3064 (released 2001-06)

Important: If you want to install versions of Mac OS X from each CD, partition your hard disk and install each version of Mac OS X 10.0 on a different partition. Do not install a version of Mac OS X from one CD over a version of Mac OS X from the other CD.

What's Included on The CD and Where Can I Find It?

The Mac OS X 10.0 (2Z691-3064) CD offers Mac OS X 10.0 in the following languages:

- Swedish
- Norwegian
- Finnish
- Danish
- Brazilian-Portuguese
- Korean
- Chinese (Traditional)
- Chinese (Simplified)

The Mac OS X 10.0 (2Z691-3064) CD is available in countries that are primarily associated with the languages listed above; it is not available in all regions, including the United States. The English, Japanese, German, and French languages are also included for your convenience.
Published Date: Oct 10, 2016

Interlacing: How to prevent jagged lines in video

This article has been archived and is no longer updated by Apple.

Learn what interlacing is, shows what it looks like, and read suggestions about how to prevent it when creating and editing movies.

Q. What is interlaced video and what is a progressive scan monitor?

A. Most consumer video cameras capture two fields per frame. The two fields are *interlaced* with each other. That is, the odd horizontal lines are from one field and the even lines are from the other. Televisions display one field after the other, while progressive scan monitors display both fields simultaneously. Computer monitors fall into the progressive scan category.

Example of interlacing

Q. In iDVD and DVD Studio Pro, jagged lines in the video are visible during preview and even after burning to disc in Apple DVD Player. What is this?

A. This may be the effect of displaying interlaced video on a progressive scan monitor.

Q. Why do jagged lines appear?

A. Since the computer monitor doesn't interpret fields like a TV does, you may see interlacing when there is fast camera or object movement. This is the effect of displaying two moments in time simultaneously. When watching the DVD on a normal TV, the interlacing effect is not noticeable.

Q. Is there any way to prevent this?

A. Yes. Some application programs such as Final Cut Pro have an option to de-interlace the video. De-interlacing the video before importing into iDVD or DVD Studio Pro prevents this effect on computer monitors (see Figure 2), though the motion may not be as smooth on a TV. Check the user's manual for your software to see if it offers this feature and how to use it. Also, some video cameras have an option for progressive scan (Canon calls it "Movie Mode"). Shooting video in this way captures an entire frame at a time instead of two fields and prevents the interlacing effect.

Image after correction

DVD Player 4.5 or later (in Mac OS X 10.4 or later) includes an option to deinterlace video. Choose Window > Video Color. In the Video Color window, select the Deinterlace video checkbox.

Q. Why does this effect only occur on DVD-R discs, but not commercial DVD-Video discs?

A. Movies on commercial DVD-Video discs are typically made with film cameras. Unlike video, film does not use fields or interlacing so you do not see this effect.

For more information on fields and interlacing, please see article 58634: "**Final Cut Pro: Field Dominance Discussion**"

Published Date: Oct 10, 2016

Apple Studio Display (ADC): Pressing Button Does Not Open System Preferences

With Mac OS X, pressing the button on the lower left of the front of the Apple Studio Display LCD (ADC) and Apple Studio Display 17 (ADC) does not open the Displays pane of the System Preferences application.

This article has been archived and is no longer updated by Apple.

Symptom

Pressing the button on the lower left of the front of the Apple Studio Display (ADC) does not open the Displays pane of the System Preferences application.

Solution

Follow these steps to open the Displays pane of System Preferences:

1. Choose System Preferences from the Apple menu.
2. Click Displays to open that pane within the System Preferences window.

After closing System Preferences, pressing the button opens the Displays pane of System Preferences. However, pressing it again does not close System Preferences.

The symptom described above will recur if you log out or shut down the computer. A future Mac OS X update may provide the button with full and persistent functionality.

Published Date: Feb 17, 2012

Mac OS: Application Switcher Miniwindow Shows No Close or Zoom Boxes

The Application Switcher miniwindow can be opened in ways that do not include a title bar, close box, or zoom box. This article explains how to restore those elements so that the miniwindow can be closed, moved, and resized.

This article has been archived and is no longer updated by Apple.

Symptom

While viewing the Mac Help topic "Switching between open programs", clicking the link titled "Open the Application Switcher in icon view for me" or the link titled "Open the Application Switcher in a horizontal row for me" causes the Application Switcher miniwindow to open without a title bar, a close box, or a zoom box. See Figures 1 and 2.

Figure 1 Application Switcher miniwindow in icon view

Figure 2 Application Switcher miniwindow in a horizontal row

Solution

Follow these steps to restore the Application Switcher miniwindow to its default state, which includes a title bar, a close box, and a zoom box (see Figure 3):

1. Make the Finder active by clicking the desktop.
2. Choose Mac Help from the Help menu; the Mac Help window opens.
3. Click "Files and programs" within the Mac Help window.
4. Click "Switching between open programs" within the Mac Help window.
5. Click "Restore the default display settings for the Application Switcher for me". (You may have to scroll toward the bottom of the window's contents in order to see this item.)

Figure 3 Application Switcher miniwindow in its default state

You can now move the miniwindow by dragging its title bar, quickly resize it with the zoom box, or close it with the close box.

For more information on the Application Switcher and its options, refer to the following articles:

Article 58093: "**Mac OS: Key Commands for Application Switcher**"
Article 58067: "**Mac OS: Application Switcher Overview**"

Published Date: Oct 10, 2016

AppleWorks 6.0.4: Dimmed Apple, File, Edit Menus Resolved With AppleWorks Update

If the Apple, File, and Edit menus are dimmed with AppleWorks 6.0.4, update to AppleWorks 6.2 or later.

This article has been archived and is no longer updated by Apple.

Symptom

After opening AppleWorks 6.0.4, the Apple, File, and Edit menus are dimmed. You cannot quit by choosing Quit from the File menu, nor can you use the command-key equivalent (Command-Q).

Solution

1. Download and install **AppleWorks 6.2 Updater** or later.
2. Download and install **CarbonLib 1.4** or later.

If the issue persists after installing the AppleWorks update, search your hard disk for duplicate copies of AppleWorks, and delete all but the copy that has been updated.

Published Date: Feb 17, 2012

WebObjects 5: Converting WebObjects 4.5 Projects

This article explains how to convert WebObjects 4.5 projects to WebObjects 5.0 format with Mac OS X.

This article has been archived and is no longer updated by Apple.
These instructions explain how to convert WebObjects 4.5 projects to WebObjects 5.0 format with Mac OS X. They should be used in conjunction with the instructions for using the JavaConverter tool. The JavaConverter instructions, in pdf format, are available at http://developer.apple.com/techpubs/webobjects/JavaConverter.pdf

Have the JavaConverter instructions available when you step through the instructions below.

Converting WebObjects 4.5 Projects to WebObjects 5.0 Format

Step 1

Open /Developer/Applications/ProjectBuilderWO and then open the WebObjects 4.5.x project.

Step 2

In the build pane, click the "clean" button. Close ProjectBuilderWO; it will not be used again during this procedure.

Step 3

Run the JavaConverter according to the instructions in the JavaConverter document. On Mac OS X the JavaConverter is located in /System/Library/WebObjects/JavaApplications. It is possible to run the JavaConverter on Mac OS X as well as Mac OS X Server (1.2 and 10.0). The instructions in the JavaConverter.pdf document work with all these platforms.

Step 4

Open /Developer/Applications/ProjectBuilder.

Step 5 (Primary Version)

Choose Import Project from the File menu.

In the "Import Project Assistant" choose "Import PB.proj" and click Next. Click Set to locate the converted project, or enter its location in the text box.

Once the converted project has been imported, add the JavaJDBCAdaptor.framework by choosing Add Frameworks from the Project menu. This framework is located at /System/Library/Frameworks/JavaJDBCAdaptor.framework. In the sheet that appears, be sure to click on the Application Server Target so that the framework is added to it.

Step 5 (Alternate Version)

You should use this alternate version of the Step 5 instructions only if the Step 5 (Primary Version) instructions do not result in a workable project.

Create a new project of the same type as your converted project. For example, if you convert a "WebObjects Application" you will want to create a project of type "WebObjects Application" within ProjectBuilder.

In the Finder, navigate to the converted project's directory. Drag and drop the needed components, resources, and so forth to the "Groups & Files" section of the new project's window. You will be able to place the files in the appropriate places inside the new project hierarchy. Be sure to select the "Copy items into destinations group's folder (if needed)" checkbox and the "Create Folder References for any added folders" radio button in the sheet that appears when you release the mouse button.

Step 6

Search for the JC_ERROR, JC_WARNING, and JC_INFO messages in the converted project and fix them as needed. This is a manual process and may take some time depending on the size of the project.

Also, be sure to see reference 2628707 at http://developer.apple.com/techpubs/webobjects/ReleaseNotes/ReleaseNotes.html for more information on the conversion, including NSValidation issues.

Step 7

Open the model file and change the connection dictionary information and update the external/internal types. This is a manual process that updates the model file for use with the JDBC adaptor. Depending on your database and original model file, it may be quicker to create a new model file than convert an existing one.

Your project should now build successfully.

For information on how to set up the JDBC URL refer to your database's documentation, or refer to article 75145: "**WebObjects 5: How to Use Oracle JDBC Drivers**".

Published Date: Oct 10, 2016

Network Assistant 4.0.x: Cannot Set Startup, Shut Down Schedules on Some Clients

Network Assistant software cannot be used to set or change startup and shut down schedules on certain Macintosh client workstations. The schedules must be set with the Energy Saver control panel on each client workstation.

This article has been archived and is no longer updated by Apple.

Symptom

With the Network Assistant application program, the "Schedule Start Up" dialog box does not allow you to turn off a startup or shut down schedule for a client computer. When you click the checkbox to turn off a schedule, the Change button becomes dimmed. See Figure 1.

Figure 1 Schedule Start Up dialog box with dimmed Change button

Solution

Use the Energy Saver control panel on each client computer to set or change startup and shut down schedules.

Network Assistant cannot change startup and shut down schedules on the client workstations listed in the Products affected section of this article.

Notes:

1. The parenthetical product description (Summer 2000) refers to the summer of the Northern Hemisphere.

2. Network Assistant 3.6.x client software is for use with Mac OS 8.1 through Mac OS 8.6. Network Assistant 4.0.3 client software is the only version of the Network Assistant 4 client software that works with Mac OS 8.1 through Mac OS 8.6.

Published Date: Oct 10, 2016

Mac OS: "Could Not Find a Translation Extension" Message

If the preference file for File Exchange or Mac OS Easy Open is unusable or out-of-date, the Finder may be unable to locate the application with which to open (or translate) a file. This article explains how to re-create and rebuild the preference file.

This article has been archived and is no longer updated by Apple.

Symptom

When you try to open a file from the desktop, an alert box appears with this message:

> "The document could not be opened, because the application program that created it could not be found. Could not find a translation extension with appropriate translators."

However, you know that the necessary application program is installed on the computer.

Solution

Re-create the preference file(s) that store the associations between files and their applications/translators and then rebuild the Desktop file.

Step One: Re-Creating Preferences

Follow these steps to re-create the preference file(s):

- **Mac OS 8.5 through Mac OS 9.x**
  1. Locate the File Exchange Preferences file in the Preferences folder of the startup disk.
  2. Drag it to the Trash.
- **Mac OS 8.1 and earlier**
  1. Locate the PC Exchange Preferences file and the Mac OS Easy Open Preferences file in the Preferences folder of the startup disk.
  2. Drag them to the Trash.

Step Two: Rebuild the Desktop file

For complete information on rebuilding the Desktop file, refer to article 10182: "**Mac OS: Rebuilding Desktop File and Icon Recovery**"

Note: Even after following these steps, double-clicking on certain files will result in the symptom described above. These include files that do not contain type or creator information, or files whose filename extension is ".exe". Files with a filename extension of ".exe" are executables for MS-DOS, and require MS-DOS or Windows emulation software to work with Mac OS-based computers.

For more information on File Exchange, refer to article 58098: "**Mac OS: File Exchange Control Panel Features**"

Published Date: Oct 10, 2016

Apple Pro Keyboard (Italian): How to Produce Special Characters

The table below lists the keystrokes needed to produce various special characters with the Italian versions of the Apple keyboard and the Apple Pro Keyboard, when using the Italian layout of Mac OS 9 or Mac OS X 10.0.

This article has been archived and is no longer updated by Apple.
The table below lists the keystrokes needed to produce various special characters with the Italian versions of the Apple keyboard and the Apple Pro Keyboard, when using the Italian layout with Mac OS 9 or Mac OS X 10.0.

Character	Italia Keyboard	Italia Apple Pro Keyboard
Ã	option-shift-Q	option-8 and then shift-A
Ã	option-S (with caps lock pressed)	option-9 and then shift-A
Ã	option-shift-C	option-Ã¬ and then shift-A
Ã	option-A (with caps lock pressed)	option-U and then shift-A
Ã	option-D (with caps lock pressed)	option-N and then shift-A
Ã	option-E (with caps lock pressed)	option-8 and then shift-E
Ã	option-shift-E	option-9 and then shift-E
Ã	option-shift-B	option-Ã¬ and then shift-E
Ã	option-shift-Z	option-U and then shift-E
Ã	option-shift-R	option-8 and then shift-I
Ã	option-shift-5	option-9 and then shift-I
Ã	option-shift-Y	option-Ã¬ and then shift-I
Ã	option-shift-T	option-U and then shift-I
Ã	option-Ã© and then shift-O	option-8 and then shift-O
Ã	option-shift-0 (zero)	option-9 and then shift-O
Ã	option-shift-9	option-Ã¬ and then shift-O
Ã	option-P (with caps lock pressed)	option-N and then shift-O
Ã	option-O (with caps lock pressed)	option-U and then shift-O
Ã	option-shift-$	option-8 and then shift-U
Ã	option-shift-I	option-9 and then shift-U
Ã	option-shift-U	option-Ã¬ and then shift-U
Ã	option-K (with caps lock pressed)	option-U and then shift-U
*	option-G	option-U and then shift-Y
Ã¿	option-y (with caps lock pressed)	option-U and then Y
Ã	option-v (with caps lock pressed)	option-N and then shift-N
Ã±	option-b (with caps lock pressed)	option-N and then N

Published Date: Feb 19, 2012

Macintosh Manager: Workgroup Data Volume Differences

This document discusses the differences between the Workgroup Data Volume section of Macintosh Manager Admin 1.0 and later and 2.0 and later.

This article has been archived and is no longer updated by Apple.
The Workgroup Data Volume option is located in the Workgroups:Options pane of Macintosh Manager Admin.

Macintosh Manager 1.0 and later

The Workgroup Data Volume is where all documents are stored while in a particular workgroup. It includes the user's documents folder as well as workgroup-specific folders (for example, Hand-In and Workgroup Shared folders).

With Macintosh Manager 1.0 and later, the Workgroup Data Volume is used to configure another documents storage location. For more information, refer to technical document 31265: "**Macintosh Manager 1.3: Saving Workgroup Documents to Another Volume**"

Macintosh Manager 2.0 and later

The Workgroup Data Volume is where workgroup-specific documents are stored, similar to Macintosh Manager 1.0. However, users' documents are no longer a part of this volume. Users' documents are now specific to each user's account (the 'Home Directory' option in Server Admin).

With Macintosh Manager 2.0 and later, the Workgroup Data Volume will not change the user's documents location, only the workgroup-specific folders (for example, Hand-In and Workgroup Shared folders). To change where users store their documents, use the Home Directory feature of Mac OS X Server 10.0 Server Admin to assign a custom location.

Published Date: Feb 17, 2012

Network Assistant 4: Difficulties With Copy Hard Disk and Copy Items Commands

Follow the steps in this document if you encounter difficulties with the Copy Items or Copy Hard Disk commands in Network Assistant 4.

This article has been archived and is no longer updated by Apple.

Symptom

When using Network Assistant 4 to copy items or an entire hard disk, an unexpected disconnection occurs. An alert box with a message may also appear.

Solution

Follow these steps in order until the issue is resolved. In addition to these steps, you should download and install the Network Assistant 4.0.5 update. This is available at Apple Software Downloads (http://www.apple.com/swupdates/).

Step 1: Check Mac OS and Network Assistant Software

Make sure all client and admin workstations have the appropriate versions of Mac OS system software and Network Assistant software. For more information on this topic, refer to technical document 25103: "**Network Assistant: Supported Versions and Configurations**"

Step 2: Check Port Numbers

If there is a router or firewall on your network, verify that UDP port 3283 is open. Network Assistant uses this port for IP communication with clients. For AppleTalk connections, Network Assistant uses DDP socket 39 to communicate with clients.

Network Assistant does not manage clients that are connected through Network Address Translation (NAT). To manage these clients, connect them directly to your network or join these networks with a dedicated router (gateway). For more information on port numbers and NAT, refer to technical document 31131: "**Apple Network Assistant: Important Information**".

Step 3: Use Disk First Aid

Use Disk First Aid on the admin and client computers; repair any "errors" found by Disk First Aid.

Network Assistant admin can check and repair Mac OS 9 client hard disks remotely. Follow these steps to use this feature:

1. Select the client(s).
2. Choose Disk Verification from the Report menu.
3. Click to enable the "Try to fix disk errors" option.
4. Click Get Report.

If the report indicates that certain repairs could not be made, you must start up the client workstation(s) from a known-good disk (for example, a system software CD) and attempt to repair the affected hard disk.

Step 4: Quit All Applications

Quit all applications on the client workstation(s) before attempting the copy operation. This can be done remotely with Network Assistant by selecting the client workstation(s), then choosing Quit Applications from the Manage menu.

Step 5: Delete Network Assistant Preferences

On each affected admin and client workstation, drag the Network Assistant Preferences file, located in the Preferences folder, to the Trash.

Important: When you delete the preferences file from a workstation, its passwords must be reset. On client workstations, use the Network Assistant Security application to change the password and re-enable administrator control. The Network Assistant admin application allows you to change its password and recreate your Network Assistant Workstation Lists.

Step 6: Perform System Extensions Troubleshooting

Perform system extensions troubleshooting on the affected admin and client workstations. For more information on this topic, refer to technical document 30929: "**Mac OS: Extension Conflict Troubleshooting/Extensions Manager Features**"

Step 7: Install Network Assistant Admin on Another Workstation

Install the Network Assistant admin application on another workstation and use it as the copy source.

Step 8: Isolate Potential Network Issues

Try using a different network protocol. For example, if you are using TCP/IP, try using AppleTalk. For more information on forcing Network Assistant to use a different network protocol, refer to technical document 60873: "**Network Assistant: Troubleshooting by Forcing a Connection Using AppleTalk or TCP/IP**"

If using a different protocol does not reveal the source of the issue, try reducing the number of clients to whom you are simultaneously copying. If limiting the number of clients does not resolve the issue, try to isolate the issue by limiting the tested clients and admin workstation to a particular subnet or physical network segment and then utilizing a decreasing number or clients. If the issue persists, set up an isolated network and continue testing.

If your Network Assistant clients are connected through AirPort, refer to technical document 88165: "**Network Assistant 4: Using Apple Network Assistant on an AirPort Network**". It offers recommendations on where to connect your Network Assistant admin workstation and suggestions on AirPort Base Station configuration.

If any of these actions in Step 8 resolve the issue, try to determine if network topology and other associated network setup issues are the source of this issue.

Additional recommendations

If issues persist, try the following:

1. If clients are Macintosh Manager/Multiple Users clients, log in with System Access prior to attempting the copy.

2. If you are trying to copy an entire hard disk to several Network Assistant workstations, copy only the System Folder first, then copy all other items.

3. Erase the Network Assistant client's hard disk before attempting the Network Assistant copy.

4. Try using a volume other than the admin workstation's startup volume as the copy source. If another local volume is not available, use Disk Copy to create a disk image of the startup volume and use it as the copy source. **Note:** You must start up from a CD to make an image of the startup volume.

5. If the Network Assistant client computers are connected through AirPort, experiment with the multicast and density settings for the best performance. Generally, better performance can be achieved with a "High" density setting and a multicast rate of 11 Mb. **Note:** The Network Assistant admin workstation should be connected to the wired Ethernet network.

6. Schedule the copying of hard disks over a longer period of time rather than copying all disks at once. This reduces network traffic, which can increase significantly with simultaneous disk copies.

Example of scheduling

The following is an example of how to schedule a copy using Network Assistant 4. Scheduling works with Mac OS 9 clients with Network Assistant 4.0 or later installed. For Mac OS 8 clients, update to Network Assistant 4.0.4 or later to use scheduling.

Schedule a few clients at a time (five to ten). If issues arise, then reduce the number of clients and create another scheduled time for other clients.

In this example, we delete all other items on the client's startup disk and then copy the following items:

- Applications (Mac OS 9)
- Documents
- Late Breaking News
- System Folder

Follow these steps:

1. Create a new user on an AppleShare (AFP) server ("ANA User" in this example).

2. Create a new share point on the same AFP server ("ANA Update" in this example), giving the ANA User read-write access.

3. Open Network Assistant admin on the computer that is to be copied (or cloned).

4. Connect to the ANA Update share point, authenticating as the ANA User.

5. In the Network Assistant admin, select the workstation(s) you would like to schedule.

6. Choose Schedule from the Server menu.

7. In the Schedule window, be sure that ANA Update is the selected server.

8. Enter the name and password information for the ANA User.

9. Set the desired scheduled time, and select the "Copy items from server" option. You may enable other options, but they are not required.

10. Click the Select button that becomes available after enabling the "Copy items from server."

11. In the Select Items dialog, navigate to the following items in the Available items list:
    - Applications (Mac OS 9)
    - Documents
    - Late Breaking News
    - System Folder
12. Add each of these items to the "Items to copy" list.

13. Navigate the "Items to copy" list to the NA Copy Items folder, and select the "Delete other items on disk" option. Because this action only applies to that folder, you must repeat this step for the "Applications (Mac OS 9)", the Documents folder, and the System Folder.

14. Click Done in the Select Items window. A dialog appears, asking if you are sure you want to permanently delete all items on the selected workstations except for the System Folder. Select Yes if you are sure.

15. You are now back at the Schedule window. Double-check the values here. When you are sure they are correct, click Change.

Once the client's time reaches the designated time, the copy process begins. If you select Now for the scheduled time, then the process begins when you click Change in step 15.

Notes

1. Deleting items takes place prior to copying and may take some time to complete. If this occurs when the AFP server is configured to disconnect idle users, clients may be disconnected while they are still deleting items. In this event, the process will not complete until you change the idle disconnect feature to a longer value or disable it.

2. To ensure clients have the same contents in these nested folders, be sure to navigate to these folders in the "Items to copy" list and select the "Delete other items on disk" option for each nested folder (Step 13). This setting is specific to each folder and does not apply to all folders unless explicitly set to do so.

3. If a client misses a scheduled event, the client will perform the steps as soon as it is available to do so.

Published Date: Oct 10, 2016

Mac OS 9: Files Saved in Mac OS X Aren‘t on Desktop

Files saved or placed on the desktop in Mac OS X do not appear there when you start up with Mac OS 9. This article tells where files saved or placed on the desktop in Mac OS X are stored.
This article has been archived and is no longer updated by Apple.

Symptom

Files saved or placed on the desktop in Mac OS X do not appear there when you start up the computer with Mac OS 9.

Solution

Files you save or place on the desktop in Mac OS X are stored in your Mac OS X Desktop folder. You can access files in your Desktop folder by navigating to it in Mac OS 9. Each user you define in Mac OS X has a separate Desktop folder, and the contents are never shared between users. The path to a user's Desktop folder begins with the Mac OS X startup disk, as listed below and illustrated in Figure 1:

<Mac OS X startup volume>
  Users
    <user name>
      Desktop

Figure 1 Location of Mac OS X Desktop folder for the user named witherow

Published Date: Oct 10, 2016

iMac: When Degauss Circuitry Is Activated

This article explains when an iMac computer's degauss circuitry is activated.

This article has been archived and is no longer updated by Apple.

The degauss circuitry in an iMac computer activates at these times:

- When the computer starts up.
- When the computer restarts.

The degauss circuitry does not activate when the computer wakes from sleep.

Degaussing works best when the computer has been turned off for a period of time, and its components have been allowed to cool. To remove any residual magnetic fields that may build up over time, you should occasionally shut down the computer, let it sit for a time, and then start it up.

For more information, see document 30485: "**Monitors: Influence of External Magnetic Fields**".

Published Date: Oct 10, 2016

Mac OS 9: How to Turn Off Individual "Recently Used Items" Submenus

With Mac OS 9, you can turn off a specific "recently used items" submenu in the Apple menu while leaving others on by using the Apple Menu Options control panel to set the submenu value to zero.

This article has been archived and is no longer updated by Apple.
With Mac OS 8 and Mac OS 9, you can turn off a specific "recently used items" submenu in the Apple menu while leaving others on by using the Apple Menu Options control panel to set the submenu value to zero.

For example, to turn off Recently Used Documents but leave Recently Used Applications and Recently Used Servers turned on, set the Recently Used Documents value to zero in the Apple Menu Options control panel. See Figure 1.

Figure 1 Turning Off Recently Used Documents

To turn off all recently used items, deselect the "Remember recently used items" option by clicking the checkbox.

When a submenu is turned off and you close the Apple Menu Options window, the corresponding Recently Used Items folder and its contents are moved to the Trash.

Note: The folder contains only aliases to the recently used items; the actual items are not moved to the Trash.

For related information on this topic, refer to the following documents:

Document 30004: "**Apple Menu Options: Not Creating Recent Document Aliases**"
Document 60762: "**Mac OS 9: Missing Apple Menu Items Could Be Due to Damaged Preferences**"

Published Date: Oct 10, 2016

Mac OS X: Using the Finder to Mount NFS Exports

This article explains how to mount NFS exports with the Mac OS X Finder.

This article has been archived and is no longer updated by Apple.
Follow these steps to use the Mac OS X Finder to access files that have been shared by an NFS-based computer (also referred to as "mounting an NFS export"):

Step 1

With the Finder active, choose Connect to Server from the Go menu; the Connect to Server window appears.

Step 2

In the Address text box, enter `nfs://` followed by the hostname or IP address of the server and the full path to the export. See the example in Figure 1.

Figure 1 Connect to Server window

Step 3

Click Connect; the Connect to Server window closes. With Mac OS X 10.1 or later the NFS exports will mount on the desktop (unless you've turned that feature off on the server, then the export will only appear in the Finder window). If your computer has Mac OS X 10.0 through 10.0.4, continue with steps 4 and 5.

Step 4

Choose Go to Folder from the Go menu; the Go to Folder dialog box appears.

Step 5

In the text box, enter `/Volumes/` followed by the hostname or IP address of the server and click Go. See the example in Figure 2.

Figure 2 Go to Folder dialog box

If you need to use more sophisticated options when mounting an NFS server, use the Terminal application to issue commands. See the man pages for mount and mount_nfs.

Published Date: Oct 10, 2016

iTunes: Difference Between Date and Date Added Columns

This article explains the difference between the Date column and the Date Added column in iTunes.

This article has been archived and is no longer updated by Apple.
The iTunes View Options include two items named Date and Date Added. See Figure 1.

Figure 1 View Options

Date

This field shows the date the MP3 file was last modified. The date corresponds with when the song was converted to MP3, or when a change in the ID3 Tag was made.

Date Added

This field shows the date the MP3 file was added to the iTunes Library or Playlist.

Published Date: Feb 19, 2012

Power Mac G4 (QuickSilver): Mold Lines Are Normal

Mold lines form during manufacturing when the Power Mac G4 (QuickSilver) computer's plastic enclosure is molded. These lines are a normal and accepted part of manufacturing, not a defect or weak point.

This article has been archived and is no longer updated by Apple.
Small lines in the enclosure of the Power Mac G4 (QuickSilver) computer are called mold lines. They occur when the computer is manufactured, and may appear on the enclosure's inside and outside surfaces. Mold lines are not cracks, and do not represent a weakness or defect in the plastic.

On the Power Mac G4 (QuickSilver) computer, mold lines may be visible at these locations:

- below the optical media bay
- below the Zip drive bay
- to the side of the front panel buttons

Published Date: Oct 10, 2016

Mac OS X Server 10.0: Incorrect Hostname May Cause Trouble Connecting With Server Admin or Other Services

The hostname entered in the Mac OS X Server Setup Assistant must match the DNS entry for your server.
This article has been archived and is no longer updated by Apple.

Symptom

- You experience difficulty connecting to the server with the Server Admin application.
- Clients experience difficulty connecting to other services.

Solution

The hostname may be incorrect. This can happen if:

- An incorrect hostname was entered in the Setup Assistant.
- The current DNS entry and hostname for your server no longer correspond to the hostname originally entered in Setup Assistant.

What is the hostname?

The hostname is the DNS subdomain name of your server.

Example URL:

> http://myserver.apple.com

This example URL shows a fully qualified domain name. The hostname would be only the subdomain, which would be:

> myserver

Steps to correct

Follow these steps to correct the hostname:

1. Choose Log Out from the Apple Menu.
2. Log in as root.
Note: If you need information on the root user or experience any issue logging in as root, see the related technical documents listed below.
3. Open TextEdit.
4. Choose Open from the File menu.
5. In the Go To field type: `/etc/`
6. Press Return.
7. From the list that appears, select the file named `hostconfig` and click Open.
Important: Several other files have similar names. Be sure to choose only the exact match.
8. Find the line: `HOSTNAME=mywrongname`
9. Correct this line to read: `HOSTNAME=mycorrectname`
Note: mywrongname and mycorrectname are examples. Type your actual hostname where mycorrectname appears in this example. Be sure not to make any other changes to the file.
10. Choose Save from the File menu.
11. Restart the computer.

Related Information

Technical document 106290:
"**Mac OS X 10.0: About the root User and How to Enable It**"

Technical document 106361:
"**Mac OS X 10.0, Mac OS X Server 10.0: Password Does Not Work as Expected After a Change**"
Published Date: Oct 10, 2016

Mac OS X 10.2: Repair Disk Permissions Finds Issue With /private/var/db/netinfo/local.nidb/

Disk Utility Repair Disk Permissions may erroneously report an issue with /private/var/db/netinfo/local.nidb/ while started up from a Mac OS X Install CD. The issue does not occur when started up from the Mac OS X volume.
This article has been archived and is no longer updated by Apple.

Symptom

Disk Utility Repair Disk Permissions, when started up from your Mac OS X Install CD, may erroneously report an issue with /private/var/db/netinfo/local.nidb/* . For example:

> "Permissions differ on ./private/var/db/netinfo/local.nidb/[text]"

Note: The text that appears after "local/nidb" varies, but may include "/Store.288" or "/Clean".

Solution

The message is not accurate but is not a cause for concern.
Published Date: Oct 10, 2016

Mac OS X: Classic Application Does Not Recognize CD-ROM Disc

This document discusses a situation in which a CD-ROM disc is not recognized by a Classic application, even though the disc may appear on the desktop.
This article has been archived and is no longer updated by Apple.

Symptom

- A Classic application reports that a CD-ROM disc is not inserted.
- Installation of a Classic application that requires more than one disc does not complete.
- A Classic application does not recognize both the audio and data partition of a disc.

Solution

Update to Mac OS X 10.2.5 or later for best results.

1. Insert the disc before starting the Classic environment.

   Note: If the Classic environment is already running, open System Preferences and use the Classic preference pane to stop the Classic environment.

2. If the issue persists, you may need to start up from your Mac OS 9 System Folder to install or use the software.

This issue can occur when:

- The disc uses an earlier kind of disc copy protection.
- The disc contains both data and audio partitions.
- The disc's title includes diacriticals, such as **ç**.

  Important: Update to Mac OS X 10.2.5 or later to address the latter issue (diacriticals).

Note: You should contact the manufacturer of the disc for Mac OS X compatibility information.
Published Date: Oct 10, 2016

Mac OS X: About the Java 1.4.1 Update

This software adds Java 1.4.1 to Mac OS X. Mac OS X 10.2.3 or later is required.

Note: Later (newer) versions of Java are available from Apple Downloads.
This article has been archived and is no longer updated by Apple.
Important: Read Before Installing

1. To install this update, you must enter the password for an administrator account. The password cannot contain a space or special characters typed by pressing the Option key.

   If you need to change the administrator account password, choose Apple menu > System Preferences, then View > Accounts. Select an account name and click Edit User. Type the current password and press Return, then type the new password in both text boxes. Click OK when you are done.

2. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Featured Software to install.

Installation

There are two ways to install the Java 1.4.1 Update.

Automatic Software Update Installation

See technical document 106704, "**Mac OS X: How to Update Your Software**." Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates. Mac OS X 10.2.3 or later is required for this update.

Standalone Installer

An installer is available from Apple Featured Software (http://www.apple.com/swupdates/). Mac OS X 10.2.3 or later is required.

Enhancements

- Improves compatibility for applets on secure webpages (https://) .
- Allows you to print from webpage applets.
- Enables JDK 1.4.1 support for Safari.
- Supports dynamic applet menus.
- Improves Universal Access compliance.
- Supports full screen mode.
- Allows for certificates encountered via secure webpages or signed code to be saved in the default keychain.
- Supports glyph substitution for double-byte characters.
- Improves applet frame border shadows and minimizing.
- Supports sound input.
- Offers international keyboard support.
- Allows for more precise text rendering.
- Offers software-based graphics acceleration for Java applets designed to use this feature, on all systems.
- Reduces situations in which scrolling within an applet could be slow.
- Enhances multi-tasking robustness.

Published Date: Oct 10, 2016

Mac OS X 10.2: Nothing Happens When You Insert a Blank Disc

If nothing happens when you insert a blank disc, such as a CD-RW disc, check the settings in the CDs & DVDs pane of System Preferences.
This article has been archived and is no longer updated by Apple.
Refer to technical document 25545, "**Mac OS X: When You Put in A Blank CD, It Doesn't Appear**" for more information.

Published Date: Oct 10, 2016

Mac OS X: How to use a PPP connection script

This document explains how to use a PPP connection terminal script if your ISP requires it. Connecting to a PPP using a terminal script is usually not necessary.
This article has been archived and is no longer updated by Apple.
Follow these steps after you receive the script file from your ISP.

How to install a Terminal script

1. Click the Finder icon in the Dock.
2. From the **Go** menu, choose **Go to Folder**.
3. Type "/Library/" and click Go.
4. From the **File** menu, choose **New Folder**. Name the new folder "Terminal Scripts".
5. Drag the terminal script file(s) to use into the Terminal Scripts folder.
6. Follow the steps for "How to choose the connection script".

How to choose the connection script

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **Network**.
3. Choose Internal Modem from the "Show" pop-up menu.
4. Click the PPP tab.
5. Click PPP Options.
6. Choose your connection script from the Terminal Script pop-up menu.

   Tip: If the Terminal Script pop-up menu is dimmed, click Cancel, then follow the steps for "How to install a Terminal script" above.

7. Click OK.
8. Click Apply Now.

Published Date: Feb 17, 2012

Mac OS X 10.2.4: Date Resets to 1969 or 1970 After Update

After updating to Mac OS X 10.2.4, the computer date resets to 1969 or 1970.
This article has been archived and is no longer updated by Apple.

Symptom

After updating to Mac OS X 10.2.4, the computer date resets to 1969 or 1970.

Solution

Update to Mac OS X 10.2.5 or later.

Published Date: Oct 10, 2016

Mac OS X: PPP connection fails, how to turn PPP LCP echo off

This document describes how to turn off the PPP LCP (Link Control Protocol) Echo option. You may need to do this if you can't connect to the Internet via PPP (dial-up modem).
This article has been archived and is no longer updated by Apple.
The PPP connection to the Internet is not made if a PPP server does not reply to LCP Echo packets.

This document applies to Mac OS X 10.1 or later.

Mac OS X 10.1

1. Open the Internet Connect applications.
2. Click Advanced Options.
3. Deselect "Send LCP echo packet".

Mac OS X 10.2, 10.3 or later

1. Choose Apple menu > System Preferences.
2. Choose View > Network.
3. Choose Internal Modem from the Show pop-up menu.
4. Click the PPP tab.
5. Click PPP Options.
6. Deselect "Send PPP echo packets".

Published Date: Feb 17, 2012

Mac OS X: How to change a Mail message‘s reply-to address

Learn how to change a Mail message's Reply-To address. What's that? A reply-to address is the address that your recipients' email application uses to reply to your email.
This article has been archived and is no longer updated by Apple.
Follow these steps to add a Reply-To header to your message:

1. Compose an email message.
2. From the **View** menu, choose **Reply-To Header**.
3. Type the reply-to email address in the Reply-To header. Any replies to this message will be sent to the reply-to address.

Tip: Repeat the last step for any other new email messages that you wish to do this for.
Published Date: Oct 10, 2016

Mac OS X 10.2: Check Print Queue If Documents Do Not Print

When a printer's print queue is stopped, print jobs do not print. Use Print Center to start the queue.
This article has been archived and is no longer updated by Apple.

Symptom

- When you print a document, everything seems to work, but the document never comes out of the printer.
- The printer appears in the Printer list in Print Center with a status of "stopped".
- One of these messages appears:

  "Printer's queue is stopped. Really print?" (Clicking OK does not start the print queue.)

  "Printing of jobs for this printer is stopped. Do you want to continue and restart the printing of jobs?"

Solution

Note: For best results when printing, upgrade to Mac OS X 10.2.3 or later.

Starting the print queue may allow documents to print.

Mac OS X 10.2.3 or later

1. If you see the message above, click Continue.
2. If your document does not print, follow the steps for Mac OS X 10.2.2 below.

Mac OS X 10.2 through 10.2.2

1. Open Print Center (/Applications/Utilities).
2. Choose Printers > Show Printer List.
3. Select your printer.
4. Choose Printers > Start Jobs.

Documents should now print. If not, go to step 5.

5. If the queue stops immediately after being started, check the printer and its connection to the computer. One of the following issues may keep the printer from being able to accept or complete a print job:
   - Paper feed issues
   - Ink tanks that are empty, improperly installed, or misaligned.
   - Loose connections or damaged cables.

   Consult your printer's documentation for information on isolating and correcting paper feed or ink issues.
6. Look for a status message in the Jobs window. See technical document 106714, "**Mac OS X: Troubleshooting Printing Issues**" to resolve other issues.

Related documents

25371: "**Mac OS X: Nothing Happens When Printing**"

25459: "**Mac OS X 10.2: Document Printed to Shared Printer Can't Be Deleted in Print Center**"

Published Date: Oct 10, 2016

Mac OS X 10.2.4: Unable to Establish or Maintain Dial-Up Connection

With Mac OS X 10.2.4, a dial-up (PPP) modem connection cannot be established, or is unreliable.
This article has been archived and is no longer updated by Apple.

Symptom

- When connecting to some modem servers, Internet Connect may report there is a connection, but then have difficulty establishing a connection.
- If the connection is established, Internet services such as Web browsing or email may not work.
- The connection is unexpectedly lost within a few minutes.

Solution

Update to Mac OS X 10.2.5 or later.

Related documents

106748: "**Mac OS X: Troubleshooting a Dial-Up/PPP Internet Connection**"
Published Date: Oct 10, 2016

Mac OS X 10.2: Keyboard Layout Changes to U.S. at Startup, Issues Logging In

The keyboard layout unexpectedly changes to U.S. during startup and creates issues logging in.
This article has been archived and is no longer updated by Apple.

Symptom

If you use a custom desktop picture, the keyboard layout changes to U.S. during startup. You may not be able to log in because typed characters do not match the keys on the keyboard.

Solution

Logging in

If your user name and password contains only numerals, use your keyboard's keypad to log in as expected, then go to "After logging in" below.

If you use any other character in your user name or password, refer to this U.S. keyboard layout graphic to find the equivalent keystrokes.

Figure 1 U.S. keyboard layout

After logging in

Use these steps to resolve the issue:

1. Rename the desktop picture you want to use. Be sure to include the filename extension. For example, the filename should end with ".jpg" if your picture is a JPEG file.

2. Select the image file again. For specific instructions, see technical document 106758, "**Mac OS X: How to Change Your Desktop Picture**".

Published Date: Feb 17, 2012

Mac OS X 10.2.8 or Earlier: Mail - Always Uses U.S. Date and Time Notation

Mail uses U.S. date and time notation, regardless of the Region settings in the International preference pane.
This article has been archived and is no longer updated by Apple.

Symptom

Mail always displays message dates and times using U.S. date and time notation. For example: "Wed Feb 26, 2003 5:06:16 Europe/Stockholm".

Solution

You can try this workaround to change Mail to honor the 24-hour clock format instead of the 12-hour clock format.

1. Choose Apple menu > System Preferences.
2. Choose View > International.
3. Click the Language tab (if necessary) and drag English to the top of the list.
4. Choose System Preferences > Quit.
5. Choose Apple menu > Log Out.
6. From the login panel, select or type your user name and password to log in.
7. Choose Apple menu > System Preferences.
8. Choose View > International. Click the Time tab and verify that the Time format is set to the 24-hour clock format
9. Click the Language tab and drag your preferred language to the top of the list.
10. Choose Apple menu > Log out.
11. From the login panel, select or type your user name and password to log in.
12. Mail should now honor the 24-hour clock format using your preferred language.

Note: This only changes the 12-hour clock format to the 24-hour clock format. This will not change the default US Date format used by Mail.

Published Date: Feb 19, 2012

Mac OS X 10.1.5: About the Security Update 2003-03-03

The Security Update 2003-03-03 improves security for Mac OS X 10.1.5.
This article has been archived and is no longer updated by Apple.
Important: Read Before Installing

1. To install Security Update 2003-03-03, you must enter the password for an administrator account. The password cannot contain a space or special characters typed by pressing the Option key.

   If you need to change an administrator account password, choose Apple menu > System Preferences, then choose View > Accounts. Select the account name and click Edit User. Type the current password and press Return, then type the new password in both text boxes. Click OK when you are done.

2. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Featured Software to install.

Installation

There are two ways to install this update.

Automatic Software Update Installation

Choose Apple menu > System Preferences then choose View > Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates. Mac OS X 10.1.5 is required before installing this update.

Standalone Installers

An installer is also available from Apple Featured Software (http://www.apple.com/swupdates/).

Enhancements

Resolves a security issue in sendmail in which a remote individual could gain access and control of the system. Although sendmail is turned off by default, all users should install this security update.

Published Date: Feb 17, 2012

Mac OS X: About the "Ignore Trackpad While Typing" Option

This document describes the "Ignore trackpad while typing" option in the Mouse preference pane.
This article has been archived and is no longer updated by Apple.
As you type on a PowerBook or iBook keyboard, your thumbs or palms may hover over the trackpad, occasionally touching it briefly. This may have the unintended effect of moving the pointer while typing, or, if trackpad clicking is on, moving the insertion point to a different part of your document.

Selecting the "Ignore trackpad while typing" option can prevent unintended trackpad movements. When selected, trackpad clicks, drags, and very small movements are ignored as you use the built-in keyboard.

Even when this option is selected, modifier keys (such as Option and Command), keystrokes on an external keyboard, and deliberate trackpad movements are not ignored. The trackpad button is also unaffected.
Published Date: Feb 17, 2012

Mac OS X: About the Mac OS X 10.2.5 Update

This software updates Mac OS X 10.2.4 to version 10.2.5.
This article has been archived and is no longer updated by Apple.
This information is available in:

Français | Deutsch | Español | Italiano | Nederlands | Svensk |

Important: Read Before Installing

1. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system
through other means. This precautionary statement does not apply to the normal installation of application software.

2. To install Mac OS X 10.2.5, you must enter the password for an administrator account. The password cannot contain a space or special characters typed by pressing the Option key

If you need to change an administrator account password, choose Apple menu > System Preferences, then choose View > Accounts. Select the account name and click Edit User. Type the current password and press Return, then type the new password in both text boxes. Click OK when you are done.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Featured Software to install.

4. If you are installing on a PowerBook G4 (17-inch), iMac (17-inch 1GHz), or a Power Mac G4 computer with an NVidia GeForce 4MX or NVidia GeForce 4 Titanium display card connected to an LCD display, first review technical document 25434: "**Mac OS X 10.2.5 Update: Set Display to Native Resolution Before Installing**".

Installation

There are two ways to update to Mac OS X 10.2.5: Software Update or standalone installer.

Automatic Software Update Installation

You may have been referred to this document by Automatic Software Update. For more information on this feature, see "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates (such as this one).

Standalone Installers

An installer is also available from Apple Downloads. For example, you can go there and search on "10.2.5" to find the standalone installer.

There are two versions of the standalone update installer available:

Mac OS X 10.2.5 Update updates Mac OS X 10.2.4 to the new version. This document describes how to use this installer.

Mac OS X 10.2.5 Update (Combo) updates Mac OS X 10.2 through 10.2.4 to version 10.2.5. If you need to use the Combo installer, see technical document 25406, "**Mac OS X: About the Mac OS X 10.2.5 Update (Combo)**".

Enhancements

Enhancements delivered with this update include:

Digital hub and disc burning

Bluetooth Setup Assistant now works with certain Microsoft keyboards and mouse devices.

Includes Bluetooth support for Nokia 7650 and Sony Ericsson P800 phones, allowing for pairing and implementing an Internet connection through

the phone.

Improves compatibility for discs burned with certain Panasonic consumer burners.

Adds Image Capture support for Canon EOS 10D, ZR65, and ZR 70 cameras.

Adds disc burning support for several device-LaCie d2 DVD Multi U&I Drive and d2 CD-RW 52x24x52x, Visual Frontier COHH-B1-A48 and COSP-B1-C24, MacPower Cold Chisel 24x12x24x8x, and these BUSlink devices: FW5252FM FireWire 52x24x52x CD-RW drive, FW4848FM FireWire 48x12x48x CD-RW Drive, RW4040FM FireWire 40x12x40 CD-RW Drive.

Networking and Internet

Addresses an issue in which domain name lookups could fail if the DNS server responded with a very large reply packet.

Improves the way that LDAPv3 connections time out when idle.

Addresses a potential data loss issue that could occur when copying certain files to an SMB volume.

Addresses issues with Internet Sharing when certain types of DSL or cable modem connections are shared.

Improves security by resolving an issue in which a guest could gain read access to the contents of a shared Drop Box folder remotely.

The Internet preference pane can now store .Mac passwords that are up to 32 characters long.

Addresses an issue in which some Apple internal modems could not establish or maintain a connection to certain Scandinavian Internet service providers.

For client AFP connections, it is no longer necessary to configure Windows 2000 Share Points to be owned by an administrator group.

Other

Improves Mail's selection of character encoding for messages sent in these languages: Arabic, Bulgarian, Greek, Hebrew, Hungarian, Icelandic, Polish, Romanian, Russian, Thai, Turkish, Ukrainian.

Improves Mail responsiveness for accounts configured with multiple POP servers, when the servers are unavailable.

Addresses an issue in which an application could unexpectedly quit when printing, if /tmp was missing or unavailable.

Addresses an issue in which a damaged GIF file, such as a website graphic, could cause an application to unexpectedly quit.

Addresses an issue in which certain PICT graphics could not be displayed.

Addresses an issue in which the date may unexpectedly be set to 1969 or 1970 during startup.

Addresses an issue when using the Hanin input method for Traditional Chinese in which Carbon applications could unexpectedly quit if a modifier key (such as Control) was pressed when no text insertion point was available.

Addresses an issue in which Classic does not start ("Error 1016") when applications are restricted to accounts that are not administrator accounts.

Addresses an issue in which the Classic environment could become unresponsive after placing a Classic application's save confirmation dialog box in the background.

Addresses an issue in which using the Command-Option-Shift-Q keyboard shortcut would immediately quit the Classic environment.

Improves the reliability of AppleEvents traffic (inter-application communication) between software open in the Classic environment and native Mac OS X; addresses an issue in which a user might not be able to log out after using a Mac OS 9 version of America Online (AOL).

Address Book now supports the Siemens S55 phone.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

TA22265_Mac_OS_X_About_the_Mac_OS_X_Update.pdf

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.

Published Date: Oct 10, 2016

Mac OS X: About the Mac OS X 10.2.5 Update (Combo)

This software updates Mac OS X 10.2 or later to version 10.2.5.
This article has been archived and is no longer updated by Apple.

Important: Read Before Installing

1. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system
through other means. This precautionary statement does not apply to the normal installation of application software.

2. To install Mac OS X 10.2.5, you must enter the password for an administrator account. The password cannot contain a space or special characters typed by pressing the Option key

If you need to change an administrator account password, choose Apple menu > System Preferences, then choose View > Accounts. Select the account name and click Edit User. Type the current password and press Return, then type the new password in both text boxes. Click OK when you are done.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Featured Software to install.

4. If you are installing on a PowerBook G4 (17-inch), iMac (17-inch 1GHz), or a Power Mac G4 computer with an NVidia GeForce 4MX or NVidia GeForce 4 Titanium display card connected to an LCD display, first review technical document 25434: "**Mac OS X 10.2.5 Update: Set Display to Native Resolution Before Installing**".

Installation

There are two ways to update to Mac OS X 10.2.5.

Automatic Software Update Installation

You may have been referred to this document by Automatic Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

Standalone Installers

The Mac OS X 10.2.5 Update (Combo) standalone installer updates Mac OS X 10.2 through 10.2.4 to version 10.2.5. This installer is available from Apple Featured Software (http://www.apple.com/swupdates/).

Enhancements Delivered with this update

Many enhancements are delivered with this update. Because this is a combo update, it also includes those delivered with Mac OS X 10.2.1, 10.2.2, 10.2.3, and 10.2.4. Enhancements are listed individually in these technical documents:

25405: "**Mac OS X: About the Mac OS X 10.2.5 Update**"
107362: "**Mac OS X: About the Mac OS X 10.2.4 Update**"
107263: "**Mac OS X: About the Mac OS X 10.2.3 Update**"
107140: "**Mac OS X: About the Mac OS X 10.2.2 Update**"
107036: "**Mac OS X: About the Mac OS X 10.2.1 Update**"

Published Date: Oct 10, 2016

Mac OS X: About Third-Party Printer Compatibility

This document provides links to Mac OS X compatibility information about Brother, Canon, Epson, Hewlett-Packard (HP), and Lexmark printers.
This article has been archived and is no longer updated by Apple.

About third-party printers

Click the links below for information about specific brands of printers.

Brother (http://www.brother.com/E-ftp/macosxstate.htm)

Canon (http://www.usa.canon.com/html/conCprSupport.jsp?type=osx)

Epson (http://support.epson.com/webadvice/wa0301.html)

HP (http://welcome.hp.com/country/us/en/support.html)

Lexmark (http://www.lexmark.com/)

Xerox (http://www.office.xerox.com/perl-bin/opb_drivers.pl)

About third-party printer drivers

Some printer modules (drivers) are already included with Mac OS X. Some printers only work with certain versions of Mac OS X. Some drivers for Mac OS X may not include the same features as drivers for Mac OS 9.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.
Published Date: Oct 10, 2016

Mac OS X 10.2: Java 1.4.1 Frequently Asked Questions (FAQ)

This document contains frequently asked questions (FAQ) about Java 1.4.1, with answers to those questions.
This article has been archived and is no longer updated by Apple.

Questions answered in this document:

1. Does Java 1.4.1 replace Java 1.3.1?
2. Which version of Java does Safari (Beta) use?
3. Does my third-party Web browser support Java 1.4.1?
4. Do existing Java applications start using Java 1.4.1 automatically?
5. Which version of Java do JAR files use?

Question 1: Does Java 1.4.1 replace Java 1.3.1?

Answer: The Java 1.4.1 Update adds Java 1.4.1 to Mac OS X. It does not replace Java 1.3.1. Both versions exist simultaneously to preserve backward compatibility for applications and services that rely on prior versions.

Question 2: **Which version of Java does Safari (Beta) use?**

Answer: The beta version of Safari uses Java 1.4.1, if it is installed.

Question 3: **Does my third-party Web browser support Java 1.4.1?**

Answer: If you use a Web browser released prior to Java 1.4.1 (which was released 2003-03-10), it may not use Java 1.4.1. For compatibility information, contact the software publisher.

Question 4: **Do existing Java applications start using Java 1.4.1 automatically?**

Answer: Existing applications that do not specify a runtime-choosing logic, or that specify Java 1.3.1, continue to use Java 1.3.1. Check with the application's publisher for more information.

Question 5: **Which version of Java do JAR files use?**

Answer: JAR files opened from the Finder use Java 1.4.1.

Note: If your JAR file must use Java 1.3.1, use the following advanced steps to open it:

1. Open Terminal (/Applications/Utilities).
2. Type:

```
/System/Library/Frameworks/JavaVM.framework/Versions/1.3.1/Home/bin/java -jar
```

Important: Leave a space following "-jar" but do not press Return yet.

4. Locate the JAR file in the Finder.
5. Drag the JAR file's icon to the Terminal window to automatically enter the file's path.
6. In Terminal, press Return.

Related documents

25367: "**Mac OS X: About the Java 1.4.1 Update**"

Published Date: Oct 10, 2016

Mac OS X 10.2, 10.3 (Spanish): Modem Unable to Connect, Default Modem Is Not Apple Internal Modem

If Spanish is the selected as the preferred language in Mac OS X 10.2 to 10.3.9, the internal modem script for certain computers may be incorrectly set to "3Com Impact Analog 14.4".
This article has been archived and is no longer updated by Apple.

Symptom

- The Apple internal modem disconnects during negotiation or shortly after the connection is made.
- The Apple internal modem only connects at 38.4 kbit/s.

Solution

1. Choose Apple menu > System Preferences.
2. Choose View > Network.
3. Choose Internal Modem from the Show pop-up menu.

   Note: If the Internal Modem item does not appear in the Show pop-up menu, choose Active Network Ports instead, then select the Internal Modem option.

4. Click the Modem tab.
5. Change the default modem script to Apple Internal 56K Modem (v.90).
6. Click Apply Now.

This document will be updated as more information becomes available.

Related documents

106748: "**Mac OS X: Troubleshooting a Dial-Up/PPP Internet Connection**"

Published Date: Oct 10, 2016

iMac, iBook: How to Reinstall World Book Software

Learn how to reinstall World Book software, included with certain iMac, eMac, and iBook computers. You cannot install it from the World Book Media CD.

This article has been archived and is no longer updated by Apple.

World Book Encyclopedia software cannot be reinstalled from the World Book Media CD. When you open this disc, a window appears with a folder named "INFO_DAT". The World Book 2003 Edition Media CD window also displays these folder aliases: "Launch World Book" and "Open World Book Folder". Clicking either of these results in an alert with this message:

> "Cannot Find World Book. The World Book may have been deleted, may not have been installed, or may have been moved to a location that you cannot access."

This happens when using:

- World Book Encyclopedia Mac OS X Edition
- World Book 2003
- eMac
- iBook computers that come with Mac OS X 10.1 or later:
  - iBook (Opaque 16 VRAM)
  - iBook (32 VRAM), iBook (14.1 LCD 32 VRAM)
  - iBook (14.1 LCD 16 VRAM)
  - iBook (14.1 LCD)
  - iBook (Late 2001)
  - iBook (Dual USB)
- iMac computers that come with Mac OS X 10.1 or later:
  - iMac (Flat Panel)
  - iMac (17-inch Flat Panel)
  - iMac (17-inch 1GHz)
  - iMac (Summer 2001)

The World Book Media CD is used for animations and videos displayed by the World Book application. It is not used to install World Book software. Use the Software Restore discs or DVD that came with your computer to install this software.

Note: Not all iMac (Summer 2001) computers included Mac OS X 10.1 and World Book software.

Related documents

61802: "**Macintosh: How to Restore Your Apple Software**".
25380: "**Mac OS X 10.2: Restore DVD - How to Install Individual Third-Party Software Items Without Erasing**"
25638: "**Mac OS X 10.3: World Book 2003 Unexpectedly Quits When Opening**"

Published Date: Feb 20, 2012

Mac OS X: DVD Player Distortion or Discoloring at Edge of Frame

With some DVD-Video discs you may notice a narrow distortion or discoloring at the left or right edge of the picture.
This article has been archived and is no longer updated by Apple.

Symptom

A narrow distortion or discoloration ("encoding artifact") appears at the left or right edge of the picture. For example, you may see a faint green line on the right side, or a thin, blurred line during motion.

Products Affected

- DVD Player for Mac OS X

Solution

This is expected behavior because Apple DVD Player displays the entire video frame. The same issue can occur with a set-top DVD player that is connected to a television set that shows the entire picture. Many television sets "overscan" the video so that the outermost edges of the picture are not visible.
Published Date: Feb 17, 2012

Mac OS X: "Wake for Network Administrator Access" Option Is For Ethernet Only

The option "Wake for network administrator access" (also known as "wake on LAN" or "using a magic packet") in the Energy Saver preference pane only works for Ethernet ports.

This article has been archived and is no longer updated by Apple.

In Mac OS X 10.0 through 10.2.8, the option "Wake for network administrator access" (also known as "wake on LAN" or "using a magic packet") in the Energy Saver preference pane only works for Ethernet ports. This is expected behavior. This option does not allow the computer to "wake" for network traffic directed to an AirPort Card or to a modem. The "Wake on ring" option provides a similar feature for modem activity.

Note: You can select this setting even if all Ethernet port configurations are deselected in the Network preference pane.

Published Date: Feb 17, 2012

Mac OS X 10.2: "HeaderOfDallasPartialInsert" Message

This document describes the causes of a potential "HeaderOfDallasPartialInsert" alert message (that is, "Header Of Dallas Partial Insert" without spacing).
This article has been archived and is no longer updated by Apple.

Symptom

As the computer starts up, or after connecting Apple Pro Speakers, this message appears:

> "HeaderOfDallasPartialInsert
> StringOfDallasPartialInsert
> ButtonOfDallasPartialInsert"

The Console utility may show messages such as:

> "locals-Computer mach_kernel: The device plugged into the Apple speaker mini-jack cannot be recognized."
> "locals-Computer mach_kernel: Remove the plug from the jack. Then plug it back in and make sure it is fully inserted."

Solution

The alert appears if the speakers' connector is not completely inserted into the port.

1. Disconnect and reconnect the speakers. Make sure to push the connector completely into the speaker port.
2. Click "ButtonOfDallasPartialInsert".

This document will be updated as more information becomes available.
Published Date: Feb 17, 2012

Macintosh: Using your mobile phone as a wireless modem

Did you know you can use a mobile telephone as a wireless modem? If your phone and computer can connect over IrDA or Bluetooth, you're well on your way.

This article has been archived and is no longer updated by Apple.

You can connect your Macintosh to the Internet using a GPRS (General Packet Radio Service) mobile telephone as a modem. To do so, you should first make sure that you can:

- Connect to the Internet over GPRS using the WAP browser in your telephone
- Connect your Macintosh to your mobile phone over IrDA or Bluetooth.

Once you can do these two things, you can set up your computer to use the telephone as a wireless modem to connect to the Internet.

Important: GPRS data services and Internet access are typically optional offerings. Ask your mobile phone operator about GPRS availability in your area, and what the subscription fees and service charges are.

For more information, see How to Connect to the Internet Using a GPRS Mobile Telephone.

Using your mobile phone as a wireless modem

Once you have made the appropriate network settings on your Mac, you can use your mobile phone as a wireless modem.

1. Ask your mobile phone operator for the network settings necessary to use your GPRS mobile phone as a modem. In some cases, you'll use the same network settings that your phone uses. In others, you may need to get network settings specific for computers. Typically, these settings include:
    - GPRS dial-up number
    - User ID
    - Password
    - IP Address
    - DNS Address
    - other advanced settings such as authentication, data compression, header compression, and quality of service
2. From the **Apple** menu, choose **System Preferences**.
3. From the **View** menu, choose **Network**.
4. Choose New Location from the Location pop-up menu.
5. Type a name for the new location such as "Wireless Modem".
6. Choose "Network Port Configurations" from the Show pop-up menu.
7. Make sure the "USB Bluetooth Modem Adapter" is enabled. Deselect the ports or interfaces you aren't using in this location, such as "Built-in Ethernet", and "Internal Modem".
8. Click Apply Now.
9. Choose "USB Bluetooth Modem Adapter" from the Show pop-up menu.
10. Click the TCP/IP tab, if necessary. Choose "Using PPP" from the configure pop-up menu, and enter the DNS numbers and search domains as provided by your mobile phone operator.
11. Click the PPP tab, and enter the account name, password, and telephone number as provided by your mobile phone operator.
12. Click PPP Options. A sheet appears. Click "Use TCP header compression" to disable this option, and click OK. Your operator may be able to tell you if you can leave this option turned on or not.
13. Click the Bluetooth Modem tab, and choose a mobile phone model that closely resembles yours from the Modem pop-up menu. In some cases, your mobile phone operator may provide a specific modem script for you to use.
14. Click Apply Now.
15. From the **View** menu, choose **Bluetooth**.
16. Click the Settings tab, and select "Show Bluetooth status in the menu bar" to enable that option, if necessary.
17. Make your mobile phone "discoverable" to other Bluetooth devices, or turn on Bluetooth communication. See the documentation that came with your phone for instructions.
18. Choose "Search for phones" from the Bluetooth menu bar item, and select your phone, which you have already paired.
19. Once your phone and Mac are connected, open the Internet Connect application.
20. Click connect. Your telephone should connect to your mobile phone operator, and in 10 to 20 seconds, you should be able to use the Internet.

Related documents

25419: "Macintosh: How to Connect Your Mac to Your Mobile Phone"

Published Date: Feb 19, 2012

Apple Remote Desktop 1.2: How to Migrate Client Computers From Network Assistant

This document describes how to migrate Network Assistant clients to Apple Remote Desktop. Apple Remote Desktop works with systems as early as Mac OS 8.1.
This article has been archived and is no longer updated by Apple.
Apple Remote Desktop provides capabilities similar to Network Assistant. From a Mac OS X system, you can manage client computers that have these operating systems:

- Mac OS 8.1 to 9.2.2
- Mac OS X 10.1 or later

In a migration scenario, it is assumed that you have:

- A computer with Network Assistant administration software installed.
- A computer with Apple Remote Desktop administration software installed.
- At least one computer with Network Assistant client software installed that is being managed by Network Assistant.

Follow these steps to migrate your Network Assistant Clients to Apple Remote Desktop:

1. On the computer with Network Assistant administration software, insert the Apple Remote Desktop CD and navigate to the following location:

   <Language>/Mac OS 8.1-9.2/Remote Desktop Parts

   Language can be English, German, French or Japanese. You'll see two files: Remote Desktop Security and Remote Desktop Startup.

2. Open Network Assistant.
3. Select the computers that you want to update from Network Assistant to Apple Remote Desktop.
4. Drag the Remote Desktop Security file onto the list of computers. You will be prompted to specify a location to copy the file to. Select either one of the predefined locations or a different location, then copy the file.
5. Drag the Remote Desktop Startup file onto the list of computers. You will be prompted to specify a location to copy the file to. Select the Extensions folder and then copy the file.
6. Next, with all the same computers still selected, choose Manage > Restart, followed by the restart immediately option. Your client computers will immediately restart, and the clients will automatically restart a second time.
7. Once they have restarted, go to the computer that has Apple Remote Desktop administration software. Choose Setup > Computers, and start adding the former Network Assistant computers. The password will be the same as they were for Network Assistant. Likewise, the computers will have the same preferences set in Apple Remote Desktop that they had in Network Assistant.

Published Date: Oct 10, 2016

Mac OS X 10.2, 10.3, 10.4: How to protect system files used by the Classic environment

This document explains how to prevent system files and local applications used by the Classic environment from being disabled, moved, renamed, or deleted by users that do not have administrative privileges. You do this by restricting file system permissions on the Classic System Folder and the Applications (Mac OS 9) folder. This is an advanced document.
This article has been archived and is no longer updated by Apple.
In Mac OS X 10.2.4 or later, advanced users can set permissions for files used by the Classic environment. By setting these permissions, you can "protect" system files and local applications used by the Classic environment from being disabled, moved, renamed, or deleted by users that do not have administrative privileges. Users who have an administrator account (members of the admin group) will still have access to these files.

Even after taking these precautions, Classic applications will be able to write into the System Folder used by Classic, but not the "Applications (Mac OS 9)" folder. A scenario in which this could lead to an issue would be a malicious user intentionally saving a document in the System Folder, overwriting an existing system file with the same name.

Determine whether protection already exists (optional)

To verify whether permissions are set correctly, follow these steps. This is an optional section.

1. Select the Mac OS 9 System Folder used by Classic.
2. Choose File > Get Info.
3. Expand "Ownership & Permissions".

Permissions are set correctly, and you do not need to use this document if the permissions on the System Folder are:

Owner: system
Access: Read & Write
Group: admin
Access: Read & Write
Others: Read only

Tip: If you use Terminal instead, correct permissions on System Folder would appear as "drwxrwxr-x root admin".

If permissions appear differently, follow the steps below.

Set permissions for Classic environment files

Mac OS X 10.2 through 10.2.8

1. Make sure the Mac OS 9 System Folder and "Applications (Mac OS 9)" folder used by Classic are located at the root directory ("/") of the Mac OS X volume. Also, make sure these folders use their default names: "System Folder" and "Applications (Mac OS 9)"
2. Update to Mac OS X 10.2.4 or later.
3. Log in with an administrator account. Open Terminal (/Applications/Utilities).
4. Execute the following commands in Terminal:

```
sudo chown -R root:admin '/System Folder' '/Applications (Mac OS 9)'
sudo chmod -R ug+rw,o-w,a-x,a+X '/System Folder' '/Applications (Mac OS 9)'
```

You may now stop here. If you wish to further enhance security, you can configure Classic to use preferences from each user's home folder by following the optional steps below in "Configure Classic to use preferences from your home folder (optional)".

Mac OS X 10.3 or later

Open Disk Utility (/Applications/Utilities) and from the **File** menu choose **Fix OS 9 Permissions** feature.

This will set the proper permissions on System Folder that's currently selected in Classic preferences.

You may now stop here. If you wish to further enhance security, you can configure Classic to use preferences from each user's home folder by following the optional steps below.

Configure Classic to use preferences from your home folder (optional)

Mac OS X 10.3 Panther

See "Setting up Classic for multiple users".

Mac OS X 10.2 through 10.2.8

Follow these steps to allow Classic to use preferences from your home directory in order to protect these files.

If you do not use Managed Client for Mac OS X

1. Choose Apple Menu > System Preferences.
2. Choose View > Classic.
3. Click the Advanced tab.
4. Configure Classic to use preferences from the user's home folder. For instructions and more information, see "Mac OS X 10.2: About the Classic 'Use Preferences From Home Folder' Feature"
5. Quit System Preferences.
6. For enhanced security, these steps may be repeated for each user account.

If you use Managed Client for Mac OS X

1. Open Workgroup Manager.
2. Choose Workgroup Manager > Preferences.
3. Click Users, Groups, or Computers, then Classic, then Advanced.
4. Choose Always from the "Manage these settings" pop-up menu.
5. Select the "Use preferences from home folder" option.

This forces preference redirection for all users who do not have an administrator account. For each administrator account, follow the steps above for "If you do not use Managed Client for Mac OS X".
Published Date: Feb 17, 2012

Mac OS 9.2: PowerBook G3 (Bronze Keyboard) Not Available to Host in SCSI Disk Mode

PowerBook G3 (Bronze Keyboard) computers with Mac OS 9.2, 9.2.1, or 9.2.2 may unexpectedly use SCSI ID 0 when starting in SCSI Disk Mode. The PowerBook hard disk will not appear or be available to the host computer because the internal SCSI hard drive also uses SCSI ID 0.

This article has been archived and is no longer updated by Apple.

Symptom

The PowerBook unexpectedly uses SCSI ID 0 when starting up in SCSI Disk Mode and does not appear on, or become available to, the host computer.

Products Affected

- PowerBook G3 (Bronze Keyboard)
- Mac OS 9.2 through 9.2.2

Solution

Prior to starting up in SCSI Disk Mode, use the PowerBook SCSI Setup control panel and set the SCSI ID to 6. This will result in the PowerBook using SCSI ID 5 instead of 0. The hard disk will be available to the host computer as long as SCSI ID 5 is not in use by another device in the SCSI chain.

Important: Only SCSI ID 6 may be used as a workaround.

Related documents

50452: "**Mac OS 9: How to Use Your PowerBook as an External Hard Disk**"

Published Date: Feb 20, 2012

Mac OS X: Opening and saving files on the Mac OS 9 desktop

Items on the Mac OS 9 desktop are kept in a folder named Desktop Folder, which is usually hidden. If you install Mac OS X and Mac OS 9 on the same disk, the Desktop (Mac OS 9) folder appears on your Mac OS X disk so you can see items on the Mac OS 9 desktop.
This article has been archived and is no longer updated by Apple.
To open the folder in the Finder, double-click the Desktop (Mac OS 9) icon.

To open the folder when you save or open a document in a Mac OS X application, open Desktop (Mac OS 9) from the Open or Save dialog.

To open the Desktop Folder when you save or open a file from a Mac OS 9 application, click the Desktop button or choose Desktop from the pop-up menu in the Open or Save dialog.

Items on your Mac OS X desktop are kept in the Desktop Folder in your home.

Your computer will only start up in Mac OS X if Mac OS 9 is not available as a startup disk. To see your available startup disks, check the Startup Disk pane of System Preferences. You can still use most Mac OS 9 applications in the Classic environment of Mac OS X by opening the Classic pane of System Preferences and clicking Start, or simply double-clicking the application icon.

Note: The information is this document comes from Mac OS X Help, the help system included with your computer. It is based on Mac OS X 10.2. If a different version is installed on your computer, choose Mac Help from the Help menu. Updated and expanded information may also be available in other Knowledge Base documents.

Published Date: Feb 17, 2012

Mac OS X 10.2: Archive and Install, "Preserve Users and Network Settings" Is Dimmed

The Archive and Install option "Preserve Users and Network Settings" can become dimmed ("grayed out") if you click the Go Back button after passing the "Select a Destination" window.
This article has been archived and is no longer updated by Apple.

Symptom

The Archive and Install option "Preserve Users and Network Settings" is dimmed.

Solution

At the "Select a Destination" window, if another volume is available, select it, then reselect the original destination volume.

If another volume is not available, restart. Do not click the Go Back button after passing the "Select a Destination" window.
Published Date: Feb 17, 2012

Mac OS: "Already Connected to" Message Appears When Connecting to Another Computer

This document explains how to resolve an issue that may occur when you connect to a Mac OS 9-based computer via file sharing. You may be unable to connect to the computer, and an inaccurate "Already Connected to" message may appear.
This article has been archived and is no longer updated by Apple.

Symptom

Connecting to one Mac OS 9 computer works as expected, but when you try to connect to another Mac OS 9-based computer via file sharing over IP, a message appears that you are already connected to the computer.

Example: Computer A (using Mac OS X) is connected to Computer B (using Mac OS 9) via file sharing over IP. Computer A then tries to connect to Computer C (using Mac OS 9) via IP, but it is unable to because an alert appears that it is already connected to Computer B.

Solution

This issue occurs when a Mac OS 9 Users & Groups Data File is copied from one computer to another, and used by both. Follow these steps on one of the Mac OS 9-based computers:

1. Turn off file sharing.
2. Delete the Users & Groups Data File (in the Preferences folder of the Mac OS 9 System Folder).
3. Use the File Sharing control panel to recreate the users and groups.
4. Turn on file sharing.

The Users & Groups Data File contains the list of user and group accounts on a Mac OS 9 computer. It also contains data that serves as a "unique identifier" for the computer when file sharing via IP is on. If this file is copied between two computers, they will appear to be the same to Mac OS 9 and Mac OS X clients.

Related documents

106461: "**Mac OS X: File Sharing**"
106657: "**Mac OS 8, Mac OS 9: File Sharing**"
106658: "**Macintosh: How to Create a Small Ethernet Network**"
Published Date: Oct 10, 2016

Mac OS X 10.2: Mail - Messages in Trash Mailbox Unexpectedly Deleted After Seven Days

Some email messages in the Trash mailbox (messages originally deleted from the "On My Mac" section) are deleted after seven days, even though one or more email accounts are configured to delete messages after a longer period.
This article has been archived and is no longer updated by Apple.

Symptom

Email messages are deleted after seven days despite configuring the mailbox to delete after a longer period of time.

Mailboxes that are not in the On My Mac section, including the non-On My Mac In, Drafts, Trash, Sent and Junk mailboxes, are not affected.

Solution

Messages that are moved to a mailbox in the "On My Mac" section of the mailbox list do not respect the Special Mailboxes "Erase deleted messages" preference. If you drag a message to the Trash from a mailbox's "On My Mac" section, it will be deleted after seven days.

Use the following advanced workaround if you would like:

1. Open Terminal (/Applications/Utilities).

2. Type the following, depending on the settings you prefer:

    To never empty the Trash for deleted "On My Mac" messages, type:

    ```
    defaults write com.apple.mail NumberOfDaysToKeepTrash -1
    ```

    To erase "On My Mac" messages that are in the Trash when quitting, type:

    ```
    defaults write com.apple.mail NumberOfDaysToKeepTrash 0
    ```

    To erase "On My Mac" messages that are in the Trash and older than one week, type:

    ```
    defaults write com.apple.mail NumberOfDaysToKeepTrash 7
    ```

    Note: This is the default behavior, but it is presented here in case you wish to revert to this setting after using a different one.

    To erase "On My Mac" messages that are in the Trash and older than one month, type:

    ```
    defaults write com.apple.mail NumberOfDaysToKeepTrash 30
    ```

3. Press Return.

Published Date: Oct 10, 2016

Mac OS X: Indian (Hindi) Fonts - How to Input Half Characters, Ligature

This document explains how to input half characters, forms, and ligature when using Indian fonts such as Devanagari.
This article has been archived and is no longer updated by Apple.
To generate half forms and ligatures, type the full form of a character followed by the Halant key. The half form will be used if there is another consonant after the Halant.

Note: The Halant key is the D key on Devanagari keyboards and the F key on Devanagari-QWERTY keyboards.

Example: To type "namaste", the key sequence on the Devanagari keyboard would be: V-C-M-D-L-S. After you type L, you will see the half form of the character SA.
Published Date: Feb 17, 2012

Mac OS X 10.2.5 Update: Set Display to Native Resolution Before Installing

On certain computers, you should set the Displays preferences to the native resolution before installing the Mac OS X 10.2.5 Update. If you do not, temporary video issues may occur when the computer wakes from sleep.
This article has been archived and is no longer updated by Apple.

Symptom

After updating to Mac OS X 10.2.5 and waking the computer from sleep, the image on the built-in or external display appears garbled.

Solution

To avoid this issue, set the Displays preferences to the native resolution for your display. The native display resolution the PowerBook G4 (17-inch) and iMac (17-inch 1GHz) computers is 1440x900.

The native resolution for LCD displays connected to a Power Mac G4 vary depending on the model of the display. Typically, the native resolution is the highest resolution available in the Displays preference pane.

If you did not take this precaution before installing the Mac OS X 10.2.5 Update and you see garbled video after waking the computer from sleep, follow
these steps:

1. Restart the computer.

   Important: If you cannot see on-screen video to do this, press the keyboard power key, then press the Return key. After the computer shuts down, start up again.

2. Choose Apple menu > System Preferences.
3. Choose View > Displays.
4. Select a different resolution.
5. Choose Apple menu > Restart, and click Restart.
6. After the computer restarts, you can switch back to the original resolution and the symptom will not recur.

Note: As an alternative to steps 2-5, you may reset PRAM by pressing the Command-Option-P-R keys combination as the computer starts up, until you hear a second startup chime. This restores certain system settings to their default values. For more information, see technical document 86194: "**Mac OS X: What Is Stored in PRAM?**".

Published Date: Oct 10, 2016

Mac OS X 10.2: Modem - "Could not Open the Communications Device" Message (Bluetooth)

A "Communications Device" message may appear when you try to use a Bluetooth-compatible computer's internal modem.
This article has been archived and is no longer updated by Apple.

Symptom

The message "Could not open the communications device" when you try to connect to the Internet with the internal modem.

Solution

If you do not use a Bluetooth-compatible mobile phone for Internet access

1. Choose Apple Menu > System Preferences.
2. Choose View > Network.
3. Choose Network Port Configurations from the Show pop-up menu.
4. Deselect "USB Bluetooth Modem Adapter".
5. Click Apply Now.
6. Open Internet Connect (/Applications).
7. Choose Internal Modem from the Configure pop-up menu if it is not already chosen.

If you use both a Bluetooth-compatible mobile phone and the internal modem for Internet access

Be sure you first choose the appropriate device from the Internet Connect Configure pop-up menu.

Related documents

106575: "**Mac OS X 10.2: Modem Unable to Dial, 'could not open the communications device' Alert**"

Published Date: Oct 10, 2016

Mac OS X 10.2.5: Some USB hubs may cause kernel panic

With Mac OS X 10.2.5, some USB hubs may cause a kernel panic a few minutes after starting up. Mac OS X 10.2.6 or later addresses the issue

This article has been archived and is no longer updated by Apple.

Solution

Download and install Mac OS X 10.2.6 or later.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

Mac OS X 10.2.5 Update: Address Book Does Not Open After Updating Mac OS X 10.2.4

After updating to Mac OS X 10.2.5 from Mac OS X 10.2.4, Address Book may fail to open if the application was previously moved out of the Applications folder.

Note: This document applies to Address Book only; other Apple applications are not affected.
This article has been archived and is no longer updated by Apple.

Symptom

Address Book does not open after updating from Mac OS X 10.2.4 to 10.2.5; a message appears "The operation could not be completed. An unexpected error occurred (error code 1000)."

Address Book's icon (in /Applications) is blank (generic).

Solution

1. Delete the Address Book application (which has a blank icon) from the Applications folder.
2. Move the original Address Book application back into the Applications folder.
3. Install the Mac OS X 10.2.5 Update (MacOSXUpdate10.2.5.pkg) again.

Important: If Software Update was originally used to update to Mac OS X 10.2.5 from Mac OS X 10.2.4 but you did not save the file "MacOSXUpdate10.2.5.pkg", download the standalone installer from Apple Featured Software (http://www.info.apple.com/support/downloads.html).

Published Date: Oct 10, 2016

Mac OS X 10.2: Applications, Utilities Sometimes Take Longer Than Expected to Open

This document discusses how to resolve an issue in which applications may sometimes take longer than expected to open (they "bounce" on the Dock for longer than expected) after changing locations or networks (including wireless networks).

Note: After the application opens once in the current location, it may open in the time expected until the location or network changes.
This article has been archived and is no longer updated by Apple.

Symptom

Applications take longer than expected to open after changing locations or networks.

The console log, under the Apple System Profiler Logs tab, may include alerts such as:

"netinfodlocal: unable to bind to parent - RPC: Timed out"

"NetInfo connection failed for server 127.0.0.1/local"

Solution

Note: You should not use this solution if you rely on NetInfo services. If you are unsure, contact your network administrator.

1. Open Directory Access (/Applications/Utilities).
2. Authenticate if necessary.
3. Deselect NetInfo.
4. Click Apply.

If the issue persists, you can try this advanced solution:

1. Open Terminal (/Applications/Utilities).
2. Type: `update_prebinding -root /`
3. After the operation finishes, quit Terminal.

For additional troubleshooting, refer to technical document 25392: "**Mac OS X Troubleshooting: How to Isolate an Issue**".

Related documents

107199: "**Mac OS X: If Your Computer Stops Responding, 'Hangs', or 'Freezes'**"

Published Date: Oct 10, 2016

Mac OS X: Mail - Messages are unexpectedly returned, undeliverable, or remain in Out Box

Address Book entries that contain commas prevent Mail messages from being delivered to the contact's email address; the message remains in the Out box and an alert appears: "The server failed to recognize any of the recipients".

This document applies to Mac OS X 10.0 through 10.2.8.

This article has been archived and is no longer updated by Apple.
Mac OS X Mail allows you to send a message to multiple recipients by placing a comma between addresses entered in the To field. Because of this, you should avoid using commas in Address Book entries. For example, do not use "Doe, John" as the First Name of an Address Book contact (vCard). Instead, you should fill in both an entry's First and Last Name fields.

If you prefer to browse Address Book addresses in a Last Name, First Name format:

1. Open Address Book.
2. Select the card(s) that you wish to view in this manner.
3. Select Card > Swap First/Last Name.

Alternatively, you may use a character other than a comma (for example, "Doe_John") in Address Book fields.

Related documents
61155: "Mac OS X Mail: How to Send an Email to Several People"

Published Date: Oct 10, 2016

Mac OS X: About the Mac OS X 10.2.6 Update

This software updates Mac OS X 10.2.5 to version 10.2.6.
This article has been archived and is no longer updated by Apple.
This information is available in:

Français | Deutsch | Español | Italiano | Nederlands | Svensk |

Important: Read Before Installing

1. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

2. To install Mac OS X 10.2.6, you must enter the password for an administrator account. The password cannot contain a space or special characters typed by pressing the Option key.

If you need to change an administrator account password, choose Apple menu > System Preferences, then choose View > Accounts. Select the account name and click Edit User. Type the current password and press Return, then type the new password in both text boxes. Click OK when you are done.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Featured Software to install.

Installation

There are two ways to update to Mac OS X 10.2.6.

Automatic Software Update Installation

You may have been referred to this document by Automatic Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installers

An installer is also available from Apple Featured Software (http://www.apple.com/swupdates/).

There are two versions of the update installer available. Mac OS X 10.2.6 Update updates Mac OS X 10.2.5 to the later version. This document describes how to use this installer.

Mac OS X 10.2.6 Update (Combo) updates Mac OS X 10.2 through 10.2.5 to version 10.2.6. If you need to use the Combo installer, see technical document 25449, "**Mac OS X: About the Mac OS X 10.2.6 Update (Combo)**".

Enhancements

The following are some of the enhancements delivered with the Mac OS X 10.2.6 Update:

- Addresses an issue for Mac OS X 10.2.5 in which a kernel panic message may appear if certain USB hubs or devices are connected.
- Improves printing compatibility for PostScript OpenType fonts.
- Improves compatibility for Maya Auto Paint and Paint Effects features.
- Addresses an issue for Mac OS X 10.2.5 in which English is the default language and Asian language scripts are not available in the International preference pane if a script's font is not available.
- Improves compatibility for MacSoft Unreal Tournament 2003 on computers with GeForce 2MX and GeForce4MX graphic accelerator chipsets.
- Address Book now supports the Sony Ericsson T610 phone.
- Addresses an issue for Mac OS X 10.2.5 in which a file could appear damaged after copying via an AFP sharepoint, unless it was moved to a local volume after copying.
- Addresses an issue for Mac OS X 10.2.5 in which an authenticated connection to a Microsoft Windows 2000 server is not made if Microsoft UAM 1.0.2 is installed.
- Addresses an issue in which a kernel panic could occur after reinserting an ejected PC card, after the computer wakes from sleep.

- Addresses an issue in which certain bitmat fonts could not be printed to a PostScript printer via the LaserWriter 8 compatibility path.
- Resolves an issue in which iTunes 4 display fonts may not be anti-aliased as expected.

Published Date: Oct 10, 2016

Mac OS X: About the Mac OS X 10.2.6 Update (Combo)

This software updates Mac OS X 10.2, 10.2.1, 10.2.2, 10.2.3, 10.2.4, or 10.2.5 to version 10.2.6.
This article has been archived and is no longer updated by Apple.
Important: Read Before Installing

1. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

2. To install Mac OS X 10.2.6, you must enter the password for an administrator account. The password cannot contain a space or special characters typed by pressing the Option key.

If you need to change an administrator account password, choose Apple menu > System Preferences, then choose View > Accounts. Select the account name and click Edit User. Type the current password and press Return, then type the new password in both text boxes. Click OK when you are done.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Featured Software to install.

Installation

There are two ways to update to Mac OS X 10.2.6.

Automatic Software Update Installation

You may have been referred to this document by Automatic Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installers

An installer is available from Apple Featured Software (http://www.apple.com/swupdates/). Mac OS X 10.2.6 Update (Combo) updates Mac OS X 10.2 through 10.2.5 to version 10.2.6.

Enhancements

Several enhancements are delivered with this update. Because this is a combo update, it also includes those delivered with Mac OS X 10.2.1, 10.2.2, 10.2.3, 10.2.4, and 10.2.5. Enhancements are listed individually in these technical documents:

25448: "**Mac OS X: About the Mac OS X 10.2.6 Update**"
25405: "**Mac OS X: About the Mac OS X 10.2.5 Update**"
107362: "**Mac OS X: About the Mac OS X 10.2.4 Update**"
107263: "**Mac OS X: About the Mac OS X 10.2.3 Update**"
107140: "**Mac OS X: About the Mac OS X 10.2.2 Update**"
107036: "**Mac OS X: About the Mac OS X 10.2.1 Update**"
Published Date: Oct 10, 2016

Mac OS X 10.2: About Quartz Extreme

This document contains links to information about Mac OS X 10.2's Quartz Extreme feature.
This article has been archived and is no longer updated by Apple.
Use these resources to learn about Quartz Extreme.

- Mac OS X Feature - Quartz Extreme (http://docs.info.apple.com/article.html?artnum=152366)
- Developer information (http://developer.apple.com/quartz/)

Published Date: Feb 19, 2012

No low-battery alert before sleep in portables and Mac OS X 10.2

PowerBook and iBook computers running a version of Mac OS X 10.2 may not display an alert message that the battery is low before going to sleep.

This article has been archived and is no longer updated by Apple.

This will only occur in Mac OS X 10.2 through 10.2.8. If you are running a version of Mac OS X 10.2 on a PowerBook or iBook, be sure you connect the computer to its power adapter once it goes to sleep.

Important: Sleep, or low-power mode, preserves the state of the computer for a period of time, but if AC power is not connected and the battery is completely emptied, unsaved documents and data that is in memory will be lost.

Published Date: Feb 20, 2012

Mac OS X 10.2: Archive and Install Does Not Preserve Some Settings

The Archive and Install feature preserves most, but not all, systems settings.

Note: This document applies to Mac OS X 10.2 through 10.2.8.
This article has been archived and is no longer updated by Apple.
The Archive and Install feature preserves most, but not all, systems settings. The following settings are not preserved when you choose Archive and Install, even if you select "Preserve user and network settings."

- Whether a network time server is used or not.
- The list of configured printers (stored in the file /etc/printers.conf).
- The computer's time zone (stored in the file /etc/localtime).
- The resolution of your display(s), and other settings if more than one display is connected, such as arrangement (stored in the com.apple.windowserver.plist in /Library/Preferences, ~/Library/Preferences/ByHost/).
- Sharing preferences pane settings (stored in /etc/hostconfig):
  - Personal File Sharing
  - Personal Web Sharing
  - Windows File Sharing
  - Remote Login
  - Remote Apple Events
  - Printer Sharing
  - Computer name

This is expected behavior.
Published Date: Oct 10, 2016

Mac OS X: Some Keys Don‘t Work as Expected After Switching Input Methods

Some keys may not work as expected when you switch between input methods.

This article has been archived and is no longer updated by Apple.

Symptom

Some keys do not work as expected after switching input methods

For example, if you switch to Kotoeri by selecting the Canadian - CSA input method, you aren't able to form some double-byte Koteri characters:

／ (unicode: FF0F)
？ (FF1F)
" (201D)
' (2019)
＜ (FF1C)
＞ (FF1E)

Solution

Choose U.S. from the input menu (looks like a flag) before choosing a different input method.

For example, to change from Canadian - CSA to Kotoeri, choose U.S. from the input menu first, then choose Kotoeri.

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

Mac OS X 10.2: Document Printed to Shared Printer Can‘t Be Deleted in Print Center

You may not be able to delete a document from Print Center that you tried to print to a shared printer.
This article has been archived and is no longer updated by Apple.

Symptom

A shared printer appears in your printer list even though you have turned off the option to "Show printers connected to other computers".

A shared printer contains a print job, but you cannot delete the print job in Print Center.

Solution

Use the CUPS Web Admin utility.

1. Open a Web browser and go to the address: http://127.0.0.1:631
2. Click the "Manage Jobs" link.
3. Select print job then click the "Cancel Job" button.

Note: Only use the CUPS Web Admin Utility when you cannot resolve an issue in Print Center.

Related documents

106714: "**Mac OS X: Troubleshooting Printing Issues**"

Published Date: Oct 10, 2016

Mac OS X 10.2: Cannot Install 10.2.5 Update After Installing AirPort 3.0.4

After installing the AirPort 3.0.4 update, Mac OS X 10.2.5 cannot be installed.
This article has been archived and is no longer updated by Apple.

Symptom

After installing the AirPort 3.0.4 update, you cannot install Mac OS X 10.2.5.

Solution

Use the Mac OS X 10.2.6 Update (Combo) installer instead. See technical document 75421, "**Mac OS X 10.2: Chart of Available Mac OS Software Updates**".

Related documents

106695 "**Mac OS X: Troubleshooting Automatic Software Update**"

Published Date: Oct 10, 2016

Mac OS X 10.2: How to Delete a Previous Systems Folder

This document explains how to delete the Previous Systems folder, which is created during an Archive and Install installation. This document assumes that you have already completed an Archive and Install installation.
This article has been archived and is no longer updated by Apple.
Important: Before using this document, make sure you have copied everything you want to keep from the Previous Systems folder, including Shared folder contents. See technical document 107447, "**Mac OS X 10.2: Contents of Shared Folder Missing After Archive and Install**" for more information.

Important: Read the related documents below for more information about Archive and Install, as well as data or settings that may be missing after the installation.

1. Log in with an administrator account.
2. Click the Finder icon in the Dock.
3. Open the Mac OS X volume. (This is usually called Macintosh HD, but could be named something else if you renamed it.)
4. Select the Previous Systems folder.
5. Choose File > Get Info.
6. Click the disclosure triangle next to Ownership & Permissions to expand this section.
7. Click the lock icon to see the owner and group options. Enter your password if prompted.
8. Choose the account name from the "system" pop-up menu.
9. Enter your account password if prompted.
10. Close the Get Info window.
11. Drag the folder named "Previous Systems" to the Trash.
12. Choose File > Empty Trash when you are ready to delete the folder.

Related documents

107120: "**Mac OS X 10.2: About the Archive and Install Feature**"
107447: "**Mac OS X 10.2: Contents of Shared Folder Missing After Archive and Install**"
25454: "**Mac OS X 10.2: Archive and Install Does Not Preserve Some Settings**"
Published Date: Oct 10, 2016

Mac OS X 10.2: Audio Balance Unexpectedly Drifts

In some cases the audio balance may unexpectedly drift towards the left or right channel. This can happen if you rapidly press the volume up or down keys while the computer's microprocessor is under heavy load.
This article has been archived and is no longer updated by Apple.

Symptom

The audio balance unexpectedly drifts to the left or right.

Solution

Use the Sound preference pane to restore audio balance.

1. Choose Apple Menu > System Preferences.
2. Choose View > Sound.
3. Drag the audio balance slider to the desired position.

Published Date: Feb 17, 2012

Mac OS X 10.2, 10.3 or later: How to manage PostScript printers for Classic

Use Print Center (Mac OS X 10.2) or Printer Setup Utility (Mac OS X 10.3 or later) utility to add and set a default PostScript printer for the Classic environment.
This article has been archived and is no longer updated by Apple.
The utility is located in /Applications/Utilities. You can use it to add PostScript (LaserWriter 8-compatible) printers for the Classic environment.

Tip: Printers added via the Classic Chooser or Desktop Printer Utility are not available to Mac OS X native applications until they are selected in Print Center or Printer Setup Utility.

Published Date: Feb 17, 2012

Mac OS 8, 9: Virtual Memory Maximum Setting

This document outlines the maximum virtual memory setting for Mac OS 8 and 9.
This article has been archived and is no longer updated by Apple.
The maximum virtual memory size setting is about 999 MB assuming that this much hard disk space is available. The exact maximum setting depends on the version of Mac OS 8 or 9 you are using. If more than 1 GB of memory is installed, the Memory control panel states:

"This computer has more than 996 MB of RAM installed. Virtual Memory can only be turned on when less than this amount of RAM is installed."

Note: The exact limit shown depends on the version of Mac OS 8 or 9 you are using.

Some of the memory is reserved for file mapping code fragments, and some is reserved for other system use.

Note: The maximum amount of virtual memory available on your computer is limited by available space on your hard disk. You cannot make a virtual memory setting that is larger than the amount of free hard disk space.

Published Date: Feb 17, 2012

Mac OS X 10.1, 10.2: Mail - Address Book (vCard) Images Do not Appear

Images in the picture field of an Address Book vCard do not appear in Mail messages.
This article has been archived and is no longer updated by Apple.

Symptom

Images pasted into Address Book vCards do not appear in Mail messages.

Solution

This is expected behavior. However, if you have a .Mac account, the Mail application can automatically show pictures in messages you receive from other .Mac members. Your picture also appears in messages you send to other .Mac members. **Note**: The picture is retrieved from a .Mac server by Mail, it is not a message attachment.

For more information, see technical document 86095, "**.Mac: How to Add Photos to Messages Sent With WebMail**".
Published Date: Oct 10, 2016

Mac OS X: Can‘t burn MS-DOS-formatted disk image

Disk Copy (Mac OS X 10.2.8 or earlier) or Disk Utility (Mac OS X 10.3 or later) does not burn disk images that contain MS-DOS formatted volumes (such as FAT-12, FAT-16, and FAT-32 formats).
This article has been archived and is no longer updated by Apple.

Symptom

You can't burn the image. This message appears:

"Burn. The data on this image will not mount properly when burned to a disc."

Solution

Consider using a different volume format as the source of your image such as:

- HFS Plus (Mac OS Extended) / ISO 9660 hybrid
- HFS Plus (Mac OS Extended)
- ISO 9660
- UFS
- HFS

Some third-party disc-burning applications may offer these features, such as:

- Roxio Toast (http://www.roxio.com/)
- NTI Dragon Burn (http://www.ntius.com/)

Refer to documentation that came with the third-party product for further instructions.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.
Published Date: Oct 10, 2016

Mac OS X: Apple System Profiler Displays Filled Memory (RAM) Slots as Empty

Damaged or incompatible memory (RAM) may not appear in Apple System Profiler (ASP).
This article has been archived and is no longer updated by Apple.

Symptom

Apple System Profiler may show some memory slots as empty even though the slot contains memory.

Solution

Whenever possible, visually inspect the memory slots on the computer to determine which slots are actually filled. Make sure that the RAM is firmly inserted in the slot.

If ASP detects and displays the memory when it is installed in a different computer, the original computer may require a different kind of memory. To find out what kind of memory your computer uses, search the Knowledge Base.

If the memory does not work in any computer, it may not meet specifications or could be defective. Contact your memory vendor or supplier for additional information.

Published Date: Feb 17, 2012

Mac OS X: Issues After System Fonts Removed or Relocated

Applications, including Apple System Profiler, TextEdit, Address Book, and Safari, may unexpectedly quit if System fonts are deleted or moved from /System/Library/Fonts.
This article has been archived and is no longer updated by Apple.
To fix this, reinstall the system fonts, or move them back into their folder (/System/Library/Fonts). This includes the Helvetica font.

Some third-party applications may allow you to move system fonts. Usually, you should not move or delete Apple-installed fonts.

Note: This document does not apply to the Helvetica font found in the Mac OS 9 System Folder used by Classic.

Related documents

106417: "**Mac OS X: Font Locations and Their Purposes**"

Published Date: Feb 17, 2012

Mac OS X 10.2: Chinese, Kotoeri, or Korean Conversion Fails If an Account‘s Application Access Is Restricted

If you restrict the applications available to non-administrator accounts, those users will not be able to perform Kanji conversions in Kotoeri, type Chinese in the Simplified or Traditional Chinese input methods, or convert Hangul to Hanja in the Korean power input method.
This article has been archived and is no longer updated by Apple.

Symptom

For Kotoeri

- The Kotoeri Character Pallet window does not appear.
- Hiragana input works but will not convert to Kanji.

For Chinese

- Cannot type Chinese in the Simplified or Traditional input methods.
- Items in the Chinese Pencil menus can be selected, but have no effect. The Operation Palette, Character Table, and other windows do not appear when the corresponding menu item is selected.
- User dictionary editing does not work.
- Chinese text typed in pinyin or bopomofo cannot be converted to Chinese characters. Tsang Jie and other non-phonetic input modes do not work.

For Korean (power input method)

- Cannot convert Hangul to Hanja.
- Items in the Korean Pencil menus can be selected, but have no effect. The Input Palette, Plugin Manager, and other windows do not appear.
- Hangul input cannot be converted to Chinese characters. Trying this conversion may cause the application to unexpectedly quit.

Solution

Do not restrict the affected account(s) from accessing applications, or follow these steps to allow access to the proper applications:

1. Log in using an administrator account.
2. Choose Apple menu > System Preferences.
3. Choose View > Accounts.
4. Select the affected user and click the Capabilities button.
5. Select "Use only these applications," then click the Locate button.
6. Add these files depending on which language or conversion is affected:
   - For Kotoeri and Kanji

     ```
     /System/Library/Components/Kotoeri.component/Contents/Support/KotoeriUIServer.app
     /System/Library/Frameworks/ApplicationServices.framework/Versions/A/Frameworks/LangAnalysis.framework/Versions/A/Support/LAServer
     ```
   - For Simplified Chinese

     ```
     /System/Library/Components/SCIMUIServer.app
     /System/Library/Components/SCIMTool.app
     ```
   - For Traditional Chinese and Mac OS X 10.2.3 and earlier:

     ```
     /System/Library/Components/TCIMUIServer.app
     /System/Library/Components/TCIMTool.app
     ```
   - For Traditional Chinese and Mac OS X 10.2.4 or later:

     ```
     /System/Library/Components/TCIM.component/Contents/Support/TCIMUIServer.app
     /System/Library/Components/TCIM.component/Contents/Support/TCIMTool.app
     ```
   - For Korean (Power Input Method)

     ```
     /System/Library/Components/PIMUIServer.app
     ```

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

Mac OS X 10.1: Cannot Install 10.1 Over 10.2 or While Started Up From 10.2

The Mac OS X 10.1 installer will not open on a computer that is started up from Mac OS X 10.2, or install on a volume that already has Mac OS X 10.2 installed on it

This article has been archived and is no longer updated by Apple.

Symptom

- The Mac OS X 10.1 installer does not open if the computer is started up with Mac OS X 10.2.
- A Mac OS X 10.2 volume or partition is dimmed in the Mac OS X 10.1 installer.

Solution

To install Mac OS X 10.1 on a Mac OS X 10.2 volume or partition, start up from the Mac OS X 10.1 installation disc and erase the target volume.

Warning: Choosing Erase and Install completely erases the contents of the selected volume. Be sure to back up your files before continuing. To learn more, see technical document 106941, "**Mac OS X: How to Back Up and Restore Your Files**".

Published Date: Feb 17, 2012

Mac OS X 10.2: Keychain Unexpectedly Stores Mail Password

The Keychain application may store your Mail account password even if you tell it not to.
This article has been archived and is no longer updated by Apple.

Symptom

- Keychain unexpectedly stores your Mail password.
- You expect to be prompted for your Mail account password, but aren't.

Solution

You can remove the password using the Keychain Access utility. However, storing the password in the Keychain does not expose it to anyone else. It is not a security issue.

If you edit account information in Mail, the password may be unexpectedly added to the Keychain again.
Published Date: Feb 17, 2012

Mac OS X 10.2: "Unable to connect to IP Host" Alert When Printing to Shared Printer

Printing to a shared printer does not work in certain network configurations if the BSD subsystem is not installed.
This article has been archived and is no longer updated by Apple.

Symptom

This alert appears: "Unable to connect to IPP Host: Undefined error 0" in certain network configurations", and your document does not print.

This happens when:

- the BSD subsystem is not installed.
- the computer sharing the printer has an IP address that is not associated with any name on the DNS server

Solution

Install the BSD Subsystem software. Refer to technical document 25534, "**Mac OS X 10.2: How to Install the BSD Subsystem After Mac OS X 10.2**" for more information. Restart after installation is complete.

Additional information

This symptom is likely to occur when the IP address for the computer sharing the printer is provided by an AirPort Base Station or third-party broadband router --the IP address has no associated name on the DNS server.

Related documents

106472: "**Mac OS X: FTP, Internet Sharing, Bonjour, SSH, and Telnet Require the BSD Subsystem**"

Published Date: Oct 10, 2016

Mac OS X 10.2 or later: About Apple Software Restore (asr) Command Line Utility

This advanced document discusses the Apple Software Restore command line utility. A command line utility is a text-only program that runs in Terminal.
This article has been archived and is no longer updated by Apple.
With the Apple Software Restore command line utility (asr), you can use to restore software from custom images, or to "clone" entire volumes. The asr utility works with Mac OS Extended (HFS Plus) volumes only.

This utility is intended for use by manufacturing and professional customers. AppleCare does not provide technical support for asr, but technical support solutions may be available. For more information see the AppleCare Products & Services website (http://www.apple.com/support/products/).

For more information, open Terminal and type: `man asr`

Note: Apple Software Restore is also an application that is used to restore software from discs included with a computer. The "traditional" restore application does not use Terminal or the command line.

A note about copyright

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Published Date: Oct 10, 2016

Mac OS X: About Using Several Displays at High Resolutions

Mac OS X allows a maximum desktop display width of approximately 4000 pixels across all displays. This document applies to Mac OS X 10.3.4 and earlier.

Note: This document is relevant when using the extended desktop feature with multiple displays connected to the computer. It does not apply when you are using the Mirror Displays feature, as configured in the Arrangement section of the Display preference pane.
This article has been archived and is no longer updated by Apple.
Mac OS X 10.3.4 or earlier allows for a maximum desktop display width of approximately 4000 pixels across all active displays. You would not usually encounter this limit unless you had three or more displays with one using a resolution width greater than 1280.

You may set a cumulative width greater than that, but you cannot place icons on the desktop outside of this 4000-pixel width. Icons dragged to this area will snap back to their original location.

Desktop pictures can fill the entire visible width.

Additional information

These sample configurations are within the approximately 4000-pixel limit. Not all Mac OS X-compatible computers allow for the use of each configuration.

- Two displays, each set to a width of 1920 pixels.
- Three displays, each set to a width of 1280 pixels.
- Three displays, two set to a width of 1152 pixels and the third set to a width of 1600 pixels.
- Four displays, two set to a width of 1152 pixels and two set to a width of 832 pixels.

Published Date: Feb 17, 2012

Mac OS X: Mail - Unable to Quit After Stopping a Message From Being Sent

You may not be able to quit Mail if you cancel sending a message.
This article has been archived and is no longer updated by Apple.

Symptom

When you choose Mail > Quit Mail, or press Command-Q, Mail does not quit. This happens when:

- Your Internet connection is not fast.
- You cancel sending a message before it is sent.

Solution

Before quitting Mail, wait for the program to cancel sending the message. This may take several seconds depending on the size of the email.
Published Date: Feb 17, 2012

Mac OS X 10.2: Mail - Quits When Sending if Some Third-Party Mail Bundles Are Installed

Mail may unexpectedly quit when sending a message if incompatible third-party mail bundles are installed.
This article has been archived and is no longer updated by Apple.

Symptom

Mail unexpectedly quits when sending a message.

This happens when one or more third-party mail bundles are installed.

Solution

Remove any third-party mail bundles installed when the issue began, or remove all bundles. These bundles are usually found in this folder:

~/Library/Mail/Bundles

Contact the publisher of any bundles that do not seem to work with Mail for more information--a later, more compatible version may be available.

Additional information

Examples of third-party mail bundles include those that provide encryption (PGP), message icons, or headers that may be prioritized.
Published Date: Feb 19, 2012

Mac OS X 10.2: Directory Issue Verification or Repair Is Not Part of Installation

When installing Mac OS X 10.2, disk directory issues are not checked for or repaired. Use Disk Utility's First Aid feature first if you think there may be a directory issue. Catalog file issues, B-Tree errors, mount check errors, and overlapped extent allocation errors are examples of directory issues.

Important: Performing an upgrade or Archive and Install installation when there are unresolved directory issues can make the issue worse, and possibly lead to data loss.
This article has been archived and is no longer updated by Apple.
Reinstalling or updating Mac OS X 10.2 does not resolve disk directory issues (unless you perform an erase-installation). Use Disk Utility's First Aid feature to verify or repair the Mac OS X volume first, unless you intend to erase the volume. For more information about Disk Utility, see technical document 106214, "**Mac OS X: About Using Disk Utility and fsck for File System Maintenance**".
Published Date: Oct 10, 2016

Mac OS X: Does Not Start Up From Hard Drive Used in a Different Computer, or from a Custom Restored Image

Later model Macintosh computers that cannot start up from Mac OS 9 may not be able to start up from a hard drive that was used in an earlier model computer, or if you restore the system using the asr Terminal command from an image that was created on an earlier Macintosh computer. This article has been archived and is no longer updated by Apple.

Symptom

- A late-model computer does not start up from a asr-restored hard drive or a burned disc that works with earlier computers.
- The computer starts up from its original hard drive instead of a second hard drive you installed from another computer that has Mac OS X installed on it.

This can occur when the original hard drive, or restored image of that drive, was first used in a computer that can start up in Mac OS 9, or is an Xserve, but the receiving computer cannot start up in Mac OS 9.

Solution

If the hard drive has already been moved or restored

You can use this solution if a different Mac OS X volume is in the computer (excluding the Install or Restore CD that came with the computer). If you do not have a different volume, you must move the drive back to the earlier computer and follow the instructions below under "Before moving the hard drive or creating the restorable image with asr".

After the computer starts from Mac OS X on a different disk volume, Open Terminal (/Applications/Utilities) and type this command:

```
#sudo bless -folder /Volumes/Your_Volume_Name/System/Library/CoreServices -bootinfo
/usr/standalone/ppc/bootx.bootinfo
```

Notes

1. Replace "Your_Volume_Name" with the name of the volume that the Mac OS X System folder is on.
2. A space precedes and follows "-bootinfo". All commands should be on a single line.

Before moving the hard drive or creating the restorable image with asr

Use this solution before moving the hard drive. Start up from the system that is to be used in the new computer or for the image. Open Terminal (/Applications/Utilities) and type this command:

```
#sudo bless -folder /System/Library/CoreServices -bootinfo /usr/standalone/ppc/bootx.bootinfo
```

Note: A space precedes and follows "-bootinfo". All commands should be on a single line.

Related documents

25498: "**Mac OS X 10.2: About Apple Software Restore Command Line Utility (asr)**"

Published Date: Feb 17, 2012

Power Mac G4: Mac OS 9 - "About This Computer" Window Displays Unexpectedly Large Mac OS RAM Usage

On some Power Mac G4 computers, the Mac OS 9 "About This Computer" window indicates that the Mac OS is using a large amount of memory (RAM).
This article has been archived and is no longer updated by Apple.

Symptom

The Mac OS 9 "About This Computer" window indicates the Mac OS is using an unexpectedly large amount of RAM (up to 600 MB). This happens when:

- The computer is started from a Mac OS 9 System Folder
- More than 1.5 GB of RAM is installed

Note: The virtual memory setting does not matter because you cannot turn it on when more than 1 GB of RAM is installed.

Solution

The Mac OS is not actually using this much RAM. This is a cosmetic issue and not a cause for concern.

Note: This does not occur when using Mac OS X or the Classic environment.

Published Date: Oct 10, 2016

Mac OS X 10.2: USB-Based PostScript Printer Does Not Print or Generate PostScript Error

Some USB-based PostScript printers may not print or display PostScript errors.
This article has been archived and is no longer updated by Apple.

Symptom

The printer does not print, and there is no alert message.

This can happen when:

- You are using a USB-based PostScript printer.
- The printer does not support TBCP (tagged binary control protocol).

Note: If PostScript reporting is selected, you may see a "PostScript Error undefined" message.

Solution

Mac OS X 10.2 may not work with USB-based PostScript printers that do not have a TBCP feature.

As a workaround, connect your printer via Ethernet (if the printer has an Ethernet port), then use Print Center to set up your printer.

If you are printing from a Classic application that allows you to Send PostScript Data as ASCII when printing, use that as a workaround.

Contact your printer manufacturer for printer-specific solutions or for more information.

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Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.

Published Date: Feb 17, 2012

Mac OS X: How to Create a ColorSync Profile Used By Every Account

An administrator account can create a ColorSync profile and make it available to all accounts on the computer.
This article has been archived and is no longer updated by Apple.
When a display is calibrated by a user, a ColorSync profile is saved in that user's home folder. Instead of calibrating the display for each account, you can copy the profile to other accounts' home directories by following these steps:

1. Log in with an administrator account.
2. Choose Apple Menu > System Preferences.
3. Choose View > Displays.
4. Calibrate the display.
5. Once calibrated, the ColorSync profile is saved in this folder: ~/Library/ColorSync/Profiles/

   Note: The default name is "Calibrated Profile.icc".

6. Drag the profile to: /Library/ColorSync/Profiles/. **Note:** You may need to make some of these folders if they do not exist.
7. Log in using a different account.
8. Choose Apple Menu > System Preferences.
9. Choose View > Displays.
10. Click the Color tab, then select the correct profile.
11. Repeat steps 7 through 10 for each additional account.

Published Date: Feb 17, 2012

Mac OS X Mail: Printed text is unexpectedly large or small

Text in email messages you print, with Mac OS X 10.2.8 or earlier, has an unexpectedly large or small font size. The same thing happens if you create a PDF file of an email message.
This article has been archived and is no longer updated by Apple.
This happens because Mail in Mac OS X 10.2.8 or earlier automatically scales printed text based on the width of your Mail message window. The wider the window, the smaller the printed text.

What can you do? Before printing or saving as a PDF, change the size of the window by positioning the pointer over the lower-right window corner (the resize control) and dragging.

- If the printed text is too small, make the Mail message window more *narrow*.
- If the printed text is too big, make the Mail message window *wider*.

Or you could do this:

1. Copy the text of the message.
2. Open a different text application, such as TextEdit.
3. Paste your email address into the new document.
4. From the **File** menu, choose **Print**.

Tip: You can preview the printout by clicking the Preview button in the print dialogue.
Published Date: Oct 10, 2016

Mac OS X: Portables - Using Function keys with Exposé, applications, games

The function keys of some portable computers, such as F1, F2, F3, F4, F5, F6, and F12, also serve as volume and brightness control buttons, which may present issues when you want to use the same key with an application, game, or Mac OS X 10.3 Panther and Mac OS X 10.4 Tiger's Exposé feature.
This article has been archived and is no longer updated by Apple.
To use a function key as a function key instead of a volume or brightness control, hold the Function (fn) key while pressing the key (for example, Function-F1).

Tip: Mac OS X 10.3.3 or later includes a setting in Keyboard & Mouse preferences to change this behavior if desired, for portable computers. To use a function key for custom actions without having to hold the Function (fn) key, open Keyboard & Mouse preferences and enable "Use the F1-F12 keys for custom actions". If this option is enabled, you must hold the Fn key and a function key to perform actions such as changing the screen brightness (Fn-F1 or Fn-F2 instead of F1 or F2) or ejecting the optical drive tray (Fn-F12 instead of just F12).

Alternatively, if your application allows, you may be able to "reassign" the software function to be associated with a different key. For Mac OS X 10.3, the Exposé preference allows you to assign Exposé functions to different function keys or some other keys (such as Right Control or Shift-F12), or to a mouse button if you have a third-party mouse which has multiple buttons.

Related documents

58327 PowerBook: Using the Multi-function Keyboard

Published Date: Oct 10, 2016

Mac OS X 10.2: Automatic Modem Connection Fails

In some cases, Mac OS X 10.2 may not establish an automatic (dial-on-demand) modem connection when expected. Manually connect to the Internet if this happens.
This article has been archived and is no longer updated by Apple.

Symptom

- A Mac OS X feature that depends on Internet access (such as using Mail, retrieving new Mac Help content, or loading a webpage with Safari) does not work. This can happen when you use a modem and have selected automatic connections in the Network preference pane's PPP tab.
- Internet Connect displays these messages:

  "The connection was terminated by the remote site. Please try again."

  "The connection was terminated because the other side is not responding."

- The Console verbose log may include a message such as "Unsupported protocol 'IP' (0x21) received and IPCP terminated by peer".

Solution

First, deselect automatic connections. You only need to do this one time.

1. Choose Apple Menu > System Preferences.
2. Choose View > Network.
3. Click the PPP tab.
4. Click the PPP Options button.
5. Deselect "Connect automatically when needed".
6. Click OK.

Thereafter, connect to the Internet manually before using the feature that requires Internet access. You can do this using Internet Connect or the modem menu bar item. To display the modem menu bar item, click the Modem tab and make sure "Show modem status in menu bar" is selected.

Related documents

106325: "**Mac OS X: How to Disable or Enable Automatic Modem (PPP) Connections**"
106717: "**Mac OS X: How to Connect to the Internet via PPP (Dial-Up Access) Using a Modem**"

Published Date: Feb 17, 2012

Mac OS X 10.2: Changing Default Voice Does Not Affect Speech Service

This document explains what to do if the speaking voice does not change when you choose a different Default Voice.
This article has been archived and is no longer updated by Apple.

Symptom

The voice does not change after changing the Default Voice in the Speech preference pane.

Solution

Use one of the following workarounds:

- Log out, then back in.
- Restart the computer.

Published Date: Feb 17, 2012

Mac OS X: Files With Leading Period Appear on a Windows-Compatible PC

This article has been archived and is no longer updated by Apple.

Files whose filenames begin with a period (for example, ".filename") are normally invisible in Mac OS X. However, if you share disks between a Mac and a Windows-compatible computer, you can see the files. They should not be deleted.

Note: This document applies to Mac OS X 10.0 through 10.3.9.

Symptom

Files whose filenames begin with a period "." appear on the disk when viewed with a Windows-compatible computer.

This can occur when you use writable, portable media with both a Mac and a Windows-compatible computer.

Solution

The files can be safely ignored and should not be deleted.

To make the files invisible when the disk is used on a PC, you can set the "hidden" attribute for the files within the view options. Refer to the Microsoft Windows Help documentation for instructions.

Published Date: Feb 17, 2012

Mac OS X 10.2: "...System Folder has been modified by a newer version of Classic..." Alert

When you open the Classic environment for the first time after performing an Archive and Install installation, an alert message may appear. This happens because the Mac OS 9 System Folder contains Classic components updated by the later version of Mac OS X.

This article has been archived and is no longer updated by Apple.

Symptom

This message appears the first time Classic opens after an Archive and Install installation:

> "Your selected System Folder has been modified by a newer version of Classic, you can use the older enabler but this would be an unsupported configuration."

Note: If you click Try Anyway, this message will not appear again.

This happens when the version of Mac OS X 10.2 that is currently installed is earlier than the version previously installed.

Solution

Update to the version of Mac OS X you were using before the Archive and Install, or later.

Alternatively, or if you do not plan to update to the same or later Mac OS X version, you can reinstall Mac OS 9. Refer to these technical documents for more information, depending on what type of Mac OS 9 install or Mac OS X Restore disc you have:

42929: "**Software Restore: How to Use Restore Discs With Mac OS X 10.2**"
106294: "**Mac OS X: How to Reinstall Mac OS 9 or Recover From a Software Restore**"
107383: "**Mac OS X 10.2: How to Perform Mac OS 9 Clean Installation With 10.2 Restore CDs**"

Published Date: Feb 17, 2012

How to tell Mac OS X Mail to forget remembered addresses

This article has been archived and is no longer updated by Apple.

Mail's Address History (Mac OS X 10.2.8 or earlier) or Previous Recipients (Mac OS X 10.3 and 10.4 or later) feature helps you automatically complete email addresses as you type them. Learn how to tell Mail to forget an address.

Mac OS X 10.2, 10.3, 10.4 or later

1. Open Mail.
2. From the **Window** menu choose Address History or Previous Recipients.
3. Select the address(es) to remove, then click Remove from History.

Mac OS X 10.1.5

Open Address Book, locate and select the address(es) to remove, and click Delete.

Published Date: Oct 10, 2016

Mac OS X: Time Is Incorrect After Resetting PRAM

This document explains what to do if the computer's clock is incorrect after resetting PRAM.
This article has been archived and is no longer updated by Apple.

Symptom

After resetting PRAM, the computer's clock is off by up to 13 hours.

This happens if the computer can also start from Mac OS 9.

Solution

A Mac OS 9 System Folder is present

Start from your Mac OS 9 System Folder. Refer to technical document 106667, "**How to Switch Between Mac OS 9 and Mac OS X**", for instructions.

Once started from Mac OS 9, start up from Mac OS X again.

A Mac OS 9 System Folder is not present

Use the Data & Time preference pane to correct the time setting. You can also use this solution if a Mac OS 9 System Folder is installed but you never start from it.

Published Date: Feb 17, 2012

Mac OS X: "Error in user parameter list (-50)" With MS DOS-Formatted Volume

This document explains what to do if the alert "Error in user parameter list (-50)" appears when working with an MS-DOS-formatted volume.
This article has been archived and is no longer updated by Apple.

Symptom

An alert appears that states:

> "Error in user parameter list (-50)" (minus 50)

The message may also include the name of a file you are using or copying.

This happens when copying a file to an MS-DOS-formatted disk or modifying a file on the disk.

Solution

Note: You can verify that the volume is formatted as a MS-DOS disk by selecting its icon in the Finder and choosing File > Get Info.

A file cannot be copied

Certain characters that can be used in a Mac OS X filename are not allowed in MS-DOS filenames. This can prevent the file from being copied, and can
occur when a filename contains non-printing ACSII characters, or any of these characters:

? / \\ < > " | > *

Remove these characters from the names of the files before you copy.

Alternatively, for a longer-term solution, reformat the volume as Mac OS Extended (HFS Plus). Be sure that any important data on the volume has been backed up first (after renaming any files with characters mentioned above), and that any other computer you will use the volume with works with Mac OS Extended format disks.

A file cannot be modified

If the alert appears when you try to change a file, try copying it to the computer's hard disk first, then copying it back when you are finished.

Alternatively, consider formatting the volume as Mac OS Extended as described above.

Related documents

107032: "**Mac OS X 10.2: 'Error -43' When Copying Files to Windows Shared Volume**"

Published Date: Feb 17, 2012

Mac OS X 10.1.5, 10.2: Application Stops Printing, Cannot Open Files

After printing several times from an application that has been open for a long time, the application may not print or open files.
This article has been archived and is no longer updated by Apple.

Symptom

An application cannot print or cannot open files (or both).

This happens when the application has been open for a long time and has already printed several times.

Solution

As a workaround, quit the application and open it again.

If you have a Hewlett-Packard or Lexmark printer that uses a PDE plug-in, contact the manufacturer of your printer for an updated version of the PDE file that addresses this issue, or update to the latest version available for your printer.

If you do not use an HP or Lexmark printer, follow these steps:

1. Click the Finder icon in the Dock.
2. Choose Go > Go to Folder.
3. Type: `/Library/Printers/PPD Plugins/`
4. Click Go. The PPD Plugins folder opens.
5. Choose Edit > Select All.

   Note: If you use a printer that is not an HP or Lexmark printer but relies on software in this folder, deselect the item(s) specifically related to your printer.

6. Drag the items to the Trash, then empty the Trash.

Published Date: Feb 17, 2012

Mac OS X 10.2: How to install the BSD subsystem after Mac OS X 10.2

This document explains how to custom install the BSD package after Mac OS X 10.2 has already been installed. Unless you choose not to install it, the BSD subsystem is installed by default when you install Mac OS X.

This document applies to Mac OS X 10.2 through 10.2.8. For Mac OS X 10.3 Panther information, see this document.
This article has been archived and is no longer updated by Apple.
The steps listed here are for use with the Mac OS X 10.2 Install CD, which you either purchased or was included with your computer in addition to Restore discs. If you are using a Restore DVD disc, stop here and see Mac OS X 10.2 - Restore DVD: How to Install Individual Third-Party Software Items Without Erasing.

1. Insert the Mac OS X 10.2 Install Disc 1. You do not need to start up from the Install CD.
2. The Welcome window appears. Double-click the Optional Installs folder.
3. Double-click the BSD Subsystem.pkg icon. The Installer application opens.

Tip: If you do not see this package, choose File > Find and search the CD for BSD.pkg.

4. Enter your account password when prompted.
5. Select the destination volume that contains Mac OS X 10.2.
6. Click Continue. The selected software installs.
7. Once installation is complete, reinstall the Mac OS X 10.2 Combo Update (such as Mac OS X 10.2.8 Combo Update) that is equivalent to the version of Mac OS X you are using.
8. After updating, you should also download and install any Apple Security Updates that are available.

Related documents

106472: "Mac OS X: FTP, Internet Sharing, Bonjour, SSH, and Telnet Require the BSD Subsystem"

Published Date: Oct 10, 2016

Mac OS 9.2.2 (Italian): Alert "-15008" When Using Modem

An alert message appears when using Mac OS 9.2.2 with a dial-up modem. This may happen after using the Italian Restore DVD included with the eMac (ATI Graphics) and Power Mac G4 (Mirrored Drive Doors 2003) computers.
This article has been archived and is no longer updated by Apple.

Symptom

This alert message appears when you try to use your modem:

"-15008, Consulta la Guida Apple O la documentazione di Remote Access per ulteriori informazioni Software Update preferencee pane questo tipo di errore."

This can happen when:

- The computer has a Combo drive.
- You have restored software from certain Italian Restore DVDs.
- The computer is started up from Mac OS 9.2.2.
- You are trying to connect to the Internet with a dial-up modem.

Solution

Follow these steps:

1. Move the file "Modem Preferences" to the Trash. It's located in the Preferences folder, which is inside the Mac OS 9.2.2 System Folder.

Important: Be careful not to delete the file "Preferenze Modem".

2. Empty the Trash, then restart.
3. After the computer restarts, open the Remote Access control panel and make sure your connection settings look right.

Note: The issue does not occur in Mac OS X.
Published Date: Feb 17, 2012

Mac OS X Mail: About PDF attachments

Learn how Mail handles PDF files attached to email.

This article has been archived and is no longer updated by Apple.

When you send or receive an email that has a PDF (Portable Document Format) file as an attachment, depending on the file's size, you may see its contents within the Mail message, or you may see a document icon.

If the PDF file contains two or more pages, Mail displays it as a document icon.

If the document is smaller, Mail displays the contents of the PDF file within the message window.

To change the way the PDF file is displayed in the current message window, Control-click the icon or visible portion of the PDF and choose "View in Place" or "View as Icon" as appropriate from the shortcut menu. Note that this only affects how you see the PDF in this message's window, it is not a permanent change.

Published Date: Feb 20, 2012

Mac OS X 10.2: Kerberos Password Does Not Unlock Screen Effects

If a system is configured to perform Kerberos authentication when the user logs in, the Kerberos password does not work with Screen Effects password feature if it differs from the account password. Use the account password instead.
This article has been archived and is no longer updated by Apple.

Symptom

The Kerberos password does not dismiss Screen Effects.

This happens when the user logs in with Kerberos authentication and Screen Effects prompts for a password when dismissed.

Solution

To dismiss the screen saver, use the local (not Kerberos) account password of the logged-in user, or of a local Admin user account.

Published Date: Feb 17, 2012

Mac OS X 10.2.8 or Earlier: Network Preference Pane Missing DHCP, BootP Options; Cannot Change Settings

If the system configuration server process (configd) unexpectedly quits, DHCP and BootP choices may not be available in the TCP/IP tab of the Network preference pane, and you may not be able to change Network settings.
This article has been archived and is no longer updated by Apple.

Symptom

You see one of these symptoms when AirPort or Built-in Ethernet is selected in the Show pop-up menu of the Network preference pane:

- After you click the TCP/IP tab, DHCP and BootP do not appear as choices in the Configuration pop-up menu. The choices that appear include Manually, PPP, and AOL Dialup.
- This alert message appears when you click Apply Now:

  "The System Configuration server (configd) is not available."
- When you open the Network preference pane, a status message of "Loading Network" appears for a long period of time.
- These messages may appear in the Console log:

  - "Error: Configuration monitor failed to connect to configd server"
  - "Error: Couldn't commit network database changes."
  - "Error: Unable to obtain write access for system configuration database."

Solution

As a workaround, restart the computer.

If restarting doesn't fix the issue, try this:

1. Open Terminal (/Applications/Utilities). Type these lines in Terminal (one at a time), following each line with a Return. Note that there is a space after each ".xml" below, but no space in "SystemConfiguration".

Note also that after the first "sudo" command you will be prompted for your admin password.

```
cd /var/db
sudo mv NetworkInterfaces.xml NetworkInterfaces.old
cd SystemConfiguration
sudo mv preferences.xml preferences.old
sudo mv com.apple.airport.preferences.xml  com.apple.airport.preferences.old
```

2. Quit Terminal when finished, then restart again.

This document will be updated as more information becomes available.

Published Date: Feb 17, 2012

Mac OS X: Software Update Unexpectedly Resumes Automatically Checking for Updates

Software Update automatically checks for updates after installing some update packages, even if you had previously turned off automatic checking.
This article has been archived and is no longer updated by Apple.

Symptom

Software Update automatically checks for updates, even though you had previously deselected this feature.

Solution

This is normal behavior. You may turn off automatic checking at any time, but some Apple software updates will turn the feature back on.

To turn off automatic checking as you did before, you would follow these steps:

1. Choose Apple Menu > System Preferences.
2. Choose View > Software Update.
3. Click the Update Software tab, if not already selected.
4. Deselect the "Automatically check for updates when you have a network connection" checkbox.

Published Date: Feb 17, 2012

Mac OS X 10.2.8 or Earlier: Disk Copy Opens When Blank Optical Media is Inserted

Disk Copy may open when you insert a blank optical disc (CD-R, CD-RW, DVD-R, and DVD-RW media). You can change this behavior by using the CDs & DVDs preference pane.

Note: This document applies to Mac OS X 10.2.8 and earlier.
This article has been archived and is no longer updated by Apple.
The CDs & DVDs preference pane allows you to choose which application opens when you insert blank optical media. One of the choices is Disk Copy. If Disk Copy opens and you dismiss the window, the disc will eject. This is normal and does not mean there is an issue with the disc or the optical drive.

To change your settings, follow these steps:

1. Choose Apple menu > System Preferences.
2. Choose View > CDs & DVDs.
3. Select the desired choice in the "When you insert a blank CD" and "When you insert a blank DVD" pop-up menus. If you are not sure what to select, choose "Ask what to do."

Published Date: Feb 19, 2012

Mac OS X 10.2, 10.3: You put in a blank disc, but it doesn‘t appear

It's OK if a blank disc (such as a CD-R, CD-RW, or DVD-R) does not appear on the desktop or in the Finder after you insert it. One of your settings most often causes this, not an actual issue with the computer.
This article has been archived and is no longer updated by Apple.
Note: Other applications, including iTunes and Disk Copy, can still use the disc even if it doesn't appear on the desktop.

When you insert a blank disc, your CDs & DVDs preference setting will determine what happens next. If it is set to Ignore, then nothing happens in the Finder.

Follow these steps to change the setting:

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **CDs & DVDs**.
3. Choose an action other than Ignore from the first two pop-up menus. For example, you can choose Open Finder.

The next time you insert a disc, it should appear as you expect.
Published Date: Oct 10, 2016

Mac OS X: Internet Sharing Stops When Computer Is in Sleep Mode

Internet sharing is not active when the computer is in sleep mode. Services restart when the computer wakes up.
This article has been archived and is no longer updated by Apple.

Symptom

Internet sharing does not work when the computer is in sleep mode.

Solution

Because of this, Mac OS X 10.4 and later prevent idle sleep when Internet Sharing is active. For earlier systems, just don't let the sharing computer sleep:

1. Choose Apple menu > System Preferences.
2. Choose View > Energy Saver.
3. Drag the "Put the computer to sleep when it is inactive for" slider to Never.

Note: The display sleep setting does not affect this issue. You can set it to whatever you like.
Published Date: Oct 10, 2016

Mac OS X: Preference Pane Icons Are Missing

If some of the expected icons don't show up in the System Preferences application, this document explains how you can fix it. This document applies to Mac OS X 10.0 through 10.2.8.
This article has been archived and is no longer updated by Apple.
To see System Preferences icons:

1. Quit System Preferences.
2. Click the Finder icon in the Dock.
3. Choose Go > Go To Folder.
4. Type: ~/Library/Caches
5. Click Go.
6. Locate this file: "com.apple.preferencepanes.cache"
7. Drag it to the Trash.
8. Open System Preferences.

Published Date: Oct 10, 2016

Mac OS X 10.3: Mail - How to Use a Secure Email Signing Certificate (Digital ID)

Learn how Mail in Mac OS X Panther can import a secure email signing certificate that you can use to protect S/MIME messages.
This article has been archived and is no longer updated by Apple.
Mail in Mac OS X Panther can use a secure email signing certificate to protect S/MIME messages. A secure email signing certificate is sometimes referred to by other names, including: Digital ID, secure certificate, Certificate Authority key, private key, or .p12 file. For additional information about what a secure certificate, private key, or Digital ID is, contact the third-party company you obtained the certificate, ID, or key from.

Mac Help includes more information about some topics covered in this document. With Mail open, from the **Help** menu, choose **Mail Help**.

Obtaining a secure certificate

To get a key, you must first obtain a secure signing certificate from a third-party, such as VeriSign or Thawte Communications. Certificates are usually PKCS12-format files. Their filename extension is ".p12". To obtain the certificate, you normally fill out an online form using a Web browser. You may need to pay for the certificate service.

Certain Web browsers, such as Safari and Microsoft Internet Explorer, may not allow you to order the certificate. In that case, try a different browser, such as Netscape Navigator or Mozilla.

Note: Your certificate file (ends with ".p12") may not be automatically downloaded to your Mac OS X volume. You may need to use your browser's preferences to back up the certificate, and save it to the desktop or a different location. After that, you can import it using the steps below.

Importing the secure certificate into Mail

1. Double-click the .p12 file to open it. Keychain Access opens and imports the certificate. If this does not happen, drag the file onto the Keychain Access application icon (/Applications/Utilities).
   Note: If the certificate includes a private key, you'll need to enter the password for the key.
   Note: New certificates appear in Keychain Access, including your private key, your public key, and keys leading to a root Certificate Authority (CA) key.

2. Quit Keychain Access.
3. Open Mail. The keys are now available for use with S/MIME messages.

Sending a signed message

To send a signed message, you only need a private key for the sending email address. A signed message offers a lower level of security than an encrypted message, but a greater level of security than an unsigned message.

In the Compose window:

-
  means the message will be signed
-
  means the message will **not** be signed

Note: You can send a message that is both signed and encrypted.

A signed message includes this line above the body of the message:

Sending an encrypted message

You can encrypt a message if you have:

- the private key of the sending email address
- the public key of each recipient

An encrypted message offers a better level of security than a signed message. Once the appropriate certificates are available, a lock button appears in the Compose window (see below). It allows you to securely encrypt the message. **Important:** The message is encrypted only if you have the public key of the recipient.

Encrypted messages are saved in your Sent mailbox as an encrypted message.

In the Compose window:

-
  means the message will be encrypted
-
  means the message will **not** be encrypted

Note: You can send a message that is both encrypted and signed.

Importing another person's public certificate (key)

Importing another person's public key is easy. Just view a signed or encrypted message and Mail will automatically import the person's public key. You can use Keychain Access to view or edit it.

Related documents

25593: "**Mac OS X 10.3: Mail - About SSL, IMAP Accounts and 'Remember My Decision**'"

Published Date: Oct 10, 2016

Mac OS X 10.3: Troubleshooting Classic startup with Fast User Switching

The Classic environment can only be opened by one account at a time in Mac OS X Panther 10.3. The symptom described in this document may occur when more than one account is logged in and trying to use a Classic application.
This article has been archived and is no longer updated by Apple.

Note: This document applies to Mac OS X 10.3 through 10.3.9.

Symptom

You can't start the Classic environment or use Classic applications. This message appears:

> "Classic cannot start because it is already running. Classic is being used on the Mac by the user '<name of user>'."

This happens when another account is also logged in and is using the Classic environment.

Solution

Note: To use this solution you need to be able to log in to the account that is currently using Classic.

1. Switch to the account that is using the Classic environment.
2. Click the Finder icon in the Dock, or anywhere on the desktop.
3. Choose System Preferences from the Apple menu.
4. Click the Classic icon.
5. Click Stop. See Figure 1.

Figure 1

7. Switch back to your own account and use Classic.

Published Date: Oct 10, 2016

How to search the System Directory with Find in Mac OS X 10.3

The Finder's Find feature can search many places on your computer's hard disk, but it doesn't search in the System directory by default. Learn how to configure Find to search /System.
This article has been archived and is no longer updated by Apple.
To search in the System directory using Find:

1. Click the Finder icon in the Dock.
2. From the **File** menu, choose **Find**.
3. Choose Specific Places from the "Search in" pop-up menu.

4. Click the Add button.
5. Navigate to /System, then click Open.

6. Make sure that your Mac OS X disk or volume is also selected in the list of places to search.

The System directory should now available in the list of Specific Places.

To remove it from the list, select /System, then click Remove.

Tip: Searching the System directory can greatly increase the time it takes to perform your search. You should not normally need to search the /System directory because it only contains system software files, which you should not normally remove or modify.
Published Date: Oct 10, 2016

Mac OS X 10.2: Internal v.92 Modem Does Not Disconnect When Idle

The computer's internal v.92-based modem does not disconnect when idle, even if you've selected that option in Network preferences. This document applies to Mac OS X 10.2.4 through 10.2.8.
This article has been archived and is no longer updated by Apple.

Symptom

Your computer's internal modem does not disconnect when idle, even if you've selected that option in Network preferences.

This happens when:

- You connect to the Internet using the internal modem.
- The Apple Internal 56K Modem (v.92) modem script is chosen in the Modem tab of Network preferences.
- The checkbox labeled "Disconnect if idle for __ minutes" is selected in the PPP Options sheet of Network preferences.

Solution

Disconnect from the Internet manually by opening Internet Connect and clicking Disconnect.

You could also use a different modem script that allows the modem to disconnect when idle. **Important:** Using a different script may mean that certain v.92 features will not work, but you will still be able to connect to the Internet.

1. Choose Apple menu > System Preferences.
2. Choose View > Network.
3. Choose Internal Modem from the Show pop-up menu.
4. Click the Modem tab.
5. Choose Apple Internal Modem (v.90) from the Modem pop-up menu.
6. Click Apply Now.

Published Date: Oct 10, 2016

Mac OS X 10.2: Shared Fax Modem Appears in Print Center But Doesn‘t Work

This article has been archived and is no longer updated by Apple.

Mac OS X 10.3 includes built-in faxing, and allows you to share your fax modem with other Mac OS X 10.3 users. While the shared fax modem will be visible to Mac OS X 10.2 users in the Print Center, only Mac OS X Panther users will be able to use the shared fax modem.

For more information about built-in faxing, please see Printing and Faxing Support.

Symptom

The Shared Fax Modem is viewable in the Print Center as an "Internal Modem". Its type is listed as "Fax Printer". You try to send a job to the shared fax modem, but it is never sent.

This happens when the fax modem is hosted by a computer using Mac OS X 10.3 or later, but your computer is using Mac OS X 10.2.

Products Affected

- Mac OS X 10.2 through Mac OS X 10.2.8 (client)
- Mac OS X 10.3 (host)
- Other operating systems that use the Common UNIX Printing System (CUPS)

Note: Mac OS X 10.3 users are not affected by this issue.

Solution

While users on older operating systems may be able to see Shared Fax Modems in their Print Center, only Mac OS X 10.3 users will be able to use the modem.

Published Date: Oct 10, 2016

iCal 1.5.1: Updating the Date or Time

If iCal doesn't seem to acknowledge that you've changed your computer's date or time, quit it and open it again.

This article has been archived and is no longer updated by Apple.

Symptom

After switching between a 24-hour and 12-hour clock in Date & Time preferences, iCal calendars may not reflect the change.

Some alarms may not work after changing the date or time in Date & Time preferences.

Solution

Quit iCal and open it again after making changes in the Date & Time System Preference pane.

Published Date: Feb 17, 2012

Bluetooth, iSync: Sony Ericsson P800, P900 Listed With No Name or as Miscellaneous

After pairing via Bluetooth for the first time, your Sony Ericsson P800 or P900 mobile phone (http://www.sonyericsson.com/) may appear in the Bluetooth device list, but with no name or as a Miscellaneous device.
This article has been archived and is no longer updated by Apple.

Symptom

- You cannot sync the phone using iSync.
- The phone appears in the Bluetooth All list as an unnamed device. If you add the device, is it appears as a Miscellaneous device.

This happens if you initiated pairing from the phone the first time you use it, or after choosing Master Reset on the phone.

Note: Master Reset refers to a function of the phone. It is not related to the iSync Reset All Devices function.

Solution

Initiate pairing from the computer, then pair the phone with the computer.

1. Delete the unnamed device from the All list For more information, see technical document 86471, "**Bluetooth: How to Delete a Paired Device**".
2. Delete the computer from the list of paired Bluetooth devices on the phone. Refer to the phone's manual if you need help.
3. Pair the phone with the computer. For more information, please see technical document 51770, "**How to Pair Your Computer With Bluetooth-Enabled Devices**".

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Published Date: Feb 19, 2012

Mac OS X 10.2.8: Blue or Dark Screen After Updating

After installing Mac OS X 10.2.8 (Build 6R65) on a Macintosh that uses an ATI graphics chipset, including Power Macintosh G3 and PowerBook G3 Series (Bronze Keyboard) computers, the screen may look blue or dark in some applications.
This article has been archived and is no longer updated by Apple.

Symptom

In some applications, including Microsoft Entourage and Disk Utility, the display's image is blue or "melts".

When restarting or in some applications, the screen is black, as if the computer had been turned off.

This can happen if your ATI graphics chipset-based computer has 192 MB or more of RAM, and you install Mac OS X 10.2.8 (Build 6R65).

Solution

Download and install Mac OS X 10.2.8 (Build 6R73), or later. You can get it using the Software Update feature in System Preferences. For more information about using Software Update, see technical document 106704, "Mac OS X: How to Update Your Software".

Mac OS X 10.2.8 (Build 6R73) is known to resolve the issue for PowerBook G3 Series (Bronze Keyboard) computers. If you have a different computer and the issue persists, follow these steps:

1. Open Terminal (/Applications/Utilities/).
2. Type:

```
sudo mv /System/Library/Extensions/AppleNDRV/ATIDriver.bundle /Users/Shared/
```

Note: There is a space after "mv" and another after ".bundle".

3. Press Return.
4. Type: `sudo touch /System/Library/Extensions`
5. Press Return.
6. Restart the computer.

If desired, you can remove ATIDriver.bundle from the Shared folder.

This document will be updated as more information becomes available.

Published Date: Oct 11, 2016

Can‘t log in after installing Mac OS X 10.2 over 10.3

You may not be able to log in to Mac OS X 10.2 if you perform an Archive and Install installation over Mac OS X 10.3 Panther.
This article has been archived and is no longer updated by Apple.
This can happen if you chose to preserve user and network settings during the Mac OS X 10.2 installation.

To fix this, either reinstall Mac OS X 10.3 Panther, or perform another Mac OS X 10.2 Archive and Install installation but do not preserve user and network settings.

Usually, it's best to use the most current version of Mac OS X instead of an earlier version.
Published Date: Oct 11, 2016

Mac OS X 10.3: Default Personal Web Sharing Page Not Advertised

Mac OS X 10.3 does not advertise the default Personal Web Sharing page, which is in English, over Rendezvous. Personal Web Sharing, which can be turned on in Sharing preferences, lets you share webpages on your local network and on the Internet.

Note: This document discusses an advanced topic.
This article has been archived and is no longer updated by Apple.
Mac OS X 10.3 does not advertise the default Personal Web Sharing page over Rendezvous, which, for each account, is located at ~/Sites/index.html.

Although the webpage is not advertised over Rendezvous, you can still view it using the URL that appears in Sharing preferences (such as http://127.0.0.1/~accountname/).

If you change the default account webpage, it will be advertised after the computer restarts. You can then view it with the Rendezvous browser in Safari. Follow these steps:

1. From the **Safari** menu, choose **Preferences**.
2. Click the Bookmarks button.
3. Click the three checkboxes labeled "Include Rendezvous".

Note: The computer's webpage (located at /Library/WebServer/Documents) is never advertised over Rendezvous.

Published Date: Oct 11, 2016

Mac OS X 10.3: Mail - Messages Missing or Incomplete, Can‘t Get or Send Mail After Using Mac OS X 10.2 Mail

Some advanced users configure Mac OS X to use a home folder besides the default one. These users shouldn't switch back and forth between Mac OS X Panther Mail and Mac OS X 10.2 Mail.
This article has been archived and is no longer updated by Apple.

Symptom

Mac OS X 10.2 or 10.3

- Mail cannot get or send messages.
- Your In mailbox appears empty even though you know messages should be there.
- Messages in a mailbox appear incomplete, or seem to run together.

This happens if:

- You use the same home folder for both Mac OS X 10.3 and Mac OS X 10.2 Mail.
- Mac OS X 10.3 and 10.2 are installed on different volumes.
- You start from your Mac OS X 10.3 volume, use Mail, then start from your Mac OS X 10.2 volume and use Mail again.

Note: Your home folder has the same name as your account's short name. It is in the Users folder.

Note: IMAP mailboxes stored on a server are not affected by this issue.

Solution

You can use the same home folder for Mac OS X 10.3 that you used for Mac OS X 10.2; however, if you do, you shouldn't start from Mac OS X 10.2 and use Mail after installing Mac OS X 10.3 and using Mail.

To avoid the issue, upgrade to Mac OS X 10.3 and don't use Mac OS X 10.2 on the same computer. If you still don't see email messages, from the **Mailbox** menu, choose **Rebuild**.

Published Date: Oct 11, 2016

Mac OS X Address Book: About SMS messaging and new phone models

Address Book includes a short message service (SMS) feature that works with many mobile phones.
This article has been archived and is no longer updated by Apple.
Some new phone models use new methods of communication with Mac OS X. Therefore, not all new phones will be able to use the SMS messaging features or phone number dialing features of Address Book.

You can use Address Book to manage the phone's contacts with iSync, though.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 17, 2012

Mac OS X: Common Pointer Icons and What They Mean

Learn about common pointer (cursor) icons that you see in Mac OS X.
This article has been archived and is no longer updated by Apple.

Mac OS X 10.1 and earlier	Mac OS X 10.2 and later	Description
		Arrow pointer When you see this icon, you can move, copy, select, or drag items.
		Progress indicator The progress indicator appears when an application needs some time to finish a task. In Mac OS X 10.2 or later, this pointer appears in applications that need you to wait. If this pointer appears a long period of time, the application may have stopped responding or "crashed."
		Watch cursor The watch cursor may appear instead of the progress indicator in some stand by situations, such as with a Classic application.
		Progress indicator Some applications use this alternate spinning cursor.
		Link pointer The link pointer appears in Mac OS X applications when you move the pointer over a hypertext link, such as http://www.apple.com.
		I-beam The I-beam, or insertion point, appears when you can edit, type, or select (highlight) text in a particular area.
		Alias pointer The alias pointer means you are making an alias of the selected item. This happens if you press Option-Command while dragging an item.
		Copy pointer The copy pointer means you are copying or duplicating the selected item without moving the original. In the Finder, this pointer appears when you drag an item to a different volume, or to the same volume while pressing the Option key.
		Shortcut menu pointer This pointer means that you can click the mouse button to see a shortcut, or contextual, menu. You can hold the Control key on your keyboard and click the mouse button to see these menus when they are available.
n/a		**Prohibitory pointer** This pointer means you can't do the action you're trying to do, such as attempting to move a file to a location where you don't have permission make changes.
		Resize pointer Variations of this cursor appear when you can resize something, such as a window column in the Finder, or a sidebar in iTunes.
		Screen capture pointer To take a screen shot of a selection of the screen, press Command-Shift-4.
		Screen capture pointer To take a screen shot of a particular window, press Command-Shift-4, release those keys, then press the Space bar.

Published Date: Feb 17, 2012

iSync: Data Loss After Using Terminal to Allow Unsupported Calendar Syncing

If you previously used Terminal to modify iSync 1.1 for unsupported calendar syncing, you may lose data or duplicate data when you sync your phone using iSync 1.2.1 or later.
This article has been archived and is no longer updated by Apple.

Symptom

Calendar data is lost or duplicated when you sync your phone with iSync 1.2.1.

You have previously used Terminal to allow iSync 1.1 to sync calendar data with an unsupported mobile phone.

Solution

There are two solutions. Review both and use the best for your situation.

If iSync 1.2.1 or later is not yet installed

Important: Following these steps removes the third-party patch and preserves calendar data. However, you will lose any speed dials, ring tones, or other special features attached to your phone contacts. See technical document 93182, "**iSync: Use Caution Before Choosing Reset All Devices Command**".

1. Select the phone in the iSync window.
2. From the **Devices** menu, choose **Remove Device**.
3. Download and install iSync 1.2.
4. Sync with other devices.
5. From the **Devices** menu, choose **Add Device** to add the phone to the list.
6. Select the phone in the iSync window.
7. When the Device pane appears, choose "Erase data on device" from the "On first sync" pop-up menu.
8. Sync the phone with your computer and other devices.

If iSync 1.2.1 or later is already installed

This solution disables, but does not remove, the patch or calendar data that may have been synced to the phone previously. You may see duplicate calendar events.

1. Select the phone in the iSync window.
2. From the **Devices** menu, choose **Remove Device**.
3. Sync with other devices.
4. From the **Devices** menu, choose **Add Device** to add the phone to the list.
5. Click the Device drawer.
6. Deselect Calendar synchronization.
7. Sync the phone with your computer and other devices.

Published Date: Feb 19, 2012

Mac OS X 10.3: Fax address is incorrectly completed

When typing a fax recipient's name, Mac OS X Panther will complete the name and phone number if the contact's name is in Address Book. If similar or duplicate contacts are in Address Book, the wrong one may be chosen for you.
This article has been archived and is no longer updated by Apple.

Note: This document applies to Mac OS X 10.3 through 10.3.9.

Symptom

When typing the name of a fax recipient in the To: field, an Address Book entry is filled in automatically. The contact that is filled in may not be the one you intended.

This happens when two or more entries in Address Book have the same first or last name.

Solution

Select the recipient this way instead:

1. Click the button to the right of the To: field. The contacts window appears.
2. Select the recipient.
3. Click the To: button.
4. Close the window.

Published Date: Oct 11, 2016

Mac OS X 10.2.8, G5: About the Mac OS X 10.2.8 (G5) Update

This software updates Mac OS X 10.2.7 (G5) to version 10.2.8 (G5).

Important: This update works only with Power Mac G5 computers. To update a different kind of computer to Mac OS X 10.2.8, refer to technical document 25524, "**Mac OS X: About the Mac OS X 10.2.8 Update**".

This article has been archived and is no longer updated by Apple.
Important: Read Before Installing

1. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

2. To install Mac OS X 10.2.8, you must enter the password for an administrator account. The password cannot contain a space or special characters typed by pressing the Option key.

   If you need to change an administrator account password, choose Apple menu > System Preferences; then choose View > Accounts. Select the account name and click Edit User. Type the current password and press Return, then type the new password in both text boxes. Click OK when you are done.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Featured Software to install.

Installation

There are two ways to update to Mac OS X 10.2.8 (G5): using Software Update or a standalone installer.

Software Update Installation

You may have been referred to this document by Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

An installer is also available from Apple Featured Software (http://www.apple.com/swupdates/). Mac OS X 10.2.8 (G5) Update updates Mac OS X 10.2.7 (G5) to the later version.

Enhancements

These are some of the enhancements that are part of the Mac OS X 10.2.8 (G5) Update:

- The computer will now wake from sleep if both an AirPort Extreme card and some kinds of PCI cards are installed.
- iChat works better on AirPort networks.
- Adds support for these third-party disc burners: Logitech Corp. LCW-E48F 48x24x48x, MCE Lucid-SD DVD-R/RW Drive, Formac Devideon FWD1496-3DVD-R 4x, TDK DVD+/-R/RW Drive - DED+440, LaCie d2 CD-RW FireWire 52x32x52x
- Bluetooth devices are now available after the computer wakes from sleep.
- Some FireWire devices will work better if you connect them after disconnecting certain kinds of digital cameras.
- Keyspan Twin Serial adapters work better when connected to a USB 2.0 hub.
- FireWire devices, including iPod, are now available when the computer wakes from sleep.
- Prevents a kernel panic from happening if you start Classic with more than 2 GB of RAM installed.
- Improves stability when using the "Return to command state" modem string command (;) with an Apple Internal USB Modem (v.92).
- The Apple Internal USB Modem maintains better connections to some kinds of v.34 modems.
- Includes updated security services and the latest Security Updates.

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TA22368_Mac_OS_X_G_About_the_Mac_OS_X_G_Update.pdf

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 11, 2016

iCal 1.5.1 "Play Sound" alarms show two alarm messages

These things can happen after updating to iCal 1.5.1:

- iCal "play sound" alarms become "message with sound" alarms.
- Two messages appear for alarms that previously had one.

This article has been archived and is no longer updated by Apple.

This happens because your "play sound" alarms are converted into "message with sound" alarms.

iCal 1.5 or later allows you to attach different kinds of alarms to a single event. Earlier versions of iCal used separate alarms for "display message" and "play sound". iCal converts this type of alarm to a "message with sound" alarm, so that a persistent message is displayed at the time of the alarm in case you are away from the computer. If you already had one message attached to the alarm, you will see two after upgrading.

You can adjust the alarm or remove extra messages by following these steps:

1. Open iCal 1.5.1.
2. Select the event that has an alarm.
3. Open the inspector by choosing Window > Show Info.
4. Select the alarm you want to remove.
5. In the inspector, click the word "alarm" by the alarm you wish to remove. A pop-up menu appears:

6. Choose Remove Alarm from the pop-up menu.

Published Date: Oct 11, 2016

Mac OS X: Palm HotSync, iSync Conduit don‘t work after Archive and Install installation

This article has been archived and is no longer updated by Apple.

After performing an Archive and Install installation, you should reinstall Palm Desktop software and the iSync Palm Conduit before syncing your Palm OS-based device.

After an Archive and Install installation, you might see this alert when you log in: "Transport monitor could not be launched because of a shared library error," and you can't sync with your Palm OS-based PDA.

Locate the "HotSync Libraries" file in your Previous System folder, and drag it to: /Library/CFMSupport/

Alternatively, or if your Previous System folder is not available:

• For iSync 2.0 or later (included with Mac OS X 10.4), enable Palm Conduit in iSync. Note that there are other steps in the process of setting up a Palm OS-based device, such as opening HotSync Manager and checking conduit settings. Check out this document.

• For iSync 1.5, reinstall Palm Desktop, which is available from this Palm website. If you use iSync with your Palm OS device, you will also need to reinstall the iSync Palm Conduit after Palm Desktop. The iSync Palm Conduit is available here.

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Published Date: Feb 17, 2012

Mac OS X: Shared printer‘s name is garbled in Printer Setup Utility

This article has been archived and is no longer updated by Apple.

The name of printer shared by a Windows-compatible PC might not make sense in the Printer Setup Utility (Mac OS X 10.3 or later) if the name contains certain characters.

Symptom

A shared printer's name appears as garbled text in the Printer Setup Utility. After adding the printer, you might not be able to print to it.

This happens when the printer's name contains high ASCII characters or 2-byte characters and is shared by a Windows-compatible PC.

Note: 2-byte characters are commonly used in Japanese, Chinese, and Korean fonts. High ASCII characters are "extended ASCII" characters that you typically type using the Option key. They are listed in table II of this webpage: (http://www.cdrummond.qc.ca/cegep/informat/Professeurs/Alain/files/ascii.htm).

Solution

The name of the shared printer should not include high ASCII characters or 2-byte characters. Change the name of the printer so that it only uses alphanumeric characters.

Alternatively, if you have a compatible printer driver, consider sharing the printer from your Mac instead.

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Published Date: Oct 11, 2016

Mac OS X 10.3: Update third-party video card drivers before installing

This article has been archived and is no longer updated by Apple.

Issue or symptom

After installing Mac OS X 10.3, or while started from the Mac OS X Panther Install CD:

- The image on the screen is much larger. Icons and windows don't seem to be the right size.
- There is no video on the display. It's dark even though the computer is turned on.
- There are fewer display resolutions and color depth choices in Display preferences.
- Only black and white or grayscale video appears.

This can happen if your display is connected to a third-party video card. The card and display worked fine with Mac OS X 10.2 or earlier.

Solution

Before you install Mac OS X 10.3 Panther, be sure to install updated drivers for any third-party video cards you use, even if you didn't have to do this for Mac OS X 10.2. "Third-party video card" means a card that didn't come from Apple when you bought your computer.

Contact the video card's manufacturer to see if they have updated the card's software or firmware drivers to work with Mac OS X 10.3. For best results, install the updated software or firmware before installing Mac OS X 10.3.

If the third-party card is the only one installed and the screen is dark when you start up the computer, you may need to reinstall the original video card temporarily, install Mac OS X 10.3, install the updated third-party drivers, then put your third-party video card back in the computer.

Additional information

If your video card's ROM (or firmware) is older than March 2001, Mac OS X 10.3 will not load the ROM driver during start up. Instead, it will try to load a newer software driver file if one is present. Make sure the installed driver works with Mac OS X Panther.

These are some third-party video card manufacturers' support websites where you may be able to find additional information:

- **ATI Technologies**: (http://www.ati.com/support/driver.html)

  Note: If your ATI video card came with your Mac OS X 10.3-compatible computer, this document does not apply.
- **ForMac**: (http://www.formac.com/webapp/support_start.php)
- **ixMicro**: This company in no longer in business. However, you may be able to locate drivers using an Internet search engine.
- **3Dfx**: (http://www.voodoofiles.com/3dfxhelp.asp)

  Note: The 3Dfx website may offer some drivers as a courtesy, but the company is no longer in business.

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Published Date: Oct 11, 2016

iSync: Can‘t Sync With a Locked Motorola Phone

You'll need to unlock your Motorola phone (http://www.motorola.com/) before you sync via iSync. A locked phone may display a "locked" message or lock icon.
This article has been archived and is no longer updated by Apple.

Symptom

iSync does not sync with your Motorola phone. A message appears that says the "device is unavailable."

This happens when the phone is locked.

Solution

Unlock the phone, then sync via iSync. iSync cannot unlock the phone for you.

If you don't know how to unlock your locked phone, refer to the documentation that came with it, or contact Motorola for further assistance.

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Published Date: Feb 19, 2012

Changing owner or group in a Get Info window (Mac OS X)

This article has been archived and is no longer updated by Apple.

If your computer is bound to a network directory system with many user or group records, changing a file or folder's owner or group in a Get Info window may take some time.

Symptom

- Owner and Group information appears blank in a Get Info window, and a progress indicator (looks like a spinning gear) appears.
- Scrolling through the users or groups pop-up menu takes longer than expected.

This happens when the client is bound to a network directory system that has many user or group records.

Solution

When you authenticate to change the Owner or Group setting, the pop-up menu is populated with every user or group in the local and networked directory system.

Mac OS X 10.3 and 10.4 or later only workaround - enable free text entry

By default, Mac OS X 10.3 and 10.4 or later display users and groups in the local directory only.

Note: This advanced procedure requires manual editing of a value using the Terminal application. This information is provided for information purposes only. Apple does not provide any further technical support for this method. You should use this method only if you don't need to browse user or group listings.

Note: If multiple users have the same real name, this method selects the first one that it encounters in the network directory system.

1. Open Terminal (/Applications/Utilities).
2. Type, followed by Return:
   ```
   defaults write com.apple.finder FXDisableFullUserGroupListing true
   ```
3. Log out, then back in.

When you log in, the Owner and Group pop-up menus will be replaced with text-entry fields. You can now type in a known account or group short name or a real name.

Mac OS X 10.3 and 10.4 or later only - selecting a user or group that is not displayed

By default, Mac OS X 10.3 and 10.4 or later display users and groups in the local directory only. To select a user or group from the network directory:

1. In the Get Info window, click the Owner or Group pop-up menu depending on what you want to do.
2. Choose Other at the bottom of the menu.
3. In the User Listing window, select the user and group from the network directory list.

Note: The time required for the User Listing to appear depends on the number of user and group records in the network directory system.

This document will be updated when more information is available.

Published Date: Oct 11, 2016

Mac OS X 10.3: Sometimes automatic PPP connection dialing doesn‘t work

Mac OS X Panther's automatic PPP connection feature usually works great. However, it might not work sometimes.
This article has been archived and is no longer updated by Apple.
Mac OS X can automatically dial your modem (PPP connection) when it needs to connect to your Internet Service Provider (ISP). For example, Mac OS X will connect for you when Safari or Mail need to access the Internet.

To enable this feature, do this:

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **Network**.
3. Click the PPP pane.
4. Click the PPP Options button.
5. Click the checkbox labeled, "Connect automatically when needed".

If automatic connection does not work

In some situations this feature may not work, even if it is turned on in Network preferences. These include:

When you cancel a PPP connection attempt when the modem is dialing, or you manually disconnect after an automatic connection

To fix this, you can change any modem setting, put the computer to sleep and wake it, change your network location, or restart the computer.

Tip: When this happens, the PPP option "Connect automatically when needed" still appears to be enabled.

After three failed automatic connection attempts

The auto-connect feature turns itself off if a PPP connection can't be made in three attempts. When this happens, it probably means there is an issue with your ISP's phone number, or with the phone cable or outlet. Make sure all the connections are correct, and try a phone with the same cord and outlet.

Tip: In this case, Mac OS X uses the next network port as set in Network preferences (such as AirPort or Ethernet) to connect to the Internet.

Once you have the correct phone number and a working connection, put the computer to sleep and wake it, change your network location, or restart the computer, to use automatic connection.

Related documents

106717	Mac OS X: How to Connect to the Internet via PPP (Dial-Up Access) Using a Modem
106433	Mac OS X: Frequently Asked Questions (FAQ) for PPP Modem Connections

Published Date: Oct 11, 2016

Mac OS X 10.3: Included PPDs for PostScript printers

Mac OS X 10.3 Panther installs PostScript Printer Description (PPD) files that you can use with many Apple LaserWriter and third-party PostScript printers. This document includes a list of included PPDs.
This article has been archived and is no longer updated by Apple.
The Mac OS X print architecture works with many Apple and third-party PostScript printers, specifically those that have these two characteristics:

- Are PostScript Level 2 or 3 printers
- Use PPD files to describe the set of features available for a specific PostScript printer or printer family

A PPD file typically describes a printer's features: paper-handling capabilities, the number of paper trays and their capacity, available paper sizes, and so forth. Even if your printer's PPD isn't installed, you can still use the Generic PPD to print documents.

Printer manufacturers create the PPD files for their printers. Mac OS X 10.3 includes them as a convenience to you. A list of PPDs for Apple, Brother, Hewlett-Packard, Lexmark, and Xerox printers appears below.

For information on inkjet printers, see "Mac OS X 10.3: Raster (Inkjet) Printer Drivers Included".

Location of PPD files on Mac OS X 10.3 Install Discs

English (EN) PPDs are installed as part of the Essentials.pkg on the Mac OS X 10.3 Install Disc 1. PPDs for other languages are installed from the Mac OS X 10.3 Install Disc 2.

Some printer features not available?

Bundled PPDs may not offer every feature of a printer, such as sheet feeders or built-in fax machines. If your printer has a feature that is not available, contact the printer manufacturer for more information regarding the use of that feature. In the case of the LaserWriter 16_600 PS Fax, for example, Apple does not include the built-in fax feature when that PPD is used with Mac OS X.

Included PPD files

This list is subject to change without notification. There may be PPD files included with Mac OS X 10.3 that are not included with Mac OS X 10.2 or earlier, and PPD files that are included with Mac OS X 10.2 but not Mac OS X 10.3. You may wish to check with your printer manufacturer for a later PPD file version.

Some PPD files are not completely localized for the languages listed, but still work with them.

For a list of language codes, see "Knowledge Base: Language Codes Used".

Tip: For Mac OS X 10.2 PPD files, see "Mac OS X 10.2: Included PPDs and Use of PostScript Printers."

Printer	Languages
Apple LaserWriter 12/640 PS	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
Apple LaserWriter 16/600 PS	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
Apple LaserWriter 16/600 PS Fax	EN,FR,DE,JA,NL,ES,PT,ZH-S,KO,ZH-T,DA,NO,SV
Apple LaserWriter 16/600 PS-J	EN,FR,JA,NL,PT,ZH-S,KO,ZH-T,NO
Apple LaserWriter 4/600 PS	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
Apple LaserWriter 8500	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
Apple LaserWriter Color 12/600 PS	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV

Apple LaserWriter Color 12/600 PS-J	EN,FR,JA,NL,PT,ZH-S,KO,ZH-T,NO
Apple LaserWriter Color 12/660 PS	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
Apple LaserWriter IIf v2010.113	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
Apple LaserWriter IIf v2010.130	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
Apple LaserWriter IIg v2010.113	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
Apple LaserWriter IIg v2010.130	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
Apple LaserWriter Personal 320	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO
Apple LaserWriter Personal NTR	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
Apple LaserWriter Pro 400	EN,FR,JA,NL,PT,ZH-S,KO,ZH-T,NO
Apple LaserWriter Pro 405	EN,FR,JA,NL,PT,ZH-S,KO,ZH-T,NO
Apple LaserWriter Pro 600	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
Apple LaserWriter Pro 630	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
Apple LaserWriter Pro 810	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
Apple LaserWriter Pro 810f	EN,FR,JA,NL,PT,ZH-S,KO,ZH-T,DA,NO,SV
Apple LaserWriter Select 360	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
Apple LaserWriter Select 360f	EN,FR,JA,NL,PT,ZH-S,KO,ZH-T,NO,SV
Apple LaserWriter Select 610	EN,FR,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,NO
Brother	
Brother DCP-8020	EN,FR,DE,NL,IT,ES,PT,DA,FI,NO,SV
Brother DCP-8025D	EN,FR,DE,NL,IT,ES,PT,DA,FI,NO,SV
Brother HL-5070N Series	EN,FR,DE,NL,IT,ES,PT,DA,NO,SV
Brother MFC-8420	EN,FR,DE,NL,IT,ES,PT,DA,FI,NO,SV
Brother MFC-8820D	EN,FR,DE,NL,IT,ES,PT,DA,FI,NO,SV
Hewlett-Packard	
HP Business Inkjet 2250	EN,FR,DE,IT,ES
HP Business Inkjet 2280	EN,FR,DE,IT,ES,ZH-S,KO,ZH-T
HP Business Inkjet 2600	EN,FR,DE,IT,ES
HP Business Inkjet 3000	EN,FR,DE,IT,ES,KO
HP Color LaserJet	EN,FR,DE,NL,IT,ES,PT,KO,DA,FI,NO,SV
HP Color LaserJet 5/5M	EN,FR,DE,NL,IT,ES,PT,KO,DA,FI,NO,SV
HP Color LaserJet 2500	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP Color LaserJet 4500	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV

HP Color LaserJet 4550	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP Color LaserJet 4600	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP Color LaserJet 5500	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP Color LaserJet 8500	EN,FR,DE,NL,IT,ES,PT,ZH-S,KO,ZH-T,NO
HP Color LaserJet 8550	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,NO
HP Color LaserJet 9500	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP DesignJet 800PS	EN,FR,DE,JA,IT,ES,ZH-S,KO,ZH-T
HP DesignJet 1050C	EN,FR,DE,JA,IT,ES,ZH-S,KO,ZH-T
HP DesignJet 1055CM	EN,FR,DE,JA,IT,ES,ZH-S,KO,ZH-T
HP DesignJet 2500CP	EN,FR,DE,JA,IT,ES,ZH-S,KO,ZH-T
HP DesignJet 3500CP	EN,FR,DE,JA,IT,ES,ZH-S,KO,ZH-T
HP DesignJet 5000PS	EN,FR,DE,JA,IT,ES,ZH-S,KO,ZH-T
HP DesignJet 5500PS	EN,FR,DE,JA,IT,ES,ZH-S,KO,ZH-T
HP LaserJet 4/4M	EN,FR,DE,NL,IT,ES,DA,FI,NO,SV
HP LaserJet 4 Plus	EN,FR,DE,ES,PT,DA,FI,NO,SV
HP LaserJet 4ML	EN,FR,DE,NL,IT,ES,DA,FI,NO,SV
HP LaserJet 4MP	EN,FR,DE,NL,IT,ES,DA,FI,NO,SV
HP LaserJet 4Si/4Si MX	EN,FR,DE,NL,IT,ES,DA,FI,NO,SV
HP LaserJet 4V/4MV	EN,FR,DE,NL,IT,ES,PT,DA,FI,NO,SV
HP LaserJet 5M	EN,FR,DE,NL,IT,ES,PT,DA,FI,NO,SV
HP LaserJet 5P/5MP	EN,FR,DE,NL,IT,ES,PT,DA,FI,NO,SV
HP LaserJet 5Si	EN,FR,DE,NL,IT,ES,PT,DA,FI,NO,SV
HP LaserJet 5Si Mopier	EN,FR,DE,NL,IT,ES,PT,DA,FI,NO,SV
HP LaserJet 6P/6MP	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP LaserJet 1200	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP LaserJet 1220	EN,FR,DE,JA,NL,IT,ES,PT
HP LaserJet 1300 Series	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP LaserJet 2100 Series	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP LaserJet 2200	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP LaserJet 2300 Series	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP LaserJet 3200M	EN,FR,DE,JA,NL,IT,ES,PT,KO
HP LaserJet 3300/3310/3320	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP LaserJet 4000 Series	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP LaserJet 4050 Series	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV

HP LaserJet 4100 MFP	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP LaserJet 4100 Series	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP LaserJet 4200 Series	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP LaserJet 4300 Series	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP LaserJet 5000 Series	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP LaserJet 5100 Series	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP LaserJet 8000 Series	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP LaserJet 8100 Series	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP LaserJet 8150 Series	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP LaserJet 9000 MFP/9000L MFP	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP LaserJet 9000 Series	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP Mopier 240	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
HP Mopier 320	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,KO,ZH-T,DA,FI,NO,SV
Lexmark	
Lexmark C720	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark C750	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark C910	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark C912	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark E320	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark E321	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark E322	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark E323	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra C710	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra Color 40	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra Color 45	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra Color 1200	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV

Lexmark Optra E310	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra E312	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra E312L	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra M410	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra M412	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra S 1250	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra S 1255	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra S 1255 plus	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra S 1620	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra S 1625	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra S 1625 plus	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra S 1650	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra S 1855	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra S 1855 Plus	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra S 2420	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra S 2450	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra S 2455	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra S 2455 plus	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra Se 3455	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra Se 3455 plus	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra SC 1275	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra T610	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra T612	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra T614	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra T616	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark Optra W810	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV

Lexmark T420	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark T520	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark T520 SBE	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark T522	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark T620	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark T622	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark T630	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark T632	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark T634	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark W812	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Lexmark W820	EN,FR,DE,JA,NL,IT,ES,PT,ZH-S,ZH-T,DA,FI,NO,SV
Xerox / Tektronix	
Phaser 740	EN,FR,DE,IT,ES,ZH-S,ZH-T
Phaser 740E	EN,FR,DE,IT,ES,ZH-S,ZH-T
Phaser 740P	EN,FR,DE,IT,ES,ZH-S,ZH-T
Phaser 750DP	EN,FR,DE,IT,ES,ZH-S,ZH-T
Phaser 750DX	EN,FR,DE,IT,ES,ZH-S,ZH-T
Phaser 750N	EN,FR,DE,IT,ES,ZH-S,ZH-T
Phaser 750P	EN,FR,DE,IT,ES,ZH-S,ZH-T
Phaser 780GN	EN,FR,DE,IT,ZH-S,ZH-T
Phaser 780N	EN,FR,DE,IT,ZH-S,ZH-T
Phaser 780P	EN,FR,DE,IT,ZH-S,ZH-T
Phaser 840DP	EN,ZH-S,ZH-T,EN,ZH-S,ZH-T
Phaser 840N	EN,ZH-S,ZH-T
Phaser 850DP	EN,FR,DE,IT,ES,ZH-S,ZH-T
Phaser 850DX	EN,FR,DE,IT,ES,ZH-S,ZH-T
Phaser 850N	EN,FR,DE,IT,ES,ZH-S,ZH-T
Xerox DocuColor 2006	EN,FR,DE,NL,IT,ES,PT
Xerox DocuPrint N2025	EN
Xerox DocuPrint N2125	EN
Xerox DocuPrint N2825	EN
Xerox DocuPrint N3225	EN
Xerox DocuPrint N4025	EN
Xerox DocuPrint N4525	EN,FR,DE,IT,ES
Xerox Phaser 790	EN,FR,DE,NL,IT,ES,PT
Xerox Phaser 1235	EN,FR,DE,IT,ES
Xerox Phaser 2135	EN,FR,DE,IT,ES

Xerox Phaser 3400	EN,FR,DE,IT,ES,ZH-S,ZH-T
Xerox Phaser 5400	EN,FR,DE,IT,ES,PT

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Published Date: Oct 11, 2016

Mac OS X 10.3, 10.4 and later: Fonts in Mac OS 9 System Folder aren‘t available to Mac OS X applications

This article has been archived and is no longer updated by Apple.

Fonts that are in your Mac OS 9 System Folder may not be available to Mac OS X Panther and Tiger applications until you select the System Folder in Classic preferences or start Classic.

Symptom

- Fonts are unexpectedly substituted in a Mac OS X application.
- Fonts you expect to be available to a Mac OS X application are not.

This can happen when your Mac OS 9 System Folder is on a different volume than Mac OS X, if there are multiple Mac OS 9 System Folders present, or if the font is a bitmap font or font suitcase that contains only bitmap fonts (please note that bitmap fonts are not available in Mac OS X).

Solution

Either start Classic before using the Mac OS X application, or follow these steps once:

1. Quit any open Mac OS X application that needs the font or fonts.
2. From the **Apple** menu, choose **System Preferences**.
3. In the resulting dialog, click Classic.
4. Click the Start/Stop button.
5. Select your System Folder in the list of available folders, even if it is the only choice.
6. From the **System Preferences** menu, choose **Quit**.
7. Reopen a Mac OS X application. Your fonts should be available (except for bitmap fonts).

Published Date: Oct 11, 2016

Mac OS X 10.3 or later: About faxing via mobile phone or Bluetooth

You might be able to send or receive faxes via Bluetooth or a mobile phone and Mac OS X 10.3 Panther or later.
This article has been archived and is no longer updated by Apple.
However, the fax feature has not been tested over Bluetooth or with a mobile phone. This means that AppleCare does not offer telephone technical support for faxing via a third-party Bluetooth modem or mobile phone.

Related documents

25596 Mac OS X 10.3: About Receiving Faxes

Published Date: Oct 11, 2016

Mac OS X 10.3: Terminal Commands That Require Authentication Unlock Other Applications

In Mac OS X Panther, Terminal commands that unlock resources and allow you to perform certain functions that you might not otherwise be able to, such as `su` and `sudo`, share the logged-in account's credentials with any application that requests them. This includes System Preference panes that are normally "locked" to the user and require authentication. If this is undesirable, you can use Fast User Switching as a workaround.

This article has been archived and is no longer updated by Apple.
Example: A non-administrator user, such as a student in a school lab, is logged in. The user needs to perform a certain operation that requires administrator access. An administrator user, such as a teacher, opens Terminal and uses the `sudo` command to allow the student to perform the task. Mac OS X 10.3 differs from earlier versions of Mac OS X because the non-administrator user now has access to other resources. Among other things, this means that all System Preference panes are now unlocked for the logged-in user, regardless of the Security pane or master password settings.

To avoid sharing credentials, you can use Fast User Switching:

Enable Fast User Switching if it isn't on. Do this one time:

1. Log in with an administrator account.
2. From the **Apple** menu, choose **System Preferences**.
3. From the **View** menu, choose **Accounts**.
4. Click the Login Options button.
5. Select "Enable fast user switching".
6. Create another admin user account.

Then, follow these steps whenever you need to authenticate or unlock resources via Terminal:

1. Switch to the alternative account via the Fast User Switching menu.
2. Do what you need to in the Terminal.
3. Switch back to the original account.

Note: You can also reset session credentials by locking an unlocked System Preferences pane, such as Network preferences.

Published Date: Oct 11, 2016

Mac OS X: Microsoft Office Test Drive Doesn‘t Stay Open

If a Microsoft Office Test Drive application closes immediately after it's opened, log in with an administrator account and open it once.
This article has been archived and is no longer updated by Apple.

Symptom

When you open a Microsoft Office Test Drive application, it closes immediately after it's opened.

This includes: Word, Excel, PowerPoint, and Entourage.

Solution

1. From the **Apple** menu, choose **Log Out**.
2. Log in with an administrator account. You may need to ask a person with an administrator account to do this.
3. Open one of the Microsoft Office Test Drive applications.
4. From the **Apple** menu, choose **Log Out**.
5. Log in using your own account.

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Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.

Published Date: Feb 19, 2012

Mac OS X 10.3 Mail: About SSL, IMAP accounts, and "Remember my decision"

Learn about accepting SSL certificates in Mac OS X Panther Mail.
This article has been archived and is no longer updated by Apple.

Symptom

Mail asks if you want to accept an SSL certificate for each IMAP account. This happens each time Mail opens, even if you click Remember My Decision.

Solution

As a workaround, follow these steps. You need to log in using an administrator account first.

1. Click "Show certificate" when Mail asks if you want to accept the certificate.
2. Press the Option key while dragging the certificate to the desktop. The certificate's icon appears on the desktop.
3. Add the certificate to your keychain by dragging its icon on top of Keychain Access. **Tip**: Keychain Access is located in the Utilities folder (/Applications/Utilities).
4. When Keychain Access opens, you may be prompted to select which keychain to import to. If this happens, choose a keychain and also select X509 Anchors.

Additional information

Mail will continue to ask if you want to accept an SSL certificate each time it opens if the certificate is an expired server certificate or is signed by an unknown certificate authority.

Related documents

25555 Mac OS X 10.3: Mail - How to Use a Secure Email Signing Certificate (Digital ID)

Published Date: Oct 11, 2016

Changing the "Use Mac OS 9 Preferences" setting in Mac OS X 10.3

The Classic preferences option "Use Mac OS 9 preferences from your home" is dimmed (or grayed out) when Classic is running. You won't be able to change the setting until you stop Classic.
This article has been archived and is no longer updated by Apple.
To change this setting, log in with an administrator account. If you don't have an administrator account, or if your account is managed and you do not have access to change Classic preferences, a person with an administrator account will need to assist you.

After logging in with an administrator account, follow these steps:

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **Classic**.
3. Click Start/Stop.

4. Click Stop.
5. Click Advanced.
6. Modify the "Use Mac OS 9 preferences" option as desired.
7. Click Start/Stop.
8. Click Start.

Published Date: Oct 11, 2016

iSync: About Syncing Large Amounts of Data at One Time

You may not be able to sync lots of calendar or contact information to some phones at one time. If this happens, sync less information at a time, or sync several times.
This article has been archived and is no longer updated by Apple.

Symptom

An alert appears when syncing a large amount of data to a phone at one time. The alert indicates which data type is causing the issue.

This can happen when syncing lots of calendars, or a few calendars each with lots of information and notes, or many Address Book contacts, or lots of contact images to some phones.

Solution

As a workaround, sync fewer contacts or calendars at one time. For example, sync just one iCal calendar.

Note: In Address Book, you can make a new group and move some of your contacts into it. Then, sync only that group of contacts.

Additional information

For the Sony Ericsson P800 phone only, the limit for data syncing is 2 MB for calendars and 500 KB for contacts. Contacts with images take up more space.

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Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 11, 2016

iSync: About D-Link Bluetooth USB adapter compatibility

This article has been archived and is no longer updated by Apple.

You can sync information via iSync and a Bluetooth device using a D-Link (http://www.dlink.com/) Bluetooth USB adapter.

Use D-Link USB Bluetooth Adapter part number DBT-120, revision B2 or later for best iSync compatibility. If you have an earlier version of the D-Link adapter, or a different brand, you may not be able to synchronize with some phones such as the Sony Ericsson P800.

Older versions of the adapter, such as revision A, work with compatible, older phones.

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Published Date: Oct 11, 2016

iSync: Bluetooth connection fails when syncing with Sony Ericsson P800 phone

You can fix your Bluetooth connection if it fails while syncing data to a Sony Ericsson P800 mobile phone.
This article has been archived and is no longer updated by Apple.
When you're syncing your Sony Ericsson P800 phone via Bluetooth, iSync tells you that the Bluetooth connection has failed.

Try the solutions listed below to restore the connection. Any step may restore the connection, but you should try them in the order presented until the issue is resolved.

Note: "Break pairing" below means first remove the device from the Bluetooth Devices list, then remove the computer from the phone's device list. It does not involve any physical force to the device or computer. For more information, see these technical documents:

86471: "Bluetooth: How to Delete a Paired Device"
51770: "How to Pair Your Computer With Bluetooth-Enabled Devices"

- Try to sync again.
- Turn the phone off and on, then try to sync.
- In iSync, remove the phone from the list of devices to sync, then add it back. Select "Merge data on first sync" when you do this.
- Restart the computer, then try to sync.
- Open iSync, then try to sync.
- Break pairing, and pair the phone with the computer again.
- Add the device to iSync again, choose Erase data on first sync, then try to sync.
- Break the pairing between the phone and computer again, perform a Master Reset on the phone, then pair again.

  Note: Master Reset is a feature of the Sony Ericsson P800 phone, not of iSync.

- Add the device to iSync again, then try to sync.

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Published Date: Feb 19, 2012

Mac OS X 10.3: Repair Permissions Utility Reports Printer Configuration File Issue

Mac OS X Panther's Repair Permissions utility reports a permissions issue with the printer.conf file. You can safely ignore this message,
This article has been archived and is no longer updated by Apple.

Symptom

The Repair Permissions utility reports a permissions issue with the printer.conf file.

Solution

You can safely ignore this message. It is accurate, but not a cause for concern. It may appear again if you make changes with Printer Setup Utility.

Download and install Mac OS X 10.3.2 Update or later to avoid this situation.

Published Date: Oct 11, 2016

Mac OS X 10.3: QuickTime Registration Button Doesn‘t Work

Troubleshoot QuickTime preferences when the Registration button doesn't work.

This article has been archived and is no longer updated by Apple.

Symptom

The Registration button in QuickTime preferences doesn't work. You entered a high ASCII or 2-byte character in the Organization or Name field.

Note: 2-byte characters are commonly used in Japanese, Chinese, and Korean fonts. High ASCII characters are "extended ASCII" characters that you typically type using the Option key. They are listed in table II of this webpage: (http://www.cdrummond.qc.ca/cegep/informat/Professeurs/Alain/files/ascii.htm).

Solution

1. Click the Finder icon in the Dock.
2. From the **Go** menu, choose **Go to Folder**.
3. Type: `~/Library/Preferences`
   Note: The tilde character ("~") represents your home folder.

4. Find the file named "QuickTime Preferences" and drag it to the Trash.

Note: After you do this, re-enter your QuickTime registration to enable QuickTime Pro features. Avoid using high ASCII or 2-byte characters in the Organization or Name field. See technical document 42564, "**QuickTime Pro: How to Enter Registration Key in Mac OS X**" if you need instructions.

If you no longer have your key and registration information, see technical document 58453, "**QuickTime Pro Key: Getting a Lost Key Resent**"

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Published Date: Oct 11, 2016

Mac OS X 10.3: A disc doesn‘t appear in the Finder after you burn it

Learn how to troubleshoot a disc that doesn't appear in the Finder after you burn it, with Mac OS X 10.3 through 10.3.3.
This article has been archived and is no longer updated by Apple.
A disc that doesn't appear in the Finder after you burn it is probably OK if no alerts appeared while it was being burned. Simply eject the disc and reinsert it to make it appear in the Finder. You only need to do this one time after burning the disc. Eject the disc by pressing the Media Eject key or the F12 key.

Update to Mac OS X 10.3.4 or later to avoid this issue.

Tip: You can burn CD-R, CD-RW, and DVD-R discs depending on your computer's disc drive.

If the disc still doesn't appear, see technical document 25545, "**Mac OS X: When You Put in a Blank CD, It Doesn't Appear**".

Published Date: Oct 11, 2016

Mac OS X 10.3: Mail - Some Font Styles Appear in Compose Window but Not in Sent Messages

Some of the text formatting you make in Mac OS X Panther Mail messages may not be visible to your recipients.

Note: Email formatting features that work with Mail in Mac OS X 10.2 also work in Mac OS X 10.3, such as bold, italics, and text coloring.
This article has been archived and is no longer updated by Apple.
The Font panel in Mac OS X Panther includes many ways you can format your text. For more information about these features, choose **Mac Help** from the **Help** menu, then search on "Font panel".

In Mail, some of these text formats only appear in the Compose window, regardless of the font you choose or the email application the message's recipients use. People who receive your message will not see certain changes to the text, such as strikethrough and text shadowing, even though you see them.

Note: The Text Underline button (the first button on the left in the top row of buttons) works for messages sent to recipients whose email applications can display rich text. Recipients will see single underlines, but not double underlines or colored underlines.

To get a good idea of what the message's recipients will probably see, save the message before you send it, then open it from your Drafts mailbox. You can also look at the copy in your Sent mailbox if you've already sent it.

Figure 1 Font Panel Buttons

These Font panel features only work with Mail message drafts:

- Text Strikethrough button (the second button on the left in the top row of buttons)
- Text Shadow (the fifth button from the left in the top row of buttons)

Other Font panel features are dimmed (or "grayed out") for Mail messages. Even though you can use the controls, they have no effect on selected text. These controls work in other applications, though:

- Shadow Opacity slider (the slider directly to the right of the Text Shadow button)
- Shadow Blur slider (the middle slider)
- Shadow Offset slider (the rightmost slider)
- Shadow Angle wheel

If it's important that your recipients see these styles, consider composing your message in a different application that can use these Font panel features, such as TextEdit. Then, save the file in rich text format (RTF) and attach it to a Mail message.

Related documents

106189 Mac OS X Mail: Plain Text Compared to Rich Text (RTF)

Published Date: Oct 11, 2016

Mac OS X 10.3: Keyboard Layout or Input Method Changes After Upgrade

After upgrading an existing Mac OS X installation to Mac OS X Panther, you may need to select your preferred keyboard layout or input method in International preferences.
This article has been archived and is no longer updated by Apple.

Symptom

Your previously selected keyboard layout or input method choice changes.

This happens after upgrading to Mac OS X 10.3 from an earlier version of Mac OS X.

Solution

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **International**.
3. Click Input Menu.
4. Select the layouts or input methods you wish to use.
5. Select "Show Input menu in menu bar" if desired. This allow you to quickly change between layouts or methods without opening International preferences.

Related documents

107379: "**Mac OS X 10.2: About Languages and Input Methods**"

Published Date: Oct 11, 2016

Mac OS X 10.3 (Swedish): Address Book - How to Send SMS Messages Longer Than 68 Characters

Update to Mac OS X 10.3.4 or later to avoid an issue in which, when you use Address Book to send an SMS via a Bluetooth mobile phone, you can type more than sixty eight characters, but once you type the sixty ninth or greater, the message's Send button is dimmed (or "grayed out").
This article has been archived and is no longer updated by Apple.
To send a message of up to 160 characters with the Swedish version of Mac OS X 10.3 through 10.3.3, simply press the Delete key once at the beginning of each new message.
Published Date: Feb 17, 2012

Mac OS X 10.3: Printer Sharing shares both printers and faxes

This article has been archived and is no longer updated by Apple.

Sharing a printer in Mac OS X 10.3 also shares any faxes that appear in the Printer Setup Utility Fax List. **Note:** For information about this issue and Mac OS X 10.4, see this article.

When you share a printer, faxes that appear in Printer Setup Utility's Fax List are also shared. You can turn on printer sharing in Sharing preferences or Print & Fax preferences.

Shared printers appear in the "shared printers" section of the Printer List. Shared faxes appear in the "shared faxes" section of the Fax List.

Tip: From the **View** menu, choose **Show Fax List** to see your Fax List.

Note: The Windows Sharing feature in Sharing preferences shares printers via SMB, but does not share faxes.

You can avoid sharing faxes by deleting them from the Fax List.

To learn more about setting up printer sharing, Printer Setup Utility, or faxing, choose **Mac Help** from the **Help** menu, then search on the feature you're interested in.

Published Date: Oct 11, 2016

Mac OS X 10.3: About Opening a File That‘s in a Hidden Directory

Learn how to open files from applications that are in a hidden (or invisible) directory (or folder).
This article has been archived and is no longer updated by Apple.
When you choose Open from a Mac OS X application's File menu, you can select from visible folders and directories.

To open a file that's in a hidden directory follow these steps:

1. From the application's **File** menu, choose **Open**. An Open window appears.
2. Press the Solidus ("/") key, commonly called the "forward slash key." A "Go to the folder" sheet and field appears.
3. Type the path to the directory or file that you want to open. **Note**: Mac OS X Panther may automatically complete the path as you type it.
4. Press Return.

Published Date: Oct 11, 2016

Mac OS X 10.3, 10.4, Palm HotSync: Fast User Switching - one Mac OS X user may sync at a time

One logged in user may sync a PDA via Palm HotSync (http://www.palm.com/) at a time. This applies to iSync Palm Conduits, too.
This article has been archived and is no longer updated by Apple.
When your computer is using Fast User Switching and other users are logged in, you can't sync your Palm OS-based device using Palm HotSync or iSync.

This can happen if another account has already used Palm HotSync or iSync to sync a Palm OS-based device. Have the other person log out of his account. Log out of your account, then log back in. You should be able to sync.

Related documents

25619 Mac OS X 10.3: Some applications only work in one account at a time

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Published Date: Oct 11, 2016

Mac OS X 10.3: Kotoeri candidate window doesn‘t appear in Simple Finder

The Kotoeri Candidate input window does not appear in accounts that use Simple Finder.

Note: This document applies to Mac OS X 10.3 through 10.3.9.

This article has been archived and is no longer updated by Apple.
In Accounts preferences, an administrator can set another account to use Simple Finder. The Kotoeri Candidate input window does not appear in these accounts. You can make the window appear by following these steps:

1. From the Input menu, choose Kotoeri Preferences.
2. Click the Candidate tab.
3. Select the number of times a key should be pressed to show the Candidate window.
4. Choose a Candidate window font size.
5. Close the Kotoeri Preferences window.

Published Date: Oct 11, 2016

Mac OS X 10.3, 10.4: FileVault - Home directory, Public folder may be unavailable

This article has been archived and is no longer updated by Apple.

Mac OS X 10.3 Panther and 10.4 Tiger's FileVault security feature prevents other users from accessing your home directory.

FileVault is a security feature of Mac OS X 10.3 or later. It encrypts your home directory and saves it as a disk image file. For more information about FileVault, choose Mac Help from the Help menu in the Finder and search on "FileVault".

You can turn on FileVault in Security preferences or Accounts preferences.

When you turn on FileVault, your home directory, including your Public folder and Drop Box, is unavailable if you've logged out. To make it available, log into your account.

If you connect to the computer via file sharing (or any sharing service), you won't see your shared (Public) folder or Drop Box. To see it in Mac OS X 10.3 through 10.3.9, log in at the computer where your account is. In Mac OS X 10.4 or later, you won't see your shared (Public) folder or Drop Box after you log in at the computer where you account is.

This document will be updated as more information becomes available.

Published Date: Oct 11, 2016

Mac OS X 10.2: "You Have Inserted a Disk Containing..." Alert at Login

Learn about a message that may appear when a user with limited access logs in.
This article has been archived and is no longer updated by Apple.
When logging in as a limited user, the following message appears if "Remove items from Dock" is not enabled for the account:

> "You have inserted a disk containing volumes that Mac OS X can read. To continue with the disk inserted, click Ignore"

This happens when more than one volume is present and the user has limited security options, as configured in Accounts preferences by an administrator user.

You can dismiss this alert by clicking Ignore, as the message states. It is not a cause for concern, but may appear each time the user logs in.

Published Date: Feb 18, 2012

Mac OS X 10.2.7: System Folder Dimmed in Classic Preferences, "No System Folder" Alert

Quit and open System Preferences if your Mac OS 9 System Folder is dimmed in Classic preferences or if a "no System Folder" alert appears..

This article has been archived and is no longer updated by Apple.

Symptom

- The Mac OS 9 System Folder is dimmed in Classic preferences.
- This alert appears when starting Classic: "Classic Startup found no System Folder on the boot volume from which to start Classic."

This can happen when the user account has limited access.

Solution

Update to Mac OS X 10.2.8 or later.

As a workaround, follow these steps:

1. If System Preferences is open, quit it.
2. From the **Apple** menu, choose **System Preferences**.
3. From the **View** menu, choose **Classic**.
4. Select the desired System Folder, then quit System Preferences.

Published Date: Feb 18, 2012

Mac OS X 10.3 Tip: Use Keyboard Viewer for Key Caps functions

Learn about Keyboard Viewer, which replaces the Key Caps utility used in earlier Mac OS X versions.
This article has been archived and is no longer updated by Apple.
Mac OS X Panther includes Keyboard Viewer, which is equivalent to Key Caps.

To use Keyboard Viewer, first enable it in International preferences:

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **International**.
3. Click Input Menu.
4. Enable the Keyboard Viewer palette.
5. Enable "Show input menu in menu bar".

International preferences

After Keyboard Viewer is enabled, you can use it by choosing Keyboard Viewer from the menu that looks like a flag. It's in the upper right corner of your screen.

Published Date: Oct 11, 2016

Mac OS X 10.3, 10.4: Some applications only work in one account at a time

This article has been archived and is no longer updated by Apple.

Some applications are designed to work with one user account at a time. If such an application is already open for one user, and you switch to a different account (for example, with Fast User Switching) you can't open the same application again.

When you try to open an application that is already open in a first user account, nothing happens if you click the application's icon in the Dock. If you open the application by double-clicking its icon in the Finder, a message containing "error -1026" may appear.

As a workaround, quit the application in the first account before opening it in a second account.

Contact the application's publisher for more information or further assistance. Because some applications are designed to be used by one account at a time, this may be considered normal behavior by the application's publisher.

Examples of Apple applications that you can't open by more than one user account at a time

- Final Cut Pro
- Final Cut Express
- DVD Studio Pro
- LiveType
- Cinema Tools
- Compressor
- Shake
- Soundtrack (Mac OS X 10.3 only)
- Logic Audio
- iDVD
- iTunes (Mac OS X 10.3 only)
- Backup 2.0 or earlier (.Mac)

Examples of Apple applications that you can open within multiple accounts

- iTunes (Mac OS X 10.4 or later)
- Soundtrack (Mac OS X 10.4 or later)
- iPhoto
- iMovie
  Note: iMovie can't control an attached camera if the camera is already in use by iMovie or another application in a different user account.
- iSync
- iCal
- Keynote
- AppleWorks
- Safari
- iChat

  Note: iChat logs out the currently signed-in ID before switching to the other user because you can't have two different iChat accounts signed in at the same time from the same computer.

Related documents

93419: iTunes: Importing Songs From a CD and Fast User Switching
93495: iMovie: Fast User Switching and DV Camera Control
25611: Mac OS X 10.3, Palm HotSync: Fast User Switching - One Mac OS X User May Sync at a Time

25556: Mac OS X 10.3: Troubleshooting Classic Startup With Fast User Switching

Published Date: Oct 11, 2016

Mac OS X 10.3 Mail: Long Internet URLs in a message may not work

With Mac OS X 10.3 through 10.3.3, long address (URL) in a Mac OS X Panther Mail message may not open in your web browser when you click it.
This article has been archived and is no longer updated by Apple.
In some cases, a long URL contained in a Mail message that wraps across more than one line may not work when you click it. Your web browser may say the page cannot be found or display a "404" alert.

Update to Mac OS X 10.3.4 or later to fix this.

Workarounds

Use either of the following workarounds if you're not ready to update:

- Copy the entire URL from the Mail message and paste it into your browser's address field. Do not copy any enclosing characters because your browser may not work with them. For example, don't copy the "<" or ">" if they appear.
- Remove "%0A" from the URL in your browser**.** For example, there is a line break in this URL after "Reference". In your web browser, the line break appears as "%0A":

URL in an email message that has a line break

URL in Safari with the line break "%0A" highlighted

To fix this, manually delete "%0A" from the web browser's address field, then press Return to open the page again.

Published Date: Oct 11, 2016

Mac OS X 10.3: Cannot Deselect Kotoeri Input in International Preferences

If there are third-party input methods installed, Kotoeri-related items may still appear in the input menu even if you deselect Kotoeri in International preferences.
This article has been archived and is no longer updated by Apple.
This issue can occur after each restart. To avoid this, follow these steps one time:

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **International**.
3. Select any third-party Japanese input methods, such as ATOK, from the list of keyboard layouts, input methods, and palettes.
4. Close International preferences.
5. From the **Input** menu (generally looks like a flag in the menu bar), choose the third-party input methods.
6. From the Input menu, choose **Open International**.
7. Deselect Kotoeri in the list of keyboard layouts, input methods, and palettes

Published Date: Oct 11, 2016

Mac OS X 10.3: "/spool/cups/" alert when printing or faxing

Update to Mac OS X 10.3.1 or later if you can't print or fax, or if received faxes forwarded by email are never received by the recipients.
This article has been archived and is no longer updated by Apple.
You can't print or fax with Mac OS X 10.3. When you try, this alert appears: " Can't open '/private/var/spool/cups/d00158-001'".

Note: The name and number of the cups spool file may be different than the one above.

- Received faxes you send by email to the address in Print & Fax preferences are never received, and no alert appears.

If you use sendmail (a mail function in the Darwin subsystem unrelated to the application Mail), this alert may appear:

"sendmail: fatal: file /etc/postfix/main.cf: parameter mail_owner: unknown user name value: postfix"

This can happen after:

- You've upgraded Mac OS X 10.2 through 10.2.8 to Mac OS X 10.3.
- You've used Disk Utilities Repair Permissions after upgrading.
- You receive a fax.

Download and install Mac OS X 10.3.1 or later to avoid these issues.
Published Date: Oct 11, 2016

Mac OS X 10.3, iDisk: Local iDisk Sync Issues, Some Folders May Appear Empty

Update to Mac OS X 10.3.1 or later if your Mac OS X Panther computer hasn't been restarted in three or more days and some iDisk folders appear empty, or if you have issues syncing your iDisk.

This article has been archived and is no longer updated by Apple.
Every 72 hours after you start up or restart your computer, a routine maintenance task (or "cron job") runs that can affect iDisk. If you have selected the "Create a local copy of your iDisk" option in .Mac preferences and cannot sync after your computer has been on for three or more days, download and install the Mac OS X 10.3.1 Update or later.

Similarly, if the Backup, Library, or Software folders of your iDisk appear to be empty, download and install the Mac OS X 10.3.1 Update or later.

Note: The task should run at about 3:15 a.m unless the computer is in sleep. You might be able to avoid this issue by making sure the computer is in sleep at this time, however this will prevent other background maintenance tasks from running, which are described in technical document 107388 "**Mac OS X: How to Force Background Maintenance Tasks (Logs and Temporary Items)**".
Published Date: Oct 11, 2016

Mac OS X 10.3, PowerBook G4: Computer Stops Responding When Window Is Moved

Mac OS X 10.3.2 resolves an issue in which your PowerBook G4 computer may stop responding when a Classic application window is moved.
This article has been archived and is no longer updated by Apple.

Symptom

Your PowerBook G4 computer stops responding (or "freezes") when you move a Classic (Mac OS 9) application window.

Solution

Download and install Mac OS X 10.3.2 Update, or later.
Published Date: Oct 11, 2016

Mac OS X 10.3.2 Update Addresses Video Issues With ATI XCLAIM VR Card, Power Macintosh G3 (Blue and White)

Mac OS X 10.3.2 Update addresses an issue with Mac OS X 10.3 in which the display connected to an ATI XCLAIM VR card has grayscale or monochrome (black and white) video, even when started from a Mac OS X Panther Install CD.
This article has been archived and is no longer updated by Apple.
Download and install Mac OS X 10.3.2 or later to fix this.

This affected card was part of the Power Mac G3 (Blue and White) Teacher Workstation (AV) configuration sold through education channels, and also included Avid Cinema. The card is sometimes referred to as "ATI Xclaim VR".
Published Date: Feb 17, 2012

Mac OS X 10.3: Upgrade Installation Stops at Disc 2, "iTunes.bom" Message in Log

A Mac OS X Panther upgrade installation may stop on disc (CD) 2. Learn how to fix this and get Mac OS X Panther installed.
This article has been archived and is no longer updated by Apple.

Symptom

This alert message appears when upgrading to Mac OS X 10.3 from an earlier version: "There were errors installing the software."

The installation log includes this message:

> "Can't open package /Mac OS X/Library/Receipts/iTunes.pkg (there was an error reading the file iTunes.bom)."

This can happen when performing an upgrade installation on a volume where an early version of iTunes (version 1.0) was formerly installed.

Solution

1. Click Cancel to stop the installation.
2. The Mac OS X Panther setup assistant opens automatically for you. Enter your registration information.
3. After registration is complete, you'll be in the Finder. From the **Go** menu, choose **Go to Folder**.
4. Type: `/Library/Receipts`
5. Click Go.
6. The Receipts window opens. Drag the iTunes.pkg file to the Trash.
7. Double-click the Mac OS X Install Disc 2 icon.
8. Double-click this file: "InstallCD2.mpkg".
9. Complete the installation.

Note: Some items you had previously selected to install may require disc 3. You may need to manually install these items from installer package files, whose file names end with ".pkg," on disc 3. For example, some third-party raster (inkjet) printer drivers are located on disc 3, as described in technical document 25588, "**Mac OS X 10.3: Raster (Inkjet) Printer Drivers Included**".
Published Date: Oct 11, 2016

Apple security updates (August, 2003 and earlier)

This document outlines security updates for Apple products. **Note:** For the protection of its customers, Apple does not disclose, discuss or confirm security issues until a full investigation has occurred and any necessary patches or releases are available.

Important: This document describes updates and releases from August 2003 (2003-08) **and earlier**, such as Mac OS X 10.1, 10.2, 10.2.6 and Security Update 2003-08-14. For information about newer security updates, see one of these documents:

- Apple security updates (25-Jan-2005 and later)
- Apple security updates (03-Oct-2003 to 11-Jan-2005)

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This document outlines security updates for Apple products. **Note:** For the protection of its customers, Apple does not disclose, discuss or confirm security issues until a full investigation has occurred and any necessary patches or releases are available.

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- Apple security updates (25-Jan-2005 and later)
- Apple security updates (03-Oct-2003 to 11-Jan-2005)

Obtaining Mac OS X

Information about obtaining Mac OS X can be found on the Mac OS X website (http://www.apple.com/macosx/).

Information about obtaining Mac OS X Server can be found on the Mac OS X Server website (http://www.apple.com/macosx/server/).

Information about the Apple Product Security PGP Key is available in technical document 25314, "How To Use The Apple Product Security PGP Key".

Software updates are available via:

- The Software Update preference
- Apple Downloads (http://www.apple.com/swupdates/)

Security updates: 2003-08 and earlier

Security updates are listed below according to the software release in which they first appeared. Where possible, CVE IDs (http://cve.mitre.org/cve/) are used to reference the vulnerabilities for further information.

For information about newer security updates, see technical document 61798, "Apple Security Updates".

Security Update 2003-08-14

- **fb_realpath(): Addresses CAN-2003-0466**, a potential vulnerability in the fb_realpath() function, specifically in the FTPServer and Libc projects, which could allow a local or remote user to gain unauthorized root privileges to a system.

Security Update 2003-07-23

- **Fixes CAN-2003-0601** to improve the security of your system by assigning a "disabled" password to a new account created by Workgroup Manager until that account has been saved for the first time. This ensures the new account cannot be accessed by an unauthorized individual.

Security Update 2003-07-14

- **Screen Effects Password: Fixes CAN-2003-0518**, a potential vulnerability when a password is required upon waking from the Screen Effects feature, which could allow an unauthorized user access to the desktop of the logged in user. Credit to Denis Ahrens for reporting this issue.

Security Update 2003-06-12 (Mac OS X Server only)

- **Apache 2.0: Fixes CAN-2003-0245** by updating Apache 2.0.45 to 2.0.46 to address a security hole in the mod_dav module that could be exploited remotely causing an Apache Web server process to crash. Apache 1.3 is unaffected and is the primary web server on Mac OS X Server. Apache 2.0 is installed with Mac OS X Server, but off by default.
- **dsimportexport: Fixes CAN-2003-0420** in which a logged-in user could potentially view the name and password of the account running the dsimportexport tool

Security Update 2003-06-09 (version 2.0)

- **AFP: Fixes CAN-2003-0379.** When Apple File Service (AFP Server) in Mac OS X Server is serving files on a UFS or re-shared NFS volume, there is a potential vulnerability that can allow a remote user to overwrite arbitrary files.
- **Directory Services: Fixes CAN-2003-0378.** When logging in via Kerberos on an LDAPv3 server, the account password may be sent in cleartext format when Login Window falls back to trying a simple bind on the server.

Safari 1.0 Beta 2 (v74)

- **Fixes CAN-2003-0355** in which Safari does not validate the Common Name field on X.509 certificates. Details are available from (http://www.securityfocus.com/archive/1/320707).
- The latest Safari version is available from (http://www.apple.com/safari/).

Mac OS X 10.2.6

- **IPSec: Fixes CAN-2003-0242**, where incoming security policies that match by port would fail to match the correct traffic.

Mac OS X 10.2.5

- **Apache 2.0: Fixes CAN-2003-0132**, a denial of service vulnerability in Apache 2.0 versions through 2.0.44. Apache 2.0 is distributed only with Mac OS X Server, and is not enabled by default.
- **Directory Services: Fixes CAN-2003-0171** DirectoryServices Privilege Escalation and DoS Attack. DirectoryServices is part of the Mac OS X and Mac OS X Server information services subsystem. It is launched at startup, setuid root and installed by default. It is possible for a local attacker to modify an environment variable that would allow the execution of arbitrary commands as root. Credit to Dave G. from @stake, Inc. for the discovery of this vulnerability.
- **File Sharing/Service: Fixes CAN-2003-0198** where the contents of the write-only DropBox folder can be revealed. When enabled, Personal File Sharing on Mac OS X or Apple File Service on Mac OS X Server, a "DropBox" folder is available by default to allow people to deposit files. This update no longer allows the permissions of the "DropBox" folder to be changed by a guest.
- **OpenSSL: Fixes CAN-2003-0131** Klima-Pokorny-Rosa attack on PKCS #1 v1.5 padding. The patch from the OpenSSL team, which addresses this vulnerability, is applied to Mac OS X and Mac OS X Server.
- **Samba: Fixes CAN-2003-0201** which could allow an anonymous user to gain remote root access due to a buffer overflow. The built-in Windows file sharing is based on the open source technology called Samba and is off by default in Mac OS X.
- **sendmail: Fixes CAN-2003-0161** where address parsing code in sendmail does not adequately check the length of email addresses. Only the patch from the sendmail team is applied to the currently-shipping version of sendmail in Mac OS X and Mac OS X Server.

QuickTime 6.1 for Windows

- **Fixes CAN-2003-0168**, a potential vulnerability in QuickTime Player for Windows that could allow a remote attacker to compromise a target system. This exploit is only possible if the attacker can convince a user to load a specially crafted QuickTime URL. Upon successful exploitation, arbitrary code can be executed under the privileges of the QuickTime user.

Security Update 2003-03-24

- **Samba: Fixes CAN-2003-0085 and CAN-2003-0086** which could allow unauthorized remote access to the host system. The built-in Windows file sharing is based on the open source technology called Samba and is off by default in Mac OS X. This update only applies the security fixes to the currently-shipping 2.2.3 version of Samba on Mac OS X 10.2.4, and the Samba version is otherwise unchanged.
- **OpenSSL: Fixes CAN-2003-0147**, to address an issue in which RSA private keys can be compromised when communicating over

LANs, Internet2/Abilene, and interprocess communication on local machine.

Security Update 2003-03-03

- **Sendmail: Fixes CAN-2002-1337** in which a remote attacker could gain elevated privileges on affected hosts. Sendmail is not enabled by default on Mac OS X, so only those systems which have explicitly enabled sendmail are vulnerable. All Mac OS X users, however, are encouraged to apply this update. The sendmail fix is available in Security Update 2003-03-03.
- **OpenSSL: Fixes CAN-2003-0078**, in which it is theoretically possible for a third-party to extract the original plaintext of encrypted messages sent over a network. Security Update 2003-03-03 applies this fix for Mac OS X 10.2.4; customers of earlier Mac OS X versions may obtain the latest openssl version directly from the OpenSSL Web site: http://www.openssl.org/

Mac OS X 10.2.4 (client)

- **Sendmail: Fixes CAN-2002-0906** Buffer overflow in Sendmail before 8.12.5, when configured to use a custom DNS map to query TXT records, could permit a denial of service attack and possibly allow execution of arbitrary code. Mac OS X 10.2.4 contains Sendmail 8.12.6 with the SMRSH fix applied to also address **CAN-2002-1165**.
- **AFP: Fixes CAN-2003-0049** "AFP login permissions for the system administrator". Provides an option whereby a system administrator may or may not be allowed to log in as a user, authenticating via their admin password. Previously, administrators could always log in as a user, authenticating via their own admin password.
- **Classic: Fixes CAN-2003-0088**, where an attacker may change an environment variable to create arbitrary files or overwrite existing files, which could lead to obtaining elevated privileges. Credit to Dave G. from @stake, Inc. for discovering this issue.
- **Samba:** Previous releases of Mac OS X are not vulnerable to **CAN-2002-1318**, an issue in Samba's length checking for encrypted password changes. Mac OS X currently uses Directory Services for authentication, and does not call the vulnerable Samba function. However, to prevent a potential future exploit via this function, the patch from Samba 2.2.7 was applied although the version of Samba was not changed for this update release. Further information is available from: http://samba.org/

Mac OS X 10.2.4 Server

- **QuickTime Streaming Server:** Fixes CAN-2003-0050 QTSS Arbitrary command execution. The QuickTime Streaming Administration Server relies on the parse_xml.cgi application to authenticate and interface with the user. This CGI can pass unvalidated input which could allow a remote attacker to execute arbitrary code on the server and to gain root privileges. Credit to Dave G. from @stake, Inc. for finding this vulnerability.
- **QuickTime Streaming Server:** Fixes CAN-2003-0051 QTSS Physical path revelation. The QuickTime Streaming Administration Server relies on the parse_xml.cgi application to authenticate and interface with the user. This CGI could be used to reveal the physical path upon which the Darwin/Quicktime Administration Servers are installed within. Credit to @stake, Inc. for finding this vulnerability.
- **QuickTime Streaming Server:** Fixes CAN-2003-0052 QTSS Directory listings. The QuickTime Streaming Administration Server relies on the parse_xml.cgi application to authenticate and interface with the user. This CGI could be used to reveal arbitrary directory listings due to the lack of user input validation within the application. Credit to Ollie Whitehouse from @stake, Inc. for finding this vulnerability.
- **QuickTime Streaming Server:** Fixes CAN-2003-0053 QTSS Login credentials. The QuickTime Streaming Administration Server relies on the parse_xml.cgi application to authenticate and interface with the user. A vulnerability in the handling of error messages from this CGI could be used in a cross-site scripting attack to gain valid login credentials. Credit to Ollie Whitehouse from @stake, Inc. for finding this vulnerability.
- **QuickTime Streaming Server:** Fixes CAN-2003-0054 Arbitrary command execution when viewing QTSS logs. If an unauthenticated user of QuickTime Streaming Server makes a request to the streaming port, the request is then written to the log file. It is possible to craft the request such that arbitrary code can be executed when the logs are viewed by the system administrator via a browser. Credit to Ollie Whitehouse from @stake, Inc. for finding this vulnerability.
- **QuickTime Streaming Server:** Fixes CAN-2003-0055 Buffer overflow in MP3 Broadcasting application. There is a buffer overflow in the stand-alone MP3Broadcaster application. An MP3 file which has a filename of over 256 bytes will cause a buffer overflow to occur. This could be used by local/ftp users to obtain elevated privileges. Credit to Ollie Whitehouse from @stake, Inc. for finding this vulnerability.
- **Sendmail:** Fixes CAN-2002-0906 Buffer overflow in Sendmail before 8.12.5, when configured to use a custom DNS map to query TXT records, could permit a denial of service attack and possibly allow execution of arbitrary code. Mac OS X 10.2.4 contains Sendmail 8.12.6 with the SMRSH fix applied to also address CAN-2002-1165 .
- **AFP:** Fixes CAN-2003-0049 "AFP login permissions for the system administrator". Provides an option whereby a system administrator may or may not be allowed to log in as a user, authenticating via their admin password. Previously, administrators could always log in as a user, authenticating via their own admin password.
- **Classic:** Fixes CAN-2003-0088 , where an attacker may change an environment variable to create arbitrary files or overwrite existing files, which could lead to obtaining elevated privileges. Credit to Dave G. from @stake, Inc. for discovering this issue.
- **Samba:** Previous releases of Mac OS X are not vulnerable to CAN-2002-1318 , an issue in Samba's length checking for encrypted password changes. Mac OS X currently uses Directory Services for authentication, and does not call the vulnerable Samba function. However, to prevent a potential future exploit via this function, the patch from Samba 2.2.7 was applied although the version of Samba was not changed for this update release. Further information is available from: http://samba.org/

- **Integrated WebDAV Digest Authentication:** The mod_digest_apple Apache module has been added to more easily enable digest authentication for an existing WebDAV realm. This eliminates the need to maintain a separate digest file containing the list of authorized users, passwords, and realms. mod_digest_apple works in coordination with Open Directory for user authentication. For further details, open the Help Viewer after installing Mac OS X Server version 10.2.4, select Mac OS X Server Help in the drawer, and search for "New: Enabling Integrated WebDAV Digest Authentication."

Mac OS X 10.2.3

- **fetchmail: Fixes CAN-2002-1174** and **CAN-2002-1175** that could lead to a potential denial of service when using the fetchmail command-line tool. fetchmail is updated to version 6.1.2+IMAP-GSS+SSL+INET6
- **CUPS:** Provides fixes for the following potential issues that could be exploited remotely when Printer Sharing is enabled. Printer Sharing is not enabled by default on Mac OS X or Mac OS X Server.
  CAN-2002-1383: Multiple Integer Overflows
  CAN-2002-1366: /etc/cups/certs/ Race Condition
  CAN-2002-1367: Adding Printers with UDP Packets
  CAN-2002-1368: Negative Length Memcpy() Calls
  CAN-2002-1384: Integer Overflows in pdftops Filter and Xpdf
  CAN-2002-1369: Unsafe Strncat Function Call in jobs.c
  CAN-2002-1370: Root Certificate Design Flaw
  CAN-2002-1371: Zero Width Images in filters/image-gif.c
  CAN-2002-1372: File Descriptor Resource Leaks

Security Update 2002-11-21

BIND: Updated to version 8.3.4 to fix potential vulnerabilities in the domain server and client library from Internet Software Consortium (ISC) that comes with Mac OS X and Mac OS X Server. BIND is not turned on by default on Mac OS X or Mac OS X Server.

CVE IDs: CAN-2002-1219, CAN-2002-1220, CAN-2002-1221, CAN-2002-0029

Further information is available at:
http://www.cert.org/advisories/CA-2002-31.html
http://www.kb.cert.org/vuls/id/457875

Mac OS X 10.2.2

This update addresses the following potential security issues:

- **CAN-2002-1266: Local User Privilege Elevation via Disk Image File** It is possible for a local user to obtain elevated privileges on a system by opening a disk image file that was created on another computer with administrator level privileges.
- **CAN-2002-0830: This is FreeBSD-SA-02:36.nfs,** a potential vulnerability in the Network File System (NFS) where a remote attacker could cause a denial of service.
- **IP Firewall:** Under certain circumstances, the ipfw firewall built into Mac OS X may block packets that are explicitly allowed by the firewall rules. This does not meet the formal requirements of a security vulnerability and does not obtain a CVE ID.
- **CAN-2002-1267: CUPS Printing Web Administration is Remotely Accessible** A malicious user could access the port to run the CUPS Printing Web Administration utility. It would then be possible to cause a denial of service to a printer.
- **CAN-2002-1268: User Privilege Elevation via Mounting an ISO 9600 CD** Users could gain elevated privileges when logged into a system that has an ISO 9600 CD available to the file system.
- **CAN-2002-1269: NetInfo Manager Application could allow filesystem access** A security vulnerability in the NetInfo Manager application could allow a malicious user to navigate the file system.
- **CAN-2002-1270: map_fd() Mach system call can allow a file to be read** The map_fd() Mach system call can allow a caller to read a file for which they only have write access.
- **CAN-2002-1265: TCP issue in RPC** The RPC-based libc implementation could fail to properly read data from TCP connections. As a result, a remote attacker could deny service to system daemons. Further information is available in CERT VU#266817 at: http://www.kb.cert.org/vuls/id/266817
- **CAN-2002-0839, CAN-2002-0840, CAN-2002-0843: Apache** Apache is updated to version 1.3.27 to address a number of issues.

Mac OS X Server 10.2.2

- Includes all security fixes noted in Mac OS X 10.2.2, plus **CAN-2002-0661, CAN-2002-0654, CAN-2002-0654: Apache 2** Apache 2 is provided with Mac OS X Server, but not enabled by default. The version is updated to Apache 2.0.42 to address a number of issues.

StuffIt Expander Security Update 2002-10-15

- **Stuffit Expander:** CAN-2002-0370. This update resolves a potential security vulnerability in versions 6.5.2 and earlier of Stuffit Expander. Further information is available at: http://www.kb.cert.org/vuls/id/383779 .

Security Update 2002-09-20

- **Terminal:** This update fixes a potential vulnerability introduced in Terminal version 1.3 (v81) that shipped with Mac OS X 10.2 that could allow an attacker to remotely execute arbitrary commands on the user's system. Terminal is updated to version 1.3.1 (v82) with this Security Update.

Security Update 2002-08-23

- This security update is for Mac OS X 10.2 and applies the fixes contained in Security Update 2002-08-02 which was for Mac OS X 10.1.5.

Security Update 2002-08-20

- **Secure Transport:** This update enhances the certificate verification in OS X and is now in full compliance with the Internet X.509 Public Key Infrastructure Certificate and CRL Profile (RFC2459).

Security Update 2002-08-02

This update addresses the following security vulnerabilities, which affect current shipping versions of Mac OS X Server. These services are turned off by default in Mac OS X client, however if these services are turned on then the client becomes vulnerable. Users of Mac OS X client should also install this update.

- **OpenSSL:** Fixes security vulnerabilities CAN-2002-0656, CAN-2002-0657, CAN-2002-0655, and CAN-2002-0659. Details are available via: http://www.cert.org/advisories/CA-2002-23.html
- **mod_ssl:** Fixes CAN-2002-0653, an off-by-one buffer overflow in mod_ssl Apache module. Details are available via: http://cve.mitre.org/cgi-bin/cvename.cgi?name=CAN-2002-0653
- **Sun RPC:** Fixes CAN-2002-039, a buffer overflow in the Sun RPC XDR decoder. Details are available via: http://bvlive01.iss.net/issEn/delivery/xforce/alertdetail.jsp?oid=20823

Security Update 7-18-02 (2002-07-18)

- **Software Update:** Contains Software Update client 1.4.7 which adds cryptographic signature verification to the softwareupdate command line tool. This provides an additional means to perform software updates in a secure manner, along with the existing Software Update capability contained in System Preferences.

Security Update 7-12-02 (2002-07-12)

- **Software Update:** Fixes CVE ID CAN-2002-0676 to increase the security of the Software Update process for systems with Software Update client 1.4.5 or earlier. Packages presented via the Software Update mechanism are now cryptographically signed, and the new Software Update client 1.4.6 checks for a valid signature before installing new packages.

Security Update July 2002 (2002-07)

- **Apache:** Fixes CVE ID CAN-2002-0392 which allows remote attackers to cause a denial of service and possibly execute arbitrary code. Further details are available from: http://www.cert.org/advisories/CA-2002-17.html
- **OpenSSH:** Fixes two vulnerabilities, CAN-2002-0639 and CAN-2002-0640, where a remote intruder may be able to execute arbitrary code on the local system. Further details are available from: http://www.cert.org/advisories/CA-2002-18.html

Mac OS X 10.1.5

- **sudo** - Fixes CAN-2002-0184, where a heap overflow in sudo may allow local users to gain root privileges via special characters in the -p (prompt) argument.
- **sendmail** - Fixes CVE-2001-0653, where an input validation error exists in Sendmail's debugging functionality which could lead to a system compromise.

Internet Explorer 5.1 Security Update (2002-04)

- This addresses a vulnerability that could allow an attacker to take over your computer. Microsoft has since discontinued support and development on Internet Explorer for Mac, please consider upgrading to Safari instead.

Mac OS X 10.1.4

- **TCP/IP broadcast:** Addresses CAN-2002-0381 such that TCP/IP connections now check and block broadcast or multicast IP destination addresses. Further details at: http://www.FreeBSD.org/cgi/query-pr.cgi?pr=35022

Security Update - April 2002 (2002-04)

- **Apache** - updated to version 1.3.23 in order to incorporate the mod_ssl security fix.
- **Apache Mod_SSL** - updated to version 2.8.7-1.3.23 to address the buffer overflow vulnerability CAN-2002-0082 which could potentially be used to run arbitrary code. Further Details at: http://archives.neohapsis.com/archives/bugtraq/2002-02/0313.html
- **groff** - updated to version 1.17.2 to address the vulnerability CAN-2002-0003, where an attacker could gain rights as the 'lp' user remotely. Further details at: http://online.securityfocus.com/advisories/3859
- **mail_cmds** - updated to fix a vulnerability where users could be added to the mail group
- **OpenSSH** -- updated to version 3.1p1 to address the vulnerability CAN-2002-0083, where an attacker could influence the contents of the memory. Further details at: http://www.pine.nl/advisories/pine-cert-20020301.html
- **PHP** - updated to version 4.1.2 to address the vulnerability CAN-2002-0081, which could allow an intruder to execute arbitrary code with the privileges of the web server. Further details at: http://www.cert.org/advisories/CA-2002-05.html
- **rsync** - updated to version 2.5.2 to address the vulnerability CAN-2002-0048 which could lead to corruption of the stack and possibly to execution of arbitrary code as the root user. Further details at: ftp://ftp.FreeBSD.org/pub/FreeBSD/CERT/advisories/FreeBSD-SA-02:10.rsync.asc
- **sudo** - updated to version 1.6.5p2 to address the vulnerability CAN-2002-0043, where a local user may obtain superuser privileges. Further details at: ftp://ftp.FreeBSD.org/pub/FreeBSD/CERT/advisories/FreeBSD-SA-02:06.sudo.asc

Mac OS X 10.1.3

- **openssh** - Updated to version 3.0.2p1 to address several vulnerabilities in the previous version. For details, please refer to: http://www.openssh.com/security.html
- **WebDAV** - Extended the Digest Authentication mode to work with additional servers

Mac OS X 10.1 Security Update 10-19-01 (2001-10-19)

- Fixes the vulnerability described in http://www.stepwise.com/Articles/Admin/2001-10-15.01.html where an application can be granted root access privileges.

Internet Explorer 5.1.1

- **IE 5.1.1** - Fixes a problem with IE 5.1 bundled with Mac OS X v10.1 where Internet Explorer executes downloaded software automatically, which could result in data loss or other harm. More information is available in technical document 106503, "**Mac OS X 10.1: Internet Explorer Executes Downloaded Software Automatically**".

Mac OS X 10.1

- **crontab** - Fixes the vulnerability described in FreeBSD-SA-01:09 (ftp://ftp.FreeBSD.org/pub/FreeBSD/CERT/advisories/FreeBSD-SA-01:09.crontab.v1.1.asc) where local users can read arbitrary local files that conform to a valid crontab file syntax.
- **fetchmail**
  - Fixes the buffer overflow vulnerability described in FreeBSD-SA-01:43 (ftp://ftp.FreeBSD.org/pub/FreeBSD/CERT/advisories/FreeBSD-SA-01:43.fetchmail.asc)
  - Fixes the large header problem described in BugTraq MDKSA-2001:063: fetchmail (http://www.securityfocus.com/advisories/3426)
  - Fixes the memory overwrite vulnerability described in BugTraq ESA-20010816-01: fetchmail-ssl (http://www.securityfocus.com/advisories/3502)
- **ipfw** - Fixes the vulnerability described in FreeBSD-SA-01:08.ipfw (ftp://ftp.FreeBSD.org/pub/FreeBSD/CERT/advisories/FreeBSD-SA-01:08.ipfw.asc) where a remote attack may be constructed with TCP packets with the ECE flag set.
- **java** - Fixes the vulnerability described in:http://sunsolve.Sun.COM/pub-cgi/retrieve.pl?doctype=coll&doc=secbull/216&type=0&nav=sec.sbl&ttl=sec.sbl where an untrusted applet may monitor requests to and responses from an HTTP proxy server.
- **open()** syscall - Fixes the vulnerability described in FreeBSD-SA-97:05.open (ftp://ftp.FreeBSD.org/pub/FreeBSD/CERT/advisories/old/FreeBSD-SA-97:05.open.asc) where another user on the system could do

unauthorized I/O instructions

- **OpenSSL** - Included version 0.9.6b which contains a number of fixes from the previous version. See http://www.openssl.org/ for details.
- **procmail** - Fixed the vulnerability described in Red Hat RHSA-2001:093-03 (http://www.redhat.com/support/errata/RHSA-2001-093.html) where signals are not handled correctly.
- **rwhod** - Fixes the vulnerability described in FreeBSD-SA-01:29.rwhod (ftp://ftp.FreeBSD.org/pub/FreeBSD/CERT/advisories/FreeBSD-SA-01:29.rwhod.asc) where remote users can cause the rwhod daemon to crash, denying service to clients.
- **setlocale()** string overflow - Fixes the vulnerability described in FreeBSD-SA-97:01.setlocale (ftp://ftp.FreeBSD.org/pub/FreeBSD/CERT/advisories/old/FreeBSD-SA-97:01.setlocale) where the setlocale() call contains a number of potential exploits through string overflows during environment variable expansion
- **sort** - Fixes the vulnerability described in CERT Vulnerability Note VU#417216 (http://www.kb.cert.org/vuls/id/417216) where an intruder may be able to block the operation of system administration programs by crashing the sort utility.
- **system clipboard / J2SE** - Fixes a security issue that permitted unauthorized applets access to the system clipboard.
- **tcpdump** - Fixes the vulnerability described in FreeBSD-SA-01:48 (ftp://ftp.FreeBSD.org/pub/FreeBSD/CERT/advisories/FreeBSD-SA-01:48.tcpdump.asc) where remote users can cause the local tcpdump process to crash, and may be able to cause arbitrary code to be executed.
- **TCP Initial Sequence Numbers** - Fixes the potential vulnerability described in FreeBSD-SA-00:52 (ftp://ftp.FreeBSD.org/pub/FreeBSD/CERT/advisories/FreeBSD-SA-00:52.tcp-iss.asc) where the algorithm to generate the number the system will use for the next incoming TCP connection was not sufficiently random
- **tcsh '>>' operator** - Fixes the vulnerability described in FreeBSD-SA-00:76 (ftp://ftp.FreeBSD.org/pub/FreeBSD/CERT/advisories/FreeBSD-SA-00:76.tcsh-csh.asc) where unprivileged local users can cause an arbitrary file to be overwritten when another person invokes the '<<' operator in tcsh (e.g. from within a shell script)
- **telnetd** - Fixes the vulnerability described in FreeBSD-SA-01:49 (ftp://ftp.FreeBSD.org/pub/FreeBSD/CERT/advisories/FreeBSD-SA-01:49.telnetd.v1.1.asc) where remote users can cause arbitrary code to be executed as the user running telnetd.
- **timed** - Fixes the vulnerability described in FreeBSD-SA-01:28 (ftp://ftp.FreeBSD.org/pub/FreeBSD/CERT/advisories/FreeBSD-SA-01:28.timed.asc) where remote users can cause the timed daemon to crash, denying service to clients.

Mac OS X Server 10.1

- **MySQL 3.23.42** - Contains a number of fixes from the previous version. See the 3.23.42 section on the MySQL site (http://www.mysql.com/downloads/mysql-3.23.html) for details.
- **Tomcat 3.2.3** - Contains a number of fixes from the previous version. See the Tomcat site (http://jakarta.apache.org/tomcat/) for details.
- **Apache** - Fixed the .DS_Store file vulnerability described in http://securityfocus.com/bid/3324
- **Apache** - Fixed the potential vulnerability where .htaccess files might be visible to web browsers if created on HFS+ volumes. The files directive in the http.conf file was modified to block from visibility to web browsers all files whose names begin with .ht, regardless of case.

Mac OS X Web Sharing Update 1.0

- **Apache 1.3.19** - Fixes security issues with sites use of the mass virtual hosting module mod_vhost_alias or mod_rewrite.
- **mod_hfs_apple** - Addresses Apache case-insensitivity problems on Mac OS Extended (HFS+) volumes.
- **OpenSSH 2.9p2** - Fixes SSH1 vulnerability described in http://www.openwall.com/advisories/OW-003-ssh-traffic-analysis.txt.
- **sudo** - Fixes the buffer overflow vulnerability described in FreeBSD-SA-01:38 (ftp://ftp.FreeBSD.org/pub/FreeBSD/CERT/advisories/FreeBSD-SA-01:38.sudo.asc)

Mac OS X 10.0.4 Server Update

- **Samba 2.0.9** - Addresses the macro vulnerability described in us1.samba.org/samba/whatsnew/macroexploit.html
- **sudo** - Fixes the buffer overflow vulnerability described in FreeBSD-SA-01:38 (ftp://ftp.FreeBSD.org/pub/FreeBSD/CERT/advisories/FreeBSD-SA-01:38.sudo.asc)

Mac OS X 10.0.2

- **FTP** - Fixes the File Globbing vulnerability described in CERT(R) Advisory CA-2001-07 (http://www.cert.org/advisories/CA-2001-07.html)
- **NTP** - Fixes the buffer overflow vulnerability described in FreeBSD-SA-01:31 (ftp://ftp.FreeBSD.org/pub/FreeBSD/CERT/advisories/FreeBSD-SA-01:31.ntpd.asc)

Mac OS X 10.0.1

- **OpenSSH-2.3.0p1 -** SSH services are enabled via the Sharing pane in System Preferences

Mac OS Runtime for Java (MRJ) 2.2.5

- **MRJ 2.2.5** - Fixes a security issue that permitted unauthorized applets access to the system clipboard.

Published Date: Oct 11, 2016

Mac OS X 10.3, 10.3.1: HP LaserJet "Printer not responding" Message

Troubleshoot an HP LaserJet printer connection if the message "Printer not responding" appears. This document applies to Mac OS X 10.3 and 10.3.1.
This article has been archived and is no longer updated by Apple.
When you try to add an HP LaserJet 2300 in Printer Setup Utility, the message "Printer not responding" appears. If you select and add the printer manually, the same message appears when you try to print.

This can happen with an HP LaserJet 2300, 2300L, or 2300d connected via USB, or any HP LaserJet with an HP JetDirect J4135A Connectivity Card installed when connected via USB.

To fix this, download and install Mac OS X 10.3.2 Update or later. It's available from Software Update preferences, or Apple Downloads (http://www.apple.com/swupdates/).

If you're not ready to update, you can use these workarounds:

- If the printer has an HP JetDirect Card for 10/100Base-T installed, connect the printer to the computer's Ethernet port.
- Connect the printer to the USB port of an AirPort Extreme Base Station, if one is available. For more information, see technical document **107456**.

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Published Date: Oct 11, 2016

Mac OS X 10.3: Chart of available Mac OS software updates

This article has been archived and is no longer updated by Apple.

Learn about Mac OS updates available for Mac OS X 10.3 Panther.

Mac OS X 10.3 Software Updates

Update name and download link	Prerequisite software	Release date	Detailed information	Tips
Mac OS X 10.3.9 Update	Mac OS X 10.3, 10.3.1, 10.3.2, 10.3.3, 10.3.4, 10.3.5, 10.3.6, 10.3.7, 10.3.8	15 Apr 2005	About this update	2
QuickTime 7.0.4	Mac OS X 10.3.9 or later	10 Jan 2006	About this update	n/a
Java Update 1.4.2 Update 2	Mac OS X 10.3.4 or later	23 Sept 2004	About this update	1

Security Updates

For information about security updates available for Mac OS X, see Apple security updates.

Upgrading to Mac OS X 10.3

If you have a version of Mac OS X earlier than Mac OS X 10.3 Panther, see "Mac OS X: How to Upgrade to Version 10.3".

Tips

1. Security Updates do not change the Mac OS X 10.3 build version. For more information about build versions, see "Mac OS X: About This Mac 'Build' Information".
2. This update includes enhancements delivered with these Mac OS X Updates: 10.3.8, 10.3.7, 10.3.6, 10.3.5, 10.3.4, 10.3.3, 10.3.2, and 10.3.1.
3. To determine if a certain Security Update is installed, look for its package (.pkg) file in the Receipts folder, which is in the Library folder.

Related documents

25799 Mac OS X: Software update sizes can vary

Published Date: Oct 11, 2016

Mac OS X 10.3: Media Eject and Volume keys don‘t work

The Media Eject and volume keys may not work if an early version of USB Overdrive is installed.
This article has been archived and is no longer updated by Apple.
Early versions of USB Overdrive, published by Alessandro Levi Montalcini, may prevent the Media Eject, Volume Up, and Volume Down keys from working in Mac OS X Panther.

If you have this issue, update to a later version of USB Overdrive (http://www.usboverdrive.com/).

Also, download and install Mac OS X 10.3.3 Update or later to avoid this issue.

Tip: To see if USB Overdrive is installed on your computer:

1. From the **Apple** menu, choose **System Preferences**.
2. Look for a "USB Overdrive" icon.

If you see the icon, the software is installed.

If you don't use this icon, troubleshoot for other conditions. See "Mac OS X Troubleshooting: How to Isolate an Issue".

Related documents

152226	Ejecting a disc when all else fails
32496	Power Mac G5: Issues after installing Mac OS X 10.3.2 and Firmware Update 5.1.4

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Published Date: Oct 11, 2016

Mac OS X 10.3.1: Avoids Losing Settings When FileVault Reclaims Disk Space

To avoid losing preference settings when Mac OS X Panther's FileVault feature reclaims disk space, update to Mac OS X 10.3.1 or later.
This article has been archived and is no longer updated by Apple.
FileVault normally asks to reclaim space before the computer sleeps, restarts, or shuts down. In some cases, you can lose some preference settings after space is reclaimed. Download and install Mac OS X 10.3.1 or later to avoid this issue. It is available in Software Update preferences, or from the **Apple Featured Software** webpage.

FileVault can be turned on or off in the Security or Accounts preferences. Turning off FileVault and/or installing Mac OS X 10.3.1 does not automatically recover lost settings. You should configure any incorrect preference settings after installing the update.

Important: If you force the computer to restart while disk space is being reclaimed, data loss can occur. The same is true if power is lost during the process. Mac OS X 10.3.1 does not address this type of data loss.
Published Date: Oct 11, 2016

Mac OS X 10.2, iBook: Modem Dials, but Is Silent

Your iBook's modem dials and connects just fine, but no sounds are heard when it makes the connection.
This article has been archived and is no longer updated by Apple.
This can occur even if modem sounds are enabled. It is expected behavior with Mac OS X 10.2.3 through 10.2.8 and iBook computers with blueberry, tangerine, or graphite plastics.
Published Date: Feb 18, 2012

Mac OS X 10.3: World Book 2003 unexpectedly quits when opening

If Software MacKiev World Book 2003 Edition won't open with Mac OS X Panther, install an update that's available from the publisher.
This article has been archived and is no longer updated by Apple.
If you use Mac OS X 10.3, install the World Book 7.1.2 Update or later, which is available from Software MacKiev (http://www.mackiev.com/support.html).

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Published Date: Feb 17, 2012

Mac OS X 10.3: Security Update 2003-11-04 Doesn‘t Install

You may not be able to install Security Update 2003-11-04 if an application other than Terminal is installed whose filename contains "Terminal".
This article has been archived and is no longer updated by Apple.

Symptom

- You can't install Security Update 2003-11-04.
- Software Update stops installing during the "Expanding and verifying" or "Now checking local disks" stages.
- A "bus error" message may appear if installing via Terminal.

This can happen when:

- An application besides Terminal is installed whose name contains "Terminal".
- You are installing via Software Update, a downloaded installer, or Terminal.

Solution

1. Click the Finder icon in the Dock.
2. From the **File** menu, choose **Find**. The Find window appears.
3. From the "**Search in**" pop-up menu, choose "**Local disks**".
4. Choose the items in the first and second rows of pop-up menus as illustrated in Figure 1.

Figure 1 Find window

5. Type "Terminal" in the empty text box.
6. Click Search.
7. Rename any applications that are found, except for the application named Terminal, so that the word "Terminal" is not part of their filenames.

   For example, if you find an application named "MyTerminal," rename it to something like "MyTerm" by clicking its filename to select it,

typing a new filename, and pressing Return.

Note: Do not rename preference files or other files whose filenames contain "Terminal" and whose Kind is not application.

8. Download and install Security Update 2003-11-04 again. It is available from Software Update preferences or from Apple Featured Software.

This document will be updated as more information becomes available.

Published Date: Oct 11, 2016

Mac OS X 10.3: Character Palette Unexpectedly Appears

Mac OS X Panther's Character Palette may unexpectedly appear when you log in or after the computer wakes from sleep.
This article has been archived and is no longer updated by Apple.
To avoid this, download and install Mac OS X 10.3.2 Update, or later.

Published Date: Oct 11, 2016

Mac OS X 10.3: DVD Player video shows through overlaying text, or text "sparkles"

This article has been archived and is no longer updated by Apple.

When overlaying text is green in DVD Player, you may see video through the text, or the text may appear to "sparkle".

Note: This document applies to Mac OS X 10.3 through 10.3.9.

Symptom

Overlaying text in DVD Player, such as Closed Captioning and chapter information, sparkles or reveals the video behind it.

This can happen when the overlaying text is green and the computer's graphics card does not support Quartz Extreme. For information about which graphics cards work with Quartz Extreme, read this document.

Solution

1. From the **DVD Player** menu, choose **Preferences**.
2. Click Windows.
3. In the Floating Overlays section, change the text to a different color, such as yellow.

Published Date: Oct 11, 2016

Mac OS X: Items in Mac OS 9 Shutdown Items folder may prevent shut down, restart, or logout

This article has been archived and is no longer updated by Apple.

Items in your Mac OS 9 Shutdown Items folder can prevent Mac OS X from shutting down, restarting, or logging out.

If you can't log out, restart, or shut down your computer when Classic is running, stop Classic.

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **Classic**.
3. Click "Start/Stop".
4. Click the Stop button.
5. Log out, restart or shut down your computer.

To prevent this issue from happening again, do one of the following depending on the settings you've selected in the Advanced section of Classic preferences. If you don't know what your settings are, click Advanced in Classic preferences.

If you use the advanced preference option "Use Mac OS 9 preferences from your home"

Make sure there's nothing in the Shutdown Items folder.

1. Click the Finder icon in the Dock.
2. From the **Go** menu, choose **Go to Folder**. A sheet appears.
3. Type: ~/Library/Classic/
4. Click Go.
5. If you see a message that the folder can't be found, skip to the next section. Otherwise, open the Shutdown Items folder and drag any items in it to the desktop or Trash. If the folder appears to be empty, there may be an invisible item in it. In this case, drag the Shutdown Items folder to the Trash.

If you don't use the advanced preference option "Use Mac OS 9 preferences from your home"

Make sure there's nothing in the Shutdown Items folder, which is in the System Folder used by the Classic environment. If the folder appears to be empty, there may be an invisible item in it. In this case, drag the Shutdown Items folder to the Trash.

Note: If you see a message that says you don't have permission to do this, log in with an administrator account, or ask a person with an administrator account to do this for you.

If you still can't restart or shut down the computer, see technical document 107199, "**Mac OS X: If Your Computer Stops Responding, 'Hangs', or 'Freezes'**".

Published Date: Oct 11, 2016

Mac OS X 10.2, 10.3: How to eject removable media with simple Finder

Learn how to eject removable media, such as a CD or iPod, when Simple Finder is enabled.
This article has been archived and is no longer updated by Apple.
You can eject removable media from your computer, including: CDs, an iPod, Zip disks, FireWire drives, USB drives, and external floppy disks.

These steps apply to Mac OS X 10.2, Mac OS X Server 10.2, Mac OS X 10.3, and Mac OS X Server 10.3.

Removable media in the computer's optical drive

To eject a disc from the computer's optical drive, press the Media Eject key.

Figure 1 Media Eject key

You can also press the F12 key on keyboards that don't have a Media Eject key.

Removable media in a different drive, including external third-party drives

If the media's window appears in Simple Finder, drag the disk icon from the top of its window to the Trash.

Figure 2 Dragging the disk icon to the Trash

You can also eject media by restarting the computer. Immediately after you hear the system startup sound, press and hold the mouse button. Continue to hold the mouse button until the computer is finished starting up. The disk should eject as the computer starts up.

If you have an external USB or FireWire device, you can safely disconnect it right after you hear the system startup sound.

Eject using Sidebar in Mac OS X 10.3

In Mac OS X Panther, you can also use the Sidebar to eject an item:

1. Open any application. TextEdit is a good choice.
2. From the **File** menu, choose **Open**.
3. An eject icon appears next to each disk or item you can eject. Click the eject icon to eject it.

   Figure 3 Eject icon next to a disk

4. Click Cancel, then quit the application.

Related documents

151720 Ejecting a disk, server volume, CD or DVD disc, or other devices

Published Date: Oct 11, 2016

Mac OS X 10.3: Using an HP Photosmart Printer

Install driver version 2.3.6 or later to use an HP Photosmart printer with Mac OS X Panther.
This article has been archived and is no longer updated by Apple.
HP Photosmart printer driver version 2.3.5 does not work with Mac OS X 10.3. When you try to print, the job may stop, or the application you're printing from may unexpectedly quit. To fix this, install version 2.3.6 or later. You can download a later version from the HP website (http://www.hp.com/).

Tip: Follow these steps to see which driver version is installed:

1. Click the Finder icon in the Dock.
2. From the **Go** menu, choose **Utilities**.
3. Double-click Printer Setup Utility.
4. Select the Photosmart printer in the Printer List.
5. From the **Printers** menu, choose **Show Info**.

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Published Date: Feb 18, 2012

Mac OS X: Printing to an HP printer with binary PostScript

This article has been archived and is no longer updated by Apple.

Change a print option if your file prints as garbled text on an HP (http://www.hp.com/) PostScript printer. This article applies to Mac OS X 10.2 or later.

When you send a job to an HP PostScript printer, instead of printing your document, the printer prints multiple pages that have a single line of text and symbols, or fails to print at all. This can happen in applications such as Adobe Photoshop CS3 that create their own PostScript information for the printer.

Affected printers do not accept binary-format PostScript data in their default print queue. This can happen no matter which PPD you chose when you set up the printer. Use any of these solutions:

Print to an AppleTalk queue

If your printer is on an AppleTalk network, follow these steps:

1. Open Print Center (Mac OS X 10.2) or Printer Setup Utility (Mac OS X 10.3).
2. Click the Add button.
3. Choose **AppleTalk** from the top pop-up menu.

   Tip: You do not need to first enable AppleTalk elsewhere if it is not currently enabled.

4. Select your printer from the list of AppleTalk network printers.
5. Click Add.

Change the PostScript encoding each time you print

This is an example using Adobe Photoshop:

1. In the Photoshop Print window, click "Show More Options".
2. Choose **ASCII** from the **Encoding** pop-up menu.
3. Click Print.

Print to a "BINPS" print queue.

1. Open Print Center (Mac OS X 10.2) or Printer Setup Utility (Mac OS X 10.3).
2. Click the Add button.
3. Choose **IP Printing** from the top pop-up menu. The Printer Type pop-up menu should now say "LPD/LPR".
4. Enter the printer's IP address or hostname in the Printer Address field.
5. In the Queue Name field, type: "BINPS".

   Note: For Mac OS X 10.2, first deselect "Use default queue on server".

6. Click Add.

"BINPS on <printer address>" appears In the Printer List. Choose this printer when you print from Adobe Photoshop.

Figure 1 Printer List with BINPS queue (Mac OS X 10.3.1)

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Published Date: Oct 11, 2016

Mac OS X: Address Book doesn‘t respond in Fax window

This article has been archived and is no longer updated by Apple.

In Mac OS X 10.3 or later, you may see Address Book in a Fax window when you click its button, but you might not be able to select contacts whom you want to send a fax. You can only click the Cancel button.

This can happen in some applications, including iCal, Stickies, Microsoft Office applications, and Fire Instant Messenger.

As a workaround, type the fax recipient's fax number in the To field (pictured below). If the recipient is in Address Book, type his or her name, and the fax number should fill in automatically.

Tip: Sometimes the contact's information may not be completed correctly. If this happens, see "Mac OS X 10.3: Fax Address Is Incorrectly Completed."

Follow these steps to use Address Book:

1. In the Print dialog, click Preview instead of Fax. The Preview application opens.
2. From the **File** menu, choose **Print**.
3. Mac OS X 10.3 users: In the Print dialog, click the Fax button. Mac OS X 10.4 users: In the Print dialog, choose **Fax PDF** from the **PDF** pop-up menu.
4. Click the Address Book button.
5. Select the recipient.
6. Click Fax.

This document will be updated as more information becomes available.

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Published Date: Oct 11, 2016

Mac OS X: About the Mac OS X 10.3.2 Update

This software updates Mac OS X version 10.3 or 10.3.1 to version 10.3.2.
This article has been archived and is no longer updated by Apple.
This information is available in:

Français | Deutsch

Important: Read Before Installing

1. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.
2. To update to Mac OS X 10.3.2, you must enter the password for an administrator account. The password cannot contain a space or special characters typed by pressing the Option key. You can change the password in Accounts preferences if you need to.
3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Featured Software to install.

Installation

There are two ways to update to Mac OS X 10.3.2: Software Update and Standalone Installer.

Software Update Installation

You may have been referred to this document by Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

An installer is also available from Apple Featured Software (http://www.apple.com/swupdates/).

Mac OS X 10.3.2 Update updates Mac OS X 10.3 or 10.3.1 to the later version. This document describes how to use this installer.

Enhancements

These are some of the enhancements that are part of Mac OS X 10.3.2 Update:

Address Book and Mail enhancements

- Mail moves messages marked as junk to the Junk mailbox more reliably.
- In Address Book, you can now configure Exchange synchronization with either a hostname or full server URL, including a (https://) URL to automatically use SSL.
- Improves syncing between Address Book and Microsoft Exchange.
- You can now move an email to a different mailbox if you use an email server that previously didn't allow this.
- Improves results when using Mail with a .Mac or IMAP account and an SSL connection.
- Improves text sizing when printing from Mail.

Networking enhancements

- Improves results when looking for SMB-based servers in the Network view.
- Resolves an issue in which the Mac OS X firewall could no longer be available if you performed an upgrade installation of Mac OS X Panther.
- Allows automatic configuration of proxy servers using Proxy Auto Configuration (.pac) files.
- Resolves an issue that could prevent the computer from getting a DHCP lease after certain kernel extensions were unloaded and reloaded.
- Improves DNS for Mac OS 10.2 clients that use a shared Internet connection from a Mac OS X Panther computer.
- Resolves an issue that could prevent you from getting or maintaining an IP address via DHCP under certain conditions.
- Addresses an issue in which the L2TP VPN could not connect with leftover racoon.pid.

Print and fax enhancements

- The size of printouts from certain applications, including Safari, has been fixed.
- Addresses an issue in which a "No pages were selected to be printed in this document" alert appears when printing from Mail, Safari, iPhoto, or Preview, and then the application unexpectedly quits.
- Improves compatibility for Microsoft Virtual PC 6.1's emulated printing features.
- You can now save faxes in a folder whose name includes 2-byte characters.
- Addresses an issue with some USB PostScript printers, including the HP LaserJet 2300, Lexmark E310, and GCC Elite 21, in which a "Printer not responding" message appears when you add the printer in Printer Setup Utility, or when you try to print.
- Improves compatibility for Brother HL 1240 printers when used on an AirPort network with Rendezvous; an alert message with "-9672" could appear when adding the printer.
- Addresses an issue in which an application could unexpectedly quit when sending a fax to several recipients.
- Improves compatibility for some Lexmark printers when they print an A4-sized page.
- Improves reliability of Mac OS X Panther's fax email delivery feature.

Finder and other enhancements

- Addresses issues that could keep a disk image from appearing in the Finder when you open its file.
- You can now eject a FireWire-based volume from the Finder without entering an administrator password.
- Improves security of background applications when Screen Saver is on, and when entering a Screen Saver password.
- The Repair Permissions utility no longer reports a permissions issue with the printer.conf file.
- Character Palette no longer appears when you log in or after the computer wakes from sleep.

- iTunes will keep importing songs from an audio CD if you switch to another account.
- FileVault no longer prompts to recover unused disk space each time you log out; it will now ask only when needed.
- A Font Book collection's name, if it included a slash, or solidus, character ("/"), could cause issues; you can no longer use a slash in a Font Book collection's name.
- Addresses an issue in which a PowerBook G4 computer may stop responding when a Classic application's window is moved.
- The consonant of the first character for certain words entered using the Simplified Chinese ABC input method is no longer ignored.
- Improves compatibility for CH Products' joysticks and flight yokes.
- Improves compatibility for MagTek credit card readers.
- Improves reliability of third-party FireWire audio hardware devices.
- More reliably recognizes some FireWire devices, including the iSight camera.
- Addresses an issue with iChat AV (Italian) in which you couldn't join a chat room that you were invited to.

Published Date: Oct 11, 2016

Mac OS X 10.3: Kernel Panic When Using iSub

Mac OS X 10.3.2 Update resolves an issue that can cause a kernel panic when an iSub speaker plays audio. Harmon Kardon Soundsticks with iSub, for example, include an iSub speaker.

This article has been archived and is no longer updated by Apple.

The kernel panic message may include information such as "Apple02DBDMAAudio" and "IOAudioFamily" in the backtrace.

Download and install Mac OS X 10.3.2 Update to resolve this issue.

Published Date: Oct 11, 2016

Mac OS X 10.3: Kana-Kanji conversion stops working

This article has been archived and is no longer updated by Apple.

Troubleshoot Kana-Kanji conversions if they stop working after using the Kotoeri input method.

Note: This document applies to Mac OS X 10.3 through 10.3.9.

1. Click Finder icon in the Dock.
2. From the **Go** menu, choose **Go to Folder**.
3. Type: ~/Library/Preferences/com.apple.JapaneseAnalysis/
4. Click Go.
5. Look for the file named "LearningDictionary.dict", then drag it to the desktop.
6. Log out and back in, or restart your computer.

You can safely delete the "LearningDictionary.dict" file from your desktop.

Published Date: Oct 11, 2016

iCal, Mac OS X: iCal Alarms Don‘t Go Off on Schedule

If iCal alarms don't go off on schedule, update to iCal 1.5.2 or later.
This article has been archived and is no longer updated by Apple.
iCal 1.5.2 or later is available through Software Update preferences and (http://www.apple.com/ical/).

Published Date: Oct 11, 2016

Apple System Profiler: Palm OS Devices Don‘t Appear on USB

It's OK if your Palm OS device (http://www.palm.com/) doesn't appear in Apple System Profiler even though it is connected to the computer's USB port.

This article has been archived and is no longer updated by Apple.

The USB connection from your computer to your USB-based Palm OS device, such as a PDA, is only active when you are performing a HotSync.

You can test whether the connection is detected by your computer, by pressing the HotSync button on the device's cradle or cable, then refreshing the Apple System Profiler window before the sync is complete.

Published Date: Feb 18, 2012

Mac OS X 10.3: Some included Epson drivers aren‘t installed

This article has been archived and is no longer updated by Apple.

Mac OS X Panther includes many Epson printer drivers, but they're not all installed by default. You can easily install one you need if Printer Setup Utility doesn't list your printer under EPSON USB, EPSON FireWire, EPSON AppleTalk, or EPSON TCP/IP.

Document 25588, "Mac OS X 10.3: Raster (Inkjet) Printer Drivers Included", lists all Epson inkjet printer drivers included with Mac OS X 10.3 Panther.

Note: Printer drivers included in the Epson Printer Drivers 1 package are installed by default. Drivers included in the Epson Printer Drivers 2 package are not. If your driver isn't installed, it's probably in the Drivers 2 package or not included with Mac OS X Panther. If it's not included, see if it's available from Epson's website (http://www.epson.com/). Later versions of printer drivers, even ones included with Mac OS X Panther, may be available there, too.

Follow these steps to install an Epson driver from the Epson Printer Drivers 2 package:

1. Check document 25588 to see if your printer's driver is part of the Epson Printer Drivers 2 package.
2. Insert the Mac OS X 10.3 Install Disc 3 or Mac OS X 10.3 Software Install DVD.
3. Open the Packages folder on the Install CD.

   If you have an Install DVD, note the name of the installation DVD as it appears on the desktop (such as "iMac Software"), then do this: From the Finder's **Go** menu, choose **Go to Folder**. Type:

   `/volumes/`{name of your DVD}`/System/Installation/Packages`
   Click Go.

4. Double-click EpsonPrinterDrivers2.pkg.
5. Follow the onscreen instructions to install the software.

Your printer's driver, and others in the Drivers 2 package, will be installed.

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Published Date: Feb 17, 2012

Mac OS X 10.3: Administrator authentication allows root privileges in Finder for 5 minutes

This article has been archived and is no longer updated by Apple.

If you authenticate with an administrator account to allow a restricted task in the Mac OS X 10.3 Finder, the logged-in account will have root privileges for 5 minutes. Also, each time you log in with an administrator account, you have root access for 5 minutes.

Note: This document applies to Mac OS X 10.3 through 10.3.9. This document also applies to Mac OS X Server 10.3 through 10.3.2.

This behavior changes in Mac OS X 10.3.3 and later, which require an administrator to authenticate each Finder action that needs authentication, such as installing software.

When a user authenticates and is granted root privileges in the Finder, she can edit or delete system files, among other things.

Example: You can log in with an administrator account and perform a root-level task in the Finder within the first 5 minutes, including dragging the System directory to the Trash. There is no warning when you do this. After 5 or more minutes of logging in, Finder asks you to authenticate to before performing the same task.

Example: A user who does not have administrator privileges tries to copy a .kext file to the /System/Library/Extensions/ directory. An authentication dialog appears. A person with an administrator account authenticates and Finder copies the .kext file. For the next 5 minutes, the user who does not have administrator privileges can perform any action in the Finder that usually requires administrator authentication.

This is the expected behavior for Mac OS X 10.3 through 10.3.2. Download and install Mac OS X 10.3.3 Update or later if you wish to avoid this.

Related documents

25591 Mac OS X 10.3: Terminal Commands That Require Authentication Unlock Other Applications

Published Date: Oct 11, 2016

Mac OS 9.2.2: Remote Access "Answering" Option Doesn‘t Stay Selected; Can‘t Open Remote Access Control Panel

Learn what to do if you can't open the Mac OS 9.2.2 Remote Access control panel and the "Answering..." option doesn't remain selected when you restart the computer.

This article has been archived and is no longer updated by Apple.

Symptom

- The Remote Access' "Answering..." option isn't selected after a restart and doesn't remain selected after the next restart.
- After restarting the computer, you can't open the Remote Access control panel. This message appears:

  "Remote Access requires the 'OpenTpt Remote Access' system extension which was not found in the Extensions folder. You may need to reinstall it, or restart the computer with extensions on."
- After restarting, you can't open the Remote Access Status application. This message appears:

  "Apple Remote Access version 3.0 (or later) is not installed on this computer. Apple Remote Access is software that allows you to connect to an AppleTalk or TCP/IP network using a modem."

Products affected

- Mac OS 9.2.2
- iBook (Late 2001)
- iBook (14.1 LCD)
- iBook (16 VRAM)
- iBook (14.1 LCD 16 VRAM)
- PowerBook G4 (Gigabit Ethernet)
- PowerBook G4 (DVI)
- iMac (Flat Panel) with serial numbers earlier than xx303xxxxxx
- iMac (Flat Panel 17-inch)
- eMac
- Power Mac G4 (Mirrored Drive Doors) - dual 1 GHz and dual 1.25 GHz models

Solution

1. Before restarting, open the Remote Access control panel.
2. Deselect "Answering..." in the Remote Access menu.
3. Restart.
4. Open the Remote Access control panel.
5. Choose "Answering..." from the Remote Access menu.
6. Select or deselect "Answer calls" as desired.
7. Click OK.

Published Date: Feb 20, 2012

Mac OS X: Can‘t access Help content, or content is blank or missing links

This article has been archived and is no longer updated by Apple.

Learn what to do if you can't get to information in Help, such as Finder or iCal 1.5 Help.

When you open Help, for example, you might see a blank page, or three links instead of four, but none of them work (you might expect to see these working links: What's New, Overview, Contents, Website).

Blank window in Mac OS X 10.4 or later

Download and install the Mac OS X 10.4.6 Update or later if you experience a blank window issue. You may also need to follow the steps described in the next section one time.

All versions of Mac OS X

Follow these steps:

1. Quit Help Viewer if it is open.
2. Click the Finder icon in the Dock.
3. From the **Go** menu, choose **Go to Folder**.
4. Type: ~/Library/Caches/

   Tip: "~" means your Home, which you can also get to by going to the Users folder and opening your home folder.

5. Click Go.
6. Look for the "com.apple.helpui" folder.
7. Rename that folder to something else, such as "old Help cache folder".
8. Open Help Viewer.

You should be able to access the Help content now.

Related documents

107013 Mac OS X 10.2, 10.3: Mac Help Viewer unexpectedly quits

Related Terms: window, doesn't, empty, broken link

Published Date: Oct 11, 2016

Mac OS X 10.3 and 10.4: DVD Player - Video behind Info window updates slowly after resizing window

Video displayed behind the Info window in DVD Player 4 may update slowly after you resize the video window (the frames-per-second rate drops).
This article has been archived and is no longer updated by Apple.

This can happen when the video window is resized so that it intersects with the transparent Info window.

To fix this, move either the video window or the Info window.

You can avoid this issue by not resizing the video when a movie is playing. **Note**: In Mac OS X 10.4 and later, the Info window is named "Navigator."

This document will be updated as more information becomes available.

Published Date: Oct 11, 2016

Mac OS X 10.3: Faxing - Application Unexpectedly Quits When Sending to Many People

Update to Mac OS X 10.3.2, or fax to one recipient at a time if your application unexpectedly quits when you send a fax with Mac OS X Panther.
This article has been archived and is no longer updated by Apple.
Download and install Mac OS X 10.3.2 or later. You can get it by choosing Software Update from the Apple menu, or from the Apple Software Downloads website (http://www.apple.com/swupdates/).

If you're not ready to update, fax the same document to one recipient at a time.

Published Date: Feb 19, 2012

Mac OS X 10.3: How to rename Finder Sidebar items

Learn how to rename items in the Mac OS X Panther Sidebar.
This article has been archived and is no longer updated by Apple.
Note: Some items can't be renamed, such as read-only media (optical discs), network volumes, or any item whose permissions or ownership does not permit changes by the current user.

To rename a volume or folder in the Sidebar

1. Select the item in the Sidebar.
2. From the **File** menu, choose **Get Info**.
3. Click the triangle next to "Name & Extension:".
4. Rename the item.
5. Press the Tab key or close the Info window.

To rename an application or document

1. Locate the item in the Finder (not in the Sidebar).
2. Select the item.
3. Press the Return key to make the name editable.
4. Rename the item.
5. Press the Return key to complete the change.

Published Date: Feb 17, 2012

Mac OS X 10.3: Faxing - Some Multi-Purpose Fax Devices Don‘t Receive Faxes

Some multi-purpose fax devices, that are both a fax machine and a telephone, for example, may not receive faxes sent with Mac OS X Panther.
This article has been archived and is no longer updated by Apple.
Note: Devices that only send and receive faxes are not affected by this issue. Only multi-purpose (or combination) fax/telephone devices that use an auto-recognition mode to identify incoming calls are affected.

As a workaround, ask the recipient to set the device to receive a fax manually, then send the fax. Or, ask the recipient to set the device's receiving mode from auto-recognition to "fax only". Instructions should be available in documentation that came with the device.

Note: Even when the device is in "fax only" mode, you should still be able to use it for voice by picking up the receiver while the device is ringing.
Published Date: Oct 11, 2016

Mac OS X: Mac OS X 10.3.2 Update Addresses Virtual PC 6.1 "Emulated" PostScript Printer Issue

If Microsoft Virtual PC 6.1 does not work with an "emulated" PostScript printer in Mac OS X Panther, update to Mac OS X 10.3.2 or later.
This article has been archived and is no longer updated by Apple.
Download and install Mac OS X 10.3.2 Update or later to avoid this issue.

If you're not ready to update, you can fix this by modifying the /etc/cups/cupsd.conf file.

1. Click the Finder icon in the Dock.
2. From the **Go** menu, choose **Go to Folder**.
3. Type: `etc/cups`
4. Click Go.
5. Double-click the "cupsd.conf" file. This dialog appears: "There is no default application specified to open the document 'cupsd.conf.'"
6. Click Choose Application.
7. In the Choose Application dialog, the Applications folder is already selected. Select TextEdit, then click Open.
8. In TextEdit, scroll through the document until you see "ServerName 127.0.0.1".
9. Click on the empty line that appears below ServerName.
10. Type: `MinCopies 0`
11. From the **File** menu choose **Save**.
12. Close the TextEdit window.

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Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Feb 17, 2012

iSync: Frequently Asked Questions (FAQ) About the Sony Ericsson P800 Phone

Find answers to common questions about using iSync with a Sony Ericsson P800 phone.
This article has been archived and is no longer updated by Apple.
Questions answered in this document:

1. What tips should I follow before using my phone with iSync?
2. I'm having issues pairing my P800 to my Mac.
3. I've paired my phone successfully, but now an error appears in iSync that says the Bluetooth connection has gone down, and I can't sync any data.
4. I've successfully paired my phone to my Mac and have synced a few times without any issues. However, I can only sync contact information; the option for syncing calendars is not available.
5. An error appears in iSync that says the sync failed because I'm trying to push too much information to the P800.

Question 1: What tips should I follow before using my phone with iSync?

Answer: Here are some basic tips:

- Make sure you have the latest Bluetooth software installed from the Apple Bluetooth website.
- Make sure you are using a compatible Bluetooth USB adapter or have a Mac with built-in Bluetooth. For compatible Bluetooth adapters, see the Apple Bluetooth website.
- If you are using a Bluetooth USB adapter, try connecting it directly to the computer instead of a hub or the keyboard.

Question 2: I'm having issues pairing my P800 to my Mac.

Answer: For best results, use the Bluetooth setup assistant, available in the Bluetooth preferences, to pair the phone to your Mac.

If you are still having issues pairing your phone, see technical document 93179, "iSync: Troubleshooting Connections With Symbian OS Phones (P800, 7650, and 3650)".

Question 3: I've paired my phone successfully, but now an error appears in iSync that says the Bluetooth connection has gone down, and I can't sync any data.

Answer: See technical document 25599, "iSync: Bluetooth Connection Fails When Syncing With Sony Ericsson P800 Phone".

Question 4: I've successfully paired my phone to my Mac and have synced a few times without any issues. However, I can only sync contact information; the option for syncing calendars is not available.

Answer: Download and install iSync 1.2.1 or later. Use Software Update preferences, or go to the iSync website.

Question 5: An error appears in iSync that says the sync failed because I'm trying to push too much information to the P800.

Answer: Read technical document 25595, "iSync: About Syncing Large Amounts of Data at One Time".

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Document 17159, "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Published Date: Feb 19, 2012

Mac OS X 10.3: Can‘t send or receive faxes without /var/spool/lock Folder

Mac OS X Panther can't send or receive faxes if a specific folder is missing.
This article has been archived and is no longer updated by Apple.
When you try to send a fax, the status message for the Internal Modem says, "There was a software fax error".

The modem doesn't answer after the number of rings you specified in Print & Fax preferences.

Follow these steps to fix this:

1. Click the Finder icon in the Dock.
2. From the **Go** menu, choose **Go to Folder**.
3. Type: `/var/spool`
4. Click Go.
5. Look for a folder named "lock". If you don't see it, follow the steps below. If you see this folder, troubleshoot for other conditions.
6. From the **Go** menu, choose **Utilities**.
7. Open Terminal.
8. Type: `cd /var/spool`
9. Press Return.
10. Type: `sudo mkdir lock`
11. Press Return.
12. Enter your admin password when prompted.
13. Quit Terminal when finished.

Published Date: Oct 11, 2016

Mac OS X 10.3: PowerBook G4 Behaves Unexpectedly After Changing Display Resolution

With Mac OS X Panther, a PowerBook G4 or PowerBook G4 (Gigabit Ethernet) computer may experience issues when the display resolution changes.
This article has been archived and is no longer updated by Apple.
The computer behaves unexpectedly when you or an application changes the display resolution. Some examples of this behavior include:

- A slideshow doesn't advance when played in Keynote.
- The screen turns a solid blue color or the computer stops responding ("crashes") when you turn on full screen Visuals in iTunes or change the resolution in Display preferences.

Download and install Mac OS X 10.3.3 Update or later to avoid this issue.

If you're not ready to install, these tips can help:

This does not affect video on an external display, if one is connected.

If you need a workaround, you can try this: Put the computer to sleep by closing the lid, then wake it from sleep.

Published Date: Oct 11, 2016

Mac OS X: How to install files into the Classic System file

This article has been archived and is no longer updated by Apple.

Learn how to install script bundles, keyboard layouts, and sound files into the Classic System file in the Mac OS 9 System Folder.

In Mac OS 9, you install script bundles, keyboard layouts, and sound files by dragging them onto the System Folder. The operating system then puts them in the System file. In Mac OS X, you can add the same files to the System file by following these steps.

Mac OS X 10.3, 10.4 and later

1. Open the System Folder that is used by Classic.
2. Drag the script bundle, keyboard layout, or sound file into the Appearance folder in the Mac OS 9 System Folder.
3. Use Classic preferences to restart Classic if it is running.

Mac OS X 10.2.8 or earlier

1. Start your computer from Mac OS 9. If you don't know how, see technical document 106667, "**How to Switch Between Mac OS 9 and Mac OS X**".
2. Drop the files on the System file icon in the Mac OS 9 System Folder.
3. Start from Mac OS X again.

Related Terms: drop, installation, system beep

Published Date: Oct 11, 2016

Mac OS X 10.3 Tip: Dragging a print job to another printer queue

A print job might not print with Mac OS X Panther if you drag it to the queue of a printer that has different capabilities.
This article has been archived and is no longer updated by Apple.
Tip: For best results, only drag jobs between print queues of printers that have similar capabilities, such as the size of paper it can handle.

Tip: For best results, download and install Mac OS X 10.3.3 Update or later.

Usually, print jobs will print OK if you drag them from a PostScript printer queue to another PostScript printer queue, from an inkjet printer queue to another, or from an inkjet printer queue to a PostScript printer queue.

This document will be updated as more information becomes available.

Related documents

152233 Mac OS X 10.3: Assigning a Print Job to a Different Printer

Published Date: Oct 11, 2016

Mac OS X 10.3, 10.4: Num Lock light doesn‘t turn on

The Num Lock light does not turn on when you press the key.
This article has been archived and is no longer updated by Apple.
With Mac OS X 10.3 or later, the Num Lock key light may not turn when you press the key. This doesn't mean anything is wrong with your keyboard.

You can use Keyboard Viewer to make sure your Num Lock key is working. If you don't know how, see "Mac OS X 10.3 Tip: Use Keyboard Viewer for Key Caps Functions".

Related documents

58653 Apple Pro Keyboard: Num Lock LED Does Not Light Up

Published Date: Feb 17, 2012

Mac OS X 10.3: No "Other" option at login

Sometimes the Mac OS X Panther login window does not offer an "Other" choice.
This article has been archived and is no longer updated by Apple.

Solution

1. At the login window, type the first character in the name of a listed user. This will highlight that user's name.
2. Press Option-Return.

Login window will present text boxes for entering a name and password. You can now log in as any valid user.

Note: The Other option does not appear when NetInfo is turned off in Directory Access.

Published Date: Oct 11, 2016

Mac OS X 10.3: Calculator "rounding errors"

This article has been archived and is no longer updated by Apple.

Sometimes, Mac OS X 10.3 Panther Calculator results may include "rounding errors". Choose a lower **Precision** setting from the **View** menu to avoid this issue in the main Calculator window.

Note: This document applies to Mac OS X 10.3 through 10.3.9.

Sometimes you may see different results in the Paper Tape window. For example, if you calculate 77 + .1, the result is 77.1 in the Calculator window as expected; but the Paper Tape window displays a result of "77.09999999999999".

Since Calculator uses floating-point arithmetic, the calculation is the expected result. Choose a lower **Precision** setting from the **View** menu to avoid this issue in the main Calculator window.

Additional information

For an advanced discussion of why this happens, see "What Every Computer Scientist Should Know About Floating-Point Arithmetic" (http://docs.sun.com/source/806-3568/ncg_goldberg.html).

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Published Date: Oct 11, 2016

Mac OS X 10.3: Getting automatic PPPoE connections to work

This article has been archived and is no longer updated by Apple.

Learn about Mac OS X 10.3 Panther's automatic PPPoE (point-to-point protocol over Ethernet) connection feature and what to do if it doesn't work.

Note: For Mac OS X 10.4 or later information, see this article.

Mac OS X can automatically establish a PPPoE connection when it needs to connect to your Internet service provider. For example, Mac OS X will connect for you when Safari or Mail needs to access the Internet.

To use this feature:

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **Network**.
3. From the **Show** pop-up menu, choose **Built-in Ethernet**.
4. Click PPPoE.
5. Click the PPPoE Options button. **Note**: This only appears if "Connect using PPPoE" is selected.
6. Select the "Connect automatically when needed" option.

If automatic connection does not work

In some situations this feature may not work, even if it is selected in Network preferences. These include:

- When you cancel a PPPoE connection attempt while the connection is being established, or you manually disconnect after an automatic connection.

  Note: When this happens, the PPPoE option "Connect automatically when needed" still appears to be enabled even though your canceling it has disabled it.

  To connect, choose Connect from the PPPoE menu bar item, change any PPPoE setting, put the computer to sleep and wake it, change your network location, or restart the computer. Then, attempt an automatic connection such as with Safari or Mail.

- After three failed automatic connection attempts

  The auto-connect feature turns itself off if a PPPoE connection can't be made in three attempts. When this happens, it probably means there is an issue with your PPPoE configuration, or with the physical connection to the modem. Make sure the configuration and connections are correct.

  Note: In this case, Mac OS X uses the next network port as set in Network preferences (such as AirPort or Modem) to connect to the Internet.

  Once you have the correct PPPoE configuration and a working connection, restart the computer, put it to sleep and wake it, or change your network location to use automatic connection.

Published Date: Oct 11, 2016

iChat AV (Italian), Mac OS X 10.2: Can‘t Join Chat Room

If you can't join a chat room with iChat AV (Italian), there are two workarounds. You may temporarily use a different language or edit a resource file.

This document applies to Mac OS X versions 10.2 to 10.2.8.
This article has been archived and is no longer updated by Apple.
When you try to join a chat room, the button "Entra" (Go) in the window "Entra In chat ..." (Go to Chat) is dimmed.

Note: You can join a chat only if you are invited to it.

There are two workarounds. Use either one.

Workaround: Temporarily change the language

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **International**.
3. Drag a language other than Italian, such as English, to the top of the list of languages.
4. From the **Apple** menu, choose **Log Out**.
5. Log back in and try to join or create a room.

Advanced workaround: Edit a line in a text file

You only have to do this one time.

1. Click the Finder icon in the Dock.
2. From the **File** menu, choose **Go to Folder**.
3. Copy and paste (or type) this folder's pathname into the field:

   ```
   /System/Library/PrivateFrameworks/InstantMessage.framework/iChatAgent/Contents/Resources/Italian.lproj
   ```

4. Click Go.
5. Open the file "AIMLocalizable.strings" with a text editor, such as TextEdit.
6. In the editor, change the second line from:

   ```
   "FullNameOfAIM" = "Servizio Messaggi Istantanei AOL"
   ```

   To:

   ```
   "FullNameOfAIM" = "AOL Instant Messenger";
   ```

7. Quit the editor and save the changes.
8. Restart or log out and back in.

Published Date: Feb 17, 2012

Mac OS X 10.3.2 Update: Only install on startup disk

You should install Mac OS X 10.3.2 Update or Mac OS X Server 10.3.2 Update only on the disk you've started from. Applications, including Mail, Address Book, and Network Image Utility, are not properly updated when installing on a volume other than the one you've started from, even though the update appears to install successfully.
This article has been archived and is no longer updated by Apple.
The best way to install the update on a different disk is this: Start up from it first, then install (or reinstall) the update. You can use the same installer package you downloaded on the original volume, or you can download and install the update again using Software Update preferences.

Alternatively, you can copy the affected applications from a properly-updated Mac OS X 10.3.2 volume to the other volume, and replace the older versions. "Other volume" or "other disk" can include a different partition of the same hard disk, or an external volume, such as an external FireWire hard disk.

For Mac OS X 10.3.2, these applications are updated:

- Terminal.app
- Bluetooth Setup Assistant
- Bluetooth Serial Utility
- Bluetooth File Exchange
- Safari
- Mail
- Font Book
- Address Book

For Mac OS X 10.3.2 Server Update, these are also updated:

- Workgroup Manager.app
- Server Assistant.app
- Server Admin.app
- QTSS Publisher.app
- Network Image Utility.app

Additional information

Verification

To verify a successful installation, select the Mail icon in the Applications folder, then choose Get Info from the File menu. The Version line should say "1.3.2".

Creating a NetInstall image (advanced)

To create a NetInstall image of Mac OS X 10.3.2, you must install 10.3, then start up from that system and install Mac OS X 10.3.2 Update. You can then create a NetInstall image from the installed system.

About Mac OS X 10.3.3

If you're started from Mac OS X 10.3.3 or later, you can install a Mac OS X update on volumes other than the startup disk and this issue won't occur.

If you're started from Mac OS X 10.3.2, Mac OS X 10.3.3 Update should only be installed on the startup volume to avoid this issue.

Published Date: Oct 11, 2016

Mac OS X: Getting notified when a new fax arrives

This article has been archived and is no longer updated by Apple.

Mac OS X 10.3 or later can notify you when a fax arrives. **Tip**: If you don't already know how to receive faxes, check out this (for Mac OS X 10.5); this (for Mac OS X 10.4); or this document (for Mac OS X 10.3).

There are several ways to receive notification.

Notification by email

Mac OS X 10.3, 10.4

1. Open System Preferences and click Print & Fax.
2. Click Faxing.
3. Select the "Email to" checkbox and type an email address in the "Email to" field. You can also choose addresses directly from Address Book by clicking the Address Book button to the right of the "Email to" field.

Tip: If email notifications are not getting sent, see this article.

Mac OS X 10.5

1. Open System Preferences and click Print & Fax.
2. Select the modem you are using to receive faxes and click the Receive Options... button.
3. Select the "Email to" checkbox and type an email address in the "Email to" field. You can also choose addresses directly from Address Book by clicking the Address Book button to the right of the "Email to" field.

Print the fax automatically

Mac OS X 10.3, 10.4

1. Open System Preferences.
2. Click Print & Fax.
3. Click Faxing.
4. Select the "Print on printer" checkbox, and choose a printer from the pop-up menu.

Mac OS X 10.5

1. Open System Preferences.
2. Click Print & Fax.
3. Select the modem you are using to receive faxes and click the Receive Options... button.
4. Select the "Print to" checkbox, and choose a printer from the pop-up menu.

Onscreen notification

Use AppleScript and Folder Actions to set this up. Follow these steps:

1. Open Folder Actions Setup, located in the AppleScript folder, which is in the Applications folder.
2. Select "Enable Folder Actions".
3. Click the "+" button.
4. Select the folder where received faxes are saved.

   Note: The default location is /Users/Shared/Faxes, but may have been changed in Print & Fax preferences.

5. Click Open.
6. The Choose A Script sheet appears. Click "add - new item alert.scpt".
7. Click Attach.
8. Quit Folder Actions Setup.

When a fax is received and saved to the folder, an alert will now appear.

Published Date: Oct 11, 2016

Mac OS X 10.3: Disabling Fonts in Font Book Does Not Affect Classic Applications

"Classic Mac OS" fonts disabled in Font Book are still available in Classic applications.
This article has been archived and is no longer updated by Apple.
You can use Font Book to control which fonts are available to Mac OS X applications. Fonts installed in the Mac OS 9 System Folder can be disabled using Font Book's Disable feature. A "disabled" font becomes unavailable to Mac OS X applications, but continues to be available to Classic applications. Disabling a font in Font Book is different than removing it.

To make a font unavailable to Classic applications, remove it from the Mac OS 9 System Folder. For help doing this, see technical document 106737, "**Mac OS X: How to Add or Remove Classic Fonts.**"

Related documents

152218 Mac OS X 10.3: Turning a Font Off or On

Published Date: Oct 11, 2016

Mac OS X 10.3: DVD Player - Unexpectedly Quits When Second Video Card Is Installed

DVD Player may unexpectedly quit if a second PCI video card that doesn't support DVD playback is installed in your computer. This document applies to Mac OS X 10.3 through 10.3.2.
This article has been archived and is no longer updated by Apple.
Download and install Mac OS X 10.3.3 Update or later to avoid this issue.

If you're not ready to install, this issue can occur even if the second video card isn't being used for the main display. To fix this, remove the second video card.

Published Date: Oct 11, 2016

Mac OS X 10.3: Address Book - Sharing vCards With Mac OS X 10.2

Mac OS X Panther Address Book vCards can contain more kinds of information than vCards in Mac OS X 10.2.
This article has been archived and is no longer updated by Apple.
Mac OS X Panther Address Book vCards can have these additional fields:

- Phonetic First Last Name
- Prefix
- Middle Name
- Suffix
- Nickname
- Maiden Name
- Job Title
- Phone
- Email
- Home Page
- Birthday
- Dates
- Related Notes
- Instant Messaging
- Address

Mac OS X 10.2 Address Book vCards, however, only have these additional fields:

- Phonetic First Last Name
- Birthday
- Instant Messaging

When you send or copy a vCard from a Mac OS X 10.3 computer to a Mac OS X 10.2 computer, information in the Mac OS X 10.3 additional fields (except Phonetic First Last Name, Birthday, Instant Messaging) appear in the vCard's Notes field.

The extra information is not visible to other Mac OS X 10.3 users who receive the vCard, however.

Published Date: Feb 17, 2012

Mac OS X 10.2, 10.3: Your Own Computer Appears in List of Available Servers

Your own computer may appear in lists of available servers, but you can't connect to it.
This article has been archived and is no longer updated by Apple.
You might see your own computer listed as a server in a Connect to Server server list, or in the Mac OS 9 Chooser. If you try to connect to it, one of these messages appears:

- "Connection Failed This file server is running on your machine. Please access the volumes and files locally" (Mac OS X Connect to Server)
- "No response from server. Please try again." (Mac OS 9 Chooser in Classic)

Use the Finder to open files on your computer instead.
Published Date: Feb 17, 2012

Mac OS X 10.3: How to Restore Mailboxes From a Backup on a Burned Disc

Learn how to restore mailboxes you backed up to a CD or DVD in Mac OS X 10.2 so you can use them with Mail in Mac OS X Panther.

Note: For best results, follow the steps in this document before using Mail in Mac OS X Panther for the first time. If you've already used Mail, see the warning below before proceeding.
This article has been archived and is no longer updated by Apple.
If you saved a backup of Mail messages or mailboxes (whose filename extension is ".mbox") to a CD or DVD in Mac OS X 10.2, copy the .mbox files to a certain folder in your home directory so you can use them in Mac OS X Panther Mail.

Warning: If you've already used Mail in Mac OS X Panther, you must take certain steps to prevent any messages you've received from being lost when you restore your backup. To keep any messages you may have received since you made the backup, copy them to a new mailbox that has a special name first. To do this, create a new On My Mac mailbox with a unique name (one you didn't use in Mac OS 10.2), drag the newer messages to it, then follow the steps below.

Restoring from a backup

1. Start from Mac OS X Panther if you haven't already, and insert the disc you used to make your backup.
2. Quit Mail if it's open.
3. From the **Go** menu, choose **Go to Folder**.
4. Type: ~/Library/Mail/Mailboxes
5. Click Go.
6. From the **File** menu, choose **New Finder Window** and open the folder on the disc where your backed up mailboxes are saved.
7. Drag the .mbox files from your backup disc to the Mailboxes folder you opened in Step 5. If the Finder alerts you that you're replacing newer mailboxes, see the warning above to make sure you won't lose messages. If you're sure you've saved your mail in Mac OS X Panther, click Replace.
8. Open Mail. The restored mailboxes automatically appear in Mail.

At this point, you may wish to make a backup of your Mac OS X Panther mailboxes.
Published Date: Feb 17, 2012

Mac OS X: Korean "Ga" Character Appears in a Square When Typing Hangul Text

While typing Korean text using the Hangul input method, you may see the Korean character "Ga" in a square when a syllable is incomplete or not an actual Korean word.
This article has been archived and is no longer updated by Apple.
Mac OS X 10.3 Panther can display the full set of over 11,000 Korean characters using Unicode fonts. However, the system fonts in Mac OS X 10.3 and Mac OS X 10.2 do not include all extended Korean characters. Because of this, the Korean character "Ga" may sometimes appear in a square if you're using the Hangul input method.

Figure 1 - "Ga" in a square

This can happen when the Korean script is converted from the phonetic alphabet, or Jamo, to Hangul, which consists of clusters of Jamo characters. You may see Ga in a square when a cluster of Jamo characters is incomplete or does not yet create an actual Korean word. This occurs when the Jamo cluster is within the extended range and outside the standard range provided by the system font. Once the character cluster is completed, typed correctly, or another Jamo vowel is added for the next syllable, the text should display properly.

With Mac OS X 10.3, one workaround is to install a third-party Unicode font that includes the full set of Hangul syllables. For information about third-party font solutions, see the Apple Korea font list website (www.applecomputer.co.kr/hardware/fontlist.html) .
Published Date: Feb 17, 2012

Mac OS X 10.3: Classic Menu Bar Item Not Always Correct

The Classic menu bar item may not correctly show the status of Classic.
This article has been archived and is no longer updated by Apple.
The Classic menu bar item may show that Classic is stopping, for example, when Classic has already stopped. This can happen if you've chosen to open Extensions Manager during Classic startup.

If you experience this issue, use Classic preferences to start or stop Classic, and to see the correct status.
Published Date: Feb 17, 2012

Apple System Profiler: Several USB Buses Appear

Apple System Profiler may show several USB buses that your computer doesn't have and you can't use. This does not indicate a hardware issue with your computer

This article has been archived and is no longer updated by Apple.

This can happen on Power Mac G5 or PowerBook G4 (12-inch DVI) computers. This is a cosmetic issue you can safely ignore. It does not indicate any issue with the computer or Mac OS.

This document will be updated as more information becomes available.

Additional information

The PowerBook G4 (12-inch DVI) computer has two external USB 2.0 ports. The Power Mac G5 computer has three external USB 2.0 ports: two on the back, and one on the front of the enclosure.

Published Date: Feb 18, 2012

Mac OS X 10.3, 10.4: Finder items don‘t clean up if they‘re too close together

This article has been archived and is no longer updated by Apple.

Icons in Mac OS X Panther and Mac OS X Tiger Finder windows and on the desktop may not respond to the Clean Up command if they are too close together. This can happen if the Keep Arranged By option is not selected for the window or desktop.

Space the close icons farther apart by dragging them together to a different place in the window or on the desktop. They will automatically space themselves apart.

Published Date: Feb 17, 2012

Mac OS X 10.3: Types of Certificates Keychain Access Can Import

Learn about common types of certificates Mac OS X Panther Keychain Access can import.
This article has been archived and is no longer updated by Apple.
Keychain Access, located in the Utilities folder, works with these certificate formats:

Certificate type	Filename extension
X.509 DER encoded	.cer or .crt
PKCS12 DER encoded	.p12 or .pfx
PKCS7, DER or PEM encoded	.p7r, .p7b, .p7m, .p7c, or .p7s

Once in the Keychain, valid certificates can be used by compatible applications, including Mail.

Related documents

25555 Mac OS X 10.3: Mail - How to Use a Secure Email Signing Certificate (Digital ID)

107883 Using client-side certificates in Safari

Published Date: Oct 11, 2016

Mac OS X 10.3: Some Files Have .app Filename Extension

To improve security, some items that might not normally appear with a filename extension in the Finder can have a ".app" extension.
This article has been archived and is no longer updated by Apple.
This can happen if the Finder doesn't recognize the item's previous filename extension and the "Show all file extensions" option is not selected in Finder preferences.

This is an intentional security feature.
Published Date: Feb 17, 2012

Mac OS X: About the Mac OS X 10.3.3 Update

This software updates Mac OS X 10.3.2 to version 10.3.3.
This article has been archived and is no longer updated by Apple.
Important: Read Before Installing

1. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

2. To update to Mac OS X v10.3.3, enter an administrator account password. The password cannot contain a space or special characters typed by pressing the Option key. You can change the password in Accounts preferences if you need to.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.

4. Advanced users: If you have made any changes to the /etc/ttys file, you should back it up before updating. The update overwrites this file.

Installation

There are two ways to update to Mac OS X v10.3.3: Software Update and Standalone Installer.

Software Update Installation

You may have been referred to this document by Software Update (as described in "Mac OS X: How to Update Your Software"). After reviewing this document, use Software Update to download and install the update.

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

An installer is also available from Apple Downloads.

Mac OS X 10.3.3 Update updates Mac OS X 10.3.2 to the later version. This document describes how to use this installer.

This update can be installed on non-startup volumes if you start from a Mac OS X v10.3.3 volume first.

Enhancements

These are some of the enhancements that are part of Mac OS X 10.3.3 Update.

Networking and .Mac enhancements

- Addresses issues, such as a lost network connection, that could occur when connecting to a network device that forces the network speed and/or duplex setting (known as a "locked" device).
- AppleTalk Browsing is now on by default.
- Resolves an issue in which name conflicts could occur among Network Service Entities.
- Available servers can be seen when browsing Windows Workgroups or Domains.
- Enhancements to /Network browsing include: Servers appear on the desktop and in Finder window Sidebars, AFP Authentication options are available, and you can disconnect a server by dragging its icon on the desktop to the Trash or by clicking the Eject icon in the Sidebar.
- Improves synchronization between .Mac and your computer.
- .Mac no longer attempts to automatically sync files over a wireless network (or "hotspot") before the computer is authorized to use the network.
- Enhances an Open directory plug-in, which is used in network environments: The Active Directory plug-in is no longer sensitive to the case of the domain; the plug-in now works in ".local" domain environments; the plug-in is now less sensitive to DNS records that don't have matching reverse lookup.
- Improves compatibility with certain third-party wireless networking PC cards, such as the Honda AH-G10. More...
- Enhances the IrDA menu item when IrDA networking is active.
- Finder and applications that allow you to browse the file system will now refresh the contents of a remote network volume's folder or directory when the folder's contents change.

DVD Player enhancements

- DVD Player will no longer quit if an unsupported PCI video card is installed in your computer. More...
- DVD Player supports more DVD video discs that are designed to play automatically.
- Improved DVD playback when "Digital Audio Output" is selected in DVD Player preferences.
- DVD Player now recognizes and plays DVD+R media, on computers with optical drives that support DVD+R media.

Application enhancements

- Images retain their characteristics when you import them in iPhoto. More...
- Addresses an issue in which Mail could unexpectedly quit when marking some types of unsolicited messages (or "spam") as Junk.
- Addresses issues that may cause Address Book and other applications to unexpectedly quit if the Classic Mac OS fonts are disabled in Font Book.
- Text shadow opacity and color are saved in RTF documents and preserved when you copy or paste.
- Image Capture can now import files whose names begins with an underscore character ("_") .
- When you select (but not open) a file in an application, the flashing button now says "Choose" instead of "Open".

Other enhancements

- Improvements in start up time that some computers experienced under some installations of Mac OS X 10.3.2 Update. More...
- Improves security by requiring an administrator to authenticate for each Finder action that needs authentication, such as installing software. In earlier Mac OS X Panther versions, an administrator who authenticated may have unknowingly given elevated privileges to the non-admin user for 5 minutes. This change also prevents a normal user from performing administrator actions if an administrator user has authenticated during their session.
- Improves situations in which Finder could unexpectedly quit (and open again) if the View menu option "Show icon preview" is enabled while dragging a significant number of icons to another location.
- Improves print operations when a pending print jobs is moved to the queue of a printer that has different capabilities. More...
- Improves recognition of Hi-Speed USB devices by PowerBook G4 and iBook G4 computers when woken from sleep.
- A UPS (Uninterruptible Power Supply) panel is available in Energy Saver preferences, as well as a UPS menu bar item, when a UPS power management system is connected to the computer. Overall support for UPS systems is improved.
- Improves display of text when printing a document that contains two-byte PostScript CID or OpenType fonts.
- Improves compatibility for USB Overdrive: Addresses an issue in which the Media Eject and volume keys may not work if an early version was installed. More...
- Improves Fan Control system function for Power Mac G5 computers.
- Includes Bluetooth 1.5, which supports Bluetooth-enabled headsets with iChat AV, and adds the ability to print to compatible Bluetooth-enabled printers.
- Adds support for the latest mLAN devices. First-generation mLAN devices require a firmware update for compatibility with v10.3.3. Please visit (http://www.mLANcentral.com) for complete details and access to available firmware updates.
- For portable computers, adds an option in Keyboard & Mouse preferences to use Function keys for custom functions.
- Improves function when sending faxes to combination phone/fax machines.

Published Date: Oct 11, 2016

Mac OS X: About the Mac OS X 10.3.3 Update (Combo)

This software updates Mac OS X 10.3, 10.3.1, or 10.3.2 to version 10.3.3.
This article has been archived and is no longer updated by Apple.
Important: Read Before Installing

1. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

2. To update to Mac OS X 10.3.3, enter an administrator account password. The password cannot contain a space or special characters typed by pressing the Option key. You can change the password in Accounts preferences if you need to.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.

Installation

There are two ways to update to Mac OS X 10.3.3: Software Update and Standalone Installer.

Software Update Installation

You may have been referred to this document by Software Update (as described in "Mac OS X: How to Update Your Software"). After reviewing this document, use Software Update to download and install the update.

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

An installer is also available from Apple Downloads.

Mac OS X 10.3.3 Update (Combo) updates Mac OS X versions 10.3, 10.3.1, or 10.3.2 to the later version.

This update can be installed on non-startup volumes if you start from a Mac OS X v10.3.3 volume first.

Enhancements

For a list of some of the enhancements that are part of Mac OS X 10.3.3 Update, see Mac OS X: About the Mac OS X 10.3.3 Update.

This update also includes enhancements delivered with Mac OS X 10.3.2 Update and Mac OS X 10.3.1 Update.

Published Date: Oct 11, 2016

Mac OS X 10.3: Using the Honda AH-G10 PC Card Modem

Make sure to insert your Honda AH-G10 modem into your PowerBook's PC Card slot before you turn on the computer. This card is a third-party wireless networking card.
This article has been archived and is no longer updated by Apple.
Download and install Mac OS X 10.3.3 Update or later to avoid this issue.

If you're not ready to install, these tips can help:

If you forget to insert the card before you turn on the computer, Mac OS X 10.3 probably won't recognize it. If this happens, or if you eject it after starting up, just restart your PowerBook.

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Published Date: Oct 11, 2016

Mac OS X: Mail unexpectedly quits if Times RO font is installed

With Mac OS X 10.3.3 or earlier, Mail might unexpectedly quit if Times RO fonts are installed. Some HP printer software may install this font.
This article has been archived and is no longer updated by Apple.
Update to Mac OS X 10.3.4 or later to avoid this issue.

If you're not ready to update, you can use this workaround:

1. Click the Finder icon in the Dock.
2. Type "Times RO" in the Search field to search for the font. A list of Times fonts appears.
3. Drag "Times RO" font files to the Trash. Don't drag "Times New Roman" or other "Times" font files that may also appear in the search results.
4. From the **Apple** menu, choose **Restart**.

This document will be updated as more information becomes available.

Additional information

Although Times RO is known to lead to this issue, any other damaged or incompatible font could potentially do the same.

Some versions of stand-alone Hewlett-Packard (HP) printer software can install this font. More....

If you view a damaged Times RO font file with Font Book, it may look like this:

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Published Date: Oct 11, 2016

Mac OS X 10.3: Restoring a Mac OS 9 System Folder from a disk image file

Follow these steps if your computer can't start from Mac OS 9 after restoring the System Folder from a custom image with Disk Utility. Disk Utility is an application that can repair disk issues and permissions, create disk images, and restore data from custom disk images.

This document applies to Mac OS X 10.3 through 10.3.3. Update to Mac OS X 10.3.4 or later to avoid this issue.

This article has been archived and is no longer updated by Apple.
This document applies when:

- You restored a Mac OS 9 System Folder from a custom disk image.
- You can't start from the restored System Folder, but you can use it for Classic. If you try to start from it, a flashing question mark appears.
- The image was restored using Mac OS X Panther's Disk Utility application in Mac OS X 10.3 through 10.3.3.
- The affected computer can normally start from Mac OS 9. Some computers only start up in Mac OS X.

The solution to these symptoms is to restore the image using a Terminal command instead of Disk Utility. The command is "asr". For more information about restoring from custom disk images with the asr command, see Mac OS X 10.2: About Apple Software Restore command line utility (asr).

Example

If you're restoring **from** the custom disk image named "PHOBE.img" that is on the desktop, **to** a volume named "STEER", you'd do this:

1. Open Terminal (/Applications/Utilities/).
2. Type this command in Terminal, on one line:

```
sudo asr -source ~/Desktop/PHOBE.dmg -target /Volumes/STEER/ -erase
```

3. Enter your administrator account password when prompted.
4. Quit Terminal after the restore is complete.

Published Date: Oct 11, 2016

Mac OS X: Spaces in PDF Text or iPhoto Book Appear as Two Dots

Text in a PDF file that was saved with third-party DynaFont TrueType fonts, which are used in some Japanese documents, may unexpectedly appear with two dots where a space is expected. It appears this way in some PDF viewers, such as Adobe Acrobat Reader, but not in the Mac OS X Preview application.
This article has been archived and is no longer updated by Apple.
For example, instead of "Hello there," the text may look like this: "Hello··there".

This can also happen when you order an iPhoto book that uses one of these fonts.

The solution is to view the PDF file in Preview where the text will appear as expected.

To avoid this issue, don't use these fonts in your document or iPhoto book.

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Published Date: Oct 11, 2016

Mac OS X 10.3: Playing Video Compact Disc (VCD) media

You can play a Video Compact Disc (VCD) in Mac OS X Panther or later.
This article has been archived and is no longer updated by Apple.

1. Insert the VCD.
2. Open QuickTime Player, which is in the Applications folder.
3. From the **File** menu, choose **Open Movie in New Player.**
4. Click the VCD icon in the Sidebar.
5. Select the MPEGAV folder.
6. Select the file whose filename extension is ".DAT".
7. Click Open. The movie opens as a new window in QuickTime Player.
8. Click the Play button or press the Space bar to begin playing the movie

Tip: To play an SVCD (Super Video Compact Disc), you need to install third-party software such as Video LAN Client.

About VCD media

Video Compact Discs hold much less data than DVD-Video discs, even though the discs are physically the same size. The video stored on a VCD is typically lower quality than the video on a DVD.

VCD video is encoded in MPEG1 format.

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Published Date: Feb 17, 2012

My phone doesn‘t work with iSync after I reset it

iSync software lets you synchronize data between your computer and many kinds of mobile devices.
This article has been archived and is no longer updated by Apple.
If you've reset your Sony Ericsson P800 or P900 phone, Nokia 6600 phone, or a different phone, and iSync can't sync with it anymore, try this trick:

1. Before syncing with iSync, open the phone's Calendar application.
2. Quit the phone's Calendar application. This creates a database file on the phone that iSync needs.
3. Use iSync to sync the phone and the computer.

If your phone has been erased or reset to its default settings and has no calendar information, you may need to create a new calendar on the phone before syncing.

Published Date: Feb 19, 2012

Mac OS X 10.3: Computer stops responding when using ATOK16 input method as a limited user

When using an ATOK16 input method as a limited (or managed) user, menu bar items may start blinking, and the computer may stop responding.
This article has been archived and is no longer updated by Apple.
To fix this, a user with an administrator account needs to change the limited user's Accounts preferences.

1. Log in with an administrator account.
2. From the **Apple** menu, choose **System Preferences**.
3. From **View** menu, choose **Accounts**.
4. Select the affected (managed) user account, then click Limitations.
5. In "Some Limits", deselect "This user can only use these applications".
6. In "This user needs:", select "No Limits" or "Simple Finder".

This document will be updated as more information becomes available.
Published Date: Oct 11, 2016

iSync 1.5 or earlier: Syncing contacts with Nokia 6350 and 3660 phones

This article has been archived and is no longer updated by Apple.

Some of the fields for a contact you created on your phone won't be synchronized and may be lost on the phone if you sync it with iSync 1.5 or earlier.

On your phone, if you create a contact, these contact fields are not synced:

- "Mobile (Home)" numbers
- "Mobile (Business)" numbers
- "Fax" numbers
- "DTMF" field
- "Address" fields
- "URL Address"
- "URL Address (Home)"

As a result, data in these fields may be removed from the phone after syncing.

To avoid this situation, create and edit contacts in Address Book instead of on the phone.

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Published Date: Oct 11, 2016

Mac OS X 10.3: Software Update unexpectedly quits when an update has a license agreement

This article has been archived and is no longer updated by Apple.

Software Update could unexpectedly quit when installing software that includes a license agreement, such as QuickTime or Java. This happens if the "Times RO" font is installed on your computer. Software Update makes it easy to install Apple software updates.

Note: This document applies to Mac OS X 10.3 through 10.3.4.

Solution

Download and install Mac OS X 10.3.5 Update or later.

Additional information

Some versions of stand-alone HP printer software install this font.

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Related document

106695 Mac OS X: Troubleshooting Automatic Software Update

Published Date: Oct 11, 2016

Mac OS X 10.3: Address Book stops responding if Helvetica font is disabled

If you disable the Helvetica font, Address Book may not open, or may stop responding.

Address Book stores information about your contacts that can be used by many Mac OS X applications.
This article has been archived and is no longer updated by Apple.
Address Book uses the Helvetica font included with Mac OS X. Other kinds of "Helvetica" fonts might be installed, but Address Book requires the Apple font.

Use Font Book to enable Helvetica in the All Fonts font collection.

Tip: If you use third-party font management software, temporarily disable it.

This document will be updated as more information becomes available.

Additional information

The Apple version of Helvetica is located in this path: System/Library/Fonts/Helvetica.dfont. It may appear there even when it's disabled. Using Font Book's Resolve Duplicates feature may inadvertently cause this issue, depending on what other fonts you have installed.

The Console utility displays this message in the console.log when the issue occurs:

```
Address Book[3225] Exception raised during posting of notification.
Ignored.  exception: *** -[ABTextView setFont:]: nil NSFont given.
```

The number in brackets may differ.
Published Date: Oct 11, 2016

Mac OS X 10.3: Mail quits when you click Junk Mail

If this happens, follow these easy steps to reset the Junk Mail training.
This article has been archived and is no longer updated by Apple.
Download and install Mac OS X 10.3.3 Update or later to avoid this issue.

If you're not ready to install, these tips can help:

1. Open the Mail application.
2. From the **Mail** menu choose **Preferences**.
3. Click Junk Mail.
4. Click the Reset button.
5. Click "Yes" in the alert window that asks if you want to reset Junk Mail training.

You may wish to turn on Junk Mail training if it isn't already on.

Published Date: Feb 17, 2012

Mac OS X: Restoring software on a partitioned hard drive

Partitioning a hard drive into smaller volumes can be useful in some cases. However, if your Mac came with Mac OS X and iLife '04 Software Restore discs, be aware that you can only restore the software onto partitions that are larger than 11 GB.
This article has been archived and is no longer updated by Apple.
If you try to restore the software on a smaller partition, you'll see this message:

> "**Restore Failure**
> An error (-20) occurred while copying
> Not enough free space on the partition"

Disk Utility's First Aid feature may also find "problems" on the partition you restored the software to.

To restore the software, partition the drive with at least one volume that is 11 GB or larger.

Warning: Partitioning a disk erases all information on the entire disk.
Published Date: Oct 11, 2016

Mac OS X 10.3: Receiving faxes and connecting to the Internet

If your computer has a built-in USB modem and you use it to connect to the Internet, selecting the "Receive faxes on this computer" option in Print & Fax preferences may keep the computer from connecting to the Internet more than once, unless you restart.
This article has been archived and is no longer updated by Apple.
The modem menu bar item may say the modem is "disconnecting." The Internet Connect Connection Log may say "Connect script failed."

To fix this, follow these easy steps.

1. From the **Apple** menu, choose **Restart**. The computer restarts.
2. Log in, if necessary.
3. From the **Apple** menu, choose **System Preferences**.
4. From the **View** menu, choose **Print & Fax.**
5. Deselect "Receive faxes on this computer".

Now you can connect more than one time without restarting the computer.

But what if I want to receive faxes?

Follow the steps above, but enable "Receive faxes on this computer" in the last step. Remember to deselect the option if you need to connect to the Internet more than one time before you restart or shut down.

This document will be updated as more information becomes available.

Related documents

106748 Mac OS X: Troubleshooting a dial-up/PPP Internet connection

Published Date: Oct 11, 2016

Mac OS X: Preview wants a password to open an unprotected PDF file

Why does Preview ask for a password when I open a PDF file with Mac OS X 10.3.3 or earlier?

Preview is a Mac OS X application that lets you view, create, and print PDF and graphics files.

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Some other applications can create PDF files and assign a password to them. Preview will ask for this password if needed.

However, with Mac OS X 10.3.3 or earlier, Preview might ask for a password even if the document isn't password-protected.

This message appears:

> "This PDF is password protected. Without a password, some operations with this document will be restricted. Operations allowed are listed with a check mark next to them below.
> {list of options}
> To enable more operations, enter a password."

This is normal when a PDF file has been password-protected by its creator.

However, if other software (such as Adobe Reader) opens the file without asking for a password, use that application to view the PDF file for now. Update to Mac OS X 10.3.4 or later to avoid this issue.

Additional information

When you can't view a password-protected file in Preview, this icon appears instead of text:

A document's password is set by the document's creator, and isn't your user account password. Ask the creator for the password if you need it.

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Published Date: Oct 11, 2016

Safari bookmarks don‘t change when syncing via iSync and .Mac

If Safari bookmarks don't change after syncing them via iSync and .Mac, sync again.
This article has been archived and is no longer updated by Apple.
This can happen if Safari hasn't been opened at least once on the computer that's receiving the synced bookmarks.

Open Safari at least once on the Mac that will receive the bookmarks, then sync again. You'll be asked to merge or replace your bookmarks with those from your .Mac account.
Published Date: Feb 19, 2012

Mac OS X: Font stays the same when you revert input methods

If the font in your text application doesn't change back when you switch back to the original input method, select the text you typed and change the font. This can happen when you use two or more input methods in English, Chinese, Japanese, or Korean and are using a Mac OS X "Cocoa" application.
This article has been archived and is no longer updated by Apple.
For example, you start a document in a Cocoa text application using the English input method. You type some English text. You switch to a Korean input method and type some more text. All the text appears the way you'd expect--English in an English font and Korean in a Korean font. Then you switch back to the English input method and type more, but the new text is still in a Korean font.

To fix this, select the text to be changed, then use the application's **Font** menu (or **Show Fonts** menu choice in a differently-named menu) to change the font to what it should be.

To avoid this, use a Mac OS X "Carbon" application that doesn't experience this issue. You could, for example, type a document in one of these applications, then copy and paste the text into your Mac OS X application.

Tip: WorldText, a Carbon application, is available on the Developer Tools CD that came with your computer and with Mac OS X software installation discs.

This document will be updated as more information becomes available.

Published Date: Oct 11, 2016

Importing photos in iPhoto or Image Capture as a limited or managed user

You can set up a limited or managed user's account so iPhoto or Image Capture can import photos.
This article has been archived and is no longer updated by Apple.
Follow these easy steps if a user can't import photos from a digital camera because the camera isn't recognized:

1. From the **Apple** menu, choose **System Preferences.**
2. From the **View** menu, choose **Accounts.**
3. Select the limited user account you want to give camera access.
4. Click Limitations.
5. Select "This user can only use these applications," if it isn't already, and make changes to the application limits, if desired.
6. Click Locate.
7. Navigate to /System/Library/Image Capture/Devices/.
8. Select all the items in this folder.
9. Click Add.

The limited user account should now be able to use iPhoto or Image Capture to import photos from the camera.

Published Date: Oct 11, 2016

Mac OS X 10.3: PostScript or PDF file doesn‘t look like it should in Preview

Preview might display a PDF or PostScript file in an unexpected font or without all the expected characters. Don't worry. You probably just need to install some fonts to display the document properly.

Preview is a Mac OS X application that lets you view and print many kinds of files. PostScript filename extensions are ".ps", and PDF filename extensions are ".pdf".
This article has been archived and is no longer updated by Apple.
This can happen when every font used to create a PDF or PostScript document isn't embedded in it, and the necessary fonts aren't installed.

To fix this, install the fonts on your computer that were used to create the original document.

Tip: If you don't know what fonts those are, open the document with Adobe Reader. You'll see an alert that tell you which fonts were used to create the file and that you don't have installed.

This document will be updated as more information becomes available.

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Published Date: Feb 17, 2012

Mac OS X 10.3: Applications unexpectedly quit when you print

My applications crash when I print. It started happening after a "No pages were selected to be printed in this document" message appeared, and now happens in every Mac OS X application.
This article has been archived and is no longer updated by Apple.
One of these solutions should fix this and get you back to printing at will.

- Are you using Mac OS X 10.3.3 or later? If not, update your computer's software.
- Do you use an HP Photosmart printer? Download and installed driver version 2.3.6 or later. You can get it from Hewlett-Packard.
- If you use any other printer, download the latest driver from the manufacturer's website, then install it.
- If the issue persists when using custom printer presets and Mac OS X 10.3.2 or earlier, find and delete the file "com.apple.print.custompresets.plist". It's in your home folder's Preferences folder, which is in your home folder's Library folder (~/Library/Preferences).
  You'll need to recreate any custom presets that you've previously saved.

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Published Date: Oct 11, 2016

Mail prints emails backwards and upside down (Mac OS X)

This article has been archived and is no longer updated by Apple.

You print from Mail, but the printout looks strange--backwards and upside down, that is. Instead of standing on your head and using a mirror to read it, try our helpful tips before you print.

Tip: Download and install Mac OS X 10.3.4 or later to avoid this. This document applies to Mac OS X 10.3.3 and earlier.

If you're not ready to update to Mac OS X 10.3.4 or later, you can use these workarounds:

- Copy what you want to print and paste it into a different application. Then print from it.
- Before you print, increase the size of the message's text. If you get carried away and the text becomes too big, you can make it smaller, but always keep it at least one size larger than what you started with to avoid the issue.

Published Date: Oct 11, 2016

Mac OS X 10.3: Fax doesn‘t send

Learn how to make sure your faxes get sent.

Note: This document applies to Mac OS X 10.3 through 10.3.9.

This article has been archived and is no longer updated by Apple.
If you try to fax using a device that isn't connected to a phone line or isn't a fax modem, the fax won't send, even though the device appears in, and can be selected from, the Modem pop-up menu.

When you fax, a Fax dialog box appears. Choose a device that is designed to fax (such as an Apple internal modem or an external fax modem) in the Modem pop-up menu, in the Fax dialog box.

All internal Apple fax modems, many Bluetooth-enabled mobile phones (depends on your phone and service provider), and some external USB modems can fax with Mac OS X Panther. **Tip**: If your third-party fax device doesn't send a fax try the Apple internal modem. Contact the vendor of the third-party phone or modem for more information or assistance if needed.

Sometimes, a device that's not connected may appear in the menu, such as "Bluetooth-Modem" in the picture above. The rest of this article explains how you can remove unwanted choices from the Modem list if you want.

Additional information

You can remove unwanted modem choices from the Modem list, if they appear, with these easy steps. Don't worry. Removing the device from the list doesn't mean it will stop working with Panther. It just won't appear in the Modem pop-up menu.

Tip: Don't remove "Internal modem".

1. Print from any Mac OS X application.
2. Click the Fax button.
3. From the Modem pop-up menu, choose Show Fax List.
4. Uncheck "In Menu" next to the unwanted modem choice.

Devices might get on the list because they were once connected to your Mac, but no longer are.

Related documents

25676	Mac OS X 10.3: Can't Send or Receive Faxes Without /var/spool/lock Folder
25731	Mac OS X 10.3: Receiving faxes and connecting to the Internet
152270	Mac OS X 10.3 Help: Sending a fax

Published Date: Oct 11, 2016

Mac OS X 10.3: Which fonts are Apple fonts?

Learn how to figure out which of your fonts were supplied by Apple. This might be useful to know when troubleshooting a software issue, for example.

This document applies to Mac OS X 10.3 through 10.3.4.

This article has been archived and is no longer updated by Apple.
Here's how to do it in the Finder:

1. Open the Fonts folder you wish to look at. Fonts may be in more than one location.
2. Select a font.
3. From the **File** menu, choose **Get Info** (or press Command-I).
4. Look at the "Copyright" line. If you see "Apple Computer" in the copyright, it's an Apple font.

5. Repeat these steps for other fonts you want to check out.

And here's how you can do this with Mac OS X Panther Font Book, if you want:

1. Hop on over to the Applications folder and open Font Book.
2. From the **Preview** menu, choose **Show Font Info** (or press Command-I). If Font Info is already shown, you don't need to do this.
3. Select each font you want to check out. Look in the Font Info section (which is below the preview).
4. Look at the "Foundry" link. If you see "Apple Computer" in the copyright, it's an Apple font.

Tip: Just select one font at a time; "-" appears in all Font Info lines if more than one font is selected.

Tip: Want to see a complete list of fonts that can be installed by Mac OS X Panther? Check out Mac OS X 10.3: Fonts list.

Some fonts that come with Mac OS X 10.3 do not have "Apple" on the Get Info-Copyright or Font Book-Foundry lines. They include:

- Arial, Arial Black
- Big Caslon
- Comic Sans MS
- Copperplate
- Courier New
- Didot
- GB18030 Bitmap
- Helvetica Neue
- Optima
- Times New Roman
- Trebuchet MS
- Webdings

Published Date: Feb 17, 2012

You see a "buffer underrun" error when burning a disc in Finder or iTunes

This article has been archived and is no longer updated by Apple.

Learn about "buffer underrun" issues that can happen when you burn a CD or DVD on your Mac. Some of this information is specific to Mac OS X and internal Apple recordable optical drives.

Tip: Many newer optical drives contain buffer-underrun protection. To find out if your optical drive has buffer underrun protection, open Terminal (/Applications/Utilities) and type this command: "`drutil info`" . If you see "BUFE" in the returned results, then your drive has buffer underrun protection. Mac OS X 10.3, 10.4 or later may report buffer underrun errors for burns that have failed for other reasons. If your drive has buffer underrun protection, and you see a buffer underrun error, the most common cause is dirty or scratched media.

"Buffer underrun"? What's that mean?

In a nutshell, it means the memory buffer (or temporary data storage location) inside your burner is not getting data from your hard drive fast enough to burn the disc.

If this happens with Mac OS X in the Finder, iTunes, or another burning application, you might see "Buffer underrun error" or "Unknown Error - 2147352480".

When this happens, the burn may fail and the partially-burned disc can be unusable.

What can cause "buffer underrun" issues?

- Your computer is trying to do too many things at once (for example, too many applications are open and using the Mac's resources).
- Your hard drive isn't supplying data to the burner fast enough.
- The disc you're burning may be scratched, dirty, or not work with your disc burner.
- The hard drive is very fragmented (though this is unlikely with Mac OS X or later).

In some cases, the optical drive itself might have a hardware issue, but this is not as likely.

What can I do if I run into this?

- The first and easiest thing you can do is don't use too many (or any) other applications when burning a disc.
- Restart your Mac and try again.
- Try using a different blank disc or a lower burn speed. Sometimes you might need to try a completely different type of writable media. See Factors That Affect Writing to or Reading From Optical Media.
- For Mac OS X 10.2, 10.3 or later and CD-R, CD-RW, or DVD-R media, see these tips.
- In some cases, installing more RAM or a faster hard drive can help.

Related documents

151900 I can't burn files on my recordable CD or DVD disc

152176 About creating your own CD or DVD discs

152178 Backing up your important files

Published Date: Oct 11, 2016

Mac OS X 10.3.3: Retrospect 6 doesn‘t recognize SCSI tape drive

Dantz Retrospect 6 may have issues recognizing SCSI tape drives or changers with Mac OS X 10.3.3 or Mac OS X Server 10.3.3. Update to Mac OS X 10.3.4 or later to avoid this issue.
This article has been archived and is no longer updated by Apple.
The SCSI tape device may appear in Apple System Profiler, but isn't recognized by Retrospect 6.

To avoid this, install Mac OS X 10.3.4 or later. Dantz has also released an update that addresses this, Retrospect 6.0.193, which can be downloaded from their website.

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Published Date: Feb 17, 2012

Using AirPort Admin Utility 3.4 configuration files

This article has been archived and is no longer updated by Apple.
Base Station configuration files saved from AirPort Admin Utility version 3.4 cannot be opened used by an earlier version of AirPort Admin Utility.

If you have an earlier version of AirPort Admin Utility, download version 3.4 or later.
Published Date: Oct 11, 2016

Mac OS X 10.3: Fonts Technology Brief

This article has been archived and is no longer updated by Apple.

Mac OS X 10.3 Panther delivers unmatched capabilities for beautifully rendering, quickly finding, and easily managing the fonts you need for your creative projects. Fonts are an important element of any document. Whether you're working on an advertisement, a newsletter, a book layout, or an invitation, the right font can enhance any professional or personal communication.

To learn more, download the Mac OS X v10.3 "Panther": Fonts Technical Brief.

Additional information

Mac OS X - Font Book (http://www.apple.com/macosx/features/fontbook/)

Published Date: Oct 11, 2016

Can I fax with my cable, ADSL, DSL, or ISDN modem using Mac OS X 10.3?

Learn about sending or receiving a fax with a cable, ADSL, DSL, or ISDN ("broadband") modem and Mac OS X Panther. This document's concepts also apply when using third-party faxing software.
This article has been archived and is no longer updated by Apple.
To fax, you need two things:

- A modem that sends and receives analog signals.
- A phone line that can carry analog signals (most do).

If you have an Apple internal modem, for example, you can use it to fax. Analog modems are also often used for connecting to the Internet via PPP, which is often not as fast as a broadband connection (but sometimes it can be, depending on the kind of phone line and Internet service provider).

Many broadband modems, on the other hand, don't use analog technology. They usually use digital signals instead, and connect to your computer's Ethernet port or USB port, not the modem port. While you can't use this kind of modem or connection to send or receive a fax with Mac OS X Panther, read the helpful tips below.

Tip: You might be able to fax using the same wall jack that your ADSL, DSL or ISDN modem uses, if that line allows analog calls and you don't mind performing a quick test. Try this to find out:

1. Temporarily disconnect the cable from your DSL or ISDN modem and plug it (the cable that goes between the modem and the wall) into a standard phone .

   Note: Don't force it in if it doesn't easily fit--Ethernet plugs, for example, look like phone plugs but don't fit into landline (RJ-11) phone jacks. There's a picture below that you can look at. If the cord is coaxial, like for cable TV and cable modems, it won't fit in the phone.

2. Use the phone if the cord fits. Do you hear a dial tone? Can you make calls?

If so, you may be in luck. You can probably use the same wall jack to send or receive faxes with Panther. Get in touch with your Internet service provider (ISP) if this works and you want to hook up both your analog modem and broadband modem to the same wall jack. Alternatively, just connect your analog modem to a standard phone jack and don't worry about your broadband modem's cord or jack.

Here's an example of what the computer's ports look like (they might be in a different arrangement on your computer). (1) is the USB port, (2) is the Ethernet port, (3) is the modem port.

Contact the manufacturer or the supplier of your modem if you are unsure what type it is or if you can make phone calls on the same line.

Related documents

25746 Mac OS X 10.3: Fax doesn't send
25731 Mac OS X 10.3: Receiving faxes and connecting to the Internet
152270 Mac OS X 10.3 Help: Sending a fax

Published Date: Feb 17, 2012

Apple Remote Desktop: Controlling a computer that‘s running the ARD Administration application

Usually, a computer running the ARD Administration application can't be controlled by another computer's ARD Administration application. But if you have client version 1.2.1 or later, that computer can be controlled. Learn what you need to do to set this up.

This article has been archived and is no longer updated by Apple.

These steps assume you have two computers, "A" and "B" below. You want to control computer B from computer A using ARD Administration. The computers are already configured so that B appears on A's computer list.

Both computers need ARD Client 1.2.1 or later installed.

1. Open Terminal on computer B and enter these commands, each of which should be typed on one line. They would normally prevent it from being controlled by another computer:

   ```
   sudo defaults write /Library/Preferences/com.apple.RemoteDesktop AdminConsoleAllowsRemoteControl -bool false

   sudo '/System/Library/CoreServices/ARD Agent.app/Contents/Resources/kickstart' -restart -agent
   ```

2. With Remote Desktop running on computer B, try to control it from computer A (and verify that you can't).
3. Open Terminal again on computer B and enter these commands, each of which should be typed on one line:
   ```
   sudo defaults write /Library/Preferences/com.apple.RemoteDesktop AdminConsoleAllowsRemoteControl -bool true
   sudo '/System/Library/CoreServices/ARD Agent.app/Contents/Resources/kickstart' -restart -agent
   ```

4. With Remote Desktop running on computer B, try to control from computer A again (and verify that it works).

Published Date: Feb 18, 2012

Mac OS X: Tip - Connecting to the Internet with a mobile phone and USB

Can I get on the Internet using a mobile phone that's connected to my Mac via USB?
This article has been archived and is no longer updated by Apple.
Apple does not offer technical support for this kind of Internet connection, but the information below might help.

Connect to the Internet via other means if needed, such as a broadband modem, an internal or external analog modem, or a compatible IrDA or Bluetooth-modem device. Your mobile phone might be able to communicate with your Mac in ways other than USB.
These resources might help:

- Macintosh: How to Connect Your Mac to Your Mobile Phone
- Macintosh: How to Use Your Mobile Phone as a Wireless Modem
- "How To Use Your CDMA Cell Phone as a USB Modem on Mac OS X" (http://homepage.mac.com/jrc/contrib/mobile_office/)

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Published Date: Feb 17, 2012

Mac OS X 10.3, 10.4: Configuring AFP to use OpenSSH exclusively

This article has been archived and is no longer updated by Apple.

Learn how to configure an AFP (Apple File sharing Protocol) client to exclusively use OpenSSH as the connection method, instead of a clear connection. This is an advanced document for Mac OS X 10.3 and 10.4.

AFP includes a feature to use OpenSSH as the data transport mechanism. To prevent OpenSSH from using a clear connection, these three preferences must be set by editing a configuration file (com.apple.AppleShareClientCore):

`afp_ssh_allow=1`
Enables the feature and instructs the client to try OpenSSH if the server advertises it

`afp_ssh_force=1`
Instructs the client to use OpenSSH even if the server does not say it is available

`afp_ssh_require=1`
Causes the login attempt to fail if OpenSSH cannot automatically connect

Important: This settings must be made for each user account. They cannot be made globally.

Note: When these settings are in effect, if OpenSSH cannot establish a connection a "bad password" dialog box appears. The most common cause of OpenSSH failure is when the host key for the server is unknown or is changed. Administrators should distribute and maintain the /etc/ssh_known_hosts files in accordance with best security practices. Without the /etc/ssh_known_hosts file, users will need to manage their own known_hosts file and pre-establish the correct server key.

Editing the configuration file

There are two ways to do this:

Manually edit the file

Open the .GlobalPreferences.plist (which is in each user's ~/Library/Preferences/ folder) in a editor such as TextEdit. Change the three preferences described above.

Repeat this process for each additional account's .GlobalPreferences file.

Make a script

The following script can be saved into a file and run once for every account that will be using AFP over SSH. Follow these steps:

1. Create a new document in TextEdit.
2. Copy and Paste in the text that is in the section below, beneath "Begin copying below this line"
3. Choose **Make Plain Text** from the **Format** menu.

   Tip: If this command is not present in the Format menu, skip this step (as you have already set plain text as the default format).

4. Save this file to the /Users/Shared folder with the name "SecureAFP.command"

   Note: Do not append the txt filename extension to the file.

5. Open the Terminal application (located in the Utilities folder).
6. Type: `sudo chmod 555 SecureAFP.command`
7. Press Return.
8. Enter your administrator password when prompted.
9. Run the script by double-clicking it in the Finder.
10. Log in with a different account, and use the same script.
11. Repeat for other accounts as needed.

Begin copying below this line:

_____

```
#!/usr/bin/perl
$ENV{PATH}="/bin:/sbin:/usr/bin:/usr/sbin";
$defs = `defaults read -g com.apple.AppleShareClientCore`;
$defs =~ s/"afp_ssh_(allow|force|require)"\\s+=\\s+[^;]+;/"afp_ssh_\\1" = 1;/gs;
system qw(defaults write -g com.apple.AppleShareClientCore), $defs;
#end of script
```

_____

End copying above this line.

Note that the script's lines begin, respectively, with "#!", "$ENV", "$defs", "$defs", "system", and "#end"

Additional information

OpenSSH requires access to a user's home directory, so you can't use this method to mount the user's home directory.

AFP connections initiated by the automounter cannot use OpenSSH.

When using OpenSSH the AFP client will not attempt automatic reconnect.

Since OpenSSH only works over TCP/IP, you cannot use this method to communicate to a server over AppleTalk.

Published Date: Feb 19, 2012

Xserve RAID: Controllers appear with different size cache memory in RAID Admin

The two Xserve RAID controllers may have different cache memory sizes when monitored with RAID Admin.
This article has been archived and is no longer updated by Apple.
For example, the RAID Admin Components tab reports that one controller module has a Cache Size of 128 MB but the other controller module has a Cache Size of 512 MB.

This can happen after replacing a controller module from an AppleCare Service Parts Kit for Xserve RAID.

This is a valid and fully-supported configuration. It doesn't affect the way Xserve RAID works.

Published Date: Feb 19, 2012

Workgroup Manager: Authenticating as a network domain administrator

Workgroup Manager's normal authentication dialog is for server administrator authentication, but you can authenticate as a network domain administrator.

This article has been archived and is no longer updated by Apple.

Important: The system that Workgroup Manager is running on must be bound to the directory domain to be administered.

Follow these steps:

1. Open Workgroup Manager. The authentication dialog box appears.
2. Click the Cancel button.
3. From the **Server** menu, choose **View Directories**. This displays the same kind of window that a server administrator sees.

   Note: The View Directories feature uses the Directory Access settings to find the directories to view.

4. Select the directory node to be administered from the pop-up menu below the toolbar.
5. Click the lock icon to authenticate as the network domain administrator.

Additional information

Domain administrators cannot edit share points, so the Sharing button is dimmed ("grayed out").

Published Date: Feb 18, 2012

Mac OS X Server 10.3: Web Service doesn‘t start with SSL and Web Performance Cache enabled

Apache services won't start if you enable both Web Performance Cache and SSL for a specific site.
This article has been archived and is no longer updated by Apple.
If you enable SSL for a site, disable Web Performance Cache for the same site.

Web Performance Cache is enabled by default. You can use it or SSL for a site, but not both.

Related documents

107898: Mac OS X Server 10.2, 10.3: Learn about Web Performance Cache

Published Date: Oct 7, 2016

Mac OS X Server 10.3: Managed Client - iPhoto, Image Capture can‘t find a connected camera

Learn what to do if iPhoto or Image Capture can't seem to find (or import from) a camera when you manage access to applications with Mac OS X Server 10.3's Workgroup manager.
This article has been archived and is no longer updated by Apple.
This can happen when managing access to applications with Workgroup Manager. Don't worry. A few easy steps will take care of this:

1. Open Workgroup Manager (/Applications/Server).
2. Select the user account, group, or computer list you wish to edit.
3. Click Preferences, then Applications.
4. Allow all of the items in /System/Library/Image Capture/Devices/.

5. Enable the "Allow approved applications to launch nonapproved applications" option.
6. Enable the "Allow UNIX tools to run" option.

The account you selected in step 2 above should now be able to use iPhoto or Image Capture to import photos from the camera. Repeat the steps for other accounts, if needed.

Related documents

25400: Mac OS X 10.2: iPhoto, Image Capture - Managed Mac OS X Clients May Not Recognize a Camera
25736: Importing photos in iPhoto or Image Capture as a limited user

Published Date: Oct 7, 2016

Power Mac G5: System stops responding

Some Power Mac G5 computers using Mac OS X 10.3 may unexpectedly become unresponsive. For example, the Force Quit dialog box might not appear when you press the Option-Command-Escape keys, and mouse clicks might be ignored.
This article has been archived and is no longer updated by Apple.
Many different things could cause an application or the system to become unresponsive, but if you're using a Power Mac G5 with Mac OS X 10.3, you should try the steps presented in this article before spending time on more generalized troubleshooting procedures.

This document addresses a known issue that might cause one or more of these symptoms:

- You can move the pointer, but the system ignores mouse clicks.
- The Force Quit dialog window does not appear when you press Option-Command-Escape.
- The computer can only be turned off by holding the power button or by disconnecting the power cable.

This can happen with any Power Mac G5 that's using Mac OS X 10.3 or later, *except* Power Mac G5 (June 2004) 2.5 GHz or Power Mac G5 (Late 2004) computers.

Important: If you see a specific application unexpectedly quitting or a kernel panic issue, this document does not apply. See this instead for troubleshooting tips.

Solution

Download and install Mac OS X Update 10.3.6. This update improves general system reliability and addresses these specific symptoms.

Important: If you previously disabled Quartz Extreme while troubleshooting with AppleCare, use these steps to re-enable Quartz Extreme. You can use them before or after installing the update.

a. Open /Applications/Utilities/Terminal.
b. Type, on one line:
```
defaults delete /Library/Preferences/com.apple.windowserver GLCompositor
```
c. Press Return.
d. Restart the computer.

Published Date: Oct 7, 2016

About the Mac OS X 10.3.4 Update

This software updates Mac OS X 10.3.3 to version 10.3.4.
This article has been archived and is no longer updated by Apple.
Important: Read Before Installing

1. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.
2. To update to Mac OS X 10.3.4, enter an administrator account password. The password cannot contain a space or special characters typed by pressing the Option key. You can change the password in Accounts preferences if you need to.
3. The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.

Installation

There are two ways to update to Mac OS X 10.3.4: Software Update and Standalone Installer.

Software Update Installation

You may have been referred to this document by Software Update (as described in "Mac OS X: How to Update Your Software"). After reviewing the information here, use Software Update to download and install the update.

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

An installer is also available from Apple Downloads.

Mac OS X 10.3.4 Update updates Mac OS X 10.3.3 to the later version. This document describes how to use this installer.

This update can be installed on nonstartup volumes if you start from a Mac OS X 10.3.4 or 10.3.3 volume first.

Enhancements

These are some of the enhancements included with the Mac OS X 10.3.4 Update.

Mail and Address Book

- Addresses a Mail issue in which a long address (URL) in a Mac OS X Panther Mail message may not open in your Web browser when you click it. More...
- Resolves an issue in which a third-party "Times RO" font could cause Mail, Safari, or other applications to unexpectedly quit. More...
- Address Book can now import more than one email address per contact from an LDIF export file.
- You can now send SMS messages longer than 68 characters via the Mac OS X 10.3 (Swedish) Address Book. More...
- A Mail message will now retain its status (read or unread, flagged or not flagged, and so forth) when you copy and paste it within Mail.
- Attached .zip files can now be saved from Mail without automatically being decompressed.

Networking and .Mac

- Resolves an issue in which automated (scheduled) syncing between iSync and .Mac would sometimes not work as expected.
- Improves function when connecting to a TLS-authenticated wireless network; addresses a "error -1001" issue that could occur when more than one client certificate is stored in a keychain.
- Addresses an issue that could prevent you from using VPN over a PPTP connection.
- Addresses an issue in which, in some cases after a scheduled backup was missed, the .Mac Backup application opened twice.

iPod and peripheral devices

- iTunes and iSync now recognize an iPod connected via USB 2.0.
- Improves compatibility with mass storage devices, SCSI or RAID PCI cards, and USB and FireWire devices, when using Mac OS X 10.3.3.More...
- Addresses a kernel panic that may occur when capturing from some Canon cameras in ESP mode.
- Addresses a situation in which video frames may be missed when digital video is being captured from a FireWire camera connected to a PowerBook.
- Windows for incoming phone calls and SMS messages for a paired Bluetooth phone now appear in the foreground.

Finder

- Addresses an issue in which a writable disc might not appear in the Finder after you burn it. More...
- Improves reliability when selecting several files at a time in Finder at the same time Finder is previewing a movie or MP3 file.
- You can now use more kinds of disk image volumes when the Mac OS X Panther language is set to Devanagari (Hindi, Marati, Nepali, or Sanskrit language), Gujarati, or Gurmukhi (Panjabi).
- Addresses an issue in which some screen captures (or grabs) could unexpectedly contain a gray area.

Printing and faxing

- With this update, you can now print shadowed text from Preview to HP DeskJet 970 or 990 printer without a black outline appearing around the text.
- A PDF file's shadowed graphics will now print as expected with a PostScript printer.
- Improves function when receiving a multiple-page fax.

Other

- Includes recent Mac OS X Security Updates. (This update does not include Security Update 2004-05-24.)
- Improves compatibility when receiving an email with a very large PDF file attached in Microsoft Entourage .
- Preview will no longer ask for a password when opening a PDF file that hasn't been password-protected. More...
- Stickies no longer writes to the hard drive every five minutes, even when the computer is idle.
- Addresses an issue in which scheduled items, such as automated backups or Software Update checks, may not work if the computer is asleep at the scheduled time. With this update, the schedule will run once the computer wakes from sleep.
- Resolves an issue in which an eMac's display resolution could be unexpectedly large and its geometry is off-center (only the upper left portion appears), after waking from sleep.
- Addresses an issue that could prevent an update from installing if some .plist files (ones related to an application that would be installed) were damaged.
- Safari is now able to download a Hotmail email attachment. More...
- Addresses a DVD Player issue in which an "Operation not permitted {symbol like a 0}" alert could appear, and the player could unexpectedly quit.
- Resolves an issue that could prevent users with network home directories from adding fonts to a Font Book collections.
- Improves OpenGL by adding support for OpenGL Vertex Buffer and Replaceable OpenGL entry points.

TA22513_About_the_Mac_OS_X_Update.pdf

Published Date: Oct 7, 2016

About the Mac OS X 10.3.4 Update (Combo)

This software updates Mac OS X 10.3, 10.3.1, 10.3.2, or 10.3.3 to version 10.3.4.
This article has been archived and is no longer updated by Apple.
Important: Read Before Installing

1. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.
2. To update to Mac OS X 10.3.4, enter an administrator account password. The password cannot contain a space or special characters typed by pressing the Option key. You can change the password in Accounts preferences if you need to.
3. The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.

Installation

There are two ways to update to Mac OS X 10.3.4: Software Update and Standalone Installer.

Software Update Installation

You may have been referred to this document by Software Update (as described in "Mac OS X: How to Update Your Software"). After reviewing information here, use Software Update to download and install the update.

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

An installer is also available from Apple Downloads.

Mac OS X 10.3.4 Update updates Mac OS X 10.3, 10.3.1, 10.3.2, or 10.3.3 to the later version. This document describes how to use this installer.

This update can be installed on nonstartup volumes if you start from a Mac OS X 10.3.4 or 10.3.3 volume first.

Enhancements

For a list of some of the enhancements that are part of Mac OS X 10.3.4 Update, see About the Mac OS X 10.3.4 Update.

This update also includes enhancements delivered with:
Mac OS X 10.3.3 Update
Mac OS X 10.3.2 Update
Mac OS X 10.3.1 Update

Published Date: Oct 7, 2016

iSync syncs with Sony Ericsson phones via Bluetooth

A Sony Ericsson phone might be able to connect to your Mac via a USB cable and cradle as well as via Bluetooth, but iSync only works with a Bluetooth connection.
This article has been archived and is no longer updated by Apple.
iSync will not see or work with these phones over USB: Sony Ericsson P800 and P900B. Use a Bluetooth connection instead.

Published Date: Feb 19, 2012

Mac OS X 10.3.5 through 10.3.9: Disk images and blank CD-R, CD-RW media, "-536870208" alert in Finder

This article has been archived and is no longer updated by Apple.

You put a blank CD-R or CD-RW disc in your computer or attempt to mount a disk image, but the Finder doesn't mount it. Instead, a "-536870208" alert appears. This can happen after updating to Mac OS X 10.3.5 through 10.3.9.

Solution

1. Log in as an administrator.
2. In the Finder, delete these files:
    - /System/Library/Extensions.mkext
    - /System/Library/Extensions.kextcache
    - /System/Library/Caches/com.apple.kernelcaches
3. Open Terminal (/Applications/Utilities/Terminal)
4. Type this, followed by Return:
   ```
   sudo touch /System/Library/Extensions
   ```
5. Restart.

Published Date: Feb 17, 2012

Handling "overlapped extent allocation" errors reported by Disk Utility or fsck

This article has been archived and is no longer updated by Apple.

If Disk Utility or the fsck command line utility reports "overlapped extent allocation" errors that it cannot repair, here are some things you can do to resolve the issue. This affects both Mac OS X and Mac OS X Server. (This article offers advanced solutions that use the command line interface.)

About overlapped extent allocation errors

Overlapped extent allocation means that two files occupy the same space on your hard disk. Although this is a very rare situation, at least one of the affected files will likely have data loss. If Disk Utility or fsck reports this issue on your Mac OS X volume, do not install any additional software, but do try the solutions presented below.

Important: If you see an overlapped extent allocation error in Disk Utility or fsck, some data loss has already occurred on the disk. This article does not show how to recover lost data, but does provide steps on how to recover from this underlying issue. If you don't have a backup available and important information has potentially been lost, consider contacting a third-party data recovery service *instead of* attempting any of the steps below.

Backup, erase the volume, reinstall Mac OS X

The most effective way to resolve this issue is to back up as much important data as possible, start up from any Mac OS X Install or Restore disc, then perform an Erase and Install installation of Mac OS X (if this isn't an ideal solution for you, try the other options presented in this article).

Once you've reinstalled Mac OS X, restore or replace files from your recent backup (archive).

Tip: Making regular backups is a great way to prevent data loss.

Use Mac OS X 10.4.2 Disk Utility, or fsck, from a volume or disc

With Mac OS X 10.4.2 or later, Disk Utility can help you recover from these issues without erasing the volume. If your startup volume is affected, start up from a Mac OS X 10.4.2 or later disc or other 10.4.2 or later volume, and use Disk Utility to repair the affected volume (you can't use Disk Utility to repair while started from the affected volume).

Note: Only Mac OS Extended or Mac OS Extended (Journaled) volumes (also known as HFS Plus volumes, HFS Plus, HFS Plus Journaled, or HFSP Plus Case Sensitive) can be repaired this way.

If you don't have access to another Mac OS X 10.4.2 or later volume or Install disc ("version 10.4.2" or later appears on the disc's label), start up your computer in single-user mode and use fsck to repair the issues.

If you use Disk Utility on a Mac OS X 10.4.2 or later Install disc or fsck to repair the affected volume, you may be able to review some affected files using the "DamagedFiles" folder— see "Checking for files," below.

Important: If you do not have a Mac OS X 10.4.2 or later volume or Install disc that you can start up from, do not attempt to install the Mac OS X 10.4.2 Update, or any other software, on the affected volume at this point. Doing so may lead to further data loss. Instead, please use one of the other solutions presented below.

Checking for files--If you use Disk Utility or fsck in Mac OS X 10.4.2 or later to repair overlapped extent allocation issues, the following things happen when you repair an affected volume using one of these utilities:

- The repair utility attempts to move the data of the existing overlapped file (or files) to a new location on your hard disk. This move may succeed or fail without displaying any alert.
- If the move succeeds, the file gets updated to use the new data location. (You can move it again if you wish, of course.)
- If the move doesn't succeed because of a lack of contiguous available space or other reason, the file data is not moved.
- A new folder is created in the root level of your damaged hard disk named "DamagedFiles," which contains a symbolic link (or symlink, which is like an alias) with the name "fileID filename" for each file involved in the overlapping extents issue. Use the link (or links) to locate any affected files. Depending on the file, you can then determine if is still usable or if necessary, replace it with a backup. If the original file is a preference file, it's best to just delete it and recreate preferences from the associated application. Be sure to check the contents of all files listed in the DamagedFiles folder as well as in the output from Disk Utility or fsck. (Sometimes a file is created instead of a symlink; see below for details.)

  Important: The DamagedFiles folder may not always contain symlinks to all the files that were involved in producing the overlapped extents errors. You should write down the text output generated when you run Disk Utility or fsck with the actual symlinks or files in the DamagedFiles folder. You can also try to manually locate any files that were listed in Disk Utility or fsck error messages that don't appear in the DamagedFiles folder.

Note: Any files in the DamagedFiles folder that have a fileID less than 16 are (or were) system files. Instead of a symlink, a plain text file gets created for these. Also, if an affected file's name has more than 255 characters, or the path to the file in the file system is greater than 1024 bytes, a plain text file gets created instead of a symlink—you can locate the original file manually to see if it's still usable. If the original file is a preference file, it's best to just delete it and recreate preferences from the associated application.

Try third-party disk repair software

You may also wish to try third-party disk utility applications, which may offer a resolution.

Use the command line to delete problematic files (advanced)

In some cases, removing the affected files and then recreating or restoring them from a backup may allow you to resolve the issue more easily, or at least to start up your computer so you can back up important files. Although these steps are typically for Mac OS X 10.4.1 or earlier, they can be used with Mac OS X 10.4.2 or later if other methods did not work.

Important: Follow the steps precisely. Incorrectly entered commands may result in data loss or unusable system software. Some steps involve using the rm command, which deletes files.

Before attempting the following steps, first consider trying the other solutions presented above.

1. Start up in single-user mode and use fsck.
2. Write down the file number for each overlapped extent allocation entry as it appears. For example, if you see this...

   ```
   ** Checking Catalog file.
   ** Overlapped extent allocation (file 5528909d)
   ** Overlapped extent allocation (file 9053642d)
   ```

   ...then write down "5528909" and "9053642" (ignore the trailing "d").

   Note: With Mac OS X 10.4.2 or later, the output appears like this:

   ```
   ** Overlapped extent allocation (file 1234567 /System/Library/Myfile.plist)
   ```

3. Find the path to each of the affected files. If only one or just a few files are listed, list each file path by entering this command for each affected file (where `5528909` is the number that fsck reported):

   ```
   find / -inum 5528909
   ```

4. Type `mount -uw /` (Then press Return)
5. Type `rm` and then a space (but don't press Return yet). The rm command is used to remove files or directories, so it's important that you follow these steps precisely.
6. On the same line, type the path to the affected file you located in step 3.

   Note: If a file's path contains a space (for example, /iTunes/iTunes Music/Random Song.m4a), type a backslash (\) before each space, or put the entire path in quotation marks. For example:

   /iTunes/iTunes\ Music/Random\ Song.m4a

   or

   "/iTunes/iTunes Music/Random Song.m4a**"**

7. Press Return. The file should be removed.
8. Repeat steps 5-7 for each affected file noted in step 2.
9. When finished, type `reboot`
10. Press Return.
11. Start up in single-user mode.
12. Type `fsck -y` (or `fsck -fy` for Mac OS Extended Journaled volumes).

    Important: If you are deleting flies to remove overlapping extents from your file system, it is essential that you perform this step (step 12). You must run fsck after deleting the overlapping files. If you don't, you may see a reoccurence of overlapping extent issues.

13. Press Return.
14. If the overlapped extent allocation errors still appear, repeat these steps.

After following these steps, restore or replace any removed files from a recent backup (or archive) if you have one. For a more thorough recovery from the issue, after backing up important files, perform an erase installation of Mac OS X.

Published Date: Oct 7, 2016

How to fax to multiple recipients in Mac OS X 10.3

Want to send a fax to several recipients? Mac OS X Panther makes it easy. **Note:** This document is about Mac OS X 10.3's built-in fax feature—the suggestions might not apply to third-party fax software.

Note: This document applies to Mac OS X 10.3 through 10.3.9.

This article has been archived and is no longer updated by Apple.

Just put a comma (",") between each recipient's name or phone number in the fax's To: field, like you'd do to send an email to several people.

If the fax isn't supposed to go to multiple recipients, make sure there are no commas in the To: field. This includes contacts whose name contains a comma (such as ", Inc.").

Using a comma to pause dialing

If you need to fax to a number but also need to use commas to pause when dialing that number (you're using a calling card, for example), check out this tip: Put the first part of the phone number, including commas to pause dialing where needed, in the Dialing Prefix field. Put the rest of the phone number in the To field.

If you want to fax to more than one number that requires pausing with a comma, either send the faxes separately or create an Address Book contact entry for each number (with commas in the Address Book entry) then fax to both Address Book contacts, separating them by a comma. If you're using a "temporary" calling card number, sending separate faxes might be easiest.

Related documents

152362: Mac OS X 10.3 Help: Using special characters in the phone numbers your modem dials
25670: Mac OS X 10.3: Faxing - Application Unexpectedly Quits When Sending to Many People

Published Date: Oct 7, 2016

Mac OS X 10.3: Computer doesn‘t start if Setup Assistant isn‘t completed (Japanese, Chinese, Korean)

Make sure to complete the Setup Assistant process the first time you turn on your computer if you use a Japanese, Chinese, or Korean language input method. Otherwise, your computer might not start up a second time. This document applies to computers which ship with Mac OS X 10.3.2 or 10.3.3.

This article has been archived and is no longer updated by Apple.

If this happens, restore Mac OS X 10.3 Panther using the Restore CDs or DVD that came with your computer.

You can safely shut down or restart after completing the setup process.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Mac OS X: Computer doesn‘t "network" with itself in Classic ("Loopback address")

In the Mac OS X Classic environment, if you can't "network" with your own computer using some addresses, use the Mac's assigned IP address or host name. This document applies to Classic applications using a sharing service, such as Web Sharing.
This article has been archived and is no longer updated by Apple.
For example, you can't connect to services in the Classic environment that use IP address 127.0.0.1, or "localhost" as the server address or host name. (Experienced users call these "loopback addresses," but they can also be thought of as meaning "this computer.")

What do I do?

Just open Network preferences and look at your Mac's assigned IP address or its host name. Use that instead of 127.0.0.1 or "localhost".
Published Date: Feb 17, 2012

Mac OS X 10.3.2 Install CD can‘t be selected or used while started from Mac OS 9

While started from Mac OS 9, the Mac OS X 10.3.2 Install CD can't be selected in the Startup Disk control panel. The Mac OS X Installer can't be used while started from Mac OS 9, either.
This article has been archived and is no longer updated by Apple.

Symptom

While started from a Mac OS 9 volume:

- The Mac OS X 10.3.2 Panther Install disc is dimmed ("grayed out") in the Startup Disk control panel and cannot be selected as the startup volume.
- Trying to use the Mac OS X Installer doesn't work. This alert appears: "Startup disk was unable to select the install CD as the startup disk. -2"

Products affected

- Mac OS X 10.3.2 install CD
- Computers that can start from both Mac OS 9 and Mac OS X 10.3.

Solution

Start up from the CD instead of trying to select it while started from Mac OS 9. Hold the C key during startup. **Tip**: Make sure you're using a keyboard that's connected directly to the computer's USB port (or the built-in keyboard, for portables).

Alternatively, if the computer supports Startup Manager, use it to set the CD as the startup volume.

Note: If an Open Firmware password is set, it can interfere with the startup process. Disable it if necessary.
Published Date: Oct 7, 2016

Restoring from disk images on a different computer with Mac OS X 10.3

With Mac OS X 10.3 Panther and later (client and server), you can use Disk Utility to create and restore from disk image files. Learn about restoring from a disk image that's on a different computer.
This article has been archived and is no longer updated by Apple.
When restoring from an image via a network while started from a Mac OS X 10.3 disc, use the host computer's (or server's) numeric network addresses instead of a text address. For example, 125.32.19.105.

You can find the IP address in Network preferences on the computer that's hosting the image file(s), if it's a Mac OS X-based computer.

Don't use a host name or Bonjour (formerly "Rendezvous") name. If you do, Disk Utility may display this: "(51) an error occurred while copying".

Additional information

If a numeric network address isn't used and the "(51)" alert appears in Disk Utility, the install log also reports:

```
root: bootstrap_look_up(): unknown error code
root: asr couldn't mount source image.
```

Published Date: Oct 7, 2016

The Classic environment is in English after restoring Japanese software on your iBook G4

If the Classic environment is in English instead of Japanese after restoring Mac OS X from your System Software and Restore DVD, call AppleCare Japan for assistance: 0120-27753-5 or 0120-APPLE-5.
This article has been archived and is no longer updated by Apple.
This document applies to Restore DVDs that ship with some iBook G4 (Early 2004) and iBook G4 (14.1-inch Early 2004) computers with Mac OS X 10.3 (Japanese) preinstalled.

Published Date: Oct 7, 2016

Mac OS X 10.3: Software Update "The update could not be verified and expanded" alert

This article has been archived and is no longer updated by Apple.

Note: This document applies to Mac OS X 10.3 through 10.3.9.

An option in Software Update preferences allows you to download important updates in the background. If you open Software Update preferences, click Check Now, and begin downloading an update at the same time, this message appears:

"The update could not be verified and expanded correctly. Make sure you have permission to write to /tmp/####/TemporaryItems/com.apple.SoftwareUpdate, then try again."

(Where ### is the logged in user's user id.)

Follow these steps:

1. Deselect "Download important updates in the background" in Software Update preferences.
2. From the Finder Go menu, choose Home.
3. Double-click the Library folder.
4. Double-click the Caches folder.
5. Look for a folder named "com.apple.SoftwareUpdate", then drag it to the Trash.
6. Empty the Trash.
7. Restart.
8. Log in and test Software Update.

If the error appears again, repair permissions with Disk Utility. After the repair is complete, try Software Update again.

If the issue persists, download standalone updates from Apple Downloads as a workaround.

Related documents

25633 Mac OS X 10.3: Chart of available Mac OS software updates

Published Date: Feb 20, 2012

About Security Update 2004-06-07

Security Update 2004-06-07 increases security when automatically opening an application for the first time.
This article has been archived and is no longer updated by Apple.
An application may be automatically opened two ways: either by opening a document that is associated with the application or by clicking a link (URL) in a webpage or document.

Opening an application manually or automatically

You can manually open an application, such as by clicking its icon in the Dock; or the application may open automatically, such as when you click a link or open a document associated with the application.

For example: You open Safari *manually* if you double-click its icon in the Applications folder or click its icon in the Dock. Safari opens *automatically* if you open a document such as "mypage.html", or click an "http://" link that's in a document.

How does Mac OS X know which application to open automatically?

This is done by association (or "mapping"). Mac OS X associates each major type of document (such as text, pictures, movies, and webpages) and each major type of link (such as "http://") with a particular application. When you open a document or click a link, it automatically opens in the associated application. If you encounter a document or link type that is not associated with an application installed on your computer, Mac OS X asks you to choose which application to open it with. In the example, webpages (.html) and Web links ("http://") are both associated with Safari by default.

Tip: You can change the application associated with a type of document in the Info window. In some cases you can use application preferences, such as the Default Web Browser preference in Safari.

A warning for new applications

When you open an application manually, you are making an explicit choice to do so. But when you open a document, it may not be clear which application will be used. If you click an untrustworthy link, it may try to automatically open a downloaded application designed to cause harm to the system. The feature provided by Security Update 2004-06-07 alerts you if an application that is automatically opening hasn't already been opened, either manually or by consent to this warning dialog:

You can either open the application or cancel the attempt, which is appropriate if you don't recognize or trust the application.

Once an application has been opened, this message will not appear again for that particular application.

Applications included with your computer are considered "trusted" and will not trigger the warning panel.

Related documents

108009	Safety tips for handling email attachments and content downloaded from the Internet
25789	Mac OS 9: Preventing the automatic opening of downloaded applications
61798	Apple Security Updates

Published Date: Oct 7, 2016

Mac OS X 10.3: Caller ID for incoming calls isn‘t always displayed

Sometimes your Apple Internal V.92 Modem does not display Caller ID for incoming calls while you're connected to the Internet.
This article has been archived and is no longer updated by Apple.
Tip: In order to be notified of incoming calls while you're online, you must have an Apple V.92 modem and call waiting service from your phone company. Additionally, your Internet service provider (ISP) must support "modem on hold" connections. Contact your phone company and ISP to determine the availability of these features.

This symptom can occur on Macs that have some kinds of internal V.92 modems, specifically a V.92 "Dash" modem with a USB interface. If you don't know what kind of internal modem your computer has, use Apple System Profiler to find out. Click "Modems" in the Hardware section. If Modem Model includes the word "Dash," the Interface Type is USB, and you're using the Apple Internal 56K Modem (V.92) modem script, this document may apply to you.

With this configuration, if "Notify me of incoming calls while connected to the Internet" is selected, specific Caller ID details may not be displayed if someone calls while you're connected to the Internet; that is, the caller's phone number and name may not appear onscreen. Some telephone company equipment, or "switches," that your phone lines may connect to can lead to this situation.

If you have subscribed to caller ID and call waiting ID, you will see the phone number and name, if available, of the person who is calling you.

This document will be updated as more information becomes available.

Published Date: Feb 17, 2012

Mac OS X Mail: "The server rejected the password" alert, even with correct password

Mail might tell you this, even when you're using the correct password:

"The server {server name} rejected the password for user {username}. Please re-enter your password, or cancel."
This article has been archived and is no longer updated by Apple.
This message may appear several times while trying a correct password.

This can happen if the mail server is not available for authentication or cannot be contacted. Click Cancel, then wait a few minutes. After waiting, choose **Go Online** from the **Mailbox** menu, then enter the same password.

If this doesn't help, you may indeed be using the wrong password, or it may have been changed. Check with your Internet service provider about how you can reset it, if necessary.
Published Date: Oct 7, 2016

Mac OS 9: Preventing the automatic opening of downloaded applications

There are three things you can do to help prevent unwanted applications that are downloaded from the Internet from being automatically opened in Mac OS 9:

- Disable automatic processing and decompressing (or "unstuffing") of downloaded files.
- Disable unassociated "Helper Application" assignments. Your Internet settings may also include a number of Helper Application assignments that do not have installed applications associated with them which should be removed.
- Prevent Help Viewer from running scripts.

This article has been archived and is no longer updated by Apple.

Disable automatic processing and decompression of downloaded files

These instructions are for Microsoft's Internet Explorer. You can apply similar concepts to other Mac OS 9 web browsers.

1. Open Internet Explorer.
2. From the **Edit** menu, choose **Preferences**.
3. Choose "Receiving Files -> File Helpers" from the scrolling list on the left side of the window. (You will most likely have to scroll through the list to see this choice. You may also have to click the disclosure triangle for the Receiving Files setting.)

   You should now see something like this:

4. Change every setting in the Applications column so that none are "Post-process with Application". First select the line to change, then click Change. This message appears:

5. If the Handling "How to handle" pop-up menu is set to "Post-Process with Application", change the setting to "Save to File".

6. Click OK to confirm.
7. Repeat these steps for every application.

Disable unassociated Helper Application assignments

Mac OS 9 typically includes some default Helper Application assignments. For increased safety, you can remove these assignments if you have not installed software to use them.

1. Open the Internet control panel.
2. Click the disclosure triangle next to "Edit sets". You should now see this:

3. Click the Advanced tab.
4. In the scrolling list of icons in the left side of the window, click "Helper Apps". You should now see something like this:

5. Select a "Type" that is to be removed, then click Remove. For best security, remove the following list of types if you do not have software installed that uses them:
    - finger
    - netphone
    - tn3270
    - wais
    - whois
    - x-netphone
6. Close the control panel and save the changes.

Prevent Help Viewer from running scripts

You can prevent Help Viewer from running scripts by removing the protocol helper for "help".

Important: Disabling this protocol helper can prevent some legitimate applications from using Help Viewer. This change will also prevent the Help Viewer from automating tasks that open applications.

Follow these steps:

1. Open the Internet control panel.
2. Click the disclosure triangle next to the "Edit sets" label.
3. Click the Advanced tab.
4. In the scrolling list of icons in the left side of the window, click "Helper Apps".

5. Select the "help" type, then click Remove.
6. Close the control panel and save the changes.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

About the Mac OS X 10.3.5 Update (Delta)

This software updates Mac OS X 10.3.4 to version 10.3.5. **Tip**: If you have version 10.3, 10.3.1, 10.3.2, or 10.3.3, update with the combo update instead.
This article has been archived and is no longer updated by Apple.
Important: Read Before Installing

- You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.
- The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.

Installation

There are two ways to update to Mac OS X 10.3.5: Software Update or Standalone Installer. You only need to use one of these methods to update.

Automatic Software Update

Software Update, located in System Preferences, is a tool for automatically downloading and installing the latest Apple software. Software Update may have linked you to this document for additional information about the update.

Note: This update's size may vary from computer-to-computer, when installed via Software Update.

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer (Web Update)

Two different standalone installers (or "Web Updates") are available from Apple Downloads: One that updates Mac OS X 10.3.4 to 10.3.5 (the "delta" update, described in this document), and also a combo update installer which can update versions 10.3, 10.3.1, 10.3.2, 10.3.3, and 10.3.4.

Tip: You don't need one of these if you've already updated via Software Update.

Where do you find these? Go to Apple Downloads.

This type of update, particularly the "combo," is useful if you have multiple computers to update and only want to download 10.3.5 once.

Enhancements

These are some of the enhancements included with the Mac OS X 10.3.5 Update.

Bluetooth enhancements

- Bluetooth FIle Exchange now works better with Bluetooth-capable Hewlett-Packard printers.
- Resolves an issue in which an application that's performing an asynchronous Bluetooth operation could quit unexpectedly, if the computer went to sleep before the data transfer was complete and the "Allow Bluetooth devices to wake this computer" preference setting was disabled.
- Addresses an issue in which Bluetooth File Exchange could unexpectedly quit if you tried to copy several files but one or more of them already existed at the target location.

Networking, Internet enhancements

- If you had difficulties connecting to the Internet with a Comcast cable modem and your account uses DHCP configuration (as opposed to PPPoE), then this update can help you connect more easily. If it doesn't, contact Comcast for further assistance. (An example of this issue would be that your computer can't get an IP address when connected to the cable modem, and your Network preferences are set to configure via DHCP.) More...
- Improves the way Safari handles certain kinds of GIFs, including ones that could cause Safari to quit unexpectedly.
- Reintroduces shorter server pathnames; the overall limit remains 89 characters, but now only 24 characters (instead of 39 with Mac OS X 10.3 through 10.3.4) are reserved for the beginning of the pathname. More...
- Addresses an issue in which the Finder could unexpectedly quit when connecting to an AFP server.

Other enhancements

- Image Capture can now import MPEG-4 movies (.MP4) from compatible digital cameras.
- Resolves a potential data loss issue after renaming a Mail mailbox file.
- Addresses an issue for Mac OS X 10.3.4 in which Installer might unexpectedly quit when installing software that has a Japanese name.
- Corrects an issue in which analog speakers connected to a PowerBook or iBook during sleep sometimes didn't produce sound after waking the computer.
- Resolves an issue with Mac OS X 10.3.4 in which the internal microphones of some iBook (Dual USB) computers would not be available to applications or Sound preferences.
- Allows the "Attach" button of Eudora version 6.0 and 6.0.1 to work as expected.
- Improves support for NTFS-formatted volumes.
- Updates the libpng (Portable Network Graphics) component.
- Addresses an issue in which certain Keynote documents would not print all pages.
- Includes recent Security Updates.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.
Published Date: Oct 7, 2016

About the Mac OS X 10.3.5 Update (Combo)

This software updates Mac OS X 10.3, 10.3.1, 10.3.2, 10.3.3, or 10.3.4 to version 10.3.5. **Tip**: If you are updating from Mac OS X 10.3.4, you can use this smaller update instead.
This article has been archived and is no longer updated by Apple.
Important: Read Before Installing

- You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.
- The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.

Installation

There are two ways to update to Mac OS X 10.3.5: Software Update or Standalone Installer ("Web Update"). You only need to use one of these methods to update.

Automatic Software Update

Software Update, located in System Preferences, is a tool for automatically downloading and installing the latest Apple software. Software Update may have linked you to this document for additional information about the update.

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer ("Web Update")

Two different standalone installers (or "Web Updates") are available from Apple Downloads: One that updates Mac OS X 10.3, 10.3.1, 10.3.2, 10.3.3, and 10.3.4 to 10.3.5 (described in this document), and also a different installer ("delta") which updates version 10.3.4 to 10.3.5.

Standalone installer updates, particularly the "combo," are useful if you have multiple computers to update that are running different versions of Mac OS X 10.3, but you only want to download 10.3.5 once.

Tip: You don't need one of these if you've already updated via Software Update.

Where can you find standalone installers? At Apple Downloads! For example, here.

Enhancements

For a list of some of the enhancements that are part of Mac OS X 10.3.5 Update, see the Enhancements section of About the Mac OS X 10.3.5 Update.

This update also includes enhancements delivered with:
Mac OS X 10.3.4 Update
Mac OS X 10.3.3 Update
Mac OS X 10.3.2 Update
Mac OS X 10.3.1 Update
Published Date: Oct 7, 2016

Power Macintosh G3 (Blue and White): Unable to start from Mac OS X 10.3.2 Install CD by holding "C" key

If your Power Macintosh G3 (Blue and White) computer has a Matshita CR-587 CD-ROM drive, it may not start up from the Mac OS X 10.3.2 Install disc when you hold the C key.
This article has been archived and is no longer updated by Apple.
It may be able to start from other system CDs, but not the Mac OS X 10.3.2 CD.

If you can start from a Mac OS X volume (such as your hard disk), put the Install CD in after you've started up, then click the "Install Mac OS X" icon you see on the CD. You may be prompted to enter an administrator password. The computer will then restart, and should start from the Install disc. This won't work if you can only start from Mac OS 9.

Otherwise, follow these steps.

1. Insert the Mac OS X 10.3.2 Install disc if it isn't in the computer.
2. Restart the computer and hold these keys: Command-Option-O-F . This asks the computer to start in Open Firmware.
   Tip: If you don't start in Open Firmware, try again. Make sure you're using a USB keyboard, and that the keyboard is connected directly to one of the computer's USB ports.
3. type: `boot cd:,\\\\:tbxi`
4. Press Return.

Published Date: Oct 11, 2016

About iSync 1.5‘s "All day event handling" feature with some phones

Learn about the iSync 1.5 (or later) "Sync all day events" feature, which can be used with some phones.
This article has been archived and is no longer updated by Apple.
Certain phones, including the Sony Ericsson T68, T616, and the Siemens S56, work with a special iSync option, "All day event syncing."

This option is off by default, but you can turn it on by clicking the Options button at the bottom of the iSync device drawer. If the Options button is not present, your phone doesn't work with this iSync feature.

What happens after "Sync all day events" is enabled in iSync?

Once the option is enabled, iSync will sync iCal calendars to the phone as read-only entries. All day events should only be changed or modified *on the Mac* and then synced to the phone. If the entries (calendars) are modified on the phone, iSync will display an alert during synchronization which explains that the calendar is read-only and that any calendar changes made on the phone will be lost.

What if the phone's time zone changes?

Changing the phone's time zone will not affect the event. Rather, it simply adjusts the event for the new time zone. This does not modify the event or cause any iSync alerts during synchronization.

What happens if "Sync all day events" is disabled in iSync?

Any "All day events" on the phone will be removed during the next sync. This does not affect the events in iCal. You can get the events back on the phone by turning the option on again and syncing.
Published Date: Feb 19, 2012

iSync 1.5: No iSync transfer option in Bluetooth Setup Assistant

This article has been archived and is no longer updated by Apple.

Sony Ericsson P800 and P900 phones work with iSync 1.5 via Bluetooth, but Bluetooth Setup Assistant might not offer an iSync transfer option for them when setting up devices. This can happen if the phone's firmware has been updated.

If a phone is supported by iSync, the Bluetooth Setup Assistant option to "Set up iSync to transfer contacts and events" is normally one of the available options. However, when adding a Sony Ericsson P800 or P900 series phone using the Bluetooth Setup Assistant, the option to "Set up iSync to transfer contacts and events" may not be available.

Why does this happen?

Some firmware updates to these phones change the identification information the phone sends to the computer during the pairing process. Because the Bluetooth Setup Assistant does not recognize the later ID of the phone, it does not offer this iSync option.

Important: This issue only affects the Bluetooth Setup Assistant and does not affect the ability to use the phone with iSync.

What can I do?

You can use these steps as a workaround:

1. Continue with the Bluetooth Setup Assistant even if the option doesn't appear.
2. Once the Bluetooth Setup is complete, open iSync.
3. From the **Devices** menu, choose **Add Device**.
4. Double-click the name of the phone to add it to iSync.

Published Date: Oct 7, 2016

Minimizing how often you see "Optimizing System Performance" during software installation

This article has been archived and is no longer updated by Apple.

Have you ever wanted to optimize system performance just once, instead of waiting through it for each software update that requires it?

Mac OS X (10.3, 10.4 or later) includes a feature to do exactly that. Following the steps here, you can optimize just once when installing multiple updates that would each trigger optimization if installed separately. This trick is especially helpful when there's a group of software updates that you plan to install on several computers.

You can benefit with either of these ways of installing software in Mac OS X:

- Software Update, located in System Preferences
- Manual installations from a standalone "package file" (.pkg), which may look like this:

The Installer application handles manual installations, and it opens automatically when you double-click an installation package file. Software Update installs in a different manner and doesn't use the Installer application.

Software Update

Using Software Update preferences, simply install more than one update at a time (when more than one is offered, of course). Software Update in Mac OS X 10.3 automatically optimizes only what is necessary, ensuring the updates are installed as quickly as possible. Previously, you might have had to sit through optimization for each and every update, even if you installed many at once. With Mac OS X Panther, such delays when installing multiple items are but a fond memory.

Standalone package installation files

Simply open more than one installation package file at the same time. The Installer application will queue up the packages and install them in order. This even works with third-party package files that use Installer. After the last package is installed, Installer performs optimization on the computer, but usually just one time. Beats optimizing after each package, doesn't it?

Tip: Even if Installer is already chugging away at some cool software for you (or even uncool software, Installer doesn't care), you can double-click *even more* package files and Installer will add them to the same queue. Installer still won't optimize until after the very last package is installed, and then just once.

What about other kinds of software installations?

This feature doesn't apply to third-party installer applications that don't use Software Update or the Mac OS X Installer. Typically such installers run only once, are for very large applications, and are on removable media (CDs, DVDs, and so forth). Such installers might entertain you with screenshots of the software in action, or tips about how to get the most out of the product, while installing and optimizing in the background.

Related documents

25768 Receipts can affect what appears in Software Update (Mac OS X)

Published Date: Oct 7, 2016

What is an operating system (OS)?

This article has been archived and is no longer updated by Apple.

Ever wonder what an "operating system" is? This concept is easier to understand than you may think.

The operating system

Imagine going to the symphony only to see the musicians sit quietly without sheet music or a conductor. That's like what your computer would do without an operating system, or "OS" -- it would turn on and do nothing useful. That's why all Macintosh computers come with a version of the "Mac OS" preinstalled. At the concept level, an OS is simply the software that controls your computer and tells it what to do. Your computer must have an OS installed before it can do anything useful or fun.

The current version of Mac OS is Mac OS X (pronounced "Mac O-S ten"). Earlier versions of Mac OS included Mac OS 9, Mac OS 8, System 7.5, and System 6. Major releases of Mac OS X include versions 10.0, 10.3, and 10.4. There are also updates (sometimes called "dot" releases) for each major release, such as versions 10.2.8 and 10.4.2. If you don't have Mac OS X and want to get it, be sure your computer can work with it, then visit this website for more information about upgrading.

Tip: Want to see what version of Mac OS you have? From the Apple menu (in the top-left corner of the screen), choose About This Mac.

Tip: An operating system includes thousands of files, many of which are protected so you can't accidentally remove them. The System folder in Mac OS X is an example. Each Macintosh comes with a backup copy of the Mac OS on system software CD or DVD.

An integral part of the Mac OS operating system is the Finder. To learn more about it, see "What is the Finder?"
Published Date: Oct 7, 2016

What is the Finder?

Learn about one of the best parts of the Mac OS, the Finder.

This article has been archived and is no longer updated by Apple.

Before Apple reinvented the personal computer with Macintosh in 1984, finding something on a computer could be kind of scary. There were often no nice, neat folders. Getting to your files and applications could have meant typing out long pathnames in a cryptic text-only environment.

The Finder saves you from that. It's the integral part of the Mac OS that shows you easy-to-read folders and windows instead of all those old-fashioned text prompts. The Finder lets you visually navigate disks, work on the desktop, and open applications and files. It can show you information about your files and folders, such as their size and date modified, even allowing you to sort by those categories. The Finder also lets you move or delete files, eject discs and perform searches on your hard disk.

Each release of Mac OS makes the Finder more helpful and versatile. Read more about the Mac OS X Finder here.

Related documents

25808 What is an operating system (OS)?

Published Date: Feb 18, 2012

Mac OS X 10.3.5: Power Mac G5 1.8 GHz computer fans run in sleep mode

After installing the Mac OS X 10.3.5 Update, the fans on a Power Mac G5 1.8 GHz single processor (SP) model can continue to run in sleep mode.
This article has been archived and is no longer updated by Apple.
Download and install the "Power Mac G5 Uniprocessor Firmware Update 5.1.5". This update improves general system reliability and restores sleep functionality.

Related documents

- Mac OS X: About Energy Saver Options
- Energy Saver: About sleep and idle modes in Mac OS X

Published Date: Oct 7, 2016

Viewing PDF documents in Mac OS X with Preview

This article has been archived and is no longer updated by Apple.
Many Apple products include manuals in Portable Document Format (PDF). You can read these and other PDF documents with Preview.

If you double-click a PDF file and a different application opens, you can use these steps to tell Preview to open PDF documents:

1. Select the PDF file in the Finder.
2. From the **File** menu, choose **Get Info**.
3. In the Info window that appears, click the disclosure triangle next to "Open with."
4. Set the pop-up menu to Preview.
5. Click the Change All button that's immediately below the pop-up menu.

If you like to use shortcut menus (Control-click), you can use the alternate method shown in this movie. To change from "Open with" to "Always open with," as you see in the movie, press the Option key.

Related documents

25732 Mac OS X: Preview wants a password to open an unprotected PDF file

Published Date: Feb 17, 2012

Mac OS X 10.3.5 Some fonts aren‘t available

After updating to Mac OS X 10.3.5, some fonts that you're used to using may no longer be available, or may only show up in some applications. This is most likely to affect Expert fonts, Dingbats fonts, or fonts with fancy or non-English glyphs (characters). Thankfully, all you have to do is update to Mac OS X 10.3.6 or later to fix this.
This article has been archived and is no longer updated by Apple.
For example, the PostScript Type 1 version of "Zapf Dingbats" may no longer work after updating to Mac OS X 10.3.5 or late.

Note: Existing documents that were created with the font may print it correctly, even if the font does not appear in the document or in font-related menus.

Solution

Update to Mac OS X 10.3.6 or later.
Published Date: Feb 17, 2012

Xserve G5: Moving a PCI Hardware RAID card? Reset its configuration information

Anytime you move a PCI Hardware RAID card from one Xserve G5 server to another, you must reset the card back to JBOD ("Just a Bunch of Disks") mode by removing the configuration information with all hard drives disconnected from server. Otherwise, the server which you put the card in to may not recognize the drive configuration.
This article has been archived and is no longer updated by Apple.
Follow these steps to remove previous configuration information from the PCI Hardware RAID card:

1. Shutdown the Xserve G5 server that has the card installed.
2. Disconnect all hard drives from the server.

   Warning: Data loss can occur if you don't disconnect all drives.

3. Start up the (drive-less) server from the Xserve Server Software CD 1.
4. In Terminal, execute the command: `megaraid -destroyconfig`
5. Shutdown using this command: `shutdown -h now`
6. Reconnect all of the hard drives.
7. Start up normally. The PCI Hardware RAID card should read the metadata from the connected drives.

Published Date: Oct 7, 2016

Mac OS X 10.2: Can‘t update to 10.2.8 after Archive and Install of 10.2

Can't update back to 10.2.8 after an Archive and Install installation of Mac OS X 10.2? Fear not. We'll tell you how to fix that.
This article has been archived and is no longer updated by Apple.
The issue can crop up in a couple of different ways:

- Software Update won't install the Mac OS X 10.2.8 Update. When you try, this alert message appears:

  "The installation has encountered a problem. None of the checked updates were successfully installed. To try again, choose Download Checked Items in the Update menu and open the package from the desktop."

  What a downer!

- The standalone Installer from Apple Downloads doesn't work either. It tells you:

  "There were errors installing the software. Please try installing again."

  (Even if you dutifully try again, you do not succeed.)

- If you're the adventuresome type who reads Console log, you might see something like this:

  ```
  Software Updates {405} *** NSTimer ignoring exception 'NSRangeException' (reason '*** -{NSCFArray objectAtIndex:}: index (0) beyond bounds (0)') that raised during posting of timer with target 1ba0e50 and selector 'taskCompleted:'
  ```

  Tip: Don't worry about what all that means.

Solution

1. Get a different 10.2 update from Apple Downloads, such as the Mac OS X 10.2.6 Update. **Note:** 10.2.7 is not available.
2. Install the update, and restart when installation is complete.
3. Now you can update to 10.2.8 using either Software Update or Apple Downloads.

If everything installs, you're all done!

"Disk Copy Helper has unexpectedly terminated" message

If you see that, you're not *quite* done yet. You could see this when trying to open the downloaded disk image file (.dmg), for example. To fix this:

1. Open the Utilities folder, which is in the Applications folder.
2. Adjust the Utilities folder window so that you can see Disk Copy.
3. Drag the image file (.dmg) on top of Disk Copy. The mounted image should then appear alongside other available disks, like your hard disk, and you should be able to use package file (.pkg) on it to update your software.

Tip: If the installation package file (.pkg) won't open either, drag it directly onto the Installer, which is also in the Utilities folder.

Related documents

106692 Mac OS X: Troubleshooting installation and software updates

Published Date: Oct 7, 2016

iBook G4 has a color tint after using Screen Saver

After updating to Mac OS X 10.3.4 or later, the display's color balance may change with Screen Saver use. It may have a light blue tint, for example. This happens only with the iBook G4 and iBook G4 (Early 2004) models, regardless of whether Screen Saver was manually or automatically engaged.

This article has been archived and is no longer updated by Apple.

What can you do when this happens? Open Displays preferences, click Color, then click on the name of your desired color profile (even if it's already selected).

If this keeps happening but you don't want to keep resetting the color profile, set the "Start screen saver" slider to Never in Desktop & Screen Saver preferences. Consider using Energy Saver's display sleep feature instead.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

About LaserWriter 8 Version 8.4.3 Read Me

LaserWriter 8 Version 8.4.3 was released on July 24, 1997 and has been posted to Apple Software Updates libraries on the WWW and other platforms. It requires System 7.1.1 or later and a 68030-based Macintosh. Mac OS 8.0 or later running on a 68040- or PowerPC-based Macintosh is recommended. Description: This software is included as part of Mac OS 8.0.

This software consists of a Disk Copy NDIF (New Disk Image Format) compressed image, which requires Disk Copy 6.1 or later to use. Download this software to your hard drive and then double-click it to use it. Disk Copy is available in the Utilities folder.

This article has been archived and is no longer updated by Apple.

About LaserWriter 8 Version 8.4.3

This document contains some important information about LaserWriter 8 version 8.4.3. You may want to print this document and keep it for future reference. The topics are:

- What's New in LaserWriter 8 Version 8.4.3
- Installing LaserWriter 8 Version 8.4.3
- Using LaserWriter 8 Version 8.4.3

What's New in LaserWriter 8 Version 8.4.3

- Support for QuickDraw GX Applications

QuickDraw GX applications - LaserWriter 8 version 8.4.3 supports GX applications which have been revised to work with the Classic Print Manager. Check your application documentation to see if your application requires GX print drivers.

- About Extra Blank Pages with PageMaker

PageMaker documents have an extra blank page when printed with LaserWriter 8.4.1. LaserWriter 8 version 8.4.3 corrects this.

- About International Systems Using Right To Left Line Direction

LaserWriter 8 version 8.4.3 corrects a tabbing issue in the Chooser on these systems.

Installing LaserWriter 8 Version 8.4.3

After decompressing the LaserWriter 8 version 8.4.3 archive follow the steps below to install the files.

- Restart your system with all extensions turned off. To do this, hold down the Shift key while you restart your computer. Hold the Shift key down until you see the message "Extensions off" or until your normal desktop appears.
- Rename your existing LaserWriter 8 driver or drag it to a folder outside the System folder.
- In System Folder: Preferences delete the files LaserWriter 8 Prefs, LaserWriter 8.4 Prefs, and LaserWriter 8.0 Prefs if found.
- Drag all Desktop Printer icons to the Trash and empty the Trash. You will need to recreate your Desktop Printers. Be sure to print all current spool files before doing this step.

Next, drag the files listed below to your system. Follow these steps:

- Place LaserWriter 8 in System Folder: Extensions.
- Place PrintingLib in System Folder: Extensions.
- LaserWriter 8 version 8.4.3 requires PrintMonitor 7.1.2 or greater.
- If you are using a 68K-based Mac OS system, LaserWriter 8 requires these files in the System Folder:Extensions folder:

- CFM-68K Runtime Enabler version 4.0 or greater
- NuQuickTimeLib.slb version 2.0.1 or greater
- NuThreadsLib.slb version 2.1.1 or greater

If you are using Mac OS 7.1.1 and have a version of Chooser earlier than 7.3, place Chooser 7.3 in your System Folder:Apple Menu Items

- Reboot your system with extensions on. You should be able to setup your printer using Chooser and be able to print to it.

Using LaserWriter 8 Version 8.4.3

Using PostScript Fax

PostScript Fax is an option for the LaserWriter Select 360, the LaserWriter 16/600 PS, and the LaserWriter Pro 810. If you use a PostScript Fax

option with any of these printers, you should use LaserWriter 8f version 8.2.3f. PostScript Fax is no longer supported with LaserWriter drivers 8.3 and beyond. See the section "How To Get Updated Printer Software"at the end of this Read Me for information on obtaining LaserWriter 8f version 8.2.3f if you don't already have it.

Using Color Matching

When ColorSync 2.0 or greater is installed and the ColorSync Profiles folder contains printer profile(s), there are two options in addition to color/grayscale output:

- PostScript Color Matching/Printer's Default is the preferred color-matching choice. When you are printing to a PostScript Level 2 printer, and it is efficient to let the printer do most of the work, this option is a good choice.
- ColorSync Color Matching is an alternative color-matching selection. It invokes the ColorSync system software to perform color matching for the printed document, matching your monitor and printer's profile and sending the correct color information to the printer. With ColorSync Color Matching, most of the work is done by your Macintosh.

Here are some tips on using color matching:

- Color output will vary depending on the application you are using.
- Documents that use ColorSync 1.0 embedded profiles convert to the profile set up in the ColorSync 2.0 System Profile control panel.
- When you print with PostScript Color Matching selected and ColorSync 2.0 is not installed, the driver uses the Apple 13" RGB Standard profile.
- Application programs that generate their own PostScript may have issues color matching EPS or TIFF images correctly. Converting the image to a PICT file corrects the issue.

PPD Files

The LaserWriter 8 driver uses PostScript Printer Description (PPD) files to determine the characteristics of the printers it uses. PPD files contain information about individual PostScript printers. For example, PPD files describe the paper-handling capabilities of printers: the number of paper trays, their capacity, and the paper sizes they handle.

To take full advantage of your printer's features, you need to go through a simple setup procedure. When selecting your printer for the first time, or after installing an additional option, click the Create/Setup button in the DTP Utility or in the Chooser . This procedure causes the LaserWriter driver to query the printer for its characteristics and associate a particular PPD file with the printer.

You can also change your printer's setup by highlighting your desktop printer icon and then selecting Change Setup from the Printing Menu.

If you get an error about the preferences file when you choose an option that is specific to your printer, you may have an outdated PPD file. You should contact the vendor of your printer for an update.

Using English Language Chooser 7.3 on Localized Mac OS Systems

If you use Chooser to select your printer, be sure to use Chooser 7.3 or greater because LaserWriter 8 requires Chooser 7.3 or greater. If you have a localized Mac OS system with a Chooser earlier than version 7.3 and you install an English-language version of the printer software, an English-language Chooser 7.3 may be installed. Use Chooser 7.3 or greater to select the printer to which you want to print.

Creating EPS Files

You can create an encapsulated PostScript (EPS) file in many application programs by clicking File in the Print dialog box, then clicking Save. When you create an EPS file, note the following:

- Creating EPS files with the All option selected in the Font Inclusion pop-up menu in the EPS dialog box can result in very large files. If you include all fonts in an EPS file and save the file with the Unlimited Downloadable Fonts option selected, you may create an extremely large file.
- If you create an EPS file with no fonts included and open the document, fonts in the document appear on your screen, but Courier may be substituted when you print.
- When you create EPS files with preview information included, other programs that create their own PostScript code may not display the EPS file accurately on the screen.

Using the LaserWriter 8 Driver With the Kanji System

To print Japanese characters using KanjiTalk or the Japanese Language Kit, your system must have WorldScript II version 7.5.1 or later.

Using QuickDraw GX Fonts on a non-QuickDraw GX System

If you are using the QuickDraw GX versions of the fonts Hoefler or Skia with a non-QuickDraw GX system, you may encounter line-layout issues on screen or with your print-outs. To correct this issue, remove the GX fonts from your Fonts folder.

Using the LaserWriter 8 Driver With Applications

Some programs do not yet take advantage of the new features of the LaserWriter 8 driver or have small incompatibilities that result in printing issues. If you experience issues with an application, please contact the publisher of the program. In some cases a newer version of the program may be available.

The following list describes some special cases that you should be aware of when working with some applications. There may be other issues with these, or with other programs, not mentioned in this document.

Foreground vs Background Printing: LaserWriter 8.4 and greater offer both foreground and background printing.
In foreground, the driver doesn't spool the file being printed. An application may fail when printing in the foreground if the application assumes the driver will make a spool file.

If you experience issues with foreground printing, change to background printing and try again.

- With many programs, you cannot use the Flip Horizontal, Flip Vertical, landscape page orientation, and Layout option in the Page Setup dialog box in combination.
- Some programs may print in color even when Black and White mode is selected.
- Programs that generate their own PostScript may have issues color matching EPS or TIFF images correctly. Converting the image to a PICT corrects the issue.
- Tray Selection: Applications that don't utilize LaserWriter 8's capabilities have some limitations with tray selection when printing from the Finder. To work around these issues, print from within the application and contact the vendor of this application.

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Adobe Acrobat 3.0

- Acrobat retains the settings used for one printout and applies these settings to subsequent print jobs, unless options are reset by the user.
- The orientation of the .PDF file may not match the setting that appear in the printer dialogs. This is expected behavior.

The .PDF file will print as it is displayed on your monitor.

Adobe Illustrator 6.0.1

- Multiple-page documents may not print correctly when you choose a page layout from the Layout pop-up menu in the Page Setup dialog box.

Adobe PageMaker 6.5

- Documents that have been set up using a page layout from the Layout pop-up menu may not print correctly with the Print-Option command. Use the Print command with PageMaker's Thumbnail option.
- When using a page layout from the Layout pop-up menu with the Print-Option command, the document will be printed in reverse order.
- Rotated graphics may not print correctly when you hold down the Option key and click Print in the Print dialog box.
- You cannot print legal-size documents from the paper cassette of the Personal LaserWriter 320; print such documents by selecting Manual Feed or by holding down the Option key and clicking Print in the Print dialog box.
- Foreground printing does not always print text in the correct size.

Adobe Persuasion 4.0

- Persuasion uses its page dimensions to establish the orientation. These dimensions, however, are not picked up the driver's orientation settings.

Adobe SuperPaint 3.5

- Rotated or filled polygons print as solid gray objects.
- Gradient fills may not print when copied into other programs.

ClarisDraw 2.0

- Some shapes that contain gradients may not print correctly.
- A PostScript error is sometimes generated when attempting to print in the foreground. If you see this error, print the document again in the

background.

DeltaGraph Pro 4.0

- Printing with Unlimited Downloadable Fonts may cause some elements to be shifted and fonts to substitute Courier.

Informed Designer/Manager 1.4.3

- Do not print documents that contain JPEG images in Black and White mode; your system will restart.
- When you select the Unlimited Downloadable Fonts option, some graphic elements may shift or disappear when printed.

Lotus 1-2-3

- Sometimes a single document prints when multiple documents are sent to printer.

Microsoft Excel 5.0

- When you first install the new printer driver, you need to use the driver's page setup dialog to set the orientation of your document. When you select Page Setup, Excel first displays its own dialog box. Click the Options button to open the Page Setup dialog box generated by the LaserWriter driver. Then click on the orientation setting you desire. Click Okay to exit the driver's dialog. Then click Okay again to exit Excel's dialog.
- Most of the settings in Excel's Page Setup will now match the corresponding options in the driver's Page Setup. However, the scaling size may be different in the two dialog boxes. The size displayed in the Excel window is the size that will be used when you print from Excel.
- Colored horizontal cell borders will often not appear in the printout. This happens with any color printing option and on most printers.
- If in print preview window, multiple copies will not be printed.

MicroSoft Word 6.0.1

- Each section of a document is treated as a separate file when printed. This will not affect your output.
- Also, another section is sometimes inserted in the document when cursor is not at the top of the document.
- A blank page will be produced when incorrect page numbers are given.

Microsoft Works 4.0

- There are 24 new shapes available through the tools palette. Colored shadows for any of these shapes will appear correctly on screen. But these colored shadows will only print in gray, regardless of what the print color options might be.
- Works 4.0 color printouts may not match what appears on your screen. Experiment with the color options to determine which one generates the best printout for your needs.

Netscape 3.0.1

- Netscape may print a pale gray background to an older LaserWriter printer.
- When printing a multiple-page document, Netscape may print below the margins on the intermediate pages.
- Portions of graphics that seem to be transparent on screen will be printed on your documents.

Painter 3.0

When you print using the Invert option, images do not print inverted correctly.

- Painter adds 2 small pop-ups to the print dialog panels. They are in the lower left quadrant of the panels and can interfer with the driver's functionality.

PixelPaint Pro 3.0

- When you print using the Invert option, images do not print inverted correctly.

QuarkXPress 3.32

- Be sure to use the PPDs provided with QuarkXPress when you choose a page layout from the Layout pop-up menu in the Page Setup dialog box.
- Some imported JPEG files may not print correctly.

ReadySetGo! 6.0

- Use ReadySetGo! version 6.0 or later with the LaserWriter 8 printer driver; earlier versions will not work.
- With the Unlimited Downloadable Fonts option selected, you may not be able to print complex documents.
- Documents that use pen patterns will print patterns as solid gray.

Studio/8 & Studio/32

- When creating an EPS file with these programs and the LaserWriter 8 driver, you must select the QuickDraw Printer option.
- A blank page is sometimes printed when a doc is dropped onto a DTP.

This article can help you locate the software update mentioned here:

"**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.

For information on the services and support offered by AppleCare see:

http://www.apple.com/support/products/overview.html

Published Date: Feb 20, 2012

PC Setup Version: 1.6.1 Read Me

PC Setup Version: 1.6.1 was released August 15, 1997. This software update requires US System 7.5.3 or later, and a 166 MHz PC Compatibility Card installed in a Power Macintosh 4400 or 7220.

Description:
This software, only for a 166 MHz PC Compatibility Card installed in a Power Macintosh 4400 or 7220, fixes a problem with formatting and writing to DOS floppy disks in PC mode. It also corrects a problem with a generic icon of the PC Setup control panel.
This article has been archived and is no longer updated by Apple.
This version of PC Setup is only supported on the Power Macintosh 4400 or Power Macintosh 7220 with a 166 MHz PC Compatibility Card installed. It has not been qualified for use on other CPUs or PC/DOS Compatibility Cards and is not supported on this hardware.

This software consists of two Disk Copy NDIF (New Disk Image Format) compressed images, which requires Disk Copy 6.1 or later to use. Download this software to your hard drive and then double-click it to use it. Disk Copy is available in the Utilities folder.

Disk Copy 6.1 (or later) or Disk Image Mounter 2.1 (or later) from Apple are the recommended applications to access all disk images released by Apple and are the only supported applications to access NDIF disk images.

This article can help you locate the software update mentioned here:
"**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.
Published Date: Feb 20, 2012

Mac OS 8.0 & 8.1: Clean Installation Instructions

This article describes the steps to do a clean installation of a System Folder in Mac OS 8.0 and 8.1 without having to remove the Finder, System file or renaming the System Folder.

For Mac OS 8.5 through 9.2 information, see technical document 58176, "**Mac OS 8.5, Mac OS 9: Performing a Clean Installation**".

This article has been archived and is no longer updated by Apple.

Purpose of a Clean Installation

A normal system software installation modifies and updates the existing System Folder. A clean installation disables the existing System Folder, leaving all files in place, and creates a new System Folder.

A clean system installation brings the system software back to the standard configuration. This is necessary when system software has been damaged or modified, preventing a normal installation. It is also useful in troubleshooting.

Clean Install Instructions

Follow these instructions in the order presented.

Starting from the Mac OS 8 CD

1. Insert the Apple Macintosh CD in the CD-ROM drive.
2. Restart your Macintosh.
3. As soon as you hear the startup chime, hold down the letter 'C' on the keyboard until you see the "Welcome to Macintosh" message.
4. As the computer starts up, you should see the "flying CD" background pattern- this will confirm that you are starting from the CD.
5. If the computer does not start from the CD, shut down the computer, turn on the computer and immediately hold down the Command-Option-Shift and the large Delete key simultaneously. Hold down these keys until you see the "Welcome to Macintosh" message.
6. If you a receive a system error while starting from the CD, please see the section entitled "Cannot Boot from Mac OS 8 CD When AppleTalk is Off" in article 24160: "**Mac OS 8: Late Breaking Information**."
7. At the desktop, the Apple Macintosh CD's icon should be in the upper-right corner of your screen with your hard drive's icon below it. If any other hard drive appear above the Apple Macintosh CD, go to the Control Panels under the Apple Menu, open the Startup Disk item, select the Apple Macintosh CD, close all open windows and restart. The Apple Macintosh CD should then appear above the hard drive.
8. If you have successfully started from the Mac OS 8 CD, double-click the "Mac OS Install" icon or the "Install Mac OS 8.1" icon, then proceed to the section entitled "Installing Mac OS 8".

Starting from the Disk Tools diskette

Note: These steps require a Mac OS 8 CD and Apple CD ROM drive.

1. Shut down your Macintosh computer.
2. Insert the appropriate Disk Tools diskette in the floppy drive, and turn on the computer. At the desktop, the Disk Tools floppy disk's icon should be in the upper-right corner of your screen with your hard drive's icon below it.
3. Disk Tools Disk 1 is designed for use with all non-PowerPC machines except the PowerBook 190.
4. Disk Tools Disk 2 is designed for use with all PowerPC computers and the PowerBook 190.
5. Insert the Mac OS 8 CD and double click the "Mac OS Install" icon or the "Install Mac OS 8.1" icon, then proceed to the section entitled "Install Mac OS 8".

Starting from the Install Me First diskette

1. Shut down your Macintosh computer.

2. Insert the Install Me First diskette in the floppy drive, and turn on the computer. The installer program will launch automatically on startup.

Installing Mac OS 8

1. The "Welcome" screen will come up. Click the Continue button.

2. When the "Select Destination" screen comes up, select the appropriate disk in the Destination Disk pop-up menu.

3. Check the box marked "Perform Clean Installation", then click the Select button.

4. Read the Important Information on the next screen and click Continue.

5. Read the licensing agreement and click Continue.

6. At this point you may customize your installation. Refer to your Mac OS 8 manual for descriptions of the optional components listed.

7. If you are using a non-Apple hard disk, click the Options... button and uncheck the Update Apple Hard Disk Drivers option. It is very important that you check with the vendor of your non-Apple hard disk to confirm that your hard disk driver will be compatible with Mac OS 8 before you start the installation.

8. Click the start button. The installer will check your hard disk and attempt to repair any faults that it finds. If it is unable to repair them, you should back up the hard disk and reinitialize it using the appropriate formatting utility for that drive. For Apple drives, use Drive Setup.

When you are finished with the installation, restart the computer. If you started from the diskette, it will be ejected, however if you started from the CD-ROM you may need to eject the Mac OS 8 CD.

Troubleshooting

These steps assume you are using the Clean Install of system software for troubleshooting purposes.

1) Verify Issue Resolution

2) After performing a clean installation, verify that you resolved the difficulty before adding anything to the new System Folder. Adding items to the System Folder before resolving your difficulty defeats the purpose of performing a clean installation.

3) Install Non-Standard Items

You can now reinstall the non-standard items from the old System Folder (now named "Previous System Folder") such as fonts, extensions, and control panels. If possible, you should reinstall these items from their original disks.

If the original disks are not available, you may move the nonstandard items from the Previous System Folder to the new System Folder. Be careful not to replace anything that is already in the new System Folder. Only move items that are not already in the new System Folder. Open each corresponding folder within the System Folder and the Previous System Folder and then compare the contents. Move up to 5 items that are not already in the new System Folder and its sub folders from the Previous System Folder and its sub folders.

Restart your Macintosh.

Verify that the Macintosh is still starting up properly and that basic functions are working properly.

Repeat Steps 2-4 until all non-standard items have been moved from the Previous System Folder to the new System Folder.

4) Final Steps

Verify your applications are performing normally. If not, refer to the application manual or contact the vendor. When the Macintosh behaves as expected and you are sure that all needed items from the Previous System Folder are transferred or reinstalled, move the Previous System Folder to the Trash, and choose Empty Trash from the Special menu.

Published Date: Feb 19, 2012

Apple Printer Utility 2.2 - Read Me

Apple Printer Utility Version 2.2 was posted on January 30, 1998. It requires US Mac OS 7.1.1 or later.

Description:
This software is included with the LaserWriter 8.5.1 software posted here. It replaces all previous versions of Apple Printer Utility. Contains a 68k-based (non-PowerPC) version of Apple Printer Utility 2.2, and a PowerPC version of Apple Printer Utility 2.2. For complete information, please see the documentation included with the LaserWriter 8.5.1 software.
This article has been archived and is no longer updated by Apple.
Apple Printer Utility Version 2.2

Apple Printer Utility is Now a Custom Install Option only

The Apple Printer Utility is now a custom install option only. If you cannot find the Apple Printer Utility version 2.2 on your system, it probably was not installed.

Printer Support

The Apple Printer Utility program works with all Apple PostScript Level 1, Level 2, and PostScript 3 printers. If this software is used with a non-Apple printer or with a printer developed after this release, a set of generic features will be available. The generic feature set consists of options that are common to most PostScript printers. These features should work with non-Apple printers but are not specifically supported by Apple.

Working with a Large Number of Downloaded Fonts

If you plan on working with a large number of downloaded fonts, you will need to increase the memory allocation for the Apple Printer Utility. To do this, quit the Apple Printer Utility, select its icon and choose Get Info from the File menu. Increase the memory in the Preferred Size box, then close the Get Info window. The amount of memory required grows dynamically as the number of fonts in the printer increase. Increase the Apple Printer Utility's Preferred Size memory by 100K to 500K and try downloading again.

Working with 2-Byte Fonts

Downloading Chinese, Japanese, or Korean fonts is not a supported feature of this software and program errors may occur.

Downloading PostScript Fonts on a QuickDraw GX System With the Apple Printer Utility

When GX is installed, any PostScript fonts (often called Type 1 fonts) in the Fonts folder are converted to GX fonts, and the original PostScript fonts are copied to a new folder called *Archived Type 1 Fonts* which is created in the System Folder. If you want to download these fonts to your printer using the Apple Printer Utility, you must send the fonts in the *Archived Type 1 Fonts* folder, not the GX-converted versions in the Fonts folder. Downloading GX fonts that were not previously Type 1 fonts and converted by GX works correctly.

This article can help you locate the software update mentioned here:

- Article 14724: "**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.

Published Date: Feb 20, 2012

Apple/GV 56K Modem Updater Read Me

This article comprises the Read Me for the Apple/GV 56K Modem Updater. This software was released by Apple on January 15, 1999 and is available for download from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Requires:

The 56k internal modem which came with the Power Macintosh G3 (Desktop, Minitower, or All-in-one), or Power Macintosh 6500 series computers.

Description:

Includes Apple/GV 56K Updater 2.200 and Apple/GV 56K Updater v1.001. The Apple/GV 56K Updater 2.200 installs the V.90 protocol. If you have updated to the V.90 protocol and discover that your ISP only supports K56flex, run the Apple/GV 56K Updater v1.001 to install the K56flex protocol.

Other Info:

These updaters DO NOT support the modem in the iMac or the new Power Macintosh G3 (Blue and White). Note: Some Power Macintosh 6500 systems shipped with an internal 33.6Kbps modem. These modems are not supported by these updaters.

This article has been archived and is no longer updated by Apple.
Important Information About the Apple/GV 56K Updaters

These updaters support the internal modem which came with your Power Macintosh G3 (Desktop or Minitower or All-in-one, or Power Macintosh 6500 series computers. These updaters DO NOT support the modem in the iMac or the new Power Macintosh G3 (Blue and White). Note: Some Power Macintosh 6500 systems shipped with an internal 33.6Kbps modem. These modems are not supported by these updaters.

This document also contains several references to articles in the Apple Knowledge Base that discuss modem connectivity issues. These articles are recommended reading for better a understanding of 56K modem technology.

Why are there two Apple/GV 56K Updaters?

Unlike the 56K modems that ship with the PowerBook G3 Series or the iMac, the Apple/GV 56K modem DOES NOT support both the V.90 and K56flex protocols at the same time.

Apple/GV 56K Updater 2.200 - installs the V.90 protocol

Apple/GV 56K Updater v1.001 - installs the K56flex protocol

IMPORTANT: If your ISP supports only one of the two protocols (V.90 or K56flex) it is necessary to install the same protocol on your modem, otherwise your connections will be limited to speeds of 33.6kbps or less (V.34 protocols). This modem cannot automatically negotiate with the service provider to determine whether to use V.90 or K56flex. Check with your ISP to determine which protocol they support.

What The Apple Modem Updater Does

The Apple/GV 56K Updater 2.200 installs the V.90 protocol. If you have updated to the V.90 protocol and discover that your ISP only supports K56flex, run the Apple/GV 56K Updater v1.001 to install the K56flex protocol. The ROM on the Apple/GV 56K modem is capable of being updated several thousand times, far more than would be needed even under extraordinary conditions.

After you have updated the modem you may notice that the connection speed that is reported when you first establish a connection may be lower than it was prior to the upgrade, however the modem throughput will be at least as good and often better than before the upgrade. Throughput is the measure of how quickly a certain amount of data is transferred from one modem to another. It is important to remember that the connection speed that is reported is only the initial connection speed. The modems will adjust their communications speed as line conditions require.

A faster connection speed does not necessarily indicate a higher throughput, factors like resending data due to noise on the phone lines will lower overall throughput. This is discussed in more detail in article 30734, "**V.90 Protocol: Connectivity Discussion**" and article 24482, "**56Kbps Modems: Getting The Fastest Connection**".

Updating The Modem

Before updating your modem, make sure the modem and modem port are not in use. Turn answering off in fax or other communications programs. Log off any open Internet/modem connections. (Disconnecting the phone line will force any active modem connections to be closed.)

IMPORTANT Do not cancel the installation process once you start updating; canceling the upgrade process will damage the modem. This modem updater may take up to five minutes to complete.

To update your modem:

1. Double click on the Apple/GV 56K Updater icon.

2. Click Update Modem

3. Click OK to turn off AppleTalk. Note: You may be warned that the modem already contains the current firmware. Click OK to install the version of the firmware you have selected. Status messages appear as the updater installs the firmware onto the modem.

4. Click Quit when the update is complete.

5. Drag copy the file Power Mac G3 Internal 56K into the Modem Scripts folder, located in the Extensions folder within the System Folder. Click OK to replace any existing file. Open the Modem control panel and select: Power Mac G3 Internal 56K

Note: The new Power Mac G3 Internal 56K modem script should be used with both the V.90 and K56flex protocols.

You do not need to restart your computer after updating the modem firmware.

Future Modem Software

New firmware updates, modem scripts, and modem drivers may be released for 56K modems until the technology stabilizes. For more information on V.90 modem upgrade information, see Apple's support web site: **http://www.apple.com/support**

Published Date: Feb 20, 2012

Support for Former Claris Software Products

This article has been archived and is no longer updated by Apple.

On 1998-01-27 Apple announced that its Claris subsidiary would restructure to focus exclusively on its FileMaker Pro line of database software. This article will help you find technical support for various software that was previously distributed, and supported, from the Claris Web site. The Claris Technical Library has been imported into Apple's Knowledge Base and selected Software Updaters have been tested by Apple's Software Engineers and posted to Apple Software Updates.

Go to AppleCare **Knowledge Base Search** page and select the "Archive" option for technical Information, and **Older Software Downloads** web page for the software for following products:

- ClarisDraw
- Claris Emailer
- ClarisImpact
- Claris Organizer
- ClarisWorks

Key Points of Support Information Regarding Former Claris Products:

ClarisDraw: There is no further development to ClarisDraw. The application AppleWorks (formerly known as ClarisWorks 5) includes a drawing option. Claris Draw 1.0v4 Updater posted to Apple Support automatically updates a copy you have made of your original ClarisDraw 1.0v1, v2, v3, or v4 updated prior to 1997-12-09.

Claris Emailer: The most recent update to this application program is the Claris Emailer 2.0v3 Updater. The original application is not available from Apple. Please note that the "Important Information" file installed with this update mentions the "Emailer Contextual Plugin" in the list of feature enhancements. This plugin, which was not developed by Claris or Apple, is no longer available and all references to it should be disregarded. (As of 1999-03-25, all Tech Info Library articles on Claris Emailer have been archived in the Tech Info Library Archive.

Fog City Software - is a Web site packed with Claris Emailer resources. In particular, visit their listings of **utilities**.

Claris Organizer: In a Press Release on 1998-05-11, Palm Computing, a division of 3Com and makers of the family of PalmPilot connected organizers, announced that it had acquired Claris Organizer. Palm will enhance and support the package, now called Palm Organizer with HotSync capabilities for PalmPilot organizers. For more information please visit the **Palm Computing** Web site. (As of 1999-03-25, all Tech Info Library articles on Claris Organizer have been archived in the Tech Info Library Archive.

ClarisWorks: ClarisWorks 5.0x has been renamed AppleWorks and comes with Apple's iMac and iBook computers. This application has a dedicated **AppleWorks support** Web site with links to Software, technical articles and other related Web sites. If you have an earlier version of ClarisWorks you can find information on updating your existing versions with the most recent update. Purchasing, third-party product, and education-focused information can be found on the **AppleWorks product** page.

ClarisWorks Users Group (CWUG), a private organization not affiliated with Apple, Inc. is available on the World Wide Web for ClarisWorks users. You will find hundreds of templates, graphics, fonts, and utilities in the comprehensive software library.

In the U.S., telephone Support Options can be purchased:

Apple Support Options

ClarisWorks, Claris Emailer, Claris Organizer, ClarisImpact, ClarisDraw:

- Toll: + 1 512 674 8700

> **Important:** Apple provides only installation support for these products.

All Other Claris Software:

- Toll Mac OS: +1 408 727 9054
- Toll Windows: +1 408 727 9004
- Fee Based: 1 (800) 965-9090

If you live outside the U.S. call your local Apple Assistance Centre for further details on available telephone support options.
Published Date: Feb 19, 2012

Support for Newton Products

This article has been archived and is no longer updated by Apple.
On February 27, 1998 Apple Computer, Inc. announced it will discontinue further development of the Newton operating system and Newton OS-based products, including the MessagePad 2100 and eMate 300.

This article has been created to assist Apple Support Web Site customers in finding technical support for Newton products previously distributed, and supported, from various Apple Web sites.
Find Technical Information and Software Updates for the following products:

Technical articles for the AppleMessagePad and eMate are found in the Knowledge Archive. Use the following links to go directly to articles for the specific product or search the Knowledge base (select the "Archive" option) for specific articles and to older Apple product discussions.

There is a list of Software Downloads for English North-American versions of Software for Macintosh, Apple II and Newton released prior to Mac OS 8.1 in January 1998. All software listed on this list is considered obsolete and may do harm if improperly installed. Please use extreme caution. All software released since January, 1998 is available in the AppleCare Knowledge Base http://kbase.info.apple.com (needs Apple ID), although there may be some duplicates listed here. Use this URL to see the list of Newton downloads for Windows or for Macintosh platforms http://www.info.apple.com/support/oldersoftwarelist.html#newton

Newton or MessagePad Products	Technical Assistance Available Online
eMate 300	eMate 300 articles
MessagePad 100	MessagePad 100 articles
MessagePad 110	MessagePad 110 articles
MessagePad 120	MessagePad 120 articles
MessagePad 130	MessagePad 130 articles
MessagePad 2000	MessagePad 2000 articles
MessagePad 2100	MessagePad 2100 articles
Newton Software	Newton Software Downloads

Key points of support information regarding former Newton Products:

MessagePad 2000 UpgradeProgram
The upgrade program introduced November 10, 1997 ended April 30, 1998

Unable to Access Newton Website

Customers may encounter a DNS error when using an old url to the Newton Specific Apple Web site at "newton.apple.com". Apple no longer hosts a Newton Web site and this is no longer a valid url.

Macintosh Users Groups

If you are looking for motivated Newton Users who might help you find what you are looking for you can use the Discussion links featured above or use Apple's User Group Locator to find a group dedicated to Newton products.

User groups offer the greatest support bargain for most computer users. Within a user group you'll find some of the most helpful and knowledgeable computer experts, and they're willing to share their experience and advice. In addition, many user groups schedule speakers and events that give you a chance to keep up-to-date and learn more about the possibilities of your computer.

Apple Discussions Forum
If you searched the Knowledge Archive and Software Updates and are still unable to find an answer to your Newton or eMate related question please visit Discussion's and select the appropriate category. You can search for discussions relating to your question, or you can read through the existing posts.

Use this link to go to Apple Discussions: http://discussions.info.apple.com/

If you're new to Apple Discussions, there is Apple Discussions Help available from the Discussions Web site.

For other technical support please see the AppleCare Overview Web page.

Published Date: Feb 19, 2012

Macintosh: Support for earlier operating systems

This article has been archived and is no longer updated by Apple.
Support for Mac OS 8.0 and later can be found in the Software Support Web pages on the Apple Support Web site :

Mac OS 8.1: http://www.info.apple.com/usen/macos8.1/
Mac OS 8.5: http://www.info.apple.com/usen/macos8.5/
Mac OS 8.6: http://www.info.apple.com/usen/macos8.6/
Mac OS 9.0/9.1 : http://www.info.apple.com/usen/macos9/

Please be aware that issues and solutions for Older System Software found in the Knowledge Base have often been solved in more recent releases of System Software. Therefore, it is recommended that you run the most recent system software on your Macintosh.Technical Information can be found in the Knowledge Base: To find articles that relate to your Operating System you can search the Knowledge Base or Knowledge Archive. For assistance in using the Search option to the best advantage please use the Knowledge Base Help option. The Knowledge Base http://kbase.info.apple contains recent updated documents from approximately January 1998 to today.

The Knowledge Archive contains articles covering older Apple products (select the "Archive" option at the search screen). Archived documents are not updated.

The Knowledge Archive articles featured below relate to System 7 and later versions of the Macintosh Operating System.

Document Number 30152: **Mac OS: Upgrading from Older OS Versions**
This article lists different options for obtaining various version of System Software, System Upgrades and Mac OS Software.

Document Number 15582: **Macintosh: System Software Version History**
This article contains a history of older versions of Macintosh System SoftwareDocument Number 21176: System 7: 7.5.3 and Later Enabler Matrix

Document Number 20249: **System 7.5: Updates, Versions, & What's Installed**
This article lists all Macintosh cpus and the versions of System 7.5.3 and later that they support. It also lists current versions of required enablers.

If you are confused about System 7.5 and its updates please read this article archive article 20081: **What Updates Do I Need for System 7.5.5?**

Questions and answers for customers who had System 7.5.3 pre-installed on their hard drive.
Download System 7.5 version 7.5.3 full install from http://www.info.apple.com/support/oldersoftwarelist.html

Document Number 20408: **System 7.5.5 Update: Frequently Asked Questions (1 of 2)** contains the answers to frequently asked questions (FAQ) about System 7.5.5 Update. **Download System 7.5.5** from **Older Software** downloads.

Many Customers with older Macintosh computers ask Apple where they can find Mac OS 7.6. Document Number 26170: **Where to get Mac OS 7.6 and 7.6.1**

Software Updates can be found in the Software Updates Library:
Software updates for earlier versions of Mac OS and Apple hardware are available by browsing the Downloads Web site. You can look at the Older Software Downloads page for a list of all software released prior to January 1998.

Document Number 14724: **Where to Find Apple Software Update** explains where to find Apple Software Updates that are available for downloading.

Browse the Apple II and Apple IIGS Directory
Browse Older System Software Directory

Apple Discussions Forum
Use this link to go to the **Mac OS Discussion Forum**.

If you're new to Discussions, use the **Help** link under **Options.**

User Groups:
User groups offer the greatest support bargain for most computer users. Within a user group you'll find some of the most helpful and knowledgeable computer experts, and they're willing to share their experience and advice. In addition, many user groups schedule speakers and events that give you a chance to keep up-to-date and learn more about the possibilities of your computer. Please visit Apple's User Groups Locator web page.

Published Date: Feb 19, 2012

Support for Apple Printers

This article has been created to direct customers to technical support for Apple Printers.

This article has been archived and is no longer updated by Apple.
Please be aware that issues and solutions for older system software found in the **Older Software List** have often been solved in more recent releases of system software. Therefore, it is recommended that you run the most recent system software that works with your Macintosh computer. For support and information on older Mac OS versions please see Knowledge Base document number **26181**.

If you have looked at product support information in the resources listed below and have not found a resolution to your Mac OS related issue, you may wish to visit **Apple Discussions**.

Apple Printers

Apple Spec Database has Technical Specifications and Descriptions
You can find technical specifications for the following products in Apple Spec Database

- Dot Matrix Printer
- Ink Jet Printers: StyleWriter and Color StyleWriter
- Laser Printers: LaserWriter, Color LaserWriter and Personal LaserWriter
- They are also available by searching the Knowledge Base or the Knowledge Archive.

About the Knowledge Base and Knowledge Archive:

You can find technical information on all Apple Printers in the Knowledge Base or the **Knowledge Archive** (select the "Archive" option before searching).

Software for Apple Printers:

Where to Find Software Downloads:
Software Downloads for Apple Printers can be found on the Apple **Older Software Downloads** Web page or search the **Featured Software** Web page.

Three documents have been created to help customers identify and find the appropriate printer drivers and cables. If you are looking for a driver or cable for your printer, please refer to one of the following documents:

StyleWriter Printers: Print Drivers & Cable Matrix - Document number **30153**
LaserWriter Printers: Mac OS Print Drivers & Cable Matrix - Document number **30154**
Other Printers: Print Drivers & Cable Matrix - Document number **15372**

Key issues and support information regarding Apple Printers:
The following documents have been identified as providing relevant support information for Apple Printers:

Apple LaserWriter Printer Tips -Document number **20032**
Apple LaserWriter Printers: Frequently Asked Questions -Document number **18219**
Apple StyleWriter Printers: Frequently Asked Questions -Document number **18232**
LaserWriter: Communication Mode Switch Setting: Document number **24318**
LaserWriter Driver 4.2.2 for Windows 95 - Document number **24439**
Mac OS: Desktop Printing Troubleshooting - Document number **24306**
Printers & Imaging: Frequently Asked Questions -Document number **22143**
QuickDraw-Based Printers: Not Compatible With IBM PCs -Document number **9507**

For more specific questions please search the Knowledge Base.

Apple Discussions
If you have searched the Knowledge Base and Software Updates and you are still unable to find an answer to your Apple printer related question please visit **Apple Discussions**. You can search for discussions relating to your question, or you can read through the existing discussions. Finally, if you have exhausted all other options please post your question. If you are new to Apple Discussions there is Apple Discussions Help available.

If you have tried all of the above Online options for solving your Printer related question and you still need help, please review the **Support Options** web site.

Published Date: Feb 19, 2012

Macintosh: Support for Older Model Computers

This article has been created to assist owners of older model Macintosh computers locate support information.
This article has been archived and is no longer updated by Apple.
The following are considered to be older model Apple Computers:

- Classic Macintosh Systems
- Macintosh II Systems
- Macintosh LC Systems
- Macintosh Performa Systems
- Macintosh Centris & Quadra Systems
- Power Macintosh Systems prior to Power Macintosh G3
- Systems Upgraded to PowerPC

Please be aware that issues and solutions for older system software found in the Knowledge Archive have often been solved in more recent releases of system software. Therefore, it is recommended that you run the most recent system software that works with your Macintosh computer. For support and information on older Mac OS releases, please see article number 26181.

To find out if your Macintosh computer is in the Legacy Product Support category, please visit the Legacy Support Web page to see a list of qualifying products. If you have exhausted the resources listed below you may wish to proceed directly to

- Apple Discussions - Older Apple Products.

About the Knowledge Base and Knowledge Archive:

You can find technical information on all Apple Computers in the Knowledge Base. The Knowledge Base has over 14,000 technical articles and is updated daily. The Knowledge Archive contains Knowledge Base articles covering older Apple products (Select the "Archive" option before searching). Archived articles are not updated.

About Software Updates:
The Apple Software Library is a collection of updaters, utilities, and full software installs to help keep your Apple Products running smoothly. You can locate a particular software file by either searching our library, browsing our hierarchy, or viewing a list of the most recent postings. All software available from this site is covered by the software license agreement included with this software. Read Download Help if you need assistance downloading software. Apple Software Update web page is at: http://asu.info.apple.com

Software for Older Macintosh Computers:
For information on Upgrading system software and other options please read article number 26181: Support for Older Macintosh Operating Systems

Some Issues Identified in Older Model Computers:

Power Macintosh: Frequently Asked Questions (FAQ) Article number 42501 is comprised of questions frequently asked on the Power Macintosh discussion forum.

Macintosh Family: Batteries and Part Numbers (FAQ) Article number 11751 contains frequently asked questions about Macintosh family batteries and part numbers, and answers to those questions.

Disk First Aid Version 8.2 Read Me Article number 30567 describes this utility which is intended for 68040 and PowerPC-based Macintosh computers using Mac OS 8.1. It is a utility that verifies and repairs some problems that may occur on your hard disk drive.

Flashing "?": Solution on Performa/Power Mac 54xx, 55xx, 6400, & 6500 Article number: 22078

Macintosh 5xxx/6xxx Tester: Read Me Article number: 19999 contains the ReadMe file for the 5xxx/6xxx Tester application, which should be used with all Power Macintosh and Performa 5200, 5300, 6200, and 6300 series computers to test for known component issues that may cause system freezing.

Macintosh 5xxx/6xxx: Microprocessor Issue Article number: 18616 describes an issue with some PowerPC 603 microprocessors installed on a limited number of Macintosh and Performa 5200 and 6200 series computers.

Power Macintosh/Performa 52xx/62xx: Continuous Beep on Startup Article number: 22193
Discusses an issue after installation of Mac OS 8.1. During startup, the computer will emit a "squealing" sound, similar to a car horn sounding continuously. The sound will continue until a new sound is played or the volume is changed.

Apple Spec Database has Technical Specifications and Descriptions
You can find Technical Specifications for the following products on the Apple Specification page.

Classic Macintosh Systems; Macintosh II Systems; Macintosh LC Systems; Macintosh Performa Systems; Macintosh Centris & Quadra Systems; Macintosh PowerBook Systems; Power Macintosh Systems; Systems Upgraded to PowerPC

Product Documentation Archive
Apple product manuals are available in the **Knowledge Base**. Search using the product name followed by kmanual. For example to locate the Macintosh Performa manuals, you would type:

```
performa kmanual
```

For iMac manuals, type:

```
iMac kmanual
```

All manuals are in Adobe Acrobate format. Adobe Acrobat Reader version 3.0 or later is required to view the manuals. For further information view the Help document found on the Navigation Bar

Apple Discussions
If you have searched the Tech Info Library and Software Updates and you are still unable to find an answer to your older Macintosh computer related question please visit Apple Discussions for Older Apple Hardware Products. Finally, if you have exhausted all other options please post your question. If you are new to the Discussion Forum there is a Help document available at the top of every page.

If you have tried all of the above Online options for solving your older Macintosh computer related question and you still need help, please review the Support Options web site.

Published Date: Feb 19, 2012

AppleShare IP 6.3: System Requirements, New Features, and Setup

This article provides system requirements and important information about AppleShare IP 6.3 features and setup.
This article has been archived and is no longer updated by Apple.
AppleShare IP 6.3 is available as a retail product or as a software update for owners of a previous version of AppleShare IP 6. The AppleShare IP 6.3 Update may be downloaded from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Important: If you are using Shared Users and Groups with AppleShare IP 6.2, be sure to read the additional installation information provided with the AppleShare IP 6.3 Update.

New Features

- Mac OS 9 compatibility
- Mac OS Server Admin for remote or local server administration
- ability to administer multiple AppleShare IP 6.3 servers at once
- support for sleep features on client computers
- support for Network Services Location Manager (NSL)
- improved features of home directories
- setup guest access for each service
- Power Mac G4 compatibility

Note: To ensure peak performance and compatibility with the latest Apple hardware, be sure to check Apple Software Updates (http://www.apple.com/swupdates) for the latest AppleShare IP updates. AppleShare IP only utilizes one processor on dual-processor Power Macintosh computers.

New System Requirements

The following additional system requirements are new with AppleShare IP 6.3. Previous system requirements still apply; see your AppleShare IP 6 Getting Started manual for details.

- Any Apple Power Macintosh computer, iMac, or Macintosh Server with a PowerPC G4, G3, 604e, 604, or 601 microprocessor, or a 6500 series computer with a 603e microprocessor
- Mac OS 9
- 80 MB RAM with virtual memory off or 64 MB RAM with virtual memory on
- 250 MB of free hard disk space.

Requirements for Mac OS Server Admin

- Any Macintosh computer with Mac OS 8.6 or later installed
- Monitor with resolution of 800 x 600 or better
- A TCP/IP connection to the network on which the server resides, which may be via the Internet
- 20 MB of free hard disk space
- 5 MB of RAM (you may need more RAM if you want to administer more than three servers at once)

Installation Instructions

Preparing Your Computer

Before installing Mac OS 9 and AppleShare IP 6.3, you should back up your server. When backing up, make sure that the AppleShare IP Web & File Server is running. If you do not have back up software available make a copy of your System Folder. This will allow you you to switch back to your previous version of AppleShare IP if you desire.

Installing Mac OS 9 and AppleShare IP 6.3

If you are installing Mac OS 9 and AppleShare IP 6.3, be sure to install Mac OS 9 first following the instructions that come with that software. Then restart the computer with extensions off by holding down the Shift key while restarting.

To preserve your previous AppleShare IP setup, it's recommended that you do not perform a clean installation of Mac OS 9.

If you choose to perform a clean installation of Mac OS 9, you need to install Mac OS 9, then your previous version of AppleShare IP 6.x. Then you need to restart the computer with extensions off by holding down the Shift key while restarting, and install the AppleShare IP 6.3 Update. You

should then copy the file "Users & Groups Data File" from the Preferences folder in the Previous System Folder to the Preferences folder inside your newly-created System Folder.

After a clean install of the system software you must:

- enter a static IP address in the TCP/IP control panel
- enter an owner name, password, and computer name in the File Sharing control panel

If you do not set up these control panels properly, you will not be able to log on to Mac OS Server Admin and set up network services. (You use the owner name and password to log on to Mac OS Server Admin.)

Installing AppleShare IP Software

To perform an installation, double-click the icon labeled Installer and follow the instructions onscreen. There is not a custom installation option.

Installing AppleShare 3.8.5 Client Software

To update client computers to AppleShare 3.8.5, see the AppleShare Client 3.8 User's Manual in the Client Software 3.8.5 folder on your hard disk. See your license agreement for the number of clients your AppleShare IP server may have.

Installing the Thread Manager

In rare cases, AppleShare IP 6.3 may stop responding when running under heavy load. The AppleShare IP Thread Manager is an extension that fixes this problem and provides greater stability of AppleShare IP 6.3 when the server is busy.

After you install AppleShare IP 6.3, follow these steps to install the AppleShare IP Thread Manager:

1. Open the Install ASIP Thread Manager folder on the AppleShare IP 6.3 Install CD.
2. Drag the AppleShare IP Thread Manager file onto the System Folder of your AppleShare IP 6.3 server.
3. Click OK to put the file in the Extensions folder and to replace any earlier versions of this extension.
4. Restart your computer

Setting Up AppleShare IP

Using Easy Setup

You need to use the AppleShare IP Easy Setup program before you can use AppleShare IP. The program asks a few questions about how you plan to use AppleShare IP and sets up your AppleShare IP servers accordingly.

To use the Easy Setup program, double-click the Setup AppleShare IP icon on your computer desktop. Follow the instructions that appear onscreen. Your previous serial number will appear automatically; you do not need to enter a new serial number.

If you need more help using the Easy Setup program, see your AppleShare IP 6 Getting Started manual.

Using Mac OS Server Admin for the First Time

The Mac OS Server Admin program is located in the Mac OS Server Admin folder, inside the AppleShare IP 6.3 folder. Double-click the Mac OS Server Admin icon. You will be prompted to login with your server's ip address or DNS name, your administration name, and password. Once you have logged on to your AppleShare IP server, a service window appears for that server. Modules for each service installed on your server will appear in the service window.

If you installed AppleShare IP before you set up the TCP/IP and File Sharing control panels you may need to do the following before you can login with Mac OS Server Admin:

1. Open the Extensions Manager control panel and turn off the AppleShare IP Registry extension.
2. Restart the computer.
3. Open the File Sharing control panel and type an owner name, password, and computer name.
4. Close the File Sharing control panel.
5. Open the TCP/IP control panel and choose Manually from the Configure pop-up menu. Then enter an IP Address and other network information.
6. Close the TCP/IP control panel.
7. Open the Extensions Manager control panel and turn the AppleShare IP Registry extension back on.
8. Restart the computer.

Setting Up Remote Admin for the First Time

To use the web browser-based remote administration feature in AppleShare IP, you need to enable it in Mac OS Server Admin. You also must use an administrator account to use this feature.

For extra security, you can use TCP Filter software to allow access to the AppleShare IP Remote Admin application only from specific computers. See the TCP Filter section of AppleShare IP Help for details.

Follow these steps:

1. Launch Mac OS Server Admin and connect to the server.
2. Select the web server admin module.
3. Choose "Configure Web Server..." from the pop-up menu.
4. Select the "Allow administration via AppleShare IP Remote Admin" checkbox.
5. Click Save.
6. If the web server is not running, start the web server.

Your changes take effect immediately. To administer your server remotely from any computer on the network, type the following URL in any industry-standard Web browser:

http://<your Web server's DNS name or TCP/IP address>/.admin

For More Information

See AppleShare IP Help. You can open AppleShare IP Help by choosing AppleShare IP Help from the Help menu within any AppleShare IP administration program, or by double-clicking the AppleShare IP Help icon in the AppleShare IP 6.3 folder.

If you are using Remote Admin, see AppleShare IP Remote Help. To access Help while you are using the Remote Admin application, click the Help link at the bottom of any Remote Admin page in your Web browser. You can also double-click the AppleShare IP Remote Help icon in the AppleShare IP 6.2 folder.

If you need help while using the Mac OS Server Admin program, open the Help menu and select Mac OS Server Admin help.

For recent downloads, refer to the Apple Downloads page at http://www.apple.com/support/downloads/ and search AppleShare IP.
Published Date: Feb 19, 2012

Xserve G5: Customer-Installable Parts Instructions

This document contains links to the documentation for installing replacement parts in the Xserve G5.
This article has been archived and is no longer updated by Apple.

Xserve G5

Viewing Requirements

- PDF files require Adobe Acrobat Reader version 4.0 or later and correctly set browser preferences are required to view the PDF instructions.

Download Adobe Acrobat Reader

- Download Acrobat Reader (Opens Adobe's Web Site)

Related Documents

- Knowledge Base: Language Codes Used

Part	Instructions
Boards	
Drive Interconnect Board	EN
Front Panel Board	EN
Cables	
Hard Drive Cable	EN
FireWire Cable	EN
Front Panel Board Cable	EN
Optical Drive Cable	EN
Power Cable	EN
Cards	
PCI/PCI-X Card	EN
Riser Card	EN
Drives	
Hard Drive	EN
Optical Drive	EN
Optical Drive Bracket	EN
Additional Parts	
Battery	EN
Button Kit	EN
Fan Array	EN
Front Bezel	EN
Front Bezel Bracket	EN
Light Pipe	EN

Locking Mechanism	EN
Logic Board	EN
Memory	EN
Password	EN
PCI Fan	EN
PCI Fan Duct	EN
Processor	EN
Processor Cover	EN
Power Supply	EN
Power Supply Fan Duct	EN
Rack Mount Kit	EN
Top Cover	EN

Published Date: Feb 19, 2012

Power Mac G5 (June 2004) and Power Mac G5 (Early 2005) CIP Instructions

This document contains links to download Customer-installable parts (CIP) instructions in PDF format. Follow these instructions when you replace parts in the Power Mac G5.
This article has been archived and is no longer updated by Apple.

Power Mac G5

Viewing Requirements

- PDF files require Adobe Acrobat Reader version 4.0 or later and correctly set browser preferences are required to view the PDF instructions.

Download Adobe Acrobat Reader

- Download Acrobat Reader (Opens Adobe's Web Site)

Related Documents

- Knowledge Base: Language Codes Used

Electrostatic Discharge (ESD) Precautions

To avoid ESD damage to your computer, you must safely discharge static electricity from your body before you touch any parts or install components. Be sure to carefully follow the instructions below and perform the discharge procedure as instructed.

Replacement Part	Instructions
Cables	
Front Panel Board Cable	EN | FR | DE | ES | IT | NL | SV
Cards	
AirPort Extreme Card	EN | FR | DE | ES | IT | NL | SV
AGP/PCI Card	EN | FR | DE | ES | IT | NL | SV
Drives	
Optical Drive	EN | FR | DE | ES | IT | NL | SV
Optical Drive Standoffs	EN
Serial ATA Hard Drive	EN | FR | DE | ES | IT | NL | SV
Serial ATA Hard Drive Guide Screws	EN | FR | DE | ES | IT | NL | SV
Fans	
Front Inlet Fan Assembly	EN | FR | DE | ES | IT | NL | SV
Speaker Fan Assembly	EN | FR | DE | ES | IT | NL | SV
Other Replacement Parts	
Air Deflector	EN | FR | DE | ES | IT | NL | SV
Air Deflector Sensor Label	EN
Access Door	EN | FR | DE | ES | IT | NL | SV
Battery	EN | FR | DE | ES | IT | NL | SV
Memory	EN | FR | DE | ES | IT | NL | SV
Modem	EN | FR | DE | ES | IT | NL | SV

TA22565_Power_Mac_G_June_and_Power_Mac_G_Early_CIP_Instructions.pdf

PCI Card Guide

EN | FR | DE | ES | IT | NL | SV

Published Date: Oct 7, 2016

Apple Discussions (PowerBook): Frequently Asked Questions

This article has been archived and is no longer updated by Apple.

This document contains a number of frequently asked questions (FAQ) in the PowerBook Discussions.

Each question is followed by one or more links to technical documents that provide answers, suggestions, or troubleshooting advice to help you deal with the issue that creates the question.

Some of the documents have pointers to useful suggestions posted on the board by other users. These may or may not also have an official Apple answer, but this will be noted where applicable.

If the questions below do not contain an answer to something you are looking for, you can continue to search for using the Knowledge Base, or you can go directly to the PowerBook Discussions forum (http://discussions.apple.com/category.jspa?categoryID=120).

Apple's Support Team identifies and makes available important information and relevant software updates on the Important Page. If you don't find information relating to your issue you can click Discussion on the Navigation bar to go to the Discussion Forum.

Take some time to look through the board, or use its search function. It is quite likely your question has come up before, even if it does not have the frequency of the ones listed below. If you find a previously posted question that matches yours, read the posted answers. If you still did not find an answer, please feel free to either post a new topic describing your issue, or add a reply to an existing topic that closely matches your issue.

Questions answered in this article:

1. Every time I connect to my Internet service provider (ISP), Apple Remote Access disconnects me after about ten minutes.
2. How can I print from my IrDA-capable PowerBook to an IrDA laser printer?
3. Sometimes an out of memory error appears and my PowerBook stops working when using the File Synchronization control panel.
4. My PowerBook G3 Series battery does not seem to charge when the PowerBook is running. It charges when the PowerBook is in sleep mode. What's wrong?
5. My PowerBook G3 Series computer cannot make a modem reconnect after waking from sleep.
6. The bottom of my PowerBook G3 Series becomes very warm after extended periods of use. Is there an issue with my PowerBook?
7. The internal backup battery in my PowerBook G3 Series does not maintain the date and time settings properly.
8. What are the specifications for the PowerBook G3 Series computer?
9. What type of external display can I use on my PowerBook G3 Series computer? What resolutions can I get with an external Monitor?
10. My PowerBook display has pixels that are always on, even on a black background. Can the display be replaced?
11. My PowerBook hard drive makes clacking noises. Is this normal?
12. My fax software does not pick up the call and receive the fax.
13. My PowerBook G3 series loses network services when using the built-in Ethernet port.
14. I am having difficulties when I try to print to a serial printer.
15. I will be travelling overseas and will be taking my PowerBook computer with me. Which adapters do I need for the power and modem?

Question 1: Every time I connect to my Internet service provider (ISP), Apple Remote Access disconnects me after about ten minutes.

Answer: See technical document 24802: "**Apple Remote Access: Disconnects After Ten Minutes**"

Question 2: How can I print from my IrDA-capable PowerBook to an IrDA laser printer?

Answer: See technical document 30861: "**PowerBook: Printing to an IrDA Printer**"

Question 3: Sometimes an out of memory error appears and my PowerBook stops working when using the File Synchronization control panel.

Answer: See technical document 24711: "**Mac OS: Out Of Memory Errors With File Synchronization**"

Question 4: My PowerBook G3 Series battery does not seem to charge when the PowerBook is running. It will charge when the PowerBook in sleep mode. What's wrong?

Answer: These things may prevent the battery from charging while the PowerBook is in use: failure of the charging circuit, a bad battery, or an issue with the AC adapter or wall socket.

To help narrow down the possible cause, follow these steps:

- Shut down the PowerBook. Connect it to AC power overnight and see if the battery is charged. If so, your PowerBook should be repaired. If it does not charge, try the next step.
- Make sure the AC outlet works by plugging another electrical device into the AC outlet and turning on the device.
- If the outlet is working, try another PowerBook AC adapter, if available.
- Download and install the **PowerBook Battery Reset version 2.0** from Apple Software Downloads.

Question 5: My PowerBook G3 Series computer cannot make a modem reconnect after waking from sleep.

Answer: Install ARA Client 3.0.1 Updater. It is available from document 30716: "**About ARA 3.0.1 Client Updater Document and Software**"

Question 6: The bottom of my PowerBook G3 Series computer becomes very warm after extended periods of use. Is there an issue with my PowerBook?

Answer: See technical document 30612: "**PowerBook G3 Series: Operating Temperature**"

Question 7: The internal backup battery in my PowerBook G3 Series does not maintain the date and time settings properly.

Answer: See technical document 30580: "**PowerBook G3 Series: Backup Battery Life**"

Question 8: What are the specifications for the different PowerBook computers?

Answer: Technical specifications are available from the Apple Spec database (http://www.info.apple.com/applespec/applespec.taf)

Question 9: What type of external display can I use on my PowerBook G3 Series computer? What resolutions can I get with an external monitor?

Answer: See these technical documents:

- Document 24614: "**PowerBook G3 Series: Video, Graphics, And Sound FAQ**"
- Document 24232: "**PowerBook G3: Video Out Specifications**"
- Document 28503: "**PowerBook G3 Series: External Video Out**"
- Document 28504: "**PowerBook G3 Series: External TV Out**"

Question 10: My PowerBook display has pixels that are always on, even on a black background. Can the display be replaced?

Answer: If you see a "stuck" pixel on your display, take a look at this technical document, which explains this situation. Document 22194: "**Pixel Anomalies on Active Matrix LCD Panels**"

Question 11: My PowerBook hard drive make clacking noises. Is this normal?

Answer: See technical document 30593: "**PowerBook: Hard Drives and Noise**"

Question 12: My fax software does not pick up the call and receive the fax.

Answer: Occasionally, the modem will go into data mode instead of the idle (fax) mode. When this happens, the modem will no longer answer an incoming fax call. See technical document 24480: "**FaxSTF: Not Picking Up Fax Phone Calls**"

Question 13: My PowerBook G3 series loses network services when using the built-in Ethernet port.

Answer: You may need the G3 Ethernet 2.0.4 software, which is available from document 24540: "**Power Macintosh G3 Ethernet (Built-In) Driver v2.0.4**"

Question 14: I am having difficulties when I try to print to a serial printer.

Answer: Make sure you have turned AppleTalk off in the AppleTalk control panel. These links will provide additional troubleshooting tips:

- Document 30340: "**Mac OS 8.1: Late Breaking Tips**"
- Document 16067: "**PowerBook: Printing to Serial Printer with One Serial Port**"

Question 15: I will be travelling overseas and will be taking my PowerBook computer with me. Which adapters do I need for the power and modem?

Answer: The PowerBook computers can use 115 V and 230 V AC. You will need a power prong adaptor available at many electronic and travel retailers. Review the following technical document for more details. Document 129: "**World Power Differences Can Limit International Product Usage**"

Most modems are not certified to be used in other countries. It would be best to use an external modem purchased in the destination country.

Published Date: Feb 20, 2012

PowerBook G3 Series: External Video Out

What are the external video options on the PowerBook G3 Series?
This article has been archived and is no longer updated by Apple.

External Video

The PowerBook G3 Series (M4753) computers have a built-in connector for an external VGA or SVGA monitor. An included adapter allows you to attach a standard Apple video cable.

The Video port can provide up to millions-of-colors of video output at the following resolutions: (Note: Not all monitors are capable of displaying all the resolutions listed in the following table.)

Resolution	2 MB Video RAM	4 MB Video RAM
512 x 384	24 bpp (millions)	24 bpp (millions)
640 x 480	24 bpp (millions)	24 bpp (millions)
800 x 600	16 bpp (thousands)	24 bpp (millions)
832 x 624	16 bpp (thousands)	24 bpp (millions)
1024 x 768	16 bpp (thousands)	24 bpp (millions)
1152 x 870	8 bpp (256)	24 bpp (millions)
1280 x 960	8 bpp (256)	16 bpp (thousands)
1280 x 1024	8 bpp (256)	16 bpp (thousands)

How do I use an External Monitor?

1. Shut Down or put the PowerBook to sleep.
2. Connect the Monitor to the 15-pin VGA style connector on the back of the PowerBook.

Figure 1, Monitor cable connection diagram

3. Power the Monitor On.
4. Power on or wake the PowerBook.
5. When the PowerBook has booted, choose the resolution to display on the external monitor. It will either cause the external monitor to show the video, or if in a simulscan mode, both the monitor and the PowerBook will display the same image.
6. The PowerBook G3 Series 233/512K L2, 266Mhz, and 300Mhz computers have options for scaled resolutions of the internal display at resolutions of 640 x 480 and 800 x 600. (**Note:** The full capabilities of the displays can be obtained only with the proper driver software. Download and install ATI Driver Update 1.4.7 if you cannot achieve the scan rates listed here when in simulscan mode.)
7. PowerBook G3 Series computers with 12.1 TFT(active matrix) support scaling at 640 x 480 but the standard is still 800 x 600.

How to read all of these choices...

Figure 2, Monitors control strip showing available resolutions after connecting an external monitor to the PowerBook.

Figure 3, Monitors control strip with no external monitors attached.

Figure 4, Monitors control strip showing all of the available resolutions after one of these computers is connected to an external monitor.

1024 x 768 (built-in) - selecting this option will cause the video to only show on a 13.3 or 14.1 inch PowerBook display. On a 12.1 inch display, this setting will be 800 x 600 (built-in).

1024 x 768, 60 Hz (simulscan) - On the PowerBooks with 13.3 or 14.1 inch displays, this setting will mirror the PowerBook display on the external monitor. On a 12.1 inch PowerBook display the option will be 800 x 600, 60 Hz (simulscan).

All of the other options in the list will display that resolution video on the external monitor and turn off the video from the PowerBook LCD.

Display	PowerBook Display Resolution	Simulscan Resolution	PowerBook display video only resolution	Ext. monitor display video only resolutions
12.1	800 x 600, 60 Hz	800 x 600, 60 Hz	800 x 600	all others
13.3 and 14.1	1024 x 768	1024 x 768	1024 x 768	all others

Not all monitors will support this complete list of resolutions. When you connect to an external display and select a resolution from the menu above, after the resolution is changed, you will see a dialog box which asks to confirm your choice. If you press return or do nothing, the resolution will be switched back to what you were running. This is to prevent you from switching to an unsupported resolution. If both displays are blank and the customer does nothing, then the PowerBook will revert to the previous resolution.

Figure 5, Monitor settings confirmation dialog box.

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, read article 24604: "**PowerBook G3, G3 Series: Identifying Different Versions**"

Published Date: Feb 19, 2012

PowerBook G3 Series: External TV Out

How can a PowerBook G3 Series computer be connected to a TV?
This article has been archived and is no longer updated by Apple.

TV Out

Some Powerbook G3 Series models come equipped with a TV out port (also called video out, not to be confused with External Video support) on the rear of the computer. See Figure 1.

Figure 1: TV out port.

It is an S-Video type of connector (the one that looks similar to the keyboard connector).

How Do I Use TV Out?

In the example below, we will use a TV as the device we're connecting to; the same steps apply for VCRs as well.

1. Shut Down the PowerBook or put it to Sleep.
2. Connect the PowerBook G3 Series to the TV using either an S-Video to S-Video cable or an S-Video to RCA Composite Video cable.
3. Set the TV to the line-in or whichever channel will display the PowerBook video (see your TV or VCR manual for this).
4. Power on or wake the PowerBook.
5. When the PowerBook has started up, choose the resolution to display on the TV. You will get a series of options like those shown in Figure 2.

Figure 2: Resolution options.

What Do All Those Video Options Mean?

1024 x 768 (built-in): This is the PowerBook display video-only setting. Selecting this will not display any video to the TV.

All other selections: These are all of the resolutions that a TV can display. Unlike RGB or VGA monitors, TVs can only display computer video at certain resolutions which limits the size of the screens that are selectable.

If you are getting corrupted video on the TV, make sure you have selected a resolution under the (NTSC) selections. The PowerBook G3 Series can use TV Out to both North American (NTSC) and European (PAL) TVs. If you are using a PAL resolution on a U.S. TV, it will give a corrupted video image. To resolve this, disconnect the TV, restart the PowerBook so the display is showing on the PowerBook's display only, follow the directions above and make sure you choose an NTSC setting.

Connecting to a VCR or TV

Figure 3 shows how a TV can be connected to the TV out port of the PowerBook G3 Series. This also applies to a VCR as well.

Figure 3: Connecting a TV.

Aarticle 8405: "**Macintosh: Video Mirroring and Extended Desktop Defined**" provides some additional information on what video mirroring is and when it should be used.

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Article 24604: "**PowerBook G3 & G3 Series: Identifying Different Models**"

TA22568_PowerBook_G_Series_External_TV_Out.pdf

Published Date: Feb 19, 2012

PowerBook G3 Series: Keyboard

How does the keyboard differ from other PowerBook models?
This article has been archived and is no longer updated by Apple.
The keyboard on the PowerBook G3 Series (M4753) computer has a new layout with all the features of an Apple Extended Keyboard. You can hold down the function key to activate the extended keyboard functions. To activate the embedded numeric keypad, you hold down the function key and press the F5 (num lock) key. The num lock LED lights to indicate that the numeric keypad is active. In that mode of operation, only the numeric keypad, the modifier keys, and certain other special functions are active. While the keyboard is in the keypad mode, you can type alphabetical information by holding down the function key.

There are two different states that the keyboard can be put into using the function key. They are: function key held down and num lock active. Below are some illustrations of the keyboard and what the keys will do in each of these different states:

Function key held down - In this mode, the letter and number keys still operate normally, however, the keypad can be used for page up page down, end and home which are usually keys that are located on extended keyboards.

Figure 1, Function key and arrow key locations

Num Lock Mode - This mode is activated by pressing function-F5. When the num lock mode is active, the light to the left of the F5 key will be lit. In this mode, the letter keys are disabled and some are converted to only type numbers as a numeric keypad would operate. The illustration below shows which keys operate as numbers.

Figure 2, Function key, num lock and embedded numeric keypad
Each of the keys that are modified by the function key has small brown-yellow text printed on the key to indicate its uses.

Key Caps
Note: In the illustrations below, the num lock light has been added to the Key Caps graphics. The light is not present on the normal Key Caps desk accessory.

Below are Key Caps illustrations of how this will work:

Figure 3, Num lock light unlit.

Notice that the light right above the 5 key is not lit. This indicates that the keyboard is in normal operation mode. This light indicates whether the num lock is active.

Figure 4, Lit num lock light.

On this keyboard, the light above the 5 key is lit. This is lit by pressing the function key right next to the ctrl key on the keyboard and pressing the F5 key. The light comes on and the only active keys will be ones listed above along with:

arrow keys
function key
ctrl key
option key
command key
space bar
shift key
tab key
caps lock key
escape key
F1 - F12

All other keys are disabled until you press the function-F5 key combination again to return the keyboard back to its normal configuration. Note that when the keyboard is in keypad mode, you can access all of the normal keys by pressing the function key and the key. While the function key is pressed normal keys are accessible.

- You will not be able to use key combinations like command-shift-3 when in the keypad mode. You will still be able to restart the keyboard with ctrl-command-power key.
- When the keyboard is in keypad mode. If you restart the computer, it will remain in keypad mode when it starts up. If you have password security active, the computer will not recognize your password. If this happens check if the num lock light is on, if it is, press function-F5, the light should go off, then you can type in the password.
- If you are using an application which does not support the extended keys, make sure that the function keys are functioning in SimpleText. If the Page Up, Page Down keys are working in SimpleText, then contact the vendor of the application for an update.

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Published Date: Feb 20, 2012

PowerBook G3 Series: RAM

What type of RAM is used in the PowerBook G3 Series computer?
This article has been archived and is no longer updated by Apple.
PowerBook G3 Series computers use SDRAM in a SO-DIMM slot which is smaller than the RAM slots for desktop Power Macintosh computers. There are two SDRAM SO-DIMM slots. One is located on the bottom of the processor card and the other is located on the top portion of the same module. The bottom slot is not customer accessible and RAM replacement or upgrades using this slot must be dealer installed. The top slot is user installable. For instructions on how to install memory in the top slot see the user manual for some models or the Help Center under the Help menu for other models.

PowerBook models ordered with extra RAM through the build-to-order (BTO) program (or CTO configure-to-order), the extra RAM will usually be installed in the upper slot, but can be installed in the bottom slot. This means that a PowerBook purchased through the BTO program may have both RAM slots populated.

To verify, check the Apple System Profiler under the Apple menu. In the Apple System Profiler go to the System Profile tab. Under this tab in the Memory Overview section look at the Built-in memory subsection for the location of any installed memory.

Third-party RAM is compatible if it meets the following criteria:

- 16, 32, 64, or 128 MB module (the PB G3 Series 1999 also supports a 256 module in the top slot).
- 1.0, 1.25, 1.5, or 2.0 inches in height (1.0, 1.25, 1.5 in the lower slot).
- 144-pin.
- 100 MHz or faster.
- 10 nanosecond or faster (a lower number is faster).
- 3.3 volt (V)
- Unbuffered, 64-bit wide, with Serial Presence Detect.

The maximum amount of RAM supported in all PowerBook G3 Series except the PowerBook G3 Series 1999 is 192 MB. This can be achieved by installing a 128 MB module on the upper slot and a 64 MB module in the lower (dealer accessible only) slot.

The maximum amount of RAM supported in the PowerBook G3 Series 1999 is 384 MB. This can be achieved by installing a 256 MB module on the upper slot and a 128 MB module in the lower (dealer accessible only) slot.

Important: The lower RAM expansion slot will only accommodate SO-DIMMs which are 1.0 through 1.5 inches in height. A 2.0-inch DIMM will not physically fit into the slot and cannot be used. EDO SO-DIMM RAM modules are not compatible with the PowerBook G3 Series. If you use an EDO SO-DIMM (from a PowerBook 2400, for example), the computer will start up fine but will not show any RAM increase in the "About this Computer" window.

Notes:

1. iMac RAM is compatible with PowerBook G3 Series computers.

2. For additional information on upgrading the memory, in the PowerBook G3 Series (Bronze keyboard), read Knowledge Base article 58325: "**PowerBook G3 Series (Bronze keyboard): Upgrading Memory**"

3. For additional information on upgrading the memory, in the PowerBook G3 Series, read Knowledge Base article 25002: "**PowerBook G3 Series: Upgrading Memory**"

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Published Date: Feb 19, 2012

PowerBook G3 Series: Control Strip Contents Described

What are the modules in the PowerBook G3 Series Control Strip?
This article has been archived and is no longer updated by Apple.
The Control Strip modules found in the PowerBook G3 Series are, from left to right:

Figure 1, PowerBook G3 series Control Strip modules

AppleTalk
Battery Monitor
CD-ROM Controls
Energy Settings
File Sharing Settings
Hard Disk Spin Down
Expansion Bay (detailed below)
Monitor Bit Depth
Monitor Resolution
Printer Selection
Sound Volume
Sound Source
and, if an external Monitor is present, Video Mirroring (not shown)

Note: The Control Strip graphic above has been split in half to preserve space on the page.

Expansion Bay Control Strip
The media bay control strip shows the current status of expansion bay devices that are installed in the PowerBook. Because expansion bay devices can be hot-swapped (meaning you do not need to shut down to remove them), the control strip can reflect whether a device is installed, and the type of device.

The table below shows the state of the Control Strip in some of the various expansion bay device configurations.

What is installed	Strip Icon	Strip Icon on Mouse Down
Two expansion bay devices installed, left device is a battery.		
Battery installed in left expansion bay.		
Battery installed in right expansion bay.		
No expansion bay devices installed.		

When removing expansion bay devices, its important that the device has ejected any media that was being used.

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Published Date: Feb 19, 2012

PowerBook G3 Series: Infrared Port

What are the features of the PowerBook G3 Series Infrared Port?
This article has been archived and is no longer updated by Apple.
The PowerBook G3 Series (M4753) has built-in infrared that supports two types of transmissions:

- IrDA - up to 4 megabits per second (Mbps) - AppleTalk and TCP/IP
- IRTalk - 230 kilobits per second (Kbps) - AppleTalk Only

Note: PowerBook G3 Series (Bronze keyboard) computers are IrDA compliant but do not support IRTalk.

There are two main differences between IRTalk and IrDA:

1. IrDA is an industry standard, while IRTalk is an Apple-only technology.
2. IrDA supports TCP/IP and AppleTalk, where IRTalk only supports AppleTalk.

The Infrared Control Panel will give information about any Infrared connections that are established as well as what type of infrared the PowerBook is currently set to use. In the window below, IrDA is selected and there are no other Infrared devices in range.

Figure 1, Infrared Control Panel

The options button will present a new window which allows you to select the type of infrared connections you want. You can also select whether or not you are notified if the connection is interrupted. This checkbox will only be available for IrDA and not IRTalk.

Figure 2, Infrared Control Panel Options dialog box

For infrared options to work there are three drivers that must be in the Control Panels or Extensions folder. They are normally installed. They are:

Figure 3, Infrared Control Panel icon

Figure 4, IrDALib Extension icon

Figure 5, IrLanScannerPPC Extension icon

If these are not present or disabled, you will not be able to make infrared connections from the PowerBook.

- If you have used infrared communications with other Apple products, you will notice a difference with this PowerBook. The lens in the rear of the PowerBook has been updated to support IrDA. The new lens has about a 30 degree viewing angle.
- There is also a **maximum** 1 meter distance for recognizing other Infrared devices. Information source, Powerbook G3 series manual, page 47 and product testing.

For more information on IrDA and IRTalk compatibility, see the following article:

Article 20928: "**Macintosh Infrared: Is It IrDA Compatible?**"

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TA22572_PowerBook_G_Series_Infrared_Port.pdf

Published Date: Feb 19, 2012

PowerBook G3 Series: CD-ROM and DVD-ROM Drive Support

What types of CD-ROM and DVD-ROM drives are supported by the PowerBook G3 Series computer?
This article has been archived and is no longer updated by Apple.
The PowerBook G3 Series (M4753) computer has two different drives available for the right expansion bay, a 20x speed CD-ROM and a 1.5x speed DVD-ROM.

Drive Type	Speed
CD-ROM	20 x
DVD-ROM	1.5 x

DVD Facts:

- CD-ROM discs can be used in DVD-ROM Drives.
- DVD-ROM discs cannot be used in CD-ROM Drives.
- DVD-ROM drives will read CD-ROM discs at the approximate speed of a 12x CD-ROM Drive.
- All DVD discs are formatted with the UDF format, similar to ISO 9660, HFS, or FAT.
- UDF formatted discs are readable because of the UDF Volume Access extension.
- CD and DVD-ROM Drives will only fit in the right expansion bay.

The CD and DVD ROM drives are installed by insertion into the bay until an audible click is heard which denotes that the device is safely in place. The software needed is pre-installed by the system software. There is only one driver needed to use the CD and DVD devices which is a unified driver available only for the PowerBook G3. There are the usual assortment of Foreign File Access modules as well as a new file, UDF Access extension, which allows the new format of DVD discs to be mounted.

All of the following files are installed in the Extensions folder and, as mentioned above, are installed by the system software. If you need to reinstall the drivers, you must perform a custom install of the Mac OS (selecting install the CD and DVD software). There is no single, separate installer for just these files.

Figure 1, Necessary CD/DVD drivers

If the drivers are unusable or missing, you will notice that the discs (CD or DVD act the same) will not mount on the desktop.

If the DVD Drive is installed and you cannot mount a DVD disc, make sure that the UDF Volume Access extension is present and not disabled or missing.

If you cannot mount a DVD disc, but can mount a CD-ROM disc, make sure that you have a DVD-ROM drive installed (eject the drive and look at the top label of the drive for the name), then make sure that the correct software is installed.

DVD-VIDEO discs can be mounted on the desktop. However, the movie files on the discs cannot be played without the combination of an MPEG-2 video decoder and an AC-3 audio decoder.

DVD-ROM drives can be affected by issues that affect CD-ROM drives. These include:

- not closing the door firmly
- seating discs improperly on the spindle
- unbalanced discs which can cause read errors and noise
- scratches and expansion damage cause read errors

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Published Date: Feb 19, 2012

PowerBook G3 Series: PC Card

Can the PowerBook G3 Series computer use PC cards?
This article has been archived and is no longer updated by Apple.
The PowerBook G3 Series (M4753) computer has two PC Card slots. Both slots can hold Type I (3.3 mm) and Type II (5 mm) cards, but only the lower slot can hold a Type III (10.5 mm) card. When a Type III PC Card is inserted in the lower slot, the upper slot cannot be used.

The use and installation of PC Cards has not changed from previous models of the PowerBook.

The PC Card slots on the new PowerBook G3 are CardBus slots. This means that they can accept newer 32-bit PC Cards.

The lower PC Card slot has circuitry for handling video signals (zoomed video). Although a zoomed video card is a Type II card, it can only be used in the lower slot.

Zoomed Video
Zoomed Video is a method of displaying video signals sent from a PC card.

CardBus
CardBus is a 32-bit version of the PCMCIA PC Card standard. In addition to supporting a wider bus (32 bits instead of 16 bits), CardBus also supports bus mastering and operation speeds up to 33 MHz. CardBus cards include SCSI, Video in, and Video out (to a monitor) types of cards to name a few.

The slot supports both older 16-bit PC Cards, that work in other PowerBook models, and 32-bit CardBus Cards.

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Published Date: Feb 19, 2012

PowerBook G3 Series: Optional Internal Modem Features

What are the features of the internal modem included with some of the first generation PowerBook G3 Series computer?
This article has been archived and is no longer updated by Apple.
Note: This article relates specifically to the internal modems that shipped with some first-generation PowerBook G3 Series models. The early PowerBook G3 Series shipped with a version of Mac OS 8.1 unique to this model. Upgrading the OS or running the Apple Modem Updater application may change the modem script selection found in the Modem Control Panel and/or modem related files installed within the System Folder.

An internal modem is included in some of the PowerBook G3 Series (M4753) models. The modem is based on Rockwell's K56 Flex technology. It has upgradeable flash ROMs. If you wish to update this modem to the V.90 standard, there is an updater application available from the Apple Software Updates web site.

What connections speeds can I expect when dialing into a K56 Flex provider?
In testing the modem with some of the national internet service providers, speeds ranging from 44000 bps to 48000 bps were consistently achieved. This is representative of average connections speeds for K56 Flex modems.

Phone line noise and service provider line quality are the two most common issues which can cause lower connect speeds with 56k modems.

Where do I plug in the phone line?
Unlike the PowerBook 3400 and PowerBook G3, the PowerBook G3 Series computer has a separate dedicated modem port on the left side of the unit.

The window below shows the correct modem script selected for the internal 56k modem.

Figure 1, Modem control panel

What drivers are necessary to use the modem?

The PowerBook G3 Series Modem Extension is needed for using the internal modem. The PB/GV Internal 56 file is an AppleTalk Remote Access modem script and is optional when not using OT/PPP or ARA (2.1 or greater).

Figure 2, PowerBook G3 Series Modem Extension icon

Figure 3, PowerBook/GV Internal 56 icon

How to tell if the modem is K56 Flex or V.90?
You should launch some type of communications application such as ZTerm or ClarisWorks and type the following command: ATI3
(for more information on how to perform this in ClarisWorks, click here)

You will get a response from the modem that will show whether or not it is still K56 Flex or has been upgraded to V.90. For example, you may see:

```
A811-K56_DLS v1.200_CS
```

This particular string indicates that the modem is still K56 Flex.

Where can I get a list of the AT Commands?

A PDF document containing the complete AT Command list is included on the the System Software CD.

In some documentation, the modem is called an Apple/GV. Although this may imply that the modem is a Global Village modem, Apple provides all support, service, and driver updates for this modem.

Note: This article mentions an Apple software update. You may search for software updates in Apple Downloads at following URL:
http://www.apple.com/downloads

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Published Date: Feb 19, 2012

PowerBook G3 Series: Hard Drive Format

What is the hard drive format used on the PowerBook G3 Series computer?
This article has been archived and is no longer updated by Apple.
The PowerBook G3 Series (M4753) computer's hard disk uses a new, improved file format called Mac OS Extended format (sometimes called HFS Plus). Mac OS Extended format has two benefits:

- it increases the number of files you can store on your hard disk
- it lets your computer work with data more efficiently than previous formats.

Using Norton Utilities
Norton Utilities version 3.5.1 and earlier is not compatible with Mac OS Extended format. If you experience issues with your hard disk, Apple Computer recommends using the disk utility Disk First Aid, which is included on your system software CD.

Warning - Using Norton Utilities version 3.5.1 or earlier on your hard disk can result in hard disk corruption and loss of all your data.

See the Symantec Web site for more information on Norton Utilities and Mac OS Extended format.

Using Other Hard Disk Utility and Disk Locking Programs

Some other disk utility and disk locking programs manufactured by companies other than Apple are incompatible with Mac OS Extended format. Before you attempt to use another manufacturer's disk utility or disk locking program, make sure the version you have is compatible with Mac OS Extended format. Check the documentation that came with the program or contact the manufacturer or the vendor from whom you purchased the program.

Using SCSI Disk Mode (PowerBook Computers)

To use your PowerBook in SCSI disk mode, the computer you are connecting your PowerBook to must have Mac OS 8.1 or later installed. If the computer has an earlier version of system software, you will not be able to see the files on your PowerBook's hard disk.

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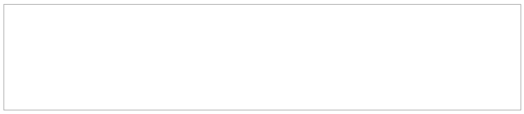
Published Date: Feb 19, 2012

PowerBook G3 Series: Apple System Profiler

What information will I see in the Apple System Profiler on the PowerBook G3 Series computer?
This article has been archived and is no longer updated by Apple.
The PowerBook G3 Series (M4753) is shipping with a new version of Apple System Profiler. The new version supports the reading of serial number and software bundle numbers from the hard disk configuration. This data is stored in the hard drive and will remain there until you perform a low-level format of the hard disk drive.

Here is a closer view of the serial number and software bundle number. This data should also help correlate the machine's configuration with the user's proof of purchase.



If this data is not there or says not applicable (as it does above). This means that the user has done a low level format of their hard drive. There is no harm to losing the information here. It does not affect the warranty or support.

Here is the report generated by Apple System Profiler 1.4 on a PowerBook G3 Series M6477LL/A.

Report Generated: Sat, Aug 2, 1913 at 7:55 AM

System Overview
Machine: PowerBook G3 Series
Machine ID: 314
Finder: v8.1
System: v8.1 US / PB G3 Series Enabler 1.0
Processor: PowerPC G3 at 233 MHz
Active Enabler: PowerBook G3 Series Enabler (1.0)
OpenDoc: v1.2.1
Memory Installed: 32 MB
Virtual Memory: is on
Total Memory: 33 MB
Disk Cache: is on, 96K
Startup Device: None Selected
Serial Number: not applicable
Software Bundle: not applicable

Networking Information
File Sharing: is off
AppleTalk Zone: Unknown
Chosen Printer: No printer has been chosen
Active Port(s): LocalTalk (printer) built-in
Network Software:
Open Transport (v1.3) present and loaded

AppleTalk present and loaded
TCP/IP present but not loaded
Internet (TCP/IP):
not applicable

Volume Information
Total Found: 1

Name: Macintosh HD
Kind: Hard Disk, HFS+
Size: 2 GB
Space Available: 1.8 GB
Bus: Internal ATA
ID: 0
Mounted: Yes
Write Protected: No
Where: (ATA 0, v3.08)

Device Information
Total Buses Found: 3

Bus: Expansion Bay
ID: 0
Device Type: CD-ROM Drive
Capacity: not applicable
Vendor: MATSHITA CR-174
Product ID: not applicable
Revision Number: A011
Interface Type: ATAPI
Removable Media: Yes
Partitions: not applicable

Bus: Internal ATA
ID: 0
Device Type: Hard Drive
Capacity: 2 GB
Vendor: TOSHIBA MK2105MAV
Product ID: not applicable
Revision Number: E5.04 G
Interface Type: ATA
Removable Media: No
Partitions: 1

Control Panel Information
Total Found: 43

- Appearance (1.0.1)
- Apple Menu Options (1.1.3)
- AppleTalk (1.1)
- ColorSync System Profile (2.1)
- Control Strip (1.4.1)
- Date & Time (8.0.1)
- Desktop Pictures (1.0.1)
- Desktop PrintMonitor (2.1)
- Editor Setup (1.2.1)
- Energy Saver (2.1)
- Extensions Manager (4.0.3)
- File Sharing (8.0)
- File Synchronization (1.1)
- General Controls (7.7)
- Infrared (1.1.2)
- Keyboard (8.0)
- Launcher (3.1)
- Location Manager (2.0)
- Mac OS Easy Open (1.1.3)

- MacLinkPlus Setup (9.0.2)
- MacTCP DNR
- Map (7.5.1)
- Memory (7.6)
- Modem (1.0.1)
- Monitors & Sound (1.4)
- Mouse (7.5.4)
- Numbers (7.1)
- OpenDoc Setup (1.2.1)
- Password Security (1.0.7)
- PC Exchange (2.2)
- PowerBook SCSI Disk Mode (1.0)
- PPP (1.0.1)
- PrintMonitor (7.1.2)
- QuickTime Settings (2.5)
- Speech (1.5)
- Startup Disk (7.6.2)
- TCP/IP (1.3.1)
- Text (7.1)
- Trackpad (7.5.7)
- Users & Groups (8.0)
- Web Sharing (1.1)
- Web Sharing Extension (1.1)
- ~ATM (4.0.2)

Extension Information
Total Found: 89

- EM Extension (4.0.3)
- AOL Link (3.0.2)
- Appearance Extension (1.0.1)
- Apple CD/DVD Driver (1.0)
- Apple Color SW Pro CMM (1.0.1)
- Apple Guide (2.2)
- Apple Modem Tool (1.5.6)
- Apple Photo Access (5.2)
- Apple QD3D HW Driver (1.5.3)
- Apple QD3D HW Plug-In (1.5.3)
- AppleScriptLib (1.2.2)
- AppleScript (1.1.2)
- AppleShare (3.7.4)
- ATI 3D Accelerator (3.4)
- ATI Graphics Accelerator (1.3.9)
- ATI Video Accelerator (2.3.4)
- ATI Video Memory Manager (3.2)
- Audio CD Access (5.1)
- Color Picker (2.1.1)
- Color SW 1500 (2.2.1)
- Color SW 2500 (2.2.1)
- Color SW Pro (1.5.2)
- ColorSync (2.1.2)
- Contextual Menu Extension (1.0.1)
- Desktop Printer Spooler (2.1)
- Desktop PrintMonitor (2.1)
- Ethernet (Built-In) (2.0.3)
- File Sharing Extension (7.6.2)
- File Sharing Library (8.0)
- Foreign File Access (5.2)
- High Sierra File Access (5.2)
- ImageWriter (7.0.1)
- Indeo¨ Video (3.22.24.09)
- Intel Raw Video (1.10.20.02)
- Internet Access (1.0.3)
- Internet Config Extension (1.3)
- IrDALib (1.1.2)

- IrLanScannerPPC (1.1.2)
- ISO 9660 File Access (5.2)
- jgdw.ppc (1.0)
- LaserWriter 300/LS (1.2)
- LaserWriter 8 (8.5.1)
- MacinTalk 3 (1.4)
- MacinTalk Pro (1.4)
- MacLinkPlus for Easy Open (9.0.2)
- Memory Manager (1.2.1)
- NetManage WinSock Lib (3.5.1)
- Open Tpt AppleTalk Library (1.3.1)
- Open Tpt Internet Library (1.3.1)
- Open Transport Library (1.3.1)
- OpenOT (1.0.1)
- OpenTpt Modem (1.0.1)
- OpenTpt Remote Access (1.0.1)
- OpenTpt Serial Arbitrator (1.0.1)
- OpenTptAppleTalkLib (1.3.1)
- OpenTptInternetLib (1.3.1)
- OpenTransportLib (1.3.1
- PowerBook G3 Series Modem (1.0)
- PowerBook ZoomedVideo (1.2)
- Printer Share (1.1.3)
- PrintingLib (8.5.1)
- PrintMonitor (7.1.2)
- QuickDraw 3D (1.5.3)
- QuickDraw 3D IR (1.5.3)
- QuickDraw 3D RAVE (1.5.3)
- QuickDraw 3D Viewer (1.5.3)
- QuickTime (2.5)
- QuickTime MPEG Extension (1.0)
- QuickTime Musical Instruments (2.5)
- QuickTime PowerPlug (2.5)
- QuickTime VR (2.0.1)
- Serial (Built-in) (1.3.3)
- Serial Tool (1.0.2)
- Shared Library Manager (2.0.1)
- Shared Library Manager PPC (2.0.1)
- SOMobjects for Mac OS (2.0.8)
- Speech Manager (1.4)
- StyleWriter 1200 (2.1.1)
- SystemAV (1.4)
- TCPack for AOL (2.2.5)
- Text Encoding Converter (1.3)
- Text Tool (1.0.1)
- TTY Tool (1.0.1)
- UDF Volume Access (1.0)
- Video Startup (1.7.1)
- VT102 Tool (1.0.2)
- Web Sharing Extension (1.1)
- XMODEM Tool (1.1)
- ¡AppleVision (1.5.3)

System Folder Information
Total Found: 1
Macintosh HD:System Folder

Application Information
Total Found: 73
ConvertAICK (1.0.3)
Acrobat Reader 3.01 (3.01)
Add Alias to Apple Menu (8.0)
Alert When Folder Changes (8.0)
America Online (3.0.2a)
America Online (3.0.2a)

AOL Diagnostic (3.0)
AOL Scheduler (3.0.1)
Apple Applet Runner (2.0)
Apple Browser Launcher (1.0.1)
Apple IR File Exchange (1.2.4)
Apple Video Player (1.7.1)
AppleCD Audio Player (2.2)
Browse the Internet (1.0)
Claris Emailer Lite 1.1v4 (1.1v4)
DataViz FileView (9.0.2)
DataViz TechWeb 1/97.sea (4.0)
Desktop Printer Utility (1.0)
Desktop PrintMonitor (2.1)
DigitalColor Meter (1.0)
Disk First Aid (8.1)
Document Converter (1.1)
Drive Setup (1.4)
DropStuff w/EE 4.0 Installer (4.0)
Eric's Solitaire Sample (1.0.2)
Eudora GURL Handler (1.0.3)
Find File (1.1.3)
Graphing Calculator (1.0)
Hide/Show Folder Sizes (8.0)
HyperCard Player (2.3.5)
Install Remote Access (4.0.6)
Install Remote Access (4.0.6)
Internet Config (1.3)
Internet Dialer (1.0.3)
Internet Editor Assistant (1.0.3)
Internet Explorer 3.01 (3.01a)
Internet Setup Assistant (1.0.3)
Internet Setup Utility (1.0.3)
ISP Registration Assistant (1.0.3)
Jigsaw Puzzle (1.0.1)
Mac OS Setup Assistant (1.0)
MacLinkPlus How to Demo (4.0.4)
MacLinkPlus Version Checker (1.1.1)
Mail (1.0)
Monitors & Sound (1.4)
MoviePlayer (2.5.1)
Netscape Navigator 3.01 (3.01US)
Note Pad (7.5)
OpenDoc Setup (1.2.1)
OpenDoc (1.2.1)
PPP Connect (1.0.1)
PPP Disconnect (1.0.1)
PPP Reconnect (1.0.1)
PPP Save Log (1.0.1)
PPP Status (1.0.1)
PrintMonitor (7.1.2)
Register MacLinkPlus (9.0.2)
RunA3M.ppc (3.5F1)
Scrapbook (7.5.2)
Script Editor (1.1.2)
Share a Folder (8.0)
Share a Folder (no Guest) (8.0)
SimpleSound (1.0)
SimpleText (1.4)
SimpleText (1.4)
Start File Sharing (8.0)
Stickies (1.0.3)
Stop File Sharing (8.0)
StuffIt Expander (4.0.2)
Synchronize Folders (8.0)
Upgrade From AICK (1.0.3)

TA22577_PowerBook_G_Series_Apple_System_Profiler.pdf

Web Sharing Extension (1.1)
WebWhacker 3.0 (WebWhacker 3.0.0.10)
Published Date: Feb 19, 2012

PowerBook G3 Series: About This Computer

What information should I expect to see in the About This Computer window?
This article has been archived and is no longer updated by Apple.
Here is the **About This Computer** window on a PowerBook G3 Series computer.

Figure 1 About This Computer window

It shows that the unit ships with Mac OS 8.1 running the PB G3 Series Enabler 1.0

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, read article 24604: "**PowerBook G3, G3 Series: Identifying Different Versions**"

Published Date: Feb 19, 2012

What is the Status of Claris Organizer and ClarisWorks?

This article provides the status of Claris Organizer and ClarisWorks.
This article has been archived and is no longer updated by Apple.

Claris Organizer

Apple has acknowledged the sale of Claris Organizer to 3Com's Palm Computing subsidiary. Palm will use the product as a part of its MacPac connection solution for Palm computers. Full details are available at: **http://www.palm.com**.

Apple continues to offer technical support for all Claris-labeled versions of the product. Consult the materials that came with your copy of Claris Organizer for details on how to obtain technical support. You may also wish to consult Apple's discussion area at http://discussions.apple.com/.

3Com/Palm will support future versions of the product published under their label.

ClarisWorks

ClarisWorks has been rebranded as "AppleWorks" and is bundled with some Apple products. Consult the materials that came with your copy of ClarisWorks or AppleWorks for details on how to obtain technical support.

Published Date: Feb 19, 2012

LaserWriter Family: Adjusting Default Timeout Values

The following information discusses LaserWriter timeouts and the defaultvalues of these timeouts.
This article has been archived and is no longer updated by Apple.
The LaserWriter family has three types of "timeouts" that cancel an existing job on expiration:

- Job timeout: duration time of the job.
- Feed timeout: time allowed to manually feed the paper.
- Wait timeout: time the printer waits for additional input on the current job.

The following table contains the default values of these timeouts; a PostScript program can be used to change the defaults for a current job, if necessary (see below).

LaserWriter	Job Timeout	Manual Feed Timeout	Wait Timeout
LaserWriter	0 (never)	60 seconds	30 seconds
LaserWriter Plus	0 (never)	60 seconds	30 seconds
LaserWriter Plus (Rev. 47 ROMs)	0 (never)	60 seconds	40 seconds
LaserWriter IINT/IINTX	0 (never)	60 seconds	40 seconds
LaserWriter IIf/IIg	0 (never)	60 seconds	300 seconds
LaserWriter Pro 600/630	0 (never)	60 seconds	300 seconds
LaserWriter Pro 810	0 (never)	60 seconds	40 seconds
Personal LaserWriter NT	0 (never)	60 seconds	300 seconds
Personal LaserWriter NTR	0 (never)	60 seconds	300 seconds
Personal LaserWriter 320	0 (never)	60 seconds	300 seconds
LaserWriter Select 360	0 (never)	60 seconds	300 seconds
LaserWriter Pro 16/600PS	0 (never)	60 seconds	300 seconds

Note:
Appendix D of "PostScript Language: Reference Manual", available from Addison-Wesley (ISBN# 0-201-10174-2), contains additional information on timeouts and default adjustments.

Changing the timeout is done with the "setdefaulttimeouts" PostScript operator. This operator establishes the default values, job, manual feed, and wait for the three timeouts.

At the beginning of each job, these values are used to initialize the job, manual feed, and wait timeouts. Each parameter must be a non-negative integer denoting the length of a timeout in seconds. The value of 0 indicates that the corresponding timeout should never occur. A PostScript program, like the one that follows, can be sent to the printer to change timeout values.

Caution:

If you choose to use the PostScript code provided in this article, you assume all risks involved in making these changes. PostScript code, if not entered correctly, can place the LaserWriter into a condition requiring service.

```
%=============================================
% Begin PostScript Code
%
serverdict begin 0 exitserver
statusdict begin
# # # setdefaulttimeouts
end
%
% end PostScript Code
%=============================================
```

where # # # should be replaced by the job, manual-feed, and wait-timeout values in seconds. For example, if you want to change the manual-feed timeout of the LaserWriter IIg to 120 seconds and keep the other values at their default setting, the PostScript program should look like this:

```
%=============================================
% Begin PostScript Code
```

```
%
serverdict begin 0 exitserver
statusdict begin
0 120 300 setdefaulttimeouts
end
%
% end PostScript Code
%═══════════════════════════════════════════
```

The PostScript program then can be downloaded to the printer using the LaserWriter Utility 7.1 (or later).
Published Date: Feb 19, 2012

HSV-To-RGB Mapping and Color Models (Part 1 Of 2)

A two-part article on HSV-to-RGB mapping and color models.
This article has been archived and is no longer updated by Apple.
There are several color models for color monitors. The most common are:
- HSV
- HSL (synonymous with HIS)
- CMY
- RGB
- YIQ

Note: The Color Picker Package defines parameter values from 0 to 65535 for each of these models.

The Macintosh II Color Picker Package uses the RGB, CMY, HSV, and HSL models. Each of them is described below.

The RGB and CMY Models (Red-Green-Blue and Cyan-Magenta-Yellow)
The RGB model defines its colors as mixtures of the additive primary colors: red, green, and blue. The RGB model organizes colors into a three-dimensional cube. Differing values of red, green, and blue define the model. (The human eye can see all visible colors in combinations of three base colors.)

The CMY model features cyan, magenta, and yellow values. These are the subtractive (or complementary) primary colors. The model works in the same manner as the RGB model--that is, a three-dimensional cube is fashioned with the three color values.

The association between RGB and CMY is one-to-one: cyan is the complement of red, magenta the complement of green, and yellow the complement of blue. A color defined in values for red, green, and blue in the RGB model is defined in values of cyan, magenta, and yellow in the CMY model. For conversion purposes, each of these two models is the other's complement.

For example, given a maximum value of 65535 and a minimum value of 0, a pure red color in the RGB model containing 65535 red, 0 green, and 0 blue has a CMY color of 0 cyan, 65535 magenta, and 65535 yellow.

The HSV Model (Hue-Saturation-Value)
The HSV model appears as a color cone. The three parameters describing this cone are hue, saturation, and value.

"Hue" - describes the primary attributes of a color. A color hue for purple has both red and blue primary attributes or hues. A given purple may contain more blue than red; therefore, the hue of that purple is blue.

"Saturation" - is a value measuring the amount of mixing between primary colors like red, green, and blue. A fully-saturated red contains only the color red and has no other primary color attributes; that is, no mixtures of blue or green. Colors that are slightly or minimally saturated contain mixtures of the primary colors and might contain red, green, and blue. A color that has no saturation at all is white. In the HSV model, the primary colors appear along the edges. They mix toward the center, growing lighter in hue and becoming less saturated as they near the center. The center is white, and contains equal amounts of all the colors.

"Value" - describes the brightness of a color. A red can be made brighter or darker by adjusting its value. A white in the center of the HSV model becomes darker, grows to gray, and finally becomes black if followed along the center of HSV model to its point.

The HSV model is a single-cone shape based on the coordinate values of hue, saturation, and value. Colors are mixed within the cone and appear as primaries along the edges, spaced every 60 degrees. The colors following green on the perimeter, are yellow, red, magenta, blue, cyan, and back to green (or the reverse, depending on direction around the cone). The color white is anywhere on the center line of the cone where all the colors are mixed evenly, and the value or brightness is at a high level.

In the HSV model, the apex describes the lowest intensity level, and the base describes the highest intensity level of a color. Points within the cone are colors made up of mixtures of hue and saturation. A color's intensity is the point's distance above the base.

Visualize a cone with a hexagon just fitting the mouth of the cone. In this cone, these edges represent the primary colors. The center of the hexagon is a white wire with one end at the tip of the cone. The wire, while white at the wide end or base, grows more gray as it recedes to the tip, where it at last becomes black.

The HSL (Hue-Saturation-Luminance)
The HSL (or HIS, hue-intensity-saturation) model is a double cone with the bases connected. It follows the same parameters as the HSV model, but the colors filling the base and sides have values rising and falling to each apex of the cones. The apexes are defined as the brightest color point (white) and the lowest color point (black)--similar to the HSV model, where the apex gradually darkens, and all colors fade to black. However, in HSL the colors fade to black AND white. The colors rise in value, becoming brighter, but are also brought closer together by the angle of cone's surface toward the white center. This model is used in Tektronix display devices.

"Intensity" and "luminance" both define the strength or brightness of a color. This is like the "value" parameter of the HSV model, but is defined with the brightest primary color values occurring in the center of the model instead of at one end. The colors could become brighter near the white point, but lose their identity when they mix with other colors as they approach the white apex.

To model HSL/HIS, two cones are connected to make a hollow shape with the hexagon sandwiched inside. The lines extending from the points on the hexagons connect to the points on both cones.

Note: This article is continued in Article 2992: **HSV-To-RGB Mapping and Color Models (Part 2 Of 2)**
Published Date: Feb 20, 2012

HSV-To-RGB Mapping and Color Models (Part 2 Of 2)

The second of a two-part article on HSV-to-RGB mapping and color models.
This article has been archived and is no longer updated by Apple.

Converting from RGB to HSV or HIS

When converting HSV to RGB, the HSV model always has at least one RGB value equaling the intensity or value of the HSV model color.

When converting HSV to RGB, the HSV model sets the value parameter to the largest RGB value.

When converting RGB to HSL/HIS, the HSL model always sets the luminance or intensity parameter to equal the midrange of the RGB values.

The hue values for the HSV model always equal the hue values from the HSL model.

References

"Raster Graphics Handbook" Conrac Division, Conrac Corporation Van Nostrand Reinhold Company Inc.
135 West 50th Street
New York, New York 10020

"Fundamentals of Interactive Computer Graphics" James D. Foley, Andries
Van Dam, Addison-Wesley Publishing Company Menlo Park, CA

For the HSL model (also called HIS), both books use "Status Report of the Graphics Standards Committee," Computer Graphics volume 13, number 3, Association for Computing Machinery, New York, August, 1979.

The HSL model provided in both books is based on the SIGGRAPH article. There is a typographical error in the calculation for converting from RGB to HSL. This error appears in the article and is replicated in the books.

The correct calculation for color saturation from red, green, and blue values is:

```
If luminance <=.5 then
  saturation := (max - min) / (max + min)
else
  saturation := (max-min) / (2 - min - max)
```

Apple, Inc. uses the corrected calculation in its Color Picker Package.

Note: Part 1 of this article can be found in Article 2991: **HSV-To-RGB Mapping and Color Models (Part 1 Of 2)**
Published Date: Feb 19, 2012

DVD Studio Pro: Update your DVD@ccess to fix a hang or no-launch issue with Windows XP

This article has been archived and is no longer updated by Apple.
A new update to DVD@ccess, software used with DVD Studio Pro and discs produced by it, can fix these issues:

- The DVD@access 2.0 Installer on Windows XP will not launch DVDaccess.exe on start-up.
- When you Log Off Windows XP with DVD@ccess active, the computer may become unresponsive ("hang"), displaying only a blue screen.

This affects users who have not upgraded to DVD Studio Pro 3 who are authoring discs that include DVD@ccess links.

Who needs this update

- Macintosh users who are authoring DVDs containing DVD@ccess on a version prior to DVD Studio Pro 3. The DVD@ccess.exe file is what gets written to your DVD in order for Windows users to have access to DVD@ccess functionality.
- Windows users who receive a disc containing DVD@ccess Links that was authored in a version prior to DVD Studio Pro 3

Getting the update

Click here to download the DVD Access Update.

Installing the update

Mac OS:

1. Download the DVD@ccess.exe file.
2. Control-click the DVD Studio Pro Application icon, and choose **Show Package Contents** from the shortcut menu.
3. In the window that appears, navigate to: Contents/Resources/DVDccess
4. Copy DVD@ccess.exe into the DVDccess folder. If it asks you if you want to replace the existing DVD@ccess file, click Replace.

Windows:

Before installing, uninstall the existing DVD@ccess.exe using the Add or Remove Programs control panel.

Note: If you do not have a previous version of DVD@ccess installed, skip to Step 6.

1. From the **Start Menu**, choose **Control Panel**.
2. Double-click the Add or Remove Programs icon.
3. Highlight DVD@ccess 2.0, and click the Change/Remove button.
4. Click Yes in the dialog that asks, "Are you sure you want to completely remove 'DVD@ccess 2.0' and all of its components?"
5. Click "Yes, I want to restart my computer now."
6. Double-click the newer DVD@ccess.exe that you downloaded.

Published Date: Feb 19, 2012

Logic Pro 7: Audio file is distorted after Digital Mixdown

This article has been archived and is no longer updated by Apple.
After merging some audio Regions in the Arrange window using either the Glue tool or choosing the Region > Merge > Region menu option, the level of the resulting audio file is about 6dB higher than before. When using the bounce function, the level stays the same.

This happens when a stereo audio file is played back on a mono audio track. When playing back a stereo file on a mono track, Logic Pro automatically adapts the level. Thus, bouncing results in a corrected level. When using Digital Mixdown for a stereo file on a mono track, the stereo file will be converted into a mono file. This means that the level of the left and the right channel are added.

To avoid this when using Digital Mixdown, make sure that the file type (mono/stereo) matches the track setting. Alternatively, you can use the bounce function to merge stereo audio Regions into a mono file.

Published Date: Feb 19, 2012

FireWire volumes and Logic Pro‘s Project Manager

This article has been archived and is no longer updated by Apple.
If you scan a FireWire volume with Logic Pro's Project Manager and connect the drive to another computer, you don't need to scan the volume again.

After connecting the volume:
Choose Edit > Import file maps from the local menu of the Project Manager.

Why does this work?
When scanning a volume with the project manager, a filemap is created in the root directory of the scanned volume. The data is stored as a hidden file named ".Logic PM Database" in Mac OS X (this is also the case with internal volumes). The function Edit > Import file maps from the local menu of the Project Manager reads this file and provides the Project Manager data for the volume immediately.

Published Date: Oct 7, 2016

Logic Pro 7: Strange characters in EXS24 instrument menu

This article has been archived and is no longer updated by Apple.
Some Sampler Instruments or subfolders for the EXS24 show unexpected names in the Sampler Instruments menu, such as "6 String Bass Guitar P#CDF1.EXS".

The EXS24 can display up to 31 characters, including the file name extension. Longer names will be shortened in the display, and a hexadecimal number is added in order to prevent duplicate names.

While the instrument will still work, you can prevent this by renaming the file or folder in the Finder, making sure not to use more than 31 characters, including the .exs file extension.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

Logic Pro 7: ReWire stream stutters in cycle mode

This article has been archived and is no longer updated by Apple.
When a Logic Pro song runs in cycle mode, audio streams of a ReWire slave application stutter or stumble each time the Song Position Pointer jumps back to the start of the cycle.

This issue only occurs when the cycle starts at bar 1. If the cycle start is set to bar 2, the audio playback loops smoothly. In order to prevent this:

1. Move the song content to bar 2.
2. Set the cycle to start at bar 2.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

Logic Pro/Express 7.0: "Some Text Fonts Are Missing" message

This article has been archived and is no longer updated by Apple.
When Logic Pro and Logic Express start up, you get the alert message "Some Text Fonts Are Missing." The software still works properly, but some text fonts may not be available.

Logic 7.0 can handle up to 253 fonts. This refers to the total of fonts in the System and user Font folders. The fonts are loaded in alphabetical order, and no fonts after number 253 will be available.

Click here for more information on Font locations.

This issue is resolved in Logic Pro/Express 7.1, because there is no longer a limit on the number of fonts Logic can use.

Regardless of the Logic issue, you might also consider managing your fonts with a utility such as Font Book or third-party font management software.

Before upgrading to Logic 7.1, another workaround is to create a new user account for working with Logic, making sure the total number of fonts for this user is less than 253.

Published Date: Feb 19, 2012

Logic Pro 7: Short dropout in monitor signal after Punch Out

This article has been archived and is no longer updated by Apple.
If the Replace button in the Transport Window is active, there may be a short dropout in the monitor signal after "punching out" a recording.

Specifically, it happens when the Replace button in the transport window is active and the recording is punched in and out with the key command for Toggle Record. The monitor signal then drops out for an instant as soon as the recording is ended (punch out).

Because the issue affects only the monitor signal, the audio is recorded correctly. It only occurs if the Replace option is active when record is toggled manually. It does not occur when using the Auto Drop function together with Replace.

To avoid the drop out of the monitor signal, disable Replace in the Transport Window. This will record the audio without replacing the old parts of the track. The newly recorded audio Regions will be placed above the old ones in the Arrange Window, resulting in only the new audio regions being played back. If needed, the sections of the previous recording can be removed manually or using the "No Overlap" mode from the local Drag menu.

Published Date: Feb 19, 2012

Logic Pro 7: Audio Instrument does not play

This article has been archived and is no longer updated by Apple.
When playing an Audio Instrument with the MIDI keyboard, you hear no signal. Logic Pro's Transport window reflects the MIDI input, but the mixer channel does not show any level.

A workaround is to start the playback. After that, the Audio Instrument can be played as usual.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

Logic Pro 7: Freeze files will not play before the first bar

This article has been archived and is no longer updated by Apple.
After using the Freeze function, all material that was located before bar 1 will not play.

Symptom

If the song start is set before the first bar, and a track containing regions before bar 1 is rendered with the Freeze function, then the material before bar 1 remains silent when playing back the song.

Solution

Set the song start to bar 1 and move all regions to a later position.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

Logic Pro 7: AudioSuite plug-in windows cannot be closed

This article has been archived and is no longer updated by Apple.
Digidesign AudioSuite plug-in windows are missing the usual buttons for closing the window.

Symptom
When using Digidesign AudioSuite plug-ins on a Digidesign TDM system with Logic Pro as the front-end application, the plug-in windows are missing the usual buttons for closing the window and therefore cannot be closed using the mouse.

Solution
For Logic Pro 7.0, use the keyboard shortcut Command-W to close AudioSuite plug-in windows.

The issue has been resolved in Logic Pro 7.1 or later, in which the buttons are available.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 19, 2012

Logic Pro 7: Don‘t use special characters for filenames during OMF export

This article has been archived and is no longer updated by Apple.
When exporting an OMF file from Logic Pro, an alert says:

"An OMF error has occurred. Error code 18. Description: OMFI_ERR: Cannot open File"

The export is then cancelled.

This happens when the file name contains an umlaut or another special character. The OMF library does not support these characters. Check your filename for special characters and use a different filename for the OMF file.

Published Date: Feb 19, 2012

Logic Pro 7: "Error while Trying to Synchronize Audio and MIDI" with 48kHz

This article has been archived and is no longer updated by Apple.
After switching the sample rate for DAE to 48kHz, you get this message each time the playback is started:

"Error while Trying to Synchronize Audio and MIDI. Sample Rate 48000 recognized"

This happens because the sample rate was changed to 48kHz within the Digidesign Hardware Setup panel in the local options menu of the Audio window. This changes the sample rate of the TDM hardware but does not change the sample rate in Logic Pro as the front-end application. So, Logic Pro still expects a sample rate of 44.1kHz while the audio hardware is running at 48kHz.

To prevent this, the sample rate must always be changed within Logic Pro via the menu Audio > Samplerate ... or within the audio window via Options > Sample rate. This will change the sample rate for Logic and DAE.

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Published Date: Oct 7, 2016

Logic Pro 7: Using MIDI keyboard with fast user switching

This article has been archived and is no longer updated by Apple.

Logic Pro is fully supported with fast user switching in Mac OS X 10.3. However, only one account can access a MIDI interface at a time. This means that notes you play on an external keyboard may play the software synthesizer of account (A) instead of the current user (B). To remedy this, switch to account A, quit Logic Pro, and switch back to account B.

Published Date: Oct 7, 2016

Logic Pro 7: A track imported from an audio CD contains only noise

This article has been archived and is no longer updated by Apple.
A track that has been imported from an audio CD into Logic Pro contains only noise.

Symptom
When listening to an audio file, the file contains only noise.

This happens when you have added a track directly from an audio CD into Logic Pro using the "Add Audio File" dialog. You then copied the track to the hard drive using the "Copy/Convert Audio File(s)" function in the local Audio File menu of the Audio window.

Solution
This issue only occurs when saving the audio file from within Logic Pro in AIFF format. It does not occur with the WAVE or SoundDesigner II file format.

To avoid this, you should first copy the CD track to your hard disk in the Finder, and then import it into Logic Pro from there. In this case, the AIFF file format can be used.

If you have already imported the track directly from CD into Logic Pro, then set the file format in Logic Pro's Copy/Convert dialog to "WAVE" or "SoundDesigner" when saving the track to the hard disk.

You can resolve the issue by upgrading to Logic Pro 7.1, in which you can now copy/convert audio files imported from CDs as AIFF.

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Published Date: Oct 7, 2016

Logic Pro 7: Startup modifier keys

This article has been archived and is no longer updated by Apple.
By holding down modifier keys during application launch, you can put Logic Pro in one of several troubleshooting modes.

To do that, just double-click the Logic Pro application icon, then hold down the respective modifier key(s) until a dialog pops up or Logic is fully loaded.

Modifier key(s)	Description	Purpose
Control	Start without Audio	This can be helpful to rule out problems with a specific Core Audio driver. In some cases, Logic Pro may stop responding or quit unexpectedly while initializing the Core Audio driver. In these cases, start Logic Pro without Audio. If needed, turn on Built-In Audio for the troubleshooting.
Shift-Control	AU-Safe Mode	This will only load Audio Units that have passed the Audio Units Validation Tool which is automatically launched on the very first startup of Logic Pro. If you have enabled Audio Units which did not pass this test, you may experience unexpected quitting or misbehavior. With this option, you may revert Logic Pro to a stable state.
Command	"Please enter your activation code" Dialog	This brings up the XSKey dialog which allows you to enter an XSKey activation code which was delivered with the upgrade to Logic Pro 7. If you did not enter your activation code when you first started Logic Pro, you can enter it by using Command as a startup modifier key.
Shift-Command	"Manual Authorization" Dialog	This brings up the XSKey dialog which allows you to enter an XSKey authorization code and shows the XSKey number. If you have no Internet connection on the computer with Logic Pro, you must get an authorization code manually. An authorization code can be retrieved from here or from an AppleCare representative.
Option	Start without Autoload/Template/LastRecent	This will start Logic Pro without loading a Template, Autoload or last opened Song. It is useful for troubleshooting any kind of issue as it excludes the possibility that the reason for a problem is specific to or caused by the currently loaded song. Choosing File > New with the Option Key held down will load a plain empty default song for troubleshooting.

Published Date: Feb 19, 2012

Logic Pro 7: Folder content keeps playing outside of folder

This article has been archived and is no longer updated by Apple.
The content of a folder keeps playing if it exceeds the length of the folder.

When shortening a folder, the content's playback will not be cut at the folder's end. In a folder, a MIDI note or an audio file will be played in whole, even if it exceeds the folder length. This only affects MIDI notes or audio files that start within the folder limits.

There are two workarounds, cutting the content at the folder's end or cutting the folder.

Workaround 1: Cut the content at the folder's end

1. Select the folder.
2. From the local menu, choose **Region** > **Set Locators by Region**.
3. Double-click the folder to open it.
4. Select all regions.
5. From the local menu, choose **Region** > **Split/Demix** > **Split Regions by Locators**.

Note: When splitting MIDI regions, overlapping notes will be shortened or split destructively. If you re-extend a folder after splitting a contained MIDI region, these notes will remain split or shortened.

Workaround 2 (applicable only to folders which contain only audio files): Cut the folder instead of resizing it.

Published Date: Feb 19, 2012

Logic Pro 7: No panorama information in the send signal

This article has been archived and is no longer updated by Apple.
An audio signal routed via Send to a Bus remains unaffected by the pan setting of the Track.

When an audio track is panned hard left or right, the signal that is routed via a Send to a Bus does not reflect the original panning of the track. The signal is always sent as if it was panned to the center. Sends are always routed pre-pan (before the pan pot). Therefore the panning of the audio track does not affect the panning of the Send signal. This does not mean that stereo sends are mono. They carry a real stereo signal, but they don't reflect the panorama setting of the main audio track.

You can modify your routing in order to achieve post-pan sends as follows:

1. Route the output of the audio track to a Bus, and use this Bus as the input for an Aux object as shown below in Figure 1. In our example, we route the signal from Audio 1 via Bus 1 to Aux 1 (1).
2. Aux objects have their own sends which allow to send the signal to another Bus. Use the Send of the Aux object to send the signal to the Bus where your effect plug-in resides. In our example, we use Bus 10 for the reverb plug-in Space Designer (2).

Figure 1 The routing for post-pan Sends.

As the level meters in the picture show, the panning of the Audio track is now reflected in the send signal from the Aux track to the effect Bus. Please be aware that in this setup the panorama must always be adjusted in the Audio track, not in the Aux track, because the Aux track's Send is again pre-pan.

Published Date: Oct 7, 2016

Logic Pro 7: Undo after step input deletes region

This article has been archived and is no longer updated by Apple.
When using step input in a newly created region, the Undo command may delete the region instead of the events under certain circumstances.

After creating an empty region, notes are created via step input within the Matrix Editor (applies for other editors as well). If the last input should be undone using the Undo command, the region will be deleted. An empty Matrix Editor is visible, and no events can be input anymore.

To prevent this, delete the unwanted events by selecting them and pressing the Backspace key.

This document will be updated when additional information is available.

Published Date: Feb 19, 2012

Logic Pro 7: Instruments open up in Controls view after double-clicking

This article has been archived and is no longer updated by Apple.
When double-clicking an instrument in the Input slot, the plug-in opens in the Controls view instead of the Editor view.

This can happen after dragging a software instrument loop (e.g. "70s ballad drums") from the Loop Browser onto an Audio Instrument track.

When this happens, switch to Editor view manually via the Editor menu at the top of the plug-in window.

Published Date: Oct 7, 2016

Logic Pro 7: Nodes could not be found or failed to connect

This article has been archived and is no longer updated by Apple.
Even though the computers are switched on and connected to gigabit Ethernet with the Logic Node application running, some Logic Nodes may not be found on the network.

When starting Logic Pro or relaunching the audio driver, you get one of these messages:

- "The following selected node failed to connect: nodename" followed by the node name, or
- "None of the selected Nodes could be found on the network."

There are several possible causes for this, so you need to review each of the following to determine which affects your configuration.

The Computer's name contains a special character

When the node computer's name contains a special character such as an apostrophe or an umlaut, it may not be found on the network. Please make sure the computer names of node computers contain only alphanumerical characters.

To change the computer name:

1. From the **Apple Menu**, choose **System Preferences**.
2. From the **View** menu, choose **Sharing**.
3. Change the name in the Computer Name field.
4. Quit System Preferences.

It may also be necessary to delete this file before connecting to the node:

~/Library/Preferences/Logic/com.apple.LogicNodes.plist

A Firewall is active on the Node computer

If a Firewall is active on the Node computer, the Node cannot be found because the port for the Node connection is blocked. Node computers cannot have an active Firewall.

To turn off all Firewalls off on the Node computer:

1. From the **Apple Menu**, choose **System Preferences**.
2. From the **View** menu, choose **Sharing**.
3. Click FireWall.
4. Click the Stop button.

The Node computer is in sleep mode

Node access does not wake up the Node computer from sleep mode. This may happen when Logic has not been running on the Logic master computer for a while. Either keep Logic running when nodes are connected, or set the sleep mode for the Node computer to Never in System Preferences.

To set the sleep mode:

1. From the **Apple Menu**, choose **System Preferences**.
2. From the **View** menu, choose **Energy Saver**.
3. Click Sleep, and drag the top slider to Never.

Node not available

If a Node is set in Logic Pro > Preferences... > Audio > Nodes, then Logic Pro will try to connect to this Node at every start. If the Node is not available (either because the computer is down or the Logic Node application has been quit or not yet started), then you will see this alert.

The solution in this case is to Start the Logic Node application on the corresponding computer or remove it as a Node in the preferences.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Logic Pro 7: Apple Loops cannot be exported as new audio files

This article has been archived and is no longer updated by Apple.
The "Convert Regions to new Audio Files" function does not work with Apple Loops.

Nothing happens when you select an Apple Loop in the Arrange window and choose "Convert Regions to new Audio Files" from the local Audio menu. No new audio file is created, and no alert appears.

This function currently only works for normal audio regions, not for Apple Loops.

If you need to convert an Apple Loop
In order to convert an Apple Loop into a new audio file while preserving the transpose and tempo settings of the current song, use the function:

File > Export > Region as Audio File...

Note: This will export the Apple Loop as a new audio file but will apply all plug-in effects that have been inserted into the track where the Apple Loop resides. To export the Apple Loop without these effects, bypass them before exporting the Region. To bypass a plug-in, click the plug-in insert slot while holding down the Option key. The new audio file isn't automatically added to Logic Pro's Audio window. To use it in your song, drag it from the Finder to the Arrange or Audio window.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

About the Mac OS X 10.3.6 Update (Delta)

This article has been archived and is no longer updated by Apple.
This software updates Mac OS X 10.3.5 to version 10.3.6. **Tip**: If you have version 10.3, 10.3.1, 10.3.2, 10.3.3, or 10.3.4, update with the combo update instead.

Important: Read Before Installing

- You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.
- The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.

Installation

There are two ways to update to Mac OS X 10.3.6, Software Update or standalone Installer. You only need to use one of these methods to update.

Automatic Software Update

Software Update, located in System Preferences, can automatically download and install the latest Apple software. Software Update may have linked you to this document for additional information about the update.

This update's size may vary from computer-to-computer when installed via Software Update.

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

Two versions of the Installer are available from Apple Downloads as a standalone update that you can use without being connected to the Internet.

- A "delta" that updates Mac OS X 10.3.5 to 10.3.6 (described in this document), and
- A "combo" that can update any version 10.3, 10.3.1, 10.3.2, 10.3.3, 10.3.4, or 10.3.5 to 10.3.6.

This type of update, particularly the combo, is useful if you have multiple computers to update and only want to download 10.3.6 once.

Enhancements

These are some of the enhancements included with the Mac OS X 10.3.6 Update.

Internet and .Mac

- Resovles an issue in which Safari might not load webpages correctly when the hard drive name included a non-ASCII character such as a symbol, diacritical, or two-byte character.
- Safari no longer times out after 60 seconds when attempting to connect to a webpage or to submit form data. With this update, Safari will keep trying indefinitely (or until you cancel the attempt).
- With this update, a synchronized iDisk correctly resizes .Mac storage after its allocation changes.
- Addresses a kernel panic issue that could occur when using an external, wireless USB broadband modem with Mac OS X 10.3.5.

Networking

- Improves AFP service performance.
- Addresses a situation in which a file name change that occurred on a server while a client was running Terminal resulted in the client Terminal's failure to recognize the change.
- Addresses an issue that could prevent login via a network user account.

- Resolves an issue for Mac OS X 10.3.5 in which, sometimes, network-based applications could not open an application from an automounted AFP volume, such as /Network/Applications/.
- SMB/CIFS servers in /Network no longer suddenly disappear and reappear after the network changes.

Applications

- Addresses an issue that could occur when using some scholastic information management applications with Mac OS X 10.3.5; this alert could appear: "*Another module has 'locked' the MS Tx file. You will gain access when their task is completed.*"
- Addresses an issue in which "zooming" in Halo 1.0.5 could lead to blurry video when using certain Nvidia video cards.
- Many calculating and conversion features within Calculator are improved by this update.
- Addresses an issue in which TextEdit could unexpectedly quit when changing text from Euphermia regular to italic.
- Addresses an issue for Mac OS X 10.3.5 in which Final Cut Pro HD 4.5 could unexpectedly quit.

Other

- Improves ColorSync calibrating for Apple Cinema HD Display (23-inch DVI) displays.
- Resolves an issue in which the display could sometimes remain dark when waking from display sleep (the mouse pointer might appear, but normal function could not be restored) if using Screen Saver password on a portable computer.
- Adds WMC connectivity capability for Nokia 7610 phones.
- Addresses an issue for Mac OS X 10.3.5 in which some glyph fonts, certain "Expert" or "dingbat" fonts, would no longer appear in some applications.
- Resolves a situation in which incorrect characters could show up for some fonts.
- Addresses some issues that could cause Classic to unexpectedly quit when starting up.
- This update makes it easier to scroll through a long list of user names in the login window.
- Includes recent Security Updates.

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Published Date: Oct 7, 2016

About the Mac OS X 10.3.6 Update (Combo)

This article has been archived and is no longer updated by Apple.
This software updates Mac OS X 10.3, 10.3.1, 10.3.2, 10.3.3, 10.3.4, or 10.3.5 to version 10.3.6. **Tip**: If you have version 10.3.5, update with the smaller update instead.

Important: Read Before Installing

- You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.
- The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.

Installation

There are two ways to update to Mac OS X 10.3.6, Software Update or standalone Installer. You only need to use one of these methods to update.

Automatic Software Update

Software Update, located in System Preferences, can automatically download and install the latest Apple software. Software Update may have linked you to this document for additional information about the update.

This update's size may vary from computer-to-computer when installed via Software Update.

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

Two versions of the Installer are available from Apple Downloads as a standalone update that you can use without being connected to the Internet.

- A "combo" that updates Mac OS X 10.3 or later 10.3.6 (described in this document), and
- A "delta" that can update Mac OS X 10.3.5 to 10.3.6.

The combo update is useful if you have multiple computers to update and only want to download 10.3.6 once.

Enhancements

What does this update include? Check out the Enhancements section of this document for some details.

This update also includes enhancements delivered with:

Mac OS X 10.3.5 Update
Mac OS X 10.3.4 Update
Mac OS X 10.3.3 Update
Mac OS X 10.3.2 Update
Mac OS X 10.3.1 Update

Published Date: Oct 7, 2016

Mac OS X 10.3: System sleeps after using Fast User Switching

This article has been archived and is no longer updated by Apple.

Do you use Fast User Switching along with the Screen Saver password feature? If so, when the computer wakes from sleep and is switched to a different user, it will probably go back to sleep within a minute.

Don't worry, your computer isn't a "sleepyhead." All you need to do is wake it up again.

Note: This document applies to Mac OS X 10.3 through 10.3.9.

Published Date: Oct 7, 2016

Apple Asia Chinese Language Kit: Questions and Answers

What is AACLK? Is this similar to CLK (Chinese Language Kit)? I understand this is available in Asia. Why can't I purchase it here in the U.S.? I'm having trouble installing CLK and I heard AACLK might work with System 7.6.
This article has been archived and is no longer updated by Apple.
AACLK (Apple Asia version of the Chinese Language Kit) is not a standalone product and not available in the U.S. It is only for purchasers of the localized Chinese system software who want to be able to use the other Chinese (traditional or simplified) at the same time. (Like Chinese language kit, the localized Mac OS is available for Traditional and Simplified Chinese.)

AACLK is not intended for use outside of Chinese countries and hasn't been tested with non-Chinese systems. The AACLK installer will not behave correctly in some scenarios, such as when other LKs are present, on other localized systems, etc. AACLK and CLK are made by cooperating teams at Apple, but for different purposes. In time, they may be combined.

The only way a U.S. customer can get AACLK is to buy the localized Chinese system from a dealer of localized systems and applications, but the cost of the localized system package is much higher than the cost of the U.S. CLK. Like the localized Chinese Mac OS, AACLK is not supported in the U.S.

In terms of CLK 1.0 or 1.1 working with System 7.5.x or 7.6.x, please use the following steps for installation:

Installation

1. Install the WorldScript Updater 1.1 (or select the International Option under Custom Install for System 7.6).
2. Install the Chinese Language Kit version 1.0 or 1.1.
3. Install the Chinese Language Kit Updater to update your software to version 1.1.1

IMPORTANT: Be sure to follow these steps in the order shown.
Published Date: Feb 20, 2012

Logic Pro 7: Latency when playing software instruments

This article has been archived and is no longer updated by Apple.
When playing a software instrument from the MIDI keyboard, you might get undesired delay between actuation of the instrument and the resulting sound from the computer. There are several reasons this might happen.

The audio buffer size is set to a high value
The audio data produced by a software instrument is temporarily stored in a buffer. This audio buffer must be completely filled before it is transferred the sound card and your speakers. The larger the buffer, the longer it takes until you actually hear a sound after pressing a key on your MIDI keyboard.

At a sample rate of 44.1 KHz and an audio buffer of 512 samples, it takes approximately 11ms to fill the buffer, whereas with a buffer size of 256 samples this takes approximately 6ms. These are the theoretically minimal latencies with these buffer settings. The sound card driver, digital/analog conversion etc. may add their bit to this value.

In 6ms sound travels approximately 2 meters. This is a very common distance between live players and monitor speakers. So 6ms seems to be an acceptable and unnoticeable latency.

Latencies below 6ms are barely noticeable when playing an instrument. Thus it's recommended you set the audio buffer size to 256 samples or lower for live playing of software instruments. A larger audio buffer unburdens the CPU and leads to a better performance, but at the cost of a higher latency. Try different buffer settings to find the best value for your personal setup and taste.

The audio buffer size is set in Preferences > Audio... > Drivers > I/O Buffer Size.

The software instrument is processed on a Node
When a software instrument is processed on a Node computer, the audio data has to be transferred to the Node computer and back to the Logic host. This introduces additional latency which is automatically compensated for during playback. When playing live, this latency cannot be compensated for. Switch off the Node buttons of the Audio Instrument tracks you want to play live.

A mastering plug-in can introduce latency
A mastering plug-in, such as the Adaptive Limiter, which works with a large look-ahead, has been inserted in the master output or into the Audio Instrument track. These plug-ins also introduce latency which cannot be compensated when playing live. Disable mastering plug-ins for live playing Audio Instruments.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Logic Pro 7: Tutorial songs and settings missing from the installation DVD

This article has been archived and is no longer updated by Apple.
The Tutorial songs and settings, referred to in the Logic Pro Reference Manual and the Logic Plug-In Reference, are missing from the installation DVD.

The tutorial song and settings are available from here.

1. Double-click "Logic Tutorial Settings Install.pkg" on the disk image to install the setting files for the tutorial song.
2. Copy the Logic 7 Tutorial Song folder from the disk image to your hard disk.
3. Eject the Logic Tutorial disk image, and drag it to the Trash.
4. Open the Logic 7 Tutorial Song folder, and start the tutorial song by double-clicking the Tutorial.lso file.

Note: This is an updated version of the Tutorial Song. If you experienced issues with the previous version (like detuning), please download and install this song again.

Published Date: Oct 7, 2016

Logic Pro 7: Using effect plug-ins with MIDI input

This article has been archived and is no longer updated by Apple.
Learn how to use audio effect plug-ins which have an additional MIDI input, such as Antares Auto-Tune, vocoder plug-ins, or Logic Pro's EVOC20.

Audio tracks don't accept MIDI input, which is why an effect plug-in that has been inserted in an Audio track, Bus, or Aux channel does not respond to MIDI input. Only Audio Instrument tracks accept MIDI input.

To use the MIDI input of these plug-ins, insert the plug-in into the first insert (the instrument insert) of an Audio Instrument track, just as with any other software instrument.

Inserting EVOC as an Audio Instrument

To feed the plug-in with the audio material you wish to process, use the side chain input of the instrument. Put your audio file on an Audio track, and choose this track from the side chain menu in the top area of the plug-in window. In our example we put the file on Audio track 1, so we choose track 1 from the plug-in's side chain menu.

The side chain menu

The side chain track will now be processed by the plug-in, but the original audio signal will still be audible through its Audio track (Audio 1 in our example). To suppress this signal, mute the audio track with the Mute button in the Track Mixer or in the Arrange channel strip. You can also switch the output routing to "No Output." Now select the Audio instrument track, start the playback, and play the vocoder effect with the MIDI keyboard. **Note:** Make sure you do not use the Arrange Track Mute button.

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Published Date: Oct 7, 2016

About the Mac OS X Server 10.3.6 Update

This article has been archived and is no longer updated by Apple.
This software updates Mac OS X Server version 10.3.5 to version 10.3.6.

Important: Read Before Installing

1. An administrator account password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, follow these steps: Choose System Preferences from the Apple menu. Choose Accounts from the View menu. Select an Admin account and click Edit User. Type your current password, and press Return. Change the password, and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.

4. This update can be installed on non-startup volumes, but that should be done **only** when the current startup volume has already been updated to Mac OS X Server 10.3.6. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are two ways to update to Mac OS X Server 10.3.6: Software Update and Standalone Installer.

Software Update Installation

You may have been referred to this document by Software Update. For more information on this feature, see How to Update Your Software.

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

An installer is also available from Apple Featured Software.

The Mac OS X Server 10.3.6 Update is specifically for updating version 10.3.5. There is also a "combo" installer available, which will update any version 10.3 to 10.3.6.

Remote Installation

If you need to install the update on a remotely located computer, you can do so using either the Server Admin application or the "softwareupdate" command-line tool. Choose the method that works best for you.

Enhancements

These are some of the enhancements that are part of Mac OS X 10.3.6 Server Update:

Open Directory (Directory Services)

- Active Directory Plug-in: Corrects an issue in which some clients received -14987 error when trying to authenticate using Active Directory.
- Active Directory Plug-in: Corrects an issue in which the Plug-in incorrectly displays the UID.

File Services

- AFP: Improves overall AFP performance and scalability.
- AFP: Addresses issue in which the shell is not in sync with filename changes that were performed on the AFP Server. Filename changes made on the server are now correctly reflected in the shell.
- SMB: Addresses issue in which some Windows clients failed when copying large files to an SMB share.
- SMB: Addresses an issue in which, after installing a Windows Hot Fix (http://www.microsoft.com/technet/security/bulletin/MS04-011.mspx>), Windows XP clients would receive the "system can not change password now because 'domain' the domain controller is not available" message when trying to change their password.

Fibre Channel Utility

- FCU: Corrects multiple issues, including correct aggregation of ports with multiple HBAs, properly displaying card status after port configuration on secondary HBAs, and removing unnecessary error messages in the console during launch. Fibre Channel Utility now provides a pop-up menu with a fixed list of allowable Hard Loop ID values.

Other

- Mail Server: Corrects an issue when using CRAM-MD5 of mail clients failing to authenticate while making SMTP connections.
- LDAP: Addresses an issue in which creating a replica does not work if a custom data location is being used.

Mac OS X Server 10.3.6 also includes the enhancements of the Mac OS X 10.3.6 Update.

Published Date: Oct 7, 2016

About the Mac OS X Server 10.3.6 Update (Combo)

This article has been archived and is no longer updated by Apple.
This software updates any version of Mac OS X Server 10.3 to 10.3.5 to Mac OS X Server version 10.3.6. It is a "combo" update that combines enhancements delivered with versions 10.3.1 through 10.3.6. If you already have Mac OS X Server 10.3.5, you may download a smaller update that is not a combo.

Important: Read Before Installing

1. An administrator account password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, then follow these steps: Choose System Preferences from the Apple menu. Choose Accounts from the View menu. Select an Admin account and click Edit User. Type your current password, and press Return. Change the password, and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.

4. This update can be installed on non-startup volumes, but that should be done **only** when the current startup volume has already been updated to Mac OS X Server 10.3.6. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

5. If you are updating from 10.3.2 or earlier and use a MySQL database, you must back it up prior to upgrade. See the Additional Information for MySQL section, below.

6. If you are updating from 10.3.2 or earlier and have set up a loginhook, a custom serial port configuration, or have edited the "/etc/ttys" file for other reasons, you will need to back it up prior to installation of this update.This is because a 10.3.3 or later update overwrites the file with a new copy when updating from 10.3.2 or earlier. The new file will set the Xserve's serial port to communicate at 56Kbps. If your serial device cannot communicate at this speed, you must edit this file to reduce the speed.

Installation

There are two ways to update to Mac OS X Server 10.3.6: Software Update and Standalone Installer.

Software Update Installation

You may have been referred to this document by Software Update. For more information on this feature, see How to Update Your Software.

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

An installer is also available from Apple Featured Software.

Mac OS X Server 10.3.6 Update (Combo) updates Mac OS X Server 10.3, 10.3.1, 10.3.2, 10.3.3, 10.3.4, or 10.3.5 to the later version.

Remote Installation

If you need to install the update on a remotely located computer, you can do so using either the Server Admin application or the "softwareupdate" command-line tool. Choose the method that works best for you.

Enhancements Delivered with this update

Many enhancements are delivered with this update. Because this is a combo update, it includes those delivered with earlier 10.3 updates. You can see the individual lists for 10.3.1, 10.3.2, 10.3.3, 10.3.4, 10.3.5, and 10.3.6.

Additional Information for MySQL

Data stored in MySQL databases with the version of MySQL that is pre-installed Mac OS X Server 10.3.2 or earlier must be exported and re-imported in order to be compatible with version of MySQL that is pre-installed on Mac OS X Server 10.3.3 or later, in which a byte-ordering issue is fixed.

As with any upgrade install, you should back up your old data. In this particular upgrade, the following process is recommended to convert the data to the correct byte ordering:

Before the upgrade, use the terminal to export the data from your pre-10.3.3 database:

```
#  mysqldump -p table > backup-file.sql
```

or

```
#  mysqldump  --opt database > backup-file.sql
```

After the upgrade, and after initializing the MySQL database, import the data:

```
#  mysql -p table < backup-file.sql
```

or

```
#  mysql  database < backup-file.sql
```

Published Date: Oct 7, 2016

Logic Pro 7: Apple Loops transpose to the wrong octave

This article has been archived and is no longer updated by Apple.
Transposing an Apple Loop to a higher pitch may result in the Loop being played back at a lower pitch, and vice versa.

Example: If an Apple Loop is transposed to sound 7 semitones higher, it will sound 5 semitones lower instead. So the Loop is harmonically correctly transposed, but not to the intended octave.

Transposing audio material is a technically complicated process which always implies a certain loss in quality. The higher the amount of transposition applied, the higher the quality loss. This is why Apple Loops are always transposed to the smallest possible value.

Keep in mind that the sound quality depends on the actual transposition based on the Apple Loop's original key – not based on the song key which defines the zero line of the Transposition track. For example, if the song key is already 5 semitones above the original key of an Apple Loop, setting the transposition value to +2 will transpose the Apple Loop 10 semitones down, because this is only 5 semitones below its original key (instead of 7 semitones above it).

In the classical European music system, an octave is divided into 12 semitones. As +7 semitones is therefore harmonically equal to -5 semitones, -5 is chosen as the transposition amount in this case. The same happens with other settings: A transposition of -9 will result in +3, and +12 will result in +/- 0.

Published Date: Oct 7, 2016

Logic Pro 7: Tracks are not processed on a Node

This article has been archived and is no longer updated by Apple.

Some tracks which have the Node button activated are not processed on a Node computer.

Although the Node button of some tracks has been activated, the tracks are not processed on the Node computer. This is indicated by the track Node button not turning blue like on other Node tracks.

This could happen for several reasons:

An Audio Instrument with multiple outputs is sent to a Node Audio
Instruments with multiple outputs cannot be processed on a Node. Only mono and stereo is possible. **The Node does not have enough processing power to process the track**
If a track is sent to a Node, a previous check assures that the Node CPU has enough free resources to process this specific track. The result of this check may be distorted under certain circumstances and the Node will not process the track although the resources are available.

Example: A very CPU intensive Audio Instrument like the ES2 is sent to a Node with its polyphony is set to 32 voices, while in your arrangement, the ES2 only uses 4 of these voices (and will in fact only need the CPU performance of 4 voices). The Node will however report that it does not have enough processing power to process 32 ES2 voices, although only 4 will be used. As a result, the track is not sent to the Node.

To avoid this, the polyphony of Audio Instruments which shall be processed on a Node should always be adjusted to the number that is actually used in your arrangement.

The track contains a Spreader plug-in
A Spreader plug-in cannot be processed by a Node prior to Logic 7.1, so if the Spreader plug-in is the last plug-in of a track, the track will not be processed by the Node. In Logic Pro 7.1, the Spreader can be processed by a Node. If you use a mixture of plug-ins that can and can't be processed by a Node on the same track, only the node-eligible plug-ins that come after the last non-eligible plug-in in the channel strip will be processed by the node. For example, if you have a channel strip that contains a Space Designer, an Audio Unit, and then another Space Designer, only the second Space Designer will be processed by the node.

The EXS24 cannot be processed by a node, but Logic DSP plug-ins assigned to an EXS24 track can be. If there are no eligible plug-ins on an EXS24 track, it will not be processed by a node.

Audio Unit plug-ins cannot be processed by a node. However, Logic plug-ins inserted on tracks after any AU plug-ins can be processed.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Logic Pro 7: Use QuickTime DV format to get smooth playback over FireWire

This article has been archived and is no longer updated by Apple.
Logic Pro can send video over FireWire to a video converter or DV camera. If movie playback stutters and some frames seem to be dropped after doing this, then the video may not be in the QuickTime DV format.

This happens because video that isn't QuickTime DV format must be converted in real time before it is transferred to the FireWire DV converter. This conversion is a very CPU intensive task and may lead to dropouts if the processor cannot handle the stream in real time.

Thus movies output to a FireWire video converter or a DV camera must use the Quicktime DV format. Use iMovie or Quicktime Pro to convert the movie to the appropriate Quicktime DV format for the converter or DV camera you are using.

Published Date: Oct 7, 2016

iSync, iPod: Last day of recurring iCal event not sent to iPod

This article has been archived and is no longer updated by Apple.
Transferring an iCal calendar to your iPod or iPod Mini via iSync?

If the last day of a recurring event in the calendar doesn't show up on the iPod afterwards, you can follow a couple of easy steps:

1. Delete the calendar from the Calendars folder of the iPod. Do this when the iPod is available in Disk Mode.
2. Export the calendar directly from iCal to the iPod Calendars folder.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Logic Pro 7: How to create an upbeat in the Score Editor

This article has been archived and is no longer updated by Apple.
Learn how to manually create an upbeat in the Score Editor.

MIDI regions are normally created at the beginning of a bar. If you want to create an upbeat, the MIDI region will have to start before beat one of the bar. The Score Editor will then automatically display the notes before beat one as an upbeat.

In order to create an upbeat:

1. Create an empty MIDI region with the pencil tool in the Arrange window.
2. While holding the Option key, double-click the Region to open it in the Score Editor.
3. Move the MIDI region or its left boundary in the Arrange window to the position where the upbeat starts (e.g. an eighth-note before beat one). You may also drag the region boundaries in the Score Editor. Simply grab and drag the region boundary indicator below the Bar Ruler to the desired position.
4. Now you can enter the upbeat notes with the mouse in the Score Editor.

Changing the left Region boundary

Published Date: Oct 7, 2016

Logic Pro 7: Set song folder permissions to read and write

This article has been archived and is no longer updated by Apple.
When loading a GarageBand song, Logic quits unexpectedly. This can happen because the song is inside a folder that has permissions set to read only.

To prevent this, set the folder to read-and-write permissions.

This issue will be resolved when you upgrade to Logic 7.1. If the folder containing the GarageBand song is read only, Logic will display a dialog box instead of quitting. You will still need to to set the folder to read and write before opening the song in Logic.

Published Date: Oct 7, 2016

Logic Pro 7: "No Transpose" doesn‘t reset transposition of region

This article has been archived and is no longer updated by Apple.
The No Transpose option doesn't reset regions that are already transposed.

The transposition track affects the events of a region. Checking the option for No Transpose does not reset those events, but it does prevent them from being affected by further transpose manipulations.

Use these steps if you have transposed regions:

1. Deselect the No Transpose checkbox.
2. Bring the transposition track to 0.
3. Select the No Transpose checkbox.
4. Re-enter the required transposition.

Published Date: Oct 7, 2016

Logic Pro 7: Phantom ports with audio interface M-Audio Delta 1010

This article has been archived and is no longer updated by Apple.

Symptom

The audio interface M-Audio Delta 1010 may show phantom duplicate ports in the utility Audio Midi Setup after updating the driver to version 1.1.7.

This doesn't happen if the driver is installed for the first time or if a full install is done instead of an update.

To avoid this issue, please remove the old driver components before installing the new one. Contact M-Audio for assistance with this procedure.

If you want to delete the components manually and at your own risk, use the following steps:

Warning: This procedure is only recommended for very experienced users.

1. Search for the strings "Delta" and "M-Audio" in the Finder.
2. Delete the found file(s).
3. Install the new driver.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 19, 2012

Logic Pro 7: Keyboard shortcuts don‘t work in floating windows

This article has been archived and is no longer updated by Apple.
Logic lets you open any window as a floating window. These windows will stay on top of all other windows, regardless of the currently active window, and they don't accept any keyboard shortcuts. **Tip:** You can open a window as a floating window by holding down the Option key while choosing the window type from the Window menu.

Floating windows are normally used as informational windows which don't get covered by selecting another one. This can be useful for an Event List, an Environment, or a Mixer window, for example.

When a window is opened as as floating window, it does not accept any keyboard shortcuts which have been assigned to this window type. This gives you the advantage of floating windows in the foreground that won't block the key commands of an editor or Arrange window in the background.

For example: Open a normal Arrange window, and then open an Environment window as floating. In this configuration, all keyboard shortcuts are passed to the Arrange window. This way, you can use commands to move or delete Regions in the Arrange window without accidentally deleting a mixer channel or another object in the Environment window.

Exceptions to this rule are some special keyboard shortcuts for plug-in windows, which by default open as floating windows. Examples of these are next/previous plug-in setting or next/previous EXS instrument.

Published Date: Oct 7, 2016

Logic Pro 7: Delays and reverb tails are cut off

This article has been archived and is no longer updated by Apple.
Delays sometimes get cut off when used in an insert slot of a a track that contains many short audio regions. That means the audio playback suddenly goes silent. Occasionally this also happens with reverb tails.

Since this issue only shows up with very short audio regions, try to use longer regions.

You can convert the short regions, into one long region. To do so, please select all regions of the track and choose:
Region > Merge > Regions.

Published Date: Oct 7, 2016

iMac G5: Mold lines in back cover are normal

This article has been archived and is no longer updated by Apple.

It's normal for the iMac G5 to have surface lines on its back cover. These occur during manufacture of the enclosure and are called "mold lines." They appear on the back cover to the left of each port and the power button. Mold lines are not cracks and do not represent a weakness or defect in the plastic.

Note: Mold lines normally look very faint, so this picture has been darkened to make the line more visible.

Published Date: Feb 20, 2012

iMac G5: Fine Lines in Front Bezel are Normal

This article has been archived and is no longer updated by Apple.

It's normal for the Front Bezel of the iMac G5 to have fine lines at each corner. These occur during manufacture of the enclosure, and they're called "witness" lines.

Witness lines are not cracks and do not represent a weakness or defect in the plastic.

Note: Witness lines normally look more faint than in this picture, which has been darkened to make this one easier to see.

Published Date: Feb 20, 2012

Logic Pro 7: Devices won‘t play at maximum volume

This article has been archived and is no longer updated by Apple.

If you choose Options > Send to MIDI > Maximum Volume, some still don't seem to play with maximum volume. The option sends CC 7 with value 127 to all ports, but only on channel 1. Therefore all devices that use a channel different from 1 are unaffected.

You can resolve this issue by updating to Logic Pro 7.0.1 or later.

Published Date: Oct 7, 2016

Logic Pro 7.0: Errors when importing an OMF file

This article has been archived and is no longer updated by Apple.

Symptom

When trying to import an OMF file from Pro Tools, AVID, or FinalCut Pro into Logic Pro, audio files are missing or one of the following alerts comes up:

- "Error Code 205. OMFI_ERR: Bento Container Error"
- "Error Code 118. OMFI_ERR: Invalid object attached to property"

Solution

This issue is resolved in Logic Pro 7.1, which no longer has a 107 audio region limitation when importing OMF files.

For Logic 7.0:

The errors are linked to the number of Audio Regions the OMF file contains. If one track of the OMF file contains more than 107 Audio Regions, one of these errors may occur. In case of split stereo files, each channel's regions count separately. This means that the error will in this case occur with more than 53 parts of a split stereo file (which equals 108 regions).

An OMF file that will be imported into Logic Pro cannot contain more than 107 Audio Regions per track. You may reduce the number of Audio Regions per track by joining some of them with digital mixdown or bounce function before exporting the OMF file.

Because of this limitation, you should use the AAF format for data exchange between Pro Tools, AVID, and Logic Pro. FinalCut Pro sessions can easily be transferred using Logic Pro's FinalCut Pro XML im- and export function.

Published Date: Oct 7, 2016

Logic Pro 7: Wrong time signature position in Score

This article has been archived and is no longer updated by Apple.
When viewing a score in layout view mode, some sequences may show a time signature change at the beginning of the stave line instead of the actual position of the time signature change. Additionally, double bar lines at these positions are not drawn through all staves. When looking at the single sequence in the Score editor, the bar position is correct.

This may happen if:

- An automatic multi rest had been inserted manually into the sequence which shows the wrong time signature position.
- The multi rest is placed in the bar before the time signature change.

The multi rest can also be placed ten bars before the time signature change, as long as there's nothing between the multi rest and the time signature change.

After deleting the multi rest from this sequence, the score layout displays correctly.

If you need to preserve the multi rest in the sequence for printing it as a single voice, you may do the following:

1. Copy the sequence which contains the multi rest.
2. Delete the multi rest(s) from the original sequence (not from the copy).
3. Make sure the the original (now without the multi rests) is still included in your instrument set for the full score.
4. Keep the copy (with multi rests) for single voice printing only. Make sure it is not part of your instrument set for the full score.

If you don't know how to create and manage instrument sets, please refer to the Score section of the Logic Pro manual or the Logic Pro Help.

Published Date: Oct 7, 2016

TA22642_Support_for_Logic_and_.pdf

Support for Logic 5 and 6

This article has been archived and is no longer updated by Apple.
If you need support for Logic 5, Logic 6, or any other Emagic branded software product, and you're a registered user, connect to the Emagic Legacy Product Support page for information regarding support for those products.
Published Date: Oct 7, 2016

AppleWorks 6: Open Recent menu not showing the most recent items

This article has been archived and is no longer updated by Apple.

Sometimes you will notice that the Open Recent submenu in AppleWorks does not display the most recent document you have worked on. At other times, the most recent item may appear, though not necessarily at the top of the list.

This happens due to an issue with list sorting. Though the list is supposed to be sorted by date modified, it's actually sorted alphabetically. This means that you will always see just the top of your list (alphabetically) once the number of documents in the list exceeds the number specified for display in AppleWorks preferences.

There are three ways to address this:

1. Empty the list periodically (see below), and/or
2. Increase the number to display in Preferences, and/or
3. When you need the list, view it in a Finder or Explorer window, which will allow you to sort by date modified.

To empty the list:

1. Locate the Recent Items folder:

   Mac OS X
   ~/Documents/AppleWorks User Data/Starting Points/Recent Items/

   Note: The tilde "~" refers to your home directory.

   Windows
   C:\Documents and Settings\username\My Documents\AppleWorks User Data\Starting Points\Recent Items\

2. Drag the aliases from that folder to the Trash.

Published Date: Feb 18, 2012

Logic Pro 7: EVB3 produces no sound when using channels 4 to 16

This article has been archived and is no longer updated by Apple.
You insert an EVB3 in the input slot of an Audio Instrument, but there is no sound output when playing the organ live with a MIDI keyboard or trying to play back a MIDI region on this track. What's going on?

Unlike all other Logic Pro Audio Instruments, the EVB3 accepts MIDI input only on MIDI channels 1-3. MIDI data with other channels (4-16) will be ignored. If the track's MIDI channel is set to a value beyond 3, the EVB will therefore remain silent.

Because organs usually have two manuals and a pedal, so does the EVB3. MIDI data on channel 1 or 2 plays the upper or lower EVB3 manual respectively, MIDI channel 3 plays the pedal. Set the MIDI channel of the EVB3 track to a value between 1 and 3 to play one of the manuals or the pedal.

The MIDI channel parameter

If you set the MIDI channel parameter to "All," the MIDI channel of your MIDI keyboard will be passed unfiltered to the EVB3. Choose this setting for a split keyboard or a dedicated organ keyboard setup. You may then set a dedicated MIDI mode in the EVB3 graphical interface.

For further information on this kind of MIDI setup, please refer to the EVB3 section of the Logic Pro Plug-In Reference manual.

Published Date: Feb 19, 2012

Apple Remote Desktop 2: Send UNIX Command fails when target computer is at the login window

This article has been archived and is no longer updated by Apple.
To use the Send UNIX Command, either a local user must be logged in to the client computer, or you must execute the command as a specific local user.

Otherwise, you will get this message:

"This task will fail. A console user is not logged in on <your server>."

To avoid this, run the UNIX command as the currently logged in user, or run it as a particular user on the client computer, such as root or <any_username>. The latter method is the only way to run a UNIX command when the target is at the login window.

Published Date: Feb 20, 2012

Logic Pro 7: SMPTE time code is not written from within Logic Pro

This article has been archived and is no longer updated by Apple.
When setting the SMPTE mode to "Generate" (File > Song Settings > Synchronisation... > Unitor), the Unitor8 does not start writing SMPTE time code. The Write LED on the Unitor8 does not light up, and no SMPTE signal is created.

You can generate SMPTE time code from within Logic Pro with the MIDI interface Emagic Unitor8, but not if if a daisy chain of Unitor8 and AMT8 interfaces is connected to the computer and the first interface is an AMT8.

The Unitor8 should always be the first interface in the chain. AMT8 interfaces should be cascaded from the Unitor8. Otherwise, the extended synchronization features of the Unitor8 will not be available.

Using the application Unitor8 Control, you can stripe SMPTE from any device of the chain. **Note**: "Generate" can only be used for striping, not for realtime-synchronization.

Published Date: Oct 7, 2016

Apple Remote Desktop 2: Software Update for 1.2.4 Still Shows After Client Upgrade to Apple Remote Desktop 2

This article has been archived and is no longer updated by Apple.

Installing Apple Remote Desktop 2 on a non-startup volume does not remove the Apple Remote Desktop 1.2.2 Agent. The result is that Software Update still offers version 1.2.4 for that computer after it's been upgraded to version 2.

To avoid this issue, either:

- Install Apple Remote Desktop 2 on the startup volume where Apple Remote Desktop 1.2.2 is currently installed, or
- Remove the Apple Remote Desktop 1.2.2 Agent by executing this Terminal command:

```
# sudo rm -r /System/Library/CoreServices/ARD Agent.app/
```

Published Date: Feb 18, 2012

Logic Pro 7: Incorrect beat grouping in the Score editor

This article has been archived and is no longer updated by Apple.

Symptom

The beat grouping setting in the time signature setting of the Score editor has no effect.

When the beat grouping default in a 7/8 measure is set to e.g. 3+4 or 3+2+2, the notes are beamed as 3+3+1. Other combinations of grouping settings and time signatures may also lead to incorrect results.

Solution

If the default beat grouping does not lead to the desired result, the notes can be beamed manually. Select the notes to be beamed and use the local menu function Attributes > Beaming> Beam selected (or the corresponding keyboard shortcut).

Published Date: Oct 7, 2016

Logic Pro 7: First beats not in time after freezing

This article has been archived and is no longer updated by Apple.
The first beats of a track do not play back in time the first time playback is started after a track is frozen.

Having plug-in delay compensation enabled, a track containing the Linear Phase EQ will play back properly. As soon as this track is frozen, the first beats of this track's playback will no longer be in time. It sounds as if plug-in delay compensation has been disabled. This is only true for the first time playback has been started after freezing. From the second time on it is perfectly in time again.

A workaround is to start and stop playback immediately after freezing.

Published Date: Oct 7, 2016

Logic Pro 7: Wait for Note option doesn‘t work

This article has been archived and is no longer updated by Apple.
The count-in option Wait for Note in the recording settings does not work in Logic Pro 7.0, and it has been removed from Logic Pro 7.1. If this option is set in 7.0, the recording starts immediately.

You should use a suitable count-in instead of the Wait for Note option.

Published Date: Oct 7, 2016

Logic Pro 7: MIDI clock is always sent to all ports

This article has been archived and is no longer updated by Apple.
Even if you choose a specific port for MIDI clock transmission (File > Song Settings > Synchronization... > MIDI), the MIDI clock signal is still sent to MIDI port 0 (all ports).

MIDI Clock is always sent globally to the MIDI interface which then distributes it to all ports. This works similarly with all multi-port MIDI interfaces. This method has the advantage that the MIDI clock signal is sent only once to the interface and not multiple times for each output port, thus reducing the MIDI data stream.

Depending on your MIDI interface, you may filter MIDI clock by filtering "realtime messages" in the setup software for the MIDI interface itself. Emagic MIDI interfaces allow this with the included Unitor Control software.

Published Date: Oct 7, 2016

How many computers are authorized to play music from my account?

This article has been archived and is no longer updated by Apple.

To see how many computers are currently authorized to play music purchased with your iTunes Store account:

1. Open iTunes.
2. Click iTunes Store in the Source list.
3. If you're not signed in to the store, click the Account button and enter your Apple ID and password.

4. When the iTunes Store opens, click the Account button (your Apple ID appears on the button), enter your password, then click View Account.

The Apple Account Information page that appears shows you how many computers are currently authorized.

Do you think you have used up multiple authorizations with one computer? Try this:
One computer using multiple iTunes Store authorizations.

Published Date: Oct 7, 2016

Logic Pro 7: Audio Recording suddenly stops

This article has been archived and is no longer updated by Apple.
If the maximum recording time is set too low, audio recording suddenly stops. The sequencer keeps running in playback mode, the recorded audio file is fine, and no alert appears.

To avoid this issue, increase the Maximum Recording Time by choosing Audio > Set Audio Record Path.

The default setting for the maximum recording time is 15 minutes.

Published Date: Oct 7, 2016

Logic Pro 7: Volume and Pan are not saved in exported MIDI files

This article has been archived and is no longer updated by Apple.
Volume, Pan, and other settings are not saved in an exported MIDI file.

These are realtime settings which can be altered at any time during playback in Logic. If you want to destructively fix these parameters for a MIDI file export, they have to be written into the MIDI Regions before the export. Write the settings to the Regions with the local Arrange menu function:

MIDI > Insert Instrument MIDI Settings as Events

Note that the Region parameters (Transpose, Delay etc.) also have to be written into the events by "MIDI > Region > Normalize Region Parameters.

Published Date: Oct 7, 2016

Logic Pro 7: "Sample Clipboards with different Sizes not allowed for Stereo Files"

This article has been archived and is no longer updated by Apple.

Symptom

You get the alert message "Sample Clipboards with different Sizes not allowed for Stereo Files."

This happens when changing the tempo of an audio file with the Time & Pitch Machine, if the tempo of longer stereo audio files (interleaved or split stereo) is changed less than one bpm (e.g. from 120 to 120.9 bpm).

Solution

This happens only with time stretching algorithm Version 5. This version of the algorithm cannot process very subtle tempo changes on stereo files.

Use one of the Logic 6 Time & Pitch Machine algorithms for subtle tempo processing.

Published Date: Oct 7, 2016

Logic Pro 7: Volume fader does not control the recording level

This article has been archived and is no longer updated by Apple.
The volume fader does not change the recording level when an audio track is armed for recording. Logic always records with the same level, regardless of the volume fader setting.

The volume fader adjusts the level of the monitoring signal, not the input signal. The recording level remains the same, since it has no relationship with the level of the monitoring signal.

To decrease or increase the recording level, you have to adjust the gain of the signal source in your audio interface or mixing console.

Published Date: Oct 7, 2016

Logic Pro 7: Notes appear in the next measure

This article has been archived and is no longer updated by Apple.
In Score Editor, a note that you expect to appear at the end of a particular bar may appear instead at the beginning of the next bar, especially with very short notes.

To correct the score display, change the note position to a full bar (in the Matrix Editor or in the note parameters in the Score Editor). If you don't want to change the note position of the performance, set the quantize grid for the Score Editor to a finer value.

Why this happens
Logic uses a display quantization for the Score Editor. If a MIDI sequence has been recorded from live playing, the timing between the live instrument and the sequencer's tempo may not precisely synchronize. To create a readable score out of such a performance, Logic applies a dedicated display quantization to the MIDI data before displaying it as a score.

If a note lies between two quantization grid points, it will be displayed on the next available grid position. Therefore, depending on the note position and the quantize grid set in the Score window, some notes may appear in the next bar, when they are actually positioned in the previous one.

Published Date: Oct 7, 2016

Logic Pro 7: Avoiding clicks in the audio signal of software synthesizers

This article has been archived and is no longer updated by Apple.
Learn how to avoid clicks in the audio signal of ADSR software synthesizers like the ES1, ES2, or Sculpture.

Clicks can appear in some cases when using the ES1, ES2, Sculpture, or other synthesizer while working with an ADSR section.

You can avoid these by paying attention to the following settings:

1. If the "Analog" slider is set to 0% (ES1/ES2), a special feature is invoked, oscillator and filter synchronization. The oscillator and the filter reset at every Note On. This enables the ES1 or ES2 to create synthetic percussion sounds with much attack and best reproducibility. To avoid clicks, set this slider at least to 1%.

2. The minimum setting of the attack and release time is 0ms, which means 0ms or 1 sample. So, if you want to avoid clicks from here, allow a little bit of attack. The sliders have a stretched characteristic at the lower end to allow a fine adjustment of the attack and release time.

3. If a synth voice is assigned to a new note with a different velocity, and a velocity range is there, you might hear a click, even with slow attack rates, because the ADSR works with the new velocity and immediately changes its output. Assign more voices to the software synthesizer to avoid this.

Published Date: Oct 7, 2016

Logic Pro 7: No audio recording when using the "tape" icon

This article has been archived and is no longer updated by Apple.
When the tape recorder icon is used as symbol on an audio track in the arrange window, audio cannot be recorded.

To prevent this, do not use the tape icon on an audio track. Using a different symbol will resolve the issue.

Additional information
MIDI tracks that have the tape icon and are located in first position at the upper edge of the arrange window are reserved for arming tracks on external tape recorders (ADAT machines or similar) over MMC.

The record ready switch of these tracks will in this case toggle record ready for the external tape recorder which is connected to the corresponding MIDI out. On an audio track, arming the track leads to a dialogue asking for the audio record path. After defining it, when Logic is set into record mode, recording audio will be anticipated. The tape icon itself masks this external communication function. It cannot be used as audio track icon.

Published Date: Oct 7, 2016

PowerBook: Testing Backup Battery

This article explains how to check the power of the internal backup battery in a PowerBook computer.
This article has been archived and is no longer updated by Apple.
The backup battery saves the PRAM and power management information on the logic board when the computer is shut down.

Checking the backup battery

1. Set the date and time.
2. Perform a Shut Down from the Apple menu or Special menu.
3. Remove the main battery and disconnect the power adapter for 10 minutes.
4. Connect the power adapter, insert the battery, and power on the computer.
5. If the date and time were lost the backup battery may be dead or discharged.
6. If the backup battery is rechargeable, remove any main batteries from the unit and leave the PowerBook plugged in for at least 4 hours. If discharged main batteries are installed in the computer, recharging the backup battery may take up to 48 hours to completely charge. It is okay to use it while it is charging.
7. If the backup battery appears dead or will not charge have the computer serviced.

Backup Battery Types

For additional PowerBook battery or backup battery part numbers , refer to document 11751: "**Macintosh Family: Batteries and Part Numbers**" for computers introduced before November 1997, and document 86181: "**Macintosh Family: Batteries and Part Numbers, Part 2**" for computers introduced after November 1997.

Published Date: Feb 20, 2012

Simple Finder: Classic applications do not appear in "My Applications" folder

This article has been archived and is no longer updated by Apple.

If you add Classic applications to the list of approved items, they do not appear in the "My Applications" folder when using Simple Finder. This occurs when managing users via Workgroup Manager or via the Limitations feature found in the Accounts pane of System Preferences.

This issue happens with Mac OS X and Mac OS X Server versions 10.3.

As a workaround for clients managed via Workgroup Manager, consider adding that classic application to the list of Dock items.

Published Date: Feb 18, 2012

Finding the Logic Pro 7 Support ID number

This article has been archived and is no longer updated by Apple.
The 11-digit Support ID number for Logic Pro 7 is Located on the front page of the booklet titled "Installing Your Software," as shown here:

Published Date: Oct 7, 2016

Finding the Logic Pro 7 XSKey serial number

This article has been archived and is no longer updated by Apple.
To find the XSKey serial number:

Choose Menu > About Logic.

The serial number appears under XSKey Serial #:

Published Date: Oct 7, 2016

Logic Pro 7: Opening songs from earlier versions

This article has been archived and is no longer updated by Apple.
When loading a song created in a version of Logic Pro prior to version 7, the song format will be converted to the version 7 format. The first time this song is saved, a Save dialog will appear giving you the option to rename the file so that the old song file will not be automatically overwritten.

Note: Once saved in version 7 format, a song can no longer be opened with versions prior to version 7 (exception: Logic Pro versions 6.4.3 and higher can open the song, but without any Logic Pro 7 specific features).

Published Date: Oct 7, 2016

Logic Pro 7: Ultrabeat cannot import individual sounds

This article has been archived and is no longer updated by Apple.
Ultrabeat plug-in settings won't open when using the import function to load individual sounds of a different drum kit.

More specifically, when you load an Ultrabeat setting using the Import button in the upper portion of the Ultrabeat interface, you get an open dialog that points to the factory plug-in settings in the local domain:

/Library/Application Support/Logic/Plug-In Settings/Ultrabeat/

After you choose a setting, the drum kit fails to load, and the list for importing the drum sounds does not appear in the Ultrabeat user interface.

Resolve the issue by updating to Logic Pro 7.0.1 or later.

Published Date: Oct 7, 2016

Remote Desktop 2: Difficulty connecting from RealVNC 4.0

This article has been archived and is no longer updated by Apple.

If you try to connect to a Remote Desktop 2 system using RealVNC 4.0, you may see one of these alert messages:

"No matching security types"
"Unknown message type"

You can resolve the first message by updating to Remote Desktop 2.1 and the second by configuring RealVNC's color setting to Full.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 18, 2012

Drive Setup 1.7.3 and Earlier: Version History

This article details the version change history of Drive Setup version 1.7.3 and earlier.
This article has been archived and is no longer updated by Apple.

Drive Setup Changes for 1.7.3
This version provides improved reliability for Ultra ATA transfers on Power Macintosh G3 (Blue and White) computers.

Drive Setup Changes for 1.7.2
This version was posted to Apple Software Updates as a general release for Macintosh/Power Macintosh computers that can run system software 7.5 through Mac OS 8.5. Beginning with Drive Setup 1.7, the Low Level option for ATA drives was disabled, (Drive Setup does not low level format ATA hard drives). Although this option was disabled, users were able to still select this option. Drive Setup 1.7.2 now dims this option so it cannot be selected for ATA drives. This option can still be selected for Apple SCSI hard drives.

Drive Setup Changes for 1.7.1
This version shipped with some Power Macintosh G3 Blue & White computers to prevent an incorrect Mode Page issue that can occur with certain SCSI hard drives shipping in some Power Macintosh G3 Blue & White configurations.

Drive Setup Changes for 1.7
This version ships with the Power Macintosh G3 Blue & White computers, and the Strawberry, Lime, Tangerine, Grape and Blueberry iMac computers with Mac OS 8.5.1 and is only supported on these computers.

- Support for ultra DMA transfers in new ATA driver version 3.20
- Changes to update list of drives for ATAPI Zip and CD-ROM drives. When a user inserts media, the name of the volume is listed instead of Not Supported.
- Low level format option for all ATA drives has been disabled. This test was not performing a low level format. This test instead wrote zeros and performed subsequent reads to verify drive calculated checksums on the written data. With the exception of the read portion, this test was the same as the write zeroes option. The combination of both tests and the larger capacity of drives Apple is shipping provides unnecessary redundancy at the expense of the user experience. Drive Setup users can achieve the same functionality by selecting the Zero all data initialization option before initializing the hard drive followed by the Test Disk... function under the Function menu.

Drive Setup Changes for 1.6.2

- Changes made only to the Drive Setup application address a rare issue where the hard disk driver partition map can be improperly formatted. This would cause some 3rd party utilities to incorrectly report that block 0 is damaged or not allow the volume to mount. This version also ensures that two patches are always installed: the large volume support patch for Power Macintosh 6100, 7100 and 8100 computers which do not have large volume (2GB or larger) support in ROM, and the SCSI MESH patch for PCI Power Macintosh computers. This version does NOT install newer drivers than the drivers included with Drive Setup 1.6.1.

Drive Setup Changes for 1.6.1

- Fixed a potential data transfer issue on the PowerBook 5300 and PowerBook 2300 operating in SCSI Disk Mode.

Drive Setup Changes for 1.6

- Fixed a problem where ATA drives did not properly sleep.
- Also fixed a problem where Media bay devices were not properly reported on PowerBooks.

Drive Setup Changes for 1.5

- Support added for Power Macintosh G3 computers.
- Updates ATA driver to v3.10. This new driver fixes a write cache issue on some Apple ATA (IDE) hard drives was disabled following a restart. This issue is NOT specific to any Macintosh or Power Macintosh computer and can affect any computer that has an ATA (IDE) hard drive.

Drive Setup Changes for 1.4
Note: Drive Setup 1.4 is included with Mac OS 8.1 Update.

- Drive Setup 1.4 was tested with and supports Mac OS 8.1.
- Supports the same CPUs as Drive Setup 1.3.x, and adds support for Desktop/Minitower G3 and PowerBook G3 computers.
- Support for Mac OS Extended format.
- Fixed an issue where a SCSI Zip drive would show up as a CD-ROM if a cartridge wasn't in the drive

- Fixed an issue where a Micronet Premier MO 1300 drive would show up as 2 CD-ROM drives.

Drive Setup Changes for 1.3.1

- Version 1.3.1 is only required by Apple computers that have an internal ATA (IDE) hard disk.
- Installs the ATA (IDE) device driver version 3.07 if the computer includes an ATA (IDE) hard disk. The updated hard disk driver prevents a rare incident in which you may lose files on your hard disk or be unable to start up the computer using your hard disk. (If your computer is unable to start up, you see a flashing question mark on your screen.)

Drive Setup Changes for 1.3

- Drive Setup now supports all Macintosh and Power Macintosh models supported by Mac OS 8.
- Takes full advantage of the enhanced throughput of Ultra SCSI-2 Fast/Wide drives.
- Incorporates Mac OS 8 "look and feel".

Drive Setup Changes for 1.2.5

- Limited release for Power Macintosh Workgroup Servers 7350 and 9650, with added functionality specific to these models.
- NOT RECOMMENDED for use on other computers. Superceded by later versions of Drive Setup.

Drive Setup Changes for 1.2.4

- Includes the ability to repair a drive that is damaged as a result of updating with Drive Setup 1.2.2 after initializing with Apple HD SC Setup 7.1.2 or earlier.
- IMPORTANT Apple HD SC Setup should only be used with older 68k-based Mac OS computers.
- Added the ability to access drives with SCSI IDs greater than 7 (SCSI-2 Fast/Wide).

Drive Setup Changes for 1.2.3
ATA Driver (v3.0.4) changes in Drive Setup 1.2.3
The IDE driver was changed to correct a stack overflow problem, which occurred during large reads. Reads over one megabyte are now broken up into smaller chunks and the ATA Manger is called synchronously for each of the smaller calls.

- Correction for volumes being mounted (by VM) at boot time even when the "do not mount" option is selected.
- Correction for non-recoverable errors caused by the drive exceeding the ataManager's timeout.
- Correction for large reads on the PowerBook 1400 causing bus errors.

SCSI Driver (v8.0.6) changes in Drive Setup 1.2.3

- Corrected the undesired mount by VM on SCSI drives.
- Fixed a problem with large-sized reads and writes to disk on the internal drives of Performa 6400-family computers which could cause hangs.
- Added the ability to safely update over Apple HDSC Setup drivers.

Drive Setup Changes for 1.2.2

- Improvements in recognition of secured volumes.
- Minor changes to ensure compatibility with the Mac OS 7.6 Installer.

Drive Setup Changes for 1.2.1

- Limited release for a few Power Macintosh computers unique to some European markets. NOT RECOMMENDED for use on other computers.
- Superceded by later versions.

Drive Setup Changes for 1.2

- Includes SCSI MESH patch for PCI Power Macintosh models.
- Added support for selected 68k-based Mac OS computers with internal ATA hard drives.

Drive Setup Changes for 1.1

- Provides DMA support for ATA based computers.
- Fixed a problem where an ATA device's capacity was not correctly recognized.

Drive Setup Changes for 1.0.5

- No changes to the SCSI driver.
- No changes to the IDE driver.
- Updated Drive Setup application to assure that volume creation dates are different when creating multiple partitions on a hard drive. This change fixes a problem where, in rare cases, custom icons may appear incorrectly on a volume with multiple partitions with the same creation dates.
- Drive Setup 1.0.5 waits 3 seconds between calls to the Disk Init Package ensuring that volume creation dates are different. This prevents a problem with custom icons not appearing correctly on drives with multiple partitions.
- Drive Setup 1.0.5 requires System Software 7.5 or later and is only supported for use with the following systems:
- -- Power Macintosh systems (including PowerPC-based Performa systems)
- -- PowerPC-based PowerBook computers*
- -- Macintosh 580- and 630-series systems and PowerBook 190 series
- Drive Setup does not currently support the Macintosh Processor Upgrade. If the upgrade is installed in a Macintosh 580- or 630-series system, use the "601 Processor Upgrade" control panel to turn the card off before using Drive Setup.

*The following computers are in the PowerPC-based PowerBook computer family: PowerBook 5300, 5300c, 5300ce, 5300cs, 2300c, 1400c, and 1400cs. Additionally PowerBook 200 and 500 series computers which have PowerPC upgrade cards installed are included in the PowerPC-based PowerBook computer family.

Drive Setup Changes for 1.0.3

- No changes to SCSI driver. This is the same SCSI driver that is included with Drive Setup 1.0.2.
- Installs updated IDE driver (ATA v1.12) for systems that were previously supported by previous versions of Drive Setup.
- Some Apple IDE hard drives require extra time to flush its caches at shut down and restart. This new IDE driver ensures that the drive's caches are properly flushed.
- Corrects an issue with the PowerBook 190, 2300 and 5300 series of computers where, in some cases, the system will freeze after wake up.
- Drive Setup 1.0.3 requires System Software 7.5 (or later) and is only supported for use with the following systems:
- -- Power Macintosh systems (including PowerPC-based Performa systems)
- -- Macintosh 580- and 630-series systems
- -- PowerBook 190, 2300, and 5300
- Drive Setup 1.0.3 does not support the Macintosh Processor Upgrade. If the upgrade is installed in a Macintosh 580- or 630-series system, use the "601 Processor Upgrade" control panel to turn the card off before using Drive Setup 1.0.3.

This article can help you locate the software update mentioned here:

- Article 14724: "**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.

Published Date: Feb 20, 2012

iMovie: Having both an II-DC camera and a DV camera connected may result in "Camera Not Connected" message

This article has been archived and is no longer updated by Apple.

If you are have difficulty getting your iSight (or other II-DC FireWire webcam) to be recognized in iMovie and get a "Camera Not Connected" message, try these simple steps:

- Make sure that no other application is open that might be using the webcam, such as iChat AV.
- If you have a DV camera (video camera/camcorder) connected to the computer, disconnect the DV device and reopen iMovie.

For additional assistance see My iSight won't communicate with iMovie.

Published Date: Oct 7, 2016

Exporting to Apple Lossless from Logic 7

This article has been archived and is no longer updated by Apple.
Logic Pro 7 and Logic Express 7 cannot export files directly to Apple Lossless. Instead, you'll need to first export your project to AIFF, and then convert the AIFF file to Apple Lossless using iTunes.

1. Export your project as an AIFF file from Logic Pro 7 or Logic Express 7.
2. Open the AIFF file in iTunes (version 4.6 or later).
3. From the **iTunes** menu, choose **Preferences**.
4. Click the Importing tab.
5. From the **Import Using** pop-up menu, choose **Apple Lossless Encoder**.
6. Click OK.
7. Select the AIFF file in iTunes and from the **Advanced** menu, choose **Convert selection to Apple Lossless**.

To locate your new Apple Lossless file in the Finder, select it in iTunes and from the **File** menu, choose **Show Song File**.

Published Date: Oct 7, 2016

Mac OS X Server 10.3: Disk quota not enforced for NetInfo users

This article has been archived and is no longer updated by Apple.
When set in Workgroup Manager, disk quotas are not enforced for users whose accounts are in the local NetInfo database of the server, even though the "homedirectoryquota" attribute appears in the user records.

The simplest workaround is to configure the server to be an Open Directory Master and to export the local NetInfo accounts into the LDAP database. To accomplish this, do the following:

1. Open Server Admin, and go to the Open Directory service.
2. Click the Settings button, and then the General tab.
3. If the "Role:" pop-up menu is set to "Standalone Server," select "Open Directory Master" from the list, and you'll be prompted to enter a server administrator's name and password, the Kerberos realm name, and the LDAP search base.
4. Open Workgroup Manager, and go to the NetInfo database.
5. Select the users you wish to import into the LDAP database.
6. From the **Server** menu, choose **Export**.
7. Navigate to the LDAP database in Workgroup Manager.
8. From the **Server** menu, choose **Import**.
9. Locate the export file created in step 6, then click the Import button.
10. You'll have to reset the imported user passwords at this point.

If you have to use a Standalone server, or need to store user accounts in the NetInfo domain on an Open Directory Master, you can use /usr/sbin/edquota instead of Workgroup Manager to set and enforce disk quotas. For more information on edquota, you can launch /Applications/Utilities/Terminal and type `man edquota` at the prompt.

Published Date: Oct 7, 2016

Logic Pro 7: Tuner defaults to 410Hz

This article has been archived and is no longer updated by Apple.
When you insert an ET1 tuner, it is set to a standard pitch of 410Hz instead of 440Hz.

To open the tuner with a default pitch of 440Hz, set it to 440Hz and save the setting under the name "#default" in the plug-in settings folder for the ET1.

If a setting with this name exists in the user or local domain, all effects and software instruments included with Logic Pro will load it as the default.

This issue is resolved in Logic Pro 7.0.1 and later.

Published Date: Feb 19, 2012

Apple Loop Utility does not launch from Logic or Soundtrack

This article has been archived and is no longer updated by Apple.
If you can't launch Apple Loop Utility from within Logic or Soundtrack, resolve the issue by deleting this file:

/Library/Caches/com.apple.LaunchServices.6B.csstore

Published Date: Oct 7, 2016

Logic Pro 7: Modulation phase shift when exporting Region as an audio file

This article has been archived and is no longer updated by Apple.
After exporting a Region as an audio file, the phase of a modulation plug-in may be different than when playing the song from the start.

The Low Frequency Oscillator (LFO) of a modulation plug-in is triggered once when the sequencer playback is started. Thus, the phase of an LFO at a certain song position depends on the position where the playback has been started.

When exporting a Region as an audio file, the playback starts at the Region start and triggers the LFO at this position.

To preserve the phase the same as when playing back the song from the start, follow these steps:

1. Export the whole track as an audio file.
2. Import the exported audio file into the Arrange window.
3. Divide the new Audio File into Regions with the function Strip Silence from the local Audio menu in the Arrange window.
4. Delete the Regions you don't need.
5. Double-click the Region to open it in the Sample Editor.
6. From the local **Functions** menu, choose **Trim**.

Published Date: Oct 7, 2016

Using iPod photo with Belkin Media Reader and Belkin Camera Link

This article has been archived and is no longer updated by Apple.
iPod photo Software 1.1 continues to support the Belkin Media Reader and the Belkin Camera Link, with the following differences:

With the Belkin Media Reader with iPod Software 1.1 for iPod photo, you can browse photos you just imported without having to sync iPod with your computer.

The Belkin Camera Link functions the same, whether you are using the 1.0 or 1.1 software. This means if you want to view the photos you imported to iPod photo, load them on your computer from iPod and then use iTunes 4.7 or later to sync them back to iPod photo.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

iPod: TV Out and display mirroring

This article has been archived and is no longer updated by Apple.
TV Out works with slide shows only. It is not capable of the following:

- Mirroring its display to a TV.
- LCD mirroring.

This applies to:

- iPod with color display (also known as iPod photo)
- Fifth Generation iPod (also known as iPod with video).

Published Date: Oct 7, 2016

Power Mac G5: Internal speaker doesn‘t mute if digital speakers are attached

This article has been archived and is no longer updated by Apple.
When you have digital speakers connected to your Power Mac G5, your internal speaker will not mute--even if you select the mute checkbox in Sound preferences. But you can set the internal speaker's volume low (in Sound preferences) as a workaround.

"Digital speakers" means speakers that connect to the optical Digital Out audio port with Toslink cables, and use the S/PDIF (Sony/Philips Digital Interface) protocol.

To mute the internal speaker, disconnect the digital speakers. Or, if you like, use a different kind of speakers to avoid this issue.

Published Date: Oct 7, 2016

iTunes 4.7 cannot sync photos to iPod photo from a locked volume

This article has been archived and is no longer updated by Apple.
When iTunes 4.7 first syncs photos to an iPod photo, it creates a cache folder in the folder where the photos are stored.

If you don't have write access for the selected drive or volume, you will get a "permissions error" when you try to sync photos. This will happen because iTunes cannot create the cache folder on the read-only volume.

The solution is to copy the photos to your hard drive first, then tell iTunes where the photos are stored. Be sure not to select a volume that is always read only, such as a CD-ROM or DVD-ROM disc.

Published Date: Oct 7, 2016

iPod with color displays do not have an adjustable contrast setting

This article has been archived and is no longer updated by Apple.

Unlike previous iPod models, the contrast setting for the iPod models that have a color display is not adjustable. This includes iPod nano, Fifth Generation iPod, iPod with color display, and earlier iPod photo models. If you're not sure what iPod model you have, click here.

Published Date: Oct 7, 2016

Logic Pro 7: "XSKey driver too old!" message during launch

This article has been archived and is no longer updated by Apple.

Symptom

When you try to open Logic Pro 7, you get a message that the XSKey driver is too old and has to be updated.

This happens only on systems which have had Logic 5 installed but not Logic 6. In this case, the XSKey driver cannot be updated by the Logic 7 installer.

Solution

Update the XSKey driver to resolve the issue. Follow these steps:

1. Download the installer.
2. Run the XSKey.pkg Installer.
3. Restart your computer when the installation is complete.

Published Date: Feb 19, 2012

Logic Pro 7 quits unexpectedly when attempting to open a file selector

This article has been archived and is no longer updated by Apple.

Symptom

When trying to open a file selector window from within Logic, the application quits unexpectedly.

Solution

This happens if the software Autocompleter or RapidoWrite is installed. Remove the software and delete the folder `~/Library/InputManagers/Autocompleter` or `~/Library/InputManagers/RapidoWrite`, as may be applicable in your situation.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

None of my photos were transferred to the iPod photo

This article has been archived and is no longer updated by Apple.
Changing your iPod update settings after the update has started can cause your photos not to get sent to the iPod photo.

Symptom

After stopping the iPod update, changing settings, and then starting the update again, no photos are sent to the iPod photo.

Solution

1. Click your iPod photo in the Source list in iTunes.
2. From the **File** menu, choose **Update iPod**.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

iPod photo: Should I use NTSC or PAL for TV Out?

This article has been archived and is no longer updated by Apple.
The iPod photo can deliver video out in either NTSC (National Television Standards Committee) or PAL (Phase Alternation Line) video formats.

NTSC is the standard broadcast signal received by televisions in the United States. PAL is the standard broadcast signal received by televisions in many European countries.

The main difference between NTSC and PAL is that NTSC delivers 525 lines of resolution at 60 half-frames per second, whereas PAL delivers 625 lines at 50 half-frames per second.

iPod photo will attempt to guess the appropriate video format to use based on the geographical region that it was sold in. If the incorrect video format is used, the image displayed on the television will be poor or garbled. Additionally, if the incorrect video format is selected, it can be changed in the following menu location:
Photos > Slideshow Settings > TV Signal

Published Date: Oct 7, 2016

iPod: Viewing a slideshow

This article has been archived and is no longer updated by Apple.

Some iPod models allow you to play a slideshow with music and transitions, either on its own display or on a television. Models that can display to a television currently include:

- Fifth Generation iPod (iPod with video)
- iPod with color display (also known as iPod photo)

If you're not sure what iPod model you have, see "Identifying different iPod models."

To access slideshow settings, select Photos > Slideshow Settings. Although iPod nano has a color display, it won't output a slideshow to a TV.

Choosing the display

- To display slideshows on the iPod display, set TV Out to Ask or Off.
- To display slideshows on a television, set TV Out to Ask or On.

If you set TV Out to Ask, iPod will give you a choice of display every time you start a slideshow. The first time you use a TV, you'll probably need the Tips for TV viewing and Connecting to a TV sections below.

Slideshow settings

- To set how long each slide is displayed, select Next Slide and choose a time.
- To set the music that plays during slideshows, select Music and choose a playlist.
  Tip: If you're using iPhoto, you can choose From iPhoto to copy the iPhoto music setting.
- To set slides to repeat, set Repeat to On.
- To set slides to display in random order, set Shuffle Photos to On.
- To set slides to display with wipe transitions, set Transitions to On.

Playing a slideshow

- Select any photo or album and press Play, or select any full-screen photo and press the select button.
- Play/Pause will pause the music and slideshow.
- To skip to the next or last photo, press the Next/Fast-forward or Previous/Rewind button.

Connecting to a TV

iPod models that support displaying video on an external video source can do so in two different ways.

Method 1 (Composite video)
Using the AV cable connected directly to the top of the iPod or to the line out port on the Universal Dock.

Method 2 (S-video)
Using S-video when the iPod is in the Universal Dock.

Method 1 setup (Composite video)
This method can be used when the iPod is either in or out of the dock. Additionally, you would need a television or other video device that has RCA inputs.

1. Connect the AV cable into the iPod (where the earbuds would normally connect) or to the line out port on the Universal Dock.
2. Connect the red RCA connection into the right audio input of the television.
3. Connect the white RCA connection into the left audio input of the television.
4. Connect the yellow RCA connection into the video input of the television.

Tip: The RCA input connectors on a television are usually color coded to match the colors on the AV cable.

Method 2 setup (S-video)
This method provides slightly better image quality and should be used if possible. This method requires a television or other video device with S video inputs. Additionally, S-video can only be used when the iPod is in the Universal Dock.

1. Place iPod in the Universal Dock.
2. Connect a S-video cable to the S-video out port on the Universal Dock. This connection provides the video signal.
3. Connect the other end of the S-video cable to the S-video input on the television.
4. Connect the AV cable to the line out port on the Universal Dock. This connection provides the audio signal.

5. Connect the red RCA connection into the right audio input of the television.
6. Connect the white RCA connection into the left audio input of the television.

Some televisions may need to be set to channel 3 or 4 or "video" to receive input. Check with the documentation for your television if you're not sure.

Important: You should only use the included cable. Other RCA video cables won't work. Though other cables may look similar, only the Apple iPod AV Cable works with the iPod Headphones and AV port.

Tips for TV viewing

NTSC or PAL?
Compatible iPod models can deliver video out in either NTSC (National Television Standards Committee) or PAL (Phase Alternation Line) video formats. You will have to set the TV Signal setting to either NTSC or PAL when viewing on a television. These are two different broadcast standards, and your TV will only work with one of them. If you don't know which your TV is, simply try both settings to find the one that matches.

NTSC is the standard broadcast signal received by televisions in the United States. PAL is the standard broadcast signal received by televisions in many European countries.

The main difference between NTSC and PAL is that NTSC delivers 525 lines of resolution at 60 half-frames per second, whereas PAL delivers 625 lines at 50 half-frames per second.

iPod will attempt to guess the appropriate video format to use based on the geographical region that it was sold in. If the incorrect video format is used, the image displayed on the television will be poor or garbled. Additionally, if the incorrect video format is selected, it can be changed in the following menu location:
Photos > Slideshow Settings > TV Signal

Video input on TV

You may then need to select the correct video input on your television. If you're not already familiar with the input features of your TV, you'll need to read the manual that came with your TV. If the TV is not set correctly, the slideshow will not appear.

Don't forget the sound

The video cable does not carry sound, so you'll need to use the regular audio connections regardless of which display you choose. Run an audio cable from the Line Out port on your Universal Dock to an input on your TV or receiver, for example.

Published Date: Oct 7, 2016

DVD Studio Pro: Too many Chapters and Stories may cause playback issues in some players

This article has been archived and is no longer updated by Apple.

DVD Studio Pro allows more than 999 cumulative PTTs per VTS. To determine if your title exceeds this limit, use this equation:

PTTs = *S* x *C* + *M*

Where:

- S = Number of Stories
- C = Chapters per story
- M = Number of markers in the associated track

If this number exceeds 999, some DVD players may report an error or have issues playing back the disc.

Published Date: Oct 7, 2016

iBook, iBook (FireWire): How to find the Serial Number

This article has been archived and is no longer updated by Apple.

This document explains how to find the serial number on the original models of iBook. For other iBooks, see document 86321, "Locating your iBook Serial Number".

To find the serial number using software

On most computers with Mac OS X you can find the serial number in the About This Mac window. See technical document 106486, "About This Mac Window Provides Computer Serial Number".

To find the serial number located on the computer

These models of iBook are covered in this document:

- iBook
- iBook (FireWire)

The serial number for these iBook models is located in the battery bay.

1. If the computer is on, shut down it down and close the lid.
2. Turn the computer over so you are looking at the battery door.
3. Remove the battery door. For information on how to do this, see technical document 58447, "iBook: Replacing the Battery".
4. The serial number is located near the bottom edge of the battery door. See below.

Published Date: Feb 20, 2012

Windows Domain Member Servers Cannot Host Profiles

This article has been archived and is no longer updated by Apple.

If you configure a Mac OS X Server to act as a Windows Domain Member of another Mac OS X Server running as a Windows Primary Domain Controller, Profiles cannot be stored on the Domain Member.

Symptom

You can configure a User account in Workgroup Manager to store a Profile on a Mac OS X Server acting as a Windows Domain Member. When a user in this configuration authenticates from a Windows workstation to a Mac OS X Server running as a Windows Primary Domain Controller, the Windows computer will attempt to access the Profile share point that resides on the Windows Domain Member. In a default configuration, accessing this share point will fail.

Solution

There are a few reasons that Windows clients will fail to access the Profile share point that resides on the Windows Domain Member Server.

The first reason is that the share point is not automatically created on the Windows Domain Member Server. In order to allow windows clients to access the Profile share point, one must first create the Profile directory and then create a share point of the directory.

This article assumes that in Workgroup Manager you have set your User's Profile location as: \\\\<domain member server netbios name><share point><optional path to subfolder><User Name>

To create the Profile directory on the Windows Domain Member Server, execute this command:

```
sudo mkdir -p -m 770 <Path to Profile share point><optional path to subfolder>
```

If asked to authenticate, enter your admin account password.

Next, change the ownership on the new directory:

```
sudo chown -R root:staff <Path to Profile share point>
```

If asked to authenticate, enter your admin account password.

Next, on the Windows Domain Member Server, as root, add the following lines to the end of /etc/smb.conf

```
[profiles]
 path = <Path to Profile share point>
 oplocks = yes
 strict locking = no
 read only = no
 browseable = no
```

Last, on the Windows Domain Member Server, restart Windows Services in Server Admin.

The second reason that Windows clients will fail to access the Profile share point that resides on the Windows Domain Member Server is that specific version of Windows requires a security descriptor be sent to the server hosting the profile. The versions of Windows that require the security descriptor are Windows 2000 running Service Pack 4 and Windows XP running Service Pack 1. Perform the following steps on the Windows machines to disable the requirement for a security descriptor to be sent to the server hosting the profile.

1. Select Start > Run.
2. Enter gpedit.msc and click Run.
3. If running Windows 2000 running Service Pack 4:

   Go to Local Computer Policy > Computer Configuration > Administrative Templates > System > Logon

   If running Windows XP running Service Pack 1:

Go to Local Computer Policy > Computer Configuration > Administrative Templates > System > User Profiles

4. Enable "Do not check for user ownership of Roaming Profile Folders".
5. Restart the system.

Published Date: Feb 18, 2012

iMac (Slot Loading): How to locate the Serial Number

This article has been archived and is no longer updated by Apple.

This document explains how to locate the serial number on slot-loading iMac computers. For other iMacs, see document 86320, "Locating your iMac Serial Number".

To find the serial number using software

On most computers with Mac OS X you can find the serial number in the About This Mac window. See technical document 106486, "About This Mac Window Provides Computer Serial Number".

To find the serial number located on the computer

These models of iMac are covered in this document:

- iMac (Slot Loading)
- iMac (Summer 2000)
- iMac (Early 2001)
- iMac (Summer 2001)

The serial number is on a sticker on the underside of your iMac.

Note: The parenthetical product descriptions (Summer 2000) and (Summer 2001) refer to the summer of the Northern Hemisphere.

Published Date: Feb 20, 2012

Apple iPod AV cable is not interchangeable with other AV cables

This article has been archived and is no longer updated by Apple.

The Apple iPod AV cable is for use with iPod models that support television-out. The iBook AV cable may look similar but is not interchangeable.

Only use the Apple iPod AV cable with:

- Fifth Generation iPod
- iPod with color display
- iPod photo

Third party cables may look similar to the Apple iPod AV cable but may not work when connecting to a TV.

Published Date: Oct 7, 2016

LaserWriter 12/640 PS: Network LaserWriter Sharing

I have an Apple LaserWriter printer that supports TCP/IP, a Power Macintosh computer, and two PC computers running Windows 95. I would like to connect all of these items on 10BaseT Ethernet so that all the computers can print over Ethernet. I found that I cannot see the printer with the Windows 95 computers, but I am able to print from the Macintosh computer just fine.
This article has been archived and is no longer updated by Apple.
Although Windows 95 offers built-in peer-to-peer networking via TCP/IP, IPX, and NetBEUI protocols, there are no built-in services for network printing without a print server or additional printing software.

Macintosh computers have built-in peer-to-peer networking as well as printing services via the AppleTalk and TCP/IP (LPR) protocols.

Workaround
Connect one of the PC computers directly to the LaserWriter using a parallel connection, then use Windows 95 print sharing to make the printer available over the network. The computer would be acting as a print server, handling all PC traffic going to the printer. Because the LaserWriter 12/640, LaserWriter 16/600 PS, LaserWriter 16/660 PS, LaserWriter 8500, Color LaserWriter 12/600 PS, and Color LaserWriter 12/660 PS can have a concurrent Ethernet and parallel connection, a Macintosh computer can continue to print directly to these printers over Ethernet (without having to go through the PC computer).

Other alternatives such as CopsTalk from Cops, Inc. and PC MACLAN for Windows 95 from Miramar Systems, Inc., provide AppleTalk protocol services for Windows 95 clients. Installation of either of these third party alternatives provides access to AppleTalk network printer services without the need of a print server or printer sharing via direct serial connection.

Lastly, LPR client software for Windows can be used to print over TCP/IP to LaserWriter printers that support TCP/IP. Some LPR clients are commercially available; however, Apple does not have any specific product recommendations. Some LPR clients are available as shareware and freeware, as well.

Mention of third-party products is for informational purposes only and constitutes neither an endorsement nor a recommendation. Apple assumes no responsibility with regard to the performance or use of these products.
Published Date: Feb 20, 2012

Ejecting large capacity iPods in Windows may take a long time

This article has been archived and is no longer updated by Apple.

When using a large capacity iPod with a Windows-compatible computer, it can take a while to eject the iPod when it contains many photos and it does not have the "disk use" option enabled. To speed up the time to eject the iPod, select the "Enable disk use" option.

Set "Enable disk use" in Windows

In iTunes 7.0 or later

1. Connect your iPod to your computer.
2. When the iPod icon appears in the iTunes window (below Devices), select it.
3. If the Summary pane isn't showing, click the Summary tab.
4. If not checked, select "Enable disk use." This will automatically be checked and dimmed if "Manually manage music and videos" is checked.
5. Click the Apply button in the bottom right-hand corner of the iTunes window.

In iTunes 6.05 or earlier

1. Connect iPod photo to the computer.
2. Open iTunes.
3. From the **Edit** menu, choose **Preferences**.
4. Select the iPod tab.
5. Select the General tab.
6. Select the "Enable disk use" checkbox.
7. Click the OK button to close the iTunes Preferences.

For information on safely disconnecting iPod from your computer, see Disconnecting iPod from your computer.

Published Date: Oct 7, 2016

Email created with Send to Mail Recipient option in Windows can‘t be sent when iTunes or QuickTime Player is open

This article has been archived and is no longer updated by Apple.

Symptom

When either iTunes or QuickTime Player is open, an email created from the "Send to Mail Recipient" shortcut menu command will not send.

Solution

To work around the issue, quit iTunes and QuickTime Player before using the Send To Mail Recipient shortcut menu item or before clicking "Send."

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Safari quits unexpectedly after migration to a new computer

This article has been archived and is no longer updated by Apple.
Safari may quit unexpectedly, or "crash," when visiting certain websites after you've used the migration feature of Setup Assistant to move from one Mac OS X 10.3 computer to another.

Use of the migration feature inadvertently backdates one component of Java software on computers that have the most recent Java version (1.4.2 Update 2), thus causing the issue. In that situation, Java won't work for various applications, including Safari.

To resolve this issue, simply reinstall Java 1.4.2 Update 2. Software Update will automatically spot the out-of-date component and offer you the update for reinstallation.

Published Date: Oct 7, 2016

Logic Pro 7: How to fix the position of a marker

This article has been archived and is no longer updated by Apple.
Learn how to fix the position of a marker on the timeline.

Markers are by default linked to their bar position, not to a time based position. This means that a marker will move in time when changing the tempo of the song. As an exception, markers that have been created by analyzing the scene cuts of a movie are automatically linked to their SMPTE time position.

Markers can also manually be linked to the SMPTE time position rather than the bar position. Use the "Lock SMPTE Position" command for this:

1. Select the markers you want to link to the SMPTE time.
   Tip: clicking on the marker track selects all markers.
2. Choose **Region** > **Lock SMPTE Position** from the local **Arrange** menu, or use the corresponding key command.

The markers will now be SMPTE locked and thus won't follow tempo changes. A padlock symbol in the marker display indicates the SMPTE lock.

Tip: This works for all objects in the Arrange window. If you want to lock the position of an Audio or MIDI Region, select the Regions and choose Lock SMPTE Position.

Published Date: Oct 7, 2016

Mac OS X 10.3: Setup Assistant migration may transfer portable-only menu items to a desktop computer

This article has been archived and is no longer updated by Apple.

Using Setup Assistant to transfer data from a portable Mac to a desktop Mac? Some portable-only Finder menu items may appear on the desktop computer after the transfer, but you can easily get rid of them.

For example, you may see a battery icon in the menu bar after using the migration option of the Setup Assistant. Desktop Macs don't have the ability to run on batteries like portable Macs do, so this menu does nothing on your desktop computer.

Want to make such a menu item disappear? Easy--just hold down the Command key as you drag the unwanted icon off the menu bar. Poof! The icon disappears into a cloud of virtual dust.

If this trick doesn't work with a third-party menu item, get in touch with the company that makes the software associated with the menu item.

Related documents

25773 Mac OS X 10.3: Transferring data with Setup Assistant frequently asked questions (FAQ)

Published Date: Feb 20, 2012

Logic Pro 7: No format change for Freeze files

This article has been archived and is no longer updated by Apple.
The Logic Pro 7 Reference Manual misleadingly states that the Freeze file format can be changed to 16 or 24-bit in Preferences > Audio. This information is no longer true for Logic 7.

If you used the Freeze function for exporting audio tracks in Logic 6, you can now use the superior feature of "Export Track as Audio File."

Choose **File** > **Export** > **Track As Audio File** or **Export All Tracks As Audio Files**.

This opens a file selector which allows to set the bit depth and audio file format. The first option exports only the selected track, and the second option exports all tracks which actually produce a sound (i.e. which are not muted or only the soloed ones).

This approach has a few advantages:

- With the export track function, the tracks are named more conveniently than when using the Freeze function in Logic 6, and you can freely choose the file destination and format for each export.
- The Freeze function can only ensure perfect sound quality in all cases when using 32-bit audio. Reading 32-bit files from the hard drive takes only a few percent more hard disk performance than reading 24 or 16-bit files (because most of the time is needed for seeking, not for reading).

Published Date: Oct 7, 2016

iPod photo: Update software to use iPod Remote for slideshows

This article has been archived and is no longer updated by Apple.
With iPod photo Software 1.0, the iPod Remote for iPod photo can only be used for music playback. To control the slideshow, use the click wheel on the iPod photo.

iPod photo Software 1.1 or later allows the remote to be used to control the slideshow. You can find the latest iPod software here.

Published Date: Oct 7, 2016

Apple Portables and AirPort Express: How to care for your AC Plug

This article has been archived and is no longer updated by Apple.

The power adapter that comes with iBooks and PowerBooks has an optional AC plug or "duck head." This AC plug is also used in the AirPort Express.

Follow these tips for best performance:

- Before using your AirPort Express or power adapter with the AC plug, make sure that the plug is free from foreign objects and debris that could have accumulated since the last time it was used.
- Periodically check the AC plug to make sure it is in good working order, as described in this article.
- When you store the power adapter or AirPort Express, make sure the electrical prongs (AC blades) are folded for storage, and store the adapter or AirPort Express in a padded bag or container.
- When you use the AC plug, firmly seat the plug with blades folded onto the power adapter or AirPort Express, then snap the AC blades into their completely extended position before you plug the adapter into the power outlet.

If you notice any of the following, discontinue use of the AC plug:

- The AC blades are bent. (DO NOT straighten a bent blade.)
- The AC blades fail to lock into place.
- The blades wobble (side to side) when they are locked in the open position.
- The AC blades have black marks or other visible damage.
- The adapter or AirPort Express does not power on or powers on intermittently when securely plugged in to a known good wall outlet.
- You have heard popping sounds come from within the AC plug.

For more information on troubleshooting portable power adapters, click here.

Published Date: Feb 18, 2012

AirPort: How to update the firmware on your AirPort Extreme or AirPort Express from a Macintosh

This article has been archived and is no longer updated by Apple.
The first step in updating firmware is to connect to the base station. There are several ways you can do this. Here are two examples:

- Choose a base station's unique network name from the AirPort menu, or
- Connect your computer to the base station using an Ethernet cable.

Tip: If your network uses multiple base stations, roaming, wireless distribution system (WDS), or a third-party router, you might have to use different types of connections. See the "Advanced information" section below to learn more about updating over other types of connections.

How to update

After you have connected to the base station, follow these steps to update the firmware:

1. Download the firmware update for your AirPort Extreme or AirPort Express.
2. Open the Firmware Updater. It should display all available base stations.

3. Select the base station, and click the Update button. This will start the firmware update process. This process may take a few minutes while the update is transferred to your AirPort Extreme or AirPort Express.

4. Click the OK button when the application notifies you that the update is finished. You will see your base station listed with the updated firmware version. If you have more base stations to update, return to step 3. If you are done updating you can Quit the application.

Advanced information

You may connect to a base station directly or indirectly. In a **direct** connection, communication passes from your computer to the base station that's being updated without going through any other device. If you only have one base station, your connection is always direct. The examples above are direct connections.

In an **indirect** connection, communication passes through a third device (usually another base station or router) to reach the base station that is being updated. This can happen on networks configured for roaming and/or WDS, or that have third-party routers or access points. Direct connections are preferred but not required.

Base station firmware 5.3 or later improves the ability to update the base station over an indirect connection (firmware 5.3 is included with AirPort software version 3.3 and is also available for separate download). If your base station has not been updated to firmware 5.3 or later, or if you are in the process of updating to version 5.3, a direct connection is the most reliable.

Updates over an indirect connection will not work under some circumstances when using firmware prior to 5.3, so they are not the preferred method. They do often work, however. Attempting to update over an indirect connection is worthwhile if it will save you the effort of making a direct connection to an inaccessible base station (such as one mounted in a ceiling). If the indirect update is not successful, connect directly.

Tip: The way you can tell that an indirect attempt has been unsuccessful is that AirPort Admin Utility will display the progress indicator (looks like a spinning pinwheel) for over three minutes, remaining unresponsive to other input. When this happens, choose Force Quit from the Apple Menu, select AirPort Admin Utility from the dialog, and click the Force Quit button.

Note: Mac OS X 10.2, Microsoft Windows 2000, and Windows XP users must download the 5.3 firmware separately. The AirPort 3.3 software is for Mac OS X 10.3 or later only. Links to the Windows AirPort Admin Utility and the latest firmware are on the AirPort support page
.

Examples of indirect connection:

- You connect wirelessly to the station with network name "A", which has a wired or wireless (WDS) connection to the target base station with network name "B".
- You choose a base station's non-unique network name in the AirPort menu.
  Note: When base stations have the same network name, known as "roaming," then you may be passing through another base station to reach the target base station.

Ensuring a direct connection

If you can't use the direct methods described above, try one of these two methods:

- Temporarily rename the base stations' networks.
- Temporarily unplug all but the target base station.

This third method almost always works:

1. Locate your computer near the target base station (or vice versa).
2. On the computer, turn AirPort off in the AirPort menu.
3. Turn AirPort on again.

Your computer should associate with the nearest base station when AirPort is turned back on, though unusual circumstances or sources of interference can keep this method from being 100 percent reliable.
Published Date: Feb 20, 2012

Mac OS X: A USB modem might prevent startup

This article has been archived and is no longer updated by Apple.
Your Mac might not start up correctly if an external USB modem is connected.

But don't worry, there's an easy workaround. Disconnect the USB modem before starting your computer. Then, reconnect it after the computer is started up.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

Some software DVDs may fail to mount in SuperDrives

This article has been archived and is no longer updated by Apple.

Some SuperDrive-equipped Power Mac G5, Power Mac G5 (June 2004), and eMac (USB 2.0) computers may not consistently mount all of the DVD discs included in some Apple software packages. Sometimes the DVD-ROM media will mount; other times it will be rejected (the optical drive will eject the disc with no error message).

The issue does not consistently affect all of the included media, and may occasionally be seen with non-Apple software products.

Some of the discs that may cause this issue include the following Apple retail software (released since May 2004):

- Final Cut Pro HD
- Production Suite
- Logic 7
- Logic Express
- Remix Tools (Jam Pack 2)
- Rhythm Section (Jam Pack 3)
- Motion
- iLife '05
- Mac OS X 10.4 Tiger
- Mac OS X Server 10.4

If you are experiencing this issue, download and install the SuperDrive Firmware Update.

Published Date: Feb 18, 2012

How to reinstall AppleWorks on an iMac G5, Mac mini, or iBook G4

This article has been archived and is no longer updated by Apple.

If you reinstall a localized version of Mac OS X on an iMac G5, Mac mini, or iBook G4, you may need to reinstall AppleWorks separately.

To custom install AppleWorks, follow these instructions:

1. Insert your Mac OS X Install Disc 1 into the optical drive.
2. Double-click the package named Install Bundled Software Only.
3. When you see "Welcome to the Mac OS X Installer," click the Continue button.
4. Select your destination disk, click Continue.
5. In the next screen, choose the button that says Customize.
6. Deselect all checked items in the list of components.
7. Click the disclosure triangle next to the line that says "AppleWorks Languages."
8. Select the version of AppleWorks that corresponds to the language you would like to use.
9. Click the Upgrade button.

For more information on installing the additional applications that came with your computer, see the document called "Read Before You Install," located on the Mac OS X Install Disc 1.

Published Date: Oct 7, 2016

iMovie: Some special characters (Unicode) do not display in titles

This article has been archived and is no longer updated by Apple.

Symptom

Using some Unicode-only characters in iMovie titles may result in the character being displayed as a blank, question mark, or rectangle when the title is rendered. The character may also cause the rest of the title past the character not to render.

You normally enter the affected characters with a combination of keys (such as Option-E + apostrophe) or with the Character Palette.

Solution

Use Key Caps or the Keyboard Viewer to see if there is an alternative way to input the special character you need. If you do not see the character you are looking for, try using a different font that can display the character you want without pressing a combination of keys.

Published Date: Oct 7, 2016

Logic Pro 7: End of stave line cannot be moved

This article has been archived and is no longer updated by Apple.
The end of a stave (staff) line cannot be moved with the Layout tool in the layout view of the Score Editor.

If a warning for a key signature change exists at the line break of a stave, the end of the stave line cannot be changed in the score layout because the end point cannot be grabbed with the Layout tool.

If you want to move the end of a stave line, you have to first remove the time signature change warning at the line break. In order to do so:

1. Deselect the option "Display Warnings at Line Breaks" in the local Score menu (**Layout** > **Clefs & Signatures**).
2. Change the layout.
3. Reselect the option "Display Warnings at Line Breaks."

Published Date: Oct 7, 2016

Disk Utility‘s "Scan image for Restore" process doesn‘t finish in Mac OS X 10.3

This article has been archived and is no longer updated by Apple.

After using Mac OS X 10.3's Disk Utility to create a disk image of a volume, you may run into an issue in which a "Scan Image for Restore" scan won't finish. Disk Utility just sits there indefinitely.

What can you do? Force quit Disk Utility, and then perform one of our workarounds. This article applies for Mac OS X 10.3 through 10.3.9.

Tip: If you're checking out log files, the Console log displays messages such as these when the issue occurs:

```
open failed: Operation not supported asr: could not checksum slp_ipc
open failed: Operation not supported asr: could not checksum mDNSResponder
open failed: Operation not supported asr: could not checksum pppconfd
```

Solution

As a workaround, you can either:

- Create a disk image, using this method in Disk Utility: From the **Images** menu, choose **New > Image from Folder**, or...
- Open Terminal and type this (which is equivalent to "Scan Image for Restore"), then press Return:

  ```
  asr -imagescan -blockonly
  ```

  Tip: To learn more about the asr command, type "man asr" in Terminal.

Published Date: Oct 7, 2016

Remote Desktop 2 won‘t launch, says "A newer version of the package is already installed."

This article has been archived and is no longer updated by Apple.

If you updated your Remote Desktop client software to version 2.1 but still have the Remote Desktop 2.0 admin application on the same computer, the admin application won't launch when you try to open it. Instead, it will start an installation routine and display the message, "A newer version of the package is already installed."

When you click Done to close this message, the application unexpectedly quits.

This usually happens if you moved Remote Desktop from the default Applications folder (/Applications) to another location. Here's why:

If you have Remote Desktop 2.0 on your computer, Software Update will offer you one of two versions of the 2.1 update: Remote Desktop Admin Update 2.1 or Remote Desktop Client Update 2.1. It will offer you the Admin version if the Remote Desktop application is in the Applications folder, or the Client version if it's not in there. The latter case leads to a mismatch of your client and admin software, which will prevent the Remote Desktop admin application from launching.

To resolve the issue, put the Remote Desktop application back in the Applications folder. Choose Software Update from the Apple menu, and this time it will offer you the Admin update. Install it, and you're done.

Tip: The Admin update includes the Client update, but not vice versa. If you get the Admin update first, everything will get updated at once.

Published Date: Feb 18, 2012

Remote Desktop 2: Upgrade Client Software feature doesn‘t work for some clients

This article has been archived and is no longer updated by Apple.

The Upgrade Client Software feature of Remote Desktop may fail for some clients. The system log on affected clients contains the message:

localhost /System/Library/CoreServices/RemoteManagement/ARDAgent.app/Contents/MacOS/ARDAgent: CheckDestination: Package install folder is invalid.

You can resolve the issue with either of the following solutions:

- Use Disk Utility to Repair Disk Permissions on the startup volume of affected client systems, or

- Execute this command on affected client systems:

  ```
  sudo chown root:wheel /private/tmp
  ```

  This command must be run on the client system as an admin user.

Tip: If the issue affects many clients, you can use the Send UNIX Command feature in Remote Desktop 2.0 to run `chown root:wheel /private/tmp` as the `root` User. You can't do this with version 2.1 of the Remote Desktop admin application, because 2.1 does not allow 2.0 clients to be targeted for UNIX Command tasks.

Published Date: Feb 18, 2012

AirPort: How to reset the trusted networks list

This article has been archived and is no longer updated by Apple.

Your computer keeps its list of trusted AirPort networks in the AirPort preferences file, "com.apple.airport.preferences.plist". It's located here:

```
/Library/Preferences/SystemConfiguration/
```

Deleting this file will reset the list. As a result, you will see a confirmation dialog whenever you attempt to join a network that was formerly in your trusted list. You might reset the list, for example, if your computer was automatically joining a network that you'd prefer to manually authorize. To delete the preference file in AirPort 3.3 or later, do the following steps.

For Mac OS X 10.3 "Panther"

1. While connected to a wireless network, locate the preference file "com.apple.airport.preferences.plist".
2. Drag it to the Trash.
3. In the resulting Authenticate dialog, enter your administrator name and password.
4. Click the AirPort menu bar icon, and choose **Turn AirPort Off**.
5. From the same menu, turn AirPort back on.

Once AirPort is on, the system creates a new preference file. Make sure that you don't skip any steps or the list may not be reset.

For Mac OS X 10.4 "Tiger"

1. From the **Apple** menu, choose **Location > Network Preferences**.
2. From the **Show** pop-up menu, choose **AirPort**.
3. Locate the pop-up menu next to "By default, join:". If this pop-up menu is set to "A specific network," this means that you upgraded to Tiger from Panther, and you should stop here and follow the Panther steps, above, instead. Otherwise, continue to step 4.
4. Set the pop-up menu to **Preferred**, which will reveal the list of trusted networks.
5. Select any network you want to delete from the list, then click the minus (-) button to delete it.
6. Click the Apply Now button.

Published Date: Feb 18, 2012

Mac OS X 10.3.6: FireWire device stops working immediately after a software update is performed

This article has been archived and is no longer updated by Apple.

If a FireWire device stopped working immediately after updating to Mac OS X 10.3.6, download and install Mac OS X 10.3.7 or later (Mac OS X 10.3.9 is the latest version of Mac OS X 10.3.x). For example, a connected FireWire hard drive may not mount (appear on the desktop), but it may appear in System Profiler.

Important: If a third-party FireWire hard drive is connected, disconnect it before installing the 10.3.7 or later update. Reconnect it and turn it back on after installation is complete and the computer is restarted.

Related documents

151724 My FireWire device isn't working

61248 How to troubleshoot a FireWire device that isn't working

Published Date: Feb 17, 2012

Clearing Recent Items can improve AppleWorks performance

This article has been archived and is no longer updated by Apple.

Does AppleWorks seem to be getting slower the longer you use it?

If so, try deleting the aliases (Mac) or shortcut files (Windows) in the Recent Items folder:

1. Locate the Recent Items folder:

   Mac OS X:
   /Users/username/Documents/AppleWorks User Data/Starting Points/Recent Items/

   Windows:
   C:\Documents and Settings\username\My Documents\AppleWorks User Data\Starting Points\Recent Items\

2. Drag the alias or shortcut files from that folder to the Trash or Recycle Bin.

If the Recent Items menu is not showing the most recent items, click here.

Published Date: Oct 7, 2016

Power Mac G5 (Late 2004): Fans remain loud after air deflector door is replaced

This article has been archived and is no longer updated by Apple.

Important: You should always shut down your Power Mac G5 before opening its case. This avoids potential damage to internal components or the components you want to install. Do not open the computer or attempt to install items inside the computer while it is on. Refer to your owners manual for further instructions on opening the computer.

If you remove the air deflector while the Power Mac G5 (Late 2004) is powered on, the fans will change speed, increasing the noise level. The fan speed will remain this way even after you replace the air deflector and door.

To return the fans to normal speed and noise level, follow these steps:

1. Power down the computer.
2. Remove the power cord from the computer.
3. Wait 15 seconds.
4. Plug in the power cord.
5. Press the power button on the computer.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Mac OS X 10.3: Retaining Energy Saver schedule preferences

This article has been archived and is no longer updated by Apple.

Mac OS X 10.3's Energy Saver preferences allows you to schedule a time for your computer to automatically start up (turn on) and shut down. However, if you click the preference window's lock icon to lock the settings (this prevents further access without a password) right after you make changes, your schedule settings won't be remembered.

Don't worry; you have a couple workarounds:

- After editing your Energy Saver schedule, open any other preference (either by clicking Show All or by choosing one from the View menu) to save the settings. Then, if you wish to lock your settings, go back into Energy Saver preferences and lock (de-authenticate) the preference.

- Or, just quit System Preferences after making your scheduling changes, *without* clicking the lock icon, and your settings will be saved. After that, if you wish, you can go back into Energy Saver preferences and lock (de-authenticate) the preference.

Note: The preference will be automatically unlocked the next time an administrator logs in.

Published Date: Oct 7, 2016

Final Cut Express 2: Timecode Overlays not available

This article has been archived and is no longer updated by Apple.

The Final Cut Express 2 manual incorrectly states that Timecode Overlays are available in the Viewer and Canvas. Overlays are not available, but you can determine timcode information using the timecode fields as described on page 291 of the Final Cut Express 2 manual and Help documentation available from the Help menu in Final Cut Express.

Published Date: Oct 7, 2016

Final Cut Express "Configuration Error" alert with less than 384 MB of RAM

This article has been archived and is no longer updated by Apple.

If your computer does not have enough memory, you will not be able to launch Final Cut Express.

Final Cut Express will install on a computer that has less than the minimum of 384MB of RAM, but it won't actually work in this configuration. You see this alert message:

> Configuration error
> This software requires certain hardware or software which is missing.
> • 384MB of RAM

To run Final Cut Express 2, your computer must meet all of the following minimum requirements:

- Macintosh computer with a 350MHz PowerPC G4 or G5 processor and AGP graphics card.
- RT Extreme requires a 500MHz PowerPC G4 (550MHz for PowerBook G4) or G5 processor or any dual PowerPC G4 or G5 processors.
- Mac OS X v10.2.5 or later.
- QuickTime 6.4 or later.
- 384MB of RAM (512MB required for RT Extreme).
- 40MB of available disk space required for installation.

Published Date: Oct 7, 2016

Logic Pro 7: Automation jumps back to last value in touch mode when using Logic Control

This article has been archived and is no longer updated by Apple.
Automation may jump back to the last value after approximately two seconds, although the fader keeps being touched. This happens when using the Logic Control in touch mode.

As a workaround, use touch mode with the track's automation fader instead of the Logic Control.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Some Internet radio stations don‘t play through AirTunes

This article has been archived and is no longer updated by Apple.

Some Internet radio stations that play in iTunes don't play through AirTunes, even when you've selected AirPort Express in iTunes. Instead, the radio station plays through the built-in speaker or audio-out port of the computer.

There is no workaround at this time. This document will be updated as more information becomes available.

Internet radio stations that play outside of iTunes (in a browser window or another application like QuickTime Player) do not play through AirTunes.

Published Date: Oct 7, 2016

TA22731_Cant_add_Windows_printers_in_Mac_OS_X_.pdf

Can‘t add Windows printers in Mac OS X 10.3.6

This article has been archived and is no longer updated by Apple.
Printers shared by Windows may not appear when attempting to add a printer in Printer Setup Utility, with Mac OS X 10.3.6 installed.

What can you do? Download and install Mac OS X 10.3.7 Update or later to resolve the issue.

Published Date: Oct 7, 2016

iCal 1.5.4: What‘s an "unsafe" alarm?

This article has been archived and is no longer updated by Apple.

iCal 1.5.4 displays an "unsafe" alarm alert when you try to import a calendar that contains existing alarms that open documents or other applications.

If you are concerned about security, either be sure to remove all unsafe alarms during the import process or don't import calendars that contain these kinds of alarms.

The alert allows you to choose whether or not you want to continue importing the calendar and its events, including all alarms. If you choose not to, click "Cancel" to stop the import process.

If you want to import everything, click "Keep All Alarms," and iCal will import all events and their respective alarms, including ones that open other documents and applications. Keep in mind that this is the least secure option.

If you want to import the calendar without the potential security issues, click "Remove Unsafe Alarms." iCal will import all events but won't import any alarms that are set to open documents or applications. It will import all event alarms that play a sound or display a message.

Published Date: Feb 18, 2012

Logic Express 7: SMPTE display does not update

This article has been archived and is no longer updated by Apple.
When Logic Express is in playback mode, the SMPTE time display in the Transport window does not update as the audio plays. As a result, the Transport window doesn't show the current song position.

This issue is resolved in Logic Express 7.1, which updates the SMPTE display in the Transport as the song plays.

Published Date: Oct 7, 2016

Logic Pro 7 and Logic Express 7: Score Editor displays squares instead of characters

This article has been archived and is no longer updated by Apple.

If you change to the JazzText font in the Score Editor, some characters may display as squares.

To make the characters display properly, either change the font to "JazzTextExtended" globally in the Text Styles window or change it individually in the text parameters.

Published Date: Oct 7, 2016

Logic Pro 7: Surround joystick may not work reliably for surround automation

This article has been archived and is no longer updated by Apple.
When using a mixing console (such as the Roland SI-24) for surround panning in Logic, you may experience erratic behavior when using the console's surround joystick--the surround position in Logic doesn't always change.

To resolve this issue, update to Logic Pro 7.0.1 or later.

Published Date: Oct 7, 2016

About the Mac OS X Server 10.3.7 Update

This article has been archived and is no longer updated by Apple.
This software updates Mac OS X Server version 10.3.6 to version 10.3.7.

Important: Read Before Installing

1. An administrator account password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, follow these steps: Choose System Preferences from the Apple menu. Choose Accounts from the View menu. Select an Admin account and click Edit User. Type your current password, and press Return. Change the password, and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.

4. This update can be installed on non-startup volumes, but that should be done **only** when the current startup volume has already been updated to Mac OS X Server 10.3.7. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are two ways to update to Mac OS X Server 10.3.7: Software Update and Standalone Installer.

Software Update Installation

You may have been referred to this document by Software Update. For more information on this feature, see How to Update Your Software.

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

An installer is also available from Apple Featured Software.

The Mac OS X Server 10.3.7 Update is specifically for updating version 10.3.6. There is also a "combo" installer available, which will update any 10.3.x version to 10.3.7.

Remote Installation

If you need to install the update on a remotely located computer, you can do so using either the Server Admin application or the "softwareupdate" command-line tool. Choose the method that works best for you.

Enhancements

This update includes the same changes that are found in the standard Mac OS X 10.3.7 Update. Though these items are not server-specific, they are relevant in a server environment:

- Filenames longer than 31 characters are no longer shortened when the file is saved on a server via Apple File Sharing.
- Resolves an issue in which Safari, Mail, and other networking applications that use DNS lookups could experience intermittent connectivity issues with Security Update 2004-09-30 and Mac OS X 10.3.5 or later installed.
- Resolves an issue that prevented printing to some Windows-based print servers.

Published Date: Oct 7, 2016

About the Mac OS X Server 10.3.7 Update (Combo)

This article has been archived and is no longer updated by Apple.
This software updates any version of Mac OS X Server 10.3 to 10.3.6 to Mac OS X Server version 10.3.7. It is a "combo" update that combines enhancements delivered with versions 10.3.1 through 10.3.7. If you already have Mac OS X Server 10.3.6, you may download a smaller update that is not a combo.

Important: Read Before Installing

1. An administrator account password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, then follow these steps: Choose System Preferences from the Apple menu. Choose Accounts from the View menu. Select an Admin account and click Edit User. Type your current password, and press Return. Change the password, and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.

4. This update can be installed on non-startup volumes, but that should be done **only** when the current startup volume has already been updated to Mac OS X Server 10.3.7. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

5. If you are updating from 10.3.2 or earlier and use a MySQL database, you must back it up prior to upgrade. See the Additional Information for MySQL section, below.

6. If you are updating from 10.3.2 or earlier and have set up a loginhook, a custom serial port configuration, or have edited the "/etc/ttys" file for other reasons, you will need to back it up prior to installation of this update.This is because a 10.3.3 or later update overwrites the file with a new copy when updating from 10.3.2 or earlier. The new file will set the Xserve's serial port to communicate at 56Kbps. If your serial device cannot communicate at this speed, you must edit this file to reduce the speed.

Installation

There are two ways to update to Mac OS X Server 10.3.7: Software Update and Standalone Installer.

Software Update Installation

You may have been referred to this document by Software Update. For more information on this feature, see How to Update Your Software.

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

An installer is also available from Apple Featured Software.

Mac OS X Server 10.3.7 Update (Combo) updates Mac OS X Server 10.3, 10.3.1, 10.3.2, 10.3.3, 10.3.4, 10.3.5, or 10.3.6 to the later version.

Remote Installation

If you need to install the update on a remotely located computer, you can do so using either the Server Admin application or the "softwareupdate" command-line tool. Choose the method that works best for you.

Enhancements Delivered with this update

Many enhancements are delivered with this update. Because this is a combo update, it includes those delivered with earlier 10.3 updates. You can see the individual lists for 10.3.1, 10.3.2, 10.3.3, 10.3.4, 10.3.5, 10.3.6, and 10.3.7.

Additional Information for MySQL

Data stored in MySQL databases with the version of MySQL that is pre-installed Mac OS X Server 10.3.2 or earlier must be exported and re-imported in order to be compatible with version of MySQL that is pre-installed on Mac OS X Server 10.3.3 or later, in which a byte-ordering issue is fixed.

As with any upgrade install, you should back up your old data. In this particular upgrade, the following process is recommended to convert the data to the correct byte ordering:

Before the upgrade, use the terminal to export the data from your pre-10.3.3 database:

```
#  mysqldump -p table > backup-file.sql
```

or

```
#  mysqldump  --opt database > backup-file.sql
```

After the upgrade, and after initializing the MySQL database, import the data:

```
#  mysql -p table < backup-file.sql
```

or

```
#  mysql  database < backup-file.sql
```

Published Date: Oct 7, 2016

About the Mac OS X 10.3.7 Update (Delta)

This article has been archived and is no longer updated by Apple.
This software updates Mac OS X 10.3.6 to version 10.3.7. If you have version 10.3, 10.3.1, 10.3.2, 10.3.3, 10.3.4, or 10.3.5, update your software with the combo update instead.

Important: Please read before installing

- If you have a third-party FireWire hard drive connected, disconnect it before installing this update. Reconnect it and turn it back on after installation is complete and you've restarted.
- You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. (This does not apply to normal application software installation.)
- The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to update.

Installation

You have two ways to update to Mac OS X 10.3.7: Use Software Update or the standalone installer. Use just one of these methods to update your computer.

Automatic Software Update

Software Update, located in System Preferences, can automatically download and install the latest Apple software. Software Update may have linked you to this document for additional information about the update.

This update's size may vary from computer to computer when installed via Software Update.

Because some updates are prerequisites for others, you may need to run Software Update more than once to get all available updates.

Standalone installer

Two versions (delta and combo, described below) of the installer are available from Apple Downloads as standalone updates. After you download an update, you can use it without being connected to the Internet.

- The "delta" installer will update Mac OS X 10.3.6 to 10.3.7 (described in this document).
- The "combo" installer can update 10.3, 10.3.1, 10.3.2, 10.3.3, 10.3.4, 10.3.5, or 10.3.6 to 10.3.7.

The standalone installer, particularly the combo, is useful if you have multiple computers to update and only want to download the 10.3.7 update once.

Enhancements

These are some of the enhancements included with the Mac OS X 10.3.7 Update.

Applications

- Allows TextEdit to open certain RTF documents that previously wouldn't open, resulting in a "TextEdit Open Failed. Couldn't open file" alert.
- Resolves an issue in which Safari, Mail, and other networking applications that use DNS lookups could experience intermittent connectivity issues with Security Update 2004-09-30 and Mac OS X 10.3.5 or later installed.
- Addresses an issue with Blizzard World of Warcraft in which the game's frame rate could drop considerably when in "Ghost mode," if the computer uses an nVidia graphics card.
- Resolves an issue in which enabling Vertex Shaders in World of Warcraft could lead to unexpected graphics issues when using an nVidia graphics card.
- Addresses an issue with World of Warcraft in which incorrect colors or unexpectedly flashing objects could appear when using an ATI Radeon 9600 graphics card, making gameplay difficult.
- Improves compatibility for Pacific Tech's Graphing Calculator 3.5—some 3D surfaces might not render in Mac OS X 10.3.6.

Other

- Addresses an issue in which a brief "flash of lines" may appear on the screen when waking the computer from sleep after the "Flurry" Screen Saver has run, if the computer uses an ATI Radeon 8500, 9000, 9200, 9600, or M9 graphics chip.
- Improves compatibility for FireWire-based audio interfaces, including the Edirol FA-101 FireWire audio interface.
- Enables E*TRADE PDF account statements to be viewed in Preview.
- An Apple Cinema 22" ADC display, when connected to certain PowerBook computers, no longer shows random "stuttering" or other graphics anomalies in the Finder and DVD Player.
- Addresses an issue in which shadowed text in a PDF file may print differently than it appears on the screen when printing to a raster printer.
- Filenames longer than 31 characters are no longer shortened when the file is saved on a server via Apple File Sharing.
- Resolves an issue with Mac OS X 10.3.6 in which some FireWire hard drives would not appear ("mount") on the desktop.
- Addresses an issue with Mac OS X 10.3.6 in which DVD Player might not open on some Power Mac G4 computers that use an ATI Radeon 9800 AGP video card.
- Resolves an issue that prevented printing to some Windows-based print servers.

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Published Date: Oct 7, 2016

About the Mac OS X 10.3.7 Update (Combo)

This article has been archived and is no longer updated by Apple.
This software updates Mac OS X 10.3, 10.3.1, 10.3.2, 10.3.3, 10.3.4, 10.3.5 or 10.3.6 to version 10.3.7. If you have version 10.3.6, you can update your software with the smaller delta update instead.

Important: Please read before installing

- If you have a third-party FireWire hard drive connected, disconnect it before installing this update. Reconnect it and turn it back on after installation is complete and you've restarted.
- You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. (This does not apply to normal application software installation.)
- The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to update.

Installation

You have two ways to update to Mac OS X 10.3.7: Use Software Update or the standalone installer. Use just one of these methods to update your computer.

Automatic Software Update

Software Update, located in System Preferences, can automatically download and install the latest Apple software. Software Update may have linked you to this document for additional information about the update.

This update's size may vary from computer to computer when installed via Software Update.

Because some updates are prerequisites for others, you may need to run Software Update more than once to get all available updates.

Standalone installer

Two versions (combo and delta, described below) of the installer are available from Apple Downloads as standalone updates. After you download an update, you can use it without being connected to the Internet.

- The "combo" installer (described in this document) can update 10.3, 10.3.1, 10.3.2, 10.3.3, 10.3.4, 10.3.5, or 10.3.6 to 10.3.7.
- The "delta" installer will update Mac OS X 10.3.6 to 10.3.7 (described in a different document).

The standalone installer, particularly the combo, is useful if you have multiple computers to update and only want to download the 10.3.7 update once.

Enhancements

What does this update include? Check out the Enhancements section of this document for details.

This update also includes enhancements delivered with:

Mac OS X 10.3.6 Update
Mac OS X 10.3.5 Update
Mac OS X 10.3.4 Update
Mac OS X 10.3.3 Update
Mac OS X 10.3.2 Update
Mac OS X 10.3.1 Update

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Published Date: Oct 7, 2016

Not all DVD players support all media types

This article has been archived and is no longer updated by Apple.

Computers and set-top DVD players may not support all types of booktypes (media).

Some examples of different DVD media include:

- DVD-ROM
- DVD+R
- DVD-R
- DVD+RW
- DVD+R DL

Set-top DVD players
The manufacturer determines what booktypes the player supports at the time of production.

Computer DVD players
The drive, software DVD player, and the computer operating system must support the media in order for the disc to mount and play back.

For more information on supported media types and updates for specific devices, please consult the manufacturer of the device.

Symptoms of an incompatibility include:

- The disc fails to mount.
- The disc ejects automatically.
- The disc is ignored.
- The player displays error messages or codes when a disc is inserted.

See What's New in DVD Studio Pro 3.0.2 for additional information about DVD Studio Pro and support for the DVD+R DL booktype.

Published Date: Oct 7, 2016

Final Cut Pro HD: CinéWave drops frames when capturing SD clips

This article has been archived and is no longer updated by Apple.

When using a CinéWave card to capture SD (Standard Definition) clips in Final Cut Pro HD, the card will start dropping frames after 5–10 seconds if you're capturing to the Serial ATA bus on a Power Mac G5 1.6GHz, with the card's Bus Manager set to the "Transfer video directly between storage and CinéWave" option.

To resolve this issue, set the Bus Manager to the "Transfer video to/from CinéWave through system memory" option. You'll find this option in the CinéWave System Preference.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Unable to reinstall Remote Desktop 2.0

This article has been archived and is no longer updated by Apple.

If you're trying to uninstall Remote Desktop, as described in document 108021, and then reinstall version 2.0, your attempt might fail with one of two symptoms.

Scenario 1: see an alert message that says "A newer version of the package is already installed."

When you click Done to close this message, the Remote Desktop application unexpectedly quits. The same thing happens each time you reopen the Remote Desktop application.

Scenario 2: Remote Desktop installs necessary components each time you open it, reports that the installation was successful, and then quits. It does this each time you open it, creating a sort of "looping installation" effect.

Because you may also see an installation or setup routine each time you try to reopen Remote Desktop in scenario 1, the two scenarios can seem very similar.

Note: If your intent is to update to version 2.1 and *not* to uninstall or reinstall 2.0, please refer to document 300329 instead.

To resolve the issue, execute the following commands in a Terminal window:

Note: These steps are not for Mac OS X 10.4 Tiger. They are for 10.3.9 and earlier.

```
$ sudo rm -rf /System/Library/PreferencePanes/SharingPref.prefPane/
$ sudo rm -rf /Library/Receipts/PantherSharing.pkg/
```

You may now open the Remote Desktop application to complete the installation.

Published Date: Feb 18, 2012

Final Cut Express: Imported movie has audio but no video

This article has been archived and is no longer updated by Apple.

In Final Cut Express 1.0.1, if you import a QuickTime movie that uses the Photo JPEG codec, the audio will be imported, but the video tracks will not.

As a workaround, if you have an application that can export to a different codec (like QuickTime Pro)), open the Photo JPEG movie file and export it using a different video codec.

This document will be updated when additional information is available.

Published Date: Oct 7, 2016

AirPort: How to update the firmware on your AirPort Extreme or AirPort Express from a Windows PC

This article has been archived and is no longer updated by Apple.
The first step in updating firmware is to connect to the base station. There are several ways you can do this. Here are two examples:

- Connect to the base station network wirelessly, or
- Connect your computer to the base station using an Ethernet cable.

Tip: If your network uses multiple base stations, roaming, wireless distribution system (WDS), or a third-party router, you might have to use different types of connections. See the "Advanced information" section below to learn more about updating over other types of connections.

How to update

After you have connected to the base station, follow these steps to update the firmware:

1. Download the firmware update for your AirPort Extreme or AirPort Express.
2. Open the Firmware Updater. It should display all available base stations.

3. Select the base station, and click the Update button. This will start the firmware update process. This process may take a few minutes while the update is transferred to your AirPort Extreme or AirPort Express.

4. Click the OK button when the application notifies you that the update is finished. You will see your base station listed with the updated firmware version. If you have more base stations to update, return to step 3. If you are done updating you can Quit the application.

Advanced information

You may connect to a base station directly or indirectly. In a **direct** connection, communication passes from your computer to the base station that's being updated without going through any other device. If you only have one base station, your connection is always direct. The examples above are direct connections.

In an **indirect** connection, communication passes through a third device (usually another base station or router) to reach the base station that is being updated. This can happen on networks configured for roaming and/or WDS, or that have third-party routers or access points. Direct connections are preferred but not required.

Base station firmware 5.3 or later improves the ability to update the base station over an indirect connection. If your base station has not been updated to firmware 5.3 or later, or if you are in the process of updating to version 5.3, a direct connection is the most reliable.

Updates over an indirect connection will not work under some circumstances when using firmware prior to 5.3, so they are not the preferred method. They do often work, however. Attempting to update over an indirect connection is worthwhile if it will save you the effort of making a direct connection to an inaccessible base station (such as one mounted in a ceiling). If the indirect update is not successful, connect directly.

Examples of indirect connection:

- You connect wirelessly to the station with network name "A", which has a wired or wireless (WDS) connection to the target base station with network name "B".
- You choose a base station's non-unique network name in the AirPort menu.
  Note: When base stations have the same network name, known as "roaming," then you may be passing through another base station to reach the target base station.

Ensuring a direct connection

If you can't use the direct methods described above, try one of these two methods:

- Temporarily rename the base stations' networks.
- Temporarily unplug all but the target base station.

This third method almost always works:

1. Locate your computer near the target base station (or vice versa).
2. On the computer, turn AirPort off in the AirPort menu.
3. Turn AirPort on again.

Your computer should associate with the nearest base station when AirPort is turned back on, though unusual circumstances or sources of interference can keep this method from being 100 percent reliable.
Published Date: Feb 19, 2012

Apple Hardware Test for Power Mac version 2.2.5 reports fan error

This article has been archived and is no longer updated by Apple.

Apple Hardware Test may incorrectly report the error "2FAN/4/8 : Rear Fan 0" on Power Mac G5 (Late 2004) computers if the air deflector is not installed. (Remember that the air deflector should always be installed when the computer is running.)

It is possible that the error does not indicate an actual fan failure. To verify whether it is a genuine failure, follow the steps below to reset the SMU, make sure that the air deflector is properly installed, and run the test again:

1. Shut down the computer.
2. Disconnect the power cord from the wall socket (or from the power strip) and wait at least 15 seconds.
3. While you're waiting at least 15 seconds, open the door on the Power Mac G5 and make sure the plastic air deflector is firmly in place.

4. Reconnect the power cord and start up the computer.
5. Run the Apple Hardware Test again. If the error persists, have the computer serviced.

Published Date: Feb 18, 2012

Mac OS X 10.2: iSync quits or can‘t sync to Symbian OS-based phone after installing iCal 1.5.4

This article has been archived and is no longer updated by Apple.

If your computer has Mac OS X 10.2.3 through 10.2.8 and iCal 1.5.4 installed, and iSync is configured to sync with a Symbian OS-based phone, iSync might unexpectedly quit when opening or syncing.

iSync may also quit when adding a Symbian OS-based phone.

To resolve the issue, download and install iCal 1.5.5.

Published Date: Oct 7, 2016

Mac OS X Server: WebDAV .DS_Store protection added by Security Update 2004-12-02

This article has been archived and is no longer updated by Apple.
Server Security Update 2004-12-02 modifies the Web Server configuration file. If the update is successful, files named ".DS_Store" will be blocked (unavailable to Web browsers or WebDAV clients). Please see article 300422 for the technical details. This improves security but can degrade the experience for WebDAV users who are working in the Finder. Similar to a read-only volume, client metadata for folders on mounted WebDAV volumes, such as icon positions and view options, will not be persistent from one login to the next.

WebDAV users who use the Finder to copy a folder that contains a .DS_Store file may see this alert message:

"The item <folder-name> contains one or more items you do not have permission to read. Do you want to copy the items you are allowed to read?"

In this case, instruct your users to click Continue to direct the Finder to copy the folder. All files except for the .DS_Store files should be copied.

When such clients access WebDAV volumes, expect to see many entries like this in the Apache error log:

```
[Tue Nov 16 13:15:26 2004] [error] [client 192.0.34.166] client denied by server configuration:
/Library/WebServer/Documents/dav/.DS_Store
```

Such errors are harmless and can be ignored.

Published Date: Oct 7, 2016

Mac OS X, Mac OS X Server: Protection for sensitive files when using Apache on an HFS+ volume

This article has been archived and is no longer updated by Apple.

Security Update 2004-12-02 makes changes to the httpd.conf file. After a successful update, the Apache configuration file will deny access to the following files:

- */..namedfork/data
- */..namedfork/rsrc
- */rsrc
- rsrc
- .ht* (case insensitive)
- .ds_s* (case insensitive)

Warnings:

1. The configuration changes that block named-fork exposure apply only to the default webserver, apache1. If you've chosen to use Apache2, it's recommended that you serve content from a UFS volume.
2. For important related information, see "mod_hfs_apple" protects web content against case insensitivity in the HFS file system.

Blocking these files improves security, but it may impact applications that either provide resource fork content via a web server (no Apple applications do) or store files called "rsrc".

If clients attempt to access blocked files, the Apache error log will create a record. By default, Apache writes log files into /private/var/log/httpd. Here's what this example would look like:

```
[Tue Nov 16 13:15:26 2004] [error] [client 1.2.3.4] client denied by server configuration:
/Library/WebServer/Documents/rsrc
```

In some circumstances, the Security Update may not install successfully if the Web Server configuration file has been manually edited or has been updated by installing certain third-party software.

If the Security Update can't successfully modify the Web Server configuration file, this entry will appear in system install log (/var/log/install.log):

```
## WARNING #############################################################
The Security Update was unable to safely apply a patch to your Apache
config file, /etc/httpd/httpd.conf. It has been left undisturbed.

Please look at /etc/httpd/httpd.conf.default and consider merging the
new Files 'rsrc' and DirectoryMatch '..namedfork' directives from that
file into /etc/httpd/httpd.conf.

######################################################################
```

If this occurs, we highly recommend that you edit your /etc/httpd/httpd.conf file manually, as follows.

An unpatched configuration file will contain one of the following three alternative sections:

- ```
  <Files ~ "^\.ht">
      Order allow,deny
      Deny from all
      Satisfy All
  </Files>
  ```

- ```
  <Files ~ "^\.([Hh][Tt])">
      Order allow,deny
      Deny from all
      Satisfy All
  </Files>
  ```

- ```
  <Files ~ "^\.([Hh][Tt]|[Dd][Ss]_[Ss])">
      Order allow,deny
      Deny from all
      Satisfy All
  </Files>
  ```

Whichever section appears, replace it with **all** of the following:

```
<Files ~ "^\.([Hh][Tt]|[Dd][Ss]_[Ss])">
    Order allow,deny
    Deny from all
```
```

```
    Satisfy All
</Files>

<Files "rsrc">
    Order allow,deny
    Deny from all
    Satisfy All
</Files>

<DirectoryMatch ".*\.\.namedfork">
    Order allow,deny
    Deny from all
    Satisfy All
</DirectoryMatch>
```

Additional information

Security Update 2004-12-02 may update Mac OS X client with a copy of the Apache default configuration file (httpd.conf.default) that is intended for Mac OS X Server. The default file is provided in Mac OS X client only as a reference in the event that user-made changes to the active configuration file result in a need to revert back to a known-good default copy. You can restore a Mac OS X client httpd.conf.default file to the correct state by opening it in a text editor and replacing its contents with the copy found below. The copy below is **only** for Mac OS X 10.2.8 or 10.3.6 with Security Update 2004-12-02 installed.

Begin copying below this line.

```
##
## httpd.conf -- Apache HTTP server configuration file
##

#
# Based upon the NCSA server configuration files originally by Rob McCool.
#
# This is the main Apache server configuration file.  It contains the
# configuration directives that give the server its instructions.
# See <URL:http://httpd.apache.org/docs/> for detailed information about
# the directives.
#
# Do NOT simply read the instructions in here without understanding
# what they do.  They're here only as hints or reminders.  If you are unsure
# consult the online docs. You have been warned.
#
# After this file is processed, the server will look for and process
# /private/etc/httpd/srm.conf and then /private/etc/httpd/access.conf
# unless you have overridden these with ResourceConfig and/or
# AccessConfig directives here.
#
# The configuration directives are grouped into three basic sections:
#  1. Directives that control the operation of the Apache server process as a
#     whole (the 'global environment').
#  2. Directives that define the parameters of the 'main' or 'default' server,
#     which responds to requests that aren't handled by a virtual host.
#     These directives also provide default values for the settings
#     of all virtual hosts.
#  3. Settings for virtual hosts, which allow Web requests to be sent to
#     different IP addresses or hostnames and have them handled by the
#     same Apache server process.
#
# Configuration and logfile names: If the filenames you specify for many
# of the server's control files begin with "/" (or "drive:/" for Win32), the
# server will use that explicit path.  If the filenames do *not* begin
# with "/", the value of ServerRoot is prepended -- so "logs/foo.log"
# with ServerRoot set to "/usr/local/apache" will be interpreted by the
# server as "/usr/local/apache/logs/foo.log".
#

### Section 1: Global Environment
#
# The directives in this section affect the overall operation of Apache,
# such as the number of concurrent requests it can handle or where it
# can find its configuration files.
#

#
# ServerType is either inetd, or standalone.  Inetd mode is only supported on
# Unix platforms.
#
ServerType standalone

#
```

```
# ServerRoot: The top of the directory tree under which the server's
# configuration, error, and log files are kept.
#
# NOTE!  If you intend to place this on an NFS (or otherwise network)
# mounted filesystem then please read the LockFile documentation
# (available at <URL:http://www.apache.org/docs/mod/core.html#lockfile>);
# you will save yourself a lot of trouble.
#
ServerRoot "/usr"

#
# The LockFile directive sets the path to the lockfile used when Apache
# is compiled with either USE_FCNTL_SERIALIZED_ACCEPT or
# USE_FLOCK_SERIALIZED_ACCEPT. This directive should normally be left at
# its default value. The main reason for changing it is if the logs
# directory is NFS mounted, since the lockfile MUST BE STORED ON A LOCAL
# DISK. The PID of the main server process is automatically appended to
# the filename.
#
#LockFile "/private/var/run/httpd.lock"

#
# PidFile: The file in which the server should record its process
# identification number when it starts.
#
PidFile "/private/var/run/httpd.pid"

#
# ScoreBoardFile: File used to store internal server process information.
# Not all architectures require this.  But if yours does (you'll know because
# this file will be  created when you run Apache) then you *must* ensure that
# no two invocations of Apache share the same scoreboard file.
#
ScoreBoardFile "/private/var/run/httpd.scoreboard"

#
# In the standard configuration, the server will process httpd.conf (this
# file, specified by the -f command line option), srm.conf, and access.conf
# in that order.  The latter two files are now distributed empty, as it is
# recommended that all directives be kept in a single file for simplicity.
# The commented-out values below are the built-in defaults.  You can have the
# server ignore these files altogether by using "/dev/null" (for Unix) or
# "nul" (for Win32) for the arguments to the directives.
#
#ResourceConfig /private/etc/httpd/srm.conf
#AccessConfig /private/etc/httpd/access.conf

#
# Timeout: The number of seconds before receives and sends time out.
#
Timeout 300

#
# KeepAlive: Whether or not to allow persistent connections (more than
# one request per connection). Set to "Off" to deactivate.
#
KeepAlive On

#
# MaxKeepAliveRequests: The maximum number of requests to allow
# during a persistent connection. Set to 0 to allow an unlimited amount.
# We recommend you leave this number high, for maximum performance.
#
MaxKeepAliveRequests 100

#
# KeepAliveTimeout: Number of seconds to wait for the next request from the
# same client on the same connection.
#
KeepAliveTimeout 15

#
# Server-pool size regulation.  Rather than making you guess how many
# server processes you need, Apache dynamically adapts to the load it
# sees --- that is, it tries to maintain enough server processes to
# handle the current load, plus a few spare servers to handle transient
# load spikes (e.g., multiple simultaneous requests from a single
# Netscape browser).
#
# It does this by periodically checking how many servers are waiting
# for a request.  If there are fewer than MinSpareServers, it creates
```

```
# a new spare.  If there are more than MaxSpareServers, some of the
# spares die off.  The default values are probably OK for most sites.
#
MinSpareServers 1
MaxSpareServers 5

#
# Number of servers to start initially --- should be a reasonable ballpark
# figure.
#
StartServers 1

#
# Limit on total number of servers running, i.e., limit on the number
# of clients who can simultaneously connect --- if this limit is ever
# reached, clients will be LOCKED OUT, so it should NOT BE SET TOO LOW.
# It is intended mainly as a brake to keep a runaway server from taking
# the system with it as it spirals down...
#
MaxClients 150

#
# MaxRequestsPerChild: the number of requests each child process is
# allowed to process before the child dies.  The child will exit so
# as to avoid problems after prolonged use when Apache (and maybe the
# libraries it uses) leak memory or other resources.  On most systems, this
# isn't really needed, but a few (such as Solaris) do have notable leaks
# in the libraries. For these platforms, set to something like 10000
# or so; a setting of 0 means unlimited.
#
# NOTE: This value does not include keepalive requests after the initial
#       request per connection. For example, if a child process handles
#       an initial request and 10 subsequent "keptalive" requests, it
#       would only count as 1 request towards this limit.
#
MaxRequestsPerChild 100000

#
# Listen: Allows you to bind Apache to specific IP addresses and/or
# ports, instead of the default. See also the <VirtualHost>
# directive.
#
#Listen 3000
#Listen 12.34.56.78:80

#
# BindAddress: You can support virtual hosts with this option. This directive
# is used to tell the server which IP address to listen to. It can either
# contain "*", an IP address, or a fully qualified Internet domain name.
# See also the <VirtualHost> and Listen directives.
#
#BindAddress *

#
# Dynamic Shared Object (DSO) Support
#
# To be able to use the functionality of a module which was built as a DSO you
# have to place corresponding `LoadModule' lines at this location so the
# directives contained in it are actually available _before_ they are used.
# Please read the file http://httpd.apache.org/docs/dso.html for more
# details about the DSO mechanism and run `httpd -l' for the list of already
# built-in (statically linked and thus always available) modules in your httpd
# binary.
#
# Note: The order in which modules are loaded is important.  Don't change
# the order below without expert advice.
#
# Example:
# LoadModule foo_module libexec/mod_foo.so
#LoadModule vhost_alias_module libexec/httpd/mod_vhost_alias.so
#LoadModule env_module         libexec/httpd/mod_env.so
LoadModule config_log_module  libexec/httpd/mod_log_config.so
#LoadModule mime_magic_module  libexec/httpd/mod_mime_magic.so
LoadModule mime_module        libexec/httpd/mod_mime.so
LoadModule negotiation_module libexec/httpd/mod_negotiation.so
#LoadModule status_module      libexec/httpd/mod_status.so
#LoadModule info_module        libexec/httpd/mod_info.so
LoadModule includes_module    libexec/httpd/mod_include.so
LoadModule autoindex_module   libexec/httpd/mod_autoindex.so
LoadModule dir_module         libexec/httpd/mod_dir.so
LoadModule cgi_module         libexec/httpd/mod_cgi.so
```

```
LoadModule asis_module        libexec/httpd/mod_asis.so
LoadModule imap_module        libexec/httpd/mod_imap.so
LoadModule action_module      libexec/httpd/mod_actions.so
#LoadModule speling_module     libexec/httpd/mod_speling.so
LoadModule userdir_module     libexec/httpd/mod_userdir.so
LoadModule alias_module       libexec/httpd/mod_alias.so
LoadModule rewrite_module     libexec/httpd/mod_rewrite.so
LoadModule access_module      libexec/httpd/mod_access.so
LoadModule auth_module        libexec/httpd/mod_auth.so
#LoadModule anon_auth_module   libexec/httpd/mod_auth_anon.so
#LoadModule dbm_auth_module    libexec/httpd/mod_auth_dbm.so
#LoadModule digest_module      libexec/httpd/mod_digest.so
#LoadModule proxy_module       libexec/httpd/libproxy.so
#LoadModule cern_meta_module   libexec/httpd/mod_cern_meta.so
#LoadModule expires_module     libexec/httpd/mod_expires.so
#LoadModule headers_module     libexec/httpd/mod_headers.so
#LoadModule usertrack_module   libexec/httpd/mod_usertrack.so
LoadModule log_forensic_module libexec/httpd/mod_log_forensic.so
#LoadModule unique_id_module   libexec/httpd/mod_unique_id.so
LoadModule setenvif_module    libexec/httpd/mod_setenvif.so
#LoadModule dav_module         libexec/httpd/libdav.so
#LoadModule ssl_module         libexec/httpd/libssl.so
#LoadModule perl_module        libexec/httpd/libperl.so
#LoadModule php4_module        libexec/httpd/libphp4.so
LoadModule hfs_apple_module   libexec/httpd/mod_hfs_apple.so
LoadModule rendezvous_apple_module libexec/httpd/mod_rendezvous_apple.so

#  Reconstruction of the complete module list from all available modules
#  (static and shared ones) to achieve correct module execution order.
#  [WHENEVER YOU CHANGE THE LOADMODULE SECTION ABOVE UPDATE THIS, TOO]
ClearModuleList
#AddModule mod_vhost_alias.c
#AddModule mod_env.c
AddModule mod_log_config.c
#AddModule mod_mime_magic.c
AddModule mod_mime.c
AddModule mod_negotiation.c
#AddModule mod_status.c
#AddModule mod_info.c
AddModule mod_include.c
AddModule mod_autoindex.c
AddModule mod_dir.c
AddModule mod_cgi.c
AddModule mod_asis.c
AddModule mod_imap.c
AddModule mod_actions.c
#AddModule mod_speling.c
AddModule mod_userdir.c
AddModule mod_alias.c
AddModule mod_rewrite.c
AddModule mod_access.c
AddModule mod_auth.c
#AddModule mod_auth_anon.c
#AddModule mod_auth_dbm.c
#AddModule mod_digest.c
#AddModule mod_proxy.c
#AddModule mod_cern_meta.c
#AddModule mod_expires.c
#AddModule mod_headers.c
#AddModule mod_usertrack.c
AddModule mod_log_forensic.c
#AddModule mod_unique_id.c
AddModule mod_so.c
AddModule mod_setenvif.c
#AddModule mod_dav.c
#AddModule mod_ssl.c
#AddModule mod_perl.c
#AddModule mod_php4.c
AddModule mod_hfs_apple.c
AddModule mod_rendezvous_apple.c

#
# ExtendedStatus controls whether Apache will generate "full" status
# information (ExtendedStatus On) or just basic information (ExtendedStatus
# Off) when the "server-status" handler is called. The default is Off.
#
#ExtendedStatus On

### Section 2: 'Main' server configuration
#
# The directives in this section set up the values used by the 'main'
```

```
# server, which responds to any requests that aren't handled by a
# <VirtualHost> definition.  These values also provide defaults for
# any <VirtualHost> containers you may define later in the file.
#
# All of these directives may appear inside <VirtualHost> containers,
# in which case these default settings will be overridden for the
# virtual host being defined.
#

#
# If your ServerType directive (set earlier in the 'Global Environment'
# section) is set to "inetd", the next few directives don't have any
# effect since their settings are defined by the inetd configuration.
# Skip ahead to the ServerAdmin directive.
#

#
# Port: The port to which the standalone server listens. For
# ports < 1023, you will need httpd to be run as root initially.
#
Port 80

#
# If you wish httpd to run as a different user or group, you must run
# httpd as root initially and it will switch.
#
# User/Group: The name (or #number) of the user/group to run httpd as.
#  . On SCO (ODT 3) use "User nouser" and "Group nogroup".
#  . On HPUX you may not be able to use shared memory as nobody, and the
#    suggested workaround is to create a user www and use that user.
#  NOTE that some kernels refuse to setgid(Group) or semctl(IPC_SET)
#  when the value of (unsigned)Group is above 60000;
#  don't use Group "#-1" on these systems!
#
User www
Group www

#
# ServerAdmin: Your address, where problems with the server should be
# e-mailed.  This address appears on some server-generated pages, such
# as error documents.
#
#ServerAdmin webmaster@example.com

#
# ServerName allows you to set a host name which is sent back to clients for
# your server if it's different than the one the program would get (i.e., use
# "www" instead of the host's real name).
#
# Note: You cannot just invent host names and hope they work. The name you
# define here must be a valid DNS name for your host. If you don't understand
# this, ask your network administrator.
# If your host doesn't have a registered DNS name, enter its IP address here.
# You will have to access it by its address (e.g., http://123.45.67.89/)
# anyway, and this will make redirections work in a sensible way.
#
# 127.0.0.1 is the TCP/IP local loop-back address, often named localhost. Your
# machine always knows itself by this address. If you use Apache strictly for
# local testing and development, you may use 127.0.0.1 as the server name.
#
#ServerName homeslice.apple.com

#
# DocumentRoot: The directory out of which you will serve your
# documents. By default, all requests are taken from this directory, but
# symbolic links and aliases may be used to point to other locations.
#
DocumentRoot "/Library/WebServer/Documents"

#
# Each directory to which Apache has access, can be configured with respect
# to which services and features are allowed and/or disabled in that
# directory (and its subdirectories).
#
# First, we configure the "default" to be a very restrictive set of
# permissions.
#
<Directory />
    Options FollowSymLinks
    AllowOverride None
</Directory>
```

```
#
# Note that from this point forward you must specifically allow
# particular features to be enabled - so if something's not working as
# you might expect, make sure that you have specifically enabled it
# below.
#

#
# This should be changed to whatever you set DocumentRoot to.
#
<Directory "/Library/WebServer/Documents">

#
# This may also be "None", "All", or any combination of "Indexes",
# "Includes", "FollowSymLinks", "ExecCGI", or "MultiViews".
#
# Note that "MultiViews" must be named *explicitly* --- "Options All"
# doesn't give it to you.
#
    Options Indexes FollowSymLinks MultiViews

#
# This controls which options the .htaccess files in directories can
# override. Can also be "All", or any combination of "Options", "FileInfo",
# "AuthConfig", and "Limit"
#
    AllowOverride None

#
# Controls who can get stuff from this server.
#
    Order allow,deny
    Allow from all
</Directory>

#
# UserDir: The name of the directory which is appended onto a user's home
# directory if a ~user request is received.
#
<IfModule mod_userdir.c>
    UserDir Sites
</IfModule>

#
# Control access to UserDir directories.  The following is an example
# for a site where these directories are restricted to read-only.
#
#<Directory /Users/*/Sites>
#    AllowOverride FileInfo AuthConfig Limit
#    Options MultiViews Indexes SymLinksIfOwnerMatch IncludesNoExec
#    <Limit GET POST OPTIONS PROPFIND>
#        Order allow,deny
#        Allow from all
#    </Limit>
#    <LimitExcept GET POST OPTIONS PROPFIND>
#        Order deny,allow
#        Deny from all
#    </LimitExcept>
#</Directory>

#
# DirectoryIndex: Name of the file or files to use as a pre-written HTML
# directory index.  Separate multiple entries with spaces.
#
<IfModule mod_dir.c>
    DirectoryIndex index.html
</IfModule>

#
# AccessFileName: The name of the file to look for in each directory
# for access control information.
#
AccessFileName .htaccess

#
# The following lines prevent .htaccess files from being viewed by
# Web clients.  Since .htaccess files often contain authorization
# information, access is disallowed for security reasons.  Comment
# these lines out if you want Web visitors to see the contents of
# .htaccess files.  If you change the AccessFileName directive above,
```

```
# be sure to make the corresponding changes here.
#
# Also, folks tend to use names such as .htpasswd for password
# files, so this will protect those as well.
#
<Files ~ "^<.([Hh][Tt]|[Dd][Ss]_[Ss])">
    Order allow,deny
    Deny from all
    Satisfy All
</Files>

#
# Apple specific filesystem protection.
#

<Files "rsrc">
    Order allow,deny
    Deny from all
    Satisfy All
</Files>

<Directory  ~ ".\.\.namedfork">
    Order allow,deny
    Deny from all
    Satisfy All
</Directory>

#
# CacheNegotiatedDocs: By default, Apache sends "Pragma: no-cache" with each
# document that was negotiated on the basis of content. This asks proxy
# servers not to cache the document. Uncommenting the following line disables
# this behavior, and proxies will be allowed to cache the documents.
#
#CacheNegotiatedDocs

#
# UseCanonicalName:  (new for 1.3)  With this setting turned on, whenever
# Apache needs to construct a self-referencing URL (a URL that refers back
# to the server the response is coming from) it will use ServerName and
# Port to form a "canonical" name.  With this setting off, Apache will
# use the hostname:port that the client supplied, when possible.  This
# also affects SERVER_NAME and SERVER_PORT in CGI scripts.
#
UseCanonicalName On

#
# TypesConfig describes where the mime.types file (or equivalent) is
# to be found.
#
<IfModule mod_mime.c>
    TypesConfig /private/etc/httpd/mime.types
</IfModule>

#
# DefaultType is the default MIME type the server will use for a document
# if it cannot otherwise determine one, such as from filename extensions.
# If your server contains mostly text or HTML documents, "text/plain" is
# a good value.  If most of your content is binary, such as applications
# or images, you may want to use "application/octet-stream" instead to
# keep browsers from trying to display binary files as though they are
# text.
#
DefaultType text/plain

#
# The mod_mime_magic module allows the server to use various hints from the
# contents of the file itself to determine its type.  The MIMEMagicFile
# directive tells the module where the hint definitions are located.
# mod_mime_magic is not part of the default server (you have to add
# it yourself with a LoadModule [see the DSO paragraph in the 'Global
# Environment' section], or recompile the server and include mod_mime_magic
# as part of the configuration), so it's enclosed in an <IfModule> container.
# This means that the MIMEMagicFile directive will only be processed if the
# module is part of the server.
#
<IfModule mod_mime_magic.c>
    MIMEMagicFile /private/etc/httpd/magic
</IfModule>

#
# HostnameLookups: Log the names of clients or just their IP addresses
```

```
# e.g., www.apache.org (on) or 204.62.129.132 (off).
# The default is off because it'd be overall better for the net if people
# had to knowingly turn this feature on, since enabling it means that
# each client request will result in AT LEAST one lookup request to the
# nameserver.
#
HostnameLookups Off

#
# ErrorLog: The location of the error log file.
# If you do not specify an ErrorLog directive within a <VirtualHost>
# container, error messages relating to that virtual host will be
# logged here.  If you *do* define an error logfile for a <VirtualHost>
# container, that host's errors will be logged there and not here.
#
ErrorLog "/private/var/log/httpd/error_log"

#
# LogLevel: Control the number of messages logged to the error_log.
# Possible values include: debug, info, notice, warn, error, crit,
# alert, emerg.
#
LogLevel warn

#
# The following directives define some format nicknames for use with
# a CustomLog directive (see below).
#
LogFormat "%h %l %u %t <"%r<" %>s %b <"%{Referer}i<" <"%{User-Agent}i<"" combined
LogFormat "%h %l %u %t <"%r<" %>s %b" common
LogFormat "%{Referer}i -> %U" referer
LogFormat "%{User-agent}i" agent

#
# The location and format of the access logfile (Common Logfile Format).
# If you do not define any access logfiles within a <VirtualHost>
# container, they will be logged here.  Contrariwise, if you *do*
# define per-<VirtualHost> access logfiles, transactions will be
# logged therein and *not* in this file.
#
CustomLog "/private/var/log/httpd/access_log" common

#
# If you would like to have agent and referer logfiles, uncomment the
# following directives.
#
#CustomLog "/private/var/log/httpd/referer_log" referer
#CustomLog "/private/var/log/httpd/agent_log" agent

#
# If you prefer a single logfile with access, agent, and referer information
# (Combined Logfile Format) you can use the following directive.
#
#CustomLog "/private/var/log/httpd/access_log" combined

#
# Optionally add a line containing the server version and virtual host
# name to server-generated pages (error documents, FTP directory listings,
# mod_status and mod_info output etc., but not CGI generated documents).
# Set to "EMail" to also include a mailto: link to the ServerAdmin.
# Set to one of:  On | Off | EMail
#
ServerSignature On

# EBCDIC configuration:
# (only for mainframes using the EBCDIC codeset, currently one of:
# Fujitsu-Siemens' BS2000/OSD, IBM's OS/390 and IBM's TPF)!!
# The following default configuration assumes that "text files"
# are stored in EBCDIC (so that you can operate on them using the
# normal POSIX tools like grep and sort) while "binary files" are
# stored with identical octets as on an ASCII machine.
#
# The directives are evaluated in configuration file order, with
# the EBCDICConvert directives applied before EBCDICConvertByType.
#
# If you want to have ASCII HTML documents and EBCDIC HTML documents
# at the same time, you can use the file extension to force
# conversion off for the ASCII documents:
# > AddType       text/html .ahtml
# > EBCDICConvert Off=InOut .ahtml
#
```

```
# EBCDICConvertByType  On=InOut text/* message/* multipart/*
# EBCDICConvertByType  On=In    application/x-www-form-urlencoded
# EBCDICConvertByType  On=InOut application/postscript model/vrml
# EBCDICConvertByType Off=InOut */*


#
# Aliases: Add here as many aliases as you need (with no limit). The format is
# Alias fakename realname
#
<IfModule mod_alias.c>

    #
    # Note that if you include a trailing / on fakename then the server will
    # require it to be present in the URL.  So "/icons" isn't aliased in this
    # example, only "/icons/".  If the fakename is slash-terminated, then the
    # realname must also be slash terminated, and if the fakename omits the
    # trailing slash, the realname must also omit it.
    #
    Alias /icons/ "/usr/share/httpd/icons/"

    <Directory "/usr/share/httpd/icons">
        Options Indexes MultiViews
        AllowOverride None
        Order allow,deny
        Allow from all
    </Directory>

    # This Alias will project the on-line documentation tree under /manual/
    # even if you change the DocumentRoot. Comment it if you don't want to
    # provide access to the on-line documentation.
    #
    Alias /manual/ "/Library/WebServer/Documents/manual/"

    <Directory "/Library/WebServer/Documents/manual">
        Options Indexes FollowSymlinks MultiViews
        AllowOverride None
        Order allow,deny
        Allow from all
    </Directory>

    #
    # ScriptAlias: This controls which directories contain server scripts.
    # ScriptAliases are essentially the same as Aliases, except that
    # documents in the realname directory are treated as applications and
    # run by the server when requested rather than as documents sent to the client.
    # The same rules about trailing "/" apply to ScriptAlias directives as to
    # Alias.
    #
    ScriptAlias /cgi-bin/ "/Library/WebServer/CGI-Executables/"

    #
    # "/Library/WebServer/CGI-Executables" should be changed to whatever your ScriptAliased
    # CGI directory exists, if you have that configured.
    #
    <Directory "/Library/WebServer/CGI-Executables">
        AllowOverride None
        Options None
        Order allow,deny
        Allow from all
    </Directory>

</IfModule>
# End of aliases.

#
# Redirect allows you to tell clients about documents which used to exist in
# your server's namespace, but do not anymore. This allows you to tell the
# clients where to look for the relocated document.
# Format: Redirect old-URI new-URL
#

#
# Directives controlling the display of server-generated directory listings.
#
<IfModule mod_autoindex.c>

    #
    # FancyIndexing is whether you want fancy directory indexing or standard
    #
    IndexOptions FancyIndexing
```

```
    #
    # AddIcon* directives tell the server which icon to show for different
    # files or filename extensions.  These are only displayed for
    # FancyIndexed directories.
    #
    AddIconByEncoding (CMP,/icons/compressed.gif) x-compress x-gzip

    AddIconByType (TXT,/icons/text.gif) text/*
    AddIconByType (IMG,/icons/image2.gif) image/*
    AddIconByType (SND,/icons/sound2.gif) audio/*
    AddIconByType (VID,/icons/movie.gif) video/*

    AddIcon /icons/binary.gif .bin .exe
    AddIcon /icons/binhex.gif .hqx
    AddIcon /icons/tar.gif .tar
    AddIcon /icons/world2.gif .wrl .wrl.gz .vrml .vrm .iv
    AddIcon /icons/compressed.gif .Z .z .tgz .gz .zip
    AddIcon /icons/a.gif .ps .ai .eps
    AddIcon /icons/layout.gif .html .shtml .htm .pdf
    AddIcon /icons/text.gif .txt
    AddIcon /icons/c.gif .c
    AddIcon /icons/p.gif .pl .py
    AddIcon /icons/f.gif .for
    AddIcon /icons/dvi.gif .dvi
    AddIcon /icons/uuencoded.gif .uu
    AddIcon /icons/script.gif .conf .sh .shar .csh .ksh .tcl
    AddIcon /icons/tex.gif .tex
    AddIcon /icons/bomb.gif core

    AddIcon /icons/back.gif ..
    AddIcon /icons/hand.right.gif README
    AddIcon /icons/folder.gif ^^DIRECTORY^^
    AddIcon /icons/blank.gif ^^BLANKICON^^

    #
    # DefaultIcon is which icon to show for files which do not have an icon
    # explicitly set.
    #
    DefaultIcon /icons/unknown.gif

    #
    # AddDescription allows you to place a short description after a file in
    # server-generated indexes.  These are only displayed for FancyIndexed
    # directories.
    # Format: AddDescription "description" filename
    #
    #AddDescription "GZIP compressed document" .gz
    #AddDescription "tar archive" .tar
    #AddDescription "GZIP compressed tar archive" .tgz

    #
    # ReadmeName is the name of the README file the server will look for by
    # default, and append to directory listings.
    #
    # HeaderName is the name of a file which should be prepended to
    # directory indexes.
    #
    ReadmeName README.html
    HeaderName HEADER.html

    #
    # IndexIgnore is a set of filenames which directory indexing should ignore
    # and not include in the listing.  Shell-style wildcarding is permitted.
    #
    IndexIgnore .??* *~ *# HEADER* README* RCS CVS *,v *,t

</IfModule>
# End of indexing directives.

#
# Document types.
#
<IfModule mod_mime.c>

    #
    # AddLanguage allows you to specify the language of a document. You can
    # then use content negotiation to give a browser a file in a language
    # it can understand.
    #
    # Note 1: The suffix does not have to be the same as the language
```

```
# keyword --- those with documents in Polish (whose net-standard
# language code is pl) may wish to use "AddLanguage pl .po" to
# avoid the ambiguity with the common suffix for perl scripts.
#
# Note 2: The example entries below illustrate that in quite
# some cases the two character 'Language' abbreviation is not
# identical to the two character 'Country' code for its country,
# E.g. 'Danmark/dk' versus 'Danish/da'.
#
# Note 3: In the case of 'ltz' we violate the RFC by using a three char
# specifier. But there is 'work in progress' to fix this and get
# the reference data for rfc1766 cleaned up.
#
# Danish (da) - Dutch (nl) - English (en) - Estonian (ee)
# French (fr) - German (de) - Greek-Modern (el)
# Italian (it) - Korean (kr) - Norwegian (no) - Norwegian Nynorsk (nn)
# Portugese (pt) - Luxembourgeois* (ltz)
# Spanish (es) - Swedish (sv) - Catalan (ca) - Czech(cs)
# Polish (pl) - Brazilian Portuguese (pt-br) - Japanese (ja)
# Russian (ru)
#
AddLanguage da .dk
AddLanguage nl .nl
AddLanguage en .en
AddLanguage et .ee
AddLanguage fr .fr
AddLanguage de .de
AddLanguage el .el
AddLanguage he .he
AddCharset ISO-8859-8 .iso8859-8
AddLanguage it .it
AddLanguage ja .ja
AddCharset ISO-2022-JP .jis
AddLanguage kr .kr
AddCharset ISO-2022-KR .iso-kr
AddLanguage nn .nn
AddLanguage no .no
AddLanguage pl .po
AddCharset ISO-8859-2 .iso-pl
AddLanguage pt .pt
AddLanguage pt-br .pt-br
AddLanguage ltz .lu
AddLanguage ca .ca
AddLanguage es .es
AddLanguage sv .sv
AddLanguage cs .cz .cs
AddLanguage ru .ru
AddLanguage zh-TW .zh-tw
AddCharset Big5         .Big5    .big5
AddCharset WINDOWS-1251 .cp-1251
AddCharset CP866        .cp866
AddCharset ISO-8859-5   .iso-ru
AddCharset KOI8-R       .koi8-r
AddCharset UCS-2        .ucs2
AddCharset UCS-4        .ucs4
AddCharset UTF-8        .utf8

# LanguagePriority allows you to give precedence to some languages
# in case of a tie during content negotiation.
#
# Just list the languages in decreasing order of preference. We have
# more or less alphabetized them here. You probably want to change this.
#
<IfModule mod_negotiation.c>
    LanguagePriority en da nl et fr de el it ja kr no pl pt pt-br ru ltz ca es sv tw
</IfModule>

#
# AddType allows you to tweak mime.types without actually editing it, or to
# make certain files to be certain types.
#
AddType application/x-tar .tgz

#
# AddEncoding allows you to have certain browsers uncompress
# information on the fly. Note: Not all browsers support this.
# Despite the name similarity, the following Add* directives have nothing
# to do with the FancyIndexing customization directives above.
#
AddEncoding x-compress .Z
AddEncoding x-gzip .gz .tgz
```

```
    #
    # If the AddEncoding directives above are commented-out, then you
    # probably should define those extensions to indicate media types:
    #
    #AddType application/x-compress .Z
    #AddType application/x-gzip .gz .tgz

    #
    # AddHandler allows you to map certain file extensions to "handlers",
    # actions unrelated to filetype. These can be either built into the server
    # or added with the Action command (see below)
    #
    # If you want to use server side includes, or CGI outside
    # ScriptAliased directories, uncomment the following lines.
    #
    # To use CGI scripts:
    #
    #AddHandler cgi-script .cgi

    #
    # To use server-parsed HTML files
    #
    #AddType text/html .shtml
    #AddHandler server-parsed .shtml

    #
    # Uncomment the following line to enable Apache's send-asis HTTP file
    # feature
    #
    #AddHandler send-as-is asis

    #
    # If you wish to use server-parsed imagemap files, use
    #
    #AddHandler imap-file map

    #
    # To enable type maps, you might want to use
    #
    #AddHandler type-map var

</IfModule>
# End of document types.

#
# Action lets you define media types that will execute a script whenever
# a matching file is called. This eliminates the need for repeated URL
# pathnames for oft-used CGI file processors.
# Format: Action media/type /cgi-script/location
# Format: Action handler-name /cgi-script/location
#

#
# MetaDir: specifies the name of the directory in which Apache can find
# meta information files. These files contain additional HTTP headers
# to include when sending the document
#
#MetaDir .web

#
# MetaSuffix: specifies the file name suffix for the file containing the
# meta information.
#
#MetaSuffix .meta

#
# Customizable error response (Apache style)
#  these come in three flavors
#
#    1) plain text
#ErrorDocument 500 "The server made a boo boo.
#  n.b.  the single leading (") marks it as text, it does not get output
#
#    2) local redirects
#ErrorDocument 404 /missing.html
#  to redirect to local URL /missing.html
#ErrorDocument 404 /cgi-bin/missing_handler.pl
#  N.B.: You can redirect to a script or a document using server-side-includes.
#
#    3) external redirects
#ErrorDocument 402 http://some.other-server.com/subscription_info.html
```

```
#  N.B.: Many of the environment variables associated with the original
#  request will *not* be available to such a script.

#
# Customize behavior based on the browser
#
<IfModule mod_setenvif.c>

    #
    # The following directives modify normal HTTP response behavior.
    # The first directive disables keepalive for Netscape 2.x and browsers that
    # spoof it. There are known problems with these browser implementations.
    # The second directive is for Microsoft Internet Explorer 4.0b2
    # which has a broken HTTP/1.1 implementation and does not properly
    # support keepalive when it is used on 301 or 302 (redirect) responses.
    #
    BrowserMatch "Mozilla/2" nokeepalive
    BrowserMatch "MSIE 4<.0b2;" nokeepalive downgrade-1.0 force-response-1.0

    #
    # The following directive disables HTTP/1.1 responses to browsers which
    # are in violation of the HTTP/1.0 spec by not being able to grok a
    # basic 1.1 response.
    #
    BrowserMatch "RealPlayer 4<.0" force-response-1.0
    BrowserMatch "Java/1<.0" force-response-1.0
    BrowserMatch "JDK/1<.0" force-response-1.0

</IfModule>
# End of browser customization directives

#
# Allow server status reports, with the URL of http://servername/server-status
# Change the ".your-domain.com" to match your domain to enable.
#
#<Location /server-status>
#    SetHandler server-status
#    Order deny,allow
#    Deny from all
#    Allow from .your-domain.com
#</Location>

#
# Allow remote server configuration reports, with the URL of
# http://servername/server-info (requires that mod_info.c be loaded).
# Change the ".your-domain.com" to match your domain to enable.
#
#<Location /server-info>
#    SetHandler server-info
#    Order deny,allow
#    Deny from all
#    Allow from .your-domain.com
#</Location>

#
# There have been reports of people trying to abuse an old bug from pre-1.1
# days.  This bug involved a CGI script distributed as a part of Apache.
# By uncommenting these lines you can redirect these attacks to a logging
# script on phf.apache.org.  Or, you can record them yourself, using the script
# support/phf_abuse_log.cgi.
#
#<Location /cgi-bin/phf*>
#    Deny from all
#    ErrorDocument 403 http://phf.apache.org/phf_abuse_log.cgi
#</Location>

#
# Proxy Server directives. Uncomment the following lines to
# enable the proxy server:
#
#<IfModule mod_proxy.c>
#    ProxyRequests On

#    <Directory proxy:*>
#        Order deny,allow
#        Deny from all
#        Allow from .your-domain.com
#    </Directory>

    #
    # Enable/disable the handling of HTTP/1.1 "Via:" headers.
```

```
    # ("Full" adds the server version; "Block" removes all outgoing Via: headers)
    # Set to one of: Off | On | Full | Block
    #
#    ProxyVia On

    #
    # To enable the cache as well, edit and uncomment the following lines:
    # (no caching without CacheRoot)
    #
#    CacheRoot "/private/var/run/proxy"
#    CacheSize 5
#    CacheGcInterval 4
#    CacheMaxExpire 24
#    CacheLastModifiedFactor 0.1
#    CacheDefaultExpire 1
#    NoCache a-domain.com another-domain.edu joes.garage-sale.com

#</IfModule>
# End of proxy directives.

### Section 3: Virtual Hosts
#
# VirtualHost: If you want to maintain multiple domains/hostnames on your
# machine you can setup VirtualHost containers for them. Most configurations
# use only name-based virtual hosts so the server doesn't need to worry about
# IP addresses. This is indicated by the asterisks in the directives below.
#
# Please see the documentation at <URL:http://www.apache.org/docs/vhosts/>
# for further details before you try to setup virtual hosts.
#
# You may use the command line option '-S' to verify your virtual host
# configuration.

#
# Use name-based virtual hosting.
#
#NameVirtualHost *:80

#
# VirtualHost example:
# Almost any Apache directive may go into a VirtualHost container.
# The first VirtualHost section is used for requests without a known
# server name.
#
#<VirtualHost *:80>
#    ServerAdmin webmaster@dummy-host.example.com
#    DocumentRoot /www/docs/dummy-host.example.com
#    ServerName dummy-host.example.com
#    ErrorLog logs/dummy-host.example.com-error_log
#    CustomLog logs/dummy-host.example.com-access_log common
#</VirtualHost>

<IfModule mod_php4.c>
    # If php is turned on, we respect .php and .phps files.
    AddType application/x-httpd-php .php
    AddType application/x-httpd-php-source .phps

    # Since most users will want index.php to work we
    # also automatically enable index.php
    <IfModule mod_dir.c>
        DirectoryIndex index.html index.php
    </IfModule>
</IfModule>

<IfModule mod_rewrite.c>
    RewriteEngine On
    RewriteCond %{REQUEST_METHOD} ^TRACE
    RewriteRule .* - [F]
</IfModule>

<IfModule mod_rendezvous_apple.c>
    # Only the pages of users who have edited their
    # default home pages will be advertised on Rendezvous.
    RegisterUserSite customized-users
    #RegisterUserSite all-users

    # Rendezvous advertising for the primary site is off by default.
    #RegisterDefaultSite
</IfModule>

Include /private/etc/httpd/users/*.conf
```

End copying above this line.
Published Date: Oct 7, 2016

Logic Pro 7: Bouncing a DAE output creates an empty audio file

This article has been archived and is no longer updated by Apple.
After clicking the Bounce button on a DAE output channel and confirming the Bounce dialog, you may come across a situation in which no progress bar appears and the bounce seems to be performed faster than usual (it's done in a few seconds). The resulting audio file contains only silence.

This will happen if the bounce mode for Direct TDM tracks is set to Offline. In this case, the bounce mode setting for Direct TDM is taken into account although the bounce process is triggered in DAE. Thus, Logic tries to perform an offline bounce for DAE, which is not possible. DAE can only be bounced in realtime.

This issue is fixed in Logic Pro 7.1, in which DAE bounces no longer use the settings for DTDM.

To resolve this issue in Logic 7.0, switch the bounce setting for Direct TDM to Realtime before bouncing the DAE output. This setting has to be changed only once and is stored in the preferences. (If an output object for Direct TDM already exists in your environment, skip to step 4).

1. Create a new audio object in the Environment window, using the local menu function New > Audio Object.
2. Double-click the new object to display it in extended view.
3. Assign the object's Device setting to Direct TDM, and set the Channel output to ESB 1-2.

The Direct TDM Output object in the Environment window

4. Click the Bounce button on the Direct TDM output channel to open the Bounce dialog.
5. In the Bounce Mode options, select Realtime.
6. Click the Cancel button in the Bounce dialog (this cancels the bounce, but saves the Bounce Mode setting).
7. Bounce the DAE output.

The Bounce dialog with Bounce Mode set to Realtime

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

Logic Express 7: Audio tracks won‘t record as expected in Cycle Record

This article has been archived and is no longer updated by Apple.
The "Auto Create Tracks in Cycle Record" option does not work with audio recordings in Logic Express 7. Logic Express supports this option with MIDI tracks only. Although you can activate the option, audio will only be recorded during the first cycle. With MIDI recordings, the tracks are created as expected.

Logic Pro 7 supports the recording of audio tracks with this feature.

Published Date: Oct 11, 2016

iMac G5 internal Bluetooth module shows that it‘s "Not Available"

This article has been archived and is no longer updated by Apple.

If you have an iMac G5 computer with an internal Bluetooth module that isn't accepting input from your Apple Wireless Keyboard and Apple Wireless Mouse, here's how to troubleshoot the issue.

Here's an example of what a "Not Available" Bluetooth menu icon will look like:

If Bluetooth reports that it's "Not Available" and you are using an iMac G5 with an internal Bluetooth module, try these steps:

1. Unplug all USB accessories from the computer.
2. Shut down the computer (if necessary, by pressing and holding the power button on the back of the computer).
3. Remove the power cord from the computer for one minute.
4. Plug the computer back in and start it up, leaving all USB accessories disconnected. The Bluetooth keyboard and mouse should pair normally at this point—test them to be sure.
5. Reconnect the USB devices.

If your Bluetooth keyboard and mouse worked as expected after start up, this indicates that one of your USB accessories is not compliant to the USB standard. You can do two things here—you can figure out which device is causing the issue, and you can follow our tips to keep the issue from happening again.

If you want to avoid this issue in the future, try these tips:

- Do not turn off your computer—instead, set it to sleep when you're using it. If you need to restart the computer, unplug all USB devices and wait until your computer has completely restarted and is ready before you reconnect them.
- Connect USB devices to a self-powered USB 2.0-compliant hub instead of connecting them directly to your iMac G5.
- Unplug all USB devices when you shut down your computer. You can plug them back in once the computer has restarted and the Desktop has loaded.

If you want to isolate which USB device is causing the issue:

1. Plug in only one of your USB devices, such as a hub, and then restart your computer.
2. If the issue occurs (your computer doesn't recognize your Apple Wireless Keyboard or Apple Wireless Mouse, and says that Bluetooth is "Not Available"), the connected USB device is the one that's non-compliant and the cause of the issue.
3. If, however, the issue does not occur and your Bluetooth devices function normally, plug in one more USB device and then restart your computer again to see if the issue crops up. Keep doing this until the issue occurs again. Once the issue occurs, the last device you plugged in is the non-compliant one.
4. Once you've isolated which USB accessory is not compliant, you can contact the manufacturer of that device for more assistance.

If this is not the issue causing your keyboard and mouse not to be recognized, check to make sure that Bluetooth is on. Check the Bluetooth menu icon in the menu bar; if the icon is dimmed, Bluetooth is off. (If there's no menu icon available, from the **Apple** menu, choose **System Preferences**, then click Bluetooth.) If you accidentally turned Bluetooth off, you can turn Bluetooth back on from its menu icon or from its preference pane.

If you checked and can confirm that Bluetooth is on and working, follow the steps in article 86496, "Apple Wireless Keyboard and Mouse: Troubleshooting Connection Issues."

Published Date: Feb 20, 2012

Final Cut Pro HD - Canvas appears slightly blurry

This article has been archived and is no longer updated by Apple.

Some users have reported that the Canvas window will show video that is slightly blurred or softened when the video is playing back.

This can occur on configurations running Final Cut Pro HD (4.5) under Mac OS X 10.3.6 or Mac OS X 10.3.5 with NVIDIA graphics cards. This issue does not affect the final output, and should only appear in the Canvas when the video is in motion; when the playhead is still, the Canvas should display normally.

This issue is addressed in the Mac OS X 10.3.7 Update. Please update to Mac OS X 10.3.7.

Published Date: Feb 20, 2012

Workgroup Cluster: Power Requirements and Considerations

This article has been archived and is no longer updated by Apple.

Apple Workgroup Clusters ship with various uninterruptible power supply (UPS) sizes. Some of these UPS systems include plug shapes that may not be available at your installation site. Read on to learn about plug shapes and electrical current considerations..

Type	Plug	Socket
NEMA 5-15 This is the most common plug shape in the U.S. and Canada. It has two vertical prongs, one slightly larger than the other, and a third, round prong for ground. It supports 15 amps of current at 120V.		
NEMA 5-20 This plug, which supports 20 amps of 120V current, is also common in institutional environments. Compared to the NEMA 5-15, one of the NEMA 5-20 plug's top two prongs is rotated 90 degrees.		
NEMA L5-30 This plug is typically found in server rooms or in places where it has been specially installed for high-current equipment. This plug type is used on circuits that support 30 amps at 120 volts.		

Each Xserve G5 Cluster Node requires approximately 2 amps of current at 120V. You should ensure that the outlet you're using is capable of sustaining the total current of your cluster system, including Xserves, switches, and fans.

The current requirements for each device are documented in the product manual. The current (in amps) required by the servers, which will make up the majority of your circuit load, is equal to the number of Xserve G5 servers multiplied by 2 (at U.S. and Canadian voltage). You should also leave some headroom in your circuit capacity—typically, about an amp or two per circuit. If you do not have an outlet capable of supporting the load of your entire Apple Workgroup Cluster, you must split the systems across two or more independent circuits.

Beginning in December 2004, all Apple Workgroup Cluster systems now ship with APC Smart-UPS 1000VA UPSs. You should connect *only* the head node of your cluster to this UPS. Cluster nodes are not as essential to protect with the UPS since the risk of data loss is highest on the head node during a power failure. (No non-volatile data is stored on cluster nodes.) APC Smart-UPS 1000VA UPSs have NEMA 5-15 connectors.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

See also technical document 86694: Xserve G5: Power consumption and thermal output (BTU) information

Published Date: Feb 18, 2012

Xsan mounts will fail if they have the same name

This article has been archived and is no longer updated by Apple.
Xsan will not mount any volume that has the same name as any existing volume or folder located at /Volumes/.

Unlike some mounting mechanisms that automatically resolve name conflicts (for example, the Finder will append characters to each mounted volume name), the Xsan backend agent simply won't mount the volumes.

To avoid this issue, create a unique name for each volume to be mounted.

Published Date: Oct 11, 2016

Xsan won‘t let you rename a volume by changing only the letter case

This article has been archived and is no longer updated by Apple.

If you try to change the letter case of a volume name, but not the actual name, you'll encounter the alert message, "Error while writing settings (could not create config file)." If you want to do this, you'll need to first rename the volume to a different name, and then change it back to the original name with the desired case-sensitive spelling.

Published Date: Feb 19, 2012

Logic Pro 7 and Logic Express 7: Previously recorded Regions are "grayed out" with Auto Mute in Cycle Record option

This article has been archived and is no longer updated by Apple.
If you Cycle Record with the "Auto Mute in Cycle Record" option enabled, only the last recorded cycle will appear active. Any cycle regions that you previously recorded in the take will be muted and therefore appear dimmed (grayed out) and with a bullet (•) in front of the region name.

To unmute regions, use the Mute tool (from the Toolbox) —not the Mute button on the track. You can also select a Region and press M on the keyboard to mute or unmute it.

The benefit of this option is that it allows you to comfortably record take after take without starting and stopping Logic. After the take, you may mute and unmute the Regions individually to compare and composite the different takes.

If you don't want Logic to automatically mute Regions in cycle record, uncheck The Auto Mute in Cycle Record option in **File** > **Song Settings** > **Recording**.

Published Date: Oct 7, 2016

AirTunes: Display won‘t sleep when streaming to AirPort Express

This article has been archived and is no longer updated by Apple.
When iTunes is playing music to AirPort Express, your computer's display won't go to sleep (power down) automatically after a period of inactivity, because it is actively streaming music.

This happens when using:

- iTunes 4.7
- AirPort Express with version 6.1 firmware
- Mac OS X 10.3 or later

Update to iTunes 4.7.1 or later.
Published Date: Oct 7, 2016

Final Cut Pro HD: LiveType does not appear in the External Editors tab

This article has been archived and is no longer updated by Apple.

Under some circumstances, the External Editors tab (choose **Final Cut Pro HD** > **System Settings**) in Final Cut Pro HD does not display a setting for "LiveType Movie Files."

This can happen if you installed Final Cut Pro HD from a new Final Cut Pro HD disc, as opposed to installing it from an upgrade. If you upgraded from Final Cut Pro 4 to Final Cut Pro HD, you will not have this issue. If you upgraded from an earlier version of Final Cut Pro using an upgrade disc, you will not have this issue.

You can still add LiveType files to the timeline even if LiveType does not appear in the External Editors tab. The behavior may be slightly different, depending on whether you add a LiveType project file or a LiveType movie file to the Timeline.

- If you add a LiveType project file (for example, MyProject.ipr) to the Timeline and then choose to open it in an External Editor, the file will open automatically in LiveType as a LiveType project.

- If you add a rendered LiveType movie file to the Timeline and then choose to open it in an External Editor, the file will open in the Editor you've selected for Video Files (in the External Editors tab) or in QuickTime Player if none is selected.

The External Editors tab in System Settings. Note that the bottom option, "LiveType Movie Files," only appears if you *upgrade* to Final Cut Pro HD from an earlier version of Final Cut Pro 4.

Published Date: Feb 20, 2012

RAID Admin 1.3.2 with Firmware 1.3.1-1.24 will ignore LUN masking settings

This article has been archived and is no longer updated by Apple.

If you install Xserve RAID Firmware version 1.3.1-1.24 that came with the Xserve RAID Admin 1.3.2 Update, LUN masking settings that were made using the RAID Admin application will not be properly set.

Symptom

If you use RAID Admin to specify LUN masking settings for your Xserve RAID, the settings will appear to be set properly in RAID Admin, but the LUN masking settings will not be enforced by the Xserve RAID. All hosts on the same Fibre Channel network as the Xserve RAID will be able to access all LUNs.

Solution

This issue has been addressed by RAID Admin 1.3.3 or later, and the accompanying firmware. The latest version of RAID Admin can be downloaded as a disk image, a tar file or a zip file from the Downloads area of the Apple Support site. Apple recommends that customers run the latest version of RAID Admin and the accompanying firmware with their Xserve RAID.

Published Date: Feb 18, 2012

iMovie may not import protected AAC content correctly

This article has been archived and is no longer updated by Apple.
If you purchase a song from the iTunes Store and want to use it in iMovie, you may find that the song previews fine in the iMovie Audio pane, but does not play once you drag the file to the timeline. If you run into this issue, read on for some things to check. After doing each step, test your iMovie project to see if the song plays.

1. Make sure that iTunes, iMovie, and QuickTime are up to date.
2. Quit iMovie and make sure the audio track you are trying to import plays correctly in iTunes. If it does, try reimporting the track into your iMovie project again.
3. If you installed third-party QuickTime plug-ins, try disabling them (click here for instructions on how to disable QuickTime plug-ins).
4. If you installed third-party iMovie plug-ins, try disabling them (find steps to remove iMovie plug-ins here).
5. Try recreating the iTunes Music Library.xml file as described here.

Published Date: Oct 7, 2016

Logic Pro 7: Waveform overviews are always created in the background

This article has been archived and is no longer updated by Apple.
In Logic 7, waveform overviews are always created as a background process. In earlier versions, this process could be sped up by double-clicking the overview calculation Progress window. Although page 356 in the Logic Pro Reference Manual indicates that you can double-click the Progress window and then click Finish to move the process into the foreground, this is not the case in Logic Pro 7.0.

However, this ability returns in Logic Pro 7.1. The overview creation progress dialog now has a check box labeled "Faster overview creation (may affect Logic's performance)." Checking this box will bring the overview creation process to the foreground, significantly speeding it up. If you are performing other operations in Logic while doing this, those operations may be affected, as they will have a lower priority than the creation of the overview.

Published Date: Oct 7, 2016

iDVD 4: Avoid creating menus that are difficult to navigate

This article has been archived and is no longer updated by Apple.
When creating a DVD project in iDVD 4, make sure you don't select the No Text option when using a theme that displays only text-based button highlight menu items.

What can happen is you will create DVD menus that are difficult to navigate because the menu items won't display to viewers.

Published Date: Oct 7, 2016

Using Emulex switches with Apple Fibre Cards and Fibre-attached storage

This article has been archived and is no longer updated by Apple.

When using Emulex fibre switches in a Storage Area Network (SAN) topology such as an Xsan deployment, or in a Network Area Storage (NAS) deployment, you may need to modify the port settings to ensure constant communication between devices on the fibre network.

The Smart Settings for each port on Emulex 355 and 375 fiber switches reflect the role that the machine attached to the port will provide in the fabric topology. The Smart Setting varies according to whether the port will connect to a host or a storage device.

For ports that will be connected to a host computer, such as an Xserve or a Power Mac G5, the port's Smart Setting should be set to "Initiator with Stealth." This setting prevents host devices from receiving Loop Initialization Primitive Sequence (LIPs) messages from other Initiators. See Using Fibre Channel switches and hubs with Apple Fibre products for more information about LIPs.

1. Using Mozilla on a computer running Mac OS X, connect to the Emulex Switch and click the Login button.
2. Authenticate with the administrator password when prompted. (The default password is “password”.)
3. From the **Port** menu, choose **Smart Settings**.
4. Select "Initiator with Stealth“ from the list of Smart Settings sets, then click the Clone button.
5. Name the new Smart Settings set. (Do not use spaces in the name.)
6. Select the new set from the list of Smart Settings sets. Check each port number that will be connected to a host machine.
7. Click Change Notifications to expand the view.
8. Change the ”Stealth Intelligent Change Manager“ setting to ”Initiator: Only Receive Changes“.
9. Click the Submit button.

For ports that will be connected to a storage device, the Smart Setting should be set to "Target with Stealth." This setting allows storage devices to inform hosts that it has entered the network.

1. Using Mozilla on a Mac OS X-based computer, connect to the Emulex Switch and click the Login button.
2. Authenticate with the administrator password when prompted. (The default password is “password”.)
3. Choose **Port > Smart Settings**.
4. Select "Target with Stealth" from the list of Smart Settings sets, and click the Clone button.
5. Name the new Smart Settings set. (Do not use spaces in the name.)
6. Select the new set from the list of Smart Settings sets. Check each port number that will be connected to a storage device.
7. Click Change Notifications to expand the view.
8. Change the "Stealth Intelligent Change Manager" setting to "Target: Only Send Changes".
9. Click the Submit button.

Learn how to configure Emulex Switches in a cascade topology here. For instructions regarding how to change Smart Settings, please reference the Emulex product manual that is specific to your switch model. You can download Emulex switch manuals here.

Tip: Pre-configured switch configuration files can be downloaded from Emulex' website.

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Published Date: Oct 7, 2016

Can‘t receive all of a multiple-page fax in Mac OS X 10.3

This article has been archived and is no longer updated by Apple.

If your computer is set to receive faxes, but only receives the first few pages of a multiple-page fax, update to Mac OS X 10.3.9 or later.

This could happen with Mac OS X 10.3 through 10.3.8 and a Mac that has a "Jump" modem (included with Macs introduced after March 2004).

Solution

Download and install the Mac OS X 10.3.9 Update.

Published Date: Oct 7, 2016

QLogic Storage Area Network (SAN): Apple interoperability testing and supported firmware

This article has been archived and is no longer updated by Apple.
Apple and QLogic have developed a joint, comprehensive test process to ensure interoperability within the Apple SAN environment. The test focuses on each component within the SAN, including application software, server, Host Bus Adapters (HBAs), RAID storage, and fibre channel switches. In addition to individual device testing, Apple performs end-to-end solution testing within real-world environments to ensure that all devices within the SAN are interoperable.

To ensure robust interoperability, you should use the tested versions of firmware for each of the SAN components. QLogic now has an Apple-specific website that provides users with firmware that has undergone this comprehensive testing process. All fibre channel switches that are deployed within the Apple environment should be updated with the Apple tested and supported switch firmware and management GUI. You can get SANbox switch firmware and management GUI for the SANbox 5200 and SANbox2-64 here:

http://support.qlogic.com/support/drivers_software.aspx

This website will be updated as new switch firmware and management GUIs become available. If you have any questions regarding the update process of QLogic SANbox switches, please contact QLogic technical support at:

Website: http://solutions.qlogic.com/KanisaSupportSite/supportcentral/supportcentral.do
Phone: +1 952-932-4040
Email: support@qlogic.com

Note: QLogic Fibre Channel Switches obtained from the Apple Store will be updated to the latest tested and supported firmware, and will include a software CD that contains the latest supported management GUI. SANbox switches obtained outside of the Apple Store may have different versions of firmware and should be updated to the latest Apple-supported firmware available at the URL listed above.

Published Date: Oct 7, 2016

iPod shuffle: Turn on disk mode before transferring files

This article has been archived and is no longer updated by Apple.

When using iPod shuffle to transfer files, turn on disk mode first. If you don't, it will appear as if you have to make the target computer (the one that you're transferring files to) the owner of iPod shuffle; doing so will erase the contents on the iPod shuffle.

Published Date: Oct 7, 2016

iPod shuffle: Issues with song quality

This article has been archived and is no longer updated by Apple.

If you think songs on your iPod shuffle could sound better, it could be a result of transcoding. Transcoding will convert higher bitrate (160 or 192 kbps) MP3 files to 128 kbps AAC files if the preference is set this way.

To prevent this, go into the iPod preferences and turn off the "Convert higher bitrate songs to 128 kbps AAC for this iPod" option. Another way to ensure good quality is to rip the songs from the original CD directly to 128 kbps AAC files.

This option was designed primarily for larger AIFF or Apple Lossless Encoder files.

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Published Date: Oct 7, 2016

How to put iPod shuffle on hold

This article has been archived and is no longer updated by Apple.

To prevent accidental button pressing when you're using iPod shuffle, lock the buttons (this is similar to using the Hold switch on other iPod models).

To do this, press and hold the Play/Pause button for 3 seconds. The LED will flash orange three times to signal that the buttons are now locked. While the buttons are locked, you will not be able to adjust the volume or pause playback.

To unlock the buttons, press and hold the Play/Pause button for 3 seconds. The LED will flash green three times. You can now adjust the volume, change songs, or pause playback.

Published Date: Oct 7, 2016

iChat displays "Internal Error" when starting a chat with the Helvetica font turned off

This article has been archived and is no longer updated by Apple.

If you turn off (disable) the Helvetica font (the Apple-created one) on your computer, you won't be able to start an iChat chat. Instead, you'll see some gibberish message, like this:

> iChat Internal Error! NSInvalidArgumentException: NSConcreteMutableAttributedString addAttribute: value: range:: nil value

What's up with that?

iChat needs the "Helvetica" font included with Mac OS X to start a chat (you may have other "Helvetica"-type fonts installed with similar names). It's easy to turn the font back on if you used Font Book to turn it off. If you disabled the font using another third-party font management application, use that software to turn it back on, or disable the software.

This document applies to Mac OS X 10.3.9 and earlier.

Published Date: Feb 18, 2012

Mac OS X: SMB links (URLs) not recognized as web content

This article has been archived and is no longer updated by Apple.
Mac OS X web-savvy applications, such as Mail and Safari, do not recognize SMB links as web content. However, you can easily connect to SMB servers by pasting a link into the Connect to Server dialog ("SMB" is the name of the Microsoft Windows file sharing protocol).

You probably won't come across this issue, because servers rarely use SMB to distribute web content on the open Internet. However, sometimes a school or other organization might store media files on a Windows server for local access (LAN/WAN), and then give out links that look like this:

```
smb://servername/example_movie.mov
```

If you are the administrator of such a LAN/WAN configuration, consider serving content via both SMB and HTTP services. When you intend the content for web-savvy Macintosh applications, provide an HTTP link.

Published Date: Feb 17, 2012

iPod shuffle and Motorola phones featuring iTunes: What's that gray dot in iTunes?

This article has been archived and is no longer updated by Apple.

This article does not cover iPhone support in iTunes. For more information about iPhone support in iTunes, click here.

If you see a song in iTunes with a gray dot next to it, it means the song has not been synced yet to the iPod shuffle or Motorola phone featuring iTunes. Once you sync the song, the dot will go away.

While the song is being synced, the dot will change into two rotating arrows.

The gray dot may remain next to the song if it could not be sent to the iPod shuffle or Motorola phone featuring iTunes. Check here for possible reasons the song might not have synced.

Published Date: Oct 7, 2016

iPod shuffle: Renaming in the Mac OS X Finder

This article has been archived and is no longer updated by Apple.

If you use Mac OS X 10.2.8, you won't be able to rename your iPod shuffle in the Finder. The iPod shuffle drive is formatted using the File Allocation Table (FAT) format. Mac OS X 10.2.8 does not support the renaming of FAT formatted volumes.

If you rename iPod shuffle in iTunes, the name will not change in the Finder.

You can rename your iPod shuffle so the Finder displays the new name if you have access to a Mac with 10.3.4 or later and built-in USB or a Windows-compatible PC that works with iPod shuffle. Check here for system requirements. The renamed iPod shuffle will then work fine with your computer using Mac OS X 10.2.8.

When renaming any FAT-formatted volume (including iPod shuffle) in the Finder, you can't use double-byte characters (including Chinese, Japanese, and Korean). If you try, you'll see this error:

Use only Roman characters to rename the iPod in the Finder. You can use double-byte characters to rename the iPod shuffle in iTunes.

Published Date: Oct 7, 2016

Final Cut Express 2: Custom column layouts not available in Browser

This article has been archived and is no longer updated by Apple.

The Final Cut Express 2 manual incorrectly states that you can save custom column layouts in the Browser. While it is possible to modify columns during a session, saving custom layouts is not supported.

Published Date: Oct 7, 2016

Apple Remote Desktop: How to send Ctrl-Alt-Del to a PC

This article has been archived and is no longer updated by Apple.

If you use Remote Desktop to administer a PC that's running VNC, you may be wondering how to send the Ctrl-Alt-Del command (Control-Alternate-Delete) from a Mac to the PC. Though Mac and PC key mapping differs, you can use an alternate key combination in Remote Desktop 2.0 and later to send the command.

For full-size (desktop) keyboards, use **Control-Option-Forward Delete**.

Note: The Forward Delete key is located below the Help key on a full-size keyboard. Be sure not to confuse it with the Delete key located above the Return key.

For abbreviated keyboards (on portable computers), use **Function-Control-Option-Command-Delete**.

Published Date: Feb 18, 2012

Apple Remote Desktop 2: How to copy a computer list from one admin to another

This article has been archived and is no longer updated by Apple.
Here's how to copy a computer list from one administrator to another in Apple Remote Desktop 2.0 or later (for 1.2, look here).

To transfer the list, follow these steps:

1. Select the computer list.
2. Select all the computers in the list.
3. Copy the list and paste it into a text editor such as TextEdit.
4. Save the new document and then copy it to the other admin system.
5. Select the Scanner in Remote Desktop.
6. Change the pop-up menu from **local network** to **File Import**.
7. Use the ellipsis (...) button to select the newly-copied list.
8. Create a new computer list based on the computers found by the scanner.

Published Date: Oct 7, 2016

Logic Pro 7: EXS Instrument edits stay active until quitting

This article has been archived and is no longer updated by Apple.
If you make changes to a sampler instrument in the EXS24 Sampler Instrument Editor, the edits stay active until you quit and restart Logic Pro.

When you close the EXS24 Sampler Instrument Editor, a dialog appears, asking if you want the instrument changes to be stored. Even if you choose not to save the changes, the sampler will still play the edited version until you quit and restart Logic Pro.

When you do quit Logic Pro, you will be asked again if you want to save the changes to the instrument. If you want to discard the changes, click Don't Save in the dialog.

If you don't want to restart Logic Pro
You can temporarily save the edited instrument using a different name and then load the original instrument.

1. Save the edited instrument using a different name. In this case, it would preferable to save the instrument to the Desktop so it could be moved to the Trash easily.
2. Load the original instrument. It will load without the edits and playback as expected.

Published Date: Oct 7, 2016

iPod photo: iTunes quits unexpectedly when optimizing photos

This article has been archived and is no longer updated by Apple.
Some photos with very unusual dimensions (for example, a photo that is really wide but only a few pixels high) can cause iTunes to quit unexpectedly when you try to sync them to your iPod photo. This occurs during the photo-optimizing phase—when "Optimizing photos for *iPod name*" is showing in the status section of the iTunes window. This is more common with graphics imported from websites.

First, make sure you have iTunes 4.7.1 or later. If you have an earlier version of iTunes, update to the latest version and try syncing again. If the issue remains, then continue with the steps below.
To check the version of iTunes:
Macintosh: From the **iTunes** menu, choose **About iTunes**.
Windows: From the **Help** menu, choose **About iTunes**.

If you are aware of any problematic photos within the folder or Library being synced, try removing them and try the sync again. If you're not sure if you have such photos, try syncing smaller subsets of photos until you identify the photo that is causing iTunes to quit.

Published Date: Oct 7, 2016

Logic Pro 7: How to export songs for earlier versions of Logic

This article has been archived and is no longer updated by Apple.

Any song[1] that you create in Logic Pro 7 can be opened in Logic Pro 6.4.3 but not in earlier versions. However, you can export songs that will be compatible with versions as early as Logic 4.8 if you have Logic Pro 6.4.3.

To do this, open a song in Logic Pro 6.4.3 and save it from there to use in Logic 6. Logic Pro 6.4.3 also allows you to export a song in Logic 4.8 format for use in Logic 5 and Logic 4.8:
Choose **File** > **Export** > **Song as Logic 4.8 song**

Although the Logic Pro 7 Reference Manual states that the option to export to a earlier versions still exists, it has been removed from Logic Pro 7 due to a significant change in the song format.

Please note that when you export songs to an earlier version of Logic, all functions that are not available in the earlier version will be lost.

Notes

1. Songs created in Logic 7.2 or later can only be opened in Logic 7.0 or later. Additionally, songs created in Logic 7.2 or later on an Intel system can only be opened in Logic 7.0-7.1.x if first opened in Logic 7.2 or later on a PPC system and then saved.

Published Date: Oct 7, 2016

Using the QuickTime MPEG-2 Playback Component with VOB files

This article has been archived and is no longer updated by Apple.

If you have the optional QuickTime MPEG-2 Playback Component installed with QuickTime 6 or later, you can play back video in Video Object (VOB files), which are used in the DVD-Video specification and contain the mutiplexed audio and MPEG-2 video data.

Sometimes QuickTime Player needs a little help to recognize VOB files when opening them from the Finder. If a VOB file doesn't open by simply double-clicking it, do these steps:

1. Select the VOB file (.vob) in the Finder.
2. From the **File** menu, choose **Get Info**.
3. From the **Open With** pop-up menu in the Info window, choose **Other**. A Choose Other Application window appears.
4. From the **Enable** pop-up menu, choose **All Applications**.
5. Navigate to the Applications folder and select QuickTime Player.
6. Click Add. If you see this alert...

   > You don't have privileges to change the application for this document only. Do you want to change all similar documents to open with the application "QuickTime Player?"

   ... then click Continue.

This should set Mac OS X to open VOB files in QuickTime Player whenever you double-click them in the Finder. The MPEG-2 Playback Component may ignore the audio portion of the stream, but the video will play back normally. Please note that the component will not play back encrypted VOB files, such as those found on commercially-produced DVDs, in QuickTime Player.

Related documents

304656: "QuickTime MPEG-2 Playback Component plays only first 4 GB of file"

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Published Date: Feb 18, 2012

Xsan: Settings for configurations with multiple storage pools

This article has been archived and is no longer updated by Apple.
If you're running Xsan 1.0 or 1.1 with any fibre channel storage, only the first two storage pools may contain metadata. The third or later storage pools should be set to User Data Only.

If the third or later storage pool is configured for any setting other than User Data Only, your controllers may fail over. If this is the case, follow these steps to resolve the issue:

1. Unmount the Xsan volume from all clients.
2. Stop the Xsan volume.
3. Set all storage pools (except for the first two) to be used for User Data Only.

   Warning: Changing a storage pool's use will cause the volume to be reinitialized, erasing all data on the volume.

4. Click Save.
5. Restart the Xsan volume.

Published Date: Oct 7, 2016

iPod shuffle may not fit in all USB ports

This article has been archived and is no longer updated by Apple.

This document is for the original iPod shuffle

The iPod shuffle (Second Generation) comes with a required dock and cable.

Because of iPod shuffle's width, you may not be able to connect it to certain USB ports on your computer. If that's the case, you can use the iPod shuffle Dock or a third-party USB extension cable to make the connection. These items are available at the Apple Store under iPod Accessories.

This issue could occur with any computer, display, or USB hub with recessed or closely spaced USB ports. This includes the following Apple products:

- eMac
- iMac G3
- the original iBook and iBook (FireWire)
- Apple Studio Display 17 (ADC)
- Power Mac G4 (Digital Audio)
- Power Mac G4 (Quicksilver)
- Certain Xserve configurations.

Note: If your Mac came with a USB Keyboard Extender cable, don't try to use it with iPod shuffle. This cable is keyed to only fit the keyboard that came with your computer.

Published Date: Oct 7, 2016

Unexpected behavior with iPod shuffle or iPod nano if connected during computer startup

This article has been archived and is no longer updated by Apple.

If you leave your iPod shuffle or iPod nano connected to your computer when you restart or start up a Windows-compatible PC, you might encounter up to a 3-minute delay on startup. You can either wait it out (if you don't mind waiting), or disconnect your iPod shuffle or iPod nano and wait until the computer has started before reconnecting it.

For more information on this situation and how to permanently avoid it, read this article.

On certain older Power Macintosh G4 desktop computers, your computer may boot into Open Firmware if your iPod nano is connected on startup. To avoid this, use a hub to connect iPod nano to your computer, or wait until your computer has started up before connecting your iPod nano.

Published Date: Oct 7, 2016

My AirPort connection does not work

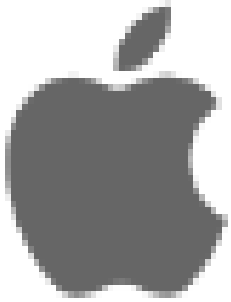
This article has been archived and is no longer updated by Apple.

If your computer can't connect to the Internet over AirPort, try the following steps to resolve the issue.

Check AirPort card status

1. From the **Apple** menu, choose **About This Mac**.

2. In the resulting window, click More Info to open System Profiler.



3. In the System Profile window, select AirPort Card from the left column under Hardware.

4. If the panel to the right displays "No information found," your computer doesn't realize that it has an AirPort Card installed. Try removing and reinstalling your AirPort Card in your computer and then check again.
   If you want to see instructions on how to reseat the card, click here.
5. If your computer recognizes its Airport Card but you still can't connect to your network, try the steps in the Airport Troubleshooting Guide.
6. If your computer still doesn't recognize the AirPort Card even after you've reseated it and checked its connection, your card may need to be replaced. You can order a replacement AirPort Card online.

Published Date: Oct 7, 2016

When I type, unfamiliar characters appear on the screen

This article has been archived and is no longer updated by Apple.

If unfamiliar characters appear on your screen when you type in Mac OS X, these steps can help you troubleshoot the issue.

It's possible to accidentally change your keyboard's language or layout—for example, from English to Japanese. This can result in mixed-up language when you type, like this:

1. To switch back to the U.S. keyboard, from the **Apple** menu, choose **System Preferences**.

2. Click the International icon to open its preferences.

3. Click the Input Menu tab near the top of the screen.

4. Scroll down the list and click any checked non-US keyboard layout checkboxes to deselect them.

5. Close System Preferences and try typing a few characters. You can easily do this by creating a new folder in the Finder, clicking on the folder name, and renaming it. Do you still get strange characters when you type? If you do, check to make sure that you have carefully followed the instructions above.

Published Date: Feb 18, 2012

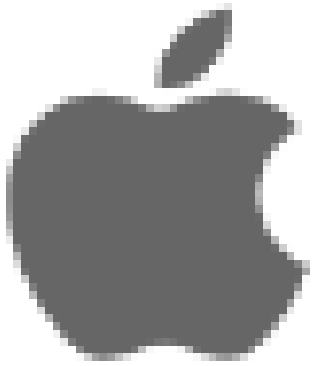
The USB port on my keyboard doesn‘t work

This article has been archived and is no longer updated by Apple.
If one of your Apple keyboard's USB ports don't seem to be working, these steps can help you troubleshoot the issue. Check the USB Basic Troubleshooting steps first and if these don't resolve the issue, move on to the step-by-step instructions.

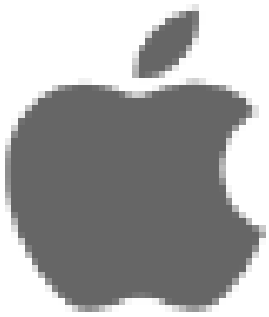
Troubleshooting your Apple USB Keyboard Step-by-Step

If your keyboard USB port still isn't working after trying the steps in article 58033, try these steps, in order, until you've come to a resolution.

1. Unplug and replug the keyboard from the back of the computer. Make sure the USB port and plug are firmly connected.
2. Take the device that isn't working when attached to the keyboard, and plug it in to the other USB port of the keyboard. Test to see if it works there. If it does, unplug and replug the keyboard from the computer. Test both ports again. If the device consistently works in one USB port on the keyboard but not the other, skip step 2 and move on to step 3.
3. Take the device that isn't working when attached to the keyboard, and plug it in to the USB port directly on the computer. Test to see if it works there. If the device works when attached to the computer, but doesn't work when it's attached to the keyboard, it probably needs a powered USB hub to function.
4. Restart your computer and hold down the Option key on your keyboard while it starts up.



5. You should see a blue screen, called the Startup Manager, that displays two arrow buttons and your hard drive.



6. Test your mouse in the questionable keyboard USB port at this screen. It may be jumpy, but the mouse should work. Test the other port as well, for comparison. If your mouse doesn't work in just one keyboard port while in the Startup Manager and you've followed all the other troubleshooting steps, you will probably need to replace your keyboard. You can order the keyboard online. Order a replacement keyboard.
7. If your mouse works in the questionable port while in the Startup Manager but not after you start up your computer normally, software seems to be the cause of the issue. Follow these steps to fix the issue.
    1. Insert the Software Install and Restore disc into your CD/DVD drive.

2. Shut down your computer.
3. Once it's off, hold down the C key on the keyboard and start up your computer. (You can let go of the C key when you see the big Apple logo on the screen.) This will start up the computer from the Software Install and Restore disc instead of your hard drive.
4. Now you want to use the Archive and Install feature of the Mac OS X installer. This kind of installation gives you a fresh version of Mac OS X, but you don't lose any data from the computer as your old information is all archived.

Published Date: Oct 7, 2016

AirPort Setup Assistant 4.1 quits unexpectedly when administering AirPort Extreme

This article has been archived and is no longer updated by Apple.
When trying to configure an AirPort Extreme Base Station with AirPort 4.1 software, the AirPort Setup Assistant may unexpectedly quit. This may occur if your AirPort Extreme Base Station is using the default wireless network name and version 5.4 or earlier firmware.

To resolve the issue, update your AirPort Extreme firmware to version 5.5 or later, using the update found here. If you are unable to connect to the base station to update the firmware, perform a hard reset.

If that doesn't work, try disconnecting the base station from power, plugging it back in, and then using the "AirPort Setup Assistant for Graphite and Snow" utility, which is located in your Utilities folder next to the default version of AirPort Setup Assistant.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

Modem: Not Answering Calls

My modem will not answer incoming calls. I have verified that I can call out, performed a clean software install and otherwise verified that my software settings are correct. Is hardware service the only option at this point?
This article has been archived and is no longer updated by Apple.
There is at least one other factor that should be checked first.

Telephone companies define a "ringer equivalency number" for each device that rings when your telephone number is called. This number represents the current each device draws. The maximum number of RENs per circuit is going to be a number less than 4.0 or 5.0. The exact number is set by the capabilities of your local phone carrier.

As more devices are connected to the phone line the total REN value increases. When the total REN value starts to approach the maximum value set by the phone company, strange things can start to happen. One of them is that when you receive an inbound call, the modem may not detect there is a call at all. It therefore does not go "off-hook," and you do not receive the call.

The modems included with Apple computers usually have an REN of between 0.7 to 0.9. Third-party modems have similar values. Some typical values are:

- iMac internal modem: 0.3
- Global Village Bronze: 0.7 (used on most Performas prior to 1995)
- Global Village Gold II for Performa: 0.8 (used on the Performa 6100 and some 630 series machines)
- Global Village Gold IIv (used in the Performa 6200 and 5300 series): 0.80
- Global Village Platinum V (used in the Performa 6300, 6320, 6290, and some 6400 series): 0.88
- GeoPort Telecom Adapter: 0.7 (stand-alone kit; also included with some Performa 6116s)
- GeoPort Telecom Adapter II: 0.5 (stand-alone kit)

The exact number can vary throughout the manufacturing life of a product, by usually not by more than 0.1. The number for your particular device is usually going to appear on the modem's FCC ID plate. In the case of internal modems, it will be on a placard on the modem card itself (usually not visible from the outside).

Telephones can have values of between 0.7 to 3.5. The exact REN is usually going to be stamped on the bottom of the telephone base, right in the plastic, or on an FCC ID plate, if one is present.

To test whether your modem is not answering because of too many telephones, fax machines, or modems attached to your phone number, proceed as follows:

1. Disconnect ALL additional phones. It is not sufficient to simply turn the ringer off. Remove them from their wall sockets.
2. Plug in one phone into the telephone wire servicing your computer. Verify that you get a dialtone.
3. Configure your fax software correctly. The details will vary depending on what computer you have.
4. Attempt to receive an inbound call.

If you receive a call successfully, go back and determine the RENs of each device (including the modem) you have attached to your phone number. If the value is above or near 4, call the phone company and see what their maximum total REN value for your central office is.

The phone company may have additional suggestions or recommendations on how you can overcome this problem, but odds are, you may need to invest in another phone line.

For more information on the Ringer Equivalency Number for the iMac internal modem, please see the following Knowledge Base article:

24643: "iMac: Ringer Equivalency Number (REN) For Internal Modem"
Published Date: Feb 20, 2012

iPod shuffle: Certain characters in file names can affect transferring files to and from the Mac

This article has been archived and is no longer updated by Apple.
iPod shuffle is an iPod that is formatted as FAT32, regardless of whether you are using it on a Mac or Windows computer. Because of this, files that have the following characters in their names are not allowed:

```
* . " / \ [ ] : ; | = ,
```

This also affects any characters you type using the Option or Control keys (like a bullet - Option-8). Note that the period before the three character extension (.mp3, .aac, .jpg) is not considered as part of the file name in this case. This doesn't affect audio files you copy inside of iTunes.

If you copy a file that contains such a character in its name to iPod shuffle from a Mac, you will see a message that says one or more files could not be copied. If you ignore this message and then transfer the files from iPod shuffle to another computer, the filenames may not appear as they did on the original computer.

Does this mean you have to rename every file that contains these special characters you want to copy to iPod shuffle? Not at all. Just follow these steps to create an archive file that acts as an envelope for your other files, allowing you to keep your original file names intact. If you already tried copying the files separately, remove them from iPod shuffle first.

Mac OS X 10.3 or later

1. In the Finder, select the files you want to transfer.
2. From the **File** menu, choose **Create Archive**.
3. Name the archive without using any special characters.
4. Copy the archive file to iPod shuffle.

If you're not running Mac OS X 10.3, you can use an archive program such as Stuffit or Zip to create an archive, or rename your files without using any special characters.

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Published Date: Oct 7, 2016

iCal doesn‘t update if some third-party utilities are installed

This article has been archived and is no longer updated by Apple.

Some third-party iCal-related utilities, such as Objectpark Software MenuCalendarClock, may prevent you from installing iCal updates that you get from Software Update or download from the Apple site. (“Third-party” refers to products created by companies other than Apple.) When you attempt to update iCal, you receive a message that says that you cannot update iCal because it is “running.” Even if you quit iCal, the issue persists.

What can you do? Check to see if you have a third-party application or utility running that might be accessing iCal resources. Quit or stop the software, then update iCal.

You might also want to contact the developer of the application for possible updates to their software that could avoid this issue.

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Published Date: Feb 18, 2012

Logic Pro 7: Burned CD only plays noise

This article has been archived and is no longer updated by Apple.

Symptom

When set the Bounce destination to Burn, the resulting CD contains only noise.

This only happens under the following settings in the Bounce dialog window:

- You select PCM in addition to Burn.
- The file format for PCM is set to Wave.

Solution

As a workaround, either change the file format for PCM from Wave to AIFF, or deselect PCM and only use Burn.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Logic Pro 7: "Assignment" not available in Guitar tab

This article has been archived and is no longer updated by Apple.
According to the manual, the Guitar tab under the Song Settings should have four options for the Assign parameter:

- Pitch
- Channel
- Inv.Channel
- Inv.Channel-1, Inv.Channel-2

If you don't see these options, then update to Logic Pro 7.0.1 or later to see them.

Published Date: Oct 7, 2016

About the Mac OS X 10.3.8 Update (Delta)

This article has been archived and is no longer updated by Apple.
This software updates Mac OS X 10.3.7 to version 10.3.8. If you have version 10.3, 10.3.1, 10.3.2, 10.3.3, 10.3.4, 10.3.5, or 10.3.6, update your software with the Combo Update instead.

Important: Please read before installing

- You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. (This does not apply to normal application software installation.)
- The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to update.

Installation

You have two ways to update to Mac OS X 10.3.8: Use Software Update or the standalone installer. Use just one of these methods to update your computer.

Automatic Software Update

Software Update, located in System Preferences, can automatically download and install the latest Apple software. Software Update may have linked you to this document for additional information about the update.

This update's size may vary from computer to computer when installed via Software Update.

Because some updates are prerequisites for others, you may need to run Software Update more than once to get all available updates.

Standalone installer

Two versions of the installer (Delta and Combo, described below) are available from Apple Downloads as standalone updates. After you download an update, you can use it without being connected to the Internet.

- The Delta Update installer (described here) will update Mac OS X 10.3.7 to 10.3.8.
- The Combo Update installer can update 10.3, 10.3.1, 10.3.2, 10.3.3, 10.3.4, 10.3.5, 10.3.6, or 10.3.7 to 10.3.8.

The standalone installer, particularly the Combo Update, is useful if you have multiple computers to update and only want to download the 10.3.8 update once.

Mac OS X 10.3.8 Enhancements

These are some of the enhancements delivered with the Mac OS X 10.3.8 Update:

- Addresses an issue with Mac OS X 10.3.7 in which iChat, Mail, or other network-based applications could take a long time to open.
- Addresses an issue in which a computer wouldn't always restart automatically after a power failure, even when the Energy Saver preference option "Restart automatically after a power failure" was selected.
- Improves the performance of Blizzard World of Warcraft's "Full Screen Glow" video feature.
- Improves DVD Player compatibility when playing a movie (using certain ATI Radeon cards) to an external widescreen TV with a 16:9 aspect ratio.
- Resolves an issue in which a "flicker" could be seen when navigating DVD menus in DVD Player on certain PowerBook G4 computers.
- Addresses an issue in which a PowerBook G4 computer would, on rare occasion, wake from sleep with a black screen and not respond to any keyboard, mouse, or trackpad input.
- Addresses "jumping cursor" issues that might occur when using your portable computer's trackpad with your thumb, side of thumb, or a "flat" finger.
- Resolves an issue on certain Power Mac G5 computers where a fan cycles erratically at unexpected times, such as when Seti@home software is running.
- Speeds up Address Book and Mail LDAP lookups that are performed by a Cisco DistributedDirector DNS server.
- Addresses an issue that could prevent clients using the Active Directory plugin from binding to their Active Directory server.
- Addresses a kernel panic that could occur when dialing or connecting to your ISP via your internal Apple modem.

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TA22800_About_the_Mac_OS_X_Update_Delta.pdf

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Published Date: Oct 7, 2016

About the Mac OS X 10.3.8 Update (Combo)

This article has been archived and is no longer updated by Apple.
This software updates Mac OS X 10.3, 10.3.1, 10.3.2, 10.3.3, 10.3.4, 10.3.5, 10.3.6, or 10.3.7 to version 10.3.8. If you have version 10.3.7, you can update your software with the smaller delta update instead.

Important: Please read before installing

- If you have a third-party FireWire hard drive connected, disconnect it before installing this update. Reconnect it and turn it back on after installation is complete and you've restarted.
- You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. (This does not apply to normal application software installation.)
- The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to update.

Installation

You have two ways to update to Mac OS X 10.3.8: Use Software Update or the standalone installer. Use just one of these methods to update your computer.

Automatic Software Update

Software Update, located in System Preferences, can automatically download and install the latest Apple software. Software Update may have linked you to this document for additional information about the update.

This update's size may vary from computer to computer when installed via Software Update.

Because some updates are prerequisites for others, you may need to run Software Update more than once to get all available updates.

Standalone installer

Two versions (combo and delta, described below) of the installer are available from Apple Downloads as standalone updates. After you download an update, you can use it without being connected to the Internet.

- The "combo" installer (described in this document) can update 10.3, 10.3.1, 10.3.2, 10.3.3, 10.3.4, 10.3.5, 10.3.6, or 10.3.7 to 10.3.8.
- The "delta" installer will update Mac OS X 10.3.7 to 10.3.8 (described in a different document).

The standalone installer, particularly the combo, is useful if you have multiple computers to update and only want to download the update once.

Enhancements

What does this update include? Check out the Enhancements section of this document for details.

This update also includes enhancements delivered with:

Mac OS X 10.3.7 Update
Mac OS X 10.3.6 Update
Mac OS X 10.3.5 Update
Mac OS X 10.3.4 Update
Mac OS X 10.3.3 Update
Mac OS X 10.3.2 Update
Mac OS X 10.3.1 Update

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Published Date: Oct 7, 2016

Mac OS X: Mail displays a "Too many recipients" alert and won‘t send the message

This article has been archived and is no longer updated by Apple.
Does Mail complain when you try to send a message to several recipients at once? You might be surprised to know that Mail actually has *no limit* on the number of recipients to whom you can send a message! So, what's going on here?

Chances are it's your Internet Service Provider (ISP) that's preventing your message from being sent. Your ISP might do this, for example, to deter folks who send unsolicited bulk commercial email (such as "spam" or "Junk mail") to a large number of addresses.

If this happens to you, contact your ISP and ask them if they enforce a limit on how many recipients each email message can have. If there is a limit, you can either send your message to fewer people, or divide your recipient list into multiple sets and send the same message in batches (each time to a different set of recipients).

Published Date: Oct 7, 2016

How to position your Mac mini

This article has been archived and is no longer updated by Apple.

You can place your Mac mini on its side and use it if you like. Just be sure not to rest the computer on its front or back side or you'll block access to the slot-loading optical drive in front or port connectors in back.

Always place your Mac mini on a hard, flat surface to provide maximum airflow to the computer's vents around the rubber base. Don't put anything on top of your Mac mini or stack Mac minis on top of each other either. If your Mac mini is configured with AirPort or Bluetooth, you could hamper the signal strength since the antennas are located in the top of the computer.

Published Date: Feb 20, 2012

Shake 3.5: FileIn node thumbnail images are not displayed

This article has been archived and is no longer updated by Apple.

Depending on a user's file access permissions, FileIn node thumbnail images may not display in Shake if writing a file to the cache directory is prohibited.

Symptom
Shake does not display the source material image thumbnails of FileIn nodes in the NodeView window.

Solution
Create a definition file for configuring your environment and specify a folder to which the disk cache should be written. You can create a definition file using a plain text editor such as TextEdit. Here's an example of how to create a definition file:

1. Open TextEdit.
2. In a new document, type the following configuration line:
   ```
   diskCache.cacheLocation="/Users//Library/Caches/Shake";
   ```
3. Save the file with the name `cache.h`.
4. Place cache.h in the following folder:
   /Users/user_name/nreal/include/startup/ui/
   This will specify the folder to which the disk cache will be written.

Published Date: Feb 18, 2012

Mac mini: What keyboard and mouse to use

This article has been archived and is no longer updated by Apple.

The Mac mini does not come with a keyboard or mouse. If you don't already have a keyboard or mouse, you can buy one that connects via USB or Bluetooth.

USB

The Mac mini has two USB 2.0 ports, which can be used with any USB 1.1- or USB 2.0-compliant keyboard and mouse.

The Apple USB Keyboard and Apple Pro Keyboard both contain a USB hub that allows you to connect a USB mouse and still have two free USB ports (one on the keyboard and one on the back of the Mac mini) for other USB devices. If you have a USB device that doesn't have its own power supply, you may want to connect it directly to the USB port on the computer rather than to the USB port on the keyboard.

Note: Some third-party USB keyboards may have different keys than an Apple keyboard.

Bluetooth

You can also order a Mac mini with an internal Bluetooth module that allows you to use an Apple Wireless Keyboard, Apple Wireless Mouse, and many other Bluetooth accessories. If you have a Mac mini without Bluetooth installed, you can purchase an internal module and have it installed, or you can use a USB Bluetooth adapter to enjoy wireless connectivity with Bluetooth-compliant devices.

Published Date: Oct 7, 2016

WebObjects 5.2.x: How to Rename a Project with Xcode in Mac OS X 10.3 or later

This article has been archived and is no longer updated by Apple.
When renaming a WebObjects or Cocoa project using the Rename command from the Project menu in Xcode, the resulting executable file may retain the original name of the project. This is because, with Xcode in Mac OS X 10.3 or later, the name must be changed in other places in addition to choosing Rename from the Project or File menu.

Assume you are starting with a project named "MyWOProject" and that you want to change its name to "MyNewWOProject".

Note that projects originally created with ProjectBuilder will include a project file with the suffix .pbproj. Xcode will not change that suffix to .xcode. Projects originally created with Xcode will include a project file with the .xcode suffix.

Steps for renaming a project

1. Duplicate the "MyWOProject" directory and name it "MyNewWOProject".
2. Rename the MyWOProject.pbproj file inside the MyNewWOProject directory to MyNewWOProject.pbproj. In the case of a project originally created with Xcode, change the name from MyWOProject.xcode to MyNewWOProject.xcode.
3. Open the MyNewWOProject project in Xcode.
4. Rename the MyWOProject target MyNewWOProject.

    a. Click on the disclosure triangle to the left of the Targets Group in Xcode's Groups & Files pane. This reveals the aggregate target named MyWOProject, and the Application Server and Web Server targets.
    b. Click on the aggregate target named MyWOProject in the Groups & Files pane.
    c. Choose Project > Rename. In some versions of Xcode, Rename appears under the File menu.
    d. Replace MyWOProject with MyNewWOProject.

5. Choose Clean All Targets from the Build menu. At this point, if you build the project, the executable still has the name MyWOProject, as does the .woa directory and the URL for connecting to the application. A few more steps are necessary to complete the process.
6. Close the MyNewWOProject project in Xcode or quit Xcode, so that Xcode will not attempt to prevent changes to the project files.
7. Open the MyNewWOProject/MyNewWOProject.pbproj/project.pbxproj file with a text editor. (If the project was originally created with Xcode, it will be located in MyNewWOProject/MyNewWOProject.xcode/project.pbxproj.) This file is not immediately visible in the Finder, so choose from one of the following methods to open the project.pbxproj file:

    GUI Method:

    a. In the Finder, Control-click the MyNewWOProject.pbproj or MyNewWOProject.xcode file, then choose Show Package Contents from the shortcut menu.
    b. Open project.pbxproj in a text editor.

    Command-Line Method:

    a. Open the Terminal.
    b. Use your preferred command-line text editor, such as vi or pico, to open the file.

8. Replace all occurrences of MyWOProject in the project.pbxproj file with MyNewWOProject. This updates PBXBundleReference keys, CFBundleExecutable keys, the NSExecutable key, the .woa directory, several intermediate build directories, PRODUCT_NAME keys, and the application's main jar file.

    Some examples:

    ```
    path = "_WO$(SERVER_UNIQUIFIER)MyWOProject.tmp";
    ```

    Should change to:

    ```
    path = "_WO$(SERVER_UNIQUIFIER)MyNewWOProject.tmp";
    ```

    ```
    path = "_WO$(CLIENT_UNIQUIFIER)MyWOProject.tmp";
    ```

    Should change to:

    ```
    path = "_WO$(CLIENT_UNIQUIFIER)MyNewWOProject.tmp";
    ```

    ```
    PRODUCT_NAME = "_WO$(SERVER_UNIQUIFIER)MyWOProject";
    ```

Should change to:

```
PRODUCT_NAME = "_WO$(SERVER_UNIQUIFIER)MyNewWOProject";
```

```
path = MyWOProject.woa;
```

Should change to:

```
path = MyNewWOProject.woa;
```

```
<string>MyWOProject.jar</string>
```

Should change to:

```
<string>MyNewWOProject.jar</string>
```

Important: Do not modify names of .java files or the .wo directories. Additionally, if you modify any package names in the project.pbxproj file, make sure that you make the appropriate changes to the package statements in your .java source files.

9. Save the changes to project.pbxproj.
10. Open MyNewWOProject in Xcode.
11. Build and run the application. The resulting executable file has the new name of MyNewWOProject, and the URL for accessing the application includes the correctly updated name.

Published Date: Feb 20, 2012

Safari won‘t print after Archive and Install

This article has been archived and is no longer updated by Apple.
A print dialog may not appear in Safari when you try to print, even though other applications still print just fine.

This can happen when you have Safari 1.2.4 (v125.12) on the same computer with Mac OS X 10.3.6 or earlier. This version of Safari comes with the Mac OS X 10.3.7 Update and as such doesn't work properly with the earlier versions of Mac OS X.

To print in Safari, simply update the computer to Mac OS X 10.3.7.

Published Date: Oct 7, 2016

Mac OS X Server 10.3: "postmaster" and other user names can‘t receive email

This article has been archived and is no longer updated by Apple.

Workgroup Manager will allow you to create users named "postmaster," "abuse," and other things that conflict with common server mail aliases. Because of their traditional purposes, users with the following names will not be able to receive email in the default configuration. The server will receive the mail, but the user won't. These names are:

- postmaster
- bin
- named
- uucp
- ftp-bugs
- manager
- dumper
- operator
- abuse
- decode

The file /etc/postfix/aliases defines these names as redirected to root, and root's email is directed to /dev/null. Avoid using these names unless the user will be acting in the traditional role expected of the corresponding address. To allow any of the above user names to receive email, comment out (add "#" before a line) the appropriate line in /etc/postfix/aliases. For example:

```
# Well-known aliases
# manager:        root
# dumper:         root
# operator:       root
# abuse:          postmaster
```

Next, execute these commands in the Terminal:

```
newaliases
postfix reload
```

These commands will reload the alias database and the mail server.

Published Date: Oct 7, 2016

Final Cut Pro HD: Digital Cinema Desktop appears green

This article has been archived and is no longer updated by Apple.

The Digital Cinema Desktop feature in Final Cut Pro HD allows you to use your computer's display for full-screen playback monitoring. Under some circumstances, you may see only a green screen instead of your sequence's video. This can happen if you are using 10-bit uncompressed settings in your Final Cut Pro sequence.

To workaround this issue, you can monitor playback in the Canvas window on your computer display, or monitor playback on an external NTSC or PAL monitor. This issue will not affect the final output to file or tape.

This document will be updated when more information becomes available.

Published Date: Feb 20, 2012

Jam Pack 4 demo songs do not play in GarageBand 1.x

This article has been archived and is no longer updated by Apple.
While you can use Jam Pack 4 Real Instrument Apple Loops in GarageBand 1.x, none of the demo songs that come with the package will play. GarageBand 2.x is required for full functionality of the Jam Pack 4.

If you try to play the demo songs in GarageBand 1.x, one or more of the following alert dialogs may appear:

- Performance Warning
- Warning! This song was created by a newer GarageBand version.
- Core Audio: Plug-in "EXS24" not available.
- An error occurred. Result Code = 5000.

Published Date: Oct 7, 2016

iTunes: Smart Playlist window is too long to fit onscreen

This article has been archived and is no longer updated by Apple.

If you add a lot of criteria to the Smart Playlist window in iTunes (and we mean *a lot*—about 20 items or more, depending on your screen resolution), you can effectively cause the window to extend beyond the bottom of your screen (no scroll bars appear in the window if this happens). If you really want to create a smart playlist with that many conditionals, follow these steps:

1. From the **File** menu, choose **New Smart Playlist**.
2. Add some of the criteria that you want for your Smart Playlist, but don't let the window extend below the bottom of the screen.
3. Click OK.
4. Enter a name for your playlist in the Source list.
5. From the **File** menu, choose **New Smart Playlist**.
6. From the first pop-up menu in the Smart Playlist window, choose **Playlist**.
7. From the second pop-up menu, choose **is**.
8. From the third pop-up menu, choose the playlist you named in step 4.

9. Add the remaining criteria items to complete your Smart Playlist.
10. Click OK.
11. Enter a name for your playlist in the Source list.

This document will be updated when additional information is available.

Published Date: Oct 7, 2016

Xsan: Restart hosts to see new Xserve RAID slices

This article has been archived and is no longer updated by Apple.

When slicing a RAID set that is part of an Xsan storage pool, the new slices do not appear immediately in Disk Utility. To ensure immediate recognition of the new slices (LUNs), you should restart all computers that are an Xsan file system client, metadata controller, or failover metadata controller.

Published Date: Oct 7, 2016

Jam Pack 4 requires Soundtrack 1.x users to index loops manually

This article has been archived and is no longer updated by Apple.
Want to use Jam Pack 4 loops in Soundtrack 1.x? Then know this. Jam Pack 4 installs loops in a location that Soundtrack 1.x doesn't immediately know about. To use Jam Pack 4 loops, you will need to manually index the loops. Click here for information on how to index the loops.

The Jam Pack 4 loops are installed in the following directory:
`/Library/Audio/Apple Loops/Apple/Jam Pack 4 - Symphony Orchestra/`

Published Date: Oct 7, 2016

About Mac OS X Server Update 10.3.8

This article has been archived and is no longer updated by Apple.
This software updates Mac OS X Server version 10.3.7 to version 10.3.8.

Important: Read Before Installing

1. An administrator account password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, follow these steps: Choose System Preferences from the Apple menu. Choose Accounts from the View menu. Select an Admin account and click Edit User. Type your current password, and press Return. Change the password, and click OK.
2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.
3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.
4. This update can be installed on non-startup volumes, but that should be done **only** when the current startup volume has already been updated to Mac OS X Server 10.3.8. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are two ways to update to Mac OS X Server 10.3.8: Software Update and Standalone Installer.

Software Update Installation

You may have been referred to this document by Software Update. For more information on this feature, see How to Update Your Software.

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

An installer is also available from Apple Featured Software.

The Mac OS X Server 10.3.8 Update is specifically for updating version 10.3.7. There is also a "Combo Update" installer available, which will update any version 10.3.x to 10.3.8.

Remote Installation

If you need to install the update on a remotely located computer, you can do so using either the Server Admin application or the "softwareupdate" command-line tool. Choose the method that works best for you.

Enhancements

These are some of the enhancements that are part of Mac OS X 10.3.8 Server Update:

- Active Directory Plug-in: Addresses an issue in which some Mac OS X computers would not bind to Active Directory, affecting computers with Mac OS X 10.3.6.
- Password Server: Improved scalability and performance with Password Server and Kerberos in a replicated environment.
- Password Server: Addresses an issue where Password server replicas may not be created properly after migrating your 10.2.8 NetInfo servers to 10.3.X OD master.
- Workgroup Manager: Improved batch editing when assigning admin privileges to users.

Mac OS X Server 10.3.8 also includes the enhancements of the Mac OS X 10.3.8 client update.

Published Date: Oct 7, 2016

About Mac OS X Server Update 10.3.8 (Combo)

This article has been archived and is no longer updated by Apple.
This software updates any version of Mac OS X Server 10.3 to 10.3.7 to Mac OS X Server version 10.3.8. It is a "combo" update that combines enhancements delivered with versions 10.3.1 through 10.3.8. If you already have Mac OS X Server 10.3.7, you may download a smaller update that is not a combo.

Important: Read Before Installing

1. An administrator account password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, then follow these steps: Choose System Preferences from the Apple menu. Choose Accounts from the View menu. Select an Admin account and click Edit User. Type your current password, and press Return. Change the password, and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.

4. This update can be installed on non-startup volumes, but that should be done **only** when the current startup volume has already been updated to Mac OS X Server 10.3.8. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

5. If you are updating from 10.3.2 or earlier and use a MySQL database, you must back it up prior to upgrade. See the Additional Information for MySQL section, below.

6. If you are updating from 10.3.2 or earlier and have set up a loginhook, a custom serial port configuration, or have edited the "/etc/ttys" file for other reasons, you will need to back it up prior to installation of this update.This is because a 10.3.3 or later update overwrites the file with a new copy when updating from 10.3.2 or earlier. The new file will set the Xserve's serial port to communicate at 56Kbps. If your serial device cannot communicate at this speed, you must edit this file to reduce the speed.

Installation

There are two ways to update to Mac OS X Server 10.3.8: Software Update and Standalone Installer.

Software Update Installation

You may have been referred to this document by Software Update. For more information on this feature, see How to Update Your Software.

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

An installer is also available from Apple Featured Software.

Mac OS X Server Update 10.3.8 (Combo) updates any earlier Mac OS X Server 10.3.x to 10.3.8.

Remote Installation

If you need to install the update on a remotely located computer, you can do so using either the Server Admin application or the "softwareupdate" command-line tool. Choose the method that works best for you.

Enhancements Delivered with this update

Many enhancements are delivered with this update. Because this is a combo update, it includes those delivered with 10.3.8 and earlier 10.3 updates. You can see the individual enhancement lists for 10.3.1, 10.3.2, 10.3.3, 10.3.4, 10.3.5, 10.3.6, 10.3.7, and 10.3.8.

Additional Information for MySQL

Data stored in MySQL databases with the version of MySQL that is pre-installed Mac OS X Server 10.3.2 or earlier must be exported and re-imported in order to be compatible with version of MySQL that is pre-installed on Mac OS X Server 10.3.3 or later, in which a byte-ordering issue is fixed.

As with any upgrade install, you should back up your old data. In this particular upgrade, the following process is recommended to convert the data to the correct byte ordering:

Before the upgrade, use the terminal to export the data from your pre-10.3.3 database:

```
#  mysqldump -p table > backup-file.sql
```

or

```
#  mysqldump  --opt database > backup-file.sql
```

After the upgrade, and after initializing the MySQL database, import the data:

```
#  mysql -p table < backup-file.sql
```

or

```
#  mysql  database < backup-file.sql
```

Published Date: Oct 7, 2016

About the Mac OS X Server 10.3.9 Update

This article has been archived and is no longer updated by Apple.

This software updates Mac OS X Server version 10.3.8 to version 10.3.9.

Important: Please Read Before Installing

- To avoid a potential issue that may cause Java applications and Safari to unexpectedly quit, please review this article.
- A server running as an Open Directory master will be temporarily unavailable as such while the database is updated.
- You must have an administrator account password that does not contain spaces or Option-keyed characters to install this update. The password may not be left blank. If you need to change your password, follow these steps:
  1. From the **Apple** menu, choose **System Preferences**.
  2. Click Accounts to display the preferences.
  3. Select an Admin account and click Edit User.
  4. Type your current password and press Return.
  5. Type a new password and click OK.
- You may experience unexpected results if you've installed third-party system software modifications, or if you have modified the operating system through other means. This doesn't apply to normal software installation.
- The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.
- This update can be installed on non-startup volumes, but you should only do this if the current startup volume has already been updated to Mac OS X Server 10.3.9. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are two ways to update to Mac OS X Server 10.3.9: Use Software Update or install from a standalone installer.

Software Update Installation

Software Update may have referred you to this document. For more information on this feature, see "How to Update Your Software."

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

A standalone installer is also available from Apple Downloads. The Mac OS X Server 10.3.9 Update is specifically for updating version 10.3.8. There is also a "Combo Update" installer available, which will update any version of 10.3.x to 10.3.9.

Remote Installation

If you need to install the update on a remote computer, you can do so using either the Server Admin application or the "softwareupdate" command-line tool. Choose the method that works best for you.

Enhancements

The following items are some of the enhancements and improvements in Mac OS X 10.3.9 Server Update:

Open Directory (Directory Services)

- Schema enhancements for Tiger compatibility.
- Active Directory Plug-In: Addresses a stability issue found with some configurations when binding to a server via Active Directory.
- Password Server: Addresses an issue in which the slapd server may stop responding to authentication requests.
- Password Server: Addresses an issue in which the slapd server may stop responding during heavy, simultaneous logins from Windows clients.
- Addresses an issue in which clients cannot change the password if bound to a Novell eDirectory server.

Mail Server

- Addresses an issue in which the cyrus database may become corrupted.
- Addresses an issue in which the cyrus server may not respond to configuration changes.

File Services

- AFP: Improved AFP Service reliability and stability when multiple users connect.
- AFP: Improved AFP Server performance and reliability during heavy load.
- SMB: Addresses an issue in which some third-party products (such as Retrospect and Homesite for Windows), connecting to Mac OS X Server 10.3.6 to 10.3.8, may get incorrect volume information, causing the connection to fail.
- SMB and Automounter: Addresses SMB deadlock issues which may have occurred on Servers hosting multiple Automounts.

Network Hardware

- Addresses on issue with Ethernet communication on Xserve hardware that could result in packet corruption.

NetBoot/NetInstall

- Addresses an issue preventing NetBoot and NetInstall images from being hosted on an Xsan volume.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

About the Mac OS X Server 10.3.9 Update (Combo)

This article has been archived and is no longer updated by Apple.

This software updates any version of Mac OS X Server 10.3 to 10.3.8 to Mac OS X Server version 10.3.9. It is a "combo" update that combines enhancements delivered with versions 10.3.1 through 10.3.9. If you already have Mac OS X Server 10.3.8, you can download a smaller update to update to version 10.3.9.

Important: Please Read Before Installing

- To avoid a potential issue that may cause Java applications and Safari to unexpectedly quit, please review this article.
- You must have an administrator account password that doesn't contain spaces or Option-keyed characters to install this update. The password may not be blank. If you need to change your password, follow these steps:
  1. From the **Apple** menu, choose **System Preferences**.
  2. Click Accounts to display the preferences.
  3. Select an Admin account and click Edit User.
  4. Type your current password and press Return.
  5. Type a new password and click OK.
- You may experience unexpected results if you've installed third-party system software modifications, or if you have modified the operating system through other means. This doesn't apply to normal software installation.
- The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.
- This update can be installed on non-startup volumes, but you should only do this if the current startup volume has already been updated to Mac OS X Server 10.3.9. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.
- If you are updating from 10.3.2 or earlier and use a MySQL database, you must back it up prior to updating. See the "Additional Information for MySQL" section, below.
- If you are updating from 10.3.2 or earlier and have set up a loginhook, a custom serial port configuration, or have edited the "/etc/ttys" file for other reasons, you will need to back things up prior to installing this update. This is because a 10.3.3 or later update overwrites the file with a new copy when updating from 10.3.2 or earlier. The new file will set the serial port on an Xserve to communicate at 56 Kbps. If your serial device cannot communicate at this speed, you must edit this file to reduce the speed.

Installation

There are two ways to update to Mac OS X Server 10.3.9: Use Software Update or install from the standalone installer.

Software Update Installation

Software Update may have referred you to this document. For more information on this feature, see "How to Update Your Software."

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

A standalone installer is also available from Apple Downloads. Mac OS X Server Update 10.3.9 (Combo) updates Mac OS X Server 10.3.x to 10.3.8 to version 10.3.9.

Remote Installation

If you need to install the update on a remote computer, you can do so using either the Server Admin application or the "softwareupdate" command-line tool. Choose the method that works best for you.

Enhancements delivered with this update

This update delivers many enhancements. Because this is a combo update, it includes enhancements that are delivered with 10.3.9 and earlier 10.3.x updates. You can see the individual enhancement lists for 10.3.1, 10.3.2, 10.3.3, 10.3.4, 10.3.5, 10.3.6, 10.3.7, 10.3.8, and 10.3.9 updates.

Additional Information for MySQL

Data stored in MySQL databases with the version of MySQL that's preinstalled in Mac OS X Server 10.3.2 or earlier must be exported and imported again to be compatible with the version of MySQL that is preinstalled in Mac OS X Server 10.3.3 or later (a byte-ordering issue is addressed).

As with any upgrade install, you should back up your old data. In this particular upgrade, the following process is recommended to convert the data to the correct byte ordering:

Before upgrading, use the Terminal to export the data from your pre-10.3.3 database:

```
#  mysqldump -p table > backup-file.sql
```

or

```
#  mysqldump  --opt database > backup-file.sql
```

After the upgrade, and after initializing the MySQL database, import the data:

```
#  mysql -p table < backup-file.sql
```

or

```
#  mysql  database < backup-file.sql
```

Published Date: Oct 7, 2016

Logic Pro 7: How to uninstall

This article has been archived and is no longer updated by Apple.
Logic Pro 7 does not include an uninstaller. If you need to uninstall the software, manually delete the items listed below. Some items may not be present, depending on what has been installed. Please be sure to address the items that are flagged in the Notes column before deleting files; removing some of these can have an impact on your other applications.

Path	File/Folder	Notes
/Applications/	Logic Pro	
/Applications/	WaveBurner	
/Library/Application Support/	GarageBand	1
/Library/Application Support/	Logic	
/Library/Audio/Apple Loops/	Apple Loops for GarageBand	1
/Library/Documentation/	Logic Acknowledgements.rtfd	
/Library/Receipts/	Logic Pro.pkg	
/Library/Receipts/	LogicPro701Updater.pkg	
/Library/Receipts/	Logic Pro Sound Library.pkg	
/Library/Receipts/	Logic Pro Bonus Sound Library.pkg	
~/Library/Application Support/	Logic	2, 3
~/Library/Preferences/	Logic PMData	2, 3
~/Library/Preferences/	com.apple.logic.pro.plist	2, 3
~/Library/Preferences/	Logic	2, 3

Notes:

1. Do not delete this folder if the application GarageBand is installed on your system.
2. Item only present after Logic Pro has been launched.
3. The tilde (~) in the path represents your Home folder.

Published Date: Oct 7, 2016

Mac OS X 10.3.6, 10.3.7, 10.3.8: Slow login with many PostScript fonts

This article has been archived and is no longer updated by Apple.

After updating to Mac OS X 10.3.6, 10.3.7, or 10.3.8, if you have many PostScript Type 1 fonts installed, you may notice that it takes longer to log in than before updating. To fix this, download and install Mac OS X 10.3.9.

How much longer log in takes generally depends on the number of PostScript Type 1 fonts installed. With 1000 or more PostScript fonts, for example, you'd probably notice it. The login time may increase slightly with every login, even if you don't install additional PostScript Type 1 fonts.

Solution

Download and install the Mac OS X 10.3.9 update.

Published Date: Oct 7, 2016

AirPort for Windows unable to find or communicate with AirPort Base Stations

This article has been archived and is no longer updated by Apple.
Due to common configuration issues which are not AirPort specific, some Microsoft Windows computers may experience difficulty communicating with or configuring any wireless base station, such as an AirPort Express, AirPort Extreme, or a Linksys Wireless-G, for example. This may be caused by:

- Third-party software issues
- Running a Microsoft OS without the latest updates
- Entering an incorrect WEP or WPA password

When this happens, the wireless icon in the Task Bar indicates that the computer is connected to the wireless network, but you are unable to get any Internet data, and the Status window for the wireless connection shows that you have limited or no connectivity. You may also see that the computer has self-assigned a 169.254.xxx.xxx IP address.

To resolve the issue, try these steps:

1. Make sure that you have the latest Service Pack updates from Microsoft. You may also wish to get any additional updates that include changes to the networking abilities of the OS.

2. Check the website of the wireless access point manufacturer to see if there are any updates to the access point's firmware. In the case of Apple AirPort base stations, see the AirPort Support page to be sure that you have the latest firmware update for your AirPort product.

3. Be sure you are using the correct WEP or WPA key (password). Most Windows systems are set up without the ability to validate the user-entered password. If you mistyped it, the wireless computer will be using a different key than the wireless network.

4. Some third-party security software may impede traffic between your computer and the base station. Check for firewall or other security software, and make sure you understand how it is configured. Some VPN software may also operate a firewall without your knowledge, even if the VPN application is not actively running.

   Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

Logic Express 7 box depicts curves feature not present in actual product

This article has been archived and is no longer updated by Apple.
The retail packaging for Logic Express 7 was printed with a mistake: The box depicts an arrangement window that contains non-linear automation curves. In reality, Logic Express 7 does not offer the non-linear automation curves feature.

Non-linear automation curves are a Logic Pro 7 feature only.

Published Date: Oct 7, 2016

Audio Cycle Recording does not work in Logic Express 7

This article has been archived and is no longer updated by Apple.

When you select a cycle range in the Arrange window, record enable a track, and press Record, the recording will not cycle. Instead, Logic Express 7 will start the recording as expected, but then stop recording once it reaches the end of the cycle range. The cycled range will continue to play until you press Stop.

There is currently no workaround for this issue. MIDI cycle recording does work as expected.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

iMovie HD: Close all iDVD projects before using iMovie‘s Magic iMovie feature

This article has been archived and is no longer updated by Apple.
If you have an iDVD project open and you use the Magic iMovie feature in iMovie HD to create a DVD, the project coming from iMovie may not complete.

In this situation, once iMovie HD creates a Magic iMovie, the computer switches applications to iDVD, but because you already have an iDVD project open, iDVD won't create a new project for your Magic iMovie content. Instead, you may receive an alert such as this:

> There is already a project open, do you want to save?

It doesn't matter if you select Yes or No; your Magic iMovie DVD project will not be created as expected. Instead, iDVD opens a new blank project.

If this happens to you:

1. Close the blank project in iDVD.
2. Switch back to iMovie; your Magic iMovie project should still be open and already assembled.
3. Use the Send to iDVD option to resend the project to iDVD: From the **File** menu, choose **Share**. Then click the iDVD button and click Share.

To avoid this issue, make sure that you close all iDVD projects before starting a new Magic iMovie.

Published Date: Oct 7, 2016

iMovie HD: Magic iMovie troubleshooting

This article has been archived and is no longer updated by Apple.
If the Magic iMovie feature of iMovie HD does not work as expected, here are some things to note and do to help resolve the issue.

Magic iMovie is designed to work with a DV or HDV camera that is connected to your computer through FireWire. This feature relies on scene break information stored on tape in the camera, as well as iMovie HD's ability to control the camera over the FireWire connection.

Make sure that your camera can connect over FireWire before using Magic iMovie. This feature is not designed to work with analog-to-DV bridge devices (such as those that allow you to connect a VCR or Hi-8 camcorder to your computer).

If you captured multiple scenes on your tape, but do not see multiple scenes in your Magic iMovie project, make sure that the "Start a new clip at each scene break" option is enabled in iMovie HD Preferences. Click here for additional iMovie scene detection troubleshooting information.

If you are having difficulty sending your Magic iMovie project to iDVD, click here for more information on resolving this issue.

Published Date: Oct 7, 2016

iMovie: Do not connect or disconnect FireWire devices during capture or export

This article has been archived and is no longer updated by Apple.
When you're using iMovie to capture video from or export video to a FireWire video camera or DV device, avoid plugging or unplugging other FireWire devices (such as a drive, iPod, or iSight) into or from your computer.

Connecting or disconnecting devices during a capture or export could result in unexpected behavior, including:

- Corrupted video (including MPEG artifacts)
- Camera disconnection messages
- Dropped frames

If you need to connect (plug) or disconnect (unplug) a device, wait until the capture or export is complete.

Published Date: Oct 7, 2016

Final Cut Express HD: Turning off or disconnecting a FireWire device while rendering a project may cause unexpected results

This article has been archived and is no longer updated by Apple.

Don't power off a computer-connected FireWire device (including a DV camera) while you're rendering an HDV project in Final Cut Express HD. If you do, you might interrupt the render by causing Final Cut Express to stop responding or quit unexpectedly.

If you did disconnect or power off a FireWire device and see a General Error -34 on the screen then restart the computer before continuing.

Published Date: Oct 7, 2016

Tables and charts copied between Keynote 1.1.1 and Keynote 2 are copied as images

This article has been archived and is no longer updated by Apple.
When you copy a table or chart from a slide in Keynote 1.1.1 and paste it into Keynote 2 (or vice versa), the item is copied as an image. All chart or table properties that have been set will not be retained. This won't be an issue if you don't need to edit the table or chart any further.

However, if you want to have this luxury, instead of copying and pasting items from one Keynote version to another, open the Keynote 1.1.1 document directly in Keynote 2 instead of in its native application (you can't open a Keynote 2 document in Keynote 1.1.1). Any table or chart that you then copy and paste within Keynote 2 will have its properties retained.

Published Date: Oct 7, 2016

Final Cut Express HD: Artifacts may appear after decoding MPEG-2 video

This article has been archived and is no longer updated by Apple.

After you decode MPEG-2 video in Final Cut Express HD, visual artifacts may appear in your footage.

This document will be updated when additional information is available.

Published Date: Oct 7, 2016

Register iWork from an admin user account

This article has been archived and is no longer updated by Apple.

To avoid being asked to register again if you switch user accounts, be sure to install and register iWork using an admin user account instead of a standard user (non-admin user) account. You'll only be asked to register once if you register from an admin user account.

Published Date: Feb 18, 2012

Keynote 2 displays a long pause when exporting a slide with audio to QuickTime

This article has been archived and is no longer updated by Apple.
When you add an audio file to a Keynote 2 slide and then export the presentation to QuickTime, Keynote may appear to pause (stop responding) for a long time when it processes the slide with the audio file.

Even though your instinct might be to try and force quit the program, let the export continue to run. After a lengthy delay, the export should complete, and the QuickTime movie will play normally.

This document will be updated when additional information is available.

Published Date: Oct 7, 2016

GarageBand: Enhance Timing may place notes after the end of the region

This article has been archived and is no longer updated by Apple.

To fix timing inconsistencies, the Enhance Timing feature moves notes to the closest grid position. When you quantize a region, a note (or notes) that occur at the end of a selected region may seem to disappear. In actuality, it's just been moved to beat 1 in the measure that follows your selected region. This occurs if the note falls closer to beat 1 in the subsequent measure than the final beat in your selected one.

Published Date: Feb 19, 2012

TA22839_Keynote_Print_Previews_are_black_and_white.pdf

Keynote 2: Print Previews are black and white

This article has been archived and is no longer updated by Apple.
Under some conditions, a slide with colored objects may appear as black and white when you select a Print Preview.

This only occurs under the following conditions:

- A black-and-white printer is the current printer.
- You are are using the "White" theme and have a colored object on one of the slides.
- The Soft Proof checkbox at the bottom of the Preview window is checked.

To see color in the Print Preview window, either zoom in or out of the document, or uncheck the Soft Proof checkbox.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Sudden Motion Sensor: Advanced Tips

This article has been archived and is no longer updated by Apple.

Beginning with the PowerBook G4 (12-inch 1.5GHz), PowerBook G4 (15-inch 1.67/1.5GHz), and PowerBook G4 (17-inch 1.67GHz), PowerBook G4 computers feature a Sudden Motion Sensor.

Apple has adjusted this feature carefully to provide the best balance between protecting the hard drive and preventing unwanted activation of the Sudden Motion Sensor. Most PowerBook G4 owners will never need to turn this feature off, and Apple suggests that you not modify the settings unless absolutely necessary.

In some environments, such as live concert halls, recording studios, or dance clubs, external vibrations may be major enough to cause the module to unexpectedly park the hard drive heads, resulting in interrupted sound or video playback. In these situations, you may find that you want to disable the feature temporarily.

To disable the Sudden Motion Sensor:

First, find the current status of Sudden Motion Sensor:

1. From the Finder's **Go** menu, choose **Utilities**.
2. In the Utilities folder, open Terminal.
3. When the command line appears, type `sudo pmset -g` and press Return.
4. Type in the administrator password when prompted and hit Return. This command queries the computer for the current setting of the Sudden Motion Sensor, which you can determine by locating the ams entry (in Mac OS X 10.3) or the sms entry (in Mac OS X 10.4) and looking to the right to determine its value. The default setting is "1" (turned on).

Disabling the Sudden Motion Sensor in Mac OS X 10.3:

1. In Terminal, which should still be open from the previous step, you can disable the Sudden Motion Sensor by typing `sudo pmset -a ams 0` and pressing Return (changing the setting to a zero disables the module).
2. Type your administrator password when you are prompted and press Return.
3. Type the `sudo pmset -g` command again to be sure that the setting has been applied.

Disabling the Sudden Motion Sensor in Mac OS X 10.4:

1. In Terminal, which should still be open from the previous step, you can disable the Sudden Motion Sensor by typing `sudo pmset -a sms 0` and pressing Return (changing the setting to a zero disables the module).
2. Type your administrator password when you are prompted and press Return.
3. Type the `sudo pmset -g` command again to be sure that the setting has been applied.

Any changes that you make to the Sudden Motion Sensor setting remains in effect even after you restart the computer. If you choose to disable the Sudden Motion Sensor, Apple recommends that you re-enable it as soon as possible in order to take full advantage of the feature.

To re-enable the Sudden Motion Sensor:

First, find the current status of Sudden Motion Sensor:

1. From the Finder's **Go** menu, choose **Utilities**.
2. In the Utilities folder, open Terminal.
3. When the command line appears, type `sudo pmset -g` and press Return. Type your administrator password when you are prompted and press Return. If you have the Sudden Motion Sensor turned off, the value of the ams entry (in Mac OS X 10.3) or sms entry (in Mac OS X 10.4) will be a zero (0).

Re-enabling the Sudden Motion Sensor in Mac OS X 10.3:

1. If the above command returns a zero, you can re-enable the Sudden Motion Sensor by typing `sudo pmset -a ams 1` and pressing Return.
2. Type your administrator password when you are prompted and press Return.
3. Type the `pmset -g` command again to be sure that the setting has been applied.

Re-enabling the Sudden Motion Sensor in Mac OS X 10.4:

1. If the above command returns a zero, you can re-enable the Sudden Motion Sensor by typing `sudo pmset -a sms 1` and pressing Return.
2. Type your administrator password when you are prompted and press Return.
3. Type the `pmset -g` command again to be sure that the setting has been applied.

TA22840_Sudden_Motion_Sensor_Advanced_Tips.pdf

Published Date: Feb 18, 2012

iPod photo: All album artwork is missing after upgrading to iTunes 4.7.1

This article has been archived and is no longer updated by Apple.
If you upgrade to iTunes 4.7.1 and then find that all your album artwork is missing from your iPod photo, update to iTunes 4.8 or later to resolve this.

For additional troubleshooting information, click here.

Published Date: Oct 7, 2016

iMovie HD: Effects display in black bars of clips with different aspect ratios

This article has been archived and is no longer updated by Apple.
In iMovie HD 5.0, you should be aware of unusual things that can happen when mixing clips with different aspect ratios within the same project. One thing that can happen is when you import a clip that has a different aspect ratio than the project you're bringing it into and then apply certain effects (such as Fog), the effect will also render over the black bars outside of the video image in the frame.

In the following example, we imported a DV widescreen clip into a standard DV project (4:3 aspect ratio) and added the Fog effect. Note how the Fog appears over the entire frame and not just the image:

As a workaround, you can create a new iMovie HD project in the same aspect ratio as the clip in question, import the clip, apply the effect, and export the rendered clip as a movie. Then import the revamped clip into your original project. You can also cut and paste between projects.

Published Date: Oct 7, 2016

Keynote 2: Text containing ligatures may not behave as expected in an object build slide

This article has been archived and is no longer updated by Apple.
If you're creating a slide in Keynote 2 and want to animate the text, some of the characters may not behave as expected if a word contains a *ligature*. A ligature is a feature used by some fonts to combine two or more text characters into one. For example, a font may combine the "fi" in "find" into one character so that the dot on the "i" gets absorbed by the top curve of the "f" instead of having the two characters interfere with each other.

In Keynote 2, you can combine text characters with ligatures if the font you're using supports this feature. However, some individual characters in a ligature combination, such as "fl" (as in "flower") and "ff" (as in "caffeine"), will move together as a single entity when you apply certain character effects, such as Expand or Typewriter.

This is normal. If you don't want this to happen (you want each character to behave independently), set the font to not use ligatures (from the **Font** menu, choose **Ligature**, then **Use None**).

Published Date: Oct 7, 2016

Update to iMovie HD 5.0.1 to avoid sync issues

This article has been archived and is no longer updated by Apple.
To avoid synchronization issues during playback, update iMovie HD 5.0 to version 5.0.1 if your projects contain any of the following:

- Titles
- Transitions
- Video effects

This includes projects in Widescreen, standard, PAL, and NTSC formats.

You can download the update using Software Update. - Audio/video sync while playing back standard DV movies is better. - HDV exports to tape longer than 8 minutes are now possible. - compatibility with certain analog-to-digital converter boxes is improved. - it is now possible to record video sent by a DV camera when there is no tape in the device (e.g. analog passthru or live camera images).

Published Date: Oct 7, 2016

Importing a Motion or iMovie project into Final Cut Express HD

This article has been archived and is no longer updated by Apple.
If you want to import Motion or iMovie projects into Final Cut Express HD, you will need to have the corresponding application installed on the same computer. In other words, if you want to import a Motion (or iMovie) project, Motion (or iMovie) must also be installed on the same computer that houses Final Cut Express HD.

If the corresponding application is not installed, you will get an "Unrecognized File" alert when you try to import the project into Final Cut Express HD. To avoid seeing this message, be sure that the project's native application is installed on your target machine.

Published Date: Oct 7, 2016

iDVD 5: Create DVDs from a DV camera with OneStep DVD

This article has been archived and is no longer updated by Apple.
iDVD 5 has a new feature called OneStep DVD that allows you to create DVDs directly from your DV camera in one step without having to use iMovie. The resulting DVD will play your movie automatically when you insert it in a DVD player.

Although OneStep DVD makes DVD creation quick and easy, it does have the following caveats:

- You will not be able to edit your movie in any respect.
- The DVD cannot be customized. No menus or slideshows can be added.
- The DVD will not have chapter markers.

If you're OK with all the above, then here's how to create a DVD using OneStep DVD:

1. Connect your DV camera to your computer.
2. Turn on the camera (no need to rewind the tape).
3. Set the camera to VTR mode.
4. Open iDVD and click the OneStep DVD button in the welcome screen (or from the **File** menu, choose **OneStep DVD** if another project is already open).
5. Insert a recordable DVD disc into your computer.

That's it! iDVD takes over from there. If you're interested in finding out more about the creation process, read on.

Capturing video
In OneStep DVD mode, iDVD automatically rewinds the tape in your DV camera and then captures video to your computer's hard drive. If you press the Play button on your camera while it's being rewound, iDVD will begin to capture at that point. While capturing, iDVD displays a thumbnail image that shows the current point in the video.

iDVD also displays two time indicators. The first indicates the amount of video that iDVD has captured so far. The second indicates the amount of video that could potentially be captured, based on the available space that remains on your hard drive. You may notice that the second indicator decreases a little faster than the amount that the first one increases. This is because iDVD needs to make sure that there will be extra hard drive space left available to encode your video and audio and then structure that material into the DVD-Video format.

Stopping the capture
You can press the Stop button on screen at any point while your video is being captured. If you do this, a dialog appears, giving you options to cancel the current project or continue creating the DVD using the video that was captured up to that point. If you don't manually stop the capture, iDVD will stop capturing video automatically when the tape ends or after 10 seconds of sensing that no video is coming from the camera.

Creating the DVD
After capturing, iDVD prepares the DVD structure and begins to process the video that was captured. During this stage, iDVD encodes the captured DV video into MPEG-2 format, which is used in standard DVDs (you'll see a thumbnail image, representing the frames being encoded). When it's done, iDVD transcodes the audio into uncompressed PCM audio. You can cancel the OneStep project at any time up to this point, and your DVD will be left blank.

The last stage in the process is burning the content to a recordable DVD disc. After iDVD completes the burn, it will eject the disc.

Note: OneStep DVD will only capture from recorded tape on a DV camcorder or deck. OneStep DVD will not work with analog-to-DV converters. It will also not work if you are using your camcorder or deck as a pass-through device to digitize from an analog source (such as VHS or Hi-8). In order to function, OneStep DVD reads the timecode from your DV tape and it relies on DV device control to communicate with the camera or deck.

Published Date: Oct 7, 2016

Some DVD-RW discs cannot be played in DVD Player

This article has been archived and is no longer updated by Apple.

Some SuperDrive models are capable of burning DVD-Video content onto certain types of DVD-RW media that the Mac OS X DVD Player cannot recognize.

If DVD Player doesn't recognize a disc, you may see a "Not Permitted" or "Supported disc not available" message in the Viewer window when you try to play the disc. This issue may occur with a variety of SuperDrives and media types or brands.

As a workaround, use DVD-R disc media when burning DVD-Video content.

Published Date: Feb 18, 2012

Mac OS X: Asian language characters are unreadable when pasted into a Classic application

This article has been archived and is no longer updated by Apple.
Asian text may become unreadable if you copy text from a native Mac OS X application (such as TextEdit) and paste it into a Classic application (such as SimpleText). This may happen if you're using Mac OS X 10.2 or later.

To resolve this issue, instead of copying and pasting text, drag and drop it like this:

1. Open both applications so that you can see the original text and the document in which you want to place the text.
2. Select the text in the original document that you want to transfer. If you want to select it all, press Command-A.
3. Drag the selected text and drop it in the Classic application's document window. That's it!

Published Date: Oct 7, 2016

iDVD 5: 12-bit audio may result in sync issues when using OneStep DVD

This article has been archived and is no longer updated by Apple.
Most DV cameras allow you to record using one of two audio settings: 12-bit or 16-bit audio. If you used both of these settings on one tape (some of the footage was shot with 12-bit audio, and some was shot with 16-bit) and then use iDVD 5 to create a OneStep DVD project, iDVD may have difficulty keeping the audio synchronized with the video.

To avoid this issue, always keep your camera set to 16-bit audio, if possible. This will ensure higher quality audio and better compatibility with iLife applications.

Published Date: Oct 8, 2016

Mac OS X 10.3 and later: IP over FireWire may prevent using other FireWire devices

This article has been archived and is no longer updated by Apple.

If you network two Macs over FireWire, such as using IP over FireWire, you may not be able to use other devices on that FireWire bus. This means that a connected iPod or iSight, for example, may not be recognized properly, or may even appear on another Mac computer that is part of your FireWire network.

To prevent this from happening, disconnect your other Macs from the FireWire network before using any FireWire devices that exhibit this issue. If you have a FireWire card installed (or an open PCI or PC card slot to install one), you can alternatively use it to connect the computers on a different FireWire bus from your FireWire devices (connect these to your computer's built-in FireWire ports.

Published Date: Feb 18, 2012

Mac OS X Server: "MMap chainhead is NULL" messages are harmless

This article has been archived and is no longer updated by Apple.
The Apple File Server error log may report "MMap chainhead is NULL." This message is harmless and does not indicate any problem with the AFP server.

You may see repeated instances of a message like:

```
29/Dec/2004:15:07:35 -0500: MMap chainhead is NULL
```

You can safely ignore these messages.

Published Date: Feb 18, 2012

GarageBand 2.0: Songs cannot exceed 999 measures

This article has been archived and is no longer updated by Apple.

In GarageBand 2.0, the end-of-song marker cannot be moved beyond measure number 999. However, it is possible to record a Real Instrument track beyond that point, but if you do, the portion of the recording that extends beyond measure 999 will not be playable. If you want to use that portion in your song, split the region at the end-of-song marker (at the end of measure 999) and drag the overmatter into any area between measures 1 and 999.

Tip: Consider creating a new Real Instrument track to move the split region into - otherwise, you might overlap regions.

In GarageBand 3.0 or later, this limit increases from 999 to 1999.

Published Date: Oct 8, 2016

PowerBook G4 (12-inch 1.5GHz), PowerBook G4 (15-inch 1.67/1.5GHz), PowerBook G4 (17-inch 1.67GHz): Installing individual applications from iLife ‘05

This article has been archived and is no longer updated by Apple.

iLife 05 is preinstalled on PowerBook G4 (12-inch 1.5GHz), PowerBook G4 (15-inch 1.67/1.5GHz), and PowerBook G4 (17-inch 1.67GHz) computers. However, if you ever need to reinstall certain applications from iLife 05, you can do so. When you go through the installer, you may not be able to select an individual application. (When you try to select just one application, all the applications are checked.) Simply uncheck the applications that you do not want to install.

Published Date: Oct 8, 2016

About the Apple Remote Desktop 2.2 Update

This article has been archived and is no longer updated by Apple.

The Apple Remote Desktop 2.2 Update improves reliability and compatibility, and it's recommended for all users of Apple Remote Desktop 2. Note: Be sure to quit the Remote Desktop administration application before updating to version 2.2. If the admin application is open when the updater is run, you will have to add your client computers again and recreate your computer lists.

Here are some of the improvements included with this version:

Software Distribution

- Now correctly copies files to symlinked directories such as "/tmp".
- Improved reliability for installing from .mpkg files.
- Can now install iTunes 4.7 and iTunes 4.7.1.

Asset Management

- Improved reliability for generating system and software reports.
- Correctly reports systems that have more than 2 GB of memory installed.

Remote Assistance

- During control sessions, keys typed on Japanese keyboards will display correctly.
- Improved reliability for the Share Screen command.

Remote Administration

- Brightness is no longer reset when a client is shut down during display sleep.

Other

- Compatibility with Mac OS X 10.4 Tiger.
- Scanners now retain settings across Admin sessions and/or changed locations.
- Improvements in reporting the correct status of computers.
- Improved launch time of the Apple Remote Desktop application.

Published Date: Oct 8, 2016

Using Aatrix Top Pay in Canada

This article has been archived and is no longer updated by Apple.

PowerBook G4 (12-inch 1.5GHz), PowerBook G4 (15-inch 1.67/1.5GHz), and PowerBook G4 (17-inch 1.67GHz) computers in North America come bundled with Aatrix QuickBooks, including Top Pay. The default installation of Top Pay has a payroll feature that uses United States information. If you want to use the payroll feature but live in Canada, you will need to switch out a file.

To modify Top Pay for use in Canada:

1. Open the QuickBooks NUE folder (it's in the Applications folder).
2. Open the Aatrix Top Pay 15 folder.
3. Locate the Aatrix Top Pay icon and drag it to the trash.
4. Double-click the For Users in Canada.zip icon. The file will unzip and create a folder called For Users in Canada.
5. To run Aatrix Top Pay Canada, from QuickBooks, go to the Employees option and choose Payroll.

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Published Date: Feb 18, 2012

About Security Update 2005-001 for Mac OS X

This article has been archived and is no longer updated by Apple.
This document describes Security Update 2005-001, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How To Use The Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Security Update 2005-001

- at commands
  Available for: Mac OS X v10.3.7, Mac OS X Server v10.3.7
  CVE-ID: CAN-2005-0125
  Impact: Updates the "at" commands to address a local privilege escalation vulnerability
  Description: The "at" family of commands did not properly drop privileges. This could allow a local user to remove files not owned by them, run programs with added privileges, or read the contents of normally unreadable files. This update patches the commands at, atrm, batch, atq, and atrun. Credit to kf_lists[at]digitalmunition[dot]com for reporting this issue.

- ColorSync
  Available for: Mac OS X v10.3.7, Mac OS X Server v10.3.7, Mac OS X v10.2.8, Mac OS X Server v10.2.8
  CVE-ID: CAN-2005-0126
  Impact: Malformed ICC color profiles could overwrite the program heap, resulting in arbitrary code execution.
  Description: An out-of-specification or improperly embedded ICC color profile could overwrite the program heap and allow arbitrary code execution. There are no known exploits for this issue. With this update, ColorSync will reject incorrectly-formed ICC color profiles.

- libxml2
  Available for: Mac OS X v10.3.7, Mac OS X Server v10.3.7
  CVE-ID: CAN-2004-0989
  Impact: The libxml2 library contains unsafe code that may be exploited in applications linked against it.
  Description: This update fixes several functions in the libxml2 library that have been identified as unsafe due to potentially exploitable buffer overflows.

- Mail
  Available for: Mac OS X v10.3.7 Client, Mac OS X Server v10.3.7
  CVE-ID: CAN-2005-0127
  Impact: Email messages sent from a single machine can be identified
  Description: A GUUID containing an identifier associated with the Ethernet networking hardware was used in the construction of an RFC-822 required Message-ID header. Mail now hides this information by computing the Message-ID using a cryptographic hash of the GUUID concatenated with data from /dev/random. Credit to Carl Purvis for reporting this issue.

- PHP
  Available for: Mac OS X v10.3.7, Mac OS X Server v10.3.7, Mac OS X v10.2.8, Mac OS X Server v10.2.8
  CVE-ID: CAN-2003-0860, CAN-2003-0863, CAN-2004-0594, CAN-2004-0595, CAN-2004-1018, CAN-2004-1019, CAN-2004-1020, CAN-2004-1063, CAN-2004-1064, CAN-2004-1065
  Impact: Multiple vulnerabilities in PHP, including remote denial of service and execution of arbitrary code
  Description: PHP is updated to version 4.3.10 to address several issues. The PHP release announcement for version 4.3.10 is located at http://www.php.net/release_4_3_10.php.

- Safari
  Available for: Mac OS X v10.3.7, Mac OS X Server v10.3.7, Mac OS X v10.2.8, Mac OS X Server v10.2.8
  CVE-ID: CAN-2004-1314
  Impact: When Safari's "Block Pop-Up Windows" feature is not enabled, a malicious pop-up window could appear as being from a trusted site
  Description: If the "Block Pop-Up Windows" feature is enabled, then this issue does not occur. If the "Block Pop-Up Windows" feature is not enabled, a user can be mislead about the content of a Pop-up window if they used an untrusted link to navigate to a site they wanted to view. This update corrects the issue regardless of the "Block Pop-Up Windows" setting. Credit to Secunia Research for reporting this issue.

- SquirrelMail
  Available for: Mac OS X Server 10.3.7
  CVE-ID: CAN-2004-1036
  Impact: SquirrelMail is updated to address a cross-site scripting vulnerability
  Description: A cross-site scripting vulnerability in SquirrelMail allowed email messages to contain content that would be rendered by a user's web browser. SquirrelMail is updated to address this issue. Further details are available from the SquirrelMail website: http://www.squirrelmail.org/.

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Published Date: Oct 8, 2016

Keynote 2: Printing issues with HP DeskJet 970 and DeskJet 995 printers

This article has been archived and is no longer updated by Apple.
When you print from Keynote 2 to an HP DeskJet 970 or DeskJet 995 printer, you may see one or more of the following issues:

- Chart labels and Axis labels are incorrect.
- Pie charts lose their form and scatter.
- When two charts are printed on a page, they have the wrong series fills.
- Chart colors have intermittent issues with the following Keynote themes:
  - Letterpress
  - Notebook
  - White
  - Parchment
  - Crayon Line
  - Pushpin
  - Gradient

This document will be updated when additional information is available.

Related documents
300773 "iWork: Images print incorrectly on some printers"

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Published Date: Oct 8, 2016

iWork: Images print incorrectly on some printers

This article has been archived and is no longer updated by Apple.

When you print documents from Pages or Keynote 2, some images may be randomly swapped for others when printing to some printers. This can happen with documents that contain images with drop shadows (such as those in the Travel Journal template in Pages 1.0).

Upgrading to Mac OS X 10.4 or later will resolve this issue. However, if you are still using Mac OS X 10.3.x and are unable to upgrade, follow these steps to workaround the issue:

1. In the Pages or Keynote 2 Print dialog, click the "Save as PDF" button to save a PDF file of your document.
2. Open your PDF file in the Preview application.
3. Print the document from Preview.

This document will be updated as more information becomes available.

Related documents

300772 "Keynote 2: Printing issues with HP DeskJet 970 and DeskJet 995 printers"

Published Date: Oct 8, 2016

Apple Hardware Test: PowerBook trackpad response may be slow or jumpy

This article has been archived and is no longer updated by Apple.

When you use Apple Hardware Test on a PowerBook G4 (12-inch 1.5GHz), PowerBook G4 (15-inch 1.67/1.5GHz), or PowerBook G4 (17-inch 1.67GHz) computer, the trackpad will track very slowly and the pointer may seem to move unevenly across the screen.

This behavior is normal for the trackpad when used with Apple Hardware Test. To improve navigation when using this software, use an external mouse or use the following keyboard shortcuts:

Key	Action
Arrow up/down	Pick a language to use
Return/Enter	Select a language to use
Tab	Cycle through the tabs (Hardware Test, Hardware Profile, Apple)
G	Start the Quick Test
E	Start the Extended Test
Shift-R	Restart
Shift-S	Shut down
Command-period	Stop the testing

Published Date: Feb 18, 2012

Pages: Template text appears as Latin or gibberish

This article has been archived and is no longer updated by Apple.

When you choose a template in Pages, much of the text in the initial document may appear to be in Latin or come across as gibberish.

This is normal behavior for Pages. The initial text in any template is there to give you an idea of how the final document will look. To change it, click once on the section of text that you wish to change, and start typing. See "Using a template" from the Pages Help for more information.

Published Date: Oct 10, 2016

AirPort 4.1: Network status may display incorrectly on a Graphite base station

This article has been archived and is no longer updated by Apple.
When AirPort Admin Utility 4.1 is used in Mac OS X 10.3 Panther, it may display an incorrect Network status for the first-generation AirPort Base Station (Graphite).

The Network tab information will always show that "Enable DHCP server on Ethernet" and "Enable AirPort to Ethernet bridging" are off, even after you've turned them on.

If you have selected these checkboxes and saved the configuration, these features will be active, despite the status message.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

iMovie displays a -43 error when exporting or importing files

This article has been archived and is no longer updated by Apple.
When using iMovie 3.0 or later, you may get a -43 error message when you try to do the following:

- Send an iMovie project to iDVD.
- Import files into iMovie.
- Export projects to QuickTime using iMovie's Share feature.

If you come across this error, check to see if you have any third-party plug-ins installed in the following locations:

~/Library/iMovie/
/Library/iMovie/

If so, temporarily disable the plug-in by renaming or removing the iMovie plug-ins folder where the plug-in resides. Then open iMovie again and test to see if the export (or import) succeeds.

For example, older versions of the Slick plug-ins suite may cause this symptom. Gee Three has an update for their Slick plug-ins here. If you have plug-ins from another company, check with the plug-in developer for possible plug-in updates which may resolve this issue.

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Published Date: Oct 10, 2016

Keynote 2: Exported QuickTime slideshow‘s audio sounds doubled when played

This article has been archived and is no longer updated by Apple.
If you export a Keynote 2 presentation with audio in QuickTime format, save it as an Interactive Slideshow movie, and then open the exported movie from the Finder by double-clicking the movie file, you might hear what sounds like an echo. This may happen if you have your Finder window set to Columns view and the Preview pane is set to display content (the Preview disclosure triangle is open).

In this situation, the first time that you click the slideshow file in the Finder to select it, the audio will start playing in the Preview pane. If you then double-click the file to open the slideshow, the slideshow will be playing both in the Finder's Preview pane and in QuickTime Player.

To break-up the double play, either click the Preview disclosure triangle or click a different file in the Finder to stop the Preview pane play. To prevent this from happening in the future, switch the Finder from Columns view to List or Icons view.

Published Date: Oct 10, 2016

Logic Pro won‘t open after updating it in Software Update

This article has been archived and is no longer updated by Apple.
Logic Pro may not open after being updated by Software Update, due to an issue with your active languages configuration.

If you encounter this issue, reinstall from the original Installation disc (such as version 7.0 or 7.1) then re-run an update (such as 7.0.1 or 7.1.1), using these steps:

1. Locate the Logic Pro application in the Finder and drag it to the Trash.
2. Reinstall Logic Pro from the Installation DVD.
3. Use Software Update to update Logic Pro.
4. After the update is finished, customize your languages again.

Before installing future updates to Logic Pro, be sure to activate each language again.

Published Date: Feb 19, 2012

Xserve RAID: Not a replacement for a data backup strategy

This article has been archived and is no longer updated by Apple.

The Xserve RAID is a robust device designed to provide fast and reliable access to large amounts of data. An Xserve RAID can compensate for single drive failures (in a RAID 5 configuration), but it is not designed to be a replacement for a backup strategy. As with any computing device, unforeseen circumstances can lead to data loss.

To prevent permanent data loss, it is important to maintain a regular backup strategy. Keeping multiple staggered copies of important data is best, and it is even better to keep backups of data in an offsite location. Tape libraries or additional Xserve RAIDs can provide the storage capacity required for large amounts of backup data.

Published Date: Feb 19, 2012

Power Mac G5 won‘t capture high definition video

This article has been archived and is no longer updated by Apple.
If you aren't getting the performance you hoped for when you capture high definition video using a third-party video capture card and Power Mac G5, here are some things to try.

- Review the set-up instructions that came with your card to ensure that you have installed it in the correct PCI slot (some cards only work in certain slots).
- Consult with the video capture card manufacturer and make sure that the card will work with your configuration. You should also check the manufacturer's website to see if there's a list of computer configurations that have been qualified to work with their cards.
- If you're using Final Cut Pro, visit the Final Cut Pro specifications website to view a list of devices that have been qualified to work with Final Cut Pro.
- If you're using a non-Apple application, consult with its manufacturer to verify whether your Power Mac G5's configuration is compatible with their product.

Published Date: Oct 10, 2016

iPhoto: Do not use the Revert to Original command after removing or renaming the original

This article has been archived and is no longer updated by Apple.
iPhoto automatically manages both original and working copies of your pictures inside your iPhoto Library. If you interfere with its management by removing or renaming the originals manually or via a third-party utility (such as iPhoto Diet), then you must not use the Revert to Original command.

If you remove the original by moving it somewhere else, the Revert to Original command in iPhoto will replace your working copy with the "nothing" that it finds in the original's place (basically, a zero-K file). If this happens, you will need to re-import the original from wherever you moved it. If you didn't keep a copy of the picture outside of iPhoto, then your only copy is erased (as long as you're not using a secure delete option, an erased file will persist on your disk for an indefinite amount of time, and it might be recoverable by third-party software).

Warning: If you want to try file recovery, stop using the computer immediately and consult the documentation for your third-party file recovery software, or consult a file recovery specialist. By not using the computer, you will increase your chances of recovering the file.

Additionally, iPhoto will unexpectedly quit if you try to edit a RAW photo for which the original has been removed.

To prevent this issue:

1. Leave the contents of your iPhoto Library folder alone, and allow iPhoto to manage the images as designed.
2. Update to iPhoto 5.0.1 or later. This update will prevent the loss of non-RAW images, but it does not eliminate issues with RAW files.
3. Minimize the risk of image loss by keeping good backups:

    - Export your current library as a backup copy.
    - Back up new photos as soon as possible after taking them.

    If you already have good backup habits and copies of all your images outside of iPhoto, then obviously there is no need to export your current library. For those of you who haven't been backing up, exporting your current library will start you on the right path.

When the original of a non-RAW image is missing in iPhoto 5.0.1, iPhoto will detect this when you use the Revert to Original command, and it will make this command unavailable to that image. If you then edit this surviving image, it will subsequently be copied to the Originals folder, and your new changes will become the edited working copy.

For RAW images, the issues persist as described above (both for image loss and unexpected quitting).

Exporting your current library

This will require that you have free space on your hard disk equivalent to 50 to 100 percent of your iPhoto Library, with the exact amount dependent on the state of your library. If you don't have and can't free up that much space, the next easiest alternative would be to export to an external USB 2.0 or FireWire hard disk, or to another computer via File Sharing.

1. **Click the Finder icon in the Dock.**
2. **In the Finder Window, select Desktop.**
3. **From the File menu, choose New Folder, and name the folder Exported iPhoto Library.**
4. **Open iPhoto, and select your Library from the Source list.**
5. **Click the Keywords button.**

6. **Check your keywords list for RAW. If RAW is in your keywords list, stop here and review For libraries containing RAW images, below. Otherwise, continue to the next step.**
7. **Be sure that no keywords are selected. A selected keyword will be blue or red. Click it to turn it gray (deselected).**
8. **From the Share menu, choose Export.**
9. **Click the File Export tab.**
10. **Set the Format pop-up menu to Original.**
11. **Click the Export button.**
12. **In the navigation sheet that appears, click Desktop, then click the Exported iPhoto Library folder.**
13. **Click OK.**

For libraries containing RAW images

If your library contains both RAW and non-RAW images, you will need to export your Library once for each type. This means that you would follow the steps above twice. Do your first pass for the non-RAW images by replacing step 7 with this alternate:

> **7. To see everything that is not RAW, click the RAW keyword while pressing the Option key on your keyboard. The keyword turns red when you Option-click it, which indicates that you are doing a "not" search.**

Do the RAW images on your second pass, by replacing steps 7 and 10 with these alternates:

> **7. To see only RAW images in a selected album or in your Library, click the RAW keyword in your Keywords list. The keyword will be blue when it is selected.**

> **10. Set the Format pop-up menu to JPEG (this may seem confusing -- see Notes for explanation).**

Notes:

1. **Under normal circumstances, you can export a RAW image as Original (step 10), and you will get a copy of the original RAW file. However, if you have removed any RAW originals, what you will have left is the JPEG working copies with the RAW keyword, so you would not be able to export them as "Original" (doing so would result in a file not found message). This article is geared toward readers who have removed some originals, so setting the menu to JPEG in step 10 ensures that you will get JPEG copies of RAW images for which the original RAW file has been removed. If you are certain that you have not removed any originals, and you just want to start a backup regimen, then it's OK to select Original.**
2. **If your situation requires exporting as JPEG, then it's likely that within those RAW-keyworded images you have both missing originals and present originals. After doing the JPEG export to get copies of them all, you can then use the Finder to search your iPhoto Library folder for the present originals, which are identifiable by the filename extension that your camera uses (such as .nef, .cr2, .crw, and so forth). This way you can save the RAW originals that are present without having to negotiate the "file not found" messages in iPhoto.**
   a. **Click the Finder icon in the Dock.**
   b. **From the File menu, choose Find.**
   c. **Set the "Search in" menu to "Specific Places".**
   d. **Click the Add button.**
   e. **Navigate to your Pictures folder, and select the iPhoto Library folder.**
   f. **Click Choose.**
   g. **Deselect the checkbox for other locations so that only your iPhoto Library is being searched.**

   h. **Search for items whose name contains the file extension used by your camera (such as .nef or .cr2). This is shown in the picture above.**
   i. **Click Search.**
   j. **You can drag the RAW files you find in the results window to another folder in the Finder for safe keeping.**

Backing up new photos as you take them

Here are two different ways to go about backing up your photos as you take them. If you like to connect your camera directly to the computer, you could use this method:

1. **Import into iPhoto as you normally would.**
2. **In the Source list, select Last Roll.**
3. **From the Share menu, choose Export.**
4. **Click the File Export tab.**
5. **Set the Format pop-up menu to Original.**
6. **Click the Export button.**

7. **In the navigation sheet that appears, select a location (such as Desktop or Pictures) where you want to make a folder for backing up your latest shoot.**
8. **Click the New Folder button, name the folder, and click Create.**
9. **Click OK.**

If you prefer to use a card reader, try this method:

1. **Use the Finder to copy your images from the card reader to a folder on your computer. (This will be your backup copy.)**
2. **In iPhoto, from the File menu, choose Add to Library to import them from the desktop into iPhoto.**

Now that you have an extra copy, the safest thing to do is move it to an external hard disk, copy them to another computer via file sharing, or burn a disc. External hard disks (USB 2.0 and FireWire) are nice to have, because they're fast, flexible, and allow you to save pictures until you have enough to fill a DVD. Following this backup strategy will eliminate the risk of losing images due to your management of the iPhoto Library.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

iMovie HD: Supported video formats

This article has been archived and is no longer updated by Apple.
iMovie HD supports multiple video formats and allows you to create projects that are tailored to your specific video format. You can use the following formats in iMovie HD:

- DV
- DV Widescreen
- HDV 1080i (25 and 30 fps)
- HDV 720p (25 and 30 fps)
- MPEG 4 Simple Profile
- iSight

When you create a new project in iMovie HD, click the Video Format disclosure triangle (if it isn't open already) and choose the format for your footage at hand from the pop-up menu.

Make sure that you choose the correct format that matches your footage to avoid additional video clip transcoding. This ensures the highest quality import and may save disk space, depending on the format.

Note: If you attempt to import footage from a camera (other than iSight) that does not match the project format you selected, one of two things will happen:

- If this is the project's first import, iMovie HD may automatically change the project format to match the footage that you're importing.
- iMovie HD may display a warning message that it cannot import the footage because it does not match the project's format.

iMovie HD also allows you to import most QuickTime-compatible formats. For more information on how to do this, click here. If you need to mix different footage formats from multiple cameras, click here to find out how to use them all together in one iMovie HD project.

Published Date: Oct 10, 2016

iMovie HD: How to mix video formats within a project

This article has been archived and is no longer updated by Apple.
You'll get best results from iMovie if you use the same video format for all of the footage in a project. If you don't have this option, then these steps may allow you to mix various media footage (DV, HDV, MPEG-4) in the same project using iMovie HD.

Normally, when you attempt to import footage from a different camera type than what's used in your current iMovie project (iSight footage is the exception—you can import it into any project format), iMovie won't let you and may give you the following warning message:

> "The attached camera uses a different video format than your project's format. To use this camera, disconnect any other tape-based cameras, then create a new, empty project."

Don't worry; it can be done. If you need to mix footage from different camera types, follow these steps:

1. Import the additional footage into a new iMovie project.
2. Select the imported footage in the clips pane or timeline and copy the clips to the clipboard (from the **Edit** menu, choose **Copy**).
3. Close the project and open the project in which you want the clips to appear.
4. Paste the clips into the clips pane or timeline (from the **Edit** menu, choose **Paste**).

iMovie HD will automatically convert the footage so that it can be used in this project. Please be aware that depending on the project and footage formats, the footage may be converted to a lower quality.

If your footage is of a different aspect ratio, it may be letterboxed or pillarboxed to fit the project you are pasting into. If you need to add an effect to such footage, consider adding the effect in the clip's original project before cutting and pasting it into the new project.

Published Date: Oct 10, 2016

GarageBand: Symphony Orchestra Jam Pack requires GarageBand 2.0

This article has been archived and is no longer updated by Apple.
Jam Pack 4 takes advantage of new features and enhancements in GarageBand 2.0 that are not a part of GarageBand 1.x. For full functionality, use GarageBand 2.0 with Jam Pack 4.
Published Date: Feb 19, 2012

Remote Desktop 2: How to specify a port number for a VNC client

This article has been archived and is no longer updated by Apple.

Remote Desktop administration software, by default, uses port 5900 to communicate with a VNC server. Occasionally, it's necessary to add a VNC server that listens on another port. Here's how to use Remote Desktop to change the port number for a VNC client:

1. Add the VNC client to your list.
2. Select the VNC client, and Get Info for it.
3. Click the Edit button.
4. Edit the IP Address field to include the port number. For example, to change the number to port 5902, add it like this:

```
10.0.0.5:5902
```

5. Click Done to apply the changes.

Note: This only works for the IP address. If you edit the DNS name, it will not have the same effect.

Published Date: Feb 18, 2012

Mac OS X: Some applications are not selectable when using Limitations, Capabilities, or Parental Controls

This article has been archived and is no longer updated by Apple.
Some applications do not work properly with the Accounts preference option known by the names "Limitations" (10.2), "Capabilities" (10.3), and "Parental Controls" (10.4). Mac OS X 10.4 will actually warn you when such an application is selected, by giving the alert message:

> "Application_Name does not work with the limitations you have selected."

However, Mac OS X 10.2 and 10.3 do not have this warning. If you set a user to have "Some Limits" or a "Simple Finder," and then allow access to one of these particular applications before quitting System Preferences, that application will no longer be selected in the Allow list the next time you open System Preferences and access this user's account. This affects Mac OS X and Mac OS X Server versions 10.2 and later.

Note: This issue sounds similar to one involving unbundled applications, but is different.

If you have an application that exhibits this behavior, contact the developer of the application to report this issue.

Software developers should note that Cocoa applications must have a unique Bundle ID, and Carbon and Classic applications must have a unique Creator code as stated in the Mac OS X Developer System Overview documentation.

Published Date: Oct 10, 2016

Mac OS X 10.3 or later: Printing in Classic using a Mac OS X inkjet printer driver

This article has been archived and is no longer updated by Apple.

If you're using a Classic application, you can print from it using a Mac OS X printer driver. This applies only to inkjet (raster) printers that use a single driver to print from either Mac OS X or Classic applications. Here's how to do this in Mac OS X 10.3 or later.

Note: Mac OS X 10.4 or later automatically sends Classic print job to the Mac OS X print queue, but the steps in this article can be used if you are unable to print normally from Classic.

1. From the Finder **Go** menu, choose **Go to Folder**.
2. In the resulting dialog, type `/Applications (Mac OS 9)/Utilities` and then click Go (or press Return).

   Note: This command only works if your Mac OS 9-related folders are on the same volume as Mac OS X. If they are on a different volume (or partition), navigate to the Utilities folder in the Applications (Mac OS 9) folder on that volume.

3. Double-click Desktop Printer Utility to open it.
4. In the New Desktop Printer dialog, select "Translator (PostScript)" and click OK.
5. In the resulting dialog, click Create.
6. Type a name for your new desktop printer, such as "PostScript Translation," then click OK.
7. Quit Desktop Printer Utility.
8. Open the Classic application from which you wish to print. When you're ready to print, choose **Print** from the **File** menu.
9. In the resulting Print dialog, choose your new desktop printer ("PostScript Translator," or whatever you named it) from the pop-up menu, and click Save.
10. In the resulting dialog, give your file a name (or use the name that is provided automatically), select a location where the file will be easy to find later (such as your desktop), and click Save. (The file may take a moment to appear on the desktop or in a Finder window.)
11. To print the PostScript file, drop it on a desktop printer icon, or on the name of a printer in Printer Setup Utility. If you drop the file on the Printer Setup Utility icon in the Dock, it will be printed to the default printer.

Tip: You can view and print your new file from the Preview application, where advanced printing options, such as print quality and duplex settings, can be used.

Published Date: Oct 10, 2016

Mac OS X 10.3.5 through 10.3.7: Slow application launch or delayed network activity

This article has been archived and is no longer updated by Apple.
After you install the Mac OS X 10.3.5, 10.3.6, or 10.3.7 Update, some applications may take longer to open (launch), and some network activities may exhibit unusual delays. This can affect:

- Finder
- iChat
- Mail
- Apple Remote Desktop

To resolve this issue, update to Mac OS X 10.3.8 or later.

If you called Apple technical support for assistance with this issue, and you were instructed to use the Terminal utility to modify your system, you can reverse those changes now (before or after updating). If you had to change your "hosts" file, reverse the change by typing this command in the Terminal and then pressing Return:

```
sudo mv /etc/hosts.org /etc/hosts
```

If you were instructed to make changes to your NetInfo database using the command `sudo nicl . create /config/lookupd/hosts Timeout 5`, reverse it by typing this command in the Terminal and then pressing Return:

```
sudo nicl . delete /config/lookupd
```

You must restart the computer after using either of these commands for the changes to take place.

Published Date: Oct 10, 2016

Apple Remote Desktop 2: Screen sharing connection drops unexpectedly

This article has been archived and is no longer updated by Apple.

When sharing screens using Apple Remote Desktop 2.0 or later, you may encounter an issue in which the connection drops unexpectedly, and the target machine returns to its previous screen state.

The Remote Desktop application reports that sharing is still in progress until you manually stop it. The time before disconnect varies from 10 minutes to over an hour.

This document will be updated as more information becomes available.

Published Date: Feb 18, 2012

iPhoto 5: Fixing blank, gray thumbnails

This article has been archived and is no longer updated by Apple.
Some iPhoto 5 users may experience an issue in which thumbnails appear as blank, gray images.

To resolve this issue, update to iPhoto 5.0.1 or later, and then rebuild your iPhoto Library. It's a good idea to make a backup copy of your iPhoto Library folder (located in your Pictures folder) before rebuilding it. To rebuild the library:

1. If iPhoto is open, quit it.
2. Hold down the Command and Option keys, and open iPhoto
3. iPhoto opens and rebuilds your library.

Related documents

303473: iPhoto 6: Image appears when browsing but is blank or exclamation mark when editing

Published Date: Feb 19, 2012

Display reverts to native resolution after restarting

This article has been archived and is no longer updated by Apple.

Have you ever restarted your computer and found that your display changed its resolution, making all the icons and menus smaller than before?

If you're using Mac OS X, 800 x 600 is the minimum recommended resolution for most displays. However, sometimes you may see that other resolutions, such as 600 x 400 or 800 x 500, are available when you're running Classic, playing certain games, or using some multimedia applications. If you set your display to use one of these resolutions, the computer will default back to the minimum 800 x 600 when you restart it.

Published Date: Feb 18, 2012

iPhoto 5 and later: Adjust palette only shows Brightness and Contrast

This article has been archived and is no longer updated by Apple.

On PowerPC G3-based computers you may only see the Brightness and Contrast sliders in the adjust palette of iPhoto. The other adjustment settings require a PowerPC G4, PowerPC G5, or an Intel processor.

For additional information, check the system requirements for the version of iLife you are using.

Published Date: Feb 20, 2012

Apple Hardware Test for Power Mac version 2.1 does not show serial number

This article has been archived and is no longer updated by Apple.

If you run Apple Hardware Test for Power Mac version 2.1 on a Power Mac G5, the Hardware Profile panel will display "Information not available" for the "System Serial #."

This issue is fixed in Apple Hardware Test for Power Mac version 2.1.1. If you don't have that version available, this article will show you how to find the serial number on a Power Mac G5.

Published Date: Feb 18, 2012

iPod shuffle: Using AirPort Express to charge

This article has been archived and is no longer updated by Apple.
AirPort Express has a USB port for printer sharing, but it can also be used to charge your iPod shuffle. While this port was not intended for this purpose and it's not supported by Apple, iPod shuffle can be safely charged from an AirPort Express.

When an iPod shuffle is connected to AirPort Express, please note that its LEDs will flash orange, indicating that it is in disk mode, and that its front and back LEDs will not turn green when it's fully charged. To check the charge of iPod shuffle, disconnect it from AirPort Express and then press the battery indicator light.

iPod shuffle will not be able to play music while connected to the AirPort Express USB port.

Published Date: Oct 10, 2016

iPod mini (Second Generation): Temporary delay in appearing in iTunes when large battery icon is visible

This article has been archived and is no longer updated by Apple.
If iPod mini (Second Generation) has little or no charge left, the following may occur when you connect it to the computer via USB:

- A large battery icon appears on the display for several minutes (this icon does not animate).

- Takes longer to appear in iTunes or on the Mac desktop or Windows' My Computer.
- Takes longer to appear in the iPod Software Updater.

Note: This delay can last up to five minutes until it regains enough battery charge to resume normal behavior while charging.

When the large battery icon appears, it signifies that the iPod mini (Second Generation) does not have enough charge to do anything but charge (it won't go into disk mode, display menus, or display any screen animation).

This won't happen if you connect via FireWire or to an iPod USB Power Adapter.

Published Date: Oct 10, 2016

iPhoto: Movie clips are not part of your shared photos

This article has been archived and is no longer updated by Apple.
When you select Share my photos in iPhoto, any movie clips that you've imported into your iPhoto Library will not be shared alongside your photos. Consequently, when you connect to a shared iPhoto Library, you won't see any movie clips in the collection.

Published Date: Feb 20, 2012

iPhoto 5 Frequently Asked Questions (FAQ): Working with slideshows

This article has been archived and is no longer updated by Apple.

Questions answered in this document:

1. I created a slideshow in an album (by clicking the slideshow button), but the next time I tried to view it, all the slideshow changes I made were gone! Where did they go?
2. What types of slideshows can I make in iPhoto?
3. Why does iPhoto display two Play buttons when I'm working on a slideshow?
4. Does the Ken Burns effect soften my photos?

See also:

iPhoto 5 FAQ: Working with RAW images
iPhoto 5 FAQ: Using the Adjust palette

Working with slideshows

1. **I created a slideshow in an album (by clicking the slideshow button), but the next time I tried to view it, all the slideshow changes I made were gone! Where did they go?**

   iPhoto 5 has two different kinds of slideshows, and you probably confused the old kind with the new one. (Don't worry, a few of us did that too.) Look at the bottom of your Source list (the column on the left side of the window). With iPhoto's new "cinematic" slideshow, all slideshows appear as their own entries in the Source list; you'll probably see that you've created more than one copy of your slideshow there. Each copy will still have the changes that you saved in it. Just pick the one you want to keep, and delete all the extras.

2. **What types of slideshows can I make in iPhoto?**

   You have two choices. In older versions of iPhoto, you could play an album as a slideshow, and the album could even retain slideshow settings. You can still do that, but you can also create an improved type of slideshow that exists on its own in the Source list. These highly customizable "cinematic" slideshows allow mixed transitions, varied slide durations, and the pan-zoom Ken Burns effect, for example.

   When you click the Slideshow button, iPhoto creates one of the new slideshows in the Source List, like "London Slideshow" in this picture.

   The old type of slideshow is still there too, but its control has moved. Select a regular album, then click the Play button at the bottom left corner of the iPhoto window. When you click this Play button, you'll get the older, familiar format.

3. **Why does iPhoto display two Play buttons when I'm working on a slideshow?**

   The round Play button only appears when you're editing a cinematic slideshow, and is used to control its playback. The rectangular Play button is used to play the old-style slideshows that don't appear in the Source list (you can ignore it when editing a cinematic slideshow).

4. **Does the Ken Burns effect soften my photos?**

   Because Ken Burns images are animated, iPhoto must scale them down to ensure reasonable performance on a range of computers. This will cause some images to look softer than they actually are, though the softening effect may not be noticeable on lower-resolution displays. For example, a landscape-oriented (horizontal) Ken Burns-effected image on an Apple 20-inch Cinema Display (1680 pixels wide) would be downsampled to an animation texture of about 1024 pixels, and then rescaled to fill the screen. This should be more noticeable than if you were viewing the slideshow on a display that was only 1024 pixels wide.

TA22894_iPhoto_Frequently_Asked_Questions_FAQ_Working_with_slideshows.pdf

Published Date: Oct 10, 2016

iPhoto 5: Using the RAW image format

This article has been archived and is no longer updated by Apple.
Images captured in RAW format allow for greater image quality and editing flexibility when you bring them into an image editor, such as iPhoto. RAW is like having insurance against your shooting mistakes—your camera settings are saved separately from the image data.

RAW files are comprised of raw image data and metadata that contains all of your camera settings you used to take the picture. When you shoot RAW, your camera retains (in theory) all of the light information that strikes its sensor (CCD or CMOS) in an "as-is" state, and then stores the file, along with the camera settings information, in a lossless compression format. Basically, your selected color profile and color balance settings don't matter; you can simply change them retroactively on your computer because the RAW file saved all the relevant data.

iPhoto uses the 16-bit RAW data to facilitate your edits before converting the RAW file to JPEG. This gives you greater editing flexibility since the RAW image's superior exposure latitude is retained. (An image's "exposure latitude" refers to how far you can adjust the exposure or white balance while still retaining acceptable quality.)

When you shoot straight to JPEG, your camera looks at your white balance and color profile settings, then discards all information that is not required to make a JPEG of your selected grade with those color settings when it produces the image.

Because information is discarded, a JPEG has less latitude for retroactive correction than a RAW file does. Say, for example, that you had your camera set to ISO 400 when it should have been set to ISO 1000; your exposure will be underexposed (it'll come out too dark). That's not a big problem if you captured a RAW image because you can just bump the exposure a stop and a half without worrying too much about image degradation. With a JPEG image, you'd have less color information to work with, so loss of image quality will factor into play.

The flexibility of RAW shines most when you wind up with a really bad exposure. Take, for example, this overexposed picture of Sidekick, the lounging brown tabby. While the camera exposed the back of the play tunnel correctly, our intended subject is looking pretty washed out.

In fact, the lighting in this exposure is so uneven that we can't make it uniformly perfect in iPhoto, so we'll just concentrate on making Sidekick look as good as possible instead of trying to perfect her play tunnel too. To demonstrate how RAW and JPEG photos react differently, we applied the exact same adjustments (shown on the right) to both images.

Here's Sidekick after we applied the adjustments to the original RAW image:

And here she is again after we made the adjustments to a JPEG:

Note how the color, contrast, and detail in Sidekick's fur remain at a higher quality in the RAW version than in the JPEG image. In this particular case, the front of the tunnel below Sidekick is a bit bright, but remember that our goal was to make her look good.

Published Date: Oct 10, 2016

iPhoto 5 or later: Using Tint, Temperature, and advanced color concepts

This article has been archived and is no longer updated by Apple.

Using Tint and Temperature

The Tint and Temperature controls go hand-in-hand with the fundamental concepts for light and photography. And luckily, they're not hard to learn. To use these controls effectively, all you need to know is what impact each has on the classic lighting issues each was built to address.

In a nutshell, the Tint slider lets you control the amount of red or green tones in your image (just like the Tint control on your TV). Move the slider to the left to add more red and lessen the amount of green. Move it toward the right to add more green and lessen the amount of red. This slider comes in handy when you're trying to make skin tones look good, want to balance out scenery that contains a lot of plants, or forgot to use your camera's fluorescent white balance setting.

The Temperature slider is kind of like a "white balance" corrector in that it allows you to introduce more warmth (more orange tones) or coldness (more blue tones) to an image. For example, if you shot an image using the camera's Auto white balance and your prized polar bear picture is looking mighty blue, move the Temperature slider to the right to warm up the image, or you can move it left to give the image even more of an Arctic chill.

Advanced color concepts

Have you ever taken a picture in a room lit by fluorescent light and sunlight pouring in through an open window, and then your flash went off too? You might notice that the color in the resulting image looks a little funny. This is because each one of those lighting sources emphasizes a different color in the visible light spectrum (like the colors in a rainbow), and they're all mixed up in your photo. iPhoto's Temperature and Tint sliders allow you to correct for that.

To see how this works first hand, change the white balance setting on your camera from Auto to Daylight. Then get a sheet of white paper, and take a picture of it in each of these conditions:

a. Outdoors on a clear day at mid-afternoon
b. Indoors with no lighting, using the flash
c. Indoors with an incandescent (tungsten) light bulb only
d. Indoors with a fluorescent light bulb only

Once you download the pictures to your computer, you should see these results:

a. Mid-afternoon sunlight: The paper looks white. This lighting condition is what's considered a "neutral" color temperature.
b. Flash only: The paper looks a little blue. Flash photography generally produces "cold" temperature light.
c. Tungsten bulb: The paper looks orangey-yellow. This is "warm" temperature lighting.
d. Fluorescent: These vary the most. In addition to looking a little warm or cold, they may also have a green or purple tint.

Tungsten, sunlight, and flash are all light sources that represent a full light spectrum, but with emphasis at different points. Because the spectrum is complete and continuous, you can move iPhoto's Temperature slider to remove a warm or cold cast, revealing the full range of color underneath.

However, most fluorescent lights, as well as certain types of outdoor lighting, have gaps in the light spectrum they emit. This is why images taken under these types of lights can't be color corrected effectively using the Temperature slider, which only works its magic on the warm-cold continuum. However, moving the Tint slider can remove a green or purple cast from the fluorescent light. But because the fluorescent spectrum is incomplete, a Tint correction generally can't achieve the look of natural light in the way that a temperature correction can, because certain colors are missing from the light, and you can't reveal what's not there. For this reason, it often helps to mix flash with fluorescent light, to round out the spectrum.

Published Date: Oct 10, 2016

Sudden Motion Sensor and video editing performance

This article has been archived and is no longer updated by Apple.
Beginning with the PowerBook G4 (12-inch 1.5GHz), PowerBook G4 (15-inch 1.67/1.5GHz), and PowerBook G4 (17-inch 1.67GHz), PowerBook G4 computers feature a Sudden Motion Sensor.

If you have a computer with the Sudden Motion Sensor and you have video editing applications, such as Final Cut Pro, Final Cut Express, or iMovie that exhibit performance issues (like dropped frames), then temporarily turn off the Sudden Motion Sensor while working in those applications.

Published Date: Oct 10, 2016

iPhoto 5 and later: Supported RAW format cameras

This article has been archived and is no longer updated by Apple.

Cameras with an asterisk (*) next to their name require Mac OS X 10.4.3 or later. Those with two asterisks (**) require Mac OS X 10.4.4 or later.

Canon

- EOS-1D MARK II
- EOS-1Ds
- EOS 20D
- EOS 10D
- EOS D30 *
- EOS D60
- EOS Digital Rebel/300D
- Canon EOS 350D**
- EOS Digital Rebel XT *
- Canon EOS Kiss Digital N**
- PowerShot Pro 1
- PowerShot G5
- PowerShot G6
- PowerShot S60
- PowerShot S70

Konica Minolta

- DiMAGE A1 *
- DiMAGE A2
- Dynax 7D**
- Maxxum 7D *

Leica

- Digilux 2 *

Nikon

- Nikon D1 *
- Nikon D1X *
- Nikon D1H *
- D2H
- Nikon D2X *
- Nikon D2Hs *
- Nikon D50 *
- D70
- Nikon D70s *
- D100
- Nikon Coolpix 8400 *
- Coolpix 8700
- Nikon Coolpix 8400 *
- Nikon Coolpix 8800 *

Olympus

- Olympus E-1 *
- Olympus E-10 *
- Olympus E-20 *
- Olympus EVOLT E300 *
- Olympus C-7070 *
- C-8080 Wide Zoom

Panasonic

- DMC-LC1 *

Sony

- DSC-F828
- DSC-V3 *

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Published Date: Oct 10, 2016

Mac OS X Server 10.3.7: Setup Assistant asks for Disk 2 after installation

This article has been archived and is no longer updated by Apple.
When installing Mac OS X Server 10.3.7 from the Installation DVD that ships with the Xserve G5, the Server Assistant may prompt you to insert "Disk 2." This message is erroneous. There is no second disc.

After the Assistant ejects the Installation DVD and prompts you to install Disk 2, simply reinsert the Installation DVD to continue.

Published Date: Oct 10, 2016

iLife ‘05: Alert when installing from CD

This article has been archived and is no longer updated by Apple.

When you try to open the iLife '05 installer on the iLife '05 Install CD, you may see an alert that says the computer contains a DVD drive, and that you must install iLife from the install DVD.

If you know you have a CD-ROM drive, then just click Continue. If you're not sure what drive you have, you can check Apple System Profiler or you can just try putting the DVD disc in. If it automatically ejects after a moment, then you don't have a DVD-ROM drive and you should use the CD to install and click Continue if the alert appears again.

Related documents
93657 "Life '04: Cannot install from CD or DVD"
93673 "iLife is not for use on server configurations"

Published Date: Feb 18, 2012

Mac OS X 10.3.8: Free disk space disappears after updating to 10.3.8

This article has been archived and is no longer updated by Apple.
After updating to Mac OS X 10.3.8, free disk space may slowly "disappear" if a certain third-party gaming device driver is installed.

This issue can occur when the Macally iShock game controller device driver (used for devices such as the iShockII) is installed, but the device isn't connected. The "missing" disk space is actually being filled by one or more system.log files that are recording iShock driver issues.

To resolve this issue, first check out Macally's Drivers webpage and read the section, "Attention: iShock/iShockII users and Panther OS 10.3.8 update," which tells you how to remove iShock drivers that can cause this issue, as well as how to install newer drivers that avoid this issue.

Once you've removed the old driver and installed the newer one, reclaim the missing disk space by deleting system.log files:

1. Open Terminal (/Applications/Utilities/Terminal)
2. Type this command at the prompt:

```
sudo sh -c "echo > /var/log/system.log"
```

3. Press Return. Enter the admin password if prompted.

Tip: If removing the system.log file does not restore all the missing disk space, delete the archived system log files; for example, system.log.X.gz (where X is a number). These files are also stored in /var/log. You can access the files from the Finder.

1. From the Finder **Go** menu, choose **Go to Folder**.
2. In the "Go to this folder" field, type: `/var/log`
3. Delete any large system.log.X.gz files.

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Published Date: Oct 10, 2016

Mac OS X 10.4: Using Spotlight to search disk images or archives

This article has been archived and is no longer updated by Apple.

Mac OS X 10.4 Tiger features Spotlight, which you can use to quickly find information on your computer.

If you want to search a disk image's contents with Spotlight, just remember this tip: The image needs to be mounted. If it's not mounted, Spotlight can tell you where the image itself is located, but not what's on it. Double-click the image file to mount it and make it available to the system.

To search an archive with Spotlight, such as a .zip file you created in the Finder or other file compression utility, open (uncompress, expand) the file first.

Published Date: Oct 10, 2016

Logic Pro, Logic Express: Unable to bounce QuickTime Music Synthesizer tracks

This article has been archived and is no longer updated by Apple.
If you have tracks that trigger the internal QuickTime Music Synthesizer in a Logic project and then select them as part of a bounce, these tracks will not be included in the audio output. This is because it's not possible to directly bounce the audio output from the QuickTime Music Synthesizer within a Logic Pro or Logic Express session.

As a workaround, assign the affected track to the AU-Audio Instrument DLSMusicDevice. This uses the same QuickTime synthesizer, including the ability to listen to program changes. Like any Audio Instrument, you can bounce it both realtime and offline.

Additional information
The reason this doesn't work the way you might expect is because Logic's audio engine is not actually processing QuickTime synth tracks. Instead, Logic sends MIDI data to QuickTime, and QuickTime handles the audio in parallel with Logic. Thus the tracks are not part of the bounced file.

Published Date: Oct 10, 2016

Logic Pro and Logic Express 7: How to create an Autoload Song template file

This article has been archived and is no longer updated by Apple.
In earlier versions of Logic, if you saved a file named Autoload in the same directory as the Logic application, that file would be used as the default song template whenever you launched Logic or created a new song. You can still use this method in Logic Pro and Logic Express 7, but the location for storing your Autoload template has changed.

With Logic's expanded Templates feature, you can create an unlimited number of templates. To create an Autoload Song:

1. Open an existing song file that you'd like to use as the default template, or create a new one and configure it to your needs.
2. Choose File > Save As Template.
3. In the resulting dialog, type Autoload in the Save As field.
4. Make sure that the Song Templates folder appears as the chosen location from the Where pop-up menu (the default setting).
5. Click Save.

The template will be saved to ~/Library/Application Support/Logic/Templates. Any templates you create should be saved to this location.

Notes:

- When you create a new song and do not select the "Use template" checkbox in the New dialog, or if you select the checkbox but fail to specify a particular template, the Autoload Song will be used.
- If you have Logic's global preferences set to "Automatically load most recent song at startup," the Autoload Song will not load when you launch Logic. However, it will load whenever you create a new song.

Published Date: Oct 10, 2016

Logic Pro: Using multiple outputs with Ultrabeat

This article has been archived and is no longer updated by Apple.
Logic Pro can route audio from various software instruments to different destinations. This allows you to process different voices of the same instrument with independent DSP plug-ins, or to route different streams of audio to different outputs on your audio hardware.

Logic's integrated drum machine, Ultrabeat, is one instrument that can greatly benefit from this feature, allowing you to process each drum voice (kick drum, snare, toms, cymbals, and other percussive sounds) within a kit individually. Here's how to set up Ultrabeat to use multiple outs:

1. In the Arrange window, select an Audio Instrument track that you want to use.
2. In the channel strip pane (on the left side of the Arrange window), insert the Ultrabeat plug-in as an input: Click the slot directly below I/O and from the pop-up menus, choose **Multi Channel > Logic > Ultrabeat**.

3. The Ultrabeat interface opens, listing its 25 drum voices on the left side.
4. Load the kit that you want to use before proceeding. Initially, all sounds are routed to the Main output pair, Output 1-2, as dictated in the Audio Instrument channel strip (the assigned output pair appears in the slot directly below the Ultrabeat insert).
5. To select a different destination for a drum sound, select the voice in the Ultrabeat interface and click its output destination. A pop-up menu opens, allowing you to choose from seven additional stereo outputs. Choose one.

6. Repeat this process for each drum sound that you would like to send to a different destination than the Main output. In the picture above, we routed a Kick drum to Output 3-4.
7. When you're done assigning outputs, open the Track Mixer window.
8. Click the Global button in the upper left corner, and then click the Aux button a few buttons below it. (Logic Pro uses auxiliary channels as routing destinations for multichannel instruments.)
9. Click the input slot (the slot below I/O) for Aux 1; a pop-up menu opens. Besides the usual Input and Bus source submenus, the menu now has an instrument channel submenu for assigning Ultrabeat's multiple channels.

10. From the Instrument submenu, choose which output stream you would like the Aux channel to use as its input source. If the Aux channel is set to mono, then the streams will appear as individual channels (such as Ultrabeat 3, Ultrabeat 4). If the Aux channel is set to stereo, then the the streams will appear as pairs (such as Ultrabeat 3-4, Ultrabeat 5-6, and so on). In our example, we set Aux 1 to accept input from Ultrabeat 3-4. Therefore, any Ultrabeat voice that we assigned to Output 3-4 (such as the Kick drum), can now be processed on the Aux 1 channel.
11. Repeat as necessary to assign more Aux channels to support the number of output pairs that you have coming from Ultrabeat.

You can insert plug-ins on the Aux channel, use Sends, and so forth. If your audio interface offers more than two outputs, you can even route the Aux to different physical outputs for external processing.

Note: After using the Logic Setup Assistant, you may only have two Aux channels. Please see the Logic manual for information on setting up additional Aux channels. As a shortcut, you can make a new song using the Basic Production template, which starts out with eight Aux channels.

Published Date: Feb 19, 2012

Keynote 2: Printing to a network PostScript printer takes a long time

This article has been archived and is no longer updated by Apple.

When you print a Keynote 2 file to a network PostScript printer, it may take an unusually long time to print. This printing delay only occurs with Keynote 2 documents that contain objects with an alpha transparency of less than 100 percent opacity on computers using Mac OS 10.3.6 through Mac OS 10.3.8.

This issue does not occur with printers that are connected directly to a computer through USB.

Published Date: Oct 10, 2016

Windows Printing doesn‘t work after Windows password is changed (Mac OS X 10.3, 10.4 or later)

This article has been archived and is no longer updated by Apple.

In Mac OS X 10.3 or later, when using Printer Setup Utility to add a printer shared by a Windows PC, a dialog box appears, requesting you to enter the username and password of a Windows user who has access to the printer. This username and password is used each time a document is printed to the printer, making all print jobs coming from this computer appear to be generated by the same Windows user, regardless of which *Mac OS X user* is actually printing.

However, if the Windows user's password is changed on the PC, printing will fail because Mac OS X is still trying to use the old password. When this happens, the Mac OS X printer status will display the message, "ERROR: Connection failed with error NT_STATUS_LOGON_FAILURE."

Solution

Delete the printer in Printer Setup Utility, and then add it again with the updated password.

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

PowerBook G4 (15-inch 1.67/1.5GHz): Ethernet cable may be hard to remove

This article has been archived and is no longer updated by Apple.

If you are having difficulty trying to unplug an Ethernet cable from your PowerBook (15-inch 1.67/1.5GHz) computer's Ethernet port, gently press down on the entire RJ-45 connector while pressing down the locking connector and pull out the cable.

Published Date: Oct 10, 2016

EGWORD doesn‘t save to Keynote 2

This article has been archived and is no longer updated by Apple.
EGWORD (a Japanese word processor) has an option to save a file using a template for Keynote. However, the template is geared for Keynote 1 and does not work as expected if you have Keynote 2 installed (objects may be shifted or incomplete).

This document will be updated when additional information is available.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

Mac OS X‘s Shut Down schedule will only work when one user is logged in

This article has been archived and is no longer updated by Apple.

With Mac OS X 10.3 or later, if no user is logged in, or if more than one user is logged in at the same time, the computer cannot shut down automatically at a time specified in Energy Saver Schedule preferences.

If you want to schedule your computer to Shut Down automatically at a scheduled time, be sure that one—and only one—user is logged in.

Mac OS X 10.4 tip: Update to Mac OS X 10.4.6 or later to allow the computer to shut down at the scheduled time while at the login window.

Check out Mac OS X 10.3 and later: Computer must be awake for scheduled shutdown to occur, too.

Published Date: Oct 10, 2016

Logic Pro and Logic Express 7: PlatinumVerb Mix level is not 100 percent

This article has been archived and is no longer updated by Apple.
In Logic Pro and Logic Express 7.0 and later, PlatinumVerb will play below the indicated Mix level whenever you insert it in a bus. Though the PlatinumVerb interface shows a Mix level of 100 percent, it actually plays at about 20 percent. This affects every instance of PlatinumVerb that you insert in a bus.

To resolve this issue, move the Mix level fader down a bit, and then bring it back to 100 percent.

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

Certain versions of Mac OS X may cause iPod mini (Second Generation) to not be recognized on USB

This article has been archived and is no longer updated by Apple.
iPod mini (Second Generation) can be connected to a high-power USB port, but it requires Mac OS X 10.2.8 or Mac OS X 10.3.4 or later. Using other versions of Mac OS X may cause iPod mini (Second Generation) to not be recognized in the Finder or iTunes via USB.

If you're using Mac OS X 10.3 through 10.3.3:
Update to 10.3.4 or later (the update is available from Apple Downloads or through Software Update). Make sure you are also using iTunes 4.7 or later.

If you're using Mac OS X 10.2.7 and earlier:
To connect iPod mini (Second Generation) over USB, you must update (or upgrade) to Mac OS X 10.2.8 (the update is available from Apple Downloads or through Software Update). You must also install the software from the included CD. Make sure you are using iTunes 4.7 or later.

If you don't update your OS to a required version of Mac OS X, you won't be able to use the iPod mini (Second Generation) over USB. Without an update to the OS, you can use FireWire instead of USB to connect and sync, using the optional iPod Dock Connector to FireWire cable.

Related documents
93718: iPod appears on the Mac OS X desktop but not in iTunes

Published Date: Oct 10, 2016

Final Cut Express HD does not support the use of mixed media formats on tape

This article has been archived and is no longer updated by Apple.

Capturing footage from a tape that has had a different format previously recorded on it will not work in Final Cut Express HD.

For example, if you previously recorded a project onto a tape using a 720p30 format camera, you shouldn't use a 1080i60 format camera to record over the footage on that same tape (or vice versa). Likewise, a tape that you previously used with a DV-NTSC camera should not be used again with an HDV camera.

If you do try to capture footage from such a tape, you may experience the following issues in Final Cut Express HD:

- Frame stalls
- Frame freezes
- Dropped frames

You can reuse a tape (despite its format history) without issue if you have a way to "black and code" or stripe the tape with the format you want to use (Final Cut Express does not offer a way to do this).

Published Date: Oct 10, 2016

Logic Pro, Logic Express: Error -40 when bouncing a session or freezing a track

This article has been archived and is no longer updated by Apple.
Sometimes when you try to freeze a track or bounce a session in Logic, a dialog appears with this alert message:

> Attempt to position before start of file. Result code = -40

Logic has a maximum audio file size of 2 GB when freezing tracks or bouncing sessions. If the file to be created by the bounce or freeze operation will exceed that size, you will get this error message. In practical terms, this will only occur with very long sessions or tracks.

The actual time limit is determined by the bit depth and sample rate in use. Frozen tracks are always stored as 32-bit audio files; at a sample rate of 44.1 kHz, mono files require approximately 10 MB per minute, and stereo tracks require about 20 MB/minute. With this in mind, if you have a 44.1 kHz project and plan on freezing tracks, the time length limitation is about 200 minutes for mono tracks and 100 minutes for stereo. At higher sample rates, the time limit is reduced proportionately. For example, at 88.2 kHz, the track time limit will be half as long.

When bouncing a session to a stereo file, the time limit depends on both the sample rate and bit depth selected for the bounce. A 16-bit, 44.1 kHz stereo file requires approximately 10 MB/minute; therefore, the time limit for a bounced file in this format is about 202 minutes. If the bounce is set to 24-bit/44.1 kHz, then the time limit will be about 134 minutes. Increasing the sample rate, of course, reduces the available time.

When bouncing tracks, you can effectively double the available maximum time by setting the Stereo File Type in the Bounce Output dialog to Split (L+R). In this format, Logic writes a separate mono file for each stereo channel. Each of these files can be up to 2 GB in size; therefore, the total of the left and right channels can now be up to 4 GB.

Published Date: Oct 10, 2016

Logic Pro, Logic Express: Instrument not triggered as expected

This article has been archived and is no longer updated by Apple.
Sometimes you won't be able to trigger an instrument on an Audio Instrument or MIDI track as expected. This can happen if you inadvertently disable the Record-Enable button on the selected track. (Normally, a track's Record-Enable button will be enabled when you select the track.)

In order to monitor Audio Unit instruments, MIDI instruments, or incoming signals, this button must be turned on. When turned on, the button will be red.

When the button is turned off (it appears gray) on a selected Audio Instrument track, then incoming MIDI from your controller will not be able to trigger the instrument. You will, however, be able to hear anything that's already recorded on the track during playback.

To resolve the issue, simply reactivate the button as shown above.

Published Date: Oct 10, 2016

Logic Pro 7: Changing the Record Path for DAE Channels 33 and Higher

This article has been archived and is no longer updated by Apple.

When using DAE, the Recording Path setting in the Set Audio Record Path window only applies to tracks 1 through 32. If a higher track is record-enabled, a dialog opens, asking you to set another record path for the higher numbered tracks. If you accidentally set it to an undesired location, or you need to change it later, you cannot change the path in the Set Audio Record Path window.

Instead, re-initialize the record path from the Audio Configuration window:

1. Open the window by choosing **Audio > Audio Configuration** in the Logic Pro main menu.
2. Choose **Device > DAE** in the Audio Configuration window.
3. Choose **Edit > Remove Record Path**.

This will re-initialize the record path for all DAE channels. You can then set channels 1 to 32 the usual way by choosing **Audio > Set Audio Record Path**. To set the record path for channels 33 and higher, just record-enable one of the tracks to open the dialog that lets you set another record path for the higher channels.

This is not an issue when using Core Audio. The Recording Path setting applies to all channels, and can be freely reset.

Published Date: Feb 20, 2012

GarageBand: High audio levels can cause distortion

This article has been archived and is no longer updated by Apple.
When recording audio in GarageBand, you may get distortion if your audio levels are too high (or "hot" in audio engineering parlance). This can be caused by one or more of the following instances:

- The audio source volume is set too high.
- The audio interface's gain level or output level is set too high.
- The Input volume in Sound preferences is set too high.
- The track or master volume level in GarageBand is set too high.

If you hear distortion in one of your Real Instrument tracks, play your sound while doing the following steps until you no longer hear distortion.

1. Listen to your source (the instrument or thing that you're recording). If it sounds distorted outside of your computer, turn down its volume until the distortion stops. If your source sounds fine, keep reading.
2. Check your audio interface—if you're not using an audio interface, skip to step 3. Depending on your device, you may have two areas to control volume—the input and the output gain. Adjust your level or levels accordingly, making sure that the meters on your device show a strong signal without signal peaks (if you see red lights on any level meter, turn down that gain level just until the red stops lighting). If you're still getting distortion, read on.
3. Check the Input level in the computer's Sound preference pane. Set the "Input volume" slider so that the input level meter shows a strong signal without lighting up the last meter light. Still hear distortion? Then keep reading.
4. In GarageBand, move the volume slider on the affected track to the point where you get a strong signal but the clipping indicators (the tiny dots to the right of the level meters) do not light. Check the master volume too—if the clipping indicators light up, turn down the volume level just until they no longer light. This should resolve the issue.

Published Date: Feb 19, 2012

Logic Pro: Using multiple outputs with EXS24

This article has been archived and is no longer updated by Apple.
Logic Pro can route audio from various software instruments to different destinations. This allows you to process different voices of the same instrument with independent DSP plug-ins, or to route different streams of audio to different outputs on your audio hardware.

The Logic Pro integrated software sampler, EXS24, is one instrument that can greatly benefit from this feature, allowing you to process sampler instrument groups individually. Here's how to set up EXS24 to use multiple outs:

1. In the Arrange window, select an Audio Instrument track that you want to use.
2. In the channel strip pane (on the left side of the Arrange window), insert the EXS24 plug-in as an input: Click the slot directly below I/O and from the pop-up menus, choose **Multi Channel > Logic > EXS24**

3. The EXS24 instrument interface opens. Though you can configure the EXS24 to have multiple outputs for various instruments, one of the most common uses for this feature is to configure a drum kit that allows you to independently process and control the kit's individual drum elements. Let's take an existing drum kit and set it up for multiple output.

4. From the instrument selection menu, choose **Factory > 08 Drum Kits > Rock Kit**. This loads the rock drum kit that is included with the Logic Pro 7 installation.
5. To the right of the instrument selection, click the Edit button.

The EXS24 Instrument Editor opens.

The zones that appear along the left side of the window define which samples are triggered by MIDI notes. These zones are then assigned to the groups that make up each instrument sound, shown on the right side of the window.

6. Click the disclosure triangle for the group BD02 to reveal the group settings for the bass drum sound. By default, all groups are assigned to the Main output pair, Output 1-2, as dictated in the Audio Instrument channel strip (the assigned output pair appears in the slot directly below the EXS24 insert). Note: If the EXS Output is not displayed, select the option **View > Group: EXS Outputs. Alternatively you may want to select View > View All.**
7. **To change this setting, click the current EXS Output for the group and select another output from the pop-up menu. In our example, we routed the bass drum sound to the output pair 3-4.**

You can assign a group to any of the single outputs or output pairs you like. Repeat with all other groups.

8. **When you're satisfied with the assignments, save the instrument by choosing Instrument > Save from the EXS24 Instrument Editor window.**
9. **Close the EXS editor window and open the Track Mixer window.**
10. **Click the Global button in the upper left corner, and then click the Aux button a few buttons below it. (Logic Pro uses auxiliary channels as routing destinations for multichannel instruments.)**
11. **Click the input slot (the slot below I/O) for Aux 1; a pop-up menu opens. Besides the usual Input and Bus source submenus, the menu now has an instrument channel submenu for assigning the EXS24's multiple channels.**

12. From the Instrument submenu, choose which output stream you would like the Aux channel to use as its input source. If the Aux channel is set to mono, then the streams will appear as individual channels (such as EXS24 3, EXS24 4). If the Aux channel is set to stereo, then the the streams will appear as pairs (such as EXS24 3-4, EXS24 5-6, and so on). In our example, we set Aux 1 to accept input from EXS24 3-4. Therefore, any EXS24 voice that we assigned to output 3-4 (such as the bass drum), can now be processed on the Aux 1 channel.
13. Repeat as necessary to assign more Aux channels to support the number of outputs that you have coming from the EXS24. Note that EXS outputs that are assigned to Aux channels are automatically removed from the EXS's Main output.

You can now use any Aux channel to process the EXS24 stream in any way you like. You can insert plug-ins, use Sends, and so forth. If your audio interface offers more than two outputs, you can route the Aux channel to different physical outputs for external processing.

Published Date: Feb 19, 2012

GarageBand 2.0: Notes may stick when you partially extend or trim a MIDI Software Instrument loop

This article has been archived and is no longer updated by Apple.
In some cases, when you partially extend or trim a MIDI loop in GarageBand, some notes may *stick* (play continuously instead of stopping when they should) on playback. This can happen if the loop contains a sustain pedal effect, which allows notes to sound a bit longer when the effect is employed, such as in a piano loop. This can affect both prerecorded and self-recorded Software Instrument loops.

Loops that contain sustain pedal events use "on" and "off" messages to control when the sustain pedal is used. When a sustain pedal "on" message is sent, all subsequent notes will be prolonged until a sustain pedal "off" message is sent.

However, if you shorten or extend a loop to the point where the sustain "on" message is included but the following sustain "off" message will not play, some notes may stick. The severity of the issue depends on whether the instrument in use has a natural decay (such as with a drum or other percussive instrument loop) or a sound that has the potential to be sustained almost infinitely (such as with string loops or other bowed or blown sounds).

If you need to partially extend or trim a loop, try this workaround:

1. To extend a loop, hold down the Option key (this will make a copy of the loop) and drag the loop to the right of the original. To trim a loop, start at step 2.
2. Select the copied region (if extending) or the original (if trimming), and open the region editor by clicking the Editor (scissors) button or double-clicking the region.
3. If the Advanced pane in the editor isn't displayed, click the disclosure triangle on the right side of the Region header.
4. In the Advanced pane, from the top pop-up menu, choose **Sustain**.
5. Locate the needed sustain "off" event, and move it to the left so that it occurs before the point at which you want the loop to end. (You can press Play to watch the playhead move across the events to get a visual idea of where to move it.) This picture shows a sustain event that has had its sustain "off" message trimmed away--it needs to be corrected:

   This image shows a proper sustain event:

6. In the timeline, drag the bottom right corner of the region to the left to the desired length.

Published Date: Feb 19, 2012

Final Cut Pro 4.0 - 4.1.1: Device Compatibility Information

This article has been archived and is no longer updated by Apple.

This document lists device compatibility information intended to assist you in selecting appropriate equipment to use with Final Cut Pro versions 4.0 - 4.1.1.

The following information is intended to assist you in selecting appropriate equipment to use with Final Cut Pro 4.0 - 4.1.1.

Download the Final Cut Pro HD list here:
http://www.apple.com/finalcutstudio/resources/devicelist.php

For Final Cut Pro 3, click here.

Canon NTSC Format

Cameras and Devices	Device Protocol	More Info
Canon Elura	FireWire Basic	more info
Canon Elura 2MC	FireWire Basic	more info
Canon Elura 20MC	FireWire Basic	more info
Canon Elura 40MC	FireWire Basic	more info
Canon Gl1	FireWire Basic	more info
Canon Gl2	FireWire Basic	more info
Canon Optura	FireWire Basic	more info
Canon Optura 100 MC	FireWire Basic	more info
Canon Optura Xi	FireWire Basic	more info
Canon Optura 200 MC	FireWire Basic	
Canon Optura 20	FireWire Basic	
Canon Optura Pi	FireWire Basic	more info
Canon Ultura	FireWire Basic	more info
Canon Vistura	FireWire Basic	
Canon XL1	FireWire Basic	more info
Canon XL1s	FireWire Basic	more info
Canon ZR	FireWire Basic	more info
Canon ZR 10	FireWire Basic	more info
Canon ZR 20	FireWire Basic	more info
Canon ZR 25	FireWire Basic	more info
Canon ZR 30 M	FireWire Basic	more info
Canon ZR 30 MC	FireWire Basic	
Canon ZR 40	FireWire Basic	more info
Canon ZR 45	FireWire Basic	more info
Canon ZR 60	FireWire Basic	more info
Canon ZR50MC	FireWire Basic	more info

JVC NTSC Format

Cameras and Devices	Device Protocol	More Info
JVC BRDV 3000	FireWire	
JVC BRDV 3000U	FireWire	
JVC BRDV 6000	FireWire	
JVC GYDV 300UZ	FireWire	

Panasonic NTSC Format

Cameras and Devices	Device Protocol	More Info
Panasonic AG-DV2000	FireWire	
Panasonic AG-DVC7P	FireWire	
Panasonic AG-DVX100	FireWire	more info
Panasonic AJ-D250	FireWire Basic	more info
Panasonic AJ-SD755P	FireWire	
Panasonic PV-DV100	FireWire Basic	more info
Panasonic PV-DV200	FireWire Basic	more info
Panasonic PV-DV400	FireWire Basic	more info
Panasonic PV-DV600	FireWire Basic	more info
Panasonic PV-DV800	FireWire Basic	more info

Sony NTSC Format

Cameras and Devices	Device Protocol	More Info
Sony DCR-PC1	FireWire	
Sony DCR-PC5	FireWire	more info
Sony DCR-PC10	FireWire	
Sony DCR-PC100	FireWire	
Sony DCR-PC101	FireWire	more info
Sony DCR-PC110	FireWire	
Sony DCR-TRV7	FireWire	more info
Sony DCR-TRV8	FireWire	
Sony DCR-TRV18	FireWire	
Sony DCR-TRV20	FireWire	
Sony DCR-TRV27	FireWire	
Sony DCR-TRV120	FireWire	more info
Sony DCR-TRV230	FireWire	more info
Sony DCR-TRV900	FireWire	more info
Sony DCR-TRV7000	FireWire	
Sony DCR-VX2000	FireWire	more info
Sony DHR-1000v	FireWire	more info
Sony DSR-11	FireWire	more info
Sony DSR-20	FireWire	more info

JVC DVP7u	FireWire	
JVC GR DV 30u	FireWire	
JVC GR DV 90u	FireWire	more info
JVC GR-DVL120	FireWire	more info
JVC GR-DVL815U	FireWire Basic	
JVC GR-DVL820	FireWire	
JVC GRDVM55U	FireWire Basic	more info
JVC GRDVP3U	FireWire	
JVC GRDVP7U	FireWire	
JVC GY-DV300U	FireWire	
JVC GY DV5000	FireWire Basic	
JVC GY-DV600UA	FireWire	
JVC GY-DV550U	FireWire Basic	more info
JVC GY-DV700WU	FireWire	more info

Sony DSR-25	FireWire	
Sony DSR-30	FireWire	more info
Sony DSR-45	FireWire	
Sony DSR-1500	FireWire	
Sony DSR-1500a	FireWire	
Sony DSR 1800	FireWire	
Sony DSR-2000	FireWire	
Sony DSR - PDX 10	FireWire	
Sony GV-D300	FireWire	more info
Sony GV-D900	FireWire	more info
Sony PD100A	FireWire	
Sony PD150	FireWire	more info

Canon PAL Format		
Cameras and Devices	**Device Protocol**	**More Info**
Canon DM-MV1	FireWire Basic	
Canon DM-MV3i	FireWire Basic	more info
Canon DM-MV4i	FireWire Basic	more info
Canon DM-MV10	FireWire Basic	more info
Canon DM-MV20i	FireWire Basic	more info
Canon DM-MV30i	FireWire Basic	more info
Canon DM-MV100	FireWire Basic	more info
Canon DM-MV200i	FireWire Basic	more info
Canon DM-MV300i	FireWire Basic	more info
Canon DM-MV630i	FireWire Basic	
Canon DM-MV650i	FireWire Basic	
Canon DM-XL1	FireWire Basic	more info
Canon DM-XL1s	FireWire Basic	more info
Canon MV450i	FireWire Basic	more info
Canon MV630i	FireWire Basic	
Canon MV650i	FireWire Basic	
Canon MVX 1i	FireWire Basic	more info
Canon MVX 150i	FireWire Basic	
Canon XM-1	FireWire Basic	more info

JVC PAL Format		
Cameras and Devices	**Device Protocol**	**More Info**
JVC BRDV3000E	FireWire	

Sony PAL Format		
Cameras and Devices	**Device Protocol**	**More Info**
Sony DCR-PC2E	FireWire	more info
Sony DCR-TRV5E	FireWire	
Sony DCR-TRV8E	FireWire	
Sony DCR-TRV9E	FireWire	
Sony DCR-TRV900E	FireWire	
Sony DSR-11	FireWire	
Sony DSR-25	FireWire	more info
Sony DSR-45P	FireWire	
Sony DSR-1500AP	FireWire	more info
Sony DSR-1800	FireWire	
Sony DSR-2000	FireWire	more info
Sony DSR - PDX 10-P	FireWire	

3rd Party Hardware (Final Cut Pro HD for OS X)					
Descriptions of Devices	**RT Effects**	**OfflineRT**	**Driver/Firm**	**> 8 bit**	**More Info**
AJA Kona HD		√	4.0		more info
AJA Kona SD	√	√	4.0	√	
Aurora Igniter X	√	√	6.0.3		more info
CinWave Classic RT	√	√	4.0.1	√	
CinWave HD		√	4.0.1		
CinWave RT	√	√	4.0.1	√	
CinWave RT Pro	√	√	4.0.1	√	

I/O Framework					
Descriptions of Devices	**RT Effects**	**OfflineRT**	**Driver/Firm**	**> 8 bit**	**More Info**
AJA Io	√	√	1.1	√	more info

Serial Adapters	
Descriptions of Devices	**More Info**
Keyspan SX Pro Serial	more info
Keyspan Twin Serial	more info
Keyspan UPR-112	more info
Keyspan Usa-19QW	more info
Keyspan USA-49W	more info
Keyspan USB Serial Adaptor	more info

DV Converters		
Descriptions of Devices	**NTSC/PAL**	**More Info**
Datavideo DAC-100	Both	
Dazzle Hollywood DV Bridge	Both	
Sony DVMC-DA2	NTSC	more info

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Published Date: Feb 20, 2012

iLife ‘05: How to custom install applications

This article has been archived and is no longer updated by Apple.

If you don't want to install the entire iLife '05 package, you can custom install one or more applications from the iLife CD or DVD. Here's how:

1. Launch the installer on your iLife '05 CD or DVD and click the Customize button on the last pane of the installer.
2. The installer displays a list of items that can be installed individually from the package. Select only the items you want to install.
3. Click Install to install your selected items.

If you're trying to reinstall an application but it appears dimmed in the custom install list, quit the installer, delete the item from the Applications folder, and delete its associated receipt files from /Library/Receipts/. Then reopen the iLife installer and try custom installing again.

Important: After installation is complete, immediately use Software Update to make sure that all the applications are up to date before you launch them.

Published Date: Feb 18, 2012

.Mac: iDisk folder and file names that contain non-Roman characters may appear as gibberish

This article has been archived and is no longer updated by Apple.

If you use Goliath to upload files or folders that contain non-Roman characters in their names to your iDisk, the names may appear as gibberish.

This can happen if you use the following languages:

- Chinese Simplified
- Chinese Traditional
- Korean
- Japanese
- Russian

Note: There may be additional languages that are also affected by this issue.

For now, please rename any affected files or folders on your iDisk manually.

This article will be updated as more information becomes available.

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Published Date: Feb 18, 2012

iMovie HD, iDVD 5: White frames appear at chapter markers in some DVD slideshows

This article has been archived and is no longer updated by Apple.

If you create a slideshow movie in iMovie HD containing chapter markers it may produce white frames when burned to DVD using iDVD 5.

As a workaround, follow these steps:

1. In iMovie HD, add your images and transitions as desired.
2. Export to a Full Quality QuickTime movie.
3. Import that movie into a new iMovie HD Project.
4. Add chapter markers in the iDVD pane.
5. Export to iDVD and burn your disc as usual.

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

iPhoto: Book orders may get canceled if books contain Type 1 PostScript fonts

This article has been archived and is no longer updated by Apple.
If you create a book in iPhoto using certain Type 1 PostScript fonts, your book order might get inadvertently canceled. For now, you can get your book back on track by changing the font to one that isn't Type 1 PostScript, and then resubmitting your book order.

So how can you tell which fonts are Type 1 PostScript?

There's a couple of different ways. If you're using Mac OS X 10.3, use Font Book. If not, you can find this information in the Info or Inspector window in the Finder.

Using Font Book

1. Open Font Book (in the Applications folder).
2. Be sure that both the Preview and Font Info panes are displayed. If Font Book opens without the Preview pane visible, it looks like this:

   To display the Preview pane, from the **Preview** menu, choose **Show Preview**.

   If you don't see any "Font type" or font "Family" information at the bottom of the Preview pane, from the **Preview** menu, choose **Show Font Info** to display the Font Info pane.

3. Select the font that you want to use in your book from the Collection and Font columns. The font type will be clearly displayed in the Font Info pane (next to the words "Font type"), like this:

4. Make sure that the font you've chosen is not a Type 1 PostScript font.

Using the Finder

Though you could open an Info window for every font you're interested in using, the Inspector is more convenient, since you'll only have to open it once.

1. Click the Finder icon in the Dock.
2. While holding down the Option key, choose **Show Inspector** from the **File** menu (or just press Command-Option-I).
3. Open a Finder window and navigate to the Fonts folder that contains fonts you want to use. Remember that Mac OS X uses several Fonts folders for different purposes.
4. Select a font in your chosen Fonts folder, then look at the Inspector window that you opened earlier (it updates its information for each new item that you click). It will display the font name and type, like this:

5. Make sure that the font "Kind" is not Type 1 PostScript.

Tip: Make sure that you select only one font at a time. A dash (-) appears in all Font Info fields if you select more than one font.

Published Date: Oct 10, 2016

iDVD 5.0: Settings pane is blank

This article has been archived and is no longer updated by Apple.

When you attempt to customize your iDVD project, sometimes the Settings pane (the place where you customize backgrounds, text, and buttons) may not load properly. This can happen if Multiple Master (MM) fonts are installed on your system. MM fonts are an extension to the Adobe PostScript font format.

Update to iDVD 5.0.1 or later.

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Published Date: Oct 10, 2016

Mac OS X Server 10.2: Protecting your Windows (SMB) shares from remote attacks

This article has been archived and is no longer updated by Apple.
On Mac OS X Server versions 10.2 to 10.2.8, a remote attacker may be able to gain access to files that exist outside of an SMB share's defined path. The attacker must still be using an account that has read permissions for the targeted files.

To prevent this scenario, locate your smb.conf file, and open it in the text editor of your choice. Search the file for the entry, `wide links = yes`. If it's present, change the `yes` to `no`. If the line isn't present, add the following line to the file:

```
wide links = no.
```

Published Date: Feb 20, 2012

Mac OS X and Mac OS X Server 10.3: Copying files over network may result in incorrect locked file messages

This article has been archived and is no longer updated by Apple.
Sometimes you might get a message that says a file is "locked," even though the Info window clearly indicates that the file isn't. This can be the result of file permissions.

This can happen when you copy a file to your computer over a network, using protocols such as AFP (Apple File Service or Personal File Sharing) or SMB (Windows file sharing), from a share point to which you have read-only access. The "locked" message may appear if you try to save changes to the file in certain applications, though it may work normally in others.

To resolve the issue, use the Info window to give yourself read-write permissions to the affected file or files.

1. If only one file is affected, select it in the Finder. If multiple files are affected, put them in a new folder and select the folder.
2. From the **File** menu, choose **Get Info**.
3. In the Info window, click the disclosure triangle next to Ownership & Permissions.
4. From the **You can** pop-up menu, choose **Read & Write**. (You may be asked to enter an administrator password.)
5. If you selected a folder, click the Details disclosure triangle and then click the "Apply to enclosed items" button.
6. Close the Info window.

Published Date: Oct 10, 2016

About Security Update 2005-002

This article has been archived and is no longer updated by Apple.
This document describes Security Update 2005-002, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How To Use The Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Security Update 2005-002

Available for: Java 1.4.2
CVE-ID: CAN-2004-1029
Impact: Updates Java to address an issue where an untrusted applet could gain elevated privileges and potentially execute arbitrary code.
Description: A vulnerability in the Java Plug-in may allow an untrusted applet to escalate privileges, through JavaScript calling into Java code, including reading and writing files with the privileges of the user running the applet. Credit to Sun for reporting the issue, and to Dino Dai Zovi for assisting us in the analysis.

Available for: Java 1.4.2
CVE-ID: CAN-2005-0418
Impact: Updates Java to address an issue in Java Web Start that allows an untrusted application to elevate its privileges
Description: A vulnerability in Java Web Start allows an untrusted application to elevate its privileges. For example an application may grant itself permissions to read and write local files or execute local applications that are accessible to the user running the Java Web Start application. Releases prior to Java 1.4.2 are not affected by this vulnerability.

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Published Date: Oct 10, 2016

Logic Pro, Logic Express: Logic unexpectedly quits when you try to scroll

This article has been archived and is no longer updated by Apple.
Sometimes Logic unexpectedly quits when you try to use a scrollbar. This may be due to a compatibility issue with version 5.0 of WaveShell (a third-party product) for Audio Units.

Waves has released a 5.01 update, which resolves this issue. You can get the updated version from the Waves website.

Note: After updating the WaveShell, Logic will rescan your installed Audio Units the next time it is launched. This will take several minutes.

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Published Date: Oct 10, 2016

PowerBook G4 sound balance

This article has been archived and is no longer updated by Apple.
The 15-inch "aluminum" PowerBook G4 computers, starting with the PowerBook G4 (15-inch FW 800), have a midrange-enhancing speaker that's designed to produce a separate channel of midrange sound. The midrange speaker is located underneath and to the left of the space bar. The location of the three speakers is indicated by circles in the picture below.

There are no settings in the Sound pane of System Preferences to adjust the midrange speaker independently. Increasing and decreasing the system volume changes both the stereo speakers and the midrange speaker at the same time.

You may notice that when you move the Balance slider in Sound preferences far to the right, you can still hear sound coming from what you may perceive as the left speaker. In reality, the sound is coming from the midrange-enhancing third speaker, but because of its placement, the audio appears to be coming from the left side. This is normal.

Related document: iChat AV: Only right speaker makes sound during audio or video chats

Published Date: Oct 10, 2016

How Finder lists items that are sorted by name (Mac OS X)

This article has been archived and is no longer updated by Apple.

Finder lets you sort your files and folders in windows in all kinds of ways—by name, by date modified, by size, and so forth. But have you ever wondered how Finder decides to organize these items when you view a window as a list by name (beyond alphabetizing them)?

In a nutshell, Finder uses these guidelines when it sorts names:

- The character letter case in a file or folder's name doesn't matter. Finder treats "AAA" the same as "aaa"—in fact, you can't even have two items in the same folder with those names. Files or folders that have names in all capital letters aren't sorted before or after similarly-named items with only lowercase letters.

- Punctuation and symbols are very significant for sorting. Usually, if a file or folder's name begins with a punctuation mark (such as "_" or "~" or "!"), it will appear before all other items when sorting by name (or at the end when reverse sorting by name). **Tip**: If you want certain files or folders to always appear first (at the top) in a view-by-name Finder window, put one or two punctuation marks before the name, such as "__BestPhotoEver.jpg."

- Finder treats whole numbers numerically instead of by single digit, so "1 2 10" would come before "1 10 2," but if you take away the spaces, "1210" would come after "1102." Also, Finder does not sort according to the fractional parts of numbers. Any digits that appear after a decimal point are sorted as a different number.

Taking these guidelines into consideration, if you had items named aaa, 111, zzz, _zzz, 11 10, 1110, and a0 in a window, Finder would sort their names as follows in a window viewed as a list:

- _zzz
- 11 10
- 111
- 1110
- a0
- aaa
- zzz

Note: If you select all these items in the Finder window (Command-A), copy their names to the Clipboard (Command-C), and then paste them into a text document (or email), they will appear in a slightly different order.

Mac OS X 10.4 Tiger adds options

In Mac OS X 10.4, you can select language-specific sort orders in the Finder (or elsewhere). Open International preferences and click Language. Drag languages into the order your prefer to use in application menus, dialogs, and sorting. You can also choose from the "Order for sorted lists" pop-up menu.

The Unicode standard

Technically speaking, Finder sorting is based on the Unicode Collation Algorithm, defined by the Unicode Consortium. This standard provides a complete and unambiguous sort ordering for all Unicode characters, and is available on the Unicode Consortium website. Other operating systems or applications may use different rules that can make the same list of items sort in a different way.

Published Date: Oct 10, 2016

Xserve G5: About 2 GB DIMM Support

This article has been archived and is no longer updated by Apple.
Standard Xserve G5 systems support up to 8 GB of RAM, using 1 GB PC3200 ECC unbuffered, unregistered SDRAM DIMMs. However, in March 2005, Apple qualified a 2 GB DIMM for use with Xserve G5, allowing a system to now support up to 16 GB of RAM. This article provides more information about 2 GB DIMM support for Xserve G5 and the related issues.

About the 2 GB DIMM for Xserve G5

The 2 GB DIMM is offered as a configure-to-order option for Xserve G5. The DIMM is a special high-density design, engineered to be industry compatible and deliver 2 GB-per-DIMM capacity at full PC3200 performance. The DIMM supports error correction code (ECC) and like all memory installed in Xserve G5, it must be installed in matching pairs.

All Xserve G5s that are ordered with any 2 GB DIMM option use a different logic board that provides hardware support for up to 16 GB of RAM. You can only install 2 GB DIMMs in logic boards that specifically support it.

How to determine if your main logic board supports 2 GB DIMMs

Xserve G5 main logic boards that support 2 GB DIMMs will either have a "DDR 2GB" label affixed between the PCI expansion slots and the DIMM slots, or will have "DDR 2GB" imprinted on the board. See the diagram below for the exact placement.

Xserve logic boards that do not have this label do not support 2 GB DIMMs. If you install a pair of 2 GB DIMMs in an Xserve that doesn't support them, the DIMMs will not be recognized by the system and won't be utilized.

If you need to perform a main logic board replacement, be sure that the replacement board has the same level of memory support as the original one by checking for this label.

Installing 2 GB DIMMs

Along with 2 GB DIMM support, Xserve G5 continues to support 1 GB, 512 MB, and 256 MB DIMMs. Remember that all memory must be installed in matching pairs. When mixing higher density and lower density DIMMs in the same system, you may need to reconfigure your memory. Install the larger DIMMs, in pairs, from the center out.

If extra slots are available and you want to install more memory, install additional DIMMs in pairs, one per bank, from the center outward.

Mac OS X Server Software

For 2 GB DIMM support, Xserve G5 systems require Mac OS X Server version 10.3.7 (7T66) or later. Earlier versions of Mac OS X Server are not supported.

Xserve Remote Diagnostics and 2 GB DIMMs

Use Xserve Remote Diagnostics (XRD) version 1.0.2 or later to test Xserve G5 systems with 2 GB memory modules (DIMMs) installed. Earlier versions of the software might erroneously report memory failures. If you must run the older software, you can avoid the erroneous reports by installing 2 GB DIMMs in the inside slots and working your way outward with smaller DIMMs, as shown in the illustration above.

Published Date: Oct 10, 2016

Final Cut Express: DV Converter Easy Setup and Print To Video Incompatibilities

This article has been archived and is no longer updated by Apple.

If you use a DV converter in Final Cut Express and choose either DV-NTSC DV Converter or DV-PAL DV Converter in the Easy Setup dialog to configure it, Final Cut Express may stop responding (hang) whenever you choose "Print to Video" (the "Print to Video" dialog never appears).

To use Print to Video with a DV Converter, follow these steps as a workaround:

1. From the **Final Cut Express** menu, choose **Easy Setup**.
2. From the **Setup For** pop-up menu, choose either **DV-NTSC** or **DV-PAL**.
3. Click Setup.
4. From the **File** menu, choose **Print to Video**
5. Deselect the "Automatically Start Recording" checkbox. If you don't, the following error will appear:
   "Unable to perform edit operation. The tape appears to be write protected."

When capturing additional video, you must reselect your DV-NTSC DV Converter or DV-PAL DV Converter in the Easy Setup menu or else the capture will fail and the following error will appear:

"Waiting for Timecode Device. Must be in VTR mode when Device Control is enabled"

If this occurs, press the Escape (Esc) key to stop the capture, change the Easy Setup back to DV-NTSC DV Converter or DV-PAL DV Converter, and begin the capture again.

Published Date: Oct 10, 2016

iMovie: Black bars around video

This article has been archived and is no longer updated by Apple.

When you import video footage into iMovie, you may see black bars (or black space) on the top and bottom or the sides of the video image. This is normal. Digital video footage is recorded using standard ratios of width to height measurements, called the *aspect ratio*.

Standard definition video has an aspect ratio of 4:3, meaning for every four pixels of width, the frame has 3 pixels of height. A television screen has a 4:3 aspect ratio. Widescreen video has a 16:9 aspect ratio, meaning that the width of the frame is almost twice its height. Movie theaters have screens that can display this aspect ratio.

Depending on the aspect ratio of your footage (your camera may support both standard and widescreen formats), you may see one of the following black bar displays.

Black bars on the top and bottom (letterboxing)

If you see black bars on the top and bottom of your video image, your footage is being displayed in letterbox format. This happens when widescreen video footage (16:9 aspect ratio) is displayed on a 4:3 aspect ratio screen (like watching a widescreen DVD movie on a standard TV).

Black bars on both sides (pillarboxing)

If you see black bars on both sides of the video image, your footage is being displayed in pillarbox format. This happens when standard definition video footage (4:3 aspect ratio) is displayed on a 16:9 aspect ratio screen (like watching a standard definition broadcast on a widescreen HDTV).

Related documents

61366 "How to crop photos in iPhoto"
164926 "Preparing images for DVD slideshows"
Published Date: Oct 10, 2016

Logic Pro: Custom presets may be missing from the pop-up menu

This article has been archived and is no longer updated by Apple.

If a custom plug-in setting, an EXS instrument, or a channel strip setting does not show up in its respective pop-up menu, check to see if you may have saved the affected item under a name that begins with a minus sign (-), such as "-3 dB." Logic excludes files with names that begin with a minus sign from its pop-up menus.

If this is the case, rename the affected file to resolve the issue. You will need to locate the file in its appropriate subfolder in `~/Library/Application Support/Logic/Plug-In Settings/`.

Published Date: Feb 19, 2012

Mac OS X Server 10.3: Man pages for Cyrus and Postfix master programs

This article has been archived and is no longer updated by Apple.
Mac OS X Server stores the man (manual) pages for Cyrus and Postfix controller pages at separate locations within its man page system. If you try to read the man page for the Cyrus master program, you may get the man page for the Postfix master program instead.

Because both programs use the name "master" for the controller process that handles all daemon control, their man pages now use distinct names so you can access both programs' man pages.

To access the man page for the Cyrus mail master program, use `man cyrus-master`. To access the man page for the Postfix mail master program, use `man master`.

Published Date: Oct 10, 2016

iDVD 5: "Invalid drawable" message in Console

This article has been archived and is no longer updated by Apple.
When you open iDVD, the Mac OS X Console application (in the Utilities folder) may display an "invalid drawable" message. Please note that this message does not indicate an error or an issue with iDVD. While the Console is normally the place to look for possible clues when you're troubleshooting an issue, this particular message can be ignored.

To learn about viewing log files in the Console, click here.

Published Date: Oct 10, 2016

Logic 7: Changes to preference location, file name, and troubleshooting practices

This article has been archived and is no longer updated by Apple.

Logic Pro 7 and Logic Express 7 both have different preference file names, compared to earlier versions. Additionally, these preferences are now set apart in a Logic subfolder of your Preferences folder. The new preference files are stored as follows:

Logic Pro 7: `~/Library/Preferences/Logic/com.apple.logic.pro`
Logic Express 7: `~/Library/Preferences/Logic/com.apple.logic.express`

If Logic 7 detects that the current preference file is missing (if you moved it for troubleshooting, for example), it will seek and load an older preference file if one exists on your computer. If you have an older version of Logic installed, its preference file is stored here:

```
~/Library/Preferences/info.emagic.logic
```

Older versions of both Logic Pro and Logic Express used this earlier version of the preference file. Therefore, if you move your current preferences file for troubleshooting, be sure to move the older version as well (if applicable).

Additionally, there are some legacy preference files that you may wish to remove for troubleshooting Logic Pro and Logic Express 7.

```
~/Library/Preferences/info.emagic.logic.cs
~/Library/Preferences/info.emagic.logic.plist
~/Library/Preferences/info.emagic.logicsetupassistant.standard.plist
```

The first of these legacy files stores control surface preferences. The second stores information regarding recently used folders, and so forth. The third is created by the Setup Assistant, and it stores the default song setup.

Finally, you may also find the Project Manager database from older versions of Logic Pro needs to be removed. This is found at:

```
~/Library/Preferences/Logic PM Data
```

Remove the Logic PM Data folder before launching Logic Pro 7.

With Logic Pro 7, the Project Manager database is located at `~/Library/Preferences/Logic/PM Data`

Published Date: Oct 10, 2016

AirPort: Software changes with AirPort 4.1 for Mac OS X 10.3

This article has been archived and is no longer updated by Apple.
When you install AirPort 4.1 for Mac OS X 10.3 (Panther), some of the names and the number of AirPort administration utilities on your computer will change. AirPort software prior to version 4.1 included AirPort Admin Utility, AirPort Setup Assistant, and possibly AirPort Express Assistant.

AirPort 4.1 includes a new version of AirPort Setup Assistant that makes AirPort Express Assistant obsolete—AirPort Express Assistant will be removed when you install AirPort 4.1 if the application is present on your system.

The old version of AirPort Setup Assistant is retained, but will be renamed as "AirPort Setup Assistant for Graphite or Snow." This is because the new assistant in version 4.1 is for AirPort Express and AirPort Extreme use only. Be sure to select the older, renamed assistant when administering an original AirPort Base Station (Graphite) or AirPort Base Station (Dual Ethernet), also known as "Snow."

AirPort Admin Utility will be updated, and will continue to work with all models of AirPort base stations.

Published Date: Feb 18, 2012

iPhoto 5 or later: "Error occurred while exporting the slideshow" message

This article has been archived and is no longer updated by Apple.
When you choose **Send to iDVD** or **Export** from the **Share** menu in iPhoto 5 or later, there's certain circumstances in which you might get a message that says, "An error occurred while exporting the slideshow."

This can happen if you rename, move, or delete the Movies folder found in your home directory; because iPhoto tries to save to the Movies folder specifically. To resolve this issue, put the Movies folder back in your home directory (or create a new one if necessary).

This can also happen with some versions of Norton Anti-Virus. Try temporarily disabling Norton Antivirus to see if it helps.

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Published Date: Feb 19, 2012

Mac OS X: Using the Active Directory plug-in in a multi-domain controller environment

This article has been archived and is no longer updated by Apple.
Sometimes the Active Directory plug-in won't bind to Active Directory in a domain with multiple domain controllers (DCs). In this situation, you may get a message that warns of insufficient privileges or an incorrect name or password, and the subsequent binding won't happen. This issue affects Mac OS X and Mac OS X Server versions 10.3 and later.

To resolve the issue, enter a name of a domain controller in the "Prefer this domain server" field in the Advanced Options section of the Active Directory plug-in. This will ensure that the Active Directory plug-in binds to this domain controller first if that domain controller is available on the network.

Tip: If you are new to configuring Directory Services plug-ins, you can access the Active Directory plug-in by opening the Directory Access utility (located in your Utilities folder) and selecting Active Directory.

Published Date: Feb 20, 2012

Logic Pro 7 does not offer variable bit depth for freeze files

This article has been archived and is no longer updated by Apple.
Logic Pro 6 offered a way to change any freeze file's bit depth from the default 32-bit float to 24- or 16-bit. Though Logic Pro 7 does not offer this feature, it has new features that support the same goals.

Logic stores freeze files at a resolution of 32-bit float to preserve the massive dynamic range (almost 1000 db) that its audio engine affords. This prevents extreme plug-in settings from causing clipping in files when they are rendered, ensuring that the frozen tracks will sound identical to their unfrozen states.

Previous versions of Logic Pro offered the option of freezing files at 16- or 24-bit depth to allow these rendered files to be used in other songs, or even other applications. However, there was some danger that the frozen tracks could clip, depending on the plug-in settings used. Logic Pro 7 offers a wealth of new export features that make changing the bit depth of frozen tracks unnecessary.

To export a track (with all its DSP rendered), simply choose **File > Export > Track as Audio File**. To export all audio tracks in your Arrange window as separate audio files, choose **File > Export > All Tracks as Audio Files**. To export an individual region with its DSP rendered to a file, choose **File > Export > Region as Audio File**.

When exporting tracks, note that any reverb or delay tails will be included with the exported file, but the files created from exported regions will be exactly the same length as the original region. This allows you to easily create loops using the export region feature.

You can export tracks and regions as AIFF, WAV, or SDII files, making them compatible with virtually any other audio application available. If you export regions as WAV files, they will be written as Broadcast Wave Files (BWF), which means they will include time-stamp information. Tracks are always exported starting at bar 1 in a Logic song, so time-stamping is not needed for them.

Published Date: Feb 19, 2012

Logic Pro 7: Using the External Instrument

This article has been archived and is no longer updated by Apple.

One of the little known but most useful new features in Logic Pro 7 is the External Instrument. This is a special instrument plug-in that allows you to route MIDI information to an external MIDI hardware module and, utilizing your audio interface, feed that module's audio output directly into Logic. This allows you to treat the MIDI module like a software audio instrument in Logic; you can add plug-ins, bounce it as part of your mix, and so on.

Here's how to set up an External Instrument track for your MIDI device:

1. Select an available Audio Instrument track in your Arrange window.
2. In the channel strip to the left, click the input insert (the field directly below "I/O") and choose **Stereo > Logic > External** (for stereo) or **Mono > Logic > External** from the menus.

3. The External Instrument window opens.

Note: If it does not open, double-click the plug-in (preference).

4. Click the MIDI Destination insert area to display a menu that lists the MIDI devices defined in your Environment, and choose an instrument. (In our example, we chose the strings channel in our Roland JV1080.) Your menu items will vary, depending on what MIDI modules you own, and how you have them configured in your Environment.

5. To configure the External Instrument with your audio interface input (make sure that you physically connected your MIDI module's audio output to your audio interface's input), click the Input insert area to display a menu of available audio inputs for your audio interface.
6. Choose the audio input that your MIDI module is physically connected to from the menu. If you need to adjust the gain from the module, use the Input Volume slider to adjust the volume from -24db to +12db.

You can now record MIDI to the Audio Instrument track. Logic will route MIDI to the external module, and will see its audio at the input you defined. You can insert DSP plug-ins and (as with a software instrument) use sends to busses, and so on. You can also include sounds from External Instruments when you bounce your mix, but keep this in mind: You must perform your bounce in "Realtime"—not "Offline"—for this to happen. Logic cannot process the audio from an external device offline.

Published Date: Oct 10, 2016

Mac OS X 10.4, 10.5: Where is StuffIt Expander?

This article has been archived and is no longer updated by Apple.

Allume StuffIt Expander doesn't come with Mac OS X 10.4 or later.

However, Mac OS X 10.4 and Mac OS X 10.5 Leopard or later let you compress and decompress archive (.zip) files that work with both Mac OS X and Microsoft Windows.

If you'd like to use StuffIt Expander too, for example, to open .sit or .sitx compressed files, you can download it from the Allume Systems website.

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Related Terms: Aladdin, unzip, unstuff, stuffed

Published Date: Oct 10, 2016

Final Cut Pro: Different alpha channel types may produce different results

This article has been archived and is no longer updated by Apple.

When you import assets, Final Cut Pro uses the imported alpha channels to composite image layers over one another. You can import graphic files that use different methods of handling alpha channels, such as graphics that contain straight or premultiplied alpha channels. Or you can use one image to impose an alpha channel onto another.

Depending on the type of alpha channel used by the assets in your project, the end results may differ slightly. In most cases, graphics that have a premultiplied alpha layer will yield the best results. For more information on alpha channels and compositing in Final Cut Pro, please see the Final Cut Pro Help guide (choose **Help** > **Final Cut Pro Help**).

Published Date: Feb 20, 2012

Keynote 1.1 unexpectedly quits with Mac OS X 10.4

This article has been archived and is no longer updated by Apple.

When you use Keynote 1.1 with Mac OS X 10.4 Tiger, the application may unexpectedly quit. To resolve this issue, update to Keynote 1.1.1, or upgrade to Keynote 2 (part of iWork).

Published Date: Oct 10, 2016

Logic Pro and Logic Express 7.1: Loop Browser displays collections instead of all installed loops

This article has been archived and is no longer updated by Apple.
In Logic Pro and Logic Express 7.1 and later, the Loop Browser does not display all indexed loops in the system.

Instead, Logic 7.1 offers a new Advanced Loop Management feature in the Loop Browser that allows you to view loops from specific collections. For example, you can choose to view only loops that are included with GarageBand (which is the same loop collection that is installed with Logic), from a specific Jam Pack, from a specific third-party vendor, or only loops you created yourself.

If you are unable to locate a loop that you know is installed and indexed in your system, make sure that the Jam Pack Management setting in the upper right portion of the Loop Browser is either set to the collection that your desired loop belongs to, or to Show All.

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Published Date: Oct 10, 2016

Logic Pro 7.1: Changes to AAF support

This article has been archived and is no longer updated by Apple.

Logic Pro 7.1 uses an implementation of the Advanced Authoring Format (AAF) specification, which may affect its exported file compatibility with certain applications.

Due to changes in the AAF specification, AAF files exported from Logic Pro 7.1 will not work with ProTools 6.4 or 6.4.1, though they will work with ProTools 6.7. However, Logic can open AAF files exported from ProTools 6.4, 6.4.1, or 6.7.

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Published Date: Oct 10, 2016

Mac OS X 10.4: DVD Player closed captioning may be unreadable at half size

This article has been archived and is no longer updated by Apple.

If you size your DVD Player window to half size and play a DVD, the captions may be hard to read. But you can easily resolve this.

One thing you can do is resize the DVD Player window so that it's larger.

Another option you have is to display captions in their own window. From the **Controls** menu, select **Closed Captioning > Separate Window**.

There's also a third option:

- From the **Apple** menu, choose **System Preferences**.
- In the System Preferences window, click Appearance.
- In the sentence, "Turn off text smoothing for font sizes __ and smaller," choose **6** from the font size pop-up menu.

Published Date: Oct 10, 2016

iDVD: Remote volume slider doesn‘t work in Preview mode

This article has been archived and is no longer updated by Apple.

If you are using a version of iDVD prior to iDVD 5 and upgrade to Mac OS X 10.4 Tiger, the remote volume slider in Preview mode won't work.

This can happen with iDVD versions 2, 3, and 4. This does not occur with iDVD 5.x.

Published Date: Feb 18, 2012

Logic Pro 7: Locations of EXS24 files

This article has been archived and is no longer updated by Apple.

The EXS24 Sampler plug-in in Logic Pro uses several types of files to generate sound. An EXS24 "Instrument" consists of an instrument file, which contains information on the samples used and how they map to the MIDI notes that trigger them, as well as information on zone and group assignments. The instrument files for Logic's EXS Factory sounds are located at:

```
/Library/Application Support/Logic/Sampler Instruments
```

Any instruments you create will be stored at:

```
~/Library/Application Support/Logic/Sampler Instruments
```

Note: The tilde (~) represents your Home folder.

The audio files that the instruments refer to can be stored on any local drive. The samples for the sampler instruments that are installed with Logic are located at:

```
/Library/Application Support/Logic/EXS Factory Samples
```

Published Date: Feb 19, 2012

How to install additional fonts included with Mac OS X 10.3

This article has been archived and is no longer updated by Apple.

Mac OS X 10.3 comes with additional language fonts that aren't part of the default install set, but you can easily install them at any time, no matter what version of Mac OS X 10.3 you're currently using. These language fonts include:

- Arabic
- Hebrew
- Thai
- Cyrillic
- Devanagari
- Gujarati
- Punjabi
- Armenian
- Cherokee
- Inuktitut

If you'd like to install any of these fonts, follow these steps:

1. Insert Mac OS X 10.3 Install Disc 3 (if you have install CDs) or the Mac OS X 10.3 Software Install DVD.
2. If you have an Install CD, open the Packages folder that's on the disc. Then skip to step 4. If you have an Install DVD, continue to the next step.
3. Note the name of the DVD on the desktop (such as "iMac Software"). In the Finder, choose **Go to Folder** from the **Go** menu, and type

   ```
   /volumes/name of DVD/System/Installation/Packages
   ```

   (where "name of DVD" is the name of your DVD), then click Go.

4. Double-click "AdditionalFonts.pkg" to open the installer.
5. Follow the onscreen instructions to install the fonts.

About additional Asian fonts

Your Mac OS X 10.3 disc also includes an installation package called Additional Asian Fonts, which contains additional fonts supporting Simplified Chinese, Traditional Chinese, and Korean. This package is installed by default with Mac OS X 10.3. However, if you customized your original Mac OS X 10.3 installation and didn't install these fonts, you can install them later using the same steps above.

The AdditionalAsianFonts.pkg is located on Mac OS X 10.3 Install Disc 2 (for CD installations) or the Mac OS X 10.3 Software Install DVD.

Published Date: Oct 10, 2016

Logic Pro and Logic Express 7.1: Loop Type options may be unavailable when adding regions to the Loop Library

This article has been archived and is no longer updated by Apple.
Logic 7.1 allows you to add audio regions from audio tracks or MIDI regions from audio instrument tracks to your Loop Library. To do this, highlight the region you wish to add, and then from the Arrange window's menu bar, choose **Region > Add to Apple Loops Library**.

A dialog appears, allowing you to set the tags for the loop. You can set the loop Type by selecting either the Loop radio button (the loop will conform to the tempo of the song) or the One-shot radio button (the loop will maintain a fixed duration, ignoring the song tempo).

However, sometimes these radio buttons may appear dimmed, with the Type set to One-shot.

This can happen if the selected region is not precisely trimmed to contain a number of whole bars. Only regions that are set to whole bar lengths will give you the option of selecting the loop type (either Loop or One-shot); all others can only be added as a One-shot. There are several ways to work around the issue:

- Trim the region so that its length spans a number of whole bars at the current song tempo.
- Change the tempo of the song to conform to the region.
- Add the loop using the Apple Loop Utility application. You can do this from within Logic; just highlight the region and, from the Arrange window's menu bar, choose **Audio > Open in Apple Loops Utility**.

Apple Loops Utility allows you to define the intended length of the loop, regardless of the song tempo. Please note that the utility only works with audio regions—not with MIDI regions on Audio Instrument tracks.

Published Date: Oct 10, 2016

Xsan: New folders may have unexpected group ownership

This article has been archived and is no longer updated by Apple.
When creating folders on an Xsan volume, the group owner of a new folder is the primary group of the user who created it—not the group owner of the parent folder.

Because of this, users who are members of a common group, but who have other primary groups, may create folders with varying ownership inside the folder of their common group. Members of this group may expect to have access to everything inside of the common group's folder, but that won't be the case.

To resolve the issue, log in as an administrator, select the affected folder, and Get Info. In the Ownership & Permissions section of the Info window, change the ownership to the desired group.

Published Date: Feb 19, 2012

Shake: Disable IPv6 to use Qadmin with Mac OS X 10.4

This article has been archived and is no longer updated by Apple.

After you create a cluster in Qadmin, you won't be able to drag a node into the cluster if you have updated to Mac OS X 10.4 Tiger. As a workaround, disable IPv6 in the Network preferences pane.

Published Date: Oct 10, 2016

Logic: Where custom key commands get stored

This article has been archived and is no longer updated by Apple.
Logic Pro and Logic Express give you the ability to customize the key commands that trigger various commands and functions. Logic stores these key commands in its preference file. It's a good idea to keep a backup copy of this file in case you ever have an issue with the original, or you want to import your key commands into a different system. Here's where this file is stored:

Logic Pro: `~/Library/Preferences/Logic/com.apple.logic.pro`
Logic Express: `~/Library/Preferences/Logic/com.apple.logic.express`

If you ever want to import key commands from a backup copy of the file, you can do so by opening the Key Commands window, as follows:

1. Choose **Logic Pro** (or **Logic Express**) **> Preferences > Key Commands**.
2. In the resulting Key Commands window, choose **Import Key Commands** from the **Options** pop-up menu.
3. In the resulting dialog, navigate to and select the backup copy of your preferences file and click Open.

The key commands from your backup copy will be imported into the current preference file, replacing all previous commands.
Published Date: Oct 10, 2016

AppleShare IP 6.3 Windows clients can‘t connect after applying Microsoft Security Bulletin MS05-011

This article has been archived and is no longer updated by Apple.

Windows clients won't be able to connect to an AppleShare IP (ASIP) 6.3.x server over SMB after applying Microsoft Security Bulletin MS05-011. More information about this bulletin can be found at:

http://www.microsoft.com/technet/security/bulletin/ms05-011.mspx

Because AppleShare IP is no longer updated, the solution is to upgrade to Mac OS X Server 10.3 or later.

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Published Date: Feb 18, 2012

PowerBook G4 (12-inch 1.5GHz), PowerBook G4 (15-inch 1.67/1.5GHz), PowerBook G4 (17-inch 1.67GHz): Troubleshooting intermittent trackpad issues

This article has been archived and is no longer updated by Apple.
If you find that the trackpad cursor on your PowerBook G4 (12-inch 1.5GHz), PowerBook G4 (15-inch 1.67/1.5GHz), or PowerBook G4 (17-inch 1.67GHz) temporarily stops tracking or behaves erratically, try the following steps to resolve the issue.

1. Make sure you're using just one or two fingers. Using more than two fingers could cause erratic behavior.
2. Make sure you have installed the latest version of the system software. For Mac OS X 10.3, this is Mac OS X 10.3.9.
3. Reset the trackpad by placing your entire palm directly onto the whole trackpad for 3 to 4 seconds, and then remove your hand from the trackpad in one smooth motion.

In most cases, trackpad operation will return to normal. If you have updated your system software and reset the trackpad and operation is still not working as expected, test the computer for five to ten minutes. If, after that length of time, there is still no improvement, you may need to contact Apple using the support phone number that is listed for your country.

Published Date: Oct 10, 2016

iMovie: MPEG artifacts or blank video bands in footage

This article has been archived and is no longer updated by Apple.
If you're importing footage from your camera and you see see large blocks of MPEG artifacts or blank bands of video interspersed in the footage, the tape may be damaged or your camera may need cleaning. Consult the documentation that came with your camera to see if there is a way to clean the camera heads using a cleaning tape or similar procedure.

If you are using a camera that can record in multiple formats (such as HDV, DV, and/or DV Widescreen) and you see similar symptoms, you may have footage on the tape that was shot in different formats from multiple recording sessions. Avoid capturing different video formats on the same tape. Try using a fresh tape and record in one format to troubleshoot the issue.

Published Date: Oct 10, 2016

iDVD: HDV movie displays as a still image in drop zone

This article has been archived and is no longer updated by Apple.
When you place an HDV (high definition video) movie clip in an iDVD drop zone, the movie may display as a still image in your menu instead of showing full motion video. This can occur when using iDVD 5.0 in Mac OS X 10.4 Tiger.

To resolve this issue, update to iDVD 5.0.1 by using Software Update, or download the updater from here.

Published Date: Feb 18, 2012

Xsan is disabled after installing Security Update 2005-002

This article has been archived and is no longer updated by Apple.

If you're running Xsan and just installed Security Update 2005-002, you may come across an issue where the Xsan filesystem becomes disabled and won't start up. This happens because this security update overwrites the hostconfig file in the /etc directory, which removes the command to start the Xsan filesystem.

To resolve this issue, modify the hostconfig file as follows:

1. Launch the Terminal (/Applications/Utilities).
2. Change to the root user by typing `su root`. Type your password when prompted.
3. Type `cd /etc` to navigate to the /etc directory.
4. Open your preferred editor (such as vi, emacs, or pico), and use it to add the following line to the bottom of the hostconfig file: `ACFS=-YES-`.
5. Save the file and then close your editor application.
6. Restart your computer.

Note: You will need to modify the hostconfig file on all Xsan clients and Metadata Controllers after installing Security Update 2005-002.
Published Date: Feb 19, 2012

Logic Pro/Express 7: Logic stores opened GarageBand files in the same location as the original

This article has been archived and is no longer updated by Apple.

When you open a GarageBand song in Logic Pro or Logic Express, a folder is created at the same location as the original GarageBand song to hold the corresponding Logic song and all audio files that are needed to play it back. For example, if you have a GarageBand song named "My Hit Song" stored in your GarageBand folder (~/Music/Garageband), Logic will create a folder named "My Hit Song" in that same folder.

If you would rather store the song at another location, choose **File > Save as Project** in Logic to save the song and all audio files to another location on your computer.

Published Date: Oct 10, 2016

About Security Update 2005-003

This article has been archived and is no longer updated by Apple.
This document describes Security Update 2005-003, which can be downloaded and installed using Software Update, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred, and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How To Use The Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Security Update 2005-003

- **AFP Server**
  Available for: Mac OS X v10.3.8, Mac OS X Server v10.3.8
  CVE-ID: CAN-2005-0340
  Impact: A specially crafted packet can cause a Denial of Service against the AFP Server.
  Description: A specially crafted packet will terminate the operation of the AFP Server due to an incorrect memory reference. Credit to Braden Thomas for reporting this issue.

- **AFP Server**
  Available for: Mac OS X v10.3.8, Mac OS X Server v10.3.8
  CVE-ID: CAN-2005-0715
  Impact: The contents of a Drop Box can be discovered.
  Description: Fixes the checking of file permissions for access to Drop Boxes. Credit to John M. Glenn of San Francisco for reporting this issue.

- **Bluetooth Setup Assistant**
  Available for: Mac OS X 10.3.8, Mac OS X Server 10.3.8
  CVE-ID: CAN-2005-0713
  Impact: Local security bypass when using a Bluetooth input device.
  Description: The Bluetooth Setup Assistant may be launched on systems without a keyboard or a preconfigured Bluetooth input device. In these cases, access to certain privileged functions has been disabled within the Bluetooth Setup Assistant.

- **Core Foundation**
  Available for: Mac OS X v10.3.8, Mac OS X Server v10.3.8
  CVE-ID: CAN-2005-0716
  Impact: Buffer overflow via an environment variable.
  Description: The incorrect handling of an environment variable within Core Foundation can result in a buffer overflow that may be used to execute arbitrary code. This issue has been addressed by correctly handling the environment variable. Credit to iDEFENSE and Adriano Lima of SeedSecurity.com for reporting this issue.

- **Cyrus IMAP**
  Available for: Mac OS X Server v10.3.8
  CVE-ID: CAN-2004-1011, CAN-2004-1012, CAN-2004-1013, CAN-2004-1015, CAN-2004-1067
  Impact: Multiple vulnerabilities in Cyrus IMAP, including remotely exploitable denial of service and buffer overflows.
  Description: Cyrus IMAP is updated to version 2.2.12, which includes fixes for buffer overflows in fetchnews, backend, proxyd, and imapd. Further information is available from http://asg.web.cmu.edu/cyrus/download/imapd/changes.html.

- **Cyrus SASL**
  Available for: Mac OS X v10.3.8, Mac OS X Server v10.3.8
  CVE-ID: CAN-2002-1347, CAN-2004-0884
  Impact: Multiple vulnerabilities in Cyrus SASL, including remote denial of service and possible remote code execution in applications that use this library.
  Description: Cyrus SASL is updated to address several security holes caused by improper data validation, memory allocation, and data handling.

- **Folder permissions**
  Available for: Mac OS X v10.3.8, Mac OS X Server v10.3.8
  CVE-ID: CAN-2005-0712
  Impact: World-writable permissions on several directories, allowing potential file race conditions or local privilege escalation.
  Description: Secure folder permissions are applied to protect the installer's receipt cache and system-level ColorSync profiles. Credit to Eric

Hall of DarkArt Consulting Services, Michael Haller (info@cilly.com), and (root at addcom.de) for reporting this issue.

- **Mailman**
  Available for: Mac OS X Server v10.3.8
  CVE-ID: CAN-2005-0202
  Impact: Directory traversal issue in Mailman that could allow access to arbitrary files.
  Description: Mailman is a software package that provides mailing list management. This update addresses an exposure in Mailman's private archive handling that allowed remote access to arbitrary files on the system. Further information is available from http://www.gnu.org/software/mailman/security.html.

- **Safari**
  Available for: Mac OS X v10.3.8, Mac OS X Server v10.3.8
  CVE-ID: CAN-2005-0234
  Impact: Maliciously registered International Domain Names (IDN) can make URLs visually appear as legitimate sites.
  Description: Support for Unicode characters within domain names (International Domain Name support) can allow maliciously registered domain names to visually appear as legitimate sites. Safari has been modified so that it consults a user-customizable list of scripts that are allowed to be displayed natively. Characters based on scripts that are not in the allowed list are displayed in their Punycode equivalent. The default list of allowed scripts does not include Roman look-alike scripts. Credit to Eric Johanson (ericj@shmoo.com) for reporting this issue to us. More information is available here.

- **Samba**
  Available for: Mac OS X v10.3.8, Mac OS X Server v10.3.8
  CVE-ID: CAN-2004-0882, CAN-2004-0930, CAN-2004-1154
  Impact: Multiple vulnerabilities in Samba including remote denial of service and possible remote execution of arbitrary commands
  Description: Several security vulnerabilities were addressed in recent Samba releases. Security Update 2005-003 installs Samba version 3.0.10 to provide these fixes. Further information is available from the Samba security site located at http://www.samba.org/samba/history/security.html

- **SquirrelMail**
  Available for: Mac OS X Server v10.3.8
  CVE-ID: CAN-2004-1036, CAN-2005-0075, CAN-2005-0103, CAN-2005-0104
  Impact: Multiple vulnerabilities in Squirrelmail including cross-site scripting and html injection
  Description: SquirrelMail 1.4.4 addresses several security issues including various cross-site scripting exposures and the possibility of using webmail.php to include web pages from remote servers. CAN-2005-0075 is an issue fixed in SquirrelMail 1.4.4, but which does not affect the default configuration of Mac OS X Server since register_globals is not enabled. Further information is available from the SquirrelMail security site located at http://www.squirrelmail.org/changelog.php

- **Telnet**
  Available for: Mac OS X v10.3.8, Mac OS X Server v10.3.8
  CVE-ID: CAN-2005-0468, CAN-2005-0469
  Impact: Malicious telnet servers may cause local code execution
  Description: This update addresses two buffer overflows in the telnet client that could lead to local code execution by a malicious telnet server. Credit to iDEFENSE for reporting this issue.

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Published Date: Oct 10, 2016

Logic Pro/Express 7: Audio region does not play as expected after being split

This article has been archived and is no longer updated by Apple.

Sometimes after you split an audio region into two or more shorter regions, the first part of your new regions won't play back as expected. Specifically, the beginning part may not play back properly or at all if the region's anchor point appears at the very end.

This can happen if you split an audio region at the same point as its anchor. In the example below, our region starts a bit before bar 5 and ends at bar 21 in the Arrange window.

If we look at the region in the Sample Edit window, the anchor for the region appears exactly at bar 5 (the black triangle below the region). We set it this way because the downbeat falls exactly on bar 5 in this audio region (the audio before bar 5 is a pickup).

When we split the region at bar 5 and again at bar 13, our region looks like this in the Arrange window:

When we open the first region—the short one that starts a bit before bar 5—in the Sample Edit window, the anchor still appears at bar 5, but it's now at the very end of the region.

This is the cause of the issue—Logic won't play a region back properly if its anchor is at the very end. To resolve the issue: In the Sample Edit window, choose **Edit > Update Arrange Position**, then drag the anchor back to the beginning of the region, or to a point before the very end, as in this image:

Published Date: Feb 19, 2012

Logic Pro/Express 7: Core Audio driver cannot be selected

This article has been archived and is no longer updated by Apple.

In some situations, the Driver selection menu and other settings in the Core Audio preference pane of Logic Preferences (from the **Logic Pro** or **Logic Express** menu, choose **Preferences**, then **Audio**, click the Drivers tab, then click the Core Audio tab) may appear dimmed (unavailable).

This happens if Core Audio is disabled, which can occur after you remove your Logic preferences or install Logic on a fresh system without running the Setup Assistant.

To select a driver:

1. Click the Enabled button in the upper left corner of the Core Audio pane in the Preferences window. A dialog appears, asking you to reboot Logic:

2. Click OK. All the settings should now be accessible.

3. To select a driver, choose an audio interface from the **Driver** pop-up menu.

4. Another dialog appears, asking you to reboot. This time click Try (Re)Launch to initialize your selected driver.

Published Date: Oct 10, 2016

Logic Pro/Express: 7.0: Applying fades to Apple Loops makes them play in their original key

This article has been archived and is no longer updated by Apple.

If you apply a fade to an Apple Loop in the Arrange window, the portion of the loop encompassed by the fade will play at the loop's original key and tempo, rather than the key and tempo of the song. This issue occurs with Logic Pro 7.0 and Logic Express 7.0.

The core issue is that Apple Loops do not support fades, so you shouldn't assign a fade directly to one. If you'd like to achieve the effect, export the Apple Loop (in the Arrange window, choose **File > Export > Region as Audio file**). Then bring the exported file back into the Arrange window and apply the fade to it.

Logic 7.1 and later prevents this issue by disallowing fade application to an Apple Loop.

Published Date: Feb 19, 2012

Logic Pro 7: First note may be missing from exported audio file

This article has been archived and is no longer updated by Apple.

If you have a pickup note (a note that starts right before measure 1) in an Audio Instrument track and export the track as an audio file, the pickup note will be missing from the exported file.

As a workaround, move the pickup note so that it falls on or after bar 1. For example, if a MIDI note falls slightly before bar 1 (say, at 0 4 4 235), you can move the note to somewhere within bar 1. If your song has a pickup of several beats before bar 1 (or if moving the first note is impractical), select all the regions in the Arrange window and move them (including all automation data) to the right one bar so that the pickup starts at or within bar 1.

Published Date: Feb 19, 2012

Using Apple displays with computers running Windows

This article has been archived and is no longer updated by Apple.

The Apple Cinema Display product line features the industry standard DVI connector, which allows it to be connected to a variety of computer systems, including both Apple and Windows-based computers. The DVI connection, along with the VESA DDC support, removes the barriers to using an Apple display with a non-Macintosh PC. As long as your graphics card supports the full single link and/or dual link bandwidth defined in the DVI specification and incorporates DDC technology, your PC graphics card will support the Apple Cinema Display line.

The 23-inch Apple Cinema HD Display and the 20-inch Apple Cinema Display require a single link DVI signal. The 30-inch Cinema HD Display requires dual link DVI support to drive its massive amount of pixels.

The table below includes a list of video cards from a number of different manufacturers that Apple has verified to provide VESA DDC as well as DVI single link and/or dual link support. Video cards from other manufacturers that are not listed may also be compatible.

Nvidia Quatro FX by PNY Technologies

Model tested:	Apple Cinema Display (20-inch DVI)	Apple Cinema HD Display (23-inch DVI)	Apple Cinema HD Display (30-inch DVI)
FX 500	√		
FX 700	√	√	
FX 1100	√	√	
FX 3000	√	√	√
FX 4000	√	√	√
FX 540	√		
FX 1300	√	√	
FX 1400	√	√	
FX 3400	√	√	√
FX 4400	√	√	√

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Published Date: Feb 18, 2012

Logic Pro 7.0: Stops responding when initializing nodes in Mac OS X 10.4 Tiger

This article has been archived and is no longer updated by Apple.

If nodes are enabled in Logic Pro 7.0 or 7.01, Logic will stop responding when it tries to initialize Core Audio on Mac OS X 10.4 Tiger systems. To use the distributed audio feature in Tiger, you must upgrade to Logic Pro 7.1.

Published Date: Oct 10, 2016

Logic Pro/Express 7.1: US-2400 control surface detected incorrectly

This article has been archived and is no longer updated by Apple.

If you have a Tascam US-2400 connected to your computer, it will be detected incorrectly when Logic initially scans for control surfaces. The Tascam US-2400 should be detected as if it were a Logic/Mackie Control and two Logic/Mackie Control XTs. Instead the unit is detected as if it were a Logic/Mackie Control and two Mackie C4s. Additionally, the fader banks are in the wrong order. As a result, the control surface will not operate properly with Logic.

To resolve this issue, delete the control surfaces that Logic has automatically scanned and manually rescan the US-2400 by doing the following:

1. From the **Logic Pro** or **Logic Express** menu, choose **Preferences > Control Surfaces > Setup**.
2. In the window, delete the icons for any detected control surfaces.
3. From the Setup window's menu bar, choose **New> Install**. An install window appears.
4. Select Tascam US-2400 in the list.
5. Click the Scan button in the upper left corner of the Install window.

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Published Date: Oct 10, 2016

Logic Pro/Express: Plug-ins from old songs not available

This article has been archived and is no longer updated by Apple.

When you load an old song into Logic Pro or Logic Express, sometimes the plug-ins won't appear on the inserts or if they do, they appear crossed out with a diagonal line. This happens when you load a song that was created with a different type of audio driver (for example, you created the song in Mac OS 9 with an ASIO driver). Logic will often offer to automatically convert the song to Core Audio, but here are some situations where this will not occur:

- The Universal Track Mode setting for the current audio driver does not match the setting on the system that the song was created.
- The song was created with multiple audio drivers.

In this situation, it will also be impossible to insert new plug-ins. Clicking on an insert will only display No Plug-in because the wrong driver is specified in the parameter box for audio objects in the song's Environment. There are several steps you can take to resolve this issue:

1. Go to the Environment, and select all of the audio objects (take care not to select any other types of objects).
2. Go to the parameter box on the left side of the Environment window, and change the Device setting from whatever it was set to originally (ASIO, AW, and so forth) to CoreAudio. Depending on how your Environment is set up in your song, you may have to go through multiple layers in the Environment to get all of the audio objects.

Notice that all of the inserted plug-ins on your audio channel strips will disappear. The following steps correct this.
3. Choose **Audio > Audio Configuration** to open the window.
4. Choose the driver that your song was originally saved with from the window's **Device** menu.

5. From the window menu bar, choose **Edit > Copy**.
6. From the window menu bar, choose **Device > CoreAudio**.
7. From the window menu bar, choose **Edit > Paste**.

The plug-ins should reappear in their proper insert slots on each audio channel strip. If they do not, choose **Logic Pro > Preferences > Audio** and click the Drivers tab in the resulting window. Toggle the Universal Track Mode checkbox from whatever it is currently set to and then repeat steps 3-7 above. You can reset your Universal Track Mode selection after you've pasted the configuration to Core Audio.

Published Date: Oct 10, 2016

Logic Pro 7.1: Progress bar stops progressing when loading Elastic Audio tracks into RAM

This article has been archived and is no longer updated by Apple.

A new feature in Logic Pro 7.1 is Elastic Audio, which enables your recorded tracks to follow any tempo changes you make after you've recorded them. However, the progress bar that displays when Logic loads Elastic Audio tracks into RAM may stop progressing if there isn't enough RAM to load the files.

If this happens, abort the process by pressing Command-period (.).

So how much audio can you load into RAM at any given time? This will depend on the following:

- The amount of physical RAM in your computer
- The number of other open applications
- The amount of RAM being used by other applications
- The bit depth and sample rate of the audio files you're working with
- The length of the audio files
- The number and length of any Apple Loops in use
- The amount of RAM being used by the EXS-24 or other sample-based audio instruments

You can do a number of things to use the RAM on your system more efficiently:

1. Quit any other running applications.
2. Enable the Virtual Memory option for the EXS-24.
3. Work at lower sample rates or bit depths where possible.
4. Install more RAM in your computer.

Published Date: Oct 10, 2016

Mac OS X 10.4: Adding a Bluetooth fax device

This article has been archived and is no longer updated by Apple.

Faxing over Bluetooth is possible in Mac OS X 10.4 Tiger (and Mac OS X 10.3 Panther), but not all wireless carriers and phones support faxing—and this function is not supported by AppleCare.

If you do want to add a Bluetooth-Modem fax device in Mac OS X 10.4 or later, you must add it manually. **Note**: Faxing must be supported by the phone and wireless carrier, too, for this to work. Follow these steps to add the device in Tiger:

1. If you're using a Bluetooth adapter, connect it to your computer if it isn't.
2. From the **Apple** menu, choose **System Preferences**.
3. Click Print & Fax to display the preferences.
4. Click the Printing tab.
5. Click the plus sign (+) button; the Printer Browser window opens.
6. Option-click the More Printers button.
7. In the sheet that appears, choose **Advanced** from the top pop-up menu. (If you don't see Advanced in the menu, click Cancel and repeat the previous step.)
8. From the **Device** pop-up menu, choose **Bluetooth-Modem**. (If this doesn't appear, be sure that your Bluetooth adapter is connected.)
9. From the **Printer Model** pop-up menu, choose **Other**.
10. In the resulting "Choose a File" dialog, select your Mac OS X volume icon.
11. Click on the following folders—in this order—to navigate to the PrintCore.framework Resources folder:
    System
    Library
    Frameworks
    ApplicationServices.framework
    Frameworks
    PrintCore.framework
    Resources
12. Select the appropriate folder for the language you are using. For example, North American English users should select English.lproj.
13. Select Fax.ppd and click Choose.
14. Click Add.

Your Printer Browser window should look something like this after you've completed the steps:

Once you pair your Bluetooth mobile phone with your computer, you should have the ability to send faxes using the Bluetooth-Modem (of course, faxing must be supported by the phone and wireless carrier too).

Published Date: Oct 10, 2016

Logic Pro/Express: Automating plug-in bypasses is not sample accurate

This article has been archived and is no longer updated by Apple.

When you bypass DSP plug-ins in an automated mix, the actual change in state may sometimes occur slightly late. Setting the Audio preference for Sample Accurate Automation to "Volume, Pan, Sends, Plug-In Parameters" won't help.

For optimization reasons, bypassed plug-ins are removed from the CPU load, so it's not possible to change a plug-in's bypass state and have it be sample accurate. Instead, place the automation nodes for the plug-in's bypass and enabled states slightly earlier in your tracks.

Published Date: Feb 19, 2012

Mac OS X 10.4: Archived file does not retain Extended Attributes or ACLs

This article has been archived and is no longer updated by Apple.

Archiving files in the Finder (from the **File** menu, choose **Create Archive**) with Mac OS X 10.4 Tiger is a great way to "bundle up" seldomly-used files. However, doing this will cause archived files to lose any set Extended Attributes (EAs) or Access Control Lists (ACLs) metadata. This issue applies to Mac OS X 10.4 and Mac OS X Server 10.4.

Not all metadata is lost when archiving—only EAs and ACLs. Other metadata, such as EXIF information in a photo file, won't be lost.

EA and ACL metadata usually comes from a Mac OS X Server administrator. So, if you don't use files that are stored on a Mac OS X Server, you probably won't notice the difference. If you want to avoid losing EAs and ACLs, don't archive files using the Create Archive feature, or use a third-party file-archiving utility that can preserve this kind of file data.

Published Date: Oct 10, 2016

Mac OS X 10.3: Cannot receive faxes if the computer has been sleeping

This article has been archived and is no longer updated by Apple.

If your Mac OS X 10.3 computer has been in sleep mode at any time since the last restart, the computer may not accept incoming faxes. This document applies to Mac OS X 10.3 through 10.3.9.

To resolve this issue, either restart the computer before you intend to receive a fax, or use the Energy Saver preference pane to disable sleep.

If you see the message "there was a software fax error," see this document.

Published Date: Feb 18, 2012

iDVD 5.0: Free Position feature may cause buttons to be incorrectly positioned

This article has been archived and is no longer updated by Apple.
In iDVD 5.0, you can change the button positions in a theme and then save the customized theme as a favorite to create your own template. However, this may have an impact on the buttons in the original theme, causing them to be incorrectly positioned.

This can happen if you select "Free Position" in the Button section of the Settings Pane, move folders around in the menu, and then click "Save as Favorite." If you then try to use the original theme in a new project, the buttons may not be positioned correctly because your custom button positions are saved in both the favorite and in the original theme when you save a theme as a favorite.

To avoid this, update to iDVD 5.0.1.

Published Date: Oct 10, 2016

iDVD 5: Supported languages

This article has been archived and is no longer updated by Apple.

You can add additional languages to the Mac OS X default language list by clicking the Edit button in the International pane of System Preferences, and then selecting any language checkbox in the resulting dialog.

iDVD 5 supports the following languages: English, Japanese, French, German, Dutch, Italian, Spanish, French Canadian, Simplied Chinese, Korean, Traditional Chinese, Swedish, Danish, Norwegian, and Finnish.

If you move a language that iDVD does not support to the top of the Languages list and then either logout and login or restart your computer, iDVD may unexpectedly quit when you use it to burn a project to DVD or save a project as a disc image. This can occur with Mac OS X 10.3 or later.

To resolve this issue, make sure that the language at the top of the Language list in the International pane of System Preferences matches one of the supported languages when you burn iDVD projects. If it doesn't, drag one of the supported languages to the top of the list, burn your project, and then move your chosen language back to the top.

You will need to logout and login or restart the computer before trying iDVD again.

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

iDVD 5.0: Changing submenu themes may leave you stuck in map view

This article has been archived and is no longer updated by Apple.

In iDVD 5.0, you can create submenus by adding folders to a menu. If you switch to map view, you can easily change the themes of any submenu. However, if you try to undo this action, you may be unable to return to the main project window from the map view window.

To prevent this from happening, update to iDVD 5.0.1.

Published Date: Oct 10, 2016

Logic: Getting the Logic 7.1 Upgrade

This article has been archived and is no longer updated by Apple.

If you already have Logic Pro 7.0, you can get the Logic 7.1 upgrade from the online Apple Store.

Published Date: Oct 10, 2016

iPod photo: Use your camera‘s erase function to erase a media card completely

This article has been archived and is no longer updated by Apple.

You can use the Erase Card option on iPod photo (it's in the Photo Import screen) to erase files from a media card after importing photos from an attached camera or media reader. However, keep the following issues in mind:

- Selecting Erase Card can take longer than expected to complete; you may want to use your camera to erase the pictures instead.
- The Erase Card option does not delete files outside of the DCIM folder on the media card. If you want to erase your card completely, use your camera's format or erase card feature to do this.
- Certain Nikon cameras connected in PTP mode may not erase pictures. If this affects you, try connecting your camera in Mass Storage mode, or just use your camera to erase the pictures instead.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

iPod photo: How to delete imported photos from iPod

This article has been archived and is no longer updated by Apple.

Remove imported photos from iPod

Delete a roll of photos directly from iPod

1. Navigate to the main Menu.
2. Select Extras, then Photo Import.
3. Select the roll name, then Delete Roll, and then Delete.

In iTunes 7 or later

Imported photos can also be deleted from the iPod disk while it is attached to a computer.

1. Connect your iPod to your computer.
2. When the iPod icon appears in the iTunes Source list (below Devices), select it.
3. If the Summary pane isn't showing, click the Summary tab.
4. Click "Enable disk use".
5. All imported photos are located in the "DCIM" folder on the iPod disk.

Remove imported photos from iPod using iPhoto

After you import TIFF images or movie files from an iPod photo into iPhoto with the "Delete items from camera after importing" checkbox selected, the photos and movie files will still appear to be present on your iPod.

iPhoto does in fact delete these files from the iPod, but it doesn't delete the thumbnail files that iPod with color display creates to indicate that you have imported these files into it from your camera or media reader. So although the files will still appear to be in your iPod, they're not. This doesn't happen with other image formats.

Instead of using the "Delete items from camera after importing" iPhoto option to delete photos from iPod with color display, use the Delete Roll function on your iPod to delete the photo and movie files—as well as the thumbnail files—after you've imported them into iPhoto.

Published Date: Oct 10, 2016

iPod photo may seem to stop responding when importing movies

This article has been archived and is no longer updated by Apple.

Your iPod photo may appear to get stuck or stop responding while importing photos and movies from your camera or media reader. Don't worry. Most likely, your iPod is still hard at work.

This apparent situation can happen because iPod photo only generates thumbnails of images that it can display. Since it doesn't display movies, you won't see a thumbnail for a movie as it's being imported; instead you'll see the thumbnail of the previously imported image.

If the movie you're importing is very large, it may appear that your iPod is no longer responding when, in fact, it's still importing the file. Here are some ways you can tell if your iPod is still importing files:

- You will see the progress indicator and the number of items imported update on your iPod.
- The word "Importing" will flash on and off during the photo import.
- If you set your iPod to display the time in the title bar, you will see the time update.

Published Date: Oct 10, 2016

iPod: Understanding Browse Roll icons

This article has been archived and is no longer updated by Apple.

With the latest iPod Software Update you can browse a roll of imported photos on an iPod that works with the iPod Camera Connector (currently iPod photo, iPod with color display, and Fifth Generation iPod), but you may see certain icons displayed instead of a photo thumbnail. Here are the icons you may see and descriptions of what they represent.

Video camera—This indicates that the imported file is a movie. You can't view these movie files on iPod, however, you can view it on your computer after you connect your iPod to your computer and transfer the file. If you select the file on your iPod, you will see the following message: "This media file cannot be viewed or played on iPod. Use QuickTime to open this file on your computer."

Audio—This indicates that the imported file is an audio file. If you select the file on your iPod, you will see the following message: "This media file cannot be viewed or played on iPod. Use QuickTime to open this file on your computer."

Question mark—A question mark (?) in a circle means that the imported image is either not a compatible media type or the image is corrupted. For further identification, you may want to connect your iPod to your computer and locate the file in the DCIM folder. The question mark icon can also appear as a result of the following circumstances:

- You disconnected your camera during a photo import. Please note that the proper way to cancel an import is to select "Stop and Save."
- The iPod or camera ran out of power during a photo import. Make sure that both devices are fully charged prior to using Photo Import.

RAW image—This indicates the file is an unprocessed photo image file. If you select the file on your iPod, you will see the following message: "This photo format cannot be viewed on iPod. Transfer imported photos to your computer and synchronize through iTunes to display them on iPod."

Click here for more information on how to use the iPod Camera Connector.

Published Date: Oct 10, 2016

Safari 2.0: Changes to the keyboard shortcuts for selecting tabs

This article has been archived and is no longer updated by Apple.

In Mac OS X 10.4 Tiger, Safari 2.0 has new keyboard shortcuts for selecting tabs. The new keyboard shortcut for Select Next Tab is Command-Shift-right bracket (]). The shortcut for Select Previous Tab is Command-Shift-left bracket ([).

Note: Because `Shift-]` results in `}`, you may also see this key combination abbreviated to the form "Command-}", as it appears in the Window menu in Safari.

The original combinations, Command-Shift-left arrow (←) and Command-Shift-right arrow (→), still work except in these two situations: Your keyboard focus is in a text field, or you switch to a blank tab. Be sure to use the new method in these situations.

Published Date: Oct 10, 2016

About Safari International Domain Name support

This article has been archived and is no longer updated by Apple.
Security Update 2005-003 updates Safari's support for International Domain Names (IDN) to prevent lookalike characters from being used to spoof the URL displayed in the address field, SSL certificate, or status bar. Here's more information about IDN support in Safari and how Security Update 2005-003 affects it.

The Issue

Safari can display Unicode characters in URLs, allowing you to access foreign language websites using their native language. For example, you could enter the Japanese language URL "�?島.jp" to visit the website instead of using the Latin alphabet that represents that domain name to get there.

However, lookalike characters could be used to make users believe that they are viewing a different site than what they actually are. For example, the Cyrillic letter "a" could be used in place of the Latin letter "a," making it difficult for a user to tell if they are at "www.apple.com" or a malicious imposter website that's designed to look like the real one. These sites can be used to collect account numbers, passwords, and other personal information. This can affect any web browser with support for International Domain Names. Security Update 2005-003 addresses this issue.

The Solution

Security Update 2005-003 provides a user-editable list of scripts that are allowed to be displayed natively in domain names. The default list does not include Latin lookalike scripts (Cherokee, Cyrillic, and Greek) that could be used to trick users into navigating to malicious sites.

Domain names containing scripts that are not in the allowed list will be displayed in an ASCII format called "Punycode." For example, an imposter website with the URL "http://www.apple.com/" that uses the Cyrillic letter "a" would be displayed as "http://www.xn--pple-43d.com" for your protection. This conversion prevents disabled scripts from being confused with other scripts.

You can edit the list of allowed scripts to specify exactly what scripts you want displayed. Please note that adding Cherokee, Cyrillic, and Greek will enable Safari to display all scripts, and will expose you to known IDN vulnerabilities. If you have an empty list of scripts, all non-ASCII characters will be displayed in their Punycode equivalents.

You can modify the list of allowed scripts using any text editor as long as you have administrative access. This list is located at:

/System/Library/Frameworks/WebKit.framework/Versions/A/Resources/IDNScriptWhiteList.txt

Related documents

108009 Safety tips for handling email attachments and content downloaded from the Internet

Published Date: Oct 10, 2016

QuickTime 6 for Windows: QuickTime Player unexpectedly quits when selecting Hot Picks

This article has been archived and is no longer updated by Apple.

If you are using QuickTime 6 for Windows and you have modified QuickTime Player Preferences so that the "Open movies in new players" option is not selected, QuickTime Player may unexpectedly quit when you click the Hot Picks button.

To prevent this, reselect the "Open movies in new players" option in QuickTime Player Preferences.

Published Date: Feb 18, 2012

Logic Pro 7: Node drops offline when loading an Ultrabeat Kit

This article has been archived and is no longer updated by Apple.

If an Ultrabeat kit that contains samples is assigned to a node, the connected node may drop offline after the samples are loaded, and an error dialog may appear, indicating that the connection to the node has been lost.

This issue only occurs on systems using 100-Megabit Ethernet for node connections. The system requirement for nodes in Logic Pro specifies Gigabit Ethernet for Distributed Audio Processing. When assigned to a node, Ultrabeat will only work reliably when both the master and node computers are Gigabit Ethernet-enabled. Applicable network hardware (such as switches or hubs) must also be Gigabit-enabled.

Published Date: Oct 10, 2016

Final Cut Pro: Modifications to Photoshop layers may cause unexpected scaling

This article has been archived and is no longer updated by Apple.

If a layered Photoshop image (.PSD) is imported into a Final Cut Pro project, and then later modified in Photoshop (via Final Cut Pro's Open In Editor command), changes made to a layer's content may appear to be the wrong size or aspect ratio when viewed in Final Cut Pro. This can happen with Photoshop layers that are partially, or mostly empty.

When Final Cut Pro first imports a layered .PSD file, it evaluates each layer in the file to determine how it should be handled. One part of this evaluation process sets the boundary size for the layer. Although the .PSD file might have an image size of 1280 X 720, a layer in that file might have visible content which covers only a portion of that area. Final Cut Pro sets the boundary size for each layer based on the extent of visible image content in that layer.

If the Open In Editor command is used to make changes to the .PSD file, Final Cut Pro can update the project to reflect those changes, but the boundary size for a layer remains fixed. Changes made to the layer in Photoshop will be scaled in Final Cut Pro to the same dimensions that described the visible extent of that layer when it was originally imported.

The following images illustrate how layer content might be unexpectedly scaled after modification.

This image shows an imported two-layer Photoshop file in Final Cut Pro's Canvas, displayed in Image+Wireframe mode. The wireframes show that the white background on track 1 takes up the full area of the Canvas. The green circle is a layer in the .PSD file, and its wireframe shows that its boundary describes a square which encompasses just the circle.

This image shows the same .PSD file after being sent from Final Cut Pro to Photoshop via the Open in Editor command. The red circle has been added to the same layer which contains the green circle.

This image shows what happens after the file is saved in Photoshop. Upon return to Final Cut Pro, the layer is updated to reflect changes, but the layer's boundary size and shape are not updated. The boundary which described the extent of the layer's visible content at the time of its import now contains the modified visible extent of the layer.

To compensate for the scaling behavior in this scenario, you can use Final Cut Pro's wireframe handles in the Canvas, or Motion parameters in the Viewer to adjust size, aspect ratio and position. If that's not sufficiently precise, you can prevent the scaling by predefining the extent of the layer's visible content in Photoshop before you import the .PSD file into Final Cut Pro. Since you probably don't want to compromise the look of your project, consider a method such as the one outlined below to unobtrusively predefine the boundary of the layer's content.

Example

1. In Photoshop, select the layer and select a single pixel in a corner of the image. (i.e., the absolute, upper left-hand corner of the image).
2. Fill the pixel with a color that will match as closely as possible the background color in your project.
3. Set the pixel to have 1% opacity.
4. In the diagonally opposite corner, set another pixel the same way.
5. Create the rest of the layer as you normally would, or use this as a template.

These steps will define the boundary of the layer's visible area to be the the entire area - the same as the image's dimensions. If content is added to the layer after being imported into Final Cut Pro, the scaling described above will not occur. And because the pixels are in the far corners of the image, and are 99% transparent, they should be hard to detect by viewers (and will also be in the overscan area, and thus unseen on standard televisions).

Note: Avoid creating additional layers in a .PSD file that has already been imported into a Final Cut Pro Project.

TA22999_Final_Cut_Pro_Modifications_to_Photoshop_layers_may_cause_unexpected_scalin

For more information about using .PSD files in Final Cut Pro, please refer to Final Cut Pro Help.

This document will be updated as more information becomes available.

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Published Date: Feb 20, 2012

Logic Pro 7: Audio artifacts when using Pitch Correction

This article has been archived and is no longer updated by Apple.

When you use the Pitch Correction plug-in on audio tracks that have sudden large changes in pitch, the plug-in may introduce audio artifacts if the Pitch Correction "Response" parameter is set to respond too fast. To resolve this issue, try lowering the Response setting until the artifacts are no longer audible.

Published Date: Oct 10, 2016

Shake: Motion projects are ignored in Render Disk FlipBook

This article has been archived and is no longer updated by Apple.

If an imported Motion project is included in a Shake script, and you choose Render Disk FlipBook, the Motion project contents will not be included in the resulting Disk FlipBook. Other nodes will be rendered appropriately, but the Motion node will not be rendered.

As a workaround, choose Render FlipBook instead, or output the node tree using a FileOut node.

Published Date: Oct 10, 2016

Logic Pro 7: Grooveshifter causes a track‘s initial audio to fade in

This article has been archived and is no longer updated by Apple.

When you insert the Grooveshifter plug-in on a track, it causes the track's initial audio transient to fade in over a period of a second or so, rather than play with its normal attack. Playback is normal from that point onward, even when cycling.

This happens because Grooveshifter needs to be "primed" with audio before it can play, which causes the initial bit of audio fade in. You can compensate for this by choosing **File > Song Settings > Audio**, then turning on "Playback Pre-roll." With Playback Pre-roll enabled, the initial audio transient played through the Grooveshifter plug-in will be preserved.

Published Date: Oct 10, 2016

iPod: Compilations menu option in Music menu

This article has been archived and is no longer updated by Apple.

If you have an iPod with a color display (including iPod photo and iPod nano) you can add a Compilations option to the Music menu on iPod to display songs that are part of a compilation. To enable this menu option:

1. Select **Settings** in the main menu.
2. In the Settings menu, select **Compilations** to turn the setting on or off

The Music menu now displays a menu option called Compilations. When you select it, iPod will display all songs that are part of a compilation. If you see songs listed in the Compilations menu that shouldn't be there, or if certain songs are missing from the menu, follow these steps:

1. In iTunes, select a song.
2. From the **File** menu, choose **Get Info**.
3. Click the Info tab.
4. To make the song display as part of a compilation, select the "Part of a compilation" checkbox. To change it so that it's not part of a compilation, deselect this checkbox.

If you have an iPod photo, your iPod may need to be updated with the latest iPod Updater to see the Compilations option.

If you're not sure what iPod model you have you can check here.

Published Date: Oct 10, 2016

Logic Pro 7.1: Follow Tempo setting changes without explanation

This article has been archived and is no longer updated by Apple.

In some situations, regions that you haven't explicitly set to "Follow Tempo" will have this feature enabled. In other cases, regions that had been previously enabled to Follow Tempo are no longer enabled.

Although the Follow Tempo parameter for elastic audio can be enabled and disabled in the Region Parameter box, it's actually a property of the audio file. This means that if you enable Follow Tempo for a region, all other regions derived from the same audio file will also have Follow Tempo enabled. Likewise, if you disable Follow Tempo for a region, all other regions derived from the same audio file will have Follow Tempo disabled.

If you want to have independent control over the Follow Tempo parameter for different regions derived from a single audio file, there are a few methods. You can select the regions that you don't want to follow the tempo, and then choose **Audio > Convert Regions to New Audio Files** from the Arrange window's local menu. The regions will be converted into normal, independent audio files that will not follow the tempo if you change it. This method works best if the song is still in the same tempo that the audio file was originally recorded at; converted audio files will always play at the original recorded tempo.

If you've changed the tempo of the song and wish to "lock" some regions to the new tempo, use the Export Region function instead. Select a region that you want to follow the tempo, and choose **File > Export > Region as Audio File**. Be sure to select the "Add resulting files to Audio Window" checkbox so that the exported region is added to your song. Then drag the region from the Audio window into the Arrange window in place of the original. This file will now play at the tempo that the song was set to at the time of export, rather than the tempo at which the region was originally recorded.

Published Date: Oct 10, 2016

Apple Location Manager: Frequently Asked Questions (1 of 3)

This article contains frequently asked questions (FAQ) and answers regarding Apple Location Manager. Additional Apple Location Manager FAQ articles are listed at the bottom of this article.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. What is the Apple Location Manager?
2. How does the Location Manager work?
3. What are the hardware and software requirements to run Location Manager?
4. How can I obtain Apple Location Manager?
5. How do I install the Location Manager?
6. What if I do not want to install all of the Modules that come with Location Manager? Somehow a module has became damaged, and I only want to install just that Module?
7. What if I decide I want to remove the Location Manager?
8. How do I open the Location Manager? Where is it located?
9. Is there on-line help or an Apple Guide for the Location Manager?
10. How do I create a Location in the Location Manager?
11. What are the capabilities of the different Location Manager Modules?
12. How do I add a Module to a Location that I have created?
13. I created a Location and have added the Modules I want, and do not want to ever change it, can I use the Lock check box in the Get Info window to lock it?
14. I want the Location Manger to ask me which Location I wish to use on startup?
15. I have set the Location Manager's Preferences to always ask for a Location on startup. I turn on my computer and go get a cup of coffee but when I come back I already have the desktop?
16. How do I change to the different Locations I have created?

Question 1: What is the Apple Location Manager?

Answer: Apple Location Manager software makes it easy for PowerBook users to move from one Location to another without having to spend a lot of time manually reconfiguring their computer with every move. The Location Manager allows you to quickly change many settings at one time.

Question 2: How does the Location Manager work?

Answer: Apple Location Manager allows users to assign specific settings for a variety of capabilities including networking, printers, time zone, file sharing, sound, frequently used applications, and even which extensions need to be in use. Once a Location is set up, a user simply selects that Location and the system recognizes the user's preferences for that environment.

For example, a typical PowerBook user might have two Locations, named "Home" and "Office", defined for a single PowerBook. When "Home" is selected, the printer becomes a StyleWriter printer connected via serial port, File Sharing is turned off, and Apple Remote Access and Claris E-mailer are automatically opened. When "Office" is selected, the printer becomes the office LaserWriter, File Sharing is turned on, and the network connection is changed to the correct office Ethernet settings.

Question 3: What are the hardware and software requirements to run Location Manager?

Answer: You must be running 7.6 or greater, and it will only install on a PowerBook. Also, version 2.0.1 is available for use with Mac OS 8.1 and is supported on any Macintosh computer that supports Mac OS 8.1.

Question 4: How can I obtain Apple Location Manager?

Answer: The Location Manager comes preinstalled on some PowerBook units. Check your control panels to see if it is already installed. You may also download it from the Older Software Downloads page of Apple Downloads (search for the link "Macintosh/System/Mac_OS_8.1_Update/Location_Manager_2.0.1.smi.bin"). This file will decompress into a folder named "Location Manager Install" which contains:

- Apple Location Manager Read Me
- Installer
- Install Location Manager
- Tome

For directions on how to install, please read the "Apple Location Manager Read Me" file.

Question 5: How do I install the Location Manager?

Answer: Always use the Installer program to install Apple Location Manager. The software may not work correctly if you try to copy or drag it to the System Folder. For directions on how to install, please read the "Apple Location Manager Read Me" file.

Question 6: What if I do not want to install all of the Modules that come with Location Manager? Somehow a module has became damaged, and I only want to install just that Module?

Answer: The Location Manager Installer supports custom installing. You can choose to install any of the following:

- Apple Location Manager control panel
- All the Location Manager Modules or you can click on the arrow and chose to install any of the following:
  - Auto-Open Item
  - Default Printer
  - Extensions Manager
  - File Sharing
  - Network
  - Sound
  - TimeZone
- Control Strip Module for Location Manager
- Location Manager Apple Guide

Question 7: What if I decide I want to remove the Location Manager?

Answer: The Installer also has a Custom Remove. You may choose this option by using the pop-up menu in the top left hand corner in the Location Manager Installer.

Question 8: How do I open the Location Manager? Where is it located?

Answer: You can access the Location Manager through the control panels in the Apple Menu, or by using the Location Manager's Control Strip.

Question 9: Is there on-line help or an Apple Guide for the Location Manager?

Answer: Yes, the Location Manager has both Balloon Help, and an Apple Guide. To access either of these use the Guide menu in the right hand side of the menu bar and select either Show Balloons or Mac OS Guide. Also you can bring up the Location Manager's Apple Guide by clicking on the yellow question mark in the top right hand corner of the Location Manager window.

Question 10: How do I create a Location in the Location Manager?

Answer: Open the Location Manager. In the Location Manager window click the New button on the right hand side. It will bring up a new "untitled" window. Type in a name for this Location in the "Location Name" field. Then select "Save Location" in the File menu. It will rename the window to what you typed in the "Location Name" field. You can also see the "How do I create a new location?" in the "How do I" topic area of the Location Manager Guide, available by clicking on the yellow question mark in the top right hand corner of the Location Manager window. Note: To avoid confusion, do not use the name "None (off)" for a location you create with Apple Location Manager. This is the phrase you use to turn off Location Manager or to select none of the existing locations in the control panel's pop-up menu.

Question 11: What are the capabilities of the different Location Manager Modules?

Answer: Overview of the Modules that come with Location Manager 1.0.

- Auto-Open Item
  This Module will open a file or program automatically when you change to a Location that contains this Module. When you add this Module to your Location it brings up an Open Dialog box for you to choose the application or document you wish to have opened. Select the file or program you wish to Auto-Open and then click the Add button in the middle of the window. To open more than one item when changing to a Location, add this Module multiple times.
- Default Printer
  Choosing this Module will change the default printer. To use this Module select the printer you wish to have in the Chooser and then add the Module Default Printer. For instructions on how to change your default printer, see "How do I print?" in the "Printing" topic area of the Mac OS Guide, available in the Guide menu.
- Extensions Manager
  This Module changes the extensions that are to be in effect for this Location. Before trying to add this Module, create a Set inside the Extensions Manager control panel for the Location you will be using. (See note below)
- File Sharing
  This Module will turn File Sharing on or off. First set the Sharing Setup control panel to the state you wish to save with this Location. For instructions on how to set the Sharing Setup control panel, see "How do I give others access to my files?" in the "Sharing Files" topic area of the Mac OS Guide, available in the Guide menu. Then open a Location and add this Module.
- Networking
  This Module will switch between Configurations of the AppleTalk and TCP/IP control panels only. This Module will not allow you to save a setting named "Default". You will need to use the AppleTalk and TCP/IP control panels to create multiple Configurations prior to saving the current setting with Location Manager. NOTE: It is usually best to name these Configurations after the Location you will be using it in, and not after what the Configuration changes. Choose names like "Office" or "Home" instead of "Ethernet". This way when the computer reports it is changing to the configuration "Ethernet" and for some reason this Configuration has been set to change the AppleTalk control panel to

the Printer/Modem port it will not be so confusing. For instructions on how to create these settings in the AppleTalk and TCP/IP control panel, see "How do I change AppleTalk settings all at once?" and "How do I change TCP/IP settings all at once?" in the "Networks" topic area of Mac OS Guide, available in the Guide menu. NOTE: The current version as of this writing (which is 1.0) of this module is not capable of changing to different Configuration of the PPP control panel that is part of OT/PPP.

- Sound
  This Module saves and restores the volume level for sound out on the computer. For instructions on how to change the sound volume, see "How do I adjust the speaker or headphones?" in the "Sound" topic area of the Mac OS Guide, available in the Guide menu.
- Time Zone
  This Module will save the settings of the Date & Time and Map control panels. Use the Date & Time control panel to change your time zone. Use the Map control panel if you wish to set your Location to somewhere that isn't in Date & Time. For instructions on how to change these control panels, see "How do I set my Location?" in the "Customizing Your Computer" topic area of Mac OS Guide, available in the Guide menu.

Note: It is usually best to name this Set after the Location you will be using it in, and not after the Set changes. Choose names like "Office" or "Home" instead of "7.6 Only". You can do this by going into the extensions manager and selecting the Duplicate button in the bottom right hand corner, it will ask you to name the set. You can also see "How do I manage System Folder extensions?" in the "Customizing Your Computer" topic area of Mac OS guide, available in the Guide menu. Then change this new set to have the extensions you want. Leave this set active and then when you go into the Location Manager and Add the Module Extensions Manager it will add this set. This Module only captures the name of the extensions set. If you use the Extensions manager control panel to alter the contents of a set, you do not need to update this Module. When you change to a different Location that changes the Extensions Set you will be given the option to Restart the computer to activate this new set of extensions.

Question 12: How do I add a Module to a Location that I have created?

Answer: After you have created a Location, you can add a Module by clicking on it and then selecting the Add button. Make sure you have the settings for this module set the way you want, before adding it. Some Modules require that you create a configuration with the settings that you wish before adding them, such as the Extensions Manager Module or the Networking Module.

Question 13: I created a Location and have added the Modules I want, and do not want to ever change it, can I use the Lock check box in the Get Info window to lock it?

Answer: The Location Manager can not use Locked Locations or Locations on a locked volume and will ignore them.

Question 14: I want the Location Manger to ask me which Location I wish to use on startup?

Answer: Under the Edit menu, while the Location Manager is the active application, you can select Preferences. In this dialog box you can change the Startup Switching preference. You may select to have the Location Manager at startup ask you to select a Location:

- Never
- Always
- If I hold down the spacebar

Question 15: I have set the Location Manager's Preferences to always ask for a Location on startup. I turn on my computer and go get a cup of coffee but when I come back I already have the desktop?

Answer: The Location Manager will only display this dialog box for a few minutes, and if you do not change it, will leave the currently selected Location as the active one and continue the startup process.

Question 16: How do I change to the different Locations I have created?

Answer: You can change from one Location to another several ways. You can use the Location Manager control strip module. It looks like two foot prints. You can go to the control panel Location Manager and use the pop up menu "Current Location" to change to a different Location. You can also set Location Manager's preferences, located in the Location Manager's Edit menu, to have it either always ask for you to select a Location on startup, or if you hold down the spacebar it will bring up a dialog box asking you to choose a Location.

Other Apple Location Manager FAQ's can be found in the following articles:

Article 31331: **Apple Location Manager: Frequently Asked Questions (2 of 3)**

Article 31332: **Apple Location Manager: Frequently Asked Questions (3 of 3)**

Published Date: Feb 20, 2012

Mac OS X 10.4 Tiger: "Connection failed" error when connecting to an AFP server

This article has been archived and is no longer updated by Apple.

Apple Filing Protocol (AFP) service is known by several names, including File Sharing, Personal File Sharing, AppleShare, and Apple File Service. Some AFP servers can only share over the AppleTalk protocol; they don't offer sharing over TCP/IP, which is now the preferred protocol. If you try to connect to an AppleTalk-only AFP server from a Mac OS X 10.4 Tiger computer, this message will appear:

> "Connection failed. This file server uses an incompatible version of the AFP protocol. You cannot connect to it."

This happens because Tiger no longer supports connecting to AFP over the AppleTalk protocol.

As a solution, enable the TCP/IP protocol on the AFP server if it offers this option. If no TCP/IP option is available, connect to the Tiger computer from the computer that is the AppleTalk-only AFP server (instead of trying to connect from the Tiger computer to connect to the older computer). This method works because AppleShare client software on the older computer can connect to a Tiger computer over TCP/IP, even if it can't offer service over TCP/IP.

This may also affect third-party AFP server products. Be aware that some affected AFP servers have a TCP/IP option, but others don't.

Some AFP services that *do not* have a TCP/IP option include Personal File Sharing in Mac OS 8.6 and earlier, and the AppleShare server suite. Some AFP services that *do* have a TCP/IP option include Mac OS 9 File Sharing, and the AppleShare IP server suite.

Published Date: Oct 10, 2016

Mac OS X Server: Join Kerberos dialog may show incorrect information

This article has been archived and is no longer updated by Apple.

In Server Admin, if you click the Join Kerberos button immediately after configuring Directory Access to bind to a directory system (such as Active Directory), the Join Kerberos dialog may appear blank or contain incorrect prompts, such as a request for Kerberos realm or DNS server.

Some of the required network information takes a moment to populate after binding to a directory system, so you can avoid the issue by simply waiting 30 to 60 seconds before clicking the Join Kerberos button.

Published Date: Oct 10, 2016

Logic Pro/Express 7.1: Issues with Follow Tempo when opening GarageBand songs in Logic

This article has been archived and is no longer updated by Apple.

When you open GarageBand 2 songs in Logic Pro 7.1 or Logic Express 7.1, there are some differences in how Follow Tempo will work with audio tracks, depending on whether the song was created in GarageBand 2.0 or 2.01.

Audio recorded directly in Logic 7.1 can follow subsequent tempo changes or changes to the Project Key (initial key signature). Likewise, audio recorded in GarageBand 2.0 or later can also follow tempo and key transpositions when the song is opened in Logic 7.1. However, there are a couple of important differences in how this is achieved.

Songs created in GarageBand 2.0

When you open a GarageBand 2.0 song in Logic 7.1 and enable the Follow Tempo feature in the Region parameter box, this allows the audio files to follow tempo changes in Logic, but it doesn't allow them to follow the project key. If you want to transpose audio that was originally recorded in GarageBand 2.0, use the Transpose parameter that appears in the Region Parameter box after you enable Follow Tempo.

Set the Transpose value to whatever number of semitones is necessary for the audio to play in the same key as the Logic song. In the picture above, we transposed our audio up two semitones to change the key from C to D.

Songs created in GarageBand 2.01 or later

When you open a GarageBand 2.01 or later song in Logic 7.1 and enable the Follow Tempo feature, this allows the audio file to follow tempo changes and the project key in Logic. To make audio recorded in GarageBand 2.01 play in the same key as the Logic project (no matter what key it was originally recorded in), just set the initial key signature in the Signature track to the same one you're using in Logic. The audio will automatically be transposed to the proper key.

Published Date: Feb 19, 2012

GarageBand 2.0 song does not automatically follow key change

This article has been archived and is no longer updated by Apple.

When you record a song in GarageBand 2.0.1 or later, all tracks automatically follow any subsequent changes you make to both the key and tempo. However, a song recorded in GarageBand 2.0 will only follow tempo changes—not key changes.

You can easily transpose a GarageBand 2.0 recording to a new key by following these steps:

1. Select an audio recording in the song.
2. Click the Edit button to open the Audio Editor.
3. Set the Region Pitch slider to the number of semitones needed to transpose the region to the song's new key.

   In the example above, we transposed our audio recording up two semitones to change the key from C to D.
4. Repeat for each audio recording in the song.

Published Date: Feb 19, 2012

iPhoto 5: Norton AutoProtect may prevent export

This article has been archived and is no longer updated by Apple.

The AutoProtect feature of Norton AntiVirus may prevent iPhoto from exporting a slideshow to QuickTime or iDVD. When this happens, you will see this message:

> An error occurred while exporting the slideshow.

To resolve the issue, temporarily turn off AutoProtect in Norton AntiVirus.

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Published Date: Oct 10, 2016

Final Cut Pro 5 will not open without QuickTime 7

This article has been archived and is no longer updated by Apple.

If Final Cut Pro 5 won't open after you install it, be sure that you have QuickTime 7 installed. QuickTime 7 is required to run Final Cut Pro 5. To see what version of QuickTime you have:

1. Open QuickTime Player.
2. From the **QuickTime Player** menu, choose **About QuickTime Player** to open the About window.

Your QuickTime version number is displayed in the About window. You can download the latest version of QuickTime from here.

For more information on Final Cut Pro requirements, please see "Technical Specifications for Final Cut Pro."

Published Date: Feb 20, 2012

Final Cut Pro: Notes for setting Scratch Disks on Xsan

This article has been archived and is no longer updated by Apple.

This document discusses setting Final Cut Pro's Scratch Disk folders for multiple users on an Xsan volume. Numerous configurations are possible, but planning the Scratch Disk settings is an important consideration, as it may seriously affect the way that Final Cut Pro is able to access resources on Xsan.

- **Don't designate the root level of the Xsan as a Scratch Disk.**
  In general, the root level of the Xsan volume should be write-prohibited for Final Cut Pro users. If you do designate the root level of the volume as Scratch Disk, other users may see an alert message when opening Final Cut Pro that says:

  > "Unable to set scratch disk. The selected directory is on write-protected or non-writable media."

- **Don't share the same Scratch Disk location between two or more users.**
  Ideally, each user should have a unique folder on the Xsan volume that will act as Final Cut Pro's Scratch Disk for that user. Permissions for a user's folder should be set to allow that specific user to have read/write access. While it is possible for multiple users to share a Scratch Disk, Apple advises against this configuration, as it may lead to unexpected behaviors.

- **If using Final Cut Pro 6.0.1 and earlier, use POSIX. If using Final Cut Pro 6.0.2 and later, use an Access Control List (ACL).**
  If you use an ACL to designate a folder's privileges with Final Cut Pro 6.0.1 and earlier (including Final Cut Pro 5.x), it might not perform as expected if set as a scratch disk, or may not be configurable as a scratch disk.

  Instead, for example, if you want to make a user's Capture Scratch folder readable, but not writable by other users, do so with standard UNIX file permissions, as opposed to an ACL.

If a user on the Xsan has set the Scratch Disk location to a shared folder, and other users are subsequently unable to open Final Cut Pro, or make changes the Scratch Disk location, delete the Final Cut Pro preferences for affected users, and then set the Scratch Disk in accordance with the guidelines listed above.

For more information on the topics discussed here, refer to the Final Cut Pro User's Manual, and to the Xsan Admin Guide.

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

Motion 1: Changing audio sample rates could cause audio not to play

This article has been archived and is no longer updated by Apple.

If your computer's audio output was set to a particular sample rate when you created a Motion project and then you change that sample rate, you may not be able to hear your project's audio tracks when you open it. This can happen even when the audio tracks and waveforms are properly displayed.

This issue can occur with both your computer's built-in audio outputs and third-party sound cards.

For example, let's say you set the Digital Out/Headphones source in Audio MIDI Setup to 44.1 KHz. Then you create a new Motion project, do some work with graphics and audio, and save it. If you go back to Audio MIDI Setup and change the Digital Out/Headphones source to 48 KHz, the next time you open your Motion project, the sound won't be audible.

To correct this, you can edit the project file:

1. Close your Motion project.
2. Make a backup of your Motion project file.
3. Open your original Motion project with TextEdit (you can just drag the project onto the text edit icon in the Dock or your applications folder.)
4. Find in the document (Command-F will bring up the Find window).
5. Look for a line that begins with <audioSampleRate> .
6. Select and delete the entire <audioSampleRate> line (see illustrations below).
7. Save the changed Motion project file.
8. Open your project in Motion and confirm that you can now hear audio.

Audio MIDI Setup is where you can configure the audio input and output settings on your computer. Click here to learn more about Audio MIDI Setup.

Note: There may be a second entry of <audioSampleRate> under <exportSettings>. This should be left in the project file.

This document will be updated as more information becomes available.

This issue does not occur in Motion 2.

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Published Date: Oct 10, 2016

iPod photo: Unexpected slideshow behavior after upgrading to 1.1

This article has been archived and is no longer updated by Apple.

After upgrading iPod photo from 1.0 to 1.1, you may experience certain unexpected slideshow behavior. This may occur if you do not connect iPod photo to iTunes 4.7.1 after upgrading.

One or more of the following may occur:

- Certain transitions, such as "Push Across", do not work during a slideshow.
- Selecting Random transitions does not work as expected.
- A black screen may occur during slideshow.
- Photo colors do not appear correctly and may look like "abstract art."

The solution is to connect iPod photo to iTunes 4.7.1 after upgrading iPod photo from 1.0 to 1.1. Allowing iTunes to update your photo library on iPod photo should keep this issue from occurring. Restoring iPod photo software 1.1 instead of upgrading from 1.0 to 1.1 should also prevent this from occurring.

Published Date: Oct 10, 2016

Removing a Palm OS device from the iSync device list

This article has been archived and is no longer updated by Apple.

Before you remove a Palm OS device from your iSync device list, make sure that the Palm HotSync application isn't running. If it is, quit it, then remove the Palm device in iSync. Otherwise, the Palm device may reappear in iSync.

If you decide you want to add the device back again later:

1. Open HotSync.
2. From the HotSync menu, choose Conduit Settings.
3. Select the iSync Conduit in the list.
4. Click the Conduit Settings button.
5. Select "Enable iSync for this Palm device".

The Palm device icon should now appear in the iSync window.

Related document

- 302120: iSync 2: How to set up a USB Palm OS device to sync with your computer
- 302227: iSync 2: How to sync a Palm OS device over Bluetooth

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Published Date: Oct 10, 2016

iSync phone syncing issue may be related to third-party software

This article has been archived and is no longer updated by Apple.

If you are having issues syncing your phone with iSync (for example, you may experience unexpected disconnections), temporarily disable any third-party software on the phone. The software may be trying to read or write to the same contacts or calendar data as iSync, which can cause the disruption.

Some such applications include PocketTorch AquaCalendar, and Sony Ericsson Desktop (available on Sony Ericsson P900 series phones).

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Published Date: Oct 10, 2016

Mac OS X 10.3 or later: System won‘t restart after installing SUIExtras.pkg

This article has been archived and is no longer updated by Apple.

If you install the SIUExtras.pkg on Mac OS X 10.3 or later, it will prevent your system from restarting.

This package is used by System Image Utility for creating Mac OS X 10.3 NetInstall images; it's not meant to be installed under any circumstances. The package's `/etc/rc.cdrom` file is the item that prevents your computer from restarting because it tries to force the Installer to launch. You can resolve this issue by removing the file as follows:

1. During startup, press and hold Command-S to start up in single-user mode.
2. Type each of the following commands, pressing Return after each one.
   Warning: Be sure to type the commands exactly as they appear below. Misusing the "rm" command can cause unintended data loss.

```
fsck -yf
mount -uw /
rm /etc/rc.cdrom
exit
```

After performing these commands, the system will restart normally. The package also installs files at /System/Installation/CDIS and /Applications/Utilities/Startup Disk.app. You can delete these in the Finder after the system starts up.

Published Date: Oct 10, 2016

Mac OS X Server: Migrate data from NetInfo to LDAP only on a NetInfo master

This article has been archived and is no longer updated by Apple.

If you want to migrate data from NetInfo to LDAP, you must do this on the NetInfo master. To verify that the system you are upgrading on is not a clone, execute this command in Terminal:

```
nicl .. read /
```

This displays the master property. Here's an example:

```
master: xserver/network
```

The first part of the master property is the host name. This is the system on which you need to perform the migration. You can find this system's IP address by entering the following command in Terminal, where <master> is the name of your master:

```
nicl .. read /machines/<master>
```

In our example command above, we got the following output:

```
nicl .. read /machines/xserver name: xserver ip_address: 10.1.1.100 serves: ./network xserver/local
```

Therefore, our system at IP address 10.1.1.100 is the master in this case. This would be the system on which we'd perform our migration. Do the same, noting your variables accordingly.

Published Date: Feb 18, 2012

iSync: Can‘t initiate session with Motorola phone via USB

This article has been archived and is no longer updated by Apple.

Are you having trouble syncing your Motorola phone with iSync via USB? If you look at the sync log, you may see a message stating that iSync "Can't initiate session."

To resolve this issue, try disconnecting the phone's USB cable from your computer, then reconnecting it and syncing again.

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Published Date: Feb 18, 2012

iSync 2: Uppercase letters in phone numbers get converted to numbers

This article has been archived and is no longer updated by Apple.

When you sync a phone with your computer using iSync 2 (part of Mac OS X 10.4 Tiger), any Address Book phone number that contains uppercase (capital) letters will be automatically converted into all numbers on your phone.

For example, if you have the phone number 800-555-CALL in Address Book and then use iSync 2 to sync contacts with your phone, the phone number will show up as 800-555-2255 when viewed on your phone.

iSync translates uppercase letters into numerals so that the dialing feature works with some phones. Please note that lowercase letters are not translated because some phones use lowercase letters for commands (for example, the letter *p* is used to pause on some phones).

Published Date: Feb 18, 2012

AirPort: Wired client cannot initiate base station modem dialing

This article has been archived and is no longer updated by Apple.

If you use the built-in modem on your AirPort base station to connect to a dial-up Internet Service Provider (ISP), you must initiate the connection attempt from a wireless client. Clients that are connected to the base station LAN port over Ethernet cannot trigger modem dialing.

After the dial-up connection is established, wired clients will be able to use the connection; they just can't start it when the connection is not already open.

This issue affects all AirPort and AirPort Extreme base station models with a built-in modem.

Published Date: Feb 18, 2012

iSync 2: "iSync Agent" error appears when setting up a phone for syncing

This article has been archived and is no longer updated by Apple.

If you have less than 300k of memory available on your Symbian OS-based phone when you try to set it up in iSync 2 (included with Mac OS X 10.4 Tiger), you'll get the following error message:

> "An error occurred while copying iSync Agent to your phone. iSync could not copy iSync Agent to your phone. Please check the following: Your phone is turned on. Bluetooth is turned on on your phone."

Symbian OS-based phones (such as the Sony Ericsson P800 or P900, Nokia 3600, Nokia 3620, Nokia 3650, Nokia 3660, Nokia 6600, Nokia 7650, and Nokia N-Gage) need at least 300k of memory available for iSync 2 to set them up for syncing. A good way to make more memory available on your phone is to delete pictures, sounds, movies, or other applications that you don't want anymore (check the documentation that came with the phone for more information).

After making at least 300k of memory available, turn the phone off and back on again, then use iSync 2 to set it up for syncing.

If you're not sure what type of OS your phone uses, check the documentation that came with it to find out whether it's a Symbian OS device or not.

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Published Date: Oct 10, 2016

About Xsan 1.0.1 Update

This article has been archived and is no longer updated by Apple.

The Xsan 1.0.1 update delivers improved reliability and compatibility for Xsan 1.0, and is recommended for all users of Xsan. For tips on using an update, see Upgrading Xsan Controller Software.

Enhancements

- Use the "mv" command to move files from Xsan (ACFS) to Mac OS Extended (HFS+) volumes.
- Save files over 4 GB via SMB/CIFS to an Xsan volume hosted on Mac OS X Server.
- Greater server stability when resharing Xsan volumes via NFS.
- Eliminates spontaneous metadata controller failovers that can result in decreased file performance.

System Requirements

- Any hardware supported by Xsan 1.0
- Xsan 1.0
- Mac OS X 10.3.9 or Mac OS X Server 10.3.9

Published Date: Oct 10, 2016

About the Xsan 1.1 Updates

This article has been archived and is no longer updated by Apple.

There are three different software updates available for Xsan 1.1. These updates apply to Mac OS X client and Server versions 10.3.9 and later.

Installation

The following updates are available for Xsan 1.1, which can be installed using Software Update or by downloading a standalone update installer from Apple Downloads:

- Xsan 1.1 Update for 10.3.9
- Xsan 1.1 Update for 10.4
- Xsan Admin 1.1 Update

Of the first two, you only need to install the one that corresponds to your operating system version (an upgrade scenario is an exception). The third is required for Xsan 1.1 administration (and is also recommended for Xsan 1.0 administration) but only needs to be installed on admin computers.

Software Update Installation
Software Update may have referred you to this document. For more information on using this feature, see "Mac OS X: Updating your software."

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer
A standalone installer is also available from Apple Downloads .

Remote Installation
If you need to install the update on a remote computer, you can do so using the "softwareupdate" command-line tool.

Enhancements

The following items are some of the enhancements and improvements included in each Xsan 1.1 update:

Xsan Admin 1.1 Update
This update improves reliability for remotely administering, configuring, and maintaining Xsan 1.1 deployments. It includes fixes for:

- Labeling Fibre Channel LUNs and creating new Xsan volumes.
- Displaying progress messages while performing lengthy operations.
- Preventing manually modified configuration settings from being overwritten during a save.
- Accurately reporting Fibre Channel multipathing errors.
- Lock View command in Xsan Admin 1.1 can now monitor a SAN from an unsecured computer without the risk of a passerby mounting, unmounting, starting, or stopping volumes, or otherwise changing the SAN configuration.
- Improvements to email notifications will now alert you if the Xsan software serial number on a controller or client is about to expire.
- Now allows the use of site-licensed product license keys (serial numbers).

Xsan 1.1 Update for 10.4.1 or later
This update improves reliability for Xsan, and is required for all systems with Mac OS X 10.4.1 or later. It includes fixes for:

- Using Xsan on computers with Mac OS X and Mac OS X Server versions 10.4.1 or later.
- Providing metadata controller services to Mac OS X 10.3.9 or later systems with Xsan 1.1.
- Accessing Xsan volumes larger than 16 terabytes in size (up to 1024 terabytes).
- Greater server stability when resharing Xsan volumes through NFS.
- Handling quotas with no associated user or group name.
- Maintaining access to Xsan volumes when metadata controller failovers occur.
- Operating Xsan in environments with a mix of Mac OS X 10.3.9 and 10.4 systems.

Important: If any client system in your SAN is running Xsan 1.1 on Mac OS X 10.4 or later, then your metadata controllers (MDCs) must also be updated to 10.4 or later. Otherwise, Xsan will not work properly.

Xsan 1.1 Update for 10.3.9
This update improves reliability for Xsan, and is recommended for all systems with Mac OS X 10.3.9. It includes fixes for:

- Greater server stability when resharing Xsan volumes through NFS.
- Handling quotas with no associated user or group name.
- Maintaining access to Xsan volumes when metadata controller failovers occur.
- Operating Xsan in environments with a mix of Mac OS X 10.3.9 and 10.4 systems.

TA23026_About_the_Xsan_Updates.pdf

Documentation

Xsan 1.1 includes new documentation, which you can get here. Be sure to read the Xsan 1.1 Administrator's Guide as well as the Xsan Migration Guide for Xsan 1.1, which includes step-by-step instructions for upgrading from Xsan 1.0 to Xsan 1.1.

Published Date: Oct 10, 2016

Pages 1.0: "Template Could Not be Found" error on French systems

This article has been archived and is no longer updated by Apple.

If you set Pages 1.0 to use the template "En Blanc" as the default template for new documents, you may get a "Template could not be found" or "Impossible de trouver le modle" error when you try to open a new document.

If this happens to you, use these steps as a workaround:

1. From the **Pages** menu, choose **Preferences**.
2. In the "For New Documents" section, select the "Show Template Chooser dialog" radio button.
3. Close the Preferences window.
4. Any time you want to use the En Blanc template, choose **New** from the **File** menu.
5. Select the En Blanc template and click Choose.

Published Date: Oct 10, 2016

Final Cut Pro: File error when exporting clips to Soundtrack

This article has been archived and is no longer updated by Apple.

If you export a clip from Final Cut Pro to Soundtrack, delete the clip from the Soundtrack timeline, and then export it back again to Soundtrack, you may get the following error:

> "File Error: The specified file is open and in use by this or another application."

To resolve this issue, quit Soundtrack so it can release the original clip you imported and then deleted. This issue can happen with Final Cut Pro HD 4.5 and Final Cut Pro 5.0, and either Soundtrack 1.x or Soundtrack Pro 1.0.

Published Date: Feb 20, 2012

iSync 2.0: About compatible devices

This article has been archived and is no longer updated by Apple.

Want to sync your devices with your Mac? If you're using iSync version 2.0, included with Mac OS X 10.4 Tiger, there are many devices and services that will work with it.

To find out more, see the iSync Compatible Devices webpage.

Related documents

301039 iSync 1.5: About compatible devices

93179 iSync doesn't sync with a Symbian OS phone after pairing

Published Date: Oct 10, 2016

iSync 2: Reset Sync History enables calendar and contact syncing

This article has been archived and is no longer updated by Apple.

Learn about the iSync 2 (included with Mac OS X 10.4 Tiger) feature "Reset Sync History."

If you're troubleshooting iSync 2, you might wish to reset the computer's sync history by selecting the Reset Sync History option (in iSync preferences). After this, the computer act as though it is being synced for the first time, and you may be asked to merge or replace information on this computer with information from other devices or computers.

Note: This reset will also enable syncing of all calendars and contacts on all devices, even if that was previously disabled. If after performing a Reset Sync History you don't want to sync calendars and contacts with certain devices, reconfigure each device's settings in iSync.

Published Date: Oct 10, 2016

Xsan: Metadata Controller should be a dedicated unit for optimal results

This article has been archived and is no longer updated by Apple.

To achieve the best performance on an Xsan network, you should dedicate a computer to the role of Metadata Controller. You may also dedicate a backup Metadata Controller.

If a Metadata Controller is used for functions other than Xsan (such as AFP, SMB, or Open Directory), it may result in decreased performance.

Published Date: Feb 19, 2012

Motorola phone not in iSync 2 after upgrade

This article has been archived and is no longer updated by Apple.

If you were using an earlier version of iSync before upgrading to iSync 2 (part of Mac OS X 10.4 Tiger), your Motorola phone might not be automatically recognized during the upgrade process, even though iSync 2 asked you to connect it. Here's how to resolve this issue.

Note: This document applies to iSync 2 or later.

1. Connect the phone to your computer and turn it on.
2. From the iSync 2 **Devices** menu, choose **Add Device**.
3. Double-click the phone icon in the Add Device window.
4. Configure the phone's settings however you wish.

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Published Date: Oct 10, 2016

Logic Pro/Express 7.1: Crossfade parameters disappear for audio regions

This article has been archived and is no longer updated by Apple.

In Logic Pro and Logic Express 7.1, crossfade settings in the Region Parameter box are not consistently displayed for all audio files. Normally, the Region Parameter box will display several settings for adjusting crossfades in selected regions.

Here are some situations where the crossfade settings in the Region Parameter box will not be available:

- The region you are working with is an Apple Loop. Because you can't apply crossfades to an Apple Loop, no crossfade parameters will display when you select one. Instead, you will see a setting for Transpose.

- You've selected the Follow Tempo checkbox for a recorded region (Logic Pro 7.1 only).

  Because you can't crossfade regions that are set to follow subsequent song tempo changes, the crossfade settings are not displayed, though you will see a Transpose parameter.

If you want to apply crossfades to a loop or region in either of the above situations, export the regions as audio files by doing the following:

1. Select a loop or region and choose **File > Export > Region as Audio File**. Repeat for all other Apple Loops or Follow Tempo-enabled regions that you want to crossfade.
2. Replace each Apple Loop or Follow Tempo-enabled audio region with its corresponding exported region.
3. Select a region and apply crossfades using the settings in the Region Parameter box as you normally would.

Important: Do not make any tempo changes to the song after performing this workaround, as the exported regions will not follow subsequent tempo changes.

Published Date: Oct 10, 2016

Mac OS X Server 10.3 or later: Issues when saving disk image to local volume

This article has been archived and is no longer updated by Apple.

If you save a disk image created in Network Image Utility (Mac OS X 10.3) or System Image Utility (Mac OS X 10.4) to the startup volume, the save process may pause for an extended time and ultimately stop. Cache files that get created when you save the disk image to your startup volume may cause your available disk space to temporarily exceed the space available—sometimes regardless of startup volume size.

To resolve the issue:

1. Open the Network Image Utility or System Image Utility.
2. Configure the image name, type, installation options, disk image source, and any other options you wish.
3. When you're ready to create the disk image, click Create.
4. When prompted to save the disk image, choose a volume other than the startup volume.

Published Date: Oct 10, 2016

iSync: Nameless contacts may be duplicated

This article has been archived and is no longer updated by Apple.

If you create a contact on more than one device that has the same phone number or other contact information but you don't provide a contact or company name with it, you may end up with multiple copies of that contact after syncing.

To avoid this issue, make sure that you have either a contact or company name for each contact on every device so that iSync doesn't duplicate contacts.

Published Date: Feb 18, 2012

iSync: Deleting a contact may not occur on all synced devices

This article has been archived and is no longer updated by Apple.

If you delete a contact from the Address Book of a computer or device and then also modify the same contact on another computer or device, the contact may not be deleted after syncing. iSync won't give you any alert message about the conflict.

If you want to delete a contact, avoid modifying the same contact on other devices before performing the sync. If you did but the contact hasn't been deleted, delete the contact and sync again.

Use care when deleting a contact. Be sure to back up your contacts so that if you inadvertently delete a contact, you can easily recover it. See "Working with vCards" and "Backing up Address Book" for more information.

Published Date: Feb 18, 2012

Installing Mac OS X Server 10.3 on a computer that won‘t start up from the Installation CD

This article has been archived and is no longer updated by Apple.

Some computers that work with Mac OS X Server 10.3 may not be able to start up from the Server Installation CD—the computer may display just a blank, gray screen when you try. For this reason, Apple allows you to use a meta package (.mpkg) file on the CD to install Mac OS X Server over a running Mac OS X 10.3 (client) installation.

Note: Mac OS X Server 10.3 is supported on the Power Mac G5, Power Mac G4, Power Mac G3 (Blue and White), eMac, iMac, and Mac Mini.

To install Mac OS X Server 10.3 from the .mpkg file, do the following:

1. Be sure that all software on the target computer is up to date.
   Note: If you decide to start with a fresh system by doing an erase install (this is *not* required), be sure to complete the Setup Assistant while the computer is connected to your network.
2. Be sure that your computer is connected to your network.
3. Restart the computer.
4. Insert Disc 2 from the retail version of Mac OS X Server 10.3.
5. Open the .mpkg Installer from the disc and follow the onscreen steps.
6. When finished, restart the computer.
7. The Server Assistant appears; use it to complete the set-up, making sure that you configure the computer as a standalone server.
8. Use Software Update to install only the Mac OS X Server 10.3.4 Update (do not install the JBoss update for now).
9. Restart the computer.
10. Go back to Software Update and install all the remaining updates, restarting your computer as necessary.
11. If desired, you can now use Server Admin to set up the server as an Open Directory Master.

This procedure also appears on page 85 of the Getting Started manual, found here.

Published Date: Feb 18, 2012

Logic Pro/Express 7: How to resize the Transport window

This article has been archived and is no longer updated by Apple.

In Logic Pro 7 and Logic Express 7, the method for resizing the Transport window is different from previous versions of Logic. In previous versions, you can click the arrow on the Transport in Logic to display a menu that offers options to resize the window.

Version 7 no longer offers the menu option. You can simply drag the Transport window's lower-right corner to the left or right to resize it.

Published Date: Feb 19, 2012

Logic Pro/Express 7: Converted Apple Loops don‘t play at song‘s tempo or key

This article has been archived and is no longer updated by Apple.

When an Apple Loop is converted into an audio file, the resulting file may not play at the song's current tempo and key settings. Instead, the new audio file will play at the original Apple Loop's tempo and key.

This happens when you select an Apple Loop region and choose **Audio > Convert Regions to New Audio Files** from the Arrange window menu and you change the "file format" parameter in the resulting dialog window from "Original file type" to either Wave or SDII. This creates a copy of the original Apple Loop file, but without the transient and category tags. That means the file will only play at whatever tempo and key the original Apple Loop was recorded at—not at the tempo and key of the song.

Logic Pro/Express 7.2 resolves this issue by enabling the Elastic Audio feature for exported files. When you convert regions to new audio files, the Follow Tempo box will be checked for the new audio files created.

If you want to convert Apple Loops to new audio files that will use the song's tempo and key settings in other audio applications, select the loop (or loops) and choose **File > Export > Region as Audio File**. Though this new file will play at your song's current tempo and key, it can't follow subsequent tempo or key changes like an Apple Loop; it's fixed at the tempo and key that your song was set to when you exported the file.

Published Date: Oct 10, 2016

Syncing requirements for Mac OS X 10.4

This article has been archived and is no longer updated by Apple.

You can sync many different kinds of data and devices with Mac OS X Tiger 10.4. **Note**: Compatible devices are subject to change.

To sync using .Mac

To use .Mac syncing in Mac OS X 10.4, you'll need:

- A .Mac subscription (either full or 60-day trial)
- An Internet connection (dial-up modem or high-speed broadband)

Learn more about .Mac here.

Mobile phone syncing

To sync a Bluetooth mobile phone with Mac OS X 10.4, you need one of the following:

- A Tiger-compatible Mac with built-in Bluetooth, or
- A Tiger-compatible Mac with D-Link DBT-120 USB Bluetooth Adapter

To sync a USB mobile phone (through USB), you need a Mac with built-in USB 1.1 or 2.0 port

Learn more about Tiger-compatible phones here.

iPod syncing

To sync information with an iPod, you need a Mac with a built-in USB or FireWire connection (and, of course, an iPod).

Find out more about syncing devices here.

Palm device syncing

To sync a PalmOS-based device in Mac OS X 10.4, you need:

- A Macintosh-compatible PalmOS device
- Palm Desktop software version 4.2.1 or later

Learn more about Palm devices here.

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Published Date: Oct 10, 2016

Logic Pro/Logic Express 7: Plug-in "Save Setting" menu item is dimmed

This article has been archived and is no longer updated by Apple.

You may come across a situation when you try to save a plug-in setting in Logic Pro 7 or Logic Express 7, but **Save Setting** in the plug-in settings menu appears dimmed. This can occur after you load an existing setting or when you try to save a new one.

Tip: The "plug-in settings menu" refers to a nameless menu represented by a triangle, as seen in this image.

Here's how to save your plug-in settings in each of these circumstances.

1. If you opened a plug-in, adjusted some parameters, and are saving the setting for the first time, choose **Save Setting as** from the plug-in settings menu since there is no existing setting file to save to. Once you save the setting, you can then open it anytime, make changes, and choose **Save Setting** to save subsequent changes.
2. If you loaded one of Logic's factory settings, you won't be able to modify the settings directly. If you wish to modify one, choose **Save Setting as** from the menu to create an editable copy of the settings file. You can then edit the settings and save them using the Save Setting option.

Published Date: Oct 10, 2016

Mac OS X Server 10.3 or later: NetInstall may stop if NetBoot settings are modified during client installation

This article has been archived and is no longer updated by Apple.

NetInstall services may be temporarily interrupted if you modify and save any NetBoot or NetInstall settings on the server. If you do this while installing clients over the network, the NetInstall process at the client will stop and display this error message:

> There was an error during installation. Please try again.

To prevent this, simply refrain from modifying any settings in the Server Admin Utility Netboot Service plug-in while clients are being installed over the network.

Published Date: Feb 18, 2012

Helvetica Fractions font may cause text to display improperly in Address Book, iChat, Safari, Mail

This article has been archived and is no longer updated by Apple.

If you have the Helvetica Fractions font installed, text in some applications (including Address Book, iChat, Safari and Mail) may appear as overlapping numbers and symbols.

To avoid this issue in Mac OS X 10.3 and later, use Font Book to turn off the Helvetica Fractions font.

If you're using Mac OS X 10.2.8 or earlier, check these two font locations for the Helvetica Fractions font:

- /Library/Fonts/
- ~/Library/Fonts/ (the tilde represents your Home folder)

If you find a Helvetica Fractions font (or fonts), which may appear as "HelveFra" or "HelveFraBold," remove it from the folders. (To avoid other issues, do not disable the Helvetica font.)

Published Date: Feb 19, 2012

iMovie: Adding effects to a clip with titles may make it become gray or tinted

This article has been archived and is no longer updated by Apple.

If you apply a title to a clip in iMovie 4 or 5 and then add an effect to the same clip, it's possible that the clip may unexpectedly become gray or tinted with the same color as the title text after the effect finishes rendering.

For example, if you add a title using the default white text and then add an effect, the clip might look white or gray. If your title text is blue and you add an effect, you might see that the effect and the clip have taken on a blue tint. This only happens if you use certain combinations of titles and effects.

If this happens to one of your clips after you add an effect, try these steps as a workaround:

1. Undo the effect: From the **Edit** menu, choose **Undo** (or press Command-Z).
2. Save your iMovie project.
3. Quit iMovie.
4. Open iMovie.
5. Add the desired effect back to the clip.

The effect should render normally at this point without causing any color shifts. If it's too late to undo the effect, you can either restore the clip back to its original form (from the **Advanced** menu, choose **Revert Clip to Original**), or bring a fresh version of the clip into the timeline.

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

Keynote: Bullets do not appear as expected in exported Flash file

This article has been archived and is no longer updated by Apple.

When you export a Keynote presentation to Flash, you may notice that image bullets appear as simple text bullets. This happens because Flash does not support image bullets; all image bullets in a Keynote project will be replaced by text bullets when you export it to Flash.

Note: Please be aware that many of the slide themes in Keynote use image bullets as a default.

Click here for more information on formatting a bulleted list.

Published Date: Oct 10, 2016

Mac OS X Server 10.3: NetBoot images don‘t include all packages by default

This article has been archived and is no longer updated by Apple.

Like a default installation of Mac OS X 10.3 Panther, a NetBoot installation image only includes the essential packages by default.

When you create a NetBoot image from Mac OS X 10.3 client installation discs on a 10.3 server, the image will contain the default selection of packages from the first two Panther discs. If you would like to add more than the default packages to the image, including the packages found on the third Panther disc, you'll need to create a custom image.

To do this, while in Network Image Utility, click the Contents tab, then click the Customize button (this button appears when you choose a CD or DVD from the **Image Source** pop-up menu). A dialog sheet appears, and offers various checkboxes for you to select the packages you want to include.

Published Date: Feb 18, 2012

iDVD: Not all operations are shown in the progress bar

This article has been archived and is no longer updated by Apple.

When you burn a DVD in iDVD, some operations may not be displayed in the progress bar during the process. Sometimes the progress bar doesn't indicate specifically what process is taking place or how long it has to go, which can make it appear as if the process has stopped.

You may notice this more when iDVD is encoding audio or multiplexing, where the progress window may display a "Writing Lead-in" message for a long time (from 5–10 minutes, depending on your content, which can seem like an eternity when you're anticipating that first DVD screening). Don't worry. iDVD is still hard at work—it just won't give you every detail of its progress.

Published Date: Oct 10, 2016

Mac OS X 10.4: Mail may reset to default if it unexpectedly quits twice in row

This article has been archived and is no longer updated by Apple.

In Mac OS X 10.4 Tiger, if Mail (or any other application, but Mail is our focus here) unexpectedly quits twice in a row, you will be given the opportunity to open the application with the default ("safe") settings by clicking a Try Again button in a dialog that appears when you open Mail a third time.

In the unlikely event that Mail unexpectedly quits twice in a row, clicking the Try Again button should successfully open Mail. You will then be guided through setting up your Mail account (or accounts) again. Your previous Mail messages will appear after you complete the account set-up (assuming that you've set up the same account that you were using before).

Important: If you enter different account information than before, Mail will not show messages for the account you were using prior to the two unexpected quits. But it doesn't delete those missing messages either—they'll be available once you set up that account again in Mail preferences.

For example, let's say that you use a POP server-based Mail account named MyMail for the address myfakeaddress@fakeplace.com, and have many messages in your Inbox. If Mail unexpectedly quits twice in a row and you click Try Again when opening Mail a third time, Mail will open and ask you to fill in your account information. If you fill in the same "MyMail" account information, you'll have access to your "MyMail" messages. If you fill in different information, such as an IMAP server or address of myfunaddress@funfakeplace.com, you won't see your original "myfakeaddress@fakeplace.com" messages until you set up the account the same way it was before.

Alternatively, if messages are missing after using the Try Again button, you could import the mailboxes from ~/Library/Mail.

Related Terms: forgot, forgets, crash, crashing, crashed, email

Published Date: Oct 10, 2016

iDVD 5: Project capacity is reported in size and time

This article has been archived and is no longer updated by Apple.

In iDVD 5, the DVD Capacity meter (in the Customize drawer, click the Status tab) reports the project size differently than in earlier versions of iDVD. When you add media assets to an iDVD 5 project (such as video, slideshows, and audio), the DVD Capacity meter updates to show the size of your project; you can have the meter indicate the current running time (the total time for all media and transitions) or the total disc space used. To switch the display between minutes and gigabytes (GB), click the text to the right of the DVD Capacity meter.

In earlier versions of iDVD, the meter did not necessarily indicate the actual running time for some elements, such as slideshows. In iDVD 5, this meter reports the actual running time of slideshows—not their video capacity equivalent. To determine how much space is available on your DVD after adding assets to the project, view the gigabyte display—not the time display. For more information on the iDVD Status pane, click here.

Published Date: Oct 10, 2016

iSync: Do not disconnect phone when syncing it

This article has been archived and is no longer updated by Apple.

If your phone gets disconnected in the middle of a sync, iSync may stop recognizing the device afterwards. For example, iSync may report that it cannot find the phone when you go to sync a second time. If you look for the phone in the Add Device window in iSync, the phone won't be listed.

To avoid this issue, make sure that your phone's battery has a sufficient charge before initiating a sync, or consider connecting the phone to its charger during the sync. Do not disconnect the phone from the computer during a sync if you are using USB. Do not take the phone out of range during a sync if you are using Bluetooth.

If your phone is no longer recognized by iSync, you can resolve the issue by removing and then re-adding the phone following these steps:

1. In iSync, select the phone icon in the iSync window.
2. From the **Devices** menu, choose **Remove Device**.
3. In the resulting confirmation dialog that asks if you're sure you want to remove the device, click OK.
4. From the **Devices** menu, choose **Add Device**.
5. In the Add Device window, double-click your phone's icon to re-add the phone.

Once your phone is recognized by iSync, you will need to set up your device settings in iSync again. Take special care in selecting the option under **For First Sync**. If all your iCal calendar and Address Book data is already on the computer, select the option to "Erase data on device then sync." Otherwise, select the option to "Merge data on computer and device."

Published Date: Feb 18, 2012

iDVD 5: Unable to select a transition for the forward button

This article has been archived and is no longer updated by Apple.

When you create an iDVD project that contains a movie with chapter markers, you may come across an issue where you can't select a transition to use for the "forward" button in a scene selection menu. This can happen if you're trying to do this directly in the project window. However, you will be able to add the transition if you switch the project to map view. Here's a bit more about what's going on here.

When you add a movie with chapter markers to a menu, iDVD automatically creates two buttons:

- A "play movie" button, which bears the title of the movie
- A scene selection button that links to a scene menu

If you double-click the scene selection button to open the scene menu, iDVD displays buttons named after each chapter in your movie. The number of buttons the menu displays depends on its theme (a theme can display up to 12 buttons per menu). Each scene menu contains a "back" button to go to the previous menu.

If you have a lot of chapters, the scene menu may only display the first group along with a "forward" button to navigate to another scene menu. If you want to add a button transition to this forward button, you will not be able to do this directly in the project window. To add a transition, switch to map view. For more information on scene selection menus, click here.

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

Mac OS X 10.3: Mail - Can‘t reply to a message or forward it

This article has been archived and is no longer updated by Apple.

In Mail, you may receive a message that you can't reply to or forward. Nothing happens when you click the Reply or Forward button, but if you quit Mail and open it again, you will see empty "Re:" or "Fwd:" message windows, addressed to your intended recipient, for each attempt you made. This can happen if you're using Mail in Mac OS X 10.3 through 10.3.8.

To resolve this issue, download and install Mac OS X 10.3.9. As for those blank messages that might appear when Mail opens, just close their windows to get rid of them.

Published Date: Oct 10, 2016

Mac OS X 10.3: Disk Utility reports inaccurate "Volume needs to be repaired" message when checking Mac OS X 10.4 volume

This article has been archived and is no longer updated by Apple.

If you want to check a Mac OS X 10.4 Tiger volume with Disk Utility First Aid in Mac OS X 10.3, make sure that you use Mac OS X 10.3.9. Earlier Disk Utility versions will report false issues with the Mac OS X 10.4 volume, such as the following:

```
** /dev/rdisk0s7 (NO WRITE)
** Checking HFS Plus volume.
** Checking Extents Overflow file.
** Checking Catalog file.
** Checking multi-linked files.
** Checking Catalog hierarchy.
** Checking Extended Attributes file.
Invalid leaf record count (It should be 2 instead of 21)
** Checking volume bitmap.
** Checking volume information.
** The volume [Mac OS X Tiger] needs to be repaired.
```

For an accurate Disk Utility report, only check Mac OS X 10.4 volumes while started from a Mac OS X 10.4 volume or Install disc, or while started from Mac OS X 10.3.9. If you're using an earlier version of Mac OS X 10.3, download and install Mac OS X 10.3.9.

Published Date: Oct 10, 2016

Mac OS X 10.4: Transferring a printer list

This article has been archived and is no longer updated by Apple.

You can transfer a list of printers from any computer that has Mac OS X 10.2 or later installed to a computer with Mac OS X 10.4 Tiger installed. With Tiger, you can also transfer a printer list from one partition to another on the same computer using Setup Assistant or Migration Assistant.

When starting Mac OS X 10.4 for the first time, the Setup Assistant appears, enabling you to transfer information from another computer or from another partition on the same computer. If you select "Network & other settings" and either "Applications folder" or "Files and folders on (volume name)" (or both), your list of printers will also be transferred.

If you've already completed the Setup Assistant but didn't transfer the printer list, you can use the Migration Assistant to transfer the list:

1. Open Migration Assistant in the Utilities folder (from the Finder's **Go** menu, choose **Utilities**).
2. Select either "Migrate Applications" or "Migrate Files and Folders" (or both) in the Migration Assistant window "Step 2 of 4: Pick Applications and Files".
3. Select "Network Settings" in the Migration Assistant window "Step 4 of 4: Machine Settings".

It's possible some raster (ink-jet) printers might not transfer, but if this happens, you can easily add them using the Print & Fax preferences in System Preferences. **Tip:** USB and FireWire printers are added to the printer list automatically if you have a driver installed for the printer and it's connected to your computer.

My transferred printer doesn't work

In the unlikely event that one or more printers that were transferred from another system do not work as expected on your Tiger computer, use the Print & Fax preferences in System Preferences to remove the printer, then add it again.

Published Date: Oct 10, 2016

PAL projects containing layered PSD files will not open in Final Cut Express 3.0

This article has been archived and is no longer updated by Apple.

PAL projects that contain layered PSD (Photoshop) files can be created and saved in Final Cut Express 3.0, but when you later try to open the project again in Final Cut Express, you may get a message that says, "Unable to open project." This can happen if you're using DV PAL or HDV 1080i50 cameras in Final Cut Express 3.0.

This document will be updated when additional information is available.

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Published Date: Oct 11, 2016

Motion, Mac OS X 10.4: Compound Blur may make a clip transparent

This article has been archived and is no longer updated by Apple.

If you're using Motion 1.0.1 with Mac OS X 10.4 Tiger and apply a Compound Blur without a blur map to a clip, the effect can make the clip transparent.

To prevent this issue, add an image or movie to the Blur Map well in Motion, in either the Inspector or the Dashboard.

The Compound Blur filter blurs an object using a specified channel of a blur map image. You can use a shape, still image, or movie file as a blur map image, and select any—or all—of its red, green, blue, alpha, or luminance channels to dictate the overall shape of the blur.

Published Date: Oct 11, 2016

Logic Pro/Express 7.1: Adding loops to the Loop Browser

This article has been archived and is no longer updated by Apple.

Logic Pro and Logic Express come with a large number of Apple Loops for you to use in your music compositions, but you can also turn any audio region—up to one minute in length—into an Apple Loop, or add loops to the Loop Browser from the Finder.

To turn a region in the Arrange window into an Apple Loop, simply highlight the region and choose **Region > Add to Apple Loops Library**. In the resulting dialog, you can assign search tags to the loop for better sorting. The loop file will be stored at `~/Library/Audio/Apple Loops/User Loops/SingleFiles`.

To add loops to the Loop Browser from the Finder, simply drag an individual loop, or a folder containing multiple loops, onto the browser window. The loops are added to the Apple Loops library and indexed. If you use this method to drag a single loop to the Loop Browser, the loop will be copied to `~/Library/Audio/Apple Loops/User Loops/SingleFiles`.

If you drag a folder of loops that are located on the same drive and partition as the Loop Browser, the loops will be left at their current location and an alias of the folder will be created in `~/Library/Audio/Apple Loops/User Loops`. If the loops are located on a different drive or partition, you'll be asked whether you want to copy them to the loop library or index them in their current location (loops added from optical media will always be copied).

If you choose to copy them, the folder containing the loops will be copied to `~/Library/Audio/Apple Loops/User Loops/`. If you choose to index them at their current location, then an alias to the folder will be created in `~/Library/Audio/Apple Loops/User Loops/`.

Published Date: Oct 11, 2016

About FCC Certification for Apple Products

This document describes the certifications of Apple products by the United States Federal Communications Commission (FCC).
This article has been archived and is no longer updated by Apple.

About Apple's FCC testing and self-declaration

Apple Computer's EMC test facilities have been accredited through the United States National Institute of Standards NVLAP program since 1996-08. This accreditation allows Apple Computer to test and self declare products meeting the requirements as complaint for the U.S. market. This self-declaration process only applies to unintentional radiating devices, not devices that intentionally transmit signals, such as Apple's wireless products.

Apple products that display the FCC logo are marketed through the self declaration process. These products do not have, and are not required to have, an FCC ID number. Instead of an FCC ID number, an FCC DOC logo will appear with the statement: "Tested To Comply With FCC Standards For Home Or Office Use." An FCC ID number is present on the wireless part of Apple's product, as required by the FCC.

You may be required to complete an FCC 740 form for products entering the United States through customs. For products displaying the FCC logo, box 2 should be checked on the FCC 740 form. In the field titled "FCC ID" on the form, write in "DOC".

A radio frequency (RF) device is defined as a product that emits RF energy either intentionally in the case of a transmitter, or unintentionally as in the case of a computer, or computer peripheral products. An FCC 740 Form must be provided for each type of non-U.S.-manufactured RF device in your shipment. Commodity examples typically regulated by the FCC are cordless telephones, microwave ovens, radio/tape recorder combinations, cassette cartridge type, video games used with TV, radio transmitters/receivers, and color/monochrome TV receivers, ADP display units/printers, and electronic musical instruments.

Published Date: Oct 4, 2008

Logic Pro/Express 7.1: User-created loop doesn‘t sound like the original region

This article has been archived and is no longer updated by Apple.

If you create a loop from a region in an Audio Instrument track that uses sends to bus effects, and then drag the saved loop to another Audio Instrument track, the new loop will sound different from the original source region. This happens because the effects sends in the original track are not saved with the loop.

Logic Pro and Logic Express do not automatically assign effects to busses because doing so would potentially interfere with bus configurations that you've already set up in your song. However, effects that are inserted directly on the Audio Instrument channel will be automatically recalled when the loop is dragged to the Arrange window from the Loop Browser.

You can do one of the following workarounds to ensure that loops you create from Audio Instrument track regions will sound the same as the original regions:

- Drag your Audio Instrument loop (whose original region used bus sends) to an Audio track instead of to an Audio Instrument track. When you create an Audio Instrument loop, the audio file that is rendered, including its bus processing. This will sound the same as the original.
- When creating a loop from an Audio Instrument track region, insert all effects needed to reproduce the desired sound directly on the instrument's channel strip. This will allow a faithful recreation of all sound elements when you subsequently add the loop to an Audio Instrument track.
- When using Audio Instrument Apple Loops, manually set up the sends and bus effects needed to reproduce the sound of the original region.

Published Date: Oct 11, 2016

Apple Wireless Mouse and Keyboard: Update firmware before upgrading to Mac OS X 10.4

This article has been archived and is no longer updated by Apple.

Before upgrading to Mac OS X 10.4 "Tiger," make sure that you update the firmware for your Apple Wireless Mouse and Keyboard first. The firmware updater for the Apple Wireless Mouse and Keyboard will not open in Mac OS X 10.4.

If you didn't do this before upgrading to Tiger, you can work around this issue by temporarily pairing the mouse and keyboard with a Bluetooth-enabled computer that's still using Mac OS X 10.3, and apply the firmware update from that computer.

About the update

The Wireless Keyboard and Mouse Firmware Updates improve Apple Wireless Keyboard and Mouse performance and reliability.

This document will be updated as more information becomes available.

Published Date: Oct 11, 2016

Soundtrack Pro: Some elements are not included when sending a sequence or clip from Final Cut Pro 5

This article has been archived and is no longer updated by Apple.

When you send a sequence or clip from Final Cut Pro 5 to Soundtrack Pro, some elements, including speed clips, generators, slugs, transitions, and all markers other than scoring markers, are not included. This happens because Final Cut Pro does not render these elements out to the base layer movie which is sent to Soundtrack Pro's Multitrack Editor or Audio Waveform Editor.

Clips that were sent to the Waveform Editor will still have the elements when you open the clip in Final Cut Pro. Clips that were sent to the Multitrack Editor will not have these elements when opened in Final Cut Pro because the original will be replaced with the edited sequence.

Published Date: Feb 20, 2012

iDVD 5: Don‘t hide the application during a burn

This article has been archived and is no longer updated by Apple.

In Mac OS X 10.4 Tiger, it's now possible to hide iDVD while you're burning a DVD or saving a disc image using the **Hide iDVD** command under the **iDVD** menu. However, this can cause the application to unexpectedly quit.

To avoid this issue, do not hide iDVD while burning a DVD or saving a disc image. You can switch to another application in the Dock. This does not hide iDVD, but just sends it to the background.

Note: Encoding and burning DVDs uses a lot of processing power. Do not use other applications that place heavy demands on the system while you are encoding and burning a disc. For more information on burning DVDs, see "Burning your DVD."

If you update to Mac OS X 10.4.1, the option to hide iDVD has been disabled.

Published Date: Oct 11, 2016

iPod: EQ setting change

This article has been archived and is no longer updated by Apple.

With the introduction of iPod Software 1.5, iPod Software 2.3, and iPod Software 3.0.2, the EQ setting is no longer displayed in the Settings menu as shown here:

Instead, to see the current EQ setting, you will need to select EQ in the Settings menu (Settings > EQ). On the next screen the current EQ setting will be highlighted. This change makes the EQ setting identical to the iPod mini and iPod photo.

To change the EQ setting, scroll to the setting you want and select it.

iPod models that use iPod Software 1.5

- iPod (scroll wheel)
- iPod (touch wheel)

iPod models that use iPod Software 2.3

- iPod (dock connector)

iPod models that use iPod Software 3.0.2

- iPod (Click Wheel)
- iPod Special Edition U2

If you're not sure what iPod you have, click here.

Published Date: Oct 11, 2016

Mac OS X 10.3 Server: Instructions for updating LDAP Replicas to Mac OS X 10.3.9 Server

This article has been archived and is no longer updated by Apple.

If you have a Mac OS X 10.3 Open Directory Master and one or more Mac OS X 10.3 LDAP Replicas, and want to update to Mac OS X 10.3.9 Server, please update the servers in this order:

1. Update all LDAP Replicas to Mac OS X 10.3.9 Server.
2. Update the Open Directory Master to Mac OS X 10.3.9 Server.

If the servers are not updated in this order, the LDAP Replicas may get out of sync with the Open Directory Master. If this happens, reset the role of the servers from LDAP Replicas to Standalone servers using Server Admin, then convert them back to LDAP Replicas after you update the Open Directory Master to Mac OS X 10.3.9 Server.

Published Date: Oct 11, 2016

Soundtrack Pro: AppleScript scripts that have Japanese characters don‘t work

This article has been archived and is no longer updated by Apple.

If you create a script using the "Save As AppleScript" option in Soundtrack Pro's Audio Waveform Editor, and the script contains Japanese characters or has them in its filename, nothing will happen when you run the script from the Scripts menu in Soundtrack Pro.

You can remove the Japanese characters in a script using the AppleScript Script Editor. You can remove the Japanese characters in a script's file name in the Finder (the default location for AppleScript droplets saved from Soundtrack is ~/Library/Scripts/Soundtrack Pro Scripts/).

Published Date: Oct 11, 2016

Mac OS X: Mac may not sleep when using some Bluetooth mice

Certain third-party Bluetooth mice may "sleep" or disconnect if left idle, to conserve battery power. This may prevent your Mac from sleeping. If you try choosing Apple > Sleep, your Mac may sleep for just a moment, then wake soon after.

This article has been archived and is no longer updated by Apple.

1. Choose Apple > System Preferences.
2. Click Bluetooth.
3. Click Advanced... in Mac OS X v10.5 or v10.6 or click the Settings tab in Mac OS X v10.4.
4. Deselect the "Allow Bluetooth devices to wake this computer" checkbox.
5. Click OK.

Alternatively, if you allow the Mac to wake, it will likely go back to sleep after the idle interval specified in its Energy Saver preferences.

Published Date: Jan 27, 2016

Helpful?

Yes No

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Xsan 1.0: Upgrading an Xsan beta is not supported

This article has been archived and is no longer updated by Apple.

If you participated in an Apple Xsan Seed program, you will need to uninstall Xsan Beta before installing Xsan 1.0. Apple does not support upgrading Xsan Beta to Xsan 1.0.

Uninstalling Xsan Beta will delete Xsan volume(s), so make sure that you back up all your data and test your backups to ensure that you won't lose data. For instructions on how to uninstall Xsan, please see this article. For further instructions on uninstalling Xsan, click here.

Once the Xsan Beta software has been uninstalled, install Xsan 1.0 from the Xsan installation disc. After the installation has completed, you will need to manually recreate all volumes and restore all data to the new volumes.

Published Date: Feb 19, 2012

Mac OS X Server 10.3: Error -43 when renaming files or folders using WebDAV

This article has been archived and is no longer updated by Apple.

On Mac OS X Server 10.3 to 10.3.9, WebDAV allows you to create, copy, and delete files on WebDAV volumes, but not rename them. If you try to rename a file or folder on a WebDAV volume that is on the default "wild-card" virtual host, you will get an Error -43 message. This issue does not affect volumes on named virtual hosts.

As a client-centric workaround, you can copy the file to a non-WebDAV volume, change the name of the copied file, copy it back to the WebDAV volume, and then delete the original file.

Published Date: Feb 18, 2012

Xsan 1.0 to 1.1: Invalid license key message

This article has been archived and is no longer updated by Apple.

When entering an Xsan product license key (serial number), please make sure that you enter it all in lowercase characters. If you enter alpha characters in uppercase, Xsan Admin may display a message that says the key is invalid. Xsan 1.2 resolves this issue.

Published Date: Oct 11, 2016

Qmaster startup item evokes security message in Mac OS X 10.4 Tiger

This article has been archived and is no longer updated by Apple.
Qmaster is Apple software that is included automatically when you install any of the following:

- DVD Studio Pro
- Final Cut Pro
- Motion
- Shake

If Qmaster is installed, you may see this message when Mac OS X 10.4 Tiger starts up:

Please note that this message does not indicate any issue with Qmaster or Mac OS X 10.4. If you see this message, just click the Fix button.

Note: After you click Fix and the computer finishes starting up, restart once more for the changes to take effect. After doing so, this message will not appear on subsequent startups.

If you see similar messages regarding items in StartupItems other than Qmaster, you should consider them independently from this specific message.

Published Date: Oct 11, 2016

Apple Remote Desktop 2.0: Clients using DHCP may appear offline

This article has been archived and is no longer updated by Apple.

If a client's IP address changes, most often when DHCP renews its lease to the client or a range of clients, the Remote Desktop admin application may not correctly acquire the new IP address for some clients. Remote Desktop identifies client computers using the hardware address, but has to use the last known IP address when trying to access the client. If the IP address has changed, you need to use the network scanners to locate the new IP address of the client.

To quickly resolve this issue:

1. Open the Remote Desktop application.
2. Switch to Scanner mode.
3. Rescan the Local Network or Network Range where clients may reside.

If the client is found, its IP address will automatically be updated and your list of computers will again appear online.

Published Date: Feb 18, 2012

Mac OS X 10.4, Mail: Some mailbox files used by Mac OS X 10.3 are not deleted after importing

This article has been archived and is no longer updated by Apple.

If you used Mail with Mac OS X 10.3, then upgraded to Mac OS X 10.4 Tiger and imported your Mail mailboxes (messages and attachments), please note that Tiger will not delete some previous mailbox files. Tiger keeps them around just in case you want to back up your Mac OS X 10.3 mailboxes.

This won't pose any issues with your current mailboxes. However, if your previous mailboxes are pretty big—maybe you have lots of attachments or large messages—you might enjoy the disk space you'd get back by deleting them.

If you want Tiger to "devour" those mailboxes to free up some disk, follow these steps:

1. In the Finder, choose **Home** from the **Go** menu.
2. Open the Library folder.
3. Open the Mail folder.
4. Open the Mailboxes folder.
5. If you want to back up (archive) the mailboxes before deleting them, copy them to a different location, such as a burnable disc.
6. Open, one at a time, the mailbox folders that end with ".mbox" or ".imapmbox". (If you're curious, these folders were actually package files in Mac OS X 10.3 Panther.)
7. Inside each ".mbox" or ".imapmbox" folder, you'll see some items. Do not delete every item you see. These are files you may safely delete if you want to free up some disk space:

    - mbox (which is a file, not a folder)
    - table_of_contents
    - mbox.SKindex
    - Info.plist (but not Info.plist that's in the Mailboxes folder)
    - mbox.SKindex.isValid
    - content_index
    - content_index-(your computer name)-Computer.local

    It's OK if you don't see all of those files in each folder.
8. Empty the Trash.

Important: Do not delete any folders, including ".mbox" folders, ".imapmbox" folders, or "Messages" folders." These are used by Mac OS X 10.4.

Tip: If you don't immediately see available disk space increase, you probably have FileVault home folder protection enabled—simply log out and back in to let FileVault recover disk space.

Published Date: Oct 11, 2016

iPod photo: How to add music to your photo albums in iPhoto 5

This article has been archived and is no longer updated by Apple.

In iPhoto 5, you can associate a specific song or playlist in your music library with an iPhoto photo album. That music will then also be associated with the photo album on iPod photo once you sync it. Here's how to do this.

1. In iPhoto, select a photo album in the Source list.
2. Click the play button in the window's lower-left corner.

3. Click the Music tab and select the music or playlist that you want.

4. Click Save Settings.
5. Sync your iPod photo in iTunes.

Published Date: Oct 11, 2016

Mac OS X 10.4 Tiger: Roaming AirPort clients may lose IP address

This article has been archived and is no longer updated by Apple.

If your Mac OS X 10.4 computer is connected to a network over AirPort and you roam from one wireless access point to another, your computer may lose its IP address without warning.

Update to Mac OS X 10.4.1 or later to resolve the issue.

If you are reading this article from another computer and need to force a 10.4 computer back online so that you can get the update, you have two workarounds available. The first is to put the computer to sleep and then wake it back up. The second is to force DHCP lease renewal by doing the following:

1. Open System Preferences.
2. Click the Network icon.
3. From the **Show** pop-up menu, choose **AirPort**.
4. Click the TCP/IP tab.
5. Click the Renew DHCP Lease button.

Note: On a roaming or WDS network, your computer may switch base stations without being relocated, due to variations in environmental factors.

Published Date: Oct 11, 2016

GarageBand 2: New tempo not recognized after switching audio interface

This article has been archived and is no longer updated by Apple.

When you switch from using one audio interface to another in GarageBand 2, you may come across a situation where your song plays back at its original tempo instead of your current one. This can occur if the interface you switched to wasn't turned on when you made the switch or wasn't connected when you started GarageBand, which causes GarageBand to switch to built-in audio support.

When you turn on the new audio interface or connect it while GarageBand is opened, GarageBand will ask if you want to use the new interface. If you choose to use it, your current song will play at its original tempo, which may or may not be your current one.

To avoid this issue, always make sure that your audio interface is connected and turned on before opening GarageBand. If you do need to change the selected audio interface, quit GarageBand, make your change, and then reopen GarageBand.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.
Published Date: Feb 19, 2012

About the security content of Mac OS X 10.3.8 Update

This article has been archived and is no longer updated by Apple.

This document describes the security content included with the Mac OS X 10.3.8 Update, which can be downloaded and installed using Software Update, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred, and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How To Use The Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Security content of Mac OS X 10.3.8 Update

- **Kernel**
  CVE-ID: CAN-2005-0985
  Impact: Local system users can cause a temporary system stall.
  Description: An issue with the handling of requests to the fan control unit (FCU) driver could allow unprivileged local users to hang a system.
  Credit to Marcel Bresink of Marcel Bresink Software-Systeme for reporting this issue.

Published Date: Oct 11, 2016

iSync: Canceling Palm sync takes a few minutes

This article has been archived and is no longer updated by Apple.

When you cancel a sync that includes a Palm device, it may take up to 5 minutes to stop. You may see one of the following alert messages appear:

- iSync and/or HotSync appear to be unresponsive
- Transport Monitor - could not complete your request (-600)
- Cancelling HotSync. This could take a few minutes.

This behavior is normal. Please be patient, and do not force-quit the iSync or HotSync application.

Related documents

301419 iSync 2.0: About canceling a sync

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 19, 2012

About Security Update 2005-004

This article has been archived and is no longer updated by Apple.

This document describes Security Update 2005-004, which can be downloaded and installed using Software Update, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred, and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How To Use The Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Security Update 2005-004

- **iSync**
  Available for: iSync 1.5 on Mac OS X v10.2.8 and Mac OS X v10.3.x
  CVE-ID: CAN-2005-0193
  Impact: A buffer overflow in iSync could lead to local privilege escalation.
  Description: The iSync helper tool mRouter contains a buffer overflow vulnerability. This could result in the execution of arbitrary commands as root by local system users. Security Update 2005-004 fixes this issue by providing a patched version of mRouter. Credit to Braden Thomas for reporting this issue.

Published Date: Oct 11, 2016

About the security content of the Mac OS X 10.3.9 Update

This article has been archived and is no longer updated by Apple.

This document describes the security content of the Mac OS X 10.3.9 Update, which can be downloaded and installed using Software Update, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred, and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How To Use The Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

To avoid a potential issue that may cause Java applications and Safari to unexpectedly quit, please review this article. Though the resolution to this issue utilizes a Security Update, it is not an actual security issue.

Security content of Mac OS X 10.3.9 Update

- **Kernel**
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  CVE ID: CAN-2005-0969
  Impact: A kernel input validation issue can lead to a local denial of service.
  Description: The kernel contains syscall emulation functionality that is not used in Mac OS X. Insufficient validation of an input parameter list could result in a heap overflow and a local denial of service through a kernel panic. The issue is addressed by removing the syscall emulation functionality. Credit to Dino Dai Zovi for reporting this issue.

- **Kernel**
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  CVE ID: CAN-2005-0970
  Impact: Permitting SUID/SGID scripts to be installed could lead to privilege escalation.
  Description: Mac OS X inherited the ability to run SUID/SGID scripts from FreeBSD. Apple does not distribute any SUID/SGID scripts, but the system would allow them to be installed or created. This update removes the ability of Mac OS X to run SUID/SGID scripts. Credit to Bruce Murphy of rattus.net and Justin Walker for reporting this issue.

- **Kernel**
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  CVE ID: CAN-2005-0971 CERT: VU#212190
  Impact: A kernel stack overflow in the semop() system call could lead to a local privilege escalation.
  Description: The incorrect handling of system call arguments could be used to obtain elevated privileges. This update includes a fix to check access to the kernel object.

- **Kernel**
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  CVE ID: CAN-2005-0972 CERT: VU#185702
  Impact: An integer overflow in the searchfs() system call could allow an unprivileged local user to execute arbitrary code with elevated privileges.
  Description: The searchfs() system call contains an integer overflow vulnerability that could allow an unprivileged local user to execute arbitrary code with elevated privileges. This update adds input validation on the parameters passed to searchfs() to correct the issue.

- **Kernel**
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  CVE ID: CAN-2005-0973
  Impact: Local system users can cause a system resource starvation.
  Description: A vulnerability in the handling of values passed to the setsockopt() call could allow unprivileged local users to exhaust available memory. Credit to Robert Stump (rds3792@cs.rit.com) for reporting this issue.

- **Kernel**
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  CVE ID: CAN-2005-0974 CERT: VU#713614
  Impact: Local system users can cause a local denial of service.
  Description: A vulnerability in the nfs_mount() call due to insufficient checks on input values could allow unprivileged local users to create a denial of service via a kernel panic.

- **Kernel**
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  CVE ID: CAN-2005-0975
  Impact: Local system users can cause a temporary interruption of system operation.
  Description: A vulnerability in the parsing of certain executable files could allow unprivileged local users to temporarily suspend system operations. Credit to Neil Archibald for reporting this issue.

- **Safari**
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  CVE ID: CAN-2005-0976
  Impact: Remote sites could cause html and javascript to run in the local domain.
  Description: This update closes a vulnerability that allowed remote websites to load javascript to execute in the local domain. Credit to David Remahl for reporting this issue.

Published Date: Oct 11, 2016

Mac OS X Server 10.2 and later: How to change default file permissions for the FTP service

This article has been archived and is no longer updated by Apple.

When you upload a file over FTP, the resulting file includes the default UNIX permissions as if you created the file on your desktop. In a group work environment, this can prevent others from modifying the file. If you want to implement more useful permissions, edit the server's "ftpaccess" configuration file.

1. Open the file /Library/FTPServer/Configuration/ftpaccess in a text editor. (See "How to Locate and Edit Configuration Files" for more information.)
2. Type the following line at the end of the file:

   ```
   defumask <umask>
   ```

   Where `<umask>` is an actual umask value, such as 002 (see "About umask values," below).
3. Save the file.
4. Restart the FTP service.

About umask values

Generally speaking, a umask value is subtracted from the highest permission value possible on the host system. Permission values range from 000 to 777, which is an abbreviated way of notating owner/group/other access levels of rwxrwxrwx (find more information here). A 0 (zero) means no access, while other numbers are the sum of 1, 2, and 4, where 4=Read, 2=Write, and 1=Execute.

A permission that's commonly desirable is 775, in which the owner and group have full access and unknown users have read-execute access. Because the umask value is *subtracted* from the most permissive value (usually 777), a umask of 002 yields an effective permission of 775.

This explanation is somewhat simplified. If you are not comfortable with altering permissions, consult someone who is, check out some Internet resources, or find information at your local bookstore before proceeding.

Tip: For a full explanation of the defumask directive, type `man ftpaccess` in Terminal to view the manual.

Published Date: Oct 11, 2016

Logic Pro/Express 7.1: Silence at beginning of track when Enhance Timing is enabled

This article has been archived and is no longer updated by Apple.

When you insert the Enhanced Timing plug-in on a track and play your project, the very beginning of the track will be silent for approximately the first eighth note.

To resolve this issue, choose **Audio > Audio Hardware & Drivers** to open a window, then select Larger Disk Buffer.

Published Date: Oct 11, 2016

iMac G5: Mounting an iSight camera

This article has been archived and is no longer updated by Apple.

It's easy to mount an iSight camera to an iMac G5. Just follow these simple steps:

1. Use the magnetic display mount that came with the iSight.
2. Push the end of the iSight FireWire cable into the mount as shown below.

3. Be sure the FireWire cable can reach one of the FireWire ports on the back cover of your iMac G5.
4. Connect the iSight to the top of the mount.
5. Place the mount on top of your iMac G5 display in the center. A magnet that's located here will hold the iSight magnetic mount in place.

Published Date: Oct 11, 2016

Mac OS X 10.4: Unable to install iPhoto or iMovie from iLife ‘05 disc

This article has been archived and is no longer updated by Apple.

In Mac OS X 10.4, you will not be able to install iPhoto or iMovie directly from their respective "package" files on the iLife '05 disc. You may see the following:

- Volumes are dimmed during the installation process.
- Moving the mouse over the dimmed volumes displays the message, "A newer package is already installed," even though you haven't installed iPhoto or iMovie yet.

Instead of trying to install these applications from their individual packages, use the iLife Installer on the iLife '05 disc. You can then use the "Customize" option and select only the applications that you want to install.

This should not occur in iLife '06.

Published Date: Oct 11, 2016

Mac OS X 10.3.9: Windows shared printer may have new name after security update

This article has been archived and is no longer updated by Apple.

After installing Security Update 2005-003 or Mac OS X 10.3.9 Update, you may see that a printer shared by Windows Sharing has a new name. Specifically, underscore characters (_) will be replaced by actual spaces.

This name change may prevent some Windows computers from printing. To resolve this issue, go to the Windows computer and re-add the printer.

Published Date: Feb 18, 2012

Mac OS X Server: Open Directory Master requires proper DNS for KDC to work

This article has been archived and is no longer updated by Apple.

When configuring Mac OS X Server 10.3 or later as an Open Directory Master, the Kerberos Domain Controller (KDC) won't start without proper DNS setup.

The server should have both forward and reverse DNS records. You can verify this by issuing the following command in the Terminal, at the server, before configuring it as an Open Directory Master.

```
# host <name/address>
```

In place of `<name/address>`, type the IP address or fully qualified domain name (FQDN) of the server. Whichever one you type, it should return the other. If it doesn't work on both directions, DNS isn't set up properly for your server.

If your DNS is running on Mac OS X Server, you can learn more about it in the DNS section of the Network Services guide found here. If your DNS is on another platform, consult the appropriate resources or the system administrator.

Published Date: Feb 18, 2012

Mac OS X 10.4: Don‘t use Tech Tool Deluxe 3.0.3‘s Volume Structure repair

This article has been archived and is no longer updated by Apple.

Do not use the Volume Structure repair function of Tech Tool Deluxe 3.0.3 on Mac OS X 10.4 Tiger volumes. It is not compatible with the file system. If you need to repair a 10.4.x volume, use Disk Utility instead.

A "Failed (Error = -64)" message may appear, and other issues can occur, such as a kernel panic message appearing during start up.

Tech Tool Deluxe 3.0.4 has been released and is compatible with Mac OS X 10.4 Tiger volumes.

Important: If you received Tech Tool Deluxe 3.0.3 with an AppleCare Protection Plan, and are experiencing these symptoms after using Volume Structure repair, contact AppleCare for information about receiving version 3.0.4.

Related documents

301170	Mac OS X 10.4: About the utilities available on the Mac OS X 10.4 Install DVD
301269	Only use Mac OS X 10.4-compatible disk utilities with Mac OS X 10.4 volumes

Published Date: Oct 11, 2016

Soundtrack Pro: Audio sounds distorted when using Match EQ

This article has been archived and is no longer updated by Apple.

When you preview tracks in Soundtrack Pro using Match EQ in the Waveform Editor, the audio can sometimes sound distorted.

This issue occurs if you activate the Learn button (under Template) or the Learn button (under Current Material) before you load a template or audio file from which Match EQ can learn the audio spectrum.

Note: The Learn button (under Template) is red when enabled and the Learn button (under Current Material) is green when active. Both buttons are black when disabled.

The best way to avoid this is to always load a settings file or audio file from the Learn button (under Template) before attempting to preview (Control-click on the button for options). If you do get distorted audio from previewing prior to loading a template, disable the Learn button (under Template) button by clicking it once (it should turn from red to black) and the audio will play normally.

Published Date: Oct 11, 2016

iSync 2.0: "Erase data on device" is default first sync option in Mac OS X 10.4, but not 10.4.1 or later

This article has been archived and is no longer updated by Apple.

With *Mac OS X 10.4.1 or later*, the first time you add a mobile phone to iSync version 2.0, the default first sync option is "Merge data on computer and device," which doesn't erase anything from your phone. You can download and install Mac OS X 10.4.1 Update or later from Apple Downloads.

With *Mac OS X 10.4*, the first time you add a mobile phone to iSync version 2.0, the default option for the first sync is "Erase data on device then sync." This option does just that—it erases syncable data from the phone, no matter what's on it. Change it to "Merge data on computer and device" if you wish.

If you don't want to lose the data on your phone, use "Merge data on computer and device." This setting won't erase anything from your phone.

Important Bluetooth note: When you add a Bluetooth phone using the Bluetooth Setup Assistant, iSync opens but will not show you the default first sync setting ("Erase data on device then sync") unless you click the phone's icon in the iSync window. Be sure to double-check your iSync settings before pressing the Sync Device button to avoid data loss.

Published Date: Oct 11, 2016

iPod photo: Unexpected behavior may require software update

This article has been archived and is no longer updated by Apple.

Unexpected behavior can occur on iPod photo if you are using version 1.0 of the software.

You may experience any of the following:

- Your iPod resets constantly.
- Your iPod won't play shuffled music, but non-shuffled music plays fine.
- Your iPod resets when playing shuffled music, but doesn't do so when playing non-shuffled music.
- Album art does not appear on your iPod screen for songs that have album art.
- No photos or albums show up in the Photos section on your iPod screen. However, when you look in **Settings > About** on iPod photo, the number next to "Photos" indicates that there are photo files on the iPod.
- No songs or playlists show up in the Artists, Songs, Albums, or Playlists sections on your iPod screen. However, when you look in **Settings > About** on iPod photo, the number next to "Songs" indicates that there are song files on the iPod.
- Pictures do not display on a connected television when playing a slideshow out to your TV.

If you experience any of the above symptoms, download and install the latest iPod Updater and then update your iPod.

Published Date: Oct 11, 2016

Mac OS X 10.4: About Dashboard Weather widget settings

This article has been archived and is no longer updated by Apple.

The Dashboard Weather widget might provide information about a city other than the one set in Date & Time preferences. But you can easily adjust the widget's settings if needed.

For example, the Weather widget might display temperature and weather information about a different city of the same name as yours (you might have Austin, TX selected in the Date & Time preferences, but the Weather widget displays weather for Austin, PA; or Sydney, FL instead of Sydney, Australia).

If this happens, change the city in the Weather widget. Just click the "i" button and enter a new city and state, or zip code, in the field. You can also change the temperature display from Fahrenheit (F) to Celsius (C), or vice-versa if you want.

Published Date: Oct 11, 2016

Motion: Issues with StoneSans fonts in Mac OS X 10.4

This article has been archived and is no longer updated by Apple.

The StoneSans fonts do not work with Motion 1.0 or 1.0.1 in Mac OS X 10.4 Tiger. Because of this:

- When you open a Brush Strokes template in Motion, a "missing media" dialog appears (these templates use the StoneSans fonts).
- When you go to change your text font in the Dashboard or Inspector, StoneSans fonts do not appear in the list of choices.

This document will be updated as more information becomes available.

Published Date: Oct 11, 2016

Logic Pro: "Unsupported File System" error in Project Manager

This article has been archived and is no longer updated by Apple.

When scanning a Unix-formatted volume (UFS), the Project Manager may display an "Unsupported file system" alert message. The Project Manager does not support UFS.

The Project Manager only supports HFS, HFS Plus, and Xsan format volumes.

Published Date: Feb 19, 2012

Keynote 2.0.1 unable to print to some network printers

This article has been archived and is no longer updated by Apple.

If you have presentations in Keynote 2 that contain some built-in themes that use transparency (such as Graph Paper), the presentation may not print to some network printers, such as the HP Color Laser Jet 4500. You won't see an error message onscreen, but your print job may suddenly disappear when you try to print.

This can happen with Keynote 2.0.1, HP Color Laser Jet 4500 (there may be other affected network printers), and Mac OS 10.3.6 through 10.3.9. This does not occur on Mac OS 10.4 Tiger.

To prevent this from happening, make sure that all objects in your presentation are set to 100-percent opacity.

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Published Date: Feb 18, 2012

Mac OS X 10.4: Troubleshooting registering computer for .Mac Sync

This article has been archived and is no longer updated by Apple.

When you select the "Synchronize with .Mac" checkbox in the .Mac pane in System Preferences and attempt to sync, you may receive an alert message that says:

> **.Mac Sync Error**
> This computer is no longer registered to sync with .Mac - perhaps it was unregistered from another computer. Please re-register this computer using the .Mac System Preferences and try again.

If this happens, you may also notice that when you click "Register This Computer," your computer won't get registered.

This can occur if your computer name or long Mac OS X user name contains an ampersand (&). To resolve this issue, either update to Mac OS X 10.4.1 or later, or change your computer name or long user name so that it doesn't contain an ampersand.

To update Mac OS X, either use the Software Update pane of System Preferences, or find the latest update on the Apple Support Downloads page.

If you choose to change your name, there are a couple of places to check to make sure there's no ampersand in the name:

1. Open System Preferences (if it isn't open already).
2. Click Sharing.
3. In the Computer Name field, change the text so that it no longer contains an ampersand.
4. Click Show All at the top of the window to display all preferences.
5. Click Accounts.
6. Make sure that none of the users of the computer have names containing ampersands. (For example, use "Jack and Jill" instead of "Jack & Jill".)
7. Click Show All at the top of the window to display all preferences.
8. Click .Mac to display its preference pane and register your computer for syncing.
9. Click the Sync tab, then click Sync Now to sync.

Published Date: Oct 11, 2016

iSync‘s "Only synchronize contacts with phone numbers" option may remove email addresses from Motorola phones

This article has been archived and is no longer updated by Apple.

If your Motorola phone has "limited" contact support (see below), the "Only synchronize contacts with phone numbers" option in iSync could cause email addresses to be removed from your phone (but remain in Address Book), if you entered the addresses on the phone itself. This can happen if you've selected the "Synchronize email addresses" option, which is off by default.

This applies to all versions of iSync, including versions 1.5 and 2.0.

For example, if you enter a name with an email address on your phone and then sync with this option *off*, iSync will sync the name and email address on the phone with Mac OS X's Address Book. But if you turn this option *on* and then sync again, the contact's email address will be removed from your phone.

As a workaround, use Address Book to enter email addresses for your contacts instead of entering them on your phone.

What is limited contact support?

By "limited," we're referring to phones that can only store names, text email addresses, and phone and fax numbers for each contact. If your phone can also store other kinds of information for each contact, such as notes and URLs, it's probably not "limited," and this issue shouldn't affect you. For example, Symbian OS-based phones are not "limited."

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Published Date: Oct 11, 2016

iSync 2.0 includes Palm Conduit

This article has been archived and is no longer updated by Apple.

If you have a Palm OS device, iSync version 2.0 (included with Mac OS X 10.4 Tiger) can install iSync Palm Conduit for you if you need it. You no longer have to download it from the web, as was required with earlier versions of iSync.

Tip: You will also need to install Palm HotSync software. iSync 2.0 will prompt you to install it if it doesn't find it.

Tip: Don't use previous Palm Conduit software with iSync version 2.0. Only use iSync Palm Conduit installed by iSync version 2.0.

To install the necessary software, simply enable Palm OS syncing in iSync 2.0:

1. Open iSync 2.0.
2. From the **Devices** menu, choose **Enable Palm OS Syncing**. The conduit will be installed if it needs to be.

There are other steps in the process of setting up a Palm OS-based device, such as opening HotSync Manager and checking conduit settings. Check out this document.

Note: To enable the Palm Conduit you must login as a user with administrator privileges.

For more information about Palm Device support in iSync, see the Help menu in iSync.

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Published Date: Oct 11, 2016

iSync: Don‘t add another phone while syncing

This article has been archived and is no longer updated by Apple.

When iSync is syncing with your mobile phone, do not add another phone to iSync. Wait until iSync completes its current sync.

If you don't wait, you may need to reset the device in iSync for it to sync correctly.

Published Date: Oct 11, 2016

Mac OS X 10.4: Use iTunes for iPod syncing

This article has been archived and is no longer updated by Apple.

In Mac OS X 10.4 or later, you can sync contacts and calendars to your iPod with iSync 2.0. But you may notice that you cannot add iPod to iSync once the latest version of iTunes is installed. That's because iTunes will take over these duties from iSync. Follow these steps to configure what contact and calendar information you want synced to your iPod:

1. Connect your iPod.
2. Open iTunes if it doesn't automatically open.
3. Select your iPod in the Source pane.
4. Click the Contacts tab.
5. To turn on contact syncing, select "Sync Address Book contacts."
6. To turn on calendar syncing, select "Sync iCal calendars" (you may need to scroll down to see this).
7. Click Apply and iTunes will sync the information to your iPod.

If you are using Mac OS 10.4 or later but haven't upgraded to at least iTunes 4.8, you can continue using iSync to sync contacts and calendars to your iPod. Please note that iSync will not automatically launch when you connect your iPod. Instead, your information will sync to iPod in the background whenever you connect it.

If you are using Mac OS 10.3.9 or earlier, you cannot use iTunes to sync contacts and calendars to iPod.

Notes

1. Once you start using iTunes to sync your contacts and calendars with your iPod, you won't be able to use iSync to synchronize with your iPod.
2. Calendars that have a colon ":" in the name may not sync to the iPod.

Published Date: Oct 11, 2016

Bluetooth: Security Update 2005-005 makes changes to default sharing settings

This article has been archived and is no longer updated by Apple.

Security Update 2005-005 makes changes to the default settings for Bluetooth File Transfer, also known as Bluetooth FTP. If you customized the settings prior to the Security Update, your personal settings will be retained.

The original default setting was to enable browsing of the Shared folder. This allowed any other Bluetooth user to anonymously browse your Shared folder (/Users/Shared).

After installing the Security Update, you will see two changes to the default settings.

- Browsing is off by default.
- The folder that's being shared has been changed to the Public folder that's in your Home folder.

If you were using the default settings and want to keep sharing contents in the Shared folder (/Users/Shared), click the Choose Folder button to reselect it.

Bluetooth follows the settings for the user who's currently logged in to the computer, so other user accounts may have different Bluetooth settings if any user personalized his or her settings prior to the Security Update. Example: If two users of a computer had never modified their old default settings but a third user had modified hers, then the first two users would get the new default settings when they log in, but the third user would still have the personalized settings when she logs in.

Published Date: Oct 11, 2016

Mac OS X 10.4: When to use PPPoE over AirPort

This article has been archived and is no longer updated by Apple.

Mac OS X 10.4 Tiger allows you to use Point-to-Point Protocol over Ethernet (PPPoE) over AirPort. This feature is intended for very specific situations. It should only be used when the base station is in wireless bridge mode *and* when one of these conditions applies:

- Your Internet Service Provider (ISP) has issued hardware designed for this feature.
- When required by certain wireless hot spots, primarily outside the United States.
- Your local network administrator says it's required.

Unless it's required, you probably don't need to be using this feature.

Published Date: Oct 11, 2016

Mac OS X Server: LDAP temporarily unavailable after updating to 10.3.9

This article has been archived and is no longer updated by Apple.

After updating to Mac OS X Server 10.3.9, network users won't be able to authenticate, home directories won't mount, and you won't be able to complete any operation that requires access to LDAP data.

This happens because Mac OS X Server 10.3.9 includes a new schema for Open Directory that requires the database to be reindexed. This occurs on the first restart after the update, and it can take several minutes (the more users you have, the longer it will take).

Verifying the process

During the reindexing, the LDAP database is offline. To verify that indexing is in progress, open Activity Monitor and set it to show all processes. Look for a process named *slapconfig*. Another option is to use `ps -ax | grep slapconfig` in Terminal.

slapconfig must finish

The slapconfig process needs to finish to completely index the database. In the event that indexing has been interrupted (crashed), you should manually restart the indexing process by executing the Terminal commands listed below. Please note that this process also takes the LDAP server offline and can take several minutes, depending on the size of the LDAP database.

Note: You should only do this if the crash is evidenced by presence of the log file, /Library/Logs/CrashReporter/slapindex.crash.log.

1. `sudo SystemStarter stop LDAP`
2. `sudo slapindex`
3. `sudo SystemStarter start LDAP`

Checking your search path

After slapconfig has finished, verify the search path is set to include the /LDAPv3/127.0.0.1 node.

1. Launch the Directory Access utility.
2. If necessary, click the lock to authenticate.
3. Click the Authentication tab.

If the Search pop-up menu is not set to Custom Path and the "/LDAPv3/127.0.0.1" node is not in the Directory Domains list, do the following.

1. Select Custom Path from the Search pop-up menu.
2. Click Add
3. Select "/LDAPv3/127.0.0.1" in the list.
4. Click Add.
5. Click Apply.

Published Date: Feb 20, 2012

Soundtrack projects with track panning effects may sound different when opened in Soundtrack Pro

This article has been archived and is no longer updated by Apple.

When you open a project from the original Soundtrack application in Soundtrack Pro, stereo tracks that include (or "make use of") panning effects may sound incorrect. They may sound like they are missing some or all signal from the channel opposite the pan direction when opened in Soundtrack Pro.

This happens because Soundtrack Pro handles stereo track panning differently than Soundtrack does. The pan slider in a Soundtrack Pro stereo track acts as a balance control (sometimes referred to as an *isolating* panner). With this type of pan, when you, say, move the slider to the left, the right channel is progressively removed from the signal.

Soundtrack features a *collapsing* panner in its stereo tracks. With this type of pan, when you, say, move the pan slider to the left, both channels of the stereo signal are progressively moved (collapsed) toward the left speaker.

Projects that you saved in Soundtrack that feature stereo track panning will not exhibit collapsed panning behavior when you open it in Soundtrack Pro. Instead, the panned signal may be faint or inaudible.

Published Date: Oct 11, 2016

Apple Qadministrator clusters require managed services

This article has been archived and is no longer updated by Apple.

Although Apple Qadministrator currently allows you to create a cluster with unmanaged services, valid clusters require at least one managed service. To make them available in Apple Qmaster and Batch Monitor, you must create clusters with at least one managed service.

Apple Qmaster can be installed with DVD Studio Pro 4, Shake 4, and Final Cut Studio.

Published Date: Feb 18, 2012

Apple Qmaster: Cleaning up cluster storage

This article has been archived and is no longer updated by Apple.

If you are using Apple Qmaster with cluster storage and an error occurs, some partial files may be left on the designated cluster storage location. Check the cluster storage location to make sure that no partial media files are left there. If you find any, delete them and submit the job again.

This is more likely to occur if you're using Compressor and Apple Qmaster together.

(You can install Apple Qmaster from Final Cut Studio, DVD Studio Pro 4, or Shake 4.)

Published Date: Feb 18, 2012

Remote Desktop 2.0, 3.0: Unable to access client when Common Criteria audit is enabled

This article has been archived and is no longer updated by Apple.

When you enable the auditing feature in Common Criteria Tools, the system may not be available in Remote Desktop. You can work around this by toggling the Remote Desktop service off and back on in the Sharing System preference pane. Or you can use the following command to restart Remote Desktop:

```
sudo /System/Library/CoreServices/RemoteManagement/ARDAgent.app/Contents/Resources/kickstart -restart -agent
```

Both of these workarounds will allow Remote Desktop to work until the client is restarted. After restarting, you must apply the workaround again.

The issue only occurs with certain combinations of software. It does not occur with Apple Remote Desktop 3.0 or later in combination with Mac OS X 10.4 or later and Common Criteria Tools for Mac OS X 10.4.

Published Date: Feb 18, 2012

Mac OS X 10.3 and later, Mac OS X Server 10.3 and later: Unsaved changes will prevent automatic logout

This article has been archived and is no longer updated by Apple.

In Mac OS X 10.3 and later and Mac OS X Server 10.3 and later, you can have your computer automatically log out of your account if you've been inactive for a set amount of time. In the client version of Mac OS X 10.3 and later, you can turn on this feature in the Security pane in System Preferences. In Mac OS X Server 10.3 and later, you can set this option in Login Preferences (click the Auto Log-Out tab).

However, if you have a document open with unsaved changes, the application will cancel the logout process. This is expected behavior. Mac OS X 10.3 and 10.4 do this to prevent you from losing your unsaved data.

Published Date: Feb 17, 2012

iPod: Inaccurate dates on photos synced from iPhoto

This article has been archived and is no longer updated by Apple.

When you sync photos from iPhoto to your iPod, the photo date displayed may be inaccurate; you may see one or both of the following:

- The date at the top of the iPod screen displays Dec 2000 for all photos.
- The full-resolution copies of the photos on the iPod are stored in this folder hierarchy: /*iPodname*/Photos/Full Resolution/2001/01/01 (where *iPodname* is the name of your iPod).

To resolve this issue:

1. Download and install the iPhoto Updater.
2. Open iPhoto.
3. Quit iPhoto.
4. Open iTunes.
5. Enable Disk Mode on the iPod.
6. Quit iTunes.
7. Drag these folders to the Trash:
   - /*iPodname*/Photos/
   - ~/Pictures/iPhoto Library/iPod Photo Cache/
     Note: The tilde "~" refers to your Home directory. For more information, see "Mac OS X: Using Your Home Directory."
8. Open iTunes; a message appears, indicating that the iPod is linked to another photo library or folder.
9. Click Yes to add all your photos back to the iPod.

You can then disable Disk Mode on the iPod if you want.

Published Date: Oct 11, 2016

Mac OS X 10.4: Update iCal Help files after doing an Archive and Install

This article has been archived and is no longer updated by Apple.

If you install Mac OS X 10.4 Tiger over Mac OS X 10.3 using an Archive and Install installation, the Help files for iCal 2.0 (included with Tiger) will need to be updated. Otherwise, you'll see the Help content for iCal version 1.5 when you open Help from within iCal 2.0.

To update these files in Mac OS X 10.4, follow these steps:

1. Open the Applications folder.
2. Control-click the iCal application icon.
3. In the resulting shortcut menu, choose **Show Package Contents**; an "iCal.app" window opens with a Contents folder in it.
4. Open the Contents folder, then the Resources folder within it.
5. In the Resources window, look for folders whose names end with a ".lproj" extension. For easier finding, view the window as a list, then sort it by Kind (click the Kind header). Note that there are different ".lproj" folders for different languages, including English.lproj and German.lproj.
6. Open the .lproj folder for the language that you want to use.
7. Open the iCal Help folder in this folder.
8. Delete the "iCal Help.html" file (not a folder). **Do not** delete the similarly named " iCalHelp.html" (note that it has no space in the name) or any other files.
9. Repeat steps 6–8 for any other languages for which you want to update iCal Help.

This document will be updated as more information becomes available.

Published Date: Oct 11, 2016

Xserve and Xserve G5: Fan too fast alert message

This article has been archived and is no longer updated by Apple.

You may occasionally receive alerts from your Xserve that the fans are spinning too fast. As long as the reported fan speed is no more than approximately 10-percent over warning message, and the increased speed happens only for four hours or less, your server is functioning normally.

If you receive a fan speed warning accompanied by an odd noise (such as squealing) or abnormal behavior, the Xserve may need to be serviced.

Published Date: Feb 19, 2012

Final Cut Pro 5: Items to note when working with HDV

This article has been archived and is no longer updated by Apple.

When working with HDV (high-definition video) in Final Cut Pro 5, here are some special considerations that you should keep in mind.

Print to Video limitations using HDV formats

On computers that meet the minimum system requirements for HDV playback[1], the Print to Video command cannot be used if the Mirror to Desktop option is enabled. To turn off the Mirror to Desktop option:

1. Choose **Final Cut Pro > Audio/Video Settings**, then click the A/V Devices tab.
2. Deselect the Mirror to Desktop checkbox.
3. Click OK.

HDV Log and Capture Preview is disabled when a PCI graphics card is installed

If your computer has a PCI graphics card installed and you are logging or capturing HDV, Final Cut Pro does not preview video or audio in the Log and Capture window. You can still log and capture, but you'll need to use your HDV camcorder display to preview video.

Sony native MPEG-2 media must be exported for use in DVD Studio Pro

Sony HDV media records MPEG-2 media using an open GOP (Group of Pictures) structure, which means that B-frames in the MPEG stream may be reliant on frames in adjacent GOPs.

In some cases, using open GOP media in DVD Studio Pro can cause DVD decoder issues, particularly at the start and end frames of media files. To properly transfer open GOP MPEG-2 HDV media to DVD Studio Pro after capturing it in Final Cut Pro, export the media from Final Cut Pro using the Export QuickTime Movie option (**File** > **Export**). This command conforms the beginning of the MPEG-2 media to a closed GOP structure, which is compatible with DVD decoders.

HDV footage with timecode breaks may report a stream error during capture

In User Preferences, if you choose **Abort Capture** from the **On timecode break** pop-up menu, capturing is aborted when a timecode break is detected. Depending on the signal on tape, you may see one of two messages if the capture is aborted:

- A "stream error" message
- A "timecode break error" message

Related Document

301402 "Final Cut Pro 5: Computer and Camera show different points in time while capturing HDV"

Notes

1. 1 GHz processor, 1 GB of RAM, and 167 MHz bus speed required for HDV playback.

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Published Date: Oct 11, 2016

iMovie HD: Unable to eject audio CD after importing a track in iMovie

This article has been archived and is no longer updated by Apple.

If you add a track from an audio CD into your iMovie HD project, you may be unable to eject that CD while iMovie HD is running. In such cases, you will see a message like this one:

This can happen if you're using iMovie HD in Mac OS X 10.4 Tiger.

To eject your CD, save your project and quit iMovie HD. You will then be able to eject your CD normally. After the CD is ejected, open iMovie again and resume work on your project.

If you have a number of CD tracks that you wish to add to an iMovie project, you can avoid this issue by first importing the tracks into iTunes. Once they are in your iTunes Library, they will be available for use in iMovie HD without needing to have the CD in your computer.

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Published Date: Oct 11, 2016

About the WebObjects 5.2.4 Update

This article has been archived and is no longer updated by Apple.

This document contains an overview and download information for the WebObjects 5.2.4 Update. WebObjects 5.2.4 is primarily for developers of WebObjects applications on Mac OS X 10.4. WebObjects 5.2 users who use the Xcode 2.0 development tool suite or plan to deploy their WO 5.2 applications on Mac OS X Server 10.4, Windows, or Solaris should also install this update. WebObjects 5.2.4 is formally qualified and supported on the Java 1.4.2 platform.

The WebObjects Current Patch List contains information on all available patches and updates for all versions of WebObjects. Read this document if you're not sure which update you need on your system.

More details are listed below, but these are highlights of the update:

- Compatibility with Xcode 2.0 Developer tools on Mac OS X 10.4
- Compatibility between WebObjects 5.2 and Java 1.4.2 for Mac OS X 10.4
- Compatibility between WebObjects 5.2 and Mac OS X 10.4
- OpenBase SQL for Mac OS X 10.4
- Fixes for the Java Client Save/Delete/Update problems with WO 5.2.3

This update also introduces the WebObjects Server Admin plug-in for Mac OS X Server 10.4 which will migrate the WebObjects StartupItems mechanism for auto starting WebObjects services to launchd-based services. The documentation for deploying WebObjects applications can be found at here, and this documentation has been updated to describe the features of Mac OS X Server 10.4

WebObjects 5.2.4 Developer for Mac OS X 10.4

Important: There are two mutually exclusive updates for this platform. If you have WebObjects 5.2 Developer installed on Mac OS X 10.4, you need the WebObjects 5.2.4 Developer update. If you have WebObjects 5.2 Deployment installed on Mac OS X Server 10.4, you need the WebObjects 5.2.4 Deployment update. You do not need both on any system.

This update is available through the Software Update feature of Mac OS X. If you use this method, only the proper update for the software which you have installed on your system is visible and available for download. If you prefer to download and install the package manually, follow the instructions below.

System requirements

WebObjects 5.2.4 Developer requires:

- Mac OS X 10.4 or later
- Xcode 2.0 Developer tools
- Java 1.4.2

If you have not yet updated to the correct version of Mac OS X or Developer Tools, you must do so before installing WebObjects 5.2.4.

If you are creating a new Mac OS X WebObjects 5.2.4 development system, you should install the software in the following order:

1. Mac OS X 10.4
2. Xcode 2.0 Developer tools CD
3. WebObjects 5.2 Developer

   Important: After installing WebObjects Developer 5.2 and restarting your computer, you will get a warning message about fixing permissions. You may choose to fix, ignore, or disable the issue without adversely effecting the installation or compromising the security of your system. The WebObjects Developer 5.2.4 Installer will fix the permissions issues.

4. WebObjects 5.2.4 Developer

Manually installing WebObjects 5.2.4 Developer on Mac OS X 10.4

These instructions are for manually downloading and installing WebObjects 5.4 Developer. If you are installing using Software Update, see the previous section of this document.

System requirements

WebObjects 5.2.4 Developer requires:

- Mac OS X 10.4 or later

- JDK 1.4.2
- Xcode 2.0 Developer tools

If you have not yet updated to the correct version of Mac OS X, Java, or Developer Tools, you must do so before installing WebObjects 5.2.4.

1. Go to Apple Downloads and get the WebObjects 5.2.4 Developer update. The disk image should expand after downloading, leaving WO524Developer.pkg.
2. Open WO524Developer.pkg. The Authenticate panel opens. **Important:** Only an administrator can install the update.
3. Type the proper administrator name and password to authenticate.
4. Click OK to proceed. The Introduction panel appears.
5. Click Continue. The Software License Agreement appears.
6. Read the software license agreement, then click Continue.
7. Click Agree to agree to the license agreement, and continue the installation.
8. Select the volume containing Mac OS X and WebObjects 5.2 Developer.
9. Click Continue.
10. Make sure that there are no WebObjects or EOF applications running.
11. Click Install to proceed with installation. The Installer window displays information about the progress of the installation, which may take several minutes.
12. Restart your computer.

WebObjects 5.2.4 Deployment for Mac OS X Server 10.4

This update is available through the Software Update feature of Mac OS X. If you use this method, only the proper update for the software which you have installed on your system is visible and available for download.

System requirements

- Mac OS X Server 10.4 or later
- JDK 1.4.2

If you have not yet updated to the correct version of Mac OS X Server, you must do so before installing WebObjects 5.2.4.

If you are creating a new Mac OS X WebObjects 5.2.4 deployment system, all you need to do is install Mac OS X Server 10.4.

Configuration tasks:

To configure and start the WebObjects services:

1. Open the Server Admin application.
2. Select the WebObjects service.
3. Click the settings tab.
4. Configure the wotaskd and monitoring services.
5. Click the Start button.

Important: You do not need to manually edit the apache.conf file with the following line. We have already inserted it for you.

```
# Including WebObjects Configs Include /System/Library/WebObjects/Adaptors/Apache/apache.conf
```

Both Mac OS X 10.4 and Mac OS X Server 10.4 have a new, more reliable mechanism for keeping applications running. It is called "launchd". It supersedes the "SystemStarter" and "watchdog" processes of previous systems. See the man pages launchd(8) and launchctl(1) for more information. The Server Admin application uses the files at `/System/Library/LaunchDaemons/com.apple.wotaskd.plist` and `/System/Library/LaunchDaemons/com.apple.womonitor.plist` to configure the wotaksd and JavaMonitor applications; and launchd keeps the apps running, based on the information in these files. The scripts which formerly restarted the wotaskd or JavaMonitor process after a restart are no longer needed and can be deleted. The launchd process will launch these applications after restart for you and restart them if they crash for any reason. If you want to change the way the wotaksd and JavaMonitor applications are managed, that can be done with the facilities provided by launchd and its associated tools.

Installing WebObjects 5.2.4 on Windows 2000

System Requirements

WebObjects 5.2.4 Developer/Deployment requires:

- Java 1.4.2 (J2SE SDK)
- WebObjects 5.2

If you see panels indicating that certain files being replaced by the update are "locked" during installation, click Reboot to continue the installation.

The files will be replaced upon restarting.

This update cannot be uninstalled alone. Once you have upgraded to WebObjects 5.2.4 you cannot revert to a previous version of WebObjects 5.2. However, the entire WebObjects 5.2.4 installation can be uninstalled using the Add/Remove Programs control panel.

Follow these steps:

1. Download the WebObjects 5.2.4 Developer update for Windows.
2. Log in as a user with Administrator privileges.
3. Make sure that there are no WebObjects or EOF applications running.
4. Open WO524.exe to start the installation process. A screen appears with some information about this update.
5. After you have read the information screen, click Next to continue. The license agreement for this update appears.
6. To agree to the license and continue the installation, click Yes. The update will be installed on your system and you will be asked if you want to restart.
7. Select "Yes, I want to restart my computer now" to restart Windows.
8. The WinZip self-extractor automatically quits and removes its temporary files in about 20 seconds.

Installing WebObjects 5.2.4 on Solaris

System Requirements

WebObjects 5.2.4 Deployment requires:

- Java 1.4.2 (J2SE SDK)
- WebObjects 5.2.

If you have not yet updated to these versions, you must do so before installing WebObjects 5.2.4.

Follow these steps:

1. Download the WebObjects 5.2.4 Developer update for Solaris.
2. Download the update installation script patcher.sh.
3. After you have downloaded the files, the patcher.sh script needs its executable bit set. At the command prompt enter:

   ```
   chmod 511 patcher.sh
   ```

4. Log in as root.
5. Ensure that there are no WebObjects or EOF applications running, including Monitor.
6. If a web server is running on the computer on which you are installing the update, stop it.
7. Stop WebObjects services (wotaskd and woservice) using the WOServices script. At the command prompt enter:

   ```
   cd $NEXT_ROOT/Library/WebObjects/Executables ./WOServices stop
   ```

   These services will restart when you restart the computer after installing the update.

8. To Install the update, cd to the directory containing the update and the patcher.sh installation script. Then at the command prompt enter:

   ```
   patcher.sh -install WO524Solaris.tar.gzip
   ```

   For more information on using patcher.sh, at the command prompt enter:

   ```
   patcher.sh -help
   ```

9. Copy the updated WODocument root to your web server's document root.

   ```
   cp -r $NEXT_ROOT/Library/WebObjects/WODocumentRoot/WebObjects <webserver doc root>/WebObjects
   ```

10. Restart your computer.

Issues resolved in WebObjects 5.2.4

3397711: TITLE: EOEditingContext.refreshObject() breaks object observing mechanism.

ISSUE: EOEditingContext.refreshObject() breaks object observing mechanism. The root of the problem was that the refreshObject() called refaultObject(), which in turn cleared the object out of the updatedObjects list.

RESOLUTION: Refaulting objects with unsaved changes is now correctly handled. Changes would not be thrown away.

3485344: TITLE: WebObjects Builder consumed 100% CPU cycles whenever the src attribute of an IMG tag were set to an absolute URL.

ISSUE: Whenever a WebObjects Builder encountered an IMG tag whose src attribute was bound to an absolute URL, WebObjects Builder tried to fetch and display the content. However, the fetch sometimes led to an infinite loop and the time out mechanism for the fetch was broken.

RESOLUTION: This issue has been resolved.

3505762: TITLE: Documentation for NSLog Debug Groups Incorrect

ISSUE: Documentation for NSLog Debug Groups was Incorrect. The values are not listed in both numeric and alphabetic order.

RESOLUTION: This issue has been resolved.

3516904: TITLE: The performance on WebObjects Builder degraded significiantly when it encountered certain CSS contents, complex WebObjects Component or components with malformed html contents.

ISSUE: Certain CSS contents, complex WebObjects Components or components with malformed html contents could bring WebObjects Builder into a panic state, which led to a spinning wheel and a major performance hit.

RESOLUTION: This issue has been resolved.

3557641: TITLE: WebObjects Builder crashed upon opening certain WebObjects Components created with older version of WebObjects Builder.

ISSUE: Certain artifacts in a WebObjects Component created by older version of WebObjects Builder could make the latest version of WebObjects Builder crash.

RESOLUTION: This issue has been resolved.

3566580: TITLE: WOExceptionParser throws an exception.

ISSUE: Under certain circumstances, WOExceptionParser might throw an StringIndexOutOfBoundsException.

RESOLUTION: This issue has been resolved.

3596000: TITLE: Illegal state exception was thrown to suggest illegal lock usage.

ISSUE:In some uncommon cases an illegal state exception was thrown to suggest illegal lock usage. The root of the problem was that WOSession causes locking issues while disposing the EOEditingContext and putting the WOComponent to sleep.

RESOLUTION: This issue has been resolved.

3616063: TITLE: JavaClient does not handle save/delete consistently in some cases.

ISSUE: Adding a new record, saving, deleting, and then saving it again sometimes made Java Client applications throw an exception: "Save Failed: Server Exception: Attempt to insert null into an com.webobjects.foundation.NSMutableArray."

RESOLUTION: This issue has been resolved.

3641431: TITLE: Incorrect HTML generated for JSImageFlyover

ISSUE: The HTML generated for JSImageFlyover was Incorrect.

RESOLUTION: This issue has been resolved.

3642302: TITLE: Boolean was not handled correctly in Direct to Web.

ISSUE: Boolean was not handled correctly in Direct to Web.

RESOLUTION: This issue has been resolved.

3720010: TITLE: Accessing an image via SSL within a WOComponent causes WebObjects Builder to crash.

ISSUE: Accessing an image via SSL within a WOComponent causes WebObjects Builder to crash. Content fetching via http/https was broken in WebObjects Builder.

RESOLUTION: This issue has been resolved.

3735980: TITLE: Restricting qualifiers are not correctly migrated across relationships during prefetching

ISSUE: Restricting qualifiers are not correctly migrated across relationships during prefetching

RESOLUTION: This issue has been resolved.

3738943: TITLE: Removing observers from notification center prior to adding any observers throws an exception.

ISSUE: Removing observers from notification center prior to adding any observers throws an null pointer exception.

RESOLUTION: This issue has been resolved.

3739954: TITLE: WebObjects Builder could not handle the tag with absolute URL.

ISSUE: WebObjects Builder could not handle the tag with absolute URL.

RESOLUTION: This issue has been resolved.

3748926: TITLE: Certain debug information was logged to NSLog.err instead of NSLog.debug.

ISSUE: Information such as the URL for connecting to the WebObjects Application via WebServer went to NSLog.err instead of NSLog.debug.

RESOLUTION: This issue has been resolved.

3753879: TITLE: OpenBase distribution should be updated

ISSUE: OpenBase needs to be updated to a more current version that is compatible with Tiger.

RESOLUTION: OpenBase SQL 8 for Tiger is now bundled with WebObjects 5.2.4 Developer release.

3761296: TITLE: EOModeler loses track of Subversion hidden folder in eomodeld folder

ISSUE: EOModeler loses track of Subversion hidden folder in eomodeld folder

RESOLUTION: This issue has been resolved.

3767346: TITLE: WOCompletionBar generated invalid HTML attributes.

ISSUE: WOCompletionBar generated invalid HTML attributes.

RESOLUTION: This issue has been resolved.

3809485: TITLE: Missing documentation for the deprecated setValueClassName method in EOAttribute.

ISSUE: The method setValueclassName() defined in the class EOAttribute was deprecated. However, there was no documentation suggesting any replacement methods.

RESOLUTION: This issue has been resolved.

3845748: TITLE: Dragging items from a table and dropping them out of a table crashed WOB.

ISSUE: Dragging and dropping items into/out of a table has been causing WebObjects Builder to crash. The workaround is to use copying and pasting with keyboard instead.

RESOLUTION: Drag and Drop support has been turned off by default. To enable Drag and Drop support, launch WebObjects Builder with the argument "-WBDragNDrop."

3935864: TITLE: Creating a new instance of WebObjects Application causes JavaMonitor to throw an exception.

ISSUE: Under certain circumstances, creating a new instance of WebObjects Application could make JavaMonitor throw a null pointer exception.

RESOLUTION: This issue has been resolved.

Troubleshooting

- **My application is throwing the exception "com.webobjects.foundation.NSForwardException for java.lang.NoClassDefFoundError: javax/servlet/ServletContext".**

  For some reason, the necessary packages are not in your classpath. Debug your classpath to make sure the javax.servlet.* classes are there. If the classes are not found, the resolution is to download the servlet.jar and put it into /Library/Java/Extensions or in your classpath. The servlet.jar can be found with many open source distributions (e.g tomcat).

- **How do I convert my legacy WebObjects application to build as a true war bundle?**
  1. In Xcode, configure your build settings to the following:

```
SERVLET_SINGLE_DIR_DEPLOY = NO
SERVLET_STUB_WAR = NO
SERVLET_TRUE_WAR = YES
SERVLET_DEPLOY_LICENSE = <your deployment license>
SERVLET_WEBAPPS_DIR = /Library/JBoss/3.2/deploy
```

  2. Add the JavaWOJSPServlet.framework to your project.
  3. You should also verify that all of your custom frameworks are being built as jar files (BUNDLE_AS_JAR = YES) and are installed or linked into /Library/WebObjects/lib.

- **I have problems building a newly created Java Client Application (Three Tier) project. The client app crashes and I get a error in the console similar to:**

  ```
  apple.awt.EventQueueExceptionHandler Caught Throwable : java.lang.IllegalArgumentException: Controller class not found: javaclicent1.client.javaclicent1InterfaceController java.lang.IllegalArgumentException: Controller class not found: javaclicent1.client.javaclicent1InterfaceController
  ```

  The WebServer target for the Java Client template in Xcode 2.0 is not configured correctly and the [projectname]InterfaceController.java class is in the the 'Copy Bundle' phase instead of the 'Compile Sources' phase. To workaround this problem, move the [projectname]InterfaceController.java source to the 'Compile Sources' phase of the WebServer target.

- **The WebObjects Apache adaptor is not configured on WebObjects Developer 5.2.4 after a Tiger upgrade install**

  Check the file `/etc/httpd/http.conf` and verify if the line below exists:

  ```
  Include /System/Library/WebObjects/Adaptors/Apache/apache.conf
  ```

  If not, add it to the file, save and restart your web server either in System Preferences or by typing "sudo apachectl restart" in Terminal.

Published Date: Oct 11, 2016

Logic Pro/Express, Soundtrack, Soundtrack Pro: Plug-in window text not localized

This article has been archived and is no longer updated by Apple.

The text displayed in Logic Pro, Logic Express, Soundtrack, and Soundtrack Pro plug-in windows is always in English, no matter what language you selected.

For technical reasons, the text found in the various interface elements of plug-ins is always in English. Many of the terms derive from universal audio vocabulary that would not make sense in other languages.

Published Date: Feb 19, 2012

Soundtrack Pro: How to paste to only one channel of a stereo audio recording

This article has been archived and is no longer updated by Apple.

If you want to paste audio into only one channel of a stereo audio recording, it may not be immediately obvious how to do this in the Soundtrack Pro Waveform Editor.

For example, if you copy a section of audio from one channel, select a section with both channels selected, and then choose **Edit > Paste**, the audio will be placed in both channels. If you make a selection in only one channel and attempt to paste, the **Paste** command will be dimmed in the **Edit** menu.

This happens because you can't edit one channel of a stereo audio file in such a way that the two channels would become different lengths. However, there is a way to paste a single channel of audio into only one channel of an audio file. Here's how to do it:

1. Copy the audio you want to the clipboard.
2. Set an insertion point in the channel that you wish to paste to by clicking on the desired point in the timeline—either near the waveform's upper edge for the left channel, or near the lower edge for the right channel. The cursor will turn into a small arrow with an L or R, respectively, to indicate the selected channel.
3. Choose **Edit > Paste Special > Paste Mix**. The following dialog appears:

4. In the dialog, set "Original Material Level" to 0 (zero) percent, set "Clipboard Level" to 100 percent, and click OK to paste.

The contents of the clipboard will replace the current material in the selected channel, thus preserving the length of the channel in relation to the other.

Published Date: Oct 11, 2016

Mac OS X 10.3.9: Users with account limitations cannot log in

This article has been archived and is no longer updated by Apple.

After updating to Mac OS X 10.3.9, a user who has account limitations may be unable to log in to the computer. When they attempt to log in from the Login window, the progress bar may stop moving and the computer may stop responding ("freeze").

This document applies to Mac OS X 10.3.9.

What can you do? Try any of these workarounds:

- Try deselecting the "Change password" checkbox under Limitations in Accounts preferences may resolve the issue.
- The user may be able to log in using Fast User Switching (that is, log in as a different user, then switch to the limited user).
- When logged in as an administrator, change the managed user account to a standard user account (one without limits but no administrator privileges) in Accounts preferences.

This document will be updated as more information becomes available.

Published Date: Oct 11, 2016

Mac OS X 10.4 Tiger: AirPort preferred network settings affect all locations

This article has been archived and is no longer updated by Apple.

When you make changes to your preferred networks in AirPort preferences on a computer with Tiger, please note that the settings will affect all of your Locations.

Before Tiger, you were limited to one AirPort TCP/IP configuration per Location, which forced some people to create additional Locations to meet the configuration requirements of different networks. Tiger lifts that limitation, so you can create extra port configurations in one Location, and Tiger will automatically use the appropriate one. This means you can now go from place to place without touching the Locations menu.

The only people affected by the new global nature of preferred networks are those who are in the presence of several wireless networks at the same time and were using the Locations menu to switch between them. The preferred method for achieving this effect is to simply switch networks in the AirPort menu.

If you don't have this menu in your menu bar, go to the AirPort section of Network preference and check the box for "Show AirPort status in menu bar."

Published Date: Oct 11, 2016

iMovie HD: No sound after applying a title, effect, or transition to an MPEG-4 video clip

This article has been archived and is no longer updated by Apple.

If you use MPEG-4 video in an iMovie 5.0.2 HD project, you may notice that when you apply an effect, transition, or a title over a video clip, you don't hear any sound when you play back your edited clip. If you export the movie, the exported movie will also be affected. This occurs on computers with Mac OS X 10.4, or Mac OS X 10.3.9 with QuickTime 7.

To avoid this issue, extract the audio before applying the effect, title, or transition. Then reapply the sound after the video has been modified.

This document will be updated when additional information is available.

Published Date: Oct 11, 2016

Mac OS X 10.4: If FileVault "secure erase" is interrupted, data loss may occur

This article has been archived and is no longer updated by Apple.

When you turn on FileVault protection for an account in Security preferences (in System Preferences), your entire home directory is converted into an encrypted disk image. With Mac OS X 10.4 Tiger, you can also securely erase data when FileVault protection is turned on by clicking the "Use secure erase" checkbox when the "You are now ready to turn on FileVault protection" dialog sheet appears.

If you select this option, *do not interrupt the secure erase process* (see below)—even if "Unmounting FileVault" appears for a long time.

Tip: It's a good idea to make a back up of important files, or even your entire home directory, before turning on FileVault.

The secure erase option means that after files are copied to the FileVault encrypted disk image, they are securely erased from your computer, like the Finder's Secure Empty Trash feature.

Important: If the secure erase process is interrupted:

- You may not be able to log in with the account that you were enabling FileVault protection for.
- All files within your Home, including things that were on your desktop, in your Documents, Pictures, Movies, and Music folders, your bookmarks, Mail messages, and your application settings, may be lost (even if you can log in with a different account afterwards).

Tip: When using this option on a portable Mac, it's a good idea to make sure the AC power adapter is connected.

The FileVault secure erase process

After you click "Turn On FileVault" with the "Use secure erase" option enabled, you will be logged out and the FileVault window will appear (it looks like the Login window). A status message tells you how long it will take to move files to your encrypted home directory.

After that, the secure erase process starts, but you won't see a status message that indicates how long it may take (you'll see an "Unmounting FileVault" message in the status area).

Important: The "Unmounting FileVault" message remains until the secure erase is finished. Don't interrupt it!

The secure erase is great for ensuring that files are securely deleted after they're moved to your encrypted disk image, but this can take a while to complete, just like using Secure Empty Trash in the Finder, which can take a long time when you're deleting lots of data. How long it takes depends on how much information is in your home directory and how fast your Mac is. Don't force-restart your computer or interrupt the process in any other way.

I interrupted the secure erase process

You probably can't log in. If you can log in as a different user, you probably can't find your files (or a FileVault-created disk image) in your original user account.

Do you have another administrator account already set up? If so, log in as that when starting up instead of with the account that was interrupted during the FileVault activation. Then, use Account preferences to delete the account which you can no longer log in as. Create the account again afterwards. Finally, log in as the new replacement account. If you have a back up of important files as mentioned above, restore your important data from it. Afterwards, you can enable FileVault for the account again.

If you have no other account set up, you'll need your Mac OS X 10.4 Tiger Install disc. Start up from the disc and perform an Archive and Install installation. Do not preserve user accounts and network settings. See this document for more information.

This document will be updated as more information becomes available.

Published Date: Oct 11, 2016

iSync 2.0: Mac OS X 10.4 upgrade does not automatically enable Palm OS devices

This article has been archived and is no longer updated by Apple.

iSync version 2.0, included with Mac OS X 10.4 Tiger, does not automatically enable syncing on your Palm OS devices, even if you've been using them with an earlier version of Mac OS X. You may see a yellow triangle icon by the device in iSync 2.0.

Don't worry. It's easy to enable Palm OS device syncing in Mac OS X Tiger. Check out this document for more information.

Related documents

301371 iSync 2.0 includes Palm Conduit

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 11, 2016

Mac OS X 10.4, .Mac: Downloaded iCal events don‘t open in iCal

This article has been archived and is no longer updated by Apple.

With Mac OS X 10.4 Tiger, iCal events that you download using .Mac Webmail will have an HTML (.html) file extension instead of an iCal (.ics) one. Because of this, when you double-click the file, iCal won't open and instead, your default web browser will try to open the file (or whatever application you've assigned to open .html files).

If this happens, simply change the ".html" file extension on the affected file to ".ics." For example, if you download an iCal 1.5-sent invitation event named "mydates" using .Mac Webmail, the file will be saved as "mydates.html." To make this file open in iCal when you double-click it, change its name to "mydates.ics."

Note: Mac OS X 10.4 includes iCal version 2.0, which is the version that will open when you double-click an iCal file.

Published Date: Oct 11, 2016

iSync 2.0: Sync stops if you quit iSync while syncing a PalmOne Treo 650

This article has been archived and is no longer updated by Apple.

If you quit iSync 2.0 (included with Mac OS X 10.4 Tiger) while it's syncing with a PalmOne Treo 650, the sync stops, though no alert message will appear—no data will be lost either. If this happens, open iSync 2.0 and sync again (click the sync button on your Palm device's cradle or use Palm HotSync), and let the sync finish.

Related documents

301419 iSync 2.0: About canceling a sync

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 19, 2012

Logic Pro 7.1: Erroneous newer software message when installing in Tiger

This article has been archived and is no longer updated by Apple.

When you're installing Logic Pro 7.1 on a Mac OS X 10.4 "Tiger" computer, certain circumstances may produce this alert message:

> The chosen volume contains software which is newer then [sic] the software you are installing.

The message is erroneous; it can happen when you're updating from Logic Pro version 7.01. Simply click the Continue button in the dialog to ignore it.

Published Date: Oct 11, 2016

Changes to scoring markers from Final Cut Pro are not updated in Soundtrack Pro

This article has been archived and is no longer updated by Apple.

When you open a Final Cut Pro-created movie in Soundtrack Pro, you may come across a situation where your score makers don't appear in Soundtrack Pro. This can happen if you open a Final Cut-exported movie with score markers in Soundtrack Pro, delete the file, go back to the original movie project in Final Cut Pro, edit or add score markers, re-export the movie with the same name, and then open the file in Soundtrack Pro again. Soundtrack Pro will not show any changes or additions you made to the markers.

To avoid this issue, change the name of the movie when you re-export it from Final Cut Pro. Then open the renamed movie in Soundtrack Pro.

Published Date: Feb 20, 2012

Soundtrack Pro: Playback region cannot be disabled by dragging right boundary

This article has been archived and is no longer updated by Apple.

Under some conditions, a playback region cannot be disabled by dragging the arrow that marks the right boundary of the playback region.

For example, if you're zoomed in closely and Snap mode is turned off (**View > Snap**), you won't be able to disable a playback region by dragging the right arrow in the timeline to the left.

To disable a playback region in these situations, click outside its borders in the timeline.

Published Date: Oct 11, 2016

iPhoto: Sharpness adjustment may not be apparent when viewing at less than 100 percent

This article has been archived and is no longer updated by Apple.

When you view an image at less than full size, iPhoto smooths it (a technique known as anti-aliasing) to get rid of artifacts that result from scaling down the photo. The relationship between anti-aliasing and sharpening is a trade-off; although anti-aliasing does not modify the actual image file, it does counter the effect of sharpening when viewing the image at less than full size.

Because of this, if you sharpen a photo, close it, then reopen it again at a less than 100-percent view, you may get the impression that your sharpness changes were not saved. In reality they were, but since the image has been re-aliased to fit your screen, the image's true sharpness may not be apparent.

To evaluate whether an image is sharp or needs sharpening, you should view the photo at 100 percent/full size while editing in a separate window. To open the photo in a separate window, you can either Control-click the image and choose "Edit in a separate window" from the shortcut menu, or change your iPhoto preferences:

1. From the **iPhoto** menu, choose **Preferences**.
2. In the General pane, locate the preference for "Double-click photo."
3. Set the radio button to "Opens photo in edit window."
4. Close the preferences window.

Now photos will open in a separate window when you double-click them. Once in the separate window, choose **100%** from the **Size** pop-up menu. If you don't see the Size menu, widen the window until it appears.

Tip: If you are editing the photo from one of the other view options, you can press the 1 key to quickly jump to 100 percent view.

Other applications, such as Adobe Photoshop, handle anti-aliasing differently, so the degree of apparent sharpness can vary from one application to the next when viewing an image at a scaled-down size. You should see consistency when comparing the image at 100 percent across other applications.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.
Published Date: Oct 11, 2016

Logic Pro 7.1: Enhancements included in the Logic Pro 7.1 Upgrade Kit

This article has been archived and is no longer updated by Apple.

The Logic Pro 7.1 update adds a generous collection of new features and sought after enhancements such as full native plug-in delay compensation and over 70 new key commands. It provides greater facility for creating and managing Apple Loops and a convenient new method for re-ordering Channel Strip plug-in configurations. Logic Pro 7.1 further extends the creative options with 5 new plug-ins including a Bass Amp and two hybrid synthesizers. The update is rounded out by a host of optimizations and refinements that significantly improve the performance and stability of both Logic Pro and the included, updated version of Waveburner.

Full enhancement list

For a full list of enhancements, check out our Logic 7.1 Enhancement PDF. For a quick overview of the top ten, keep reading here.

Top ten reasons to upgrade

1. Expanded Apple Loops Integration
Produce your own software instrument Apple Loops using any Logic Pro or Audio Unit plug-in. Place the software instrument Apple Loops onto an Audio Instrument track and the original MIDI performance and Channel Strip configuration is completely restored. Convert your ReCycle (REX) files into Apple Loops by simply dragging them into the Arrange window. Find your Apple Loops more easily by limiting which Jam Packs or other loop collections you wish to browse.

2. Full Native Plug-In Delay Compensation
Take advantage of full plug-in delay compensation which now corrects for latency produced on bus, auxiliary, and output channels in addition to every other path in the native audio mixer. You'll especially appreciate this enhancement if you own third party DSP cards like those developed by Universal Audio and TC Electronics.

3. New Instrument and Effect Plug-Ins
Add beef and character to your bass or other instruments with a new Bass Amp plug-in which replicates the sound of the industry's sweetest bass amplifiers and direct boxes. Tighten up any performance using the Enhanced Timing plug-in or be inspired by the massive atmospheric synth textures produced by two new Hybrid Synth instruments.

4. Hand Tool in Track Mixer
Freely move, copy and swap plug-ins between Channel Strip Inserts using the new Hand Tool in either the Arrange window or Track Mixer.

5. Over 70 New Key Commands
Speed up your workflow by assigning up to 70 new key commands to your favorite functions, including many of those introduced in 7.0 such as Open Loop Browser, Next/Previous Channel Strip, Create Multiple Tracks, Import Audio Files, and Bounce.

6. Numerous Plug-In Improvements
Swap, copy, and import Ultrabeat voices and sequences using a simple drag and drop operation. Export Ultrabeat patterns directly to the Arrange window also using drag and drop. Create or edit EXS24 instruments more easily using rubber-band selection of Zones and the ability to define Start Note and Width settings when importing multiple samples. Exploit new options for the Rotor effect in the EVB3, which also now has improved integration with the Hammond Suzuki XB-1, XK-2, and XK-3 hardware Drawbar controllers. Enjoy many other useful refinements made to Sculpture, Vocal Transformer, Pitch Correction and other plug-ins.

7. Support for 9 additional Control Surfaces
Increase your choices for compatible hardware control surfaces thanks to dedicated support for these 9 popular controller devices: Korg KONTROL49 and MicroKONTROL, Frontier Design Groups Tranzport, Tascam US-2400 and FW-1082, JL Cooper CS-32 and FaderMaster 4/100.

8. Follow Tempo Option for Recorded Audio
Enable the new "Follow Tempo" Region parameter for any audio recorded into your song, and Logic will time and pitch shift the file when you change the song's tempo or key.

9. Insert Chords from Chord Track
Simplify the process for placing chords in lead sheets using a new option which imports the chords from the Global Chord Track.

10. Multiple Performance Enhancements
Streamline your entire workflow as a result of numerous general optimizations and performance enhancements found in Logic Pro 7.1. Highlights include accelerated waveform overview creation, speedier initialization of Audio Units plug-ins during startup, the option to add files to the Audio Window after many audio file functions, improved handling of XML, AAF, and OMF file transfers, and more.

Note: Logic Pro 7.1 is available as a USD 19.95 upgrade to all Logic Pro users possessing an XSkey authorized for Logic Pro 7.0 (pricing may

vary in other regions).

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Soundtrack Pro: Undo function doesn‘t work in some cases

This article has been archived and is no longer updated by Apple.

If the timeline is in Truncate mode and you apply a manual cross fade in Soundtrack Pro, the Undo function won't work as expected. As a workaround, choose **Undo** two more times, which moves the clip to its original spot, and then reapply the cross fade.

Published Date: Feb 18, 2012

Soundtrack Pro: Some one-shot loops show incorrect information in the Inspector

This article has been archived and is no longer updated by Apple.

When viewed in the Inspector window, some one-shot loops may show tempo and time signature information. This information is irrelevant for one-shot loops. You can simply ignore it. The one-shot loops will not change to match the project tempo or key.

Published Date: Feb 18, 2012

Mac OS X 10.4: Error after installing Emagic A26 and A62m drivers

This article has been archived and is no longer updated by Apple.

If you have an Emagic A26 or Emagic A62m audio interface and install the driver for either on a Mac OS X 10.4 computer, you will get this alert dialog after restarting your computer:

> The Startup Items folder ("/Library/StartupItems/") does not have the proper security settings.

To resolve the issue, simply click the Fix button in the dialog. You will then be asked to restart the computer. The audio interface will function properly after restarting.

Published Date: Oct 11, 2016

iWork: Exported PDF documents may not display drop shadows

This article has been archived and is no longer updated by Apple.

When you create a PDF file from an iWork application, please note that drop shadows within the PDF document may not display in all PDF readers.

The drop shadows in Pages and Keynote are generated by a component of Mac OS X. When you view iWork-generated PDF files in Preview, you'll see these shadows. However, if you view the PDF with a third-party reader that doesn't use this component, the shadows will be missing.

Published Date: Oct 11, 2016

Soundtrack Pro: Touch mode automation does not work as expected when cycling

This article has been archived and is no longer updated by Apple.

In Soundtrack Pro, automation may not work as expected when you cycle a region and use Touch mode automation.

When Soundtrack Pro writes automation in Touch mode while a region is set to cycle, it won't write a held parameter value after the end of the playback region has been reached. The old automation data remains after the playhead loops back to the start of the playback region.

To avoid this, turn off cycling before using Touch mode automation.

Published Date: Feb 18, 2012

Motion 2: New filters

This article has been archived and is no longer updated by Apple.

Motion 2 contains more than 130 GPU-accelerated filters and effects in its Library to use in your projects, including 16 brand new filters. Here's a look at what these new filters can do for you.

Extrude—Simulates depth in an object with an alpha channel by creating an object "front" and "back," offsetting them, and extruding the edges so that they connect.

Indent—Gives a shiny, bump-mapped appearance to an image, with raised and flat areas.

Refraction—Creates a glass-distortion effect on an image, with an optional height map.

Relief—Creates a 3D height map by using the color values of an object or height map to calculate height vertices.

Basic 3D—Allows you to rotate an object on the X, Y, and Z axes, and set its position and perspective.

Prism—Blurs and refracts an image as if seen through a prism, creating a rainbow effect.

Channel Swap—Substitutes the color value of a channel with that of either a selected channel or its inverse. If you select Blue from Red, the blue value in the object will match the red value across the entire object. Channel Swap can be used in a variety of ways, including simply inverting an object's alpha channel.

Gradient Colorize—Colorizes an image using color values instead of position to determine the application of the colors in the gradient.

Vectorize Color—Makes an object appear as multicolored polygons. It substitutes four colors over the entire color range of the object.

Earthquake—Creates an animated displacement effect on an object, adjusting its position as if it was being shaken by an earthquake.

Matte Magic—Erodes and feathers matte edges.

Vignette—Simulates the light fall-off and corner blurring in images as seen through some camera lenses.

Random Tile—Tiles an object in an irregular pattern with circular panels.

Scrub—Moves a virtual playhead around a clip, allowing you to change the timing of the clip without moving it in the Timeline. You can also use this filter to create a freeze frame. Additionally, it allows you to animate the offset parameter, often with interesting results. Try adding the Scrub filter to a clip, then applying the Randomize behavior to the Frame offset with the "Offset from" parameter set to Current Frame.

Trails—Draws light or dark motion trails that follow an object's movement. This is only effective with moving images.

Reduce Banding—Adds a small amount of noise to the pixels of an object, often used to soften the banding seen on 8-bit images with subtle gradients. This filter used to be called Noise Dither.

Bonus Filters—You can download three additional new filters by registering your copy of Motion. You can register by launching the application or registering online. Once registration is complete, go here to download the additional filters. These new filters are:

- **Insect Eye**—Maps a repeating hexagonal distortion pattern to an image, mimicking the point of view of an insect.
- **Movement Blur**—Creates blur based on the movement of subjects in the footage itself. This is different than motion blur, which blurs an animated object in the Canvas.
- **Underwater**—Applies an animated distortion to your object, as if it was being viewed through a water surface.

Published Date: Oct 11, 2016

Motion 2: Learn about the Replicator

This article has been archived and is no longer updated by Apple.

A new feature of Motion 2 is the Replicator, an amazing pattern-based design tool. Replicator lets you automatically generate and animate multiple copies of a single graphic, shape, or movie. Motion 2 includes over 100 Replicator presets.

The Replicator is a powerful new tool that allows you to quickly and fluently build patterns of repeating elements, including video, still images, shapes, or other objects in a Motion project. The patterns are built on a shape that you select, such as a circle, spiral, or rectangle. Once the Replicator shape is determined, you can modify and animate the parameters specific to that shape, such as the size of a circle or the amount of twist in a spiral's arms. You can also modify and animate the pattern's cell parameters. The Replicator also has a special behavior called Sequence Replicator that allows you to sequence the replicator parameters over the pattern. This behavior is very similar to the Sequence Text behavior in the Text Animation behavior subcategory.

For more information, in the Motion **Help** menu choose **Motion User Manual** and see Chapter 9, "Using the Replicator."

Published Date: Oct 11, 2016

Soundtrack Pro: Enhanced Command-W functionality

This article has been archived and is no longer updated by Apple.

Soundtrack Pro features enhancements to the Command-W keyboard shortcut that are not documented in the users guide. Here are the functions that this keyboard shortcut provides in these scenarios:

- If the Project window is active and contains a single tab, the Project window will be closed.
- If the Project window is active and contains multiple tabs, the active tab will be closed.
- If the Media and Effects Manager is active, the Media and Effect Manager will be closed.
- If the Utility window is active, the Utility window will be closed.

Published Date: Oct 11, 2016

Audio from Final Cut Pro 5 goes offline after processing in Soundtrack Pro

This article has been archived and is no longer updated by Apple.

Audio sent from Final Cut Pro 5 to the Soundtrack Pro audio Waveform Editor may go offline in Final Cut Pro after you finish editing or processing the audio clip. If this happens, you will need to reconnect the media in Final Cut Pro. Please see the Final Cut Pro User's Guide for more information on reconnecting disconnected media.

Tip: You can prevent this from occurring by making sure Soundtrack Pro has finished saving the file before switching to Final Cut Pro.

Published Date: Feb 20, 2012

Soundtrack Pro unexpectedly quits when saving longer looping clips

This article has been archived and is no longer updated by Apple.

Note: This issue is resolved in Soundtrack Pro 1.0.3. This update is recommended for all Soundtrack Pro customers. Use Software Update or download updates here.

After recording a take in Soundtrack Pro, the application may quit unexpectedly when you try to save the clip as a looping clip. This can occur if your audio is longer than 30 seconds, and you Control-click the recording, choose **Save Clip As** from the pop-up menu, then select the Looping button in the Save Clip As dialog.

To avoid this issue, do not save clips that are longer than 30 seconds as looping clips. The same issue may occur if you try to change one or more one-shot clips, longer than 30 seconds, to looping clips using the Apple Loops Utility.

Published Date: Oct 11, 2016

Motion 2: MIDI controller support

This article has been archived and is no longer updated by Apple.

Motion 2 features MIDI behavior, which allows you to edit and animate object parameters using the various controls (such as knobs, sliders, keys, and so on) on a standard MIDI device, such as a keyboard synthesizer.

You can "teach" Motion which control on the MIDI device manipulates what parameter to which the MIDI behavior is applied. Here are the different components of MIDI controller support in Motion 2. For more information, choose **Motion User Manual** from the Motion **Help** menu, and see the "MIDI" section in Chapter 5: Using Behaviors.

Dashboard Controls

The Dashboard controls allow you to adjust the Control Type, ID, Value, Scale, and parameter assignment shown in the Inspector.

Parameters in the Inspector

Control Type
Specifies the type of control being used on the MIDI device. The three available control types are Note, Controller, and Learning:

- **Note**: This mode indicates that a keyboard key on the MIDI device is the control.
- **Controller**: This mode indicates that a knob, dial, key, slider, or foot pedal on the MIDI device is the control.
- **Learning**: This mode allows you to "teach" Motion which control (such as a knob, slider, or key) you want to use on the MIDI device to manipulate the parameter to which the MIDI behavior is applied. In Learning mode, the first knob, slider, key, or other control that you adjust gets set as the control. **Note**: When you first apply MIDI behavior, "Learning" is the default control type.

ID
Displays the identification number of the MIDI control (the knob, slider, key, or what have you) that you are using.

Value
When you manipulate the control, this displays the standard MIDI value between 0 and 1.

Scale
Increasing the Scale value multiplies the Value parameter in the MIDI behavior. This means that when Scale is increased, the MIDI control has a larger value range and a greater effect on the parameter it's controlling. For example, if you're using a knob to adjust an object's rotation and let's say the default rotation value range (when Scale is set to 1) for a full knob rotation is 30 percent, if you increase the Scale value to 13, the rotation value of a full knob turn will be increased to 370 degrees.

Apply To
The **Apply To** pop-up menu (parameter assignment control) shows the parameter being affected, and can be used to reassign the behavior to another parameter. The MIDI behavior is applied in the same way as all other Parameter behaviors.

Note: This behavior can only be used if you have a MIDI device properly connected to your computer.

Published Date: Oct 11, 2016

Soundtrack Pro: Multitrack project cannot be saved to Xsan 1.1

This article has been archived and is no longer updated by Apple.

When you save a Soundtrack Pro multitrack project (.stmp) file to an Xsan volume on a computer running Mac OS X 10.4 and Xsan 1.1, you may get the following error: "The document X could not be saved" (where "X" is the name of your multitrack project).

To avoid this, save multitrack projects to a local drive. Please note that you can save audio file projects to an Xsan server with Xsan 1.1 without issue with Mac OS X 10.4.

(See chapter 3 of the Soundtrack Pro User Manual for a description of the two project types).

Published Date: Feb 18, 2012

Scripts folder not created during Soundtrack Pro installation

This article has been archived and is no longer updated by Apple.

Note: This issue is resolved in Soundtrack Pro 1.0.1 and later. Update to the latest version of Soundtrack Pro for best performance. Use Software Update or download updates here.

If there isn't already a "Scripts" folder at ~/Library (where "~" is your home folder), Soundtrack Pro does not create one during installation. Because of this, when you create an AppleScript in Soundtrack Pro and try to save it, the save path won't point to ~/Library/Scripts because a "Scripts" folder does not exist there. If you save it anyway, you won't be able to access the script through the AppleScript menu.

To resolve this issue, in Soundtrack Pro, choose **Open Scripts Folder** from the **AppleScript** menu. This will create a Scripts folder in your home folder's Library folder (~/Library/Scripts) and a Soundtrack Pro subfolder within it. Now any AppleScripts you create in Soundtrack Pro will have the path, ~/Library/Scripts/Soundtrack Pro.

Published Date: Oct 11, 2016

DVD Studio Pro 4: Updating rendered Final Cut Pro reference movies

This article has been archived and is no longer updated by Apple.

You can import Final Cut Pro reference movies (those that are not self-contained) into your DVD Studio Pro projects, but if any part of the Final Cut Pro sequence requires rendering, you must render it before importing the movie.

Keep in mind that if you need to make a change to a rendered portion of the movie, you must render it again in Final Cut Pro, re-export the movie using the same name, then overwrite the previous reference file. When you go back to DVD Studio Pro, a dialog appears, noting that the movie has changed and that the DVD Studio Pro project has been updated to use the new movie.

This applies to any reference movie that you import into DVD Studio Pro 4 from Final Cut Pro 4, Final Cut Pro HD, or Final Cut Pro 5.

Published Date: Feb 20, 2012

New features in Apple Qmaster 2

This article has been archived and is no longer updated by Apple.

Apple Qmaster 2 includes some new features, enhancements, and changes. Here's an overview of some of the most significant features. For more information on these features and their use, see the Apple Qmaster 2 User Manual and the Distributed Processing Setup guide.

Shared Cluster Storage

This new feature offers automated and simplified shared storage devices set-up. Cluster administrators can select a directory for cluster storage use, and computers in the cluster will automatically access this location, as needed. Compressor users have additional options for how data is stored and transferred.

QuickClusters and Unmanaged Services

Apple Qmaster QuickClusters offer a simple and automated way to create and configure clusters, and an alternative to creating and configuring clusters manually with Apple Qadministrator. QuickClusters simplify the distributed processing set-up process for beginners. They also offer a powerful solution for more advanced distributed processing through extended node clusters. QuickClusters with enabled, unmanaged support autoconfigure themselves and use any available unmanaged services.

An unmanaged service will remain dedicated to its QuickCluster only long enough to finish the current job. Once the current job is complete, the unmanaged service is once again a "free agent," and will advertise its availability to all QuickClusters. You can open a calendar interface and schedule the availability of any particular computer as a processing node in your distributed processing system.

Generic Render Command Plug-in

This plug-in handles distributed processing for projects from other frame-based rendering applications (such as After Effects and LightWave). The plug-in dialog provides you with a convenient way to adjust common settings and to add more command-line options to each job.

Preflight Scripts

The preflight script feature allows you to run a script on each cluster node prior to actually processing a batch. These scripts are sent with every distributed segment of a job. Preflight scripts are an enhancement to the Environment Variable feature that you can use to set or change an environment variable for submitting certain batches or jobs, such as setting directory paths for Apple Qmaster jobs.

Serialized Jobs

You can now specify that some jobs in a batch are dependent on others. This "serialize" feature executes jobs in exactly the order in which they appear in the batch list. For example, if you have a Shake script that requires the output of a Maya script, you can ensure that the Shake script does not execute until the Maya script is done.

Distributed Rendering of QuickTime Output Nodes

With Shake 4, Apple Qmaster 2 builds on its Shake-to-QuickTime conversion capability by now offering Shake-to-QuickTime distributed rendering, which creates a single QuickTime output file.

Persistent Queues

Apple Qmaster now stores batch lists on disk, so that in the event of a restart, the job queue is maintained.

User Interface Enhancements

Apple Qmaster 2 has visual consistency with the Final Cut Studio suite of professional media creation tools, as well as numerous interface enhancements, including:

- The Apple Qmaster pane in System Preferences has been completely revised for more flexibility and a streamlined workflow.
- An email notification button to set (or reset) an email address to which the status of a Batch completion or failure can be sent.
- A stepper tool in the Delay pop-up menu that allows you to enter a wider range of delay times.
- A new column in the History table that indicates progress of each history item.

Apple Qmaster 2 currently ships with Final Cut Pro Studio and DVD Studio Pro 4.

Published Date: Oct 11, 2016

Safari 1.3 or later: Save Image command in shortcut menu has been updated

This article has been archived and is no longer updated by Apple.

When you Control-click (or right-click) an image in Safari 1.3 or later, you may notice that the "Save Image As" command in the shortcut menu has changed from previous versions of Safari.

Before Safari 1.3, when you chose **Save Image As** from the shortcut menu, you got a standard save dialog. In Safari 1.3 or later, the menu now includes a "Save Image" option that names your default download location in the menu. For example, the menu would say "Save Image to the Desktop" if you haven't specified a different default download location.

You can still access the "Save Image As" command if you want—just press the Option key after opening the menu.

Published Date: Feb 19, 2012

Safari: Using the "Open in Tabs" command from the Bookmarks menu

This article has been archived and is no longer updated by Apple.

If you've added both bookmarks and folders of bookmarks to your Bookmarks menu in Safari, and have Tabbed Browsing enabled in Safari preferences, when you choose **Open in Tabs** from the **Bookmarks** menu, the outcome will depend on which version of Safari you have.

In Safari 1.3 and later (version 1.3 is included with Mac OS X 10.3.9; 2.0 or later is included with Mac OS X 10.4 "Tiger"), the "Open in Tabs" behavior is different than in previous versions of Safari. Prior to Safari 1.3, choosing this command from the Bookmarks menu would open only the individual bookmarks that appeared in the menu, and not the ones contained in your folders or subfolders in the menu.

In Safari 1.3 and later, this command opens both the individual bookmarks and those contained in folders. Therefore, choosing this command directly from the Bookmarks menu isn't a good idea if you have a lot of folders with lots of bookmarks in your Bookmarks menu. Here are a couple of ways to adjust to this new behavior:

- Reorganize your Bookmarks menu so that only the items you want to open from it reside there.
- Choose **Open in Tabs** from the submenu of an individual folder in the **Bookmarks** menu. Only the bookmarks inside of that folder will open in tabs.

Note: The "Open in Tabs" command will not appear in the Bookmarks menu if you haven't selected the Enable Tabbed Browsing checkbox in Safari preferences.

Published Date: Feb 19, 2012

Xsan: Requirements for upgrade to Tiger

This article has been archived and is no longer updated by Apple.

To upgrade the operating systems of an Xsan installation to Mac OS X 10.4 "Tiger," you must have the Xsan 1.1 Update or later and the Mac OS X 10.4.1 Update or later.

See "How to use the Xsan 1.1 Updates."

Published Date: Oct 11, 2016

DVD Studio Pro 4: Use 720p HDV video for multi-angle projects

This article has been archived and is no longer updated by Apple.

When authoring a multi-angle or mixed-angle HD DVD project in DVD Studio Pro 4, the video streams in the track are limited to a combined maximum bit rate of 24 Mbps (this includes the selected video stream plus all audio and subtitle streams). 1080i HDV video uses a bit rate of 25 Mbps, which is higher than the maximum allowable multi-angle bit rate in the HD DVD specification.

It is possible to create a multi-angle project with HDV video if you use 720p HDV video, which uses a bit rate of 19 Mbps, depending on the number and type of audio and subtitle streams you use.

Published Date: Oct 11, 2016

Mac OS X 10.4: Some Xerox printers may require newer PPDs

This article has been archived and is no longer updated by Apple.

Some Xerox printer models may be unable to print using the PPD (PostScript Printer Description) files included with a Mac OS X 10.4.0 Tiger installation. If your printer is affected, it may print out the following error message instead of the expected document:

> ERROR: undefined
> OFFENDING COMMAND: COMMENT
> STACK:

This issue can occur with these printers:

- Xerox Document Centre 420
- Xerox Document Centre 425
- Xerox Document Centre 426
- Xerox Document Centre 430
- Xerox Document Centre 432
- Xerox Document Centre 440
- Xerox Document Centre 460
- Xerox Document Centre 470
- Xerox Document Centre 480
- Xerox Document Centre 490
- Xerox Document Centre 535
- Xerox Document Centre 545
- Xerox Document Centre 555
- Xerox WorkCentre M165
- Xerox WorkCentre M175
- Xerox WorkCentre M35
- Xerox WorkCentre M45
- Xerox WorkCentre M55
- Xerox WorkCentre Pro 165
- Xerox WorkCentre Pro 175
- Xerox WorkCentre Pro 32 Color
- Xerox WorkCentre Pro 35
- Xerox WorkCentre Pro 40 Color
- Xerox WorkCentre Pro 45
- Xerox WorkCentre Pro 55
- Xerox WorkCentre Pro 65
- Xerox WorkCentre Pro 75
- Xerox WorkCentre Pro 90
- Xerox WorkCentre Pro C2128
- Xerox WorkCentre Pro C2636
- Xerox WorkCentre Pro C3545

To resolve this issue, download and install the latest version of your printer's PPD file from the Xerox website. After installing the PPD, remove the printer and then add it again using either the Print & Fax pane in System Preferences or Printer Setup Utility. Follow the instructions included with the downloaded file to ensure that the PPD and any plugins that it needs are installed correctly.

Note that this issue and document don't apply to Macs with Mac OS X 10.4.2 or later preinstalled, or to Mac OS X 10.4.2 or later installation discs.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 11, 2016

Apple Qmaster requires a G4 processor

This article has been archived and is no longer updated by Apple.

Apple Qmaster requires a Macintosh computer with a G4 processor as a minimum hardware configuration. Computers with a G3 processor are not supported by Apple Qmaster.

Published Date: Feb 18, 2012

DVD Studio Pro 4: Improved integration with Motion

This article has been archived and is no longer updated by Apple.

DVD Studio Pro 4 now supports specialized markers added to your Motion projects. These markers can define the loop point when creating a motion menu, and the transition switch point when creating Alpha Transitions. In Motion, choose **Help** > **User Manual** for more information.

Published Date: Oct 11, 2016

Mac OS X 10.4: TextEdit list may appear to lose content

This article has been archived and is no longer updated by Apple.

With Mac OS X 10.4, if you use the List feature in TextEdit to create a list, it's possible that some or all of your list content may disappear after saving and reopening the document. Update to Mac OS X 10.4.1 or later to avoid this issue.

When this happens with Mac OS X 10.4, your list may be truncated or missing. This can happen with rich text documents (those with a .rtf or .rtfd file extension) and certain combinations of lists and font choices.

You can create a TextEdit List by clicking the **Lists** pop-up menu at the top of a TextEdit document, or from the **Format** menu, choose **Text**, then **List**.

Important: If your TextEdit document list is missing or has been truncated, please note that the content isn't actually gone; it's just not visible to you. However, if you save the document again, the invisible information will indeed be lost.

For example, if you create the following list in a TextEdit document in Mac OS X 10.4...

- first
- second
- third

... then save the document and open it again, you might only see this:

-

The saved document list appears to have been truncated, but it's actually not (unless you save it again—so don't do that!).

The best way to avoid this issue is to not use the TextEdit List feature in Mac OS X 10.4 until you've updated to Mac OS X 10.4.1 or later.

Tip: You can remove all lists from a TextEdit document by choosing **Select All** from the **Edit** menu, then selecting **None** from the **Lists** pop-up menu. Please note that this doesn't recover lost text, unfortunately.

Again, you can avoid this issue by downloading and installing the Mac OS X 10.4.1 Update, or later, from Apple Downloads.

Published Date: Oct 11, 2016

DVD Studio Pro 4: DTS audio formats

This article has been archived and is no longer updated by Apple.

DVD Studio Pro 4 supports additional Digital Theater Systems (DTS) audio formats.

You can now use DTS ES audio that contains up to 6.1 channels, as well as audio that has up to a 96 kHz sample rate and 24-bit sample size.
Important: All DTS audio imported into DVD Studio Pro must use the compacted file format (files with a ".cpt" file extension).

Note: All DTS audio files that you import into a DVD Studio Pro project must use at least a 48 kHz sample rate. DTS files with a 44.1 kHz sample rate produce unusable results.

Published Date: Oct 11, 2016

Mac OS: Digital Audio & MIDI Software Installation (PACE Copy Protection)

This article describes PACE copy protection, and its interaction with Mac OS 8 and Mac OS 9.
This article has been archived and is no longer updated by Apple.
There are some applications (primarily high-end digital audio and MIDI applications) which rely on a Key Disk authorization scheme known as PACE. Essentially, PACE writes a code number to the hard drive which is then verified each time the application is launched.

Newer PACE-protected applications use the current PACE protocol referred to as "interlok" which installs flawlessly with Apple's Mac OS 8 release. Some applications (Steinberg's Cubase VST 3.5 and earlier, other older Steinberg PACE protected applications and Digidesign's SoundDesigner 2.82 and earlier) use the older, pre-interlok PACE authorization protocol called PACE III. During the install of one of these specific applications, pre-interlok PACE III will perform an expansion of the application. This expansion conflicts with Mac OS 8, preventing the proper installation of pre-interlok PACE III applications over Mac OS 8.

The good news is that it's an expansion issue, not an authorize/de-authorize issue. If the user does a dirty install of Mac OS 8 where the PACE III protected application has already been installed, the upgrade will work fine and the user will gain all the benefits of Mac OS 8. A user could even de-authorize the PACE protected application, do a clean install of Mac OS 8 and then re-authorize the application and all would still be fine (assuming all appropriate extensions are manually moved from the previous system to the new Mac OS 8 system).

Simply put, everything should work fine as long as the PACE III protected application is installed (expanded from its tome) before the Mac OS 8 install. Most applications that use the PACE key disk authorization protocol have upgraded to the new "interlock" version which works with fresh installs over Mac OS 8. We encourage you to contact the developer of your software to confirm that you have latest version. They will be able steer you through any small issues you might stumble across.

For more information on using PACE protection software and Mac OS 9 or newer Power Macintosh computers, see the PACE Anti-Piracy web site: http://www.paceap.com
Published Date: Feb 19, 2012

iSync 2.0: About canceling a device reset

This article has been archived and is no longer updated by Apple.

iSync 2.0 features Reset Device and Reset All Devices functions that allow you to reset all the information on a connected device, or on all connected devices, to match the information on your computer.

When you select one of these options in iSync 2.0, iSync will display a dialog that asks you to verify your selection. Once you confirm it, the reset process begins and a "Cancel Sync" button appears. If you click "Cancel Sync," the reset gets deferred until the next sync. If you cancel because you want to preserve modified contacts on a device instead of resetting them to what's on the computer, do this before the next sync:

1. Verify that your modified contacts or calendars are still on your device. If you're only preserving minor changes, consider manually making them in Address Book or iCal.
2. In iSync, remove the device.
3. Add your USB or Bluetooth device back into iSync.
4. Before you sync, make sure to select the "Merge data on computer and device" option—not the "Erase data on device then sync" option.

Published Date: Oct 11, 2016

Compressor 2: Advanced image analysis

This article has been archived and is no longer updated by Apple.

Compressor 2 offers high-quality transcoding from many different source formats to many different target formats using advanced image analysis. That means you can now do any of the following at quality levels that were previously only available through expensive hardware solutions:

- Convert video files between international television standards, such as PAL to NTSC, or NTSC to PAL.
- Downconvert high definition (HD) video sources to standard definition (SD), or upconvert SD to HD.
- Convert a progressive stream to an interlaced one, or interlaced to progressive.

Compressor 2 ships with a completely new set of Apple presets, representing a wide variety of workflows such as the standards conversions described here, as well as web delivery, mobile devices, SD DVD, HD-based DVD, professional audio, and motion graphics.

Published Date: Oct 11, 2016

QuickTime 7 and Cleaner 6 incompatibilities

This article has been archived and is no longer updated by Apple.

If you use QuickTime 7 to compress a video file in H.264 format and add it to Cleaner by dragging the file into an Untitled window or using the Add Batch Files command, the preview window won't display any video. This happens because Cleaner doesn't see QuickTime-compressed H.264 video.

This document will be updated when additional information is available. Apple and Autodesk Media and Entertainment are working together to resolve this issue as quickly as possible.

For additional information on Cleaner support, click here.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 18, 2012

QuickTime Player 7: Movie object properties cannot be accessed when movie is in fullscreen mode

This article has been archived and is no longer updated by Apple.

If you have an AppleScript that interacts with QuickTime Player, it may not work if you are watching a movie in fullscreen mode. This happens because property requests aren't processed until a movie has exited fullscreen mode.

Published Date: Feb 18, 2012

Compressor 2: High resolution audio support

This article has been archived and is no longer updated by Apple.

Compressor 2 supports high resolution audio up to 64 bits per sample (floating point) and sample rates up to 192 kHz. If you have disk space or bandwidth limitations, you must compress your audio. Do note that audio takes up less disk space than video, so you won't need to compress it as much as video.

The most important components of audio codecs are sampling rates and bit depth. Sampling rate sets the sound quality; bit depth sets the dynamic range of the sound. QuickTime audio codecs allow you to set both the sampling rate and size of your source media file.

Published Date: Oct 11, 2016

Motion 2: Supported file formats

This article has been archived and is no longer updated by Apple.

Motion allows you to use a wide variety of video, still image, and audio files within a single project. Since it's a QuickTime standard application, Motion supports many of the same file formats that QuickTime does.

QuickTime video codecs

Motion supports QuickTime video files using nearly any video codec installed on your computer, including, but not limited to:

- Animation
- BMP
- Cinepak
- Component Video
- DV - PAL
- DV/DVCPRO - NTSC
- DVCPRO - PAL
- DVCPRO HD 1080i50, 1080i60, and 720p60
- DVCPRO50 - NTSC
- DVCPRO50 - PAL
- Uncompressed 8- and 10-bit 4:2:2
- Graphics
- H.261
- HDV 1080i50, 1080i60, and 720p30
- Apple Intermediate Codec
- Motion JPEG A and JPEG B
- MPEG IMX 525/60 (30Mb/s, 40 Mb/s, 50 Mb/s)
- MPEG IMX 625/50 (30Mb/s, 40 Mb/s, 50 Mb/s)
- MPEG-4 Video
- Photo - JPEG
- Apple Pixlet Video
- Planar RGB
- PNG
- TGA
- TIFF
- VC H.264
- Video
- H.263
- H.264
- JPEG 2000
- Sorenson Video 3
- Sorenson Video

Still image formats

Motion supports most commonly used still image file types, including:

- SGI
- Photoshop
- BMP
- JPEG
- PICT
- PNG
- MacPaint
- TIFF
- TGA
- JPEG-2
- QuickTime Image Files
- Open EXR

Other image formats

In addition, Motion includes special support for the following image types:

- Layered Photoshop files
- PDF files

Audio formats

You can import audio files with sample rates up to 192 kHz, and with bit depths up to 32 bits. Motion supports mono, stereo, and multi-channel audio files in any of the following audio formats:

- WAV
- AIFF
- .cdda
- MP3
- AAC (AAC files are listed in the Finder with the .m4p file extension.)
- QuickTime Audio, with support for the following audio codecs:
  - 8-bit
  - 8-bit Unsigned (Little Endian/WAV)
  - 16-bit Integer
  - 24-bit Integer
  - 32-bit Integer
  - 32-bit Float
  - 64-bit Float
  - ALaw 2:1
  - AMR Narrowband
  - Apple Lossless
  - IMA 4:1
  - MACE 3:1
  - MACE 6:1
  - MPEG-4 Audio

Important: You cannot import rights-managed AAC files, such as those purchased from the iTunes Store.

For more information about the file formats supported by Motion, visit the Motion website.

Published Date: Oct 11, 2016

Motion: Image sequences must contain three or more digits in each filename

This article has been archived and is no longer updated by Apple.

You can import an image sequence into Motion as long as each file in the sequence contains three or more numerical digits in its filename; for example, image.001.tif, image.002.tif, image.003.tif, and so on—or file00001.jpg, file00002.jpg, file00003.jpg, and so on.

Image sequences store video clips as individual still image files. Each image has a number in its filename that indicates where it fits into the sequence. In a film clip that's been digitally scanned, each file represents a single frame. In a video clip that's been converted to an image sequence, each file contains both fields of a single video frame, with the upper and lower lines of the image saved together.

Image sequences can come in the same file formats as still image files. Some of the most popular formats for saving image sequences are:

- SGI
- BMP
- JPEG
- TIFF
- TGA

Like still image formats, many image sequences support alpha channels, which are automatically used by Motion. Because image sequences have been around for a long time (before QuickTime, they were the only way to store video on a computer), they remain the lowest-common denominator file format for exchanging video across many different editing and compositing applications.

While QuickTime is increasingly used to exchange video clips between platforms, image sequences are still in common use—especially in film compositing. As with QuickTime video clips, you can mix image sequences of different formats, frame sizes, pixel aspect ratios, frame rates, and interlacing.

Published Date: Oct 11, 2016

Motion: Don‘t use an alias for third-party plug-ins

This article has been archived and is no longer updated by Apple.

Motion supports third-party After Effects-compatible plug-ins. But if you create an alias for any third-party plug-in, the plug-in won't be recognized in Motion or Motion 2. However, you can tell Motion where to find these plug-ins so that they appear in the 3rd Party Filters category of the Library. Here's how:

1. Choose **Motion > Preferences** (or press Command-,).
2. Click General.
3. In the "3rd Party Plug-ins" group, click Choose (next to Search Path).
4. In the resulting window, navigate to the folder that contains your third-party plug-ins, then click Choose. A message appears, informing you that the path has changed and that it will take effect the next time you open Motion.
5. Quit and reopen Motion.

The third-party plug-ins now appear in the "3rd Party Filters" category, and can be applied in the same manner as all other filters.

This document will be updated as more information becomes available.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.
Published Date: Oct 11, 2016

About the QuickTime 6.5.2 Reinstaller for Mac

This article has been archived and is no longer updated by Apple.

The QuickTime 6.5.2 Reinstaller will remove QuickTime 7 from a Mac OS X 10.3.9 system and restore QuickTime 6.5.2. The reinstaller to use for QuickTime 7.0.1 can be downloaded from here.

Note: This reinstaller will only work on computers with Mac OS X 10.3.9.

Published Date: Feb 18, 2012

Final Cut Pro 5: Connecting your DV camcorder or deck to your computer

This article has been archived and is no longer updated by Apple.

To capture video footage from a DV camcorder or deck into Final Cut Pro 5, you need to properly connect the device to your computer and turn it on. Once you do, FireWire device control allows Final Cut Pro to control the video device, allowing you to control playback from within the application instead of using the controls on your camcorder or deck.

Here are basic instructions on how to connect a device for video capture using Final Cut Pro. For detailed information, see the documentation that came with your video equipment and your computer. (If you want to output your movie to DV tape after you're finished editing, you'll need to connect the device in the same manner.)

What you need

- A computer and display
- A DV device, such as a DV camcorder or deck
- A 6-pin to 4-pin FireWire cable, available at electronics stores or an Apple Authorized Reseller

Connecting your DV camcorder or deck

1. Turn off your DV camcorder or deck.
2. Connect one end of the FireWire cable to the FireWire port on your computer. Your computer can be turned on during this setup process.
3. Connect the other end of the FireWire cable to the FireWire port on the camcorder or deck.
   Note: On some devices, the FireWire port may be labeled IEEE 1394 or i.LINK. Make sure that you align the connector and port properly by matching the indentation on the connector to the indentation on the port. Do not force the two together.

4. Turn on your camcorder or deck.
5. If you are using a DV camcorder, switch it to VTR (playback) mode.
6. Open Final Cut Pro, then choose **File > Log and Capture**. The Log and Capture window appears. If your device is properly connected, Final Cut Pro displays "VTR OK" at the bottom of this window.
7. To view your video on an external monitor, use an appropriate cable to connect the analog video output (S-Video or Composite) on your DV camcorder or deck to your NTSC or PAL video monitor's input.

8. To listen to the audio through speakers or an amplifier, use an appropriate cable to connect the analog audio output (stereo RCA) on your DV camcorder or deck to the input of self-powered speakers, an amplifier connected to speakers, or an audio mixer. If your mixer or amplifier has a headphone output, you can also monitor audio through headphones.
9. If you prefer to listen to the incoming audio signal through your computer speakers, click the Clip Settings tab in the Log and Capture window and select the Preview checkbox to enable it. This option sends the incoming audio signal to the audio output specified in the Output section of the Sound pane in System Preferences.
10. You're now ready to capture.

For more information about capturing video in Final Cut Pro 5, choose **Getting Started.pdf** from the **Help** menu in Final Cut Pro 5.

Related document

302337: "Final Cut Pro: Troubleshooting Basics"

Published Date: Feb 20, 2012

Mac OS X 10.4: How to configure older AirPort base stations

This article has been archived and is no longer updated by Apple.

To administer the original AirPort Base Station (Graphite) or second-generation AirPort Base Station (Dual Ethernet) from a Mac OS X 10.4 "Tiger" computer, you must use AirPort Admin Utility.

The version of AirPort Setup Assistant included with Tiger can't be used with the older base stations, and the older version of the assistant cannot be installed on Tiger.

The one exception is if you upgraded your computer from Mac OS X 10.3 with AirPort 4.1 software to 10.4. Under this circumstance, the "AirPort Setup Assistant for Graphite or Snow" may be carried over into 10.4. Though it may remain on your system after an upgrade, it will not actually work. It is left so that you may use it in the event that you "dual boot" your computer. In certain situations, this may also be called "AirPort Setup Assistant for Graphite and Snow."

Note: "Snow" is an alternate name for the second-generation AirPort Base Station (Dual Ethernet).

Published Date: Oct 11, 2016

QuickTime Pro 7: "Save As QuickTime" disabled in web browser after working once

This article has been archived and is no longer updated by Apple.

After you install QuickTime 7 on your computer and install Final Cut Studio or other software that automatically installs a new QuickTime Pro Key, you may come across an issue where you're only able to save a file from your web browser as QuickTime content once before losing that ability. Though QuickTime Pro normally allows you to save any number of movies, you may suddenly see "Pro" icons appear in the shortcut menu next to the **Save As QuickTime** and **Save As Source** menu options.

If you choose **Save As QuickTime**, you'll see the following message, which suggests that you aren't using QuickTime Pro when you actually are:

As a temporary workaround, quit your web browser and then reopen it to reset the QuickTime Plug-in, allowing you to save another movie.

This does not occur with QuickTime Pro keys that are entered manually into the QuickTime pane of System Preferences.

This document will be updated when additional information is available.

Published Date: Feb 18, 2012

About the Mac OS X Server 10.4.1 Update

This article has been archived and is no longer updated by Apple.

This software updates Mac OS X Server version 10.4 to version 10.4.1.

Important: Please Read Before Installing

- You must have an administrator account password that does not contain spaces or Option-keyed characters to install this update. The password may not be left blank. If you need to change your password, follow these steps:
  1. From the **Apple** menu, choose **System Preferences**.
  2. Click Accounts to display the preferences.
  3. Select an Admin account and click Edit User.
  4. Type your current password and press Return.
  5. Type a new password and click OK.

- You may experience unexpected results if you've installed third-party system software modifications, or if you have modified the operating system through other means. This doesn't apply to normal software installation.

- The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.

- This update can be installed on non-startup volumes, but you should only do this if the current startup volume has already been updated to Mac OS X Server 10.4.1. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are two ways to update to Mac OS X Server 10.4.1: Use Software Update or install from a standalone installer.

Software Update Installation

Software Update may have referred you to this document. For more information on this feature, see "How to Update Your Software."

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

A standalone installer is also available from Apple Downloads.

Remote Installation

If you need to install the update on a remote computer, you can do so using the "softwareupdate" command-line tool.

Enhancements

The following items are some of the enhancements and improvements in Mac OS X 10.4.1 Server Update:

Software Update Server

- Addresses an issue where the Software Update Service may not automatically download and host mirrored updates.

Open Directory

- Addresses an issue in which users may not be able to add Password Hints to an Access Control List.
- Addresses an issue in which static LDAP binding entries may be lost when bound to a DNS entry which resolves to many IP addresses.
- Addresses startup issues which may prevent computers from fully starting up when bound via Active Directory and hosting multiple services.

Apple File Server

- Addresses an issue in which the Apple File Server may stop unexpectedly when used simultaneously with SMB and CIFS.

servermgrd

- Addresses an issue that may cause the servermgrd service to stop unexpectedly over time with multiple services running.

Weblogs

- Addresses an issue in which user Weblogs may appear to be unavailable, even though they're really still available.

Mail Services

- Addresses mail migration issues in which the mail databases may be located on a different partition separate from where the 10.4.1 install resides. Additional mail database reconstruct instructions may be found here.

Disk Imaging

- Addresses an issue in which Disk Images may not properly uncompress and mount when stored on an Automounted Home Directory

Published Date: Oct 11, 2016

Mac OS X Server 10.4: Software Update Server information reported to Apple

This article has been archived and is no longer updated by Apple.

When you use Mac OS X Server 10.4 to locally host updates as a Software Update Server, it reports certain information back to Apple. In server versions 10.4 to 10.4.2, this information is limited to:

- The update that the client downloaded
- The primary language of the client computer

In Mac OS X Server 10.4.3 and later, the information collected expands to this set:

- Mac OS version of the client
- Hardware model of the client
- Amount of RAM installed in client
- The primary language of the client
- Updates offered by the server
- Updates selected by the client
- Any errors in downloading or installing during the last update attempt

Published Date: Feb 18, 2012

Soundtrack Pro: Space Designer and Audio Waveform Editor

This article has been archived and is no longer updated by Apple.

Although you can use the Space Designer plug-in (included with Soundtrack Pro) in the Audio Waveform Editor, please be aware that it will only function as a realtime effect in multitrack projects and in the audio Waveform Editor. However, if you attempt to bounce realtime effects in the audio Waveform Editor, then Space Designer will not be rendered properly.

Published Date: Feb 18, 2012

Soundtrack Pro does not install the QuickTime MPEG-2 Playback Component

This article has been archived and is no longer updated by Apple.

The Soundtrack Pro installer does not install the QuickTime MPEG-2 Playback Component, which is required for MPEG-2 file playback and the Compressor Preview function. If you need the ability to import and playback MPEG-2 content, you can purchase the downloadable QuickTime MPEG-2 Playback Component, which is available from the Apple Store.

Final Cut Studio also includes the QuickTime MPEG-2 Playback Component.

Published Date: Oct 11, 2016

Mac OS X Server 10.3: Batch-promoted admin can‘t change user password (-14090 error)

This article has been archived and is no longer updated by Apple.

If you use Workgroup Manager to simultaneously promote several users to LDAP directory administrator status, these "batch-promoted" admin users will not be able to change passwords for users that use an Open Directory password. When they try, they will get a -14090 error.

This issue affects Mac OS X Server 10.3 to 10.3.9.

To avoid the issue, promote only one user at a time to administrator status. If you want to verify whether a promoted admin user will be able to change Open Directory user passwords, execute this command in Terminal, where *newadmin* is the short name of the admin user being verified:

```
pwpolicy -u newadmin -getpolicy | awk '{print $2}'
```

If you get a result of `isAdminUser=1`, that admin user can change passwords. If the result is `isAdminUser=0`, demote and then repromote the user in Workgroup Manager. Alternatively, you could use the `pwpolicy` command to set the isAdminUser attribute to 1.

Published Date: Feb 18, 2012

Mac OS X 10.4: Address Book "Smart Groups" are not synced

This article has been archived and is no longer updated by Apple.

If you're using Mac OS X 10.4 Tiger, please note that Smart Groups that you create in Address Book are not syncable, even though many other types of contact information are.

Because of this, you may notice that when you select a device in iSync, you can't choose any Smart Groups from the **Contacts-Synchronize** pop-up menu.

As a workaround, create a regular group (not a Smart Group) of contacts in Address Book that's just for iSync syncing. Add the contacts that you want synced to this group. Then choose that group as the one to sync in iSync.

Note: Any contacts you create on your phone or other devices will still show up in relevant Address Book Smart Groups if that contact meets the Smart Group's criteria.

Published Date: Oct 11, 2016

About Security Update 2005-005

This article has been archived and is no longer updated by Apple.

This document describes Security Update 2005-005, which can be downloaded and installed using Software Update, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred, and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How To Use The Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Security Update 2005-005

- **Apache**
  CVE-ID: CAN-2005-1344
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  Impact: The htdigest program contains a buffer overflow, which if used improperly in a CGI application, could allow a remote system compromise.
  Description: The htdigest program could be used in a CGI application to manage user access controls to a web server. htdigest contains a buffer overflow. This update fixes the buffer overflow in htdigest. Apple does not provide any CGI applications that use the htdigest program. Credit to JxT of SNOsoft for reporting this issue.

- **AppKit**
  CVE-ID: CAN-2004-1308, CAN-2004-1307
  CERT: VU#125598, VU#539110
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  Impact: An integer overflow in the handling of TIFF files could permit arbitrary code execution.
  Description: A malformed TIFF image could contain parameters that result in image data overwriting the heap. This issue has been addressed by adding additional tests when calculating the space needed for an image.

- **AppKit**
  CVE-ID: CAN-2005-1330
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  Impact: A Cocoa application will quit through an unhandled exception from NXSeek().
  Description: A malformed TIFF image can cause a call to NXSeek() with an offset outside the image. This raises an exception which is not handled. The default handler then causes the application to exit. This update causes an error to be returned to the application. Credit to Henrik Dalgaard of Echo One for reporting this issue.

- **AppleScript**
  CVE-ID: CAN-2005-1331
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  Impact: Scripts created using the applescript: URI mechanism could display code differently than that which would actually run.
  Description: The applescript: URI mechanism is a feature that allows AppleScript code to be distributed via a hyperlink. When an applescript: URI is clicked, the AppleScript Editor opens and displays the code that has been downloaded. If the code is then compiled and run, it may not execute exactly as it is displayed. This issue has been addressed by rejecting URIs containing characters that could be used to mislead the user. Credit to David Remahl of www.remahl.se/david for reporting this issue.

- **Bluetooth**
  CVE-ID: CAN-2005-1332
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  Impact: Bluetooth-enabled systems may allow file exchange without prompting users.
  Description: The Bluetooth file exchange service is enabled by default on systems with Bluetooth capability. This could allow files to be shared without properly notifying the user. In addition, the default directory for file sharing may be used by other applications, leading to unintentional file sharing. Security Update 2005-005 disables Bluetooth file exchange and changes the location of the default transfer directory on systems where the old default directory is set. In addition, new users of a system must now enable Bluetooth file exchange before it is allowed. Users with Bluetooth-enabled systems should read this article for more information on the changes provided by this update. Credit to kf_lists[at]digitalmunition[dot]com for reporting this issue.

- **Bluetooth**
  CVE-ID: CAN-2005-1333
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9

Impact: Directory traversal via Bluetooth file and object exchange.
Description: Due to insufficient input checking, the Bluetooth file and object exchange services could be used to access files outside of the default file exchange directory. Security Update 2005-005 addresses this issue by adding enhanced filtering for path-delimiting characters. Credit to kf_lists[at]digitalmunition[dot]com for reporting this issue.

- **Directory Services**
  CVE-ID: CAN-2005-1335
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  Impact: chfn/chpass/chsh could be manipulated to give privileges to an unprivileged user.
  Description: chfn/chpass/chsh is a hard-linked set of SUID programs. Certain code paths use external helper programs in an insecure manner which could lead to a privilege escalation. This update provides secure mechanisms for running helper programs.

- **Finder**
  CVE-ID: CAN-2005-0342
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  Impact: Unsafe handling of .DS_Store files could be used by local attackers to overwrite files and lead to privilege escalation.
  Description: Finder uses .DS_Store files to store and retrieve information used to display folders on the system. When writing these files, Finder could follow a link resulting in the overwrite of an arbitrary file. In addition, these files could contain data supplied by malicious users, allowing them to gain privileges by altering system configuration files. Security Update 2005-005 addresses this issue by updating Finder to check that .DS_Store files are not links before writing to them.

- **Foundation**
  CVE-ID: CAN-2005-1336
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  Impact: Buffer overflow via an environment variable for applications using the Foundation framework.
  Description: The incorrect handling of an environment variable within the Foundation framework can result in a buffer overflow that may be used to execute arbitrary code. This issue has been addressed by improved handling of the environment variable.

- **Help Viewer**
  CVE-ID: CAN-2005-1337
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  Impact: Help Viewer could be used to run Javascript without the restrictions normally imposed.
  Description: When Javascript is loaded for a remote site, it is executed in a restricted environment. The environment restrictions are not applied for local Javascript files loaded by the Help Viewer. Security Update 2005-005 addresses this by only allowing Help Viewer to load registered pages. Credit to David Remahl of www.remahl.se/david for reporting this issue.

- **LDAP**
  CVE-ID: CAN-2005-1338
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  Impact: Passwords could initially be stored into LDAP in plain text when using an LDAP server not running on Mac OS X.
  Description: When a system is bound to an LDAP server that has "ldap_extended_operation" disabled or not supported, and new accounts are created using the Workgroup Manager, then the initial password can be stored in the clear. If the password is modified using the Inspector, it will be correctly stored in a hashed form. This issue does not occur when using the Apple supplied Open Directory server. For servers not supporting "ldap_extended_operation," this update now stores new passwords in the hashed form.

- **libXpm**
  CVE ID: CAN-2004-0687 CERT: VU#882750
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  Impact: A vulnerability in the parsing of malformed XPM files could allow arbitrary code execution.
  Description: The xpmParseColors() function in the XFree86 libXpm library contains a vulnerability in the parsing of malformed image files that may lead to a stack overflow, and could allow arbitrary code execution. Images downloaded via a web browser may use the XPM format and allow remote exploitability. libXpm is not installed by default on Mac OS X or Mac OS X Server systems. It is an optional install item via the X11 package. Credit to Chris Evans <chris@scary.beasts.org> for reporting this issue.

- **libXpm**
  CVE ID: CAN-2004-0688 CERT: VU#537878
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  Impact: A vulnerability in the parsing of malformed XPM files could allow arbitrary code execution.
  Description: Multiple libXpm routines contain integer overflow vulnerabilities that may allow an attacker to cause a denial-of-service condition or execute arbitrary code. Images downloaded via a web browser may use the XPM format and allow remote exploitability. libXpm is not installed by default on Mac OS X or Mac OS X Server systems. It is an optional install item via the X11 package. Credit to Chris Evans <chris@scary.beasts.org> for reporting this issue.

- **lukemftpd**
  CVE-ID: CAN-2005-1339

Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
Impact: When using the chroot feature of ftp, users can bypass the restriction by using their full name.
Description: The ftp server allows users to login with either their full name or their short name. In order to restrict users to their home directory, all permitted login names must be listed in /etc/ftpchroot. Users are permitted to change their full name. This issue has been addressed by mapping full names to short names before checking the /etc/ftpchroot restriction list. Credit to Rob Griffiths of macosxhints.com for reporting this issue.

- **NetInfo**
  CVE-ID: CAN-2005-0594
  Available for: Mac OS X Server v10.3.9
  Impact: The Netinfo Setup Tool (NeST) contains a buffer overflow that could permit arbitrary code execution.
  Description: NeST is a SUID tool. It contains a buffer overflow that could permit arbitrary code execution. This update prevents the buffer overflow from occurring. Credit to iDEFENSE Labs for reporting this issue.

- **Server Admin**
  CVE-ID: CAN-2005-1340
  Available for: Mac OS X Server v10.3.9
  Impact: Enabling the HTTP proxy service also enables it for users not on your network if there are no access restrictions.
  Description: When the HTTP proxy service is enabled in Server Admin, it does not restrict which networks can access it. If there are no external access controls, then users on the Internet can also use the proxy. The HTTP proxy service is disabled by default. This update adds a user interface component to Server Admin, which allows the HTTP proxy to be restricted to local networks.

- **sudo**
  CVE-ID: CAN-2004-1051
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  Impact: Bash scripts run via sudo can be subverted.
  Description: Sudo versions prior to 1.6.8p2 do not properly sanitize their environment. A malicious local user with permission to run a bash shell script could exploit this to run arbitrary commands. Apple does not provide any pre-authorized bash shell scripts by default. This issue is addressed by removing bash shell functions from the environment before running subsequent commands.

- **Terminal**
  CVE-ID: CAN-2005-1341 CERT: VU#994510
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  Impact: Malicious input could cause data to be inserted into a user's Terminal command line.
  Description: The Terminal utility allows window titles to be read as input via a particular escape sequence. This could allow malicious content to inject data when it is displayed in a Terminal session. Security Update 2005-005 addresses the issue by removing handlers for this insecure escape sequence. Credit to David Remahl of www.remahl.se/david for reporting this issue.

- **Terminal**
  CVE-ID: CAN-2005-1342 CERT: VU#356070
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  Impact: Escape characters embedded in x-man-page URIs could insert commands into a user's Terminal session.
  Description: The x-man-page URI scheme provides support for displaying manual pages via the Terminal utility. Insufficient validation of these URIs can allow data to be inserted in a Terminal session. Security Update 2005-005 addresses this by adding escape sequence validation to the URI handler. Credit to David Remahl of www.remahl.se/david for reporting this issue.

- **VPN**
  CVE-ID: CAN-2005-1343
  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9
  Impact: A local user can obtain root privileges if the system is
  being used as a VPN server.
  Description: A buffer overflow in "vpnd" could be used by a local user to obtain root privileges if the system is configured as a VPN server. This problem does not occur on systems that are configured as a VPN client. This issue cannot be exploited remotely. This update prevents the buffer overflow from occurring. Credit to Pieter de Boer of the master SNB at the Universiteit van Amsterdam (UvA) for reporting this issue.

Published Date: Oct 11, 2016

Mac OS X 10.4: AirPort may not rejoin network on wake or restart

This article has been archived and is no longer updated by Apple.

Symptom

Some computers, after upgrading to Mac OS X Tiger 10.4, may no longer automatically join a wireless network after waking from sleep or restarting.

This may happen when a computer has been upgraded from an earlier version of Mac OS X, or it may happen if your new computer (running Tiger) has had data imported from an older computer.

Solution

Update your computer to the latest version of Mac OS X Tiger 10.4 using Software Update or by manually downloading the update from http://www.apple.com/support/downloads. After updating Mac OS X, the computer should automatically rejoin the selected network after restarting or waking the computer up.

Published Date: Oct 11, 2016

Mac OS X 10.4: Where does Spotlight search?

This article has been archived and is no longer updated by Apple.

Mac OS X 10.4 Tiger features Spotlight, a lightning-fast search technology that instantly lets you find things on your Mac. By default, Spotlight will index and search in the following locations:

- All Home folders (local and network-based, as well as FileVault and non-FileVault). This includes:
  - The Documents, Movies, Music, and Pictures folders
  - The Trash of all users and each mounted volume.
  - ~/Library/Metadata/
  - ~/Library/Caches/Metadata/
  - ~/Library/Mail/
  - ~/Library/Caches/com.apple.AddressBook/Metadata/
  - ~/Library/PreferencePanes/

- Spotlight also searches these non-Home folder locations by default:
  - /Library/PreferencePanes/
  - /System/Library/PreferencePanes/
  - /Applications

Can Spotlight search anywhere else? Of course! Any new folder you create in your Home automatically gets indexed so that it's searchable. If you connect an external storage device, such as a USB or FireWire hard drive, Spotlight will index the stuff on it, too. (If you want to exclude certain areas from Spotlight searching, see the tip below.)

Note: If your computer has multiple user accounts, any files that reside at the top level of each user's Home folder will also be indexed and searchable by Spotlight, even though they cannot be modified. However, all files and folders located within a user's Desktop, Documents, Library, Music, Movies, and Pictures folders will not be indexed nor can they be searched by other user accounts using Spotlight.

Tip: You can use Spotlight preferences to tell Spotlight which locations not to search, if you wish.

Published Date: Oct 11, 2016

Motion: LiveFont text quality may decrease with Scale slider usage

This article has been archived and is no longer updated by Apple.

In Motion, if you try to increase the size of a LiveFont text object using the Scale slider in the Inspector or one of the scaling handles in the canvas, the text quality will degrade.

If you want to increase the size of LiveFont text objects, use the Size slider instead of changing the scale. You can use the Size slider in the Dashboard or Inspector to increase the size of any text object.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

Logic Pro: Bounced files that use DAE produce only static

This article has been archived and is no longer updated by Apple.

If you bounce files in Logic when using DAE (Digidesign Audio Engine), under certain circumstances, the files may produce only static, making them unusable. This issue occurs if you set Logic to use DAE and set the recording format to Wave. In this scenario, bounced files will sound like static, regardless of the format (AIFF, WAV, or SD2) that you select for the bounce.

To resolve this issue, update to Logic Pro version 7.1.1 or later, available at Apple Downloads.

If you can't update immediately, the workaround is to set Logic to use AIFF or SD2 as the recording format. You can then select any format when bouncing.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 11, 2016

Logic Pro: "Hardware already in use" message after switching from DAE to Core Audio on TDM system

This article has been archived and is no longer updated by Apple.

If you're using TDM hardware and you switch Logic from using DAE to the Digidesign Core Audio driver (in the Audio Driver window), you'll get an alert message the next time you open Logic that says the Digidesign hardware is already in use.

To resolve this issue:

1. Change the driver in the Audio Driver window.
2. Quit Logic.
3. Open the Digidesign CoreAudio Manager application.
4. Click the Connect button.
5. Open Logic Pro.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 19, 2012

iMac G5 (Ambient Light Sensor): About the Ambient Light Sensor

This article has been archived and is no longer updated by Apple.

The iMac G5 (Ambient Light Sensor) contains an Ambient Light Sensor on the underside of the display bezel that adjusts the brightness of the sleep indicator light according to the level of the surrounding light.

In a dark environment, the sleep indicator brightness decreases; in brighter conditions, the sleep indicator brightness increases. With this behavior, you can tell if the computer is asleep when the room is bright, but the computer's sleep indicator light won't keep you awake at night.

Published Date: Oct 11, 2016

Soundtrack Pro: Can‘t install loop content on NetInfo bound systems

This article has been archived and is no longer updated by Apple.

Under some circumstances, when you try to install Soundtrack Pro loop content on NetInfo bound systems, the installation may not work if you're using Mac OS X 10.3.9.

This issue occurs if the /Library/Audio/Apple Loops folder does not exist on the local system volume. If this happens to you, try any of these workarounds:

- Start up to a local drive, then install the loop content.
- Manually create an Apple Loops folder in /Library/Audio before installing the loop content.
- In the installer, click the Choose button to specify the install folder for the content (be sure to specify the /Library/Audio folder—not just the system volume).

Published Date: Feb 18, 2012

Final Cut Pro 5: Upgrade Frequently Asked Questions

This article has been archived and is no longer updated by Apple.

What version of Final Cut Pro do I need to qualify for the Final Cut Pro 5 upgrade?
You can upgrade from any retail version of Final Cut Pro for only $399, or from any retail version of Final Cut Express for $699. Educational and Not-for-Resale (NFR) versions do not qualify for upgrades.

Can I upgrade to Final Cut Studio if I have Final Cut Pro?
Yes. You can upgrade to Final Cut Studio from the retail version of Final Cut Pro for $699, or from the retail version of Production Suite for $499. Educational and Not-for-Resale (NFR) versions do not qualify for upgrades.

What version of Mac OS X do I need to use Final Cut Pro 5?
The minimum requirement for Final Cut Pro 5 is Mac OS X v10.3.9.

Do I need a Power Mac G5 to edit HD?
No. You can edit HD on any Power Mac G4 with a 1GHz or faster processor and at least 1 GB of RAM.

What video formats does Final Cut Pro 5 support?
Final Cut Pro 5 supports virtually any video format from DV and SD to film, DVCPRO HD, native HDV, and fully uncompressed 10-bit high definition (HD) video.

What audio formats does Final Cut Pro 5 support?
Final Cut Pro 5 can capture up to 24 simultaneous channels in AIFF and AAC formats.

Does Final Cut Pro 5 include an encoder?
Yes. Compressor 2 offers high-quality encoding for video and audio to supported formats for Final Cut Pro 5.

Will projects created in older versions of Final Cut Pro work in Final Cut Pro 5?
Yes. Existing projects created in iMovie, Final Cut Express, or any version of Final Cut Pro will work in Final Cut Pro 5.

Is my current video I/O compatible with Final Cut Pro 5?
Most I/O devices should work with Final Cut Pro 5.

Published Date: Oct 11, 2016

Soundtrack Pro: Pasting audio into the right channel does not work

This article has been archived and is no longer updated by Apple.

Note: This issue is resolved in Soundtrack Pro 1.0.1 and later. Update to the latest version of Soundtrack Pro for best performance. Use Software Update or download updates here.

In some situations (in Soundtrack Pro 1.0), when you try to paste audio data from an audio file's left channel to another file's right channel in the Soundtrack Pro Waveform Editor, the data may end up in the left channel of the destination file.

This issue occurs when data is copied from an audio file that has a different sample rate than the audio file in which the data is pasted. You can resolve this issue by simply matching the sample rates of the two audio files before copying and pasting. Here are two ways to do that:

- Save the file that you're working on at the same sample rate as the file that you wish to copy data from. Then copy and paste between the two files.
- Save a copy of the file that you wish to copy data from at the same sample rate as the destination file. Open the copied file and select the section you wish to use, then copy it to the clipboard. You can now paste the copied data to either channel of your destination file.

Published Date: Feb 18, 2012

Logic Pro/Express: Can‘t import MIDI file

This article has been archived and is no longer updated by Apple.

When you try to import a MIDI file, you may come across a situation in which the file cannot be imported into Logic Pro or Logic Express. When you try, nothing happens.

This occurs if the MIDI file is set to read-only permissions. If you change the file permissions to read-write, you should be able to import the file into Logic. To change the permissions:

1. Select the file in the Finder.
2. Control-click (or right click) the file.
3. In the shortcut menu, choose **Get Info**.
4. In the Info window, click the disclosure triangle for Ownership & Permissions.
5. From the **You can** pop-up menu, choose **Read & Write**.

Published Date: Feb 19, 2012

Logic Pro/Express 7: "What kind of file is this?" message when importing certain files

This article has been archived and is no longer updated by Apple.

When AIFF files are affected

When you try to import an AIFF file that contains compressed data (known as AIFF-C) into Logic Pro or Logic Express, you may find that you are unable to do this. Instead, you will see this message:

> "What kind of file is this?"

For AIFF files, this issue affects only Logic Pro and Logic Express 7.0 to 7.0.1. (See Getting the Logic 7.1 Upgrade).

When AAC and MP3 files are affected

This affects AAC and MP3 files only on Mac OS X 10.4 or later systems with Logic Pro or Express 7.1. The first time you try to import a file, the attempt may fail without any warning. On a subsequent attempt, you see the message "'xxx.aif - what kind of file is this?", where xxx is the name of the file.

When importing a compressed file, Logic starts by making an AIFF copy. The root issue is that these AIFF copies are sometimes left incomplete during the import attempt. On the second attempt, Logic attempts to reference the incomplete AIFF file rather than the original source file, which is why you see the message only on subsequent attempts.

To resolve this issue, update to Logic Pro or Express version 7.1.1 or later, available at Apple Downloads.

Published Date: Feb 19, 2012

New SuperDrives support Double-Layer DVD burning

This article has been archived and is no longer updated by Apple.

The new SuperDrives built into the Power Mac G5 (Early 2005), iMac G5 (Ambient Light Sensor) computers, and eMac (Early 2005) computers now support DVD+R DL media, which means in addition to reading Double-Layer DVDs, they can write to a DVD+R DL disc. While single-layer recordable DVDs hold up to 4.7 GB of data, Double-Layer discs have two layers of data, allowing the SuperDrive laser to read and write on both layers, almost doubling the storage to 8.5 GB.

With iDVD (5.0.1 or later) or DVD Studio Pro, you can author discs with over three hours of MPEG-2 video on one DVD+R DL disc. The new SuperDrives can also read and write to DVD-R, DVD+R, DVD-RW, DVD+RW, CD-R, and CD-RW media.

To determine if your SuperDrive is capable of burning Double-Layer DVDs, do the following:

1. Open Apple System Profiler (from the **Apple** menu, choose **About This Mac** and then click the More Info button).
2. Select Disc Burning under Hardware.
3. Click on the Burning Device (SuperDrive) name.
4. In the DVD-Write section, if you see an item that displays "+R DL," your computer is capable of burning Double-Layer DVDs.

For more information:

iMac G5 Technical Specifications
eMac Technical Specifications
iDVD 5.0.1: Burning Double-Layer DVDs
Published Date: Oct 11, 2016

Mac OS X 10.4, 10.4.1: Print dialog slow to appear

This article has been archived and is no longer updated by Apple.

If the Print dialog takes a longer time than expected to appear in Mac OS X 10.4 or 10.4.1 after choosing **Print** from an application's **File** menu or pressing Command-P, update to Mac OS X 10.4.2 or later.

This issue can occur after upgrading to Mac OS X 10.4 Tiger.

If you're not ready to update to Mac OS X 10.4.2 or later, you can reset the printing system as a workaround.

Note: It's normal for the Print dialog to take a little longer to appear the first time you try to print after restarting the computer (even with Mac OS X 10.4.2 or later), but it should appear more quickly the next time you print. In this situation, do not reset the printing system.

Published Date: Feb 18, 2012

Logic Pro: Ascending runs sound out of tune in Sculpture

This article has been archived and is no longer updated by Apple.

If you set the Keyboard Mode in Sculpture to "Legato," notes that are connected in an ascending run will stop rising in pitch after a certain point. If you play successively higher notes, the pitch will not rise and instead, the run will sound out of tune. This does not happen when you play descending runs.

Because of the way string modeling works in Sculpture, it's not always possible to play back rising pitches correctly in Legato mode. This relates directly to how you set the Resolution parameter in the String/Material section of the Sculpture interface.

To resolve this issue, lower the Resolution setting to increase the maximum range of pitch change so that notes will play correctly in Legato mode.

Published Date: Feb 19, 2012

GarageBand 2: Input monitor level slider is dimmed

This article has been archived and is no longer updated by Apple.

When using GarageBand 2 on certain computers, you may come across a situation where you can't set the input monitoring level on a Real Instrument track. The slider will appear dimmed (unavailable) and set all the way to the left (minimum volume), like this:

Whether or not you can adjust the input monitor level depends on your computer or the audio hardware you're using. If you're using your computer's built-in audio input, the issue depends on which computer model you have. You can use Audio MIDI Setup (located in the Utilities folder), to find out if your computer supports the level adjustment.

1. Open Audio MIDI Setup.
2. Click the Audio Devices tab and look in the lower-left half of the window.
3. If the Audio Input section shows that you can adjust the individual input channels (sliders for channels 1 and 2 are available, as shown below), you should be able to adjust the level.

4. If the individual inputs cannot be adjusted (sliders 1 and 2 appear dimmed, as shown below), you won't be able to adjust the monitor input level in GarageBand.

Note: Remember that the input monitor level setting in GarageBand has nothing to do with the volume level that's written when recording—it only controls how loud the input sounds while you monitor it. Thus you can still record properly on systems that do not allow for input monitor level adjustment.

If you're using a third-party audio interface, in most cases the input monitor level can be adjusted, even if the built-in audio hardware on the computer does not offer this function.

Published Date: Oct 11, 2016

Using Spotlight to search Final Cut Pro Help documents in Mac OS X 10.4 Tiger

This article has been archived and is no longer updated by Apple.

Mac OS X 10.4 features Spotlight, which you can use to quickly find information on your computer. Spotlight can find files as well as information in files. For example, if you want to find files on your computer that contain the words—HDTV, project, bid, and budget—Spotlight can quickly list all email messages, documents, and other files that are named with or contain those terms.

When you do a search using Spotlight, you're actually accessing a comprehensive, constantly updated index that sees all the metadata inside files—not only the "what, when, and who" information, but the content kind, author, edit history, format, size, and many other details.

However, there are some places that Spotlight won't search, such as certain "invisible" areas in the Mac OS X file system, and in user areas that do not belong to you (if your computer has multiple users). You can also set Spotlight to not search in certain areas for privacy—open System Preferences, click Spotlight, then click the Privacy tab to select your off-limits areas.

In the case of Final Cut Pro, Spotlight won't search its built-in Help PDF files because they're contained within the Final Cut Pro application itself. To get these documents into Spotlight's search scope, save the files outside of the application. Spotlight will then be able to index the documents. Afterwards, when you do a search and select one of these documents in the search results, Spotlight will open the PDF in Preview and highlight every instance of the search string you entered.

Here's how to save the Final Cut Pro Help files outside of the application for Spotlight searching (we're using Final Cut Pro 5 as an example, but the same general methods apply for Final Cut Pro 4 and Final Cut Pro 4.5 HD).

1. Open Final Cut Pro.
2. Choose **Help > Final Cut Pro User Manual**. The User Manual will open in Preview.
3. Choose **File > Save As**.
4. In the resulting dialog, save the file to the Desktop.
5. Close the file and switch back to Final Cut Pro.
6. Repeat the steps above for any other PDF documents that you want to make available for Spotlight searching. In Final Cut Pro 5, the other PDF documents are:
    - New Features
    - Getting Started
    - Quick Reference
    - HD and Broadcast Formats
7. Quit or hide Final Cut Pro, create a new folder on the Desktop (Control-click on the Desktop and choose **New Folder** from the shortcut menu), and name your folder (such as "FCP5Docs" or something similar).
8. Drag all the PDF files that you saved on the Desktop to the new folder.
9. Stash the folder away for safekeeping; the Documents folder inside your Home folder is a good location, but it's up to you. Spotlight will now be able to search these documents.

You can find more information on Spotlight here

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Published Date: Feb 20, 2012

Mac OS X 10.4: Downloaded Dashboard widgets don‘t automatically install

This article has been archived and is no longer updated by Apple.

Did you download widgets for Dashboard (part of Mac OS X 10.4 Tiger) but can't find them in Dashboard? If you use Safari to download Dashboard widgets but don't have the "Open 'safe' files after downloading" checkbox selected in Safari preferences (the option is disabled), the widgets will not be automatically installed into Dashboard.

So, how do you install a downloaded widget? It's easy.

1. In the Finder, choose **Home** from the **Go** menu.
2. Open the Library folder (the one in your Home folder).
3. If you don't see a Widgets folder, create a folder named Widgets.
4. Drag your downloaded widget files (they have a .wdgt extension) to the Widgets folder.

   Note: If your downloaded widget is still archived (the file name ends in .zip), be sure to double-click it first to reveal the actual .wdgt file.

The next time you open Dashboard, your new widget will appear in the widget bar (click the "+" button to reveal the bar), ready for you to add.

Note: In Mac OS X 10.4.1 or later, if the "Open 'safe' files after downloading" option is enabled in Safari preferences, Safari will alert you that a widget you're downloading will install automatically—in case you don't wish for that to happen.

Tip: In Mac OS X 10.4.2 or later, you can double-click a widget to install it. If your downloaded widget is still archived (the file name ends in .zip), be sure to double-click it first to reveal the actual .wdgt file, which you can then double-click to install (the rest of this document doesn't apply to 10.4.2).

Why not just double-click the downloaded widget in Mac OS X 10.4, 10.4.1?

In Mac OS X 10.4 and 10.4.1, double-clicking a downloaded widget (with .wdgt extension) does open it in Dashboard. However, this does not copy the widget to the ~/Library/Widgets folder. If you accidentally delete it from the download location (such as your desktop) and then log out or restart, it will no longer be available in Dashboard.

Published Date: Oct 11, 2016

iWork: Do not rename applications or move them from the Applications folder when updating

This article has been archived and is no longer updated by Apple.

If you rename or move Pages or Keynote 2 (applications in iWork) from their default folder location (Applications/iWork), you will not be able to install updates for either application. For example, if you rename Pages or move it from the iWork folder and then try to install the Pages 1.0.1 update, you may get the following error message:

> Pages 1.0.1 cannot be installed on this computer. An eligible Pages application was not found in /Applications.

To prevent issues when installing iWork application updates, make sure that Pages and Keynote are in the iWork folder in the Applications folder and have not been renamed.

Published Date: Oct 11, 2016

Locating and using loops in Soundtrack Pro

This article has been archived and is no longer updated by Apple.

Soundtrack Pro comes with a large collection of loops that you can use in your audio productions. You can also use other Apple Loops, such as those in Apple Jam Packs or from third-party vendors. If you want to use loops in your Soundtrack Pro projects, read on to learn where the loop content is installed, and how to access and use them in Soundtrack Pro.

Locating loops

When you install Soundtrack Pro, all the loop content gets installed here:

/Library/Audio/Apple Loops/Apple Loops for Soundtrack Pro

If you've installed GarageBand or Jam Pack loops click here for information about using them in Soundtrack. You can always move loops to another drive if you need additional space. After the move, you would need to re-index the loops in Soundtrack Pro using the Setup button in the Search tab.

If you want to use these loops in your Soundtrack Pro projects, you can access them from the Media and Effects Manager window in several ways.

By Browser
If you want to locate loops using a familiar Finder-like window, click the Browser tab in the Media and Effects Manager window.

You can use the Browser window to navigate to any loop that's accessible to your system on local or network volumes. Just double-click the icons that represent volumes or folders to navigate to your desired location. If you want to see the precise path to your currently displayed location, click the Path pop-up menu at the top of the window.

By Search
Click the Search tab and you'll be able to locate loops by tags, bits of categorical attributes that are saved as part of any Apple Loop. For example, you can search by instrument type, by tempo, by key, and other tags.

The Search window offers two basic views. Click the columns view button (the left button right below the Browser tab) to search loops by category, in the form of a list:

Click the button view button (the right button directly below the Browser tab) to search loops using a matrix of category buttons:

In either view, you can search for loops based on the categories you select in the window. You can further refine the search criteria by choosing attributes from the pop-up menus below the columns list or button matrix. You can choose to only see loops that use a particular time signature (the Time Signature pop-up menu), display only looping or non-looping files (the File Type pop-up menu), show files that are major, minor, good for both (the Scale Type pop-up menu), and more.

For example, say you're looking for looping beat files that are in 4/4 time and don't have a tone associated with them. Just select Beats as the instrument, choose 4/4 as the time signature, choose Looping as the file type, and choose Neither in the Scale Type pop-up menu (indicates that loops should be neither major nor minor), as shown here:

By Favorites
If you use certain loops frequently, you can define them as "favorites" by Control-clicking (or right-clicking, if you have a two-button mouse) a loop and choosing **Add to Favorites** from the shortcut menu that appears. To access your favorite loops, just click the Favorites tab to display them.

By Bin
If you want to see all the loops that you're currently using in your active project, click the Bin tab. The Bin window displays all loops that appear in the timeline. You can also add files to the Bin if you think you might want to use them in the current project.

Using loops

To preview a loop or audio file, select it in any of the windows mentioned above (Browser, Search, Favorites, or Bin), then click the speaker button at the bottom-left part of the window (in the Media & Effects Manager you just need to click the file). To use the file in a multitrack project, simply drag it into the desired track in the timeline. Soundtrack Pro also offers other editing options in a shortcut menu; just Control-click (or right-click) a loop in a window to display the shortcut menu.

For more information on using the Media and Effects Manager window, see the Soundtrack Pro User's Guide.

Published Date: Oct 11, 2016

Before You Install DVD Studio Pro 4

This article has been archived and is no longer updated by Apple.

This document contains system requirements and things to do before you install the application and its accompanying utilities, Compressor and Apple Qmaster. For the latest information, see the Late-Breaking News file, available from each application's Help menu, and visit the DVD Studio Pro website.

Minimum Hardware Requirements

- A Macintosh computer with a 733 megahertz (MHz) or faster PowerPC G4 or G5 processor (G5 required for HD authoring and playback)
- 8 megabytes (MB) of video memory (32 MB recommended)
- 512 MB of RAM (1 GB required for HD)
- AGP Quartz Extreme graphics card
- For application installation: DVD drive, 10 gigabytes (GB) of disk space
- For writing finished projects to disc: Apple SuperDrive or other DVD recorder
- For writing finished projects to a double-layer disc: a double-layer compatible recorder and double-layer media
- For transporting projects on tape to a replicator (suggested for DVD-9 projects): DLT drive
- For transporting projects on disc that contain copy-protection or dual-layer features to a replicator: authoring DVD drive

Minimum Software Requirements

- Mac OS X v10.3.9 or later
- QuickTime 7.0 or later

Source Material Requirements

- Edited video files in MPEG-1, MPEG-2, HDV, HD DVD-compliant H.264, or QuickTime format
- Edited audio files in PCM, AIFF, MPEG-1 Layer 2, AC-3, DTS, or QuickTime format
- Video creation or editing software, such as Final Cut Pro and Motion, or any video and audio editing programs that support QuickTime

Before Installing the Software

Make sure you do the following before you install the software:

- Turn off any security software that you may have installed on your computer.
- Turn off any virus-protection software that you may have installed on your computer.
- Upgrade Mac OS X and QuickTime, if necessary.

Published Date: Oct 11, 2016

Before You Install Final Cut Pro 5

This article has been archived and is no longer updated by Apple.

This document contains system requirements and things to do before you install the application and its accompanying applications—Cinema Tools, Compressor, and LiveType. For the latest information, see the Late-Breaking News document, available in the Help menu for each application.

WARNING: The Final Cut Pro 5 Installer checks system requirements before installing. If your system does not meet the minimum requirements listed below, Final Cut Pro will not be installed.

Minimum Hardware Requirements

- A Macintosh computer with a 500 megahertz (MHz) or faster PowerPC G4 or G5 processor (550 MHz for PowerBook G4) or any dual PowerPC G4 or G5 processors
- AGP (Accelerated Graphics Port) Quartz Extreme graphics card
- 512 megabytes (MB) of random-access memory (RAM); 1 gigabyte (GB) recommended
- For HD: A Macintosh computer with a 1 gigahertz (GHz) or faster PowerPC G4 or G5 processor and 1 GB of RAM; 2 GB recommended

Minimum Software Requirements

- Mac OS X v10.3.9 or later
- QuickTime 7.0 or later

Available Hard Disk Drive Space

Final Cut Pro and its associated applications require a certain amount of free disk space:

- For application installation: 1 GB available disk space required
- For optional installation of all LiveType content: 12 GB available disk space required

Note: The progress bar that appears when you are installing LiveType content may not indicate the correct time and disk space required for installation.

Before You Install

Make sure you do the following before you install the software:

- Turn off any virus protection and security software that you may have installed on your computer.
- Upgrade to Mac OS X v10.3.9 or later and QuickTime 7.0 or later.

Published Date: Oct 11, 2016

GarageBand: Distortion when recording with M-Audio MobilePre USB

This article has been archived and is no longer updated by Apple.

If you're using an M-Audio MobilePre USB audio interface to record audio in GarageBand, your recordings may sound clipped and distorted—even if the incoming level is set appropriately.

This issue occurs if you're using the MobilePre USB driver version 1.5.7fl or earlier, and set the latency to Low in its preferences. You can resolve the issue by installing the 1.6 or higher version of the driver from the M-Audio website.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 18, 2012

GarageBand: Audio distortion and dropouts when playing Software Instruments

This article has been archived and is no longer updated by Apple.

If the CPU load on your computer is too high, you may hear some audio dropouts or distortion in GarageBand when you play a Software Instrument track live.

If this happens to you, try quitting other applications when using GarageBand. If you're using GarageBand 2, try locking tracks to free up some CPU processing time.

Published Date: Feb 18, 2012

GarageBand: Audio monitoring stops working after about 90 seconds

This article has been archived and is no longer updated by Apple.

When you're monitoring the audio of a Real Instrument track, the audio input monitoring may stop working after about 90 seconds into your recording session. You may hear clicks and pops in the monitored signal before it drops out.

This issue affects GarageBand versions earlier than 3.0 (which is a part of iLife '06) when using different audio interfaces for the input and the output. For example, if you use an external USB or FireWire audio interface for input and your computer's built-in audio for output, this can happen to you.

To avoid this issue, use the same audio device for both input and output when using an affected GarageBand version.

Published Date: Feb 19, 2012

Mac OS X Server 10.4: SSL-enabled services may not work properly on an upgraded server

This article has been archived and is no longer updated by Apple.

SSL-enabled services such as iChat and Mail may not work properly on a Mac OS X 10.4 (build 8A428) server that was upgraded from Mac OS X Server 10.3. This happens because the "certusers" group is not created during the upgrade.

For example, when you attempt to start the iChat service, you may see lines like the following ones appear in the system log (`/var/log/system.log`):

```
May 5 19:28:37 xserve iChatServer-jabberd[1041]: 20050506T00:28:37: [error] (-configure): SSL
Connections are disabled. [error: 0200100D:system library:fopen:Permission denied] while using SSL
certificate file '/etc/certificates/Default.crtkey' for host '0.0.0.0'.
May 5 19:28:37 xserve iChatServer-jabberd[1041]: 20050506T00:28:37: [notice] (-internal):
initializing server
May 5 19:28:37 xserve iChatServer-jabberd[1041]: 20050506T00:28:37: [notice] (-internal): server
started
May 5 19:28:59 xserve iChatServer-jabberd[1041]: 20050506T00:28:59: [notice] (-internal): shutting
down server
May 5 19:30:02 xserve iChatServer-jabberd[1051]: 20050506T00:30:02: [error] (-configure): SSL
Connections are disabled. [error: 0200100D:system library:fopen:Permission denied] while using SSL
certificate file '/etc/certificates/Default.crtkey' for host '0.0.0.0'.
May 5 19:30:02 xserve iChatServer-jabberd[1051]: 20050506T00:30:02: [notice] (-internal):
initializing server
May 5 19:30:02 xserve iChatServer-jabberd[1051]: 20050506T00:30:02: [notice] (-internal): server
started
May 5 19:30:41 xserve iChatServer-jabberd[1051]: 20050506T00:30:41: [notice] (-internal): shutting
down server
```

To resolve this issue, do the following:

1. Be sure you are logged in as an administrator.
2. Open Terminal (/Applications/Utilities/).
3. Execute this command:

   ```
   echo 'certusers:*:29:root,jabber,postfix,cyrusimap' | sudo niload group .
   ```

   Note: For convenience, you can copy and paste this into the Terminal window. If you do, be sure to copy/paste the final period.
4. Enter your admin user password if prompted.
5. Restart the server.

This document will be updated as more information becomes available.

Published Date: Oct 11, 2016

About WorldBook Encyclopedia and Mac OS X 10.4 Tiger

This article has been archived and is no longer updated by Apple.

Want to use WorldBook Encyclopedia 2004 or 2003 with Mac OS X 10.4 Tiger? You will need to download a WorldBook update from MacKiev first.

If you have a later version of WorldBook Encyclopedia, such as 2005, it should work just fine with Mac OS X 10.4 Tiger.

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Published Date: Oct 7, 2016

Logic Pro: Some SMPTE events won‘t unlock

This article has been archived and is no longer updated by Apple.

In Logic Pro, after you lock a region (or events within it) to SMPTE time, you can't subsequently unlock all of the SMPTE events. Some will unlock, but others won't.

If this happens, undo your actions back to the last point before locking SMPTE to the region or events.

This issue is resolved in Logic Pro version 7.1.1 or later, available at Apple Downloads.

Published Date: Feb 19, 2012

Mac OS X 10.4: Mail unexpectedly quits, stops responding, or won‘t import previous mailboxes

This article has been archived and is no longer updated by Apple.

If you use third-party plug-ins with Mail in Mac OS X 10.4 Tiger, be aware that they can lead to issues, such as Mail unexpectedly quitting or not being able to import previous mailboxes. This can happen even if the plug-ins worked with Mail in earlier versions of Mac OS X.

Note: Apple does not support the use of third-party plug-ins with any version of Mail or Mac OS X. This article is provided as courtesy information—not as a statement of compatibility.

If you are experiencing issues with Mail due to third-party plug-ins, you can download and install the Mac OS X 10.4.1 Update or later. Your third-party plug-ins will be disabled so that Mail can function properly.

If you're not ready to update, follow these steps to remove the plug-ins:

1. Quit or Force Quit Mail.
2. Remove all plug-ins from the ~/Library/Mail/Bundles and /Library/Mail/Bundles folders.
3. Open Mail. If your previous mailboxes and folders do not appear, choose **Import Mailboxes** from the **File** menu.

Published Date: Oct 7, 2016

Mac OS X 10.4: Classic does not progress beyond the welcome screen

This article has been archived and is no longer updated by Apple.

When opening Classic in Mac OS X 10.4 Tiger, if the "Welcome to Mac OS 9" screen appears but Classic never finishes loading (the extension icons don't appear), use the troubleshooting tips below.

Note: If the issue occurred before Tiger was installed, or this involves a different Classic startup issue, see this article instead.

Make sure the installed version of Mac OS 9 is 9.2.2

If Mac OS 9.2.2 is not installed (for example, if 9.0 or 9.1 are installed), update to Mac OS 9.2.2. You can find out which version of Mac OS 9 is in the System Folder in one of these ways:

- Open Startup Disk preferences and look at the Mac OS 9 System Folder version (the Mac OS 9 System Folder only appears in Startup Disk preferences if your computer can start from Mac OS 9)
- Open the System Folder and Get Info on the "System" file. It should be version 9.2.2. Note that the System Folder differs from the System folder of Mac OS X (visit Classic preferences to see where your Mac OS 9 System Folder is, if you don't know).

If these show that an earlier version of Mac OS 9 is installed, update to Mac OS 9.2.2.

Check for a DivX plug-in

If Mac OS 9.2.2 is installed but the issue still occurs, look for a DivX plug-in located in /Library/QuickTime. If it's there, remove the "DivXNetworks" folder from /Library/Application Support.

Important: Mention of third-party websites and products is for informational purposes only and constitutes neither an endorsement nor a recommendation. Apple assumes no responsibility with regard to the selection, performance or use of information or products found at third-party websites. Apple provides this only as a convenience to our users. Apple has not tested the information found on these sites and makes no representations regarding its accuracy or reliability. There are risks inherent in the use of any information or products found on the Internet, and Apple assumes no responsibility in this regard. Please understand that a third-party site is independent from Apple and that Apple has no control over the content on that website. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

iSync 2: Repeating events dated 1979 and earlier may not sync

This article has been archived and is no longer updated by Apple.

If you have repeating iCal events that are dated prior to January 1, 1980 (1980-01-01), the events may not sync with some Symbian OS-based phones when using iSync 2.0 or later. In addition, if you are using iSync version 2.0, these events may cause the iSync Agent application on your phone to unexpectedly quit.

Such events may include birthdays that you created in Address Book that got added to iCal. For example, if you create a repeating iCal event that's dated "May 5, 1975" and titled "Day 1: I am born," the event may not show up on your phone after the sync is complete, or iSync Agent may unexpectedly quit when you try to sync that event to your phone.

To prevent iSync Agent from unexpectedly quitting, update iSync 2.0 to version 2.1 or later (use Software Update or download the update from Apple Downloads).

To ensure that your events get synced to your phone, make sure that all *repeating* events you want to synchronize are dated January 1, 1980 or later.

Symbian OS-based phones

Symbian OS-based phones include the Sony Ericsson P800 and P900, Nokia 3600, Nokia 3620, Nokia 3650, Nokia 3660, Nokia 6600, Nokia 7650, and Nokia N-Gage.

If you're not sure what type of OS your phone uses, check the documentation that came with it.

Tip: If iSync asked you to install the iSync Agent application on your phone when you added it to iSync the first time, your phone is Symbian OS-based.

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Published Date: Oct 7, 2016

Final Cut Studio: Installer does not properly check for adequate disk space to install

This article has been archived and is no longer updated by Apple.

When you install Final Cut Studio from the DVD, the Installer does not properly check the amount of free disk space available on your computer before performing the installation. You will need 4 GB of disk space available to install all the applications; you will need an additional 41 GB to install all optional templates, loops, content, and tutorials (these may be installed on separate disks).

If your computer does not have enough available disk space, the Install button in the Installer will still be accessible (it won't dim), allowing you to start the installation. If you do so, you'll get the following error during the installation process:

> "Your startup disk is almost full"

A few minutes later, a second dialog will appear:

> "There were errors installing the software. Please try again."

If you see these errors, you can free up some disk space by throwing away files and applications that you no longer need, and backing up files that you wish to keep to other volumes or media. You can also custom install only specific parts of Final Cut Studio and you can change the location for certain items. See the Installing Your Software guide for additional information.

Published Date: Oct 7, 2016

Mac OS X Server: Understanding the "disconnect when idle" feature for AFP connections

This article has been archived and is no longer updated by Apple.

When you select the idle disconnect feature for Apple File Service (AFP) clients of Mac OS X Server 10.3 or 10.4, Server Admin may still list clients' connections even after they have gone idle. And idle client's listing will be dimmed, indicating that it's no longer an active connection.

The reason that Server Admin still lists the idle clients is because Mac OS X Server saves AFP sessions for later reconnect (known as "session caching"), allowing clients to resume AFP activity after sleep, for example. You can verify that the session was saved by these signs:

- The client's name is dimmed with a status of "Sleep / Idle" in Server Admin (Mac OS X Server 10.3.x only).
- The AFP log contains an entry like:

```
IP 17.22.99.79 - - [24/Feb/2005:13:55:04 -0800] Idle Disconnect: User1 0 0 0 IP 17.22.99.79 - -
[24/Feb/2005:13:55:04 -0800] Saved for Reconnect User: User1 1109281845 10 0
```

This is normal, and no further action is required. If you would like to disable AFP session caching, follow these steps:

1. For Mac OS X Server 10.4, Log in as root at the server and issue these three Terminal commands:

   ```
   cp /Library/Preferences/com.apple.AppleFileServer.plist /Library/Preferences/com.apple.AppleFileServer.plist.old
   plutil  -convert xml1  /Library/Preferences/com.apple.AppleFileServer.plist
   pico /Library/Preferences/com.apple.AppleFileServer.plist
   ```

   For Mac OS X Server 10.3, Log in as root at the server and issue these two Terminal commands:

   ```
   cp /Library/Preferences/AppleFileServer.plist /Library/Preferences/AppleFileServer.plist.old
   pico /Library/Preferences/AppleFileServer.plist
   ```

2. In the pico text editor, locate the lines that contain:

   ```
   <key>reconnectFlag</key>
   <string>no_admin_kills</string>
   ```

3. Replace the string `no_admin_kills` with `none`, so that the line now reads:

   ```
   <string>none</string>
   ```

4. Save the file (Control-O), press Return, and exit pico (Control-X).
5. Restart the AFP service in Server Admin.

Published Date: Oct 7, 2016

Final Cut Studio: Installation is not allowed from Terminal

This article has been archived and is no longer updated by Apple.

You cannot use Terminal to install Final Cut Studio. If you try to install the software from a command line, Terminal may display a message that says the software won't install because it's disabled. Please use the Final Cut Studio Installer from the Install DVD instead.

Published Date: Oct 7, 2016

About Apple Intermediate Codec 1.0.1

This article has been archived and is no longer updated by Apple.

Apple Intermediate Codec 1.0.1 delivers improved compatibility and reliability for Final Cut Express HD and iLife '05 users. This update is recommended for all users who are currently using Apple Intermediate Codec 1.0 and QuickTime 7.

Key updates include:

- Improved export performance
- Improved playback

You can download the Apple Intermediate Codec 1.0.1 from here.

Published Date: Oct 7, 2016

iTunes 4.8: Security enhancements

This article has been archived and is no longer updated by Apple.

This document describes security enhancements included with iTunes 4.8, which can be downloaded and installed using Software Update, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred, and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How To Use The Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

iTunes 4.8

Available for: Mac OS X v10.2.8 or later, Microsoft Windows XP, Microsoft Windows 2000
CVE-ID: CAN-2005-1248
Impact: A buffer overflow in iTunes could cause a denial of service and lead to the execution of arbitrary code.
Description: The MPEG4 file parsing code in iTunes versions prior to 4.8 contains a buffer overflow vulnerability. Parsing a maliciously-crafted MPEG4 file could cause iTunes to terminate or potentially execute arbitrary code. iTunes 4.8 addresses this issue by improving the validation checks used when loading MPEG4 files. iTunes 4.8 is available here. Credit to Mark Litchfield of NGS Software for reporting this issue.

Published Date: Oct 7, 2016

Motion 2: Error when exporting tutorial project to Compressor

This article has been archived and is no longer updated by Apple.

If you have one of the Motion tutorial projects open and then try to export it using Compressor, you may get an alert message that states that an error occurred while exporting to Compressor. This happens because the folder in which the tutorial projects are installed is a "read-only" folder.

When you export projects using Compressor 2, the application automatically creates a "Motion Batch Export Files" folder in the same location as the source file (in this case, it's trying to create the folder in the read-only tutorial projects folder, but won't succeed).

To resolve this issue, make sure that your project is in a location that you have both read and write access to allow Compressor to create the export folder. To export a Motion tutorial, save a copy of the tutorial project to another location (for example, your Documents folder) by choosing **File > Save As** in Motion.

Published Date: Feb 19, 2012

Mac OS X Server 10.4: Inherit permissions does not work for AFP service

This article has been archived and is no longer updated by Apple.

When offering Apple File Protocol (AFP) service, Workgroup Manager allows you to set the default permission on new files and folders to "Inherit permissions from parent." This option does not work presently with Mac OS X Server 10.4 to 10.4.1. Specifically, AFP server is not setting the permissions on files created in subfolders of a shared folder when inherit permsissions is enabled.

Mac OS X Server 10.4.2 Update resolves this issue.

Note: If you enable or disable ACLs for a volume, you'll need to unmount and remount the volume for your selection to take effect. Alternatively, you could restart your server.

Published Date: Feb 19, 2012

Mac OS X 10.4: Applications may unexpectedly quit when printing to some Brother printers

This article has been archived and is no longer updated by Apple.

If you're using a Brother printer and an application unexpectedly quits when you try to print from it (before the Print dialog appears), download and install an update from Brother. For more information, check out this page on the Brother website.

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Published Date: Feb 19, 2012

Motion 2.0: Mac OS X 10.4.1 Update resolves issues, improves ATI graphics card compatibility

This article has been archived and is no longer updated by Apple.

If you use Motion 2.0 with Mac OS X 10.4 Tiger, you should update to Mac OS X 10.4.1 or later.

The Mac OS X 10.4.1 Update offers reliability improvements for float rendering in Motion 2 when used with an ATI graphics card. The update also addresses issues encountered when using some of the Core Image Unit filters provided with Tiger. Additionally, the update resolves an issue in which Motion could unexpectedly quit when using LiveFonts.

Published Date: Oct 7, 2016

Motion: Zoom keyboard shortcut changed with Mac OS X 10.4

This article has been archived and is no longer updated by Apple.

If you used Motion with Mac OS X 10.3, you may have become accustomed to temporarily invoking the Zoom tool by pressing Command-Space bar, and dragging right or left to zoom in or out from a point on the canvas.

If you are using Motion in Mac OS X 10.4 Tiger, pressing Command-Space bar will invoke the new Spotlight feature. To temporarily invoke the Zoom tool, press the Space bar first, then press the Command key.

Published Date: Feb 18, 2012

QuickTime Player unexpectedly quits when saving Motion project

This article has been archived and is no longer updated by Apple.

You can open a Motion project file in QuickTime Player by pressing Option-Command and dragging the Motion file to the QuickTime Player icon in the Dock or in the Applications folder.[1]

While you can play the project in QuickTime Player, if you choose **Save as** from the **File** menu to create a new QuickTime movie file, QuickTime Player may unexpectedly quit. If you are successful with saving the file, the resulting QuickTime movie file may also cause other applications to unexpectedly quit when you attempt to open it or import it.

To avoid this, do not save Motion projects opened in QuickTime Player. If you wish to save a Motion project as a QuickTime Movie, open the project in Motion and choose either **File > Export** or **File > Export using Compressor**.

Notes

1. In some configurations Motion project files cannot be opened in QuickTime. Click here for more information.

Published Date: Oct 7, 2016

Xsan: Editing mount options to increase performance

This article has been archived and is no longer updated by Apple.

Editing plist files used by Xsan to customize mount options may help increase performance in some scenarios if you are using Mac OS X Server 10.3.5 or later, and Xsan 1.1 or later. To do this, follow these steps.

1. Using Xsan Admin, unmount the volume on the client (doing so will ensure that the client's automount plist file is in the new format).
2. At the client, use Terminal to copy the automount.plist file to a working directory, such as your desktop:

   ```
   % cp /Library/Filesystems/Xsan/config/automount.plist ~/Desktop/
   ```

3. If you haven't already installed the Xcode Tools package from your Software Installation disc, do so now (the next steps require using the Property List Editor utility that Xcode installs at /Developer/Applications/Utilities).
4. Open the automount.plist file in Property List Editor.
5. Expand the plist as shown.

6. Select the MountOptions node, then click the New Child button.
7. A new item appears. Replace the text "New item" with "dircachesize." Make sure that the Class column shows "String." In the Value column, type "256m." This will set the directory cache size on the client to 256 MB (depending on the amount of memory installed in the client and the expected workload, a different value may be appropriate).

8. Repeat steps 5 to 7 for each volume that you want to change.
9. From the **File** menu, choose **Save**.
10. Quit Property List Editor.
11. In Terminal, copy the updated automount.plist file back to the Xsan configuration directory on the client:

    ```
    % sudo cp ~/Desktop/automount.plist /Library/Filesystems/Xsan/config/
    ```

12. Mount the volume on the client using Xsan Admin.

The volume should now mount with the new mount options specified in automount.plist.

Published Date: Oct 7, 2016

iWork: Installing iWork over a trial version

This article has been archived and is no longer updated by Apple.

Retail purchases of Mac OS X 10.4 and new computers that come with Mac OS X 10.4 both include a trial version of iWork. Because of this, installing a full retail copy of iWork is easier than you think.

After purchasing iWork, rather than install the software from the iWork disc, simply open the trial version on your computer. When prompted to buy or try, click the Buy button and enter the serial number that came with your retail copy of iWork. This will unlock the full version—you will no longer be prompted to purchase the software.

Published Date: Oct 7, 2016

Logic Pro/Express 7.1: Bass Amp presets not available

This article has been archived and is no longer updated by Apple.

After installing Logic Pro 7.1 or Logic Express 7.1, you may find that there are no presets available for the Bass Amp plug-in.

To resolve this issue, update to Logic Pro or Express version 7.1.1 or later, available at Apple Downloads.

Note: If the issue still isn't resolved, please run the Logic Installer again to ensure that the "GarageBand 2 Sound Library" is installed correctly.

Published Date: Oct 7, 2016

Motion 2: Important installation considerations

This article has been archived and is no longer updated by Apple.

If you are planning to install Motion 2, here are some important things to consider before installing.

- Motion 2 cannot be installed on the same partition as Motion 1.0 or 1.0.1. If you want to continue using Motion 1.x, you should install Motion 2 on a different partition.
- You will need Mac OS X 10.4 Tiger if you want to use the new 16-bit or 32-bit float rendering in Motion 2 (you should also have a 256 MB graphics card installed).
- When you're installing Motion, if you choose an alternate install location for your Motion Content and then run the HD templates installer, the HD templates may not get installed in your alternate location. This can happen if there is a space in the alternate install path (for example, ~/Documents/my content), or if the path contains the name Motion (for example, ~/Documents/motion). In the latter scenario, the HD Templates will get installed in the default location (/Users/Shared/Motion/Templates). You can move the templates to your preferred location, but you must move or copy all of the following files:
  - Motion/Library/Content/Tech Blue
  - Motion/Library/Content/Blocks
  - Motion/Templates/Tech Blue
  - Motion/Templates/Blocks

  The Motion HD Templates.pkg installer is located in the Motion Extras folder on the Motion 2 install disc.

Published Date: Oct 7, 2016

Logic Pro/Express: Cycle recording audio with autodrop does not work

This article has been archived and is no longer updated by Apple.

When you set an autodrop zone inside a cycle zone in Logic Pro or Logic Express, you won't be able to record multiple passes of audio. Recording stops after the first pass through the cycle completes. You can record multiple passes of audio in cycle mode as long as you don't enable autodrop.

If you're recording MIDI, you can set an autodrop zone inside a cycle zone when recording and the function will work as expected.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

AirPort for Windows: AirPort Express Assistant may not work with Microsoft WPA2 Update

This article has been archived and is no longer updated by Apple.

The AirPort Express Assistant will not work as expected after installing the Microsoft software update titled, "Wi-Fi Protected Access 2 (WPA2)/Wireless Provisioning Services Information Element (WPS IE) update for Windows XP with Service Pack 2." If you have this update installed, you get an error message when launching AirPort Express Assistant on your Windows XP computer.

As a workaround, use AirPort Admin Utility instead of AirPort Express Assistant.

This document will be updated as more information becomes available.

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Published Date: Feb 18, 2012

Motion 2: More memory recommended for HDV

This article has been archived and is no longer updated by Apple.

HDV source material requires more memory for good playback performance. If you are using HDV source material in your Motion project, playback may be considerably slower than when using DV source material. Adding additional memory will improve realtime playback with HDV files in Motion.

While the minimum memory requirements are 512MB of RAM, 2GB or more is recommended.

Published Date: Oct 11, 2016

Motion 2: Back face of object may appear cropped when using the Basic 3D filter

This article has been archived and is no longer updated by Apple.

In Motion 2, the Basic 3D filter allows you to rotate an object on the X, Y, and Z axes. You can also place another image on the back face of the object to which the filter is applied.

However, if the image you use for the back face is larger than the original, when you rotate the object using the Basic 3D filter, the back face image will be cropped to the size of the original object. The Basic 3D filter will not expand the original object's size based on the size of the image you assigned to its back face image well.

To prevent this from happening, use an image that's the same size or smaller than the original for the back face, or scale up the original object before applying the filter.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

Motion: Can‘t use "gestures in the air" function with a Wacom tablet in Tiger

This article has been archived and is no longer updated by Apple.

If you use a Wacom tablet and pen with Motion, you can use *gestures*—continuous, uninterrupted patterns drawn in the Motion user interface, using your tablet—to navigate and perform tasks such as editing, copying, and pasting.

In the Gestures pane of Motion preferences, you can select the "Allow gestures in the air" checkbox to trigger gestures without touching your pen tip to the tablet. However, in Mac OS X 10.4 Tiger, selecting this checkbox won't allow you to make gestures with your pen in the air. This affects Motion 1 and Motion 2 in Tiger. Instead, you will be limited to making gestures on the surface of your tablet.

This document will be updated as more information becomes available.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 19, 2012

Final Cut Pro HD: Motion relinking

This article has been archived and is no longer updated by Apple.

Final Cut Pro HD 4.5 may not recognize Motion (.motn) files when you open a Final Cut Pro project on a different computer than the one used to create it. This issue occurs if you used Media Manager in Final Cut Pro to collect a project containing Motion files, and moved the project to another computer. This can happen with files created in Motion 1 or Motion 2.

To resolve this issue, you will need to relink the Motion files on the second computer before opening the Final Cut Pro project. To do this:

1. Open the Motion project file in Motion and relink the media by clicking Reconnect and locating the files.
2. Save the Motion project.
3. Open the Final Cut Pro project and relink the media files.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Motion 1: QuickTime Player in Mac OS X 10.4 won‘t open projects

This article has been archived and is no longer updated by Apple.

You can open and play Motion project files in QuickTime Player by selecting the project, pressing Option-Command, and dragging the Motion file to the QuickTime Player icon in the Dock or Applications folder. Or in QuickTime Player, you can choose **File > Open**, navigate to a Motion project in the resulting dialog, and click Open.

However, if you are using Motion 1 in Mac OS X 10.4 Tiger, you won't be able to do this. If you want to play your Motion 1 projects in QuickTime Player, you can save the project as a QuickTime movie; just open the project in Motion and choose **File > Export**, or **File > Export using Compressor**.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Mac OS X 10.4: Printing multipage TIFF documents

This article has been archived and is no longer updated by Apple.

In Mac OS X 10.4 Tiger, you can use Preview to print documents. However, Preview will only print the first page of a multipage TIFF document in Mac OS X 10.4 through 10.4.2.

To resolve the issue, download and install the Mac OS X 10.4.3 Update, or later.

If you're not ready to update to Mac OS X 10.4.3 or later, here's a tip: If the affected TIFF file was created by an application that can save in different file formats, configure the application to save files in another format. For example, third-party fax software may save incoming multiple-page faxes as TIFF documents. If the software allows you to save incoming faxes in a different format, such as PDF, change the setting.

Published Date: Oct 7, 2016

Mac OS X 10.4: Editing Address Book card fields

This article has been archived and is no longer updated by Apple.

In Mac OS X 10.4 Tiger, you can edit Address Book contact cards in a variety of ways, such as by clicking the Edit button or by choosing **Edit Card** from the Address Book **Edit** menu.

About double-click editing

With Mac OS X 10.4 Tiger, you may have become accustomed to editing information in a card by double-clicking on a field. With Mac OS X 10.4.1 or later, you can still do this, but you'll need to hold down the Option key when you double-click.

Published Date: Oct 7, 2016

About the security content of the Mac OS X 10.4.1 Update

This article has been archived and is no longer updated by Apple.

This document describes the security content of the Mac OS X 10.4.1 Update, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How To Use The Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Mac OS X 10.4.1 Update

- **Bluetooth**

  Available for: Mac OS X v10.4, Mac OS X Server v10.4

  CVE-ID: CAN-2005-1333

  Impact: Directory traversal via Bluetooth file and object exchange

  Description: Due to insufficient input checking, the Bluetooth file and object exchange services could be used to access files outside of the default file exchange directory. This update addresses the issue by adding enhanced filtering for path-delimiting characters. Credit to kf_lists[at]digitalmunition[dot]com for reporting this issue.

- **Dashboard**

  CVE-ID: CAN-2005-1474

  Available for: Mac OS X v10.4, Mac OS X Server v10.4

  Impact: Malicious websites can download and install widgets via Safari without the Safe Download Validation warning

  Description: This update blocks the automatic installation of Dashboard widgets. Mac OS X's Safe Download Validation warning is enabled, requiring user approval before a Dashboard widget is installed by Safari. This issue does not affect Mac OS X versions prior to 10.4. Further information on removing Dashboard widgets that you have installed is available here.

- **Kernel**

  CVE-ID: CAN-2005-1472

  Available for:Mac OS X v10.4, Mac OS X Server v10.4

  Impact:Users can discover the names of files placed in normally unsearchable places

  Description:Two system calls designed to allow efficient searching of filesystem objects incorrectly checked the permissions on enclosing directories and would reveal the names of files. The incorrect checking only occurred for directories without the POSIX read, but with the POSIX execute bits set for group and other. In practice this issue only affects files stored in users ~/Public/Drop Box. This update addresses the issue by correctly honoring the POSIX permission bits on directories. Credit to John M. Glenn of San Francisco for reporting this issue.

- **Kernel**

  Available for: Mac OS X v10.4, Mac OS X Server v10.4

  CVE ID: CAN-2005-0974 CERT: VU#713614

  Impact: Local system users can cause a local denial of service

  Description: A vulnerability in the nfs_mount() call due to insufficient checks on input values could allow unprivileged local users to create a denial of service via a kernel panic.

- **SecurityAgent**

TA23244_About_the_security_content_of_the_Mac_OS_X_Update.pdf

CVE-ID: CAN-2005-1473

Available for: Mac OS X v10.4, Mac OS X Server v10.4

Impact: Users with physical access to a system with a locked screensaver can start background applications

Description: A contextual menu feature in Mac OS X 10.4 allows URLs to be opened from a text input field. This could be used to launch an application behind a locked screensaver window. This update addresses the issue by removing the contextual menu from screensaver text input fields.

Published Date: Oct 7, 2016

Soundtrack Pro: How to use the Match EQ plug-in

This article has been archived and is no longer updated by Apple.

One of the most powerful sound-shaping tools in Soundtrack Pro is Match EQ. This plug-in can be used to analyze an audio file, compare the tonal data with another audio file, and then generate a frequency spectrum so that the second file matches the frequency characteristics of the first. This is an ideal tool to make dialog tracks from different location or ADR sessions sonically match one another.

Match EQ uses a virtually unlimited number of filters (it uses as many as it needs in any particular instance) to accurately generate a tonal spectrum to achieve a match.

The Match EQ interface

The Match EQ GUI (graphical user interface) offers a detailed frequency spectrum display where you can monitor the spectral content of the audio being analyzed and processed.

The buttons below the spectrum display let you control the audio analysis and spectrum application. The Learn button under Template allows you to analyze an audio file (or clip) that you want other files to match. The Learn button under Current Material allows you to analyze a second audio file—one that you want to modify to match the first. The Match button under Current Material will compare both learned frequency spectra, generate an EQ curve, and apply it to the second audio file so that it matches the first.

Here's a look at two basic workflows where you might want to use Match EQ.

Using Match EQ in a Multitrack Project

Let's say that you're working on a simple voice-over project, as shown in the image below:

You have three dialog clips that feature the same voice talent. However, let's say that the middle clip shown is a retake that you recorded at a later time. Maybe this clip was recorded in a different room, or with a different microphone, or perhaps the narrator simply sounded different that day. For whatever reason, the middle clip sounds noticeably different than the first and third clips. Match EQ can correct this quite easily. Here's how.

1. Insert Match EQ in the track; in the Media and Effects window, click the Effects tab.

2. In the Category pane, select Soundtrack Pro and in the Effect pane, select Match EQ. (**Tip**: Instead of scrolling down the Effect list, just click on any listed effect and press the *M* key; Match EQ will immediately be highlighted.)
3. Click the plus sign (+) button to insert the plug-in on the track.
4. Click the Advanced button to open the Match EQ interface.
5. To make the middle (second) clip sound like the others, you want Match EQ to learn the frequency spectrum of the original recording session (the first or third clip) and apply that spectrum to the middle clip to make it match. Set the playhead to just before the first clip.
6. Play a bit of the clip to listen. Click the Learn button under Template to start analyzing it and then stop playback. The button and the dB (decibel) scale indicators on each side of the spectrum display turn red. The spectrum display shows the frequency content of the clip.

7. Click the Learn button again to stop analyzing.
8. To analyze the middle clip, set the playhead to just before the second clip in the track. Play a few seconds, then click the Learn button under Current Material to start analyzing it. The button and the dB scale indicators turn green. The spectrum display shows its frequency content.

9. Match EQ now "knows" the frequency spectra of both recording sessions. To have it create an EQ curve that will correct the middle clip to match the others, click the Match button. The button and the dB scale indicators turn gold. The spectrum display shows a graphic representation of the EQ curve being applied.

10. During playback, apply the EQ curve to the middle clip only—you'll need to bypass the curve while the first and third clips are playing by automating the "match" parameter. To do this, go to the Timeline in the Project window and choose **Latch** from the automation mode pop-up menu. This allows Soundtrack Pro to write automation during playback.

11. In the Media and Effects window, click the Match EQ disclosure triangle to display the controls for its parameters.

12. Note the Auto column, which contains checkboxes, on the right side of the window. These checkboxes allow you to enable automation for their respective parameters. Select the Auto checkbox next to Match to enable it.
13. Set the Match parameter to "Off" for now (click the Off radio button), since we don't want to apply the Match curve to the first clip.
14. Start playback and when the playhead reaches the gap between the first and second clip, click the Match parameter's On radio button in the Media and Effects window.
15. When the second clip finishes playing, click the Match parameter's Off radio button again.
16. Stop playback, then rewind.
17. Choose **Play** from the automation pop-up menu and then play back the track. The EQ should engage just before the second clip starts to play and then disengage just after it's finished.
18. If you click the Dialog Track's disclosure triangle, you can view the details for the track, which will look something like this:

Using Match EQ in an Audio File Project

In some workflows, you may prefer to apply Match EQ directly to an audio file, rather than automating it within a track. To do this:

1. Open the clip that you wish to process as an Audio File Project by double-clicking the file.
2. A dialog appears, asking whether you wish to edit the file destructively or non-destructively. Select the option you prefer, then click OK to open the Audio Wave Editor.
3. Create an action layer using Match EQ by choosing **Process > Effects > EQ and Filter > Match EQ**.
4. The Match EQ interface appears. In this example workflow, we want to "teach" Match EQ the frequency spectrum from another audio file by loading it. Control-click (or right-click) the Learn button under Template.
5. From the shortcut menu, choose **Generate Template Spectrum from Audio File**.
6. In the resulting dialog, navigate to and select the audio file to which you'd like to match the current file.
7. Match EQ analyzes the selected file.
8. To analyze your current audio file, click the Learn button under Current Material, then click the Play button at the bottom of the interface.

9. After a few seconds, stop playback to stop the analysis.
10. Click the Match button to have Match EQ generate an EQ curve that will match your current audio to your audio template.
11. Click the Apply button to create an action layer that comprises the Match EQ effect.

For a detailed description of Match EQ and most of the other effects included with Soundtrack Pro, see the Logic Pro Plug-in Reference PDF file.

Published Date: Feb 20, 2012

Mac OS X 10.4: Address Book unexpectedly quits when printing on an envelope

This article has been archived and is no longer updated by Apple.

When you use Address Book in Mac OS X 10.4 to print an envelope (by choosing **Envelopes** from the **Style** pop-up menu in the Print dialog), you may come across a situation where nothing happens after you click the Print button. If you try printing a second time, Address Book unexpectedly quits.

This happens if your own Address Book card doesn't include a postal address (Address Book prints this information as a return address on the envelope). To add a postal address to your card:

1. Open Address Book.
2. From the **Card** menu, choose **Go to My Card**.

   Note: Go to My Card works only if you have a card for yourself. If you have not: Choose New Card from the File menu, enter your name in the First and Last fields, then choose Make This My Card from the Card menu.

3. Click the Edit button at the bottom of the window.
4. Enter a postal address in the fields next to an address label.
5. From the **File** menu, choose **Save** (or press Command-S).

You should now be able to print out an envelope. If you prefer not to have your address printed as the return address on the envelope, do this:

1. In Address Book, choose **Print** from the **File** menu.
2. In the Print dialog, choose **Envelopes** from the **Style** pop-up menu.
3. Click the Label tab.
4. Deselect the "Print my address" checkbox.
5. Click Print.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

iDVD: Modified asset warning

This article has been archived and is no longer updated by Apple.

If you archive an iDVD project and then open it on a different computer, you may get a "Modified Asset Warning" message.

If this happens, just click the Update button, and your project should open with all of its elements intact.

Published Date: Oct 7, 2016

Xsan: Not supported for mail services database storage

This article has been archived and is no longer updated by Apple.

If you are running mail services on Mac OS X Server 10.3 or 10.4, you can specify an external or alternate volume to store the mail services database. However, using an Xsan volume as storage for Apple mail services is not supported.

If you want to use an Xserve RAID as storage for Apple mail services, Apple recommends directly connecting the RAID to the mail server.

Published Date: Oct 7, 2016

iDVD: Wrong music after switching users

This article has been archived and is no longer updated by Apple.

After switching to a new user and creating a new iDVD 5 project, the background music in the project may not get updated. Instead, you can end up with the music from the previous user's project—even if you choose new audio for the new project.

You can avoid this by doing the following steps while still logged in to the first account:

1. Quit iDVD and go to the Finder.
2. From the **Go** menu, choose **Go to Folder**.
3. In the resulting dialog, type `/tmp` and click Go.
4. From the tmp folder window, drag the file "tempmovie.mov" to the Trash.

You can now switch to a new user and create your DVD project.

This issue does not occur in iDVD 6, part of iLife ’06.

Published Date: Feb 18, 2012

iDVD burn button doesn‘t spin

This article has been archived and is no longer updated by Apple.

During stage 3 of the Processing and Burning process, the burn button in iDVD may not spin during audio encoding. The thumbnail progress image may display a still image or a black rectangle (what's being displayed is either the last slide of the slideshow or the last frame of the movie whose audio iDVD is encoding at the time). The longer the movie or slideshow, the longer the pause will be while the audio is encoded.

This does not mean that the process has stopped. Click here for more information.

Note: If you check Activity Monitor (/Applications/Utilities) and it indicates that some iDVD processes are not responding (such as encoding server), this does not mean that the DVD burning process has been interrupted. If you do check in Activity Monitor, also look at the "%CPU" column for iDVD. If the "%CPU" for an iDVD process is above 5, then iDVD is likely encoding.

Related documents

302988: "iDVD appears to be unresponsive when encoding Audio"
Published Date: Oct 7, 2016

QuickTime 7: Run Software Update a second time to get the QuickTime 7 SDK

This article has been archived and is no longer updated by Apple.

If you are using Mac OS X 10.3.9, QuickTime 7 will appear in Software Update as an available download. After installing it, your computer will restart. If you have Developer Tools for Mac OS X 10.3 Panther installed, and wish to continue using using the QuickTime SDK (Software Development Kit) after you have upgraded to QuickTime 7, you will need to download the QuickTime 7 SDK.

You can do this by running Software Update again after installing QuickTime 7. This will make the SDK available to download.

If you don't run Software Update manually at this point, the QuickTime 7 SDK will automatically appear in Software Update after a week (if you're using the default "Check for updates Weekly" setting in Software Update Preferences). If you want to get started with the SDK sooner, make sure that you manually run Software Update.

To learn more about the QuickTime 7 SDK or to manually download the update, please visit the QuickTime section of the Apple Developer Connection site.

Published Date: Feb 18, 2012

Xsan may not work properly if the Mac OS X firewall is enabled

This article has been archived and is no longer updated by Apple.

When you enable the Max OS X firewall, Xsan Admin may not be able to see all systems on the SAN (storage area network), and clients may be unable to communicate with the metadata controller. Other Xsan issues may also occur.

For this reason, you should disable the Mac OS X firewall software on all systems running Xsan.

Published Date: Feb 18, 2012

Xsan: Metadata controllers should be on the same Ethernet network

This article has been archived and is no longer updated by Apple.

If you're using Xsan, make sure that all metadata controllers (MDCs) access the SAN (storage area network) on the same Ethernet network. Otherwise, clients and controllers will behave unexpectedly.

If you set up multiple MDCs on different Ethernet networks, you may see unexpected and undesirable behavior, such as:

- Clients have trouble with mounting volumes.
- Controllers don't fail over.
- Volumes start up on the wrong interface.

Published Date: Oct 7, 2016

Final Cut Pro/Express HD: Single-screen Digital Cinema Desktop Preview is unavailable in Tiger

This article has been archived and is no longer updated by Apple.

The Digital Cinema Desktop (DCD) feature in Final Cut Pro HD 4.5 and Final Cut Express HD does not function in Main mode in Mac OS X 10.4 Tiger. This issue only occurs if you are using the feature in single-screen mode, which is referred to in documentation as "Digital Cinema Desktop Preview - Main." The other Digital Cinema Desktop Preview modes (which use two screens) work as expected.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Mac OS X 10.3.9, 10.4: Some Apple applications don‘t open

This article has been archived and is no longer updated by Apple.

Some Apple applications might not open fully or at all if the Digidesign Core Audio driver has been installed as part of a Pro Tools version 6.9 installation. Digidesign products that rely on this driver include the Mbox, Digi 002, and HD systems. Audio MIDI Setup can usually be used to work around the issue.

Instead of opening, an application's icon just bounces in the Dock indefinitely. Or a black triangle appears below the icon in the Dock, but the application's windows and menus don't appear. These applications may be affected:

- QuickTime Player
- iTunes
- iDVD
- iMovie
- GarageBand
- Final Cut Express

Other Apple applications may also be affected.

Solution

Follow these steps to change the default audio device used by Core Audio:

1. Updating your Digidesign Core Audio driver may resolve the issue. You can find the latest versions for Mac OS X 10.3 (Panther) and Mac OS X 10.4 (Tiger) at http://digidesign.com/download/coreaudio. If that doesn't help, continue to step 2.
2. Open Audio MIDI Setup (/Applications/Utilities).
3. Click the Audio Devices tab.
4. From the **Default Output** pop-up menu, choose **Built-in Audio**.

You should now be able to open all affected applications as expected.

If this does not resolve the issue, shut down your computer and remove the Digidesign hardware.

If the issue still occurs, reinstall Mac OS X via an Archive and Install, which should resolve it.

Contact Digidesign for further assistance.

Additional information

Digidesign Pro Tools Compatability Summary

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Published Date: Oct 7, 2016

Mac OS X 10.4: Some VoiceOver key commands may not work with British ISO keyboards

This article has been archived and is no longer updated by Apple.

If you are using VoiceOver with an Apple British ISO keyboard (not an Apple English ANSI keyboard), some VoiceOver key commands will not work as expected.

If you press any of the following VoiceOver key commands, its designated function will not be performed:

- Typing a backslash (\\) will not open or close a disclosure triangle.
- Typing a tilde (~) won't resize a window.
- Typing an accent (`) won't move a window.

As a workaround, try using an Apple English ANSI keyboard with VoiceOver.

Tip: To view the available VoiceOver commands, open VoiceOver Utility (it's in /Applications/Utilities) and choose **VoiceOver Commands** from the **Help** menu, or download the VoiceOver Keyboard diagram in PDF format from this webpage.

This document will be updated as more information becomes available.

Published Date: Feb 18, 2012

iDVD 5: Iomega REV disk may be erased when burning projects

This article has been archived and is no longer updated by Apple.

If you have an Iomega REV drive installed in or connected to your computer and you have a REV disk mounted, the disk may get erased if you attempt to burn an iDVD project.

iDVD features an erase-before-burn function, which allows it to rewrite data on DVD-RW and DVD+RW media. Because the REV drive represents itself as a rewritable DVD device to the operating system, if you don't have a rewritable DVD in your SuperDrive, the REV Disk will be erased and your iDVD project will be written to the REV Disk. Although the REV drive appears as a rewritable DVD, it is not supported for use with iDVD.

To prevent the REV disk from being erased, eject it before you burn an iDVD project.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 18, 2012

GarageBand 2: Hot swapping audio hardware disconnects ReWire

This article has been archived and is no longer updated by Apple.

If you use GarageBand 2 with ReWire, the ReWire connection will get disconnected if you hot swap the audio interface. Although GarageBand supports hot swapping audio interfaces, ReWire does not. If you're using ReWire to slave another application to GarageBand, avoid hot swapping audio devices.

If you do lose the connection, just quit the ReWire slave application and then reopen it.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.
Published Date: Feb 18, 2012

iPhoto: Can‘t see songs in slideshow music dialog

This article has been archived and is no longer updated by Apple.

In iPhoto, sometimes after you select the option to add music to a slideshow, you see your playlists but not your individual songs in the dialog sheet.

If this happens to you, try resizing the sheet by dragging the lower-right corner to make it bigger. You should eventually see a divider that separates the playlist pane from the song listings pane. Once you see this divider, click and drag it upward so that you can see items in both parts of the window more easily.

Published Date: Feb 19, 2012

iPhoto: Slideshows do not play full screen on some computers

This article has been archived and is no longer updated by Apple.

iPhoto allows you to view slideshows in full screen mode, but some computers won't allow you to do this. If you're using an affected computer, iPhoto 5.0.2 or later will display a black border around the edges of the screen to improve slideshow performance.

If you would like to play a slideshow without the border, consider exporting the slideshow as a QuickTime movie. You can then view the resulting movie in QuickTime Player or another application that can play movies in full screen mode.

Published Date: Feb 19, 2012

Mac OS X 10.4: "iChatAgent Not Responding" message in Activity Monitor

This article has been archived and is no longer updated by Apple.

If you're using Activity Monitor, you might see a process in Activity Monitor that's named "iChatAgent (Not Responding)" in red text, with Mac OS X 10.4 through 10.4.2.

Don't be alarmed. Even though the red text may give the impression that something is amiss, you can safely ignore the message unless you can't log in. Activity Monitor can display this message even when iChatAgent is responding.

Download and install the Mac OS X 10.4.3 Update, or later, to address this issue.

Published Date: Oct 7, 2016

Logic Express 7: No Audio Input Objects in Logic Express

This article has been archived and is no longer updated by Apple.

The Logic Express Reference Guide refers to Audio Input Objects. The documentation is incorrect—this feature is not available in Logic Express.

Published Date: Feb 19, 2012

GarageBand 2: Original instrument won‘t appear if you edit it and save it with the same name

This article has been archived and is no longer updated by Apple.

If you edit an instrument in GarageBand 2 and save it using the same name as the original, only the edited version of the instrument will appear when you set Jam Pack Management to Show All.

To avoid this issue, always save any edited version of an instrument with a new name. This way, both the original and the edited version will be available to use.

In GarageBand 3.0.2 or later, it is no longer possible to save an instrument with the same name as one of the default instruments. If you attempt to do so, you will be prompted to use a different name.

Published Date: Feb 19, 2012

Mac OS X: Internal modem not working

This article has been archived and is no longer updated by Apple.

Updating or upgrading to a version of Mac OS X from 10.3.7 to 10.4.1 might cause certain "dash" type internal modems supplied by Apple to stop working. Internet Connect may give you the message "Could not open the communications device."

You can use the System Profiler application to determine if your computer has a "Dash" modem.

1. From the **Apple** menu choose **About This Mac**.
2. In the resulting window, click More Info.
3. In System Profiler, click Modems in the list on the left side of the window.
4. If System Profiler shows the "Modem Model" as any version with "Dash" in the name, then you should continue with the troubleshooting steps in this article.

Solution for Mac OS X 10.3 Panther

If you're having this issue with Panther, you should contact AppleCare for assistance.

Solution for Mac OS X 10.4 "Tiger"

If you're having this issue with Tiger, update to 10.4.2 or later to resolve the issue. Since your modem isn't working, getting the update will take a little extra effort. Try downloading the standalone update to the computer you're reading this on, then burning it onto a disc to insert in the affected computer. If you don't have a burner, you could set up file sharing. You could also visit the Genius Bar at an Apple retail store, or transfer the file using your iPod as a disk. If you can easily transport your computer, taking it to a location with AirPort or Ethernet access to the Internet would also be a solution.

Published Date: Feb 18, 2012

.Mac: Backup may revert to trial mode in Mac OS X 10.4 Tiger

This article has been archived and is no longer updated by Apple.

Mac OS X 10.4 Tiger provides the ability to reopen applications that have unexpectedly quit. On the first attempt, if you choose to reopen an application that has unexpectedly quit, it should open normally.

However, if it unexpectedly quits a second time, the Finder will offer to open the application using its default settings. If you choose to do this, the application gets temporarily set back to the original condition in which it came (before you did any customization). If you then quit and reopen the application, it will open with your normal user settings back in place.

If Backup 2.0.x unexpectedly quits twice in a row in Mac OS X 10.4, the application may open in Trial User mode on your second recovery attempt. In Trial User mode, Backup doesn't have access to your .Mac preferences. If this happens to you, just quit Backup and reopen it again to use your normal settings. You may see an alert message that asks if you want to save the new settings. Click No to use your old settings.

Related documents

- 301084: "Mac OS X 10.4: Reopening an application after it unexpectedly quits"

Published Date: Oct 7, 2016

Mac OS: Chooser Defaults to Modem Port

This article describes why a serial printer driver may default to the modem port within the Classic Networking architecture.

This article has been archived and is no longer updated by Apple.
AppleTalk tends to take over the printer port when active, preventing a serial printer from using it. This causes the serial printer's driver to choose the modem port. To resolve this issue, turn off AppleTalk.

Making AppleTalk inactive (either in the Chooser or the AppleTalk control panel) is not sufficient, since the resources are loaded at startup.

Follow these steps to make AppleTalk inactive under Classic Networking:

1. Open the Chooser.
2. Click the Inactive button to make AppleTalk inactive.
3. Restart the computer.

To verify that AppleTalk is inactive, open the Chooser; the AppleTalk Inactive button should be set. Note that using file sharing or Apple Remote Access makes AppleTalk active again.

For additional information on how to turn off AppleTalk under Open Transport, please see article 24346: "**Mac OS: AppleTalk "Port in Use" Error**"

Additional Workaround

Install Apple Remote Access Client, which adds the option "Remote Only" to the AppleTalk Control panel. Choosing "Remote Only" routes AppleTalk to "Remote Only", freeing up your printer port for use by your serial printer.

Published Date: Feb 18, 2012

Logic Express 7.1: Enhance Pitch plug-in referred to as Enhance Tuning in documentation

This article has been archived and is no longer updated by Apple.

If you're using Logic Express 7.1, the included "What's New in Logic Express 7.1" document references a new plug-in named Enhance Tuning. In Logic Express, the corresponding plug-in is actually named Enhance Pitch.

Published Date: Feb 19, 2012

Mac OS X 10.4: No results when searching Mail messages

This article has been archived and is no longer updated by Apple.

In Mac OS X 10.4 Tiger, if you want to search your Mail messages by typing keywords in the application's search box, Spotlight won't find any messages if it isn't allowed to index and search your Home folder. This is because Mail messages are stored in each user's Home folder.

Note: By default, Spotlight includes your Home folder in its searches. This issue only occurs if you specifically added your Home folder to the Privacy list.

To resolve this issue, use Spotlight preferences to remove your Home folder from the Privacy list. Then give Spotlight a few minutes (or more, depending on how large your Home folder is) to index your stuff, including your Mail messages. If you want to check indexing progress, click the Spotlight icon.

Published Date: Oct 7, 2016

Logic Pro 7.1: Audio may leak from one Aux channel to another

This article has been archived and is no longer updated by Apple.

When certain Audio Unit plug-ins are inserted in an Aux, audio from other Aux channels can leak into the signal path. In the image below, Aux 2 shouldn't show any output, but it's receiving audio that Aux 1 is getting from Bus 1.

This does not occur with the built-in plug-ins in Logic, nor does it occur with all Audio Units.

As a workaround, assign a Logic "Gain" plug-in with default settings (so as not to affect the sound) in the first insert of the Aux channel. You may then use any Audio Unit plug-in in the following slots without audio leakage.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

Apple Pro Training Final Cut Studio Tutorial overview

This article has been archived and is no longer updated by Apple.

Final Cut Studio, Final Cut Pro 5, DVD Studio Pro 4, Soundtrack Pro, and Motion 2 all come with two DVDs—the Apple Pro Training Final Cut Studio DVD Tutorial and Apple Pro Training Final Cut Studio Tutorials—that are filled with beginning and advanced tutorials and training lessons to help you learn more about the applications. Here's a look at what each DVD offers.

Apple Pro Training Final Cut Studio DVD Tutorial

The Apple Pro Training Final Cut Studio DVD Tutorial is an interactive DVD tutorial that gives you an excellent overview of Final Cut Pro 5, Motion 2, Soundtrack Pro, and DVD Studio Pro 4 (all the applications included in Final Cut Studio). The tutorial takes you through each of the applications' interfaces and primary features, including a tour of some of the most important new features. This is an interactive teaching tool, with lesson files and media included on the DVD so you can work through real-world projects as you learn.

Even if you don't have every application in Final Cut Studio, you can still watch this DVD training disc on your computer or NTSC-compatible set-top player to learn about all the products.

Apple Pro Training Final Cut Studio Tutorials

The Apple Pro Training Final Cut Studio Tutorials are step-by-step, project-based lessons—the equivalent of about 8 hours of training—in PDF format. All tutorials come with accompanying project and media files for you to use. The disc includes tutorials for both new and experienced users, and covers Final Cut Pro 5, Motion 2, Soundtrack Pro, and DVD Studio Pro 4. Here are the lessons it contains.

Lesson 1: Introducing Final Cut Pro
This step-by-step tutorial to the cornerstone application of Final Cut Studio guides you through the process of editing two projects. As you edit, you'll discover the primary aspects of the Final Cut Pro interface, and become familiar with its basic operation, including navigating through a sequence, opening and marking clips, assembling clips, basic trimming and editing techniques, adding transitions and filters, and using nested sequences.
Approximate lesson time: 1 hour

Lesson 2: Mastering Final Cut Pro
This advanced tutorial covers some of Final Cut Pro's most exciting new features and more advanced techniques. You'll work with multiple clips to create a multi-angle montage and a multi-camera edit. Then you'll use advanced effects techniques to animate opacity, change speeds, apply basic color correction, modify a nested sequence, and composite images. You'll use all of these techniques to build a promo for the show "Capturing the eXtreme" for the fictitious eXtreme Living Channel.
Approximate lesson time: 1 hour

Lesson 3: Introducing Motion
This introductory-level lesson takes you through the process of creating a Motion project from start to finish. After exploring the Motion interface, you'll work with some of Motion's most exciting features, including animated text, filters, behaviors, and particles, as you build a 10-second promo for the fictitious eXtreme Living Channel. See the Late-Breaking News section below for a correction to the steps for importing a Motion project.
Approximate lesson time: 45 minutes

Lesson 4: Mastering Motion
This advanced tutorial focuses on some of Motion's most powerful new features and more advanced techniques. You'll learn to work with replicators, the 3D filter, image masks, generators, and keyframed animations to build a "Coming Up Next" bumper for the fictitious eXtreme Living Channel.
Approximate lesson time: 1 hour

Lesson 5: Introducing Soundtrack Pro
This hands-on tutorial is designed to give you an overview of the Soundtrack Pro interface and some of the application's professional sound design features as you build and mix a project. You'll learn to arrange audio clips in the Timeline, synchronize audio and video, automate volume and pan levels, edit audio files, reduce noise, normalize a voiceover, add effects, and create a mix. Along the way, you'll also learn some handy keyboard shortcuts and sound design tricks.
Approximate lesson time: 1 hour, 15 minutes

Lesson 6: Introducing DVD Studio Pro
In this introductory-level tutorial to DVD Studio Pro, you'll use the application's Basic configuration to author a simple DVD containing one track, a slideshow, and one menu. You'll learn how to modify an existing menu template to your own design, create custom buttons, and connect your assets for a DVD. By working through a few of the basics, you'll have a solid foundation, and be ready to tackle your next project.
Approximate lesson time: 1 hour

Lesson 7: Mastering DVD Studio Pro
This advanced tutorial explores techniques for designing more advanced menus in DVD Studio Pro, including how to create motion menus, transitions, subtitles, and more. You'll be authoring a DVD to promote a fictitious show, "Shark Encounter," on the eXtreme Living Channel. The

project includes a slideshow of the production, a movie track, chapter index menus, and alternate angles.
Approximate lesson time: 1 hour, 15 minutes

Late-Breaking News

While using the tutorials, you may encounter the following issues:

Apple Pro Training Final Cut Studio DVD Tutorial
After dragging the Final Cut Studio Training folder to your computer's hard drive, it will be set to "Read Only" by default. This will prevent you from saving projects to that folder. To change this, do the following:

1. Select the Final Cut Studio Training folder on your hard drive and choose **File > Get Info**.
2. In the "Ownership and Permissions" section, choose **Read and Write** from the **You can** pop-up menu.
3. In the "Details" section, click the "Apply to enclosed items" button. You will now be able to save to this folder.

Apple Pro Training Final Cut Studio Tutorials
With the Mastering DVD Studio Pro finished project, you may see a "Max Bitrate Too High" error if you try to build a DVD. To resolve this issue:

1. Re-encode the AIFF audio files to AC3 using Compressor.
2. Replace the AIFF files with the AC3 files in "2_Mst_DVDSP."

Correction to Importing a Motion Project tutorial steps

Follow these steps instead of following the Importing a Motion Project File section of the Motion tutorial:

1. Move the playhead to the first frame of the project (press Home key).
2. Click the File Browser tab or press Command-1 to open the File Browser.
3. In the Media folder, click the eXtreme Living Text Motion project from the Media folder on the lower pane to see it in the Preview area.

   This is a simple Motion project containing two text objects with Text-Fade behaviors.
4. Click the Import button to import the selected file. The eXtreme Living text is imported to the project, at the playhead position, and automatically centered in the frame. Move playhead to frame 200.
5. Play the project in the Canvas to see the new imported text elements.
6. Move the playhead to the first frame of the project (press the Home key).
7. Click the 4 text file in the lower pane to preview it. This Motion project contains four text objects with Fade In/Fade out behaviors. You'll place the file at the lower-left corner of the frame.
8. Drag the 4 text file from the lower pane to the lower-left corner of the frame in the Canvas. Move playhead to frame 60.

Published Date: Oct 7, 2016

Xsan 1.0 and later: Second volume may not appear on slower systems

This article has been archived and is no longer updated by Apple.

When mounting more than one volume on older Xsan-supported Power Mac G4 desktop systems, additional volumes may not appear on the Desktop when you're using Xsan. If this happens to you, try one of the following methods to mount the volume.

- In Terminal, enter the following command:

  ```
  $ disktoool -r
  ```

- Relaunch the Finder using the Force Quit command (choose **Apple > Force Quit**).

Published Date: Feb 19, 2012

Xsan: Volume that hosts home directories may not mount

This article has been archived and is no longer updated by Apple.

Under certain circumstances, an Xsan volume may not mount after you restart an Xsan workstation. If you try to mount the volume with Xsan Admin, that may not work either.

This issue may occur when logging into an Xsan client computer with a user account whose home directory is located on an Xsan volume. If the login or automatic login occurs before the Xsan volume has mounted, the operating system will attempt to fulfill the automount instruction by locally creating a substitute home directory that has the same pathname as the intended mount:

```
/Volumes/<XsanVolumeName>/<PathToHomeDirectory>
```

where `<XsanVolumeName>` is a local directory (not the actual Xsan volume) that shares the same name as the Xsan volume. Because the OS created this folder with the same name as the Xsan volume, the actual Xsan volume won't be able to mount.

To avoid this situation, make sure that the Xsan client's IP address and hostname are resolvable via DNS (if you are running Xsan clients with dual interfaces on separate subnets, only the primary interface, which should be the public interface, needs to be resolvable via DNS). To verify this:

1. Open Network Utility.
2. Click the Lookup tab.
3. Enter the IP address of the client's primary Ethernet interface, and click Lookup.
4. Check to see if the result is a Fully Qualified Domain Name.
5. Now replace the IP address with the Fully Qualified Domain Name that should belong to the workstation, and click Lookup again.
6. Make sure that the result is the same as the IP address you entered in step 3.
7. If either of these tests fails to deliver the desired result, contact the person who administers DNS on your network for assistance.

If the operating system created a new home directory due to this issue as described above, you'll need to delete the directory that bears the same name as the Xsan volume (do **not** delete the actual Xsan volume). First, be sure to examine the contents of the directory and back up any data that may have been saved there. Then use the following command in Terminal to delete the directory:

```
sudo rm -r /Volumes/<XsanVolumeName>
```

where `<XsanVolumeName>` is the name of the directory that was created. After you delete it, Xsan Admin should be able to mount the Xsan volume.

Published Date: Feb 19, 2012

About the Mail Server Update for Mac OS X Server 10.3.9

This article has been archived and is no longer updated by Apple.

The Mail Server Update for Mac OS X Server 10.3.9 delivers overall improved reliability, and is recommended for all Mac OS X 10.3.9 servers.

Installing the update

You can update your server in one of two ways: Use Software Update or update from a standalone installer.

Software Update installation
Software Update may have referred you to this document. For more information on using this feature, see "Mac OS X: Updating your software."

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer
A standalone installer is also available from Apple Downloads.

Reconstructing the cyrus database (optional)

This update addresses an issue in which cyrus mail services on Mac OS X Server 10.3.9 may eventually stop working, leaving the mail database in an unsettled state after the cyrus mailbox database has been reconstructed.

If you have already encountered mail server issues, you should reconstruct the cyrus mailbox database using these steps:

1. Stop the cyrus (IMAP/POP) server.
2. Execute the following command in Terminal:

```
sudo -u cyrus /usr/bin/cyrus/bin/reconstruct -i
```

3. Restart the cyrus (IMAP/POP) server, and verify that mail is working.

Published Date: Oct 7, 2016

About the Mac OS X Server 10.4.2 Update

This article has been archived and is no longer updated by Apple.

This software updates Mac OS X Server version 10.4.1 to version 10.4.2.

Important: Please Read Before Installing

- You must have an administrator account password that does not contain spaces or Option-keyed characters to install this update. The password may not be left blank (you can change your password if needed).
- You may experience unexpected results if you've installed third-party system software modifications, or if you have modified the operating system through other means. This doesn't apply to normal software installation.
- The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.
- This update can be installed on non-startup volumes, but you should only do this if the current startup volume has already been updated to Mac OS X Server 10.4.2. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are two ways to update to Mac OS X Server 10.4.2: Use Software Update or install from a standalone installer.

Software Update Installation

Software Update may have referred you to this document. For more information on this feature, see "How to Update Your Software."

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

A standalone installer is also available from Apple Downloads. The Mac OS X Server 10.4.2 Update is specifically for updating version 10.4.1 to version 10.4.2. There is also a "Combo Update" installer available, which will update any version of 10.4 to 10.4.2.

Remote Installation

If you need to install the update on a remote computer, you can do so using the "softwareupdate" command-line tool.

Enhancements

The following items are some of the enhancements and improvements in Mac OS X Server 10.4.2 Update:

Mail Services

- Upgrades SpamAssassin and ClamAV to include additional support for TNEF (winmail.dat) files and new detection mechanisms for JPEG-based exploits.

servermgrd

- Addresses an issue in which Product License Keys may be reported as invalid due to case sensitivity.

Workgroup Manager

- Addresses issues with the creation of custom home directories specified within a subdirectory of a sharepoint.
- Addresses compatibility issues for administration of a 10.3.9 server from a 10.4 system with 10.4 admin tools.

Xgrid Admin

- Addresses an issue which prevented the Xgrid Admin application from securely connecting to controllers that required Kerberos authentication.
- Addresses an issue which may have prevented controllers from sending files to agents.

- Improvements made for batch jobs sent through the command line.

Open Directory

- Addresses an issue that prevents systems from connecting to Windows 2003 Active Directory deployments.
- Addresses an issue in which systems stop authenticating through Active Directory.
- Addresses an issue in which Active Directory users who are set as computer administrators may not get admin access to a computer.
- Addresses an issue that prevents Mobile Accounts from authenticating with Active Directory.
- Addresses an issue where the DirectoryService process may stop after waking from sleep.
- Addresses an issue in which newly-created accounts may not be able to authenticate or appear in user lists.
- Addresses an issue where Password Server may stop working, causing authentications to fail when replicated Password Servers are used.
- Addresses an issue where kerberos authentications may fail after importing a large number of users (60,000 or more).

Apple File Services

- Addresses an issue where Apple File Services may pause indefinitely after experiencing heavy loads.
- Addresses an issue which prevented Apple File Services from setting inherited permissions in nested folders within shared volumes.
- Addresses an issue where multiple automounts from a single client would incorrectly count against 10-client Server licenses.

Disk Imaging

- Addresses an issue which may have caused failure reports when used with large volumes.

Managed Users

- Addresses an issue which prevented some Login Window management options from being honored.

NFS

- Addresses issues which may have caused the mountd process to crash when NFS is used to host HFS volumes.

SMB

- Improves handling of workgroup and file names when connecting and copying to shared SMB volumes.
- Addresses issues causing -36 connection failures when connecting to SMB shared volumes with an old keychain password.
- Addresses an issue that may cause kernel panics on multiple Xsan systems when unmounting Xsan volumes.

Published Date: Oct 7, 2016

Xsan: Clients may reduce number of available licenses when integrated with a StorNext network

This article has been archived and is no longer updated by Apple.

If you're using any version of Xsan with ADIC StorNext 2.4 to 2.5 systems, the StorNext metadata controller may report that Xsan clients are taking from the pool of available ADIC StorNext licenses. If a client tries to mount storage in this mixed environment, it may get a permission denied message.

You can resolve this issue by updating all ADIC StorNext computers to StorNext version 2.5.1 or later. You can find more information about this and other ADIC bulletins on this page:

http://www.quantum.com/ServiceandSupport/SoftwareandDocumentationDownloads/SupportBulletins/Index.aspx#storNext

For this specific issue, please refer to StorNext Product Bulletin #9 (May 2005).

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.
Published Date: Feb 19, 2012

Xsan 1.0: The command "cvadmin" may not stop the volume

This article has been archived and is no longer updated by Apple.

If you set up Xsan 1.0 or 1.0.1 with backup metadata controllers (MDCs) and subsequently try to stop the volume using the "cvadmin" command line tool, your primary MDC will failover to the backup MDC.

Instead of using "cvadmin," use Xsan Admin to stop the volume.

Published Date: Feb 19, 2012

Logic Pro 7 unexpectedly quits when opened

This article has been archived and is no longer updated by Apple.

When you try to open Logic Pro 7, it may quit unexpectedly during launch if something is wrong with your Pro Application Support files.

To address this issue, download and install version 3.1 of Pro Application Support.

Published Date: Feb 19, 2012

About the Mac OS X Server 10.4.2 Update (Combo)

This article has been archived and is no longer updated by Apple.

This software updates Mac OS X Server versions 10.4 and 10.4.1 to Mac OS X Server 10.4.2. It is a "combo" update that combines enhancements delivered with versions 10.4.1 through 10.4.2. If you already have Mac OS X Server 10.4.1, you can download a smaller update to update to version 10.4.2.

Important: Please Read Before Installing

- You must have an administrator account password that does not contain spaces or Option-keyed characters to install this update. The password may not be left blank (you can change your password if needed).
- You may experience unexpected results if you've installed third-party system software modifications, or if you have modified the operating system through other means. This doesn't apply to normal software installation.
- The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.
- This update can be installed on non-startup volumes, but you should only do this if the current startup volume has already been updated to Mac OS X Server 10.4.2. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are two ways to update to Mac OS X Server 10.4.2: Use Software Update or install from the standalone installer.

Software Update Installation

Software Update may have referred you to this document. For more information on this feature, see "How to Update Your Software."

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

A standalone installer is also available from Apple Downloads.

Remote Installation

If you need to install the update on a remote computer, you can do so using the "softwareupdate" command-line tool.

Enhancements delivered with this update

This update delivers many enhancements. Because this is a combo update, it includes enhancements that are delivered with both 10.4.1 and 10.4.2 updates. You can see the individual enhancement lists for 10.4.1 and 10.4.2 updates.

Published Date: Oct 7, 2016

GarageBand 2: Rhythmic values in notation display don‘t match sound

This article has been archived and is no longer updated by Apple.

When viewing music notation in GarageBand 2, the notation that represents a MIDI recording or loop may not always match the exact rhythm that you hear. This happens because rhythmic values are sometimes rounded up to a longer value.

For example, a section of sixteenth notes may display as eighth note triplets. (To view the notation display, double-click a Software Instrument loop or MIDI recording—any green region—to open it in the editor, then click the music note button in the editor's Region pane.)

GarageBand allows you to adjust the notation display grid to make the music more readable, and it quantizes the display without affecting the actual sound of the recording, since (in most cases) you won't hold notes for their fully displayed values. This can help when you play a series of staccato notes, for example. You can adjust the display to show them as eighth notes rather than as a combination of thirty-second notes and rests.

To adjust the display grid setting, click the grid button in the upper-right corner of the Notation Editor (the button that looks like a ruler to the right of the measure bar). A pop-up menu appears, listing the available note value settings. Choose a value that will allow the shortest notes in your selected recording to be displayed. The notation display will round up the displayed duration of all notes to the nearest time division as determined by your grid selection.

For example, if you make a MIDI recording that contains sixteenth notes but set the grid to eighth notes, the display will show groups of sixteenth notes as eighth note triplets because this is the closest rhythmic value it can display at that grid setting. Keep in mind that your recording will always sound exactly as you played it—no matter what grid setting you choose here; only the visual display of the notation changes.

Related documents

- 300719: GarageBand: Enhance Timing may place notes after the end of the region

Published Date: Feb 18, 2012

GarageBand 2: Enhance Timing results vary according to audio content

This article has been archived and is no longer updated by Apple.

The Enhance Timing feature in GarageBand 2 works best on tracks that contain single parts. Because a typical drum loop contains several different rhythms across multiple sounds, such as the hi hat, kick drum, and snare, each drum part may have a different rhythmic bias that will affect the behavior of Enhance Timing. In some cases this makes it impossible for Enhance Timing to give useful results.

In contrast to the MIDI quantize feature, Enhance Timing depends on the content of the file. Any audio file that contains mixed rhythms may present issues for Enhance Timing. Drum loops are the most common example.

Published Date: Feb 18, 2012

Mac OS X: Use latest third-party device drivers and firmware for best compatibility

This article has been archived and is no longer updated by Apple.

When using a third-party hardware device with any version of Mac OS X, it's a good idea to use the latest versions of the device's driver and firmware (that work with your operating system) available from the device's manufacturer—especially after you've upgraded. Otherwise, the device might not work, even if it worked with a previous version of Mac OS X.

Third-party devices include everything from printers to storage devices to SCSI cards.

Published Date: Oct 7, 2016

GarageBand 2: Playhead location can affect software instrument sound

This article has been archived and is no longer updated by Apple.

Sometimes the position of the playhead along the timeline can affect the sound of Software Instruments being played live. For example, in Jam Pack 4, many Software Instruments allow you to choose different articulations by mapping data from the modulation wheel on your MIDI controller.

The instrument remembers the last articulation setting it sees, whether it's from a recorded track or sent live as you play. However, when you move the playhead, the most recent recorded articulation for each track will be sent, which may be different than the one you're expecting. You can reset the articulation for the current active track by moving your controller's modulation wheel.

Published Date: Feb 18, 2012

GarageBand 2: Pitchbend in Musical Typing doesn‘t work with some note combinations

This article has been archived and is no longer updated by Apple.

If you're using the Musical Typing feature to play notes in GarageBand 2, please note that the Pitchbend buttons on the Musical Typing keyboard (and their corresponding keys on your Mac keyboard) will not work when you play certain note combinations. This is a known issue.

If you play a C note (by pressing the A key on your Mac keyboard) along with any other "white key" note—D, E, F, G, A, or B—the Pitchbend down button (the 1 key on your Mac keyboard) will not work. If you play a D note (by pressing the S key) with any other "white key" note, the Pitchbend up button (the 2 key on your Mac keyboard) will not work.

If you play a C and D note together (by pressing both the A and S keys), then neither Pitchbend button will work. All other note combinations work as expected. If you need to apply pitchbend to a chord that uses an affected combination of notes, you can add it after you record the chord from the Musical Typing keyboard, using the editor.

This document will be updated as more information becomes available.

Published Date: Feb 18, 2012

GarageBand 2: Can‘t select the Instrument Tuner

This article has been archived and is no longer updated by Apple.

When you have a Software Instrument track selected in GarageBand 2, the Instrument Tuner button (the pitchfork) in the Transport area will not light, and the menu selection (Control > Show Instrument Tuner) will be dimmed.

The Instrument Tuner is only available for Real Instrument tracks. To display the tuner, select a Real Instrument track; you will then be able to open the tuner by either clicking the Instrument Tuner button or choosing **Show Instrument Tuner** from the **Control** menu.

Published Date: Feb 18, 2012

QuickTime 7.0.1: Security enhancements

This article has been archived and is no longer updated by Apple.

This document describes the security enhancements included with QuickTime 7.0.1, which can be downloaded and installed using Software Update, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How To Use The Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

QuickTime 7.0.1

- QuickTime Quartz Composer Plugin

CVE-ID: CAN-2005-1334
Available for: QuickTime 7.0
Impact: With QuickTime 7.0, a QuickTime movie containing a maliciously crafted Quartz Composer object can leak data to an arbitrary web location.
Description: Quartz Composer objects can be wrapped in a QuickTime track and delivered as a QuickTime movie. With QuickTime 7.0, a Quartz Composer object can gather local data and send it using an encoded URL to an arbitrary web location. The QuickTime 7.0.1 update modifies the QuickTime Quartz Composer Plugin to prevent access to remote web locations. Credit to David Remahl (www.remahl.se/david) for reporting this issue.

Published Date: Feb 18, 2012

Final Cut Pro 5 : Capturing HDV creates new clips at scene breaks

This article has been archived and is no longer updated by Apple.

When you capture HDV footage, Final Cut Pro can automatically create new clips and corresponding media files each time it detects a scene or timecode break. This behavior is slightly different from the way it handles DV footage.

When you capture DV, Final Cut Pro can detect scene breaks after capture if you select the clip and choose **Mark > DV Start/Stop Detect**.

When you capture HDV, Final Cut Pro automatically generates a new media file at the point of each scene break. The chosen option in the **On timecode break** pop-up menu determines how timecode breaks affect the capture; Final Cut Pro disregards the Warn After Capture option to avoid capturing media files that contain breaks in the middle of an MPEG-2 GOP (Group of Pictures).

To determine how scene and timecode breaks are handled when you capture HDV:

1. Choose **Final Cut Pro > User Preferences**, then click the General tab.
2. Choose one of the following options (described below) from the **On timecode break** pop-up menu:

   Make New Clip
   This is the default option. Whenever Final Cut Pro detects a scene or timecode break during capture, it finishes writing the current media file to disk and then begins capturing a new media file. It also creates a corresponding clip for each new media file in the Browser. To ensure that all new media files and clips have unique names, it appends a number to the filename of each new media file and clip generated by scene and timecode break detection.

   For example, let's say that you're capturing a media file named "Cafe Wide Shot," and Final Cut Pro detects a scene or timecode break. At the break detection point, Final Cut Pro begins capturing a new media file named "Cafe Wide Shot-1." If there is already a media file named "Cafe Wide Shot-1," the new media file is named "Cafe Wide Shot-2," and so on.

   Abort Capture
   If you choose this option, Final Cut Pro stops capture immediately when it detects a timecode break. All media captured before the timecode break has frame-accurate timecode, and is preserved. Final Cut Pro saves the resulting media files and places the corresponding clips in the Browser.

   Warn After Capture
   When you capture HDV, this option behaves identically to the Abort Capture option.

This document contains information from the "HD and Broadcast Formats" PDF included with Final Cut Pro.

Published Date: Feb 20, 2012

Motion 1.0: Some filters don‘t work in Mac OS X 10.4 Tiger

This article has been archived and is no longer updated by Apple.

If you are using Motion 1.0 on a computer with Mac OS X 10.4 Tiger, you won't be able to apply some filters to objects in a Motion project. This issue does not occur with Motion 2.

To resolve this issue, update to Motion 1.0.1.

Published Date: Oct 7, 2016

iChat: Issues when logging in to AIM from more than one computer or device

This article has been archived and is no longer updated by Apple.

If you try to log in to an AIM account via iChat that's already in use on a different computer, you may experience some login issues. Here's what can happen if you try to do this. As a general rule, you should only log in to your iChat account on one computer at a time.

Note: This document doesn't apply to Bonjour or Jabber messaging.

Mac OS X 10.4 Tiger

If you log in to iChat with an AIM account on a Mac OS X 10.4 Tiger computer and then log in with the same account on a different computer that has Mac OS X 10.4, 10.3.9, or an earlier OS installed (or via a Windows-based PC, cell phone, or PDA device), your iChat session will disconnect (log out) on the Tiger computer (you'll be connected on your second computer or device). No alert will display on either computer/device when this happens.

Mac OS X 10.3.9 or earlier

If you try to log in to the same AIM account using iChat on two different computers or devices with Mac OS X 10.3.9 or earlier, the following alert appears in iChat on both computers:

> Your screen name (*account name*) is now signed into AOL(R) Instant Messenger(TM) in 2 locations. To sign off the other locations, reply to this message with the number 1.

If you reply with "1," the first computer from which you logged in to iChat will be logged off (set to offline). If you ignore the message or don't reply with "1" (and both Macs remain logged in), both computers will receive all replies to messages you send, which could cause confusion when you go back to the first computer.

This document will be updated as more information becomes available.

Published Date: Feb 18, 2012

Mac OS X 10.3, 10.4: "Nothing to install" alert when trying to install Classic Support

This article has been archived and is no longer updated by Apple.

If you're trying to install Classic Support from your Mac OS X 10.3.7 or Mac OS X 10.4 Install disc that came with your computer but get a "You cannot continue. There is nothing to install" message, fear not. Just follow these steps to install Classic Support:

1. In the Installer, click the Customize button.
2. Select the checkbox next to the language you want to install.

   Tip: Make sure that the checkbox is selected, and that "Install" appears in the Action column as shown below, before you proceed. Otherwise, you will continue to see this alert message.

3. Click Install.

Note: Do not click the "Easy Install" button. If you do, the same message will appear.

Published Date: Oct 7, 2016

About the Mac OS X 10.4.2 Update (Combo)

This article has been archived and is no longer updated by Apple.

This software updates Mac OS X 10.4 Tiger or 10.4.1 to version 10.4.2.

Important: Please read before installing

- You may experience unexpected results if you have third-party system software modifications installed, or if you have modified the operating system through other means. (This does not apply to normal application software installation.)
- The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to update.
- If issues occur during installation—for example, Software Update quits unexpectedly—please see this document.

Installation

You have two ways to update to Mac OS X 10.4.2: Use Software Update or the standalone installer. You only need to use one of these methods to update your computer.

Automatic Software Update
Software Update, located in System Preferences, can automatically download and install the latest Apple software. Software Update may have linked you to this document for additional information about the update.

The update's size may vary from computer to computer when installed using Software Update.

Because some updates are prerequisites for others, you may need to run Software Update more than once to get all available updates.

Standalone installer
Two versions of the installer (Delta and Combo, described below) are available from Apple Downloads as standalone updates. After you download an update, you can use it to update your computer without being connected to the Internet.

- The Delta Update installer (described in a different document) will update *Mac OS X 10.4.1 to 10.4.2*.
- The Combo Update installer will update *Mac OS X 10.4 or 10.4.1 to 10.4.2*.

The standalone installer, particularly the Combo Update, is useful if you have multiple computers to update and only want to download the update once.

Improvements

This update offers many reliability and compatibility improvements. To see a list of some of them, check out the Improvements section of this document.

This update also includes enhancements delivered with the Mac OS X 10.4.1 Update.

Published Date: Oct 7, 2016

Logic Pro/Express: Rewire audio drops out completely

This article has been archived and is no longer updated by Apple.

Note: The issue described below is resolved in Logic Pro/Express 7.2 or later.

When you cycle audio in Logic, and the SPL (Song Position Line) reaches the end of the cycle zone and jumps back to the beginning, Rewire audio streams may drop out completely. If you stop playback and then start it again, the audio returns.

This issue occurs if the selected track in the Arrange window is an Audio Instrument track whose LFO is tempo synced to the song. For example, if you assign the ES2 synth to the selected track and set its LFO to 1/16, 1/8, and so forth, this issue will occur.

This doesn't happen if you set the instrument's LFO to a specific rate, such as 1.12 Hz. If you select a different track in the Arrange window, the issue will not occur.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 19, 2012

Soundtrack: Indexing loops on the startup volume does not work as expected

This article has been archived and is no longer updated by Apple.

If you index Apple Loops in Soundtrack and select the startup volume as the directory to be indexed, Soundtrack or your computer may stop responding (freeze). This can happen with Soundtrack or Soundtrack Pro.

As a workaround, do not select the entire startup volume as the directory to index loops; instead, select specific directories to index.

This document will be updated when additional information is available.

Published Date: Oct 7, 2016

Mac OS X 10.4: iCal calendar alarms do not work after upgrading

This article has been archived and is no longer updated by Apple.

To make sure that calendar alarms in calendars created in iCal 1.5.x work in Mac OS X 10.4 Tiger, open iCal 2.0 or later (included with Mac OS X 10.4) at least once. Your calendars will be updated, and the alarm should work as expected.

Published Date: Oct 7, 2016

Mac OS X 10.4 - 10.4.2: Cannot adjust display brightness or resolution on PowerBook

This article has been archived and is no longer updated by Apple.

If you can't manually (or via an application) adjust the brightness or resolution of your PowerBook display in Mac OS X 10.4 through 10.4.2, or if Displays preferences only shows the native resolution of the built-in display, download and install the Mac OS X 10.4.3 Update, or later.

Published Date: Oct 7, 2016

Compressor 1.2.1 and Apple Qmaster Node Installer incompatibility

This article has been archived and is no longer updated by Apple.

After using the Apple Qmaster Node Installer that comes with Apple Qmaster 2 on a computer with Compressor 1.2.1, Compressor will quit unexpectedly when you open it.

This does not occur with Compressor 2 included with Final Cut Studio, Final Cut Pro 5, DVD Studio Pro 4, Motion 2, and Soundtrack Pro.

Published Date: Oct 7, 2016

About Security Update 2005-006

This article has been archived and is no longer updated by Apple.

This document describes Security Update 2005-006, which can be downloaded and installed using Software Update, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred, and any necessary patches or releases are available. To learn more about Apple Product Security, visit the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to Use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Security Update 2005-006

- **AFP Server**
  CVE-ID: CAN-2005-1721
  Available for: Mac OS X v10.4.1, Mac OS X Server v10.4.1
  Impact: A buffer overflow in support for legacy clients could permit the running of arbitrary code.
  Description: The Mac OS X AFP Server supports a number of legacy clients. A buffer overflow in support for one of these clients could permit arbitrary code to run. This update modifies the AFP Server to correct this buffer overflow. This issue does not affect systems prior to Mac OS X 10.4.

- **AFP Server**
  CVE-ID: CAN-2005-1720
  Available for: Mac OS X v10.4.1, Mac OS X Server v10.4.1
  Impact: On an AFP Server that uses an ACL-enabled volume for storage, copying a file with POSIX-only permissions can leave an ACL attached.
  Description: When copying a local file to an AFP Server that is using an ACL-enabled volume for storage, a temporary ACL is attached to the remote object during the copy process. This ACL can be left behind if the file copy went into a directory that was not using ACLs. The ACL that is left behind could cause confusion, as it will override the POSIX file permissions for the file owner. The ACL does not permit other users to access the file. This update modifies the AFP Server so that it correctly removes the ACL that is used for copying the file. This issue does not affect systems prior to Mac OS X 10.4.

- **Bluetooth**
  CVE-ID: CAN-2005-1333
  Available for: Mac OS X v10.4.1, Mac OS X Server v10.4.1, Mac OS X v10.3.9, Mac OS X Server v10.3.9
  Impact: Directory traversal via Bluetooth object exchange
  Description: Due to insufficient input checking, the Bluetooth object exchange services could be used to access files outside of the default file exchange directory. This update provides an additional security improvement over the previous release by adding enhanced filtering for path-delimiting characters. Credit to kf_lists[at]digitalmunition[dot]com for reporting this issue.

- **CoreGraphics**
  CVE-ID: CAN-2005-1722
  Available for: Mac OS X v10.4.1, Mac OS X Server v10.4.1
  Impact: Applications that use either PDFKit or CoreGraphics to render poorly-formed PDF documents could abort due to a NULL pointer dereference.
  Description: If a poorly-formed PDF document is passed to PDFKit or CoreGraphics for rendering, the rending engine will detect an error and stop processing. As part of the cleanup process, a check for a NULL pointer is omitted. This omission can cause an application that handles PDF documents to abort, requiring that the application be restarted. CoreGraphics is updated to correctly handle the cleanup of poorly-formed PDF documents. This issue does not affect systems prior to Mac OS X 10.4. Credit to Chris Evans for reporting this issue.

- **CoreGraphics**
  CVE-ID: CAN-2005-1726
  Available for: Mac OS X v10.4.1, Mac OS X Server v10.4.1
  Impact: Console users can gain root privileges.
  Description: The CoreGraphics Window Server is updated to disallow unprivileged users from launching commands into root sessions. This issue does not affect systems prior to Mac OS X v10.4.

- **Folder Permissions**
  CVE-ID: CAN-2005-1727
  Available for: Mac OS X v10.4.1, Mac OS X Server v10.4.1
  Impact: Potential file race condition via world- and group-writable permissions on two directories.

Description: Secure folder permissions are applied to protect the system's cache folder and Dashboard system widgets. This exposure does not exist in systems prior to Mac OS X v10.4. Credit to Michael Haller at info@cilly.com for reporting this issue.

- **launchd**
  CVE-ID: CAN-2005-1725
  Available for: Mac OS X v10.4.1, Mac OS X Server v10.4.1
  Impact: The setuid program launchd can allow local privilege escalation.
  Description: A vulnerability in launchd allows local users to gain ownership of arbitrary files. The launchd command is updated to safely change ownership of files. Credit to Neil Archibald of Suresec LTD for reporting this issue. This issue does not affect systems prior to Mac OS X v10.4.

- **LaunchServices**
  CVE-ID: CAN-2005-1723
  Available for: Mac OS X v10.4.1, Mac OS X Server v10.4.1
  Impact: File extensions and mime types marked as unsafe but not mapped to an Apple UTI could bypass download safety checks.
  Description: Mac OS X 10.4 contains a database of known unsafe file extensions and mime types. If an addition to the unsafe types database was made without a corresponding Apple UTI (Uniform Type Identifier), then a query on certain forms of the file extension or mime type would not be marked as unsafe. All entries in the current unsafe type database are mapped to an Apple UTI. This update corrects the query code to correctly identify unsafe file extensions and mime types regardless of the presence of an Apple UTI. This issue does not affect systems prior to Mac OS X 10.4.

- **MCX Client**
  CVE-ID: CAN-2005-1728
  Available for: Mac OS X v10.4.1, Mac OS X Server v10.4.1
  Impact: Portable Home Directory credentials may be available to local system users.
  Description: MCX Client is updated to not log portable home directory mounting credentials. This issue does not affect systems prior to Mac OS X v10.4.

- **NFS**
  CVE-ID: CAN-2005-1724
  Available for: Mac OS X v10.4.1, Mac OS X Server v10.4.1
  Impact: An NFS export that's restricted using -network and -mask flags will export to "everyone."
  Description: The use of -network and -mask on a filesystem listed in the NFS exports file would result in that filesystem being exported to "everyone." This update modifies the NFS exporting code to correctly set the network and mask parameters. This issue does not affect systems prior to Mac OS X 10.4.

- **PHP**
  CVE-ID: CAN-2005-0524, CAN-2005-0525, CAN-2005-1042, CAN-2005-1043
  Available for: Mac OS X v10.4.1, Mac OS X Server v10.4.1, Mac OS X v10.3.9, Mac OS X Server v10.3.9
  Impact: Multiple vulnerabilities in PHP, including remote denial of service and execution of arbitrary code.
  Description: PHP is updated to version 4.3.11 to address several issues. The PHP release announcement for version 4.3.11 is located at http://www.php.net/release_4_3_11.php.

- **VPN**
  CVE-ID: CAN-2005-1343
  Available for: Mac OS X v10.4.1, Mac OS X Server v10.4.1
  Impact: A local user can obtain root privileges if the system is being used as a VPN server.
  Description: A buffer overflow in "vpnd" could be used by a local user to obtain root privileges if the system is configured as a VPN server. This issue does not occur on systems that are configured as a VPN client. This issue cannot be exploited remotely. This update prevents the buffer overflow from occurring. This issue was fixed for Mac OS X v10.3.9 via Security Update 2005-005. Credit to Pieter de Boer of the master SNB at the Universiteit van Amsterdam (UvA) for reporting this issue.

Published Date: Oct 7, 2016

Motion: How to use Symbol and Zapf Dingbats fonts in projects

This article has been archived and is no longer updated by Apple.

When adding text to a Motion project, you must use the Character Palette when working with non-unicode fonts such as Symbol and Zapf Dingbats.

With unicode fonts, you can enter text using your computer keyboard. If you wish to use non-unicode fonts in Motion, follow the instructions in this article to access the Character Palette and insert the symbols in these fonts.

Published Date: Feb 19, 2012

Mac OS X 10.4: Expanding the list of candidate characters in Traditional Chinese input methods

This article has been archived and is no longer updated by Apple.

Some Traditional Chinese input methods in Mac OS X 10.4 Tiger, such as Pinyin, limit the number of candidate characters presented. You can display all candidate characters if you use the Cangjie, Jianyi, or Dayi input methods and also disable the dynamic prompt.

Tip: If you are using the Pinyin input method, switch to Hanin instead. Simply choose **Hanin** from the **Input** menu.

Follow these steps:

1. Open International preferences (from the **Apple** menu, choose **System Preferences**, then click International) and configure the Input Menu so that it displays the input method (or methods) you want (the steps here explain how to do this).
2. From the **Input** menu, choose **Preferences**.

3. An unnamed window appears with preference choices. Click the Typing tab.
4. Deselect the "Dynamic Prompt" checkbox.
5. Close the window.

Published Date: Oct 7, 2016

Remote Desktop 2: Pressing the Help key interrupts administrator control of client

This article has been archived and is no longer updated by Apple.

If an administrator presses the Help key on an extended keyboard while controlling a client, it will interrupt the administrator's control of the client. The admin's mouse will still control the client's mouse, but the admin's keyboard input will no longer act as the client's keyboard.

To return the control session to normal (dismissing the Help mode), click the mouse or type on the keyboard of the controlled computer.

This document will be updated as more information becomes available.

Published Date: Feb 18, 2012

Final Cut Pro 5: About the Shift Fields filter

This article has been archived and is no longer updated by Apple.

Final Cut Pro 5 features a new filter called Shift Fields. You may have noticed that this filter sometimes gets applied to your clips automatically. This happens when you mix video from different sources into a sequence (known as a mixed-format sequence); the Shift Fields filter will automatically adjust the field dominance so that all clips are uniform.

Automatic field dominance correction

When you add a clip to a sequence, Final Cut Pro checks to make sure that the field dominance of the incoming clip's media file matches the field dominance of the sequence. If it doesn't match, Final Cut Pro automatically applies the Shift Fields filter to the clip to make it match the sequence's field dominance. Without the filter, the clip would stutter during playback because the fields would play in the wrong order. This is especially noticeable when you view your video on an external NTSC or PAL video monitor.

Adjusting the Shift Fields filter

The Shift Fields filter has a single parameter called Direction Control, which allows you to manually adjust the filter. If you need to do this, use the following guidelines:

- To match a clip with upper-field dominance to a sequence with lower-field dominance, set the Direction Control parameter to +1.
- To match a clip with lower-field dominance to a sequence with upper-field dominance, set the Direction Control parameter to -1.

For example, if you add an HDV 1080i60 clip with upper-field dominance to a DV NTSC sequence with lower-field dominance, the HDV clip field dominance must be adjusted to match the sequence (this is where the Shift Fields filter comes into play—set its Direction Control parameter to +1).

The Shift Fields filter isn't necessary when editing media into sequences in which the clip and sequence field dominances match.

Published Date: Feb 20, 2012

Xsan 1.1: Calculating Available Space

This article has been archived and is no longer updated by Apple.

With Xsan 1.1, the "Available Space," as reported by Xsan Admin, may differ from the capacity reported by the Finder or Disk Utility.

Disk Utility and the Finder both count free space that has been reserved for the SAN clients' future use, so both effectively overreport the space. Xsan Admin uses a different mechanism that more accurately states what is free in a SAN context.

Published Date: Oct 7, 2016

Logic Pro/Express 7.1: Digidesign hardware not available message

This article has been archived and is no longer updated by Apple.

When you set Logic Pro or Logic Express 7.1 to use the Digidesign Core Audio driver, you may get an alert message that indicates the Digidesign hardware is not available.

You can work around the issue by opening the Digidesign Core Audio Manager application before you open Logic.

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Published Date: Feb 19, 2012

How to use the Xsan 1.1 Updates

This article has been archived and is no longer updated by Apple.

This article outlines the basic steps required to update Xsan to version 1.1. The steps vary according to whether your starting point is Mac OS X 10.3.9 or 10.4 "Tiger," and there are two versions of the update to accomodate that. Please note that the Xsan Migration guide, available here, contains additional scenarios and details.

Before you begin, you must decide whether you want to keep your SAN volumes available while updating the metadata controllers (MDCs), or stop the volumes during the update. If you're performing a clean install of Mac OS X or Mac OS X Server 10.4 on your MDC, you could lose your volume and SAN configuration files. To prevent this, perform an upgrade installation of Mac OS X 10.4 when applicable. **Note:** Xsan 1.1 requires 10.4.1 or later.

All MDCs should be upgraded to the same version of Mac OS X. Do not make any changes to Xsan settings using Xsan Admin or the command-line tools during the installation. Be sure that all MDCs are upgraded before you make any configuration changes.

Updating to Xsan 1.1 requires an MDC system with Mac OS X 10.3.9 or later or Mac OS X Server 10.3.9 or later. Client systems can continue running earlier versions of Xsan after you update the MDCs to Xsan 1.1. However, if any Xsan client is running Tiger (10.4), then you must update all MDCs using the Xsan 1.1 Update for 10.4.

Assuming that you have a standby MDC, you can update from Xsan 1.0 to version 1.1 on Mac OS X 10.3.9 while volumes remain available. To do this:

1. Update the operating system to Mac OS X 10.3.9 on one MDC at a time.
2. Update Xsan on one MDC at a time, using the Xsan 1.1 Update for 10.3.9.
3. Update any admin computers using the Xsan Admin 1.1 Update.
4. Optional: Return control of volumes to specific MDCs.
5. Optional: Update client computers to Mac OS X 10.3.9 and Xsan 1.1 (using the Xsan 1.1 Update for 10.3.9).

To update from Xsan 1.0 on Mac OS X 10.3 to Xsan 1.1 on Mac OS X 10.4:

1. Update all MDCs, one at a time, to Mac OS X 10.3.9.
2. Update all MDCs using the Xsan 1.1 Update for 10.3.9.
3. Upgrade all standby MDCs to Mac OS X 10.4.1, then install the Xsan 1.1 Update for 10.4.
4. Upgrade the primary MDC to Mac OS X 10.4.1, then install the Xsan 1.1 Update for 10.4.
5. Update any admin computers using the Xsan Admin 1.1 Update.
6. Optional: Fail over to the original primary MDC.
7. Optional: Update client computers. Though this is optional, it is highly recommended that clients run at least Mac OS X 10.3.9 and Xsan 1.1.

Published Date: Oct 7, 2016

Logic Pro/Express 7.1: Key commands do not work after Tiger upgrade

This article has been archived and is no longer updated by Apple.

If you're using Logic Pro or Logic Express 7.1 and use a Scandinavian keyboard layout, you may notice that Logic key commands that incorporate modifier keys (Command, Option, and so on) do not work as expected after upgrading the computer to Mac OS X 10.4 "Tiger."

As a workaround, set the commands using the "Learn by Key Position" button instead of the "Learn by Key Label" button in the Key Commands window in Logic.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Logic Pro/Express 7: Emagic MIDI Driver error during launch

This article has been archived and is no longer updated by Apple.

If you use an Emagic USB MIDI interface with an Emagic MIDI driver that's older than version 1.5, you will get the following alert message when you open Logic Pro or Logic Express 7:

> "You have an old Emagic USB MIDI Driver version installed. This can cause unreliable MIDI communication and crashes. Please install version 1.5 or higher. You can find the current version on www.emagic.de."

You can download the latest Emagic USB driver here.

Published Date: Feb 19, 2012

Logic: WaveBurner 1.1 only writes table of contents when burning a CD

This article has been archived and is no longer updated by Apple.

In situations where WaveBurner has to bounce a project before burning a disc (such as when using fades or effects), it may only write the table of contents to the disc. The resulting disc contains no audio data.

This happens if you set WaveBurner to use outputs other than 1-2 on your audio hardware. To resolve this issue immediately, open WaveBurner preferences, click the Audio Driver tab, and choose **1-2** from the **Output** pop-up menu.

To prevent the issue in the future, update to WaveBurner 1.1.1 or later. You can download the update from Apple Downloads.

Published Date: Feb 19, 2012

Mac OS X 10.4: Print button not responding

This article has been archived and is no longer updated by Apple.
When you try to print, the Print dialog appears, but the Print button does not respond when you click it. Additionally, the Preview button and all items under the PDF button don't respond when clicked either.

This can happen if a Xerox software plugin is installed, even if you don't have a Xerox hardware product connected.

If you have multiple printers listed in the printer list, the issue may only affect some of the printers.

If this happens, try these steps:

1. Click Cancel to dismiss the Print dialog.
2. From the Finder's **Go** menu, choose **Go to Folder**.
3. Go to this folder: /Library/Printers/PPD Plugins/
4. Remove the file "XeroxAccounting.plugin".
5. Try to print again.

Note: If you use a Xerox printer and have noticed that "Accounting" is missing from the Print dialog's pop-up menu after completing the steps above, install the latest drivers for your printer available from Xerox's web site to get the latest version of XeroxAccounting.plugin.

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Published Date: Oct 7, 2016

AirPort: Using a parallel printer with AirPort Extreme or Express

This article has been archived and is no longer updated by Apple.

If you use a USB-to-Parallel adapter cable to connect a printer to AirPort Express or AirPort Extreme, you must make the connections in this order:

1. Turn on the printer.
2. Connect the adapter cable to the printer.
3. Connect the adapter cable to the AirPort Extreme or Express.

If you need to change printers, follow the steps in reverse order to disconnect the printer.

This article does not apply to you if your printer has a USB port and a cable that is USB on both ends. **Tip:** Each end of a USB cable looks different. Learn how they look here.

Published Date: Feb 18, 2012

AirPort Admin Utility may report incorrect IP address

This article has been archived and is no longer updated by Apple.

When using AirPort Admin Utility version 3.3 or earlier, an AirPort Extreme with firmware 5.6 or AirPort Express with firmware 6.2 may appear to have an incorrect IP address that's similar to "254.128.0.0."

The incorrect address appears in the list of base stations before you click Configure. The correct address will appear in the configuration screens.

In Mac OS X 10.3 and later, you can resolve the issue by updating to the latest AirPort software. For instructions, see "Mac OS X: Updating your software."

Users of 10.2.8 and earlier should ignore the incorrect address and click Configure to see the actual address.

Published Date: Feb 18, 2012

Soundtrack Pro 1.0: Subclip plays wrong part of audio in Waveform Editor

This article has been archived and is no longer updated by Apple.

If you load a clip into the Final Cut Pro 5.0 viewer, modify it to a be a subclip, and then send it to the Waveform Editor in Soundtrack Pro 1.0, you may notice that the subclip plays the wrong part of the audio file. You'll hear audio from the In point of the the original clip—not the new In point of the modified subclip. (This only occurs when you send a subclip to the Waveform Editor, not when you send it to a Multitrack Project.)

This article will be updated as more information becomes available.

Published Date: Feb 18, 2012

TA23322_Xsan_requires_Xsan_Admin_.pdf

Xsan 1.1 requires Xsan Admin 1.1

This article has been archived and is no longer updated by Apple.

After updating to Xsan 1.1, do not use Xsan Admin 1.0 to administer the Xsan 1.1 network. If you do, you may get a message that says the license is invalid. To avoid this issue, use Xsan Admin 1.1 with Xsan 1.1 systems.

As a general rule, you should always use the latest version of Xsan Admin that is compatible with the version of Xsan that is installed. For example, use Xsan Admin 1.1 with both Xsan 1.0 and Xsan 1.1.

Published Date: Oct 7, 2016

Soundtrack Pro: Clip may lose take information when saved as an audio file project

This article has been archived and is no longer updated by Apple.

If you record multiple takes of a clip in a multitrack Soundtrack Pro project and then open the clip as an audio file project, you may lose the clip's take information in the multitrack project when you save the audio file project.

This issue only occurs if you convert the audio file project's channel format (for example, changing the project from stereo to mono or vice-versa) or change its sample rate. To prevent loss of takes, avoid performing these functions on multi-take clips in the Audio Wave Editor.

This document will be updated as more information becomes available.

Published Date: Feb 18, 2012

Soundtrack Pro: Switching between multitrack projects

This article has been archived and is no longer updated by Apple.

If you have more than one Soundtrack Pro multitrack project open, you may experience a long delay after clicking a tab to switch projects before you can start working on a different one.

This happens if the projects are at different sample rates. Switching between projects that have the same sample rate is fast. In Soundtrack Pro 1.0.3 or later, choose **Soundtrack Pro > Preferences > General** and deselect the "Switch Hardware Sample Rate to match Document" setting. Although the Soundtrack Pro 1.0.3 update is recommended for all Soundtrack Pro customers, you can avoid this issue in earlier versions if you try to work in projects that use the same sample rate whenever possible, work in one project at a time, or modify a project to use the same sample rate as your other projects.

This document will be updated as more information becomes available.

Published Date: Feb 18, 2012

Xsan 1.1: How to install on a computer that has no keyboard or monitor

This article has been archived and is no longer updated by Apple.

You can install Xsan software on a computer that has no keyboard or monitor, known as a "headless" configuration. You can specify Xsan Admin, the Xsan Filesystem, or both. Here's how to do it.

Note: Installing or upgrading to the Xsan 1.1 filesystem will require you to restart the target computer. If you're concerned about maintaining productivity throughout the update procedure, you can learn more from the Xsan Migration Guide.

1. Log in to a computer on the network that has a monitor and keyboard. If you are installing from an Xsan Install CD, insert the Xsan installation disc in this computer. If you are updating Xsan 1.0 or 1.0.1 using the downloadable upgrade packages, you can download the correct packages here:

   Xsan Update 1.1 for 10.4
   Xsan 1.1 Update for 10.3.9
   Xsan Admin 1.1 Update (10.3.9 or 10.4.1)

   Once the update package has been downloaded, open the disk image.

2. Open the Terminal (/Applications/Utilities).
3. Execute one of the following Terminal commands, according to your installation preference, to copy the desired packages from the installation disc or updater disk image to the target computer. When doing so, replace <user> with a user name of an administrator of the target computer, and replace <remotehost> with the IP address or DNS name of the target computer.

   To copy both Xsan Admin and the Xsan Filesystem to either a 10.3.9 or 10.4.1 or later target computer, enter this:

   ```
   $ scp -r /Volumes/Xsan/Install_xsan.mpkg <user>@<remotehost>:/tmp/
   ```

   To copy Xsan Admin only from the installation disk, enter:

   ```
   $ scp -r /Volumes/Xsan/Admin Tools.localized/XsanAdmin.pkg <user>@<remotehost>:/tmp/
   ```

   To copy the Xsan Filesystem only from the installation disk to a 10.3.9 target computer, enter:

   ```
   $ scp -r /Volumes/Xsan/Install Xsan.mpkg/Contents/Installers/XsanPanther.pkg <user>@<remotehost>:/tmp/
   ```

   To copy the Xsan Filesystem only from the installation disk to a 10.4.1 or later target computer, enter:

   ```
   $ scp -r /Volumes/Xsan/Install Xsan.mpkg/Contents/Installers/XsanTiger.pkg <user>@<remotehost>:/tmp/
   ```

   To copy Xsan Admin only from the updater disk image, enter:

   ```
   $ scp -r /Volumes/Xsan\\ Admin\\ Update\\ 1.1/XsanAdmin.pkg/ <user>@<remotehost>:/tmp/
   ```

   To copy the Xsan Filesystem only from the updater disk image to a 10.3.9 target computer, enter:

   ```
   $ scp -r /Volumes/Xsan\\ File\\ System\\ Update\\ 1.1/XsanPanther.pkg/ <user>@<remotehost>:/tmp/
   ```

   To copy the Xsan Filesystem only from the updater disk image to a 10.4.1 or later target computer, enter:

   ```
   $ scp -r /Volumes/Xsan\\ File\\ System\\ Update\\ 1.1/XsanTiger.pkg/ <user>@<remotehost>:/tmp/
   ```

4. Log in to the remote computer by typing:

   ```
   $ ssh <user>@<remotehost>
   ```

5. Run the installer on the headless computer by entering the following command, replacing <packageName> with the name of the package you copied over in step 3 (Install_xsan.mpkg, XsanAdmin.pkg, XsanPanther.pkg, or XsanTiger.pkg). The verbose parameter is optional, but including it will allow you to see the installation's progress.

   ```
   $ sudo installer -verbose -pkg /tmp/<packageName> -target /
   ```

6. After the installation is complete, execute the command:

```
$ sudo restart
```

Published Date: Oct 7, 2016

Soundtrack Pro: Audio may stutter when scrubbing H.264 files

This article has been archived and is no longer updated by Apple.

If you're working with H.264 video files in a Soundtrack Pro project, you may come across a situation where the audio stutters when you scrub the playhead.

This can happen if your available hard drive or CPU bandwidth is insufficient. As a workaround, try moving the video file to a faster hard drive. Hiding the video tab may also improve audio performance when scrubbing files.

(For instructions on hiding the video tab or other "how to" questions, see the Soundtrack Pro manual, available from the Help menu.)

Published Date: Feb 18, 2012

Final Cut Pro 5: How to make the Timeline span across multiple displays

This article has been archived and is no longer updated by Apple.

In Final Cut Pro, you can arrange its windows any number of ways, allowing you to choose a configuration that best suits your needs. If you have more than one display connected to your computer, you can arrange Final Cut Pro windows across multiple displays.

However, in Final Cut Pro 5 it may seem difficult to get the Timeline to span the displays—when you try to resize the Timeline across the displays the common way, by dragging the window's lower-right corner, it may snap to conform to the edges of only one display.

Instead, try dragging the edges of the window to resize it rather than dragging the lower-right corner. You can reposition the entire window by dragging from the title bar, and then resize it by dragging its edges, not its corner.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

iSync 2.0: Data may disappear from Symbian OS phone after syncing

This article has been archived and is no longer updated by Apple.

If you have a Symbian OS-based phone and try to sync it with your Mac shortly after changing some information on the phone, the recently entered or modified data may disappear from the phone and won't be synced to the computer. This can happen if you're using iSync 2.0 (included with Mac OS X 10.4 Tiger).

To avoid this issue, wait 1 or 2 minutes before syncing if you recently added or modified contacts, calendars, or to-do items on the phone. After waiting, you should be able to sync normally.

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Published Date: Oct 7, 2016

Logic Pro/Express 7.1: Burned CDs contain static noise

This article has been archived and is no longer updated by Apple.

If you burn a CD from the Bounce dialog in Logic Pro or Logic Express 7.1, the resulting CD may contain only white noise, or static, instead of the selected audio. This happens if you have one of the POW-r dither options selected for PCM bounce, but do not actually bounce to a PCM file. To avoid this issue, set the dither to "none" or check both bounce options for PCM and Burn.

This issue is resolved in Logic Pro and Express version 7.1.1 or later, available at Apple Downloads.

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Published Date: Feb 19, 2012

Soundtrack Pro: Playhead still visible after minimizing window

This article has been archived and is no longer updated by Apple.

If you save a Soundtrack Pro 1.0 layout that has the project window minimized in the Dock, go to a different layout, and then return to your saved layout, the playhead from the project window will be displayed, even though the rest of the window is still minimized in the Dock.

To avoid this, don't save layouts that include the project window in its minimized state.

This document will be updated as more information becomes available.

Published Date: Feb 18, 2012

Soundtrack Pro: Video scrubbing stops working with Digital Cinema Desktop

This article has been archived and is no longer updated by Apple.

If you output a Soundtrack Pro movie using Digital Cinema Desktop with the preview set to Full Screen and then scrub the playhead, the movie display will stop updating after about 10 seconds. To prevent this from happening, open the Utility window and click the Video tab so that a small version of the movie appears on your main display. Digital Cinema Desktop should now work as expected when you scrub video.

This document will be updated as more information becomes available.

Published Date: Feb 18, 2012

Soundtrack Pro: Non-looping Apple Loops preview gets cut off

This article has been archived and is no longer updated by Apple.

Note: This issue is resolved in Soundtrack Pro 1.0.1 and later. Update to the latest version of Soundtrack Pro for best performance. Use Software Update or download updates here.

If you have a playback region in the Timeline of a multitrack Soundtrack Pro project and preview a non-looping Apple Loop, the loop may get cut off after playing a second or two.

This happens if a playback region is defined in the Timeline in the Project window. If the playback region is closed, then non-looping Apple Loops will preview as expected. Looping Apple Loops previews are not affected by this issue.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Logic Pro/Express 7: Pitchbend events sound late with Quicktime Synth

This article has been archived and is no longer updated by Apple.

When you assign MIDI tracks to play back through the internal QuickTime Synth object in Logic Pro or Logic Express 7, the pitchbend events will sound late.

You can avoid this issue by routing your MIDI data to the DLS MusicDevice synthesizer instead of to the internal QuickTime Synth object. If you're using the QuickTime Synth, your setup probably looks like this:

To route MIDI to the DLS MusicDevice, insert the DLS MusicDevice instrument into an Audio Instrument channel by clicking the channel's input slot and choosing **Stereo > AU Instruments > Apple > DLS MusicDevice** from the pop-up menu. Grab the cable from the Multi Instrument that's currently connected to the QuickTime Synth object and connect it to the Audio Instrument.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

Monitor and Display Adapter Table - Vintage Products

This article has been archived and is no longer updated by Apple.

This article provides a table of monitor and display adapters used with legacy and vintage Apple computers. For more recent products, see Monitor and Display Adapter Table.

To identify a monitor or display adapter, compare it to those shown in the following table.

Note: For some adapters, the engineering part number is stamped on the adapter.

Adapter Image	Retail P/N Engineering P/N	Products Where Used
Cable, Adapter, 45-Pin	922-0419 590-0793	AudioVision 14 Display Resolution: 640 x 480
Cable, DOS Compatibility, External	922-0706 590-2104	Power Macintosh 6100/60, AV Power Macintosh 6100/66, AV Vintage * Quadra/Centris 610
Cable, HDI45 to DB15, Display Adapter	922-0721 590-0796-A	Performa 6100 Series Performa 6116CD Power Macintosh 6100/60, AV Power Macintosh 6100/66, AV Power Macintosh 7100/66, AV Power Macintosh 7100/80, AV Power Macintosh 8100/100, AV Power Macintosh 8100/110 Power Macintosh 8100/80, AV Workgroup Server 6150 Workgroup Server 6150/66 Workgroup Server 8150 Workgroup Server 8150/110
Cable, Mac/PC Adapter	922-0736 590-0993	Multiple Scan 17 Display Multiple Scan 20 Display Network Server 500/132 Network Server 700/150 Network Server 700/200
Cable, Video, External	922-0831 590-0831	Resolution: 832x624 PowerBook 1400c/117 PowerBook 1400c/133 PowerBook 1400c/166 PowerBook 1400cs/117 Powerbook 1400cs/133 Powerbook 1400cs/166 PowerBook 190 PowerBook 190cs PowerBook 520 PowerBook 520c PowerBook 5300 PowerBook 5300c PowerBook 5300ce PowerBook 5300cs PowerBook 540 PowerBook 540c PowerBook 550c [Japan Only] Vintage * PowerBook 160/165/180 Vintage * PowerBook 165c/180c
Cable, Adapter, 15-pin 3 row to DB-15	922-1104 936-0112	Resolution: 240 x 180 Vintage * Basic Color

Cable, Adapter, Multi Scan 17 to Mac II	922-1125 936-0099	Resolution: 832 x 624 Multiple Scan 17 Display
Adapter, Macintosh to VGA	922-1458 590-0322-A	AppleVision 1710 Display AppleVision 1710AV Display AppleVision 750 AppleVision 750AV ColorSync 17 Display Multiple Scan 1705 Display Studio Display (15-inch Flat Panel)
Cable, Video Loopback, For Use With Apple PC Compatibility Cards	922-2216 590-4539	12-inch 100 MHz PC Compat. Card Parts 12-inch 166 MHz P PC Compat. Card Parts 12-inch PR166 PC Compat. Card Parts 7-inch 100 MHz PC Compatibility Card Parts Performa 5400/160 Performa 5420 Performa 6400/180 Performa 6400/200 Power Macintosh 4400/160 Power Macintosh 4400/200 Power Macintosh 5400/120 Power Macintosh 5400/180 Power Macintosh 5400/200 Power Macintosh 6400/180 Power Macintosh 6400/200 Power Macintosh 7200/120 Power Macintosh 7200/75 Power Macintosh 7200/90 Power Macintosh 7220 Power Macintosh 7300/166 Power Macintosh 7300/180 Power Macintosh 7300/200 Power Macintosh 7500/100 Power Macintosh 7600/120 Power Macintosh 7600/132 Power Macintosh 7600/200 Power Macintosh 8500/120 Power Macintosh 8500/132 Power Macintosh 8500/150 Power Macintosh 8500/180 Power Macintosh 8600/200 Power Macintosh 8600/250 Power Macintosh 8600/300 Power Macintosh 9500/150 Power Macintosh 9500/180MP Power Macintosh 9500/200 Power Macintosh 9500 Series Power Macintosh 9600/200 Power Macintosh 9600/200MP Power Macintosh 9600/233 Power Macintosh 9600/300 Power Macintosh 9600/350
Adapter, Multiscan 14-inch to Mac IIsi	922-2360 971-0151	Resolution: 640 x480 max Vintage * Macintosh IIsi
Adapter, VGA DDC 1/2AB	922-2721 590-0337-A	AppleVision 850 AppleVision 850AV ColorSync 20 Display
Cable, VGA Adapter	922-2963	PowerBook 2400c PowerBook 3400 PowerBook 3400/240 PowerBook G3

Published Date: Feb 18, 2012

Language Kits: Compatibility & Installation

This article contains frequently asked questions (FAQ) regarding Language Kit compatibility and installation, with answers to those questions. This article has been archived and is no longer updated by Apple.

Questions answered in this article:

1. Is WorldScript incompatible with Finder Hiding, a feature on the Performa Operating System and System 7.5.x?
2. I am attempting to install the Chinese Language Kit (CLK) under System 7.5.x. I have the updater for the CLK, but cannot get the Language Kit itself installed because I get an error that the system cannot be updated. What's happening?
3. Is there a version of the Japanese Language Kit (JLK) compatible with Mac OS 7.6?
4. How do I install the Chinese Language Kit on a PCI-based Power Macintosh?
5. Is the Chinese Language Kit compatible with Mac OS 7.6 and Mac OS 7.6.1?
6. I want to install multiple Language Kits on my system. In what order should I install them?

Question 1: Is WorldScript incompatible with Finder Hiding, a feature on the Performa Operating System and System 7.5.x?

Answer: Finder Hiding occurs when you launch (double-click) an application in the Finder. All of the Finder's windows and icons are hidden while the application is running. Quitting the application restores the Finder view of icons and windows.

The WorldScript extension, included with Apple's Chinese Language Kit (CLK) and the Japanese Language Kit (JLK), is incompatible with Finder Hiding, a feature of the System 7.01P and System 7.1P and System 7.5.x.

To determine the fix for this incompatibility, first find out what version of system software you are using. Choose the "About This Computer" menu item from the Apple menu. The window which opens will state the System version number.

For System 7.1P2, 7.1P1, and 7.0.1P users:

If you have Performa System Software 7.1P2 or earlier, remove the Launcher from the Control Panels folder and restart your Performa. With System Software version 7.1P2, the Launcher control panel controls the "Finder Hiding" feature.

To remove the Launcher control panel:

1. Choose the Control Panels folder from the Apple menu.
2. Drag the Launcher control panel out of the Control Panels folder.
3. Close the Control Panels folder by clicking the close box.
4. Choose Restart from the Special menu to restart your Performa.

For System 7.1P5 and 7.1P3 users:

1. Choose the Control Panels folder from the Apple menu.
2. Double click on the Performa control panel to open it.
3. Click the check box marked Finder Hiding once to turn the feature off.
4. Close the Performa control panel by clicking the close box.

For System 7.5.x users:

1. Choose the Control Panels folder from the Apple menu.
2. Double click on the General Controls control panel to open it.
3. Make sure there is an X next to Show Desktop when in background.
4. Close the General Controls control panel by clicking the close box.

Question 2: I am attempting to install the Chinese Language Kit (CLK) under System 7.5.x. I have the updater for the CLK, but cannot get the Language Kit itself installed because I get an error that the system cannot be updated. What's happening?

Answer: To Install the Chinese Language Kit 1.0 under System 7.5.x, you must remove the Launcher from the Control Panels folder. This will allow the installation to take place. However, you will need the Chinese Language Kit Update 1.1.1, to be compatible with System 7.5.x.

Question 3: Is there a version of the Japanese Language Kit (JLK) compatible with Mac OS 7.6?

Answer: Japanese Language Kit 1.2 is required for (and is compatible with) all 7.5 and higher systems.

Question 4: How do I install the Chinese Language Kit on a PCI-based Power Macintosh?

Answer: To use the Chinese Language Kit with a PCI-based Power Macintosh, you MUST install in the following order:

1. Install the WorldScript Updater 1.0 or later, or WorldScript Pieces Install. One of these installers will be located in the CD Extras folder of the System Software CD that came with your PCI-based Power Macintosh computer.

2. Install the Chinese Language Kit version 1.0 or 1.1.

3. Install the Chinese Language Kit Updater to update your software to version 1.1.1.

If this installation order is not followed it will result in your Power Macintosh booting to a flashing "?" and you will need to clean install your system software and install the Language Kit components in the correct order.

Question 5: Is the Chinese Language Kit compatible with Mac OS 7.6 and Mac OS 7.6.1?

Answer: The Chinese Language Kit is compatible with Mac OS 7.6 and Mac OS 7.6.1. See article 30009: "**Apple Asia Chinese Language Kit: Questions and Answers**" for installation instructions.

Question 6: I want to install multiple Language Kits on my system. In what order should I install them?

Answer: If you are installing multiple Language Kits on your system, install them in order from oldest to newest.

If you were to install all of the language kits currently available, you would do so in the following order:

- Chinese Language Kit 1.1.1
- Japanese Language Kit 1.2
- Cyrillic Language Kit 1.0
- Arabic Language Kit 1.0.1
- Hebrew Language Kit 1.0.1
- Korean Language Kit 1.0
- Indian Language Kit 1.0.

Published Date: Feb 19, 2012

Logic Pro 7 or later: Dialog asking to locate IR files keeps appearing

This article has been archived and is no longer updated by Apple.

After upgrading to Logic Pro 7 or later, you may get messages that ask you to locate IR files when you open a Logic 6-created song that contains instances of Space Designer. Despite asking you for the location, the navigation dialog used to locate the file (or files) will default to the correct location for the file in question.

This happens because the default location for IR files has changed with Logic Pro 7. A complete set is installed at /Library/Application Support/Logic/Impulse Responses. Songs with Space Designer instances that refer to the old default location (/Applications/Logic/Impulse Responses) will exhibit this issue.

You can resolve the issue by selecting the same IR file from the new location for each instance of Space Designer and then saving the song.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

Logic Pro 7: VSM turns off if audio driver is disabled

This article has been archived and is no longer updated by Apple.

Under certain circumstances, the Virtual Sample Memory (VSM) feature of the EXS24 sampler in Logic Pro 7 may turn itself off. As a result, songs may use more RAM than what's available.

This happens if you disable the audio hardware driver in the Audio Drivers preferences window and then relaunch Logic Pro. If you swap one audio driver for another, VSM will remain on. Only starting Logic without an audio driver enabled will cause this issue to happen.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

Logic Pro/Express: "Auto create tracks" and "Auto mute" options are always on when cycling audio

This article has been archived and is no longer updated by Apple.

When you record audio in cycle mode in Logic Pro or Logic Express, Logic mutes all previous takes and creates new tracks for each cycle iteration—even when the "Auto mute in cycle record" and "Auto create tracks in cycle record" options are not enabled.

These two settings only apply to MIDI regions, which can be stacked on a track so that all takes play together (as long as the receiving module or Audio Instrument has sufficient polyphony to play all the notes).

Audio regions can't be stacked in the same way, since only one audio region can play at any given point on an audio channel. Because of this, Logic always creates new tracks when recording audio in cycle mode, and mutes regions created from previous iterations to ensure that the current recording is always audible. You may then selectively unmute regions from previous cycle iterations.

Published Date: Feb 19, 2012

Logic Pro/Express 7.1: Last node remains selected when creating four nodes with the Automation tool

This article has been archived and is no longer updated by Apple.

In Logic Pro or Logic Express 7.1, if you create four automation nodes by Control-Option-Shift dragging with the Automation tool over a selected area, the second, third, and fourth nodes will appear highlighted. However, only the second and third nodes should be highlighted.

This issue is resolved in Logic Pro and Express version 7.1.1 or later, available at Apple Downloads. The description below remains for 7.1 users who don't have time to update immediately.

Here's a picture of what the four nodes look like when you first create them:

Because the fourth node is highlighted along with the second and third, this makes it difficult to adjust only the automation within the area you selected. If you drag the selected set of nodes, you'll also affect automation to the right of the intended area. Here's what this looks like:

To work around this issue, click on the background of the Arrange window to deselect all nodes and then drag the line that connects the second and third nodes.

Published Date: Feb 19, 2012

GarageBand 2: Recordings made with iSight and some USB mics are too high pitched

This article has been archived and is no longer updated by Apple.

When you use iSight or a USB microphone to record audio in GarageBand 2, you may get recordings that sound too high pitched and play back too fast.

This issue only occurs on Mac mini computers. GarageBand only supports audio interfaces that operate at 44.1 kHz. The iSight only operates at 48 kHz. On most Macintosh computers, you can't select iSight as an audio input source in GarageBand—the choice will appear dimmed with the words, "not 44.1."

Because the Mac mini has no built-in audio input source, if you connect an iSight to it and open GarageBand, GarageBand will automatically default to selecting the device, even though the iSight selection will still remain dimmed and say "not 44.1."

When you record form iSight and then play it back, your 48 kHz file gets played back at 44.1 kHz, causing the speed and pitch discrepancy. To record audio on a Mac mini, you should use an audio interface that supports 44.1 kHz operation.

This document will be updated as more information becomes available.

Published Date: Feb 18, 2012

iDVD 5, DVD Studio Pro: Widescreen DVD content may not display correctly on some DVD players

This article has been archived and is no longer updated by Apple.

You can create 16:9 widescreen DVDs in both DVD Studio Pro and iDVD 5. On a widescreen television, the video image will fill the entire 16:9 screen. If you play a widescreen DVD on a player connected to a standard 4:3 TV, the widescreen image should be presented "letterboxed," with black bars appearing above and below the width of the image to preserve the aspect ratio. However, some DVD players may not display widescreen DVDs (created in DVD Studio Pro or iDVD 5) in the correct letterbox presentation on a 4:3 TV or monitor.

If this happens to you, verify your DVD player setup. If the player is set to output video to a 16:9 monitor, letterboxing will not occur on 4:3 monitors. If you can, change the player's output for a 4:3 monitor so that it letterboxes correctly.

Note: Some players will still not present widescreen video with the correct letterbox presentation on a 4:3 TV or monitor. Additionally, menus burned from iDVD 5 are always 4:3 - the issue described above only concerns the widescreen content part of the DVD playing back as "stretched" on a 4:3 TV.

Published Date: Oct 7, 2016

iMovie HD: Emptying iMovie Trash may not recover the expected amount of disk space

This article has been archived and is no longer updated by Apple.

You may notice in iMovie HD that, after emptying the Trash, the disposal of clips did not appear to increase the amount of free disk space available to you. This can happen if you split a clip in the timeline and then move one of the split clips to the iMovie Trash.

As iMovie HD features non-destructive editing, this is normal behavior. Non-destructive editing means that the video clips you see and work with in the program are merely representations of the video files that reside on your hard drive and that you can modify these representations and not affect your originals. Non-destructive editing makes it easier to undo or alter previous changes without having to reimport video from your original source.

When you split a clip into sections, iMovie HD doesn't really split the actual file that resides on your hard disk—rather, it creates references to the original clip's footage and these references are what you are editing. The entire original video clip remains on the disk for usage until all references to it have been deleted from iMovie HD's timeline and Clips pane.

This means that until you move all the references that point to the original clip to the iMovie Trash, you won't be able to recover the expected amount of space because other items may be relying on this clip. By themselves, references don't take up significant space to recover the amount indicated by the iMovie Trash when deleting these items individually.

Published Date: Oct 7, 2016

Logic Pro/Express: Digital input not available

This article has been archived and is no longer updated by Apple.

Logic Pro and Logic Express cannot access the digital input on certain computers. The affected systems will list the digital input as a separate device in Audio MIDI Setup. To check your system, follow these steps:

1. Open Audio MIDI Setup (located in /Applications/Utilities).
2. Click the Audio Devices tab.
3. Open the **Default Input** pop-up menu.

If your system shows more than one built-in input source, it will be affected by this issue.

Logic cannot access devices that offer only an input, and therefore cannot use the digital input. On systems with Mac OS X 10.4 or later, you can work around the issue by creating an aggregate device that uses the I/O from both available audio devices on your system.

To create an aggregate device in Audio MIDI Setup:

1. From the **Audio** menu, choose **Open Aggregate Device Editor**.
2. Click the plus (+) button to the left of "Add and remove aggregate devices on your computer."
3. In the bottom panel, select the checkbox in the Use column for each device.
4. Click Done.

5. In the Audio MIDI Setup, under Properties For: Built-in Audio, click Clock Source.
6. Select External

In Logic, you can now open the Audio Drivers window (**Audio > Audio Drivers**), click the Core Audio tab, and choose the new aggregate device.

Published Date: Feb 19, 2012

Soundtrack Pro: Can‘t reset the Match EQ template spectrum

This article has been archived and is no longer updated by Apple.

Once you set a template spectrum for the Match EQ plug-in in Soundtrack Pro, you won't be able to clear it and then choose a different template spectrum. This happens when you're using Match EQ in an audio file project and have already chosen a template spectrum but wish to clear it and choose a different one.

If you Control-click the Learn button under Template and choose **Clear Template Spectrum** from the shortcut menu, the function seems to work, but when you select a different audio file by choosing **Generate Template Spectrum from audio file...**, the waveform for the original file appears again.

To resolve this issue, remove the Match EQ plug-in from the project and then reinsert it. If you haven't yet applied Match EQ to the project, simply pressing the Cancel button should work. You should now be able to choose a new audio file as a template.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Mac OS X 10.3 and later: Keychain Scripting "isn‘t running" error in AppleScript scripts

This article has been archived and is no longer updated by Apple.

Some AppleScript scripts that use Keychain Scripting may produce this error message:

> "Keychain Scripting got an error: Application isn't running."

To resolve the issue, make sure that the Keychain Scripting process is already running; it should be launched by a process other than the one that wants to run the script.

One method for doing this is demonstrated in the following AppleScript:

-- Begin Script

```
property pKeychainItemName : "kctest"


on startKeychainScripting()

 -- This function ensures that the Keychain Scripting.app is launched by a process
 -- different from the one executing this script. It is only needed when using Keychain Scripting to
 -- retrieve the password property of a key.

 -- Quit Keychain Scripting if it's running, since opening this script may have implicitly launched it.
 try
  tell application "System Events"
   set foundApp to first process whose name is "Keychain Scripting"
   set pid to id of foundApp -- this will exit the try block if the process isn't running
   quit foundApp -- we get here if the process is found
  end tell
 end try

 -- get Finder to launch Keychain Scripting
 tell application "Finder"
  open application file ((startup disk as string) & "System:Library:ScriptingAdditions:Keychain Scripting") as alias
 end tell

 -- make sure that Keychain Scripting is up and running
 repeat while true
  try
   tell application "System Events"
    set foundApp to first process whose name is "Keychain Scripting"
    set pid to id of foundApp -- this will exit the try block if the process isn't running
   end tell
   exit repeat -- we get here if the process is found
  end try
 end repeat

end startKeychainScripting


on run
 set x to my getPassword(pKeychainItemName)
 activate
 display dialog x buttons {"OK"} default button "OK"
end run


on getPassword(keyname)

 startKeychainScripting()

 tell application "Keychain Scripting"
  try
   set theKey to first key of current keychain whose name is keyname
   set thePassword to password of theKey
  on error message number errNum
   set thePassword to message & " (" & errNum & ")"
  end try
 end tell

 return thePassword

end getPassword
```

-- End Script

This document will be updated as more information becomes available.

TA23348_Mac_OS_X_and_later_Keychain_Scripting_isnt_running_error_in_AppleScript_scrip

Published Date: Oct 7, 2016

Shake 4: Using Shake 3 projects that contain Rotoshapes

This article has been archived and is no longer updated by Apple.

Shake 4 modifies the way the Rotoshape node works. As a result, rotoshapes created and rendered in Shake 3.5 could potentially yield slightly different results when rendered in Shake 4. This difference is more prominent in shapes with hard edges, though any potential difference is minimal (a 3-pixel shift along one edge, maybe) and should generally not be an issue.

To avoid potential issues, keep the following in mind:

1. Never mix rotoshape-heavy rendered frames from Shake 4 and Shake 3.5 (for example, frame 1 was rendered in Shake 3.5, frame 2 was rendered in Shake 4, and so on).
2. If you have a script with rotoshapes that were created in Shake 3.5, but are to be rendered (or further worked on) in Shake 4, double-check the accuracy of your shapes—particularly if those shapes have hard edges or are very tightly fitted to the rotoshaped image.

Published Date: Feb 18, 2012

Logic Pro/Express: Inserting a voice into a Score Style adds unwanted stave

This article has been archived and is no longer updated by Apple.

If you copy one of the preset Score Styles in Logic Pro or Logic Express and then try to add a voice to an existing stave by choosing **New> Insert Voice**, Logic creates a new stave for the voice instead of adding the voice to an existing one.

When you open a Score Style in the edit window, the insert mark's default location appears above the first existing voice, as shown below.

When you insert a new voice, it gets placed at the position indicated by the insert mark. In the case of a Score Style, this would be before the first voice. Because a voice cannot exist without a stave, Logic creates a new stave for the voice, as shown below.

To workaround this issue, before inserting a new voice, grab the insert marker in the edit window and drag it down so that it appears below the existing voice, like this:

Now when you choose **New> Insert Voice** in the Score Style window, the voice will be added to the existing stave.

Published Date: Feb 19, 2012

iPod: Previous and Next buttons now go to chapters in an audiobook or podcast

This article has been archived and is no longer updated by Apple.

Starting with iPod Updater 2005-6-26, the behavior for the Previous and Next buttons on an iPod with a Click Wheel has changed slightly. If you have a track that contains chapter marks, such as an audiobook or podcast, pressing Previous or Next will go to the previous or next chapter within the track, respectively. Prior to this update, these buttons would go to the previous or next track.

This can cause confusion in some cases, such as if you have an audiobook that contains a lot of chapter marks. Alternatively, you can scroll the Click Wheel to navigate between tracks with many chapter marks.

If you're not sure what iPod you have or if it has a Click Wheel or not, see this document.

Published Date: Oct 7, 2016

ClarisWorks 4.0v5: Saving On 4GB Or Greater Volumes Issue

ClarisWorks 4.0v5 users receive a "Disk Full" error when attempting to save a file or library to a server volume with 2GB or more.

This document provides information about:

I. Installing the ClarisWorks 4.0v6 update
II. Issues addressed in v6
III. Issues addressed in previous releases
IV. New features
This article has been archived and is no longer updated by Apple.
This issue has been corrected in ClarisWorks 4.0v6. An updater can be downloaded from Apple Software Updates online.

I. Installing The ClarisWorks 4.0V6 Update:
Before running the updater make sure all of your computer's System software extensions are turned off. To do this:

1. Save all open files and quit all of the programs running on your computer.
2. Hold down the Shift key on your keyboard.
3. Choose Restart from the Special menu.
4. Do not release the Shift key until the words "Welcome to Macintosh. Extensions off." appear on your screen.

To update the ClarisWorks 4.0v5 product currently installed on your computer:

1. Double-click the "ClarisWorks 4.0v6 Updater" installer icon.
2. Read the Claris splash screen and click Ok.
3. The ClarisWorks 4.0v6 updater will automatically search your hard disk (and any mounted volumes) and display a list of eligible files for updating. Note: Only ClarisWorks 4.0v5 may be updated using this updater. Earlier versions of ClarisWorks 4.0 must first be updated to 4.0v5. 4. Click Update. The updater will begin updating the selected application. Once the updater is finished, you have the option of deleting the original 4.0v5 file. Then click Ok to quit and you can begin using the updated version of ClarisWorks.

II. ISSUES ADDRESSED IN V6
This v6 Updater addresses one issue from previous versions:

When attempting to save a file or library to a server volume with 2Gb or more free space, a "Disk is full." error would result.

III. ISSUES ADDRESSED IN PREVIOUS RELEASES

- Closing documents: In v4 and earlier versions, on Macintoshes with more than 48 MB of available system RAM, closing a ClarisWorks document would cause a crash on some computers.
- Importing Excel documents: In v4 and earlier versions, calculations in Excel spreadsheets that contained numbers greater than 32767 imported as negative numbers in ClarisWorks. This was fixed in the latest version of the Excel translator provided with this update. Several stationery files have been updated to use 1997 dates where appropriate.
- Mail Merge and Multiple Line Data: In v4, when a mail merge field contains multiple lines of text, the text now merges and prints correctly. (The text still displays as a single line on the screen.)
- Mail Merge and Sliding over Empty Fields: In v4, when there is an empty mail merge field on a line by itself, the following text moves up appropriately and prints correctly. (The text does not "slide" on the screen.)
- Rotating Library Images: In v1, some of the ReadyArt library images didn't rotate correctly. This was fixed in v4.
- Stationery Corrections: Minor changes were made to some of the stationery files.
- Address List Assistant: Minor changes were made to the Address List Assistant for better printing and on-screen display.
- New AppleWorks DB/SS and RTF filters:
- Faster Word Count:
- Option left/right arrows: In WP now correctly skips carriage returns and tabs (as it did in versions prior to 4.0).
- New Document dialog: Now displays more quickly, especially when there are many stationery files in the ClarisWorks Stationery folder.
- Word Services AppleEvent Support: In v4, it is easier to use applications that support the Word Services AppleEvent standard (such as some third party spelling or grammar checkers).

To enable the Word Services command in the Edit:Writing Tools menu of the ClarisWorks word processor:

1. Select Preferences from the Edit menu.
2. Select the Text icon.

3. Check the Word Services checkbox under General and click OK.

To select a Word Services application for use with ClarisWorks:

1. Open or create a word processing document.
2. Select Writing Tools from the Edit menu and then select Edit Word Services. You see a dialog containing a list of all the Word Services applications for which ClarisWorks is currently configured.
3. Press the Add button.
4. You see a dialog listing the applications running on your Macintosh that use Word Services AppleEvent standard.
5. Select the one you want and click OK.
6. In the Word Services dialog, click OK.
7. A new menu item corresponding to the Word Services application you chose appears in the Writing Tools menu.

You can also use the Edit Word Services dialog to remove installed Word Services applications from the Writing Tools menu.

To use a Word Services application on a ClarisWorks word processing document, choose the appropriate menu item from the Writing Tools menu. This launches the Word Services application if is not already running. If you have text selected in the document, then the Word Services application checks the selection. Otherwise, the entire document is checked.

IV. NEW FEATURES (Prior versions - No New Features in 4.0v6)
Release 4.0v4 added several new features, including:

- New picture and layout in the ClarisWorks splash screen.
- Macintosh Drag and Drop Support: Users can use Macintosh Drag and Drop (that comes with System 7.5) to move text, graphic objects, and spreadsheet cells within ClarisWorks 4.0 documents, drag selections from one document to another, drag selections to other applications (including creating clipping files in the Finder).
- Backwards File Conversion to 2.0/2.1/3.0 Formats: You can use the new ClarisWorks File Converter application to save version 4.0 files in the format used by ClarisWorks versions 2.0, 2.1 and 3.0. For more on the File Converter, see the file "Read Me - CW File Converter".
- New filter for WordPerfect 3.1 for Macintosh.

Note: There is no 4.0v6 updater for any language besides US-English. For all locales, this issue is resolved in version 5.0.
Published Date: Feb 20, 2012

iTunes: Exclamation point appears next to podcast

This article has been archived and is no longer updated by Apple.

If you have podcasts in iTunes, an exclamation point may appear to the left of a podcast or podcast episode in certain circumstances.

This can happen for several reasons:

- iTunes can't locate the podcast episode. You may have inadvertently moved or deleted it. If you can't locate the podcast episode, you may want to download it again.
- There is a problem downloading the podcast. You can click on the exclamation point to learn more information.
- You've subscribed to a podcast but have more than five unplayed episodes. iTunes will stop automatically downloading newer episodes. You may get the following message:

  > iTunes has stopped updating this podcast because you have not listened to any episodes recently. Would you like to resume updating this podcast?

  You can click Yes to continue downloading additional episodes. Or you can just listen to any part of any episode and a new episode will download at the next update.

Note that with iTunes 4.9, you cannot edit a podcast address. If you typed the address in manually (as opposed to subscribing from the iTunes Store), you will need to delete the podcast subscription and resubscribe with a valid address.

Published Date: Oct 7, 2016

iPod: About screen may include podcasts in the total number of songs.

This article has been archived and is no longer updated by Apple.

Depending on which iPod model you have and what firmware version is installed, the About screen (choose **Settings** > **About** on iPod) will include the following audio types in its total number of songs:

iPod model	**About menu includes**
iPod with Click Wheel (not upgraded to the latest firmware)	Songs, audiobooks, and podcasts
iPod with Click Wheel (upgraded to the latest firmware)	Songs and audiobooks, but not podcasts (unless podcast or episode is dragged into the music library)
iPod without Click Wheel	Songs, audiobooks, and podcasts

If you're not sure what iPod model you have or if it has a Click Wheel, click here to help identify your iPod model.

Published Date: Oct 7, 2016

iDVD 5: Audio encoding error when burning a DVD

This article has been archived and is no longer updated by Apple.

You may get an audio encoding error message when you try to burn a DVD in iDVD 5 that contains an iMovie HD project without any audio (such as an iMovie project that contains only still images). The burn process will stop and you'll see one of the following alerts:

> "Encoding Audio. Error during rendering/encoding: Audio_<project name> -1"
>
> or
>
> "Error during rendering/encoding"

To resolve this issue, open your iMovie project in iMovie and add a short audio track anywhere in the timeline. You can even create a blank audio track by recording from an audio input source that doesn't have any active audio (such as recording from your computer's audio Line In without connecting a microphone). The audio track doesn't have to be long or have audible content—it just needs to be part of the project.

Once you save the iMovie project, you can go back to iDVD to burn it.

Tip: If the burn fails in this manner, it's likely your DVD media remains untouched and can be reused.

Published Date: Oct 7, 2016

QuickTime Pro: About the Play All Frames feature

This article has been archived and is no longer updated by Apple.

When you upgrade to QuickTime Pro, "Play All Frames" is one of the features that becomes active in QuickTime Player—to enable the option, choose **Play All Frames** from the **View** menu (or **Movie** menu in QuickTime 6) to place a check mark by it.

This feature may play movies back differently than if you just click the Play button in QuickTime Player.

When you click the Play button, QuickTime Player automatically adjusts the video performance to provide the best possible presentation on your particular computer. If a movie is supposed to be exactly one minute long, QuickTime Player will make sure that the movie plays for exactly 60 seconds.

This can be a tough job if the movie was made on a fast computer and then played back on a slower computer that might not handle video as well. On a slower computer, QuickTime Player will skip frames to keep up with the time constraint if the movie contains more frames per second than it can handle.

The "Play All Frames" feature takes a different approach to performance. Instead of trying to keep up with the time, QuickTime Player will play every frame of the movie, without regard to how long it takes, when the feature is enabled.

Note: When you choose to play all frames in a movie, the audio track will not play.

Published Date: Feb 18, 2012

iDVD 5: Previous themes are missing

This article has been archived and is no longer updated by Apple.

When you install Mac OS X 10.4 and the bundled Apple applications from the discs included with new Apple computers, some themes may not show up in iDVD 5. This issue can occur with the following products and bundled software that ships with some iMac and eMac computers:

- iDVD 5.x
- Mac OS X 10.4.1 Installer disc and bundled applications
- 17-inch iMac computers
- 20-inch iMac computers
- eMac computers

To find out if this issue affects you, open iDVD 5, click the Customize button, click the Themes tab, and then open the **Themes** pop-up menu.

You should see category choices for iDVD "5.0 Themes," "4.0 Themes," and "Old Themes." If the only menu item available is "5.0 Themes," you will need to install the older themes if you want to use them.

To install the missing themes, do the following:

1. Drag the iDVDThemes.pkg file located in /Library/Receipts to the Trash.
2. Insert the Mac OS X Install Disc 2 disc that was included with your computer.
3. From the **Go** menu, choose **Go to Folder**.
4. Type `/Volumes/Mac OS X Install Disc 2/Packages/` in the field and click Go.
5. Double-click the iDVD Themes.pkg installer.
6. Follow the steps to upgrade.

If you don't have one of the above computers that came with Mac OS X 10.4.1, but think you may have a related issue, then see "iDVD 4/5: Where are the older themes?" for more information.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

iWork ‘05: Can‘t enter serial number

This article has been archived and is no longer updated by Apple.

Not all iWork '05 serial numbers will work with Pages 1.0 and Keynote 2.0. If you're having difficulty entering your serial number, updating the software may help.

The first time you open Keynote or Pages, you are prompted to enter a serial number. The screen should also contain a "Buy Now" button. If this button isn't present, you may need to update your software before you can enter your serial number.

You can update Keynote and Pages to the latest versions through Software Update, or download the updates from these web locations:

- Keynote update
- Pages update

This should not occur if you are upgrading from a trial version of iWork.

Published Date: Oct 7, 2016

About Soundtrack Pro 1.0.1 and Final Cut Pro

This article has been archived and is no longer updated by Apple.

If you experience any of the following issues when working with Final Cut Pro and Soundtrack Pro, then update to Soundtrack Pro 1.0.1 using Software Update.

The In and Out points for subclips sent from Final Cut Pro to the Waveform Editor in Soundtrack Pro may get shifted.

In Final Cut Pro, you can create a subclip and give it different In and Out points than the source clip from which it was created. When you send a subclip from Final Cut Pro to the Soundtrack Pro Waveform Editor, the clip appears with gray markers that indicate the In and Out points. However, these points might not appear in the right positions, although the distance between them is correct.

When you send a subclip to a multitrack project in Soundtrack Pro 1.0.1 or later, the In and Out points appear at the correct positions.

A stereo audio clip in a Final Cut Pro sequence may create two reference movies when sent to the Final Cut Pro Timeline

This can happen when you send a Final Cut Pro sequence to the Timeline that contains a stereo audio clip (an AIFF file or a QuickTime movie) that meets one of the following conditions:

- The clip is located on a pair of audio tracks where the left channel is on an even-numbered track and the right channel is on an odd-numbered track.
- The clip is unlinked.
- The clip is linked but not stereo linked, and the channels are offset from one another.

In all of these cases, Soundtrack Pro 1.0.1 and later creates two reference movies; one for each Final Cut Pro audio track.

Working with background movies in Soundtrack Pro

Background movies are now properly sent to Soundtrack Pro when you export to a Soundtrack Pro multitrack project from Final Cut Pro.

Sending audio file projects from Final Cut Pro to Soundtrack Pro

You can now send Soundtrack Pro audio file projects from the Final Cut Pro Timeline to Soundtrack Pro multiple times.

In Final Cut Pro 5.0.2, when you send an audio clip in the Final Cut Pro Timeline to a Soundtrack Pro audio project, the resulting Soundtrack Pro audio project clip in the Final Cut ProTimeline will no longer be linked to its corresponding video clip in the video track. If you need to link a video clip and a Soundtrack Pro project clip in the Timeline, you can manually link them by selecting the relevant clips, then choosing **Modify** > **Link** in Final Cut Pro 5.0.2 or later

Published Date: Feb 20, 2012

About Pro Application Update 2005-01

This article has been archived and is no longer updated by Apple.

Pro Application Update 2005-01 addresses several issues with underlying frameworks and shared components for Apple's professional applications, and is strongly recommended for all users of Final Cut Studio, Final Cut Pro 5, Motion 2, Soundtrack Pro, DVD Studio Pro 4, Shake 4, LiveType 2, Compressor 2, and Apple Qmaster 2.

This update is also recommended for users who have previously installed the FxPlug SDK.

Component name	Applications	Description
LiveType Support 2.0.2	LiveType 2 Final Cut Pro 5 Final Cut Studio PluginManger FxPlug Motion 2 DVD Studio Pro 4	Addresses an issue with LiveType 2 project integration with Final Cut Pro 5, Motion 2, and DVD Studio Pro 4.
FxPlug.framework	Motion 2 Final Cut Studio LiveType PluginManger FxPlug	Addresses issues with using third-party Core Image Units in Motion 2.
PluginManager.framework	Motion 2 Final Cut Studio LiveType PluginManger FxPlug	Addresses incompatibilities with running Motion 1.0 and Motion 2.0 on the same hard drive partition.
Apple Uncompressed 422 Codec	Final Cut Studio Final Cut Pro Motion 2 Soundtrack Pro DVD Studio Pro Compressor 2 Apple QMaster 2	The update addresses corruption issues in Shake 3.5 and Shake 4.0 when working with 10-bit QuickTime files.
Helium 2.0.1	All	The update was provided in conjunction with the Shake 4.0 release, and is being released for all pro applications that leverage the framework for version syncing.
DVCPROHD Codec	All	The DVCPro HD codec removes artifacts that can be introduced by applying the Advanced format conversion DVCPro HD 1080i60 setting to a source movie.

Published Date: Oct 7, 2016

Mac OS X 10.4: Use Gimp-Print driver with Lexmark Z53

This article has been archived and is no longer updated by Apple.

If you're printing to a Lexmark Z53 printer using the Lexmark driver included with Tiger, and the print queue stops without printing, try using the Gimp-Print driver instead. Here's how to switch the printer driver.

1. From the **Apple** menu, choose **System Preferences**.
2. Click Print & Fax to display its preference pane.
3. Click the Printing tab.
4. Remove your current Lexmark Z53 printer by selecting it in the pane, then clicking the minus sign (-) button.
5. Click the plus sign (+) button to open Printer Setup Utility.
6. Select "Lexmark Z53" in the Printer Browser window.
7. From the **Print Using** pop-up menu, choose **Lexmark**.
8. In the Model list that appears below it, select "Lexmark Z53 - Gimp-Print v5.0.0-beta2."

   Tip: If "Lexmark Z53 - Gimp-Print v5.0.0-beta2" does not appear in the list of Lexmark printer models, use Optional Installs to install Gimp Printer Drivers.

9. Click Add.

Note: The Gimp-Print driver should provide basic printing functions for the printer, but not all features may be available.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 18, 2012

iBook G4, Aluminum PowerBook G4: Preparing your computer for mail-in repair

This article has been archived and is no longer updated by Apple.

When you get ready to send in your iBook G4 or Aluminum PowerBook G4 for repair, make sure that you back up your data, and check that the computer has at least 2.5 GB of free disk space on its hard drive. The repair depot will need this space to install and run diagnostic software.

To check how much available space you have on your hard drive, follow these steps:

1. Click once on the hard drive icon on your desktop to highlight it.
2. From the **File** menu, choose **Get Info**.
3. The resulting window shows you how much space you have available.

Published Date: Feb 18, 2012

Logic Pro 7.1: AAF export does not work with Mac OS X 10.4 "Tiger"

This article has been archived and is no longer updated by Apple.

If you're using Logic Pro 7.1 in Mac OS X 10.4 or later and try to export a song as an AAF file, Logic Pro won't create the file. Instead, you'll get this message:

> "AAF internal error 0xffffffff"

To resolve this issue, update to Logic Pro 7.1.1 or later, available at Apple Downloads.

Published Date: Feb 18, 2012

Logic Pro/Express: Freeze cursor appearance prevents Audio Instrument track editing

This article has been archived and is no longer updated by Apple.

In Logic Pro and Logic Express, if you create a new song based on your Autoload Song or other template and try to open an existing Audio Instrument's user interface, the Freeze cursor may appear, even though the track isn't frozen. If you try to play the instrument live, you won't hear any sound.

Note: The freeze cursor is a unique cursor that only appears when you attempt to click on a parameter that cannot be altered when a track is frozen. You can see it in the following picture.

This happens if you've previously opened your Autoload Song or other template, frozen an existing Audio Instrument track in the song, and then closed the song without saving. If you subsequently create another song based on the same template, the Audio Instrument track will still behave as if it was frozen.

To resolve this issue, simply start and then stop playback, and the Audio Instrument should behave normally.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

Soundtrack Pro: Canceling a "Bounce Realtime to Action" command results in spinning disc cursor

This article has been archived and is no longer updated by Apple.

If you're working with long files in the Waveform Editor in Soundtrack Pro, choose **Process > Bounce Realtime to Action**, and then cancel the command, this can cause the spinning disc cursor to appear for a long time.

This is normal behavior. Wait for awhile and the cursor will disappear.

Published Date: Oct 7, 2016

Logic Pro: Audible glitch occurs when punching in

This article has been archived and is no longer updated by Apple.

If you enable the "Punch on the Fly" feature in Logic Pro and then punch in to record while playing, you may hear a glitch in the monitored audio.

This happens when you use the Record key command to start recording. To avoid this issue, use the Record Toggle key command instead. You can check the Key Commands window in Logic to see which key combination is assigned to Record Toggle.

Published Date: Feb 19, 2012

Mac OS X Server 10.3.9: Issues after upgrading Open Directory Master to Mac OS X Server 10.4

This article has been archived and is no longer updated by Apple.

If you use the CD version of Mac OS X Server 10.4 to upgrade a Mac OS X Server 10.3 Open Directory Master, you will experience issues with user authentication and Kerberos. These issues do not occur if you upgrade using the Installation DVD or NetInstall.

Verifying the issue

To see if your upgraded server is affected by this issue, open the log file, /Library/Logs/slapconfig.log. If your server is affected, you will see the following messages:

```
2005-06-28 14:46:15 -0700 - slapconfig -migrateldapserver
....
2005-06-28 14:46:48 -0700 - 5 Updating data in LDAP
...
2005-06-28 14:46:49 -0700 - ldapdelete command output:
ldap_bind: Can't contact LDAP server (-1)
2005-06-28 14:46:49 -0700 - ldapdelete command failed with status 1
```

In addition, you will see this overview message in Server Admin when you select the hostname of the server in Computers & Services:

> "This server contains new or upgraded services that need to be configured to use sign-on Kerberos authentication. Services that already use Kerberos on this server will not be affected. Select Open directory in the Computers & Services list, then click settings."

Preventing the issue

If you can't install from DVD or NetInstall, you can still prevent the issue while using the CD if you disable Auto Server Setup prior to installation. After the installation is complete, you will be taken directly into Server Assistant. **Do not complete the assistant yet.** Though this would not be done under normal circumstances, you must restart the server *before* using the assistant. To do this, either ssh the reboot command, quit Server Assistant (this will power off the system) or hold the power button. After restart, use Server Assistant to continue as normal.

After using the assistant, you'll need to copy a Kerberos command and preference file from another Mac OS X 10.4 system (either a server or client). To copy the "kerberosautoconfig" command from another 10.4 system, use the scp command in this manner (replacing "otherserver" with the name of the computer from which you intend to copy in the following commands):

```
% scp otherserver:/sbin/kerberosautoconfig /sbin
```

Then copy the "KerberosAutoConfig.plist" file from another 10.4 server by entering this:

```
% scp otherserver:/etc/mach_init.d/KerberosAutoConfig.plist /etc/mach_init.d
```

Alternatively, you could copy the contents of the plist file using the text below. Just copy everything below the following line, paste it into a text editor, and save it as a plain text file (not RTF) as "KerberosAutoConfig.plist" at /etc/mach_init.d/.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple Computer//DTD PLIST 1.0//EN" "http://www.apple.
com/DTDs/PropertyList-1.0.dtd">
<plist version="1.0">
<dict>
        <key>ServiceName</key>
        <string>com.apple.KerberosAutoConfig</string>
        <key>Command</key>
        <string>/sbin/kerberosautoconfig -x</string>
</dict>
</plist>
```

End copy above this line

Resolving the issue

If you are experiencing these issues and need to recover, follow these steps:

1. On the affected Open Directory Master, open Preferences in Workgroup Manager.
2. Select "Show all records Tab and Inspector."
3. Click the Accounts icon, then the target tab.

4. From the pop-up menu, choose **Config**. If you don't have replicas, skip to step 7.
5. Use WGM Inspector to remove any replicas in the Config / ldapreplicas record. Leave only the master in the LDAPReadReplicas attribute. Use the Delete key—not the Delete button—then save.
    a. Modify the KerberosClient config record's XMLPlist attribute to list only the master, then modify the generationID as well.
    b. Modify the ldapreplicas config record to list only the master in the LDAPReadReplicas attribute.
    c. Use Workgroup Manager Inspector to add a record in /Config.
    d. Click New Record, and change the name to "macosxodpolicy."
6. In the Open Directory settings portion of Server Admin, enable Directory Binding, then disable "Require clients to bind to directory."
7. In Directory Access, configure LDAPv3, select the Open Directory server, and click Edit.
8. Click the Search & Mappings tab, then reselect the Open Directory Server.
9. In the Search Base Suffix window, click OK. Note your Search Base Suffix you will need to use it later, it will be something like `dc=example,dc=com`.
10. Click the Write To Server button, then enter the LDAP root DN, such as:

    `uid=admin,cn=users,dc=example,dc=com and password, Search Base cn=config,dc=example,dc=com`

    to store the updated mappings.

11. If needed, set "Access this LDAPv3 server using" back to Open Directory Server, then click OK in the two panels.
12. Click the Authentication tab, set to custom path, enter /Ldapv3/127.0.0.1, and click Apply.
13. In Terminal, execute the following commands as root:

    Note: Use your realm name for REALM. The realm name can be found in the file /Library/Preferences/edu.mit.Kerberos and is normally set to the fully qualified domain name of the server in upper case, such as `SERVERNAME.EXAMPLE.COM`.

    ```
    % kdcsetup -e
    % sso_util configure -r REALM -x -v 1 all
    % sso_util configure -r REALM -x -v 1 ldap
    ```

14. You will need to get copies of the kerberosautoconfig command and plist files. Follow the steps from "Preventing the issue," above.
15. Execute this command:

    ```
    % /sbin/kerberosautoconfig
    ```

16. Add the neighborhoods and "accesscontrols" containers. Here is an example Terminal session that adds the neighborhoods container (you will need to do the same for accesscontrols):

    ```
    root# ldapadd -U locadmin -W -Y CRAM-MD5
    Enter LDAP Password:
    SASL/CRAM-MD5 authentication started
    SASL username: locadmin
    SASL SSF: 0
    <enter this text>
    dn: cn=neighborhoods,dc=example,dc=com
    cn: neighborhoods
    objectClass: container
    <press Control D>
    adding new entry "cn=neighborhoods,dc=example,dc=com"
    ```

    If you see the message "ldap_add: Already exists (68)," the file already exists, and you didn't need to create it again, though any attempt to do so is harmless.

    ```
    root# ldapadd -U locadmin -W -Y CRAM-MD5
    Enter LDAP Password:
    SASL/CRAM-MD5 authentication started
    SASL username: locadmin
    SASL SSF: 0
    <enter this text>
    dn: cn=accesscontrols,dc=example,dc=com
    cn: accesscontrols
    objectClass: container
    <press Control D>
    adding new entry "cn=accesscontrols,dc=example,dc=com"
    ```

    You may see the message "ldap_add: Already exists (68)" again; don't worry about it if you do.

17. To add the access controls to the directory, copy the access lines from the file /etc/openldap/slapd_macosxserver.conf to a temporary file to

be edited, then remove them from the original file. Copy the following lines from ther/etc/openldap/slapd_macosxserver.conf to a temporary file so that you can safely edit them:

```
access to attr=userPassword
        by self write
        by sockurl="ldapi://%2Fvar%2Frun%2Fldapi" write
        by group/posixGroup/memberUid="cn=admin,cn=groups,dc=example,dc=com" write
        by * read
access to attr=apple-user-authenticationHint
        by self write
        by sockurl="ldapi://%2Fvar%2Frun%2Fldapi" write
        by group/posixGroup/memberUid="cn=admin,cn=groups,dc=example,dc=com" write
        by * read
access to attr=apple-user-picture
        by self write
        by sockurl="ldapi://%2Fvar%2Frun%2Fldapi" write
        by group/posixGroup/memberUid="cn=admin,cn=groups,dc=example,dc=com" write
        by * read
access to *
        by sockurl="ldapi://%2Fvar%2Frun%2Fldapi" write
        by group/posixGroup/memberUid="cn=admin,cn=groups,dc=example,dc=com" write
        by * read
```

The edited entries should look like this (after adding a prefix number and removing the carriage returns):

```
1000:access to attr=userPassword by self write by sockurl="ldapi://%2Fvar%2Frun%2Fldapi" write by
group/posixGroup/memberUid="cn=admin,cn=groups,dc=example,dc=com" write by * read

1010:access to attr=apple-user-authenticationHint by self write by sockurl="ldapi://%2Fvar%2Frun%2Fldapi"
write by group/posixGroup/memberUid="cn=admin,cn=groups,dc=example,dc=com" write by * read

1020:access to attr=apple-user-picture by self write by sockurl="ldapi://%2Fvar%2Frun%2Fldapi" write by
group/posixGroup/memberUid="cn=admin,cn=groups,dc=example,dc=com" write by * read

1999:access to * by sockurl="ldapi://%2Fvar%2Frun%2Fldapi" write by
group/posixGroup/memberUid="cn=admin,cn=groups,dc=example,dc=com" write by * read
```

18. Use WGM Inspector to add a record in /AccessControls, click New Record, change the name to "default," then save the file.
19. In the /AccessContols/default record, add each of the edited lines from step 17 as a value of AccessControlEntry. Highlight the AccessControlEntry entry, click New Value, copy and paste a line into the text field, and save. Repeat this for each line.
20. Create a config record named "schema" using ldapadd:

```
root# ldapadd -U locadmin -W -Y CRAM-MD5
Enter LDAP Password:
SASL/CRAM-MD5 authentication started
SASL username: locadmin
SASL SSF: 0
<enter this text>
dn: cn=schema,cn=config,dc=example,dc=com
cn: schema
objectClass: top
objectClass: container
objectClass: extensibleObject
<press Control D>
adding new entry "cn=schema,cn=config,dc=example,dc=com"
```

21. Modify the slapd_macosxserver.conf file to read access controls from the directory while backing up the old file, just in case:

```
% cp /etc/openldap/slapd_macosxserver.conf /etc/openldap/slapd_macosxserver.conf.backup
```

(If slapd doesn't start after reboot, you can copy back the old config file.)

22. Remove all "access" lines (the ones added to the directory from above), and replace with:

```
access specified-in-directory apple-acl "cn=default,cn=accesscontrols,dc=example,dc=com"
```

The Access Controls in the LDAP database should now take effect the next time you launch slapd.

23. Add this Kerberos record using the kadmin.local command. Use your realm name in place of `REALM`, below, and your server's fully qualified domain name, such as:

```
# kadmin.local -r REALM -q "addprinc -randkey kadmin/hostname.example.com@REALM"
```

If you get a message the the policy already exists you can ignore it. it means the principal was already there.

24. Finally, execute:

```
% reboot
```

Published Date: Oct 7, 2016

Smart Playlists stop updating dynamically on iPod

This article has been archived and is no longer updated by Apple.

If you have an iPod with a Click Wheel, Smart Playlists may stop updating dynamically after you update your iPod with iPod Updater 2005-06-26 or later. For example, if you rate a song on your iPod, the rating appears, but that same song won't appear in a Smart Playlist based on the same rating on your iPod. But this can happen with a Smart Playlist based on any criteria.

Use the iPod Updater 2006-01-10 or later to resolve this.

Note: This issue does not affect iPod nano or Fifth Generation iPod.

Published Date: Oct 7, 2016

Mac OS X: "Recovered Items" in the Trash can be safely deleted

This article has been archived and is no longer updated by Apple.

After starting up in Mac OS X, sometimes you might find a "Recovered Items" folder in the Trash. Don't worry, you can safely delete this folder.

This folder contains items that are periodically flushed from your computer's temporary directory (/tmp).

Published Date: Oct 7, 2016

Mac OS X Server 10.4 or later: How to delete a user‘s blog

This article has been archived and is no longer updated by Apple.

Like home folders, a user's weblog will remain after you delete the account in Workgroup Manager. If you're an administrator, you can delete the weblog manually by following these steps:

1. In Server Admin, turn off weblogs.
2. Remove the following files:

```
/Library/Application Support/Weblogs/username
/Library/Tomcat/blojsom_root/webapps/ROOT/WEB-INF/username
```

3. In Server Admin, turn weblogs back on.

Published Date: Feb 20, 2012

Mac OS X 10.4: Share point names are case sensitive

This article has been archived and is no longer updated by Apple.

Share point names are case sensitive in Mac OS X 10.4 and later, meaning that "MyDisk" and "mydisk" will be seen as two different volumes, for example. If you enter the wrong name in the "Connect to Server" dialog, you might see this message:

> **Mount Failed**
> Could not mount volume "users."

If you make the same name mistake at the command line, you might see this error message:

```
mount_afp: the mount flags are 0000 the altflags are 0020
mount_afp: AFPMountURL returned error -5019, errno is 2
```

To avoid this issue, make sure that you are using the correct lettercase when entering share point or file sharing server names. If you're sure the name is correct as entered, it could be that the volume has become unavailable.

Published Date: Feb 18, 2012

Mac OS X: Managed client settings not working when away from the network

This article has been archived and is no longer updated by Apple.

To apply when away from the network, Managed Preferences defined in Workgroup Manager in Mac OS X Server 10.3 or later must be configured properly. If they're currently not working, resolve the issue by following these steps:

1. If you're using the Guest Computers list, make sure it's configured to define managed preferences. If you're using another computer list, be sure to manage at least one preference at the computer list level. Also, make sure the client computers are in the computer list.
2. Be sure that the cache setting for the computer list is set for two weeks or longer (17 days, for example). **Note:** Do not set the cache to 0 (zero). If you do, the cache won't be created.

Published Date: Feb 17, 2012

Logic Pro: How to reinstall

This article has been archived and is no longer updated by Apple.
Normally, you shouldn't have to reinstall Logic Pro, but if a need arises (such as if you're troubleshooting), you can reinstall the software using these steps.

1. Click the Finder icon in the Dock.
2. From the **Go** menu, choose **Go to Folder**.
3. In the resulting dialog, type `/Library/Receipts` in the field.
4. Click Go.
5. From the resulting window, drag the following items to the Trash (depending on which versions and updates you've installed, some of these files may not be present):
    - Logic Pro.pkg
    - Logic Pro Sound Library.pkg
    - Logic Pro Bonus Sound Library.pkg
    - LogicPro701Updater.pkg
    - LogicPro711Updater.pkg
6. Reinstall Logic from the original installation disc.
7. Use Software Update to get the latest Logic update.

Published Date: Feb 19, 2012

Logic Express: How to reinstall

This article has been archived and is no longer updated by Apple.

Normally, you shouldn't have to reinstall Logic Express, but if a need arises (such as if you're troubleshooting), you can reinstall the software using these steps.

1. Click the Finder icon in the Dock.
2. From the **Go** menu, choose **Go to Folder**.
3. In the resulting dialog, type: `/Library/Receipts` in the field.
4. Click Go.
5. From the resulting window, drag the following items to the Trash (depending on which versions and updates you've installed, some of these files may not be present):
    - Logic Express.pkg
    - Logic Express Sample Library.pkg
    - LogicExpress701Updater.pkg
    - LogicExpress711Updater.pkg
6. Reinstall Logic Express from the original installation disc.
7. Use Software Update to get the latest Logic Express update.

Published Date: Feb 19, 2012

iSync 2.1 won‘t open; blank icon appears in the Dock

This article has been archived and is no longer updated by Apple.

If you manually delete iSync 2.0 (which comes with Mac OS X 10.4 Tiger) and then install the iSync 2.1 update, the application won't open. Its icon will become blank (a generic icon) when you click it.

To resolve this issue, perform an Archive and Install installation of Mac OS X 10.4 or later, then install iSync 2.1. If you want to preserve your existing user accounts, Home folders, and network settings, be sure that you select the "Preserve Users and Network Settings" option (this is selected by default).

For the best results, use Software Update after reinstalling the operating system and before launching iSync or any other applications.

Published Date: Oct 7, 2016

Compressor 2: Distributed processing may seem slow

This article has been archived and is no longer updated by Apple.

When you use Compressor 2.0 to distribute processing, it may take more time to complete a batch if one or more of the computers in the cluster has a slower processor or processors. You'll notice this much more when a batch contains only one source movie with few settings applied to it.

To resolve this issue, update Compressor to version 2.0.1 using Software Update, and update all computers in the cluster to Apple QMaster 2.0.1.

Published Date: Oct 7, 2016

DVD Player: Can‘t adjust digital output volume or Audio Equalizer settings during playback in Tiger

This article has been archived and is no longer updated by Apple.

When you use DVD Player to play a movie in Mac OS X 10.4 Tiger, you won't be able to adjust the digital audio output volume (a feature on some Power Mac G5 and iMac G5 computers) in DVD Player. Also, adjustments to the Audio Equalizer settings while playing a movie in DVD Player will have no effect on digital audio output.

Although you can move the DVD Player volume slider, only external analog speakers and built-in speakers respond to the volume change.

If you need to adjust the volume on your digital output, use the volume control on your external digital audio device instead.

Published Date: Oct 7, 2016

Compressor 2: Assigning files to surround sound channels

This article has been archived and is no longer updated by Apple.

In the Compressor 2 User Manual, the section entitled "Assigning Files to Surround Sound Channels (Automatic Methods)" contains inaccurate instructions; the channel identifier codes listed in the manual are incorrect. If you use the channel identifier codes listed, you will not get a single surround source media file in the Batch window.

When you include channel identifier codes in the file names of a group of mono AIFF audio files and then drag the entire group of files into the Batch window in Compressor, the files will be assigned to the appropriate surround channels when they are converted to an AC-3 file (Dolby Digital format).

If you want to assign mono AIFF files to particular surround channels, you should use the following channel identifier codes:

Surround Channel	Channel Identifier Code
Left	-L
Right	-R
Center	-C
Surround Left	-RL
Surround Right	-RR
Surround Center	-RC
Subwoofer	-LFE

For example, if you want to assign a certain AIFF file to the Surround Left channel, rename the file as *filename*.-RL.aiff (where *filename* is the name of your file).

Note: This procedure only works when you drag and drop files into the Batch window. If you drag the files onto the application icon, they will appear as separate sources.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

iSync 2: "POSIX error" when syncing Motorola phone

This article has been archived and is no longer updated by Apple.

If you're using iSync 2 in Mac OS X 10.4 to sync with a Motorola phone though USB, you may see this alert:

> "POSIX error: Device not configured, device unplugged during sync"

This might occur after interrupting a sync. To resolve the issue, just follow these steps:

1. Turn off the phone and disconnect it from the computer.
2. Restart your Mac.
3. Turn the phone on and reconnect it.
4. Sync again.

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Published Date: Oct 7, 2016

Soundtrack Pro: Document could not be saved error

This article has been archived and is no longer updated by Apple.

When you save an audio file project as a QuickTime file in Soundtrack Pro, you may see an error that says the document could not be saved:

This happens when the drive you're saving to doesn't have enough free disk space to store the file. To resolve this issue, either free up space on the drive or save to another drive with enough available space.

Published Date: Oct 7, 2016

iPhoto 5 or later: Desktop "change picture" feature does not work with new iPhoto albums

This article has been archived and is no longer updated by Apple.

In the Desktop & Screen Saver pane of System Preferences, you can select a folder of images or an iPhoto album to display desktop pictures that automatically change at a specified interval, like a slideshow. To enable the feature, just select a source in the pane and then select the "Change picture" checkbox.

While this feature works for iPhoto albums created in iPhoto 4, the "Change picture" checkbox and corresponding pop-up menu become unavailable (dim) when you select an iPhoto album that was created in iPhoto 5 or later. This occurs due to a change in the structure of iPhoto libraries.

As a workaround, you can set your desktop pictures directly in iPhoto instead of in System Preferences:

1. In iPhoto, select the pictures you want to appear on your desktop. **Tip:** After drag selecting a group of photos, you can Command-click to add or remove photos from the selection.
2. Click the Desktop button in iPhoto. Desktop & Screen Saver preferences will open with the selected photos as an iPhoto Selection, and the "Change picture" checkbox will already be selected.
3. Adjust the time interval or random checkbox as desired.

Note: Sometimes the desktop will "stick" on the previously selected group of images. If this happens, select a background from the Apple Images list in System Preferences, then repeat the steps above. If that still doesn't work, select a background from Apple Images, log out, then repeat the steps above again.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

WebObjects 5.2: Instances are not properly restarted in direct connect mode

This article has been archived and is no longer updated by Apple.

When you set the WODirectConnectEnabled flag to YES in WebObjects 5.2 or later (all platforms), application instances that are scheduled to restart periodically in JavaMonitor won't restart. You also won't be able to activate RefuseNewSessions in JavaMonitor, and WOApplication.refuseNewSessions() will not set the refusing state.

This happens because starting with WebObjects Release 5.2, the "refuseNewSessions" feature will not work in a deployed WebObjects application when WODirectConnectEnabled is enabled.

To resolve this issue, make sure that you set WODirectConnectEnabled to NO to disable it when deploying WebObjects applications. This is strongly recommended.

If you can't disable direct connect mode, modify the method "WOApplication.refuseNewSessions()" as follows:

```
// add a private variable to keep track of refusing state
// and initialize to false
private boolean myIsRefusingNewSessions = false;
```

```
public synchronized void refuseNewSessions(boolean aVal) {
    myIsRefusingNewSessions = aVal;
    // App will terminate immediately if the right conditions
   //  are met.
    if (myIsRefusingNewSessions &&
        (activeSessionsCount() <= minimumActiveSessionsCount()))
    {
        NSLog.debug.appendln("<"+this.name()+">: refusing new clients and below min active session threshold");
        NSLog.debug.appendln("<"+this.name()+">: about to terminate...");
        terminate();
    }
}
```

```
public boolean isRefusingNewSessions() {
// To be on the safe side also keep the 'original' information here
    return ((super.isRefusingNewSessions()) || myIsRefusingNewSesions);
}
```

Note: Disabling the direct connect mode can have the following effects on a deployed WebObjects application.

1. JavaMonitor uses a direct connect URL to access statistics, so the statistics page will no longer be accessible from JavaMonitor. However, statistics for a particular instance (e.g., 2) may be accessed by entering the appropriate web server URL in a web browser (http://myhost/cgi-bin/WebObjects/MyApp.woa/2/wa/WOStats).
2. Any local access of instances using direct connect will no longer be possible.

Published Date: Feb 19, 2012

About the security content of the Mac OS X 10.4.2 Update

This article has been archived and is no longer updated by Apple.

This document describes the security content of Mac OS X 10.4.2, which can be downloaded and installed using Software Update, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How To Use The Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Mac OS X 10.4.2 Update

- **TCP/IP**

  CVE-ID: CAN-2005-2194

  Available for: Mac OS X v10.4, Mac OS X Server v10.4

  Impact: A specifically crafted TCP/IP packet can cause a denial of service.

  Description: A specifically crafted TCP/IP packet can cause the kernel to panic due to a null pointer dereference, and require a reboot. Multiple conditions are required to trigger this problem. The common practice of filtering source-routed and loose source-routed packets on network infrastructure, ingress routers, and firewalls can prevent systems from being affected. This issue does not affect previous releases of Mac OS X. Credit to Julian Y. Koh and colleagues of Northwestern University for reporting this issue.

- **Dashboard**

  CVE-ID: CAN-2005-1474

  Available for: Mac OS X v10.4, Mac OS X Server v10.4

  Impact: Users may install widgets that override Apple-supplied widgets.

  Description: Dashboard is distributed with Apple-supplied widgets, and users have the ability to add new ones. It is possible for a user to install a new widget with the same internal identifier as an Apple-supplied widget. If this occurs, the newly-installed widget will run in place of the system widget. It may not be clear to users that they are running a widget that they installed as opposed to the Apple-supplied one. This update addresses the issue by alerting users if they try to install widgets that would cause this sort of conflict. This issue does not affect previous releases of Mac OS X.

Published Date: Oct 7, 2016

Xsan Admin: Network Services interface is seen in the computers list

This article has been archived and is no longer updated by Apple.

When you add computers to an Xsan network using Xsan Admin (Settings > Computers), those that have multiple network interfaces may appear in the computers list with their Network Services interface, rather than the interface used for metadata. This is normal.

After you authenticate and serialize an Xsan computer, it will appear in the computers list with its Bonjour name. To ensure that metadata is traveling across the intended metadata interfaces, make certain that there is a communication path between the metadata interface of each metadata controller (MDC) and each client metadata interface.

To determine the interface that each MDC is using for metadata:

1. Select the Metadata Controller in Xsan Admin (Settings > Computers).
2. Click the Edit button.
3. Look at the **Access the SAN via** pop-up menu, which specifies the IP address used to communicate metadata.

Note that the **Access the SAN via** pop-up menu on Xsan clients will be dimmed and set to **Automatically Chosen**. If there is an unobstructed network link between each MDC's metadata interface and each client, the Xsan clients will automatically communicate metadata over the interface specified by the MDC's **Access the SAN via** pop-up menu.

To properly configure computers with multiple network interfaces, make sure that the metadata network is a separate physical network from the WAN network, as described in Xsan documentation:

1. Check Xsan Admin (Setup > Computers) and make sure that the metadata controllers (MDCs) are set to connect to the Xsan network using the interface that is reserved for metadata—not the WAN interface.
2. Ensure that the Network Services interface is the highest priority in your Port Configurations list (for instructions, see the "Adjusting port priority" section in the article, "Using network locations in Mac OS X").

Published Date: Oct 7, 2016

Audio drops out or has glitches at the beginning of a clip in Soundtrack Pro

This article has been archived and is no longer updated by Apple.

When you play a Soundtrack Pro project, you may hear the audio drop out briefly or hear glitches during playback when the playhead reaches the beginning of a clip in a track.

This can happen if one or more of the track's envelopes has a large number of changes in value just before the clip begins. For example, the image below shows a gradual volume ramp right before the start of a clip.

In this case, you can get the same audible result by placing the desired volume event exactly at the start of the clip, and the clip will play back smoothly. You can Control-click on an automation point and choose either **Copy value from previous point** or **Copy value from next point** from the pop-up menu.

Updating to Soundtrack Pro 1.0.2 or later will resolve this.

Published Date: Oct 7, 2016

WebObjects 5.2: xcodebuild won‘t build a project

This article has been archived and is no longer updated by Apple.

Sometimes a WebObjects application that builds successfully in Xcode may not build with the command-line tool "xcodebuild." You may see errors such as "Cannot resolve symbol." This issue affects:

- WebObjects 5.2.x
- Xcode 1.5 (Mac OS X 10.3.x)
- Xcode 2.0 (Mac OS X 10.4)

To resolve this issue, force xcodebuild to recreate the Java file list every time you build the project.

1. Open the project in Xcode.
2. In the Groups and Files list, open the Targets list, and double-click the Application Server target to put it into editing mode.
3. Click Settings and select Expert View.
4. Click the plus sign (+) button to add a new build setting.
5. In the Name column, enter `JAVA_FORCE_FILE_LIST`, and in the Value column, enter `YES`.
6. Close the project.
7. Rebuild the project with the xcodebuild command-line tool.

The project should now build successfully.

Published Date: Feb 19, 2012

Soundtrack Pro displays "Disk Limit" messages

This article has been archived and is no longer updated by Apple.

While working in Soundtrack Pro, you may get the following alert message under some circumstances:

> "Disk Limit: Soundtrack Pro is dropping audio because your computer's hard disk cannot deliver all of the audio in time. Try removing long files or quitting applications."

This disk overload message appears when the amount of data to be streamed from your computer's hard disk exceeds the disk's capacity to deliver it in real time. There are several possible reasons why this can happen. Try one or more of the following tips to avoid the issue:

- If other applications are accessing the hard drive, there will be less bandwidth available for Soundtrack Pro. Quit other applications to give Soundtrack Pro optimal access.
- If you are using the internal drive on a portable computer, it may help to use a faster external drive.

You can set Soundtrack Pro preferences to not display this dialog. To do so, choose **Soundtrack Pro** > **Preferences**, then click the General tab in the resulting window. In the "Alerts and Saving" section, click the **Show Alerts** pop-up menu and uncheck the **Disk overload message** option. You can still export mixes in this situation (with or without the error turned on), as exporting is not a realtime process.

Please note that turning off the message will not prevent audio from being dropped when your hard drive is asked for more than it can deliver, but your session will continue to play.

If you are experiencing audio glitches with Soundtrack Pro, please check this document.

Published Date: Oct 7, 2016

Using a Motorola phone featuring iTunes

This article has been archived and is no longer updated by Apple.

This article does not cover iPhone support in iTunes. For more information about iPhone support in iTunes click here.

Taking your music with you is even simpler. Just connect your Motorola phone featuring iTunes via USB and transfer the songs you want.

Note: If you see a Motorola phone featuring iTunes icon in the Mac desktop or in Windows Explorer, but not in iTunes, check the following:

- Make sure your computer meets the minimum system requirements:
  Mac OS X
  - Mac OS X 10.3.6 or later.
  - iTunes 4.9 or later

  Windows
  - Windows 2000 with the latest Service Pack, or Windows XP
  - iTunes 4.9 or later.

- If you have a Mac, you can check Software Update to see if the iTunes Phone Driver update is available for your version of iTunes. Or you can either download the latest version of iTunes or install the version on the iTunes-enabled mobile phone CD.

If you're using Mac OS X 10.4 to sync with your phone, click here for troubleshooting information.

If you're having difficulty transferring certain songs you've purchased from the iTunes Store, click here for more information.

Important: Mention of third-party websites and products is for informational purposes only and constitutes neither an endorsement nor a recommendation. Apple assumes no responsibility with regard to the selection, performance or use of information or products found at third-party websites. Apple provides this only as a convenience to our users. Apple has not tested the information found on these sites and makes no representations regarding its accuracy or reliability. There are risks inherent in the use of any information or products found on the Internet, and Apple assumes no responsibility in this regard. Please understand that a third-party site is independent from Apple and that Apple has no control over the content on that website. Please contact the vendor for additional information.

Published Date: Feb 19, 2012

Mac OS X 10.4: "The ‘%@‘ preferences pane could not be removed" alert

This article has been archived and is no longer updated by Apple.

If you've installed third-party applications that install their own preference panes in System Preferences, you can easily remove the third-party panes. However, sometimes the instructions may not work for you. For example, you may get the following alert when you try to remove a pane:

If so, use these steps instead:

1. Close System Preferences if it's open.
2. In the Finder, choose **Go to Folder** from the **Go** menu.
3. In the resulting dialog, type `/Library/PreferencePanes/`
4. Click Go (or press Return) to open the PreferencePanes folder.
5. Locate your third-party preference pane files (they end with ".prefPane"), and move the ones you don't want out of the folder or put them in the Trash (enter an administrator's password if prompted).

Note: If you want to reinstall the third-party preference pane, use the third-party software's installer. Make sure you're using a current and compatible version of the software.

Published Date: Oct 7, 2016

About the Mac OS X 10.4.3 Update (Delta)

This article has been archived and is no longer updated by Apple.

The Mac OS X 10.4.3 Update (Delta) updates Mac OS X 10.4.2 to version 10.4.3. (If you are updating from *Mac OS X 10.4 or 10.4.1* to 10.4.3, see this article instead.)

Important: Please read before installing.

- You may experience unexpected results if you have third-party system software modifications installed, or if you've modified the operating system through other means. (This does not apply to normal application software installation.)
- The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to update.
- If issues occur during installation—for example, Software Update quits unexpectedly—please see this article.

Installation

You have two ways to update to Mac OS X 10.4.3: Use Software Update or the standalone installer. You only need to use *one* of these methods to update your computer.

Automatic Software Update
Software Update, located in System Preferences, can automatically download the latest Apple software. (Software Update might have linked you to this article to learn more about the update.)

Software Update notes:

- The update's size may vary from computer to computer when installed using Software Update.
- Because some updates are prerequisites for others, you may need to run Software Update more than once to get all available updates.

Standalone installer
Two versions of the installer (Delta and Combo, described below) are available from Apple Downloads as standalone updates. After you download an update, you can use it to update your computer without being connected to the Internet.

- The Delta Update installer (described here) updates Mac OS X 10.4.2 to 10.4.3.
- The Combo Update installer (described in this article) updates Mac OS X 10.4, 10.4.1, or 10.4.2 to 10.4.3 .

The standalone installer, particularly the Combo Update, is useful if you have multiple computers to update and only want to download the update once.

Improvements

This update offers many improvements, including:

Finder and Spotlight

- Improves responsiveness during Spotlight searches in the Finder.
- Spotlight comments entered in the Finder are now preserved when using iDisk syncing.
- Get Info windows correctly display non-Roman language versions and copyright strings.
- Improves the alert that appears when replacing an item during a copy when the capitalization of the items' names is the only difference.
- Permissions for items inside packages are now correctly set when applying permission changes to enclosed items in the Finder Info window.
- Items copied into a Drop Box have permissions set correctly.
- Addresses an issue in which Spotlight cannot find a file after using iPhoto to rename it if the filename originally contained an ampersand (&).
- The Spotlight image indexer now uses the "Software" TIFF property to support graphics rendering and image editing applications that use this property.

Safari, Internet, and networking

- Safari can now pass the "Acid2" test.

- Improves compatibility of Safari with many webcams.
- Improves the handling of Hebrew and Arabic text in Safari and Mail.
- Improves compatibility for OpenGL-accelerated Macromedia Shockwave 3D webpage content when using Safari.
- Addresses an issue in which an SMB volume might not mount again after it's unmounted.
- Addresses some issues in which the Finder might not be able to connect to an SMB volume.
- Bluetooth Setup Assistant now lets you toggle the Modem menu extra on or off (you can also use System Preferences).
- Resolves an issue in which Internet Connect wouldn't connect to a dial-up ISP if the account password contained a double-quote (") character.
- Improves compatibility with Squid proxy servers.
- Japanese file names are no longer garbled when connecting to Microsoft Windows 2003 Server through AFP.

Syncing

- With this update, you no longer need to store Address Book contact URLs in the Notes field when syncing with .Mac.
- Mac sync error alerts now provide a better description of the issue (for more details about a .Mac sync error, see the dotmacsync.log file).
- Allows your Address Book contacts that are organized in subgroups to be synced to an iPod using iTunes.

Mail

- Addresses an issue in which Mail might prompt you to download items attached to an IMAP email message more than once.
- In the Fonts & Colors preferences in Mail, you can now customize the font used in the list of Mailbox names.
- Smart Mailboxes that use "Entire Message Contains" and another criteria with the "any" qualifier now work as expected.
- Smart Groups of addresses can now be dragged from Address Book to a message's To, Cc, or Bcc field.
- The number of messages in a Smart Mailbox are now displayed in the title bar.
- Pressing Tab while composing a Mail message now inserts a tab character, instead of four spaces.
- Accounts created in Mail after installing this update will avoid an issue in which .Mac mail could not be sent if the Internet Service Provider blocks port 25.
- Reduces the amount of blank lines Mail might insert into a message when forwarding or replying to it.
- Addresses an issue in which some Mail rules could be *lost or duplicated* after a .Mac sync.
- Addresses in the "To:", "Cc:", "Bcc:" fields, as well as the Accounts pop-up menu, no longer appear in red if the address is in a different lettercase than what is entered in the "Mark addresses not in the domain" field; for example, "Mac@MAC.Com" will no longer be marked in red if the "Mark addresses not in the domain" field contains "mac.com."
- Searches of "All Mailboxes" can now, optionally, include items from Junk and Trash.
- Resolves an issue in which meeting requests sent from Microsoft Outlook to an Exchange account in Mail might not appear.

iChat

- iChat preferences now allow you to display emoticons (such as a smiley face) as text (such as " **:-)** ") instead of as a graphic.
- Resolves an issue in Activity Monitor in which you might see "iChatAgent (Not Responding)" in red text, even though iChat works just fine.
- Addresses a "No data has been received for the last 10 seconds" alert that could often appear when participating in a video chat in iChat with someone using AIM on a PC.

- .Mac members can enable encrypted chat sessions after installing this update.
- Further addresses potential causes of persistent "insufficient bandwidth" alerts.

Other applications

- Disk Utility can now verify your Mac OS X 10.4 startup volume if it is Mac OS X Extended (Journaled)-formatted.
- Many improvements for Calculator are included, such as: A black triangle icon no longer appears below "Infinity." Calculator now filters out unusable characters when pasting from the Clipboard, certain "rounding error" issues are addressed, and other issues.
- Addresses an issue in which iCal could not publish or subscribe to a secure URL if your password contained a question mark (?).
- Addresses an issue in which Preview might only print the first page of a multipage TIFF document.
- Keychain Access searching is no longer case-sensitive after installing this update.
- This update allows Keychain Access to directly import .pkcs12 files.
- X11 windows no longer stay in the background after selecting the X11 application from the Dock or with Application Switcher.

Other

- Software Update now lets you know when only ignored (hidden) updates are available for installation.
- Addresses an issue in which incoming faxes are saved as "from unknown" PDF files.
- Addresses an issue in which some Traditional Chinese input methods, such as Pinyin, limit the number of candidate characters presented in the candidate window.
- Resolves an issue for Palm Desktop software in which the Command-Q keyboard shortcut would sometimes not quit the application unless it was pressed a second time.
- Improves compatibility with Microsoft IntelliPoint mouse modifier clicking; that is, mouse buttons configured to act as a Control-click or Command-click, for example.
- Improves window scrolling when dragging an item into a window that's viewed as a list, where not all of the list is visible.
- Improves compatibility with Microsoft Word and Excel 2004, addressing an issue in which the application could stop responding for several seconds.
- Addresses an issue in which cases and/or specific user conversion dictionaries could be disabled after upgrading to Tiger.
- Addresses performance issues affecting three AppleScript commands: *do shell script*, *system info*, and *delay*.
- The Core Data framework has been updated to improve relationship management issues, resolve issues with data migration, improve Undo and Redo commands, and improve insertion performance.
- Resolves a potential redraw issue in which an application window's scroll bars could appear in the wrong place.
- Allows Apple Wireless Keyboards to work in single-user mode.
- Addresses an issue in which high ASCII characters in a password could lead to a blue screen at startup, or prevent log in.
- MS-DOS-formatted volumes, including the iPod Shuffle, perform better and consistently mount (become available) in the Finder.
- Improves results when printing to an optional envelope feeder on some printers.
- Disables Quartz 2D Extreme—Quartz 2D Extreme is not a supported feature in Tiger, and re-enabling it may lead to video redraw issues or kernel panics.
- Includes previous standalone security updates.

TA23396_About_the_Mac_OS_X_Update_Delta.pdf

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Published Date: Oct 7, 2016

About the Mac OS X 10.4.3 Update (Combo)

This article has been archived and is no longer updated by Apple.

The Mac OS X 10.4.3 Update (Combo) updates Mac OS X 10.4, 10.4.1, or 10.4.2 to version 10.4.3.

Important: Please read before installing.

- You may experience unexpected results if you have third-party system software modifications installed, or if you've modified the operating system through other means. (This does not apply to normal application software installation.)
- The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to update.
- If issues occur during installation—for example, Software Update quits unexpectedly—please see this article.

Installation

You have two ways to update to Mac OS X 10.4.3: Use Software Update or the standalone installer. You only need to use *one* of these methods to update your computer.

Automatic Software Update
Software Update, located in System Preferences, can automatically download and install the latest Apple software. (Software Update might have linked you to this article to learn more about the update.)

Software Update notes:

- The update's size may vary from computer to computer when installed using Software Update.
- Because some updates are prerequisites for others, you may need to run Software Update more than once to get all available updates.

Standalone installer
Two versions of the installer (Delta and Combo, described below) are available from Apple Downloads as standalone updates. After you download an update, you can use it to update your computer without being connected to the Internet.

- The Delta Update installer (described in this article) updates Mac OS X 10.4.2 to 10.4.3.
- The Combo Update installer (described here) updates Mac OS X 10.4, 10.4.1, or 10.4.2 to 10.4.3 .

The standalone installer, particularly the Combo Update described here, is useful if you have multiple computers to update and only want to download the update once.

Improvements

This update offers many improvements. For a list of some of them, see this article.

Published Date: Oct 7, 2016

Mac OS X 10.4: Japanese message doesn‘t appear correctly in web mail or on cell phone when sent from Mail

This article has been archived and is no longer updated by Apple.

If you send a message from Mail in Mac OS X 10.4 that contains Japanese language characters, it may not appear correctly in web mail (email accessed from a webpage) or on some cell phones.

This can happen because Mail encodes Japanese language messages as UTF-8 by default when English is the primary language selected in International preferences.

To resolve this issue, use Terminal to switch from using UTF-8 encoding to ISO-2022-JP encoding:

1. Open the Terminal (/Applications/Utilities/).
2. Type the following command at the prompt:

   ```
   defaults write com.apple.mail NSPreferredMailCharset "ISO-2022-JP"
   ```

3. Press Return to execute the command.
4. Quit Terminal.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

About the security content of the AirPort 4.2 update

This article has been archived and is no longer updated by Apple.

This document describes the security content of AirPort 4.2, which can be downloaded and installed using Software Update, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How To Use The Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

AirPort 4.2

CVE-ID: CAN-2005-2196

Available for: Mac OS X v10.3.3 through Mac OS X v10.3.9, and Mac OS X v10.4.2

Impact: Mobile users with the original AirPort Card enabled could automatically associate to an unsecure network.

Description: When not associated with a known or trusted network, the original AirPort Card connects to a randomly generated network with a default WEP key. This can allow mobile users to automatically associate with untrusted networks without warning. This does not affect AirPort Express Cards, which currently ship in systems. This update addresses the issue by selecting a randomly-generated 128-bit WEP key. Credit to Dino Dai Zovi for reporting this issue.

Published Date: Oct 7, 2016

Power Mac G5: Keyboard commands don‘t work during startup

This article has been archived and is no longer updated by Apple.

Normally, when your computer starts up, you can use certain keyboard shortcuts to tell the computer to start up from an optical disk, reset PRAM, start up in FireWire Target Disk mode, start up in verbose mode, and so forth.

In some circumstances, a Power Mac G5 may no longer function as expected. If you find the computer isn't responding to any of these startup keystrokes, follow these steps to troubleshoot the issue.

1. Disconnect all USB devices except your Apple keyboard and mouse. (Make sure the keyboard and mouse work correctly before you shut the computer down.) Test from this configuration to see if a USB device is interfering in any way.
2. Make sure that the Open Firmware password is not enabled.
3. Start up the computer and keep the power button held in until the Open Firmware screen appears. When you see the Open Firmware screen and prompt, type `reset-nvram` and press return to clear NVRAM. On the next line, type `reset-all` and press return to restart the computer.

If the issues persist after trying all these steps, your computer may require service. Please contact your local Apple Retail Store or Apple Authorized Service Provider for further assistance.

Published Date: Feb 20, 2012

"Mac OS X Networking Update" error during iPod software installation

This article has been archived and is no longer updated by Apple.

If you try to install older iPod software onto a computer with Mac OS X 10.4 Tiger, you may see the following error message about a missing Mac OS X Networking Update:

> iPod 2 Software cannot be installed on this computer. This update requires the Mac OS X Networking Update.

This can happen with any Mac with Mac OS X 10.4 or later when you try to use older iPod software. To avoid this, download and install the latest iPod Updater.

Published Date: Oct 7, 2016

Mighty Mouse: Using the side buttons to let go of an item

This article has been archived and is no longer updated by Apple.

If you're using a Mighty mouse with your computer, sometimes releasing the two side buttons may not release an item that you've selected. If this happens, you may have clicked another mouse button prior to releasing the side buttons. Try simultaneously pressing the side buttons again to release the item.

Published Date: Feb 19, 2012

Mighty Mouse: What to do if you accidentally click the secondary button

This article has been archived and is no longer updated by Apple.

When you click the secondary button on your Mighty Mouse, you will most likely see a contextual menu appear, depending on what you clicked on. In some applications, clicking the secondary button starts a certain function.

If you clicked the secondary button by accident, just click the primary button to clear the menu or action.

Published Date: Feb 19, 2012

Using Mighty Mouse to open applications

This article has been archived and is no longer updated by Apple.

You can make Mighty Mouse open applications with a single click of a button. To configure your Mighty Mouse to do this:

1. Open System Preferences (from the **Apple** menu, choose **System Preferences**).
2. Click Keyboard & Mouse to open its preference pane.
3. Click the Mouse tab.
4. Choose which button you want to assign to open the application. From the appropriate pop-up menu, choose **Other**.
5. This will bring up a navigation window. Navigate to and select the application you want, then click Open.

The button in the Mouse tab will now show which application it will open. For example, if you wanted the button to open DVD player, the menu next to the button will say `Open "DVD Player"`.

Note: This applies only to applications—not documents or AppleScripts.

Published Date: Feb 18, 2012

Downloading iSync 2.1 with the softwareupdate command-line tool

This article has been archived and is no longer updated by Apple.

If you'd like to download iSync 2.1 with the softwareupdate command-line tool, make sure that your current working directory is at the root level of the startup volume (you should be at /). You can then use the softwareupdate tool to get iSync 2.1.

Note: iSync 2.1 requires Mac OS X 10.4 or later. It will not appear in Mac OS X 10.3.9 or earlier.

To see if this update is *available* for the computer via softwareupdate, execute these commands:

```
$ cd /
$ sudo softwareupdate -l
```

To *install* iSync 2.1 using the softwareupdate command-line tool, execute the following two commands:

```
$ cd /
$ sudo softwareupdate -i iSync\ 2.1
```

To install software updates with softwareupdate, you must run the command with sudo or as the root user. Be sure to include the backslash (\) character in "iSync\ 2.1" so that softwareupdate correctly interprets the space in the file name. Backslash is also known as "reverse solidus".

If you want to use Software Update (part of System Preferences—from the **Apple** menu, choose **Software Update**) to download iSync 2.1 instead of using softwareupdate, you needn't worry about what your current working directory is.

To learn more about this tool, type `man softwareupdate` in Terminal.

Published Date: Oct 7, 2016

Mac OS X 10.4: Network error (bad server response -1011) when using Software Update

This article has been archived and is no longer updated by Apple.

If you're using Software Update in Mac OS X 10.4 "Tiger" and use a satellite-based Internet service provider (ISP) to connect, you may not be able to download updates. Instead, you may get an error code -1011 (bad server response) message.

You can address the issue by dragging these two Software Update Cache files to the Trash:

- "com.apple.SoftwareUpdate", located at `/Library/Caches/`
- "com.apple.SoftwareUpdate", located at `~/Library/Caches/`

Note: For locating the first file, `/Library` refers to the Library folder at the top level (or "root") of your hard disk. For the second file, the tilde (~) refers to your Home folder.

Deleting the cache files is a temporary solution, and will only allow Software Update to function correctly one time. You'll need to delete the cache files each time you use Software Update. As a workaround, you can also download standalone update installers from Apple Downloads.

Published Date: Oct 7, 2016

iCal: Unable to find events created prior to 10.4.2 update

This article has been archived and is no longer updated by Apple.

After updating to Mac OS X 10.4.2, you may not be able to find iCal 2.0.2 events that were created prior to updating when using the search function in iCal.

When you search for a particular event in iCal, iCal won't display the event in its search results, but you can find the event by browsing to the appropriate day in an iCal calendar or by using Spotlight.

Solution

1. From the iCal **File** menu, choose **Backup Database**.
2. Quit iCal.
3. Navigate to ~/Library/Application Support/iCal/Sources.
4. Open each folder in the Sources folder and remove the file named "Index."
5. Open iCal; it will re-index your events.

Published Date: Feb 18, 2012

Compressor 1.x settings do not work with Compressor 2

This article has been archived and is no longer updated by Apple.

If you upgrade from Compressor 1.x to Compressor 2, the old presets from Compressor 1.x may still be available in Compressor 2 within the Custom folder in the Presets window. However, these settings do not work with Compressor 2.

Even though you can select and apply these older "inherited" settings to a job in the Compressor 2 Batch window, they will produce undesirable results. You should avoid using these settings and remove them instead. To remove them:

1. Quit Compressor if it's open.
2. Open ~/Library/Application Support/
   Note: The tilde (~) refers to your Home folder. For more information, see "Mac OS X: Using Your Home Directory."
3. Drag the Compressor folder to the Trash.

The next time you open Compressor 2, only the new Apple optimized settings will appear in the Preset window (these are stored in a new folder at the above location). Any custom settings you create in Compressor will also be stored in this folder.

Compressor 2 settings

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

TA23411_Official_Apple_Support.pdf

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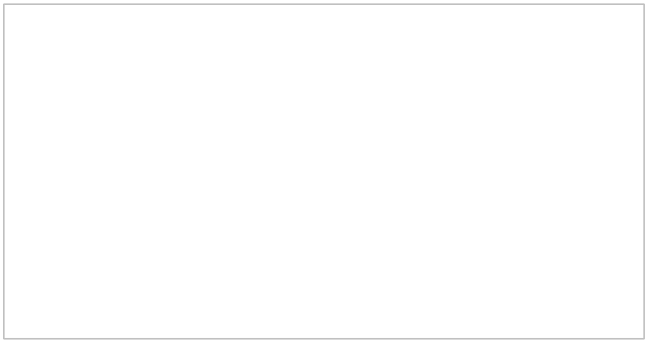

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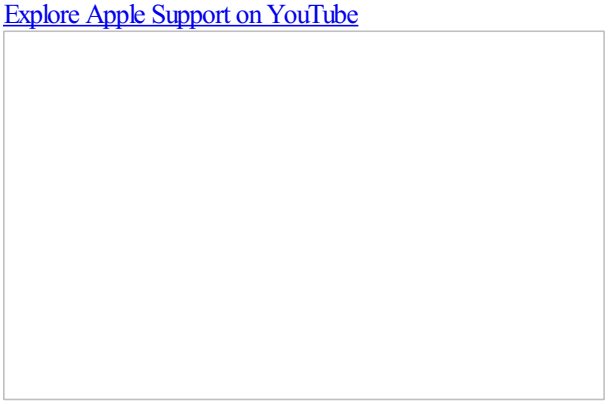

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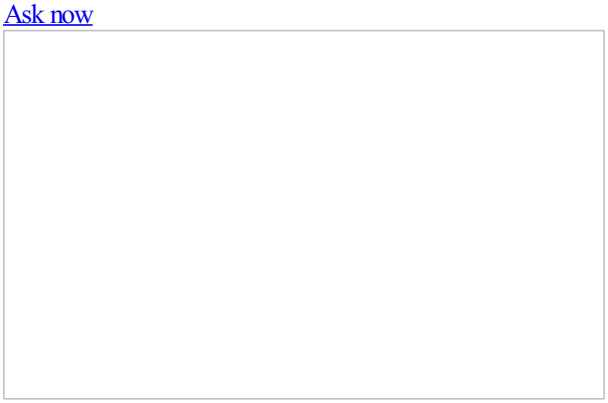

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- iPhone 6s Program for Unexpected Shutdown Issues
- Multi-Touch Repair Program for iPhone 6 Plus
- Apple AC Wall Plug Adapter Recall Program
- Beats Pill XL Speaker Recall Program
- All Programs

Using a third-party mouse with Mighty Mouse may cause unexpected behavior

This article has been archived and is no longer updated by Apple.

When you connect a Mighty Mouse to your computer, special settings for configuring the Mighty Mouse appear in the Keyboard & Mouse preferences. These settings may cause unexpected behavior with a third-party multibutton mouse if it is connected to your computer at the same time as the Mighty Mouse.

To avoid this issue, only connect one mouse at a time to the computer.

Published Date: Feb 18, 2012

Mighty Mouse: Always assign a unique function to each button

This article has been archived and is no longer updated by Apple.

If you assign one of your Mighty Mouse buttons to do the same function as another button, the original button will change its setting. To avoid such conflicts, always assign a unique function to each button.

The only exception to this is that you can set both the left and right buttons to act as the primary button—if you do this, both buttons will behave the same way regardless of whether you left-click or right-click.

Published Date: Feb 19, 2012

iCal: Change the paper size setting if you can‘t print a calendar

This article has been archived and is no longer updated by Apple.

Having a hard time printing an iCal calendar in Mac OS X 10.4 because only a portion of the calendar prints? Try choosing a different paper size setting:

1. In iCal, choose **Print** from the **File** menu.
2. Select a different paper size from the **Paper** pop-up menu, such as **A4** or **A5**. You don't have to actually put A4- or A5-sized paper in your printer.
3. Print the calendar.

This document will be updated as more information becomes available.

Published Date: Feb 18, 2012

.Mac: How to verify and change your .Mac auto renewal settings

This article has been archived and is no longer updated by Apple.

If you set your .Mac account to automatically renew each year, you can verify your .Mac renewal settings by accessing the Account section of .Mac. The Account Settings page displays the details of your .Mac account, including your storage information, bandwidth, and the date that your account is scheduled to renew.

If your account is within 60 days of renewal, you will see a button that says "Review my Renewal Settings." Click this link to view or modify your renewal settings and add or subtract upgrades to or from your account, respectively.

If you are not within 60 days, you can enable or disable the Auto-Renew option; just click the Credit Card Info button on the Account page and make your changes on the resulting page.

Note: Any upgrades that you add or remove on the Renewal Settings page will take effect on your renewal date.

Published Date: Oct 7, 2016

Motion unexpectedly quits when exporting a project

This article has been archived and is no longer updated by Apple.

If you customize the export settings in a Motion project, the application may unexpectedly quit the next time you open the project and try to export it again.

To make exporting easier, Motion includes a variety of export presets. You can customize the included export presets or create new presets to suit your specific needs. If you customize the settings by clicking "Options" and then changing any parameter before exporting your project, Motion may not be able to read the project file. The next time you try to export a QuickTime movie from your Motion project or change its advanced QuickTime compression or audio settings, Motion may unexpectedly quit.

This can happen with Motion 1 or 2 in Mac OS X 10.3 or 10.4. This issue doesn't occur if you use the existing presets or a custom preset that you previously created.

Update to Motion 2.0.1 to address this issue.

If this issue does occur and you're not able to update, you can correct it by editing the project file:

1. Close your Motion project.
2. Make a backup of your Motion project file.
3. Open your original Motion project in TextEdit (just drag the project onto the TextEdit icon in the Dock or in your Applications folder).
4. Choose **Edit** > **Find** > **Find** (or press Command-F) to open the Find window.
5. In the Find field, type `<videoFormatOptions>` and click Next.

6. TextEdit highlights the word in the project file. Select and delete the entire <videoFormatOptions> line and the <videoOptionsSize> line below it.

7. Look down a few lines and select and delete the entire <audioFormatOptions> line and the <audioOptionsSize> line below it.

8. Save the edited Motion project file.

Published Date: Oct 7, 2016

iMac G5 Sleep Light Update: Restart your computer after installing

This article has been archived and is no longer updated by Apple.

The 'iMac G5 Sleep Light Updater' updates the firmware on your iMac G5 so that the sleep indicator light is not as bright during the evening. The daytime brightness remains the same.

When you install the iMac G5 Sleep Light Update, you will need to restart your iMac G5 for the software to take effect. You will not get a dialog that prompts you to restart your computer.

If you haven't installed the iMac G5 Sleep Light Update but wonder if you should, check Software Update (from the **Apple** menu, choose **Software Update**) to see if the update appears in the list. If it doesn't, you have either already installed it or the update doesn't apply to your computer.

Note: Once the update has started, do not cancel or interrupt it. The updater takes over one minute to complete. During the update, your computer fans will run at full speed, but will return to normal once the update completes.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Mac OS X Server 10.4: Kerberos authentication services may not successfully start

This article has been archived and is no longer updated by Apple.

Network delays or DNS configuration issues may prevent Mac OS X Server 10.4 or later from starting Kerberos authentication services. If the services don't start, Kerberos authentication won't work.

Tip: To find out if Kerberos has successfully started, scope out the overview using Server Admin (**Server Admin > Open Directory > Overview**).

To resolve this issue, follow the steps below for your situation. Please note that in the following sets of instructions, we're referring to the example server that delivers Kerberos authentication services as Key Distribution Center, or "KDC."

Mac OS X Server 10.4 is installed

If you're running Mac OS X Server 10.4 or later but Kerberos authentication services won't start, follow these steps:

1. Configure DNS Services to resolve your KDC's IP address to a fully qualified domain name (FQDN, such as "www.example.com"). For instructions on how to configure DNS Services, see Network Services Administration.

   Optional: To ensure consistent Kerberos services, you can configure the hosts file to resolve the server's hostname to its IP Address. Note that the hosts file is not updated by the "changeip" command, so you must manually update it if you change the IP Address or hostname of the server.

   "Use a text editor to open the /etc/hosts file, then add the following entry to the end of the file:

   ```
   IP address FQDN
   ```

   ... where `IP address` is the IP address of the KDC, and `FQDN` is the fully qualified domain name that you specified on your DNS server.

   For example: `123.456.78.910 www.example.com`

2. In Terminal (/Applications/Utilities), execute the following command:

   ```
   sudo scutil --set HostName <FQDN>
   ```

   ... where `FQDN` is the fully qualified domain name of this server that was configured on your DNS server.

3. In Terminal (/Applications/Utilities), execute the following three commands:

   ```
   slapconfig -kerberize diradmin REALM_NAME
   sso_util configure -r REALM_NAME -f /LDAPv3/127.0.0.1 -a diradmin -p diradmin_password -v 1 all
   sso_util configure -r REALM_NAME -f /LDAPv3/127.0.0.1 -a diradmin -p diradmin_password -v 1 ldap
   ```

   (where `diradmin` is the directory administrator's short name, `diradmin_password` is the directory administrator's password, and `REALM_NAME` is the name of your Kerberos realm--which will usually be one's search domain in all uppercase characters--and `FQDN_of_KDC` is the FQDN to which your KDC's IP address resolves).

4. Reboot the KDC.

If Mac OS X Server 10.4 is not installed

If you haven't yet installed Mac OS X Server 10.4 but want to ensure that Kerberos authentication services will be active once you do install and configure it, do the following:

1. Install Mac OS X Server 10.4 on the KDC.
2. Once the installation completes, you will be prompted to configure the KDC in the Setup Assistant. Do *not* configure the server. Instead, hold the server's power button for 5 or more seconds, then start it again.
3. Start up the server in Single-User mode.
4. At the prompt, type: `fsck -yf`
5. If the computer indicates that the filesystem was modified, repeat the `fsck -yf` command until you get a message that states the filesystem is OK.

6. Once you get the "OK" message, type: `reboot`
7. Start up in Single-User mode again.
8. At the prompt, type: `mount -uw /`
9. Type: `sh /etc/rc`
10. Type: `sudo scutil --set HostName <FQDN>`

    ... where `FQDN` is the fully qualified domain name of this server that will be configured on your DNS server.

11. Use a text editor to open the /etc/hosts file, then add the following entry to the end of the file:

    ```
    IP address FQDN
    ```

    For example, `123.456.78.910 www.example.com`.

    (where `IP address` is the IP address of the KDC, and `FQDN` is the FQDN that you specified in step 10).

12. To exit Single-User mode, at the prompt, type:

    ```
    $ exit
    ```

    After the unit starts up, go through the Setup Assistant.

13. Complete the Server Setup Assistant.
14. Configure DNS Services to resolve your KDC's IP address to a FQDN. For instructions on how to configure DNS Services, see Network Services Administration.

Published Date: Feb 20, 2012

Mac OS X 10.4: How to change an application‘s language to be different from the primary system language

This article has been archived and is no longer updated by Apple.

In Mac OS X "Tiger" versions 10.4 to 10.4.2, you can't deselect an application's primary system language in the Info window (the window you see after selecting an application in the Finder and choosing File > Get Info). For example, if you have German set as your computer's primary system language, the "German" checkbox in the Languages section of the Info window will be dimmed.

To resolve this issue, update to version 10.4.3 or later. After updating, you'll be able to deselect the primary system language as long as at least one other language box remains checked. When only one language is checked, it will remain dimmed until at least one other language checkbox is selected.

If for any reason you're unable to get 10.4.3 immediately, you can follow the workaround presented below. We're going to assume that German is the primary system language and that you want to use Logic in English in this example, but the same steps apply for other language combinations.

1. From the **Apple** menu, choose **System Preferences**.
2. Click International, then click the Language tab. The computer's primary language is listed at the top of the list (Deutsch in this example).
3. Drag English to the top of the list.
4. Quit System Preferences.
5. Log out of your computer (from the **Apple** menu, choose **Log Out *your_name***), then log back in.
6. Select the desired application in your Applications folder.
7. Choose **File > Get Info**.
8. Click the Languages disclosure triangle in the Info window.
9. Deselect the German checkbox, then close the window.
10. Go back to the International preference pane, but this time drag Deutsch to the top of the list, leaving English in the second position.
11. Log out and back in again so that the language change takes effect.

Now your application will use English, even though the primary system language is German.

Published Date: Feb 19, 2012

Logic Pro/Express 7: Lyrics appear as symbols instead of words

This article has been archived and is no longer updated by Apple.

With certain fonts, lyrics that you enter in the Score window in Logic Pro 7 or Logic Express 7 may appear as music dynamic markings instead of as words. To avoid this issue, do not use the following fonts in Logic:

- Baskerville Semibold
- Futura Condensed
- Helvetica New Black Condensed
- Helvetica New Bold Condensed
- All CE fonts (such as Times CE, Monaco CE, and so on)
- Lucinda Grande CY
- Monaco CY (Mac OS 10.4.2 only)

To change the font:

1. In the Score window, choose **Text > Text Styles**.
2. Assign a different font to Plain Text.

Published Date: Feb 19, 2012

Mac OS X Managed Client: How to prevent Dashboard access

This article has been archived and is no longer updated by Apple.

If you need to prevent someone from accessing Dashboard, there are several ways to do this. For purpose of this article, a "locally managed" client is one managed via Parental Controls settings in the Accounts preference pane; and a "networked managed" client is one managed via Workgroup Manager.

Locally-managed clients

To prevent Dashboard from opening when selected, enter this command in Terminal at a client computer:

```
defaults write com.apple.dashboard mcx-disabled -boolean YES
```

Network-managed clients

For network-managed clients, you have a choice of two ways to do this. The first method is preferred.

Method 1: Prevent all access to Dashboard

You can configure this setting using the Preference Editor in Workgroup Manager by following these steps:

1. Execute the above command on a system (if you haven't already), which will generate a plist file needed for a later step.
2. Open Workgroup Manager and select a user, group, or computer list.
3. Select Preferences.
4. Click the Details tab.
5. Click the Add button, then navigate to the plist file:

   ```
   /Users/User_Name/Library/Preferences/com.apple.dashboard.plist
   ```

   Note: If desired, you can edit the preference file and move this setting to the Always section. By default, Workgroup Manager will import it into the Often section. Use these steps:
   a. Select the com.apple.dashboard preference item.
   b. Click the Edit button.
   c. Click the disclosure triangle next to Often to reveal its contents.
   d. Delete all of the keys by selecting each key and then clicking the Delete button above.
   e. Click the disclosure triangle next to Always to reveal its contents (it will be empty by default).
   f. Add the following key by selecting "Always" and pressing the New Key button above:

   ```
   Name  Type Value
   mcx-disabled boolean true
   ```

6. Click the Apply Now button.
7. Click the Done button to dismiss the sheet.

Dashboard will still appear in the Dock as an active application, but it won't open when someone selects it.

Method 2: Disable the sub-launching option in Workgroup Manager

This method will prevent access to all Dashboard widgets. To do this, follow these steps:

1. Open Workgroup Manager and select a user, group, or computer list.
2. Select Preferences, then Applications.
3. Deselect the "Allow approved applications to launch non-approved applications" option to disable sub-launching.

This allows Dashboard to display, but you won't be able to open any widgets. Any currently open widgets will close automatically.

Published Date: Feb 18, 2012

iSync: Can‘t sync Verizon Treo with iSync

This article has been archived and is no longer updated by Apple.

If you can't sync a Verizon-supplied Treo 650 (a Palm OS phone) with iSync, or if some data syncs with the Treo but other does not, make sure that the Treo is set to sync with other applications, as follows:

1. On the Treo, open the Wireless Sync application.
2. From the Wireless Sync **Setup** menu (press the menu button to make it appear), choose **Connection Settings**.
3. Click Advanced.
4. Select the "Enable other sync apps" checkbox.
5. Try to sync.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

Mac OS X Server: "Could not verify the identity of the site" message when SSL is enabled on multiple sites

This article has been archived and is no longer updated by Apple.

When using any version of Mac OS X Server to serve sites with Web Services, you can enable SSL on multiple sites that resolve to a single IP address, but only the certificate of the first listed site will be used. This is due to a fundamental limitation of how SSL works.

When users connect to the other sites at the same IP address, they'll receive an error message like this:

> Could not verify the identity of the site www.example.com.

To resolve the issue, use a unique IP address for each SSL-enabled site.

Background: When an HTTPS connection is initiated, the two hosts first set up an encrypted transport and then send the request to the server for the website. The web server won't know what hostname is about to be requested until after the encrypted transport is established. Because there is no way to change the encryption mid-connection, there is no way to change the keys used.

Published Date: Oct 7, 2016

Sound emanates from internal speakers even when a Bluetooth device is selected

This article has been archived and is no longer updated by Apple.

Audio may unexpectedly revert back to playing through your computer's internal speakers (or the sound out port) when a Bluetooth audio device, such as headphones, gets disconnected. Some examples of how a Bluetooth device can get disconnected include dead batteries, being powered off, or going out of range.

Even after the audio reverts to your computer's internal speakers, the Sound preference pane will still show Bluetoooth as the selected sound output source. When opening the Sound preference pane, a "Bluetooth Audio Failed" message will appear. You should simply dismiss the message and select "Internal Speakers" as the output source. This will get rid of the "Audio Failed" message and allow you to avoid further confusion until the next time you use the Bluetooth audio device.

Published Date: Feb 18, 2012

Logic Pro 7: Ultrabeat, EXS24 or Audio Unit instrument not triggered by virtual keyboard

This article has been archived and is no longer updated by Apple.

Under certain circumstances, clicking the virtual keyboard in the Ultrabeat, EXS24 or Audio Unit instrument interface won't produce any sound. In this situation, the virtual keyboard in the Matrix window also fails to produce sound.

This issue only occurs when using multi-channel instances of instrument plug-ins on sounds that are assigned to outputs other than Main. If this happens, put Logic into play. Another solution is to play a MIDI note into the instrument, either from an external MIDI controller or the Caps Lock Keyboard in Logic, to resolve the issue.

This document will be updated as more information becomes available.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

Logic Express 7: Audio plays over and over after clicking Pause

This article has been archived and is no longer updated by Apple.

After clicking the Pause button in Logic Express 7, the last half second or so of audio may play back repeatedly under certain circumstances.

This happens with some PCI and PCMCIA audio cards. To work around this issue, open the Sound preference pane in System Preferences and leave it open while working with Logic Express.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

Compressor 2: Field order reversed when transcoding HDV to MPEG-2

This article has been archived and is no longer updated by Apple.

Symptom

When transcoding 1080i HDV video to MPEG-2 in Compressor 2, the MPEG-2 presets incorrectly reverse the field order. The results can appear as "jittery" video when viewed on an NTSC monitor or television.

Solution

To resolve this issue, install Pro Application Update 2005-02 using Software Update.

Published Date: Oct 7, 2016

iTunes Store icon does not appear in iTunes 6

This article has been archived and is no longer updated by Apple.

Learn how to turn on the iTunes Store icon in iTunes 6 and earlier.

To access the iTunes Store, just click the green iTunes Store icon in the iTunes Source list, shown below. If this icon does not appear, it may be turned off.

If this is the case, follow these easy steps to turn the iTunes Store back on:

1. Install the latest version of iTunes. You can download iTunes (it's free) from the Download iTunes webpage. If iTunes is already installed on your computer, check your version and update if necessary.
2. Open iTunes.
3. If you're using a Mac, choose **Preferences** from the **iTunes** menu. If you're using Windows, click **Preferences** on the **Edit** menu.
4. Click the green Store button to display its preferences.
5. Select the "Show iTunes Store" checkbox.
6. Click OK.

Published Date: Oct 7, 2016

Compressor and QuickTime: About the displayed frame size of MPEG-2 video

This article has been archived and is no longer updated by Apple.

The frame size you see reported for MPEG-2 video may not be accurate in all applications.

QuickTime has the ability to play back MPEG-2 content using the QuickTime MPEG-2 Playback Component, which is available as an add-on to QuickTime Player. This component is included with Apple DVD Studio Pro, Final Cut Pro, Motion, and Final Cut Studio.

Please note that the frame size reported by the MPEG-2 Playback Component represents the **displayed** size of the MPEG-2 video—not the actual pixels that comprise the video. This is due to the MPEG-2 format's use of non-square pixels.

The QuickTime MPEG-2 Playback Component displays MPEG-2 content in the correct geometrical proportions (4:3). For example, an NTSC MPEG-2 file for DVD-Video is commonly 720 pixels wide and 480 pixels tall. However, 720 x 480 is not equivalent to a 4:3 ratio. This is normal. In DVD playback, the software adjusts the geometry of the MPEG-2 video, scaling the image to the correct proportions.

The QuickTime MPEG-2 Playback Component will display a 720 x 480 MPEG-2 video as 640 x 480 to present the correct proportions. QuickTime Player (and some other applications that use QuickTime to display video) will report that the video is 640 x 480, but the actual pixel dimensions are still 720 x 480, conforming to the MPEG-2 specification for DVD-Video.

Similarly, PAL MPEG-2 video is displayed in the correct 4:3 aspect at a 720 x 540-pixel resolution, although the actual non-square pixels that comprise the video are really 720 x 576.

DVD Studio Pro (included with Final Cut Studio and available separately) can validate an MPEG-2 video file and reveal its actual dimensions. QuickTime Player, Final Cut Pro, and Compressor should not be used to validate an MPEG-2 video's frame size.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

iPod Software 1.2.1 for iPod with color display: Accessing and changing settings

This article has been archived and is no longer updated by Apple.

iPod Software 1.2.1 for iPod with color display includes many different settings options. This article will discuss these settings and how to change them. Please note that other versions of iPod Software may have different features and default settings.

You can change settings on an iPod with iPod Software 1.2.1 for iPod with color display in three different locations. You can access various settings in the Settings menu (in the main menu), in Photos > Slideshow Settings, and in Extras > Clock.

The Settings Menu

You can access the Settings menu from the main menu on your iPod (the menu that's labeled "iPod"). Here are the options you can access and change in the Settings menu.

- **About**
  The About option displays information about iPod, including:
  - Songs—The number of songs and audiobooks synchronized to iPod from iTunes.
  - Photos—The number of photos synchronized to iPod from iTunes.
  - Capacity—The size of the hard drive in bytes (find more information on how capacity is calculated).
  - Available—The amount of free space available on your iPod hard drive.
  - Version—The installed version of iPod Software.
  - S/N—Your iPod serial number.
  - Model—Your iPod model number.
  - Format—This option appears if iPod has been formatted for use with Windows-based computers.
- **Main Menu**
  This menu allows you to customize which menu options are displayed in the main menu.
- **Shuffle**
  Available settings: Off (default), Songs, Albums
  When you enable this feature, your iPod shuffles (randomly chooses) songs to play from an album, playlist, or iPod library, depending on your setting. For more information, see "iPod 1.1: About Shuffle."
- **Repeat**
  Available settings: Off (default), One, All
  This setting allows you to have iPod repeat a song or selected list. If you set Repeat to One, iPod repeats the selected song over and over. If you set it to All, your iPod repeats all the songs in the selected list (album, playlist, or library).
- **Backlight Timer**
  Available settings: Off, Always On, preset number of seconds (10 Seconds is the default)
  The Backlight Timer allows you to set how long the backlight illuminates so you can see your iPod display in dim lighting. If you set the Backlight Timer to Always On or one of the preset number of seconds, the backlight will turn on for the specified time any time you press a button or scroll the wheel. If Backlight Timer is set to Off, you can temporarily turn it on by pressing the Menu button for about 2 seconds; the backlight will then remain on for about 30 seconds.
  Note: You may have to charge your iPod battery more frequently if the backlight is constantly on.
- **Audiobooks**
  Available settings: Slower, Normal (default), Faster
  This setting allows you to select the playback speed when listening to audiobooks.
- **EQ**
  Available settings: Off (default), one of 21 equalizer presets
  iPod features the same equalizer presets available in iTunes to help make your audio sound even better. For more information, see "iPod: About the Equalizer."
- **Compilations**
  Available settings: On, Off (default)
  When you set Compilations to On, it adds a Compilations menu to the Music menu that displays all audio files that are identified as being part of a compilation.
- **Sound Check**
  Available settings: On, Off (default)
  This setting only works if you enabled the Sound Check feature in iTunes before synchronizing the audio files to iPod. When Sound Check is On, iPod adjusts all song volumes so that they all play at the same level.
- **Clicker**
  Available settings: Speaker (default), Headphones, Both, Off
  This setting controls the audible feedback when you scroll the wheel or press buttons. When you set Clicker to Speaker, you hear a clicking sound from only the internal speaker. If Clicker is set to Headphones, you hear the clicking sound only in the headphone output.
- **Date & Time**
  This setting allows you to set the time, date, and time zone. You can set iPod to display the time as a 12-hour (default) or 24-hour clock,

and whether the time displays in the title of most menus after a short period of inactivity (this setting is Off by default).

- **Contacts**
  This setting allows you to set the sort order and the display order of your contact names on iPod. By default, iPod sorts and displays names in "First Last" order. For more information, see "iPod: How to Change Contact Display and Sort Settings."
- **Language**
  iPod can display its menu items in a variety of languages. This setting does not change the native language of playlists, artists, or songs (you can do this in iTunes). When you first use iPod or reset iPod, you will be asked to select a menu language.
- **Legal**
  iPod displays a screen with legal information, including trademarks and copyrights.
- **Reset All Settings**
  Available settings: Cancel (default), Reset
  This menu choice always displays in English, regardless of the selected language. If you select Reset, all settings in the Settings menu will return to their default settings.

Photos > Slideshow Settings

You can access the Slideshow Settings menu from the Photos menu (accessible from the main menu) to control how your images appear in a slideshow. Here are the options that you can set to your liking.

- **Time Per Slide**
  Available settings: Manual, preset number of seconds (3 Seconds is the default)
  The Time Per Slide menu lets you set how long a photo appears in the slideshow. When you set Time Per Slide to Manual, you'll need to press the Next/Fast Forward button or the Previous/Rewind button to change slides. When you set it to any of the timed options, each photo appears for that specified time—if you want to skip to the next slide before the time has elapsed, press the Next/Fast Forward button or the Previous/Rewind button.
- **Music**
  Available settings: Off (default), From iPhoto, Playlist, On-The-Go
  This setting allows you to choose music to play during the slideshow. At the end of a slideshow, the music continues to play until you press the Menu button to end the slideshow. Here's what each setting offers:
  - From iPhoto—This option plays music from settings in iPhoto, and is only available if you selected iPhoto (Mac only) as the location to synchronize photos from in the iPod preferences pane in iTunes.
  - Off—No music plays during the slideshow.
  - Playlist—The audio files in the selected playlist play during the slideshow.
  - On-The-Go—Audio files in the On-The-Go playlist play during the slideshow. If you haven't added any audio files to the On-The-Go playlist on your iPod, no music plays.
- **Repeat**
  Available settings: Off (default), On
  If you set Repeat to On, the slideshow will repeat. To end a slideshow, press the Menu button.
- **Shuffle Photos**
  Available settings: Off (default), On
  When you set Shuffle Photos to On, the slideshow will display all photos in random order. This option won't repeat any photo until the slideshow has displayed each photo in the selection. If Repeat is also set to On, the order will change randomly on every pass through the selection.
- **Transitions**
  Available settings: Off, Random (default), preset transitions
  This setting allows you to select the type of transition used to go from one picture to the next in a slideshow.
- **TV Out**
  Available settings: Ask (default), On, Off
  The TV Out menu lets you set whether iPod displays the slideshow to its video out port or on screen. Ask is the default setting; iPod displays a Start Slideshow screen that lets you select the output. When you set TV Out to On, external television support is turned on. This setting requires more power and can quickly consume the battery (you should use an iPod Power Adapter or Dock to charge iPod while showing a slideshow on a television). When this option is Off, the slideshow is only displayed on your iPod display.
- **TV Signal**
  Available settings: NTSC, PAL
  This setting allows you to select the TV signal (the default is set to the standard signal for your country). If you select the wrong TV Signal setting, the TV image may appear gray, distorted, or rolling.

Extras > Clock

You can access the Clock menu from the Extras menu (in the main menu) to change the time and date settings on your iPod and more. Here's what you can set in this menu.

- **Alarm Clock**
  The Alarm Clock menu allows you to turn the alarm clock on or off (the default). You can set what time to set the alarm, and the sound the iPod produces when the alarm goes off (Beep is the default).

- **Sleep Timer**
  Available settings: Off (default), preset time in minutes
  This menu allows you to set how long your iPod plays music before going to sleep. When you set Sleep Timer to one of the preset times, a countdown timer appears in the Now Playing screen. Once the time expires, iPod stops playing and goes to sleep.
- **Date & Time**
  This setting allows you to set the time, date, and time zone. You can set iPod to display the time as a 12-hour (default) or 24-hour clock, and whether the time displays in the title of most menus after a short period of inactivity (this setting is Off by default).

Published Date: Oct 7, 2016

iPod mini Software 1.4: Accessing and changing settings

This article has been archived and is no longer updated by Apple.

iPod mini Software 1.4 for iPod mini includes many different settings options. This article will discuss these settings and how to change them. Please note that other versions of iPod Software may have different features and default settings.

You can change settings on iPod mini with iPod mini Software 1.4 in two different locations. You can access various settings in the Settings menu (in the main menu) and in the Clock menu (Extras > Clock).

The Settings Menu

You can access the Settings menu from the main menu on your iPod mini (the menu that's labeled "iPod mini"). Here are the options you can access and change in the Settings menu.

- **About**
  The About option displays information about iPod mini, including:
  - Songs—The number of songs and audiobooks synchronized to iPod mini from iTunes.
  - Capacity—The size of the hard drive in bytes (find more information on how capacity is calculated).
  - Available—The amount of free space available on your iPod mini hard drive.
  - Version—The installed version of iPod Software
  - S/N—Your iPod mini serial number.
  - Model—Your iPod mini model number.
  - Format—This option appears if iPod mini has been formatted for use with Windows-based computers.
- **Main Menu**
  This menu allows you to customize which menu options are displayed in the main menu.
- **Shuffle**
  Available settings: Off (default), Songs, Albums
  When you enable this feature, your iPod mini shuffles (randomly chooses) songs to play from an album, playlist, or iPod library, depending on your setting. For more information, see "iPod: About Shuffle."
- **Repeat**
  Available settings: Off (default), One, All
  This setting allows you to have iPod mini repeat a song or selected list. If you set Repeat to One, iPod mini repeats the selected song over and over. If you set it to All, your iPod repeats all the songs in the selected list (album, playlist, or library).
- **Backlight Timer**
  Available settings: Off, Always On, preset number of seconds (10 Seconds is the default)
  The Backlight Timer allows you to set how long the backlight illuminates so you can see your iPod mini display in dim lighting. If you set the Backlight Timer to Always On or one of the preset number of seconds, the backlight will turn on for the specified time any time you press a button or scroll the wheel. If Backlight Timer is set to Off, you can temporarily turn it on by pressing the Menu button for about 2 seconds; the backlight will then remain on for about 30 seconds.
  Note: You may have to charge your iPod battery more frequently if the backlight is constantly on.
- **Audiobooks**
  Available settings: Slower, Normal (default), Faster
  This setting allows you to select the playback speed when listening to audiobooks.
- **EQ**
  Available settings: Off (default), one of 21 equalizer presets
  iPod mini features the same equalizer presets available in iTunes to help make your audio sound even better. For more information, see "iPod: About the Equalizer."
- **Sound Check**
  Available settings: On, Off (default)
  This setting only works if you enabled the Sound Check feature in iTunes before synchronizing the audio files to iPod mini. When Sound Check is On, iPod mini adjusts all song volumes so that they all play at the same level.
- **Contrast**
  This setting lets you control how light or dark the iPod mini screen displays. Scroll the wheel left to lighten the screen or scroll right to darken it (you can set the slider anywhere from an all white to an all black screen. If you accidentally set the contrast to something you cannot read, press the Menu button for about 4 seconds and the screen will return to its default setting.
- **Clicker**
  Available settings: Speaker (default), Headphones, Both, Off
  This setting controls the audible feedback when you scroll the wheel or press buttons. When you set Clicker to Speaker, you hear a clicking sound from only the internal speaker. If Clicker is set to Headphones, you hear the clicking sound only in the headphone output.
- **Date & Time**
  This setting allows you to set the time, date, and time zone. You can set iPod mini to display the time as a 12-hour (default) or 24-hour clock, and whether the time displays in the title of most menus after a short period of inactivity (this setting is Off by default).
- **Contacts**
  This setting allows you to set the sort order and the display order of your contact names on iPod mini. By default, iPod sorts and displays

names in "First Last" order. For more information, see "iPod: How to Change Contact Display and Sort Settings."

- **Language**
  iPod mini can display its menu items in a variety of languages. This setting does not change the native language of playlists, artists, or songs (you can do this in iTunes). When you first use iPod mini or reset it, you will be asked to select a menu language.
  Legal
  iPod mini displays a screen with legal information, including trademarks and copyrights.
- **Reset All Settings**
  Available settings: Cancel (default), Reset
  This menu choice always displays in English, regardless of the selected language. If you select Reset, all settings in the Settings menu will return to their default settings.

Clock menu (Extras > Clock)

You can access the Clock menu from the Extras menu (in the main menu) to change the time and date settings on your iPod mini and more. Here's what you can set in this menu.

- **Alarm Clock**
  The Alarm Clock menu allows you to turn the alarm clock on or off (the default). You can set what time to set the alarm, and the sound iPod mini produces when the alarm goes off (Beep is the default).
- **Sleep Timer**
  Available settings: Off (default), preset time in minutes
  This menu allows you to set how long your iPod mini plays music before going to sleep. When you set Sleep Timer to one of the preset times, a countdown timer appears in the Now Playing screen. Once the time expires, iPod mini stops playing and goes to sleep.
- **Date & Time**
  This setting allows you to set the time, date, and time zone. You can set iPod mini to display the time as a 12-hour (default) or 24-hour clock, and whether the time displays in the title of most menus after a short period of inactivity (this setting is Off by default).

Published Date: Oct 7, 2016

Soundtrack Pro: "Missing some render files" error

This article has been archived and is no longer updated by Apple.

Note: This issue is resolved in Soundtrack Pro 1.0.3. This update is recommended for all Soundtrack Pro customers. Use Software Update or download updates here.

If you save a Soundtrack Pro audio file project (.stap) that contains disabled actions as a project with a different name using the Save As command, the newly saved project will display the following error when you reopen it:

This issue occurs if you choose **File > Save As** to save the Soundtrack Pro audio file project that includes a disabled action. As a workaround, first dismiss the error message by clicking OK. Then create the missing render file by re-enabling the disabled action and saving the .stap file. If necessary, you can then disable the actions again and save the file again.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Power Macintosh 6500 or G3 w/56K Modem: AT Command Reference Location

I have a Power Macintosh 6500 series computer that came with an Apple/GV internal 56Kbps modem. I need to set a custom initialization string, but cannot find one. What should I do?
This article has been archived and is no longer updated by Apple.
The AT command reference for your Power Macintosh 6500 56Kbps modem is located on your hard disk in:

Hard Disk:Applications:FaxSTF:ATCom56flex(apple).pdf

It is located on the Restore CD in:

Restore CD:Macintosh HD Files:Applications:FaxSTF:ATCom56flex(apple).pdf

The AT command reference for the 56Kbps modem in a Power Macintosh G3 can be found on the Modem Software CD in the Modem Scripts folder.

Note:
Apple cannot provide guidance on the selection of specific modem initialization strings or modem commands. The initialization strings that you use are a function of the type of modem you are calling. Most modems simply require a factory reset (AT&F1 in this case) to enable or reset the basic features of the modem. The selection of such commands is a function of what you are trying to do; your internet service provider is normally the best source of special modem requirements.
Published Date: Feb 20, 2012

Mac OS X 10.4: Keyboard Setup Assistant unexpectedly appears

This article has been archived and is no longer updated by Apple.

When you connect a keyboard (or device that acts similar to keyboard, such as a barcode scanner) to your computer, you may come across a situation where the Keyboard Setup Assistant opens. This happens when your computer doesn't recognize the keyboard you connected. Once you specify the keyboard type, you shouldn't see the Assistant again whenever you reconnect that keyboard (it should open only once per unknown keyboard connection).

However, if Keyboard Setup Assistant opens more often, such as after restarting or when you connect a non-keyboard device, just click the red close button in the upper-left corner of the window to "cancel."

In Mac OS X 10.4.1 or later, Keyboard Setup Assistant should no longer open each time you connect the keyboard or a device, or after restarting your computer (unless you add another new, unrecognized keyboard, of course).

Additional information

In Mac OS X 10.4.1 or later, when you close Keyboard Setup Assistant by clicking the red close button, your Mac assumes the device is an ANSI keyboard (and stores this in the preference file /Library/Preferences/com.apple.keyboardtype.plist). The device should then work normally, if it is an ANSI keyboard. If you have a non-ANSI keyboard device, use Keyboard preferences' Change Keyboard Type button to open the Keyboard Setup Assistant again.

Published Date: Oct 7, 2016

Soundtrack Pro: Automation plays out of sync with audio

This article has been archived and is no longer updated by Apple.

Note: This issue is resolved in Soundtrack Pro 1.0.3. This update is recommended for all Soundtrack Pro customers. Use Software Update or download updates here.

When you add automation envelopes to a multitrack Soundtrack Pro project, the automation may play back at a later time than the audio (it's delayed).

This issue occurs if your Soundtrack Pro project is set to a higher sample rate than what your audio hardware can handle. To avoid this issue, always make sure to set your project to a sample rate that your audio hardware supports (choose **Soundtrack Pro > Preferences > Project** to set the sample rate).

Published Date: Oct 7, 2016

Soundtrack Pro: Normalize script does not analyze files before processing

This article has been archived and is no longer updated by Apple.

Note: This issue is resolved in Soundtrack Pro 1.0.3. This update is recommended for all Soundtrack Pro customers. Use Software Update or download updates here.

If you create an AppleScript in Soundtrack Pro to normalize audio files, the files are processed without first being analyzed when you run the script. This is due to the way the Normalize process is handled by AppleScript in Soundtrack Pro.

To normalize audio files in Soundtrack Pro, choose **Process > Normalize**.

Published Date: Oct 7, 2016

Keynote 2: QuickTime 7 or later required for H.264 movie playback

This article has been archived and is no longer updated by Apple.

If you use H.264 movies in your Keynote 2 presentations, please note that the computer you're presenting on must have QuickTime 7 or later installed to play the movies. Earlier versions of QuickTime will not play H.264 content.

You can download the latest version of QuickTime from the QuickTime site.

Published Date: Feb 18, 2012

Logic Pro/Express 7: Automation not written in MIDI mode

This article has been archived and is no longer updated by Apple.

When you try to create "region-based" automation in Logic Pro 7 or Logic Express 7, the process may not seem to work. Here's the sequence of events you may experience:

1. In Logic, you set the Automation Mode for an audio channel to "MIDI" to write automation data to a region instead of to a track.
2. You start playback (by clicking the Play button) and move controls in a plug-in that's assigned to the audio channel.
3. You stop playback and notice that Logic didn't record any of the automation.

This happens because when you use MIDI as the Automation Mode, Logic needs a way to write the automation data to a new region. Therefore, to make sure that Logic records your changes, click Record to begin writing the automation data instead of Play.

Other Automation modes allow you to write data by clicking only the Play button.

Published Date: Feb 19, 2012

About the Mac OS X Server 10.4.3 Update

This article has been archived and is no longer updated by Apple.

This software updates Mac OS X Server 10.4.2 to version 10.4.3.

Important: Please Read Before Installing

- You must have an administrator account password that does not contain spaces or Option-keyed characters to install this update. The password may not be left blank (you can change your password if needed).
- You may experience unexpected results if you've installed third-party system software modifications, or if you have modified the operating system through other means. This doesn't apply to normal software installation.
- The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.
- This update can be installed on non-startup volumes, but you should only do this if the current startup volume has already been updated to Mac OS X Server 10.4.3. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are two ways to update to Mac OS X Server 10.4.3: Use Software Update or install from a standalone installer.

Software Update Installation

Software Update may have referred you to this document. For more information on this feature, see "How to Update Your Software."

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

A standalone installer is also available from Apple Downloads. The Mac OS X Server 10.4.3 Update specifically updates version 10.4.2 to version 10.4.3. There is also a "Combo Update" installer available, which will update any version of Mac OS X Server 10.4 to 10.4.3.

Remote Installation

If you need to install the update on a remote computer, you can do so using the "softwareupdate" command-line tool.

Improvements

The following items are some of the improvements in Mac OS X Server 10.4.3 Update:

Apple File Services

- Improves AppleFileServer scalability and stability.
- Better performance when connected AFP clients go to sleep.
- Improved resharing when using identically-named NFS mounts over AFP.
- Improves compatibility with third-party AFP client software for Windows.
- Addresses a potential issue with long filenames.
- Fixes an issue involving use of Active Directory groups with POSIX permissions.
- Improves file locks between AFP and SMB.
- Any Mac OS X client or Server will see the following changes to its behavior as an AFP client when connecting to another AFP server:
    - Resource forks are no longer lost when renaming files stored on an Xsan volume while connected over AFP.
    - Clients copying to or from third-party AFP Servers experience better performance.
    - Improves sleep and wake-from-sleep reliability when using an AFP-based, networked home directory, or when connected to an AFP Server from the "Connect to Server" dialog.
    - Files changed over AFP now have expected modification times.
    - Characters used in filenames now correctly count towards their respective 31 (AFP 2.x) and 255 (AFP 3.x) filename character limits.
    - Japanese file names are no longer garbled when connecting to Microsoft Windows 2003 Server through AFP.

Directory Access Plug-ins

- NIS now honors group memberships beyond the user's primary group.
- Improves system performance when bound to an NIS network.
- Improves LDAP reliability when hosting Windows Domain Member services.
- Addresses an issue in which admin privileges were lost when "BSD Flat File and NIS" authentication was configured in Directory Access.
- Changes to an NIS map now take effect immediately for bound clients.
- Now allows some OIDs to properly view extended schema attributes in Active Directory.
- LDAPv3 plug-in has improved stability.
- Addresses an issue in which clients may stop responding during startup if bound to multiple directory nodes.
- Mac OS X Server is now compatible with a wider range of Active Directory configurations.

DNS

- Addresses an issue with DNS zone controls to allow easier configuration for reverse zones.
- Addresses an issue with DNS Admin support for IP addresses which point to a domain (example.com -> 192.168.0.10).

FTP

- FTP now correctly displays 2-byte character filenames.

Mail Services

- Improves Mail service performance and reliability.
- Now prevents IMAP-only users from accessing mail using POP.
- Addresses authentication issues with applications that are editing SIEVE configurations.
- Addresses an issue that prevented shared mailboxes for users who are members of a nested group.
- Addresses an issue in which mail forwarding configured in Workgroup Manager may not have been correctly delivered; account shortnames must use fully qualified domain names.

Managed Users

- Managed login items now use relative paths for items that reside inside a user's home directory.
- An Active Directory user with a mobile account can now log in after an administrator has reset the user's password and enabled "user must change password at next login."
- Mobile Accounts are now created properly when defined at the Group level in Active Directory with Extended schema.
- Addresses an issue in which an Active Directory Mobile Account may have been locked out due to excessive SMB password queries.
- Managed Preferences configured as "Often" in the Preference Editor (Details view) now apply at every login.
- Local users logging into a managed computer that does not belong to a managed computer list will no longer see the workgroup picker.
- Holding the Option key during local user login now reliably shows the workgroup picker.
- Restricted access to shared printers now behaves correctly.
- Simultaneous login will now be prevented in all instances for Managed Clients. (Note: this does not apply to mobile user accounts.)
- Improves integration of Single Sign On's passing 802.1X credentials to Active Directory environments from the login window.

MySQL

- Upgrades MySQL to version 4.1.13a.
- MySQL starts more reliably during system startup.

NetBoot, NetInstall, and System Imaging

- Improved support in System Image Utility for creation of images from systems with certain interim updates installed.
- Allows NetBoot to be configured on a link aggregate port.
- Now properly prevents the display of invisible files in images created with System Image Utility, as well as on NetBoot clients.

NFS

- Allows for improved handling of unresolved host names.
- A new NFS export option (-32bitclients) that provides better interoperability for some NFS clients that may display only partial contents of exported HFS directories.

Open Directory

- Improves DirectoryService performance and stability.
- Faster group membership updates and faster re-evaluation of group memberships during login.
- Addresses an issue in which changing a user's password type from Open Directory Password to Crypt Password may have unexpected

results.
- Addresses an issue in which Active Directory binding may have failed due to Kerberos domain names that weren't mapped to full DNS names.

Password Server

- Password Server now reuses free Database file space rather than growing the size of the Database.
- Improves Password Server stability.
- Addresses an issue in which a global password reset may have had unexpected results.

Portable Home Directories

- Addresses issues with syncing portable home directories with a user's ~/Library folder.
- Addresses issues in which Active Directory users creating an initial mobile account dropped to Console or encountered home directory creation issues.
- Addresses an issue in which portable home directory configurations may have mounted multiple instances of the same home directory.
- When logging in and creating a Mobile user account, choosing "Never" now prevents the dialog from appearing again on that computer.
- A portable home directory now properly syncs after changing the location of the network home directory.
- Improved messages when logging users into portable home directories from multiple clients.
- Background syncing will now work when the user's network home directory is unavailable while logging in.
- A new computer on which a mobile user is logging in for the first time will no longer pause for up to 20 seconds.
- Documents stored as packages (such as Keynote and Pages documents) will no longer report a conflict when the file is modified locally.

Print Services

- Improves the restart performance of print services.

QTSS

- Resolves an issue in which a client could cause an abnormally large load on the server.
- Resolves an issue that caused some RTSP clients to fail.
- Resolves an issue that occurred when using Instant-On with Fast Start.

RAID

- Improves Software RAID reliability during creation and rebuilding.

Server Admin

- Improves experience when joining Kerberos realms—Kerberos realm information populates automatically.

Server Assistant

- Addresses serial number issues encountered when configuring multiple servers at once.

SMB

- Improves file and byte range locking support for AFP, SMB/CIFS, and NFS file sharing protocols.

Software Update Server

- Improves Software Update Server performance.
- Delivers more reliable notifications and synchronization of package downloads.
- Corrected default status view in the Overview pane of Server Admin.
- Improved sorting in the Updates pane of Server Admin.
- The Updates pane of Server Admin will now reliably indicate which updates would require a restart of the client after install.

Web Services

- Updates Apache 2 to version 2.0.54.
- Lifts the 64 Kilobyte limitation on file downloads in Apache 2.

Weblog

- Update to Blojsom version 2.25, including RSS2 compatibility in Weblog server.
- Improves handling of podcast links, filenames, and attachments.
- Improved authentication to the Weblog server now allows either a full name or alternate short name.
- Now prevents data loss when the session expires.
- Improves handling of international text.

Workgroup Manager

- Faster directory enumeration when searching or applying changes to multiple records.
- Improved batch editing when applying group memberships or updating Open Directory Passwords.
- Improved experience when creating custom home directory paths within subfolders.
- Improved support for adding international phone numbers to a record's Info pane.
- Addresses an issue in which propagating file system permissions from Workgroup Manager may have unexpectedly cleared the Executable bit.
- Addresses an issue that caused an error when creating User accounts within the DefaultLocalNode.
- Group memberships now display correctly in certain situations in which they didn't previously.
- Addresses an issue that caused computers moved from one list to another in Workgroup Manager to appear in both lists.
- Addresses an issue in which users dragged from Workgroup Manager into the Macintosh Manager application may not have behaved correctly.
- Addresses an issue in which the Preference Editor (Details view) may have deleted merged preferences.
- Addresses an issue in which the Preference Editor (Details view) may not have allowed the addition of .GlobalPreferences.
- Preference Editor (Details view) now automatically removes the MAC address when adding a ByHost preference.
- Improved Preference Editor (Details view) behavior when encountering unknown or incorrect Preference Manifest keys.

Xgrid Admin

- Addresses a memory handling issue in the Xgrid agent.
- Corrects inconsistencies in the Xgrid man page.

Published Date: Oct 7, 2016

About the Mac OS X Server 10.4.3 Update (Combo)

This article has been archived and is no longer updated by Apple.

This software updates Mac OS X Server versions 10.4, 10.4.1, and 10.4.2 to Mac OS X Server 10.4.3. It is a "combo" update that combines enhancements delivered with versions 10.4.1 through 10.4.3. If you already have Mac OS X Server 10.4.2, you can download a smaller update to update to version 10.4.3.

Important: Please Read Before Installing

- You must have an administrator account password that does not contain spaces or Option-keyed characters to install this update. The password may not be left blank (you can change your password if needed).
- You may experience unexpected results if you've installed third-party system software modifications, or if you have modified the operating system through other means. This doesn't apply to normal software installation.
- The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.
- This update can be installed on non-startup volumes, but you should only do this if the current startup volume has already been updated to Mac OS X Server 10.4.3. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are two ways to update to Mac OS X Server 10.4.3: Use Software Update or install from the standalone installer.

Software Update Installation

Software Update may have referred you to this document. For more information on this feature, see "How to Update Your Software."

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

A standalone installer is also available from Apple Downloads.

Remote Installation

If you need to install the update on a remote computer, you can do so using the "softwareupdate" command-line tool.

Enhancements delivered with this update

This update delivers many enhancements. Because this is a combo update, it includes enhancements that are delivered with the 10.4.1, 10.4.2, and 10.4.3 updates. You can see the individual enhancement lists for 10.4.1, 10.4.2, and 10.4.3updates.

Published Date: Oct 7, 2016

Motion 2 bonus filters available for download

This article has been archived and is no longer updated by Apple.

Did you know that Apple offers three bonus filters for Motion 2 customers, freely available for download? Just go to the Motion download page and follow the instructions to register and download the additional filter installer (you'll need to provide your serial number to access the downloads). Here's what you'll get.

Bonus Filters

Insect Eye—Maps a repeating hexagonal distortion pattern to an image, mimicking the point of view of an insect.

Movement Blur—Creates blur based on the movement of subjects in the footage itself. This is different than motion blur, which blurs an animated object in the Canvas.

Underwater—Applies an animated distortion to your object, as if it was being viewed through a water surface.

Note: Motion 1 customers should register here for additional filters and generators.

Published Date: Feb 19, 2012

Mac OS X 10.4: Scrolling around an image in Preview

This article has been archived and is no longer updated by Apple.

In Mac OS X 10.4, you can scroll around an image in Preview easily in several different ways (scrolling is only possible when the image doesn't completely fit inside the Preview window):

- Hold down the space bar and your mouse button at the same time, then scroll at will.
- If you have an Apple Mighty Mouse or a third-party mouse with a scroll wheel, you can use the mouse's wheel to scroll around. To scroll horizontally with a third-party mouse, hold the Shift key while scrolling.
- Use your keyboard's arrow keys.
- Drag the scroll bar on the bottom or side of the Preview window.
- On some PowerBooks, you can use the trackpad for scrolling.

Related documents

- mh1820: Changing how scroll bars work

Published Date: Oct 7, 2016

Logic Pro/Express 7: Windows that span two displays aren‘t recalled in screenset

This article has been archived and is no longer updated by Apple.

If you set windows in Logic to span across two displays in a custom screenset, they may revert back to only one of the displays when you choose this screenset after using another.

For example, let's say you're working on a dual-display system and you create a screenset in which the Arrange window spans both displays. If you choose a different screenset and then revert back to the original screenset, the Arrange window may only occupy the right display instead of both.

This only happens when you're using the display on your right as your primary display (the menu bar and Dock appear in the right display). To change the primary display status to your left display:

1. Choose **Apple Menu > System Preferences**.
2. Click Displays.
3. Click the Arrangement tab.
4. Drag the white horizontal bar at the top of the right display representation to the left display representation.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

Logic Pro 7.1: Follow Tempo not available for an exported region

This article has been archived and is no longer updated by Apple.

When working with audio files that you exported from regions in Logic Pro 7.1, the Follow Tempo option may not always be available in the Region Parameter box (it will appear dimmed). This happens if the original region from which you exported the audio file doesn't start exactly on a quarter note beat.

For example, if you have a region that starts at a timeline position of 2 2 1 1 and export an audio file from it, the resulting file can be set to follow the tempo. However, if you have a region that starts at a timeline position of 2 2 3 1 and export an audio file from it, the resulting file won't be able to follow the tempo.

If you have a region that does not start on a quarter note, move it so that it starts on a quarter note beat before exporting the region. Alternatively, you can leave the region in its original position and export the entire track as an audio file by choosing **File > Export > Track as Audio File**. Then bring the resulting file back into the Arrange window to edit out any unwanted parts.

Published Date: Feb 19, 2012

Anamorphic Motion projects aren‘t displayed correctly when edited into an anamorphic Final Cut Pro sequence

This article has been archived and is no longer updated by Apple.

You can export Final Cut Pro clips and sequences as Motion projects using the Export to Motion Project command. You can also import Motion project files into Final Cut Pro and treat them like video clips. However, if you edit a widescreen anamorphic Motion project into an Anamorphic Final Cut Pro sequence, the image may appear "squeezed" into a 4:3 aspect ratio.

To display the Motion project in the correct 16:9 aspect ratio, do one of the following:

- In the Final Cut Pro Browser window, select the Motion project, then click the space next to it in the Anamorphic column to place a check mark, which assigns the Anamorphic property to it.

- Select the Motion project clip and choose **Edit > Item Properties > Format** (or press Command-9), then place a check mark next to the Anamorphic property for the clip.

- Open the Motion Project clip in the Final Cut Pro Viewer and select the Motion tab. Click to open the disclosure triangle for the Distort parameters, then change the Aspect Ratio parameter from 33.33 to 0.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Motion 2: Noise Dither filter is now called Reduce Banding

This article has been archived and is no longer updated by Apple.

In Motion 2, the filter formerly known as "Noise Dither" in Motion 1 has been renamed as "Reduce Banding." The Reduce Banding filter adds a small amount of noise to the pixels of an object, and can be used to soften the banding seen on 8-bit images with subtle gradients.

Published Date: Oct 7, 2016

.Mac: Images don‘t appear in your HomePage

This article has been archived and is no longer updated by Apple.

If you have a slow Internet connection or if you've moved files around on your iDisk, sometimes your images may no longer appear in your HomePage Photo Album pages. In their place, you may see a "missing image" icon in Safari, Internet Explorer, or Firefox, as follows:

Safari Internet Explorer Firefox

To get your photos back, first try clearing your web browser's cache. The instructions vary slightly, depending on what browser you're using. Here's how to clear the cache in Safari, Internet Explorer, and Firefox:

- **Safari**—From the **Safari** menu, choose **Empty Cache**.
- **Internet Explorer**—From the **Explorer** menu, choose **Preferences**. Under the Web Browser category in the left column, select Advanced. Click the Empty Now button.
- **Firefox**—From the **Firefox** menu, choose **Preferences**. Click the Privacy button in the left column, then click the Clear button next to "Cache."

Note: Please be aware that the instructions may differ for your browser, depending on what version you're using. If the above instructions do not work on your browser, find instructions in the application's Help menu.

If clearing the cache doesn't resolve the issue, try viewing the webpage with a different web browser or on another computer to test. If your images still show up missing, your pictures may have been moved or deleted from their original location.

For your HomePage Photo Album to display photos correctly, image files must remain in the same place on your iDisk with the same file name after you publish a page. If you renamed a picture or renamed a folder that contains pictures on your iDisk, simply changing the name back will resolve the issue. If this doesn't work or you don't remember the original name, republish the affected pages with either HomePage or iPhoto to resolve the issue.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

About the Xsan 1.2 Updates

This article has been archived and is no longer updated by Apple.

There are four different software updates available for Xsan 1.2. These updates apply to Mac OS X client and Server versions 10.3.9 and later.

Installation

The following updates are available for Xsan 1.2, which can be installed using Software Update or by downloading a standalone update installer from Apple Downloads:

- **Xsan 1.2 Update for 10.4**
- **Xsan 1.2 Update for 10.3.9**
  Of the two updates above, you only need to install the one that corresponds to your operating system version.
- **Xsan Admin 1.2 Update**
  Required for Xsan 1.2 administration (and is also recommended for Xsan 1.0 administration) and only needs to be installed on admin computers.
- **Xsan 1.2 Uninstaller**

Important Notes- Read Before Continuing

- **Before Installation**
  For the Xsan 1.2 Update for 10.3.9 and the Xsan 1.2 Update for 10.4, you must already be running Xsan 1.0.1 or 1.1. If you're still on Xsan 1.0, **stop now** and update to 1.1 **before** continuing.

- **After Installation**
  To avoid a certain stability issue over the long term, you should run the cvfsck command on each Xsan volume, after the MDCs have been updated with Xsan 1.2 Update for 10.3.9 or Xsan 1.2 Update for 10.4. **Before continuing**, please see the full explanation here.

- **Metadata Controller (MDC) software version**
  Whether you are running Panther or Tiger systems, your MDCs must always have software versions (both Xsan and Mac OS) that are equal to or more recent than the most recent client versions. Specifically, that means: If any client in your Xsan network is running Xsan 1.2 on Mac OS X 10.4.3 or later, then your metadata controllers (MDCs) must also be updated to Xsan 1.2 on Mac OS X 10.4.3 or later; If any client in your Xsan network is running Xsan 1.2 on Mac OS X 10.3.9, then the MDC must run Xsan 1.2 on 10.3.9.

Software Update Installation

Software Update may have referred you to this document. For more information on using this feature, see "Mac OS X: Updating your software ."

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

A standalone installer is also available from Apple Downloads.

Remote Installation

If you need to install the update on a remote computer, you can do so using the "softwareupdate" command-line tool.

System Hardware Requirements

- Xserve or Xserve G5
- Power Mac G4 (dual 800MHz or faster)
- Power Mac G5 (any model)

Storage Network Requirements

- Apple Fibre Channel PCI, PCI-X, or PCI Express Card

Xsan 1.2 Update for 10.4.3 or later

This update delivers overall improved reliability for Xsan and is recommended for all systems running 10.4.3 or later. It includes fixes for:

- Improving AFP performance when resharing Xsan volumes
- More accurate file permissions when sharing Xsan volumes via AFP
- Accessing Xsan volumes larger than 16 terabyte in size
- Greater server stability when resharing Xsan volumes via NFS
- Handling quotas with no associated user or group name
- Maintaining access to Xsan volumes when metadata controller failovers occur
- Providing metadata controller services to 10.3.9 and 10.4 systems running Xsan 1.2
- Operating Xsan in environments with a mix of 10.3.9 and 10.4 systems
- Reporting the creation dates for Xsan Volumes

Software requirements for this update are:

- Mac OS X Server 10.4.3 or later
- Mac OS X 10.4.3 or later
- Xsan 1.0.1 or 1.1

Xsan 1.2 Update for 10.3.9

This update delivers overall improved reliability for Xsan and is recommended for all systems running 10.3.9. It includes fixes for:

- Greater server stability when resharing Xsan volumes via NFS
- Handling quotas with no associated user or group name
- Maintaining access to Xsan volumes when metadata controller
- Operating Xsan in environments with a mix of 10.3.9 and 10.4 systems

Software requirements for this update are:

- Mac OS X Server 10.3.9
- Mac OS X 10.3.9
- Xsan 1.0.1 or 1.1

Xsan Admin 1.2 Update

This update delivers overall improved reliability for remotely administering, configuring and maintaining Xsan deployments. It includes fixes for:

- Working with multiple Xsan metadata controllers in a heterogeneous environment
- Labeling Fibre Channel LUNs and creating new Xsan volumes
- Displaying progress messages while performing lengthy operations
- Preventing manually modified configuration settings from being overwritten during a save
- Accurately reporting Fibre Channel multipathing errors

Xsan 1.2 Uninstaller

This uninstaller will remove Xsan from your computer. It will also remove the Xsan Admin Application and documentation files.

Before removing Xsan, you should back up all of your data and volumes, and unmount all Xsan volumes.

Documentation

Xsan 1.2 Administrators can continue to reference the Xsan 1.1 documentation, which you can get here.

Published Date: Oct 7, 2016

Mac OS X Server: "Invalid serial number" message appears after using Xsan 1.1 uninstaller

This article has been archived and is no longer updated by Apple.

The Xsan 1.1 CD includes an "Uninstall Xsan.pkg" file that, if run, will remove files that are essential for serial number verification in Mac OS X Server. If this happens, the next time you restart the server, Server Admin will report that the server is using an invalid serial number.

If you need to uninstall Xsan 1.1 from a computer running Mac OS X Server, or if you've already run the Uninstall Xsan.pkg from the Xsan 1.1 CD, please contact AppleCare for assistance.

Published Date: Feb 18, 2012

Final Cut Pro: Avoid enabling audio preview when capturing DVCPRO HD over FireWire

This article has been archived and is no longer updated by Apple.

When capturing DVCPRO HD footage over FireWire in Final Cut Pro, avoid enabling the Preview checkbox for audio. If you select this checkbox, audio artifacting may occur or Final Cut Pro may unexpectedly quit.

As a workaround, monitor audio directly from your video deck during capture.

Solution

Update to Final Cut Pro 5.1.2 or later.

Published Date: Oct 7, 2016

Final Cut Pro 5: If language is set to Japanese, duplicate Capture Presets if you can‘t capture video

This article has been archived and is no longer updated by Apple.

If you're using Final Cut Pro 5 with Japanese as the top language in the International pane of System Preferences, in some cases you may be unable to capture video as expected when using a standard Easy Setup. In such cases, you may be able to control your video deck, but you see a "Preview Disabled" message in the Log and Capture window instead of video. You may also see that the frame rate and digitizer type are set incorrectly in the Capture Preset.

If this happens to you, create a duplicate of the Capture Preset and then make adjustments to that copy to enable capture.

For example, if you're trying to capture DVCPPRO HD 1080i60 footage from a Panasonic AJ-HD1200A over FireWire, make a copy of the 1080i60 DVCPRO HD Easy Setup, then change the settings for anything that displays incorrectly, as shown here:

Reinstalling QuickTime may also address similar issues. Click here for more information.

For more information on creating and modifying Capture Presets, see the Final Cut Pro User's Manual, located in the Help menu.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Mac OS X 10.4: Some PostScript printing jobs may deliver unexpected results

This article has been archived and is no longer updated by Apple.

Some PostScript printers feature advanced configuration options made available through their PPD (PostScript printer description), but Mac OS X 10.4 Tiger may not immediately update the settings you make before printing. For example, you may have chosen to print in Grayscale/Black & White, but get a color printout instead.

To resolve this issue, review the selections in the Printer dialog's print job summary (choose **Summary** from the **Copies & Pages** pop-up menu) before you click the Print button. If you need to make changes, edit the settings as necessary, then print.

Additional information

Most printers can't support every available option, so their PPD files contain code that specifies those dependencies. However, the Apple Printer Features PDE (Printing Dialog Extension) may not correctly handle these dependencies, so sometimes your chosen settings will be out of sync with the actual settings sent with the print job.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

About Security Update 2005-007

This article has been archived and is no longer updated by Apple.

This document describes Security Update 2005-007, which can be downloaded and installed using Software Update, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred, and any necessary patches or releases are available. To learn more about Apple Product Security, visit the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to Use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Security Update 2005-007

- **Apache 2**

  CVE-ID: CAN-2005-1344

  Available for: Mac OS X Server v10.3.9

  Impact: The htdigest program contains a buffer overflow, which, if used improperly in a CGI application, could allow a remote system compromise.

  Description: The htdigest program contains a buffer overflow, and could be used in a CGI application to manage user access controls to a web server. This update fixes the buffer overflow in htdigest. Apple does not provide any CGI applications that use the htdigest program. Apache 2 ships only with Mac OS X Server, and is off by default. This issue was fixed for Apache 1.3 in Security Update 2005-005. Credit to JxT of SNOsoft for reporting this issue.

- **Apache 2**

  CVE-ID: CAN-2004-0942, CAN-2004-0885

  Available for: Mac OS X Server v10.3.9

  Impact: Multiple security issues in Apache 2.

  Description: The Apache Group fixed two vulnerabilities between versions 2.0.52 and 2.0.53 (the Apache Group security page for Apache 2 is located at http://httpd.apache.org/security/vulnerabilities_20.html). Apache 2 is updated to version 2.0.53 (the previous version was 2.0.52). Apache 2 ships only with Mac OS X Server, and is off by default.

- **Apache 2**

  CVE-ID: CAN-2004-1083, CAN-2004-1084

  Available for: Mac OS X Server v10.3.9, Mac OS X Server v10.4.2

  Impact: Apache 2 example configurations do not fully block access to resource forks, ".ht" files, or ".DS_Store" files.

  Description: Apache 2 ships only with Mac OS X Server, and is off by default. It is important that administrators who enable this server manually are aware of the files that should be blocked to avoid security exposures. A default Apache 2 configuration blocks access to files starting with ".ht" in a case-sensitive way. The Apple HFS+ filesystem isn't case-sensitive when performing file access, and maps resource forks of files to path names. The Finder may also create .DS_Store files containing the names of files in locations used to serve webpages. This update modifies the sample Apache 2 configuration to show how to restrict access to these files and resource forks. This issue was fixed for Apache 1.3 in Security Update 2004-12-02. Additional information is available here.

- **AppKit**

  CVE-ID: CAN-2005-2501

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: Opening a malicious, rich text file could lead to arbitrary code execution.

  Description: A buffer overflow in the handling of maliciously crafted rich text files could lead to arbitrary code execution. This update prevents the buffer overflow from occurring.

- **AppKit**

  CVE-ID: CAN-2005-2502

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: Opening a maliciously crafted Microsoft Word .doc file could result in arbitrary code execution.

  Description: A buffer overflow in AppKit that is responsible for reading Word documents could allow arbitrary code execution. Only applications such as TextEdit that use AppKit to open Word documents are vulnerable. Microsoft Word for Mac OS X is not vulnerable. This update prevents the buffer overflow.

- **AppKit**

  CVE-ID: CAN-2005-2503

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: A malicious user with physical access to a system could create additional local accounts.

  Description: A malicious user who has full physical access to a system could create additional accounts by forcing an error condition. This update prevents the error conditions from occurring at the login window.

- **Bluetooth**

  CVE-ID: CAN-2005-2504

  Available for: Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: The System Profiler information about whether or not a Bluetooth device requires authentication is misleading.

  Description: Selecting "Require pairing for security" in Bluetooth preferences correctly sets the device to require authentication, but in System Profiler the device is labeled with "Requires Authentication: No." This update changes System Profiler to accurately reflect the Bluetooth security settings. This issue does not affect systems prior to Mac OS X 10.4. Credit to John M. Glenn of San Francisco for reporting this issue.

- **CoreFoundation**

  CVE-ID: CAN-2005-2505

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9

  Impact: Buffer overflow via a command line argument for applications using the CoreFoundation framework.

  Description: The incorrect handling of a command line argument within the CoreFoundation framework can result in a buffer overflow that may be used to execute arbitrary code. This issue has been addressed by improved handling of command line arguments. This issue does not affect Mac OS X 10.4. Credit to David Remahl of www.remahl.se/david for reporting this issue.

- **CoreFoundation**

  CVE-ID: CAN-2005-2506

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: Passing a malformed date to the CoreFoundation framework can cause applications to stall.

  Description: The parsing of Gregorian dates in the CoreFoundation framework is vulnerable to an algorithmic complexity attack that could result in a denial of service. This update modifies the algorithm to parse all valid dates within a fixed processing time. Credit to David Remahl of www.remahl.se/david for reporting this issue.

- **CUPS**

  CVE-ID: CAN-2005-2525, CAN-2005-2526

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: The CUPS printing service will not print unless it is restarted.

  Description: When handling multiple, simultaneous, print jobs, the CUPS printing service can stop printing because it incorrectly tracks open file descriptors. In addition, if CUPS receives a partial IPP request and a client terminates the connection, the printing service will then consume all available CPUs. If the service is restarted, then printing will resume. This update corrects the handling of multiple, simultaneous

print jobs and partial requests.

- **Directory Services**

  CVE-ID: CAN-2005-2507

  Available for: Mac OS X Server v10.3.9, Mac OS X Server v10.4.2

  Impact: A buffer overflow in Directory Services could lead to remote execution of arbitrary code.

  Description: A buffer overflow in the handling of authentication can lead to arbitrary code execution by a remote attacker. This update prevents the buffer overflow from occurring.

- **Directory Services**

  CVE-ID: CAN-2005-2508

  Available for: Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: The privileged tool dsidentity has several security flaws that can result in non-administrative users adding or removing identity user accounts in Directory Services.

  Description: This update addresses this issue by removing dsidentity and its documentation. This issue does not affect systems prior to Mac OS X 10.4. Credit to kf_lists[at]digitalmunition[dot]com and Neil Archibald of Suresec LTD for reporting this issue.

- **Directory Services**

  CVE-ID: CAN-2005-2519

  Available for: Mac OS X Server v10.3.9

  Impact: Insecure temporary file creation could lead to a local privilege escalation.

  Description: slpd insecurely creates a root-owned file in the world-writable /tmp directory. This update moves the creation of the file to a directory that is not world-writable. This issue does not affect Mac OS X v10.4.

- **HItoolbox**

  CVE-ID: CAN-2005-2513

  Available for: Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: VoiceOver may read content from secure input fields.

  Description: Under certain circumstances, secure input fields may be read by VoiceOver services. This update stops VoiceOver from exposing the content of these fields. This issue does not affect systems prior to Mac OS X v10.4.

- **Kerberos**

  CVE-ID: CAN-2004-1189

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9

  Impact: An authenticated user could execute arbitrary code on the KDC host, compromising a Kerberos realm.

  Description: A heap buffer overflow in password history handling code could be exploited to execute arbitrary code on a Key Distribution Center (KDC). This issue does not affect Mac OS X 10.4. Credit to the MIT Kerberos team for reporting this issue. Their advisory for this vulnerability is located at http://web.mit.edu/kerberos/advisories/MITKRB5-SA-2004-004-pwhist.txt

- **Kerberos**

  CVE-ID: CAN-2005-1174, CAN-2005-1175, CAN-2005-1689, CERT VU#885830 VU#259798 VU#623332

  Available for: Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: Multiple buffer overflow vulnerabilities could result in denial of service or remote compromise of a KDC.

  Description: This update upgrades Kerberos for Macintosh to version 5.5.1, which contains fixes for this issue. The Kerberos security advisories for these issues are located at http://web.mit.edu/kerberos/www/advisories/

- **Kerberos**

CVE-ID: CAN-2005-2511

Available for: Mac OS X v10.4.2, Mac OS X Server v10.4.2

Impact: Kerberos-enabled logins when using LDAP can result in root compromise.

Description: When Kerberos authentication is enabled in addition to LDAP, it was possible to gain access to a root Terminal window. Kerberos authentication has been updated to prevent this situation. This issue does not affect systems prior to Mac OS X v10.4. Credit to Jim Foraker of Carnegie Mellon University and colleagues at MacEnterprise.Org for reporting this issue.

- **loginwindow**

  CVE-ID: CAN-2005-2509

  Available for: Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: A user can gain access to other logged-in accounts if Fast User Switching is enabled.

  Description: An error in the handling of Fast User Switching can allow a local user who knows the password for two accounts to log into a third account without knowing the password. This update corrects the authentication error. This issue does not affect systems prior to Mac OS X 10.4. Credit to Sam McCandlish for reporting this issue.

- **Mail**

  CVE-ID: CAN-2005-2512

  Available for: Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: Loss of privacy due to Mail loading remote images in HTML emails.

  Description: When Mail.app is used to print or forward an HTML message, it will attempt to load remote images even if a user's preferences disallow it. As this network traffic is not expected, it may be considered a privacy leak. This update addresses the issue by having Mail.app only load remote images in HTML messages when the preferences allow it. This issue does not affect systems prior to Mac OS X v10.4. Credit to Brad Miller of CynicalPeak and John Pell of Foreseeable Solutions for reporting this issue.

- **Mail**

  CVE-ID: CAN-2005-2745

  Available for: Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: Using Kerberos Version 5 for SMTP authentication Mail.app may disclose sensitive information.

  Description: When using SMTP authentication with Kerberos Version 5, Mail.app may append un-initialized memory to a message. This update addresses the issue by updating Mail.app. Credit to the MIT Kerberos team for reporting this issue. This issue was resolved in Mac OS X v10.3.9 by Security Update 2005-008.

- **MySQL**

  CVE-ID: CAN-2005-0709, CAN-2005-0710, CAN-2005-0711

  Available for: Mac OS X Server v10.3.9

  Impact: Multiple vulnerabilities in MySQL, including arbitrary code execution by remote authenticated users.

  Description: MySQL is updated to version 4.0.24 to address several issues. This does not affect systems running Mac OS X v10.4 as Tiger shipped with MySQL version 4.1.10a, which is patched against this issue. The MySQL announcement for version 4.0.24 is located at http://dev.mysql.com/doc/mysql/en/news-4-0-24.html

- **OpenSSL**

  CVE-ID: CAN-2004-0079, CAN-2004-0112

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: Multiple denial of service vulnerabilities in OpenSSL.

  Description: OpenSSL is updated to version 0.9.7g to address several issues. The OpenSSL advisory for these issues is located at http://www.openssl.org/news/secadv_20040317.txt

- **ping**

CVE-ID: CAN-2005-2514

Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9

Impact: A buffer overflow could result in local privilege escalation and arbitrary code execution.

Description: The ping utility is vulnerable to a buffer overflow. This update prevents the buffer overflow from occurring. This issue does not affect systems running Mac OS X v10.4. Credit to Ilja van Sprundel of Suresec LTD for reporting this issue.

- **QuartzComposerScreenSaver**

  CVE-ID: CAN-2005-2515

  Available for: Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: Users could open webpages while the RSS Visualizer screen saver is locked.

  Description: It is possible to open displayed links from the RSS Visualizer in the background when the screen saver is configured to require a password. This update prevents the RSS Visualizer screen saver from opening a URL if a password is required to exit the screen saver. Credit to Jay Craft of GrooVault Entertainment, LLC for reporting this issue.

- **Safari**

  CVE-ID: CAN-2005-2516

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: Clicking on a link in a maliciously-crafted rich text file in Safari could lead to arbitrary command execution.

  Description: Safari renders rich text content using code that allows URLs to be called directly, which bypasses the normal browser security checks. This update addresses the issue by handling all links in rich text through Safari.

- **Safari**

  CVE-ID: CAN-2005-2517

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: Information can be inadvertently submitted to the wrong site.

  Description: When submitting forms in Safari on an XSL formatted page, data is sent to the next page browsed. This update addresses the issue by ensuring that form contents are submitted correctly. Credit to Bill Kuker for reporting this issue.

- **Safari**

  CVE-ID: CAN-2005-2524

  Available for: Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: Maliciously crafted web archives could potentially allow cross-site scripting.

  Description: It is possible to view web archives served from remote sites in Safari. Maliciously crafted web archives may be rendered as content from sites they did not server them. This update prevents remote web archives from being loaded. Safari web archives were introduced in Safari 2.0. This issue was resolved in Mac OS X v10.3.9 by Security Update 2005-008.

- **SecurityInterface**

  CVE-ID: CAN-2005-2520

  Available for: Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: Recently-used passwords are visible via the password assistant.

  Description: The password assistant provides an easy mechanism for selecting a good password. If an administrator uses the password assistant while adding multiple accounts, they will be able to view previously suggested passwords. This only occurs when password assistant is used more than once from the same process. This update addresses the issue by resetting the suggested password list each time the password assistant is displayed. This issue does not affect systems prior to Mac OS X v10.4. Credit to Andrew Langmead of Boston.com for reporting this issue.

- **servermgrd**

CVE-ID: CAN-2005-2518

Available for: Mac OS X Server v10.3.9, Mac OS X Server v10.4.2

Impact: A buffer overflow in servermgrd could lead to remote execution of arbitrary code.

Description: A buffer overflow in the handling of authentication can lead to arbitrary code execution by a remote attacker. This update prevents the buffer overflow from occurring.

- **servermgr_ipfilter**

  CVE-ID: CAN-2005-2510

  Available for: Mac OS X Server v10.4.2

  Impact: Certain firewall policies created with the Server Admin tool are not always written to the Active Rules.

  Description: When using multiple subnets and Address Groups, the firewall rules are not always written to the Active Rules, depending on the order in which the IP subnets were entered into the Address Group. This update addresses the issue by generating correct rules irrespective of any ordering within the Address Group. This issue does not affect systems prior to Mac OS X 10.4. Credit to Matt Richard of Franklin & Marshall College and Chris Pepper of The Rockefeller University for reporting this issue.

- **SquirrelMail**

  CVE-ID: CAN-2005-1769, CAN-2005-2095

  Available for: Mac OS X Server v10.3.9, Mac OS X Server v10.4.2

  Impact: Multiple vulnerabilities in SquirrelMail, including cross-site scripting and SquirrelMail user preference modification.

  Description: There are multiple vulnerabilities in SquirreMail prior to version 1.4.5. These fixes address cross-site scripting and an exposure that may allow attackers to modify user preferences. This update upgrades SquirrelMail to version 1.4.5. For more information, see http://www.squirrelmail.org.

- **traceroute**

  CVE-ID: CAN-2005-2521

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9

  Impact: A buffer overflow could result in local privilege escalation and arbitrary code execution.

  Description: The traceroute utility is vulnerable to a buffer overflow. This update prevents the buffer overflow from occurring. This issue does not affect systems running Mac OS X v10.4. Credit to Ilja van Sprundel of Suresec LTD for reporting this issue..

- **WebKit**

  CVE-ID: CAN-2005-2522

  Available for: Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: Clicking on a link in a maliciously-crafted PDF file in Safari could lead to arbitrary command execution.

  Description: Safari renders PDF content using code that allows URLs to be called directly, which bypasses the normal browser security checks. This Safari issue does not affect systems prior to Mac OS X v10.4. This update addresses the issue by handling all links in PDF through Safari.

- **Weblog Server**

  CVE-ID: CAN-2005-2523

  Available for: Mac OS X Server v10.4.2

  Impact: Multiple cross-site scripting issues in Weblog Server.

  Description: Several cross-site scripting problems were discovered in the Weblog Server. This update improves the sanitizing of user input before redisplaying it. This issue does not affect systems prior to Mac OS X v10.4. Credit to Donnie Werner (wood@exploitlabs.com) of Exploitlabs.com and Atsushi MATSUO for reporting this issue.

- **X11**

CVE-ID: CAN-2005-0605

Available for: Mac OS X v10.4.2, Mac OS X Server v10.4.2

Impact: A buffer overflow could result in arbitrary code execution.

Description: An error in LibXPM may allow attackers to execute arbitrary code via a negative bitmap_unit value that leads to a buffer overflow. This issue does not affect systems prior to Mac OS X v10.4.

- **zlib**

CVE-ID: CAN-2005-2096, CAN-2005-1849

Available for: Mac OS X v10.4.2, Mac OS X Server v10.4.2

Impact: Applications linked against zlib are susceptible to denial of service attacks and potential execution of arbitrary code.

Description: By carefully crafting a corrupt compressed data stream, an attacker can overwrite data structures in a zlib-using application, resulting in denial of service or possible arbitrary code execution. This update address the issue by updating zlib to version 1.2.3.

Published Date: Oct 7, 2016

Logic Pro and Logic Express Resources

This article has been archived and is no longer updated by Apple.

Support
In the United States and Canada, all new registered users of Logic Pro and Logic Express receive 90 days of complimentary software support via telephone from the date of purchase. In addition, Apple offers a range of professional support options.

Logic Pro and Logic Express Discussion Boards
Our Logic discussion boards are filled with experienced users. Ask a question, answer a question, or simply read what other Logic users have to say.

Visit the Logic Pro and Logic Express Discussions boards

Logic Support Sites
Apple's Support website is filled with the best information for Logic Pro and Logic Express users. On this site, you can:

- Search for helpful Knowledge Base articles.
- Troubleshoot an issue
- Download software updates for Logic

Go to the Logic Pro Support website
Go to the Logic Express Support website

Logic Help
The built-in Help menu gives you direct access to a searchable Logic Pro or Logic Express user manual that can prove invaluable in assisting you with searching for information, such as how to set up and configure your audio devices, how a particular editing tool works, or how to use the features of Logic Pro or Logic Express 7.

To access this help guide in Logic Pro:

Choose Help > Logic Pro Reference

To access this help guide in Logic Express:

Choose Help > Logic Express Reference

Apple Pro Training
The Apple Pro Training Program can give you a competitive edge in the digital production job market. Whether you're an editor, composer, special effects artist, sound designer, web developer, or teach these skills, Apple training tools will help you expand your knowledge and skills.

The program offers both instructor-led and self-paced training. Apple Certified Trainers teach courses at Authorized Training Centers worldwide. Those who prefer to learn at their own pace can use Apple Pro Training Series courseware.

Learn more about the Apple Pro Training Program
Learn more about Apple Pro Training Series Books

Apple Consultants Network
Members of the Apple Consultants Network are independent technical experts, skilled in the setup, use, and maintenance of Apple products and solutions. In addition, many offer related third-party product solutions, as well as a variety of training services.

Check out the Apple Consultants Network site

Published Date: Oct 7, 2016

Spotlight: Opening an item‘s enclosing folder

This article has been archived and is no longer updated by Apple.

Did you know that you can view an item's enclosing folder (and all of its content) directly in Spotlight (a Mac OS X 10.4 Tiger feature)? Just Command-click the item in the Spotlight search results window to view it in a Finder window!

Here's another way: Click Show All in the Spotlight search results list, select the item of interest in the resulting window, then press Command-R.

Or, in this same Show All window, Control-click (or right-click if you have a multi-button mouse) the item of interest and choose **Reveal in Finder** from the shortcut menu.

These methods work for most files, but not with Mail messages that appear in Spotlight search results (because Mail messages aren't stored the same way as files in the Finder). However, if you double-click a Mail message in a Spotlight list, the email opens in Mail and displays a "Show in Mail Viewer" link in the upper-right corner. When you click the link, Mail will show you which mailbox your message is in.

Published Date: Feb 18, 2012

DVD Studio Pro: No dual-layer break point information when writing to disc image.

This article has been archived and is no longer updated by Apple.

DVD Studio Pro gives you the option to build and then save your DVD project to your system's hard disk. If you use this option to create a disc image (.img) of a DVD-9 (dual-layer) DVD, the resulting disc image will not contain any break point information—even if you specified it in the Disc/Volume tab of the Disc Inspector.

For more information, choose **Help > DVD Studio Pro User Manual** in DVD Studio Pro.

Published Date: Oct 7, 2016

DVD Studio Pro: Installer stops responding during installation

This article has been archived and is no longer updated by Apple.

When you install DVD Studio Pro (or the application as part of Final Cut Studio), the Installer progress bar may stop moving during the DVD Studio Pro 4 templates installation, reporting that the installation is 98-100 percent complete. Despite the appearance that the process has stalled, the installation is actually continuing.

Depending on the speed of the components in your computer, this part of the DVD Studio Pro or Final Cut Studio installation can take up to an hour to complete. If you force quit the Installer, the templates won't be correctly installed (if this happens, simply run the DVD Studio Pro Installer again).

If you would like confirmation that the Installer is still working, open Activity Monitor (find it in /Applications/Utilities) and inspect the Installer process.

Published Date: Feb 18, 2012

iPhoto 5.0.4 or later: Grayscale images appear inverted.

This article has been archived and is no longer updated by Apple.

A black-and-white (grayscale) image looks normal when viewed in organize view, but inverted when you open it full size.

This can happen in iPhoto 5.0.4 or later with grayscale photos that include an embedded color matching profile. To work around this issue, you might consider removing the profile from the image if you do not plan to use it.

One way to remove the profile from the image is to use an AppleScript included with Mac OS X 10.4:

1. Locate the AppleScript folder inside your Applications folder, and open AppleScript Utility.
2. Select the checkboxes for "Show Script Menu in menu bar" and "Show Library scripts." Notice the S-shaped Script menu that now appears in your menu bar.
3. In iPhoto, go to Organize view.
4. - Locate the photo(s) you want to alter.
5. From the **Script** menu, choose **Colorsync > Remove profile from image**.
6. When prompted, click OK.
7. When asked which image you want to alter, drag the image thumbnail from the iPhoto window to the Choose a File dialog. The contents of the dialog should change to the filename of your image.
8. Click the Choose button.
9. When asked if you want to remove the profile, click OK.

The photo should now display properly in iPhoto 5.0.4 or later.

Published Date: Feb 19, 2012

iSync: Deleting a contact from a Motorola phone may not remove it from Address Book

This article has been archived and is no longer updated by Apple.

If you delete a contact from your Motorola phone and then sync the phone with your computer, iSync may not fully remove your deleted contact from Address Book. The contact may still exist, but without a phone number, for example.

This can happen because of the way contacts are stored on the Motorola phone. To resolve the issue, simply delete the partial contact from Address Book after syncing.

Mac OS X 10.4 Tip: Create a Smart Group in Address Book to help you locate contacts without phone numbers—that is, contacts you might want to delete.

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Published Date: Oct 7, 2016

iPhoto: Pictures may be trimmed during bookbinding

This article has been archived and is no longer updated by Apple.

As a normal part of the bookbinding process, a binder trims each edge of a page so that the assembled book fits together smoothly.

Whenever you order an iPhoto book with full bleed images (those that go to the very edge of a page), the final bound image may contain a little more or less of the original image at any given edge than what you saw on your screen. For example, you may lose a portion of your image at the spine (known as the "gutter"), while gaining a little bit at the outside edge. Though iPhoto approximates the final output as much as possible, the normal margin of error in the publishing process precludes a 100 percent predictable result.

For this reason, when you prepare your images for an iPhoto book, you should err toward cropping photos a little bit loose rather than cropping in tight. For images that you've shot very tightly in camera (those that won't look good with trimming), select page designs that aren't full bleed.

As you lay out your book, always stop to think about how a page may get trimmed for a moment, and edit your images accordingly—you'll be happier with the results when you see the finished product.

Published Date: Feb 19, 2012

Mac OS X 10.3, 10.4: Cannot open Photoshop files after Archive and Install installation

This article has been archived and is no longer updated by Apple.

After performing an Archive and Install installation of Mac OS X 10.3 or 10.4, you might not be able to open an image file by dragging and dropping it onto an Adobe Photoshop icon, nor open a Photoshop file by double-clicking it (Photoshop opens, but the file does not). Using the Finder's Contextual menu choice "Open With" on a file to open it in Photoshop may not work either.

As a workaround, open the file(s) by choosing **Open** from the Photoshop **File** menu.

For more information and solutions, see Adobe support document 329996.

Important: Mention of third-party websites and products is for informational purposes only and constitutes neither an endorsement nor a recommendation. Apple assumes no responsibility with regard to the selection, performance or use of information or products found at third-party websites. Apple provides this only as a convenience to our users. Apple has not tested the information found on these sites and makes no representations regarding its accuracy or reliability. There are risks inherent in the use of any information or products found on the Internet, and Apple assumes no responsibility in this regard. Please understand that a third-party site is independent from Apple and that Apple has no control over the content on that website. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

DVD Studio Pro: Templates without buttons won‘t work when creating a chapter index

This article has been archived and is no longer updated by Apple.

If you create a custom menu template that doesn't contain any buttons, you will not be able to choose it for use when you create a chapter index in DVD Studio Pro 4.

For example, when you create a chapter index by dragging a clip from the Asset list to the Menu Editor and choosing **Create Chapter Index - Make Connections** from the Drop Palette, a dialog appears from which you can choose a template for your newly created menu. However, you will not be able to select any custom template that lacks buttons.

Published Date: Feb 18, 2012

iSync: Use only one connection method per phone

This article has been archived and is no longer updated by Apple.

Some phones allow you to sync information with iSync through either USB or Bluetooth. When you set up your phone, you'll need to select which method to use in iSync.

Please be aware that you cannot switch back and forth between USB and Bluetooth when syncing your phone. iSync will only use the method you selected during set-up to establish a connection to your phone.

If you later change your mind and want to use the other connection type, you must remove the phone from iSync, then add it again and select the connection method you prefer.

Published Date: Oct 7, 2016

About default optical drive burning speeds

This article has been archived and is no longer updated by Apple.

The speed at which your computer's optical drive burns a disc can vary depending on what type of media you're using. For example, your PowerBook G4 computer's SuperDrive may have a maximum 8x DVD burn speed, but if the drive can't determine whether a disc is able to handle that speed, it will burn at the drive's minimum speed for the media, to ensure that the burn is successful.

When you insert a blank disc, it's not actually completely blank. Recordable and rewritable CDs and DVDs are manufactured with a small amount of written "pregroove" data that contains various disc attributes, including the disc type, part number, manufacturer, the kind of dye used, its writable capacity, rated write speed, and other items. This data resides in a very small area on the disc that is not part of the user-writable area.

The optical drive reads this data to determine how it should handle the disc. If the the optical drive doesn't recognize the media type as being burnable at its maximum speed, the drive speed will default to its slowest setting. This protects the burn reliability so you don't end up with unreadable discs that are only useful as drink coasters.

In addition, be aware that maximum burn speeds are reached toward the outer portions of the disc, which hold only a fraction of the disc's total writable area. Since data is written from the inside to the outer edge of the disc, the drive will not reach the maximum burn speed if you burn a disc with only a small amount of data because the written area doesn't approach the outer edge of the disc.

Note: Apple DVD-R media is manufactured to exacting specifications, and has been tested to burn at maximum rated speeds.

For more information about the factors involved in optical drive burning speeds, see "About optical disc drive burning and write speeds."

Published Date: Feb 18, 2012

How to publish a podcast on the iTunes Store

This article has been archived and is no longer updated by Apple.

If you're looking to gain fame in the iTunes Store world, you can submit your own podcast to the iTunes Store—it's easy! Before you begin, make sure that you're using iTunes 4.9 or later, and that you have the URL of the podcast you want to publish handy.

When you're ready, simply click here, and iTunes will take you to the podcast submission page.

Alternatively, you can navigate to the submission page this way:

1. Open iTunes.
2. Click the iTunes Store icon in the Source list.
3. From the **Choose Genre** pop-up menu, choose **Podcasts**.
4. Click the big "Publish a Podcast" button in the middle of the screen.

Note: The iTunes team reviews each podcast submission. Depending on demand, it may take a week or two before your podcast is added.

Additional resources

How to Publish a Podcast on the iTunes Store
Recording Your Podcast in GarageBand
Creating Podcasts with QuickTime 7 Pro

Published Date: Feb 20, 2012

iTunes Store: How to update or block your podcast, or report a concern about other podcasts

This article has been archived and is no longer updated by Apple.

Podcast owners

If you have a podcast published on the iTunes Store, you can update your podcast by changing the data in your RSS feed. See "How to Publish a Podcast on the iTunes Store" to learn about the extended podcasting RSS specification for iTunes, and how to tag data. If you need to block your podcast from iTunes for any reason, you'll find information to do this in the article as well.

Podcast listeners

If you're not the podcast owner but would like to alert Apple about a particular podcast, please use the "Report a Concern" link (located below the Podcast Description) to tell us more about the issue.

Published Date: Oct 7, 2016

iTunes Store: Can‘t publish a podcast

This article has been archived and is no longer updated by Apple.

Sometimes the iTunes Store can't publish certain podcasts. If you've submitted a podcast using the "Publish a Podcast" page but haven't seen it published yet, sit tight. The iTunes team reviews each podcast submission. Depending on demand, it may take a week or two before the podcast gets published.

Additionally, here are some other reasons why a podcast might not get published:

- The podcast's RSS feed was not available.
- The podcast's RSS feed timed out.
- The podcast's RSS feed could not be validated.

If you are the podcast owner, make sure that your podcast is available on the Internet. Your podcast's RSS feed should also conform to the iTunes extended podcast RSS specification.

If you are not the podcast owner, please contact the podcast owner and direct them to our specification page.

Published Date: Feb 19, 2012

AppleCare iPod Service: Instructions for returning your iPod

This article has been archived and is no longer updated by Apple.

When you request service for your iPod or iPod shuffle on our website, you will receive a box or envelope with a letter that contains instructions on how to return your iPod to Apple.

If you've received a box that didn't contain the letter, or you've misplaced the letter, click the link below for your iPod to download and view the letter in PDF format (you will need a PDF reader such as Apple Preview or Adobe Reader to view these files).

- iPod return instructions (PDF)
- iPod shuffle return instructions (PDF)
- Additional iPod replacement information for Windows users (PDF) (Does not apply to iPod shuffle.)

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 19, 2012

Compressor 2: Log in to service nodes to distribute processing

This article has been archived and is no longer updated by Apple.

Compressor 2 can accelerate processing by distributing the work to multiple computers. If you're using an Apple QMaster cluster for distributed processing, a user must be logged in to each Compressor service node (a computer providing Compressor-distributed processing services) for full functionality. If a service node displays the login screen, that computer will be bypassed in the processing distribution.

For more information on distributed processing, open Compressor and choose **Help > Distributed Processing Setup**.

Published Date: Feb 18, 2012

Power Mac G5 (Late 2004) 1.8GHz models stop responding randomly

This article has been archived and is no longer updated by Apple.

Some 1.8 GHz models of Power Mac G5 (Late 2004) computers may experience any of the following symptoms:

- The computer may freeze when performing certain video-intensive tasks for extended periods of time, such as a full screen slideshows, QuickTime playback, or some games.
- The optical drive may not eject when you've been using the computer for about two hours.
- Internet Connect may become unresponsive when you've been using the computer for about two hours. (This issue can affect either internal or external modems that use PPP as well as DSL modems that connect using the PPPoE protocol.)
- Attached displays may not wake up properly after the computer, running Mac OS X 10.4, has been sleeping for an extended period of time. The computer seems to wake up, but the display doesn't.

A firmware update is available to address the symptoms described in this article. The Power Mac G5 System Firmware Update is only for the 1.8 GHz, 600MHz bus single-processor Power Mac G5 (Late 2004) computer and requires Mac OS X 10.3.9 or Mac OS X 10.4.3 or later. Additional information about the firmware update and requirements are included with the download.

The Power Mac G5 (Late 2004) System Firmware Update for 10.3.9 and the Power Mac G5 (Late 2004) System Firmware Update for 10.4.3 is available for download. If you are using an earlier version of Mac OS X 10.3 or Mac OS 10.4, update the Mac OS from Apple Software Downloads.

Published Date: Oct 7, 2016

Mac OS X: Using email aliases in Mail

This article has been archived and is no longer updated by Apple.

Do you have multiple email addresses that are "aliases" to a central email account? If you do, you can configure Mail in Mac OS X so that it can easily get and send email from all of your addresses. Here's how.

Note: An *alias* email address is an account in which all email sent to it automatically goes to a master email address. This is not the same thing as having different email addresses that aren't automatically tied to a central address.

Important: Do not use these steps for .Mac email aliases. Mail will automatically retrieve email from any aliased .Mac email account. When composing a new message to send, .Mac aliases are available from the Account pop-up menu in the compose window.

1. In Mail, choose **Preferences** from the **Mail** menu.
2. Click Accounts.
3. Select your master account (the one to which email from your alias addresses gets sent).
4. Click Account Information and in the Email Address field, add all of the account's associated alias addresses, each separated by a comma.

5. Save your changes.

Now when you get email, Mail will collect messages sent to your alias accounts (along with email sent to your master account), and put it all in a single Inbox. You can also send email from any alias account by choosing the desired address from the **Account** pop-up menu in a new message window.

Published Date: Oct 7, 2016

Logic Pro/Express: Sometimes notes in chords do not chase properly

This article has been archived and is no longer updated by Apple.

When you start playback at a point that's in the middle of a held chord, Logic will only chase some of the notes. At the point where the chord should end, notes that Logic didn't play back originally may sound very briefly.

This issue occurs when the notes in a held chord are staggered, and you start playback after the first note (or notes) occur, but before the later note (or notes) begin. For example, if you start playback at the point depicted below, the notes will not chase properly:

However, if you move the playhead so that playback starts after the later notes in the chord begin (as shown below), then the notes in the entire chord will be chased as expected.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

Mac OS X 10.4: Adding a PC card modem fax device

This article has been archived and is no longer updated by Apple.

Faxing over a PC card modem is possible in Mac OS X 10.4 Tiger, but not all PC card modems support faxing. Apple does not provide technical support for determining if your PC card modem can fax, or for configuring it. However, this article provides general steps on setting up a PC card to fax, which may help.

1. Connect the PC card modem to your computer if it isn't already.
2. Open Printer Setup Utility (it's in /Applications/Utilities).
3. Click the Add button to open the Printer Browser window.
4. Option-click the More Printers button.
5. In the sheet that appears, choose **Advanced** from the top pop-up menu.
6. From the **Device** pop-up menu, choose **Fax Printer (fax)**.
7. Type `card modem` in the Device Name field.
8. Type `fax://dev/cu.pccard-modem0` in the Device URI field.
9. From the **Printer Model** pop-up menu, choose **Other**.
10. When the "Choose a File" dialog appears, press Shift-Command-G to reveal the "Go to the folder" dialog. In this dialog, type:

    ```
    /System/Library/Frameworks/ApplicationServices.framework/Frameworks/PrintCore.framework/Resources/
    ```

11. Click Go. You will now see the files and folders located inside the Resources folder. Scroll down until you see folders with language names.
12. Select the appropriate folder for the language you are using. For example, Japanese users should select "Japanese.lproj."
13. Select "Fax.ppd" and click Choose.
14. Click Add.

Once you add a PC card modem fax device in Mac OS X 10.4, you should be able to send faxes using the PC card modem, if the card supports faxing.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

iSync 2: Palm Conduit installer states "HotSync is not installed correctly"

This article has been archived and is no longer updated by Apple.

In iSync 2.0 (included with Mac OS X 10.4 Tiger), you can install Palm Conduit from within iSync to sync your Palm OS device with your computer.

If you cannot install the Palm conduit because the Conduit Setup Assistant tells you that your Palm HotSync software is not installed correctly, make sure that you've downloaded and installed the latest version of Palm Desktop from Palm's support website.

Note: Some releases of Palm Desktop version 4.2.1b may cause this issue to occur, even if it's installed properly. Download and install the latest version of Palm Desktop from Palm's website to correct this issue.

Related documents

- 302120: iSync 2: How to set up a USB Palm OS device to sync with your computer

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Published Date: Oct 7, 2016

Language Kit Updater from Mac OS 8 (LKU8): Known Issues

This document discusses issues that may occur with the Apple Language Kits, running with Mac OS 8 and the Language Kit Updater for Mac OS 8.
This article has been archived and is no longer updated by Apple.

- There is a conflict between Language Kit Additions files created for LaserWriter 8.4.x and the LaserWriter 8.5.x driver. A crash will occur after selecting Print from any application if the printer driver selected in the Chooser is LaserWriter 8.5. In order to avoid this problem remove LaserWriter-related files from the Language Kit Additions folder inside the Extensions Folder which include the version 8.4 in their names. For example, LaserWriter 8.4.3 Z and PrintLib 8.4.3 Z should be removed.

  Apple is also planning to make available Language Kit Addition files for LaserWriter 8.5 and PrintLib 8.5, which when installed will prevent this problem.

- Users of the Japanese Language Kit 1.2 who are using the JIS-Keyboard (on computers sold in Japan) will not have complete JIS-Keyboard support while using the U.S. Keyboard. A few unique keys strokes do not correctly produce in Roman mode their equivalents in Japanese mode. Most keys strokes do, however, work properly.

- A problem in the Language Kit Extension (LKE) causes classic control panels (type: cdev) like PC Exchange and ColorSync to experience potentially long timeouts when requesting the Open file dialog box. This can also occur with the Change setup dialog from the Printing menu for desktop printers. You may experience a long wait that appears to be a freeze, i.e. the wait cursor can moved around the screen but nothing else can be changed. By waiting a minute or two, depending on the speed of your computer, the Open File dialog box will appear and you will not need to restart your machine. This problem only occurs when Mac OS 8 and the Language Kit Updater for Mac OS 8 are installed. To date, Apple tech support has received only a few reports worldwide of customers encountering this problem.

- The Language Kit Updater Read Me says that it updates Hebrew and Arabic Language Kits version 1.0.1. It also updates version 1.0.

Note: A new version of LKU8, with these problems fixed, will be posted in Apple SW Updates, when it becomes available.
Published Date: Feb 19, 2012

Logic Pro/Express: How to send audio to Soundtrack Pro

This article has been archived and is no longer updated by Apple.

Soundtrack Pro can be a very useful addition to your Logic Pro or Logic Express workflow. While Logic doesn't have a dedicated feature that sends audio directly to Soundtrack Pro, you can edit audio from Logic projects in Soundtrack Pro by way of a Logic key command that opens an external sample editor, which you can set to open Soundtrack Pro. Here's how to do this.

Assign the key command first

By default, Logic doesn't have a key assigned to this command, so the first step is to assign one:

1. From the **Logic Pro** or **Logic Express** menu, choose **Preferences > Key Commands**.
2. In the Key Commands window, type `external` in the search field. The search engine returns the "Start external Sample Editor" command in the window. Select this command.
3. Click the "Learn by Key Label" button on the right side of the window to enable key assignment.
4. Press a key or key combination that you want to use to invoke this command.
5. Click the "Learn by Key Label" button again to disable it.
6. Close the Key Commands window.

You're now ready to start editing audio from a Logic song in Soundtrack Pro. Keep in mind that any editing you do in Soundtrack Pro is applied destructively to the audio files. Because of this, it's a good idea to make a backup of anything you plan to edit in Soundtrack Pro first before sending it to Soundtrack.

Edit Logic files in Soundtrack Pro

To edit audio from Logic in Soundtrack Pro, follow these steps:

1. In Logic, highlight the region you wish to edit in the Arrange window, then select **Arrange > Audio > Convert Regions to New Audio Files**.

2. A save dialog appears; enter a name for your file and select a save location if you wish.
3. With your newly created region highlighted in the Arrange window, press the key (or key combination) that you assigned for the "Start external Sample Editor" command.
4. The first time you use the key command, you'll be asked to select an application to use as the external editor:

Select Soundtrack Pro and click Open.

5. Soundtrack Pro opens and displays your selected Logic region in the Audio Wave Editor. As Soundtrack opens, Logic displays a dialog that says that the available number of MIDI ports has changed.

This happens because Soundtrack provides an internal MIDI port. Click OK to dismiss the message.

You may now perform any edits you like within Soundtrack Pro. The best way to do this is using Soundtrack Pro's Process effects. These are available from the Process menu in Soundtrack Pro. It is also possible to use realtime effects in Soundtrack Pro, by inserting them from the Effects tab; but if you do this, you must use **Process > Bounce Realtime to Action** to write the effects to the file.

Keep in mind that this is not an Audio File Project (.stap) in Soundtrack Pro, but a direct edit of the source file (Logic does not support the Audio File Project format). It's a good idea to avoid any edits that affect the length of the file, or change the number of channels (stereo-to-mono or mono-to-stereo conversions). Once you have performed your edits, save the file in Soundtrack Pro, and the results will immediately be audible when you switch back to Logic.

As long as you keep the file open in Soundtrack Pro, you may use its undo functionality to revert back to any stage in the current session's edit process. If you perform an undo, you must save the file again in Soundtrack Pro for the change to take effect in Logic. Once you close the file in Soundtrack Pro, or quit Soundtrack Pro, the edits cannot be undone.

Published Date: Feb 19, 2012

After installing Mac OS X 10.4, the computer may seem slow and the fans may run more

This article has been archived and is no longer updated by Apple.

When you install Mac OS X 10.4 Tiger and then restart your computer, the OS will automatically begin indexing your hard drive for Spotlight searching. Depending on how many files and Mail messages are on your hard drive, this can take anywhere from several minutes to a few hours. But once the process is done, searching for stuff on your computer using the Spotlight icon in the menu bar, or the Find command in the Finder, will take very little time.

While your hard drive is being indexed, your computer fans may run more than usual, your computer may seem "slow," and you may notice additional processor activity in Activity Monitor.

It's a good idea to allow your computer to finish its initial indexing before doing any processor-intensive work on it. Otherwise, the indexing may take longer. You can check its progress by clicking the Spotlight icon in the menu bar.

If you interrupt the process by restarting your computer or shutting it down, the indexing will resume at the next restart.

Related documents

- mh2158: Mac OS X 10.4 Help: What can I look for using Spotlight?
- mh2160: Mac OS X 10.4 Help: Preventing certain locations from being searched
- 301685: Mac OS X 10.4: No results when searching Mail messages
- 301562: Spotlight: How to re-index files and folders

Published Date: Oct 7, 2016

Mac OS X 10.4: Blue screen or unable to log in if high ASCII characters are in password

This article has been archived and is no longer updated by Apple.

If you upgrade to Mac OS X 10.4, 10.4.1, or 10.4.2 from an earlier version of Mac OS X, and continue to use an existing user account whose password contains high ASCII characters (those that can be typed using the Option key), Mac OS X 10.4 may start up to a blue screen if you have automatic login enabled. If automatic login isn't enabled (you get the login screen), you may be unable to log in if your password contains high ASCII characters.

Note: High ASCII characters are "extended ASCII" characters that you typically type using the Option key. They are listed in table II of this webpage, and include the following characters: å ß ∂ ƒ ∆ ... æ Ω ≈ ç √ ∫ ~ µ ≤ ≥ ÷ œ Σ + ¥ ø π Å ™ ® ©

To resolve the issue, update to Mac OS X 10.4.3 or later. **Note:** This issue can still occur when switching users via Fast User Switching and using a high ASCII character in a password, even if 10.4.3 or later is installed.

Additional information

This issue can also occur (in Mac OS X 10.4 through 10.4.2) if you change your password in Accounts preferences and use high ASCII characters.

Tip: If you're setting up a new account in Mac OS X 10.4, such as when you get a new Mac, use Setup Assistant to set a password that does not contain any high ASCII characters. Otherwise, the Finder and desktop won't appear when you finish the Setup Assistant; you'll see only a blue screen.

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Related Terms: startup, boot, boots

Published Date: Oct 7, 2016

Don‘t use an Apple Internal Modem with a PBX or digital phone line

This article has been archived and is no longer updated by Apple.

Always make sure that you're using an analog telephone line before you connect it to your Apple computer's internal modem.

If you plug a PBX or digital phone line into your computer's built-in modem, the line may cause damage to your modem. The Apple Internal Modem is designed for use with analog phone lines—the type that's commonly found in residential homes. PBX and digital phone lines are typically found in hotels and businesses, and require dialing "9" or another number in order to obtain an outside line. These phone lines carry a higher voltage than residential analog phone lines, which can cause damage to your computer's internal modem.

Published Date: Feb 18, 2012

Logic Pro 7.1.1 Enhancements

This article has been archived and is no longer updated by Apple.

General

- Changing the sample rate in Logic when using the built-in audio of a Mac mini now works as expected.
- Trying to open a file that you do not have permission to access no longer causes Logic to quit unexpectedly.
- Importing protected (read-only) MIDI files now works as expected.
- Logic no longer displays the superfluous MIDI Port Change alerts when the number of MIDI ports changes.

Tiger Compatibility

- The import of AAC and MP3 files now works as expected.
- AAF export now works as expected.
- Restores function of key commands that make use of a modifier when using a Scandinavian keyboard layout.
- The TDM DSP Usage window is now also available in Tiger.

Compatibility

- Improves import of OMF2 files.
- No longer limits import of XML files to 25 minutes.

Editing

- Unlocking SMPTE-locked events in the Event Editor now always works for all selected events.
- When using Soundtrack Pro as external sample editor:
  - The waveform overviews shown in the Logic Arrange window now reflect all changes made in Soundtrack Pro.
  - Opening and editing SDII files in Soundtrack Pro now works as expected.
- Pressing Shift-Option-Control and rubber banding an automation track creates two automation nodes on each side of the rubber band area. Dragging the selected area up or down now creates two additional automation nodes – each with new values.
- Automating two state controls now works correctly: pressing the two state control now inserts two automation nodes. The first contains the old value, and is inserted just before the SPL. The second contains the new value and is inserted just after the SPL.
- Using the Logic Control to record enable a track, or to switch to a record enabled track that contains an inserted plug-in no longer causes Logic to quit unexpectedly.
- Use of the Mute key command on a note in the Score Editor (when the Content Link function is active for both the Score Editor and Arrange windows) no longer mutes the Region that contains the note.
- The Remove EQs and Remove Sends function now works as expected in the Audio Configuration window.
- Canceling the Convert To New Audio File dialog no longer creates a Region and replaces the selected Region in the Arrange window.
- If you create a Folder that contains a single Audio Region, you can effectively use the **File > Export > Region As Audio File** function, even if the Audio Region is not selected.
- Burning a CD from the Bounce dialog in Logic could create a CD of static noise, when one of the POW-r Dither options for PCM was activated – even if no PCM file was actually bounced (the PCM destination checkbox was not active).
- The Mute buttons of MIDI channel strips are now correctly displayed.
- Using the QuickTime 7 algorithms to time stretch mono audio files no longer causes Logic to quit unexpectedly.

Global Tracks

- Following the entry of a tempo change ramp in the global Tempo track, you can now edit tempo values in the Tempo List by double clicking on the BPM section.
- The Beat Mapping track now displays 3/4 time signatures correctly.

Apple Loops

- Apple Loops with odd time signatures are now played back at the correct speed.

Environment

- Protected Macro Objects can now be permanently protected.

Video

- QuickTime movies are now delay compensated, ensuring accurate synchronization with the audio engine.

- In some extremely rare cases, Logic did not automatically find the movie when loading a song. Screensets that included the Movie window could also be displayed incorrectly. The 7.1.1 Update addresses these issues.

DAE/TDM

- Bouncing now works as expected when the WAVE option is selected in the Recording File Type menu of the **Logic > Audio > General** preferences.
- The TDM DSP Usage window is now also available in Tiger.

General Plug-In Issues

- Logic now also searches the following folder for plug-in settings: /Library/Application Support/GarageBand/Instrument Library/Plug-In Settings folder. This resolves an issue that prevented the Bass Amp plug-in settings from being shown in the Settings menu.
- The Automation pull-down menu in the track list now shows all Ultrabeat and Sculpture parameters.
- Restores function of the EVB3 with the Native Instruments B4D draw bar controller.

Ultrabeat

- Swapping drum voices by dragging a voice to another voice's position no longer copies the sequences of the source.
- Loading an Ultrabeat setting while playing a drum voice in Multi Trigger mode no longer quits Ultrabeat unexpectedly.
- It is now possible to preview UBS files in the Sample Load window by pressing the Play button.
- You can now save the samples of a drum kit on an external drive without having to manually search for the samples after ejecting and reconnecting the drive.
- Saving a song as a project that contains an Ultrabeat kit that makes use of the same sample for different voices rather than saving the sample separately for each drum voice.
- Voices played in Multi Trigger mode are no longer cut off.

EXS24

- The EXS24 mkII can now handle more than 32,767 sampler instruments.

Match EQ

- Analyzing files shorter than 100 ms no longer creates empty spectrums.

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Published Date: Oct 11, 2016

Logic Express 7.1.1 Enhancements

This article has been archived and is no longer updated by Apple.

General

- Realtime sample rate conversion now works.
- Changing the sample rate in Logic when using the built-in audio of a Mac mini now works as expected.
- Trying to open a file that you do not have permission to access no longer causes Logic to quit unexpectedly.
- Importing protected (read-only) MIDI files now works as expected.
- Logic no longer displays the superfluous MIDI Port Change alerts when the number of MIDI ports changes.

Tiger Compatibility

- The import of AAC and MP3 files now works as expected.
- Restores function of key commands that make use of a modifier key when using a Scandinavian keyboard layout.

Editing

- The Automation tool now supports S curves.
- When using Soundtrack Pro as external sample editor:
  - The waveform overviews shown in the Logic Arrange window now reflect all changes made in Soundtrack Pro.
  - Opening and editing SDII files in Soundtrack Pro now works as expected.
- Automating two state controls now works correctly: pressing the two state control now inserts two automation nodes. The first contains the old value, and is inserted just before the SPL. The second contains the new value and is inserted just after the SPL.
- Pressing Shift-Option-Control and rubber banding an automation track creates two automation nodes on each side of the rubber band area. Dragging the selected area up or down now creates two additional automation nodes – each with new values.
- Using the Logic Control to record enable a track, or to switch to a record enabled track that contains an inserted plug-in, no longer causes Logic to quit unexpectedly.
- Canceling the Convert To New Audio File dialog no longer creates a Region and replaces the selected Region in the Arrange window.
- Burning a CD from the Bounce dialog in Logic could create a CD of static noise, when one of the POW-r Dither options for PCM was activated – even if no PCM file was actually bounced (the PCM destination radio button was not active).
- The Mute buttons of MIDI channel strips are now correctly displayed.

Global Tracks

- Following the entry of a tempo change ramp in the global Tempo track, you can now edit tempo values in the Tempo List by double clicking on the BPM section.

Apple Loops

- Apple Loops with odd time signatures are now played back at the correct speed.

Video

- QuickTime movies are now delay compensated, ensuring accurate synchronization with the audio engine.
- In some extremely rare cases, Logic did not automatically find the movie when loading a song. Screensets that included the Movie window could also be displayed incorrectly. These issues have been addressed in the 7.1.1 Update.

General Plug-In Issues

- Logic now also searches the following folder for plug-in settings: /Library/Application Support/GarageBand/Instrument Library/Plug-In Settings folder. This resolves an issue that prevented the Bass Amp plug-in settings from being shown in the Settings menu.
- Using the Enhance Pitch plug-in no longer causes Logic to quit unexpectedly.

EXSP24

- The EXSP24 mkII can now handle more than 32,767 sampler instruments.

Published Date: Oct 11, 2016

Bookmarking audio and video files in iTunes 5 and later

This article has been archived and is no longer updated by Apple.

Starting with iTunes 5, you can enable a bookmarking feature that lets you bookmark any audio or video file in your iTunes library. This allows you to pick up from where you left off the last time you listened to or viewed the file. To enable an audio or video file's bookmarking function, do this:

1. Select a desired file in iTunes.
2. From the **File** menu, choose **Get Info**.
3. Click Options.
4. Select the "Remember playback position" checkbox.
5. Click OK.

If you have any iPod that has a Click Wheel that's been updated with iPod Updater 2005-06-26 or later, you can sync bookmarked files back and forth between your iPod and iTunes. For example, if you listen to a file on your iPod, stop playback, sync your iPod with iTunes, and then play that same file in iTunes, iTunes will start playback from the point you last heard on your iPod.

Not sure which iPod model you have? Find your iPod in the "Identifying different iPod models" article.

Published Date: Oct 11, 2016

iPod: Setting up multiple clocks

This article has been archived and is no longer updated by Apple.

iPod Software 1.0 for iPod nano and Fifth Generation iPod allow iPod to keep multiple clocks for different time zones. This feature is also known as World Clock. You'll find the new clock features in the Extras menu (**Extras** > **Clock**).

About the Clock

Each clock displays an analog style clock face that shows the time, the name of a city in the chosen time zone, and the digital time. During daytime hours (from 6:00 AM to 5:59 PM), the clock features a white face with black hands; at nighttime (from 6 PM to 5:59 AM), the clock displays a black face with white hands.

You can add as many clocks to the Clock menu as you like. The clocks will appear in the Clock menu, in the order in which you add them—not alphabetically or by time zone.

Adding a Clock

1. Select **New Clock** from the **Clock** menu.

2. From the **Region** menu, select a region from the list.
3. You'll see a City menu that lists cities (in alphabetical order) that represent the different time zones in your selected region. Please note that some city lists can be quite long.
4. From the **City** menu, select the city that represents the clock you wish to create.
5. View your new clock in the Clock menu.

Settings

When you select a clock, you can change its settings, including:

- Alarm Clock
  Each clock can have it own alarm (see below for steps to set an alarm).
- Change City
  You can change a clock to represent a different city.
- Daylight Saving Time
  You can set the clock for daylight saving time when the city observes it.

Alarm Clock

If you want to make sure you don't oversleep, or need an audible reminder, you can set an alarm on any clock (each clock can have its own alarm). To set an alarm:

1. Select the desired clock in the **Clock** menu.
2. Select **Alarm Clock** from the city name's menu.
3. In the **Alarm Clock** menu, select **Alarm** to change its status from **Off** to **On**.
4. In the **Alarm Clock** menu, select **Time**, and on the next screen set the time that you want the alarm to sound.
5. In the **Alarm Clock** menu, select **Sound** and then select a sound or playlist. If you select **Beep**, iPod will play the alarm through its internal speaker. If you select a playlist, you'll need to connect speakers or headphones to your iPod to hear the alarm.
6. In the Clock menu, you'll see a bell icon next to any clock that has its alarm set.

Deleting a Clock

1. Select the unwanted clock in the **Clock** menu.
2. Select **Delete This Clock** from the city name's menu.

Sleep Timer

Like previous versions of iPod Software, you can set iPod to turn off automatically after playing music or a slideshow after a specified period of time. This feature is called the Sleep Timer. Even though the Sleep Timer menu option appears in each clock's menu, you can only have one Sleep Timer. Setting the timer in any one clock sets the global setting for the Sleep Timer.

Published Date: Oct 7, 2016

Mac mini modem configurations

This article has been archived and is no longer updated by Apple.

Mac mini 1.25 GHz models (M9686xx/B) come standard with an internal 56K V.92 modem.

Mac mini 1.42 GHz models, both the Combo Drive model (M9687xx/B) and SuperDrive model (M9971xx/B), do not come with a modem as part of their default configuration.

An internal 56K V.92 modem is available as a Build To Order option for Mac mini 1.42 GHz models. Alternatively, if you purchase a 1.42 GHz Mac mini without a modem, you can have an Apple Authorized Service Provider or Apple Retail Store install an internal modem module for Mac mini (separate charges apply).

Published Date: Feb 20, 2012

Apple Remote Desktop 2: Unable to add remote computer for Data Collection

This article has been archived and is no longer updated by Apple.

If you go to the Data Collection preference in Remote Desktop and drag a second Remote Desktop Administration computer into the "Remote computer address" field, the field may not display the address correctly. If you try manually typing the Remote computer's IP address in the field, the information disappears when you click Select.

This happens because the Data Collection feature requires two unique software serial numbers, as explained on page 86 of the Remote Desktop 2.2 Administration Guide:

> A remote computer that collects the data needs to be a licensed ARD administrator computer...

Check the current administration computer and the targeted remote computer to ensure that each has a serial number entered and that each is unique. To change a Remote Desktop serial number:

1. Open Remote Desktop Preferences and click the General tab.
2. Click Change in the lower-right corner of the window.
3. Enter your other licensed Remote Desktop serial number.

Tip: Additionally, a remote data collector must have port 3283 open for both TCP and UDP. TCP port 5900 must be open to do a Control or Observe of the computer, but otherwise doesn’t need to be open. UDP port 5900 would need to be open, if for some reason, you want to do a Share Screen to the computer.

Published Date: Feb 18, 2012

Mac OS X 10.4: Mail - "Unable to open" alert when checking mail from Exchange public folders

This article has been archived and is no longer updated by Apple.

When Mac OS X 10.4 Mail tries to sync public folders on an Exchange server, you may encounter an alert such as this (where `XXXX` is the name of the public folder):

```
Unable to open XXXX
IMAP command 'SELECT' failed
```

You may see several of these error messages. To resolve this issue, download and install Mac OS X 10.4.3 or later.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

About the Java Security Update

This article has been archived and is no longer updated by Apple.

This document describes the security content of Java Security Update, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How To Use The Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Java Security Update

- **Java**

  Available for: Java 1.3.1

  Impact: Java is updated to version 1.3.1_16

  Description: This release updates Java to version 1.3.1_16 to address a number of issues. Further information is available in the 1.3.1_16 section of Sun's release notes at http://java.sun.com/j2se/1.3/ReleaseNotes.html.

- **Java**

  Available for: Java 1.4.2

  Impact: Java is updated to version 1.4.2_09

  Description: This release updates Java to version 1.4.2_09 to address a number of issues. Further information is available in the 1.4.2_09 section of Sun's release notes at http://java.sun.com/j2se/1.4.2/ReleaseNotes.html. Credit to Sun and Marc Schoenefeld for notifying us about these issues.

- **Java**

  CVE-ID: CAN-2005-2527

  Available for: Java 1.4.2

  Impact: A file race condition can lead to file corruption or the creation of arbitrary files.

  Description: This is specific to the implementation of Java on Mac OS X. Under certain conditions, Java may insecurely handle a temporary directory. Subsequent file operations inside that directory could be exposed to file race conditions. This update addresses the issue by adding validation when operating in the temporary directory.

- **Java**

  CVE-ID: CAN-2005-2530

  Available for: Java 1.3.1

  Impact: An untrusted applet could gain elevated privileges.

  Description: This is specific to the implementation of Java on Mac OS X. A vulnerability in Apple's implementation of Java allows an untrusted applet to elevate privileges when using Mac OS X specific extensions. This update addresses the issue by implementing additional security checks. This issue does not affect Java on Mac OS X v10.4 or later.

- **Java**

  CVE-ID: CAN-2005-2738

  Available for: Java 1.4.2

  Impact: Network traffic intended for a particular Java ServerSocket could be intercepted by another one.

Description: This is specific to the implementation of Java on Mac OS X. It is possible for the same port to be opened as a Java ServerSocket multiple times without reporting an error. This can allow a Java program to intercept data intended for the ServerSocket of a different Java program. This update causes an exception to be thrown if a port is already in use. This issue does not affect Java on Mac OS X v10.4 or later. Credit to Jeremy Pfeifer of the University of Saskatchewan for reporting this issue.

Related documents

- 302266: About the security content of Java 1.3.1 and 1.4.2 Release 2

Published Date: Oct 7, 2016

About the security content of Java 1.3.1 and 1.4.2 Release 2

This article has been archived and is no longer updated by Apple.

This document describes the security content of Java version 1.3.1_16, and Java 1.4.2 Release 2, which can be downloaded and installed using Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How To Use The Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Java 1.3.1 and 1.4.2 Release 2

- **Java**

  Available for: Java 1.4.2

  Impact: Java is updated to version 1.4.2_09

  Description: This release updates Java to version 1.4.2_09 to address a number of issues. Further information is available in the 1.4.2_09 section of Sun's release notes at http://java.sun.com/j2se/1.4.2/ReleaseNotes.html. Credit to Sun and Marc Schoenefeld for notifying us about these issues.

- **Java**

  Available for: Java 1.3.1

  Impact: Java is updated to version 1.3.1_16

  Description: This release updates Java to version 1.3.1_16 to address a number of issues. Further information is available in the 1.3.1_16 section of Sun's release notes at http://java.sun.com/j2se/1.3/ReleaseNotes.html.

- **Java**

  CVE-ID: CAN-2005-2527

  Available for: Java 1.4.2

  Impact: A file race condition can lead to file corruption or the creation of arbitrary files.

  Description: This is specific to the implementation of Java on Mac OS X. Under certain conditions, Java may insecurely handle a temporary directory. Subsequent file operations inside that directory could be exposed to file race conditions. This update addresses the issue by adding validation when operating in the temporary directory.

- **Java**

  CVE-ID: CAN-2005-2528

  Available for: Java 1.3.1, Java 1.4.2

  Impact: Insecure temporary file handling can lead to file corruption or the creation of arbitrary files.

  Description: This is specific to the implementation of Java on Mac OS X. The privileged helper used to update Java shared archives insecurely creates temporary files, which can lead to a file race condition. This update addresses the issue by avoiding file operations in user-accessible locations. This issue does not affect systems prior to Mac OS X v10.4. Credit to kf_lists[at]digitalmunition[dot]com for reporting this issue.

- **Java**

  CVE-ID: CAN-2005-2529

  Available for: Java 1.4.2

  Impact: Malicious system users can gain elevated privileges.

TA23502_About_the_security_content_of_Java_and_Release_.pdf

Description: This is specific to the implementation of Java on Mac OS X. The utility used to update Java shared archives is susceptible to a privilege escalation vulnerability from local system users. This update addresses the issue by performing additional clean-up before launching the utility on behalf of unprivileged users. This issue does not affect systems prior to Mac OS X v10.4. Credit to Dino Dai Zovi for reporting this issue.

Published Date: Oct 7, 2016

iPod does not work when plugged into a keyboard

This article has been archived and is no longer updated by Apple.

To charge and sync iPod nano or Fifth Generation iPod, make sure that you connect the USB cable to one of the built-in, high-powered USB ports on your computer (USB 2.0 recommended) or to a powered USB hub that's connected to the computer (for example, many Apple displays contain powered USB hubs). iPod nano and Fifth Generation iPod will not work when it's plugged into a USB port on your keyboard.

Published Date: Oct 7, 2016

Mac OS X 10.4: About improved disc burning and Burn Folders

This article has been archived and is no longer updated by Apple.

Mac OS X 10.4 Tiger makes it even easier to burn to a writable CD or DVD but there are some things you should be aware of if you're used to burning discs in earlier versions of Mac OS X.

Tiger uses aliases for improved burning

Before Mac OS X 10.4, data was copied twice before burning—Tiger copies the data only once, accelerating the burning process. Tiger accomplishes this by creating *aliases* to the data to be burned.

For example, if you drag a folder to a blank disc icon to burn its contents, Tiger temporarily puts an alias on the disc. When you later burn the disc, the actual data that the alias points to is burned to the disc. This means that when you drag stuff to an blank disc's icon (or Burn Folder, see below), a temporary alias is created on the disc or in the folder.

Important: Aliases on discs that haven't been burned yet point to your actual data; data is not copied to the disc until you actually burn the disc. This means if you double-click the alias and modify the files or content, you are modifying the original data on your hard disk—not just the data on the unburned disc.

When Tiger burns the disc, it burns the original data to the disc, not the temporary aliases.

Burn Folders make disc burning easier

Mac OS X 10.4 also introduces Burn Folders in the Finder. This feature makes it easy to get your stuff ready for burning without actually having to have a disc in the computer (until you're ready to burn it, of course). You'll see a black "burn banner" inside the folder as a reminder, along with a Burn button. When you click the Burn button, you are prompted to insert a writable disc and told how much free space it must have to burn the contents of the folder.

Removing stuff from a burnable disc or Burn Folder before burning

You can delete aliases from a Burn Folder or unburned disc without affecting your original data to which the aliases point. These aliases are at the "highest" (or root) level of the Burn Folder or unburned disc. As mentioned, if you actually double-click any of these aliases, you'll be able to modify the files on your hard drive. In other words, when a Burn Banner is present, you can delete the data aliases with no consequence to the actual data on the hard disk.

Important: Do not double-click a burn alias and then delete the aliased content. This does not remove anything from the disc or Burn Folder, but does remove content from your computer!

What happens if an alias is manually copied to the disc or Burn Folder?

When the burn starts, Mac OS X 10.4 will attempt to burn the data that any alias points to, even if it's not as the root level of the unburned disc or Burn Folder. If your alias points to missing data, this alert appears:

> "The item '*name of item*' cannot be burned because the original item cannot be found. Skip this item and continue burning?"

To avoid this, don't create aliases on unburned discs or Burn folders. Instead, drag the original content to the disc or folder so that Mac OS X will create the alias for you.

How large is the burn folder?

To see the number of items and data size that will be burned, open the burn folder and look at the bottom of the window; or, select the folder and choose **Get Info** from the **File** menu. Also, you can click the refresh button in the bottom right corner of the burn folder window if you add or remove items from the folder.

Published Date: Oct 7, 2016

Some Xsan configurations will cause an error when using Distributed Processing for Compressor

This article has been archived and is no longer updated by Apple.

Symptom or Issue

If you submit a Compressor batch to a QMaster cluster, the batch may not get processed and you'll get the following error instead:

> NewMovieFromFile failed -2048.

This issue is caused by some Xsan volume configurations and affects the following products:

- Compressor 2.x
- QMaster 2.x
- Xsan 1.x
- DVD Studio Pro 4
- Final Cut Studio

Solution

Update to Xsan 1.4 to resolve this.

Published Date: Oct 7, 2016

QuickTime for Windows: Installation won‘t work if another user is using QuickTime Player

This article has been archived and is no longer updated by Apple.

Before you install QuickTime for Windows, make sure that no other user on your computer has QuickTime Player open. If another user account has QuickTime Player open while you attempt to install QuickTime, the installation won't work and QuickTime Player will not be installed properly.

To prevent this, do one of the following before installing QuickTime:

- Logout all other users.
- Quit QuickTime Player in all logged in user accounts.
- Restart the computer.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

QuickTime 7 on Windows: "Loading" message appears instead of the Content Guide

This article has been archived and is no longer updated by Apple.

When using QuickTime 7 on a computer with Windows XP, you might see a "Loading" message instead of the Content Guide if the "Automatically play movie when opened" option is selected in QuickTime preferences.

To prevent this from happening:

1. On the **Edit** menu, point to **Preferences**, then click **Player Preferences**.
2. Deselect the "Automatically play movie when opened" checkbox. The Content Guide should now open normally.

Update to QuickTime 7.1 or later to resolve this.

Published Date: Oct 7, 2016

QuickTime for Windows: Uninstall QuickTime 3 or 4 before installing QuickTime 7

This article has been archived and is no longer updated by Apple.

If you are trying to install QuickTime 7 and run into difficulty, see if your computer has QuickTime version 3 or 4 installed on it. If it does, uninstall QuickTime 3 or 4 completely before attempting to install QuickTime 7 again. Once the old version is gone, you should be able to install QuickTime 7 normally.

This document will be updated as more information becomes available.

Published Date: Feb 18, 2012

QuickTime Pro: Fast Start may not work if movie is modified after being saved

This article has been archived and is no longer updated by Apple.

The Fast Start feature in QuickTime Pro allows you to begin playing a movie while it's still being downloaded. Instead of having to wait for the entire movie to download, QuickTime Player can start playing the already downloaded part, while the rest of the movie continues to download in the background.

For Fast Start to work, you need to select the Fast Start option in the Save dialog when you create the movie.

Please note that if you modify the movie after saving it with the Fast Start option, the Fast Start feature may not work correctly. For example, if you create a movie with Fast Start enabled and then add annotations and save the movie again, the Fast Start feature may not work.

To prevent this from occurring, be sure to save the movie again with the Fast Start checkbox selected before posting your movie for download.

Published Date: Feb 18, 2012

iTunes 5 and QuickTime 7 for Windows: Installation won‘t work if Cygwin is running

This article has been archived and is no longer updated by Apple.

If you're running Cygwin on your Windows computer and try to install QuickTime 7 or iTunes 5 (which installs QuickTime), the installer may not work properly, which will prevent installation. (Cygwin is software that provides a Linux-type environment for Windows.)

Download and install QuickTime 7.0.4 or later or iTunes 6 or later to resolve this.

Important: Mention of third-party websites and products is for informational purposes only and constitutes neither an endorsement nor a recommendation. Apple assumes no responsibility with regard to the selection, performance or use of information or products found at third-party websites. Apple provides this only as a convenience to our users. Apple has not tested the information found on these sites and makes no representations regarding its accuracy or reliability. There are risks inherent in the use of any information or products found on the Internet, and Apple assumes no responsibility in this regard. Please understand that a third-party site is independent from Apple and that Apple has no control over the content on that website. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

Mac OS X 10.4: About the display rotation feature

This article has been archived and is no longer updated by Apple.

Some video cards may include support for display rotation in Mac OS X 10.4 Tiger. Look in Displays preferences; if you see a **Rotate** pop-up menu on the right side of the window, your video card supports display rotation.

Published Date: Oct 7, 2016

iTunes 5 for Mac installation will not proceed if SizzlingKeys is running

This article has been archived and is no longer updated by Apple.

If you have Yellow Mug Software's SizzlingKeys, a third-party application, installed on your computer, the application will prevent iTunes 5 from installing. Instead, you'll get this message, even if iTunes is not open:

> Please quit iTunes before beginning this update.

To install iTunes 5, download and install iTunes 5.0.1 or later.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

About Pro Applications Update 2005-02

This article has been archived and is no longer updated by Apple.

Pro Applications Update 2005-02 addresses several issues with underlying frameworks and shared components for Apple's professional applications, and is strongly recommended for all users of Final Cut Studio, Final Cut Pro 5, Motion 2, Soundtrack Pro, DVD Studio Pro 4, LiveType 2, Compressor 2, Apple Qmaster 2, and Final Cut Express HD 3.

Pro Applications Update 2005-02 updates the following components:

- **Helium.framework**
  - Helium 2.0.2 addresses underlying issues with PAL to NTSC transcoding.
  - Addresses the field inversion (image jitter) issue when using Compressor to transcode from HDV to Standard Def MPEG-2.

- **DesktopVideoOut.component**
  DesktopVideoOut 1.2.3 addresses issues with DCD Main.

Requirements for this update

- Mac OS X 10.3.9 or later
- QuickTime 7.0 or later

And at least one of the following:

- Final Cut Express HD 3.0 or 3.0.1
- Pro Applications Update 2005-01 (You'll find the ProAppsUpdate2005-01.pkg file in the Receipts folder if installed.)

Published Date: Oct 7, 2016

Mac OS X Server: Problems creating Replicas in 10.4.2

This article has been archived and is no longer updated by Apple.

Under certain circumstances, a replica that you're trying to create may turn back to Stand Alone, or you see errors in the /Library/Logs/slapconfig.log on the replica, such as:

```
Authentication failed error is -14098
```

or

```
GetReplicaSetup = -14103
```

This can happen after you set a computer from replica, to Stand Alone, then back to replica. To change the replicas back to Stand Alone and clean up the databases, follow the steps below. All commands run from the Terminal must be as root.

1. Make sure the Kerberos server is running on the master. Check the General tab in Server Admin, Open Directory. If it's not, you will need to fix this first.
2. Change the role of the replica back to Stand Alone.
3. For the old replica, check Workgroup Manager and make sure there are no Local users with Open Directory password types (the admin may have been set to use such a password). If you find any with Open Directory passwords, change them to use Shadow passwords.
4. Make sure you have a directory admin that does not have the same short name or user ID (UID) as the local admin. This normally only happens if the server has been upgraded. If you don't, create a new admin in the LDAP domain to use as the directory admin when creating replicas.
5. Run the following commands as root on the replica, ignoring the message, "No such process - nothing found to load," after entering the NeST command:

   ```
   NeST -stoppasswordserver
    mv /var/db/authserver  /var/db/authserver.old
    mv /var/db/krb5kdc /var/db/krb5kdc.old
    mv /etc/krb5.keytab /etc/krb5.keytab.old
    mv /Library/Preferences/edu.mit.Kerberos /Library/Preferences/edu.mit.Kerberos.old
   ```

6. On the master, open Preferences in Workgroup Manager.
7. Select "Show all records Tab and Inspector."
8. Click the Accounts icon, then the target tab.

9. From the pop-up menu, choose **Config**.
10. Remove any passwordserver_XXXXX records (where "XXXXX" is any number), but keep the copy that's named "passwordserver" (without a number appended).
11. In the passwordserver record, remove any references to the replica in the PasswordServerList. To do this:
    a. Select PasswordServerList.
    b. Click Edit.
    c. Remove the text (see below for the text example).
    d. Click OK.
    e. Save.
12. Go to Config / ldapreplicas, then to LDAPReadReplicas.
13. If you see more than one replica, open each to see if it lists its IP address. If it does, select it and press Delete on your keyboard. Do **not** click the Delete icon, as this will delete the "ldapreplica" record. Click Save.
14. On the master, back up your var/db/authserver/authserverreplicas file:

    ```
    cp /var/db/authserver/authserverreplicas /var/db/authserver/authserverreplicas.backup
    ```

15. Stop the PasswordService:

    ```
    NeST -stoppasswordserver
    ```

16. Remove the replica (or replicas) from the /var/db/authserver/authserverreplicas file. In the following example text, the portion shown in red can be safely removed. Note that you delete the first red line, <key>Replicas</key>, only if you are going to delete all replicas from the list. If you leave any replica in the list, you must also leave this line. In most cases, you will only delete one of the replicas, so you would leave the line. However, in the example below, the line would be deleted because both replicas are being removed:

    ```
     <?xml version="1.0" encoding="UTF-8"?>
    <!DOCTYPE plist PUBLIC "-//Apple Computer//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/PropertyList-1.0.dtd">
    <plist version="1.0">
    <dict>
     <key>ID</key>
     <string>BF0AB54BD2C8D84CE5BC4DFC4D726762</string>
     <key>Parent</key>
     <dict>
      <key>DNS</key>
      <string>ehsodm.eastonsd.org</string>
      <key>IDRangeBegin</key>
    ```

```
 <string>0x000000000000000000000000000010ea</string>
 <key>IDRangeEnd</key>
 <string>0x000000000000000000000000000012de</string>
 <key>IP</key>
 <string>10.90.10.20</string>
 <key>LastSyncDate</key>
 <date>2005-08-22T04:00:57Z</date>
 <key>ReplicaPolicy</key>
 <string>SyncAnytime</string>
</dict>
<key>Replicas</key>
<array>
 <dict>
  <key>IDRangeBegin</key>
  <string>0x000000000000000000000000000012f2</string>
  <key>IDRangeEnd</key>
  <string>0x000000000000000000000000000014e6</string>
  <key>IP</key>
  <string>10.90.10.21</string>
  <key>LastSyncDate</key>
  <date>2005-08-22T04:00:57Z</date>
  <key>LastSyncFailedAttempt</key>
  <date>2005-06-14T01:41:17Z</date>
  <key>ReplicaName</key>
  <string>Replica1</string>
 </dict>
</array>
<array>
 <dict>
  <key>IDRangeBegin</key>
  <string>0x000000000000000000000000000014e8</string>
  <key>IDRangeEnd</key>
  <string>0x000000000000000000000000000016d6</string>
  <key>IP</key>
  <string>10.90.10.24</string>
  <key>LastSyncDate</key>
  <date>2005-08-22T04:00:57Z</date>
  <key>LastSyncFailedAttempt</key>
  <date>2005-06-14T01:41:17Z</date>
  <key>ReplicaName</key>
  <string>Replica2</string>
 </dict>
</array>
<key>Status</key>
<string>AllowReplication</string>
</dict>
</plist>
```

17. On the master, restart the PasswordService:

    ```
    NeST -startpasswordserver
    ```

18. Make sure that the /var/db/authserver/authserverreplicas file is correct and not empty:

    ```
    more /var/db/authserver/authserverreplicas
    ```

    If there is an issue, use the /var/db/authserver/authserverreplicas.backup file and repeat steps 16 to 18. Recheck.

Published Date: Oct 7, 2016

Error 1920 or 1921 when installing iTunes 5 for Windows

This article has been archived and is no longer updated by Apple.

When you install iTunes 5 for Windows, one of the following errors may appear near the end of the installation process that says:

> Error 1920. Service Bonjour Service (Bonjour Service) failed to start. Verify that you have sufficient privileges to start system services.
>
> Error 1921. Service bonjour service could not be stopped. Verify that you have sufficient privileges to stop system services.

This error can be caused by two things:

- The Windows Management Instrumentation service isn't running on your computer.
- Norton Internet Security 2005 is running on the computer.

To resolve this issue, update to iTunes 5.0.1 or later.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

Final Cut Pro 5: Uncompressed PAL setups have incorrect field dominance

This article has been archived and is no longer updated by Apple.

If you're working in PAL using either the Uncompressed 8-bit or Uncompressed 10-bit Easy Setup in Final Cut Pro 5, please be aware of an error in these settings: The field dominance is set to Lower (Even), but it should be set to Upper (Odd).

Since most capture cards use their own Easy Setups, you probably won't encounter any issues if you're capturing new material. But if you're editing existing material, make sure that you adjust the sequence settings by setting the field dominance to Upper (Odd) in Final Cut Pro.

For information on changing Sequence Settings, please see the Final Cut Pro User's Manual (available from the **Help** menu).

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Mac OS X 10.4 or later: Remotely-based X11 applications quit unexpectedly or behave erratically

This article has been archived and is no longer updated by Apple.

If you use xterm in X11 to connect to a remote server over an ssh session and then execute an X11 application on that remote host, the application could exhibit unexpected behavior (application menus may not work), or quit unexpectedly with a variety of error messages.

For example, if you start a remote ssh session by entering `ssh -X remote.host.com` and then launch an application, you might encounter messages like the ones listed below by application name.

eclipse-SDK-3.1M5a-linux-gtk install

```
The program '' received an X Window System error.
This probably reflects a bug in the program.
The error was 'BadWindow (invalid Window parameter)'.
  (Details: serial 5931 error_code 3 request_code 38 minor_code 0)
  (Note to programmers: normally, X errors are reported asynchronously;
   that is, you will receive the error a while after causing it.
   To debug your program, run it with the --sync command line
   option to change this behavior. You can then get a meaningful
   backtrace from your debugger if you break on the gdk_x_error() function.)
```

gimp

```
Gdk-ERROR **: BadWindow (invalid Window parameter)
  serial 26717 error_code 3 request_code 38 minor_code 0
Gdk-ERROR **: BadAccess (attempt to access private resource denied)
  serial 26718 error_code 10 request_code 102 minor_code 0
```

glade-2

The program won't run or stops responding. The error message given is:

```
Gdk-ERROR **: The program 'glade-2' received an X Window System error.
This probably reflects a bug in the program.
The error was 'BadAtom (invalid Atom parameter)'.
  (Details: serial 1058 error_code 5 request_code 20 minor_code 0)
  (Note to programmers: normally, X errors are reported asynchronously;
   that is, you will receive the error a while after causing it.
   To debug your program, run it with the --sync command line
   option to change this behavior. You can then get a meaningful
   backtrace from your debugger if you break on the gdk_x_error() function.)
aborting...
```

However, no error message appears in the local Console application (console.log or system.log files).

Resolving the issue

Use the following command to initiate your remote ssh session in the X11.app xterm session:

```
ssh -Y remote.host.com
```

The -Y option "Enables trusted X11 forwarding," which is required to initiate these remote X11 sessions in Mac OS X 10.4 and later. For more information, please see the OpenSSH FAQ (http://www.openssh.com/faq.html#3.13).

Published Date: Feb 18, 2012

Mac OS X 10.4.2: Issues after Archive and Install of 10.4 followed by reapplication of 10.4.2

This article has been archived and is no longer updated by Apple.

If you were using Mac OS X 10.4.2, then performed an Archive and Install of Mac OS X 10.4, then updated to Mac OS X 10.4.2 again via Software Update, some Apple applications may not be properly updated or work as expected.

For example, you might not see existing email messages in Mail after updating to Mac OS X 10.4.2.

Note: This issue only occurs in the scenario described above. It does not happen when reapplying 10.4.2 via the standalone Mac OS X 10.4.2 Combo update.

Solution

If you already updated to Mac OS X 10.4.2 via Software Update following an Archive and Install of 10.4, follow these steps:

1. Open the folder named Previous System if it's still on your Mac OS X volume.
2. Delete the Applications folder from the Previous System folder. Make sure you've collected any important files you want from it if you haven't already (normally, you should reinstall third-party applications later instead of saving them from this folder).
3. Download and install the Mac OS X 10.4.2 Combo update from Apple Downloads.

After updating, your Apple applications should be at the correct versions, and Mail should display your existing messages. Reinstall any third-party applications that were in the former Applications folder from their original source discs or images.

To avoid the issue after an Archive and Install installation of Mac OS X 10.4, but before 10.4.2, follow these steps:

1. Open the folder named Previous System.
2. Delete the Applications folder from the Previous System folder. Make sure you've collected any important files you want from it if you haven't already (normally, you should reinstall third-party applications later instead of saving them from this folder).
3. Download and install the Mac OS X 10.4.2 Combo update.

After updating, your Apple applications should be at the correct versions, and Mail should display your existing messages. Reinstall any third-party applications that were in the former Applications folder from their original source discs or images.

Additional information

Apple applications that could be affected include Address Book, Automator, Font Book, iChat, Safari, Mail, and Stickies. In Mac OS X 10.4.2, the versions of these applications should be:

- Address Book 4.0.2
- Automator 1.0.1
- Font Book 2.0.1
- iChat 3.0.1
- Mail 2.0.2
- Stickies 5.1
- Safari 2.0.1

Related documents

25508 Applications don't work after reinstalling Mac OS X

Published Date: Oct 7, 2016

Mac OS X 10.4: Startup chime doesn‘t play on startup

This article has been archived and is no longer updated by Apple.

If you wake your Mac from sleep, then shut it down or restart it before playing any audio or adjusting the volume, you won't hear the startup chime on your next startup.

Don't worry. There's nothing wrong with your Mac; it will start up normally. To ensure that the startup chime sounds on startup, simply play an audio file or adjust the system volume after waking your Mac from sleep before restarting it or shutting it down.

Published Date: Oct 7, 2016

Logic Pro/Express 7: Track doesn‘t appear highlighted when selected with a control surface

This article has been archived and is no longer updated by Apple.

When you select a Logic Pro 7 or Logic Express 7 track with a control surface, the corresponding track in the Arrange window may not appear to be selected. This can happen when you have more than one instance of a channel assigned to tracks in the Arrange window.

In the image above, the first two tracks are both assigned to Audio 1 in the mixer. Each has a different drum loop, though the first track is muted. Everything, as it appears above, will work as expected; if you select Audio 1 on a connected control surface, track 1 will appear highlighted in the Arrange window.

However, if you hide the muted track by clicking the global Hide button (the round "H"—it'll turn light blue), enable the track hide button on the first track, click the global Hide button again (it'll turn orange to indicate that there is a hidden track), and then press Audio 1 on your control surface, nothing will appear highlighted in the Arrange window.

This happens because the first instance of any track is highlighted when you select with a control surface, and that's a hidden track in this case.

Resolving the issue

If you are using a Logic Control or a Mackie Control, you can put the control surface into "Arrange View" by pressing the Shift and Global buttons on the control surface. In this mode, each Arrange track will be assigned to channel strips on your control surface, even if they are assigned to the same Logic mixer channel. If you prefer not to use multiple channel strips on your control surface for tracks assigned to the same mixer channel, then use these steps:

1. Click the global Hide button to reveal the hidden track (or tracks).
2. In the Arrange window, drag an unhidden instance of the track to a higher position than the hidden instance.
3. Click the global Hide button again to hide the track.

Now you can select the unhidden instance with your control surface.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 19, 2012

AirPort for Windows (Japanese): Network name doesn‘t appear correctly in wireless connection window

This article has been archived and is no longer updated by Apple.

If an AirPort network name (SSID) contains non-ASCII characters (Japanese, for example), it may not appear correctly in the wireless connection window to Windows 2000 and Windows XP users who are trying to join the network.

Windows XP and Windows 2000 users can still connect to an affected AirPort wireless network, despite the incorrect name. To achieve a predictable name, use AirPort Admin Utility to rename the network using Roman characters.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 19, 2012

Xsan: Working with 2TB and larger LUNs

This article has been archived and is no longer updated by Apple.

Xsan 1.3

Xsan 1.3 supports LUNs larger than 2 TB. Xsan 1.3 is a downloadable update recommended for all Xsan users.

Xsan 1.0 to 1.2

Xsan 1.2 and earlier supports LUN sizes of 2 TB (terabytes) or smaller. However, if you're using an Xserve RAID that provides LUNs larger than 2 TB (such as Xserve RAID installations that use the newer 500 GB hard drives), you can use RAID Admin to create RAID sets that are smaller than 2 TB, or use the slicing feature in RAID Admin (under the Advanced tab) to divide existing RAID sets into smaller LUNs. Please keep this in mind when planning your Xsan network setup.

For optimal performance, use the following procedure as your guideline.

Step 1: Minimize the number of slices

In RAID Admin, slice the available storage into as few slices as possible, making sure to keep each below 2 TB. For example, create 2 LUNs from one that is initially 3.5 TB.

In the diagram below, the 3.5 TB LUN that comprises the drives on the left side of the Xserve RAID (controlled by the upper controller) has been sliced into two LUNs (LUN0, LUN1), while the 3.5 TB LUN that comprises the drives on the right side of the Xserve RAID (controlled by the lower controller) has also been sliced into two LUNs (LUN0, LUN1).

After you finish slicing, restart all Xsan nodes so that they recognize the slices.

Step 2: Correlate LUNs to RAID slices

Next, determine which LUNs in Xsan Admin correspond to which RAID slices. Open RAID Admin, click the Fibre Channel tab, and note the World Wide Name (WWN) for both the upper and lower controllers.

Choose **Setup > LUNs**. Each new slice should appear as "Unlabeled." The Information panel for each LUN includes a LUN number and a WWN that will correspond with the WWN of one of your Xserve RAID controllers.

In our example, the WWN `50:00:39:30:00:00:9A:44:0` corresponds to the Xserve RAID's upper controller, WWN `60:00:39:30:00:00:9A:44:0`, and this LUN has the LUN ID `0`.

Tip: It's a good idea to label each LUN according to its physical position in the rack and within the RAID. For example, we labeled a LUN with the LUN ID `0` that's associated with the upper controller of the second Xserve RAID in our rack as `RAID2LeftLUN0`.

Step 3: Create the Xsan volume

In Xsan Admin, choose **Settings > Storage**. When creating an Xsan volume that uses slices for LUNs, be sure to choose **Fill** from the **Allocation Strategy** pop-up menu for your storage pools.

Step 4: Add the slices to a storage pool

As you add LUNS (in this case, slices) to storage pools, limit yourself to one slice per RAID controller per storage pool. For example, if you create a new volume, MyVol, and three storage pools—MetaPool, FastPool, and FasterPool—you could add them like this:

Note that both FasterPool and FastPool contain one slice from each side of your Xserve RAID. Since we set the Allocation Strategy for FasterPool to Fill, it will fill up before FastPool is written. Slices with lower LUN IDs will be slightly faster than those with higher LUN IDs. In our example, the LUN ID 0 slices belong to FasterPool, while the LUN ID 1 slices belong to FastPool.

If you add LUNs, which are slices of a pre-existing Xsan volume, you should create new storage pools to handle the new storage, and change the volume's Allocation Strategy to Fill.

Published Date: Oct 7, 2016

Mac OS X 10.4: Saving Fax preferences

This article has been archived and is no longer updated by Apple.

You can change any settings that you wish in the Faxing pane of Print & Fax preferences; however, your changes take effect only if the lock icon in the lower left corner of the window is first "unlocked."

Otherwise, any changes made will revert to previous settings.

Follow these steps to save Faxing preferences:

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **Print & Fax**.
3. Click "Faxing".
4. Click the closed lock icon in the bottom left corner of the window.
5. Enter the name and password of an administrator to authenticate.
6. Make whatever Faxing preferences changes you wish (changes take effect immediately), then close the window.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Mac OS X 10.2 or later: Unable to print to a shared HP printer

This article has been archived and is no longer updated by Apple.

If you're using Mac OS X 10.2 or later to print to an HP raster (inkjet) printer that's being shared by a Mac OS X-based computer, the same version of the printer driver should be installed on both computers. Otherwise, the print job might not print even though the computer sharing the printer can print without issue. The application being used to print may unexpectedly quit when attempting to print to the shared printer.

To make sure that both computers are using the same driver, download and install the latest driver available from the HP Software & Driver Downloads website.

Note: You can print without having an HP printer driver installed on a computer connecting to a shared printer, but you will not have access to some printer-specific settings.

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Published Date: Oct 7, 2016

AirPort: How to configure Mac OS X 10.4 "Tiger" clients for LEAP authentication

This article has been archived and is no longer updated by Apple.

If you select LEAP authentication on a Mac OS X 10.4.2 or later computer on which the AirPort 4.2 or later update has been installed, your authentication settings may be lost after restart, sleep, or location change. As a workaround, you should use the steps shown here, which will have the effect of configuring LEAP, even though you will choose WEP from the menu.

1. Go to the Network pane of the System Preferences, show AirPort, and click the AirPort tab.
2. Be sure the "By default, join" menu is set to "Preferred networks."

   Note: If you don't have "Preferred networks" as a choice, this means that your 10.4 system was upgraded from 10.3, and that you're still using a Location imported from 10.3 (Panther). In this situation, you experience Panther behavior instead of new Tiger features. You will need to create a new location to utilize Tiger features and complete these steps.

3. Click the "+" button.
4. Enter the desired network name in the window that appears.
5. From the Wireless Security pop-up menu, choose WEP Password.
6. Replacing `username` and `password` with actual name and password, enter them exactly as show here, including both brackets and slash:

   ```
   <username/password>
   ```

   Note: Though there will not be any visible indication, this entry format sets the client to use LEAP rather than WEP.

7. Click OK. **Note:** The network entry will appear in the table as "WEP," but LEAP will be used.
8. Click Apply Now.

Published Date: Feb 19, 2012

Final Cut Pro 5: Tips for using the Sony PDW-1500

This article has been archived and is no longer updated by Apple.

As mentioned in the Final Cut Pro List of Qualified Devices, Final Cut Pro 5 is compatible with Sony's PDW-1500 XDCAM Deck. Here are some tips for using this device with Final Cut Pro.

Sony's PDW-1500 NTSC unit is qualified for use with Apple Final Cut Pro using the FireWire interface in AV/C mode. This permits the DVCAM streams to be captured and recorded to disc similar to using a DVCAM tape deck. Assemble edit and insert edit functions are not supported by the PDW-1500, so all newly-recorded material is appended to the end of the disc in DVCAM format.

Currently, DVCAM and MPEG IMX MXF files from Sony's XDCAM products can be imported into Final Cut Pro 5 using Telestream's Flip4Mac MXF import component.

If you insert a disc with MPEG IMX into the PDW-1500, you can import a DVCAM version of the material when you perform a batch import. When you want to print the DVCAM version of the sequence back to a disc using the Print To Tape function, the deck needs to be in DVCAM record mode (and you have to put the final sequence on a new disc). You cannot mix formats on the same disc.

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Published Date: Feb 20, 2012

iTunes for Windows may unexpectedly quit when syncing folders of pictures with iPod

This article has been archived and is no longer updated by Apple.

iTunes may unexpectedly quit when you try to synchronize folders containing pictures to your iPod. This can happen if you create two or more subfolders in a folder such as "My Pictures," and the names of subfolders contain fullwidth digits (0-9) of a 2-byte (Unicode) character set.

Examples of folder names that include these fullwidth digits:

- "１" (Unicode character FF11)
- "２" (Unicode character FF12)
- "自然１"
- "自然２"

This can happen with iTunes for Windows and any iPod with a color display.

Update to iTunes 6 or later or use the figures from a single-byte (Roman) character set to prevent this from occurring.

Published Date: Oct 7, 2016

Final Cut Pro, Final Cut Express: Tips for using devices that handle both HDV and DV

This article has been archived and is no longer updated by Apple.

Many HDV cameras and decks are able to play and record DV as well as the higher-resolution HDV format. Additionally, many of these HDV devices will attempt to automatically change their settings to match the format of the tape that it's playing. Here are some tips for using these types of devices with Final Cut Pro / Final Cut Express.

Tip: Make explicit settings on your HDV device.

Instead of using an "Auto" setting, make your own settings on your HDV device to keep the communication going between it and Final Cut Pro / Final Cut Express. This also helps Final Cut Pro / Final Cut Express keep things running smoothly with HDV devices that handle both DV-NTSC and DV-PAL.

For example, say you're using an HDV deck to capture footage from a tape that was recorded as DV-NTSC. Before capturing in Final Cut Pro / Final Cut Express, make sure that you set the deck to DV mode specifically—don't rely on Auto mode. With some devices, you may need to disconnect it from FireWire to change the mode.

For a common capture workflow, this sequence of steps can provide the best results:

1. Quit Final Cut Pro / Final Cut Express if it's open.
2. Insert your tape into your HDV deck or camcorder.
3. Use the device's menus to set it to match the format that's recorded on the tape.
4. Connect your HDV device to your computer with a FireWire cable.
5. Open Final Cut Pro / Final Cut Express.
6. Choose an Easy Setup for DV or HDV (whichever matches the format recorded on your tape).
7. Proceed to Log and Capture.

Tip: Quit Final Cut Pro / Final Cut Express before changing modes.

It's generally a good idea to quit Final Cut Pro / Final Cut Express before you change the mode on your device from DV to HDV, or from HDV to DV, and then re-open the application again.

Tip: Use an Easy Setup to play back non-default HDV format footage on your HDV device.

You can use Final Cut Pro / Final Cut Express to make your HDV device play back footage in its non-default HDV format. For example, maybe you have a 1080i60 HDV device and want to play back footage that was recorded as 1080i50. Or perhaps you have a 1808i50 HDV device and you want to play back footage that was recorded as 1080i60. To do this, follow these steps:

1. Connect your camera to your computer.
2. In Final Cut Pro / Final Cut Express, choose an HDV preset Easy Setup that matches the format of the tape's footage (you don't need to restart Final Cut Pro / Final Cut Express).
3. Your device's LCD display should automatically display a switch to 60 or 50, indicating the type of media that's being played.

Playing back non-default DV format footage on your HDV device

You can also use your HDV device to play back footage in its non-default DV format too. For example, maybe you have a 1080i60 HDV device and want to play back footage that was recorded as DV-PAL. Or maybe you have a 1080i50 HDV device and want to play back footage that was recorded as DV-NTSC. If so, follow these steps:

1. Make sure that your device is in DV/DVCAM mode.
2. Put your device into Play/Pause mode, then open the Log and Capture window in Final Cut Pro / Final Cut Express.
3. Make sure that your device's LCD (or other readout screen) displays the same format as your tape or Final Cut Pro / Final Cut Express will misinterpret what type of device you have.

Tip: Avoid recording both HDV and DV formats on the same tape.

Use separate tapes whenever you want to record in a different format. If you need to record over existing footage in a different format (for example, you have a tape with DV-PAL on it, but you want to record over it with HDV 1080i50), it's a good idea to black and code the tape, or completely record over the old footage with contiguous recording in the new format. If the tape contains even a second of, say, DV in the middle of an HDV tape (or vice versa), it could cause unexpected results later when you try to capture video from that tape.

For more information, see **HD and Broadcast Formats** and the **Final Cut Pro / Final Cut Express User Manual**, available under the Final

Cut Pro / Final Cut Express **Help** menu.

Published Date: Oct 7, 2016

About Java 2 Platform Standard Edition (J2SE) 5.0 Release 3 for Mac OS X v 10.4.2 or later

This article has been archived and is no longer updated by Apple.

Java 2 Platform, Standard Edition (J2SE) 5.0 Release 3 allows applications and applets developed for the J2SE 5.0 platform to run on Mac OS X v 10.4.2 and later.

This update does not change the default version of Java on your Mac from Java 1.4.2 to J2SE 5.0, though Java applications that require J2SE 5.0 may specifically request it. You can change the preferred Java version for applications and applets by using the new Java Preferences utility. This utility is installed by the J2SE 5.0 update at `/Applications/Utilities/Java/J2SE 5.0/`.

Installing J2SE 5.0 Release 3

1. Get the J2SE 5.0 Update here.
2. Double-click the "J2SE50Release3.dmg" disk image file that you downloaded, and it will mount to appear as a disk in the Finder.
3. Open the mounted disk, then double-click the Installer icon.
4. Follow the onscreen instructions to complete the installation.

Software developers may visit the Java Reference Library for information on this release's features.

Published Date: Oct 7, 2016

About Security Update 2005-008

This article has been archived and is no longer updated by Apple.

This document describes Security Update 2005-008, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How To Use The Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Security Update 2005-008

- **ImageIO**

  CVE-ID: CAN-2005-2747

  Available for: Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: Viewing a maliciously-crafted GIF image may result in arbitrary code execution.

  Description: By carefully crafting a corrupt GIF image, an attacker can trigger a buffer overflow in ImageIO which may result in arbitrary code execution. Several components of Mac OS X utilize ImageIO including WebCore and Safari. This update addresses the issue by performing additional validation of images.

- **Mail**

  CVE-ID: CAN-2005-2746

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: When using auto-reply rules, Mail.app may expose the contents of encrypted messages.

  Description: Mail.app includes the contents of messages when processing auto-reply rules. If a message being processed was encrypted, the automatically generated response will include the decrypted message contents. This could allow an attacker to intercept the message. This update addresses the issue by ensuring that unencrypted responses to encrypted messages are not generated. Credit to Norbert Rittel of Rittel Consulting for reporting this issue.

- **Mail**

  CVE-ID: CAN-2005-2745

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9

  Impact: Using Kerberos Version 5 for SMTP authentication Mail.app may disclose sensitive information.

  Description: When using SMTP authentication with Kerberos Version 5, Mail.app may append un-initialized memory to a message. This update addresses the issue by updating Mail.app. Credit to the MIT Kerberos team for reporting this issue. This issue was resolved in Mac OS X v10.4.2 by Security Update 2005-007.

- **malloc**

  CVE-ID: CAN-2005-2748

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: Insecure file handling may result in local privilege escalation.

  Description: When certain environmental variables are set to enable debugging of application memory allocation, files with diagnostic information are created insecurely. This could allow a malicious local user to alter arbitrary files. This update addresses the issue by disallowing malloc debugging in privileged programs. Credit to Ilja van Sprundel of Suresec LTD for reporting this issue.

- **QuickDraw Manager**

CVE-ID: CAN-2005-2744

Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.2, Mac OS X Server v10.4.2

Impact: Viewing a maliciously-crafted PICT image may result in arbitrary code execution.

Description: By carefully crafting a corrupt PICT image, an attacker can trigger a buffer overflow in QuickDraw Manager which may result in arbitrary code execution. Several components of Mac OS X utilize QuickDraw Manager, including Safari, Mail, and Finder. This update addresses the issue by performing additional validation of images. Credit to Henrik Dalgaard of Echo One for reporting this issue.

- **QuickTime for Java**

  CVE-ID: CAN-2005-2743

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9

  Impact: An untrusted applet may gain elevated privileges.

  Description: The Java extensions bundled with QuickTime 6.52 and earlier allow untrusted applets to call arbitrary functions from system libraries. This update addresses the issue by limiting these calls to trusted applets. Systems running QuickTime 7 or later are not affected by this issue. Systems running Mac OS X v10.4 or later are also not affected by this issue. Credit to Dino Dai Zovi for reporting this issue.

- **Ruby**

  CVE-ID: CAN-2005-1992

  Available for: Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: Ruby applications utilizing the xmlrpc module may be vulnerable to arbitrary code execution.

  Description: The Ruby xmlrpc/utils module utilizes the method Module#public_instance_methods to determine which methods may be invoked remotely using XML-RPC. A change between different versions of Ruby caused this method list to unintentionally include methods that may be used to execute arbitrary Ruby code. This update addresses the issue by updating the xmlrpc/utils module. This issue does not affect systems prior to Mac OS X v10.4.

- **Safari**

  CVE-ID: CAN-2005-2524

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9

  Impact: Maliciously crafted web archives could potentially allow cross-site scripting.

  Description: It is possible to view web archives served from remote sites in Safari. Maliciously crafted web archives may be rendered as content from sites they did not server them. This update prevents remote web archives from being loaded. Safari web archives were introduced in Safari 2.0. This issue was resolved in Mac OS X v10.4.2 by Security Update 2005-007.

- **SecurityAgent**

  CVE-ID: CAN-2005-2742

  Available for: Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: A user with physical access to the system may be able to bypass the "Require password to wake this computer from sleep or screen saver" setting.

  Description: Under certain situations, the "Switch User..." button may appear even though the "Enable fast user switching" setting is disabled. This could cause the currently logged-in user's desktop to be displayed without authentication. This update prevents the "Switch User..." button from appearing when inappropriate. This issue does not affect systems prior to Mac OS X v10.4. Credit to Luke Fowler of the Indiana University Global Research Network Operations Center for reporting this issue.

- **securityd**

  CVE-ID: CAN-2005-2741

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: Malicious users may grant themselves rights to manipulate arbitrary files or perform other privileged actions.

  Description: Authorization Services allows unprivileged users to grant certain rights that should be restricted to administrators, which may lead to privilege escalation. This update addresses the issue by adding restrictions to which rights unprivileged users can grant themselves.

Additional information

Also included in this update are enhancements to LoginWindow for improved interaction with Parental Controls (Mac OS X v10.3.9), X509Anchors to include the Wells Fargo root certificate (Mac OS X v10.3.9), and Safe Download Validation to include Web Archives (Mac OS X v10.4.2).

Published Date: Oct 7, 2016

Mac OS X Server 10.4 or later: Enabling Spotlight Web Search

This article has been archived and is no longer updated by Apple.

This article supersedes the discussion of mod_spotlight_apple in the Web Technologies Admin Guide.

Mac OS X Server 10.4 no longer supports the Sherlock-based searching capability provided by the mod_sherlock_apple Apache module and the indexfolder command-line tool. The Spotlight-based mod_spotlight_apple Apache module replaces it. Like its predecessor, it allows web browsers to search the content of your website.

Note that the indexing function of Spotlight is disabled by default in Mac OS X Server 10.4. Thus if you want to provide Spotlght-based search capability for Web Service, you must take the following steps.

Enable Spotlight indexing

To enable indexing for a volume, use the mdutil tool in Terminal. For example, to enable it on the root volume:

```
sudo mdutil -i on /
```

See the man page for mdutil(1) for further information. Note that there may be performance implications. Indexing must remain enabled for the Spotlight Web Search facility to operate.

Import content

Next, import your web content into the Spotlight MetaData store. The /Library/WebServer/Documents folder is not normally monitored by the MetaData Import processes, so you will need to manually import it, both initially and whenever you want any changes to be reflected. It's a good practice to create a different folder or folders to hold the contents of your virtual hosts; you'll need to manually import and update those as well.

This is done with the mdimport command-line tool:

```
sudo mdimport -f /Library/WebServer/Documents/example-vhost/
```

The "-f" option is necessary to force the mdimport tool to process the contents of the specified folder. Note that it may take some time to import large volumes of content. See the man page for mdimport(1) for more detail.

A variety of mdimporter extensions are pre-installed for most common content formats. If you have custom document formats, they may not be supported.

In Server Admin...

Enable the mod_spotlight_apple module in Server Admin's Web panel, and make sure Web Service is enabled. As always, it's a good idea to make sure the Web Performance Cache is enabled only if you have a specific need for it.

Copy the template.spotlight file

Copy the template.spotlight file from /Library/WebServer/Documents into the Document Root of each virtual host for which you want the spotlight search to be available. You may customize the title, maximum allowed hits, and other aspects of the presentation by modifying the copy of this file.

Access from clients

To access the search capability, instruct your web clients to append ".spotlight" to the URL for your virtual hosts, like this:

```
httpd://vhost1.example.com/.spotlight
```

This presents a simple search page that performs a content search on the contents of the DocumentRoot for the virtual host. Results are sorted with the most relevant hit first, although no relevance score is presented.

Published Date: Oct 7, 2016

Mac OS X Server 10.4: Installing from discs to remote computers

This article has been archived and is no longer updated by Apple.

When you start up a computer from a Mac OS X Server Installation disc, SSH also starts so that you can perform remote installations.

Because SSH gives others access to the disc-booted computer over the network, you should make sure that your network connection is secure. For example, connect the server computer to a subnet that's accessible only to trusted users.

Published Date: Oct 7, 2016

iTunes Store songs won‘t transfer to a Motorola phone featuring iTunes

This article has been archived and is no longer updated by Apple.

This article does not cover iPhone support in iTunes. For more information about iPhone support in iTunes, click here.

If music you purchased from the iTunes Store will not transfer to a Motorola phone featuring iTunes, please note the bit rate of the song (see below) and visit the following web page to contact iTunes Store Customer Service:
http://www.apple.com/support/itunes/musicstore/songs/

Scroll to the bottom of the page, complete the entire form, and click submit. In the menu where you are asked to "Please select a question," choose "I can't play one or more purchased songs." Also, be sure to include the name of the song(s) that cannot be transferred, the bit rate of the song(s), as well as the exact or approximate purchase date.

To find the bit rate of the song:

1. Select one of the purchased songs that is not transferring.
2. From the **File** menu, choose **Get Info**.
3. Click the Summary tab. The bit rate appears on the left side of the window.

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Published Date: Feb 19, 2012

Mac OS X 10.4: Fax options don‘t appear when faxing

This article has been archived and is no longer updated by Apple.

Whenever you send a fax in Mac OS X 10.4 or later, you should typically see several options available in the fax dialog that allow you to send a cover page, use tone or pulse dialing, or even schedule what time to send the fax. However, if you haven't added a printer to the printer list, these options will not appear, and the only choice you'll have in the third pop-up menu (below presets) will be **Item 1**.

To resolve this issue, just add a printer to the printer list in System Preferences, if one is available. Once you do, the fax options will appear when you fax.

If you don't have a printer, follow these steps as a workaround:

1. From the **Apple** menu, choose **System Preferences**.
2. Click Print & Fax to display the preference pane.
3. Click the Printing tab.
4. Click the plus sign (+) button to add a printer.
5. In the resulting Printer Browser window, click IP Printer.
6. From the **Protocol** pop-up menu, choose **Line Printer Daemon - LPD**.
7. Type `127.0.0.1` in the Address field.
8. From the **Print Using** pop-up menu, choose **Generic PostScript Printer**.
9. Click Add.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

iMovie HD: Can trim clips in timeline only if clip volume levels are not displayed

This article has been archived and is no longer updated by Apple.

If you use the direct trimming feature in iMovie HD, you'll need to hide the clip volume levels first. This applies to direct trimming both audio and video clips in the timeline.

You can hide the clip volume levels by choosing **Show Clip Volume Levels** from the **View** menu to deselect (uncheck) the feature.

Published Date: Oct 7, 2016

Power Mac G5 (Early 2005): Power consumption and thermal output (BTU) information

This article has been archived and is no longer updated by Apple.

Learn about the power consumption and thermal output of Power Mac G5 (Early 2005) computers.

Dual 2.0 GHz Power Mac G5 (Early 2005)
1 GHz frontside bus/processor, 512K L2 cache/processor, 512MB PC3200 (400MHz) DDR400 SDRAM, expandable to 4GB, SDRAM, 160GB Serial ATA drive, 16x SuperDrive (DVD+R DL/DVD±RW/CD-RW), 3 PCI slots, ATI Radeon 9600 with 128MB DDR SDRAM

Power Consumption		Thermal Output	
Idle	**CPU Max**	**Idle**	**CPU Max**
120 W	450 W	410 BTU/h	1535 BTU/h

Dual 2.3 GHz Power Mac G5 (Early 2005)
1 GHz frontside bus/processor, 512K L2 cache/processor, 512MB DDR400 SDRAM, expandable to 8GB SDRAM, 250GB Serial ATA drive, 16x SuperDrive (DVD+R DL/DVD±RW/CD-RW), Three open full-length PCI-X slots: one 133MHz, 64-bit slot and two 100MHz, 64-bit slots, ATI Radeon 9600 with 128MB DDR SDRAM

Power Consumption		Thermal Output	
Idle	**CPU Max**	**Idle**	**CPU Max**
120 W	450 W	410 BTU/h	1535 BTU/h

Dual 2.7 GHz Power Mac G5 (Early 2005)
1.35 GHz frontside bus/processor, 512K L2 cache/processor, 512MB DDR400 SDRAM, expandable to 8GB SDRAM, 250GB Serial ATA drive, 16x SuperDrive (DVD+R DL/DVD±RW/CD-RW), Three open full-length PCI-X slots: one 133MHz, 64-bit slot and two 100MHz, 64-bit slots, ATI Radeon 9650 with 256MB DDR SDRAM, one single-link and one dual-link DVI port

Power Consumption		Thermal Output	
Idle	**CPU Max**	**Idle**	**CPU Max**
140 W	600 W	478 BTU/h	2047 BTU/h

Notes

- Power consumption data (Watts) is measured from the wall power source and includes all power supply and system losses. Additional correction is not needed.
- "CPU Max" is defined as running a compute-intensive test application that maximizes processor usage and therefore power consumption.
- These numbers reflect a 23° C (73.4° F) ambient running environment. Increased ambient temperatures will require faster fan speeds which will increase power consumption. At 35° C (95° F), 50 W should be added to reflect increased power consumption.

Related articles

- Power Mac G5: Power consumption and thermal output (BTU) information
- Power Mac G5 (June 2004), (Late 2004): Power consumption and thermal output (BTU) information

Published Date: Feb 20, 2012

Mac OS X Server 10.4 or later: Can‘t write to folder after allowing write access in ACL

This article has been archived and is no longer updated by Apple.

When using an access control list (ACL) to allow write access to a folder, such as a drop box, you won't be able to write to the folder unless you also allow "traverse" access.

To do this, make sure that you select the Traverse Folder (Execute File) checkbox under the "Read" permission, as shown above for a drop box.

Published Date: Oct 7, 2016

Xsan: Don‘t set Metadata or Any Data storage pools to "Read Only"

This article has been archived and is no longer updated by Apple.

If you set a Metadata or Any Data storage pool to Read Only, you won't be able to mount the Xsan filesystem. When you try to mount it at a client, the filesystem will stop and a "PANIC" error message will appear in the cvlog.

To avoid this issue, never set a Metadata or Any Data pool to Read Only. To work effectively, Xsan must be able to write to these pools.

Published Date: Feb 19, 2012

Power Mac G4 power consumption and thermal output (BTU) information

This article has been archived and is no longer updated by Apple.

Learn about the power consumption and thermal output of Power Mac G4 computers.

Power Mac G4 (Mirrored Drive Doors 2003)
1.2 GHz PowerPC G4

Power Consumption		Thermal Output	
Idle	**CPU Max**	**Idle**	**CPU Max**
80 W	360 W	273 BTU/h	1,228 BTU/h

Power Mac G4 (FW800)
1GHz PowerPC G4

Power Consumption		Thermal Output	
Idle	**CPU Max**	**Idle**	**CPU Max**
120 W	360 W	410 BTU/h	1,228 BTU/h

Power Mac G4 (FW800)
Dual 1.25GHz PowerPC G4

Power Consumption		Thermal Output	
Idle	**CPU Max**	**Idle**	**CPU Max**
135 W	360 W	461 BTU/h	1,228 BTU/h

Power Mac G4 (FW800)
Dual 1.42GHz PowerPC G4

Power Consumption		Thermal Output	
Idle	**CPU Max**	**Idle**	**CPU Max**
145 W	360 W	495 BTU/h	1,228 BTU/h

Power Mac G4 (Mirrored Drive Doors)
Dual 867MHz PowerPC G4

Power Consumption		Thermal Output	
Idle	**CPU Max**	**Idle**	**CPU Max**
130 W	400 W	444 BTU/h	1,365 BTU/h

Power Mac G4 (Mirrored Drive Doors)
Dual 1GHz PowerPC G4

Power Consumption		Thermal Output	
Idle	**CPU Max**	**Idle**	**CPU Max**
150 W	400 W	512 BTU/h	1,365 BTU/h

Power Mac G4 (Mirrored Drive Doors)
Dual 1.25GHz PowerPC G4

Power Consumption		Thermal Output	
Idle	**CPU Max**	**Idle**	**CPU Max**
150 W	400 W	512 BTU/h	1,365 BTU/h

Notes

- Power consumption data (Watts) is measured from the wall power source and includes all power supply and system losses. Additional correction is not needed.
- "CPU Max" is defined as running a compute-intensive test application that maximizes processor usage and therefore power consumption.

- These numbers reflect a 23° C (73.4° F) ambient running environment. Increased ambient temperatures will require faster fan speeds which will increase power consumption. At 35° C (95° F), 50 W should be added to reflect increased power consumption.

Published Date: Feb 20, 2012

Mac OS X 10.4.2: Network view doesn‘t show network shares or won‘t open at all

This article has been archived and is no longer updated by Apple.

If you've enabled automatic login for your user account, you may experience some issues with the Network view in the Finder.

If you choose **Network** from the **Go** menu in the Finder, the resulting window may not open or it may open briefly and then close unexpectedly. If you open a Finder window and select Network in the sidebar (or browse to /Network), you may only see the Applications, Library, and Users folders.

As a workaround, turn off automatic login, or log out of your account and then log back in.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

Macintosh: Power Button Flashes

This document explains why the light on the power button of a Macintosh computer flashes on and off.
This article has been archived and is no longer updated by Apple.
The flashing power button indicates that the computer is in sleep mode. This functionality extends across the Power Macintosh, PowerBook, iMac, and iBook product lines.
Published Date: Feb 20, 2012

Final Cut Pro does not allow simultaneous editing of a project file from multiple workstations

This article has been archived and is no longer updated by Apple.

If you save a Final Cut Pro 5 project, stored on an Xsan 1.x volume, that was previously saved from another workstation during an editing session, you may receive one of two errors, depending on your Directory Services configuration:

> "File Error: Access Denied"

or

> "The project "*projectName*" has been modified externally. If another user is working on it, saving will overwrite their changes. Do you still want to save?"

If you receive the previous of these two errors, it could be that you do not have permissions to edit the project file. For more information on managing permissions for files stored on an Xsan volume, click here.

If you receive the latter of these two errors, an editor at one workstation with the same user ID (UID) as the editor at the workstation receiving the error has saved the project during the editing session. You should not allow two users with the same UID to access an Xsan volume at the same time. For more information on how to create user accounts with unique UIDs, see the Xsan Administrator's Guide.

To avoid receiving these errors when saving project files that are stored on an Xsan volume, adjust your site's workflow to prevent multiple editors from simultaneously editing a project file. To do so, store the Final Cut Pro project files on the Xsan volume, but use Affinities to prevent editors from accessing each other's project files. To learn more about configuring Affinities, see the Xsan Administrator's Guide.

Published Date: Oct 7, 2016

Mac OS X 10.4: Finder displays ".app" when "Show all file extensions" preference is enabled

This article has been archived and is no longer updated by Apple.

In Mac OS X 10.4 or later, if you select Show all file extensions in Finder preferences, the Finder will display the file extensions for all of your files, just as in earlier releases of Mac OS X. Please note that unlike previous Mac OS X releases, the Finder will also display the ".app" extension for all applications.

Published Date: Oct 7, 2016

Mac OS X 10.4.2: Computer becomes unresponsive during heavy Internet activity

This article has been archived and is no longer updated by Apple.

If you're using Mac OS X 10.4.2 with a broadband Internet connection, your computer may stop responding ("freeze") during heavy Internet activity or when you're browsing specific websites, particularly Fox News (www.foxnews.com). When this happens, your mouse pointer appears as a spinning disc. This issue may affect all applications and the Finder to the extent that not even a Force Quit works.

If you physically break the Internet connection, your computer should return to normal after a moment. To do this, disconnect the Ethernet cable if your computer is connected by Ethernet. If your computer is connected through AirPort, unplug the base station or broadband modem from its power source.

To prevent the issue from recurring, update to Mac OS X 10.4.3 or later.

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Published Date: Feb 19, 2012

Final Cut Pro: Assemble Editing with a Panasonic VTR

This article has been archived and is no longer updated by Apple.

Symptom

If you're using a Panasonic video recorder for assemble editing (Edit to Tape) operations, you may experience a few issues with your edit In points. This can include:

- VTR doesn't go into record mode at In point
- In point occurs earlier than expected
- Duplicate frames at the In point

Solution

Update to Final Cut Pro 5.1.2 to prevent these symptoms. If you're unable to update right away, continue with the rest of this document to see possible workarounds.

VTR doesn't go into record mode at In point

If the VTR does not go into record mode when it reaches the edit In point, you may be controlling the deck with the incorrect RS-422 serial protocol.

1. Choose **Final Cut Pro** > **Audio/Video Settings**.
2. Click the Device Control Presets tab.
3. Click the Edit button.
4. If a dialog appears saying that the preset cannot be edited, click OK to make a copy of the preset.
5. From the **Protocol** pop-up menu, choose **Panasonic RS-422**.

In point occurs earlier than expected

The In point on the edited tape may occur up to three frames earlier than the timecode set as the assemble edit In point. If this happens, you can work around the issue by adding frames to your intended edit point. For example, if you want your edit In point to occur at 00:58:30:00 but the actual edit comes in three frames earlier, enter an In point of 00:58:30:03 in the Edit To Tape window to offset the discrepancy.

Duplicate frames at the In point

If you see duplicate video frames at the edit In point:

1. Choose **Final Cut Pro** > **Audio/Video Settings**.
2. Click the Device Control Presets tab.
3. Click the Edit button.
4. If a dialog appears saying that the preset cannot be edited, click OK to make a copy of the preset.
5. Adjust the value for Playback Offset so that it eliminates the extra frames. As a starting point, enter a value equal to the number of duplicated frames you observed on the edited tape, then adjust as necessary.

For more information on the settings covered in this article, refer to the Final Cut Pro User's Manual under the **Help** menu.

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Published Date: Feb 20, 2012

Cinema Tools and Final Cut Pro: Limit file size for reverse telecine

This article has been archived and is no longer updated by Apple.

When performing reverse telecine to remove pull-down, avoid using large files wherever possible. In some cases, large files may result in issues with timing and audio sync. For the best results, use files that are under 9 GB for reverse telecine.

If you have larger files, you should split them or recapture them as smaller files before performing reverse telecine.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Power Mac G5 with ATI Radeon X850 video card exhibits intermittent video distortion

This article has been archived and is no longer updated by Apple.

Some Power Mac G5 computers equipped with a Radeon X850 video card may exhibit distorted video when waking from sleep, using certain screen saver modules, or when a graphics-intensive application is in use.

Here's an example of what such distortion may look like:

To resolve this issue, update to Mac OS X 10.4.3 or later. You can use Software Update to download and install the update, or download it from Apple Downloads.

Published Date: Feb 20, 2012

Mac OS X: Resolving permissions (umask) issues in a server-based group folder environment

This article has been archived and is no longer updated by Apple.

Note: This article assumes that you know how to read permissions values such as "775." If you don't, please review this article first to learn how.

Each operating system has a default permission value (such as 755 in Mac OS X 10.4) that it assigns to files and folders. Default permissions exist to ensure that the appropriate users have correct levels of access to a file in the most common situations and thus represent a balance of security and access.

In Mac OS X and other POSIX-based systems, a value known as a *umask* is subtracted from the system's maximum permissions value (typically 777) to determine the default permission value of a newly-created file. For example, a umask of 022 will typically result in a default permission of 755. The umask can play a role in a group working environment, such as sharing files in a group folder on a server.

By enabling or disabling a scheme generally known as *inherited permissions* (the exact name varies from one operating system to another), the server administrator decides whether the permissions of files written to the server will be determined by the permissions scheme of the client writing the file or by the server itself.

In a cross-platform environment, it's important to note that Windows-based systems don't employ a umask. Rather, Windows clients set the permissions of a file to match those of the target directory, regardless of whether or not the server is enforcing inherited permissions. Here's a common scenario:

1. The administrator sets up an SMB server with inherited permissions disabled and a group folder with a permission value of 775.
2. A Windows XP client saves a JPEG file to the group folder on the server, adopting the 775 permission from the server.
3. A Mac OS X 10.4 client with a umask value of 022 opens the file and saves it, resulting in a permission of 755.
4. The Windows XP client subsequently cannot save the file.

This happens because the Mac OS X client's umask of 022 wrote the file back to the group folder without group write permission (775 includes group write; 755 does not). Because inherited permissions were disabled on the server, the server did nothing to control the situation.

Using inherited permissions

To resolve this issue, make sure that you enable inherited permissions on the server (it's generally recommended that you **not** manipulate umasks, as unintended and possibly severe consequences may occur). Inherited permissions simply means that the files within a group folder will take on the permissions of the group folder itself, so that everyone in the group will be able to open and save the group files.

Had inherited permissions been enabled in the example above, the SMB server would have overridden the permissions written by the Mac OS X client, so that the Windows XP client would be able to save the file.

Depending on the server, you can enable inherited permissions for individual folders or entire shares. Consult your server documentation for instructions on how to enable inherited permissions.

Note: Inherited permissions is not a feature of Personal File Sharing in Mac OS X. If you're using Personal File Sharing in a workgroup environment, you should consider purchasing Mac OS X Server to enjoy a full server feature set.

Published Date: Feb 19, 2012

iSync: First and last name fields show up as dots or dashes on phone

This article has been archived and is no longer updated by Apple.

When syncing with some phones, including Sony Ericsson phones, if you have a contact in your Address Book that contains a company name, but no first or last name, this contact will appear to have dots or hyphens for a first and last name when viewed on the phone. For example, ". . Apple Computer" or "- - Apple Computer".

This means the phone requires a first and last name field to be filled. Any version of iSync realizes this, so it adds a dot or hyphen to each blank name field for you. You don't have to do anything else—it's just something to be aware of.

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Published Date: Oct 7, 2016

Final Cut Pro 5: Issues with setting an initial Scratch Disk

This article has been archived and is no longer updated by Apple.

The first time you open Final Cut Pro 5, a dialog opens, prompting you to set the location for the Primary Scratch Disk. Your scratch disk setting determines the location for video files used by Final Cut Pro, such as video that you capture and video that Final Cut renders. The default location is ~/Documents/Final Cut Pro Documents.

The dialog looks like this:

You can use the **Primary Scratch Disk** pop-up menu to choose a hard drive or a folder as your scratch disk location. However, there are two situations in which the dialog may act unexpectedly:

- If you set the location to be a folder on your startup drive, the setting will revert back to the default location.
- If you leave the setting as is, Final Cut will not set the location to the root level of your startup drive (as indicated by the initial menu setting); it maintains the default location in your user folder (~/Documents/Final Cut Pro Documents).

Once Final Cut Pro opens, you can work around these issues by choosing **Final Cut Pro > System Settings** and then clicking the Scratch Disks tab. You can then change the settings to your liking.

For more information on setting Scratch Disks and other initial settings, refer to the Final Cut Pro User Manual, available under the Final Cut Pro **Help** menu.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Mac OS X: Email notification doesn‘t get sent after fax is received

This article has been archived and is no longer updated by Apple.

In Mac OS X 10.3 or later, you can set Print & Fax preferences to email a notification whenever your computer receives a fax. However, if you don't have a static IP address from your ISP, you might not get the email, even though the fax arrives just fine and your computer can connect to the Internet.

If you're in this non-static IP address situation, here are a few workarounds:

- Try a third-party application, such as FaxEmailHelper. (Please refer to the documentation that comes with the software for any important information.)
- Set up and attach a folder action script to the Shared Faxes folder that automatically emails the received fax as an attachment. Please note that this won't work if there are no users logged in to the computer.
- Have your computer print the fax automatically on arrival, or set up an onscreen notification action that displays a message when a fax arrives. Find out how to do both in this article.

This document will be updated as more information becomes available.

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Published Date: Oct 7, 2016

Xsan: Users can‘t modify each others‘ files by default

This article has been archived and is no longer updated by Apple.

By default, files and folders saved to an Xsan volume are read-only for other users.

Xsan 1.3 or earlier: If desired, you can use Get Info in the Finder to give other users write access to files or folders that you've saved to an Xsan Volume.

For Xsan 1.4 or later: If your Xsan Clients are running Mac OS X 10.4 or Mac OS X Server 10.4 and are using Open Directory for directory services, Access Control Lists can be used to manage permissions on files and folders saved to the Xsan volume. For information about configuring ACLs for Mac OS X and Xsan, refer to the Xsan Admin Guide and the Mac OS X Server File Services Administration Guide: (http://images.apple.com/server/macosx/docs/File_Services_Admin_v10.5.pdf)

Note: See this article if using Xsan in conjunction with Stornext clients.

Save some time

If you're comfortable with AppleScript, you can create a script (see below) that'll add the group write permission for you instead of using Get Info. Once you've got the script, simply drop a file onto the script in the Finder and it'll add the group write permission. To create the script, copy this text into Script Editor and edit it as needed:

```
on open foo
   try
    repeat with x from 1 to number of items in foo
    set foo2 to item x of foo
     set the foo3 to the quoted form of the POSIX path of foo2
     do shell script ("/bin/chmod -R g+wX " & foo3)
    end repeat
   end try
end open
```

If you'd prefer to provide write access to users in your group and to all other users, replace the line:

```
do shell script ("/bin/chmod -R g+wX " & foo3)
```

with:

```
do shell script ("/bin/chmod -R go+wX " & foo3)
```

When you save the script, be sure to save it as an Application.

Published Date: Oct 7, 2016

Mac OS X 10.4: Error -61 when trying to delete a Burn Folder from an AFP home directory

This article has been archived and is no longer updated by Apple.

If your Mac OS X 10.4 home directory is on an AFP server and you burn a disc (CD or DVD) that gets interrupted, you might not be able to delete the Burn Folder from your home directory afterwards. When you try, an "error -61" alert may appear. (The disc itself might be unusable after an interrupted burn.)

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

iMac G5 (iSight), Power Mac G5 (Late 2005): Can‘t open Final Cut Express HD

This article has been archived and is no longer updated by Apple.

When you try to open Final Cut Express HD on an iMac G5 (iSight) or on a Power Mac G5 (Late 2005), you may see an alert message that says, "Configuration Error. Missing certain hardware or software - AGP Graphics Card."

If you see this alert, you need to update your version of Final Cut Express. You can download the Final Cut Express HD 3.0.1 update and the Pro Application Update 2005-02 from here and then install them.

Published Date: Oct 7, 2016

Mac OS X 10.4: Mail account sync alert can be safely ignored

This article has been archived and is no longer updated by Apple.

You can sync your Mail rules and accounts between different Macs using .Mac in Mac OS X 10.4 Tiger. However, you may get an inaccurate alert that states more changes are going to take place than are required.

This message appears when your Mail accounts aren't listed in the same order across your synchronized Macs. You can either safely ignore the alert or you can reorder your Mail accounts as a workaround.

Ignore It

If you choose to simply ignore the erroneous sync alert and apply the changes, the alert will continue to appear whenever you sync your Mail data, but you can keep ignoring it.

The Workaround

If you want to prevent the alert, arrange your Mail accounts so that they are in the same order on each Mac that you sync through .Mac.

For example, if Mac A has Mail accounts listed in this order...

- Home
- Work
- Kids

... and Mac B has Mail accounts in this order...

- Work
- Home
- Kids

... then the inaccurate alert will appear. To fix this, rearrange the order of the accounts on one of the Macs so that it's the same on both:

1. Open Mail.
2. From the **Mail** menu, choose **Preferences**.
3. Click Accounts.
4. On the left side of the window, drag an account's name up or down in the list and drop it in the desired location.
5. Repeat until all accounts are listed in the same order on each computer that you sync through .Mac.

Related Terms: error, synchronize

Published Date: Oct 7, 2016

Related documents

mh2207 Synchronizing your contacts and other information using .Mac

Logic Pro/Express 7.1.1 update doesn‘t work in Mac OS X 10.4 and 10.4.1

This article has been archived and is no longer updated by Apple.

Installing the Logic Pro or Logic Express version 7.1.1 update works fine in Mac OS X 10.3.9 and 10.4.2 and later, but it won't work in earlier Tiger builds (10.4 and 10.4.1). When you try to update Logic 7.1 to version 7.1.1 on a computer with Mac OS X 10.4 or 10.4.1:

- Software Update will not detect or offer the Logic update.
- The standalone installer will erroneously state that it can't find an eligible Logic application in the Applications folder.

To resolve the issue, Tiger users should update to 10.4.2 or later, then reapply the Logic 7.1.1 update.

Published Date: Feb 19, 2012

Mac OS X 10.3 to 10.4.2: Applications in the Drop Box won‘t open

This article has been archived and is no longer updated by Apple.

If you enable Personal File Sharing on your computer and other users log in to copy applications to your computer, it's possible that an application in your Drop Box folder won't open. This happens when a user connected as "guest" copies an actual application file to your computer.

For a guest to leave you a working application, he or she should make an archive of the application and then copy the archive to your Drop Box instead of the original application.

To create an archive of any file or application, select it in the Finder, Control-click it, and choose **Create Archive of "*File_Name*"** from the shortcut menu. When you receive an archived application, just double-click it in the Finder to unarchive it, then double-click the resulting file to open the application.

This document will be updated as more information becomes available.

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Published Date: Feb 19, 2012

Power Macintosh G3 & G3 All-in-one: Video RAM Upgrade

This article discusses upgrading the VRAM for the Power Macintosh G3.
This article has been archived and is no longer updated by Apple.
The Power Macintosh G3 and G3 All-in-one includes 2 MB of SGRAM on the main logic board. The video RAM can be expanded to 4 MB or 6 MB with an additional 2 MB or 4 MB of SGRAM on a 144-pin SO-DIMM (small outline dual inline memory module). This module is an industry standard upgrade that is also commonly used in PC computers. Some configurations ship with a VRAM module already installed.

Note: The only way to obtain a VRAM upgrade from Apple, is to order the upgrade at the time of purchasing a Build To Order computer from the Apple Store or purchase a configuration with expanded VRAM. Apple does not sell separately a VRAM upgrade for the Power Macintosh G3. VRAM upgrades must be purchased from third-party vendors.

The mechanical characteristics of the VRAM expansion DIMM are 144-pin 8-byte graphics SGRAM SO-DIMM, 3.3 V, 83 MHz/12 ns or faster.

Note: The internal display on the Power Macintosh G3 All-in-one does not support all resolutions listed on the chart, although the video controller does. To select a resolution other than those supported by the internal display, an external monitor that supports the resolution will have to be connected.

Screen Resolution, in Pixels	Vertical Refresh, Hz	Horizontal Refresh, kHz	Maximum Number of Colors		
			2 MB SGRAM	4 MB SGRAM	6 MB SGRAM
512 x 384	70	31.488	16.7 Million	16.7 Million	16.7 Million
640 x 480	60	31.469	16.7 Million	16.7 Million	16.7 Million
640 x 480	67	35.000	16.7 Million	16.7 Million	16.7 Million
640 x 480	72	37.861	16.7 Million	16.7 Million	16.7 Million
640 x 480	75	37.500	16.7 Million	16.7 Million	16.7 Million
640 x 480	85	43.269	16.7 Million	16.7 Million	16.7 Million
640 x 870	75	68.850	32,768	16.7 Million	16.7 Million
800 x 600	56	35.156	16.7 Million	16.7 Million	16.7 Million
800 x 600	60	37.879	16.7 Million	16.7 Million	16.7 Million
800 x 600	72	48.077	16.7 Million	16.7 Million	16.7 Million
800 x 600	75	46.875	16.7 Million	16.7 Million	16.7 Million
800 x 600	85	53.674	16.7 Million	16.7 Million	16.7 Million
832 x 624	74.5	49.725	16.7 Million	16.7 Million	16.7 Million
1024 x 768	60	48.363	32,768	16.7 Million	16.7 Million
1024 x 768	70	56.476	32,768	16.7 Million	16.7 Million
1024 x 768	75	60.023	32,768	16.7 Million	16.7 Million
1024 x 768	75	60.241	32,768	16.7 Million	16.7 Million
1024 x 768	85	68.677	32,768	16.7 Million	16.7 Million
1152 x 870	75	68.681	32,768	16.7 Million	16.7 Million
1280 x 960	75	75.000	256	32,768	32,768
1280 x 1024	60	63.981	256	32,768	32,768
1280 x 1024	75	79.976	256	32,768	32,768
1280 x 1024	85	91.146	256	32,768	32,768
1600 x 1200	60	75.000	256	32,768	32,768
1600 x 1200	65	81.250	256	32,768	32,768
1600 x 1200	70	87.500	256	32,768	32,768
1600 x 1200	75	93.750	256	32,768	32,768
The following five configurations are available only on Power Macintosh G3 computers with the revision 2 logic board. (This excludes the Power Macintosh G3 All-in-one computer.)					
1280 x 960	75.000Hz	75.000kHz	8	16	32
1280 x 1024	75.025Hz	79.976kHz	8	16	32
1280 x 1024	85.024Hz	91.146kHz	8	16	32
1920 x 1080	59.994Hz	70.313kHz	8	16	16

1920 x 1080	71.992Hz	84.375kHz	8	16	16

Published Date: Feb 20, 2012

iMac G5 (iSight): Memory specifications

This article has been archived and is no longer updated by Apple.

iMac G5 (iSight) comes with a 512 MB DDR2 SDRAM module built into the logic board that can't be removed or replaced. It also has one additional RAM slot that can support up to 2 GB of memory (you can install a 512 MB, 1 GB, or 2 GB module in this slot). You must use a memory module (DIMM) that meets all of these criteria:

- PC2-4200
- unbuffered
- nonparity
- 240-pin
- 533 MHz
- DDR2 SDRAM

DIMMs that have any of the following features are not supported in the iMac G5 (iSight):

- registered or buffered
- PLLs
- ECC
- parity
- EDO RAM

If you use System Profiler (find it in /Applications/Utilities) to view the memory, the DIMM slots for the iMac G5 (iSight) are identified as follows:

When upgrading memory, always follow the installation instructions exactly as written. Never attempt to remove screws that are not listed in the instructions.

For more information about upgrading your iMac G5 (iSight) memory, see "iMac G5 (iSight): Installing and replacing memory (RAM)."

Published Date: Oct 7, 2016

Mac OS 8: Upgrading Workgroup Server 9650 & 7350 Software

The following steps should be taken when planning to upgrade your Workgroup Server 7350 or 9650 to Mac OS 8. The steps may include updating specific components of the server Mac OS as well as bundled Apple and third-party software.
This article has been archived and is no longer updated by Apple.

Workgroup Server 7350 and 9650

1. If you have the Apple RAID hard disk driver installed, update to Apple RAID 1.5.3. - After performing the update to Apple RAID 1.5.3, launch Apple RAID and then install/update the driver on every Apple RAID disk. Make sure to install the new driver on every disk under the disks column.

2. Boot the server from the Mac OS 8 CD. Install Mac OS 8, following the installation instructions on the CD. If you updated the hard disk drivers as per instruction 1, you will get a dialog informing you that the drivers can not be updated. It is safe to ignore this warning.

3. Update to AppleShare IP 5.0.2. - Be sure to follow the installation instructions documented in the AppleShare IP Updater Read Me.

4. Update to Open Transport 1.2.1. This updater is part of the AppleShare IP Update archive.

5. Update to RunShare 3.0.1.

6. Install WGS SCSI Update 2.0. This updater is part of the WGS Mac OS 8 Update archive. Drag copy this file into the System Folder of the server.

7. Restart the server, with the Mac OS 8 CD removed from the drive. If you have a Workgroup Server 9650, continue to the appropriate 9650 model's section below.

Workgroup Server 9650/233

Note: The Workgroup Server 9650/350 ships with several Mac OS components which are not included in the base Mac OS system software. In order to update your server to Mac OS 8, you must follow these additional steps.

1. Insert the Workgroup Server Software CD in the drive.

2. Install the PCI Card Driver for the SCSI JackHammer card that is on the CD.

Workgroup Server 9650/350

Note: The Workgroup Server 9650/350 ships with several Mac OS components which are not included in the base Mac OS system software. In order to update your server to Mac OS 8, you must follow these additional steps.

1. Insert the Workgroup Server Software CD in the drive.

2. Install PCI Card Drivers on WGS CD - Locate and Open the 'Server Additions' folder on the CD.

3. Move the following drivers from the 'For System Folder' folder to the active System Folder:
- PCI SCSI JackHammer=81 1.2.2
- Apple 10/100 Fast Ethernet

4. Install Xclaim 3D video card software - Open the Xclaim 3D Installer folder that's also in the 'For System Folder' folder. Install the Xclaim software following the instructions in the Read Me file.

Internet Web Sites to Download Software Updates:

This article can help you locate software updates:
Article 14724: "**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.
Published Date: Feb 19, 2012

Compressor 2: Certain presets may set the wrong frame rate in a converted clip

This article has been archived and is no longer updated by Apple.

Compressor 2 offers high-quality transcoding using advanced image analysis when converting from one format to another. However, if you try to transcode from PAL to NTSC using one of the NTSC presets in the Advanced Format Conversions category, the resulting QuickTime movie file may not have the correct frame rate (29.97 FPS).

As a workaround, do this:

1. In Compressor, apply the setting you wish to use to the source clip in the Batch window.
2. In the Inspector window, select Frame Controls.
3. From the **Frame Controls** pop-up menu, choose **Custom**.
4. Set your destination and then submit the batch.

After changing the Frame Controls, you can save the setting if you'd like to use it for future PAL to NTSC transcoding. You can then use your new setting instead of the default setting to make the conversion.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Mac OS X 10.4.3: Allowing non-admin users to change the time zone setting

This article has been archived and is no longer updated by Apple.

In Mac OS X, a user who isn't an administrator cannot change the time zone setting in System Preferences without authorization. In this advanced article, learn how an administrator can use Mac OS X 10.4.3 or later to change the `/etc/authorization` file so that a non-admin user can adjust the time zone setting.

Please note that this will not affect other settings in the Date and Time preferences or other secured System Preferences settings.

Important: This article contains instructions for editing the `/etc/authorization` file and is only intended for use by system administrators who are familiar with editing configuration files in a command-line interface. Misconfiguring this file can cause issues, including preventing any user from logging in. Be sure that you make a back up of the `/etc/authorization` file before editing it.

To grant time zone setting access to a non-admin user, do this:

1. Make sure that you've updated to Mac OS X 10.4.3.
2. Open the `/etc/authorization` file in a text editor.
3. Locate the text that makes up the system.preferences.accounts right; it looks like this (in its entirety):

```
<key>system.preferences.accounts</key>
<dict>
<key>allow-root</key>
<true/>
<key>class</key>
<string>user</string>
<key>comment</key>
<string>This right is checked by the Admin framework when making changes to the accounts preference
pane</string>
<key>group</key>
<string>admin</string>
<key>shared</key>
<false/>
</dict>
```

4. Below this block of text (immediately below the `</dict>` tag), add the following section of text:

```
<key>system.preferences.dateandtime.changetimezone</key>
<dict>
<key>class</key>
<string>allow</string>
<key>comment</key>
<string>This right is used by DateAndTime preference to allow any user to change the system timezone.
</string>
<key>shared</key>
<true/>
</dict>
```

   Please note that the "This right is used by..." string does not include a line break; make sure that you enter it all on one line.
5. Save the file.

Published Date: Oct 7, 2016

Don‘t unplug the Apple USB modem while it‘s in use

This article has been archived and is no longer updated by Apple.

If you unplug the iMac G5 (iSight) or Mac mini computer's Apple USB modem from the computer while it is in use, you may find that both the modem and the USB port it was plugged into will not work anymore.

If this happens, don't fret. Just restart your computer and the USB port and modem will work normally again.

Published Date: Oct 7, 2016

iMac G5 (iSight): Mighty Mouse right button doesn‘t work when installing Mac OS X

This article has been archived and is no longer updated by Apple.

When you're installing Mac OS X on your iMac G5 (iSight), don't use the right button on your Mighty Mouse. The installer doesn't support the right button, but the button will work once the installation is finished and the computer starts up normally. Use the left mouse button when you install Mac OS X.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Photo Booth: "Unable to save photo" message when trying to save a photo

This article has been archived and is no longer updated by Apple.

If you've saved more than a couple of thousand photos in Photo Booth, Photo Booth may display an error message that says "Unable to save photo" when you try to save a new one. When you try to click OK to dismiss the message, the dialog won't go away. The only way to close the dialog is to force quit Photo Booth using Activity Monitor.

To do this:

1. In the Finder, choose **Utilities** from the **Go** menu to open the folder.
2. Open Activity Monitor.
3. In the Process Name column, select Photo Booth (click it once to highlight it).
4. Click the Quit Process button in the upper-left corner of the window.
5. A dialog opens and asks, "Do you really want to quit 'Photo Booth'?" Click Force Quit to confirm it.

If this happens, you will need to delete or move some of your photos before you can use Photo Booth again, or add more memory (RAM) to your computer.

Published Date: Feb 19, 2012

Tips for opening and saving files in Mac OS X applications

This article has been archived and is no longer updated by Apple.

You probably know how to open and save files and documents in a Mac OS X application's File menu (or with Command-S and Command-O keyboard shortcuts), but you might not know about some other useful tricks for opening or saving files.

- When saving a file, click the disclosure triangle in the dialog sheet to see more save locations and additional options.

- In Mac OS X 10.3 or later, if you drag files or folders to a Finder window's sidebar, they will appear in the left side of an application's Open dialog sheets as well as the left side of Save dialog sheets where the disclosure triangle has been clicked (see previous tip).
- You can drag a file or folder to an application's Open or Save dialog sheet to quickly select it.
- Another option: Drag the small icon that appears on the title bar of a Finder or application's window (the "proxy icon") to the Open or Save sheet.
- Want to type a specific location path? With the Open or Save dialog sheet open, press Command-Shift-G (or type "/"). A "Go To Folder" window appears where you can type a specific location, just like the Finder **Go** menu's **Go To Folder** option.

Related documents

disc31.html 10.4 Help: Applications and documents

mh467.html 10.4 Help: Saving documents you create

Published Date: Oct 7, 2016

Mac OS X 10.4.3: Cannot use Unicode Hex Input keyboard layout

This article has been archived and is no longer updated by Apple.

If you enable the Unicode Hex Input keyboard layout in the International pane of System Preferences and then choose it from the input menu, the U.S. keyboard layout will be used instead. This can happen in Mac OS X 10.4.3.

To resolve this issue, do this:

1. From the **Apple** manu, choose **System Preferences**.
2. Click International to display the pane.
3. Click the Input Menu tab.
4. Deselect (uncheck) all selected checkboxes for keyboard layouts, palettes, and input methods.
5. Reselect the checkboxes for keyboard layouts, palettes, and input methods that you wish to make available, including Unicode Hex Input.

Published Date: Oct 7, 2016

PowerBook G4 (Double-Layer SD): DVD-Audio discs play but without sound

This article has been archived and is no longer updated by Apple.

If you try to play a DVD-Audio disc after waking your PowerBook G4 (Double-Layer SD) computer from sleep, the disc may not play properly. It may appear to be playing, but you don't hear any audio. If this happens, just eject the disc and reinsert it; you should now be able to hear the audio.

Published Date: Oct 7, 2016

iMac G5 (iSight) and Front Row: Error messages appear when trying to play songs

This article has been archived and is no longer updated by Apple.

If you try to play a song in Front Row on your iMac G5 (iSight) but the application can't find the song because it's not in the default iTunes library, you'll see an alert message that either says, "iTunes cannot play this song" or "Communications error." If this happens, just show Front Row where you keep your music.

If you keep all of your music in one folder location:

1. Open iTunes.
2. From the **iTunes** menu, choose **Preferences**.
3. Click the Advanced tab, then click the General tab below it.
4. Click Change next to the "iTunes Music folder location" section.
5. Navigate to and select the folder that contains your tunes.
6. Click Choose.
7. Click OK.

If your music is stored in different folder locations:

1. Open iTunes.
2. From the **Advanced** menu, choose **Consolidate Library** to copy songs from all locations to your default iTunes Music folder. Let the consolidation process finish before you go back to Front Row.

Tip: If you want to play just one song from another folder, play the song in iTunes first. Front Row will be able to find it once iTunes knows where the song is located.

Published Date: Oct 7, 2016

Mac OS X Server Weblog Service: Modifying XML templates for the iTunes Store

This article has been archived and is no longer updated by Apple.

Mac OS X Server 10.4.3 or later supports RSS2 enclosures and podcasting. Although the server includes the basic RSS2 tags needed for podcasting, it doesn't include the required tags to submit podcasts to the iTunes Store. This article shows how to modify the RSS2 template so that blog entries from the Weblog Server can be considered for publication on the iTunes Store.

To find more information about the iTunes-specific RSS2 tags, click here.

Note: This advanced how-to requires you to edit XML-formatted text files. Apple does not provide any further technical support or assistance with performing this task.

Part I: Modifying the RSS2.vm template

1. Log in as an administrator of the server.
2. Make a backup copy of the file:

```
/Library/Tomcat/blojsom_root/webapps/ROOT/WEB-INF/templates/rss2.vm
```

3. Open TextEdit.
4. Open the following file in TextEdit:

```
/Library/Tomcat/blojsom_root/webapps/ROOT/WEB-INF/templates/rss2.vm
```

5. Locate the first <image> section below the opening <channel> tag. This is where you need to insert your blog server's iTunes Store channel attributes. Using the default rss2.vm file, here is an example of what this looks like (our inserted text is shown in blue):

```
<?xml version="1.0"?>
<!-- name="generator" content="$BLOJSOM_VERSION" -->
<rss version="2.0" xmlns:dc="http://purl.org/dc/elements/1.1/"
xmlns:wfw="http://wellformedweb.org/CommentAPI/" xmlns:itunes="http://www.itunes.com/dtds/podcast-1.0.dtd">
 <channel>
  <title>$BLOJSOM_BLOG.getBlogName()</title>
  <link>$BLOJSOM_BLOG.getBlogURL()</link>
  <description>$BLOJSOM_BLOG.getBlogDescription()</description>
  <language>$BLOJSOM_BLOG.getBlogLanguage()</language>
  <image>
   <url>$BLOJSOM_SITE_URL/favicon.ico</url>
   <title>$BLOJSOM_BLOG.getBlogName()</title>
   <link>$BLOJSOM_BLOG.getBlogURL()</link>
  </image>
  <itunes:author>www.demo.edu</itunes:author>
  <itunes:owner>
   <itunes:name>Demo University</itunes:name>
   <itunes:email>podcast@demo.edu</itunes:email>
  </itunes:owner>
  <itunes:link rel="image" type="video/jpeg" href="http://www.demo.edu/demo_u.jpg">About Demo University</itunes:link>
  <itunes:category text="Education">
   <itunes:category text="Higher Education"/>
  </itunes:category>
  <copyright>Copyright 2005 demo.edu</copyright>
```

6. Now locate the first <description> tag line below the opening <item> tag. This is where you need to insert the iTunes Store attribute tags. Using the default rss2.vm file, here is an example of what this looks like (again, our inserted text is shown in blue):

```
#foreach ($entry in $BLOJSOM_ENTRIES)
  <item>
  <title>$entry.getEscapedTitle()</title>
  <link>$entry.getEscapedLink()</link>
  <description>$entry.getEscapedDescription()</description>
  <itunes:author>$BLOJSOM_BLOG.getBlogOwner() from demo.edu</itunes:author>
  <itunes:subtitle>Boost your knowledge at Demo University</itunes:subtitle>
  <itunes:summary>Episodes from demo University.</itunes:summary>
  <itunes:category text="Education">
   <itunes:category text="Higher Education"/>
  </itunes:category>
  <itunes:explicit>no</itunes:explicit>
  <itunes:keywords>education college university lecture</itunes:keywords>
```

Note: In the example above, we're editing the default rss2.vm file. As a result, all of the information above is static except for the variable used for the blog owner. When editing the default rss2.vm file, all information will be the same for every item of every blog on the server. However, you can make a blog-specific template and use it to override the default, thus achieving different RSS templates for different blogs.

To create a template that's specific to a user's blog, create a new "templates" folder in the user's blog folder:

```
/Library/Tomcat/blojsom_root/webapps/ROOT/WEB-INF/<username>/templates
```

If you put a modified copy of rss2.vm in the folder, the weblog server will use that template instead of the one in /WEB-INF/templates, because the user-

specific file takes precedent over the main template when present. With this method, only the information in that specific blog will have the customized tags.

Part II: Test your blog site

To test your blog site to make sure that the RSS2 links function properly, go to a blog and click on the RSS2 or RSS Podcast links. You shouldn't see any of the tags or information you entered. These tags are only used by the iTunes Store. If any of the information is displayed incorrectly, revise your edits in the RSS2.vm file or revert to the backup copy you made.

Tip: You can see your custom tags by using the command-line utility curl. In Terminal, type:

```
curl "http://<server address>:<port>/weblog/<user shore name>/?flavor=rss2"
```

For example, let's say your server address is www.demo.edu, it's running on port 80, and your user's shortname is "joe." You'd then type this curl command in the Terminal:

```
curl "http://www.demo.edu/weblog/joe/?flavor=rss2"
```

This will return the RSS2 xml text from the web server. The custom iTunes Store tags should be returned.

Part III: Submit your blog for consideration on the iTunes Store

1. See this article for details about publishing to the iTunes Store.
2. To submit your blog site for iTunes Store consideration, use this URL format:

   ```
   http://<server address>:<port>/weblog/<user shore name>/?flavor=rss2
   ```

   For example, if your server address is www.demo.edu, running on port 80, and your user's shortname is "joe," you'd submit this URL:

   ```
   http://www.demo.edu/weblog/joe/?flavor=rss2
   ```

Related Articles

- 302200: iTunes Store: How to update or block your podcast, or report a concern about other podcasts
- 301880: Podcasting Frequently Asked Questions (FAQ)

Published Date: Feb 19, 2012

iMac G5 (iSight) and Front Row: Photo previews don‘t appear

This article has been archived and is no longer updated by Apple.

If you see nothing but black when you preview your Front Row photos on your iMac G5 (iSight), you may have inadvertently replaced the original iPhoto library with another one. Don't worry. Just rebuild your iPhoto library to bring back your images.

Published Date: Oct 7, 2016

PowerBook G4 (Double-Layer SD): Mail message stuck in Outbox after waking your computer from sleep

This article has been archived and is no longer updated by Apple.

If you're sending an email in Mail and put your computer to sleep while the message is still being sent, your message may get stuck in your Outbox when you wake the computer.

If this happens, don't worry. Mail has sent your message—you can verify this by checking your Sent folder—so you can safely delete the message that's stuck in your Outbox.

Published Date: Oct 7, 2016

iDVD: OneStep DVD not available for HDV format

This article has been archived and is no longer updated by Apple.

The OneStep DVD feature in iDVD 5 enables you to quickly transfer your video onto a DVD. Please note that this feature only works with DV format footage. If your camera records video in the high-definition HDV format, you can use iMovie HD to capture all the footage from your camera and then use iDVD to burn the video to DVD.

To do this:

1. Connect your DV camera to your computer.
2. Turn on the camera (no need to rewind the tape).
3. Set the camera to VTR mode.
4. Open iMovie HD and click the "Make a Magic iMovie" button, or choose **Make a Magic iMovie** from the **File** menu (close any open projects first).
5. Click the Video format triangle and set the video format to HDV 1080i or HDV 720p, depending on your camera's format.

6. Type a name for the project and click Create.
7. In the resulting dialog, you can choose a transition to add between scenes and add music if you'd like. Make sure that you select the "Send to iDVD" checkbox (see the Note below), then click the Create button.

8. iMovie will capture and assemble your footage and send the movie to iDVD. When iDVD opens, you can change the theme and customize the project however you want.
9. When finished, click the Burn button to burn your DVD.

Note: If you'd like your movie to autoplay, don't select the "Send to iDVD" checkbox in the Magic iMovie dialog. Instead, after following the above steps, follow these steps in iMovie:

1. From the **File** menu, choose **Share**.
2. Click the QuickTime icon.
3. From the **Export to** pop-up menu, choose **Full Quality**.
4. Click Share.
5. Type a name for the exported movie and click Save.

iMovie creates a QuickTime movie. It may be necessary to resize the movie as explained in this document. Then you can then drag to your iDVD project icon in Map view.

Published Date: Oct 7, 2016

Mac OS X 10.4: Sunday the 1st may not appear in Date & Time preferences

This article has been archived and is no longer updated by Apple.

If you use the International format region pop-up menu choice United Kingdom (System Preferences > International > Formats > Region > United Kingdom), months in which Sunday is the 1st of the month do not display Sunday in Date & Time preferences. Monday the 2nd, followed by all other days of the month, appears in the Date & Time calendar. This can happen in Mac OS X 10.4 through 10.4.2. It doesn't happen if any other region is selected in International preferences.

For example, with United Kingdom selected in the Region pop-up menu of International preferences Format tab, May 1st, 2005 and January 1, 2006 do not appear in the Date & Time preferences calendar. These months start with Monday the 2nd instead.

Solution

Download and install the Mac OS 10.4.3 Update, or later.

Published Date: Oct 7, 2016

iMac G5 (iSight), iMac (Early 2006): No VESA mount adapter kit

This article has been archived and is no longer updated by Apple.

iMac G5 (iSight) and iMac (Early 2006) computers, while similar in form to previous iMac G5 models, are not compatible with the iMac G5 VESA Mount Adapter Kit (part number M9755G/A).

The 24-inch model of the iMac (Late 2006) **is** compatible with a VESA mount adapter. Use the iMac 24-inch VESA Mount Adapter (MA473G/A). You can view the installation guide here.

Apple will not be offering this kit for installation on iMac G5 (iSight) or iMac (Early 2006) computers.

Published Date: Oct 7, 2016

iMac G5 (iSight): Install Disc 1 shows incorrect version of Apple Hardware Test

This article has been archived and is no longer updated by Apple.

Some of the Mac OS X Install Disc 1 discs that ship with iMac G5 (iSight) erroneously show Apple Hardware Test as being "AHT version 2.5.2." The actual version on these discs is version 2.5.3.

Apple Hardware Test for iMac version 2.5.3 is the correct version to use with the iMac G5 (iSight) computer, and the label is printed correctly on later shipping discs.

Published Date: Oct 7, 2016

iMac G5 (iSight): DVD playback behaves differently using Front Row

This article has been archived and is no longer updated by Apple.

Although Front Row and DVD Player both allow you to view DVD movies in full screen on your iMac G5 (iSight), the user experience is a bit different. Here are some of the differences:

Using DVD Player	Using Front Row
"+" and "-" buttons control system volume with standard visual feedback.	"+" and "-" buttons control volume with iPod-like visual feedback.
>> and << buttons will ff/rew or go to next/prev chapters with no feedback.	>> and << buttons will ff/rew or go to next/prev chapters with iPod-like visual feedback.
"MENU" button goes to the Front Row menu on the first press.	"MENU" button goes to the DVD menu on the first press, then to Front Row on the second press.

Published Date: Oct 7, 2016

Mac OS X 10.4: User collection in Font Book is dimmed ("Off")

This article has been archived and is no longer updated by Apple.
In Font Book, you may come across a situation where the "User" collection in the Collection column appears dimmed with the word "Off" next to it, and you can't enable "User" from the Edit menu. This can happen after reinstalling Mac OS X 10.4 Tiger, or after manually removing items from the Fonts folder within your home folder's Library folder.

To resolve this issue, manually add a font to your Fonts folder (~/Library/Fonts), then restart your computer. The User collection should then be available in Font Book.

Published Date: Oct 7, 2016

QuickTime for Windows: Update to QuickTime 7.0.3 for DemoShield compatibility

This article has been archived and is no longer updated by Apple.

Some programs that use Macrovision's DemoShield in their installers may not install on Windows computers that have QuickTime 7.0 to 7.0.2 installed.

To resolve this issue, install QuickTime 7.0.3 or later before running an installer that uses DemoShield. iTunes 6 and 7 does include a later version of QuickTime.

Important: Mention of third-party websites and products is for informational purposes only and constitutes neither an endorsement nor a recommendation. Apple assumes no responsibility with regard to the selection, performance or use of information or products found at third-party websites. Apple provides this only as a convenience to our users. Apple has not tested the information found on these sites and makes no representations regarding its accuracy or reliability. There are risks inherent in the use of any information or products found on the Internet, and Apple assumes no responsibility in this regard. Please understand that a third-party site is independent from Apple and that Apple has no control over the content on that website. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

iMac G5 (iSight), iMac (Early 2006) or later, MacBook Pro: Frequently Asked Questions

This article has been archived and is no longer updated by Apple.

Got questions about the MacBook Pro, iMac G5 (iSight), iMac (Early 2006) or later? Here are answers to the most frequently asked questions about this computer.

Is Photo Booth available for my other Macintosh computers?
Photo Booth is only available with the MacBook Pro, iMac G5 (iSight) or iMac (Early 2006) or later computers.

Can I get Front Row and an Apple Remote for my other Macintosh computers?
While you can use the Apple Remote with other Apple products, such as the iPod Universal Dock, Front Row is only available with the MacBook Pro, iMac G5 (iSight), and iMac (Early 2006) or later computers.

This computer doesn't come with a built-in modem like previous models. How do I use it with my dial-up Internet connection?
If you use a dial-up connection to access the Internet, you can purchase the external Apple USB Modem as a Configure To Order option when you order your iMac or MacBook Pro. If you already got your Mac but didn't get a modem, purchasing the external Apple USB Modem is one solution. The iMac and MacBook Pro also comes with a built-in AirPort Extreme card. Combined with an AirPort Extreme Base Station (with modem), you can place the Base Station near your phone jack and place your Mac nearly anywhere you like.

Published Date: Oct 7, 2016

Some PowerBook SuperDrives won‘t work with 8x DVD-R media

This article has been archived and is no longer updated by Apple.

Some earlier PowerBook G4 computers that have a SuperDrive with a 1x or a 2x DVD-R write speed may not be able to burn 8x DVD-R media reliably. Because of this, you should only use 2x or 4x DVD-R media.

Not sure what kind of SuperDrive you have in your PowerBook? Just do this:

1. From the **Apple** menu, choose **About This Mac**.
2. Click the More Info button to open Systen Profiler.
3. In the resulting window, select Disc Burning (under Hardware).

Your SuperDrive model number will be listed in bold at the top of the pane. If you see UJ-815 or UJ-816 as part of the model, make sure that you only use 2x or 4x DVD-R media.

This could occur with the following PowerBook models if they have the UJ-815 or UJ-816 drive:

- PowerBook G4 (1GHz/867MHz)
- PowerBook G4 (17-inch)
- PowerBook G4 (12-inch)
- PowerBook G4 (15-inch FW800)
- PowerBook G4 (12-inch DVI)
- PowerBook G4 (17-inch 1.33GHz)

Published Date: Feb 19, 2012

Front Row: Photos will not play if nested in another folder or album

This article has been archived and is no longer updated by Apple.

If photos are nested (in a folder within another folder) in folders or albums, you may see a "communication error" or other odd behavior when you try to display them with Front Row.

To successfully view photos with Front Row, make sure that your images are contained within an album available in the iPhoto Source window. You can't view images within folders or albums that are inside of other folders or albums—those that aren't available in the Source window—unless you expand the folders in the Source window so the nested folders are visible.

Published Date: Oct 7, 2016

Front Row: Deleted photos still appear in slideshow

This article has been archived and is no longer updated by Apple.

When you're playing a slideshow in Front Row, you may notice that you can delete photos during the show by pressing the Delete key—a garbage can icon appears briefly to confirm the delete. However, your deleted photos will continue to play in the slideshow until you leave the Photos menu entirely. When you go back to the Photos menu, the deleted images will no longer be there.

Published Date: Feb 19, 2012

Front Row: Video podcasts play audio but don‘t show video

This article has been archived and is no longer updated by Apple.

If you try to play a video podcast through Front Row but only get sound without video, it's probably because you tried to play them from the Podcasts menu in the music module. This menu item is for audio podcasts only.

To see and hear your video podcasts, access them from the Video Podcasts menu in Front Row.

Published Date: Feb 19, 2012

iMovie: Purchased videos do not work in iMovie

This article has been archived and is no longer updated by Apple.

Because all videos purchased from the iTunes Store are copyright protected, you cannot use them in iMovie. Videos that you purchase and download from the iTunes Store will appear in the Audio tab in iMovie along with your iTunes songs. However, neither the audio nor video portions of the video may be used in your iMovie project.

If you attempt to drag the video from the Audio tab into your project or if you try to preview it in the Audio tab, you may get an error due to the special copyright embedded in the video file. For example, you may see one of the following errors if you try to preview or add a purchased video in iMovie:

- **Error during audio playback**
  The file could not be played because it couldn't be opened. The file may be missing or damaged, or you may not have permission to open it.

- **Error during Import**
  The file could not be imported: The file "*file name/path*" can't be imported; QuickTime couldn't parse it: -2126

You can view videos from the iTunes Store in iTunes 7 or later, QuickTime Player 7.1.3 or later, and on iPod models that support video play.

Published Date: Oct 7, 2016

Video podcasts don‘t play as expected in Front Row

This article has been archived and is no longer updated by Apple.

Front Row provides the best video podcast viewing experience using iTunes 6.0 or later. If you're having trouble watching video podcasts, see "Video podcasts play audio but don't show video" to make sure that you're using the right menu choice.

If you are using the correct menu option but still can't see video podcasts, you may have iTunes 5.0.1 or earlier installed on your computer. To play video podcasts, be sure to download iTunes 6 or later (it's free!).

Published Date: Feb 19, 2012

PowerBook G4 (Double-Layer SD) has distorted audio

This article has been archived and is no longer updated by Apple.

If you hear distorted or garbled audio coming intermittently from the internal speakers in your PowerBook G4 (Double-Layer SD), be sure to update to Mac OS X 10.4.3. You can use Software Update to download and install the update, or download it from Apple Downloads

Published Date: Oct 7, 2016

PowerBook G4 (Double-Layer SD) displays a blue screen when mirroring video

This article has been archived and is no longer updated by Apple.

If you try to use video mirroring with your PowerBook G4 (Double-Layer SD), your computer's display may only show a blue screen. If this happens, update to Mac OS X 10.4.3. You can use Software Update to download and install the update, or download it from Apple Downloads.

Published Date: Oct 7, 2016

Power Mac G5: Grapher quits unexpectedly

This article has been archived and is no longer updated by Apple.

If you have a Power Mac G5 connected to more than two displays (including TVs), Grapher may unexpectedly quit when opening. If this happens, temporarily disconnect one of your displays while you use Grapher.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

PowerBook G4 (Double-Layer SD) Ethernet port doesn‘t work

This article has been archived and is no longer updated by Apple.

Sometimes the Ethernet port on a PowerBook G4 (Double-Layer SD) may not work properly when the computer is running on battery power and has just woken from sleep. If this happens, put the computer back to sleep and wake it up again to resolve the issue.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

PowerBook G4 (Double-Layer SD) display flashes randomly

This article has been archived and is no longer updated by Apple.

If the PowerBook G4 (Double-Layer SD) display seems to randomly "flash" toward the bottom of the screen, update your computer to Mac OS X 10.4.3 to resolve the issue. You can use Software Update to download and install the update, or download it from Apple Downloads.

Published Date: Oct 8, 2016

Mac OS X 10.4 (Japanese): Can‘t copy a file with a long name to an AFP Server

This article has been archived and is no longer updated by Apple.

If a file name contains more than 11 Japanese characters, Mac OS X 10.4 may not be able to copy the file to an affected AFP server—a server that is running on an operating system other than Mac OS X or Mac OS X Server.

Note: Apple Filing Protocol (AFP) is the type of service known by names such as Apple File Service (Mac OS X Server), Personal File Sharing (Mac OS X and Mac OS 9), AppleShare IP, and Microsoft Windows Service for Macintosh.

When you try to copy an affected file to an affected server, you could get the following message:

> "You cannot copy some of these items to the destination because their names are too long or contain invalid characters for the destination."

This issue may also cause unexpected loss of the file at the affected server. For example, if you copy a file from the server to your Mac OS X 10.4 client, modify the file, and then try to copy the file back to the AFP Server, you may get this message:

> "An item named 'File name' already exists in this location. Do you want to replace it with the one you are moving?"

If you click the Replace button, you will get this message:

"You cannot copy the item because the name is too long or includes characters that the disk cannot display."

The result is that you lose the old file on the AFP Server and cannot copy the edited file to the AFP Server until after you rename it.

Solution

This issue is addressed in Mac OS X 10.4.3 Update. To avoid this problem, update to Mac OS X 10.4.3 or later.

Published Date: Oct 8, 2016

About the PowerBook G4 sleep indicator light status

This article has been archived and is no longer updated by Apple.

Starting with the PowerBook G4 Double-Layer SD models, the sleep indicator light in the lid button has a new behavior.

When you first press the power button to turn on the PowerBook G4, the sleep indicator will also turn on. As the computer starts up, the indicator stays on until the display turns on.

After startup, after the system shuts down the video circuit (the screen goes dark) but before power is shut down to the main logic board, the sleep indicator light will once again turn on solid. It will turn off if the video is turned back on or it will start pulsing if the computer meets the condition for sleep.

You can use this light as a diagnostic visual to determine whether the computer is getting power at startup.

Published Date: Feb 19, 2012

Power Mac G5: Final Cut Pro doesn‘t show third display output option

This article has been archived and is no longer updated by Apple.

If you're using a Power Mac G5 computer with three or more displays connected, you may notice that in Final Cut Pro, the Playback Output section of the the A/V Devices tab doesn't show more than the first two displays.

This happens because Final Cut Pro does not support having more than two computer displays connected to the computer. To fully control Final Cut Pro, make sure that you only connect up to two displays at a time.

For more information, see article 302671, "Final Cut Pro supports up to two displays at a time."

Published Date: Feb 20, 2012

Power Mac G5 (Late 2005): Kernel panic may cause Ethernet switch to stop responding

This article has been archived and is no longer updated by Apple.

If a Power Mac G5 (Late 2005) kernel panics, it can cause an Ethernet switch to stop responding in rare circumstances. The following three events must happen consecutively to make the Ethernet switch lock up:

1. The switch must have negotiated a flow control Ethernet session with the client over Gigabit Ethernet.
2. That session must still be active.
3. The client then kernel panics.

The easiest way to resolve this issue is to prevent the kernel panics from happening. Short of that, there are two other methods to keep the switches from locking up: Turn off flow control in the Gigabit Ethernet switch, or turn off flow control on the Mac client.

To learn how to turn off flow control on the switch, please refer to your manufacturer's documentation.

To turn off flow control on the Mac client:

1. From the **Apple** menu, choose **System Preferences**.
2. Click Network to display the pane.
3. From the **Show** pop-up menu, choose **Built-in Ethernet**.
4. Click the Ethernet tab.
5. From the **Configure** pop-up menu, choose **Manually (Advanced)**.
6. From the **Speed** pop-up menu, choose **1000baseT**.
7. From the **Duplex** pop-up menu, choose **full-duplex**.
8. Click Apply Now.

Published Date: Oct 8, 2016

Aperture: Small text appears jagged in book layouts, web journals, or metadata overlays

This article has been archived and is no longer updated by Apple.

Aperture follows your system-wide preference for text smoothing (also known as "anti-aliasing"), so some smaller fonts may appear jagged on screen. Please note that this appearance only affects what you see on your computer screen; it does not affect the final printed version, which will be smoothed regardless of your text smoothing preferences.

The default setting in Mac OS X is not to smooth fonts that are 8 points in size or smaller because some very small fonts become more difficult to read when smoothed. To experiment and see what you like best, follow these steps:

1. From the **Apple** menu, choose **System Preferences**.
2. Click Appearance to display the pane.
3. At the bottom of the window, locate the "Turn off text smoothing for font sizes `<pop-up menu>` and smaller" setting. The pop-up menu will probably be set to the default of 8.
4. Choose **4** from the pop-up menu to smooth text fonts that are 4 points and larger.

You should now see small fonts smoothed in Aperture and most other applications.

Published Date: Oct 8, 2016

Aperture only imports the first page of a PDF file

This article has been archived and is no longer updated by Apple.

If you import a multipage PDF into Aperture, you'll only see the first page. That's because Aperture is designed to work with individual images, as are most imaging applications.

Aperture does allow you to import PDF images—just remember to limit them to a single page.

Published Date: Oct 8, 2016

Aperture: Some images don‘t appear on light table when you drag them there

This article has been archived and is no longer updated by Apple.

In a certain situation, some images temporarily won't appear on the light table.

If the light table is selected in the project list, and you import images while it is selected, those images won't be eligible for the light table until you first visit a project or the library. They will appear in the browser, but not on the light table when you try to drag them there.

To see the images, simply click Library in the projects list, then go back to the affected light table.

This issue is resolved in Aperture 1.5.

Published Date: Oct 8, 2016

Aperture: "Rename Error" when naming an album, book, web journal, or web gallery

This article has been archived and is no longer updated by Apple.

If you try to include a period (.) when you name an album, book, web journal, or web gallery, Aperture will display this message:

> **Rename Error**
> That name is already in use. Please choose a different name.

After you click OK to dismiss the message, the period and anything following it will be omitted from the name. For example, "My.Book" would become just "My" in the name field.

Although the message is technically erroneous, the request is valid: To prevent potential naming issues, you should avoid using names that contain special characters or punctuation marks, such as periods.

For more information, see pages 49-50 of the Aperture Getting Started guide.

Learn more about naming files in a cross-platform environment.

Published Date: Oct 8, 2016

Aperture: Pointer erroneously indicates a manual copy to a Smart Album

This article has been archived and is no longer updated by Apple.

When you create a Smart Album, Aperture automatically populates it with images that match your Smart Settings criteria (similar to the Filter HUD). You cannot manually add images to it.

However, if you drag an image from a project to a Smart Album, you'll see a green plus sign (+) next to the mouse pointer that normally indicates that a file will be added to the list. In reality, Aperture won't add the file; the plus cursor appears in error.

This issue is resolved in Aperture 1.5.1

Published Date: Oct 10, 2016

Aperture: Book-specific filters don‘t appear under the Loupe

This article has been archived and is no longer updated by Apple.

If you apply a filter such as Sepia or B&W from the viewer's Photo Filter menu to a book image, it will appear without the filter when viewed under the Loupe.

This happens because the Loupe looks at the source version of the image, and book filters only affect the book itself—not the source. If you apply a similar filter to a version of your image using the Adjustments inspector, you'll see the effect when you view the image under the Loupe.

Here's where to find the Photo Filter menu in a book Viewer:

Published Date: Oct 10, 2016

Aperture won‘t import images from a device connected to a keyboard‘s USB port

This article has been archived and is no longer updated by Apple.

If you connect a camera or card reader to a USB port on your keyboard, Aperture will not import the images, even though the Import dialog will appear.

To import images, connect your camera or card reader to a USB port on the computer itself.

Published Date: Oct 10, 2016

Aperture: Print Preview may not show a crop immediately

This article has been archived and is no longer updated by Apple.

If you crop an image in Aperture and leave the crop tool active, the Print Preview dialog will not show the cropping that you just applied.

If you dismiss the crop tool and then check the Print Preview again, it will display your cropped image. To dismiss the crop tool, press Return or select another tool, like the arrow tool.

Published Date: Oct 10, 2016

Aperture: Selection and target overlays for Spot & Patch, Redeye, and Crop don‘t always appear

This article has been archived and is no longer updated by Apple.

When using the Spot & Patch, Crop, or Redeye adjustments, you may notice that the target and selection overlays do not always appear. That's because selecting a palette in the Adjustments Inspector does not automatically force the selection of the corresponding tool. To see the overlays, simply select the corresponding tool in the toolbar.

This arrangement allows you to tweak your last modified selection further without giving up your current tool. When you want to further adjust an earlier selection, just click it with the proper tool to reselect it.

Published Date: Feb 20, 2012

Aperture: Only one image opens when sending multiple images to Photoshop

This article has been archived and is no longer updated by Apple.

If you select multiple images in Aperture and then try to send them to Adobe Photoshop simultaneously using the Open With External Editor command, it's possible that only one image will open in Photoshop. This behavior depends on your color settings in Photoshop.

To see your Photoshop color settings, choose **Color Settings** from either the **Photoshop** or **Edit** menu (depending on your version). In the Color Settings dialog, if you have the "Ask When Opening" checkbox selected for both "Profile Mismatches" and "Missing Profiles," this is most likely what is causing the issue:

It's up to you to decide whether or not to have the Ask When Opening feature enabled based on your own technical needs and preferences. However, if you want to send multiple images from Aperture to Photoshop, you will need to deselect both checkboxes and then click OK.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

Aperture: Redeye, Spot & Patch Inspector palettes show different values than HUD

This article has been archived and is no longer updated by Apple.

The Spot & Patch and Redeye HUDs do not always show the same values as their respective palettes in the Adjustments Inspector. That's because the Adjustments Inspector shows the settings for the currently selected area in the image, while the HUD shows the value that will be used the next time you apply the tool—think of it like selecting a brush size before making the selection.

As you click on different areas of an edited image with one of the tools, the Inspector will change to show the settings for that edit, but the HUD will retain the setting that you specify for new edits.

Published Date: Feb 20, 2012

Aperture: Update Vault doesn‘t work after restoring a vault

This article has been archived and is no longer updated by Apple.

After you restore your Library from a vault in Aperture, you may not be able to update the vault again. This can happen if you moved or renamed the vault prior to restoring it—Aperture will look for the vault by its previous name and location.

To resolve this issue, use the Update Vault Path command to point Aperture to the new vault name/location. To do this, just click the gear icon in the lower-left area of the main window, choose **Update Vault Path** from the pop-up menu, and complete the navigation dialog.

This issue is resolved in Aperture 1.5.

Published Date: Oct 10, 2016

Aperture doesn‘t display a layered Photoshop file (.psd) as expected

This article has been archived and is no longer updated by Apple.

If you import a multilayer Photoshop file (.psd) into Aperture, it may not look the way you expected. Aperture doesn't recognize layers, so it may only show one layer from the Photoshop file or nothing at all.

To prevent this, open Photoshop and choose **Preferences > File Handling**.

In the resulting dialog, choose **Always** from the **Maximize PSD and PSB File Compatibility** pop-up menu (as shown above), which will make Photoshop embed a flattened version of the image into the file that Aperture can use.

This issue is resolved in Aperture 2.x.

Published Date: Oct 10, 2016

Aperture: Some Smart Albums don‘t display any images

This article has been archived and is no longer updated by Apple.

If you put a Smart Album inside a folder and there are no other projects in that folder, the smart album will always return nothing. It may not display the expected images that meet its criteria.

This happens because you can use the location of a Smart Album to control where it will search. Additionally, a Smart Album searches actual images, not the file references (or "aliases") that reside in folders. Here's where a Smart Album will search based on its location:

Smart Album Location	Search Area
Top level	All projects, regardless of hierarchical location
Inside a project	That project only
Inside a folder	All projects that are also in the same folder

Published Date: Oct 10, 2016

Aperture: Show all images or sort by rating

This article has been archived and is no longer updated by Apple.

If you want to quickly display images that are rated a certain number of stars or higher, just use the keyboard shortcuts below.

While shortcuts are the fastest way to do this, you should also note that it's the exact same effect as clicking the magnifying glass button to access the Filter HUD. So if you wanted to add additional criteria to the filter, you could simply click the magnifying glass to do so.

The shortcut for "show all images" has the same effect as manually clearing the settings in the Filter HUD.

The filter always applies to the group of images that you currently have in your browser, which is determined by your selection in the project list. To apply a filter to all images in your Library, you would select the Library; to apply the filter to images in a project, select the project, and so forth.

Tip: Filters treat stacks based on the pick only. If your pick is a 4★, but you also have a 5★ in the stack, the entire stack will be missing when filtering for 5★.

Note: Page 115 in the Aperture Getting Started guide contains a copy of this list with incorrect "Show all" and "Show unrated" shortcuts. The shortcuts below are correct.

Function	Keyboard shortcut
Show unrated images or better	Control-` (accent grave, same key as tilde)
Show images rated 1★ or better	Control-1
Show images rated 2★ or better	Control-2
Show images rated 3★ or better	Control-3
Show images rated 4★ or better	Control-4
Show images rated 5★	Control-5
Show all images	Control-6
Show unrated images only	Control-7
Show rejects only	Control-8

Published Date: Oct 10, 2016

Aperture: Images preview correctly in books but do not print as expected

This article has been archived and is no longer updated by Apple.

You may come across a situation in which an image previews correctly in an Aperture book, but when printed, the image is blank or appears distorted. This happens if the image has an unsupported bit depth or color mode (for example, a 32-bit CMYK image).

Aperture supports RGB images at depths of 8 or 16 bits per channel.

Published Date: Oct 10, 2016

Aperture: Redeye, Spot & Patch selections appear in wrong place when viewing multiple images

This article has been archived and is no longer updated by Apple.

If you're viewing an image in Aperture that has Redeye or Spot & Patch adjustments and then Command-click another image to get a multi-image view, the selection circles in the first image may appear to be in the wrong place.

This happens because the second image becomes the primary image when you Command-click it to enter multi-image view. The selection circles will only appear correctly on the primary image, therefore you shouldn't adjust the Redeye or Spot & Patch settings for non-primary images that appear in the Viewer.

This issue is resolved in Aperture 3.

Published Date: Oct 10, 2016

Aperture: Printing from full screen mode does not work as expected

This article has been archived and is no longer updated by Apple.

In Aperture, if you try to print an image from full screen mode, you may experience these issues:

- When you click the Preview button in the Print dialog, the Preview application opens, but the preview doesn't actually appear.
- Other options available from the Print dialog don't appear when you select them.

As a workaround, exit full screen mode before printing.

Tip: You can use the F key on your keyboard to toggle between full screen and windowed modes.

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

Aperture displays "Images Can‘t be Located" when sending files to an external editor

This article has been archived and is no longer updated by Apple.

If you select several images in Aperture and send them all to an external editor simultaneously, you might get an alert message that says some of the images could not be located. This can happen if you've selected several larger images and Aperture hasn't finished loading them all.

When you send a file to an external editor, Aperture must first create an intermediary file—a TIFF or PSD file, as determined by your preferences. If you select several large images at once, it can cause a brief caching delay—you'll see a "Loading Image..." message near the top of the Viewer when this occurs. If you try to send the files to an external editor before the images are done loading, Aperture won't be able to create the intermediary files and thus, the images can't be found.

To avoid this issue, wait until Aperture finishes loading all images (when the "Loading Image..." message has disappeared), then send your images to the external editor.

Note: Because Aperture has a limit on how much image data can be simultaneously cached, you may still get the message after all images have loaded. In this case, send fewer images at a time. Aperture does not have a set limit to the number of images that can be cached due to variations in image size and dependency on your computer's specific configuration.

Published Date: Oct 10, 2016

iPhoto names may override names assigned in the Import dialog in Aperture

This article has been archived and is no longer updated by Apple.

iPhoto features an "i" button that opens a panel in which you can edit file information such as the title and comments. When you import images from your iPhoto Library into Aperture, any titles that you attempt to set in the Import dialog may be overridden by titles that you manually edited in iPhoto.

This issue is resolved in Aperture 1.5.

As a workaround, you can correct the names of your imported images in the Metadata Inspector. If you have many affected files, you can use the Batch Change feature in the Metadata Inspector to restore the original file names.

1. Create a new project.
2. Drag the affected files into the new project.
3. Choose **Edit > Select All** (or press Command-A).
4. If the Inspectors are not already open, press "I" on your keyboard.
5. In the Metadata Inspector, choose **Batch Change** from the actions menu (the small gear icon in the top right corner).
6. In the Batch Change dialog, locate the Version Name Format pop-up menu, and choose **Edit**.
7. Here you can choose the format you want, but to simply restore the original file name, select Master File Name, and deselect any other elements that might be selected.
8. Click OK.
9. Click OK again.
10. Drag the files back to the project they belong to.

Published Date: Oct 10, 2016

Aperture: Images are cut off or missing when printing a Mini Size Book

This article has been archived and is no longer updated by Apple.

When you open the Print dialog in Aperture, you'll see a preset named Mini Size Book. Please note that you should only select this option if you're working with a Mini Book template. This preset does not scale down a full-size book layout, but rather sets up your printer for the paper size needed to print a Mini Size Book layout.

If you select this preset in the Print dialog while working with a full-size book, your images will appear cut off or they may not appear at all. Before you print a book, make sure that you select the print preset that corresponds with the size of the book you've laid out.

Published Date: Oct 10, 2016

Aperture: Tools can‘t always be selected

This article has been archived and is no longer updated by Apple.

If you try to select a tool from the toolbar while working with a book, web journal, web gallery, or light table, Aperture will sound a system beep, and the tool won't be selected.

This happens because adjustment tools are not available when working with these types of albums. You can access the tools by clicking the "Show viewer for this Browser" button to toggle between the viewer and the layout, thus editing the image without having to leave the album in the project list.

1. In the browser, select the thumbnail for the image you wish to adjust.
2. Click the "Show Viewer for this Browser" button near the top-left of the Browser.

Your selected image replaces the page (or light table) in the Viewer.

This issue is resolved in Aperture 3

Published Date: Oct 10, 2016

Aperture: Slow performance when adjusting images in a book

This article has been archived and is no longer updated by Apple.

When you adjust images in a book in Aperture, the controls may respond slowly, making the images difficult to edit.

As a workaround, edit images in the Viewer, where the controls will respond much more quickly. To do this:

1. In the album, select the thumbnail for the image you wish to adjust.
2. Click the "Show Viewer for this Browser" button near the top-left of the Browser.

Your selected image replaces the album page in the Viewer.

3. Press F to enter full screen mode, then make your adjustments.

Published Date: Oct 10, 2016

Mac OS X does not rotate display image during installation

This article has been archived and is no longer updated by Apple.

If you use the display rotation function in Mac OS X with your Power Mac G5 (Late 2005), you may notice if you reinstall Mac OS X that the installation screens are not rotated and you may see some distorted video.

If you see this, be assured that it will be resolved once the installation is complete and you have restarted the computer. If you don't want to tilt your head during the installation, rotate your display back to its standard orientation temporarily—you can rotate it back after finishing the install.

Published Date: Feb 19, 2012

Can‘t wake Power Mac G5 (Late 2005) with Apple Remote Desktop 2.2

This article has been archived and is no longer updated by Apple.

When you use Apple Remote Desktop 2.2 to try to wake a Power Mac G5 (Late 2005), Apple Remote Desktop may display a "communications error" message. This happens when you try to wake the Power Mac using its second Ethernet port.

To allow Apple Remote Desktop to give your Power Mac G5 (Late 2005) a wake up call, be sure to use the computer's primary Ethernet port.

Published Date: Oct 10, 2016

Apple USB modem: Wait for AOL to completely disconnect before unplugging

This article has been archived and is no longer updated by Apple.

If you unplug your Apple USB modem before AOL completely disconnects, your computer may kernel panic.

After AOL says "Goodbye," wait for the modem to fully disconnect before you unplug it. After the modem has fully disconnected, you can safely unplug it and you shouldn't get a kernel panic.

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Published Date: Feb 19, 2012

Final Cut Pro 4.5 HD and earlier not supported on Power Mac G5 (Late 2005) or iMac G5 (iSight)

This article has been archived and is no longer updated by Apple.

Final Cut Pro 4 through Final Cut Pro HD 4.5 require a computer with an AGP video card for installation. PowerMac G5 (Late 2005) models (released October 19, 2005) and iMac G5 (iSight) models feature newer PCI Express video cards. Because of this, you can't install Final Cut Pro 4.x on these computers. Final Cut Pro 4.x is not supported on these computers.

Final Cut Pro 3.x and earlier do not work in Max OS X 10.4 Tiger. Because Power Mac G5 (Late 2005) and iMac G5 (iSight) models require Mac OS X 10.4.2 or later, you can't install Final Cut Pro 3.x or earlier versions on these computers. Final Cut Pro 3.x and earlier versions are not supported on any computer running Mac OS X 10.4.

To use Final Cut Pro on Power Mac G5 (Late 2005) or iMac G5 (iSight) computers, please upgrade to Final Cut Studio.

- Find more information about Final Cut Studio.

Published Date: Oct 10, 2016

Mac OS X 10.4: Rotated images do not appear rotated in some applications

This article has been archived and is no longer updated by Apple.

Have you ever rotated (turned) a picture from your digital camera, or any other image, in an application in Mac OS X 10.4, only to find the rotation does not remain when you open it in a different application or on a different computer? We'll explain why that might happen.

Mac OS X 10.4 Tiger supports image rotation according to EXIFstandards. Earlier Mac OS versions did not support the EXIF standard.

This means that, in earlier versions, saving an image after rotating changed the actual pixels of the image file. However, this was often not desirable because rewriting the image file itself in the new orientation could degrade image quality (especially with lossy graphic formats such as JPEG). With EXIF-compatible applications, if you rotate an image, the file doesn't need to be rewritten.

Non-EXIF compatible applications display the image as it was originally created. EXIF-compatible applications use an Orientation tag to determine whether the image needs to be rotated before it is displayed. The image is rotated and displayed in RAM rather than in the file itself, so no change to the original file data is made.

If you want the image to appear rotated regardless of which application opens it, you'll need to open it in an application designed to save images for non-EXIF applications, rotate it, and save the image (with possible image quality loss).

Published Date: Oct 10, 2016

Power Mac G5 (Late 2005): System misidentifies Ethernet port when NetBooted from Built-in Ethernet 2

This article has been archived and is no longer updated by Apple.

If you set a Power Mac G5 (Late 2005) to be a NetBoot client using its second Ethernet port, the port may be listed twice in the Network preferences pane or be mislabeled as "Built-in Ethernet 1."

The port still functions as expected, so this issue is merely a cosmetic one. However, if the mislabeling is an issue for you, NetBoot over the Built-in Ethernet 1 port instead.

Published Date: Oct 10, 2016

Final Cut Pro supports up to two displays at a time

This article has been archived and is no longer updated by Apple.

Final Cut Pro allows you to use the application across two connected displays. While Mac OS X supports numerous displays, Final Cut Pro cannot display its windows on more than two computer displays at a time. This includes Digital Cinema Desktop mode.

For example, if you're using two displays for the interface windows, you will not be able to use a third display for Digital Cinema Desktop. You can set up a better, similar configuration by using your two displays for Final Cut Pro interface windows, but use a broadcast monitor for your main video display.

For more information on configuring Final Cut Pro with your hardware, refer to the Final Cut Pro User Manual, available from the Help menu in Final Cut Pro.

Published Date: Oct 10, 2016

Power Mac G4, Power Mac G5: Moving Viewer window between displays causes slow DVD playback

This article has been archived and is no longer updated by Apple.

On any Power Mac G4 or Power Mac G5 that is equipped with two video cards, you may experience choppy or slow DVD playback in DVD Player if you move your viewer window to a secondary display. (This issue only occurs when you have each display connected to a separate video card.) After you have moved the viewer window to the other display, resize the window and video playback will return to normal.

Published Date: Feb 20, 2012

Mac OS X Server 10.4: Using the "DHCP and Netboot Server" option in the Firewall pane of Server Admin

This article has been archived and is no longer updated by Apple.

The Firewall pane in Server Admin includes an option for "DHCP and Netboot Server," which opens UDP port 67 for packets originating in the specified IP address group (typically a local subnet). However, this may not be adequate for actual DHCP clients.

If your clients are not getting DHCP leases, use the Advanced pane of the Firewall preference to add a rule similar to this one:

```
allow udp from any 68 to 255.255.255.255 dst-port 67 via en1
```

You may need to edit `via en1` to specify the network interface corresponding to your local network with the DHCP clients. To specify `via en1` in the Advanced pane, choose **Other...** from the **Interface** pop-up menu, and type `via en1` (or whatever is appropriate for your configuration) in the text field.

Background information

During the initial stages of a DHCP packet exchange, the prospective DHCP clients don't yet have an address on the subnet. Such clients send two UDP broadcast packets (DHCP DISCOVER and REQUEST) from source address 0.0.0.0 to destination 255.255.255.255. However, the "allow" rule for packets from the specific local subnet will fail to match those packets, and they will be blocked by the catch-all rule that denies all packets.

This issue does not affect DHCP servers and firewalls configured using the Gateway Setup application, because it automatically adds a rule similar to the one mentioned above. Nor does this issue affect Mac OS X Server 10.3 to 10.3.9, because Panther Server, by default, does not contain the catch-all rule that denies all packets including UDP packets.

Published Date: Oct 10, 2016

Mac OS X 10.4.3: Saving a PDF file as a PICT creates a blank image in Preview

This article has been archived and is no longer updated by Apple.

If you're using Mac OS X 10.4.3 and open a PDF file in Preview, then use the Save As command to save it as a PICT image file, the resulting image will be blank.

Download and install Mac OS X 10.4.4 or later to avoid this issue.

Published Date: Oct 10, 2016

Mac OS X Server 10.4 or later: Removing old updates from Software Update Server

This article has been archived and is no longer updated by Apple.

To remove old software updates from your Software Update Server, follow the steps below.

1. On the local Software Update server, open a Terminal window and type the following command:

   ```
   grep swupd /etc/swupd/com.apple.server.swupdate.plist > ~/Desktop/update_list.txt
   ```

2. Look on your desktop, and you'll see that the last command created the file "update_list.txt," which is a complete list of all the software updates stored on your server. Because the list is excerpted from a preference file, each individual entry will look something like this:

   ```
   <string>/usr/share/swupd/html/061-2036/.../SecUpd2005-007Ri.tar</string>
   ```

   This entry is for Security Update 2005-007, as you can see at the end of the string. The rest of the string is the update's full pathname on your server. Each update resides in its own folder, which is `061-2036` in this example.
3. To remove a given update from the server, simply delete the similarly-named folder for the targeted update. Take a look at the entry for the Safari 2.0.1 Update:

   ```
   <string>/usr/share/swupd/html/061-2048/.../SafariUpdate-2.0.1.tar</string>
   ```

   To remove the Safari 2.0.1 Update from the server, you would type this command in Terminal, entering your administrator password when prompted:

   ```
   sudo rm -rf /usr/share/swupd/html/061-2048/
   ```

By following this example, you can delete any software update in the list. When you're finished deleting files, you should drag update_list.txt to the Trash to ensure that you work from a fresh list next time.

Published Date: Oct 10, 2016

Mac OS X Server 10.4 or later requires pre-authentication for Kerberos clients

This article has been archived and is no longer updated by Apple.

For increased security, Kerberos clients of Mac OS X 10.4 or later must pre-authenticate before regular Kerberos authentication. Pre-authentication occurs automatically without user interaction.

Third-party products integrated with an environment in which Mac OS X Server handles Kerberos authentication (KDC) must support Kerberos pre-authentication.

Authentication will fail if the third-party product can't support pre-authentication or is configured not to do so. Check the third-party documentation to see if the product is configurable for pre-authentication, and change the configuration if necessary.

Published Date: Oct 10, 2016

Front Row: DVD Player alert message the first time a DVD is played

This article has been archived and is no longer updated by Apple.

With the iMac G5 (iSight) and Front Row, you can use your iMac's remote control and Front Row to play a DVD movie disc in your optical drive. When you do this, the movie is actually played using DVD Player instead of Front Row. You can change DVD Player's region code up to five times.

If you haven't set a region code in DVD Player (usually done the first time you try to play a DVD movie), you will see an error message the first time you try to play a DVD movie via Front Row.

If the first DVD you try to play has more than one region code available, DVD Player will prompt you to choose the region code for your optical drive. This can also happen if you are not logged in as an admin user the first time you play a DVD.

If this occurs while the Front Row interface is active, you will see this alert message:

> "An error was encountered while communicating with DVD Player. Press the Play/Pause button to go to the desktop."

When you return to the desktop, you will see the Region Setting dialog in DVD Player. Choose the region setting for your drive.

Note: Administrative users aren't prompted to change the region the very first time a single-region DVD movie disc is inserted. Instead, the region of the optical drive is automatically set to the region of the DVD disc that was inserted.

Published Date: Oct 10, 2016

Xsan: "Invalid" serial numbers fixed by Xsan 1.2 Update

This article has been archived and is no longer updated by Apple.

Xsan 1.1 reports some Xsan serial numbers as "Invalid" when installing on Mac OS X 10.3.9 systems. When this issue occurs, the system.log may contain an entry like this:

```
- "Oct 23 13:03:44 localhost servermgr_nomadfss: [709] ERROR: register_license:
ServerSerialNumStr_Validate(xsan-011-000-X-XXX-XXX-XXX-XXX-XXX-XXX-X) failed with 4"
```

Note: Your actual serial number would appear in place of the X characters in the example text.

The Xsan 1.2 Update for 10.3.9 resolves this issue (learn more).

Published Date: Oct 10, 2016

Xsan: "ID Contains" record search only filters NetInfo records

This article has been archived and is no longer updated by Apple.

If you use the "ID contains" pop-up menu in Xsan Admin to search for user ID (uid) or group ID (gid), the search will only check the Local NetInfo domain and find only local user records. It will not find users or groups in your Open Directory, Active Directory, or LDAP directory domains.

To find users or groups in your Open Directory, Active Directory, or LDAP directory domains based on their user ID or group ID, please select "ID is" from the pop-up menu in Xsan Admin.

Published Date: Feb 19, 2012

Xsan 1.2: Modify the JournalSize parameter on upgraded Xsan installations for improved performance

This article has been archived and is no longer updated by Apple.

In Xsan 1.2, the default value for a volume's JournalSize parameter has been increased from 4 MB to 16 MB. Increasing this value improves the performance on installations with intensive metadata loads, such as for home directory usage and general purpose file servers.

Because the new default value is written to a volume's config file at the time of creation, you must manually edit the config file for existing Xsan installations that you've upgraded to version 1.2 to get the performance benefit.

To change the JournalSize value for a volume:

1. Using Xsan Admin, stop the volume that you want to modify.
   Note: You don't need to unmount the clients.

2. Open the file `/Library/Filesystems/Xsan/config/volumename.cfg` in the editor of your choice.

3. Locate the JournalSize parameter, and change the value from `4M` to `16M`.
   Note: If you have more than one metadata controller (MDC), make sure to modify the volume config file on all of them.

4. On an MDC, execute this command:

   ```
   sudo cvupdatefs volumename
   ```

   Note: If you have more than one MDC, you don't need to run this command on each of them—just on one.

5. Using Xsan Admin, start the volume.

Clients should be able to access the volume as before.

Related articles

- 301639: Xsan 1.1—Modify upgraded Xsan installations for increased performance and stability

Published Date: Oct 10, 2016

Mac OS X Server: Older Open Directory backups can‘t be used when migrating to version 10.4

This article has been archived and is no longer updated by Apple.

The Mac OS X Server Open Directory Administration Guide for Version 10.3 and Later provides instructions for backing up and restoring Open Directory files. Do not use this guide when migrating to Mac OS X Server version 10.4.

The reason is that the LDAP schemas are different in 10.3 and 10.4, so you can't use 10.3 backups to restore 10.4.

Instead, you should follow the instructions found in Mac OS X Server Upgrading and Migrating For Version 10.4 or Later to recreate Open Directory data when migrating from version 10.3 to version 10.4.

Published Date: Oct 10, 2016

Color values may appear to change in a Mac OS X Colors window

This article has been archived and is no longer updated by Apple.

When using a Colors window in applications such as Keynote, Microsoft Word 2004, TextEdit, or others (for example, to change the color of text), you can optionally use Color Sliders to specify numerical values in Gray Scale, RGB, CMYK, or HSB colorspaces to achieve a desired color.

Usually, the values selected will change if a different color profile is selected in the color profile menu. (This menu is accessed by clicking the colored box icon just below the magnifying glass icon in the Colors window. The choices available in the color profile menu vary depending on which color slider choice is selected from the pop-up menu next to the colored box, such as "Gray Scale Sliders".)

The "Device RGB" color profile, visible in the color profile menu when the sliders pop-up menu is set to "RGB Sliders," represents the device that the color is being output to—typically a computer display. If color values are chosen in the "Generic RGB" profile for example, the values typically change when viewed in the "Device RGB" profile.

Why color values may appear to change

Since not all devices display color in the same way, a color profile defines how a particular device treats color, allowing Mac OS X and application programs to adjust color values to ensure the same actual color is output to all devices. The change in color values observed when switching color profiles is an indication that adjustments were necessary to preserve the perceived (actual) color value.

Note: When using the Magnifying Glass to select the color of a pixel on your screen, the "Device RGB" profile is used by default to determine the color values from the display.

Published Date: Oct 10, 2016

Audio from a video may be heard when playing an audiobook on iPod

This article has been archived and is no longer updated by Apple.

If you stop playing a video on a Fifth Generation iPod and then start playing an audiobook, you may hear garbled audio or artifacts from the video over the audiobook's audio. This can happen if you access the audiobook through the Audiobooks menu under Music.

As a workaround, play a music file for a few seconds before you start playing an audiobook or access the audiobook through one of the other menus instead (Playlists, Songs, Artists).

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

QuickTime 7.0.3 for Windows: Download refreshed version for Java programs

This article has been archived and is no longer updated by Apple.

Since the release of QuickTime 7.0.3 for Windows, a newer QuickTime 7.0.3 for Windows has been released. In the original version, programs that were authored with QuickTime for Java might not work.

If you experience any issues with programs that use QuickTime for Java on Windows, download the new version of QuickTime 7.0.3 for Windows from here.

To determine which version of QuickTime 7.0.3 is installed on your computer:

1. Right-click on the QuickTime Player icon (located in C:\Program Files\QuickTime\)
2. On the shortcut menu, click **Properties** to open the QuickTime Player Properties window.
3. Click the Version tab to display File Version information.

The newer QuickTime 7.0.3 will appear as:

File Version: 7.0.3.50

The older version will appear as:

File Version: 7.0.3.25

Published Date: Feb 19, 2012

Aperture: Import sessions can have the same number

This article has been archived and is no longer updated by Apple.

If you use the Import Session criterion in the Filter HUD, you might occasionally find two sessions with the same session number. This happens when two import sessions run concurrently. Note that the time stamp will still be unique for each, so you can still tell them apart.

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

Aperture: "Import Error" message during concurrent imports

This article has been archived and is no longer updated by Apple.

Aperture allows you to have multiple concurrent imports from the same device. However, if you try importing from multiple devices concurrently, you will get an "Import Error" dialog. Restrict your importing to one device at a time.

Published Date: Oct 10, 2016

Aperture: Keyword hierarchy in HUD unexpectedly changes

This article has been archived and is no longer updated by Apple.

Dragging keywords from the Keyword HUD to the Control Bar can result in inadvertent changes to the Keyword hierarchy in the HUD.

For example: You start to drag a key word from the Keyword HUD to the Control Bar, but you change your mind before dropping it onto the Control Bar. The keyword ends up in a different position within the HUD.

This happens if the mouse button is released while the keyword is over a new position. Aperture will interpret this as a request to reorder the keywords within the HUD. If you start to drag a keyword and then change your mind, always drag the keyword back to its original position.

In Aperture 1.5, you can prevent this from happening by clicking the lock icon at the lower left corner of the Keyword HUD.

Published Date: Feb 19, 2012

Aperture: "Inaccessible iPhoto Images" message when importing

This article has been archived and is no longer updated by Apple.

When importing an iPhoto Library, it's possible to get an alert message that says "Inaccessible iPhoto Images."

This happens if you import images from a folder that contains an albumdata.xml file, which normally resides in your iPhoto Library folder. Images normally do not reside in this folder, because iPhoto puts them in subfolders within the iPhoto Library. Thus this issue should only occur if you have either rearranged images manually or copied the albumdata.xml into a folder containing images.

You should not manually move, rename, or delete any images or files in your iPhoto Library folder.

Please update to the latest software version if you continue to experience this issue.

Choose **Apple > Software Update** to make sure you have the most recent upgrade.

This issue is resolved in Aperture 1.5.

Published Date: Oct 10, 2016

Aperture: Usage indicator in web journal does not count an image used in the header

This article has been archived and is no longer updated by Apple.

The indicator in the browser that shows the number of times an image has been used in a web journal does not increment when an image is used in the header space.

This affects web journal themes that utilize images in the header space. These include "Art Collection," "Special Occasion," "Proof," and "Picture".

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

iTunes: Movie sound does not play through AirTunes

This article has been archived and is no longer updated by Apple.

If you're listening to music on remote speakers via AirTunes, and you then play a movie (.mov, .mp4, .m4v) or MIDI file in iTunes, the audio will play through your computer's speaker's instead of through the remote speakers.

MIDI files and movie files will not play over AirTunes, and this affects movie files with or without video. For example, the KQED Radio stream in the Radio tuner in iTunes is a .mov file, so it plays through the computer.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

Aperture: Some characters in exported web pages appear incorrectly

This article has been archived and is no longer updated by Apple.

In web journals and web galleries, some non-standard and international characters such as tildes, umlauts, and accents do not display correctly when exported as HTML pages from Aperture 1.0 or 1.0.1.

These characters will display correctly when the pages are exported from Aperture 1.1 or later. After updating to Aperture 1.1, upload affected sites again to resolve the issue.

Published Date: Oct 10, 2016

Aperture: Font reverts to default when alignment is changed in Book

This article has been archived and is no longer updated by Apple.

You lose any changes to the default font settings in a Book when you change the text alignment. The font reverts to the default setting for the theme.

To avoid this issue, perform text alignments before changing fonts.

This issue is resolved in Aperture 1.5.

Published Date: Oct 10, 2016

Aperture: Watermark does not scale

This article has been archived and is no longer updated by Apple.

Images used as watermarks on exported images do not scale. Select or create an image that is the desired size to use as a watermark. When you print an image, the size of the watermark in proportion to the overall image size will vary. If you plan to use the same watermark for different sized prints, then you may wish to have different sized versions to use depending on the print size.

This issue is resolved in Aperture 1.5.1

Published Date: Oct 10, 2016

DVD Studio Pro 4: "Not enough space" error when writing to DLT drive

This article has been archived and is no longer updated by Apple.

When you're writing a DVD Studio Pro 4 project to a DLT (Digital Linear Tape) drive, the write may stop and you'll see the following error:

> "Format Failed. Not enough space on output device."

You may get this error even if the layer size of your DVD project is smaller than the DLT tape to which you're writing.

To resolve this issue, update to DVD Studio Pro 4.0.3 by using Software Update, or download the updater from here:
http://www.apple.com/finalcutstudio/dvdstudiopro/download/

Published Date: Oct 10, 2016

Mac OS X Server 10.4: Nested groups do not inherit managed preferences

This article has been archived and is no longer updated by Apple.

Pages 25, 77, and 89 of User Management For Mac OS X Server 10.4 or Later contain incorrect statements regarding the inheritance of managed preferences for nested groups.

Nested groups are useful for inheriting access permissions, but only preferences from the workgroup selected during login (not any workgroups via nesting) are used for group preferences.

If you need additional management options for members of groups (or multiple groups), please consider adding additional management options at the User or Computer level.

Published Date: Oct 10, 2016

PowerBook G4 (Double-Layer SD) OPTION Globetrotter GSM/GPRS card causes two AirPort ports to appear

This article has been archived and is no longer updated by Apple.

If you install the Option Globetrotter GSM/GPRS card in a PowerBook G4 (Double-Layer SD), two AirPort ports will be displayed in the Network pane of System Preferences.

This is a cosmetic issue only—the Globetrotter card functions as expected.

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Published Date: Oct 10, 2016

Aperture: Images seem to disappear or go missing

This article has been archived and is no longer updated by Apple.

Are your images missing?

If you don't know about the rating or keyword filtering shortcuts in Aperture, you may unknowingly press one of the keyboard shortcuts that invokes a filter, and then wonder why some or all of your images have disappeared. Don't worry. They're not missing.

If you don't have any images tagged to a particular keyword, Aperture won't display any images when filtering for that keyword. The same is true for ratings.

Tip: Filters treat stacks based on the pick only. If your pick is a 4★, but you also have a 5★ in the stack, the entire stack will be missing when filtering for 5★.

If you're concerned about your "rejects" specifically, remember that the default filter of "unrated or better" hides your rejects, which are considered to be a lower rank than "unrated."

To see "unrated or better" images again, you can just click the "x" in the search field to clear it. To see all images, including rejects, simply press Control-` (accent grave, same key as tilde); or click the magnifying glass icon to access the Filter HUD, then deselect the keyword criterion.

Note: After you invoke a filter, it will persist until cleared, even after selecting a different project or quitting the application.

Published Date: Oct 10, 2016

Xsan 1.2: How to use the Xsan 1.2 Updates

This article has been archived and is no longer updated by Apple.

This article outlines the basic steps required to update Xsan 1.1 to version 1.2. If you are still using Xsan 1.0, you must first update to Xsan 1.1. Please note that the Xsan Migration guide, available here, contains additional scenarios and details.

The steps vary according to whether your starting point is Mac OS X 10.3.9 or Mac OS X 10.4.3 or later, and there are two versions of the Xsan 1.2 Update to accommodate that.

Before you begin

- All metadata controllers (MDCs) should have the same version of Mac OS X.
- Do not make any changes to Xsan settings using Xsan Admin or the command-line tools during the installation.
- Be sure that all MDCs are updated before you make any configuration changes.
- If any system in your Xsan network is running Xsan 1.2 on Mac OS X 10.4.3 or later, then your MDCs must also be updated to Xsan 1.2 on Mac OS X 10.4.3 or later. The same is true for Xsan 1.2 on Mac OS X 10.3.9. The rule of thumb is that your MDCs must be running an Xsan version and operating system version that is as current as the most current of your clients.

Important: Preventing an inconsistent volume state

Xsan versions prior to 1.2 may have left bitmap artifacts on Xsan volumes, which could result in an inconsistent volume state. After all MDCs have been updated to Xsan 1.2, you should run the cvfsck command (as described below) to ensure a consistent volume state and to prevent data corruption or stability issues over the long term.

Updating Xsan 1.1 on Mac OS X 10.3.9 to Xsan 1.2

Follow these steps to update Mac OS X 10.3.9 from Xsan 1.1 to Xsan 1.2:

1. Unmount volumes on the controllers.
2. Update Xsan on one MDC at a time, using the Xsan 1.2 Update for 10.3.9.
3. Update any admin computers using the Xsan Admin 1.2 Update.
4. Stop the volume using Xsan Admin.
5. In Terminal on the MDC, run this command as root:

   ```
   # cvfsck volumeName
   ```

   Note: Replace "volumeName" with the actual name of an Xsan volume.

6. Restart the volume using Xsan Admin.
7. Repeat steps 4 to 6 until you have run cvfsck for each Xsan volume.
8. Update client Mac OS X 10.3.9 client computers using the Xsan 1.2 Update for 10.3.9.

Updating Xsan 1.1 on Mac OS X 10.4.3 or later to Xsan 1.2

1. Update Xsan on one MDC at a time, using the Xsan 1.2 Update for 10.4.3.
2. Update any admin computers using the Xsan Admin 1.2 Update.
3. Stop the volume using Xsan Admin.
4. In Terminal on the MDC, run this command as root:

   ```
   # cvfsck volumeName
   ```

   Note: Replace "volumeName" with the actual name of an Xsan volume.

5. Restart the volume using Xsan Admin.
6. Repeat steps 3 to 5 until you have run cvfsck for each Xsan volume.
7. Update Mac OS X 10.4.3 (or later) client computers using the Xsan 1.2 Update for 10.4.3.

Related articles

About the Xsan 1.2 Updates
"Invalid" Serial Numbers fixed with Xsan 1.2

Published Date: Oct 10, 2016

Don‘t move a PowerBook G4 (Double-Layer SD) for a moment after putting it to sleep

This article has been archived and is no longer updated by Apple.

Don't move your PowerBook G4 (Double-Layer SD) once you've put it to sleep until you actually see its sleep indicator light pulsing. The pulsating light indicates that the computer has gone completely to sleep. When your computer reaches its sleep state, the hard drive is no longer writing information and thus it is safe to move the system without damage to the drive.

Published Date: Oct 10, 2016

Aperture: Name of new slideshow preset is not saved

This article has been archived and is no longer updated by Apple.

When you're creating a new slideshow preset, be sure to press Return or Enter after typing the new name. If you don't press one of these keys to close the text field, your new name won't be saved. Instead, you'll see a name that begins with "Copy of".

This issue is resolved in Aperture 3

Published Date: Oct 10, 2016

Aperture: Alpha Channel does not preview correctly in a book

This article has been archived and is no longer updated by Apple.

Images with alpha channel transparency preview as opaque in Books, but they print properly.

This is normal. Aperture does not support alpha channel transparency.

Published Date: Oct 10, 2016

Aperture: Photos in "Picture" themed web gallery misaligned when viewed in IE 6 for Windows

This article has been archived and is no longer updated by Apple.

Web galleries created using the Picture theme may appear misaligned when viewed in Microsoft Internet Explorer 6 for Windows.

Normally the metadata should wrap from one line to the next below a thumbnail when using an extended metadata set, but in MS IE 6 it will appear as only one piece of metadata per line, resulting in a much taller vertical column of text. The text has the effect of pushing thumbs up the page and can thus cause the thumbs not to align with each other.

This document will be updated as more information becomes available.

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Published Date: Oct 10, 2016

Aperture: "Art Collection" web journal looks different than its preview picture in the themes list

This article has been archived and is no longer updated by Apple.

When you select the Art Collection web journal theme, it starts off looking different from its preview picture. The reason is that the preview image shows this theme with the "Header with Image" option selected, but it actually starts off with the "Header with Text" option selected. To get the desired look, choose the Header with Image option.

Published Date: Oct 10, 2016

Aperture: Page turns white in Stock Black Book

This article has been archived and is no longer updated by Apple.

If you are working with a Stock Book Black in Edit Layout mode, it's possible to select the black background and delete it, leaving a white page behind (this won't happen when in Edit Content mode). If you do this accidentally, the quickest fix is to select **Edit > Undo** before going any further. If you're too far gone to use Undo, you have two different options for fixing it.

For any page other than the cover, you can select the page in the Pages pane, then click the black triangle next to it for the list of page templates. Choose any template that is **different** from the currently selected template, then switch back to the desired template. This will cause you to have to replace the art and/or text on this page, but it won't affect the rest of the book.

However, this method won't work if you've done this to the cover, because there is no alternate template for the cover. In this event, use method 2:

1. Make note of any unique text you've entered throughout the book, because you may lose some of it (particularly captions).
2. Click the Theme button (just above the Pages pane), immediately to the left of "Theme: Stock Book Black".
3. When you see the "Switching Themes" warning, click OK.
4. Select Stock Book from the list of themes, and click Choose Theme.
5. Repeat steps 3 and 4, except that this time you'll switch back to Stock Book Black.
6. Replace images and/or text on the page that was affected, and check all other pages for text (particularly captions) that may have been lost in the theme switch.

Published Date: Oct 10, 2016

Mac OS X 10.4 or later: "Mailbox does not exist" message for accounts using alternate mail store partition

This article has been archived and is no longer updated by Apple.

You can configure additional mail stores by entering a partition name and location for each additional store (**Server Admin > Mail > Settings > Advanced > Database > Additional Mail Store**). The name of the additional mail store partition must be entered in lower case.

If you use any upper case letters in naming the partition, accounts configured to use the alternate partition (**Workgroup Manager > Users > Mail > Use an alternate partition**) will receive this message when setting up the Mail application:

> Mail was unable to open this mailbox on the server. The server error encountered was: Mailbox does not exist.

Published Date: Oct 10, 2016

How to play streaming radio in Front Row

This article has been archived and is no longer updated by Apple.

You can play streaming radio stations in Front Row. You can't access the full list of stations that are available, but you can play stations that are saved in your iTunes library folder.

Here's how to save a favorite station to your iTunes library:

1. Open iTunes and click on Radio.
2. Toggle the disclosure triangles to see the streams available.
3. When you've found one you like, click on the stream you want and drag the selection into your Library folder in the Source pane of iTunes.

Now that you've saved the streaming radio station in your iTunes Music Library, you can select it in Front Row.

Published Date: Feb 19, 2012

iTunes download button isn‘t visible on the Download webpage

This article has been archived and is no longer updated by Apple.

You may come across a situation when you try to download iTunes from the Download iTunes webpage, but the actual "Download iTunes" button is missing from the page.

This may be due to certain ad-blocking software; most commonly, McAfee Privacy Service. If you have this software installed on your computer and have it configured to block Internet ads, you may see this issue. (McAfee Privacy Service is commonly pre-installed on Windows-compatible computers, so it may have been installed at the factory for you.)

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

Logic Pro versions earlier than 7.2 are not compatible with Pro Tools 7

This article has been archived and is no longer updated by Apple.

Pro Tools version 7 contains significant changes to the Digidesign Audio Engine that make it incompatible with current versions of Logic Pro 7 using TDM. If you plan to use Logic Pro 7 with your TDM system, it is strongly recommended that you continue to use Pro Tools version 6.9.x.

To use Pro Tools 7 on the same system as Logic Pro, it would be necessary to create a separate startup partition, maintaining Pro Tools 6.9.x on one partition for use with Logic Pro, and installing Pro Tools 7 on the other.

This document will be updated as more information becomes available.

Logic Pro 7.2 is compatible with ProTools 7. See document 302969 for more information.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

iTunes Store: Resolving difficulties with redeeming gifts

This article has been archived and is no longer updated by Apple.

If someone gave you an iTunes Store gift but you're having difficulty trying to redeem it in iTunes 6 or later, try these steps.

1. In your email application, find your music gift message.
2. Right-click (or Control-click) the Redeem image and from the shortcut menu, choose **Copy**.
3. Click in your web browser's address field and from the **Edit** menu, choose **Paste**. The web address should look similar to this:
   `https://phobos.apple.com/WebObjects/MZFinance.woa/wa/com.apple.jingle.app.finance.DirectAction/freeProductCodeWizard?code=RAAAAAAAAA3`
4. Press Return. iTunes should open and accept the gift (you may need to login to your account).

If the above steps did not work, then try these steps:

1. Locate your gift code. It appears after the "code=" text in the text you copied into the web address. In our example above, it would be `RAAAAAAAAA3`). Select and copy this code (you could also write it down).
2. Open iTunes, go to the iTunes Store, and sign in to your account.

3. In the QUICK LINKS section in the right column, click Redeem.

4. In the resulting screen, paste or type in your code, click Submit, and your music will begin to download.

Published Date: Oct 10, 2016

About the security content of the Mac OS X 10.4.3 update

This article has been archived and is no longer updated by Apple.

This document describes the security content of Mac OS X 10.4.3, which can be downloaded and installed using Software Update, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How To Use The Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Mac OS X v10.4.3

- **Finder**

  CVE-ID: CVE-2005-2749

  Available for: Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: File ownership information may be misleading

  Description: Under certain situations, the file and group ownership information displayed in the Finder Get Info window may not be correct. This update addresses the issue by synchronizing the displayed ownership with the actual ownership in all situations. This issue does not affect systems prior to Mac OS X v10.4.

- **Software Update**

  CVE-ID: CVE-2005-2750

  Available for: Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: Important Software Updates may not install

  Description: Software Update can be instructed by the user to ignore specific updates. If all applicable updates have been marked in this way, Software Update will exit without providing an an opportunity to reset the status of these updates so that they may be installed. This update addresses the issue by asking whether the ignored updates list should be reset when this situation is encountered. This issue does not affect systems prior to Mac OS X v10.4.

- **memberd**

  CVE-ID: CVE-2005-2751

  Available for: Mac OS X Server v10.4.2

  Impact: Changes to group membership are delayed for hours

  Description: In certain situations, changes to a group's membership may not be immediately reflected in access control checks. This may result in an authenticated user being able to access files or other resources even after they have been removed from a group. This update addresses the issue by invalidating the group membership cache at appropriate times. This issue does not affect systems prior to Mac OS X v10.4.

- **Keychain**

  CVE-ID: CVE-2005-2739

  Available for: Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: Keychain Access will continue displaying plaintext passwords after lock timeout

  Description: Keychain Access is a utility distributed with Mac OS X that is used to view keychain items and change keychain settings. If a keychain automatically locks due to a timeout while viewing a password stored inside it, that password will remain visible. This update patches Keychain Access so that passwords are hidden when keychains lock. This issue does not affect systems prior to Mac OS X v10.4. Credit to Eric Hall of DarkArt Consulting Services for reporting this issue.

- **Kernel**

  CVE-ID: CVE-2005-1126, CVE-2005-1406, CVE-2005-2752

  Available for: Mac OS X v10.4.2, Mac OS X Server v10.4.2

  Impact: Kernel memory may be disclosed to local users

  Description: Certain kernel interfaces may return data that includes sensitive information in uninitialized memory. These issues affect Mac OS X v10.4.2 and earlier. Credit to Ilja van Sprundel and Neil Archibald of Suresec LTD and Colin Percival of the FreeBSD team for reporting these issues.

Published Date: Oct 10, 2016

Mac OS X Server 10.4: System Image Utility won‘t include Xcode in customized image created from 10.4.3 DVD

This article has been archived and is no longer updated by Apple.

When creating a customized NetInstall image from the Mac OS 10.4.3 Installation DVD, you may notice that the Xcode package isn't selectable.

To work around this issue, create the disk image without the Xcode package, then follow these steps:

1. After creating the NetInstall image, open the resulting .nbi folder.
2. Double-click the Install.dmg file to mount the disk image.
3. Remove the contents of the Xcode Tools folder at the root level of the image.
4. Copy the XcodeTools.mpkg and Packages folder from the Installation DVD to the Xcode Tools folder.
5. Eject the the image.

Published Date: Feb 19, 2012

Mac OS X Managed Client: Printer Pools do not appear in the list of available printers in Workgroup Manager

This article has been archived and is no longer updated by Apple.

When configuring a printer list in the Printing Preferences in Workgroup Manager, Printer Pools don't appear in the list of available printers. This is expected behavior.

Published Date: Feb 19, 2012

PowerBook G4 (Double-Layer SD) screen flashes intermittently

This article has been archived and is no longer updated by Apple.

If you find the video on the lower half of your PowerBook G4 (Double-Layer SD) screen flashes intermittently, update your computer to Mac OS X 10.4.3. You can use Software Update to download and install the update, or download it from Apple Downloads.

Published Date: Oct 10, 2016

About the security content of QuickTime 7.0.3

This article has been archived and is no longer updated by Apple.

This document describes the security content of QuickTime 7.0.3, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How To Use The Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

QuickTime 7.0.3

- **QuickTime**

  CVE-ID: CVE-2005-2753

  Available for: Mac OS X v10.3.9 or later, Microsoft Windows XP, Microsoft Windows 2000

  Impact: An integer overflow may be exploitable via remotely originated content

  Description: A sign extension of an embedded "Pascal" style string could result in a very large memory copy. The update treats the string as having unsigned length. Credit to Piotr Bania (bania.piotr@gmail.com) for reporting this issue.

- **QuickTime**

  CVE-ID: CVE-2005-2755

  Available for: Mac OS X v10.3.9 or later, Microsoft Windows XP, Microsoft Windows 2000

  Impact: A denial of service against any application loading remotely-originated content

  Description: A missing movie attribute is interpreted as an extension, but the absence of the extension is not flagged as an error, resulting in a de-reference of a NULL pointer. The update requires either the movie attribute or the extension to be present for a well-formed movie. Credit to Piotr Bania (bania.piotr@gmail.com) for reporting this issue.

- **QuickTime**

  CVE-ID: CVE-2005-2754

  Available for: Mac OS X v10.3.9 or later, Microsoft Windows XP, Microsoft Windows 2000

  Impact: An integer overflow may be exploitable via remotely originated content

  Description: Improper movie attributes could result in a very large memory copy. The update checks for a valid non-zero size before copying. Credit to Piotr Bania (bania.piotr@gmail.com) for reporting this issue.

- **QuickTime**

  CVE-ID: CVE-2005-2756

  Available for: Mac OS X v10.3.9 or later, Microsoft Windows XP, Microsoft Windows 2000

  Impact: Compressed PICT data may overwrite application memory from remotely originated content

  Description: Expansion of compressed PICT data could exceed the size of the destination buffer. The update prevents decompressed data from exceeding the destination buffer size. Credit to Piotr Bania (bania.piotr@gmail.com) for reporting this issue.

Published Date: Oct 10, 2016

I don‘t see some of my songs when browsing by artist on my iPod

This article has been archived and is no longer updated by Apple.

If you're looking for a particular song on your iPod and browse by artist (select **Music > Artists**), you may notice that some songs that you know are on your iPod are missing. This can happen if a song file is missing the album name information from its ID3 tag. You will be able to find such songs in the Songs menu.

To assign an album name to a song file:

1. Open iTunes.
2. Select the song or songs that you want to edit.
3. From the **File** menu, choose **Get Info**.
4. Click the Info tab.
5. Type the album name in the Album field, make any other changes that you wish, and then click OK.
6. If you have iTunes set to update songs on your iPod automatically, choose **Update iPod** from the **File** menu. If you manually update your iPod, drag the song from your iTunes library to the iPod icon in the Source list.

If you have an iPod classic or iPod nano (3rd generation), click here for more information.

Published Date: Oct 10, 2016

Power Mac G5 (Late 2005) displays "DCD Main" as the only option for Digital Cinema Desktop

This article has been archived and is no longer updated by Apple.

If you're using two displays with a Power Mac G5 (Late 2005), you may come across a situation in which the only Digital Cinema Desktop display mode available in the menu is DCD Main. This issue affects the following products:

- Power Mac G5 (Late 2005)
- Final Cut Pro 5
- Soundtrack Pro
- FinalCut Express HD 3
- Logic Pro 7

To resolve this issue, use Software Update to download and install Pro Application Update 2005-02.

Published Date: Oct 10, 2016

Mac OS X 10.4: Can‘t save owner or permissions changes in the Finder

This article has been archived and is no longer updated by Apple.

If you're using a computer with Mac OS X 10.4 to 10.4.2 and change a file's ownership or permissions in an Info window (select a file and then choose **Get Info** from the **File** menu), the settings will appear to change, but they aren't actually applied and saved. If you close and reopen the Info window, you'll see that the settings have reverted back to what they were before you made your adjustments.

To resolve this issue, update to Mac OS X 10.4.3 or later.

Advanced Tip: If you're not ready to update to Mac OS X 10.4.3 or later and you're comfortable using Terminal, you can use the chown and chmod commands to make ownership and permission settings changes. For more information on changing ownership, groups, and permissions in Terminal, see the man (manual) pages for chown and chmod (type `man chown` or `man chmod` in Terminal).

Related articles

- 106712: Troubleshooting permissions issues in Mac OS X

Published Date: Oct 10, 2016

Some application windows minimized to the Dock do not restore or update properly

This article has been archived and is no longer updated by Apple.

If you minimize a document window to the Dock, clicking the document icon in the Dock may not restore the window. If you choose your ***document name*** from the **Window** menu, the window restores but may no longer update properly.

This issue occurs if you're using Mac OS X 10.4 or QuickTime 7 and have DivX Incorporated's DivX 5 QuickTime component installed. The DIVX 5 component is not currently compatible with Mac OS X 10.4 or QuickTime 7. To resolve this issue, remove the file "DivX 5.component" from /Library/QuickTime.

This could occur in any application that uses QuickTime.

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Published Date: Feb 19, 2012

Logic Pro: XML Exports Do not Switch to Realtime Mode

This article has been archived and is no longer updated by Apple.

Logic Pro does not switch to Realtime Bounce mode while exporting sessions that include external instrument tracks, even though the manual says that it will. As a result, the external instrument tracks are not included in the export.

The manual's statement is an error in the documentation. To export a session that includes external instruments to XML, perform a realtime bounce of the external instrument tracks before you export to XML. Be sure to add the bounced tracks to the Arrange window before exporting the session.

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

Mac OS X Server 10.4 or later: Windows clients have problems acquiring a DHCP lease

This article has been archived and is no longer updated by Apple.

Windows clients may not be able to get a DHCP lease from a Mac OS X Server, even though clients using other operating systems can.

To resolve the issue:

1. Open Server Admin.
2. Select DHCP.
3. Click the Settings tab at the bottom right-hand side of the window.
4. Click the Subnets tab.
5. Select the affected subnet.
6. Click the Edit button.
7. Click the DNS tab.
8. Enter your base domain in the Default Domain field.

Published Date: Feb 19, 2012

Mac OS X 10.4: Classic - "Connection failed, the server may not exist or is not operational at this time" alert

This article has been archived and is no longer updated by Apple.

Because Mac OS X 10.4 Tiger doesn't work with AppleShare (AFP) over AppleTalk, if you start Classic and try to access an AppleShare-based server (or an alias to the server is accessed by you or by an application), you will see this alert:

> "Connection failed, the server may not exist or is not operational at this time. Check the server name or IP address and try again."

Classic applications that rely on any AppleShare-over-AppleTalk services may also fail.

Adjust the server to use TCP/IP instead of AppleTalk

A good workaround is to configure the server to use AFP over TCP/IP, if possible, instead of AppleTalk.

Tip: If the issue occurs again when you open an application with Classic (because it needs to access an AppleShare-based server), consider using a Mac OS X version of the application instead.

Try removing aliases

If the server can't be configured to use TCP/IP, you may be able to prevent Classic from attempting to connect to the server by removing aliases to that server or to files on that server. Look for aliases to the server in these locations, then remove them:

> **Tip**: If you don't know where your System Folder that's used by Classic is, open Classic preferences. You'll see your selected System Folder in the "Select a System Folder for Classic" box.

- Recent Servers folders, within the Apple Menu Items of the System Folder used by Classic
- Apple Menu Items folder within the System Folder used by Classic
- The Servers folder within the System Folder used by Classic
- The Startup Items folder within the System Folder used by Classic

If the issue persists, reinstall your Mac OS 9 System Folder and Classic

If the issue persists, and you can't locate any other server aliases or resolve the issue by changing the server to use TCP/IP, try these steps:

1. Back up any important files that are in the System Folder used by Classic (again, if you don't know where your System Folder that's used by Classic is, open Classic preferences. You'll see your selected System Folder in the "Select a System Folder for Classic" box). For example, you might have some preferences files in the Preferences folder or custom items in the Apple Menu Items folder that you want to retain.
2. Turn off Classic if it's running.
3. Reinstall Classic and the Mac OS 9 System Folder ("Mac OS 9 System Support").

   Important: You must install Classic on the same volume as Mac OS X 10.4 Tiger to avoid issues.

4. After installation, open Classic preferences and make sure the newly-installed System Folder is selected.
5. If the issue is resolved, restore any file you backed up in step 1. If the issue returns, remove the restored files one or a few at a time to isolate the cause.

This document will be updated as more information becomes available.

Related articles

- Mac OS X: Aliases to Recent Servers in the Classic Apple Menu Do Not Work
- Mac OS X: About File Sharing

Published Date: Oct 10, 2016

Final Cut Pro 5: Timecode accuracy when using the Import Panasonic P2 function

This article has been archived and is no longer updated by Apple.

If you acquire clips via the Import Panasonic P2 function in Final Cut Pro, the timecode on an acquired clip may not always match the timecode on the P2 card under some circumstances. This can happen when media is copied to a Panasonic AJ-SPD850 DVCPRO50 P2 deck using external timecode.

In most situations, when you record to a P2 card using a P2 camera or VTR, each segment of audio/video media and timecode is recorded on the card as an individual clip. But if media gets recorded from sources with existing timecode, the result on the P2 card may include timecode breaks, without the P2 recorder creating a new clip. In such cases a single clip on the P2 card may contain non-continuous timecode that otherwise would have been made into separate clips.

When Final Cut Pro imports clips from a P2 card, it expects each clip to have a single progression of continuous timecode. If Final Cut Pro attempts to acquire a P2 clip with timecode breaks, it is unable to assign the non-continuous timecode to a single clip. Attempting to acquire such a clip can result in inaccurate timecode values in the clips in your Browser.

To work around timecode breaks on a P2 card, try these suggestions:

- If you are recording media with known timecode breaks to a P2 device, simply stop and restart the recording process around the point where the break occurs. This will cause the P2 device to create a clip break and Final Cut Pro will treat the media as two clips and can correctly assign the timecode. Be certain to stop recording prior to the timecode break and begin recording again after the break.
- If the media has already been recorded to the P2 card with timecode breaks contained within a single clip, then try capturing the media over FireWire or with a third-party capture device using analog or SDI/AES inputs and serial device control. Using Capture Now will automatically detect breaks in timecode and separate the media into clips with the correct timecode. You could also log the individual timecode segments and batch capture. If you do Batch Capture, remember to leave several seconds of room for pre-roll operations. Even though there is no physical tape, the pre-roll operation will be completed prior to each capture.

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Published Date: Feb 20, 2012

Final Cut Pro: All text in a field is cleared instead of the portion desired

This article has been archived and is no longer updated by Apple.

When using the Log and Capture window, you might want to change just part of an item name you typed previously. For instance, you might want to log a series of similarly-named items, such as:

"Jenifer Speech Closeup - glasses"
"Jenifer Speech Closeup - smiling"
"Jenifer Speech Closeup - answering"
And so forth...

Normally, you could type the item name the first time, and subsequently edit just the ending to make the new item. But under some circumstances, all of the name text in the field may unexpectedly disappear when you try to delete just part of it, thus requiring that you retype the whole name from the beginning.

Note: This behavior is resolved in Final Cut Pro 5.0.3 with the Mac OS X 10.4.3 Update. Updates are available via Software Update and from Apple Downloads.

If you are unable to to update to Mac OS X 10.4.3, you can try one of these tips as a workaround:

- You can drag the Logging tab out of the Log and Capture window so that it becomes a free-floating window. The problem is less likely to happen when the windows are separated.
- This problem is more likely to occur when logging clips offline with no capture device connected. If you have your camera or deck handy, have it connected and powered on while you log.

Published Date: Feb 20, 2012

GarageBand: Audio file added from the Finder plays back at wrong speed

This article has been archived and is no longer updated by Apple.

If you drag an uncompressed audio file from the Finder or from another application into the timeline of a GarageBand project, it might play back at the wrong speed.

This happens when you use audio files at sample rates other than 44.1 kHz. Files with higher sample rates, such as 48 kHz, will play back too slow. Files with lower sample rates will play back too fast. You should only use files with the supported sample rate in GarageBand projects.

Published Date: Feb 19, 2012

Final Cut Pro and Final Cut Express: File in use error when rendering

This article has been archived and is no longer updated by Apple.

Note: This can also affect Final Cut Express. The workaround remains the same.

Spotlight, introduced with Mac OS X 10.4 Tiger, allows you to quickly perform searches for your files, not only by their names, but also by content and context. To do this, Spotlight keeps track of all your files. Every time you add or change a file, Spotlight indexes details about that file's qualities so that you can search for it later. Spotlight does this indexing all the time, while you're using your computer.

Since Spotlight is part of Mac OS X, it's able to do its job in the background, while not slowing things down for you. For instance, Spotlight's indexing should not interfere with demanding multimedia applications like Final Cut Pro, thanks to Mac OS X's multitasking.

Under rare circumstances, Final Cut Pro will report an error like this one while rendering:

This can happen when Final Cut Pro is creating render files in a folder that Spotlight indexes. But there's no need to worry. Just Click OK, and you can proceed with rendering normally. This will not happen when capturing.

This can happen because of the way that Final Cut Pro caches data while rendering, not because of any issue with Spotlight.

To prevent this from happening, you can tell Spotlight not to index the Render Files folder in your Scratch Disk:

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **Spotlight**.
3. Click the Privacy tab to reveal the areas that Spotlight will not index.
4. In the Finder, open your "Final Cut Pro Documents" folder.
5. Drag the Render Files folder into Spotlight's list, as shown here:

You don't need to add the other Final Cut Pro folders. In fact, it can be very handy to have Spotlight keep track of your captured clips. This makes it a breeze to find clips from any project.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Aperture: "Couldn‘t Create" Error when Importing Images

This article has been archived and is no longer updated by Apple.

If you try to import files for which you don't have adequate permissions, Aperture will give you this message:

> **Import Error**
>
> An error (Couldn't create) occurred while attempting to import:
>
> /Users/user_name/path_to_file
>
> This file was not imported.

The situation is not common, but it could happen when importing from a server on which you have permissions for the enclosing folder but not the files themselves, for example.

1. In the Finder, select the affected files using Shift-click or Command-click as needed.
2. Press Option-Command-I to get the Multiple Item Info window.
3. Click the disclosure triangle next to Ownership & Permissions.
4. If necessary, click the lock button to authenticate. If you don't have owner or administrator privileges for the enclosing folder, you will need the assistance of someone who does.
5. Change the permissions of the files so that you have read or read/write permissions.

Published Date: Oct 10, 2016

About the WebObjects 5.3.1 Update

This article has been archived and is no longer updated by Apple.

This document contains an overview and download information for the WebObjects 5.3.1 Update. WebObjects 5.3.1 is primarily for developers who want to develop WebObjects applications with Mac OS X 10.4 using Xcode 2.3 and WebObjects 5.3.1 Developer Tools, which are bundled with the Xcode 2.3 tools release. WebObjects 5.3.1 is formally qualified and supported on the Java 1.4.2 platform.

The WebObjects Current Patch List contains information on all available patches and updates for all versions of WebObjects. Read this document if you're not sure which update you need on your system.

This update addresses the issues and adds support for the features listed below:

- Adds a modified Developer tools license that allows WebObjects applications developed with Xcode 2.3 to be deployed on any compatible platform
- Adds better SQL Generation in the EOModeler Plug-in design tool in Xcode
- Improved FetchSpecification building in the EOModeler Plugin design tool in Xcode
- Adds a "components and elements" window for improved workflow in WebObjects Builder
- Addresses incompatibilities with Xcode 2.3 Developer tools on Mac OS X 10.4
- Bug fixes

Starting with the WebObjects Server Admin plug-in for Mac OS X Server 10.4, the WebObjects StartupItems mechanism for auto starting WebObjects services has migrated to launchd-based services. The documentation for deploying WebObjects applications can be found at here, and this documentation has been updated to describe the features of Mac OS X Server 10.4

Important: There are two mutually exclusive updates for this platform. In order to install the WebObjects 5.3.1 developer tools, you will need to install the Xcode 2.3 developer tools with the optional WebObjects packages enabled. WebObjects deployment is distributed through Mac OS X Server 10.4 and is installed by default. In order to update WebObjects Deployment to WebObjects 5.3.1, you will need to either run the Software Update application or manually download them and install.

WebObjects 5.3.1 Developer for Mac OS X 10.4

System requirements

WebObjects 5.3.1 Developer requires:

- Mac OS X 10.4 or later
- Xcode 2.3 Developer tools
- Java 1.4.2 Update 2 or later

If you have not yet updated to the correct version of Mac OS X or Developer Tools, you must do so before installing WebObjects 5.3.1. Mac OS X 10.4 and the Xcode 2.2 Developer tools are available through Software Update and ADC downloads.

If you are creating a new Mac OS X WebObjects 5.3.1 development system, you should install the software in the following order:

1. Install Mac OS X 10.4.
2. Run the Xcode 2.3 installer.
3. Select the Custom Install option.
4. Enable the WebObjects install packages.

WebObjects 5.3.1 Deployment for Mac OS X 10.4 Server

This update is available through the Software Update feature of Mac OS X. If you use this method, only the proper update for the software which you have installed on your system is visible and available for download.

System requirements

WebObjects 5.3.1 Deployment requires:

- Mac OS X Server 10.4 or later
- Java 1.4.2 or later
- Installation of WebObjects 5.3 Server Manual Software Update

If you have not yet updated to the correct version of Mac OS X Server, you must do so before installing WebObjects 5.3.1.

If you are creating a new Mac OS X WebObjects 5.3.1 deployment system, you should install the software in the following order:

1. Mac OS X 10.4
2. WebObjects 5.3 Server Manual Software Update
3. WebObjects 5.3.1 Server Software Update

Note: The WebObjects Server 5.3 Update is available only from Apple Downloads.

Configuration tasks

To configure and start the WebObjects services:

1. Start the Server Admin application.
2. Select the WebObjects service.
3. Click the Settings tab.
4. Configure the wotaskd and monitoring services.
5. Click the Start button.

Important: You do not need to manually edit the apache.conf file with the line. We have already inserted it for you:

```
# Including WebObjects Configs
Include /System/Library/WebObjects/Adaptors/Apache/apache.conf
```

Issues Outstanding in WebObjects 5.3.1

4430398: TITLE: OpenBase JDBC and J2SE 5.0

ISSUE: If you have upgraded to Java 1.5 Update 4, database transactions with OpenBase fail with strange data mapping errors.

RESOLUTION: Download the latest the latest J2SE 5.0-compliant OpenBase JDBC driver at: http://www.openbase.com

Issues resolved in WebObjects 5.3.1

4443822: TITLE: EOModeler incompatible with J2SE 5.0

ISSUE: Older versions of the EOModeler application, bundled with WebObjects, are incompatible with J2SE 5.0 Release 4.

RESOLUTION: This issue has been resolved.

3120230: TITLE: WOEventDisplay page is not accessible

ISSUE: The WOEventDisplay page was not accessible.

RESOLUTION: This issue has been resolved.

4209546: TITLE: Potential NullPointerException in EOEditingContext

ISSUE: Fixed a potential error condition in EOEditingContext.

RESOLUTION: This issue has been resolved.

4240473: TITLE: EOUtilities.localInstanceOfObject() NullPointerException when passed null

ISSUE: EOUtilities.localInstanceOfObject() was not properly checking for null values.

RESOLUTION: This issue has been resolved.

4142548: TITLE: Cannot create relations across multiple EOModels using XCode's EOModeler Plug-in

ISSUE: Cannot create relations across multiple EOModels using XCode's EOModeler Plug-in

RESOLUTION: In most instances, we are able to make cross model relationships available.

4142566: TITLE: EOModeler Plugin does not preserve Allow Null Values when upgrading from WO 5.2

ISSUE: XCode's EOModeler Plug-in was not respecting null values

RESOLUTION: This issue has been resolved.

4143767: TITLE: XCode will not open .eomodeld file with charValue

ISSUE: XCode's EOModeler Plug-in was not respecting char external types

RESOLUTION: This issue has been resolved.

4144527: TITLE: Exception in plugin when opening models with 'requiresAllQualifierBindingVariables' key

ISSUE: XCode's EOModeler Plug-in was not respecting the requiresAllQualifierBindingVariables key in eomodels

RESOLUTION: This issue has been resolved.

4149671: TITLE: Can not open existing eomodels with new xcode 2.1 modeller plugin

ISSUE: XCode's EOModeler Plug-in was not handling certain instances of Single Table Inheritance in eomodels correctly

RESOLUTION: This issue has been resolved.

4159090: TITLE: EOModeler application will not generate java files

ISSUE: EOModeler application could not generate java files because templates files were not installed

RESOLUTION: This issue has been resolved.

4171161: TITLE: EOModeled data does not retain graph layout between openings

ISSUE: XCode's EOModeler Plug-in does not retain graph layout between openings

RESOLUTION: Please note that if you had created or modified an eomodel in the Xcode 2.1 EOModeler plugin some of the diagram state may be invalid and will require you to delete the layout and elements files in your .eomodeld bundle.

4171162: TITLE: Schema generation problems with EOModel and xCode 2.1

ISSUE: XCode's EOModeler Plug-in might generate an exception with certain eomodels

RESOLUTION: This issue has been resolved.

4108931: TITLE: EOModeler application quit causes Xcode 2 to hang

ISSUE: Under some circumstances, when quitting EOModeler, Xcode would hang.

RESOLUTION: This issue has been resolved.

4120429: TITLE: Problems creating WebObjects J2EE enabled Application

ISSUE: An error panel appears creating WebObjects J2EE enabled Application in Xcode

RESOLUTION: This issue has been resolved.

4215730: TITLE: WOComponent template generates HTML 3.2 DTD, not 4.0.1

ISSUE: One of the WOComponent file templates was not generating HTML 4.0.1

RESOLUTION: This issue has been resolved.

4218449: TITLE: Assistant window in Xcode has 'Project Builder' in text

ISSUE: There were some references to 'Project Builder' instead of 'Xcode' in the WebObjects Assistant

RESOLUTION: This issue has been resolved.

4262647: TITLE: Infinite loop in New WebObjects Application Project assistant path chooser field

ISSUE: The WOAssistant could over aggressively validating file paths

RESOLUTION: This issue has been resolved.

4140818: TITLE: WebObjects Builder closes documents without quitting on Quit Command

ISSUE: WebObjects Builder closes documents without quitting on Quit Command

RESOLUTION: This issue has been resolved.

4141630: TITLE: Version error in WebObjects Builder Application

ISSUE: WebObjects Builder reported it's version incorrectly in the About box

RESOLUTION: This issue has been resolved.

4142458: TITLE: WebObjects Builder mouse over a Dynamic Element changes selection from selected text

ISSUE: Selection tracking in WebObjects Builder was not working correctly

RESOLUTION: This issue has been resolved.

4142654: TITLE: Saving WO component generates an error and deletes the component

ISSUE: WebObjects Builder was not respecting encoding specified in the preferences and therefore failed to save component changes

RESOLUTION: This issue has been resolved.

4145480: TITLE: Missing table buttons in WebObjects Builder inspector panel

ISSUE: The table manipulations buttons did not appear in WebObjects Builder inspector

RESOLUTION: This issue has been resolved.

4145481: TITLE: Need configurable palette of WO element icons

ISSUE: A replacement for the one click workflow toolbar functionality in WebObjects Builder

RESOLUTION: There is now a 'Elements and Components' window.

4151714: TITLE: HTML blockquote in WebObjects Builder produces a misspelled tag

ISSUE: HTML blockquote in WebObjects Builder produces a misspelled tag

RESOLUTION: This issue has been resolved.

4161213: TITLE: WebObjects Builder 5.3 allows binding to invalid action

ISSUE: WebObjects Builder allowed for invalid binding actions in the inspector

RESOLUTION: This issue has been resolved.

4168235: TITLE: WebObjects Builder Floating Inspector does not float under WebObjects Builder

ISSUE: WebObjects Builder floating inspector did not always order front correctly.

RESOLUTION: This issue has been resolved.

4234707: TITLE: WebObjects Builder loses Font and Font Size Setting

ISSUE: WebObjects Builder loses Font and Font Size Setting

RESOLUTION: This issue has been resolved.

4188001: TITLE: Problems with the WOStatsPage HTML template

ISSUE: The WOStatsPage was not accessible

RESOLUTION: This issue has been resolved.

4237223: TITLE: Direct Action generate non-valid URL

ISSUE: URLs generated by DirectActions sometimes incorrectly converted &

RESOLUTION: This issue has been resolved.

4169582: TITLE: Iterator returned by NSArray.iterator() returns null values

ISSUE: Sometimes Iterator returned by NSArray.iterator() returns null values

RESOLUTION: This issue has been resolved.

4267639: TITLE: WebObjects war servlet fails to open eomodeld hidden in application jar on Java 1.4.2_09

ISSUE: WebObjects war servlet failed to find eomodeld files within the bundle on Java 1.4.2 Update 2

RESOLUTION: This issue has been resolved.

4144617: TITLE: WODeclarationFormatException from deleting EO in D2W app with Basic look

ISSUE: One of the Direct To Web components caused a WODeclarationFormatException

RESOLUTION: This issue has been resolved.

4149116: TITLE: DirectToWeb generation misses removebutton

ISSUE: One of the Direct To Web components caused a WODeclarationFormatException

RESOLUTION: This issue has been resolved.

4164111: TITLE: D2W WOLInspectPage.wo misspelled submitchanges tag in 'WebObjects' template

ISSUE: One of the Direct To Web components caused a WODeclarationFormatException

RESOLUTION: This issue has been resolved.

4232286: TITLE: DTW generation error in one of the components

ISSUE: One of the Direct To Web components caused a WODeclarationFormatException

RESOLUTION: This issue has been resolved.

4232286: TITLE: incorrectly quoted value in HTML code causes runtime error in D2W

ISSUE: One of the Direct To Web components caused a WODeclarationFormatException

RESOLUTION: This issue has been resolved.

Troubleshooting

1. My application is throwing the exception "com.webobjects.foundation.NSForwardException for java.lang.NoClassDefFoundError: javax/servlet/ServletContext".

For some reason, the necessary packages are not in your classpath. Debug your classpath to make sure the javax.servlet.* classes are there. If the classes are not found, the resolution is to download the servlet.jar and put it into /Library/Java/Extensions or in your classpath. The servlet.jar can be found with many open source distributions (such as tomcat).

2. How do I convert my legacy WebObjects application to build as a true war bundle?

1. In Xcode, configure your build settings to the following:

```
SERVLET_SINGLE_DIR_DEPLOY = NO
SERVLET_STUB_WAR = NO
```

```
SERVLET_TRUE_WAR = YES
SERVLET_DEPLOY_LICENSE = <your deployment license>
SERVLET_WEBAPPS_DIR = /Library/JBoss/3.2/deploy
```

2. Add the JavaWOJSPServlet.framework to your project.
3. You should also verify that all of your custom frameworks are being built as jar files and are installed or linked into /Library/WebObjects/lib.

3. Interface Builder and the WebObjects Assistant in Xcode is complaining about the Enterprise Objects palette not being installed.

The Enterprise Objects palette is not loaded by default in the Xcode 2.3 release and has been moved from an auto-loaded location in /Developer/Palettes to /Developer/Extras/Palettes. This mainly effects people building Java Client nib based applications.

To load the palette from the new location:

1. Launch Interface Builder.
2. Choose **Tools > Palettes > Palette Preferences**.
3. Delete the "Missing" Enterprise Objects palette reference.
4. Add a new reference to the Palette in: /Developer/Extras/Palettes

Published Date: Feb 19, 2012

CRT Displays: Troubleshooting No Video, Shaky Image, Or No Color

The document describes troubleshooting steps for displays that exhibit no video, shaky or wavy images, incorrect color, specific color background, or Energy Saver control panel issues.
This article has been archived and is no longer updated by Apple.

Symptom

A display may exhibit symptoms such as no video, shaky or wavy images, incorrect color, specific color background, or Energy Saver control panel issues.

Products affected

- All standalone displays

Solution

- No video may be caused by a loose video card, loose video cable, bad RAM, corrupt Parameter RAM, Energy Saver setting, dead backup battery on the computer logic board, or display hardware issue.
- Check the video cable connections - Shut the system down and remove then reconnect all the display cables to verify they are tight. Check the cable for stress, crimping, or bending. If the cable was compressed, crimped, bent against a table, wall, or chair leg it may need to be replaced. Some video cables are integrated into the display and require a local Apple-authorized service provider to replace them. In some cases, the video cable cannot be replaced.
- Test the display on another computer - If the issue does not occur on the other computer the issue is with the first computer, computer's video card, or software.
- Radio interference can be difficult to locate. The best method is to test the display at a different building which uses a different power source. If the display is at a school or a building with a common power source, try another site. Shaking, waviness, or jittering can be caused by another nearby electrical device including a display, fan, transformer, or motor. Interference may be identified by rotating the display on its side or turning it to face a different direction. If the interference pattern changes or goes away, it may be an environmental interference issue.
- Test the display with the power cord plugged directly into the wall outlet and into the computer's power outlet if the computer has a power out port. If the display operates normally when the power cord is plugged into the wall outlet but fails when it is plugged into the computer outlet, the computer power supply is suspect and should be checked by a local Apple-authorized service provider.
- If the display needs to be repaired, contact an Apple-authorized service provider or Apple support to arrange service.

Published Date: Feb 19, 2012

Mac OS X: Change language if you can‘t use a decimal point in a custom print size

This article has been archived and is no longer updated by Apple.

You can use a custom print size in any version of Mac OS X, but the custom size cannot include decimal points (such as 8.5) if you use one of these as your primary Mac OS X language:

- French
- Swedish
- Norwegian

If you need to use a custom print size that includes a decimal point, temporarily switch your primary Mac OS X language to something other than French, Swedish, or Norwegian, in International preferences. For example, change it to English, then set your custom print size with decimal point, then change the language back to your original selection.

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

Final Cut Pro 5: Unable to send to a Soundtrack Pro Audio File Project

This article has been archived and is no longer updated by Apple.

If you control-click an audio track with a linked clip in Final Cut Pro 5 and choose **Send to > Soundtrack Pro Audio File Project**, you may not be able to select it if it is dimmed. This happens if you are working with linked clips from different media sources.

To send audio from a linked clip, both the audio and video have to be from the same media file. But even if the audio you wish to send is from the same media file as the video, there may be additional audio tracks from other media files linked to the clip. In this case, you can't send to a Soundtrack Pro Audio File Project.

You can work with audio from a linked clip by either unlinking the media in the clip before sending to Soundtrack Pro or by choosing **Send To > Soundtrack Pro Multitrack Project** instead of **Send to > Soundtrack Pro Audio File Project**.

Note: This can also occur if you link two mono clips to create a stereo clip.

Published Date: Feb 20, 2012

Final Cut Pro: Use Millions color setting for screen display

This article has been archived and is no longer updated by Apple.

Final Cut Pro requires that your computer's display be set to Millions so that it can accurately represent video content. Additionally, elements of Final Cut Pro's interface require the Millions color setting to display correctly.

To set or verify your display's color setting:

1. Choose **Apple** > **System Preferences**.
2. Choose **View** > **Displays** to open display preferences.
3. From the **Colors** pop-up menu, choose **Millions**.

If you have more than one display connected, there will be a separate settings panel for each display. Verify that each is set to Millions of colors.

Without the color setting at Millions, unexpected results might be observed in the appearance of the Title Safe and Action Safe overlays in the Canvas.

Notes

1. Final Cut Pro does not support **Thousands** or **256 Colors** modes.
2. Final Cut Pro supports only up to two displays at a time

Published Date: Feb 20, 2012

Logic Pro/Express 7: Imported MIDI files do not have tempo or time signature changes

This article has been archived and is no longer updated by Apple.

If you import standard MIDI files using the procedure from the reference manual, Logic will ignore any embedded tempo or time signature changes, in order to maintain the integrity of existing tempo / TS changes in the Song.

Instead, use **File > Open...** to open Standard MIDI files. This will preserve both tempo and time signature changes.

Published Date: Feb 19, 2012

Power Macintosh G3: Connecting to 10Base-2 Network

This article describes how to attach 10Base-2 or 10Base-5 Ethernet cabling to an RJ-45 equipped Power Macintosh.
This article has been archived and is no longer updated by Apple.
The Power Macintosh G3 computers have an RJ-45 connector for 10Base-T unshielded twisted pair (UTP) Ethernet cabling.

Here three ways to connect a Power Macintosh G3 computer's 10Base-T Ethernet to an existing coaxial Ethernet network:

- Install a coax-equipped PCI Ethernet card (must have a BNC connector)
- Add a hub with a BNC coax expansion port.
- Use a Media Adapter Transceiver (BNC/RJ-45, or coax/UTP)

The first solution may be the least expensive solution, especially if only a single computer is involved. Some PCI cards are dual-media, featuring both 10Base-T and 10Base-2 (BNC) connectors. Dual-media cards are a good choice if your coax network cabling is migrating to 10Base-T cabling in the future.

The second solution can range in price from that of a card to a more expensive hub, and is especially good if multiple 10Base-T systems are to be connected to an existing 10Base-2 coaxial Ethernet network -- or growth is anticipated.

The third solution was once in widespread use. Media adapter transceivers have faded from popularity as Ethernet has standardized more on twisted pair media. These media adapters can join a single RJ-45 connection to coax, and can to join two entire networks or add a single node to an existing network.

Published Date: Feb 20, 2012

About the Mac OS X 10.4.4 Update (Combo)

This article has been archived and is no longer updated by Apple.

The Mac OS X 10.4.4 Update (Combo) updates Mac OS X 10.4, 10.4.1, 10.4.2, or 10.4.3 to version 10.4.4. (**Note**: This document discusses the Mac OS X 10.4.4 client update, if you're looking for Mac OS X 10.4.4 Server Update information, see this article.)

Important: Please read before installing.

- You may experience unexpected results if you have third-party system software modifications installed, or if you've modified the operating system through other means. (This does not apply to normal application software installation.)
- The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to update.
- If issues occur during installation—for example, Software Update quits unexpectedly—please see this article.

Installation

You have two ways to update to Mac OS X 10.4.4: Use Software Update or the standalone installer. You only need to use *one* of these methods to update your computer.

Automatic Software Update
Software Update, located in System Preferences, can automatically download and install the latest Apple software. (Software Update might have linked you to this article to learn more about the update.)

Software Update notes:

- The update's size may vary from computer to computer when installed using Software Update.
- Because some updates are prerequisites for others, you may need to run Software Update more than once to get all available updates.

Standalone installer
Two versions of the installer (Delta and Combo, described below) are available from Apple Downloads as standalone updates. After you download an update, you can use it to update your computer without being connected to the Internet.

- The Delta Update installer (described in this article) updates Mac OS X 10.4.3 to 10.4.4.
- The Combo Update installer (described here) updates Mac OS X 10.4, 10.4.1, 10.4.2, or 10.4.3 to 10.4.4.

The standalone installer, particularly the Combo Update described here, is useful if you have multiple computers to update and only want to download the update once.

Improvements

This update offers many improvements. For a list of some of them, see this article.

Published Date: Oct 10, 2016

How to identify Power Mac G5 DIMM slots

This article has been archived and is no longer updated by Apple.

Depending upon where you look, you may see the Power Mac G5 DIMM slots labeled in different ways; refer to the chart below to help identify specifically which DIMMs are installed within which DIMM slots on the Power Mac G5 computer.

Notes on columns in table:

- "Slot pair" is the number often silkscreened onto the logic board, and refers to the DIMM slots that make up that pair.
- The "J" numbers listed in the table below refer to the slot number that's silkscreened on the logic board. This slot number is also referred to within Apple System Profiler and in Apple diagnostics software such as Apple Hardware Test.
- The DIMM number is shown in Apple System Profiler next to the "J" number for a given slot.

Power Mac G5, Single 1.6 GHz model
As viewed from top to bottom:

Slot Pair	"J" number	DIMM number
2	J14	3
1	J12	1
1	J11	0
2	J13	2

Power Mac G5 Single 1.8 GHz model, Dual 1.8GHz model, Dual 2.0GHz model
Power Mac G5 (June 2004) all models
Power Mac G5 (Early 2005) dual 2.3GHz, dual 2.7GHz
As viewed from top to bottom:

Slot Pair	"J" number	DIMM number
4	J44	7
3	J42	5
2	J14	3
1	J12	1
1	J11	0
2	J13	2
3	J41	4
4	J43	6

Power Mac G5 (Late 2004) all models
As viewed from left to right:

Slot Pair	"J" number	DIMM number
2	J4001	1
1	J4101	3
1	J4100	2
2	J4000	0

Power Mac G5 (Early 2005) dual 2.0GHz
As viewed from left to right:

Slot Pair	"J" number	DIMM number
2	J14	3
1	J12	1
1	J11	0
2	J13	2

Power Mac G5 (Late 2005) all models
As viewed from top to bottom:

Slot Pair	"J" number	DIMM number
4	J7400	7
3	J7200	5
2	J7000	3
1	J6800	1
1	J6700	0
2	J6900	2
3	J7100	4
4	J7300	6

Published Date: Feb 19, 2012

Aperture 1: Actions apply to all images in the Viewer

This article has been archived and is no longer updated by Apple.

When you have multiple images in the Viewer, the following will be true:

- Adjustments will be applied only to the **primary** image in the Viewer.
- Actions will be applied to **all** images in the Viewer.

Adjustments include anything that appears in the Adjustments Inspector, such as Straighten, Levels, Sharpen, and so forth. **Actions** include application of a rating or keyword, stamping of metadata, and similar.

When you want to isolate only the selected image in the Viewer for an action, use the Toggle Primary Only button in the Control bar (also available via the keyboard shortcut "S" and via **Edit > Primary Only**).

Which image is the "Primary?"
When multiple images are in the Viewer in Multi mode, each image will have a white outline, because each is part of the multi-image selection that placed them all in the Viewer. One of them will have a thicker white outline, signifying that is the primary.
Published Date: Oct 10, 2016

Aperture: Auto Exposure button not available for JPEG images

This article has been archived and is no longer updated by Apple.

Aperture only offers automatic exposure for RAW images. When you select a JPEG image, the Auto Exposure button in the Adjustments Inspector will be unavailable (dimmed).

Published Date: Oct 10, 2016

Best Fit Gives Unpredictable Results When Printing Books, Light Tables, and Contact Sheets

This article has been archived and is no longer updated by Apple.

Sometimes the Best Fit orientation setting in the Print Dialog will result in undesirable crops for Books and Light Tables. For Contact Sheets, it may result in undesired rotation.

Best Fit is best suited to printing single images. When there are multiple images on a page, such as with Books or Light tables, it is usually best to select Portrait or Landscape as needed.

Published Date: Feb 20, 2012

Aperture: Setting paper size to borderless does not work for some printers

This article has been archived and is no longer updated by Apple.

When using certain printers, simply setting the paper size to a borderless selection is not adequate. You must perform an extra step after selecting the borderless paper size in the Print dialog:

1. Click the Print Settings button.
2. Verify that all the settings you desire are correct (paper type, print quality, and so forth).
3. Click Done to close the printer settings.
4. Save the preset.

Now the image should print as desired.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Aperture: Images in excess of 100,000 not displayed

This article has been archived and is no longer updated by Apple.

Aperture's Browser will only display 100,000 images at a time, so those of you preparing to edit the next Olympics will need to create individual projects for "Track" and "Field." And actually, to maintain performance, you should limit yourself to 10,000 images per project or less.

If you've already put yourself in this situation and can't see all the images in a project, there's several easy ways out. First you might try this:

1. Create a new project for each 10,000 images that you imported.
2. Put the Browser into List view (**View > List**, or click the button).
3. Using the pop-up menu in the Browser, sort by Image Date or File Name, whichever you prefer.
4. Select images you want to move to the alternate project, and drag them there.

If you want more control, another easy way to achieve this effect would be to use either the Filter HUD for Smart Albums to create logical groupings of less than 100,000 images, then break them into smaller groups from there.

Note: Each version counts against the limit. This means for example, that if you import 100,000 originals and create 1,000 additional versions from them (and delete none), then you are 1,000 images over the limit.

Note that Aperture 1.1 or later will proactively warn you of the 100,000 image limit, when you hit it, and advise you to create a Smart Album.

This issue is resolved in Aperture 3.

Published Date: Oct 10, 2016

Aperture: Red Eye may look fixed, even thought it‘s really not

This article has been archived and is no longer updated by Apple.

An image may appear to be fixed by the red eye tool even though there's still some red visible under the loupe or in a print.

This can happen whenever your image is scaled to fit your screen or Viewer size (which is most of the time), as opposed to being zoomed to 100 percent. Image scaling can obscure some smaller details.

Therefore you should check your work by using the loupe or toggling to 100 percent (Z key) before concluding that it's fixed.

Tip: This is also a good idea for checking noise reduction, spot & patch, and sharpening adjustments.

Published Date: Oct 10, 2016

About the Mac OS X Server 10.4.4 Update (Combo)

This article has been archived and is no longer updated by Apple.

This software updates Mac OS X Server versions 10.4, 10.4.1, 10.4.2, and 10.4.3 to Mac OS X Server 10.4.4. It is a "combo" update that combines enhancements delivered with versions 10.4.1 through 10.4.4. If you already have Mac OS X Server 10.4.3, you can download a smaller update to update to version 10.4.4.

Important: Please Read Before Installing

- You must have an administrator account password that does not contain spaces or Option-keyed characters to install this update. The password may not be left blank (you can change your password if needed).
- You may experience unexpected results if you've installed third-party system software modifications, or if you have modified the operating system through other means. This doesn't apply to normal software installation.
- The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.
- This update can be installed on non-startup volumes, but you should only do this if the current startup volume has already been updated to Mac OS X Server 10.4.4. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are two ways to update to Mac OS X Server 10.4.4: Use Software Update or install from the standalone installer.

Software Update Installation

Software Update may have referred you to this document. For more information on this feature, see "How to Update Your Software."

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Note: This version of Mac OS X Server is built as a multi-package and should not be used with Software Update's "Download Only" and "Install and Keep Package" options. If you need to save these packages for later use, try the manual update instead.

Standalone Installer

A standalone installer is also available from Apple Downloads.

Remote Installation

If you need to install the update on a remote computer, you can do so using the "softwareupdate" command-line tool.

Enhancements delivered with this update

This update delivers many enhancements. Because this is a combo update, it includes enhancements that are delivered with the 10.4.1, 10.4.2, 10.4.3, and 10.4.4 updates. You can see the individual enhancement lists for 10.4.1, 10.4.2, 10.4.3, and 10.4.4 updates.

Published Date: Oct 10, 2016

Aperture: Sharpness not apparent at less than 100 percent

This article has been archived and is no longer updated by Apple.

When you view an image at less than 100 percent size, Aperture smooths it (a technique known as anti-aliasing) to get rid of artifacts that result from scaling down the photo. The relationship between anti-aliasing and sharpening is a trade-off; although anti-aliasing does not modify the actual image file, it does counter the effect of sharpening when viewing a scaled-down image.

Therefore, you should use the loupe or the zoom toggle (Z key) to evaluate your image for sharpness, and to check your work after using the sharpening tool.

Other applications, such as Adobe Photoshop, handle anti-aliasing differently, so the degree of apparent sharpness can vary from one application to the next when viewing an image at a scaled-down size. However, you should see consistency when comparing the image at 100 percent across other applications.

Note: Masters may appear sharper than versions at scaled-down sizes. Learn more here.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

Compressor 1.X not compatible with Power Mac G5 (Late 2005) or iMac G5 (iSight)

This article has been archived and is no longer updated by Apple.

Compressor 1.x is not compatible with the Power Mac G5 (Late 2005) or iMac G5 (iSight).

Compressor 1.x requires a computer with an AGP video card. PowerMac G5 (Late 2005) models (released October 19, 2005) and iMac G5 (iSight) models feature newer PCI Express video cards. Because of this, Compressor 1.x is not compatible with these computers.

To use Compressor on Power Mac G5 (Late 2005) or iMac G5 (iSight) computers, please upgrade to Compressor 2. Compressor 2 is included with Final Cut Studio.

Compressor 1.x was included with Final Cut Pro 4, DVD Studio Pro 2 and 3, and Motion 1.

Find more information about Final Cut Studio:
http://www.apple.com/finalcutstudio/

Related documents

302667: "Final Cut Pro 4.5 HD and earlier not supported on Power Mac G5 (Late 2005) or iMac G5 (iSight)"

Published Date: Oct 10, 2016

Mac OS X: FTP connections may fail due to firewall on the server

This article has been archived and is no longer updated by Apple.

If you try to establish an FTP connection to a Mac OS X Server or other server that is running both FTP service and a firewall, the attempt may fail due to firewall protections.

When this happens, use SFTP instead. SFTP establishes the connection over SSH, so it's a secure connection. In contrast, regular FTP sends your password over plain text and is not secured.

Another workaround is to disable the firewall on the FTP server you are trying to connect to.

Published Date: Oct 10, 2016

TextEdit: Custom page sizes do not change page margins

This article has been archived and is no longer updated by Apple.

While using TextEdit in any version of Mac OS X, you can customize your page margins within the document.

However, if you use the Page Setup dialog sheet to change to a custom page size that has different margins or to define (via the Manage Custom Sizes choice in the Paper Size pop-up menu) a custom page size, the document will not appear to use the custom size's margins.

To make sure your document will look the way you expect when it prints, preview it before printing.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

Aperture: Crop and Straighten adjustments behave unpredictably in the light table

This article has been archived and is no longer updated by Apple.

Crop and Straighten will not be available for images on the light table, except for those images to which Crop and Straighten were applied prior to being added to the light table. If you use the Crop and Straightened controls for these images on the light table, the results may be unexpected. Thus you should perform copping and straightening before adding images to a light table.

Published Date: Oct 10, 2016

Xsan 1.1 or later: Tips for using snfsdefrag

This article has been archived and is no longer updated by Apple.

You can use the `snfsdefrag` command to defragment a file by reallocating its data in a single extent. If the `snfsdefrag` command fails on a client or controller running Xsan on Panther or Tiger, restart the computer. After restart, `snfsdefrag` should succeed, but if it doesn't, try stopping and restarting the volume using Xsan Admin.

Here is an example of a failed `snfsdefrag` command when run in verbose mode:

```
ServerName:/Volumes/MyVolumeName root# snfsdefrag -v
Tiger_8A428_ServerDVD_0Z693-5618-185.dmg
Tiger_8A428_ServerDVD_0Z693-5618-185.dmg: 4 extents: new extent count 1,
CvApi_SwapExtents failed for cookie 0x12b29133, skipping.
1 file visited: 0 defragged, 1 skipped
```

Here is an example of a successful snfsdefrag command when run in verbose mode:

```
ServerName:/Volumes/MyVolumeName root# snfsdefrag -v
Tiger_8A428_ServerDVD_0Z693-5618-185.dmg
Tiger_8A428_ServerDVD_0Z693-5618-185.dmg: 4 extents: new extent count 1, done.
1 file visited: 1 defragged, 0 skipped
```

For more information on snfsdefrag and other commands, see the Xsan Administrator's Guide.
Published Date: Feb 19, 2012

About Security Update 2005-009

This article has been archived and is no longer updated by Apple.

This document describes Security Update 2005-009, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Security Update 2005-009

- **Apache2**

  CVE-ID: CVE-2005-2088

  Available for: Mac OS X Server v10.3.9, Mac OS X Server v10.4.3

  Impact: Cross-site scripting may be possible in certain configurations

  Description: The Apache 2 web server may allow an attacker to bypass protections using specially-crafted HTTP headers. This behavior is only present when Apache is used in conjunction with certain proxy servers, caching servers, or web application firewalls. This update addresses the issue by incorporating Apache version 2.0.55.

- **apache_mod_ssl**

  CVE-ID: CVE-2005-2700

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS Xv10.4.3, Mac OS X Server v10.4.3

  Impact: SSL client authentication may be bypassed in certain configurations

  Description: The Apache web server's mod_ssl module may allow an attacker unauthorized access to a resource that is configured to require SSL client authentication. Only Apache configurations that include the "SSLVerifyClient require" directive may be affected. This update addresses the issue by incorporating mod_ssl 2.8.24 and Apache version 2.0.55 (Mac OS X Server).

- **CoreFoundation**

  CVE-ID: CVE-2005-2757

  Available for: Mac OS X v10.4.3, Mac OS X Server v10.4.3

  Impact: Resolving a maliciously-crafted URL may result in crashes or arbitrary code execution

  Description: By carefully crafting a URL, an attacker can trigger a heap buffer overflow in CoreFoundation which may result in a crash or arbitrary code execution. CoreFoundation is used by Safari and other applications. This update addresses the issue by performing additional validation of URLs. This issue does not affect systems prior to Mac OS X v10.4.

- **curl**

  CVE-ID: CVE-2005-3185

  Available for: Mac OS X v10.4.3, Mac OS X Server v10.4.3

  Impact: Visiting a malicious HTTP server and using NTLM authentication may result in arbitrary code execution

  Description: Using curl with NTLM authentication enabled to download an HTTP resource may allow an attacker to supply an overlong user or domain name. This may cause a stack buffer overflow and lead to arbitrary code execution. This update addresses the issue by performing additional validation when using NTLM authentication. This issue does not affect systems prior to Mac OS X v10.4.

- **iodbcadmintool**

  CVE-ID: CVE-2005-3700

Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.3, Mac OS X Server v10.4.3

Impact: Local users may gain elevated privileges

Description: The ODBC Administrator utility includes a helper tool called iodbcadmintool that executes with raised privileges. This helper tool contains a vulnerability that may allow local users to execute arbitrary commands with raised privileges. This update addresses the issue by providing an updated iodbcadmintool that is not susceptible.

- **OpenSSL**

  CVE-ID: CVE-2005-2969

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS Xv10.4.3, Mac OS X Server v10.4.3

  Impact: Applications using OpenSSL may be forced to use the weaker SSLv2 protocol

  Description: Applications that do not disable SSLv2 or that enable certain compatibility options when using OpenSSL may be vulnerable to a protocol downgrade attack. Such attacks may cause an SSL connection to use the SSLv2 protocol which provides less protection than SSLv3 or TLS. Further information on this issue is available at http://www.openssl.org/news/secadv_20051011.txt. This update addresses the issue by incorporating OpenSSL version 0.9.7i.

- **passwordserver**

  CVE-ID: CVE-2005-3701

  Available for: Mac OS X Server v10.3.9, Mac OS X Server v10.4.3

  Impact: Local users on Open Directory master servers may gain elevated privileges

  Description: When creating an Open Directory master server, credentials may be compromised. This could lead to unprivileged local users gaining elevated privileges on the server. This update addresses the issue by ensuring the credentials are protected.

- **Safari**

  CVE-ID: CVE-2005-2491

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.3, Mac OS X Server v10.4.3

  Impact: Processing a regular expressions may result in arbitrary code execution

  Description: The JavaScript engine in Safari uses a version of the PCRE library that is vulnerable to a potentially exploitable heap overflow. This may lead to the execution of arbitrary code. This update addresses the issue by providing a new version of the JavaScript engine that incorporates more robust input validation.

- **Safari**

  CVE-ID: CVE-2005-3702

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS Xv10.4.3, Mac OS X Server v10.4.3

  Impact: Safari may download files outside of the designated downloaddirectory

  Description: When files are downloaded in Safari they are normally placed in the location specified as the download directory. However, if a web site suggests an overlong filename for a download, it is possible for Safari to create this file in other locations. Although the filename and location of the downloaded file content cannot be directly specified by remote servers, this may still lead to downloading content into locations accessible to other users. This update addresses the issue by rejecting overlong filenames.

- **Safari**

  CVE-ID: CVE-2005-3703

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.3, Mac OS X Server v10.4.3

  Impact: JavaScript dialog boxes in Safari may be misleading

  Description: In Safari, JavaScript dialog boxes do not indicate the web site that created them. This could mislead users into unintentionally disclosing information to a web site. This update addresses the issue by displaying the originating site name in JavaScript dialog boxes. Credit to Jakob Balle of Secunia Research for reporting this issue.

- **Safari**

CVE-ID: CVE-2005-3705

Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.3, Mac OS X Server v10.4.3

Impact: Visiting malicious web sites with WebKit-based applications may lead to arbitrary code execution

Description: WebKit contains a heap overflow that may lead to the execution of arbitrary code. This may be triggered by content downloaded from malicious web sites in applications that use WebKit such as Safari. This update addresses the issue by removing the heap overflow from WebKit. Credit to Neil Archibald of Suresec LTD and Marco Mella for reporting this issue.

- **sudo**

  CVE-ID: CVE-2005-1993

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS Xv10.4.3, Mac OS X Server v10.4.3

  Impact: Local users may be able to gain elevated privileges in certain sudo configurations

  Description: Sudo allows system administrators to grant users the ability to run specific commands with elevated privileges. Although the default configuration is not vulnerable to this issue, custom sudo configurations may not properly restrict users. Further information on this issue is available at http://www.sudo.ws/sudo/alerts/path_race.html. This update addresses the issue by incorporating sudo version 1.6.8p9.

- **syslog**

  CVE-ID: CVE-2005-3704

  Available for: Mac OS X v10.4.3, Mac OS X Server v10.4.3

  Impact: System log entries may be forged

  Description: The system log server records syslog messages verbatim. By supplying control characters such as the newline character, a local attacker could forge entries with the intention to mislead the system administrator. This update addresses the issue by specially handling control characters and other non-printable characters. This issue does not affect systems prior to Mac OS X v10.4. Credit to HELIOS Software GmbH for reporting this issue.

- **Additional Information**

  Also included in this update are enhancements to Safari to improve handling of credit card security codes (Mac OS X v10.3.9 and Mac OS X v10.4.3), CoreTypes to improve handling of Terminal files (Mac OS X v10.4.3), QuickDraw Manager to improve rendering of PICT files (Mac OS X v10.3.9), documentation regarding OpenSSH and PAM (Mac OS X v10.4.3), and ServerMigration to remove unneeded privileges.

Published Date: Oct 10, 2016

About the security content of iTunes 6 for Windows

This article has been archived and is no longer updated by Apple.

This document describes the security content of iTunes 6 for Windows, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

iTunes 6 for Windows

- CVE-ID: CVE-2005-2938

  Available for: Microsoft Windows XP, Microsoft Windows 2000

  Impact: iTunes 5 for Windows may launch the wrong helper program

  Description: Due to the way iTunes 5 for Windows launches its helper application, multiple system paths are searched to determine which program to run. This may allow a malicious user on the local system to create an environment where an alternate program will be executed by iTunes. This has already been addressed in the iTunes 6 release for Windows (2005-10-12), available from: (http://www.apple.com/itunes/download/) .

This advisory is being released at this time (2005-11-15) to coordinate with other vendors whose products were also affected by the vulnerability in the helper application launch mechanism. Credit to iDEFENSE for reporting this issue to us.

Published Date: Oct 10, 2016

Aperture: Can‘t restore from a vault due to disk errors

This article has been archived and is no longer updated by Apple.

If the volume that contains your vault needs to be repaired, your attempt to restore from the vault may end in a message similar to "restore library operation failed." To resolve the issue, try Disk Utility:

1. Quit Aperture.
2. Open Disk Utility, which is located in your Utilities folder (/Applications/Utilities).
3. Select the volume that contains the vault, and click Verify Disk.
4. If Disk Utility finds any errors, click Repair Disk.
5. Wait until Disk Utility is finished, then quit it.
6. Open Aperture and try to restore from the vault again.

Published Date: Oct 10, 2016

Aperture can‘t import images from a folder whose name begins with a tilde (~)

This article has been archived and is no longer updated by Apple.

If you have a folder with a name that begins with a tilde character (~), and the folder contains valid images, Aperture will tell you that there are zero images to import. Drag and drop from this folder also won't work.

For technical reasons, Aperture does not support names starting with this character. You should rename the folder.

Published Date: Oct 10, 2016

Aperture: Only one image appears in Viewer from a multiple selection in Browser

This article has been archived and is no longer updated by Apple.

Normally, multiple images will appear in the Viewer if you select multiple images in the Browser. However, if you have put the Viewer into Primary mode, then only one of the selected images will appear.

To put the Viewer back in Multi mode, which is the default, choose **View > Main Viewer > Multi**. You can also use the Viewer Mode menu in the Control Bar or the keyboard shortcut Option-U.

Published Date: Oct 10, 2016

About BroadbandTuner

This article has been archived and is no longer updated by Apple.

BroadbandTuner is an installer package for use with Internet connections that have longer than normal network latency. Examples include some Verizon FiOS connections and satellite-based services such as EarthLink/DirecWay. The common characteristic is high speed broadband with high latency.

The BroadbandTuner modifies the default value of TCP buffer space, increasing it from 64KB to 350KB on the receiving side and from 64KB to 128KB on the sending side. This allows Mac OS X to achieve maximum throughput on affected connections.

To uninstall BroadbandTuner, simply run the BroadbandTuner installer again. When BroadbandTuner is present, this automatically causes the Uninstaller to run.

BroadbandTuner requires Mac OS X 10.4 or later.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 19, 2012

Aperture: How to make fine adjustments with sliders in the Adjustments Inspector

This article has been archived and is no longer updated by Apple.

When you're making adjustments, the sliders default to a certain minimum increment, such as 10 or 1, depending on the adjustment. Oftentimes you might want to make a finer adjustment without having to resort to keyboard entry. Finer adjustments might be useful for straightening or white balance, for example.

Aperture provides "infinite sliders" to allow exactly that. When you put your mouse pointer over the numerical value of your adjustment, to the right of the slider, the pointer will convert to an I-beam, which indicates the availability of the infinite slider. To use it, press and hold the mouse button when the I-beam is visible, then move the mouse left and right to adjust.

To change the rate of adjustment, use the Shift and Option keys. Shift will accelerate the rate of adjustment, while Option will decelerate the rate of adjustment to the finest available increment.

Tip: For certain adjustments, infinite sliders can reach extremes of the adjustment range which are not available to the regular sliders.

Published Date: Oct 10, 2016

Aperture: Can‘t update vault on a network volume

This article has been archived and is no longer updated by Apple.

Network volumes are not recommended or supported for Aperture. If you create a vault locally, move it to a network volume, and update the vault location in Aperture, then attempts to update the vault may fail.

Published Date: Oct 10, 2016

iTunes for Windows quits unexpectedly importing CDs on a dual-processor or dual-core computer

This article has been archived and is no longer updated by Apple.

If you have a dual-processor or dual-core computer, iTunes for Windows may quit unexpectedly while importing audio CDs.

You can resolve this issue by updating to iTunes 6.0.2 or later.

Published Date: Oct 10, 2016

Final Cut Pro 5 and iMac G5 (iSight): Video from built-in camera is seen in Edit to Tape window

This article has been archived and is no longer updated by Apple.

If you're working in Final Cut Pro 5 on an iMac G5 (iSight), it's possible for the Edit to Tape window to react to the iMac's built-in iSight camera, as though you had an extra DV camera or video recorder connected to a FireWire port. Situations may include:

- If you have a DV device powered on and connected to FireWire while the Edit to Tape window is open, and you turn that camera off, video from the iMac's built-in iSight camera may appear in the Edit to Tape window.
- If you switch to the Video tab from another tab in the Edit to Tape window, video from the iMac's built-in iSight camera may appear instead of color bars.
- If the DV device connected to FireWire is powered back on while the Edit to Tape window is open, you might see the "VTR OK" message as usual, but instead of color bars, you see the video from the iMac's built-in iSight camera.

If any of these occur, there's no need to worry — just follow these steps:

1. Close the Edit to Tape window.
2. Power off the DV camera or video recorder that's connected to FireWire.
3. Power the camera or video recorder back on.
4. Open the Edit to Tape window.

Video from the DV device should now be recognized normally. If it is not:

1. Save any open projects and close Final Cut Pro.
2. Use the Dock (or Command-Tab) to review programs that are running, and quit any that might be trying to use FireWire video input/output. This includes programs like iMovie, QuickTime Player (with QuickTime Pro), and Photo Booth.
3. Power on the DV device and verify that it is connected to your computer via FireWire.
4. Open Final Cut Pro, and leave the DV device powered on and connected while working.

Published Date: Feb 20, 2012

Sherlock - Changes to Apple-supplied channels

This article has been archived and is no longer updated by Apple.

Sherlock no longer includes the Phone Book, Pictures, or Japanese News channels.

Apple recommends using Dashboard widgets such as Apple's Phone Book widget or websites such as Google Images or Mainichi news as a substitute for these channels.

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Published Date: Feb 19, 2012

Why can‘t I playback voice memos on my iPod?

This article has been archived and is no longer updated by Apple.

You may be unable to playback recorded voice memos after navigating to **Extras** > **Voice Memos** on your iPod. After selecting the desired voice memo and choosing play, the menu will revert to the Voice Memos selection screen. This can happen with:

- iPod with color display (iPod photo)
- iPod (Click Wheel)
- A third-party microphone or audio recorder.

To address this, update to the latest version of the iPod software. Use iPod (Click Wheel) Software 3.1.1 or later or iPod (color display) Software 1.2.1 or later. The iPod Updater 2006-01-10 includes these versions and can be downloaded here.

If you're not sure what iPod model you have, click here.

Published Date: Feb 19, 2012

Aperture won‘t import images that lack a file extension

This article has been archived and is no longer updated by Apple.

Aperture won't import images from your iPhoto Library that have no filename extension (such as .tif or .jpg).

Files must have a recognized extension for Aperture to import them.

Published Date: Oct 10, 2016

Aperture Library can‘t be shared

This article has been archived and is no longer updated by Apple.

If two or more users simultaneously access the same Aperture Library, you will get an alert message on subsequent launch that says there was an error opening the Aperture Library.

This can happen if you place the Aperture Library on an Xsan volume or other network volume and multiple users access it.

The Aperture Library is not designed to be shared among users, so you should not do so.

Published Date: Oct 10, 2016

New iPhoto Film Roll Names Do Not Carry Over to Aperture

This article has been archived and is no longer updated by Apple.

If you rename a film roll in iPhoto and subsquently import that film roll from iPhoto to Aperture, the fill roll will come into Aperture under its original name, not the later name.

This happens due to the way iPhoto writes film roll name changes to XML. You're free to rename it again in Aperture.

This issue is resolved in Aperture 1.5.

Published Date: Oct 10, 2016

Mac OS X 10.4.3: Displayed contents of a remote AFP volume don‘t update automatically as in previous OS versions

This article has been archived and is no longer updated by Apple.

When you have the contents of a remote Apple Filing Protocol (AFP) volume visible in the Finder on a Mac OS X 10.4.3 or Server 10.4.3 computer, those contents will not be automatically updated when modified by another user.

Note: AFP is also known by service names such as Personal File Sharing, Apple File Service, and AppleShare.

If you select or try to open an item that is no longer present on the server, or which has been relocated, you'll encounter one or more of these symptoms:

- The associated application launches, and a message says "File 'The Filename' does not exist."
- The file disappears without a message.
- The associated application launches, but the file does not open; when you return to the Finder window the file is gone.
- The associated application launches, and a message says "No such file or directory."

The workaround for this issue is to close the Finder window and open a new one, which will force a refresh of the server contents.

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

Aperture: Some images duplicated when importing from iPhoto

This article has been archived and is no longer updated by Apple.

Sometimes you get two copies of an image imported from iPhoto, and the pair is stacked. Though this might surprise you, the reason is very simple. Whenever you edit in iPhoto, it preserves the original and makes the changes to a copy. When you import to Aperture, you get both the original and the copy from iPhoto.

If you want the originals only, here's a quick way to remove the copies by using the "iPhoto-edited" keyword:

1. Click any image in the project to select it.
2. Choose **Edit > Select All**.
3. Choose **Stacks > Unstack**.
4. In the browser's search box (to the right of the magnifying glass), type: `iPhoto-edited`

This will cause only iPhoto-edited images to appear in the Browser. Now you can relocate or delete them as you please.

Note: If you have manually edited the contents of the iPhoto Library or have used any third-party software that sub-manages or attempts to minimize the size of the iPhoto Library (by deleting originals, for example) then you need to exercise caution. Rather than delete the files immediately, consider temporarily storing them in another project until you're sure you have everything you want to keep in the main project.

This issue is resolved in Aperture 1.5.

Published Date: Oct 10, 2016

Mac OS X 10.4.2 or later: File doesn‘t import into Address Book

This article has been archived and is no longer updated by Apple.

In Mac OS X 10.4.2 or later, Address Book might fail to import information from a .txt or .cvs file if the file contains a line break. No alert message appears when this happens, but the data from the file will not appear in Address Book.

Where do line breaks come from? Here's example: In Microsoft Excel, you can insert a line break by pressing Control-Option-Return.

To resolve the issue, open the file in a text editing application or the application that created the file, find and remove any line breaks, save the file, and then import it again into Address Book

This document will be updated as more information becomes available.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

Mac OS X 10.4: Error -8058, unable to eject when trying to copy a disc in Finder

This article has been archived and is no longer updated by Apple.

If you insert a disc (CD or DVD) in Mac OS X 10.4, then try to make a copy of it using the Finder **File** menu's **Duplicate** command, an "error -8058" alert may appear, and the disc might not eject.

Solution

Try the Eject key to eject the disc. If that doesn't work, restart the computer, then hold down the mouse button until the disc ejects.

Use Disk Utility to duplicate a disc, instead of the Finder.

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

Safari, Mac OS X 10.2: Yahoo webmail does not work as expected

This article has been archived and is no longer updated by Apple.

Websites and standards evolve over time. As such, Yahoo webmail no longer works properly in the latest version of Safari that is available for Mac OS X 10.2.8.

Apple no longer offers Safari updates for Mac OS X 10.2. As a workaround, try using a different browser.

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Published Date: Oct 10, 2016

Mac OS X 10.4.3: "Error Reading Package" alert when installing software from earlier DVDs

This article has been archived and is no longer updated by Apple.

With Mac OS X 10.4.3 installed, if you use a Mac OS X 10.3.4 or later Install DVD to try to reinstall a bundled application, this alert appears:

> "Error Reading Package - The package is damaged and cannot be read."

This can happen on computers that shipped with two Mac OS X 10.3.4 or later installation DVDs.

Solution

Download and install the Mac OS X 10.4.4 Update, or later, then use your Mac OS X 10.3.4 or later Install DVD to reinstall a bundled application.

Published Date: Oct 10, 2016

iDVD and iMovie: Image orientation changes when a RAW image is imported from the Finder

This article has been archived and is no longer updated by Apple.

In Mac OS X 10.4.3 it is now possible to use RAW images in iDVD and iMovie projects. RAW images with a vertical (portrait) orientation may change orientation if you drag them directly into iDVD or iMovie.

In iDVD, this can occur when you add an image to the background of a menu or to a slideshow. In iMovie this can occur if you drag a RAW image file to the Clips Pane or to the Movie Timeline.

To maintain the correct image orientation, import the RAW image into iPhoto before you import it into your iMovie or iDVD project. Then, in iMovie and iDVD, access the image from their Media Browsers (in iMovie from the Photos pane, in iDVD from the Customize Panel's Media pane).

For more information on RAW images, see this document.

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

About the security content of J2SE 5.0 Release 3

This article has been archived and is no longer updated by Apple.

This document describes the security content of J2SE 5.0 Release 3, which can be downloaded and installed using Software Update, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred, and any necessary patches or releases are available. To learn more about Apple Product Security, visit the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to Use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

J2SE 5.0 Release 3

Available for: Mac OS X v10.4.2 or later with Java 1.3.1 and 1.4.2Release 2

On November 28, 2005 (2005-11-28), Sun released Security Alerts #102003, #102050 and #102017. These alerts describe vulnerabilities that are already fixed in Mac OS X v10.4 with Java 1.3.1 & 1.4.2 Release 2 and J2SE 5.0 Release 3.

Java 1.3.1 and 1.4.2 Release 2 have been available since September 13, 2005 (2005-09-13).

J2SE 5.0 Release 3 has been available since November 15, 2005 (2005-11-15).

These may be obtained using Software Update preferences, or Apple's Software Downloads website:
http://www.apple.com/support/downloads/java2se50release3.html
http://www.apple.com/support/downloads/java131and142release2.html

For Java 1.3.1 & Java 1.4.2:
The download file is named: "Java131and142Release2.dmg"
Its SHA-1 digest is: 9e9f752ff56da7ab13f3b11f40b528c901145019

For J2SE 5.0 Release 3:
The download file is named: "J2SE50Release3.dmg"
Its SHA-1 digest is: c5fe977bd9a2d145e9d122ed80768488c89dcc98

For systems running Mac OS X v10.3.9, the Sun alerts are fixed with Java Security Update, which was released on September 13, 2005. It is available either from the Software Update pane in SystemPreferences, or Apple's Software Downloads web site:
http://www.apple.com/support/downloads/javasecurityupdate.html

The download file is named: "JavaSecurityUpdate4.dmg"
Its SHA-1 digest is: b6babb98a98c20bdc7d2ca9b14c56b93ff3813a7

If you want to determine that your system has the latest Java versions installed, open Terminal (from Applications/Utilities) and type one of these commands:

For Mac OS X v10.4.2 or later, type the following on one line, then press Return:

```
/System/Library/Frameworks/JavaVM.framework/Versions/1.5.0/Commands/java -version
```
You should see: java version "1.5.0_05"

For Mac OS X v10.3.9 or later, type the following on one line, then press Return:

```
/System/Library/Frameworks/JavaVM.framework/Versions/1.3.1/Commands/java -version
```
You should see: java version "1.3.1_16"

```
/System/Library/Frameworks/JavaVM.framework/Versions/1.4.2/Commands/java -version
```
You should see: java version "1.4.2_09"

Published Date: Oct 10, 2016

Logic Pro/Express 7: Undo command unavailable after using Quantize Engine

This article has been archived and is no longer updated by Apple.

After you quantize audio in the Sample Edit window by selecting **Factory > Quantize Engine**, Undo becomes unavailable in the Edit menu.

For technical reasons, Undo is not possible for audio quantize. Before using the Quantize Engine, create a backup of the audio file by choosing **Audio File > Create Backup**. If you change your mind after quantizing, choose **Audio File > Revert to Backup**.

Published Date: Oct 10, 2016

Final Cut Pro 5: Subclips may result from batch capture of 720p, 60 fps media

This article has been archived and is no longer updated by Apple.

If you're capturing 720p HD media at 60 frames per second (fps) using serial device control, there's a situation in which logged clips appear as unlinked subclips in the Browser after they are captured.

The issue can occur when using serial device control to batch capture 720p media at 60 fps because Final Cut Pro treats some details of the capture scenario as if the media were running at 30 fps instead of 60. The result is that your media is captured to disk normally, but Final Cut Pro presents each clip as if it is part of something that is larger than the clip's media. This is similar to what a subclip is.

What you see is that the captured clips appear as subclips in the Browser, but they behave as if they are offline. In fact, the clips were captured correctly, but Final Cut Pro does treat see them as usable.

This issue is addressed in Final Cut Pro 5.0.4.

Update to Final Cut Pro 5.0.4 via **Software Update** (Select **Apple > System Preferences**), or download the update here.

Without the Final Cut Pro 5.0.4 update, you can apply one of the workarounds listed below. The best one to suit you may depend on equipment you have available, your workflow and/or your current production phase.

- **Use FireWire**
  Your HD video recorder may include support for FireWire, and Final Cut Pro is able to correctly capture 720p 60 fps media over FireWire while using the same connection for device control.
- **Use Capture Now**
  If you are capturing media for the first time in a project (not recapturing), using Capture Now can be a good solution. Because of a difference in the way Final Cut Pro interprets incoming data during the Capture Now process, 720p media you acquire using Capture Now will not appear as subclips when using serial device control.
- **Import from Finder (before editing)**
  If you have already logged clips that need to be captured, and haven't yet started editing, the following steps might be best suited for this stage in your workflow.
  1. Batch capture your logged clips as you normally would. When the capture process is finished, the clips will appear as unlinked subclips in the Browser.
  2. Choose **File** > **New** > **Bin** to create a new bin in the Browser. Name this new bin "Temp" (or something similar — you won't be using it for long).
  3. Select all of the subclips and drag them into the "Temp" bin.
  4. In Finder, go to the Capture Scratch folder for this project, select the newly captured clips, and drag them right into Final Cut Pro's Browser.
     (**Finder Tip**: If you view the Capture Scratch window in List view and sort the columns by Date Modified, recently captured items will appear at the top of the list.)
  5. After doing this "Finder import", your clips should appear as they were logged, and not look like subclips with long durations.
  6. After verifying that you have your clips, it's okay to delete the "Temp" bin. (Creating the "Temp" bin is not even really necessary; it is suggested here to keep things distinct, and for safety, i.e., in case you make a mistake in the Finder.)
- **Remove Subclip Limits (if you have already begun editing)**
  The following workaround steps are best suited if you will be recapturing any clips affected by this issue, and you're already at a point in your workflow where you have done either of the following:
  - Added affected clips to the Timeline
  - Modified affected items in the Browser

  Take these steps to work around details of recapturing with this issue:
  1. Choose **File** > **New** > **Bin** to create a new bin in the Browser and call it something like "Batch Items."
  2. Locate all the clips in the Browser that you will be recapturing and place them into the "Batch Items" bin. (If you need or want to create sub-bins within this bin for organizational purposes, that's fine.)
  3. Select all the items within the "Batch Items" bin and choose **File** > **Batch Capture** to begin recapturing the selected items.

     When finished, the captured clips will appear as subclips and instances of those items in the Timeline will appear to be online, but may contain no media on playback.
  4. Select all the captured items in the "Batch Items" bin and choose **Modify** > **Remove Subclip Limits**.

  Now the items in the Timeline will be online and play normally, and the Browser instances will be online and will have the appropriate icon.

  Notes
  1. One side effect of the "Remove Subclip Limits" workaround is that all clips updated by the **Remove Subclip Limits** operation in this case will erroneously display double the correct value for their Duration property in Browser columns and in Item Properties. If

played in the Viewer, the second half of the clip will display as black. The edit points in the Timeline and disk storage requirements are not affected. The Browser clips can be used for normal editing by simply trimming off the segment of the media that displays as black.

2. If you use the "Remove Subclip Limits" workaround, and then for whatever reason need to recapture those same clips yet again, a small number of clips within the Timeline could have their out points trimmed by a single frame. Cut-only edits should be rechecked for accuracy and adjusted if necessary.

Published Date: Feb 20, 2012

Mac OS X 10.4: Pasting a phone number into a Fax dialog sheet with some applications

This article has been archived and is no longer updated by Apple.

If you're trying to fax from an application in Mac OS X 10.4, but can't successfully paste a phone number into the To: field of the Fax dialog sheet, use this workaround: Control-click the To: field (or right-click with a multi button mouse), then choose Paste from the contextual pop-up menu.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

iPod: Alarm going off at wrong time

This article has been archived and is no longer updated by Apple.

If your alarm is going off at the wrong time on your iPod nano or Fifth Generation iPod, make sure you are setting the alarm on the correct clock.

iPod nano and Fifth Generation iPod support multiple clocks. If you configure an alarm on your San Francisco clock for 10:00 AM, the alarm will go off at 10:00 AM Pacific Standard Time, even if you are in Austin (Central Standard Time). Make sure you set your alarms on the correct clock. To set an alarm:

1. Select **Extras** > **Clock** on the iPod.
2. Select the correct clock and press the Center button.
3. Select Alarm Clock and press the Center button.
4. Configure the alarm as you want it.

Published Date: Oct 10, 2016

Aperture 1.0: Checking RGB color values

This article has been archived and is no longer updated by Apple.

Aperture 1.1 or later includes a built-in color meter that can display RGB, CMYK, and lab values.

Aperture 1.0 does not include a pixel color meter, or "dropper," so you can use this workaround: Look in your Utilities folder (located inside the Applications folder) for DigitalColor Meter, which will provide the desired function. Be sure to familiarize yourself with the Preferences in DigitalColor meter. The option to "Float window above other apps" may be particularly convenient while color balancing in Aperture.

Published Date: Oct 10, 2016

Aperture: White Balance adjustment produces inaccurate result

This article has been archived and is no longer updated by Apple.

In some situations, the White Balance adjustment in Aperture may not produce an accurate result. When using a pixel meter, such as DigitalColor Meter, you may find unexpected gaps between RGB channel values of the sampled area after balancing.

To resolve the issue, update to Aperture 1.0.1 or later.

Published Date: Oct 10, 2016

About Server Admin Tools 10.4.7

This article has been archived and is no longer updated by Apple.

This article provides information about the Mac OS X Server administration software applications. You can install them on a computer other than your server for remote administration.

This update provides Universal applications for administering Mac OS X Server 10.4 from both Intel- and PowerPC-based Macintosh computers. It also includes an updated System Image Utility application for creating NetBoot and NetInstall images of Intel-based Macs. Here's the complete list of installed applications:

- Server Admin
- Workgroup Manager
- QuickTime Broadcaster
- QTSS Publisher
- Server Assistant
- Server Monitor
- Xgrid Admin
- System Image Utility
- Gateway Setup Assistant

For a brief description of each application, please see this web page.

How to install

For Mac OS X Server 10.4 and later

Update to Mac OS X Server 10.4.7 (either manually or via Software Update), which includes Server Admin Tools 10.4.7.

Mac OS X (client) 10.4 or later

1. If you are using any version from 10.4 to 10.4.6, you should first update to Mac OS X 10.4.7 or later.
2. If you have already installed Server Admin Tools 10.4 or 10.4.4, use Software Update to get Server Admin Tools 10.4.7.
3. If you have not installed a previous version of the admin tools, you can download the full installer here.

Important: If you have moved any of the Server Admin Tools out of their original locations in the (/Applications/Server/) folder, the update may not appear in Software Update at all. Return the Server Admin Tools to their original locations before using Software Update.

Notes

1. Only Mac OS X Server 10.4.4 or later supports Intel NetBoot images. You can't host Intel-based images on Mac OS X Server 10.4.3 or earlier.
2. To administer Mac OS X Server 10.4 from an Intel-based Mac you need to use the Universal Server Admin Tools 10.4.4 or later. Apple does not support or recommend using older Server Admin tools with Rosetta.

Published Date: Feb 19, 2012

iDVD: Which themes are included

This article has been archived and is no longer updated by Apple.

Here is a list of the themes included with the various versions of iDVD.

Note that themes from older versions of iDVD may still be installed if you update to a newer version. See the following articles for more information:

- iDVD 4/5: Where are the older themes?
- iDVD 5: Previous themes are missing
- iDVD 6: Themes pane is blank after upgrading

iDVD 6*

- Travel
- Pass Through
- Road Trip
- Reflection White
- Reflection Black
- Mirror
- Full Frame
- Shelves
- Watercolor
- Brushstroke

*These themes are available in Widescreen (16:9) aspect ratio.

iDVD 5

- Travel Cards
- Memories
- Sliding Panes
- Full Frame 1
- Full Frame 2
- Anime Pop
- Wedding White
- Baby Mobile
- Travel 1
- Travel 2
- Techno B&W
- Techno Color
- Lines
- Portfolio
- Scrapbook

iDVD 4

- Wedding Bronze One
- Wedding Bronze Two
- Wedding Silver One
- Wedding Silver Two
- Drive In One
- Drive In Two
- Montage
- Kids Theater One
- Kids Theater Two
- Road Trip One
- Road Trip Two
- Pop Art
- Reveal
- Fish One
- Fish Two
- Blocks
- Marquee

- Transparent Blue
- Transparent Green
- Transparent Black

iDVD 3

- Theater
- Book
- Projector
- Gen Y
- Picture In Picture
- Brush Strokes
- Western
- Sport
- Passport
- Postcard
- Fun
- Confetti
- Rose Heart
- Blue
- Pink
- Orange
- Portfolio B&W
- Portfolio Color
- Moving Bars
- Brushed Metal One
- Brushed Metal Two
- Green Linen One
- Green Linen Two
- Lightbox

iDVD 2

- Global
- Brushed Metal
- Your Photo Here
- Parchment
- Family
- Wedding
- Sports
- Claim Check
- Sky
- Chalkboard
- Kids Blue
- Kids Pink
- Baby Blue
- Baby Pink

iDVD 1

- Graphite
- Sage
- Brushed Metal 9
- Photo Album
- Road Trip
- Wanted
- Lavender
- Leather
- Burlap
- Bon Voyage
- Happy Days
- Wallpaper
- Surf's Up
- Magnetic Moments
- Holiday Cheer

- A Day To Remember
- It's a Girl
- It's A Boy

Published Date: Oct 10, 2016

Why won‘t my iPod play through my iPod speakers or car kit?

This article has been archived and is no longer updated by Apple.

When connecting iPod nano or the Fifth Generation iPod (iPod with video) to audio accessories that connect to the iPod through the dock connector port, you may not hear sound under certain circumstances. To alleviate this symptom, simply reset the iPod using the instructions detailed here.

This document will be updated as more information becomes available.

Related documents

61705 "Resetting iPod if it appears frozen or doesn't respond"
Published Date: Oct 10, 2016

Microsoft Office 2004 Test Drive expired alert

This article has been archived and is no longer updated by Apple.

If you try to open Microsoft Office 2004 Test Drive, you may see a message that the "demo has expired." This can happen with any version of Mac OS X.

If you are opening it for the first time and this occurs, download and install the Microsoft Office 2004 for Mac Test Drive 11.0.2 Update. Only use this update if you encounter this issue the very first time you open Office 2004 Test Drive.

If you have used Microsoft Office 2004 Test Drive for less than 30 days (and are not opening it for the first time), download and install Office 2004 for Mac Test Drive from Microsoft. It is one of the links in the Office 2004 section, then follow these steps:

1. Locate the folder named "Office 2004 for Mac Test Drive" in the Applications folder.
2. Back up any documents that you may have saved in that folder.
3. Delete the "Office 2004 for Mac Test Drive" folder from the Applications folder.
4. Download and install Microsoft Office 2004 Test Drive from Microsoft's website.

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Published Date: Oct 10, 2016

Backup 3: Unable to complete Backup to Windows 2003 Server

This article has been archived and is no longer updated by Apple.

If you try to back your data up to a destination volume running Windows 2003 Server using Backup 3.0.x, the backup may fail to complete. The backup may appear to have completed successfully, but the backup file's extension will be named incorrectly:

```
Home Folder - 2005.09.01-18.26.11.495.backXX
```

instead of using the proper file extension:

```
Home Folder - 2005.09.01-18.26.11.495.IncrementalBackup
```

This issue can occur if Norton Anti-Virus' Auto-Protect feature is enabled and if the destination volume is running Windows 2003 Server with Active Directory enabled.

To resolve this issue, disable Norton Anti-Virus' Auto-Protect feature before you start the backup. For assistance with disabling Auto-Protect, please consult the documentation included with Norton Anti-Virus or contact Symantec.

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Published Date: Feb 19, 2012

Backup 3 may unexpectedly quit if essential applications are missing

This article has been archived and is no longer updated by Apple.

Backup 3.0.x may unexpectedly quit if certain essential system applications are missing or have been renamed.

This issue may occur if any of the following system utilities are missing from their standard location:

```
du
hdiutil
gzip
```

These files are normally invisible. If Backup is unexpectedly quitting when you try to use it, look for the files and make sure they're there:

1. From the **Go** menu, select **Go to Folder**.
2. In the window that appears, type the following exactly as it appears below:
   ```
   /usr/bin/
   ```
3. Click on Go.

The folder should appear in a new window, displaying its contents. If any of the above files are missing, reinstall Mac OS X.

Published Date: Feb 19, 2012

Aperture 1.x does not recognize some DNG files

This article has been archived and is no longer updated by Apple.

Aperture 1.x only supports DNG files originated from cameras for which Aperture 1.x also supports the RAW format. If you import other DNG files, you may see the "Unrecognized File Format" message.

For the list of RAW-supported cameras, see this page.

Aperture 2 offers baseline support for most DNG images, regardless of whether the camera's RAW format is natively supported. For more details, click here.

Published Date: Oct 10, 2016

Mac OS X Server 10.4.3: MySQL Network Connection disabled by default

This article has been archived and is no longer updated by Apple.

The "Allow network connections" option is disabled by default in MySQL starting with Mac OS X Server 10.4.3.

Symptom

WebObjects application instances are unable to connect to MySQL. The JDBC connection will fail.

Solution

For Mac OS X Server with Server Tools installed:

1. Go to /Applications/Server.
2. Launch the MySQL Manager application, and stop the MySQL service if it is running.
3. Enable "Allow network connections" by selecting the checkbox
4. Restart the MySQL service.

Note: You need to have administrator privileges to modify the “Allow network connections﷒? settings.

For Mac OS X Server without Server Tools (headless installation):

1. Edit the file /etc/mysqlManager.plist so that it has "yes" instead of "no" for the key "allowNetwork":

```
<key>allowNetwork</key>
<string>yes</string>
```

2. Stop and start the MySQL Service:
   a. Execute this command: `sudo SystemStarter stop MySQL`
   b. Wait a few seconds and confirm that the service has shut down.
   c. Execute: `sudo SystemStarter start MySQL`

Published Date: Feb 19, 2012

Aperture: Can‘t remove images from an album

This article has been archived and is no longer updated by Apple.

When you've made a certain type of selection, you won't be able to remove images from an album. the **Remove from Album** command in the Images menu will be dimmed, and the Delete key will have no effect (other than triggering an alert sound).

This happens when you've selected an image or images from an open stack, but not the entire stack. Aperture indicates selection of an entire stack by a thin white line around its edges.

The best way to resolve the issue is to close the stack before deleting.

Published Date: Oct 10, 2016

Mac OS X 10.4 (Japanese): Can‘t type in Copies field in Print window

This article has been archived and is no longer updated by Apple.

You may not be able to enter text in a Print window's Copies field when using some Carbon applications (applications that work natively with both Mac OS X and Mac OS 9) such as AppleWorks 6.2.9.

The first time you type in the Copies field using the Kotoeri Romaji input method, it works as expected. But on a subsequent attempt (second, third, or later) in the same application, the input fails.

Workarounds

Use any of these workarounds:

- Drag the Print window to a different position, then type in the Copies field.
- After the Print window appears, click the desktop once or go to a different application, then go back to the original application and print.
- Quit and reopen the application before printing.

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

Motion unexpectedly quits ("crash") With Decklink HD Card

This article has been archived and is no longer updated by Apple.

Motion may unexpectedly quit when the Blackmagic Decklink "Video Desktop" is enabled. Specifically, it occurs when adding filters to a layer or object in your project.

To resolve the issue, update to Mac OS X 10.4.4 or later.

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Published Date: Oct 10, 2016

Mac OS X Server: Authentication issues with DIGEST-MD5, "SASL error -13"

This article has been archived and is no longer updated by Apple.

Sometimes the SASLRealm will be set to different values on an Open Directory master and its replicas. This can happen when a master doesn't have the correct hostname; it's not an issue in the absence of replicas. The symptoms you see are:

- A user can't log in to some systems
- The `/Library/Logs/PasswordService/ApplePasswordServer.Server.log` on the relevant password server contains this message:

```
Dec 5 2005 14:28:26 AUTH2: {0x4322345c67952fc40000016800000685, user1} DIGEST-MD5 authentication failed,
SASL error -13 (password incorrect).
```

When you create or set users passwords, the SASLRealm for that password server is used to create the DIGEST-MD5 hashes. This password will work on all password servers that also have the same SASLRealm setting. They will not work on password servers with a different SASLRealm setting. **Note:** other authentication methods will work.

Applications that use DIGEST-MD5 are LoginWindow, and SSH when Kerberos is not used.

To resolve the issue:

1. Using your text editor of choice, set the SASLRealm in the file `/Library/Preferences/com.apple.passwordserver.plist` to be the same on each of the master and replicas. Normally you should use the fully qualified domain name (FQDN) of the master in place of "example.apple.com":

   ```
   <key>SASLRealm</key>    <string>example.apple.com</string>
   ```

   If the file does not have an SASLRealm entry add one before the </dict>.

2. Restart the PasswordService using this command:

   ```
   killall PasswordService
   ```

3. Reset the all the passwords that don't work.

Methods for testing passwords

You should test an affected user account with both of these commands. Run them on the master and the replicas.

To test for DIGEST-MD5 authentication:

```
dirt -u <username> -p <password>
```

If this works, the last line will be "Success". To test another method, SMB-NT:

```
dirt -a nt --u <username> -p <password>
```

If this works, the last line will be "Good".

If the first test says the password is incorrect and the second one works, then the user needs a password reset.

Setting passwords

You can use Workgroup Manager or this command to set the passwords. This command will work even if the domain admin is having issues and Workgroup Manager can't:

```
pwpolicy -a diradmin -p <diradmin's password> -u  <user account> -setpassword <password>
```

Published Date: Oct 10, 2016

Aperture: Metadata import/export issues (IPTC, keywords, EXIF)

This article has been archived and is no longer updated by Apple.

Aperture currently has several issues related to metadata import/export under investigation. This article describes the issues and distinguishes them from one intentional aspect of metadata export which may be perceived as an issue.

Issue: EXIF missing when exporting versions as TIFF, PNG

Note: Aperture 1.1 with Mac OS X 10.4.6 or later resolves this issue (about updating).

If you export a version as TIFF or PNG, you may see that most of the EXIF data is missing. However, it's present when exporting to JPEG or PSD (assuming that you have updated to Aperture 1.0.1 and Mac OS X 10.4.4, or later). Keywords and IPTC data should export as expected. Note that PNG simply does not support EXIF.

Issue: EXIF missing after Open With External Editor Command

Note: Aperture 1.1 with Mac OS X 10.4.6 or later resolves this issue (about updating).

Since the Open With External Editor command is creating a PSD or TIFF version, it behaves as described above. This means that if you have updated to Aperture 1.0.1 and Mac OS X 10.4.4, or later, that you would have metadata for a PSD but not a TIFF.

Issue: Metadata added prior to Aperture import is missing

If you use a third-party application such as Photo Mechanic to apply metadata to RAW images prior to Aperture import, the metadata is not currently recognized in the Aperture metadata inspector. However, it remains part of the file and is present if you export the master.

Additionally, if you add metadata using Aperture, export the images, and then reimport them, the Import window won't show what you added in the fields following **Add Metadata From**. These fields are designed for adding new metadata at time of import, not for displaying old metadata.

Issue: Aperture won't import certain files with added metadata

Under certain circumstances with certain cameras, Aperture may not be able to import files which have had metadata added by Photo Mechanic or similar applications. Sometimes the file may import but then result in an "unsupported format" message.

By Design: Aperture won't export metadata with RAW masters

Unlike applications such as Photo Mechanic, Aperture does not write IPTC and keywords to the original RAW file. Instead, Aperture stores this information in its library and attaches it when exporting versions in JPEG, TIFF, PSD, or PNG format. If you export the RAW masters, none of your metadata changes will come along with them. Unlike the issues listed above, this feature is by design.

If your goal is to archive RAW files outside of Aperture with metadata attached, you'll need a workaround to this aspect of Aperture's metadata handling. Because Aperture is designed to read added metadata at time of import (despite the current issue described above), the best long term solution (after issues are resolved) will be to add your metadata in Photo Mechanic (or similar) prior to importing them to Aperture and then refrain for the most part from using Aperture's metadata tools. If you don't like that workaround, a secondary workaround is to export JPEG versions to be kept alongside the RAW masters. To save disk space, the JPEG copies could be a minimal size.

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Published Date: Oct 10, 2016

Safari: POSIX error when attempting to upload

This article has been archived and is no longer updated by Apple.

If you're using a website with a form that allows you to upload files directly from Safari, you might occasionally encounter this message:

> POSIX error: Is a directory (NSPOSIXErrorDomain:21)

A "directory" is another term for a folder, and you can't upload folders in this scenario without first converting the folder to a single file (more on that in a second). Some files that don't *look* like folders in the Finder *really are* folders which are not used as such by you, so the Finder hides their folder status by default to make your life easier. Examples of this include application packages, Pages documents, RTFD documents, and Keynote presentations.

When you see the message above, the first thing you should do is double check that you selected the correct item. After that, you need to convert it to an "archive," which is a compressed version of the file or folder which will behave as a single file.

In the Finder, select the document or application that you want to compress. From the **File** menu, choose **Create Archive**. A compressed archive of the selected item will appear in the same folder as the original. It will have the same name as the original, but with ".zip" added to the end.

Tip: If you archive multiple items at once, the archived file is named "Archive.zip". To un-archive a zipped file, just double-click on it in the Finder.

Published Date: Feb 19, 2012

Aperture: Image is garbled after using external editor

This article has been archived and is no longer updated by Apple.

If you use the Open With External Editor command, and have your preferences set to use PSD format for doing so, and then convert the image to CMYK in Photoshop, it will appear as a section of misaligned separation layers when it returns to Aperture. You will not get an "unsupported format" message as may occur in some other situations. For a longer answer, see Question 5 of Aperture: Avoiding issues with your External Editor (FAQ).

This document will be updated as more information becomes available.

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Published Date: Oct 10, 2016

Soundtrack Pro: Audio clip from a movie contains noise after being converted to looping

This article has been archived and is no longer updated by Apple.

If you convert an uncompressed audio clip from a movie to a looping clip in Soundtrack Pro 1.0.2, you may notice that the clip contains noise.

The solution is to save the audio clip as a looping file and then use the new clip.

1. Control-click the clip in the Multitrack Editor and choose **Save Clip As** from the shortcut menu.
2. In the resulting dialog box, be sure to select the "Looping" radio button before saving the file.
3. Replace the original audio clip with the new one.

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

iMovie chapter markers won‘t be updated in iDVD project

This article has been archived and is no longer updated by Apple.

When you export an iMovie to iDVD you can add chapter markers to your movie so that viewers can review different sections of the movie on DVD.

After you create and save your iDVD project, you can return to the iMovie project and make changes. These changes will be applied to the iMovie in your iDVD project.

When changes have been made to the iMovie project, you will see a Modified Asset Warning dialog when you open your iDVD project again.

If you select Update, the changes you made in iMovie are reflected in the iDVD project, but your chapter markers may not function as expected in iDVD or on your DVD.

If you make changes to an iMovie project with chapter markers, you should send the iMovie to iDVD by selecting the Create iDVD Project button in the iDVD pane instead of just updating the project via the Modified Asset Warning dialog.

Published Date: Oct 10, 2016

QuickTime Pro: DV format movies may require adjustment for iPod

This article has been archived and is no longer updated by Apple.

If you have QuickTime Pro 7.1.3 or later, just choose **File > Export** and then choose **Movie to iPod** from the **Export** pop-up menu to convert movies for use on a video-capable iPod.

If you have QuickTime Pro 7.0.3 to 7.1.2, it's still easy to convert movies to a format that will play on video-capable iPod, but it involves a few more steps. Before you convert a DV format movie using QuickTime's **Movie to iPod** exporter, it's a good idea to check the movie's display dimensions. DV format movies often need to be adjusted to a 4:3 aspect ratio (as described in the steps below). Doing this will ensure that the video of the resulting iPod-ready movie conforms to the proportions of the iPod's display.

This illustration shows what a DV NTSC video looks like on the iPod without adjustment on the left, and then on the right, with the adjustment described below.

Note: The following steps should be used with DV format movies. Most other formats do not require adjustment for use with QuickTime's Movie to iPod exporter.

1. Open the your movie in QuickTime Player.
2. From the **Window** menu, choose **Show Movie Properties**.
3. In the Properties window, select the Video track.
4. Select the Visual Settings button. (If you do not see the Visual Settings button, try selecting the Audio track, then reselect the Video track to refresh the button display.)
5. Deselect the Preserve Aspect Ratio checkbox.
6. Set the Scaled Size settings to 640 x 480 pixels.

   If your movie was not already at 640 x 480, you should see it change its shape slightly after entering the dimensions "640" and "480" in the Scaled Size fields. If your movie doesn't take the adjustment:
   - Press the Tab key on your keyboard to make sure that the numbers are registered after you typed them.
   - If your movie has tracks other than Audio and Video listed in the upper portion of the Properties Window (such as timecode tracks or hint tracks), disable them by unchecking the corresponding boxes for any tracks other than Audio, Video and Quartz Composer tracks.

7. Close the Properties window.
8. From the **File** menu, choose **Export**.
9. From the **Export** pop-up menu, choose **Movie to iPod (320x240)**.
10. Click Save to save your movie.

Additional Info

The DV format uses non-square pixels. When displayed on a television using DV equipment, the video automatically appears at a 4:3 ratio. But because your computer display has square pixels, the DV video is displayed with its geometric proportions slightly stretched when showing all pixels without interpolation.

Some software, like iMovie, makes a display adjustment automatically. But by default, QuickTime Player displays all pixels of DV format movies without interpolation, allowing for precise verification of DV video in professional workflows. This is by design, but it calls for compensation in cases such as the Movie to iPod exporter, which uses the movie's current aspect ratio for its input.

With NTSC video, the video will appear on the iPod with black bars above and below the video. If the source was DV PAL, the video will appear with black bars on either side when viewed on the iPod display. Use the steps above for both PAL and NTSC to ensure correct display of DV video when the destination is a 4:3, square-pixel display, such as the iPod.

Published Date: Feb 19, 2012

iDVD: More memory recommended for encoding HDV

This article has been archived and is no longer updated by Apple.

HDV is a new video format that allows you to record high-definition video onto standard DV media (such as mini-DV tape) using a supported camcorder. You can edit and export HDV video in its native format using Final Cut Pro 5. You can then import the native HDV QuickTime video files into an iDVD project for inclusion on a standard definition DVD.

You can choose between best performance and best quality when you set up the encoding of the video in your DVD project. If you choose best performance, you have the additional option of enabling background encoding, which allows you to continue working on your project while the video is encoded in the background. If you do not have background encoding enabled, the video will be processed when you burn a DVD or save as disc image.

Encoding the video in your iDVD project can take significantly longer with HDV source video. Adding additional memory to your computer will improve performance. The speed of your processor(s) will also impact the performance.

Native HDV editing is a feature of Final Cut Pro 5. While you can also capture and edit HDV in iMovie HD and Final Cut Express HD, these applications transcode the HDV source video to the Apple Intermediate Codec. The Apple Intermediate Codec is a high-quality video codec that Apple developed for use as an alternative to native MPEG-2 HDV editing in an HDV workflow. Transcoding to the Apple Intermediate Codec is also an option in Final Cut Pro.For more information click here.

Published Date: Oct 10, 2016

Mac OS X Server 10.4: Group members can‘t save to a CIFS share

This article has been archived and is no longer updated by Apple.

When using certain applications, group members cannot save to a CIFS share; they get a permissions error.

This happens on volumes that don't have ACLs enabled. The solution is to either enable ACLs or to disable the ACLs in /etc/smb.conf. Follow the steps below to disable the ACL support for the shares in question.

1. Open /etc/smb.conf in a text editor. The file is owned by root so you need to either use sudo or log in as root.
2. Find the section for the relevant share. For example, if the share is named "Share", there will be a section named "[Share]" in the file.
3. Look for the line in the share section containing "vfs objects = darwin_acls".
4. Remove "darwin_acls" from the line so it looks like this:

   ```
   vfs objects =
   ```

5. Save the file.
6. Stop and Start the CIFS server.

Published Date: Oct 10, 2016

Mac OS X Server 10.4: Installing on a computer that won‘t start up from the Installation disc

This article has been archived and is no longer updated by Apple.

Some computers that are compatible with Mac OS X Server 10.4 can't start up (boot) from the Server Installation CD or DVD. When you try it, the computer may display a blank, gray screen or kernel panic. For this reason, Apple allows you to use a metapackage (.mpkg) file from the Installation disc to install Mac OS X Server over a running Mac OS X 10.4 (client) installation.

Note: If you are running Mac OS X 10.4.10 you cannot use the metapackage file from the Installation disc. Instead, follow the instructions in article 305537.

Note: You must not use this capability to install software that is older than what shipped with your computer (learn more). This document is only intended for Mac OS X Server 10.4 or later on PowerPC-based computers (more).

To install Mac OS X Server 10.4 from the .mpkg file, follow these steps:

1. Be sure that all software on the target computer is up to date.
   Note: If you decide to start with a fresh system by doing an erase install (this is not required), be sure to complete the Mac OS X Setup Assistant while the computer is connected to your network.
2. Be sure that your computer is connected to your network.
3. Make sure Windows Sharing is disabled in Sharing preferences.
4. Restart the computer.
5. Insert the DVD or the Disc 2 CD from the retail version of Mac OS X Server 10.4.
6. Open the MacOSXServerInstall.mpkg Installer, which is located in the "Other Installers" folder on the DVD and at the root level of the Disc 2 CD.
7. Follow the onscreen steps.
8. When finished, restart the computer.
9. The Server Assistant appears. Use it to complete the setup, making sure that you configure the computer as a standalone server.
10. Use Software Update to install all available updates.
11. Restart the computer.
12. Go back to Software Update and install all the remaining updates, restarting your computer as necessary.
13. If desired, you can now use Server Admin to set up the server as an Open Directory Master.

Note: This procedure also appears on page 106 of the Getting Started manual, available here.

Published Date: Oct 10, 2016

iDVD ‘08: After 99 images in a slideshow, set-top DVD player will reset to chapter 1

This article has been archived and is no longer updated by Apple.

In iDVD '08, your slideshows are no longer limited to 99 images. You can now have up to 9,801 images in a slideshow. When you are playing a slideshow on your DVD player, it will number the slides (which are chapters) from 1 to 99 and then start numbering over again at number 1 (on the one-hundredth slide). This is normal and not something you can control when you author your DVD. It is a specification that applies to all DVD players.

Related documents

Article 302962: Slideshow audio playback drops out after 99 images
Published Date: Oct 10, 2016

iDVD ‘08: Slideshow audio playback briefly drops out after 99 images

This article has been archived and is no longer updated by Apple.

In iDVD '08, your slideshows are no longer limited to 99 images. You can now have up to 9,801 images in a slideshow. If you add a slideshow to your iDVD project with more than 99 images and an audio track, you may notice that the audio drops out very briefly after the 99th slide on your burned DVD.

You won't notice this if:

- You have 99 or fewer slides in a slide show.
- You preview a slide show with more than 99 images in iDVD (it only occurs on a burned DVD or disc image).

Related documents

Article 302961: After 99 images in a slideshow, set-top DVD player will reset to chapter 1

Published Date: Oct 10, 2016

Final Cut Pro 5: About capturing down-converted DV from HDV source

This article has been archived and is no longer updated by Apple.

Final Cut Pro 5 supports capturing a number of different media types using FireWire device control. Because of differences in the data-structures of DV and HDV, there are some important points to keep in mind if you plan to capture DV video that is being down-converted on-the-fly from an HDV tape source.

Some HDV decks and camcorders are capable of playing an HDV tape and performing a down-convert of that signal, sending a DV signal out via FireWire. Final Cut Pro can capture this DV signal, but regular DV device control may not be appropriate in this capture scenario, because the tape transport mechanism is not really handling DV-formatted video on tape.

DV-formatted video features intra-frame compression; that is, each frame contains all the data needed to represent that frame. HDV uses more complex compression methods, and it's necessary for several frames of HDV to be read into memory before they can be displayed or captured. A single frame of HDV video may contain information about the picture content of neighboring frames, while not containing an entire "picture" of data itself. (HDV features an MPEG-2, Long-GOP architecture.)

Because of these differences, HDV and DV use different device control methods for communicating with the deck or camera during capture. If there are timecode breaks on the tape and Final Cut Pro's preferences are set to "Make New Clip" on timecode breaks, unexpected results may occur.

To experiment with capturing DV from an HDV source that is being down-converted on-the-fly, it's a good idea to change the setting in User Preferences for "On Timecode Break" to "Abort Capture" or "Warn After Capture", as opposed to the default, "Make New Clip".

If you use Capture Now and the preference is set to "Abort Capture" on timecode breaks, you'll have to attend to the process since the capture will stop after each timecode break. The upside of this method is that you will maintain original timecode, allowing you to re-capture later if desired.

If you use Capture Now and the preference is set to "Warn After Capture" on timecode breaks, you can capture the entire tape at once, but the timecode of the captured result may not match what is on tape. This will preclude the possibility of subsequent recapturing based on timecode.

Another method would be to capture the source as HDV, and then use Compressor to perform the down-conversion to DV.

Published Date: Feb 20, 2012

iDVD: Make sure you have enough drive space for OneStep DVD

This article has been archived and is no longer updated by Apple.

The OneStep DVD feature in iDVD 5 enables you to quickly transfer your video onto a DVD. However, the video capture process will stop if you don't have enough drive space and you will get the following alert:

> Video Capturing Aborted

If you haven't updated to iDVD 5.0.1 or later, you may not see this message.

Free up additional drive space before trying the OneStep DVD again.

Published Date: Oct 11, 2016

Logic Pro 7.2 not compatible with ProTools 6

This article has been archived and is no longer updated by Apple.

Logic Pro 7.2 does not work under DAE/TDM with ProTools 6; DAE/TDM stops working after upgrading to Logic Pro 7.2.

For technical reasons, you can't run DAE/TDM with Logic Pro 7.2 and ProTools 6. If you are running a ProTools HD or HD Accel system, upgrading to ProTools HD 7 will resolve the issue. If you have earlier ProTools hardware that does not work with ProTools HD 7, then you will need to reinstall Logic Pro 7.1 from the original disc and use that version with DAE/TDM.

Before reinstalling, you need to delete the file `/Library/Receipts/Logic Pro.pkg`. You might also want to rename the Logic Pro 7.2 application to prevent it from being overwritten when you reinstall Logic Pro 7.1.

For more information on ProTools hardware compatibility, see the Digidesign website.

Published Date: Oct 11, 2016

iDVD can only run after DVD region code has been set

This article has been archived and is no longer updated by Apple.

You can only create or open a project in iDVD if the region code has been set on your computer.

The first time you play a DVD on your computer, your optical drive is set to the region code of the disc. The drive's region code restricts DVD Player to playing discs with the same region code or with no region code.

If you are unable to create a new iDVD project or open an existing project you must set the region code for your optical drive.

Note: You must have a display connected to your computer. If you plan to run the computer without a display attached ("headless"), you will need to connect a display in order to initially set the region code.

Published Date: Oct 11, 2016

OneStep DVD: Canceling during DVD burn may cause iDVD to stop responding

This article has been archived and is no longer updated by Apple.

The OneStep DVD feature allows you to create DVDs directly from your DV camera. However, if you cancel the process during burning, iDVD may stop responding and you'll need to force quit iDVD. If possible, avoid canceling the burn process.

This document will be updated as more information becomes available.

Published Date: Oct 11, 2016

iSync: "Can‘t initiate session" alert message

This article has been archived and is no longer updated by Apple.

If you cancel an iSync sync from your phone while the phone is syncing with your computer, you may not be able to sync again. Instead, you may see a "Can't initiate session" alert message the next time you try.

To resolve this issue, quit and reopen the iSync application, then sync. Turn the phone off and back on again if the issue persists.

Published Date: Feb 20, 2012

Logic Pro/Express, GarageBand: Duplicated software instrument track makes no sound

This article has been archived and is no longer updated by Apple.

Using more than one Novation instrument plug-in in a song does not work; only the first instance makes sound. This issue affects:

- Logic Pro
- Logic Express
- GarageBand

This issue affects Novation plug-ins, such as the V Station and Bass Station. To resolve the issue, open the plug-in GUI for the tracks that make no sound.

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Published Date: Feb 19, 2012

PowerBook G4 (Double-Layer SD) audio stutters or skips

This article has been archived and is no longer updated by Apple.

When you are running two or more audio applications on your PowerBook G4 (15-inch Double-Layer SD) or PowerBook G4 (17-inch Double-Layer SD), the audio may intermittently stutter, echo, or skip backwards. This can happen even if one audio application isn't playing or you have the sound muted in the application (such as when playing a game).

This can involve any application that uses audio, such as QuickTime, iTunes, iDVD, and many third-party applications like games and audio applications.

To avoid this, update your computer to Mac OS X 10.4.5.

Published Date: Oct 11, 2016

Microsoft Office applications fail to save to a server volume

This article has been archived and is no longer updated by Apple.

If more than one user logs in to a Mac OS X Server from different client computers and with the same UID, they will be unable to save server-stored files using a Microsoft Office application after any of the users logs out. When a save is attempted, this alert will appear:

> "There has been a network or file permission error. The network connection may be lost."

Workarounds

You can use one of these workarounds:

- Use a shared directory service instead so that every user logs in with their own unique ID.
- Don't share a server user—each client user should have a unique ID.
- Unmount the server volume before logging out of Mac OS X on the client computer.

Why does this occur?

Microsoft Office applications use a "safe save" that stores files in the TemporaryItems folder that's on the same volume as the file. With a shared file system, the path is:

/.TemporaryItems/folders. *(local UID)* /TemporaryItems.

However, when one of the users logs out of the local client, the "/.TemporaryItems/folders. *(local UID)* /TemporaryItems." directory is deleted, preventing any other currently-logged in users that are using the same UID from saving from Microsoft Office applications.

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Published Date: Oct 11, 2016

GarageBand: Possible duplication of loops after updating to v3.0

This article has been archived and is no longer updated by Apple.

Duplicate Loops

The Installer for GarageBand 3 can optionally install the Apple Loops for GarageBand to any available volume or location on your system. If you upgrade from a previous version of GarageBand and elect to do this, your previously installed Apple Loops will not be moved or deleted, leading to possible duplication of some or all of the loops.

If this happens, you may delete the old copies of the loops after installing GarageBand 3. For an overview of the default locations for GarageBand loops, look here.

If you use any other applications that use Apple Loops, such as Logic Pro, Logic Express, Soundtrack Pro, or Soundtrack, you may wish to index the newly installed loops from GarageBand 3.

Published Date: Feb 19, 2012

DVD Studio Pro 3: Not compatible with Power Mac G5 (Late 2005) or iMac G5 (iSight)

This article has been archived and is no longer updated by Apple.

DVD Studio Pro 3.x requires a computer with an AGP video card. PowerMac G5 (Late 2005) models (released October 19, 2005) and iMac G5 (iSight) models feature newer PCI Express video cards. Because of this, DVD Studio Pro 3.x is not supported on these computers and if you install it you may encounter unexpected behavior.

For instance, on Quad processor models, if you try to import MPEG-2 assets DVD Studio Pro will unexpectedly quit. This does not occur with DVD Studio Pro 4.x.

If you need to use DVD Studio Pro on Power Mac G5 (Late 2005) or iMac G5 (iSight) computers you'll need to purchase Final Cut Studio.

For More information on Final Cut Studio click here.

Related Documents

302826: "Compressor 1.X not compatible with Power Mac G5 (Late 2005) or iMac G5 (iSight)"
302667: "Final Cut Pro 4.5 HD and earlier not supported on Power Mac G5 (Late 2005) or iMac G5 (iSight)"

Published Date: Oct 11, 2016

GarageBand 3: Blank space between tracks

This article has been archived and is no longer updated by Apple.

Creating new Real Instrument tracks sometimes causes white space to be created between existing tracks and the new tracks.

This happens if you change the number of Real Instrument tracks in the Advanced preference pane from Automatic to a specific number higher than 64 and then subsequently add more than 64 Real Instrument tracks to a song.

To resolve the issue, quit and relaunch GarageBand after the issue occurs.

Published Date: Oct 11, 2016

GarageBand 3: Media browser uses different audio interface than GarageBand

This article has been archived and is no longer updated by Apple.

The Media Browser does not follow the GarageBand audio settings. Instead, it uses the default audio device setting from Audio MIDI Setup.

If GarageBand is set to use a different interface, then they will not match. To resolve the difference, set Audio MIDI Setup to use the same audio interface as GarageBand.

Published Date: Oct 11, 2016

GarageBand 3: Long Apple Lossless files stop playing before the end of the file

This article has been archived and is no longer updated by Apple.

Long Apple Lossless files sometimes stop playing before the end of the file.

This occurs if the Apple Lossless file is longer than the maximum GarageBand song length of 1999 measures. When an Apple Lossless file is added to a song, the marker does not automatically move past the maximum possible song length to accommodate files that exceed this length.

To resolve this issue, reduce the tempo of the song. Cutting the tempo in half may be a good starting point, depending on the length of the Apple Lossless file.

This document will be updated as more information becomes available.

Published Date: Oct 11, 2016

Xsan: Configuring Emulex switches in a Cascade topology

This article has been archived and is no longer updated by Apple.

When you configure Emulex switches for a topology that involves cascading (also known as trunking and inter-switch linking), it is important to configure the switches in a "star" topology with a single "root" switch at the center with "edge" switches connected to the root switch with two fibre channel connections.

Note: For simpler non-cascading configurations, see this article instead.

The steps below refer to Smart Settings. The Smart Settings for each port on Emulex 355 and 375 fiber switches reflect the role that the particular device attached to that port will provide in the fabric topology. The Smart Setting varies according to whether the port will connect to a host (initiator), a storage device (target), or another switch (tree cascade).

The following steps are to be performed in the Emulex Web Manager. To learn more about Web Manager, see the User Guide which is specific to your model Emulex switch. You can download Emulex switch manuals here.

Root Switch Setup

1. Set up Zoning:
    a. Choose **Advanced Functions > One step zoning >**.
    b. Select the checkbox for Zoning Active.
    c. Click Submit.

2. Set up Smart Settings:
    a. Choose **Port > Smart Settings**.
    b. Be sure that each of the two ports for every edge switch that you have is set to "tree cascade."
    c. All other ports should be set to target or initiator.
    d. Click Submit.

3. Configure Auto trunking config:
    a. Choose **Advanced Functions > Automatic Trunking**. You will see each of the Tree Cascade ports listed to the left. Across the top you will see Trunk Groups.
    b. Configure the two ports that are connected to the first edge switch to belong to Trunk Group A.
    c. Set the two ports that are connected to the second edge switch to belong to Trunk Group B, and so forth.
    d. Click Submit.

Edge Switch Setup

Follow the steps below for each edge switch.

1. Set up Zoning:
    a. Choose **Advanced Functions > One Step Zoning >**.
    b. Select the checkbox for Zoning Active.
    c. Click Submit.

2. Set up Smart settings:
    a. Choose **Port > Smart Settings**.
    b. Set the ports which are connected to the root switch to "tree cascade." These ports will be connected to two of the ports set to tree cascade on the root switch.
    c. All other ports should be set to target or initiator.
    d. Click Submit.

3. Configure Auto trunking config:
    a. Choose **Advanced Functions > Automatic Trunking**. You will see each of the two Tree Cascade ports listed to the left. Across the top you will see Trunk Group A.
    b. Configure the ports that are connected to the root switch to belong to Trunk Group A.
    c. Click Submit.

4. Set up Load Balancing:

a. Choose **Advanced Functions > Load Balancing**.
b. For each port that is set to initiator, alternate between Trunk Group A Port `a` and Trunk Group A Port `b`. (where `a` and `b` are the port numbers that correspond to those which are connected to the root switch)
c. Click "Submit."

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Published Date: Feb 19, 2012

Aperture: Images seem to be missing from Filter HUD searches or Smart Albums

This article has been archived and is no longer updated by Apple.

Sometimes images that you expect to find don't appear in the results of a Filter HUD search or Smart Album. This usually happens because the missing images have a Rejected (x) rating.

Any time you open the Filter HUD, whether in a Project or Smart Album, the rating will default to Unrated or Better until you change it. A reject ranks lower than unrated, so your search results will react accordingly.

If you want all images to be eligible for search results, remember to pay attention to the Rating that you are specifying. Move the Rating slider to the left so that you have "Rating: is greater than or equal to x."

Published Date: Oct 11, 2016

GarageBand 3 songs won‘t open in earlier versions

This article has been archived and is no longer updated by Apple.

If you take a song that you created in GarageBand version 1 or 2, open it in GarageBand 3, and save it, then it will no longer open in GarageBand 1 or 2.

This happens because GarageBand 3 has a new song format that makes its projects incompatible with earlier versions. To maintain backward compatibility, create copies of older songs before opening them in GarageBand 3.

Note that there's no warning messages about this compatibility issue.

Published Date: Oct 11, 2016

GarageBand 3 does not display podcast URLs in movies shared from iMovie

This article has been archived and is no longer updated by Apple.

When you share, or "export," a movie from iMovie to GarageBand, URLs (web addresses) embedded in your movie don't appear in GarageBand.

Podcast URLs do not transfer when sharing from iMovie to GarageBand. As a workaround, you can add the URLs in GarageBand.

Published Date: Oct 11, 2016

GarageBand 3 quits unexpectedly when playing long Apple Lossless file

This article has been archived and is no longer updated by Apple.

When using Mac OS X 10.3 to 10.3.9, GarageBand 3 may quit when playing long Apple Lossless files. This issue doesn't affect GarageBand 3 when used on Mac OS X 10.4 "Tiger."

Published Date: Oct 11, 2016

iPhoto 6: "Actual Size" photocast photos are recompressed

This article has been archived and is no longer updated by Apple.

When photocasting, the Actual Size preset refers to image dimensions, not image compression. The resulting files will be compressed in JPEG format (regardless of original format) to reduce upload and download times, according to the compression option you selected when setting up the photocast.

Published Date: Oct 11, 2016

iMovie HD 6: Import your files first before dragging to drop zones

This article has been archived and is no longer updated by Apple.

In iMovie HD 6, you can drag a movie to a drop zone from the timeline or Clips pane. You cannot drag a movie to a drop zone from another location such as the Finder or another application.

If you have files in the Finder or anywhere outside of iMovie HD 6, import them into in your project, and then drag it from the Clips pane. You can also import the items into other applications recognized by the media pane in iMovie (such as iPhoto). You can drag items from this pane into drop zones as well.

Published Date: Oct 11, 2016

I don‘t have a DVD drive to install iLife ‘06 or my computer doesn‘t recognize the iLife ‘06 Install Disc

This article has been archived and is no longer updated by Apple.

If you have a Mac with a G4 processor that has a CD drive and no DVD drive, you won't be able to install iLife '06 because the computer won't recognize the iLife '06 Install DVD disc. This can include certain model eMac computers and early model PowerBook G4 computers.

Unlike previous versions of iLife, there is no iLife '06 Install CD. There is only an iLife '06 Install DVD. Make sure that your computer meets the minimum requirements for installing iLife '06. If you have another computer with a DVD drive and if all requirements are met except the DVD drive, you can do one of the following:

Option 1

Use target disk mode for the install.

1. Insert the iLife '06 Install DVD into the computer with the DVD drive.
2. Shut down both computers.
3. Restart the computer with a DVD drive in target disk mode.
4. Connect the computer with the DVD drive to the computer with the CD drive using a FireWire cable.
5. Turn on the computer with the CD drive.
6. When that computer starts up, the second computer's hard drive will appear on the first computer's desktop and the iLife '06 Install DVD will also show up on the desktop. Now you can install iLife '06 on the computer with the CD drive.

Option 2

Copy to a network or external drive to install.

Use another computer with a DVD drive, and drag iLife '06 Install DVD to any of the following with at least 10 GB of free disk space:

- A network file server
- An external hard drive
- An iPod in Macintosh format

When the copy is complete, you can install iLife '06 from the volume above on the computer without a DVD drive.

Option 3

Connect and install using file sharing.

1. Insert the disc on another computer on your network and turn on file sharing.
2. From the computer with the CD drive, connect over the network to the computer with the DVD drive select the iLife '06 Install Disc as the volume to mount.
3. Install iLife '06 from the server volume.

If your computers aren't already connected to a network, see this document for information on creating a small network.

Published Date: Oct 11, 2016

iMovie HD 6: Export to compatible HD devices

This article has been archived and is no longer updated by Apple.

In iMovie HD 6, you can export your movie to compatible HDTV and HD camcorders via FireWire. To do so, follow these steps:

1. Connect your compatible FireWire HDTV or HD Camcorder to your computer.
2. Open iMovie HD and create your movie.
3. From the **Share** menu, choose **Video camera**. If the HD device is **not** compatible with iMovie HD, the message "Attached devices: none" appears in the open window:

Published Date: Oct 11, 2016

iMovie: Exporting to "Full Quality" may not include URLs, Chapter Markers

This article has been archived and is no longer updated by Apple.

When you export to QuickTime using the "Full Quality" preset, iMovie creates a file based on the native format of the current project. This format is selected when you first create the project based either on the option you choose, or the first footage you import into the project.

Here is a list of the options you can choose when creating a project, and the resulting file format that would be exported when selecting "Full Quality".

Project format	Full Quality export format
DV or DV Widescreen	.dv file, DV Stream format
HDV	.mov file, Apple Intermediate Codec
MPEG 4	.mp4 file, MPEG-4 video, AAC audio
iSight	.mov file, Photo-JPEG, 16-bit audio

Some of these file formats do not contain chapter markers, URLs, aspect ratio flags, playback quality flags, or other metadata. As a result, when viewing or importing these files into other applications, these items will not be retained or read; because they are not a part of the file you are trying to import.

Also, DV and HDV files usually have rectangular pixels. As a result, the image may appear stretched when viewed in another application, such as QuickTime Player. This is normal for this format. The iMovie preview window compensates for the pixel shape depending on the monitor you use to view the project.

Note: When viewing a .dv file in QuickTime Player or other applications, note that it may also appear somewhat pixelated.

Published Date: Oct 11, 2016

Motion: Canvas can‘t be moved to second PCI Express graphics card

This article has been archived and is no longer updated by Apple.

PowerMac G5 (Late 2005) models (19 Oct 2005) and the Mac Pro feature newer PCI Express graphics cards. Though you can install more than one compatible PCI Express card in your computer, the Motion Canvas needs to be on the main display.

Your compatible PCI Express card can connect to two displays. If you add another card and display, objects in Motion's Canvas will not be displayed correctly on a display which is connected to the second graphics card.

Motion performance depends on the type of graphics card installed in your computer. For recommended and minimum system requirements, click here.

This document will be updated as more information becomes available.

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Published Date: Oct 11, 2016

iWeb: Resizing a playlist horizontally can lead to erroneous song selection

This article has been archived and is no longer updated by Apple.

In iWeb, you can drag a playlist of songs from the Media browser to the iWeb canvas. This lets other easily find the songs on the iTunes Store. If you shrink a playlist horizontally by dragging its selection handles to the left or right, users may not get the right song in the iTunes Store.

Each song in the playlist has an associated icon (a small gray circle with a white arrow) that "links" to a search for that song in the iTunes Store. If you shrink the playlist too far, some songs may line up incorrectly with their respective icons. When the site is published and a song is selected, it may link to the wrong song in the iTunes Store.

To avoid this issue, try not to resize your playlist horizontally to the extent that a song title is not lined up with its icon:

Here's the correct way to include a playlist:

Here's the same playlist that has been collapsed too much and will cause problems when users select a song from your published website:

Note: Published playlists can be used to share your favorite playlists with others so they can find the songs in the iTunes Store. You cannot play a song from a published playlist by clicking its link.

Published Date: Oct 11, 2016

iWeb: Drag photo albums one at a time

This article has been archived and is no longer updated by Apple.

You can use the Media browser in iWeb to drag an iPhoto album to your Photos page. However, you cannot select and drag multiple albums (using Shift-click or Command-click). If you want to add several iPhoto albums, you must add them one at a time. Each Photos page can hold up to 99 photos.

Note: You can add photo albums to iWeb pages other than the Photos page, but pictures are easier to organize if you use the photo grid on the Photos page.

Published Date: Oct 11, 2016

iWeb: Do not use similar names for your sites

This article has been archived and is no longer updated by Apple.

If you have two sites in iWeb with the same name but different capitalization (for example: "site" and "SITE"), after publishing, only one site will appear online.

To prevent this, do not give your sites names that are the same except for capitalization. Use numbers (Site1, Site2) or different names (Work, Home) to name your different sites in iWeb.

Published Date: Oct 11, 2016

iWeb: Original sites are overwritten when publishing to the same folder

This article has been archived and is no longer updated by Apple.

In iWeb, when you choose the "Publish to a Folder" option from the File menu, the sites in the Site Organizer are published to the local folder of your choice. If you make changes and publish again to the same folder, the folder's previous sites will be overwritten — you will not receive a warning.

Published Date: Oct 11, 2016

iWeb: About using identical page names on multiple sites

This article has been archived and is no longer updated by Apple.

iWeb allows you to build more than one website. For instance, you may decide to create a personal site and a business site. With iWeb 1.0, you cannot use the same name for two pages, even if they are on different sites. For example, if you have a page called "Welcome" on Site 1, you cannot have a page called "Welcome" on Site 2. iWeb will warn you if you try to rename a page using a duplicate name with this alert:

> Invalid Name
> The name "Welcome" is already in use and cannot be used. Please choose a different name.

iWeb automatically renames multiple template pages (like Welcome or Photos) by adding a number at the end of the page name.

Updating to iWeb 1.0.1 will allow you to use the same name for different sites. However, you can’t use the same name for different pages on one site. If you try, iWeb will add a number to the name.

Published Date: Oct 11, 2016

iWeb: Photo captions with large font sizes may not display

This article has been archived and is no longer updated by Apple.

The photo templates in iWeb allow you to easily arrange and display photos with captions on your website. If you set a very large font size or have several lines for your photo captions, the text may get cut off by the border area around the photo.

You can adjust the font size of text by choosing Font from the Format menu, and then choosing Show Fonts. You can change the number of columns and the height of captions using the Graphic Inspector.

For more information on adding photos and captions see "Adding photos and captions" in iWeb Help.

Published Date: Oct 11, 2016

iWeb: Long page names may not display properly in the navigation menu

This article has been archived and is no longer updated by Apple.

iWeb automatically creates a navigation menu — a table of contents — on each page in your website which lists each page in your site as a link. Very long page names may not display correctly in certain themes. If you are using long page names, check the navigation menu of each page in your site to make sure that the links are displayed correctly. To see how the navigation menu appears in a web browser, publish your site to a folder and visit the site.

Tip: If you don't wish to see a page's name in the navigation menu, simply select the page in the Site Organizer and in the Page Inspector deselect the "Include page in navigation menu" checkbox.

Published Date: Oct 11, 2016

iWeb: How much disk space will my site use?

This article has been archived and is no longer updated by Apple.

If you need to determine how much disk space your website will take up on your iDisk before you publish your site, try the following steps:

1. From the **File** menu, choose **Publish to a Folder** (File > Publish to a Folder).
2. In the sheet that opens, navigate to a location on your hard drive that you can find easily (for instance, the Documents folder).
3. Click New Folder and pick a name for your folder (this is where all of the elements for your website will be saved).
4. Click Choose.
5. After the site has been published, iWeb will give you a choice to Visit Site Now (which will open the site in your default web browser) or return to iWeb (OK button). You can select either choice.
6. In the Finder navigate to the folder you created in step 3 and click once to select the folder.
7. From the **File** menu, choose **Get Info** (Command-I).

In the General section of the Info window the size of your site will be listed (if you have Mac OS X 10.4 Tiger, the size will also appear in the top right corner of the Info window).

Published Date: Oct 11, 2016

iWeb: Spaces in page names are replaced by %20 in website URL

This article has been archived and is no longer updated by Apple.

If you use spaces in site names or page names, the spaces will be replaced with "%20" in the URL of each page. For instance, if you have a site named "My Site" that contains a page named "My Page," the URL will be formatted http://web.mac.com/YourMemberName/iWeb/My%20Site/My%20Page.

This happens because some special characters (like a space) are encoded according to the the standard Uniform Resource Locator (URL) specification.

Published Date: Oct 11, 2016

Mac OS X discs for PowerPC-based Macs don‘t work with Intel-based Macs

This article has been archived and is no longer updated by Apple.

Mac OS X installation discs that came with a PowerPC processor-based Mac won't work with an Intel processor-based Mac, and vice-versa, even if both Macs came with the same version of Mac OS X. You can't start up an Intel-based Mac from a CD or DVD that came with a PowerPC-based Mac, nor a PowerPC-based Mac from an Intel-based Mac's discs, either by holding the C key at startup or by using Startup Disk preferences.

To start your computer from a disc, use the disc that came with the computer.

Published Date: Oct 11, 2016

Power Macintosh G3: PC Compatibility Card ODI Driver Issue

With a PC Compatibility Card in a Power Macintosh G3, I'm not able to get networking functioning on the PC side with the ODI driver (MACODI.COM).
This article has been archived and is no longer updated by Apple.
On a Power Macintosh G3, use the NDIS driver (MACNDIS.DOS) for networking. Consult your PC Compatibility Card User's Manual on how to install networking using the NDIS driver instead of the ODI driver.

Also, make sure you are running PC Setup 1.6.4 if you are using the PC Compatibility Card on a Power Macintosh G3.
Published Date: Feb 20, 2012

Aperture 1.0.1 appears repeatedly in Software Update

This article has been archived and is no longer updated by Apple.

Even after installing Aperture 1.0.1, Software Update may keep telling you that you need it.

Apple has corrected this Software Update issue. To realize this fix, just let Aperture 1.0.1 install one more time, and the reminders for it will stop. Alternatively, you may download this manual update to Aperture 1.0.1.

Published Date: Oct 11, 2016

How to show or hide the MiniStore in iTunes

This article has been archived and is no longer updated by Apple.

iTunes 7 and later contain an option called MiniStore. This MiniStore provides you with similar music or video choices based on the items currently selected in your library.

The first time you launch iTunes 7 the MiniStore displays a message that explains the MiniStore and asks you if you would like to turn it on. The MiniStore is not enabled until you click on Turn On MiniStore

Once enabled, you can show or hide the MiniStore by choosing **Show MiniStore** or **Hide MiniStore** from the **View** menu.

The MiniStore works like this, iTunes sends data about the item selected in your library to the iTunes Store to provide relevant recommendations. When the MiniStore is hidden, this data is not sent to the iTunes Store.

If you have an audiobook or TV show selected in iTunes, you'll see the top audiobooks or TV shows in the MiniStore. If there's not an iTunes Store available for your country, then you will see content for the USA.

You can disable the ability to show the MiniStore by disabling the iTunes Store in Parental Controls. Click here for steps to do that.

Published Date: Oct 11, 2016

Power Macintosh G3: Using PlainTalk Speech Recognition v1.5

This article discusses PlainTalk Speech Recognition 1.5 compatibility with Power Macintosh G3 computers, as well as solutions to known issues. This article has been archived and is no longer updated by Apple.
PlainTalk Speech Recognition 1.5 can be used with platinum colored Power Macintosh G3 computers. It cannot be used with Power Macintosh G3 (Blue and White) computers. PlainTalk 1.5.4 is compatible with the Power Macintosh G3 (Blue and White), iMac, and the Power Macintosh G3 with the DVD drive.

Refer to article 60339: "**PlainTalk: Using Speech Recognition 1.5.4**" for additional information.

There are some issues you should be aware of before installing the Speech Recognition component of PlainTalk 1.5 on a Power Macintosh G3 desktop or minitower computer.

Note: These issues do not apply to the PowerBook G3 or PowerBook G3 Series computers.

PlainTalk 1.5 includes the following components:

- English Speech Recognition
- English Text-to-Speech
- Mexican Spanish Text-to-Speech

The English and Mexican Spanish Text-To-Speech software came with the Power Macintosh G3 (beige) minitower and desktop computers. Both installers can be found on the Apple Macintosh CD, which allows you to reinstall your computer's system software. These components have been tested, and are supported on Power Macintosh G3 computers. Please read the "Using English Text-to-Speech" and "Using Mexican Spanish TTS" documents included with these installers for detailed information on how to use this software.

English Speech Recognition 1.5 does not come with the Power Macintosh G3 desktop or minitower computers. It has not been tested and is not supported on these computers. PlainTalk version 1.5.4, combined with Mac OS 8.6, are compatible with the Power Macintosh G3 (Blue and White), iMac, and Power Macintosh G3 computers with DVD drive. Refer to the following Knowledge Base article for additional information:

Article 60339: "**PlainTalk: Using Speech Recognition 1.5.4**"

Here are solutions to known issues.

Issue: MacinTalk 3 Voices Break Up With Virtual Memory On

Description
When Virtual Memory is turned on, you may hear stuttering or broken speech when using MacinTalk 3 voices.

Workaround
Turn off Virtual Memory in the Memory control panel and restart your computer. You can also prevent this issue by using a MacinTalk Pro voice (Victoria, Bruce or Agnes) from the Speech control panel. You can install the MacinTalk Pro voices using the English Text-to-Speech installer on the Power Macintosh G3 CD. MacinTalk 3 voices and MacinTalk Pro voice have different icons. The Voices folder in the Extensions folder contains all the voices used by Text-to-Speech and Speech Recognition. MacinTalk 3 voices have a "3" in their icon. MacinTalk Pro voices have a "P" in their icon.

Issue: Audio Feedback From Built-in Monitor or External Speakers

Description
On both desktop and minitower Power Macintosh G3 computers, you may hear feedback if the monitor's built-in speakers or external speakers are too close to the PlainTalk microphone.

Workaround
Increase the distance between the PlainTalk Microphone and any external speakers. If you have a monitor with built-in speakers, turn the speaker volume down, or use headphones.

Issue: Microphone Disconnected Error When Speakable Items is Starting Up

Description
On desktop Power Macintosh G3 computers with the audio card option, you may see an error message that says: "Speakable items could not run because the microphone is disconnected" while Speakable items is starting up.

Workaround
Select any sound input option other than the mic (like the CD-ROM) before turning Speakable Items on. Reselect the mic after Speakable Items has started up to use Speech Recognition.

Power Macintosh G3 Computers With DVD Drive Are Incompatible With Speech Recognition

Description
Power Macintosh G3 computers (both the original beige and Blue and White models) that have a DVD drive are incompatible with Speech Recognition 1.5. These computers only record sound at 44.1 KHz. Speech Recognition 1.5 is incompatible with the 44.1 KHz setting.

Workaround
PlainTalk version 1.5.4, combined with Mac OS 8.6, are compatible with the Power Macintosh G3 (Blue and White), iMac, and Power Macintosh G3 computers with DVD drive. Refer to the following Knowledge Base article for additional information:

Article 60339: "**PlainTalk: Using Speech Recognition 1.5.4**"
Published Date: Feb 20, 2012

Mac OS X 10.4: Computer speaks unexpectedly, or a black box unexpectedly appears around a file, folder, or other item

This article has been archived and is no longer updated by Apple.

If a black outline (or box) unexpectedly appears around a file, folder, icon, button, or other item when you click it, VoiceOver is probably enabled. Your computer might also be unexpectedly speaking items that you click on.

If you don't want VoiceOver on, turn it off in the Universal Access preference pane, or by pressing Command-F5 (or Fn-Command-F5 if you have an iBook or PowerBook).

Tip: If you want to prevent the Command-F5 key combination from turning VoiceOver on or off, go to Keyboard & Mouse preferences, click the Keyboard Shortcuts tab, then deselect the "Turn VoiceOver on or off" shortcut.

Published Date: Feb 19, 2012

About the security content of AirPort Firmware Updates 5.7 and 6.3

This article has been archived and is no longer updated by Apple.

This document describes the security content of AirPort Firmware Updates 5.7 and 6.3, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

AirPort Firmware Update 5.7
AirPort Firmware Update 6.3

- CVE-ID: CVE-2005-3714

  Impact: AirPort network interface becomes unresponsive

  Description: A malicious network attacker that can generate specially crafted packets may be able to cause an AirPort base station's network interface to stop responding normally, resulting in a denial-of-service. This update addresses the issue by discarding the malformed packets. Credit to Michael Zanetta of NETwork Security Consortium for reporting this issue.

Published Date: Oct 11, 2016

iPhoto 6: Inserting photos on calendar dates

This article has been archived and is no longer updated by Apple.

If you want to place a photo on a date in an iPhoto calendar, simply drag the photo to the day where you want the photo to appear, and that photo will fill that day's square.

You can drag the photo to another day or remove it from the calendar by dragging it back to the photos list.

If a grey square remains after removing a photo, don't worry, it's just the placeholder where you previously had inserted a photo. To remove the placeholder, select it, and press the delete key on your keyboard.

Published Date: Oct 11, 2016

iPhoto 6: Beware of special characters in Photocast album names

This article has been archived and is no longer updated by Apple.

When publishing a photocast, note that album names will be converted to simple text without accent marks, spaces, or other special characters. As a result, publishing similar names may result in one photocast overwriting another. For example, all three of these entries would be treated as the same name:

- tést-a
- test a
- tèst a

To avoid this, give each album that you publish a name that is unique without regard to marks such as accents.

If you inadvertently overwrite a photocast, rename the album in the iPhoto source list using a unique name, and then publish the photocast.

Published Date: Oct 11, 2016

Mac OS X 10.4.3 or later: iMac G5 fans run at full speed after using single-user mode

This article has been archived and is no longer updated by Apple.

If you start your first generation iMac G5 computer in single-user mode, the computer fans will run at full speed for as long as you are in single-user mode. This is normal. However, on a first generation iMac G5 with Mac OS X 10.4.3 or later, the fans may continue to run at full speed even after you restart the computer normally.

Solution

If your iMac gets into into a state where the fans have remained at full speed after using single-user mode, follow these steps:

1. Type "exit" at the single-user mode command line prompt.
2. Press Return.

The fans should behave as expected after Mac OS X starts up.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

iMac (Early 2006), iMac (Mid 2006), iMac (17-inch Late 2006 CD): Memory Specifications

This article has been archived and is no longer updated by Apple.

The iMac (Early 2006) computer has two SDRAM slots in the bottom of the computer. The iMac ships from the factory with at least 512 MB of DDR2 SDRAM installed into the top slot. (The computer may come with more RAM in the top slot or RAM in the bottom slot, depending on how you ordered the computer from Apple.)

The iMac (Mid 2006) ships from the factory with at least 512 MB of DDR2 SDRAM, in two 256 MB DIMMs; one in each of the memory slots. **Note**: If you upgrade the memory in your iMac (Mid 2006), make sure you have matching size SO-DIMMs in each slot for best graphics performance.

The iMac (17-inch Late 2006 CD) ships from the factory with at least 512 MB of DDR2 SDRAM, in two 256 MB DIMMs; one in each of the memory slots.

The maximum amount of RAM you can install in the iMac is 2 GB total (a 1 GB SO-DIMM in each of the two slots). You can use small-outline dual inline memory modules (SO-DIMMS) of 512 MB or 1 GB that meet all of these criteria:

- PC2-5300
- unbuffered
- nonparity
- 200-pin
- 667 MHz DDR2 SDRAM

DIMMs with any of the following features are not supported in this iMac:

- registers or buffers
- PLLs
- ECC
- parity
- EDO RAM

Always follow the upgrade instructions for memory installation as written. Never attempt to remove screws that are not listed in the upgrade instructions.

Published Date: Oct 11, 2016

About the iMac (Early 2006) and iMac (Late 2006) Mini-DVI video out port

This article has been archived and is no longer updated by Apple.

Using your iMac (Early 2006) or iMac (Late 2006) computer's Mini-DVI video out port, you can mirror the built-in display video on an external display or extend the size of your Mac OS X desktop (extended desktop mode) by connecting a compatible DVI display, VGA display, or projector and the appropriate Apple Mini-DVI adapter:

- For DVI displays, use the Apple Mini-DVI to DVI Adapter (M9321G/B).
- For VGA displays or projectors use the Apple Mini-DVI to VGA Display Adapter (M9320G/A).
- For televisions, projectors or VCRs that use S-video or composite video connectors, use the Apple Mini-DVI to Video Adapter (M9319G/A).

What choices do I have?

Video mirroring allows you to view the image displayed on the iMac's flat-panel display on an external monitor, television or projector.

Extended desktop mode allows you to use the screen area on an external display in addition to the display in your computer.

You can switch between mirroring and extended desktop mode by opening System Preferences and clicking 'Displays'. Click the Arrangement button to set your primary display.

Connecting an external display is designed to be "plug and play". Simply turn on your external display or projector, and connect the appropriate adapter to the display (see above). Then connect the adapter to the Mini-DVI port located on the back of the iMac.
Tip: To make sure that your iMac automatically detects the external display or projector, be sure you plug the adapter into the external display or projector before you plug it into the iMac.

Resolutions

When you connect the adapter to the computer, the screen may refresh momentarily as the computer prepares itself for the new video output. When the computer is mirroring video, it tries to synchronize the resolution of the built-in and external displays. If they can't be matched, the computer will change the resolution of both screens to the highest common resolution which may cause areas of the built-in display to be blacked out.

You can switch resolutions and frequencies for both the iMac internal display and the external display, television, or projector using the Displays pane of System Preferences.

To display a a DVD movie disc on a television that's connected to your iMac, select a 720 x 480 NTSC (in the United States) or 720 x 576 PAL (in Europe and other regions) resolution in the Displays pane of System Preferences.

Tip: Because of the display limitations of most televisions,the images displayed on a television screen are usually not as high quality as those on the built-in display or an external monitor.

Published Date: Oct 11, 2016

About the security content of QuickTime 7.0.4

This article has been archived and is no longer updated by Apple.

This document describes the security content of QuickTime 7.0.4, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

QuickTime 7.0.4

The following issues are addressed in QuickTime 7.0.4, and affect QuickTime 7.0.3 and earlier versions.

- **QuickTime**

  CVE-ID: CVE-2005-2340

  Available for: Mac OS X v10.3.9 and later, Microsoft Windows XP, Microsoft Windows 2000

  Impact: A maliciously-crafted JPEG image may result in arbitrary code execution

  Description: By carefully crafting a corrupt JPEG image, an attacker can trigger a heap buffer overflow which may result in arbitrary code execution. This update addresses the issue by performing additional validation of JPEG images. Credit to Varun Uppal of Kanbay, Dennis Rand of CIRT.DK, and Fang Xing of eEye Digital Security (eeye.com) for reporting this issue.

- **QuickTime**

  CVE-ID: CVE-2005-3707, CVE-2005-3708, CVE-2005-3709

  Available for: Mac OS X v10.3.9 and later, Microsoft Windows XP, Microsoft Windows 2000

  Impact: Viewing a maliciously-crafted TGA image may result in arbitrary code execution

  Description: By carefully crafting a corrupt TGA image, an attacker can trigger a buffer overflow, integer overflow, or integer underflow that may result in a denial-of-service or arbitrary code execution. This update addresses the issue by performing additional validation of images. Credit to Dejun Meng of Fortinet for reporting this issue.

- **QuickTime**

  CVE-ID: CVE-2005-3710, CVE-2005-3711

  Available for: Mac OS X v10.3.9 and later, Microsoft Windows XP, Microsoft Windows 2000

  Impact: Viewing a maliciously-crafted TIFF image may result in arbitrary code execution

  Description: By carefully crafting a corrupt TIFF image, an attacker can trigger an integer overflow which may result in a denial-of-service or arbitrary code execution. This update addresses the issue by performing additional validation of TIFF images. Credit to Dejun Meng of Fortinet for reporting this issue.

- **QuickTime**

  CVE-ID: CVE-2005-3713

  Available for: Mac OS X v10.3.9 and later, Microsoft Windows XP, Microsoft Windows 2000

  Impact: A maliciously-crafted GIF image may result in arbitrary code execution

  Description: By carefully crafting a corrupt GIF image, an attacker can trigger a heap buffer overflow which may result in arbitrary code execution. This update addresses the issue by performing additional validation of GIF images. Credit to Karl Lynn of eEye Digital Security (eeye.com) for reporting this issue.

- **QuickTime**

TA23845_About_the_security_content_of_QuickTime_.pdf

CVE-ID: CVE-2005-4092

Available for: Mac OS X v10.3.9 and later, Microsoft Windows XP, Microsoft Windows 2000

Impact: A maliciously-crafted media file may result in arbitrary code execution

Description: By carefully crafting a corrupt media file, an attacker can trigger a heap buffer overflow which may result in arbitrary code execution. This update addresses the issue by performing additional validation of media files. Credit to Karl Lynn of eEye Digital Security (eeye.com) for reporting this issue.

QuickTime 7.0.4 may be obtained from the Software Update pane in System Preferences, or from the Download tab in the QuickTime website.

Published Date: Oct 11, 2016

iWeb: Linking text to a file will change the text

This article has been archived and is no longer updated by Apple.

In iWeb, you can link text in your site to another webpage, to a file, or to an email message by selecting the text and selecting the "Enable as a hyperlink" checkbox in the Link Inspector.

However, if you link text to a file, the text will be replaced with the name of the file that the link points to.

For instance if you selected the text here from a sentence which reads "Download cupcake recipe here" and then linked it to a file called cupcake.rtf, the sentence will change to "Download cupcake recipe cupcake.rtf".

You can change the file name text by selecting the link (make sure the "Make all hyperlinks active" checkbox in the Link inspector is deselected) and adding new text in it's place.

This document will be updated as more information becomes available.

Published Date: Oct 11, 2016

About the Xsan 1.3 Update

This article has been archived and is no longer updated by Apple.

Four different software updates are available for Xsan 1.3. These updates apply to Mac OS X client and Server versions 10.3.9 and later.

Installation

Both Software Update and Apple Downloads offer these updates:

- Xsan 1.3 Update for 10.4
- Xsan 1.3 Update for 10.3.9

  Note: Of the two updates above, you only need to install the one that corresponds to your operating system version.

- Xsan Admin 1.3 Update

  Note: Required for Xsan 1.3 administration and recommended for Xsan 1.0 administration, this update only needs to be installed on admin computers.

- Xsan 1.3 Uninstaller

Important Notes: Read Before Continuing

1. **Before Installation**
   - For the Xsan 1.3 Update for 10.3.9 and the Xsan 1.3 Update for 10.4, you must already be running Xsan 1.2. If you're not on Xsan 1.2 yet, stop now and update to 1.2 before continuing.
   - If you are setting up a new Xsan deployment, please see this article for the proper installation order.
   - During the installation, do not make any changes to Xsan settings using Xsan Admin or the command-line tools.
   - Be sure that all MDCs are updated before you make any configuration changes.

2. **After Installation**
   To avoid a certain stability issue over the long term, you should run the cvfsck command on each Xsan volume, after the MDCs have been updated with Xsan 1.3 Update for 10.3.9 or Xsan 1.3 Update for 10.4. Before continuing, please see the full explanation here.

3. **Metadata Controller (MDC) software version**
   Whether you are running Panther or Tiger systems, your MDCs must always have software versions (both Xsan and Mac OS) that are equal to or more recent than the most recent client versions. Specifically, that means: If any client in your Xsan network is running Xsan 1.3 on Mac OS X 10.4.5 or later, then your metadata controllers (MDCs) must also be updated to Xsan 1.3 on Mac OS X 10.4.5 or later; If any client in your Xsan network is running Xsan 1.3 on Mac OS X 10.3.9, then the MDC must run Xsan 1.3 on 10.3.9.

Software Update Installation

Software Update may have referred you to this document. Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates (learn more).

Standalone Installer

A standalone installer is also available from Apple Downloads.

Remote Installation

If you need to install the update on a remote computer, you can do so using the "softwareupdate" command-line tool.

System Hardware Requirements

- Xserve or Xserve G5
- Power Mac G4 (dual 800MHz or faster)
- Power Mac G5 (any model)

Storage Network Requirements

- Apple Fibre Channel PCI, PCI-X, or PCI-E Card

Compatibility Matrix

See "Xsan: Compatibility of SAN clients with Xsan and StorNext controllers."

What's New in XSan 1.3

Xsan 1.3 Update for 10.4

The Xsan 1.3 update delivers overall improved reliability for Xsan and is recommended for all systems running 10.4. It includes fixes for:

- labeling and initializing LUNs greater than 2TB in size
- preventing labeled LUNs from becoming unlabeled
- improving AFP performance when re-sharing Xsan volumes
- more accurate file permissions when sharing Xsan volumes via AFP
- accessing Xsan volumes larger than 16TB in size
- greater server stability when re-sharing Xsan volumes via NFS
- handling quotas with no associated user or group name
- maintaining access to Xsan volumes when metadata controller failovers occur
- providing metadata controller services to Mac OS X 10.3.9 and 10.4 systems running Xsan 1.3
- operating Xsan in environments with a mix of Mac OS X 10.3.9 and 10.4 systems
- an issue with storing PostgreSQL 8.0 and 8.1 database files on Xsan volumes
- intermittent issues that can occur when storing NetVault Virtual Disk Library (VDL) files on an Xsan volume
- an issue in which free space and volume sizes were incorrectly reported when sharing volumes with Helios server software.

Important Note: Volumes containing initialized LUNs greater than 2TB can only be used with Xsan 1.3 systems running Mac OS X v10.4.5 or later. Xsan does not support LUNs larger than 2TB on Mac OS X v10.3.9 or systems running StorNext version 2.6.

Warning: Do not use Disk Utility in Mac OS X 10.4.5 to edit Xsan volumes—Learn More.

Software requirements for this update are:

- Mac OS X or Mac OS X Server 10.4.5 or later
- Xsan 1.2

Xsan 1.3 Update for 10.3

The Xsan 1.3 update delivers overall improved reliability for Xsan and is recommended for all systems running 10.3.9. It includes fixes for:

- preventing LUNs from becoming unlabeled
- improved file system reliability when working with 2TB truncated LUNs
- greater server stability when re-sharing Xsan volumes via NFS
- handling quotas with no associated user or group name
- maintaining access to Xsan volumes when metadata controller failovers occur
- operating Xsan in environments with a mix of Mac OS X 10.3.9 and 10.4 systems
- intermittent issues that can occur when storing NetVault Virtual Disk Library (VDL) files on an Xsan volume
- an issue in which free space and volume sizes were incorrectly reported when sharing volumes with Helios server software.

Important Note: If your Xsan network has any volumes that use LUNs greater than 2TB, all Panther clients must be updated to Xsan 1.3.

Software requirements for this update are:

- Mac OS X or Mac OS X Server version 10.3.9
- Xsan 1.2

Xsan Admin 1.3 Update

The Xsan 1.3 update delivers overall improved reliability for remotely administering, configuring, and maintaining Xsan deployments. It includes fixes for:

- labeling and initializing Fibre Channel LUNs larger than 2TB in size
- growing Fibre Channel storage pools and volumes
- working with multiple Xsan metadata controllers in a heterogeneous environment
- displaying progress messages while performing lengthy operations
- preventing manually modified configuration settings from being overwritten during a save
- accurately reporting Fibre Channel multipathing errors

Xsan 1.3 Uninstaller

TA23847_About_the_Xsan_Update.pdf

This uninstaller will remove Xsan from your computer. It will also remove the Xsan Admin application and documentation files.

Before removing Xsan, you should back up all of your data and volumes, and unmount all Xsan volumes.

Documentation

Xsan 1.3 administrators can continue to reference the Xsan 1.1 documentation here.

Published Date: Oct 11, 2016

Mac OS X 10.4: Preview - "Zoom To Selection" displays blank window in PDF documents

This article has been archived and is no longer updated by Apple.

The Zoom To Selection button can be added to the Preview toolbar via the **View** menu's **Customize...** choice (available when a document is open in Preview). If you haven't added this button to your Preview toolbar, you won't need this article.

When you open a PDF document and press the Zoom To Selection toolbar button after using the Select Tool to define a specific portion of the page, the zoomed-in view will show the selected area as expected.

However, if you don't make a selection from the PDF before clicking the Zoom To Selection button, a blank page appears instead, and you will be unable to view or manipulate the document further until you close and open it again.

Solution

Close the document, and reopen it to view it again.

Remember to always select an area of the PDF document with the Select Tool (or just by holding your mouse button as you drag over an area of the PDF document) before clicking Zoom To Selection.

Or, remove the Zoom To Selection button that you previously added, and use the **View** menu's **Zoom To Selection** choice instead (this choice is dimmed when it cannot be used).

This document will be updated as more information becomes available.

Published Date: Oct 11, 2016

iDVD 6: Background assets may not appear after opening older iDVD projects

This article has been archived and is no longer updated by Apple.

Background assets may not appear when opening older iDVD projects in iDVD 6. For instance, if you open an iDVD 3 or iDVD 4 project in iDVD 6.0, your background assets do not display.

To resolve this issue, update to iDVD 6.0.4 or later.

For more information on importing background assets in iDVD 6, see the following topics in Help:

- Changing the Background image of a DVD menu
- Using your own video in a menu background

Published Date: Feb 19, 2012

Photo album names with double-byte characters may not appear correctly on Fifth Generation iPod

This article has been archived and is no longer updated by Apple.

If the name of an album in iPhoto or the name of a folder you selected to sync contains some double-byte characters such as Japanese, Korean, or Chinese, those characters will not synchronize properly to a Fifth Generation iPod. Some characters of a photo album name on a Fifth Generation iPod might be displayed smaller than other characters when synchronized with iTunes.

Try renaming the photo album in iPhoto or the folder to a name that does not include the character that is not synchronizing properly. Or you can use a single-byte (Roman) character set to prevent this from occurring.

This document will be updated as more information becomes available.

Published Date: Oct 11, 2016

Logic Pro 7: Audio file not found when loading GarageBand instrument

This article has been archived and is no longer updated by Apple.

On a custom installation of Logic Pro, loading certain GarageBand instruments may invoke an alert message that says some audio files can't be found.

This can happen if you do not select the option for Logic Pro Bonus Sound Library or GarageBand 2 Sound Library. Rerun the Logic Pro Installer, and select both of those options this time.

Published Date: Feb 19, 2012

GarageBand: Kotoeri character palette disabled after creating an effect preset

This article has been archived and is no longer updated by Apple.

The Kotoeri Character palette becomes inactive after you create an effects preset in GarageBand.

On Japanese systems, this occurs in GarageBand versions 1 and 2. In GarageBand 3, the issue does not occur if you select "Use One Input Source in all documents." To do that:

1. From the **Apple** menu, choose **System Preferences**.
2. Select the International pane.
3. Click the Input Menu tab.
4. Select the radio button for "Use One Input Source in all documents."

Published Date: Feb 19, 2012

Aperture: A large image "could not be located" when sending to external editor

This article has been archived and is no longer updated by Apple.

If you select a very large image and use the Open With External Editor command, you may get an alert message saying that the image can't be found. If your designated editor was Adobe Photoshop CS2, for example, the message would say:

> **Edit in Adobe Photoshop CS2 Alert**
>
> The selected image file could not be located and so cannot be exported to Adobe Photoshop CS2.

The text of this message does not state the actual reason, but this happens because there is a size limit for images being sent to an external editor. The size limit varies with your system configuration and is well in excess of file sizes created by supported digital cameras. You might see this, for example, if you import a very large scanned image. In general, images up to about 250MB should work on any Aperture-supported system.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 11, 2016

AirTunes: Base station "used by someone else" message appears in iTunes when using multiple speakers

This article has been archived and is no longer updated by Apple.

If you try to play audio in iTunes to two different AirPort Express base stations, and the base stations are on different networks, you may see this alert message:

> "The remote speaker is currently being used by someone else. Please select another speaker from the menu at the bottom of the iTunes window."

This issue affects iTunes 6.0.2 and AirPort Express, and it happens when the AirPort Express base stations have the same IP address on different networks.

The key to avoiding this issue is to set up a valid network controlled by only one router. If you have one AirPort Extreme acting as the primary router, for example, it would not assign the same IP address to two other devices in the network. However, this may happen if you have multiple routers active.

To achieve a single network, AirPort Express units should join the network in client mode, WDS mode, or be used as part of a roaming network (in which multiple base stations connect to a central Ethernet "backbone" that is routed by the primary router, which could be an AirPort Extreme, for example). For help with more complex setups like roaming, please see Apple Manuals.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

Using Mac OS X Server 10.4 with Intel-based Mac OS X systems

This article has been archived and is no longer updated by Apple.

The shrink-wrap retail version of Mac OS X Server 10.4.7 (Universal) supports Intel-based Macintosh computers that meet the system requirements (http://www.apple.com/server/macosx/specs.html). **Note**: You cannot install earlier versions of Mac OS X Server on Intel-based Macintosh computers.

Intel-based Mac OS X clients can connect to PowerPC-based Macs running any version of Mac OS X Server.

The Server Admin Tools for Mac OS X Server 10.4.7 can also be installed on Intel-based Macintosh computers with Mac OS X 10.4.4 or later. For more information, see this article. A PowerPC-based Mac running Mac OS X Server 10.4.4 or later can host NetBoot and Netinstall images for Intel-based Mac clients. For more information, see this article.

Published Date: Oct 11, 2016

Mac OS X 10.3: Repair Disk Permissions "Disk Utility has lost its connection with the Disk Management Tool..." alert

This article has been archived and is no longer updated by Apple.

After installing iTunes 6.0.2 or later in Mac OS X 10.3 through 10.3.9, Disk Utility's Repair Disk Permissions may not finish, and the following alert appears in the Disk Utility window:

"Disk Utility has lost its connection with the Disk Management Tool and cannot continue. Please quit and relaunch Disk Utility."

(Quitting and reopening Disk Utility does not help.)

The following also appears in Console log:

```
*** malloc[419]: Deallocation of a pointer not malloced: 0x290a410; This could be a double free(), or free() called with the middle of an allocated block; Try setting environment variable MallocHelp to see tools to help debug : for architecture i386 object: ./Applications/iTunes.app/Contents/MacOS/iTunes malformed object (unknown flavor for flavor number 0 in LC_UNIXTHREAD command 27 can't byte swap it)
```

Workaround

1. Quit Disk Utility.
2. From the Finder's Go menu, choose **Go to Folder...**.
3. Type the following, then click OK: /Library/Receipts
4. Temporarily remove these iTunes receipts from /Library/Receipts (sort the folder alphabetically as a list):

    - iTunes.pkg
    - iTunes4.pkg

    You can put them on the desktop, for example. Do not remove iTunesX.pkg or iTunes Phone Driver.pkg.
5. Open Disk Utility and repair disk permissions again.
6. Quit Disk Utility.
7. Put the removed iTunes receipts back in /Library/Receipts.

Note: This issue does not affect Disk Utility's verify or repair *disk* features.

Published Date: Oct 11, 2016

Mac OS X 10.4: Software Update "The digital signature for this package is incorrect" alert

This article has been archived and is no longer updated by Apple.

If you encounter the message "The digital signature for this package is incorrect" while using Software Update in Mac OS X 10.4 Tiger, try the following steps:

1. Quit Software Update.
2. Restart your Mac.
3. Open Software Update.
4. Deselect all available updates, except for any Mac OS X 10.4.x Update.
5. Install the Mac OS X 10.4.x Update, if available (it should install), and restart.
6. Open Software Update, and install any remaining updates.

If the issue occurs while attempting the Mac OS X 10.4.x Update, download the update from Apple Downloads and manually install it. After restarting, try using Software Update to install any remaining updates.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

iPhoto 6 can‘t open due to permissions alert

This article has been archived and is no longer updated by Apple.

If items in your iPhoto Library belong to a different user, you may not be able to open or upgrade your iPhoto Library. When you try to open iPhoto 6, you get an alert message that says:

> "There is a problem accessing one or more files in your iPhoto Library folder. In the Finder select the iPhoto Library folder. Then choose File > Get Info. Make sure you have read and write permissions for the folder and then apply this setting to all enclosed items."

Note: This does not indicate a need to run the Repair Permissions function of Disk Utility.

For Mac OS X 10.4.3 or later

If you are using Mac OS X 10.4.3 or later, use these steps to correct the issue:

1. Locate the iPhoto Library folder in the Finder. It usually located in your Pictures folder.
2. Select the iPhoto Library, then choose **File > Get Info**.
3. In the Info window, be sure that the checkbox for "Locked" is not selected.
4. Click the disclosure triangle next to Ownership & Permissions, as well as the one for Details (if it is not already open).
5. Make sure you are the owner of this folder and have read/write permission. If not, click the lock icon next to the owner name.
6. If prompted to authenticate, enter an administrator username and password.
7. Change the Owner and Owner Access settings if needed so that you are the owner and the access for the owner is Read & Write.
8. Click the button that says Apply to Enclosed Items.
9. If prompted to authenticate, enter an administrator username and password.
10. At the next prompt, click OK.

You should now be able to open iPhoto and use your iPhoto Library.

Note: If you get an alert message on the same file again, be sure that the enclosing folder is not locked. You can check the folder using the Info window just as you did for the file. Also, be sure there are no locked files in your iPhoto library.

For Mac OS X 10.3.9

If you are using Mac OS X 10.3.9, note the filename that is outlined in the alert message ("The item that failed is..."). Use these steps to correct the permissions on that file:

1. From the Finder, locate the file mentioned in the alert message.
2. Select the file, then choose **File > Get Info**.
3. In the Info window, be sure that the checkbox for "Locked" is not selected.
4. Click the disclosure triangle next to Ownership & Permissions, as well as the one for Details (if it is not already open).
5. Make sure you are the owner of this folder and have read/write permission. If not, click the lock icon next to the owner name.
6. If prompted to authenticate, enter an administrator username and password.
7. Change the Owner and Owner Access settings if needed so that you are the owner and the access for the owner is Read & Write.
8. Click the button that says Apply to Enclosed Items.
9. If prompted to authenticate, enter an administrator username and password.

Try opening iPhoto again. If you still receive the alert message, look at the filename mentioned in the alert and repeat the steps above.

Note: If you get an alert message on the same file again, be sure that the enclosing folder is not locked. You can check the folder using the Info window just as you did for the file. Also, be sure there are no locked files in your iPhoto library.

Sharing iPhoto Library not recommended

Attempting to edit your iPhoto Library from multiple users on the same machine can introduce this issue. This could happen, for example, if you move the iPhoto Library to /Users/Shared and then attempt to open this library from more than one user account on the same computer. This is not recommended.

Published Date: Oct 11, 2016

iMac (Early 2006): External ports and connectors

This article has been archived and is no longer updated by Apple.

Here we'll describe the external ports and connectors on the iMac (Early 2006) computer. You can find them on the bottom right side of the back of the computer, known as the Input/Output (I/O) panel.

Ports and connectors

1. Mini-DVI video output port
2. Ethernet Port (10/100/1000 Gigabit Base-T)
3. Audio line-in port
4. Headphone out / optical audio out port
5. USB 2.0 ports (three ports)
6. FireWire ports (two ports)

Mini-DVI video output port

Using the Mini-DVI video out port, you can use a compatible DVI display, VGA display or projector in extended desktop or video mirroring mode with the appropriate Apple Mini-DVI adapter.

- For DVI displays, use the Apple Mini-DVI to DVI Adapter (M9321G/A).
- For VGA displays or projectors use the Apple Mini-DVI to VGA Display Adapter (M9320G/A).
- For televisions, projectors or VCRs that use S-video or composite video connectors, use the Apple Mini-DVI to Video Adapter (M9319G/A).

Video mirroring allows you to see the same image that is on the iMac (Early 2006) computer's flat-panel display on an external monitor, television or projector.

Extended desktop mode allows you to connect an external display and use that area in addition to the built-in display for your desktop.

For more information, see About the iMac (Early 2006) Mini-DVI video out port.

Ethernet Port (10/100/1000 Gigabit Base-T)

The iMac (Early 2006) has a built-in 10/100/1000 Gigabit Ethernet port. The iMac (Early 2006) computer can be connected to an Ethernet cable from a cable or DSL modem, hub, switch, or router, or to another Macintosh computer. The connected device can be either a 10Base-T, 100Base-T or a 1000Base-T device; the port automatically detects which type of device is connected. You don't have to use an Ethernet crossover cable to connect to other Ethernet devices.

Audio Line-in Port

Analog audio line input minijack; up to 16-bit stereo and 44.1 kHz sampling rate.

The external sound input jack is a 3.5 mm mini phone jack. The sound input jack accepts line-level stereo signals. It also accepts a stereo miniplug-to-RCA cable adapter for connecting stereo equipment to the computer.

The iMac (Early 2006) also has a built-in microphone near the built-in iSight camera at the top of the computer screen bezel.

Headphone out / optical audio out port

The headphone / line output jack accommodates both digital optical audio output and analog audio output with a 24-bit, 16-96 kHz D/A converter. For analog headphone / line output a standard audio cable with 3.5mm metal plug should be used. For digital audio, a fiber optic cable with 3.5mm plastic or nylon optical plug should be used.

Three USB (Universal Serial Bus) 2.0 Ports

The back of the iMac (Early 2006) has a total of three USB 2.0 compliant ports. You can connect both USB 2.0- and USB 1.1-compliant devices to these ports. The keyboard also contains a USB hub with two USB 1.1-compliant ports.

All the USB ports use USB Type A connectors, which have four pins each.

The USB 2.0 ports support both low-speed, full-speed and high-speed data transfers, at up to 1.5 megabits per second (Mbit/s), 12 Mbit/s, and 480 Mbit/s respectively.

Two FireWire 400 Ports

The iMac (Early 2006) features two 400 Mbit/s FireWire (IEEE 1394) ports. 400 Mbit/s is a theoretical maximum load, and actual rates will vary. This port is used by iPods, as well as third-party devices such as video cameras or external drives.

The iMac (Early 2006) computer supports Target Disk Mode (TDM).

Published Date: Feb 20, 2012

iDVD 6: Photos are missing from iDVD project after upgrading

This article has been archived and is no longer updated by Apple.

After you open a project in iDVD 6 that you created in an earlier version of iDVD, an alert indicates that photos used in slideshows, backdrops, or drop zones are missing. You may be prompted to locate the missing items.

To prevent this issue from occurring, update to iDVD 6.0.4 or later.

If you have an affected project, you have two options:

- Click the Find File button in the alert window to locate the missing item(s).

  Tip: Try pointing to the root folder of the updated iPhoto 6 Library (~/Pictures/iPhoto Library). This will let iDVD search the entire library and should work well provided file names are unique.

- Use the Media pane in iDVD 6 to re-create the slideshow, or to reimport the missing elements.

Tip: If you have opened this existing project because you want to burn another copy, and you don't plan to make any changes to the project — remember that you can also make a copy of this project if you have a DVD of it that you have previously burned. See "How to copy previously-burned DVD-R video discs" for details.

Published Date: Oct 11, 2016

Motion project media goes offline in Final Cut Pro project

This article has been archived and is no longer updated by Apple.

You can exchange clips and sequences between Final Cut Pro and Motion. When using both on the same computer, they integrate so tightly that you can work with a Motion project in both applications at the same time, without having to worry about moving files between applications.

If a media file you used in a Motion project is moved to a different location on your hard disk, that element won't appear in the Motion clip that is embedded in your Final Cut Pro project.

Normally, when clips go offline in Final Cut Pro, you will get an Offline Files message when you open your project. Offline files in Final Cut Pro will display a red background with the text "Media Offline" when displayed in the Viewer or Canvas.

However, if an element in your Motion project has gone offline, you will see a red and white checkerboard pattern and will not get an Offline Clip warning in Final Cut Pro.

If this happens, open the Motion project (Control-click the Motion clip in your Final Cut Pro sequence and choose **Open in Editor** from the shortcut menu). Motion will prompt you to reconnect the missing media. After you reconnect, save the Motion project. When you switch back to Final Cut Pro, the clip will display correctly.

Published Date: Feb 20, 2012

Mac OS X Server 10.4: Direct group membership required for computer list access restrictions

This article has been archived and is no longer updated by Apple.

When restricting login for a computer list to specific groups in Workgroup Manager, a user whom you wish to grant login privileges must have direct membership in a group listed in the computer list's access list. Membership in a group that's nested within a listed group is not adequate.

To avoid this issue, add all your nested groups to the access list.

Published Date: Feb 19, 2012

Mac OS X Server 10.4: Applying Directory Services settings in System Image Utility

This article has been archived and is no longer updated by Apple.

The "Apply directory services settings from this machine to all clients" option in System Image Utility allows you to duplicate Directory Services settings from the computer you're working on to a NetBoot/NetInstall image.

To use the "Map clients to other directory servers" feature in System Image Utility, you must set up authenticated directory binding in Directory Access on the computer on which you are running System Image Utility.

To create an authenticated bind for the LDAPv3 plugin, first set up a connection in the LDAPv3 plugin in Directory Access, then supply a unique computer name and server administrator credentials when prompted.

If you have set up LDAPv3 Directory Services settings without Authenticated Binding, and you attempt to copy the settings in System Image Utility, you will receive this alert message:

> "No local bindings found This machine is not bound to a directory server. Per CPU bindings can not be set."

Published Date: Feb 19, 2012

iWeb: Template text appears as Latin or gibberish

This article has been archived and is no longer updated by Apple.

When you choose a template in iWeb, much of the text in the initial page may appear to be in Latin or come across as gibberish.

This is normal behavior for iWeb. The initial text in any template is there to give you an idea of how the final webpage will look. To change it, click once on the section of text that you wish to change, and start typing.

Published Date: Oct 11, 2016

iWeb: Text boxes, tables, and shapes pasted from iWork ’06 change into PDF

This article has been archived and is no longer updated by Apple.

Copy and pasting is a very efficient method to transfer information between documents. However, certain items such as text boxes, tables, and shapes are converted into PDF objects when copied and pasted from iWork into iWeb. This ensures document compatibility.

If you want to copy the text from an iWork document, select the actual text and not the text box.

Published Date: Oct 11, 2016

About Mac OS X Server 10.4.5 Update

This article has been archived and is no longer updated by Apple.

This software updates Mac OS X Server 10.4.4 to version 10.4.5.

Important: Please Read Before Installing

- You must have an administrator account password that does not contain spaces or Option-keyed characters to install this update. The password may not be left blank (you can change your password if needed).
- You may experience unexpected results if you've installed third-party system software modifications, or if you have modified the operating system through other means. This doesn't apply to normal software installation.
- The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.
- This update can be installed on non-startup volumes, but you should only do this if the current startup volume has already been updated to Mac OS X Server 10.4.5. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are two ways to update to Mac OS X Server 10.4.5: Use Software Update or install from a standalone installer.

Software Update Installation

Software Update may have referred you to this document. For more information on this feature, see "How to Update Your Software."

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates. There is no "combo" version available for the Mac OS X Server 10.4.5 Update, so your server must be running version 10.4.4 before Software Update will prompt you to install the 10.4.5 update.

Standalone Installer

A standalone installer is also available from Apple Downloads. The Mac OS X Server 10.4.5 Update specifically updates version 10.4.4 to version 10.4.5.

There is no "combo" version available for the Mac OS X Server 10.4.5 Update, so be sure your server is running version 10.4.4 before launching the 10.4.5 Installer.

Remote Installation

If you need to install the update on a remote computer, you can do so using the "softwareupdate" command-line tool.

Improvements

Some of the improvements included in the Mac OS X Server 10.4.5 Update are:

- Time zone and daylight saving changes for 2006 and 2007.
- **MySQL:** Addresses a potential crash which may occur when processing large amounts of data in MySQL.
- **SMB:** Addresses an issue with using and mounting Windows-formatted storage devices.

Published Date: Oct 11, 2016

About the Mac OS X Server 10.4.6 Update

This article has been archived and is no longer updated by Apple.

This software updates Mac OS X Server 10.4.5 to version 10.4.6.

Important: Please Read Before Installing

- You must have an administrator account password that does not contain spaces or Option-keyed characters to install this update. The password may not be left blank (you can change your password if needed).
- You may experience unexpected results if you've installed third-party system software modifications, or if you have modified the operating system through other means. This doesn't apply to normal software installation.
- The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.
- This update can be installed on non-startup volumes, but you should only do this if the current startup volume has already been updated to Mac OS X Server 10.4.6. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are two ways to update to Mac OS X Server 10.4.6: Use Software Update or install from a standalone installer.

Software Update Installation

Software Update may have referred you to this document. For more information on this feature, see "How to Update Your Software."

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

A standalone installer is also available from Apple Downloads. The Mac OS X Server 10.4.6 Update specifically updates version 10.4.5 to version 10.4.6. There is also a "Combo Update" installer available, which will update any version of Mac OS X Server 10.4 to 10.4.6.

Remote Installation

If you need to install the update on a remote computer, you can do so using the "softwareupdate" command-line tool.

Improvements

Apple File Services

- Addresses an issue that prevented the Autosave function of Microsoft Word from working for users of AFP home directories.
- Users other than the owner can now set Finder labels on items on an AFP volume. **Note:** Label changes to folders may not appear immediately.
- Addresses an issue in which undeletable Burn Folders could be created when burning discs from an AFP home directory.
- Mac OS X 10.4 clients can now copy or duplicate folders on a Mac OS X Server 10.3 AFP volume, including drop boxes.
- Finder windows now promptly reflect changes made on an AFP volume.
- Includes an updated version of Microsoft UAM, which improves AFP authentication on Intel-based Macs.

CoreGraphics

- Addresses an issue in which Apple Remote Desktop clients stop updating the admin's control screen.

Directory Access Plugins

- Addresses Active Directory binding issues in which the first bind attempt may fail but the second attempt succeeds.
- Addresses issues for authenticating non-Kerberos SMB clients to an Active Directory-bound Mac OS X Server.
- Addresses performance and delay issues with large-scale NetInfo deployments.

DNS

- Improved reverse zone entry management, including adding secondary reverse zones via Server Admin.
- Improved behavior for DNS servers when hostname is been changed or corrected.
- The changeip command line utility now accepts and requires fully qualified domain names when updating a server's hostname (learn more).

FTP

- Addresses a potential memory leak during heavy usage.

Gateway

- Addresses issues in which VPN and DHCP services may not automatically start or be configured correctly after running the Gateway Setup Assistant.

Launchd

- Addresses an issue that prevents periodic scripts from running at the wrong time or at all.

Mail Services

- Addresses a potential memory handling issue which could cause imapd to become unresponsive during file system writes.

Managed Client

- Members of nested groups are able to log in when access is restricted to specific groups.
- Addresses an issue that allows users to connect to an AFP volume when access to applications is restricted.
- Scheduled shutdown now applies to clients at the Login Window when no other users are logged in.
- Addresses an issue that prevents the Keychain from updating correctly when network users change passwords during login.

NetBoot, NetInstall, and System Imaging

- Added latest hardware releases and improvements to Model Filters within System Image Utility.
- Addresses an issue that System Image Utility may have with some DVD media during image creations.

NFS

- Improves startup performance for some NFS-based applications.
- Resolves a permissions issue for NFS clients that was introduced with Mac OS X 10.4.
- Addresses potential kernel panics which could occur in the following conditions:
  - Users writing or copying files larger than 2GB.
  - NFSv2 clients launching certain applications with NFS Home Directories.
  - Large deployment NFS Home Directory Servers under heavy TCP loads.

Open Directory

- Improved Open Directory performance for large scale deployments.

Password Server

- Addresses an issue in which Password Server may not update new user or password change requests during replication.
- Improved performance during domain logins.

Printing

- Improved Reset Print Quota behavior.
- Improved print quotas for USB printers.
- Improved reliability and memory handling of servermgr_print service.

SMB

- Improved SMB SACL permissions for Kerberos users.
- Addresses a potential file copy issue that prevents Windows clients from copying folders (containing multiple files) to the SMB server sharepoint.
- Addresses file saving issues with Microsoft Office products on SMB shares, including a potential kernel panic when saving files which have large names (255 characters).

- Addresses an issue that prevents Windows clients from correctly resolving group access using distinguished names.
- Improved SMB authentication performance for Windows clients.

Web Services

- Web server and WebDAV realm permissions now honor Active Directory group memberships.
- Addresses an issue that prevents Weblog server from publishing Podcast AV (.m4b/.m4v) files.
- Addresses an issue that prevents some Active Directory users from accessing Weblogs.

Workgroup Manager

- Addresses an issue in which imports containing user records with multiple shortnames would not preserve second and subsequent short names.
- Sharing Pane now propagates permissions into bundled data files.
- Addresses an issue in which custom home directory configurations may not autocomplete properly.
- Disk quotas for home directories are no longer limited to 2GB.

Published Date: Oct 11, 2016

About Mac OS X Server 10.4.6 Update (Combo)

This article has been archived and is no longer updated by Apple.

This software updates Mac OS X Server versions 10.4, 10.4.1, 10.4.2, 10.4.3, 10.4.4, and 10.4.5 to Mac OS X Server 10.4.6. It is a "combo" update that combines enhancements delivered with versions 10.4.1 through 10.4.6. If you already have Mac OS X Server 10.4.5, you can download a smaller update to update to version 10.4.6.

Important: Please Read Before Installing

- You must have an administrator account password that does not contain spaces or Option-keyed characters to install this update. The password may not be left blank (you can change your password if needed).
- You may experience unexpected results if you've installed third-party system software modifications, or if you have modified the operating system through other means. This doesn't apply to normal software installation.
- The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.
- This update can be installed on non-startup volumes, but you should only do this if the current startup volume has already been updated to Mac OS X Server 10.4.6. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are two ways to update to Mac OS X Server 10.4.6: Use Software Update or install from the standalone installer.

Software Update Installation

Software Update may have referred you to this document. For more information on this feature, see "How to Update Your Software."

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Note: This version of Mac OS X Server is built as a multi-package and should not be used with Software Update's "Download Only" and "Install and Keep Package" options. If you need to save these packages for later use, try the manual update instead.

Standalone Installer

A standalone installer is also available from Apple Downloads.

Remote Installation

If you need to install the update on a remote computer, you can do so using the "softwareupdate" command-line tool.

Enhancements delivered with this update

This update delivers many enhancements. Because this is a combo update, it includes enhancements that are delivered with the prior 10.4.x updates. You can see the individual enhancement lists for 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, and 10.4.6 updates.

Published Date: Oct 11, 2016

iTunes 6 for Mac: Dragging text into Lyrics field uses text from Clipboard instead

This article has been archived and is no longer updated by Apple.

In iTunes 6, if you drag a selection of text into the Lyrics field of the Info window for a song, the contents of the Clipboard are used instead. The Clipboard is a temporary holding place for text, graphics, and other objects cut or copied using the Cut or Copy menu items in the Edit menu.

Instead of dragging, use Copy and Paste to add lyrics to your songs.

This document will be updated as more information becomes available.

Published Date: Oct 11, 2016

Logic Pro/Express 7.2, GarageBand 3: Some Audio Units not available on Intel-based Macs

This article has been archived and is no longer updated by Apple.

When using a Universal version of Logic, GarageBand, or any other application that supports Audio Units on an Intel-based Macintosh, PowerPC versions of Audio Unit plug-ins are not available. All plug-ins must be compiled for Intel, so you should consult with the manufacturer of the plug-in to see about obtaining a Universal version.

Note: Users facing this scenario with large collections of PowerPC-compatible plug-ins may be tempted to force a Universal application to run under Rosetta. You should **avoid** this temptation and allow the Universal application to run natively on the Intel-based Mac as designed.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 19, 2012

Videos labeled TV Shows in iTunes don‘t appear on iPod

This article has been archived and is no longer updated by Apple.

Issue or Symptom

iTunes 6.0.2 or later includes an option to select "TV Show" as a "Video Kind" for videos that were **not** purchased from the iTunes Store.

While iTunes will respect this selection, you will not be able to see those videos listed on your iPod by selecting Videos > TV Shows. TV Shows purchased from the iTunes Store will show up as expected.

Solution

To make these videos visible as TV Shows on your iPod, follow the steps below:

1. Update to iTunes 7.0 or later.
2. Select the affected video and choose **Get Info** from the **File** menu.
3. In the Video tab, select **TV Show** and then make sure that at a minimum a value is entered in the **Show** field.
4. You can optionally enter values for **Episode ID, Episode Number and Season Number**
5. Click **OK** and resync your iPod

Published Date: Oct 11, 2016

Sharing Full Quality HDV from iMovie HD does not export correct aspect ratio (1920 x 1080, 16:9)

This article has been archived and is no longer updated by Apple.

After completing your edit of an HDV 1080i widescreen project in iMovie HD 6, you can export a QuickTime movie by choosing **Share** > **QuickTime**. You can also choose **File** > **Export** and then click the QuickTime icon.

If you choose the Full Quality option from the **Compress movie for** pop-up menu, you can export a full resolution QuickTime movie for use in iDVD or other applications.

When you import the resulting QuickTime movie into an iDVD project, the video will incorrectly be displayed with a 4:3 aspect ratio (instead of 16:9) when imported to iDVD 6 widescreen project.

Updating to iDVD iDVD 6.0.4 or later will allow iDVD 6 to import the video correctly. If you have another application you want to use the exported file with (or just want to view it with the 16:9 aspect ratio in QuickTime Player, then use one of the following workarounds.

Workarounds

There are two workarounds, one you can use if you have QuickTime Pro and one you can use in iMovie HD.

QuickTime Pro

1. In iMovie HD, export your movie using **Share** > **QuickTime**.
2. In the **Compress movie for** pop-up menu choose **Full Quality** and click Share. Type a name for the movie and click Save.
3. Open the your movie in QuickTime Player.
4. From the **Window** menu, choose **Show Movie Properties**.
5. In the Properties window, select the Video track.
6. Select the Visual Settings button. (If you do not see the Visual Settings button, try selecting the Audio track, then reselect the Video track to refresh the button display.)
7. Deselect the Preserve Aspect Ratio checkbox.
8. Set the Scaled Size settings to 1920 x 1080 pixels.

   If your movie was not already at 1920 x 1080, you should see it change its shape slightly after entering the dimensions "1920" and "1080" in the Scaled Size fields. If your movie doesn't take the adjustment:
   - Press the Tab key on your keyboard to make sure that the numbers are registered after you typed them.
   - If your movie has tracks other than Audio and Video listed in the upper portion of the Properties Window (such as timecode tracks or hint tracks), disable them by unchecking the corresponding boxes for any tracks other than Audio, Video and Quartz Composer tracks.

9. Close the Properties window.
10. Save the movie (from the **File** menu, choose **Save**.

iMovie HD

1. In iMovie HDchoose **Share** > **QuickTime**.
2. In the **Compress movie for** pop-up menu choose **Expert Settings**.

3. Click Share button.
4. From the **Export** pop-up menu, choose **Movie to QuickTime Movie**.
5. In the "Save exported file as" dialog, click Options button.

6. In the Video section of the Movie Settings window, click Settings.

7. From the **Compression Type** pop-up menu, choose **Apple Intermediate Codec**.
8. Select the correct Compressor Preset (HDV 720p or HDV 1080i) and click OK.
9. In the Video section of the Movie Settings window, click Size.
10. In the Export Size Settings window select "Use custom size" and set the width to 1920 and the Height to 1080 and click OK.

11. In the Sound section of the Movie Settings window, click Settings.
12. From the **Format** pop-up menu, choose **Linear PCM**.
13. From the **Channels** pop-up menu, choose **Stereo (L R)**.
14. From the **Rate** pop-up menu, choose **48.000** kHz and click OK.

15. Click OK in the Movie Settings window.
16. Choose a location and name for your movie and click Save.

Published Date: Oct 11, 2016

Mac OS X 10.4.3 or later: Sudden Motion Sensor information doesn‘t appear in System Profiler or third-party utilities

This article has been archived and is no longer updated by Apple.

If System Profiler, or third-party utilities capable of reporting the status of Sudden Motion Sensor, don't display any information for the Sudden Motion Sensor, it's not an indication of an issue. This omission can happen when using Mac OS X 10.4.3 or later on these PowerBook models:

- PowerBook G4 (12-inch 1.5 GHz)
- PowerBook G4 (15-inch 1.67 GHz)
- PowerBook G4 (17-inch 1.67 GHz)
- iBook G4 (Mid 2005)

The missing information is not a reflection upon the sensor's actual status, so your sensor is probably working fine despite the reporting issue.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

About the Mac OS X 10.4.5 Update (combo)

This article has been archived and is no longer updated by Apple.

The Mac OS X 10.4.5 Update (combo) updates Mac OS X 10.4, 10.4.1, 10.4.2, 10.4.3, or 10.4.4 to version 10.4.5. (If you are just updating from Mac OS X 10.4.4 to 10.4.5, see this article instead.)

Important: Please read before installing.

- You may experience unexpected results if you have third-party system software modifications installed, or if you've modified the operating system through other means. (This does not apply to normal application software installation.)
- The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to update.
- If issues occur during installation--for example, Software Update quits unexpectedly, please see this article.

Installation

There are two ways to update to Mac OS X 10.4.5: Use Software Update or the standalone installer. You only need to use *one* of these methods to update your computer.

Automatic Software Update
Software Update, located in the **Apple** menu, will automatically download the latest Apple software. (Software Update might have linked you to this article to learn more about the update.) Note that the update's size may vary from computer to computer when installed using Software Update. Some updates must be installed prior to others, soyou may need to run Software Update more than once to get all of the available updates.

Standalone installer
Download the update installer and run it manually. This a useful option when you need to update multiple computers but only want to download the update once. Two versions of the standalone installer are available from Apple Downloads: a delta and combo.

- The delta update installer (described in a different article) updates Mac OS X 10.4.4 to 10.4.5.
- The combo update installer (described here) updates Mac OS X 10.4, 10.4.1, 10.4.2, 10.4.3, and 10.4.4 to 10.4.5.

Improvements

This update offers many improvements. For a list of some of them, see this article.

Published Date: Oct 11, 2016

iTunes: How to set the poster frame of movies

This article has been archived and is no longer updated by Apple.

A "poster frame" is a still image of a movie that appears as the movie's icon in the Videos playlist. The default poster frame is the first frame in the movie.

To change a movie's poster frame:

1. In iTunes, play the movie in a separate window (not in full screen or the main window).
2. Drag the playhead to the desired frame.
3. Right-click (or Control-click) the movie window, and from the shortcut menu, choose **Set Poster Frame**.

Note: You can only change the poster frame of videos you import. You can't set the poster frame of videos purchased from the iTunes Store, muxed (multiplexed) videos including MPEG-1 and MPEG-2 files, and 3GP videos.

Published Date: Feb 19, 2012

iTunes 7 for Mac: Restore option is not available

This article has been archived and is no longer updated by Apple.

When you connect an iPod to a Mac with iTunes 7 or later, you may come across a situation in which the **Restore** button is dimmed (grayed out) and the iPod icon displayed is for the wrong iPod model as shown below.

This occurs when the **iPodDriver.kext** file doesn't load correctly, and it can happen with any iPod model that has a color display.

To resolve this issue, follow the steps in this article.

Published Date: Oct 11, 2016

Memory Card not Erased

This article has been archived and is no longer updated by Apple.

If you connect a camera directly to your computer and then use the Erase and Eject button to erase images after import, you may encounter situations in which not all the images are erased.

To avoid this issue, it's first and foremost recommended that you erase or format cards using the camera itself rather than Aperture, or your computer in general. In-camera deletion is superior, because some cameras use a more specialized format, while Aperture must use a generic format. Think of any computer-centric erasure method as a convenient backup method for card use that's not business critical, or when in-camera deletion is not possible.

Secondly, when deleting in camera, a **format** command is superior to an **erase all** (or similar) command. If you mix the use of your memory cards between different camera models, for example, the differing folder structures used by the cameras may result in situations in which an erase will not detect the file (thus leaving your card nearly full). However, a format will always erase the files in that scenario, and often a format is faster than an erase.

Third, a high-speed card reader (FireWire or USB 2.0) is generally a superior tool for importing images as compared to a direct camera connection. If you don't have a card reader and must import directly from camera, check your camera's settings to see if it allows you to specify the mode used by the camera when connecting to a computer. The two common modes are "peer to peer" (PTP) and "mass storage." Try setting your camera to the mass storage, or similarly named, mode.

Published Date: Oct 11, 2016

Monitor Repair: Should I repair my own display?

I have three monitors. One will not power on, another is out of focus, and the last flashes blue. Can I open the monitor and turn some screws or replace a part?

I know how to use a soldering iron. As an avid computer user I have worked on my own computer equipment to install RAM and cards.
This article has been archived and is no longer updated by Apple.
Apple does not recommend you attempt to repair a display yourself unless you are an Apple Authorized Service Provider or a technician trained in display or monitor repair. A display has dangerously high voltage even when the display is off and unplugged.

Voltages inside a display can reach up to 30 000 V and can pose a serious shock and safety hazard when the display's case is open. Apple recommends you have a local Apple Authorized Service Provider service your display.
Published Date: Feb 20, 2012

Aperture: Custom Sort order lost on imported/exported projects

This article has been archived and is no longer updated by Apple.

A "custom" sort allows you to manually arrange the order of images rather than going in filename or date order, for example. If you custom sort an Aperture project then export it, or when you import one that was previously exported, the custom sort order will not be retained.

This issue is resolved in Aperture 2.0.

Published Date: Oct 11, 2016

Aperture: Web galleries don‘t appear correctly in Internet Explorer for Macintosh

This article has been archived and is no longer updated by Apple.

If you create a web gallery in Aperture using the Picture theme, it may show blue boxes along the top of Detail pages when viewed in Internet Explorer for Macintosh.

Aperture does not support Internet Explorer for Macintosh. Web Galleries should display properly when viewed in Safari, FireFox, Netscape, Mozilla, or Internet Explorer for Windows.

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Published Date: Oct 11, 2016

Aperture: Grayscale TIFF thumbnails do not appear in the Import window

This article has been archived and is no longer updated by Apple.

You may notice that some of your grayscale images appear as blank gray thumbnails in the Import window, while others don't.

This issue affects 16-bit grayscale TIFF images. However, other grayscale images, such as a JPEG, may work as expected.

Aperture does not support 16-bit grayscale TIFF images at this time. As a workaround, try using another application to convert the grayscale image to RGB mode before importing to Aperture.

Published Date: Oct 11, 2016

Aperture: Printing fails for borderless prints on an Epson printer

This article has been archived and is no longer updated by Apple.

Sometimes a borderless print fails when using an Epson printer. The file seems to be sent to the printer, but it does not print.

When this happens, be sure to set the Paper Size in the Aperture print dialog before selecting the Printer Settings.

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Published Date: Feb 20, 2012

Aperture: Some image edges cut off when printing a book as a PDF file

This article has been archived and is no longer updated by Apple.

If you have full-bleed (flush to the edge) images in a book, and you try to print it as a PDF on a printer that does not support borderless printing, then some of your page edges may be cut off.

When printing a book with full-bleed content, be sure that your printer supports borderless printing.

Published Date: Oct 11, 2016

Aperture: Aliases do not appear in the Import window

This article has been archived and is no longer updated by Apple.

An alias won't appear in the Aperture Import window. If you want to import images from aliased folders, you need to navigate to the original folders.

Advanced method
Advanced users who are familiar with symlinks may use a symlink instead of an alias as a workaround. However, Apple will not provide technical support on this option. To learn more about symlinks, execute "man symlink" in the Terminal.

Published Date: Oct 11, 2016

Aperture: Image appears in book layout, but not in the book‘s Browser

This article has been archived and is no longer updated by Apple.

Sometimes an image may appear in a book layout, but not in the book's Browser.

This is the expected behavior if you add an image to a book, then later you return to the project and (without thinking about the book) stack the image in question with another image that is not in the book's set of images.

If the image in the book is not the pick of the stack to which you added it, the result is that neither the stack nor the book image appear in the book's Browser, but the image will still appear in the book's layout. If you make that image the pick of the stack, then the stack appears in the book's layout.

If you don't want to worry about this, just remember to avoid stacking images after they are placed in a book.

This issue is resolved in Aperture 2.x.

Published Date: Feb 20, 2012

GarageBand 3: Send Song to iTunes does not work in a certain situation

This article has been archived and is no longer updated by Apple.

If you use the forward slash character (/) in a GarageBand song name, then try using the **Send Song to iTunes** command, the song won't appear in iTunes. The mixdown progress bar appears to complete, but iTunes doesn't open.

To avoid the issue, avoid using the forward slash in song names.

Published Date: Feb 19, 2012

Apple USB Modem disconnects after inserting audio CD

This article has been archived and is no longer updated by Apple.

With some computers that are running Mac OS X 10.4.3 or later, iTunes 6 or later, and that are using the Apple USB modem, you might find after you put an audio CD into your computer that the Internet Connect application says you have lost your connection to the Internet. Here are some steps you can take to avoid having this happen:

- Insert your audio CD before you connect the computer to the Internet.
- Once iTunes has opened, import the music from your audio CD that you have the right to copy to the computer by clicking the Import button in iTunes.
- Once your music has been imported, eject the audio CD.
- Now that the audio CD has been ejected, connect to the Internet. If you want to listen to your music now, you can play your imported music right through iTunes.

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Published Date: Feb 19, 2012

Xsan 1.0 to 1.2: For maximum stability, manually configure LUNs larger than 2TB

This article has been archived and is no longer updated by Apple.

To ensure maximum stability, you should manually label LUNs greater than 2TB when using Xsan versions 1.0 to 1.2 only (Xsan 1.3 and later running on Mac OS X 10.4.5 or later will support LUNs of 2TB and larger).

When you introduce a LUN that's larger than 2TB to an Xsan volume, Xsan Admin reduces the size, or "Sector count," of the LUN to 2TB worth of sectors. Xsan Admin accomplishes this reduction during the naming, or "labeling," of LUNs in **Xsan Admin > Setup > LUNs**. Instead of using Xsan Admin to label these larger LUNs, you can use the instructions in this article to manually configure the LUNs via the Terminal&emdash;this is the preferred method in Xsan 1.2 and earlier, because it allows you to specify a custom sector count size, 4294965247, which is a slightly smaller amount of sectors than the Xsan Admin application configures. The slightly smaller sector count is recommended for LUNS which will be added to new Xsan volumes or for LUNs that are to be added to pre-existing volumes. Labeling LUNs in this manner avoids certain scenarios that result in instability.

WARNING: These steps can only be performed on LUNs which are not already part of an Xsan volume. Performing these steps on LUNs that are currently included in an Xsan volume will cause all data to be lost on the Xsan Volume. Additionally, these steps will erase any data currently stored on the LUN. Therefore, you must back up all data on the LUN before proceeding.

Preparing the LUN(s)

In the Terminal application, issue the following command to Identify the LUN(s) that you wish to configure:

```
$ sudo cvlabel -l
```

Example results:

```
/dev/rdisk3 [APPLE Xserve RAID 1.26] unknown Sectors: 4724464025. SectorSize: 512. /dev/rdisk5 [APPLE Xserve RAID 1.26] acfs "Big_RAID5-2" Sectors: 4724464025. SectorSize: 512. Maximum sectors: 4724464025.
```

This output indicates that there are two available LUNs, `/dev/rdisk3` and `/dev/rdisk5`. Note by the sector count of 4724464025 that both LUNs are larger than 2TB (this is more than 2TB's worth of sectors). `/dev/rdisk3` is designated as "unknown" and therefore has not been configured for use with Xsan, while `/dev/rdisk5` has been configured for use with Xsan and labeled "Big_RAID5-2." To reconfigure a LUN which is already configured for use with Xsan, issue the following command in the Terminal:

```
$ sudo cvlabel -u <DeviceName>
```

Where `<DeviceName>` is the name of the volume to be unlabeled. For example, to unlabel `/dev/rdisk5` in our example, you would issue this command:

```
$ sudo cvlabel -u Big_RAID5-2
```

Before we proceed with configuring the LUNs with new labels, we'll verify that both LUNs have been unlabeled:

```
$ sudo cvlabel -l
```

Example results:

```
/dev/rdisk3 [APPLE   Xserve RAID     1.26] unknown  Sectors: 4724464025.
SectorSize: 512. /dev/rdisk5 [APPLE   Xserve RAID     1.26] unknown  Sectors:
4724464025. SectorSize: 512.
```

Both LUNs have been unlabeled, as they both are designated as "unknown."

Creating a label file

Issue the following command in the Terminal to create a temporary file containing the configuration information for the LUN:

```
$ cat > /tmp/lun-label-info
```

This command creates a temporary file in the `/tmp` directory which you will edit by entering text in this format:

<LUNname> /dev/<rdiskNumber> 4294965247

For example, you might type:

```
HugeLUN1 /dev/rdisk3 4294965247
HugeLUN2 /dev/rdisk5 4294965247
```

When you finish typing in the data, press Control-D on the keyboard.

Labeling the LUN(s)

Issue the following command in the Terminal to configure the LUN:

```
$ sudo cvlabel /tmp/lun-label-info
```

Example output:

```
*WARNING* This program will over-write volume labels on the
devices specified in the file "/tmp/lun-label-info". After execution, the
devices will only be usable by the Xsan. You will have to re-partition the
devices to use them on a different file system.Do you want to proceed? (Y / N)
-> y

/dev/rdisk3 [APPLE Xserve RAID 1.26] unknown Controller '5000393000001723', Serial '500039300000 1723L1',
Sector Size 512, Sectors Max 4724464025 (2.2TB)

Do you want to label it acfs-VTOC - Name: HugeLUN1 Sectors: 980416512 (Y / N)
-> y
New Volume Label -Device: /dev/rdisk3  acfs Label: HugeLUN1  Sectors: 4294965247.


/dev/rdisk5 [APPLE Xserve RAID 1.26] unknown Controller '5000393000001724', Serial '500039300000 1723L0',
Sector Size 512, Sectors Max 4724464025 (2.2TB)

Do you want to label it acfs-VTOC - Name: HugeLUN2 Sectors: 980416512 (Y / N)
-> y
New Volume Label -Device: /dev/rdisk5  acfs Label: HugeLUN2  Sectors:
4294965247.Done.  2 source lines.  2 labels.
```

Published Date: Oct 11, 2016

Intel-based Mac: How to tell if an application is Universal

This article has been archived and is no longer updated by Apple.

Are you wondering whether your application is running with Rosetta or not? Its easy to figure out if you have a Universal version of an application. Here's how:

1. In the Finder, click once on the application icon, so it's highlighted.
2. From the **File** menu, choose **Get Info**.
3. Find the section labelled **General** and toggle the triangle, if necessary, to open this section.
4. On the **Kind** line, Universal applications appear as "Application (Universal)", like in the example below.

If your application is Universal but you want it to run with Rosetta, note that there is a checkbox that says "Open using Rosetta". This can be useful if your Universal application uses plugins that have not yet been released in a Universal format.

Published Date: Feb 19, 2012

Mac OS X 10.4 (Danish): Grapher Help content missing

This article has been archived and is no longer updated by Apple.

If you can't see Mac Help information for Grapher in the Danish language version of Mac OS X 10.4 Tiger, there's an easy workaround. For example, in Help Viewer, clicking "Læs om Grapher" (Learn about Grapher) or "Se alle emner" (See all topics) results in an blank page with a non-functional search box.

Workaround

1. Open Grapher.
2. Choose **Grapher Help** from the **Help** menu.
3. From the **Library** menu, choose **Hjaelp till Grafplotter**.

You should now see Help content for Grapher.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

Intel-based Mac: Learn about device drivers

This article has been archived and is no longer updated by Apple.

The Intel-based Macs make the transition from PowerPC hardware to Intel hardware as seamless as possible. There are some undeniable differences in the hardware, though, so you might find that your printer or other accessory worked fine on your older Mac but suddenly isn't working on your new Intel-based Mac. If that's the case, you want to check your device drivers.

Some background info:
In Mac OS X, drivers for some printers and other devices are implemented via kernel extensions. These drivers, in the form of kernel extensions, are generally supplied by the manufacturer of the device. Some generic device drivers are included with Mac OS X, but most manufacturers make their own drivers in order to customize the features available through their product.

Kernel extensions are installed in /System/Library/Extensions. Kernel extensions must be in a Universal format to work on an Intel-based Mac. If you're troubleshooting your accessory and aren't sure that its related driver is Universal, follow these steps:

1. From the Finder, click on your hard drive to go to the top level of the file structure.
2. From there, double-click the **System** folder to open it.
3. From there, double-click the **Library** folder to open it.
4. From there, double-click the **Extensions** folder to open it.
5. Locate the kernel extension for your product and click on it once, to highlight it.
6. From the **File** menu, choose **Get Info**.
7. Find the section labelled **General** and toggle the triangle, if necessary, to open this section.
8. On the **Kind** line, Universal drivers appear as "Kernel Extension (Universal)", like in the example below. If you find that the kernel extension is not Universal, go to the manufacturer's web site and see if you can locate a Universal driver.

Published Date: Feb 20, 2012

QuickTime for Windows: How to Uninstall on Windows 95

This article tells how to uninstall QuickTime for Windows on a computer running Windows 95.
This article has been archived and is no longer updated by Apple.
Here are the steps for uninstalling QuickTime for Windows when using Windows 95.

1) Open the Control Panels window.

2) Open the Add/Remove Programs window. Bring the Control Panel window to the front and close it.

3) Under the Install/Uninstall tab of the Add/Remove Programs window, select QuickTime for Windows (16-Bit) or QuickTime for Windows (8-Bit). They can both be removed, but you must remove them one at a time.

4) The QuickTime Uninstall window will open. Click on the Add/Remove button. The item will be removed. Repeat for the other version of QuickTime if necessary.

If you see a message window which states "Delete all QuickTime cannot be uninstalled at this time because one of the installation files is in memory. Restart Windows and try again."

This means you have not closed the Control Panel window, and the system thinks QuickTime is in use. Close the Control Panel window and you will be able to remove the item.

Related Topic: Tech Info Article 20792: **Quicktime for Windows: How to Uninstall from Windows 3.1**
Published Date: Feb 20, 2012

iMac 20-inch (Early 2006): Trailing white shadow effect during setup assistant

This article has been archived and is no longer updated by Apple.

Some 20-inch iMac (Early 2006) computers may exhibit a white trailing effect on the display during the setup assistant when transitioning from one screen to the next. This issue only occurs during the setup assistant. It does not indicate a hardware failure and does not require service.

Published Date: Feb 20, 2012

Logic Pro/Express 7.2: Items dimmed in Sample Edit menus

This article has been archived and is no longer updated by Apple.

Sometimes destructive edits are not possible in the Sample Edit window, which you know is the case when items in the Functions and Factory menus are dimmed.

This occurs when you are working with audio files for which you have read-only access. This might happen, for example, if you save a project to a network volume and then try to edit audio. It can also happen when the opened audio file is written in a compressed file format, such as AAC (".m4p"). In versions of Logic prior to 7.2, you would have access to the menu items, but an alert message indicating lack of write access would appear.

Published Date: Feb 19, 2012

Logic Pro/Express 7.2: Some instruments install to the wrong location

This article has been archived and is no longer updated by Apple.

When you specify a custom install location for Garageband Content in the Logic 7.2 Installer, two of the instruments are placed at the default location rather than your custom location. These two instruments (Mixed Choir and Vibraphone) appear in a separate folder labeled "GarageBand" when you select an instrument from a channel strip.

To resolve the issue, you can manually move the two instrument files from the default location of `/Library/Application Support/GarageBand/Instrument Library/Sampler/Sampler Instruments/` to your custom location.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

GarageBand 3: Podcast export fails without warning when using Mac OS X 10.3.9

This article has been archived and is no longer updated by Apple.

Under a certain set of circumstances, GarageBand appears to export your podcast, showing progress dialogs for chapter creation and mixdown, but the file is not actually created.

This happens only under a very specific set of circumstances, and all of these conditions are required for this issue to occur:

- Working on a system with Mac OS X 10.3.9
- Exporting a podcasts that is 10 minutes or longer
- Audio Podcast Setting of either Musical Podcast or Higher Quality

To avoid the issue, update to GarageBand 3.0.2 or later.

Published Date: Feb 19, 2012

Aperture: Second display does not behave as expected when connected to second PCI-Express graphics card

This article has been archived and is no longer updated by Apple.

If you have two nVidia GeForce 6600 graphics cards, and you connect a display to each of them, Aperture will not use the second display.

Although the nVidia GeForce 6600 is a qualified graphics card for Aperture, it is not qualified for use with two cards. If you need to drive two 30-inch Cinema Displays, you should use a single qualified card capable of this.

Published Date: Oct 11, 2016

Logic Pro/Express (Japanese): MIDI track names offset to the right

This article has been archived and is no longer updated by Apple.

When using Logic in Japanese, the names for MIDI tracks appear offset to the right.

This occurs if the Display preference option for "Anti-aliased text" is turned off.

Enable "Anti-aliased text" in Logic's Display Preferences to resolve the issue.

This document will be updated as more information becomes available.

Published Date: Oct 11, 2016

Apple Hardware Test incorrectly reports VRAM on iMac (Early 2006)

This article has been archived and is no longer updated by Apple.

Apple Hardware Test is provided on a disc with every Mac and can be used to test hardware in a standalone environment.

The 3A100 version of Apple Hardware Test that shipped with iMac (early 2006) computers incorrectly reports the amount of VRAM (video random-access memory) installed in your computer.

The most accurate way to determine the amount of VRAM installed in your computer is to restart the computer in Mac OS X and follow these steps:

1. From the **Apple** menu, select **About this Mac**.
2. Click the **More Info** button, which will open System Profiler.
3. In the left-hand column, click on the line titled **Graphics/Displays** under the **Hardware** heading.
4. In the window to the right, details of your video card will appear. One of the lines says "VRAM (Total):"—the amount of Video memory appears on this line.

Published Date: Feb 19, 2012

Mac OS X Server: Improving MySQL Performance

This article has been archived and is no longer updated by Apple.

On versions before 10.4.7, the default configuration of MySQL on Mac OS X Server reduced the memory footprint of the database service at the cost of server performance. With version 10.4.7 and later, MySQL on Mac OS X Server creates a my.cnf file from an included configuration file which significantly increases performance at the cost of increased memory usage. (Note: an existing version of the my.cnf file will not be destroyed by the upgrade, but it will not be upgraded either.)

For sites running older versions of Mac OS X Server, MySQL performance may be increased by following the steps below, according to the amount of RAM in the server.

To improve MySQL performance, follow the steps below, according to the amount of RAM in the server.

Systems with up to 1 GB of RAM

1. Run this command:

   ```
   sudo cp /usr/share/mysql/my-large.cnf /etc/my.cnf
   ```

2. Open the the configuration file in your preferred text editor. In the file locate the section labeled [mysqld]. Add the following at the end of section:

   ```
   skip-thread-priority
   ```

3. Start (or restart) MySQL.

Systems with more than 1 GB of RAM

1. Run this command:

   ```
   sudo cp /usr/share/mysql/my-huge.cnf /etc/my.cnf
   ```

2. Open the the configuration file in your preferred text editor. In the file locate the section labeled [mysqld]. Add the following at the end of section:

   ```
   skip-thread-priority
   ```

3. Start (or restart) MySQL.

For sites with an existing my.cnf file, Apple recommends the administrator compare their current settings with those documented in one of the above existing sample configuration files and update as necessary.

Published Date: Feb 19, 2012

Which version of Backup to use when restoring files

This article has been archived and is no longer updated by Apple.

Whenever you restore backed up files, always use the same version of Backup (or later) that was used to create the backup.

For example, if you created a backup using Backup 3.1, do not try to restore backed up files using Backup 3.0.1.

If, on the other hand, you created a backup using Backup 3.0.1, you can use any version from 3.0.1 or later to restore the files.

It is recommend that you always update to the latest version of Backup before you attempt to restore a backup.

Published Date: Feb 19, 2012

Mac OS X 10.4: Some events on iPod off by an hour after Daylight Saving Time ends

This article has been archived and is no longer updated by Apple.

When using iTunes to sync calendars to iPod in Mac OS X 10.4, events that occurred during Daylight Saving Time appear off by one hour when viewed on iPod after DST ends (in standard time). This article applies to iTunes version 4.8 or later and iPods that support calendars.

Solution

Manually add your calendars to iPod.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

GarageBand 3: Inputs listed in the Outputs field in preferences

This article has been archived and is no longer updated by Apple.

In the Audio/MIDI pane of GarageBand preferences, the menu for selecting outputs lists inputs.

This happens when using GarageBand 3 on an Intel-based iMac computer.

To work around the issue, select the "input" that corresponds to the output hardware you want to use. For example, to use the Built-in Line Out, set the output field to Built-in Line In.

Published Date: Feb 19, 2012

Aperture: Exported Aperture Library contains no images after copying to another computer

This article has been archived and is no longer updated by Apple.

Under certain circumstances, an exported Aperture Library contains no images after copying to another computer and re-importing there.

This happens when Windows Sharing is turned on. To avoid this issue, go to the Sharing preference pane in the System Preferences and turn off Windows Sharing before you copy the exported library to another computer. Always copy libraries using either Apple File sharing (AFP) or Target Disk Mode.

Published Date: Oct 11, 2016

Aperture Library location resets without warning

This article has been archived and is no longer updated by Apple.

If you set the location of your Aperture Library to an external volume, you may later find that the location is unexpectedly reset to ~/Pictures/Aperture.

This happens if the volume you selected is unavailable to the system at the time you launch Aperture (for example, when the external drive is powered off).

If this happens, quit Aperture, make sure that the drive is connected and powered on, the relaunch Aperture. Check preferences in Aperture to make sure that your location is still selected.

Published Date: Oct 11, 2016

Character Palette Font Variations in menu text

This article has been archived and is no longer updated by Apple.

In Mac OS X, you can use the Character Palette to type special characters and symbols. You can use the Character Palette in DVD Studio Pro with text objects in a menu (Open the Character Palette by choosing Special Characters from the Edit menu).

Symptom

If you choose a Font Variation for a special character, the character won't appear with the default text color (set in Preferences). Additionally, if you insert a special character Font Variation in a text object or button text by dragging and dropping (as opposed to double-clicking the character or clicking Insert), the DVD Studio Pro project can't opened once it is saved and closed.

Solution

To use special characters from the Character Palette, follow these steps after adding a text object or selecting button text on your DVD menu or in Property Inspector text entry fields:

1. Click so the text entry cursor is active (cursor blinking or existing text selected) in the text object or button text on the menu or in the Property Inspector window.
2. Choose **Edit** > **Special Characters**.
3. From the **View** pop-up menu at the top of the Character Palette, choose the type of characters you want to see.

4. Click an item in the list on the left to see the characters that are available in each category.
5. Select the character or symbol in the right column that you want to insert into your document, and then click Insert.

Do not select a font variation from the Font Variation section of the Character Palette.

Published Date: Feb 19, 2012

Mac OS X Server 10.4 or later: Use only lower case domain names for iChat service

This article has been archived and is no longer updated by Apple.

When you configure the iChat service in Server Admin, be sure the domains in the Host Domains field contain only lower case letters. If there are any upper case letters, the iChat service may not start.

If the iChat service will not start and any iChat host domains contain one or more upper case letters, follow these steps:

1. Launch Server Admin.
2. Select the appropriate server under Computers & Services.
3. Select the iChat service.
4. Click the Settings tab.
5. Change any upper case letters in the Host Domains field to lower case letters.
6. Click the Save button.
7. Click the Start Service button to start the iChat service.

For more information about configuring the iChat service, select "Mac OS X Server Help" in Server Admin's Help menu or refer to the Collaboration Services Administration guide available from the server documentation page.

Published Date: Oct 11, 2016

Apple USB Modem: System Requirements

This article has been archived and is no longer updated by Apple.

If you want to use the Apple USB modem, your computer must meet these system requirements:

- Macintosh computer without a built-in modem
- Mac OS X 10.4.3 or later, **or**
- Mac OS X 10.4.2 pre-installed on a new iMac G5 or new Power Mac G5

Note: When using the Apple USB Modem, you must select the Apple External 56k modem script in your Network preferences.

Published Date: Oct 11, 2016

iCal: Avoid spaces and "at" symbol (@) in published calendar passwords

This article has been archived and is no longer updated by Apple.

Avoid using spaces and the commercial at symbol ("@") in passwords of iCal calendars that are published to an iDisk or a WebDAV server. The password will not be recognized when trying to access the calendar.

Instead, you can use just letters and numbers in your password.

This document will be updated as more information becomes available.

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Published Date: Feb 19, 2012

iDVD 6: Themes pane is blank after upgrading

This article has been archived and is no longer updated by Apple.

Learn what to do if the Themes pane is blank after upgrading to iDVD 6.

Solution

To resolve this issue:

1. Go to /Library/Receipts/ and drag iDVDThemes.pkg to the Trash.
2. Empty the Trash.
3. Insert the iLife ’06 DVD and launch the iLife ’06 installer to custom install iDVD 6.
4. Click Continue until Select a Destination screen.
5. Chose your destination volume, click Continue.
6. Click Customize.
7. Uncheck all options except Registration, iDVD, and iDVD Themes (you may have to click the triangle next to iDVD to see the iDVD Themes option).
8. Click the Upgrade button and enter Administrator password when prompted.
9. When prompted to register, click Later.
10. Click Close when done.
11. Verify that the iDVD themes were successfully installed.
12. If the themes are installed, run Software Update to ensure you have the most recent version of iDVD.

Published Date: Oct 11, 2016

20-inch iMac (Early 2006) has video distortion in Front Row

This article has been archived and is no longer updated by Apple.

Some people using 20-inch Intel-based iMac (Early 2006) computers have reported that the video may distort or shift back and forth. This may happen when you browse through Front Row menus or use Front Row to play videos or navigate through photos.

If this happens, update the iMac to Mac OS X 10.4.5 or later.

Published Date: Oct 11, 2016

iPhoto 6: White lines in thumbnails

This article has been archived and is no longer updated by Apple.

When viewing thumbnails (small images) in the iPhoto Library, you may see white lines through an image that do not appear when viewing the image at full size. These steps should resolve the issue:

1. Quit iPhoto.
2. Update to iPhoto 6.0.1.
3. While holding the Command and Option keys on the keyboard, open iPhoto.
4. When prompted, select the option to "Rebuild all of the photos' thumbnails."
5. Click Rebuild.

Published Date: Oct 11, 2016

iMovie HD does not recognize DV camera when iDVD is open

This article has been archived and is no longer updated by Apple.

If you try to import video into iMovie HD while iDVD is open, iMovie HD won't recognize that your DV camera is connected and powered on.

If this happens:

1. Quit iDVD and iMovie HD.
2. Relaunch iMovie HD.

Published Date: Oct 11, 2016

Final Cut Pro: "File Error: A file of this name already exists"

This article has been archived and is no longer updated by Apple.

When exporting a sequence from Final Cut Pro using Compressor, you might encounter an error message which says:

> "File Error: A file of this name already exists."

This can occur if certain anti-virus software is installed and active on your computer. To prevent this from occurring, try these steps:

1. Save your work and quit Final Cut Pro.
2. Disable or remove your anti-virus software (consult manufacturer for details).
3. Open Final Cut Pro and try the export to Compressor again.

Published Date: Feb 20, 2012

Setting up a modem for faxing in Mac OS X 10.4

This article has been archived and is no longer updated by Apple.

To make your internal Apple modem or external Apple USB modem available for faxing, just send a fax from any application.

You can follow these simple steps:

1. If you're setting up an external Apple USB modem, make sure that it is directly connected to your Mac.
2. Open any document.
3. Choose **Print** from the **File** menu.
4. Select "Fax PDF" from the PDF pop-up menu.
5. Verify that the expected modem is selected in the Modem pop-up menu, such as "External Modem" for the Apple USB modem.

If you want to receive faxes, set up your Mac to receive faxes. The modem will answer calls (if the computer is turn on and awake) even if the modem does not appear in the Fax List.

If you are using a third-party modem, contact the manufacturer for assistance if these steps do not help.

Related documents

303249 Apple USB Modem: System Requirements

Published Date: Feb 19, 2012

Aperture 1.0: Too Much Space Between Shots on Contact Prints

This article has been archived and is no longer updated by Apple.

Note: Update to Aperture 1.1 or later to resolve this issue.

When using certain printers, contact sheets will have large spacing between shots. This happens because the affected printers are using their margin size between shots. You can easily avoid this issue by creating a custom paper size with adjusted margins.

1. Quit Aperture.
2. Open any other application that supports printing, such as TextEdit.
3. Choose **File > Page Setup**.
4. From the **Paper Size** pop-up menu, choose **Manage Custom Sizes...** .
5. Click the plus button (+) to add a new paper size. It will be called "untitled," but you can click on the name to rename it whatever you like.
6. Be sure that your new size is still selected after renaming it, and then enter the height and width of the paper that you will print contact sheets on.
7. Set each of the four margin values to 0, or to a smaller value than it is currently if you would like to keep some space between the shots.
8. Click OK.
9. Click OK again.
10. Open Aperture.
11. In the Aperture Print Preset window, create a new Contact Sheet preset, and set the Paper Size to the new custom size.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

About Apple Remote Desktop 3.0

This article has been archived and is no longer updated by Apple.

Apple Remote Desktop (ARD) 3.0 can be installed on computers that have:

- Mac OS X 10.3.9 or later, including Intel-based Macs with Mac OS X 10.4.4 or later.
- An Ethernet (recommended), Airport, or FireWire over IP network connection

Apple Remote Desktop 3.0 is a Universal Binary application, which means it can run on both PowerPC-based Macs and Intel-based Macs.

Compatibility with previous versions of Apple Remote Desktop

Apple Remote Desktop 3 allows you to add Apple Remote Desktop version 2.x clients to your computer lists and will automatically assist you in upgrading them to the current version of the client software.

If you choose not to upgrade your clients to the current version, you will have limited backwards compatibility and will only be able to control/observe computers that are running version 2.x of the client software.

Enabling Apple Remote Desktop nn Mac OS X 10.3.9 or later client computers

In Sharing preferences, click the Apple Remote Desktop service, then click Start.

Late Breaking News

See the following articles for more information about installing and using Apple Remote Desktop 3:

- Apple Remote Desktop 3: ARD 2.2 clients may hang during upgrade when running Mac OS X 10.3.8 or earlier
-
- Apple Remote Desktop 3: Your task server, "", could not be contacted
- Apple Remote Desktop 3: Apple Remote Desktop 3: First launch dialog causes a "Copy and Open" or Open Items task to fail

For more support information, visit the Apple Remote Desktop support page.

Published Date: Oct 11, 2016

iWeb: Slow image loading in web browsers

This article has been archived and is no longer updated by Apple.

In iWeb 1.0, when you added images to your page they would be converted to PNG format images when published. PNG is a format which allows for image transparency to be displayed in your web browser. However, the downside is that this image format takes up more disk space than a compressed JPEG.

Enhancements in iWeb 1.0.1 allow for most types of images and photo page thumbnails to be published as JPEGs where possible. This translates into faster page loads when people visit your website.

To take advantage of this change in an existing iWeb 1.0 site you'll need to republish all of your pages. To do that, hold down the Option key and from the **File** menu, choose **Publish All to .Mac**.

Published Date: Oct 11, 2016

About the security content of the Mac OS X 10.4.5 update

This article has been archived and is no longer updated by Apple.

This document describes the security content of the Mac OS X 10.4.5 update, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Mac OS X 10.4.5 Update

- **Kernel**

  CVE-ID: CVE-2006-0382

  Available for: Mac OS X 10.4 through 10.4.4, Mac OS X Server 10.4 through 10.4.4

  Impact: A malicious local user can cause a system crash

  Description: A malicious local user may trigger a system crash by invoking an undocumented system call. This update addresses the issue by removing the system call from the kernel. Credit to David Goldsmith of Matasano for reporting this issue.

Published Date: Oct 11, 2016

iWeb: Inserted photos do not show up in podcast after publishing

This article has been archived and is no longer updated by Apple.

When you create a podcast page in your iWeb project, a placeholder appears on the page where you can drag your media. If you delete the placeholder and then drag your media onto the podcast page, the media will not show up when you publish your website. On a podcast page, you must drag your media into the placeholder if you want to see it on a published web page.

Published Date: Oct 11, 2016

iWeb: Clicking on "Site" displays a blank page in your iWeb project

This article has been archived and is no longer updated by Apple.

In your iWeb project, you can select any of the pages you've created in the Site Organizer, and the corresponding page appears in the main window. However, clicking the Site icon only displays a blank main page. This is how the application is designed to work. It might be helpful to think of your site as a folder that contains that particular site's content.

Published Date: Oct 11, 2016

Mac OS X 10.4: About printing Mail messages, wrapping text, and font sizing

This article has been archived and is no longer updated by Apple.

The application Mail that's included with Mac OS X 10.4 Tiger allows you to print emails in three different ways.

To find these three choices, choose Print from the File menu, then change the third pop-up menu's choice from "Copies & Pages" to "Mail". Whichever option you select will remain in effect for future printouts from Mail, until you change it again.

Tip: For any option, use the Preview button before printing to get an idea of how much paper will be needed, as well as how the printout will look.

Scale message to fit

With this option selected, Mail will not rewrap the text of the message on the printed page.

The printed document will look like how the message is displayed on screen. If the message window is wider than the paper width, then the message, including any text or graphics, will be reduced in size to fit the width of the paper. Any specified font size settings will be ignored.

Changing the width of a message window can cause the lines of text to rewrap—widening the window will create longer lines of text.

In many cases, the size of the text will be smaller than expected.

As when printing from TextEdit, the printout may not automatically be reduced to fit onto one piece of paper.

Rewrap message to fit

Mail strictly maintains the specified font size of the message with this option. This means that the text of the message will likely wrap differently on the printout, so that the width of the printout doesn't exceed one page. The printed document won't look exactly like it does on the screen. Also, because points per inch on a display is not the same as on paper, the printout may appear smaller than expected. Increase the font size before printing if desired, or use the "Keep the same apparent font size" choice.

Because printed text may wrap differently, this choice may not be best for printing structured text, such as a web page's HTML code, or an indented or nested list.

Keep the same apparent font size

If you're not sure which option might be best for you, try this one first. Mail will print the message using a font size that considers the difference between the number of points per inch on a display and on paper. The message may be rewrapped so that it's no wider than one page, but if you hold the piece of paper next to the display, the fonts should appear to be the same size (even if some words are on a different line).

Published Date: Feb 19, 2012

Aperture: Book order still in progress when quitting, after earlier indication of completion

This article has been archived and is no longer updated by Apple.

If a book order appears to have finished uploading, and you try to quit Aperture, you may sometimes see a message that says the order is still in progress.

When you place the order, a progress bar says "Exporting Book... ." That actually represents the status of creation of the PDF file that will be uploaded to Apple Print Services, not the status of the upload itself. While the upload is in progress, you see this background task indicator in the control bar:

If you try to quit Aperture while the upload is in progress, you see this message:

> **Please Wait**
> You cannot quit the application until you have been notified that the current order is complete.

To see the status of the upload, choose **Window > Show Task List...** . Don't be concerned if it says 0% for a long time—your order is actually uploading. When the task list indicates that the file is completely uploaded, you can safely quit Aperture.

Note: The progress indicator shown above, as well as the task list entry for the book order, will only appear in Aperture 1.0.1 or later.

Published Date: Oct 11, 2016

Macintosh: Using Apple Wireless Mouse with Startup Manager

This article has been archived and is no longer updated by Apple.

When you use your Apple Wireless Keyboard and Mouse to start up your computer to the Startup Manager, you should still be able to use the Apple Wireless Mouse to select a startup volume.

If you find that your Apple Wireless Mouse isn't working in this situation, you can use the arrow keys on your keyboard to select your preferred startup volume. When you have selected the volume you want, press the Return key.

If you are starting up to the Install disc that came with your Bluetooth-equipped Macintosh computer, the pairing assistant will appear and ask you to put your mouse into discovery mode so it can be paired and used when started up from the Install disc.

Published Date: Feb 20, 2012

Aperture: How to export filenames without spaces

This article has been archived and is no longer updated by Apple.

Like many other photography applications, Aperture allows you to export your filenames according to preset naming patterns or to fully customize them. While the Aperture preset formats contains spaces, it's a very simple matter to remove them.

After you choose **File > Export Version**, look for the **Export Name Format** menu, and set it to **Edit...** . You will see the Naming Presets dialog. Notice that the presets contain spaces between the individual naming elements, like this:

If you don't want spaces, simply delete the spaces or replace them with underscores, hyphens, or other valid naming characters, like this:

Note that Aperture 1.1 or later offers a preconfigured export preset without spaces.

Published Date: Oct 11, 2016

iPhoto 6: Quits when emptying the Trash

This article has been archived and is no longer updated by Apple.

In certain situations, iPhoto 6 may unexpectedly quit when you empty the Trash. If that happens, this should fix it:

1. Quit iPhoto.
2. Update to iPhoto 6.0.1.
3. While holding the Command and Option keys down, open iPhoto.
4. When the Rebuild Library dialog appears, select the option to "Rebuild the iPhoto Library database."

5. Click the Rebuild button.

Published Date: Oct 11, 2016

Logic Pro/Express 7: Logic Control input devices stop working when switching between Logic versions

This article has been archived and is no longer updated by Apple.

If you have both Logic 7.1 and Logic 7.2 installed on the same computer, then Logic Control and Logic Control XT control surfaces may stop functioning properly (knobs and sliders have no effect).

To resolve the issue, power down the control surfaces, power them back up, and then choose **Logic Pro & ; Preferences > Control Surfaces > Rebuild Defaults**.

Important: This solution will delete any user-created control assignments.

Published Date: Oct 11, 2016

Logic Pro/Express quits when launched on an Intel-based Mac

This article has been archived and is no longer updated by Apple.

Logic Pro or Logic Express version 7.2 may unexpectedly quit during launch on an Intel-based Macintosh.

This happens if the control surface preference file located at `~/Library/Preferences/Logic/com.apple.logic.pro.cs` (Logic Pro) or `~/Library/Preferences/Logic/com.apple.logic.express.cs` (Logic Express) is copied from a PowerPC-based Mac to an Intel-based Mac.

To resolve the issue, delete the file and then launch Logic.

Published Date: Oct 11, 2016

iWeb: Unable to publish an image over a movie

This article has been archived and is no longer updated by Apple.

You can drag a movie clip to a page and then drag an image over all or part of the movie clip. However, after publishing your site and viewing it with a browser, the movie will always be positioned in front of the image.

This document will be updated as more information becomes available.

Published Date: Oct 11, 2016

Mac OS X, Mac OS X Server: How to mount a volume as read-only

This article has been archived and is no longer updated by Apple.

In some cases a volume will fail to mount even though it is a valid volume. If you are unable to repair the volume with Disk Utility, you should try to mount it (make it available) as read-only in order to recover data from it. To mount a volume as read-only, follow these steps.

1. Open Terminal (/Applications/Utilities/Terminal) and execute this command: `diskutil list`
2. Find the name of the volume that doesn't mount in the output, such as this:

```
/dev/disk0
#: type name size identifier
0: Apple_partition_scheme *152.7 GB disk0
1: Apple_partition_map 31.5 KB disk0s1
2: Apple_HFS Drive160 152.5 GB disk0s3

/dev/disk1
#: type name size identifier
0: Apple_partition_scheme *76.7 GB disk1
1: Apple_partition_map 31.5 KB disk1s1
2: Apple_Boot 128.0 MB disk1s2
3: Apple_HFSX Drive80 76.6 GB disk1s3
```

   In this example, we'll use the volume "Drive80". Drive80 exists on disk1 on slice 3 in the above output, so the full device name is /dev/disk1s3.

3. Make a directory with the name of the drive in /Volumes by executing this command in Terminal: `mkdir /Volumes/Drive80` You'll want to substitute the name of your hard drive for "Drive80".

4. Mount the device as read-only by issuing the following command in Terminal: `sudo mount -t hfs -o rdonly /dev/disk1s3 /Volumes/Drive80` Again, substitute the name of your hard drive for "Drive80".
5. If the volume doesn't appear in the Finder, execute this command in Terminal: `disktool -r`.

If these steps are successful, it may be possible to retrieve or back up data from the volume. When all possible data is recovered the drive should be erased.

Published Date: Feb 19, 2012

Video created with third-party software plays incorrectly on iPod

This article has been archived and is no longer updated by Apple.

Video created with (or converted with) some third-party applications may play incorrectly on Fifth Generation iPod after updating to version 1.1 of iPod Software.

Specifically, videos that played fine in version 1.0 of iPod software may stall and continue to play without audio.

Update iPod using iPod Software 1.1.1 or later.

See "Verifying iTunes video conversion and iPod video syncing using sample QuickTime files" for information on converting video using iTunes.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 19, 2012

iWeb: Do not place objects over navigation menu

This article has been archived and is no longer updated by Apple.

If you cover any hyperlinks on your web page with an image, shape, or text box, the links will not work when the site is published (for instance, the page links in your navigation menu). This is true even if the image area covering the link is transparent.

To avoid this issue, do not cover the navigation menu (or hyperlinks you create) with objects when you are designing your site.

This document will be updated as more information becomes available.

Published Date: Feb 19, 2012

iWeb: Some placeholder images cannot be used for movies or audio files

This article has been archived and is no longer updated by Apple.

You can replace some placeholder images with photos, movies or audio files. When you drag a movie or audio file from the Media Browser to one of these universal placeholders, you will see a green "plus" icon before you release the mouse.

However, there are placeholder images in some templates that you can't replace with video or audio (if you try, you'll see the file link arrow shown below).

You can replace these placeholders with photos. You can also delete the placeholder image and then drag a movie or audio file to the canvas.

Published Date: Feb 19, 2012

Mac OS X 10.4.3 or later: Calculator may perform division when using % button

This article has been archived and is no longer updated by Apple.

In Mac OS X 10.4.3 or later, Calculator's percentage button ("%") may unexpectedly divide output instead of calculating percentage (for example, it may divide by 100). **Note:** This button is only available in the scientific calculator of the Calculator application.

This document will be updated as more information becomes available.

Published Date: Oct 11, 2016

Mac OS X Mail: "The mail could not be sent, but is saved in your Outbox until it can be sent" alert

This article has been archived and is no longer updated by Apple.

In all versions of Mac OS X, Mail automatically works with some mail servers to verify the validity of your email message's recipients. It does this if the mail server has been configured to perform verification. If the server identifies any recipient's address as invalid or unrecognized, this alert will appear, along with an identification of which addressee is not recognized:

> "The mail could not be sent, but is saved in your Outbox until it can be sent."

If this happens, edit the message that's in the Mail outbox: Remove invalid recipients, then try to send the message again.

Published Date: Feb 19, 2012

Logic: Defining custom bank messages

This article has been archived and is no longer updated by Apple.

Logic offers several preset bank select message formats, but in some cases you will need to define a custom message format to change banks on a particular synthesizer. Most synthesizers use a combination of Control 0 (Bank MSB) and Control 32 (Bank LSB) events to trigger bank changes. MSB and LSB stand for "most significant byte" and "least significant byte," respectively. Consult the MIDI implementation chart for your synthesizer to determine the particular combination it requires for bank changes.

Here's how to set Logic up to send custom bank messages:

1. In the Environment, select the Multi Instrument for the synthesizer for which you would like to define custom bank messages.
2. From the local **Options** menu, choose **Define Custom Bank Messages**.
3. A Bank Select Event List will open, with an MSB message for 16 banks already defined. This event list is similar to the normal MIDI edit event list, with one difference: Under the Position column is a bank number instead of the usual timeline position.
4. While holding the Command key, click the green CC Message button at the left to add a controller event. A new CC7 message will be added to the top of the list.

5. To change the CC7 message to a CC32 message, click "7" in the Number column and select 32 (bank LSB) from the pop-up menu that appears. Change the value to whatever your synthesizer requires to call up the specified bank. If necessary, adjust the Control 0 Bank MSB event's value.

6. If your synthesizer requires that the Control 0 and Control 32 messages be received in a particular order, you may specify the order by changing the letter in parentheses to the right of the bank number. Earlier letters will be sent before later letters.
7. Continue to add and edit events until you have defined the messages needed to call up each bank on your synthesizer.

Published Date: Feb 19, 2012

Aperture quits when applying ratings or keywords

This article has been archived and is no longer updated by Apple.

If you experience an issue in which Aperture quits unexpectedly while applying ratings or keywords to images, then it may help to rebuild your Aperture Library. To do so:

1. Quit Aperture.
2. While holding the Command and Option keys down, open Aperture.
3. When the Rebuild Library dialog appears, click Rebuild Now.

Published Date: Oct 11, 2016

Final Cut Pro: Avoid creating multiclips that contain both drop frame and non-drop frame clips

This article has been archived and is no longer updated by Apple.

NTSC video is recorded with either **drop frame** or **non-drop frame** timecode. The differences between these two timecode methods are detailed in the Final Cut Pro User Manual (available under the Final Cut Pro Help menu).

You should avoid making multiclips which contain both drop frame timecode clips and non-drop frame timecode clips. You may encounter unexpected results if you use multiclips which contain source clips of both timecode methods.

While shooting, set all cameras and decks to record the same way — all using drop frame or all using non-drop frame. If you need to make multiclips from clips which were recorded using both drop frame and non-drop frame timecode, you should choose **Modify** > **Timecode** to change clips as necessary so that all the clips which constitute any given multiclip all use the same timecode method.

Published Date: Feb 20, 2012

Logic Pro 7.2: "Critical error occurred while registering with Stream Manager"

This article has been archived and is no longer updated by Apple.

When launching Logic Pro 7.2 with TDM and DTDM, you may see this message:

> "Critical error occurred while registering with Stream Manager the ESB will not work properly - please check your stream manager installation."

Followed by this message:

> "Direct TDM: ESB plugin not found (-10800)"

This happens if Logic Pro 7.2 is installed before Pro Tools 7. To avoid this issue, install Pro Tools first (minimum requirement 7.1 cs4), and then Logic Pro 7.2 If you have already installed Logic Pro, remove the Logic Pro application and then reinstall it after installing Pro Tools. It's also a good idea to remove the ESB TDM OSX and EXS24 TDM OSX plug-ins from `/Library/Application Support/Digidesign/Plugins` before reinstalling Logic Pro.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 19, 2012

iPod Hi-Fi: Room Size in Speakers menu

This article has been archived and is no longer updated by Apple.

If you connect the Fifth Generation iPod (iPod with video) running iPod Software 1.0 to an iPod Hi-Fi, the Speakers menu will have a Room Size option instead of Tone Control.

Apple only supports using the Speakers menu on the Fifth Generation iPod when it is running iPod Software 1.1 or later. If the Speakers menu has a menu option of Room Size, update your Fifth Generation to iPod Software 1.1 or later to work correctly with the iPod Hi-Fi.

Published Date: Oct 11, 2016

Kensington Adapter for iPod shuffle causes feedback when used with the iPod Hi-Fi

This article has been archived and is no longer updated by Apple.

The Kensington Adapter for iPod shuffle allows you to connect an iPod shuffle to accessories that require a dock connector.

If you use this adapter to connect your iPod shuffle to the iPod Hi-Fi dock, you'll hear audio feedback during playback.

You can connect the iPod shuffle to iPod Hi-Fi's audio input port using a cable with a 3.5 mm stereo miniplug on both ends.

Contact Kensington for support information regarding the Kensington Adapter for iPod shuffle.

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Published Date: Oct 11, 2016

iPod Hi-Fi: Locating the serial number

This article has been archived and is no longer updated by Apple.

The serial number is printed on the inside of the battery compartment of your iPod Hi-Fi.

Published Date: Feb 20, 2012

DVD Studio Pro 4: "Formatting failed" and "Muxer Bit Rate too high" error with H.264 for HD DVD

This article has been archived and is no longer updated by Apple.

DVD Studio Pro 4 allows you to author DVDs with high definition (HD) video that conform to the HD DVD standard. There are two H.264 presets in Compressor 2 for encoding video for an HD DVD project.

Symptom

If you customize one of these presets by increasing the bit rate of the H.264 stream, you may get a "Formatting failed" error and the log would list "Muxer Bit Rate Too High" when you build your project in DVD Studio Pro. This can occur when you set the bit rate higher than the preset bit rate.

Solution

Either lower the bit rate in your custom Compressor preset, or turn off frame controls.

You can adjust the bit rate with the Bit Rate slider in the Encoder pane of the Compressor Inspector window.

You can turn off frame controls in the Frame Controls pane of the Compressor Inspector window.

Note: This issue will not occur if you use either of the presets (HD DVD H.264 60 minutes or HD DVD H.264 90 minutes) in the default configuration.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Using AOL dial-up service with an Intel-based Mac

This article has been archived and is no longer updated by Apple.

If you use the Apple USB Modem with your Intel-based iMac or MacBook Pro to connect to America Online, you need to change from the default internal modem setting to an external modem setting. Before you do this, the AOL connection software may not recognize your modem.

1. Quit the AOL software, if it is open.
2. Be sure the Apple USB Modem is connected to a USB port on your computer.
3. From the **Apple** menu, choose **Location > Network Preferences...** .
4. From the **Show** pop-up menu, choose **External Modem**.
5. Click the Modem tab.
6. From the **Modem** pop-up menu, choose **Apple External 56K Modem (v.92)**.
7. Click the **Apply Now** button.
8. Quit System Preferences.

The AOL software should now recognize your modem.

Published Date: Feb 20, 2012

iDVD 6: Undo after previewing can cause iDVD to unexpectedly quit

This article has been archived and is no longer updated by Apple.

You can create an autoplay movie or slideshow, which is one that plays automatically when you insert it into a DVD player (it starts playing before the main menu appears).

If you create an autoplay movie or slideshow in iDVD and then preview the project, iDVD can unexpectedly quit after you close the preview window and return to the project. This occurs when you choose **Undo** from the **Edit** menu.

To resolve this issue, update to iDVD 6.0.4 or later.

Published Date: Feb 20, 2012

Front Row: "Movie trailer server is not responding" alert

This article has been archived and is no longer updated by Apple.

When you try to view movie trailers in Front Row on any Front Row-equipped computer (such as iMac G5 (iSight), iMac (Early 2006), MacBook, MacBook Pro, etc.), you may see the alert "The movie trailer server is not responding" instead of the list of trailers.

If this happens, you need to update Front Row to version 1.2.2 or later. To do this, run Software Update and install any available updates. (If you want to find out what version of Front Row you are using, find Front Row in your computer's Applications folder, highlight it, and choose Get Info from the File menu. This, however, isn't necessary for the update process.)

Published Date: Feb 20, 2012

iDVD 6: Background movie displays as still image

This article has been archived and is no longer updated by Apple.

When you open an iDVD 5 project in iDVD 6.0, background movies may display as a still image in your menu instead of showing full motion video. This happens if you have background movies in any of your menus. The audio from your background movie will still play normally.

To resolve this issue, update to iDVD 6.0.4 or later.

Published Date: Feb 20, 2012

Soundtrack Pro projects play back at incorrect sample rate with Digidesign 002

This article has been archived and is no longer updated by Apple.

Symptom

Soundtrack Pro projects set to sample rates other than 44.1 kHz (including 32, 48, 88.2, and 96 kHz) play back at 44.1 kHz through a Digidesign 002 audio interface.

Solution

This issue occurs if the Digidesign Core Audio Manager application does not automatically launch when Soundtrack Pro is launched. As a workaround, manually launch the Digidesign Core Audio Manager prior to launching Soundtrack Pro. Update to Mac OS X 10.4.4 or later to resolve this.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Mac mini (Early 2006): About the IR Sensor

This article has been archived and is no longer updated by Apple.

The Mac mini (Early 2006) can be used with the Apple Remote to activate features like Front Row.

The IR Sensor is located to the right of the slot-loading optical drive:

1. Slot-loading optical drive
2. Built-in infrared (IR) receiver
3. Power indicator light

For best results when you use the Apple Remote with your Mac mini (Early 2006), make sure of the following:

- You have an unobstructed line-of-sight view to the front of the computer (as shown above).
- You are using the remote within 30 feet of the computer.
- You are pointing the lens end of the Apple Remote directly at the front of the computer.

Published Date: Oct 7, 2016

Mac Mini (Early 2006): Memory Specifications and Upgrades

This article has been archived and is no longer updated by Apple.

This article provides the memory specification and expansion capability for the Mac Mini (Early 2006) computer.

The Mac Mini (Early 2006) has two internal SO-DIMM RAM slots. The computer ships from the factory with at least 512 MB of DDR2 SDRAM; one 256 MB SO-DIMM in each slot. (It may come with more RAM installed, depending on how you ordered the computer from Apple—two 512 MB SO-DIMMs for 1GB total, or two 1GB SO-DIMMs for 2GB total).

The maximum amount of SDRAM supported by the Mac mini (Early 2006) is 2GB (one 1GB SO-DIMM in each slot) with the following specifications:

- PC2-5300
- unbuffered
- nonparity
- 200-pin
- 667 MHz DDR2 SDRAM

DIMMs with the following features are not supported by the Mac mini (Early 2006):

- registers or buffers
- PLLs
- ECC
- parity
- EDO RAM

Additional memory should be installed by an Apple Retail Store or Apple Authorized Service Provider. For optimum performance, it is recommended to use two SO-DIMMs (one in each slot) of the same DIMM size (e.g. two 512 MB SO-DIMMs).

Published Date: Oct 7, 2016

Soundtrack Pro: Playback sometimes distorts

This article has been archived and is no longer updated by Apple.

Symptom

Playback of multitrack projects can sometimes become distorted.

This can occur if there is a long volume automation ramp on a track that uses the Pitch Shifter II plug-in. If you start playback before any clips on the track, the issue will not occur.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

About Security Update 2006-001

This article has been archived and is no longer updated by Apple.

This document describes Security Update 2006-001, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Security Update 2006-001

- **apache_mod_php**

  CVE-ID: CVE-2005-3319, CVE-2005-3353, CVE-2005-3391, CVE-2005-3392

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.5, Mac OS X Server v10.4.5

  Impact: Multiple security issues in PHP 4.4

  Description: PHP 4.4.1 fixes several security issues in the Apache module and scripting environment. Details of the fixes are available via the PHP web site (www.php.net). PHP ships with Mac OS X but is disabled by default.

- **automount**

  CVE-ID: CVE-2006-0384

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.5, Mac OS X Server v10.4.5

  Impact: Malicious network servers may cause a denial of service or arbitrary code execution

  Description: File servers on the local network may be able to cause Mac OS X systems to mount file systems with reserved names. This could cause the systems to become unresponsive, or possibly allow arbitrary code delivered from the file servers to run on the target system.

- **BOM**

  CVE-ID: CVE-2006-0391

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.5, Mac OS X Server v10.4.5

  Impact: Directory traversal may occur while unpacking archives with BOM

  Description: The BOM framework handles the unpacking of certain types of archives. This framework is vulnerable to a directory traversal attack that can allow archived files to be unpacked into arbitrary locations that are writable by the current user. This update addresses the issue by properly sanitizing those paths. Credit to Stéphane Kardas of CERTA for reporting this issue.

- **Directory Services**

  CVE-ID: CVE-2005-2713, CVE-2005-2714

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.5, Mac OS X Server v10.4.5

  Impact: Malicious local users may create and manipulate files as root

  Description: The passwd program is vulnerable to temporary file attacks. This could lead to privilege elevation. This update addresses the issue by anticipating a hostile environment and by creating temporary files securely. Credit to Ilja van Sprundel of Suresec LTD, vade79, and iDefense (idefense.com) for reporting this issue.

- **FileVault**

  CVE-ID: CVE-2006-0386

Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.5, Mac OS X Server v10.4.5

Impact: FileVault may permit access to files during when it is first enabled

Description: User directories are mounted in an unsafe fashion when a FileVault image is created. This update secures the method in which a FileVault image is created.

- **IPSec**

  CVE-ID: CVE-2006-0383

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.5, Mac OS X Server v10.4.5

  Impact: Remote denial of service against VPN connections

  Description: Incorrect handling of error conditions for virtual private networks based on IPSec may allow a remote attacker to cause a service interruption. This update addresses the issues by correctly handling the conditions that may cause crashes. Credit to OUSPG from the University of Oulu, NISCC, and CERT-FI for coordinating and reporting this issue.

- **LibSystem**

  CVE-ID: CVE-2005-3706

  Available for: Mac OS X v10.4.5, Mac OS X Server v10.4.5

  Impact: Attackers may cause crashes or arbitrary code execution depending upon the application

  Description: An attacker able to cause an application to make requests for large amounts of memory may also be able to trigger a heap buffer overflow. This could cause the targeted application to crash or execute arbitrary code. This update addresses the issue by correctly handling these memory requests. This issue does not affect systems prior to Mac OS X v10.4. Credit to Neil Archibald of Suresec LTD for reporting this issue.

- **Mail**

  CVE-ID: CVE-2006-0395

  Available for: Mac OS X v10.4.5, Mac OS X Server v10.4.5

  Impact: Download Validation fails to warn about unsafe file types

  Description: In Mac OS X v10.4 Tiger, when an email attachment is double-clicked in Mail, Download Validation is used to warn the user if the file type is not "safe". Certain techniques can be used to disguise the file's type so that Download Validation is bypassed. This update addresses the issue by presenting Download Validation with the entire file, providing more information for Download Validation to detect unknown or unsafe file types in attachments.

- **perl**

  CVE-ID: CVE-2005-4217

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9

  Impact: Perl programs may fail to drop privileges

  Description: When a perl program running as root attempts to switch to another user ID, the operation may fail without notification to the program. This may cause a program to continue to run with root privileges, assuming they have been dropped. This can cause security issues in third-party tools. This update addresses the issue by preventing such applications from continuing if the operation fails. This issue does not affect Mac OS X v10.4 or later systems. Credit to Jason Self for reporting this issue.

- **rsync**

  CVE-ID: CVE-2005-3712

  Available for: Mac OS X v10.4.5, Mac OS X Server v10.4.5

  Impact: Authenticated users may cause an rsync server to crash or execute arbitrary code

  Description: A heap-based buffer overflow may be triggered when the rsync server is used with the flag that allows extended attributes to be transferred. It may be possible for a malicious user with access to an rsync server to cause denial of service or code execution. This update addresses the problem by ensuring that the destination buffer is large enough to hold the extended attributes. This issue does not affect systems prior to Mac OS X v10.4. Credit to Jan-Derk Bakker for reporting this issue.

- **Safari**

  CVE-ID: CVE-2006-0390/CVE-2005-4504

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.5, Mac OS X Server v10.4.5

  Impact: Viewing a maliciously-crafted web page may result in arbitrary code execution

  Description: A heap-based buffer overflow in WebKit's handling of certain HTML could allow a malicious web site to cause a crash or execute arbitrary code as the user viewing the site. This update addresses the issue by preventing the condition causing the overflow. Credit to Suresec LTD for reporting this issue.

- **Safari**

  CVE-ID: CVE-2006-0387

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.5, Mac OS X Server v10.4.5

  Impact: Viewing a malicious web page may cause arbitrary code execution

  Description: By preparing a web page including specially-crafted JavaScript, an attacker may trigger a stack buffer overflow that could lead to arbitrary code execution with the privileges of the user. This update addresses the issue by performing additional bounds checking.

- **Safari**

  CVE-ID: CVE-2006-0388

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.5, Mac OS X Server v10.4.5

  Impact: Remote web sites can redirect to local resources, allowing JavaScript to execute in the local domain

  Description: Safari's security model prevents remote resources from causing redirection to local resources. An issue involving HTTP redirection can cause the browser to access a local file, bypassing certain restrictions. This update addresses the issue by preventing cross-domain HTTP redirects.

- **Safari, LaunchServices**

  CVE-ID: CVE-2006-0848

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.5, Mac OS X Server v10.4.5

  Impact: Viewing a malicious web site may result in arbitrary code execution

  Description: It is possible to construct a file which appears to be a safe file type, such as an image or movie, but is actually an application. When the "Open `safe' files after downloading" option is enabled in Safari's General preferences, visiting a malicious web site may result in the automatic download and execution of such a file. A proof-of-concept has been detected on public web sites that demonstrates the automatic execution of shell scripts. This update addresses the issue by performing additional download validation so that the user is warned (in Mac OS X v10.4.5) or the download is not automatically opened (in Mac OS X v10.3.9).

- **Syndication**

  CVE-ID: CVE-2006-0389

  Available for: Mac OS X v10.4.5, Mac OS X Server v10.4.5

  Impact: Subscriptions to malicious RSS content can lead to cross-site scripting

  Description: Syndication (Safari RSS) may allow JavaScript code embedded in feeds to run within the context of the RSS reader document, allowing malicious feeds to circumvent Safari's security model. This update addresses the issue by properly removing JavaScript code from feeds. Syndication is only available in Mac OS X v10.4 and later.

The following security enhancements are also included in this update:

- **FileVault.** AES-128 encrypted FileVault disk images are now created with more restrictive operating system permissions. Credit to Eric Hall of DarkArt Consulting Services for reporting this issue.
- **iChat.** A malicious application named Leap.A that attempts to propagate using iChat has been detected. With this update for Mac OS X v10.4.5 and Mac OS X Server v10.4.5, iChat now uses Download Validation to warn of unknown or unsafe file types during file transfers.

You should use caution when opening files that are obtained from the network. See Safety tips for handling email attachments and content downloaded from the Internet.

TA23971_About_Security_Update_.pdf

Published Date: Oct 7, 2016

Front Row: "iTunes cannot play this song" alert message

This article has been archived and is no longer updated by Apple.

If you see an alert message that says "iTunes cannot play this song" when you try to play Shared Music, it usually means that the computer you are trying to use for playback isn't authorized to play the content.

To fix the issue:

1. Exit Front Row.
2. Open iTunes and try to play the same song.
3. iTunes will ask you to enter the Apple ID and password used to purchase the music. Enter the appropriate Apple ID and password to authorize the computer.
4. Verify that the song will play in iTunes.
5. Go back to Front Row and play the content.

Related documents

- iTunes: About iTunes Store authorization and deauthorization

Published Date: Feb 20, 2012

Front Row: "There is a problem playing this shared video" alert message

This article has been archived and is no longer updated by Apple.

If you see an alert message that says "There is a problem playing this shared video: The shared video server may be having problems playing this video" when you try to play Shared Video, it usually means that the computer you are trying to use for playback isn't authorized to play the content.

To fix the issue:

1. Exit Front Row by pressing the Menu button on the Apple Remote.
2. Open iTunes and try to play the same video.
3. iTunes will ask you to enter the Apple ID and password used to purchase the video, in order to authorize that computer to play the video.
4. Verify that the video will play in iTunes.
5. Go back to Front Row. Now that the computer has been authorized, you can use Front Row to play the content.

Related documents

- iTunes: About iTunes Store authorization and deauthorization

Published Date: Feb 20, 2012

Front Row: Shared photo library does not appear in menu

This article has been archived and is no longer updated by Apple.

If a shared photo library does not appear in a Front Row menu, follow these steps:

1. While still in Front Row, press the Command ( ), Option, and Escape keys simultaneously. This will quit the Front Row application.
2. Open iPhoto and make sure the shared photo library appears in iPhoto. If it doesn't, make sure both computers are running iPhoto 6.0.2 or later and make sure the source computer has sharing enabled in the iPhoto preferences.
3. Start Front Row again.

The shared photo library should now appear in the menus.

Published Date: Feb 20, 2012

Upgrading to Front Row 1.2.1 displays "wrong version" alert messages

This article has been archived and is no longer updated by Apple.

Playing shared music, photos, or videos using Front Row version 1.2.1 requires the latest versions of iTunes and iPhoto. Before you install Front Row 1.2.1, update iPhoto and iTunes. You'll need to open iTunes and iPhoto at least once before you run the Front Row installer.

If you have already started the update and received the "wrong version" message:

1. Close Front Row.
2. Install the iPhoto and iTunes updates, as described above.
3. Open iTunes and iPhoto to complete the installation.
4. Then go back and open Front Row.

Published Date: Feb 20, 2012

Logic Pro/Express 7.2: Ducker is dimmed in Plug-in list

This article has been archived and is no longer updated by Apple.

The Ducker is only available on Bus and Output channels. When you click an insert for any other type of audio channel, it will be dimmed (unavailable) in the list of Logic plug-ins that comes up. See the Logic 7.2 Late Breaking News document for more information.

Published Date: Feb 20, 2012

Final Cut Pro: Dual mono audio channels in HDV clip appear as stereo when sent to Soundtrack Pro

This article has been archived and is no longer updated by Apple.

Symptom

An HDV clip captured as dual mono and sent from Final Cut Pro to Soundtrack Pro may have the wrong audio channel assignments. Rather than two independent mono tracks, the clip appears to have a single stereo track, with the first channel duplicated to both sides of the stereo track.

Solution

Capture the HDV clip as stereo, then both channels will send properly to Soundtrack Pro.

Published Date: Feb 20, 2012

Final Cut Pro 5: Use Quartz Extreme-capable video cards only

This article has been archived and is no longer updated by Apple.

You need a compatible computer with an AGP Quartz Extreme or PCI Express graphics card to install Final Cut Pro 5.

It's possible to add additional graphics cards after installing Final Cut Pro. If you do this with the intention of enabling an additional display for use with Final Cut Pro, be sure that the additional graphics card is one that is capable of supporting Quartz Extreme.

If you add a graphics card which is not capable of supporting Quartz Extreme technology, Final Cut Pro's windows may not function correctly on a display connected to that card. Final Cut Pro is not supported in such a configuration, and may fail to operate as expected.

Related documents

302671: "Final Cut Pro supports up to two displays at a time"

Published Date: Feb 20, 2012

About the Mac OS X 10.4.6 Update (combo)

This article has been archived and is no longer updated by Apple.

The Mac OS X 10.4.6 Update (combo) updates Mac OS X 10.4, 10.4.1, 10.4.2, 10.4.3, 10.4.4 or 10.4.5 to version 10.4.6 on both Intel-based Macs and PowerPC-based Macs. (If you are just updating from Mac OS X 10.4.5 to 10.4.6, see this article instead.)

Important: Please read before installing

- If you use iSync, you should perform a full sync with your devices before installing this update. Mac OS X 10.4.6 Update includes a later version of iSync with several improvements. For more information and before-you-install steps, see iSync 2.2: Read before updating to Mac OS X 10.4.6 or later, or before first sync.

- With the Mac OS X 10.4.6 system software update, PowerPC-based Macs will restart twice, instead of once, after the initial installation.
- You may experience unexpected results if you have third-party system software modifications installed, or if you've modified the operating system through other means. (This does not apply to normal application software installation.)

- The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to update.

- If issues occur during installation--for example, Software Update quits unexpectedly, please see this article.

Installation

There are two ways to update to Mac OS X 10.4.6: Use Software Update or the standalone installer. You only need to use *one* of these methods to update your computer.

Automatic Software Update
Software Update, located in the **Apple** menu, will automatically download the latest Apple software. (Software Update might have linked you to this article to learn more about the update.) Note that the update's size may vary from computer to computer when installed using Software Update. Some updates must be installed prior to others, soyou may need to run Software Update more than once to get all of the available updates.

Standalone installer
Download the update installer and run it manually. This a useful option when you need to update multiple computers but only want to download the update once. Two versions of the standalone installer are available from Apple Downloads: a delta and combo.

- The delta update installer (detailed in a different article) updates Mac OS X 10.4.5 to 10.4.6.

- The combo update installer for PowerPC and Intel-based Macs (described here) updates Mac OS X 10.4, 10.4.1, 10.4.2, 10.4.3, 10.4.4, and 10.4.5 to 10.4.6.

Improvements

This update offers many improvements. For a list of some of them, see About the Mac OS X 10.4.6 Update (delta).

This update also includes improvements delivered with earlier Mac OS X 10.4 updates, as described in these articles:

- About the Mac OS X 10.4.5 Update (delta)
- About the Mac OS X 10.4.4 Update (delta)
- About the Mac OS X 10.4.3 Update (delta)
- About the Mac OS X 10.4.2 Update (delta)
- About the Mac OS X 10.4.1 Update

Published Date: Oct 7, 2016

Logic Express 7: No audio from songs created in Garageband 3

This article has been archived and is no longer updated by Apple.

When you try to play a song in Logic Express 7 that was created in GarageBand 3, you may get no sound.

That's because songs created in GarageBand 3 will have audio and instrument tracks assigned to output to bus 11 in Logic Express. Logic Express only supports up to 8 busses, so there's no audio.

To resolve this issue, reassign the output for each track to Out 1 to 2 on your audio hardware (or whatever outputs you usually use). The effects from Garageband on bus 1 and bus 2 will also be assigned to output to bus 10. Reassign bus 1 and 2 to output to your audio hardware as well.

Published Date: Feb 20, 2012

Logic Pro/Express 7: Unexpectedly quits during launch while reading Audio Unit cache

This article has been archived and is no longer updated by Apple.

During launch, Logic may quit unexpectedly when the progress message says "Initializing Core Audio (reading Audio Unit cache...)".

This occurs if the first language in the International preference pane is not a language for which the Finder is localized, such as Polish or Icelandic.

The issue is resolved in Logic 7.2.1 and later. To work around the issue in 7.2 or earlier:

1. Open System Preferences.
2. Select the International pane.
3. Drag a Finder-localized language, such as English, Deutsch, or Français to the top of the list.
4. Quit System Preferences.
5. Log out of Mac OS X, then log back in.

Published Date: Feb 20, 2012

Front Row: Shared music or video won‘t play

This article has been archived and is no longer updated by Apple.

If you're trying to play shared music or a video selection from Front Row 1.2.1 but the music or video won't play, it may be because iTunes 6.0.4 has an open dialog box preventing it from playing.

To resolve this, exit Front Row by pressing the Menu button on the Apple Remote. Select iTunes with your mouse or trackpad and dismiss the dialog box.

Published Date: Feb 20, 2012

iSync 2.2: "Connection to the phone failed" alert when syncing via Bluetooth

This article has been archived and is no longer updated by Apple.

After updating to iSync 2.2, included with Mac OS X 10.4.6 Update, you may see this alert message when attempting to sync your phone via Bluetooth:

> "Connection to the phone failed. Please make sure that your phone is turned on. If this error occurs again, please restart your phone"

Solution

Use these tips:

- First, make sure that your phone is on the list of iSync-compatible devices that support Bluetooth syncing.
- Make sure the phone has been paired with your computer.
- Configure your computer as a "Trusted" or "Authorized" device on your phone. The exact steps on how to do this vary from phone to phone--please consult your device's documentation. The goal is to eliminate the need to authorize your computer each time iSync wants to sync with your phone.
- If the phone has a "screen saver" running when you try to sync, this issue can occur. Wake your phone and try the sync again.
- Try turning your phone off and back on again.

If the issue persists, check with your cell phone provider or contact your phone manufacturer to see if any firmware updates are available for the phone, or for further assistance.

Published Date: Feb 20, 2012

Mac OS X: Network Status is blank, or you see "Airport: Not Configured"

This article has been archived and is no longer updated by Apple.

Under certain circumstances, Network Status may appear blank in the Network pane of System Preferences, or you may see the message "Airport: Not Configured" under the Airport menu bar item. This can occur in Mac OS X 10.2 or later.

To resolve the issue, all you need to do is apply an arbitrary change to your network preferences. Follow these steps:

1. From the **Apple** menu, choose **System Preferences**.
2. Select the Network pane.
3. From the **Show** menu, choose **Network Port Configurations**.
4. Select a port which is currently inactive, such as Built-in FireWire; **or**, if all ports are already selected, then deselect a port such as Built-in FireWire.
5. Click the **Apply Now** button.
6. If you selected a port in the last step, deselect it now, or vice versa.
7. Click the **Apply Now** button again.

Applying the change should make your network ports available again. If you still have an issue connecting to the Internet, see the overview of Mac OS X Internet setup and troubleshooting topics.

Published Date: Feb 20, 2012

Aperture can‘t import iPhoto Library from iPhoto 6.0.1 or 6.0.2

This article has been archived and is no longer updated by Apple.

If you choose **File > Import > iPhoto Library** within Aperture, and you have iPhoto 6.0.1 or 6.0.2 installed, then Aperture won't import the iPhoto Library.

However, this feature does work with iPhoto 6.0, so a workaround is to remove iPhoto 6.0.1 or 6.0.2 and reinstall iPhoto 6.0 from the iLife '06 Install DVD. Here's how:

1. From the folder `/Library/Receipts`, delete the files iPhoto.pkg and iPhotoContent.pkg.
2. Move the iPhoto application from the Applications folder to the Trash.
3. Run the iLife '06 Installer. When you get to the Installation Type screen, click the Customize button.
4. In the resulting window, deselect every option except iPhoto.

5. Click the Upgrade button.
6. After iPhoto 6.0 is installed, launch it, and quit it.
7. Import the iPhoto library into Aperture.
8. Use Software Update to re-update to the latest version of iPhoto.

This issue will be resolved in Aperture 1.1.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Mac OS X 10.4: Mail, Terminal, iChat aren‘t hidden after log in

This article has been archived and is no longer updated by Apple.

In Mac OS X 10.4, you can use Accounts preferences' Login Items tab to make individual applications automatically open when you log in. There is also an option to hide each application.

Mail, Terminal, and iChat applications can be opened automatically at log in this way, but they will not be automatically *hidden* after opened, even if you selected the Hide checkbox.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Logic Pro/Express 7.2 Crossgrade: Do not install PowerPC-only version first

This article has been archived and is no longer updated by Apple.

When installing the Logic Pro/Express crossgrade on a new system, you don't need to install previous versions first. The disc set contains a full installation of the software.

Note: On Intel-based Mac systems, Logic 7.2 may unexpectedly quit on launch if a previous version has been installed and launched. Learn how to resolve that here.

Published Date: Feb 20, 2012

Mac OS X 10.4 (Japanese): Garbled printout when printing with Morisawa NewCID fonts in Classic

This article has been archived and is no longer updated by Apple.

In the Japanese language version of Mac OS X 10.4 or later, in Classic, if you print a document that uses Morisawa NewCID fonts to a PostScript printer, some or all of the document will be garbled and unreadable. This can happen with Morisawa NewCID fonts originally installed from a floppy disk to the Mac OS 9 System Folder, but not with a Mac OS X version of the fonts.

To avoid this, use the Mac OS X version of the Morisawa NewCID fonts instead of the Classic versions. You might want to use Font Book to turn off the Classic version of the Morisawa fonts.

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Published Date: Oct 7, 2016

AirPort: Which version of firmware is on the base station?

This article has been archived and is no longer updated by Apple.

To see what version of firmware is on your AirPort Express, AirPort Extreme, or AirPort Base Station, follow these steps:

1. If your computer connects to the AirPort network wirelessly, continue to step 2. If your computer connects to the AirPort network via wired Ethernet, skip to step 4.
2. From the Airport menu, choose your network name.

Tip: If the Airport menu does not appear in your menu bar, go to the Network pane of System Preferences, show AirPort, click the AirPort tab, and select "Show AirPort Status in menu bar."

3. If prompted for a network password, enter it.
4. Open AirPort Admin Utility, which is located in the Utilities folder inside your Applications folder.
5. Select a base station, and its firmware version appears as its "Apple Base Station" version.

For the latest firmware, see the AirPort support page.

Published Date: Feb 20, 2012

About Security Update 2006-002

This article has been archived and is no longer updated by Apple.

This document describes Security Update 2006-002, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Note: Security Update 2006-002 v1.1 was released to address an issue in which Safari was not updated by v1.0 if it had been moved from its default location in the Applications folder. This article describes the steps to follow if Safari is not located in the Applications folder.

If Safari is located in the Applications folder, Security Update 2006-002 is sufficient, and there is no need to install Security Update 2006-002 v1.1.

Security Update 2006-002

- **CoreTypes**

  CVE-ID: CVE-2006-0400

  Available for: Mac OS X v10.4.5, Mac OS X Server v10.4.5

  Impact: Remote web sites can cause JavaScript to bypass the same-origin policy

  Description: When documents containing Javascript are loaded from a remote site, data access is restricted by the same-origin policy. However, under certain situations, maliciously-crafted archives can cause these restrictions to be bypassed. This update addresses the issue by flagging these documents as unsafe.

- **Mail**

  CVE-ID: CVE-2006-0396

  Available for: Mac OS X v10.4.5, Mac OS X Server v10.4.5

  Impact: Double-clicking an attachment in Mail may result in arbitrary code execution

  Description: By preparing a specially-crafted email message with attachments, and enticing a user to double-click on that attachment within Mail, an attacker may trigger a buffer overflow. This could result in the execution of arbitrary code with the privileges of the user running Mail. This update addresses the issue by performing additional bounds checking. This issue does not affect systems prior to Mac OS X v10.4. Credit to Kevin Finisterre of DigitalMunition for reporting this issue.

- **Safari, LaunchServices, CoreTypes**

  CVE-ID: CVE-2006-0397, CVE-2006-0398, CVE-2006-0399

  Available for: Mac OS X v10.4.5, Mac OS X Server v10.4.5

  Impact: Viewing a malicious web site may result in arbitrary code execution

  Description: Security Update 2006-001 addressed an issue where Safari could automatically open a file which appears to be a safe file type, such as an image or movie, but is actually an application. This update provides additional checks to identify variations of the malicious file types addressed in Security Update 2006-001 so that they are not automatically opened. This issue does not affect systems prior to Mac OS X v10.4. Credit to Will Dormann of CERT/CC and Andris Baumberger for reporting several of these issues.

The following non-security issues introduced by Security Update 2006-001 are also addressed by this update:

- **Download Validation:** Security Update 2006-001 could cause the user to be warned when provided with certain safe file types, such as Word documents, and folders containing custom icons. These unneeded warnings are removed with this update.
- **apache_mod_php:** A regression in PHP 4.4.1 that could prevent SquirrelMail from functioning is corrected with this update.

- **rsync:** A regression in rsync that prevented the "--delete" command line option from functioning is corrected with this update.

Published Date: Oct 7, 2016

iPhoto: "Display" and "Custom" values for cropping constraint result in ratios, not pixel dimensions

This article has been archived and is no longer updated by Apple.

When using the Crop tool, the Constrain pop-up menu gives you the option to choose common aspect ratios such as 5x7, 8x10, and 16x9. There will also be a choice named Display that lists your current display resolution, such as 1024x768.

Choosing the Display choice will crop the image to the *aspect ratio* of the current display resolution, **not** literally to those pixel dimensions. The same is true for any value you enter as a Custom choice via the Constrain menu.

Published Date: Feb 20, 2012

Logic: You can mix PowerPC and Intel-based systems in Logic Node setups

This article has been archived and is no longer updated by Apple.

When configuring a group of computers as a Logic Node setup, it does not matter whether the master system and nodes use the same processor architecture. A PowerPC-based system running Logic Pro may connect to any combination of nodes running on PowerPC and Intel processors (the nodes must not all be the same). Likewise, an Intel-based system running Logic Pro may connect to nodes running on either processor architecture.

However, you must be sure that all nodes are running the same version Logic as the master, such as 7.2.0.

Published Date: Feb 20, 2012

Logic: How to define a new default setting for a plug-in

This article has been archived and is no longer updated by Apple.

If you want to make a custom setting the default when you load a Logic plug-in, here's how to set it up:

Insert the chosen plug-in on a channel. Set the controls for the plug-in as you wish. Open the plug-in Settings menu by clicking the arrow in the upper left area of the plug-in window.

Select **Save Setting As...**, and name the preset "#default".

The next time you insert the plug-in, the saved setting will be the new default. You can repeat this procedure any time you want to change the default.

Published Date: Feb 20, 2012

iPhoto 6: Photos appear too dark or wrong color

This article has been archived and is no longer updated by Apple.

When viewing a photo in iPhoto 6, an image may appear darker than expected, or to have the wrong hue, tint, or color balance as compared to another application.

This happens because iPhoto now uses ColorSync to ensure accuracy, and ColorSync relies in part on knowing the source profile. If the photo lacks a color profile, iPhoto may substitute a best-guess profile based on predefined criteria.

For best results, set your camera and (if applicable) adjust the other software in your workflow so that profiles are embedded and/or preserved. Additionally, you should calibrate your display using the Displays preference pane or a third-party hardware calibration device, which is the superior method.

Published Date: Oct 7, 2016

Mac OS X 10.4: About Disk Utility‘s secure erase options

This article has been archived and is no longer updated by Apple.

In Disk Utility in Mac OS X 10.4 Tiger, there are four Security Options you can use if you wish to securely erase a volume:

- Don't Erase Data
- Zero Out Data
- 7-Pass Erase
- 35-Pass Erase

"Don't Erase Data" option

Erases directory information so that data is no longer accessible. The data itself is left unchanged on the disk until its disk space is required, at which point it is written over. Data is potentially recoverable until then. This option is the quickest, but least secure.

"Zero Out Data" option

Writes zeros over all data on the disk. This option provides good data security in a minimum amount of time.

"7-Pass Erase" option

Writes data over the entire disk seven times. This provides a highly secure erasure of disk data. A 7-Pass erase takes 7 times longer than a Zero Out Data erase.

Advanced information: The 7-Pass Erase option conforms to the DoD 5220.22-M specification. This specification calls for three passes, but Disk Utility performs seven. Visit here for more details on the specification.

7 pass overwrite data
(DoD 5220.22-M specification)

	Data written	
Pass	Inbinary notation	Inhexadecimal notation
1	11110110	0xF6
2	00000000	0x00
3	11111111	0xFF
4	Random	Random
5	00000000	0x00
6	11111111	0xFF
7	Random	Random

"35-Pass Erase" option

Writes data over the entire disk 35 times. This option provides highly effective security against the recovery of data. It requires 35 times more time to perform than the Zero Out option.

Advanced information: The 35-Pass erase option uses the Gutmann algorithm, which means 35 patterns are written to the disk to overwrite data. You can find out more about the Gutmann method here or here. In the chart below, RLL means Run Length Limited, and MFM means Modified Frequency Modulation.

35 pass overwrite data
(Gutmann)

	Data written			
Pass	In binary notation	In hexadecimal notation	Encoding scheme targeted	
1	Random	Random		
2	Random	Random		
3	Random	Random		
4	Random	Random		
5	01010101 01010101 01010101	55 55 55	(1,7) RLL	MFM

6	10101010 10101010 10101010	AA AA AA	(1,7) RLL		MFM
7	10010010 01001001 00100100	92 49 24		(2,7) RLL	MFM
8	01001001 00100100 10010010	49 24 92		(2,7) RLL	MFM
9	00100100 10010010 01001001	24 92 49		(2,7) RLL	MFM
10	00000000 00000000 00000000	00 00 00	(1,7) RLL	(2,7) RLL	
11	00010001 00010001 00010001	11 11 11	(1,7) RLL		
12	00100010 00100010 00100010	22 22 22	(1,7) RLL		
13	00110011 00110011 00110011	33 33 33	(1,7) RLL	(2,7) RLL	
14	01000100 01000100 01000100	44 44 44	(1,7) RLL		
15	01010101 01010101 01010101	55 55 55	(1,7) RLL		MFM
16	01100110 01100110 01100110	66 66 66	(1,7) RLL	(2,7) RLL	
17	01110111 01110111 01110111	77 77 77	(1,7) RLL		
18	10001000 10001000 10001000	88 88 88	(1,7) RLL		
19	10011001 10011001 10011001	99 99 99	(1,7) RLL	(2,7) RLL	
20	10101010 10101010 10101010	AA AA AA	(1,7) RLL		MFM
21	10111011 10111011 10111011	BB BB BB	(1,7) RLL		
22	11001100 11001100 11001100	CC CC CC	(1,7) RLL	(2,7) RLL	
23	11011101 11011101 11011101	DD DD DD	(1,7) RLL		
24	11101110 11101110 11101110	EE EE EE	(1,7) RLL		
25	11111111 11111111 11111111	FF FF FF	(1,7) RLL	(2,7) RLL	
26	10010010 01001001 00100100	92 49 24		(2,7) RLL	MFM
27	01001001 00100100 10010010	49 24 92		(2,7) RLL	MFM
28	00100100 10010010 01001001	24 92 49		(2,7) RLL	MFM
29	01101101 10110110 11011011	6D B6 DB		(2,7) RLL	
30	10110110 11011011 01101101	B6 DB 6D		(2,7) RLL	
31	11011011 01101101 10110110	DB 6D B6		(2,7) RLL	
32	Random	Random			
33	Random	Random			
34	Random	Random			
35	Random	Random			

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Published Date: Feb 20, 2012

Aperture 1.1: Library not backward compatible with Aperture 1.0.x

This article has been archived and is no longer updated by Apple.

The first time you run Aperture 1.1, you will see an alert message that lets you know that your Aperture Library will be converted to a new format.

Once converted, the Aperture Library will no longer work with Aperture 1.0 or 1.0.1.

Tip: If you want to maintain backward compatibility, make a copy of your Aperture Library before converting it.

By default, the Aperture Library is located in your Pictures folder. If you have selected a different location, it will be noted in Aperture Preferences.

Published Date: Feb 20, 2012

iSight: How to locate the serial number

This article has been archived and is no longer updated by Apple.

Learn how to locate the serial number of an iSight camera. This article applies to standalone iSight cameras, such as in this article, but not iSight cameras built into some iMacs and all MacBook Pro computers.

There are several ways to locate the serial number of a standalone iSight camera. The serial number consists of eleven letters and numerals, such as "W933355KCBL".

Look on the iSight camera's shipping box

Remove the sleeve from the box that the camera came in and look at the back of the box where iSight features are listed.. The serial number ("Serial No.") is printed on a white label.

Look on the bottom of the iSight camera

On the bottom of the camera, near the FireWire connector, the serial number is printed in small, white characters. If you find it difficult to read the serial number this way and you don't have the original shipping box, you can use the next method.

Open iSight Updater

1. Start up in Mac OS X.
2. Connect your iSight camera to your computer.
3. From the Finder's **Go** menu, choose **Utilities**.
4. In the Utilities folder, look for an iSight Updater folder.
    - If you see more than one iSight Updater folder, open the one with the highest version number, such as "iSight Updater 1.0.3".
    - If you don't see an iSight Updater folder, use Software Update to check for available iSight updates.
5. In the iSight Updater folder is an iSight Updater application. Open the application and the serial number will be visible.

    Note: If you've already installed the iSight update, in which case "(up do date)" appears in the iSight Update window, you do not need to click Install.

6. After you've made note of the serial number, press Command-Q to quit iSight Updater.

Published Date: Feb 20, 2012

Logic: Mixing versions of Logic Node and Logic Pro causes unexpected quitting

This article has been archived and is no longer updated by Apple.

Systems running version 7.1.0 or 7.1.1 of Logic Node can connect to Logic Pro 7.2 (Intel), leading Logic Pro to quit unexpectedly.

To avoid this situation, be sure to update any systems running Logic Node to the same version number as the system running Logic Pro. If you are running Logic Pro 7.2, then Logic Node 7.2 should be running on all connected systems. The Installer for Logic Node is located on the same disc as the Logic Pro Installer.

Published Date: Feb 20, 2012

Final Cut Studio is not supported on Mac Mini (Early 2006)

This article has been archived and is no longer updated by Apple.

If you have a Mac Mini (Early 2006), the Final Cut Studio (Universal) crossgrade Installer does not prohibit you from installing the pro applications, but this configuration does not meet the minimum system requirements for Final Cut Studio.

See the Final Cut Studio system requirements for complete requirements.

Note: The integrated graphics processor in the Mac Mini (Early 2006) does not permit float processing in Motion and will result in degraded performance and other issues in Motion and other Final Cut Studio applications.

Published Date: Oct 7, 2016

Safari: Blank icon after installing Security Update 2006-002 v1.0

This article has been archived and is no longer updated by Apple.

After you install Security Update 2006-002 v1.0, Safari might have a blank icon that won't launch Safari. This can happen if you moved Safari out of your Applications folder before installing the update. To fix it, follow these steps:

1. Drag the copy of Safari with the blank icon from your Applications folder to the Trash. **Note:** Don't worry—this will not affect your bookmarks or preferences.
2. Empty the Trash.
3. Download the Security Update 2006-002 v1.1 for PowerPC or Intel.
4. Install the Security Update 2006-002 v1.1
5. When the installation is complete, restart your computer.

Your existing version of Safari will now be up to date.

Published Date: Oct 7, 2016

Troubleshooting photo transfers with iPod Camera Connector and Canon EOS 20D

This article has been archived and is no longer updated by Apple.

You may experience difficulty when attempting to transfer photos using the iPod Camera Connector with a Canon EOS 20D and a supported iPod. You may see one or more of the following error messages on the iPod:

- No card inserted
- Camera not connected
- Device not supported

Solution

Try one or more of the following troubleshooting steps to resolve this issue and allow photos to be transferred a supported iPod:

- Change the camera's transfer mode from Normal (Type 4) to PTP (check you camera's documentation to see how to change the transfer mode)..
- Press the blue playback button on the rear of the Canon EOS 20D before connecting it to the iPod.
- With the camera, iPod Camera Connector, and iPod all connected and turned on, reset the iPod and press the blue playback button on the camera

See "How to use the iPod Camera Connector" for additional troubleshooting information.

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Published Date: Feb 20, 2012

Mac OS X 10.4.5 and later support common methods of VPN NAT traversal

This article has been archived and is no longer updated by Apple.

VPN (Virtual Private Network) software allows users to connect to a remote computer network as if they were locally present. For example, VPN allows one to connect to a company network when working from home, telecommuting, or traveling. The remote network must have a VPN server to facilitate the connection.

In case you were wondering, VPN should work just fine with a network address translation (NAT) gateway to the Internet, which is common in many hotel and home router products.

Advanced information

Mac OS X 10.4.5 or later support:

- UDP Encapsulation of IPsec ESP Packets
- Negotiation of NAT-Traversal in the IKE
- draft-ietf-ipsec-nat-t-ike-02
- draft-ietf-ipsec-udp-encaps-02

Note: Multiple users behind the same NAT cannot use the same VPN server.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

iPhoto 6: Adjust panel appears to have no effect on RAW images

This article has been archived and is no longer updated by Apple.

After using Retouch on a RAW file in iPhoto 6, you may not be able to use the settings in the Adjust panel. The Temperature, Tint, and Exposure sliders move, but no change occurs to the image file.

To correct this issue, click Done after using the Retouch tool, then return to editing the image. The various adjustment sliders should work as expected.

Published Date: Feb 20, 2012

iLife ‘06: Don‘t move iLife support files from installed locations

This article has been archived and is no longer updated by Apple.

When installing iLife '06, you can specify custom paths for themes, instruments and other related items as part of the custom install options. If you specify custom install locations during installation, but later move these items, the iLife applications may no longer be able to locate or use these items.

After moving themes, loops or instruments, you are no longer able to locate these items in the iLife application.

After renaming the hard disk or another folder in the path to the theme, instrument or loop files, you are no longer able to locate these items in the iLife application.

Solution

If you have renamed the hard disk, or one of the folders in the path to the item you are missing, try changing the name of the disk or folder back to the original name.

Alternatively, check the preferences of the application you are using to see if you can add the new path as a place to check for themes or instruments.

You may also want to try moving the items to one of the default search paths for the associated application:

iDVD Themes
/Library/Application Support/iDVD/Themes/

iMovie Themes
/Library/Application Support/iMovie/Themes/

GarageBand Demo Songs
/Library/Application Support/GarageBand/

GarageBand Instruments
/Library/Application Support/GarageBand/Instrument Library/

GarageBand Loops
/Library/Audio/Apple/Apple Loops/Apple Loops for GarageBand
Published Date: Feb 20, 2012

Software License Agreement for Firmware Restoration CD 1.3

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Published Date: Oct 7, 2016

Power Macintosh G3 Mini Tower: How to Use Video Mirroring

This document describes how to set up video mirroring on a Power Macintosh G3 Mini Tower.
This article has been archived and is no longer updated by Apple.
In order to enable video mirroring on a Power Macintosh G3 Mini Tower, use the "TV Mirroring" portion of the Control Strip, which is automatically installed on Power Macintosh G3 Mini Tower computers that have the A/V Personality Card. You can identify this by looking for the Control Strip portion that has a picture of a TV with antennas.

Within this control strip, you have several options:

- turn Video Mirroring on
- use NTSC standard
- use PAL standard
- overscan
- leave monitor on

To start video mirroring, choose "Turn Video Mirroring On".

Troubleshooting

Question: What if the TV Mirroring control strip is not present?
Answer: Make sure you have a Power Macintosh G3 Mini Tower computer with the A/V personality card.
If you have a Power Macintosh G3 Desktop computer, or if you do not have the A/V personality card, then the only way to use video mirroring is through a third-party PCI card. In that case, you should follow the instructions that came with the video card.

If you have a Power Macintosh G3 Mini Tower computer with the A/V personality card, and the control strip is not present, perform a "custom installation" of the "Control Strip" control panel with your Power Macintosh G3 CD.

Question: I have chosen "Turn Video Mirroring On" but I am getting no video on my TV.
Answer: Check your connections and make sure that the RCA or S-video cable is going from the "video out" ports of your computer, and the "video in" ports of your TV or VCR. Make sure that "Use NTSC Standard is selected within the TV mirroring control strip. Check the video input ports of your TV or VCR with another device.

Question: When I turn video mirroring on, my monitor turns off. Why won't it display to both monitor and my TV simultaneously?
Answer: Check the TV Mirroring portion of the Control Strip and make sure that the option "Leave Monitor On" is selected. If "Leave Monitor On" is disabled, then make sure your monitor is capable of displaying video at one of the following resolutions:

512 by 384 at 60 Hz
640 by 480 at 60 Hz
800 by 600 at 60 Hz
832 by 624 at 60 Hz

If your monitor does not work with one of those resolutions, it will not be able to display video simultaneously with your TV.

Finally, make sure that both your monitor and TV were connected to the computer before it started up (if you connected your monitor after the computer started up, you will need to restart).
Published Date: Feb 20, 2012

Mac OS X Server 10.4.6 or later: changeip now requires fully qualified domain names

This article has been archived and is no longer updated by Apple.

Mac OS X Server 10.4.6 and later include changes to the command line utility "changeip" such that you must now use a fully qualified domain name (FQDN) with the command.

Previously, changeip could be invoked with the server's short name, like this:

```
changeip /LDAPv3/127.0.0.1 10.0.1.1 10.0.1.2 testserver testserver2
```

Using the FQDN in Mac OS X Server 10.4.6 or later, your command would look like this:

```
changeip /LDAPv3/127.0.0.1 10.0.1.1 10.0.1.2 testserver.example.com testserver2.example.com
```

Before running changeip, be sure you have updated the server's hostname in DNS to match the hostname provided to changeip; otherwise errors will be logged in system.log, and services may not function properly.

Published Date: Oct 7, 2016

Aperture can‘t import iPhoto 5 Library that contains altered folder names

This article has been archived and is no longer updated by Apple.

Aperture can't import an iPhoto Library from iPhoto 5 if you have renamed any of the folders contained within the iPhoto Library. The import will simply fail to start. To prevent this issue, refrain from changing the names of folders contained within the iPhoto Library.

This issue affects iPhoto 5 but not iPhoto 6.

Published Date: Oct 7, 2016

Aperture: Color shift in images when in full screen mode

This article has been archived and is no longer updated by Apple.

If you have Onscreen Proofing active at the same time as Avoid mode for the Viewer, images in full screen mode can exhibit a color shift.

To avoid this issue, don't use the Avoid option and Onscreen Proofing at the same time.

Published Date: Oct 11, 2016

Aperture: Video issues after changing display resolution

This article has been archived and is no longer updated by Apple.

If you change the display resolution in System Preferences while Aperture is open, then Aperture may exhibit various anomalies, such as failure to adopt the new resolution, and redraw problems.

To avoid this issue, quit Aperture before changing the display resolution.

Published Date: Oct 7, 2016

Xsan: Clients have kernel panic when modifying Xsan volume settings

This article has been archived and is no longer updated by Apple.

An Xsan client or metadata controller (MDC) will experience a kernel panic if you do not unmount a volume from it before performing an action on that volume in Xsan Admin that will change the volume. Though you can change some settings for an existing volume, other changes require the volume to be re-initialized (you'll see a warning in these cases).

In order to avoid this behavior, unmount and stop Xsan Volumes before changing their configuration in any way that requires the volume to be rebuilt.

Published Date: Feb 20, 2012

"Allow Host Cache Flushing" is enabled after Xserve RAID restarts

This article has been archived and is no longer updated by Apple.

If your site requires that host cache flushing be disabled, make sure you open RAID Admin and disable this feature after rebooting an Xserve RAID.

Disabling host cache flushing may be essential for consistent fibre channel communications.

Download and install Xserve RAID Admin Tools 1.5.1 to resolve this issue.

Published Date: Feb 20, 2012

Logic Pro/Express 7.2: Using compressed audio will not increase track counts

This article has been archived and is no longer updated by Apple.

Logic Pro/Express 7.2 now allows you to play compressed audio formats such as AAC, Apple Lossless, and MP3 directly in the Arrange window. Because these files are smaller in terms of disk space, you might think that they would also require less CPU and disk drive bandwidth to play back. However, this is not the case.

In fact, directly playing compressed audio in your song may actually require more system resources than playing back an equivalent number of uncompressed audio tracks. In situations where the added overhead becomes a problem, you may get better performance by converting your compressed audio tracks to AIFF or WAVE files.

Select the relevant regions in the Arrange window and choose **Arrange > Audio > Convert Regions to New Audio Files**. A file selector will appear, allowing you to choose a destination file format for the copied files.

Published Date: Feb 20, 2012

iMovie HD: About limiting clip length when importing

This article has been archived and is no longer updated by Apple.

iMovie HD 6 allows you to limit the length of video clips when you are importing from a DV or HDV camera.

To configure these settings:

1. Open iMovie HD.
2. From the **iMovie HD** menu, choose **Preferences**.
3. Click the Import tab.

You can select the following settings:

- Start a new clip at each scene break
- Limit scene length

With the "Start a new clip at each scene break" option, iMovie HD automatically creates a new clip wherever there's a scene break (places where the camcorder was switched from pause to record during shooting).

With the "Limit scene length" option, iMovie HD automatically creates a new clip when importing reaches the time limit you've specified.

Notes

- These settings are only effective when importing from DV and HDV sources. Capturing from an iSight camera does not allow you to limit scene length with these settings.
- iMovie HD does not break up scenes shorter than 30 frames (about one second), so some short scenes may be merged with longer ones when imported.
- If automatic scene detection is turned on and your imported footage isn't being broken at scene breaks, make sure the date and time on your camera are set correctly.

Published Date: Feb 20, 2012

Logic Pro/Express: Unexpected insert bypassed by automation on instrument tracks

This article has been archived and is no longer updated by Apple.

When automating the bypass state of an insert on an Instrument track, the insert bypassed is offset by one in comparison with an Audio track. For example, setting Insert 2 to bypass on an Instrument track seems to bypass the first insert.

This is actually the expected behavior, because the Insert for the Instrument itself is treated as Insert 1 by the track automation. The DSP inserts at the top of the channel strip are numbered from Insert 2 and up.

On Audio tracks, the top DSP insert is considered Insert 1.

Published Date: Feb 20, 2012

Updating from Aperture 1.0.x to 1.1

This article has been archived and is no longer updated by Apple.

Below are some suggestions for updating from Aperture version 1.0.x to version 1.1 in several different, yet common, scenarios.

Updating from Aperture 1.0.1 to 1.1 on a PowerPC-based Mac

1. Update to Mac OS X 10.4.6 or later.
2. Use Software Update again to install the Aperture 1.1 Update.

Updating from Aperture 1.0 to 1.1 on a PowerPC-based Mac

1. Run Software Update to install Aperture 1.0.1 and Mac OS X 10.4.6 or later.
2. Open Aperture 1.0.1 at least once.
3. Run Software Update again to install Aperture 1.1.

Using an Aperture 1.1 Installation Disc on an Intel-based Mac

1. Update the system to Mac OS X 10.4.6 or later.
2. Install Aperture from the disc.

Using an Aperture 1.0 Installation Disc on an Intel-based Mac

1. Update the system to Mac OS X 10.4.6 or later.
2. Install Aperture 1.0 from the disc.
3. Run Software Update to install the Aperture 1.0.1 Update.
4. Run Software Update again to install the Aperture 1.1 Update.

Moving your Aperture library from a PowerPC Mac to an Intel Mac

1. If you have not already updated to Aperture 1.0.1 on the PowerPC-based Mac, do so now, and open Aperture 1.0.1 at least once after the update.
2. Follow the steps (above) for installing Aperture on an Intel-based Mac.
3. Copy your existing Aperture Library to the Pictures folder (`~/Pictures`) on the Intel-based Mac.

Published Date: Feb 20, 2012

After Power Mac G5 wakes from sleep, optical media appears to be blank

This article has been archived and is no longer updated by Apple.

If your optical disc drive tray is open when your Power Mac G5 goes to sleep, it will retract the tray as it goes to sleep. Then when the computer wakes up, the disc may appear in the Finder as blank media.

This can occur with blank CDs or DVDs as well as commercially-produced CDs or DVDs.

If this occurs, eject the disc icon on your desktop by dragging it to the Trash in the dock. Reinsert the disc and close the drive tray. The optical drive will recognize the media correctly.

Published Date: Feb 20, 2012

Front Row: Videos only play on primary display

This article has been archived and is no longer updated by Apple.

If you have multiple displays connected to your Mac, you may notice that Front Row will play videos on the "primary" display only. If you want the videos to play on a different display, you can change the "primary display" assignment:

1. From the Apple menu, open System Preferences.
2. Choose the Displays pane of System Preferences.
3. Select the **Arrangement** tab.
   (If you don't see one, you may not have the other display connected at the moment—reconnect the display and try again.)
4. Drag the menu bar (the white line on top of the display icon) to the display you want the to use as the primary display. The system will switch to the new primary assignment immediately.
5. Close the Display preference pane and watch your Front Row videos!

Published Date: Feb 20, 2012

Mac OS X: Adjusting Date & Time for Australian Daylight Saving Time‘s extra week in 2006

This article has been archived and is no longer updated by Apple.

In Australian states that observe Daylight Saving Time, Summer Time extends for an extra week in 2006. This means that clocks will be set back to standard time on 02-April-2006 instead of 26-March-2006. Learn how to make sure your Mac OS X clock displays the correct time during the intervening week if you live in one of the affected states.

This document applies to all versions of Mac OS X in Australian states that observe Daylight Saving Time.

Mac OS X 10.4

Download and install the Mac OS X 10.4.5 Update or later. This contains updated Daylight Saving Time rules that maintain the proper time automatically.

Mac OS X 10.3.9 or earlier

You have two options: Select a different time zone, or set the time manually.

Select a different time zone

Note: Use this option if it is necessary to maintain the correct offset from Universal Time—for example, in an environment where Kerberos authentication is used.

1. Select a time zone in Date & Time preferences that is one hour to the east of your location—for example, by clicking on an area of northeastern Russia or the South Pacific.
2. On 02-April-2006, reverse this change by reselecting the original time zone.

Note: This option is not available for users in South Australia.

Set the time manually

1. Deselect the "Set Date & Time automatically" option in Date & Time preferences if it's enabled.
2. Manually set the correct time.
3. Click Save.
4. On 02-April-2006, reverse this change by checking "Set Date & Time automatically" or by manually setting the correct time again.

Published Date: Feb 20, 2012

Mac OS X: Adjusting Date & Time for Indiana Daylight Saving Time changes in 2006

This article has been archived and is no longer updated by Apple.

In the United States, the state of Indiana observes Daylight Saving Time (DST) for the first time in many counties on April 2, 2006 (02-April-2006). Some counties in Indiana also change from the Eastern to Central time zone. This article explains how to adjust your Mac for these changes.

Note: If you live in an Indiana county that observed Daylight Saving Time before 2006, no changes are necessary.

If you live in an Indiana county that changes from Eastern to Central time as of April 2, 2006

Use Date & Time preferences to choose a Central time zone city, such as Chicago, on or after 02-April-2006.

If you live in an Indiana county that is not changing to Central time and has not observed DST before

Your steps depend on which version of Mac OS X you are using.

Mac OS X 10.4 or later

Download and install the Mac OS X 10.4.5 Update, or later. This contains updated Daylight Saving Time rules to automatically maintain the proper time.

Mac OS X 10.3.9 or earlier

Use Date & Time preferences to choose an Eastern time zone city, such as Detroit, on or after 02-April-2006.

Published Date: Feb 20, 2012

Bonjour for Windows: Error -995 when repairing software in Spanish

This article has been archived and is no longer updated by Apple.

If your primary language is Spanish and you attempt to Repair a Bonjour for Windows installation, you may see these alert messages:

> "Error -995. I/O operation has been cancelled due to a subprocess output or an application request."
>
> "Installation was interrupted. The system hasn't been modified"
>
> "Re-run the installer"

These are caused by using a Windows installer that is earlier than version 3. To resolve the issue, install the latest version of the Windows installer, and and rerun the Repair.

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Published Date: Oct 7, 2016

Mac OS X 10.4.5 or later: Java issues after installing J2SE 5.0 Release 4 update

This article has been archived and is no longer updated by Apple.

When you install the software update for Java 2 Platform Standard Edition (J2SE) 5.0 Release 4 for Mac OS X v10.4.5 or later, it will change the default version of Java virtual machine from Java 1.4.2 to Java 5.0.

If the Java applications or Java-enabled websites that you use most often do not behave as expected after applying the Java 5.0 Release 4 update, you can consider changing the Java default back to 1.4.2.

To do that, follow these steps:

1. From the **Go** menu, choose **Utilities**.
2. Open the Java folder, then open the J2SE 5.0 folder inside of it.
3. Open the Java Preferences application.
4. At the top of the Java Preferences window, next to **Use version**, is a pop-up menu where you can set the version used for applets.
5. In the middle of the Java Preferences window, you should see **Java Application Runtime Settings**, and below that a while field in which you can drag the most preferred version to the top of the list. Drag 1.4.2 to the top. This controls the order in which Java versions are used for applications that use the Java Network Launching Protocol.
6. Click the Save button, and quit Java Preferences.

Published Date: Oct 7, 2016

iMovie: Distortion at edges of analog content

This article has been archived and is no longer updated by Apple.

When importing video from an analog source (such as a VCR) using a DV converter, you may see distortion at the edges of the image.

Some analog sources may produce distortion or noise outside of the "TV safe" area of the image. Most television screens "overscan" so that the outer edges of the image are not normally visible. When importing footage from a VCR or other analog source using a DV converter, you may see these parts of the image because iMovie shows the full frame of information.

If you want to mask or remove the distortion from the edges of your final project, consider using iMovie's Letterbox effect (available in iMovie HD 5 or later) to cover the distortion at the top or bottom of frame. Alternatively, apply a third-party effect, if you have one, to pillarbox or windowbox the footage, or an effect which can zoom or crop the image.

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Published Date: Feb 20, 2012

iMovie: How to move clips from one project to another

This article has been archived and is no longer updated by Apple.

Learn how to move clips from one iMovie project to another.

iMovie HD 6 and later

In iMovie HD 6, you can open more than one project at a time. Simply open both projects, and drag the items from one iMovie project window to the other.

Tip: Only drag from one track at a time and drag any audio tracks separately.

Alternatively, you can select the item and cut (Command-X) or copy (Command-C) it, then paste (Command-V) it into the other project window. Be aware that copying and pasting audio could result in overlapping audio (or even a longer piece of audio obscuring or covering up a shorter piece of audio).

iMovie HD 5

In iMovie HD 5 you can copy and paste items between projects. Select the item you want to move, and cut (Command-X) or copy (Command-C) the item. Close the originating project, and open the project where you want to place this item. Paste the item (Command-V) to import the clip.

All versions of iMovie, including iMovie 4 and earlier

In iMovie, you can export or share the desired clip as Full Quality. Then, import the resulting file into the other project. **Tip**: iMovie 4 and later will allow you to share just selected clips. Consider selecting just the clip you wish to move to the other project, and use this option.

Alternatively, locate the resulting file in the project's Media folder in the Finder, and import this file into the other project (in iMovie, **File** > **Import**).

Published Date: Feb 20, 2012

Soundtrack Pro: How to use AJA Io to monitor audio

This article has been archived and is no longer updated by Apple.

You can use the AJA Io, an external output device, to monitor audio with Soundtrack Pro. However, setting up the Io is different that setting up a typical Core Audio interface. Here's how to do it:

1. Import a video into a Soundtrack Pro project to monitor audio through the AJA Io.
2. Open the Soundtrack Pro preferences (**Soundtrack Pro** > **Preferences**).
3. Click the Video Out button.
4. Select the appropriate AJA output option from the Video Out pop-up menu.

5. Make sure video out is enabled. You can toggle Video Output on and off by pressing Command-F12. (Soundtrack Pro playback must be stopped while toggling the setting).

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Mac OS X Server 10.4: Some print jobs do not update page log or user quotas

This article has been archived and is no longer updated by Apple.

Some print jobs sent to a Mac OS X Server 10.4 Print Server queue are not being recorded in the page log (`/var/log/cups/page_log`). If a job is not recorded in the page log, it will not count against the user's print quota.

For many printer models, you can resolve this issue by the installing the Mac OS X Server 10.4.6 update. If it does not resolve the issue with your printer, contact the printer manufacturer to see if an updated PPD is available. If not, set up the print queue using the Generic PPD instead of the printer-specific PPD.

For new queues, Server Admin will use the Generic PPD by default.

For existing queues with a printer-specific PPD, do the following:

1. Open Printer Setup Utility.
2. Select the appropriate printer.
3. Click the Show Info button.
4. From the **Name and Location** pop-up menu, choose **Printer Model**.
5. Click on the pop-up menu that lists the printer model, and choose **Generic**.
6. Click the Apply Changes button.

Note: Clients should continue to use the printer-specific PPD in order to take advantage of the specific features of the printer not available through the Generic PPD. Using the Generic PPD on the server does not affect the client's use of printer-specific features.

Published Date: Oct 7, 2016

Power Macintosh G3 Computers: Reinstalling System Software

Reinstalling system software on a Power Macintosh G3 with any of the following options may require a separate drag install.

- Ultra Wide SCSI internal hard disk drive
- 10/100Base-T Ethernet card
- 128-bit 2D/3D professional graphics card with 8 MB of its own video memory (VRAM)

This article has been archived and is no longer updated by Apple.
The system software components necessary to support your computer's new options are installed in the System Folder on your computer*s hard disk. If you reinstall system software, you may have to reinstall some of these software components separately. They may not be included in the system software Installer.

To reinstall the software components, follow these steps:

1. Insert your Power Macintosh G3 CD.

2. Open the folder titled Important Extra System Software.

3. Drag the items from the folder onto the System Folder on your hard disk.

Note: If the folder is empty, then all of the necessary software components are included in the system software Installer.

4. When you see a message asking if you want to put these items in the Extensions folder, click OK.

5. Restart your computer.

Published Date: Feb 20, 2012

Power Mac G5 (Late 2005): Power consumption and thermal output (BTU) information

This article has been archived and is no longer updated by Apple.

Learn about the power consumption and thermal output of Power Mac G5 (Late 2005) computers.

Dual 2.0 GHz Power Mac G5 (Late 2005)
Dual-core 2GHz PowerPC G5,1 GHz frontside bus/processor, 1MB L2 cache/core, 512MB of 533MHz DDR2 SDRAM (PC2-4200), 160GB Serial ATA drive, 16x SuperDrive with double-layer support (DVD+R DL/DVDRW/CD-RW), 3 PCI Express slots, NVIDIA GeForce 6600 LE with 128MB of GDDR SDRAM

Power Consumption		Thermal Output	
Idle	**CPU Max**	**Idle**	**CPU Max**
165 W	450 W	563 BTU/h	1535 BTU/h

Dual 2.3 GHz Power Mac G5 (Late 2005)
Dual-core 2.3GHz PowerPC G5,1.15 GHz frontside bus/processor, 1MB L2 cache/core, 512MB of 533MHz DDR2 SDRAM (PC2-4200), 250GB Serial ATA drive, 16x SuperDrive with double-layer support (DVD+R DL/DVDRW/CD-RW), 3 PCI Express slots, NVIDIA GeForce 6600 LE with 256MB of GDDR SDRAM

Power Consumption		Thermal Output	
Idle	**CPU Max**	**Idle**	**CPU Max**
165 W	450 W	563 BTU/h	1535 BTU/h

Quad 2.5 GHz Power Mac G5 (Late 2005)
Two dual-core 2.5GHz PowerPC G5,1.25 GHz frontside bus/processor, 1MB L2 cache/core, 512MB of 533MHz DDR2 SDRAM (PC2-4200), 250GB Serial ATA drive, 16x SuperDrive with double-layer support (DVD+R DL/DVDRW/CD-RW), 3 PCI Express slots, NVIDIA GeForce 6600 LE with 256MB of GDDR SDRAM

Power Consumption		Thermal Output	
Idle	**CPU Max**	**Idle**	**CPU Max**
185 W	550 W	631 BTU/h	1877 BTU/h

Notes

- Power consumption data (Watts) is measured from the wall power source and includes all power supply and system losses. Additional correction is not needed.
- "CPU Max" is defined as running a compute-intensive test application that maximizes processor usage and therefore power consumption.
- These numbers reflect a 23° C (73.4° F) ambient running environment. Increased ambient temperatures will require faster fan speeds which will increase power consumption. At 35° C (95° F), 50 W should be added to reflect increased power consumption.

Related articles

- Power Mac G5: Power consumption and thermal output (BTU) information
- Power Mac G5 (June 2004), (Late 2004): Power consumption and thermal output (BTU) information
- Power Mac G5 (Early 2005): Power consumption and thermal output (BTU) information

Published Date: Feb 20, 2012

Shake 4.0: Handling interlace-like artifacts

This article has been archived and is no longer updated by Apple.

Some node configurations in Shake 4 may result in imagery that appears to have horizontal lines on some edges, resembling interlace artifacts, as seen in the following illustration:

One way around this is to apply an **Other-Bytes** node to promote affected nodes to 16 bits. This should remove the artifacts. You don't need to apply it to the entire script, just to the areas you find the behavior occurring.

The script in the following illustration shows a scenario where you might notice the artifacts. The **RotoShape** fills half the screen, and the **Primatte** is set to a primary scrub of blue.

In the next illustration, an **Other-Bytes** node is introduced before the **QuickPaint** node, and the artifacts do not occur:

Note: A side-effect of this using workaround results from Shake's internal tree optimization: You cannot demote the script to 8 bits with a second **Other-Bytes** node until after the **Max1** node (in the example script above). Placing it above **Invert1**, **Inside2**, or **Max1** will not remove the artifacts.

Published Date: Feb 20, 2012

Fifth Generation iPod has a blank backlit display and beeps 3 times

This article has been archived and is no longer updated by Apple.

Symptom

- Unit may make a series of short beeps on startup
- Unit may boot to a blank white (backlit) display
- Unit may boot to a blank dark display

Resolution

1. Download and install iTunes 7.0 or later.
2. Open iTunes.
3. Connect your iPod to the computer via the iPod USB cable.
4. The iPod will make a series of beeps and the display will light up with no image. If the iPod only beeps but the display does **not** light up, leave the iPod connected until the display lights up. This may take up to 15 minutes while the iPod charges.
5. Reset the iPod by pressing the **Menu** and **Center** buttons for up to 10 seconds and release the buttons when you hear the beeps.
6. **Immediately** after releasing the **Menu** and **Center** buttons, press and hold the **Center** and **Play/Pause** buttons for 5 seconds the release the buttons.
7. The iPod should be visible in the iTunes Source pane. Select the iPod and **Restore** it from the **Summary** tab.
8. If the iPod is not recognized in iTunes, retry steps 1-7.
9. If you are still unsuccessful you can visit the Genius Bar at a local Apple Retail Store. Reference this knowledge base document number (303545) during your visit.
10. Alternately, eligible iPods can be sent to Apple for recovery by visiting http://depot.info.apple.com/ipod/

Published Date: Oct 7, 2016

Mac OS X 10.4.6 or later: Scheduled shut down occurs at Login window even if users are logged in

This article has been archived and is no longer updated by Apple.

In Mac OS X 10.4.6 or later, if you have scheduled a shut down time in Energy Saver preferences, your Mac will shut down automatically at the scheduled time while at the login window, even if other users are logged in via fast user switching. This happens without any warning, which means if the logged-in accounts have files open that have unsaved changes, the unsaved data will be lost.

Note: If the computer is not at the Login window, scheduled shut down will still occur, but an alert will appear if any users have unsaved changes.

To avoid the possibility of losing unsaved changes when automatically shutting down from the Login window, do not leave the computer idle at the Login window if user accounts are logged in with unsaved work.

Tip: If you want to "lock the screen" while you're away from the computer, use the Security preferences option "Require password to wake this computer from sleep or screen saver," then start the screen saver or put the computer to sleep before leaving the computer idle.

Published Date: Oct 7, 2016

Xsan: Issues after installing Xsan 1.1 or earlier on Mac OS X 10.4.6 or later

This article has been archived and is no longer updated by Apple.

If you install Xsan 1.1 or earlier on a computer that has already been updated to Mac OS X 10.4.6 or later, you may see these issues:

- Xsan volumes will not unmount properly (which may subsequently cause the system to become unresponsive or applications/processes to unexpectedly quit).
- Xsan volumes will not appear in the Sharing section of Workgroup Manager.

To prevent this behavior, follow these steps on each Xsan client and metadata controller (MDC).

1. Download this disk image.
2. Copy the file "acfsfs-Info.plist" from the disk image to the root of your home directory.
3. In the Terminal, run the following commands to install acfsfs-Info.plist into the appropriate location:

```
$ sudo cp acfsfs-Info.plist /System/Library/Filesystems/acfs.fs/Contents/Info.plist
$ sudo chmod 0644 /System/Library/Filesystems/acfs.fs/Contents/Info.plist
$ sudo chown root:wheel /System/Library/Filesystems/acfs.fs/Contents/Info.plist
```

4. Restart the system.

Published Date: Oct 7, 2016

iDVD 6: No audio on finished DVD

This article has been archived and is no longer updated by Apple.

When previewing your project in iDVD, sound is audible. However, after burning the disc, there is no audio on the DVD when played back in the DVD Player application or on a set-top DVD player.

Solution

1. Update to iDVD 6.0.1.
2. Delete encoded assets from the project.
3. Burn another disc or Save as Disc Image, mount the image and test in DVD Player and then burn your DVD with Disk Utility.

This issue can also occur if third-party (non-Apple) QuickTime plug-ins are installed. If the issue still occurs after trying the steps above, check for third-party plug-ins in ~/Library/QuickTime/ and /Library/QuickTime. Move these to the desktop, and then log out and log back in to the computer.

If the issue continues after updating and removing any added plug-ins, create a new project in iDVD 6.0.1.

Note: Importing multiplexed (muxed) MPEG-1 and MPEG-2 footage in your iDVD project can also introduce this symptom. See the following articles for more information:

- 42996 "iMovie does not work with muxed MPEG-1 and MPEG-2 clips"
- 304158 "iMovie: Using footage from DV and non-DV sources"

Published Date: Oct 7, 2016

iPhoto 6: Supported RAW format cameras

This article has been archived and is no longer updated by Apple.

The following digital cameras require Mac OS X 10.3.9 or later for RAW support. Cameras with an asterisk require Mac OS X 10.4.10 or later for RAW support. Check Apple Downloads for the latest update.

Canon

- EOS 1D
- EOS 1D Mark II
- EOS 1D Mark IIN
- EOS 1D Mark III* (sRAW not supported)
- EOS 1Ds
- EOS 1Ds Mark II
- EOS 5D
- EOS 10D
- EOS 20D
- EOS 30D*
- EOS D30
- EOS D60
- EOS Kiss Digital
- EOS Kiss Digital N
- EOS Digital Rebel
- EOS Digital Rebel XT
- EOS 300D Digital
- EOS 350D Digital
- PowerShot G3*
- PowerShot G5
- PowerShot G6
- PowerShot S60
- PowerShot S70
- PowerShot Pro 1

Konica Minolta

- DiMAGE A1
- DiMAGE A2
- Dynax 5D*
- Dynax 7D
- Konica Minolta Alpha 7*
- Maxxum 5D*
- Maxxum 7D

Fujifilm

- FinePix S2 Pro*
- FinePix S3 Pro*
- FinePix S5 Pro*

Leaf

- Leaf Aptus 17*
- Leaf Aptus 22*
- Leaf Aptus 65*
- Leaf Aptus 75*
- Leaf Valeo 11*
- Leaf Valeo 17*
- Leaf Valeo 22*

Leica

- Digilux 2
- Digilux 3*

- D-LUX 2*
- D-LUX 3*
- M8*

Nikon

- D1
- D1X
- D1H
- D2H
- D2Hs
- D2X
- D2Xs*
- D50
- D40*
- D40x*
- D70
- D70s
- D100
- D200*
- E8400
- E8700
- E8800

Olympus

- C70Z*
- C7000Z*
- C8080 Wide Zoom
- E-1
- E-300
- E-330*
- E-500*

Panasonic

- DMC-LC1*
- DMC-LX1*
- DMC-LX2*
- Lumix DMC-L1*

Pentax

- *ist DL*
- K10D*
- K100D*
- K110D*

Samsung

- GX-1L*

Sony

- DSC-F828
- DSC-V3
- DSLR-A100*

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Published Date: Feb 20, 2012

Final Cut Pro 5: Color artifacts with the QuickTime > Sharpen filter

This article has been archived and is no longer updated by Apple.

In Final Cut Pro 5.1, the QuickTime variant of the Sharpen filter may produce undesired coloring artifacts when used with images or video clips that contain an alpha channel. This only happens on Intel-based Macs.

The effect where this is noticed is:
Effects > Video Filters > QuickTime > Sharpen

To workaround this issue, use an alternative filter, such as:
Effects > Video Filters > Sharpen > Sharpen

This document will be updated when more information becomes available.

Published Date: Feb 20, 2012

About the security content of the Mac OS X 10.4.6 Update

This article has been archived and is no longer updated by Apple.

This document describes the security content of the Mac OS X 10.4.6 Update, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Mac OS X v10.4.6 Update

- **Firmware**

  CVE-ID: CVE-2006-0401

  Available for: Mac OS X 10.4.5

  Impact: Firmware password can be bypassed on Intel-based Macintosh computers

  Description: Intel-based Macintosh computers support the firmware password feature. Prior to this update, a person with physical access to the computer could bypass the firmware password and access Single User Mode. This update addresses the issue by enhancing the security provided by the firmware password. Credit to David Pugh of the University of Michigan for reporting this issue.

Published Date: Oct 7, 2016

AirPort: Slow network connection in Mac OS X 10.4 Tiger

This article has been archived and is no longer updated by Apple.

Under certain circumstances, you might have a slow AirPort connection in Mac OS X 10.4.5 or earlier on an Intel-based Mac. (If you're into advanced network troubleshooting, you would see high packet loss associated with this issue.)

You should update to Mac OS X 10.4.6, which addresses this issue.

If that does not help, you should also consider whether you have sources of interference in the affected area.

Published Date: Feb 20, 2012

Aperture: Duplicate keywords when importing projects

This article has been archived and is no longer updated by Apple.

If you add a custom keyword to an image, subsequently export that image as part of a project, and then import the project on a different system where you've previously created the same custom keyword, the keyword will appear twice on that system.

This issue is resolved in Aperture 1.5.

Published Date: Feb 20, 2012

Adding LUNs to Xsan Volumes fails

This article has been archived and is no longer updated by Apple.

Under certain conditions, Xsan volumes may not expand when you introduce new LUNs to an existing storage pool. Here's some background information and how to deal with the issue.

Bandwidth Expansion versus Storage Expansion

Adding LUNs to an existing storage pool will increase both the capacity of a volume as well as the amount of data you can write to a volume per unit of time, so adding LUNs to an existing storage pool known as "bandwidth expansion." (Note that this is true within reasonable limits. If you attempt to make a volume arbitrarily large, you will at some point encounter a diminishing return, and ultimately performance issues as you approach the limits of your equipment.)

Alternately, adding LUNs to a new storage pool will increase the capacity of a volume, but it will not increase bandwidth. Therefore, adding LUNs to an new storage pool is referred to as "storage expansion."

This article pertains to bandwidth expansion.

Issue description

Xsan 1.1 and earlier: After adding LUNs to an existing storage pool, Xsan volumes will no longer mount at Xsan clients.

Xsan 1.2 and later: After adding LUNs to an existing storage pool, changes made to the volume configuration will revert.

Solution

In each of the following steps, replace the phrase `<VolumeName>` with the name of your Xsan Volume, and replace the phrase `<PoolName>` with the name of the storage pool you want to expand. Also, after using the command sudo, authenticate if prompted.

Preparation:

If using multiple Metadata Controllers:

1. Determine which metadata controller (MDC) is controlling the volume by visiting the <VolumeName> Overview in Xsan Admin. Note which MDC is hosting the volume by referencing the "Hosted By" value. Perform the following steps on the computer that is hosting the volume.
2. If the MDC is running Xsan 1.1 or earlier, ensure that the Xsan volume will start up and mount. If the volume will not start or mount, then stop here and contact AppleCare for support. If the volume will start and mount, make a backup of the config file by issuing the following command in the Terminal:

   ```
   $ sudo cp /Library/Filesystems/Xsan/config/<VolumeName>.cfg /Library/Filesystems/Xsan/config/<VolumeName>.cfg.bak
   ```

3. Assess your site's needs. If you only wish to increase the volume's capacity, just add the LUNs to a new storage pool. If your site requires an increase in a volume's bandwidth, you will need to take the following steps:
   a. Unmount and stop the volume.
   b. Verify that there are no inconsistencies in the filesystem by following the steps described here.
   c. In Xsan Admin > Setup > LUNs, label the new LUNs.
   d. In Xsan Admin > Setup > Storage, drag the new LUNs from the "Available LUNs" drawer to the preexisting storage pool.
   e. Click Save.
   f. If the expansion failed, proceed to step 4.
4. Verify that the issue is occurring by reading the cvupdatefs log located in /var/run. To do so, type the following in the Terminal application located in /Applications/Utilities:

   ```
   $ sudo cat /var/run/xsan_cvupdatefs_<VolumeName>.log
   ```

   (Note that rebooting your MDC will result in this file being deleted.)

   If an Xsan volume is affected by this issue, you will see the following entry at the end of the file:

   ```
   <snip>

   Bitmap fragmentation threshold exceeded. Aborting. Invalid argument

   *Fatal*: Failed to expand stripe group

   Check configuration and try again

   <snip>
   ```

   What this means:

The addition of the LUNs to a pre-existing storage pool would have fragmented the storage pool so that performance would have been unacceptably slow.

Preparation for Workaround

1. If your MDC is running Xsan 1.2 and you're affected by the issue, skip to step 3.
2. If the MDC is running Xsan 1.1 of earlier, restore the backup of the volume config file by issuing the following commands in the Terminal:

```
$ sudo rm /Library/Filesystems/Xsan/config/<VolumeName>.cfg
$ sudo cp /Library/Filesystems/Xsan/config/<VolumeName>.cfg.bak /Library/Filesystems/Xsan/config/<VolumeName>.cfg
```

   Verify that the volume will start and mount. If it will not, stop here and contact AppleCare Support. If it will start and mount, continue to step 3.
3. Run cvfsck again to verify that there are no inconsistencies in the filesystem by following the steps described here.

Workaround

1. All data that resides on the storage pool will need to be temporarily backed-up to another volume in order to correct this issue.
   a. Start and mount the Xsan volume only on the Metadata controller.
   b. In the Terminal, type:

```
sudo cvfsck -x <VolumeName> | awk -F, '{print $5","$6}' | egrep -v "^none,"
```

   This command should produce a list of all folders at the root of the Xsan volume which have one or more files located on the Storage Pool that is listed before the folder name. For instance, in the following example the folder Affinity1 has one of more of it's files on the Storage Pool called "MyPool."

```
MyPool,Affinity1
```

   A Note about "cvfsck -x": This command only returns the first eight characters of a Storage Pool's name. For example, a storage pool with the name "VideoPool" would be changed to "VideoPoo."

   If you have two or more pools with names containing the same first 8 characters, cvfsck will change the name of the first of these Storage Pools listed in Xsan Admin > Setup > Storage to eight characters. For example, a pool named DataPoolMoe would be converted to "DataPool."

   Next, cvfsck will convert each subsequent pool encountered in the config settings located in Xsan Admin with the same first 8 characters to have a trailing numeric character. For instance, if there were two other storage Pools named DataPoolLarry and DataPoolCurly, cvfsck would convert these to DataPoo1 and DataPoo2. To determine which converted name corresponds to which pool, visit Xsan Admin > Setup > Storage and note in which order these storage pools are listed from top to bottom and correspond these to the numeric values.

2. After you have determined where you will temporarily back up the data, mount the temporary backup volume on the MDC.
3. Run the following command to back up each folder that resides on the storage pool you wish to expand:

```
$ sudo tar -czpf /Volumes/<TempVol>/<FolderName>.tgz -C/Volumes/<VolumeName>/ <FolderName>
```

   ...replacing <TempVol> with the name of the volume to which the data will be temporarily backed up, <FolderName> with the name of the folder which is to be backed up, and <VolumeName> with the name of the Xsan volume.
4. Verify that all files that reside on the storage pool have been backed up.
5. Verify that all backed up folders can be extracted and that the contents are identical to the originals.
6. Delete the folders that have been backed up from the Xsan volume.
7. Add the new LUN(s) to the existing storage pool as directed above.
8. Verify that the LUNs have successfully been incorporated into the storage pool.
9. Run cvfsck again to verify that there are no inconsistencies in the filesystem by following the steps described here.
10. Start and mount the Xsan volume.
11. Restore the backed-up files from the temporary backup location to the newly expanded filesystem:

```
$ sudo tar -xzf /Volumes/<TempVol>/<FolderName>.tgz-C /Volumes/<VolumeName>/
```

12. Verify that all restored folders and their contents are identical to the originals.
13. Delete the tar files from the temporary location.

Published Date: Oct 7, 2016

Mac OS X 10.4, 10.5: Computer shuts down during Safe Boot

This article has been archived and is no longer updated by Apple.

When starting up with Safe Boot, a disk verification and repair happens automatically. In Mac OS X 10.4 or later, if the disk repair cannot repair issues on the disk, the computer will automatically shut down while a gray screen and Apple logo appear on the screen. This protects existing data on the drive. Even if you can start up without Safe Boot, you should address the disk issue as soon as possible.

You have three options if this happens:

- Start from your Mac OS X Tiger Install DVD and use Disk Utility to try to repair the drive. If repair is successful, you should be able to start up normally. If repair is not successful, consider the next two options.
- Back up your important data and files (as much as possible), then try using a third-party disk utility to repair the drive. Be sure that you use one that works with your version of Mac OS X. If this doesn't work, consider the next option.
- Back up your important data and files (as much as possible), then perform an Erase and Install installation of Mac OS X on the affected volume. **Important**: This option completely erases the destination volume and then installs a new copy of Mac OS X. You should always backup important files on the target volume before performing an Erase and Install installation. You can then restore your backed up files afterwards.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

Aperture: Photoshop files do not appear in the Import window

This article has been archived and is no longer updated by Apple.

Sometimes, Photoshop files (PSD) do not show up in the Import window in Aperture.

This happens if there is a TIFF file with the same name at the same location; only the TIFF file will appear. One way to work around this issue is to simply drag the PSD file directly onto a project icon in the Project pane. Alternatively, you could rename one of the files before importing.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Safari (Japanese): Add Bookmark command may not work

This article has been archived and is no longer updated by Apple.

Under certain circumstances, the Add Bookmark command may not work in Safari. This issue occurs when your primary system language is Japanese.

To resolve the issue, follow these steps:

1. From the **Bookmarks** menu in Safari, choose **Show All Bookmarks**.
2. Select the Bookmarks Bar collection.
3. Locate the folder with no name (just after Yahoo! Japan), and select this folder.
4. Press Delete to remove this empty folder.

Published Date: Oct 7, 2016

Final Cut Pro: Unexpected timecode breaks encountered with Batch Capture

This article has been archived and is no longer updated by Apple.

In some instances, while batch capturing sequence clips, this alert message may appear:

> Batch capture encountered timecode breaks in sequence items. To protect your edits, these clips were left offline and not divided into separate clips.

This dialog usually indicates that Final Cut Pro encountered non-sequential timecode when attempting to capture a clip. The timecode break might have been in the clip itself, in the requested media handle sections, or in the pre-roll segment of the tape leading up to the clip.

If this dialogue appears, try to determine what actual segment of tape Final Cut Pro is trying to capture. Final Cut Pro must be able to detect continuously present and sequential timecode values, starting from the pre-roll section, through incoming handle, the clip itself from In to Out, and through to the end of the outgoing handle.

If the timecode break occurs in the handle or pre-roll areas, try making the pre-roll or the handle values smaller (if possible) while capturing that particular clip. If you discover that there is a timecode break in the clip itself, simply re-log the single clip as two clips that do not include the problem timecode segment (remembering to allow for handles and pre-roll).

In rare cases, you may find that the timecode on tape *seems* to be valid and sequential for the section of media being captured. In most of these instances, a slightly erratic timecode signal may have caused Final Cut Pro to detect a break where none appears to exist. If this happens, the batch capture for that clip can simply be attempted again. If a timecode break is reported repeatedly, there may be a marginal problem with the tape itself. In these cases, a good solution is to dub or clone the tape to a new tape with timecode intact.

If none of the suggestions above help you to capture successfully, then choose **Final Cut Pro > User Preferences**. Click the General tab. In the **On timecode break** pop-up menu, choose **Warn After Capture**. This will allow you to complete the capture without the dialog appearing, but the resulting captured media may contain problems that could propagate further into the project as editing progresses. For this reason, this last suggestion should be taken only if all else fails. Remember to reset the preference to either **Abort Capture** or **Make New Clip** before capturing any additional media.

For more detail on the terms and concepts discussed in this document, refer to the Final Cut Pro User Manual, available within Final Cut Pro, under the Help menu.

Published Date: Feb 20, 2012

Aperture 1.0.1: Auto Level Adjustment does not work in Mac OS X 10.4.6

This article has been archived and is no longer updated by Apple.

When using Mac OS X 10.4.6 and Aperture 1.0.1, the Auto Level Adjustment buttons stop working properly for some images. For some affected images the button has no effect, while for others it adjusts the image improperly.

If this happens, you can still adjust manually.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Aperture: Some images render incorrectly when using Mac OS X 10.4.6

This article has been archived and is no longer updated by Apple.

When using Aperture 1.0.1 with Mac OS X 10.4.6, some images may exhibit noise, color banding, or posterization that did not appear when using Mac OS X 10.4.5.

This is a cosmetic issue, because it only affects images which are scaled to fit your screen or the Viewer. These artifacts will not appear when zoomed in to 100 percent, when using the loupe, exporting, or printing.

This issue is resolved in Aperture 1.1 or later.

Published Date: Feb 20, 2012

Mac OS X (German) 10.4.6 or earlier: Mail unexpectedly quits when customizing a new message

This article has been archived and is no longer updated by Apple.

Mail may unexpectedly quit in the German language version of Mac OS X if you create a new message, then choose Customize from the pop-up menu that appears next to "Accounts". For example, you might want to use this menu to try to show the "Blindkopie" field or to set message priority.

Solution

Update to Mac OS X 10.4.7 or later.

Published Date: Oct 7, 2016

iSync: Editing contact name on Motorola phone may create a duplicate Address Book entry

This article has been archived and is no longer updated by Apple.

Issue or symptom

Editing an existing contact on a Motorola phone may create duplicate Address Book entries. After creating a contact on your Motorola phone, then syncing, you later edit the contact name on the phone. On the next sync, the old contact name and new contact name may be displayed as separate contacts in Address Book (in Mac OS X).

Solution

To avoid this situation, edit existing contact names on the computer, not the phone.

To resolve duplicate entries, you can use the Merge Selected Cards feature in Address Book in Mac OS X before syncing again.

Related documents

302170 iSync: Deleting a contact from a Motorola phone may not remove it from Address Book

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

iSync 2.2 or later: Some phones may require a firmware update

This article has been archived and is no longer updated by Apple.

Issue or symptom

Attempting to add a supported phone to iSync using the **Add Device** choice in the **Devices** menu may cause this alert message to appear:

"Your phone (phonename) does not work with this version of iSync. To enable this phone to work with iSync, contact the phone's manufacturer or your service provider to update the firmware on your phone. For more information, visit the iSync Support website."

Solution

Update to the latest versions of Mac OS X and iSync via Software Update.

If the issue persists, check with your cell phone provider or manufacturer to see if a later firmware version is available for your phone.

Published Date: Feb 20, 2012

Apple Remote Desktop 3: Repeated serial number requests, or "Your task server could not be contacted" message

This article has been archived and is no longer updated by Apple.

The first time you open the Remote Desktop 3.0 admin application, you should be logged in as an admin user. If not, you will see one of these two symptoms every time you launch the application:

- a request to enter your product serial number
- this message: "Your task server, ' ', could not be contacted."

To resolve the issue, log in as an admin user, open Remote Desktop, complete the setup steps, and quit.

Published Date: Feb 20, 2012

Apple Remote Desktop 3: First launch dialog causes a "Copy and Open" or Open Items task to fail

This article has been archived and is no longer updated by Apple.

If the first launch dialog is present on an ARD client, a "Copy and Open" or Open Items task may fail.

The reason this happens is that when an application is launched for the first time, Mac OS X asks the user to confirm opening it for the first time as a security measure.

After the confirmation dialog appears, opening a file that uses this application will succeed when the user confirms by clicking the Open button within a specified amount of time.

If that doesn't happen soon enough, the task will eventually time out with this message:

> "A communication failure occurred with this computer."

Published Date: Feb 20, 2012

Mac OS X: FileVault-protected Home shows less capacity than what‘s available on the hard disk

This article has been archived and is no longer updated by Apple.

If you move (or migrate) a FileVault-protected account (home directory) to a Mac that has more hard disk capacity, the space available within the protected account will be less than the actual space available on the hard disk. FileVault is a feature of Mac OS X 10.3 or later.

To make more space available for the protected account, follow these steps:

Tip: Back up the contents of your Home before starting the process—if security is a concern, create an encrypted disk image on your destination volume and copy files to it. You can choose **Home** from the Finder's **Go** menu to see all the stuff in your Home.

1. Log in as the account user.
2. Use Security preferences to turn off File Vault (you will be logged out during the process).
3. Log in with the account again.
4. Use Security preferences to turn FileVault back on (you will be logged out during the process).

As Security preferences states, turning FileVault off and back on may take a while, depending on the size of your Home.

Tip: If you do not have sufficient free space on your hard disk, you will need to temporarily reduce the size of your home directory, for example by copying a large amount of data in your home directory to an external hard disk, then deleting the stuff that you moved from your Home. After copying, log out or restart so that FileVault can reclaim the unused space.

Why does this happen?

When FileVault is enabled, the stuff in your Home, such as desktop contents, documents, and account preferences, are transferred to an AES-128 bit encrypted sparse disk image. A sparse disk image is one that grows in size as you copy more data to it. "Traditional" disk images (non-sparse images) are a set size no matter how much stuff is or isn't on them. In other words, a traditional disk image of 2 GB will always be 2 GB in size even with no data in it—a sparse image will be only as large as the data contained in it.

However, the *maximum* size of a sparse image is established when the image is created. Of course, the maximum image size can't exceed your available hard disk space, so if you migrate the account from a Mac with a smaller-sized hard disk, the FileVault sparse disk image's size will always be limited by the size of your former Mac's available space, unless you follow the above steps to create a new FileVault image.

Published Date: Feb 20, 2012

Mac OS X: "Network error -1011" when trying to use Software Update with Direcway Mac ISP

This article has been archived and is no longer updated by Apple.

If you can't download updates with Software Update because a "network error -1011" appears, and you use the Direcway Mac satellite-based ISP, contact Direcway support (1-866-347-3292) for assistance.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

iChat: Audio or video connection does not end when you go offline or log out of AIM, Jabber, or Bonjour

This article has been archived and is no longer updated by Apple.

After an audio or video conference in iChat, your audio or video continues to be sent to the person you were chatting with if you log out of iChat or set your iChat status to Offline. This can happen when chatting via voice or video with a buddy from your AIM, Bonjour, or Jabber buddy lists.

Solution: Close the chat window, or quit iChat, to stop transmitting audio or video to your buddy.

Additional information

This happens because iChat establishes a direct peer-to-peer (or peers) network connection for audio or video chats. Once the direct connection is established, audio and/or video sessions continue even if you log off of your AIM, Bonjour or Jabber services.

Published Date: Feb 20, 2012

iWeb and .Mac HomePage: Windows Internet Explorer 6 "ActiveX control" alert when viewing QuickTime media

This article has been archived and is no longer updated by Apple.

After applying a recent Internet Explorer security update (912812) from Microsoft, Microsoft Windows Internet Explorer 6 behaves differently when viewing a page that contains QuickTime media published with iWeb or .Mac HomePage.

When viewing a page with QuickTime media after installing the security update, Windows Internet Explorer 6 displays a pop-up window that says: "Click to run an ActiveX control on this webpage."

Solution

Click the OK button to view the QuickTime media.

Published Date: Feb 20, 2012

Aperture 1.1: "Configuration warning" alert when using with Mac OS X 10.4.5 or earlier

This article has been archived and is no longer updated by Apple.

Aperture 1.1 works with Mac OS X 10.4.6 or later. If you try to run Aperture 1.1 with Mac OS X 10.4.5 or earlier, this alert message appears:

> "**Configuration warning**
> This software requires certain hardware or software which is missing.
> • Mac OS X 10.4.6 or higher."

Solution

1. On Intel-based Macs, two buttons appear in the alert, "OK" and "Quit". Click Quit. Do not click OK.

   On PowerPC-based Macs, a Quit button appears in the alert. Click Quit.

2. Update to Mac OS X 10.4.6 or later
3. Open Aperture 1.1.

Published Date: Feb 20, 2012

Mac Higher Learning: The Next Steps

This article has been archived and is no longer updated by Apple.

You've mastered the basics with your Mac and are emailing, printing, shopping online, and tinkering with all your media and files like a pro. Now what? Time to take your learning to the next level.

Get the Most Out of Your Mac

Got too much data to lose? Get a backup plan in order—pronto!
Show me how to back up my different types of files Show me how to back up all of my iTunes media Show me all the ways I can create a backup and how to restore files

Burn CDs or DVDs to archive files and free up your disk space.
Show me how to use the Finder to burn my files to a disc Show me how to use iTunes to burn my music to a disc Show me how to use iPhoto to burn my photos to a disc

Enforce your parental authority and keep your kids (and Mac) safe
Show me how to limit access to certain user accounts on my Mac Show me how to set Parental Controls for iTunes Show me how to set Parental Controls for iChat

Connect your Mac to the Windows world
Show me how to share my files with Windows users Show me how to connect my Mac to a Windows server Show me how to set up Windows File Sharing

Print your files to a network shared printer
Show me how to add a network printer to my printer list Show me how to print to a shared Windows printer

Sync information to your devices and other Macs
Tell me how to sync information to my devices and other Macs Show me articles to sync my phone, iPod, or Palm device with my Mac Show me a QuickTime movie on using .Mac to sync multiple Macs

Protect your Mac with the built-in Mac OS X firewall
Tell me how to turn on my built-in Mac OS X firewall Tell me how to set the advanced firewall options

Move your files to your other Macs
Show me how to use FireWire to move my old Mac files to my new Mac Show me other ways to copy my files between my other Macs

Banish network cables! Set up a wireless AirPort network
Tell me how to set up different types of AirPort networks Tell me about the types of AirPort networks I can create

Share your life with others on your network and beyond
Show me how to share my photos with others using iPhoto Show me how to share my music with others using iTunes Show me how to share my files with others locally and remotely Show me how to share my opinions with the world Show me how to verbally share my viewpoints with the world

Make your Mac do your work
Tell me what Automator can do for me

Get Help with Higher Learning Issues

I get an "unknown error" when I burn a disc I get a "buffer underrun" error when I burn a disc in the Finder or iTunes I need help connecting my Mac to a Windows computer for file sharing I'm having trouble syncing information using .Mac Sync The computer to which I want to connect doesn't appear in the Network browser I can't set my Mac into FireWire Target Disk Mode I'm having trouble syncing devices with iSync I can't

TA24076_Mac_Higher_Learning_The_Next_Steps.pdf

add a device to iSync I can't print to a printer shared by Microsoft Windows I can't find a shared Windows printer I'm having trouble with AirPort Take me to the product support pages for all Macs Take me to the Mac OS X product support pages Consult with experts and other Mac users in Apple Discussions

Mac Tips

- Maximize your MacBook Pro, PowerBook, or iBook battery life
- Prevent certain folders on your Mac from being searched
- Expand your Dashboard collection
- Don't sweat Automator—download actions from others
- Tips for opening and saving files in Mac OS X applications
- Exercise safety with email attachments and downloads
- Choosing good passwords

Published Date: Oct 7, 2016

Xsan volume may not mount after using Xsan 1.3 uninstaller

This article has been archived and is no longer updated by Apple.

If you use the Xsan 1.3 uninstaller and then reinstall an older version, such as Xsan 1.1 or 1.2, on the same computer, the Xsan volumes may not mount on startup. Xsan Admin will show that the volume is mounted, but it will not appear in the Finder. Relaunching the Finder via the Force Quit dialog may allow the volume to mount until the computer is restarted.

To resolve the issue, follow these steps:

1. Use the Xsan uninstaller to remove Xsan from the system.
2. Delete this file from the startup disk:

   ```
   /System/Library/Extensions/AppleXsanFilter.kext
   ```

3. Install Xsan 1.1, then update to the desired version.

Published Date: Oct 7, 2016

What is the wattage specification for iPod Hi-Fi?

This article has been archived and is no longer updated by Apple.

What is the wattage specification for iPod Hi-Fi?

Apple does not specifying the wattage rating of the output volume on the iPod Hi-Fi. A wattage rating only specifies how much potential power is available to the amplifier and speakers. Amplifiers and speaker drivers are never (and sometimes not even close to) 100% efficient. Instead of reporting the starting or potential power, Apple states the maximum peak sound pressure level (SPL) which is the final output, or end result of that power. A wattage specification is not a reliable means to determine sound volume. A very efficient 20-watt system is theoretically capable of playing just as loudly as a very inefficient 80-watt system.

The iPod Hi-Fi performance specifications are:

- Frequency response: 53Hz to 16kHz plus or minus 3 dB
- Maximum peak sound pressure level: 108 dB at 1 m (AC); 102 dB at 1 m (DC)

Published Date: Feb 20, 2012

Mac OS X: Low battery alert does not appear over full-screen application, keyboard becomes unresponsive

This article has been archived and is no longer updated by Apple.

If your battery gets low when using an application that fills the entire display on a portable Mac (that is, the Mac OS X menu bar is not visible), you will not see the low battery alert warning. This article applies to Mac OS X 10.2 or later on an iBook, PowerBook, or MacBook Pro computer.

When this happens, your built-in keyboard and trackpad may become unresponsive.

Solution

Simply connect your computer to an AC outlet to recharge the battery. If your AC adapter is not handy, connect an external keyboard and mouse to your computer to see and dismiss the low battery alert (after which your built-in keyboard will work).

Published Date: Oct 7, 2016

About the security content of J2SE 5.0 Release 4

This article has been archived and is no longer updated by Apple.

This document describes the security content of J2SE 5.0 Release 4, which can be downloaded and installed using Software Update, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred, and any necessary patches or releases are available. To learn more about Apple Product Security, visit the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to Use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerability for further information.

To learn about other Security Updates, see "Apple Security Updates."

J2SE 5.0 Release 4

- **Java**

  CVE-ID: CVE-2006-0613

  Available for: Mac OS X v10.4.5, Mac OS X Server v10.4.5

  Impact: Untrusted Java applications may obtain elevated privileges.

  Description: A security vulnerability in Java Web Start may allow an untrusted application to elevate its privileges. This update addresses the issue by providing J2SE version 1.5.0_06, which is not susceptible to this vulnerability. For additional information on this issue see Sun Alert 102170 (http://sunsolve.sun.com/search/document.do?assetkey=1-26-102170-1)

- **Java**

  CVE-ID: CVE-2006-0614, CVE-2006-0615, CVE-2006-0616, CVE-2006-0617

  Available for: Mac OS X v10.4.5, Mac OS X Server v10.4.5

  Impact: Untrusted Java applets may obtain elevated privileges.

  Description: Security vulnerabilities related to the use of "reflection" APIs in the Java Runtime Environment may allow an untrusted applet to elevate its privileges. This update addresses these issues by providing J2SE version 1.5.0_06, which is not susceptible to these vulnerabilities. For additional information on these issues see Sun Alert 102171 (http://sunsolve.sun.com/search/document.do?assetkey=1-26-102171-1)

Additionally, a minor security-related fix is included in this update for Java InputMethods. Due to an issue handling input method events, it is possible that key events intended for a secure field such as a password field may be sent to a normal text field in the same window. This could result in accidental password disclosure to others present when the password is entered. This update addresses the problem by properly handling input method events. Credit to Misako Ishida from SAP AG for reporting this issue.

Published Date: Feb 20, 2012

Intel-based Macs: Compatibility with Gigabit Ethernet switches

This article has been archived and is no longer updated by Apple.

Some Gigabit Ethernet switches, using early versions of Broadcom 1000BASE-T PHY (Broadcom 5400), were manufactured and shipped before the IEEE 802.3ab specification was finalized and they do not comply with the final specification. These switches are not compatible with Intel-based Macintosh computers using the 1000BaseT setting.

Intel-based Macintosh computers will detect a link with some non-compliant switches, but can't interoperate with the switches at the 1000BaseT speed setting. You can change the settings on the Intel-based Mac to operate with these switches at the 100BaseTX setting instead.

To change the speed setting:

1. From the **Apple** menu, select **System Preferences...**
2. Select the Network pane.
3. Highlight the Built-in Ethernet line and click the Configure... button.
4. Select the Ethernet tab.
5. Change the Configure: drop-down menu to **Manually (Advanced)**.
6. Change the Speed: drop-down menu to **100baseTX**.
7. Click the Apply Now button.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

iWeb: Hit counter must be positioned completely within the canvas

This article has been archived and is no longer updated by Apple.

In your iWeb project, make certain that the entire hit counter is positioned within the canvas page prior to publishing.

If the hit counter isn't positioned completely within the canvas (1), then it may appear split in half or only partially visible when viewed with a browser (2).

Note: The hit counter works only if you publish your site to .Mac.

Published Date: Feb 20, 2012

iWeb: Publishing your site to servers other than .Mac may cause text anomalies

This article has been archived and is no longer updated by Apple.

If you publish your iWeb site via FTP to a web host other than .Mac, some characters may appear incorrectly when viewed in a browser. For example, some characters may show up as question marks.

This can happen when an FTP program misinterprets characters on your webpage. Because FTP programs and host servers don't always adhere to the same standards, changing your FTP and/or host server preferences to use UTF-8 text encoding may resolve this issue (iWeb uses UTF-8 text encoding).

If that does not help, check the support documentation provided by your Internet service provider or web host to learn how to change applicable settings on the host server.

Published Date: Oct 7, 2016

iWeb: Deleting lists on the About Me page provides different results with different templates

This article has been archived and is no longer updated by Apple.

In iWeb, when you add an About Me page to some of the templates and delete one or more lists on the page, the complete list is not always deleted. This table illustrates the results of deleting lists in an About Me page:

Template	Example	Description
Pavement		
Formal		Numbers are left behind, but the next column section won't start with a number 1.
Black		
Portfolio		All bullets are removed.
Journal		Bullets and numbers are removed.
White		All numbers are removed.

As a workaround, use the Inspector to modify the list.

1. Select the list.
2. If the Text Inspector isn't open, click Inspector in the toolbar (or choose **View > Show Inspector**), and then click the Text Inspector button.
3. If the List pane isn't showing, click List
4. Configure the list using the options as needed in the List inspector.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Aperture 1.1 Update: What to do when it won‘t install over version 1.0.1

This article has been archived and is no longer updated by Apple.

Under certain circumstances, the Aperture 1.1 Update won't install on Aperture 1.0.1 as intended. When this happens, Software Update won't offer you Aperture 1.1, and/or the standalone Aperture 1.1 updater says that no eligible previous version was found.

To resolve this issue, simply reapply the Aperture 1.0.1 update before using 1.1 again. You can get Aperture 1.0.1 using Software Update or Apple Downloads.

Published Date: Feb 20, 2012

iWeb: Clear web browser cache when testing changes to your site

This article has been archived and is no longer updated by Apple.

If you republish a page and it looks different in the browser than it did in iWeb, try clearing your browser cache. Otherwise, you may notice things like missing media, or objects (such as text) from your old page that still appear on the new version of the page.

To clear the cache in Safari:

1. Open Safari.
2. From the **Safari** menu, choose **Empty Cache** (Safari > Empty Cache).
3. In the warning dialog that appears, click on Empty.
4. Visit your site again (by clicking the Visit button in iWeb) or reload the page in Safari.

If you use a different browser, check the browser's Help or other documentation to see how to clear the cache.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Xsan 1.3: Do not use Disk Utility in Mac OS X 10.4.5 to edit Xsan volumes

This article has been archived and is no longer updated by Apple.

If you are running Xsan 1.3 on Mac OS X 10.4.5, Disk Utility will display Xsan volumes as unknown GPT partitions and will let you edit them.

Warning: Despite the fact that Disk Utility will allow it, you must not use Disk Utility to edit these volumes in Mac OS X 10.4.5, because doing so may cause data loss.

To avoid this risk, update your Xsan clients to Mac OS X 10.4.6 or later.

Using Disk Utility in Mac OS X 10.4.6 and later to edit Xsan volumes will not put data at risk, but in general you should use Xsan tools instead. Use Xsan Admin to label Xsan volumes, cvfsck to repair Xsan volumes, and Raid Admin to rebuild arrays.

Published Date: Oct 7, 2016

iWeb: Publish all after changing names of linked pages in the Inspector

This article has been archived and is no longer updated by Apple.

If you change the name of a site or page in the Inspector, any links to that site or page on your other iWeb sites will no longer work. Links to a site can also break if you publish the site to .Mac and then republish it to a .Mac group.

To change site or page names without breaking links, do one of the following:

- Use the site organizer to rename a site or webpage.
- Hold down the Option key and choose **Publish All to .Mac** from the **File** menu (**File** > **Publish All to .Mac**) after making your changes.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Mac OS: What is a .smi File

This article describes a Self Mounting Image file. These files have filenames ending with the .smi suffix.
This article has been archived and is no longer updated by Apple.
.smi is a self-mounting image. It is a Disk Copy image for which you do not need the Disk Copy program.

When you double-click a .smi file, the image mounts on the desktop and an icon will appear. At this time, there is no public software for making .smi files.
Published Date: Feb 20, 2012

Mobile Users sync every 20 minutes after disabling sync settings

This article has been archived and is no longer updated by Apple.

Mobile users sync every 20 minutes after choosing to manage the background sync settings as Never.

When you stop managing the background sync settings for mobile users in Workgroup Manager by choosing Never, it's important to understand that this does not mean syncing will stop altogether. Rather, it means that clients will no longer use the settings specified in Workgroup Manager.

Instead, they will revert to the user's settings, which are to sync every 20 minutes in the background by default. If you want to stop the mobile users from syncing their portable home directories in the background, manage the Background Sync settings as Always, and remove everything from the Include list.

This document describes Mac OS X Server 10.4 or later when used with Mac OS X 10.4 or later clients.

Published Date: Feb 20, 2012

Xsan 1.3 and Later: LUNs with capacity larger than 2.0TB may appear as being 2.0TB in size.

This article has been archived and is no longer updated by Apple.

Prior to Xsan 1.3, LUNs with actual capacity greater than 2.0TB that have been incorporated into ACFS volumes appear as 2.0TB and are limited to that amount of use, an automatically imposed limit known as "truncation." Xsan 1.3 supports LUNs larger than 2.0TB, but LUNs truncated under previous versions of Xsan will remain truncated.

After updating to Xsan 1.3, you can reclaim the drive space on truncated LUNs by erasing the LUN.

Warning: Erasing a LUN will destroy the data on the LUN which will, in turn, destroy the data on an Xsan volume that incorporates the LUN. Therefore, you must back up all data on the Xsan volume and then delete the Xsan volume before erasing the LUN.

Follow these steps:

Note: If you have a LUN that has been truncated to 2TB and is not part of a volume, you can skip straight to step 8.

1. Back up all data on the Xsan volume.
2. Unmount the volume from all machines.
3. Stop the volume.
4. In Xsan Admin 1.3, choose **Setup > Storage**.
5. Select the Xsan volume, and click the "-" button to delete the volume.
6. Click Save, and then choose the option to Delete.
7. In Xsan Admin 1.3, choose **Setup > LUNs**.
8. Select the LUN that needs to be erased, and click the Edit button.
9. Delete the text in the Label field, then click OK.
10. In Xsan Admin 1.3, choose **Setup > LUNs**. The LUN which was unlabeled will now appear as "Unlabeled."
11. Select the LUN, and click edit.
12. Enter a LUN name, check the box "Allow LUN to exceed 2 TB capacity," and save it.

The LUN will now use the full capacity of its storage.

Published Date: Oct 7, 2016

Mac OS X 10.4.6: Applications silently fail to open, or you see "error: can‘t fragload"

This article has been archived and is no longer updated by Apple.

After installing the smaller-sized delta (or "patch") version of the Mac OS X 10.4.6 Update on a PowerPC-based Mac, a few applications may:

- Fail to open, without an alert message, **or**
- Display the alert message "error: can't fragload", **or**
- "err -2804" messages appear in the Console log.

Note: If you want to see if you installed the smaller-sized delta version of the Mac OS X 10.4.6 Update, see this article and look for a MacOSXUpd10.4.6PPCPatch.pkg file in your Receipts folder. If you don't have this "PPCPatch" file, this article does not apply to you. Note that not all delta updates are smaller-sized deltas.

Solution

Do either of the following:

- Download and install "Mac OS X 10.4.6 Combo for PPC," which is about 140 MB in size. If you are updating more than one PowerPC-based Mac, you'll probably want to use this download.

- Or, if you want a smaller download, download and install "Mac OS X 10.4.6 for PPC," which is about 65 MB is size.

Note: These updates do not appear via Software Update preferences once you've already installed the smaller-sized Mac OS X 10.4.6 Update. You must manually download and install them from Apple Downloads as linked above.

Published Date: Oct 7, 2016

Soundtrack Pro sometimes doesn‘t open on MacBook Pro (17-inch)

This article has been archived and is no longer updated by Apple.

Symptom

Soundtrack Pro may not open on your MacBook Pro (17-inch).

Solution

Use Software Update to update to Mac OS X 10.4.7 or later to resolve this issue.

Published Date: Oct 7, 2016

iMovie HD 6 and iMovie ‘08 require Quartz Extreme-compatible graphics cards

This article has been archived and is no longer updated by Apple.

iMovie HD 6 and iMovie '08 include features which require Quartz Extreme. Quartz Extreme is a technology included with Mac OS X that utilizes advanced visual capabilities offered by modern graphics cards.

If you install an additional graphics card that is not compatible with Quartz Extreme in your computer (so that you can attach another display), the features listed above may not function correctly in iMovie. This is true even if your original built-in graphics card is Quartz-Extreme compatible. The additional card must be compatible with Quartz Extreme, even if you will not be displaying your iMovie project windows on the display connected to it.

iMovie requires that **all** graphics cards in the computer be compatible with Quartz Extreme. Note that Quartz Extreme requires millions of colors.

See Mac OS X 10.4: Requirements for Quartz Extreme and Core Image graphics for information on how to tell if you have Quartz Extreme functionality.

Note: With iMovie 6.0.2 and later, when you open iMovie with non-Quartz Extreme compatible graphics hardware, you'll get an alert message that says:

> "Your computer contains a graphics card which may not support iMovie. iMovie requires a 'Quartz Extreme Compatible' graphics card. Certain iMovie features such as Themes, Ken Burns Photos, and Video FX may not work properly with your graphics card."

Published Date: Oct 7, 2016

GarageBand 3.0.2: Built-in Output appears twice on Intel-based Macs

This article has been archived and is no longer updated by Apple.

The Built-in Output is listed twice on the Audio/MIDI preference pane within GarageBand 3.0.2.

GarageBand will work properly if you select either of the duplicate Built-in Output listings, so the issue is purely cosmetic.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

About the Mac OS X Server 10.4.7 Update

This article has been archived and is no longer updated by Apple.

This software updates Mac OS X Server 10.4.6 to version 10.4.7.

Important: Please Read Before Installing

- You must have an administrator account password that does not contain Option-keyed characters to install this update. The password may not be left blank (you can change your password if needed).
- You may experience unexpected results if you've installed third-party system software modifications, or if you have modified the operating system through other means. This doesn't apply to normal software installation.
- The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.
- This update can be installed on non-startup volumes, but you should only do this if the current startup volume has already been updated to Mac OS X Server 10.4.7. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are two ways to update to Mac OS X Server 10.4.7: Use Software Update or install from a standalone installer.

Software Update Installation

Software Update may have referred you to this document. For more information on this feature, see "How to Update Your Software."

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Note: Do not use the "Download Only" or "Install and Keep Package" options in Software Update. The resulting download will not install on your server. If you need a standalone installer, follow the instructions in the next section.

Standalone Installer

A standalone installer is also available from Apple Downloads. The Mac OS X Server 10.4.7 Update specifically updates version 10.4.6 to version 10.4.7. There is also a "Combo Update" installer available, which will update any version of Mac OS X Server 10.4 to 10.4.7.

Remote Installation

If you need to install the update on a remote computer, you can do so using the "softwareupdate" command-line tool.

Improvements

Apple File Services (Server)

- Addresses an issue that could cause the AppleFileServer process to stop responding and disconnect users.
- The Apple File Service will now start if sharepoints are locked.
- Permissions are now correctly handled for Active Directory users on third-party NFS exports which are reshared via AFP.

Apple File Services (Client)

- Prevents issues in which certain Adobe and Quark applications unexpectedly quit when saving a file to a non-Apple AFP server.
- Addresses an issue that could cause files to be deleted when duplicating them in the Finder on a mounted AFP volume.
- Addresses an issue that could cause the error "Bad file descriptor" when using the cp command to copy a file to an AFP volume.

Command-Line Tools

- The changeip command now updates Kerberos credentials when run on a server bound to a Kerberos realm.
- Improves reliability of the lsof command on systems with large amounts of RAM installed.
- Fixes a rare problem that could prevent incoming ssh connections.

Disk Utility

- Improves reliability of rebuilding a degraded RAID 1 (mirror) set in Disk Utility.

Mail Server

- Updates ClamAV to version 0.88.2 for virus filtering and security.

MySQL

- Updates the default MySQL configuration file (/etc/my.cnf) to improve MySQL performance.

Netboot/Netinstall

- Added model properties for MacBook and 17-inch MacBook Pro.

Networking

- Mac OS X 10.4 computers will now respond to Layer 2 Multicast ARPs.

NFS Server

- Increases the maximum number of NFS server daemons configurable in Server Admin from 20 to 64.
- Fixes an issue that would prevent clients from mounting NFS shares if the root volume (/) was exported with the "-alldirs" option.
- Improves reliability of exporting directories that may not mount early in the startup process, such as volumes on an Xserve RAID.

Password Server

- Addresses an issue that prevented ApplePasswordServer.Server.log from rolling.

SMB Server

- Resolves an issue that prevented Windows 95, 98, and ME clients from connecting to the SMB Server in Mac OS Server X 10.4.6.

Xsan-related Improvements

- Resolves an issue which could cause Xsan clients to stop responding when accessing the SAN if an Xsan peer was rebooted.
- Increases the maximum number of vnodes on systems with 2GB or more RAM, to avoid a problem that could cause Xsan clients to become unresponsive when the vnode table became full.
- Resolves a problem using "Save As..." from certain Adobe applications to an Xsan volume reshared via AFP.
- The cp, mv and tar commands now pre-allocate space on Xsan volumes to avoid file fragmentation.

Published Date: Oct 7, 2016

About the Mac OS X Server 10.4.7 Update (Combo)

This article has been archived and is no longer updated by Apple.

This software updates Mac OS X Server versions 10.4, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, and 10.4.6 to Mac OS X Server 10.4.7. It is a "combo" update that combines enhancements delivered with versions 10.4.1 through 10.4.7. If you already have Mac OS X Server 10.4.6, you can download a smaller update to update to version 10.4.7.

Important: Please Read Before Installing

- You must have an administrator account password that does not contain spaces or Option-keyed characters to install this update. The password may not be left blank (you can change your password if needed).
- You may experience unexpected results if you've installed third-party system software modifications, or if you have modified the operating system through other means. This doesn't apply to normal software installation.
- The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.
- This update can be installed on non-startup volumes, but you should only do this if the current startup volume has already been updated to Mac OS X Server 10.4.7. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are two ways to update to Mac OS X Server 10.4.7: Use Software Update or install from the standalone installer.

Software Update Installation

Software Update may have referred you to this document. For more information on this feature, see "How to Update Your Software."

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Note: This version of Mac OS X Server is built as a multi-package and should not be used with Software Update's "Download Only" and "Install and Keep Package" options. If you need to save these packages for later use, try the manual update instead.

Standalone Installer

A standalone installer is also available from Apple Downloads.

Remote Installation

If you need to install the update on a remote computer, you can do so using the "softwareupdate" command-line tool.

Enhancements delivered with this update

This update delivers many enhancements. Because this is a combo update, it includes enhancements that are delivered with the prior 10.4.x updates. You can see the individual enhancement lists for 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, 10.4.6, and 10.4.7 updates.

Published Date: Oct 7, 2016

TA24103_About_Xsan_.pdf

About Xsan 1.4

This article has been archived and is no longer updated by Apple.

Please see this article for information about Xsan 1.4.

Published Date: Feb 20, 2012

Unable to drag and drop in Disk Utility while started from install DVD

This article has been archived and is no longer updated by Apple.

When you use the restore option in Disk Utility in Mac OS X 10.3 through 10.4.11, you have to drag the destination device into the destination field. If your Mac is started up from the install DVD that was included in the box with the computer, this drag-and-drop function may not be available, and you may not be able to use the restore process.

There are two possible workarounds to this issue:

- Start up from an external Firewire drive running Mac OS X and use Disk Utility while running off the Firewire drive.
- Start the Intel-based Mac up in Target Disk mode and connect the Mac to another computer running Mac OS X (version 10.4 or later). Then use Disk Utility on the host computer to backup and restore the drives.

Published Date: Oct 7, 2016

Mac OS X Server 10.4: Third-party clients cannot see contents of NFS export

This article has been archived and is no longer updated by Apple.

HFS Plus file systems exported by Mac OS 10.4 and later use 64-bit values in the NFSv3 READDIR cookies. Some clients running non-Apple operating systems may only be able to handle 32-bit values in the NFSv3 64-bit READDIR cookies. These clients will not see the full contents of NFS shares exported by a Mac OS X 10.4 Server.

To resolve the issue, use one of these two solutions:

- Export the NFS directory using the "-32bitclients" option. **Note:** This requires Mac OS X Server 10.4.3 or later.

  – Or –

- Have the client OS access the share using NFSv2 (which only has 32-bit READDIR cookies) instead of NFSv3.

Published Date: Oct 7, 2016

Mac OS X Server 10.4.6: Changes in server hostname discovery

This article has been archived and is no longer updated by Apple.

Mac OS X Server 10.4.6 improves server hostname discovery and error reporting. This article summarizes the changes.

Automatic hostname storage

The hostname will automatically be stored to System Configuration the first time it is detected via a DNS lookup.

- servermgrd will attempt to look up the hostname of the server in DNS based on its primary IP address, when the hostname has not been set. If it finds a name, it will store that name in System Configuration.
- This prevents the host booting with a ".local" name when the network is not up in time or there is boot timing issue due to switch latencies, and so forth.
- `/var/log/system.log` will have entries that servermgrd has set the hostname and what it has set it to the first time it is detected.
- `/var/log/system.log` will denote that the names of the host and DNS are "synchronized," meaning, everything is ok.

Leave hostconfig alone

You should **not** modify the configuration file `/etc/hostconfig`, meaning you should leave hostname set as "-AUTOMATIC-".

Getting in the zone

If you configure a server as a DNS server for the first time, and it does not have a valid DNS name, the hostname will also be automatically set when the DNS zone is created.

Tastier logs

Various error messages now get logged to `/var/log/system.log` when the configured hostname and DNS do not match, warning you that things will not work correctly until fixed. Hostname checks occur periodically, you'll be reminded. Here's some sample system.log messages for reference:

DNS/configured name mismatch:

```
===== Apr 5 15:30:50 server3 servermgrd: servermgr_dns: configured name and reverse DNS name do not match (server3.testzone.com != nameserver.testzone.com), various services may not function properly - use changeip to repair and/or correct DNS
```

Synchronized message:

```
===== Apr 5 15:37:58 nameserver servermgrd: servermgr_dns: hostname and DNS entries for this server are synchronized
```

First boot, hostname set:

```
==== Apr 5 15:40:23 server2 servermgrd: servermgr_dns: hostname has been set to nameserver.testzone.com in SystemConfiguration - use changeip to change Apr 5 15:40:24 server2 servermgrd: servermgr_dns: hostname and DNS entries for this server are synchronized
```

For general information about using the changeip tool to change your server hostname or IP address see the Mac OS X Server Command-Line Administration Guide on the server documentation page, or type `man changeip` in Terminal.

For more information about changes to the the changeip tool in Mac OS X Server 10.4.6, see "changeip now requires fully qualified domain names."

Published Date: Oct 7, 2016

Remote Desktop stops responding at the Task Server pane of the Setup Assistant

This article has been archived and is no longer updated by Apple.

If you have previously configured a Remote Desktop 2.2 computer as a remote task server for data collection, then Remote Desktop 3 may stop responding ("hang") at the Task Server pane of the Setup Assistant, or it may display the status of "--" for all client computers.

To resolve the issue, you can update the remote task server to Remote Desktop 3 as well, or select a task server that already has Remote Desktop 3 installed, or use the local system as the task server. To use the local system as the task server:

1. Quit or, if necessary, Force Quit the Remote Desktop application.
2. While holding Option key, open Remote Desktop. This will force the first-run assistant to appear.
3. Click through the first two screens to reach the screen where you specify the Task Server.
4. Specify a Task Server with Remote Desktop 3 installed, or choose to use the local computer as the task server.

If that does not resolve your issue, do this:

1. Quit the Remote Desktop application.
2. In the Sharing pane of System Preferences, turn off Apple Remote Desktop in the list of sharing services.
3. Move this file to the desktop:

   ```
   /Library/Preferences/com.apple.RemoteDesktop.plist
   ```

4. Turn on Apple Remote Desktop in the Sharing pane of System Preferences.
5. Open the Remote Desktop application, and specify a Task Server with Remote Desktop 3 installed, or choose to use the local computer as the task server.

Published Date: Feb 20, 2012

iDVD: Keyboard Shortcuts fail to open from Help menu in Mac OS X 10.3.9

This article has been archived and is no longer updated by Apple.

In iDVD you can access a list of keyboard shortcuts by choosing iDVD Shortcuts from the Help menu. If you are using iDVD 5 or 6 with Mac OS X 10.3.9, choosing this menu item will open a blank page.

To access the keyboard shortcuts, try one of the following workarounds:

Search for keyboard shortcuts

1. Open iDVD.
2. From the Help menu, choose **iDVD Help**.
3. Type `keyboard shortcuts` into the search field (ask a question).
4. Double-click the Keyboard shortcuts item (or select it and click the Show button).

Go through Contents

1. Open iDVD.
2. From the **Help** menu, choose **iDVD** Help.
3. Click on the Contents link.
4. Click on the Shortcuts and tips link
5. Click on Keyboard shortcuts

Note: This issue does not occur with Mac OS X 10.4.x.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Final Cut Pro: Capture fails if more than one Ensemble audio device is connected

This article has been archived and is no longer updated by Apple.

If multiple Apogee Ensemble FireWire audio devices are connected to your computer (aggregated or not), capturing in Final Cut Pro may fail with this message:

> **This operation could not be completed as there is no video.**

When this happens, you may also notice the tape in the camera running and playing back to an external monitor as usual, but the playback doesn't show up in the Preview window.

As a workaround, you can turn off or disconnect one of the Ensemble devices while capturing. This will allow Final Cut Pro to allocate enough isochronous bandwidth to capture via FireWire.

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Published Date: Feb 20, 2012

Final Cut Pro: Set the time and date on your camera before shooting video

This article has been archived and is no longer updated by Apple.

Setting the time and date on your camera is important. Some of Final Cut Pro's features require time and date information on the tape in order to function reliably. For instance, if you're capturing DV or HDV using scene break detection, it's important to set the camera's clock before shooting video.

For best results, shoot your video after setting a date and time on your camera's clock. If you've already shot your video, you might find that automatic scene break detection doesn't behave reliably. If this occurs, simply log your clips before capturing, or use the controls in Capture Now to place scene breaks as desired.

Published Date: Feb 20, 2012

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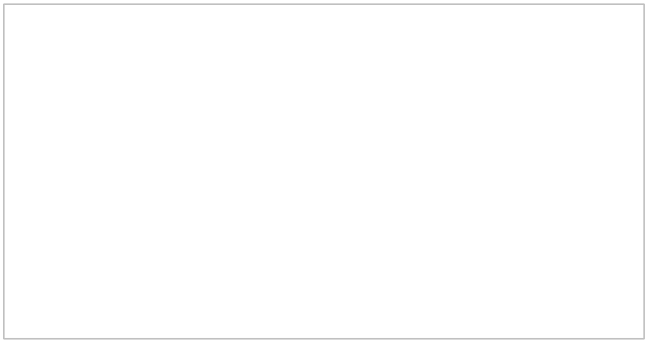

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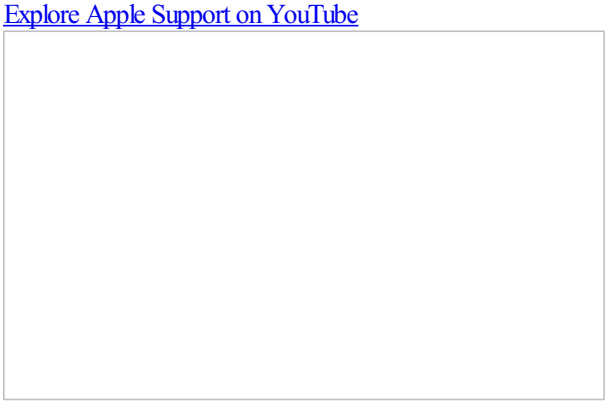

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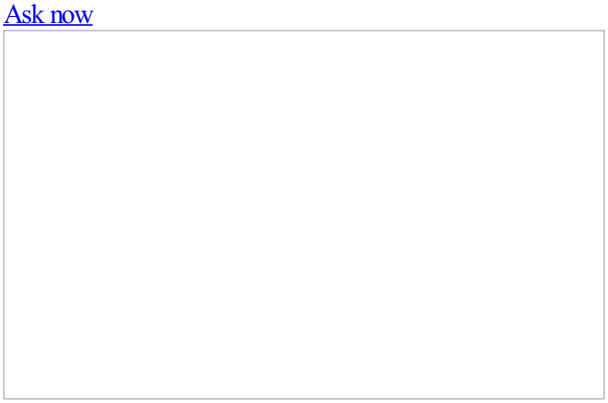

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- Apple AC Wall Plug Adapter Recall Program
- Beats Pill XL Speaker Recall Program
- All Programs

Pro Applications Update 2006-01

This article has been archived and is no longer updated by Apple.

Pro Applications Update 2006-01 address several issues with underlying frameworks and shared components for the following professional applications, and is strongly recommended for all users of Final Cut Studio 5.1, Final Cut Pro 5.1, Motion 2.1, Soundtrack Pro 1.1, Apple Qmaster 2.1, Compressor 2.1, DVD Studio Pro 4.1, LiveType 2.1, Shake 4.1, and Final Cut Express HD 3.5.

Pro Application Update 2006-01 updates the following components

HDVCodec

HDVCodec addresses compatibility issues with Sony's XDCAM-HD 1080p24 25 Mbps CBR format and playback for the XDCAM-HD 540-line VFR formats.

This update is required for customers using Final Cut Pro 5.1.1 and the "Cine Alta" filmmaker features of Sony's XDCAM-HD cameras.

Uncompressed 422

Uncompressed 422 delivers a fix for changes in color-space and/or gamma when moving clips between Final Cut Pro and Adobe After Effects and addresses a codec issue leading to drawing errors in 16bpc After Effects projects. It also fixes discrepancies found between former AltiVec and the current Intel (scalar) code and delivers some performance improvements on Intel-based Macs.

This update is required for customers using Final Cut Pro 5.1 and recommended for customers using any of the Final Cut Studio 5.1 applications and Shake 4.1.

IMXCodec

IMXCodec delivers a fix for ARGB encoding on Intel-based Macs.

This update is required for customers using Shake 4.1 and recommended for Final Cut Studio 5.1 customers.

LiveType Support

This fix improves application stability when doing round-trip edits between Final Cut Pro and LiveType or Final Cut Express and LiveType. This also addresses an issue where LiveType could cause OverTheEdge's Unity to stop responding.

This update is required for customers using Final Cut Pro 5.1 and Final Cut Express HD 3.5.

FxPlug

FxPlug delivers a single image-processing plug-in architecture for pro applications.

This update is required for customers using Motion 2.1

Requirements for the Pro Applications Update 2006-01

- Mac OS X 10.4.4 or later
- QuickTime 7.0.4 or later

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Published Date: Feb 20, 2012

iDVD 6: Slideshow from iPhoto album only plays first slide

This article has been archived and is no longer updated by Apple.

If you add a slideshow to iDVD by selecting an album in iPhoto, by choosing **Send to iDVD** from the **Share** menu, then you may experience an issue where the slideshow appears to be "stuck" on the first slide when you preview your project.

If this happens, try the following steps:

1. In the iDVD window, double click on the slideshow to open the slideshow editor.
2. From the **Slide Duration** pop-up menu, choose a different option.
3. From the **Slide Duration** pop-up menu, choose the original setting (or the setting of your choice).
4. Preview the slideshow.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Mac OS X 10.4: Network Time clients lose synchronization

This article has been archived and is no longer updated by Apple.

Some Mac OS X computers will lose time synchronization even when the "Set date & time automatically" option is selected in the Date & Time preference pane. To temporarily resolve the issue, simply deselect and then reselect that checkbox.

To permanently resolve the issue, you can modify the default values in the time synchronization configuration file. The defaults require several hours of constant access to the time server in order to establish synchronization. If the initial sync gets interrupted (by the computer going to sleep, for example), the subsequent synchronization will not take place, causing the computer to eventually drift from the correct time.

Note: Modification of the configuration file is an advanced technique. If you are not experienced in the type of steps you see below, consider using the temporary method mentioned above. The advanced steps will use the pico text editor as an example; advanced users may choose a different editor.

To modify the configuration file, follow these steps:

1. Be sure you are logged into Mac OS X with an administrator account.
2. Open the Terminal (located at /Applications/Utilities/).
3. Execute this command:

   ```
   sudo cp /etc/ntp.conf /etc/newntp.conf
   ```

4. When prompted, enter your administrator password.
5. Execute this command:

   ```
   sudo pico /etc/newntp.conf
   ```

6. Use the cursor keys lot locate the minpoll and maxpoll values, and then delete them.
7. Add "iburst" after the server address(es). Your edited file should contain an entry that looks like this:

   ```
   server time.apple.com iburst
   ```

8. Press Control-O followed by Return to save the file, then Control-X to exit pico.
9. Execute this command:

   ```
   sudo pico /System/Library/StartupItems/NetworkTime/NetworkTime
   ```

10. Change the line near the end of this file, which starts with "ntpd -f", so that it reads:

    ```
    ntpd -f /var/run/ntp.drift -p /var/run/ntpd.pid -c /etc/newntp.conf
    ```

11. Press Control-O followed by Return to save the file, then Control-X to exit pico.
12. To restart the Network Time service, execute this command:

    ```
    sudo SystemStarter -d restart "Network Time"
    ```

Note: These changes will help Mac OS X establish time synchronization quickly. Time drift may still occur if the computer's network configuration changes. To re-establish synchronization, restart the Network Time service as described in the last step above.

Published Date: Oct 7, 2016

Mac OS X 10.4: Can‘t bind to a Directory Service with hyphen in computer name

This article has been archived and is no longer updated by Apple.

You may not be able to join, or bind to, a Directory Domain such as LDAP or Active Directory if your computer name contains a hyphen.

To allow binding, use a computer name that does not contain a hyphen.

Published Date: Oct 7, 2016

Logic: Some languages appear twice in Finder Info window

This article has been archived and is no longer updated by Apple.

After updating Logic Pro/Express, one or more languages are duplicated in the Info window for Logic (the window that appears if you select Logic in the Finder then choose **File > Get Info**).

Solution

This happens if you have disabled one or more languages in the Info window before updating Logic. To prevent the issue, make sure all languages are enabled before updating. If you have already updated and have the issue, use these steps to resolve it:

1. Go to your Applications folder.
2. Drag the Logic Pro or Logic Express application to the Trash.
3. Still in the Finder, choose **Go > Home**.
4. Open the Library folder, then the Receipts folder inside it.
5. Drag any Logic Pro or Logic Express receipts to the Trash.
6. Reinstall Logic Pro (or Logic Express) from the installation DVD. It is sufficient to do a custom install and simply install the Logic application.
7. Update to the latest version of Logic.

If you wish to disable languages, that's OK, but be sure to re-enable them before future updates.

Published Date: Feb 20, 2012

Aperture: CPU usage higher after switch to version 1.1 RAW decoding

This article has been archived and is no longer updated by Apple.

A system can become slow or unresponsive after migrating images from version 1.0 to 1.1 RAW decoding in Aperture. If you look at Activity Monitor, it shows Aperture using a large amount of CPU resources.

Solution

After you update images from 1.0 to 1.1 decoding, Aperture must regenerate each image thumbnail. If you update a large number of images at once, this can cause a noticeable slowdown. To avoid this issue, migrate images in relatively small batches (only those needed for a particular session), or migrate a large batch when you plan to be away from the computer for a while.

Published Date: Feb 20, 2012

Soundtrack Pro running in Mac OS X 10.4.6 quits unexpectedly while fixing pops and clicks

This article has been archived and is no longer updated by Apple.

In Soundtrack Pro, if you analyze an audio file in the Waveform Editor by selecting Clicks and Pops, then try to fix the file, Soundtrack Pro may unexpectedly quit if you are running Mac OS X 10.4.6 on a PowerPC-based computer.

Update to Mac OS X 10.4.7 or later to address this issue.

If you're not able to update to Mac OS X 10.4.7 and you need to analyze an audio file for clicks and pops with Soundtrack Pro, then use Mac OS X 10.4.5. If you have already updated to Mac OS X 10.4.6 and are not running any other applications that require 10.4.6, revert to Mac OS X 10.4.5 using the following steps:

1. Perform an archive and install of Mac OS X Tiger from your install media.
2. Update to Mac OS X 10.4.5 using the Mac OS X 10.4.5 Combo Updater.

Published Date: Feb 20, 2012

Mac OS X Server: How to export LDAP contents in LDIF format

This article has been archived and is no longer updated by Apple.

This article explains how to export LDAP entries in LDIF format.

Note: Exporting user accounts to LDIF format includes only user passwords with type "Crypt" and not those with type "Password Server" or "Open Directory.

You can use the Terminal Application to export LDAP contents in LDIF format by following these steps:

1. In the Terminal, type the following:

   ```
   $ sudo ldapsearch -LLL -H ldap://<IP Address> -b "<distinguished name>" > <target>
   ```

   Where `<IP Address>` is the IP Address or the Fully Qualified Domain Name of the server hosting the LDAP database, `<distinguished name>` specifies the path to the users container which is being backed up, and where `<target>` is the target file to which the LDIF information will be written.

2. Press the Enter key.

Example

The following example will export User account information to a file "userexport.ldif":

```
sudo ldapsearch -LLL -H ldap://myserver.foo.com -b "cn=users,dc=foo,dc=com" > userexport.ldif
```

Where "ldap://myserver.foo.com" is the Fully Qualified Domain Name of the server hosting the LDAP database, "cn=users,dc=foo,dc=com" specifies the path to the users container which is being backed up ("cn=users" is the root-level container which contains user records, and "dc=example,dc=com" is the Search Base.), and "userexport.ldif" is the target file to which the LDIF information will be written.

The ldapsearch command requires one to specify a distinguished name, which is the method of describing a path to an object. A distinguished name is composed of a container name (cn=users, cn=groups, or cn=computer_lists) followed by the search base. To determine the search base, connect to the LDAP server with Server Admin and select **Open Directory > Settings > Protocols > LDAP > Search Base**.

To export all users from a server with search base "dc=example,dc=com":

```
cn=users,dc=example,dc=com
```

To export all groups from a server with search base "dc=example,dc=com":

```
cn=groups,dc=example,dc=com
```

To export all computer lists from a server with search base "dc=example,dc=com":

```
cn=computer_lists,dc=example,dc=com
```

Published Date: Oct 7, 2016

iMovie HD 6: Clips in Trash after closing project with Mac OS X 10.3.9

This article has been archived and is no longer updated by Apple.

You may find that your changes were not saved after reopening a project you were working on earlier. Some of the clips you were working on may be found in the iMovie Trash.

This happens if you closed the document and then clicked Save when iMovie HD prompted you to save changes.

To avoid this issue, save your iMovie project (**File > Save Project** or Command-S) before closing the iMovie window.

This issue does not affect Mac OS X 10.4 or later.

Published Date: Feb 20, 2012

iDVD 6: Themes don‘t load correctly

This article has been archived and is no longer updated by Apple.

When opening iDVD 6, one of the following symptoms occur:

- A "Loading Themes" dialog appears, but iDVD does not go any further.
- iDVD opens, but switching between themes causes iDVD to unexpectedly quit.

Update to iDVD 6.0.4 or later to resolve these issues.

Related documents

303252 "iDVD 6: Themes pane is blank after upgrading" :

Published Date: Oct 7, 2016

GarageBand: Audio Output lists "No Driver" on Intel-based Macs

This article has been archived and is no longer updated by Apple.

When using GarageBand 3.0.2 on an Intel-based Mac, the Audio/MIDI pane in GarageBand's preferences lists "no driver selected" in the Audio Output pop-up menu.

This is a purely cosmetic issue. Audio still goes to the built-in audio output. Click the Audio Output pop-up menu, and select "Built-in Audio."

Published Date: Feb 20, 2012

Logic Pro 7, EXS24: Audio imported from CDs is distorted

This article has been archived and is no longer updated by Apple.

Sampler Instruments using audio which was drag copied from audio CDs exhibit static and/or distortion.

This issue only occurs when the CD tracks are imported from the CD via drag and drop. Instead, you should use iTunes to import the audio to the computer as AIFF files.

Published Date: Feb 20, 2012

Aperture: Import panel shows current time for all images

This article has been archived and is no longer updated by Apple.

When importing images directly from a camera, all images in the Import panel appear to be time stamped with the current time, rather than the original capture time. (Note that after import, the images will display the correct capture time.)

This issue can occur if a camera is directly connected to the computer, and the camera is set to PTP file transfer mode. There are several ways to avoid the issue:

- Use a card reader instead of directly connecting the camera to the computer.
- Set the camera to "normal" or "PC connection" mode, rather than "PTP".
- After opening Aperture's Import panel, close and re-open it before importing images.

Any of the above will resolve the issue.

This issue is resolved in Aperture 3.

Published Date: Oct 7, 2016

About the security content of the QuickTime 7.1 Update

This article has been archived and is no longer updated by Apple.

This document describes the security content of the QuickTime 7.1 Update, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

QuickTime 7.1 Update

- **QuickTime**

  CVE-ID: CVE-2006-1458

  Available for: Mac OS X v10.3.9 and later, Microsoft Windows XP, Microsoft Windows 2000

  Impact: Viewing a maliciously-crafted JPEG image may result in an application crash or arbitrary code execution

  Description: By carefully crafting a corrupt JPEG image, an attacker can trigger an integer overflow which may result in an application crash or arbitrary code execution with the privileges of the user. This update addresses the issue by performing additional validation of JPEG images.

- **QuickTime**

  CVE-ID: CVE-2006-1459, CVE-2006-1460

  Available for: Mac OS X v10.3.9 and later, Microsoft Windows XP, Microsoft Windows 2000

  Impact: Viewing a maliciously-crafted QuickTime movie may result in an application crash or arbitrary code execution

  Description: By carefully crafting a corrupt QuickTime movie, an attacker can trigger an integer overflow or buffer overflow which may result in an application crash or arbitrary code execution with the privileges of the user. This update addresses the issue by performing additional validation of QuickTime movies. Credit to Mike Price of McAfee AVERT Labs for reporting these issues.

- **QuickTime**

  CVE-ID: CVE-2006-1461

  Available for: Mac OS X v10.3.9 and later, Microsoft Windows XP, Microsoft Windows 2000

  Impact: Viewing a maliciously-crafted Flash movie may result in an application crash or arbitrary code execution

  Description: By carefully crafting a corrupt Flash movie, an attacker can trigger a buffer overflow which may result in an application crash or arbitrary code execution with the privileges of the user. This update addresses the issue by performing additional validation of QuickTime movies. Credit to Mike Price of McAfee AVERT Labs for reporting this issue.

- **QuickTime**

  CVE-ID: CVE-2006-1462, CVE-2006-1463

  Available for: Mac OS X v10.3.9 and later, Microsoft Windows XP, Microsoft Windows 2000

  Impact: Viewing a maliciously-crafted H.264 movie may result in an application crash or arbitrary code execution

  Description: By carefully crafting a corrupt H.264 movie, an attacker can trigger an integer overflow or buffer overflow which may result in an application crash or arbitrary code execution with the privileges of the user. This update addresses the issue by performing additional validation of H.264 movies. Credit to Mike Price of McAfee AVERT Labs and ATmaCA working through TippingPoint and the Zero Day Initiative for reporting these issues.

- **QuickTime**

CVE-ID: CVE-2006-1464

Available for: Mac OS X v10.3.9 and later, Microsoft Windows XP, Microsoft Windows 2000

Impact: Viewing a maliciously-crafted MPEG4 movie may result in an application crash or arbitrary code execution

Description: By carefully crafting a corrupt MPEG4 movie, an attacker can trigger a buffer overflow which may result in an application crash or arbitrary code execution with the privileges of the user. This update addresses the issue by performing additional validation of MPEG4 movies. Credit to Mike Price of McAfee AVERT Labs for reporting this issue.

- **QuickTime**

  CVE-ID: CVE-2006-1249

  Available for: Mac OS X v10.3.9 and later, Microsoft Windows XP, Microsoft Windows 2000

  Impact: Viewing a maliciously-crafted FlashPix image may result in an application crash or arbitrary code execution

  Description: By carefully crafting a corrupt FlashPix image, an attacker can trigger an integer overflow which may result in an application crash or arbitrary code execution with the privileges of the user. This update addresses the issue by performing additional validation of FlashPix images. Credit to eEye Digital Security and Mike Price of McAfee AVERT Labs for reporting these issues.

- **QuickTime**

  CVE-ID: CVE-2006-1465

  Available for: Mac OS X v10.3.9 and later, Microsoft Windows XP, Microsoft Windows 2000

  Impact: Viewing a maliciously-crafted AVI movie may result in an application crash or arbitrary code execution

  Description: By carefully crafting a corrupt AVI movie, an attacker can trigger a buffer overflow which may result in an application crash or arbitrary code execution with the privileges of the user. This update addresses the issue by performing additional validation of AVI movies. Credit to Mike Price of McAfee AVERT Labs for reporting this issue.

- **QuickTime**

  CVE-ID: CVE-2006-1453, CVE-2006-1454

  Available for: Mac OS X v10.3.9 and later, Microsoft Windows XP, Microsoft Windows 2000

  Impact: Viewing a maliciously-crafted PICT image may result in an application crash or arbitrary code execution

  Description: Two issues affect QuickDraw when processing PICT images. Malformed font information may cause a stack buffer overflow, and malformed image data may cause a heap buffer overflow. By carefully crafting a malicious PICT image, an attacker may be able to cause arbitrary code execution when the image is viewed. This update addresses the issue by performing additional validation of PICT images. Credit to Mike Price of McAfee AVERT Labs for reporting these issues.

- **QuickTime**

  CVE-ID: CVE-2006-2238

  Available for: Mac OS X v10.3.9 and later, Microsoft Windows XP, Microsoft Windows 2000

  Impact: Viewing a maliciously-crafted BMP image may result in an application crash or arbitrary code execution

  Description: By carefully crafting a corrupt BMP image, an attacker can trigger a buffer overflow which may result in an application crash or arbitrary code execution with the privileges of the user. This update addresses the issue by performing additional validation of BMP images.

  This issue was originally identified in CVE-2006-1983, but a new CVE name was assigned.

Published Date: Oct 7, 2016

Logic appears to stop responding ("hang") while scanning Audio Units

This article has been archived and is no longer updated by Apple.

Logic can appear to be unresponsive or stuck while scanning Audio Units.

This happens because a plug-in will sometimes generate a dialog box that must be dismissed before scanning can continue. In some cases, this dialog may be hidden behind the Logic splash screen. Click the AU Manager icon in the Dock to reveal the dialog, then dismiss it.

Published Date: Feb 20, 2012

Aperture Resources

This article has been archived and is no longer updated by Apple.

Support

In the United States and Canada, all newly registered users of Aperture receive 90 days of complimentary software support via telephone from the date of purchase. In addition, Apple offers a range of professional support options.

Aperture Discussion Boards

The Aperture Discussion forum is filled with experienced users. Ask a question, answer a question, or simply read what other Aperture users have to say.

Aperture Support Site

Apple's Support website is filled with the best information for Aperture users. On this site, you can:

- search for helpful Knowledge Base articles
- troubleshoot an issue
- download software updates for Aperture

Go to the Aperture Support website

Aperture Help

The built-in Help menu in Aperture gives you direct access to a searchable user manual that contains all sorts of information, such as how to set up and configure Aperture, how to perform image adjustments, or how to order books and prints.

Choose the Help menu in Aperture to access the user manual and other helpful resources.

Aperture manuals are also available online. Visit the Apple Manuals website.

Apple Pro Training

The Apple Pro Training Series is Apple's official curriculum. Offered as a self-paced learning tool and used in all instructor-led courses, Apple chooses the authors because of their industry expertise.

The instructor-led courses are offered at Apple Authorized Training Centers across North America, Europe, Japan, Australia and Asia. Taught by Apple Certified Trainers, the courses balance concepts and lectures with hands-on labs and step-by-step real-world exercises.

Upon completion of the course material, a student can become an Apple Certified Pro by taking the certification exam offered only at Apple Authorized Training Centers. Successful certification as an Apple Certified Pro gives you official recognition of your knowledge of Apple's professional applications.

Learn more about the Apple Pro Training Program

Learn more about the Apple Pro Training Series Books

Apple Consultants Network

Members of the Apple Consultants Network are independent technical experts, skilled in the setup, use, and maintenance of Apple products and solutions. In addition, many offer related third-party product solutions, as well as a variety of training services.

Check out the Apple Consultants Network site

Published Date: Feb 20, 2012

Aperture does not launch because Library is locked

This article has been archived and is no longer updated by Apple.

In a certain rare situation, you may see this message when you try to launch Aperture:

> "The database for the library ' /Aperture Library.aplibrary' is locked and cannot be used at this time."

If you Get Info on the Aperture Library package, it shows normal read-write permissions, and the Locked box is not selected.

Solution

Follow these steps:

1. Open the Terminal (located at /Applications/Utilities).
2. At the prompt, type "`cd `" (note the space).
3. Drag the folder that contains your Aperture Library into the Terminal window. After that, the command line will look something like this (but will vary depending on the path to your library):

   ```
   cd /yourusername/Pictures/
   ```

4. Press Return.
5. Type: `cd Aperture\\ Library.aplibrary/Aperture.aplib`
6. Press Return.

   Warning: The next step uses the "rm" command. Misuse of the rm command can result in unintended data loss, up to and including the entire contents of your hard disk. So be sure to type the command as shown.
7. Type: `rm Library.apdb.lock`
8. Press Return.

Published Date: Oct 7, 2016

Mac OS X Server 10.4: "Bad address syntax error" message when sending e-mail using WebMail

This article has been archived and is no longer updated by Apple.

Users who connect to a 10.4 server via its IP address instead of its fully qualified domain name (FQDN) may get this error when trying to send email via WebMail:

> "501 Bad address syntax error".

Solution

Set the server's domain name in the SquirrelMail configuration file. You can do this by using the Terminal application to run an interactive configuration script with root privileges.

1. In the Terminal, type the following command, and then press Return:

   ```
   sudo /etc/squirrelmail/config/conf.pl
   ```

2. At the "Command >> " prompt, type the number 2 for Server Settings, and press Return.
3. At the "Command >> " prompt, type the number 1 to edit Domain, and press Return.
4. At the "[getenv(SERVER_NAME)]: " prompt, type your server's domain name, such as example.com, and press Return.
5. At the "Command >> " prompt, type the letter S to save your settings, and press Return twice.
6. At the "Command >> " prompt, type the letter Q to quit, and press Return.

Further information about configuring SquirrelMail is available in the Web Technologies Administration guide and in Mac OS X Server Help.

Published Date: Feb 20, 2012

Logic Pro 7.2.1 converts some compressed files to AIFF

This article has been archived and is no longer updated by Apple.

Logic Pro 7.2.1 is now able to play compressed audio files directly. In some cases, when an MP3 or AAC file is added to a song, the file is rendered as AIFF instead.

Solution

An MP3 or AAC file must meet these technical requirements for Logic Pro to play it directly:

- 44.1 kHz
- Bit rate of at least 32kbps (mono) or 48kb/sec (stereo)
- Created by iTunes 5 or later, or by Logic 7.0 or later

You can still use compressed files that do not meet all of these conditions, but they have to be rendered as AIFF first.

Published Date: Feb 20, 2012

Mac OS X Server 10.4.2: Internal Server Error when connecting to Mac OS X Server Weblog

This article has been archived and is no longer updated by Apple.

After enabling the web and weblog services in Mac OS X Server, users connecting to the weblog in a web browser may encounter an Internal Server Error message.

This issue affects Xserve G5 and Mac OS X Server 10.4.2.

Solution

This issue is due to incorrect permissions for the Tomcat service that provides weblog function. To resolve the issue:

1. Disable Weblogs in Server Admin.
2. Execute these commands in the Terminal:

```
$ sudo chown -R appserver:appserveradm /Library/Tomcat/blojsom_root
$ sudo chmod -R 770 /Library/Tomcat/blojsom_root
```

3. Update the Mac OS X Server software to 10.4.6 or later.
4. Re-enable Weblogs in Server Admin.

Published Date: Oct 7, 2016

iSync: Palm OS-based device only syncs some information

This article has been archived and is no longer updated by Apple.

Issue or symptom

When a Palm OS-based device (including handhelds and phones) syncs calendars, it may not sync contacts, or not all information is transferred from the computer to the device during a sync. The iSync log may state that the Palm device unexpectedly disconnected during sync.

Solution

This can occur if the Palm OS-based device runs out of memory during the sync.

Important: If you are using a Palm OS-based Treo provided by Verizon, read iSync: Can't sync Verizon Treo with iSync before performing the following steps.

To resolve this issue, narrow the range of events you've selected to sync with this device. For example, select "Ignore Palm events older than: One Week" if you don't need to synchronize all of your Address Book contacts with your device.

You can also synchronize only a specific group of contacts from your Address Book to save device memory. Create a group in Address Book which contains the contacts you want to sync with your device. Then, select this group from the iSync Synchronize pop-up menu within the Contacts section of the device's setup pane.

If the issue persists, check to see how much available memory is available on your Palm device. If you are low on device memory, you can remove unused applications, photos, sounds or other unused items from the device to free up memory. Consult your device documentation for more information.

On some Palm-based devices, restarting the device (performing a "soft reset") may also free up additional memory or resolve this issue. Consult your device documentation for more information.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

About the Mac OS X 10.4.7 Update (delta)

This article has been archived and is no longer updated by Apple.

The Mac OS X 10.4.7 Update (delta) updates Mac OS X 10.4.6 to version 10.4.7 on both Intel-based Macs and PowerPC-based Macs. (If you are updating from *Mac OS X 10.4, 10.4.1, 10.4.2, 10.4.3, 10.4.4, or 10.4.5* to 10.4.7, see this article instead.)

Important: Please read before installing.

- You may experience unexpected results if you have third-party system software modifications installed, or if you've modified the operating system through other means. (This does not apply to normal application software installation.)
- The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to update.
- If issues occur during installation--for example, Software Update quits unexpectedly, please see this article.

Installation

There are two ways to update to Mac OS X 10.4.7: Use Software Update or the standalone installer. You only need to use *one* of these methods to update your computer.

Automatic Software Update
Software Update, located in the **Apple** menu, will automatically download the latest Apple software. (Software Update might have linked you to this article to learn more about the update.) Note that the update's size may vary from computer to computer when installed using Software Update. Some updates must be installed prior to others, so you may need to run Software Update more than once to get all of the available updates.

Standalone installer
Download the update installer and run it manually. This a useful option when you need to update multiple computers but only want to download the update once. Two versions of the standalone installer are available from Apple Downloads: a delta and combo.

- The delta update for PowerPC and Intel-based Macs installer (described here) updates Mac OS X 10.4.6 to 10.4.7.
- The combo update installer (described in this article) updates Mac OS X 10.4, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, and 10.4.6 to 10.4.7.

Improvements

This update offers many improvements, including:

Mail

- Updates Help links within Mail alert messages so you are linked to useful content instead of a "No pages with your search words were found" page.
- Resolves a sync alert issue that could appear if Mail accounts were in different order on the different Macs that you were syncing.
- The Mail POP account option to "Remove copy from server after retrieving a message..." is no longer turned off after performing a sync with .Mac.
- POP accounts you create will no longer begin with the "Remove copy from server after retrieving a message..." preference setting turned off.
- Redirecting message to only a BCC: address no longer redirects the message to the original To: recipients as well.
- Improves results when retrieving IMAP messages with attachments over unreliable connections.
- Mail now supports connecting to mail servers through a SOCKS proxy.

iChat

- Improves compatibility for iChat when using a video input source that's connected to a third-party video card.
- Improves reliability when transferring files to or from AIM account users via iChat.
- Addresses an issue on PowerPC-based Macs that prevented video conferencing when not enough shared memory was available.
- Addresses potential causes of "insufficient bandwidth" alerts in iChat.
- If a conference doesn't start as expected, iChat will now offer to send a report to Apple for investigation.

Syncing

- Improves support for Motorola cell phones that sync via iSync and Bluetooth
- Addresses issues that could cause iDisk syncing to fail without alerting you or with a "Last sync failed" alert.
- iDisk syncs in progress are now more responsive to cancel requests.

- Shortens the time for cancellation of an iPod contact-and-calendar sync, if cancellation requested shortly after sync.
- Improves certain .Mac connection failure alerts that included misleading error messages.
- Resolves an issue in which the initial .Mac sync would fail if all data classes were selected to be synced (but future syncs would succeed).
- Addresses a number of issues related to .Mac syncing of tasks, bookmarks, and contacts.
- Addresses an issue for Mac OS X 10.4.6 in which you might not be able to sync via iSync 2.2 with Sony Ericsson k700i or S700i phones.

Finder and Apple applications

- Manually removing unwanted fonts from /System/Library/Fonts/ will no longer potentially cause Finder to unexpectedly quit.
- TextEdit will no longer unexpectedly quit if Helvetica fonts have been disabled in Font Book.
- You can now create compressed disk images larger than 60 GB.
- In iCal, a "Print Error while printing" alert message will no longer appear when creating a PDF with one of these options: Compress PDF, Encrypt PDF, Mail PDF, Save As PDF-X, Save PDF to iPhoto, or Save PDF to Web Receipts.
- Addresses issues that might prevent Sudden Motion Sensor information from appearing in System Profiler or other utilities.
- Addresses an issue in which some PDF files could be shifted to the right when printed from Safari.
- Resolves an issue in which, under certain circumstances in the Japanese language version of Mac OS X 10.4, the Add Bookmark command may not work in Safari.
- Addresses an issue in which Aperture 1.1 could unexpectedly quit while using full-screen mode.
- Improves reliability when rebuilding a problematic RAID 1 (mirror) set in Disk Utility.
- Disk Utility will no longer report unexpected messages after Adobe Illustrator CS2 or Photoshop CS2 are installed.
- Resolves an issue in which an error message might appear when attempting to print a document using the "Save PDF to iPhoto" option.
- Automator supports more file types, including JPEG, TIFF, and HTML, in the Filter Finder Items action.
- Automator supports more websites that require cookies and sessions, specifically those where the authentication is passed along with the URLs, in the Get Image URLs for Webpage, and Get Link URLs from Webpages actions.
- Improves responsiveness when dragging Automator actions in the workflow.
- Resolves an issue in which Soundtrack Pro may unexpectedly quit on PowerPC-based Macs after you analyze an audio file in the Waveform Editor by selecting Clicks and Pops.
- If you press the Kana key twice in a row while using the Kotoeri input method, the Finder and applications will no longer unexpectedly quit on Intel-based Macs.
- Addresses an issue in which iTunes, the Finder, or other applications could unexpectedly quit under certain circumstances while using Kotoeri input.

Third-party

- Adds support for Sierra wireless cards AirCard 580 (AC580), PC5220, and for the Novatel V620, S620, and U730 wireless cards for PowerBook computers.
- Improves compatibility for Adobe Photoshop CS2 by preventing menu items being highlighted if the cursor was in an image's zoom field.
- Improves compatibility for Microsoft Virtual PC—the installer application will no longer unexpectedly quit when performing an uninstallation.
- Prevents certain Adobe and Quark applications from unexpectedly quitting when saving a file to a non-Apple AFP server.
- Resolves an issue in which printing certain documents on some HP LaserJet printers caused an error "79.01FE" to be displayed.

Networking and Xsan

- Addresses an issue that could cause files to be deleted when duplicating them in the Finder on a mounted AFP volume.
- Addresses an issue that could cause the error "Bad file descriptor" when using the `cp` command to copy a file to an AFP volume.
- Mac OS X 10.4 computers now respond to Layer 2 Multicast ARPs.
- Addresses an issue in which the configd process could take excessive CPU resources when a DHCP server sent a malformed DHCP response.
- The included Apple VPN client now supports group membership on Cisco VPN servers.
- Improves reliability of the `lsof` command on systems with a large amount of RAM installed.
- Resolves an issue that could cause Xsan clients to stop responding when accessing the SAN if an Xsan peer was rebooted.
- Increases the maximum number of vnodes on systems with 2 GB or more RAM to avoid an issue that could cause Xsan clients to become unresponsive when the vnode table became full.
- Resolves an issue using "Save As..." from certain Adobe applications to an Xsan volume reshared via AFP.
- The `cp`, `mv` and `tar` commands now pre-allocate space on Xsan volumes to avoid file fragmentation.
- Safari will no longer intermittently, unexpectedly quit if you use PAC (Proxy Auto Configuration) files.
- Addresses an issue in which Apple Remote Desktop clients could stop updating the admin's control screen.

Other

- Resolves an issue for Mac OS X 10.4.6 and PowerPC-based Macs in which some applications may silently fail to open, or you could see "error: can't fragload" when trying to open an application.
- Addresses an issue in which HTML files on a downloaded disk image might not be readable, and a "Safari cant find the file. No file exists at the address /private/tmp/..." alert appears, after Safari mounts the downloaded image.

- Resolves an issue that prevented users with Active Directory accounts from logging in if "Use UNC path from Active Directory" was enabled.
- Resolves an issue in which Intel-based Macs could not bind to Active Directory when multiple domain controllers are available.
- Adds RAW image support for these cameras: Olympus C7070, Olympus E330, Olympus E500, Minolta Dynax 5D, Minolta Maxxum 5D, and Pentax *ist DL.
- Addresses an issue that prevented the Apple USB Modem from receiving faxes on some computers.
- You can now verify whether or not a Dashboard widget you downloaded is the same version as a widget featured on (www.apple.com) before installing it.
- Includes recent Apple security updates.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

About the Mac OS X 10.4.7 Update (combo)

This article has been archived and is no longer updated by Apple.

The Mac OS X 10.4.7 Update (combo) updates Mac OS X 10.4, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, or 10.4.6 to version 10.4.7 on both Intel-based Macs and PowerPC-based Macs. (If you are just updating from Mac OS X 10.4.6 to 10.4.7, see this article instead.)

Important: Please read before installing

- If you use iSync, you should perform a full sync with your devices before installing this update. Mac OS X 10.4.7 Update includes a later version of iSync with several improvements. For more information and before-you-install steps, see this article.
- With this update, PowerPC-based Macs will restart twice, instead of once, after the initial installation.
- You may experience unexpected results if you have third-party system software modifications installed, or if you've modified the operating system through other means. (This does not apply to normal application software installation.)
- The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to update.
- If issues occur during installation--for example, Software Update quits unexpectedly, please see this article.

Installation

There are two ways to update to Mac OS X 10.4.7: Use Software Update or the standalone installer. You only need to use *one* of these methods to update your computer.

Automatic Software Update
Software Update, located in the **Apple** menu, will automatically download the latest Apple software. (Software Update might have linked you to this article to learn more about the update.) Note that the update's size may vary from computer to computer when installed using Software Update. Some updates must be installed prior to others, soyou may need to run Software Update more than once to get all of the available updates.

Standalone installer
Download the update installer and run it manually. This a useful option when you need to update multiple computers but only want to download the update once. Two versions of the standalone installer are available from Apple Downloads: a delta and combo.

- The delta update installer (detailed in a different article) updates Mac OS X 10.4.6 to 10.4.7.
- The combo update installer for PowerPC and Intel-based Macs (described here) updates Mac OS X 10.4, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, or 10.4.6 to 10.4.7.

Improvements

This update offers many improvements. For a list of some of them, see About the Mac OS X 10.4.7 Update (delta).

This update also includes improvements delivered with earlier Mac OS X 10.4 updates, as described in these articles:

- About the Mac OS X 10.4.6 Update (delta)
- About the Mac OS X 10.4.5 Update (delta)
- About the Mac OS X 10.4.4 Update (delta)
- About the Mac OS X 10.4.3 Update (delta)
- About the Mac OS X 10.4.2 Update (delta)
- About the Mac OS X 10.4.1 Update

Published Date: Oct 7, 2016

iWeb 1.1: Slideshow doesn‘t launch if an apostrophe is in the title

This article has been archived and is no longer updated by Apple.

After updating to iWeb 1.1 and publishing a photo page, your slideshow may not launch when viewing the site.

Update to iWeb 1.1.1 or later to address this.

If you're not able to update right away, you can prevent this by avoiding apostrophes (single quotation mark) in your photo page names (for example, Carrie's Photos).

You can change a page name by double clicking it in the Site Organizer and typing a new name.

Note: You must republish your photos page after changing the page name in order to regain the Slideshow functionality in your published page.

Published Date: Feb 20, 2012

Mac OS X Managed Client: Managed proxy settings do not appear in Network preferences

This article has been archived and is no longer updated by Apple.

When managing the proxy settings in Workgroup Manager, these settings are not reflected in the Network pane of System Preferences. However, the settings do still apply. You can use this command on Mac OS X 10.4 to view the current proxy settings:

```
sudo <currentUser> scutil --proxy
```

Published Date: Feb 20, 2012

Power Macintosh G3: US Robotics Sportster 33.6 Modem Not Connecting to ISP

Unless a new modem script is used, the US Robotics Sportster 33.6 modem attempts to connect, but fails with "No Carrier".
This article has been archived and is no longer updated by Apple.

Symptom

The US Robotics Sportster 33.6 modem dials, but will not connect to the your Internet service provider (ISP). A "No Carrier" error occurs.

Solution

Replace the modem script.

US Robotics, part of 3Com, has an updated modem script that resolves this issue. The name of this script is "US Robotics High Speed". It is available from the following Web site: http://www.usr.com/support/downloads-template.asp?prod=s-mac

Once at this location, download **USR Universal Script**, the file is named "usrara.hqx".

This file should be placed into the Modem Scripts folder inside the Extensions folder. Once installed you can select this modem script in the Modem control panel.

Published Date: Feb 20, 2012

iWeb: Comment count may not appear on Blog Summary pages after turning on comments

This article has been archived and is no longer updated by Apple.

Symptom

Blog comment counts won't appear on the summary page if the number of excerpts shown is equal to ten.

Existing entries should also indicate "No comments" after each entry, but they do not.

This can happen in iWeb 1.1 if you enable comments on a blog that was originally created using iWeb 1.0 or 1.0.1.

Update to iWeb 1.1.1 or later to resolve this.

Published Date: Feb 20, 2012

Mac OS X Server: How to reset a mailing list password

This article has been archived and is no longer updated by Apple.

If you lose the password to a mailing list, you can use the Terminal to set a new one. This requires System Administrator (root) privileges. Use this command in Terminal:

```
$sudo /usr/share/mailman/bin/change_pw --listname=mailman --password=newpassword
```

Note: Replace "newpassword"with the password you want to set for this list.

To see other password modification options for mailman, use this command:

```
/usr/share/mailman/bin/change_pw --help
```

Published Date: Feb 20, 2012

Final Cut Studio is not supported on MacBook

This article has been archived and is no longer updated by Apple.

If you have a MacBook, the Final Cut Studio (Universal) crossgrade Installer does not prohibit you from installing the pro applications, but this configuration does not meet the minimum system requirements for Final Cut Studio.

See the Final Cut Studio system requirements for complete requirements.

Note: The integrated graphics processor in the MacBook does not permit float processing in Motion and will result in degraded performance and other issues in Motion and other Final Cut Studio applications.

Published Date: Feb 20, 2012

Mac OS X 10.4: Intel-based Mac startup issue after installing QuickTime 7.1

This article has been archived and is no longer updated by Apple.

After installing QuickTime 7.1 on an Intel-based Mac, the computer might not completely start up if third-party startup items are installed. Startup stalls before the desktop appears. If your computer uses a **wireless** connection, please skip to the section named "For computers using wireless connections."

Solution

1. Start in Safe Mode by holding the Shift key during start up.

   Tip: If the startup process is stalled, you can hold the computer's power button a few seconds to shut down your computer.

2. Download and install QuickTime 7.1.1 or later.

The computer should now start up normally.

For computers using wireless connections

This second set of steps works for computers that use a **wireless** connection, such as a built-in AirPort Extreme card, to connect to a wireless access point. If you live in an area where the Internet reaches your home wirelessly but then connects to your computer via a wire, please use the section above.

1. Start in Safe Mode by holding the Shift key during start up.

   Tip: If the startup process is stalled, you can hold the computer's power button a few seconds to shut down your computer.

2. Click the Finder icon in the Dock.
3. Choose **Go > Go to Folder...** .
4. Type: `/Library/StartupItems/`
5. Click Go.
6. Drag the contents of the StartupItems folder to your desktop.
7. Restart.
8. Download and install QuickTime 7.1.1 or later.
9. Repeat steps 2 through 5.
10. Drag the items you moved to your desktop in step 6 back into the StartupItems folder.

The computer should now start up normally.

This document will be updated as more information becomes available.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

Mac OS X Server: How to use Mail service with Active Directory users

This article has been archived and is no longer updated by Apple.

Active Directory users who try to use mail services hosted on a Mac OS X Server v10.4 or later will be unable to send or receive mail using the default mail service configuration. To allow them to access mail service, An administrator must set Service ACLs (access control lists) for selected users or groups.

To configure Service ACLs for mail service, follow these steps:

1. In Server Admin, select the hostname of your server, and click the Access tab.
2. Deselect the "Use same access for all services" checkbox.
3. Select Mail.
4. Set the radio button above the user list to "Allow only users and groups listed below."
5. Click the "+" button, and drag the users and/or groups for which you want to enable mail service into the list.
6. Click the Save button.
7. Restart the Mail service.

Published Date: Oct 7, 2016

Mac OS X 10.4: Issues authenticating after changing keyboard layout

This article has been archived and is no longer updated by Apple.

If you change your keyboard layout after logging in, you may have issues entering a name and password when Mac OS X displays an authentication window—for example, when you try to make certain changes in locked System Preferences or install software.

Log out and back in after changing your keyboard layout to resolve the issue.

Additional information

This happens because authentication windows use the keyboard layout that was active at login.

Published Date: Oct 7, 2016

About the security content of Xcode Tools 2.3

This article has been archived and is no longer updated by Apple.

This document describes the security content of Xcode Tools 2.3, which can be downloaded and installed from the Apple Developer Connection.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Xcode Tools 2.3

- **WebObjects**

  CVE-ID: CVE-2006-1466

  Available for: Mac OS X v10.4 and later

  Impact: If you install WebObjects developer tools, remote attackers may be able to obtain or modify WebObjects projects while Xcode is running

  Description: The WebObjects Xcode plug-in provides the ability to manipulate projects through a network service. This service is accessible to remote systems while Xcode is running. This update addresses the issue by limiting this service to the local system. This issue does not affect default installations of Xcode Tools. Only systems with the WebObjects plug-in installed are affected. Credit to Mike Schrag of mDimension Technology for reporting this issue.

Published Date: Oct 7, 2016

Mac OS X Server 10.4: No user warning when print server quota exceeded

This article has been archived and is no longer updated by Apple.

When quotas are enforced on a print queue hosted on Mac OS X 10.4 Server, users don't receive any notification when they exceed their print quota. The job, or part of the job, will fail to print without reporting any error to the user. The reason for the failure will appear in the server's logs.

To verify that a print failure occurred because the user exceeded his or her quota, check the `/var/log/cups/error_log` on the server. You can view this log in Server Admin:

1. Select the Print Service.
2. Click the Logs tab.
3. Choose **Error Log** from the **Show** pop-up menu.
4. Look for a line that contains a message like this:

```
Job 55 cancelled: pages exceeded user quota limit on printer
```

You can reset this user's print quota in Workgroup Manager:

1. Select the Accounts pane.
2. Select the user.
3. Click on the Printer Quota tab.
4. Click the Reset Print Quota button (for all queues) or the Restart Print Quota button (for an individual queue).
5. Click Save.

Published Date: Oct 7, 2016

iWeb: Avoid using apostrophes in your iWeb site/page names

This article has been archived and is no longer updated by Apple.

If you create a site or page name in iWeb 1.0.1 with an apostrophe as part of the name, and subsequently update to iWeb 1.1, then the web addresses (URLs) to your site/page will no longer be valid. This will break any existing bookmarks to the page. This occurs because iWeb 1.1 handles apostrophes differently than iWeb 1.0.1.

People who bookmarked your iWeb 1.0.1 site need to bookmark your new site published with iWeb 1.1.

Related documents

303775 "iWeb 1.1: Slideshow doesn't launch if an apostrophe is in the title"

Published Date: Feb 20, 2012

Final Cut Pro: Apply the Broadcast Safe filter last

This article has been archived and is no longer updated by Apple.

Using the Broadcast Safe filter is a good way to ensure that the levels in your project will conform to the specifications required for television. In order for the Broadcast Safe filter to be effective and accurate when used, it should be the last filter applied to a clip or nested sequence.

Background

Final Cut Pro allows you to create imagery using any of the millions of colors your computer can produce. A mistake beginners often make when creating graphics for video is to use colors that are vivid on the computer display, but have chroma and luma levels that are out of specification for the "legal" range of color for television. Also, many modern cameras are capable of recording video levels which are beyond the broadcast-legal range for the NTSC and PAL specifications. Broadcasters adhere strictly to these specifications and will reject tapes that are not "broadcast safe," because those levels can cause problems in the television signal.

In order to achieve accurate and predictable results with the Broadcast Safe filter, it's important to understand that filters are applied in series in Final Cut Pro. In other words, the order in which a given set of filters are applied will affect the end result.

The next two images illustrate an example of how the order in which filters are applied can affect the resulting image.

Gaussian Blur, then **Diffuse**

Diffuse, then **Gaussian Blur**

As seen above, the order of the filters makes a difference, even when the same filters are used. This is why it's important to add Broadcast Safe last. If you add a filter like Proc Amp after Broadcast Safe, the result might include levels that are no longer within the safe range.

Tip: The following steps outline a simple method for adding the Broadcast Safe filter at the end of the editing workflow:

1. Wait until your project is completely edited before adding the Broadcast Safe filter.
2. Select all items in the Timeline of your main sequence.
3. Choose **Sequence > Nest Item(s)** to group everything into a consolidated, nested item.
4. Control-click on the nested item in the Timeline and choose **Open in Viewer** from the shortcut menu.
5. Choose **Effects > Video Filters > Color Correction > Broadcast Safe**
6. Choose appropriate settings in the Viewer's Filters tab.

Adding the Broadcast Safe filter as a last stage (as in the steps above) can serve to ensure that video levels remain within the safe range.

For more information about using filters in Final Cut Pro, and to learn about using video scopes to monitor video levels, see the Final Cut Pro User Manual, available from the Help menu in Final Cut Pro.

Published Date: Feb 20, 2012

Intel-based Macs: Internal microphone becomes default audio input device if external device is disconnected

This article has been archived and is no longer updated by Apple.

On Intel-based Macs, the internal microphone becomes the audio input device if an external audio input device is disconnected.

If you want to change the audio input device, use Sound preferences.

Published Date: Feb 20, 2012

Macs with LSI 22320 Ultra SCSI Card may stop responding ("hang") on restart or shutdown

This article has been archived and is no longer updated by Apple.

When certain Seagate SCSI hard drives are connected to the LSI 22320 Ultra SCSI Card that shipped as a configure-to-order option in certain PowerPC-based Macintosh computers, the computer will stop responding ("hang") during shutdown or restart.

Apple included LSI 22320 Ultra SCSI cards on some PowerPC-based Macintosh computers as a configure to order option to support the addition of tape drives, but did not ship any SCSI hard drives with the card. If you have added a Seagate hard drive to the card's bus, you should check the Seagate website to see if the drive you have is compatible with the card.

If you determine that a hard drive is incompatible with the card, you should remove the hard drive.

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Published Date: Feb 20, 2012

Final Cut Pro: Read Prefetch settings for Xserve RAID

This article has been archived and is no longer updated by Apple.

If you are using an Apple Xserve RAID for video in high data rate formats (such as Uncompressed SD formats or HDTV formats), a Read Prefetch setting of 128 stripes (8 MB) is recommended. When using a Read Prefetch setting of 128 stripes, you may be able to further increase the Xserve RAID's performance by storing audio-only files on a separate drive system (such as a second internal ATA or SATA drive or second Xserve RAID).

If your project uses only compressed SD formats (DV or Offline RT) or stores a significant number of audio-only files to the Xserve RAID, a Read Prefetch setting of 8 stripes (512 KB) is recommended.

For additional information on tuning Xserve RAID settings, see "Xserve RAID 1.5 and Later: Optimizing performance."

Published Date: Feb 20, 2012

Final Cut Pro 5: "Unable to read the movie just captured"

This article has been archived and is no longer updated by Apple.

If you're using a non-controllable device for audio-only capture in Final Cut Pro 5, the capture may fail in some cases, and the following alert message may appear:

> "Unable to read the movie just captured"

This can happen if you're performing an audio-only capture from a non-controllable device (like a dedicated FireWire or USB audio interface), while there is also a video camera or deck connected to the computer via FireWire.

You can avoid this issue by simply disconnecting the camera or deck from FireWire while you are capturing audio-only. After your audio is successfully captured, you can connect the camera or deck to FireWire again without worry.

This document will be updated when more information becomes available.

Published Date: Feb 20, 2012

Some QuickTime components may display white instead of video on Intel-based Macintosh computers

This article has been archived and is no longer updated by Apple.

Third-party developers can create components, or plug-ins, for the use in the open architecture of QuickTime. These third-party components expand the functionality of QuickTime, allowing QuickTime to play additional media types.

If you are using an Intel-based Mac, be sure to visit the component developer's website to download a Universal binary component that is compatible with Intel-based Macintosh computers. PowerPC-based QuickTime components will not work natively in QuickTime on an Intel-based Mac.

Please see the QuickTime third-party component page for a list of QuickTime components with links to their respective manufacturers.

If the required component is not available from the third party in a Universal version that will run on an Intel-based Mac, you can work around the issue by forcing QuickTime Player to run under Rosetta. Components that were developed for PowerPC-based Macs will be able to run while QuickTime is running under Rosetta. See "Intel-based Macs: Forcing a Universal application to run with Rosetta" for steps.

In addition to third-party components, there is also a QuickTime component that's made by Apple: the QuickTime MPEG-2 Playback Component. Apple has created a Universal version of this component for users of Intel-based Macs. If you purchased the PowerPC version of the MPEG-2 Playback Component from the Apple Store online, you are eligible to receive the Universal version for free. Follow the directions below to receive the updated MPEG-2 Playback Component.

1. Connect to the Apple Store. If you are not in the United States, choose your country's Apple Store from the menu at the bottom of the page.
2. Click "Your Account" in the store menu bar at the top right of the page.
3. Enter your Apple ID and password.
4. Click "Software Download Purchases". You will see a link to the QuickTime MPEG-2 Playback Component.
5. Click the link to download and install the updated version.

Published Date: Oct 7, 2016

Final Cut Pro: Edit To Tape via a PCI Express I/O card may drop frames with HD

This article has been archived and is no longer updated by Apple.

In some cases, Final Cut Pro will drop frames when performing an Edit To Tape operation, when the video is in an HD format, and the Edit To Tape operation is performed via a PCI Express I/O card.

If your scenario matches these details, you can avoid the issue by disabling Mirror on Desktop while performing the Edit To Tape operation.

To change the setting for Mirror on Desktop, follow these steps:

1. Choose **Final Cut Pro > Audio/Video Settings**.
2. On the **Audio/Video Settings** window, click on the **A/V Devices** tab.
3. Deselect the **Mirror on Desktop** checkbox to disable Mirror on Desktop.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Sherlock: Movie information appears but not movie trailers

This article has been archived and is no longer updated by Apple.

In Sherlock's Movie channel, movie trailers may not appear even though other movie information does, such as show times and theatre locations. This can happen when the Moviefone website that Sherlock relies on for movie trailers does not offers the trailer in a format that Sherlock can use.

If this happens, view movie trailers at the Apple Movie Trailers website or Moviefone's website.

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Published Date: Feb 20, 2012

Drive Setup 1.4: How to Format with Macintosh Extended Format

I tried using the instructions found in the Read Me file for Mac OS 8.1, to use Drive Setup 1.4 to format my hard drive as a Macintosh Extended Format drive but am not having any success.

Are there additional steps, other than the ones in the Read Me file, that I need to take to complete this process?
This article has been archived and is no longer updated by Apple.
Follow these instructions to use drive setup to format your drive as a Macintosh Extended format volume.

(1) Boot from the OS 8.1 CD or the Disk Tools Diskette for Mac OS 8.1
(2) Open Drive Setup
(3) Select the hard drive you would like to format
(4) Click the initialize button
(5) Click the customize button
(6) Select the number of partitions you would like to create (if you do not want to partition the drive, select 1 partition)
(7) Select the type of format (Macintosh Standard or Macintosh Extended Format (HFS+))
(8) Click OK
(9) Click Initialize
Published Date: Feb 20, 2012

Logic Pro/Express 7.2 Enhancements

This article has been archived and is no longer updated by Apple.

Logic Pro and Logic Express 7.2 are the first Universal Binary releases for these two applications and also provide numerous functional improvements and fixes. This document lists the most significant enhancements which were incorporated between version 7.1.1 and 7.2 and not documented in New Features in Logic Pro 7.2, Late Breaking News About Logic Pro or Late Breaking News About Logic Express.

Arrange Window

- You can now change the name of a Frozen track without having to first un-freeze it.
- Packing multiple frozen tracks into a folder will no longer incorrectly invoke the dialog which stated "Current track is frozen, do you want to unfreeze it?".
- It is now possible to export "Region as Audio File" within a folder track without having to first make a track selection.
- Linked Edit windows now update properly when selecting Regions using the arrow keys.
- Editing Region based automation curves via the Control-Option keyboard shortcut now works as expected.
- In the Arrange window, Logic now correctly displays the Magnifying Glass when the Control key is held, regardless of which primary tool is selected.
- Logic now correctly creates tracks within folder tracks when using the "Create Multiple" Tracks command.
- Performing a Snip operation in the Arrange window no longer deletes Scene Cut Markers.
- Regions on protected tracks are no longer shifted when using the "Insert Time and move by Locators" command.
- Regions now consistently delete correctly in Shuffle L and Shuffle R edit modes.
- MIDI Regions will no longer change length when using Beat Mapping with Protect MIDI disabled in a song that starts at something other than bar 1.
- Logic will no longer quit unexpectedly if you drag an audio file into the Arrange window when there is no audio driver enabled in the Audio Hardware and Drivers Preference pane.
- Regions that belong to grouped tracks that have the "Arrange Select" option enabled are now properly selected when rubber-band selected in the Arrange window.
- The "Create New track with next Instrument" command will no longer bring up the "Current Track is Frozen" alert message when the selected track is frozen.
- Zooming speed now behaves normally at extreme zoom levels when dashed Automation edit lines are visible.
- Protected tracks now behave correctly and cannot be added to a folder track.
- Scrolling now behaves correctly when accessing the X/Y tool in the Arrange window with the Control-Shift modifier keys while pressing the mouse button.
- The locators now behave correctly when using the command: Splice > Insert Snipped Part at Song Position.
- A marker"s left border can now be moved or resized in the Global tracks while the Scissor tool is selected.

Track Based Automation

- Redundant Frequency band On/Off nodes are no longer written when recording touch automation for the Channel EQ.
- Automation Quick Access now works as expected with the following plug-ins not made by Apple: Arturia Minimoog and Native Instrument’s Absynth, Reaktor, and FM7.

Global Tracks

- Logic now correctly ignores muted notes when performing chord analysis in the Global Chord track.
- Clicking a Chord in the Global Track with the Pencil tool no longer causes Logic to quit unexpectedly.
- Logic now behaves as expected when dragging the Global tracks Transpose line above values of -1.
- The breakpoint editing line in the Global Transposition track will no longer intermittently jump back to its original position when being dragged upward.
- Beat Map analysis transient detection has been improved and corrects a condition that caused transients near the beginning of certain audio regions to be undetected.
- Using the "Hide Signature" setting will no longer also hide the signature from the Global track.

Effects Plug-ins

- Settings for the the AUMatrixReverb Audio Unit plug-in are now properly retained with a song.
- GoldVerb now retains its Wet/Dry settings correctly when saving and reopening a song it is used within.
- Dragging an Impulse Response file from the Finder into the Space Designer window now behaves as expected.
- Guitar Amp is now labeled correctly in Logic Express.
- Noise artifacts that occurred when EVOC20, Stereo Delay, and Compressor were processed by a Logic Node have been eliminated.
- Space Designer now correctly resolves Impulse Response file locations when Logic 7 is installed as an upgrade to Logic 6.4.2.

Software Instrument Plug-ins

- Plug-in settings will no longer be copied between songs in certain cases when two songs are open that have similar plug-ins in similar insert locations.
- The ES2 should no longer display missing parameters and artifacts when used on a Logic Node enabled track.
- EVB3 will no longer produce an audible artifact when the instrument is not being played and the Swell parameter is set to 0.

EXS24mkII

- EXS24 now loads the correct sample files even when there is a file with the same name in a different directory.
- It is now possible to simultaneously adjust the borders of multiple selected Zones within the EXS24 Instrument Editor.
- The Instrument > Move Audio Files command in the EXS24 Instrument Editor has been removed in order to correct a condition which caused the Sample Instrument file to be incorrectly moved.
- Using the key command for shifting Instrument Zones in the EXS Instrument Editor will no longer cause Logic to quit unexpectedly.

Ultrabeat

- Ultrabeat samples will no longer reload under special circumstances when saving a song.
- Ultrabeat will no longer erroneously display level meters even though samples are missing and audio is not actually playing. The condition occurred with certain songs that were saved as a project with all options set to Copy.
- One-shot-Trigger mode in Ultrabeat now behaves correctly when the UltraBeat step sequencer is turned off and back on again.

Apple Loops

- MIDI Regions for Software Instrument Apple Loops are now correctly placed when imported to a track within a folder.
- The Loop Browser now includes an "ALL" filter button for displaying all loops regardless of how they are Meta tagged.
- Newly indexed Apple Loops folders now show up immediately in the Loop browser, without having to quit and re-open Logic.
- In the Loop Browser, Logic now correctly displays the search history when clicking the magnifying glass to the left of the text entry field.

Matrix Editor

- In the Matrix Editor, clicking with the Velocity tool on a note no longer triggers the sound a second time on mouse release.
- When using Hyper Draw in the Matrix Editor, the help tag window no longer obscures the cursor when editing the automation.
- In the Matrix Editor, muted notes now correctly retain their mute state after drawing velocity ramps in the Hyper Draw.

Sample Editor

- Using the "Percussive" algorithm in the Time and Pitch Machine should no longer cause audio clipping under some circumstances.
- Canceling a destructive edit of a stereo file in the Sample Editor no longer results in silence on the left side of the file.

Score Editor

- Independent Notes can now be assigned a color using the Note Attributes menu.
- Moving the SPL in the Arrange window now updates the Score Window correctly when Catch mode is enabled.
- Moving bars with the Layout tool in the Score Editor should no longer create unexpected graphic glitches.

Event Editor

- It is now possible to modify the SMPTE value in the Event List using the plus or minus keys.
- It is now possible to double-click a note value in the Event List and enter a new value.
- Logic behaves as expected when opening the Val or Num Pop-up-menu in the Event List to change program or bank select commands.
- A rubber-band selection in the Event List now behaves correctly when auto scrolling is activated.
- Using the Mute Folder/Region key command in an Event Editor now works as expected.
- Rubber-banded selections of Audio Regions in the Arrange window will now be consistently displayed in the Event Editor.
- Rubber-banded selections of multiple notes in the Matrix Editor are now consistently displayed in the Event Editor.

File Management

- When two Broadcast Wave files are merged in the Arrange window, the start time now correctly updates to the start time of the newly merged file.
- Logic now correctly handles renaming of files and extensions when converting interleaved files to split stereo files using the Audio window's Copy/Convert operation, or when converting split stereo SDII files to AIFF or WAV.
- Audio files exported as AAC files will now play properly via iTunes when being shared over a network.
- The Project Manager now consistently displays the complete Sampler Instrument library folder after the scan or expanded scan process is complete.
- ReCycle files can no longer be dragged from the Finder onto audio tracks. This prevents a condition where undesirable artifacts were

introduced into ReCycle files when REX files were dragged onto Audio Instrument tracks.
- When bouncing a file to a split Stereo SDII format, the file extensions are now correctly recognized as an SDII file, rather than a Quicktime or graphics file.
- Audio files that are imported, dragged in from the Loop Browser, or created using the "Convert Regions to New Audio Files" command, now default to taking on the color of the track.
- Disc space requirements for surround bounce are now correctly calculated and displayed.
- Audio files bounced or exported as AAC mono files now play at the correct speed.
- Several issues regarding import of AAF files with a Japanese character in their name now behave correctly within Logic.
- The Audio window now correctly imports MP3 files without displaying an error message.
- A 96 khz 24 bit audio file in the Audio window can now be converted to an MP3.
- Logic should no longer quit unexpectedly under certain circumstances when exporting a song as an OpenTL file.
- Switching the sample rate in a session that contains frozen tracks now renders those tracks at the correct sample rate.
- Logic no longer displays an "Out of Memory" or "Missing Overview" alert dialog when importing audio files from the Project Manager.

General

- 96 kHz WAV files bounced from Logic and burned onto CD will no longer contain white noise artifacts.
- When the progress window hint: "Press Cmd-Period to abort" appears, the key command now works as expected.
- Logic Express can now use the 17 PowerBook line-in as an input for audio recording.
- When Autodrop is enabled during recording, the Record button now correctly flashes while the song position is outside the locators to indicate that no recording is taking place.
- The error message, "Specified volume doesn´t exist. Error Code = -35" no longer appears when a forward slash is used in the filename.
- The Undo History now correctly reflects dragging a file from the Project Manager to the Audio window.
- Dragging MIDI files with the file type MooV onto the Logic application icon will no longer cause Logic to quit unexpectedly.
- Logic"s Transport bar now displays the Preference Display tempo as BPM without decimals properly.
- The SMPTE Offset setting (Song Settings > Synchronization > General > Bar Position X plays at SMPTE Y) now correctly retains its value when changing tempo values.
- Logic no longer transposes MIDI notes down by one semitone when being used with SoundDiver and WaveBurner.

Control Surface Support

- Pressing the "Assign:Track" button on a Mackie Control surface with no song open no longer causes Logic to quit unexpectedly.
- Logic now correctly updates the Mackie Control surface display when Bass Amp parameters have been changed using the mouse.
- Punch in and out now functions correctly when using the Frontier Designs TranzPort control surface.
- Logic now correctly handles envelope recording in Sculpture when using an external controller.

QuickTime Movie Support

- Non-floating movies no longer disable the use of the "Enter" or " 0" keys on the numeric keypad.
- Logic now manages the selection of Digital Cinema Desktop better by disallowing the selection of DCD on the main window, thereby preventing the selector from becoming hidden, making it difficult to subsequently disable DCD playback.
- Exporting Audio To Movie no longer creates an extraneous 4KB File containing no audio.
- Movies with the DV format are now recognized by the Project Manager.
- A warning alert dialog will no longer incorrectly appear when selecting Digital Cinema Desktop as the output with a movie using a codec other than HD 1080i/p uncompressed.
- Logic can now recognize and playback MPEG4 and H.264 movie files that have the associated .m4v file extension.

ReWire

- ReWire streams will no longer drop out temporarily at the beginning of Cycle playback when an Audio Instrument with a tempo synced LFO is assigned to the selected track.
- Logic will no longer quit unexpectedly when inadvertently quitting Ableton Live 5 without first confirming Logic"s dialog which states "Quit ReWire Slave Application first".

Environment

- Patch names are now correctly pasted into the currently selected Bank when using the Paste All Names command to paste patch names into a Multi Instrument.
- Object icons changed in the Environment window now correctly update in the Arrange window.
- New Audio Objects now default to a channel strip view within the Environment.

Tempo List Editor

- The position marker in the Tempo List no longer disappears when resizing the window.

- New tempo events in the Tempo List editor no longer disappear when double-clicking on the bar position text field.

Key Commands

- The Escape Key, which functions as Cancel in many windows, now cancels the Strip Silence window.
- The key command for "Set Locators by Marker" now behaves correctly when the Global Marker track is visible and a Marker is selected.

Published Date: Oct 7, 2016

Logic Pro/Express 7.2.1 Enhancements

This article has been archived and is no longer updated by Apple.

Logic Pro and Logic Express 7.2.1 are maintenance releases that address isolated reliability and compatibility issues. This document lists the enhancements and fixes that have been incorporated between version 7.2 and 7.2.1 and which are not documented in the 7.2.1 versions of software update text, Late Breaking News About Logic Pro, or the Late Breaking News About Logic Express.

Arrange Window

- Using the "Snip/Cut time and move by locators" command on a single MIDI track no longer moves unselected audio files in Logic.
- When editing MIDI Regions in any editor, the Region content now updates in the Arrange as expected.
- The "Analyze," (transient mapping) function in the Beat Mapping Global track has been further improved to reduce the potential detection of extraneous transients.
- With Global Tracks enabled, Logic no longer exhibits Song Position Line redraw errors when using the Zoom tool.
- When importing a file from within a Folder track, in cases where the Song Position Line is positioned before the start of a Folder's boundaries, the imported file is now placed at the start of the Folder on the selected track.
- When lowering the tempo in a sequence with SMPTE locked regions, the locked regions now redraw correctly.

Intel-based Macintosh specific:

- Selecting the "Utilize Notes" option in the Chord Track options pane will no longer cause Logic to stop responding when running on an Intel-based Macintosh.

Track Based Automation

- An incorrect first node is no longer written when automating Channel Strip Mutes.
- Sample accurate automation in the Arrange has been improved with a 10 ms smoothing curve.
- Track Automation data will no longer be inadvertently entered under certain circumstances.
- Touch Automation mode will now continue to function properly on an Intel-based Mac even after overwriting existing automation data.
- The "Move all track automation to Region" command now works correctly on Audio Regions when Hyper Draw is not visible.

Software Instrument Plug-ins

- Audio instruments in Logic have been modified to prevent an unexplained loss of audio, even while channel strip meters indicate that MIDI is being received and signal should be present.
- Double-clicking the Import button in Ultrabeat has been corrected to bring up only one file selector window.
- When dragging a sample onto the Osc 2 sample window on the Ultrabeat, the GUI now correctly updates the name.
- Ultrabeat now changes the search path for finding missing sample files to the last directory manually selected by the user to locate a missing file.
- The Morph step mode on the EVB3 now always toggles between the different presets as expected.

Intel-based Macintosh specific:

- Logic will no longer quit unexpectedly on Intel-based Macs when loading certain EXS instruments from the Vienna Symphonic Library.
- On Intel-based Macs, Ultrabeat now correctly imports and loads the the samples of a .pst Ultrabeat Kit, when using the Import button.
- All samples loaded at once into EXS editor will play as expected when using an Intel-based Mac.

Effects Plug-Ins

- Logic now copies Tape Delay feedback automation correctly when Option-dragging the Region and selecting "Copy" in the dialog.
- The Enhanced Timing plug-in no longer resets its intensity level to 0 when changing the note grid resolution in the Arrange window.
- The tempo of the Tape Delay, when Sync is set to off, now remains unchanged regardless of changes to the song tempo.
- The margin reset feature of the Level Meter Plug-in now resets the display with mono signals correctly.
- Logic now correctly implements the "Look Ahead" feature in the Ducker plug-in.
- Inserting the stereo Rotor Cabinet plug-in on a mono Instrument track will no longer cause feedback or distortion under certain circumstances.
- Waves AU plug-ins settings are now correctly retained when closing and re-opening a song.
- Parameter values for certain plug-ins, Silver Compressor and Expander for example, will now load correctly when moving from a 7.1.1 to 7.2.1 session.
- SoundToys TDM plug-ins now appear in the Sample Editor Audio Suite menu as expected.
- Logic Pro 7.2.1 now has improved latency compensation for processor hungry Audio Unit plug-ins, allowing timing related plug-in modulations to happen in sync with timeline events.

Intel-based Macintosh specific:

- On Intel-based Macs, the Match EQ "Load template spectrum from setting..." now works as expected.
- Logic will no longer stop responding when assigning Stylus RMX output 13-14 as the input for an Aux while running on an Intel-based Mac.

Apple Loops

- Apple Loops are no longer removed from the installed directory when saving a Song as a Project with "Audio files : Move" selected.
- Logic no longer quits unexpectedly when "Add To Apple Loops Library" is selected, and everything in the field "Instrument Descriptors" is de-selected by clicking on the empty space below "Woodwind".
- Apple Loops that are added via the "Add Region to Apple Loops Library" command now have "Type" and "Scale" attributes as a selection.

Matrix Editor

- In the Multiple Region View of Matrix Editor, the following commands, "Select Overlapped", "Select Muted", "Select Similar", "Select Equal" and "Select Equal Subposition" now execute their functions correctly.

Score Editor

- In the Score Editor, when the display grid is set to 1/8 notes or finer, note beams are drawn with greater resolution.
- In the Score Editor, after entering lyrics, the TAB key now correctly moves the cursor to the next note, rather than defaulting to the cursor.

Track Mixer

- Logic Express 7.2.1 now has 12 busses, allowing GarageBand 3 songs to be imported and played without output reassignment.
- The Solo button on channel strips is now available for automation in Preferences > Control Surfaces > Learn Assignment.
- The Track Mixer global mode can now be toggled with the key command "Toggle Global Switch"
- Setting the track output to a bus now works as expected in Logic Express when using multiple I/O sound cards that provide more than eight outputs.

File Management

- A condition on certain systems that caused Logic to quit unexpectedly when performing a bounce has now been corrected.
- Importing an OMF file exported from Final Cut Pro has been improved and now works as expected.
- When converting files to Apple Lossless via menu command Audio File -> Copy/Convert Files, the resulting files are now the proper length instead of approximately 500 samples short.
- Logic now supports dragging songs directly from iTunes to the Arrange window.
- Converting a Region of a split stereo file to a "new audio file" no longer leads to unwanted replacement of other Regions.
- Stereo-interleaved MP3 and AAC files can now be successfully imported into Split-Stereo based songs.
- In the Bounce window, selecting Burn now behaves as expected, even when the original file source is 24 bit/44k, 24 Bit/48K or 16 Bit/48K.
- Logic now correctly handles MP3 files bounced from sessions with a 48Khz sample rate, correcting an earlier condition that converted MP3s to 44.1 Khz with a longer running time.
- It is now possible to choose "Add All" for Audio import in the "Add Audiofile" window or the EXS Instrument Editor, even when that selection contains .wav files that have the less common capitalized suffix (i.e. .WAV).
- Logic Pro now supports filename lengths of 21 characters and up to 10 characters for the extension suffix.
- Logic now executes the "'Move File" command from the Audio Window on a .mp4 file without changing the bit-rate or increasing its file size.
- Exporting and re-importing OMF files from Logic now no longer contain unwanted noise artifacts.
- Logic 7.2.1 should no longer sometimes create duplicate, oddly numbered, files when performing bounces.

Intel-based Macintosh specific:

- Improved compatibility when importing Logic 4 based song files on Intel-based Macs.
- ReCycle file support is now available on Intel-based Macs.
- ReCycle files Copy/Pasted from ReCycle into the Arrange window on an Intel-based Mac will now properly convert the file to an Apple Loop if that option is selected after the Paste command.
- Due to optimized handling of fade files, Intel-based Mac no longer receive the following error: "File is busy; one or more files are open. Result code = -47", followed by an Error Message "Fade Update failed. (Error -47)."

General

- Logic now prevents the computer from going to sleep during recording when Automatic Sleep is enabled as an Energy Saver Preference pane.
- The Audio MIDI Setup utility now properly retains the Emagic A2|6 or A6|2 audio interface bit depth settings when opening Logic Pro.
- Re-enabling the Core Audio Driver during playback will no longer cause Logic to quit unexpectedly.

- When the XSkey is removed on certain systems, Logic now displays an alert as expected, rather than quitting unexpectedly.
- The version number now correctly updates in the Finder after Installing Logic Pro 7.1.1 or Logic Express 7.1.1 in localized languages.
- Networked computers using Logic Express no longer experience Read/Write Permission errors when accessing the local home folders.
- Numerical input in the Transform Editor has been improved to eliminate an unexpected digit shift to the right.
- In the localized Japanese version of Logic, Click-holding a Marker in the Global Tracks view correctly updates the Help Tag.
- The Sample Edit window no longer opens with an empty screen, because of improvements made with the way Logic manages virtual memory.
- Logic no longer quits unexpectedly on launch when the International Preference Pane has been set to a language that the Finder is not localized for (such as Icelandic, Russian, Polish, etc).

Intel-based Macintosh specific:

- Exporting and re-importing MIDI-Regions now works as expected on Intel-based Mac.
- Changing the sample rate in Logic from 44.1 Khz to 88.2 Khz/96 Khz and back to 44.1 Khz no longer adversely affects the Core Audio driver when running on an Intel-based Mac.

Control Surface Support

- Mute LEDs are now consistently displayed correctly on the Mackie Control.
- The Mackie C4 now displays the correct characters when changing format parameters.
- Mackie Control and Mackie C4 now update as expected when shifting to Channel Strip view.
- Mackie C4 assignments for Next/Previous Setting now execute the function as expected.
- Mackie/Logic Control or XT Fader for Audio Track 1 will now consistently stay at its set position, even if the Arrange window contains less than 8 audio tracks.
- Track Left and Right buttons on a Mackie C4 Control surface now function properly when in Multi-Channel view.
- Changing the Control Surface Group parameter in the Controller Assignment window will no longer cause Logic to stop responding.
- Activating a MIDI controller on a G5/Quad or other Dual Core machines, using the "Learn Assignment" command now works correctly in Logic.

Intel-based Macintosh specific:

- The control surface preference file (~/Library/Preferences/Logic/com.apple.logic.pro.cs) is now compatible between PPC and Intel-based Macs.

QuickTime Movie Support

- Logic no longer creates a an empty .aif file artifact in the Finder when extracting audio from a muxxed movie file (audio and video mixed on the same channel) and clicking OK to the resulting "No Extractable Audio tracks found" dialog.
- The "Detect Cuts" command for Intel-based Macs has been improved so that it no longer potentially causes the system to unexpectedly quit when used with .mp4 files.

Logic Node

- Logic Nodes now retain their status when using multiple ethernet cards in one machine.

Intel-based Macintosh specific:

- Node operations initiated between Intel-based and PPC Macs no longer emit a short burst of white noise on playback.
- Audio no longer drops out under certain conditions when enabling Node tracks on an Intel-based Mac.
- Improved Logic Node compatibility with Intel-based Mac mini computers.
- A short noise burst will no longer be emitted in some cases when using a Mac mini Core Solo as a Logic Node.

Environment Window

- Logic now correctly deletes Environment layers, rather than leaving an unnamed layer in the Layer list.
- The Transformer Object window in the Environment now correctly displays "-1-" and "-2-" for the processing columns as opposed to showing two columns of "-1-".
- The Environment Vector object no longer creates graphic glitches when values are changed.

Intel-based Macintosh specific:

- Touchtrack region assignments made in a song on a PPC based machine are no longer lost when opening the song on an Intel-based Mac.

Key Commands

- Assigning Transport controls to notes on a MIDI keyboard in the Key Commands window now works correctly.

- In the Key Command window, a safety alert now appears when the user attempts to overwrite a global key Command.

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Published Date: Feb 20, 2012

Aperture: Cannot select root level of disk when importing images

This article has been archived and is no longer updated by Apple.

If you're importing images from an external disk and you select a folder on that disk, it may seem like you aren't able to subsequently navigate back up to the root level of that disk. However, you can, using different navigation path within the Import window.

The reason it seems this way is that Aperture remembers the last used path for an external disk when you select it by clicking its icon. In this picture, for example, Aperture remembers that the user imported from the folder "Stuff" the last time she imported from the disk "Aperture":

In this situation, clicking the icon for the disk Aperture in the Import panel simply toggles the Import dialog.

To get the desired effect, navigate to the external disk via the Local Files icon in the Import panel, like this:

Using this method, you can quickly navigate back to the root of the disk.

Published Date: Oct 7, 2016

Server Admin may display incorrect Time Zone Information

This article has been archived and is no longer updated by Apple.

Under certain circumstances, the Time Zone panel of Server Admin may show a different time zone than what appears in System Preferences.

This issue occurs in Mac OS X Server 10.3 and later.

Solution

In Server Admin, under Settings, set the time zone to match what is displayed in System Preferences.

Published Date: Feb 20, 2012

Mac OS X Server 10.4: How to publish a podcast using the server‘s weblog feature

This article has been archived and is no longer updated by Apple.

You can publish a podcast using Mac OS X Server's built-in weblog feature. Just follow these steps:

1. Connect to your weblog server at:

   ```
   http://serveraddress:port/weblog/
   ```

2. Log in with your account's short name and password.
3. Click New Entry.
4. Type in a title and description.
5. Click Advanced.
6. Click the podcast Choose File button.
7. Select the podcast, and click the Choose button.
8. Click Save.

To subscribe to the podcast, follow these steps:

1. In iTunes, choose **Advanced > Subscribe to Podcast...** .
2. Enter the URL to your weblog in this format:

   ```
   http://serveraddress:port/weblog/usershostname/?flavor=rss2
   ```

   For example, if your server address is www.demo.edu, running on port 80, and your user account's short name is "joe," you would enter this URL:

   ```
   http://www.demo.edu/weblog/joe/?flavor=rss2
   ```

Published Date: Feb 20, 2012

Mac OS X Server 10.4 or later: How to store Software Update packages on another hard disk or partition

This article has been archived and is no longer updated by Apple.

The Software Update service stores its package files in a static location at:

```
/usr/share/swupd/html
```

These files can take up gigabytes of hard disk space. If you want to save space on the system volume by storing the updates on a different volume, it's possible to use a symbolic link to point a location where packages reside on another volume.

Note: If you have previously enabled the software update service, you need to delete the existing `/usr/share/swupd/html` folder before creating the symbolic link. For more information on creating symbolic links, see the ln man page.

For example, if you had a volume named "ScratchDisk" where you want to store the updates, you could create a symbolic link to it with this Terminal command:

```
sudo ln -s /Volumes/ScratchDisk /usr/share/swupd/html
```

Published Date: Feb 20, 2012

Mac OS X: Dial-up connection (PPP) fails to automatically disconnect

This article has been archived and is no longer updated by Apple.

Sometimes Mac OS X may not seem to respect the automatic disconnect setting that is defined in System Preferences (which is 10 minutes of inactivity by default).

The reason is that unsolicited, inbound traffic from the Internet, usually caused by others' attempts to attack to your computer, can "tickle" the 10 minute timer, causing it to reset.

You can have your Mac ignore this unsolicited traffic by using Stealth mode. Follow these steps:

1. From the **Apple** menu, choose **System Preferences**.
2. Select the Sharing preference.
3. Click the Firewall tab.
4. Click the Advanced button.
5. Select the checkbox for Enable Stealth Mode.
6. Click OK.

Published Date: Oct 7, 2016

Mac OS X: Resolving login issues with Active Directory plug-in

This article has been archived and is no longer updated by Apple.

You can resolve some Active Directory Plug-in login issues, in which the computer becomes unresponsive ("hangs") at the blue progress bar, by changing the startup parameters for automount.

Warning: If you are unfamiliar with command-line interface and manual configuration in general, you should be cautious or seek assistance. Due to the advanced nature of this procedure, the complimentary support included with new Apple products does not cover this procedure. However, fee-based support is available through Apple Professional Services (http://www.apple.com/services/). If you do not follow these steps precisely, the script may not work, which could prevent the computer from starting up normally.

1. Make sure you are logged in with an administrator account.
2. Open Terminal (/Applications/Utilities).
3. Create a backup of the current NFS Startup script with this command on a single line:

   ```
   sudo cp /System/Library/StartupItems/NFS/NFS /System/Library/StartupItems/NFS/NFS.bak
   ```

4. Open the NFS Startup Item script for editing with pico by using this command:

   ```
   sudo pico /System/Library/StartupItems/NFS/NFS
   ```

5. To locate the section of the script that starts automount, press Control-W, type "automounter", and press Return.
6. Under the section "Start the automounter," change the line that reads:

   ```
   automount -m /Network -nsl -mnt ${AUTOMOUNTDIR}
   ```

   to read:

   ```
   automount -1 -m /Network -nsl -mnt ${AUTOMOUNTDIR}
   ```

7. Change the line that reads:

   ```
   automount -m /automount/Servers -fstab -mnt /private/Network/Servers \\
   ```

   to read:

   ```
   automount -1 -m /automount/Servers -fstab -mnt /private/Network/Servers \\
   ```

8. Save the file (Control-O, Return), and exit pico (Control-X).
9. Reboot.

Published Date: Feb 20, 2012

iSync 2.3: About using a Motorola Razr V3x phone

This article has been archived and is no longer updated by Apple.

iSync 2.3, included with Mac OS X 10.4.7, lets you sync with Motorola Razr V3x phones, as well as many others.

The following behaviors are expected when syncing a Motorola Razr V3x with iSync 2.3 or later:

- The Motorola Razr V3x may not sync reliably if Datebook is running on the phone. On the phone, close the Datebook application. If syncing problems continue, turn the phone off and back on.

- Motorola Razr V3x email addresses may sync to the Mac OS X Address Book application as Work addresses. A feature of the Motorola V3x phone is the ability to create phone contacts with different types of email addresses, such as home or work. However, when you sync these contacts to Address Book, all emails will appear as Work email addresses. After they have been synced to Address Book, you can find the contact in Address Book and change the email address type if desired.

- If a contact in Address Book has more than two email addresses, the additional email addresses (third, and so forth) will sync to the phone as an additional contact or contacts. This happens because the Motorla V3x phone allows for a maximum of two email addresses per contact record.

- If your sync via USB does not complete sometimes, try the sync again.

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Published Date: Feb 20, 2012

iSync: Some Sony Ericsson phones may show birthday value of 01/00/00 if you remove the birthday information from Address Book

This article has been archived and is no longer updated by Apple.

Address Book allows you to enter birthday information for each contact. Some Sony Ericsson phones show this information. If you later delete the birthday information in Address Book and sync the contact to your phone via iSync, some phones will correctly delete the birthday information. However, the birthday data may be replaced with 01/00/00.

Solution

If your phone replaces the birthday data with 01/00/00, delete the birthday information on the phone instead of Address Book.

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Published Date: Feb 20, 2012

Apple Remote Desktop 3: About encrypted communication

This article has been archived and is no longer updated by Apple.

When using the Remote Desktop 3 application to connect to an Apple Remote Desktop 3 (ARD) client, most of the communication is encrypted.

Authentication

Authentication to Apple Remote Desktop clients uses an authentication method based on a Diffie-Hellman Key agreement protocol that creates a shared 128-bit key. This shared key is used to encrypt both the name and password using the Advanced Encryption Standard (AES). The Diffie-Hellman key agreement protocol used in Remote Desktop 3 is very similar to the one used in personal file sharing, with both of them using a 512-bit prime for the shared key calculation.

Administration

With Remote Desktop 3, keystrokes and mouse events are encrypted when you control Mac OS X client computers. Additionally, most tasks (except Control and Observe screen data), files copied via Copy Items, and Install Packages are encrypted for transit (though you may choose to encrypt these as well by changing your application preferences). This information is encrypted using the Advanced Encryption Standard (AES) with the 128-bit shared key that was derived during authentication.

The following tasks do not support encrypted communication:

- Wake computers
- Upgrade Client Software
- Share Screen

Encrypting Observe and Control Network Data

Although Remote Desktop sends authentication information, keystrokes, and management commands encrypted by default, you may want additional security. You can choose to encrypt all Observe and Control traffic, at a certain performance cost.

Encryption is done using an SSH tunnel between the participating computers. In order to use encryption for Observe and Control tasks, the target computers must have SSH enabled (“Remote Login﷒? in the computer’s Sharing Preference pane). Additionally, firewalls between the participating computers must be configured to pass traffic on TCP port 22 (SSH well known port).

If the you are trying to control a VNC server which is not Remote Desktop, it will not support Remote Desktop keystroke encryption. If you try to control that VNC server, you will get a warning that the keystrokes aren’t encrypted, which you will have to acknowledge before you can control the VNC server. If you chose to encrypt all network data, then you will not be able to control the VNC server, because Remote Desktop is not able to open the necessary SSH tunnel to the VNC server.

If you drag and drop files when Controlling a client computer, the file copy will be encrypted if the screen sharing is encrypted, or if the option "Encrypt network data when using Copy Items" is selected in the Preferences.

Published Date: Feb 20, 2012

Final Cut Pro: How to edit audio nondestructively

This article has been archived and is no longer updated by Apple.

When you send audio from a Final Cut Pro sequence to a Soundtrack Pro script, any edits performed by the script are destructive —in other words your media files on the hard drive will be permanently changed.

A good way to edit audio from Final Cut without destructively altering your source files is to send the audio to a Soundtrack Pro audio file project first. This will replace the audio clip in your Final Cut Timeline with a Soundtrack Pro audio file project, which can be nondestructively edited.

To do this, control-click the audio clip you'd like to edit, and from the shortcut menu choose **Send To > Soundtrack Pro audio file project**. Soundtrack Pro will open and create an audio file project based on the audio clip. Now, you may either perform your edits in Soundtrack Pro or apply a Soundtrack Pro script to the clip nondestructively from the Final Cut Pro Timeline.

Published Date: Feb 20, 2012

Mac OS X Server 10.4: Unable to configure NAT using a PPPoE interface

This article has been archived and is no longer updated by Apple.

You cannot configure network address translation (NAT) in Mac OS X Server when the primary Internet connection uses PPPoE, because the PPPoE network interface will not appear in the “External network interface﷯? pop-up menu in Server Admin (located at Computers & Services > NAT > Settings).

Solution

To work around this issue, you need a DSL modem that negotiates the PPPoE authentication itself, rather than configuring the server to do so. After making the PPPoE connection, the modem passes the IP address to the server via DHCP.

From the server's perspective, it will then operate as a standard Ethernet connection, and the network interface to which the modem-negotiated IP address is assigned will be available as the external network interface when configuring NAT.

The ability of a modem to operate in this manner is sometimes known as "half-bridge mode" or "DHCP spoofing."

Note: You must work with your Internet Service Provider to ensure that the server's DSL line has a static IP address. (Mac OS X Server requires a static IP address regardless of the issue discussed in this document.)

Published Date: Oct 7, 2016

LaserWriter 8500: Arial Font substitution issue

Some users have reported that when printing to the LaserWriter 8500, using the Arial typeface, the printout is instead substituting Courier for the final output.
This article has been archived and is no longer updated by Apple.

Mac OS 9

Some Arial characters such as quote, apostrophe, and option-space may not print correctly on a LaserWriter 8500 under Mac OS 9. This occurs only with certain applications. To work around the issue, first navigate to the Font Settings panel using the pulldown menu within the Print dialog box. Then select the "Always download needed fonts" option. You can make this setting the default by clicking the "Save Settings" button.

Font Settings panel of the Print dialog box.

Windows NT

Apple has confirmed this issue with printing Arial to a LaserWriter 8500 from Windows NT. This issue is not expected to be addressed. Apple recommends substituting an equivalent PPD in order to print using the Arial typeface.

If you need to print to the LaserWriter 8500 from Windows NT using the Arial typeface utilize the following PPDs:

- use the LW8500 PPD as the default for normal use
- use the Pro 810 PPD for tabloid printing when printing with Arial
- use the 12/640 PPD for duplex printing when printing with Arial

Many applications will allow you to specify which printer to send a job to. You should consider setting up all three printers (one for each setting) assigned to the LaserWriter 8500 and in turn name them accordingly (such as "normal", "tabloid" and "duplex") so that you can easily switch between setups depending on what your output requires.
Published Date: Feb 20, 2012

Bluetooth Firmware Update 1.2.1: What to do if update won‘t finish

This article has been archived and is no longer updated by Apple.

Under certain circumstances, Bluetooth Firmware Updater 1.2.1 may not install successfully on the first attempt.

If that happens to you, it is important to **shut down** the computer. A **restart** is not sufficient, because the computer must be powered off, which doesn't happen during a restart.

After the shutdown, power the computer on again and run the Bluetooth Firmware Updater again.

Published Date: Oct 7, 2016

Mac OS X Server 10.4: Do not configure over 20 VLANs on one interface

This article has been archived and is no longer updated by Apple.

Configuring more than 20 VLANs on a single network interface in Mac OS X Server 10.4, such as Built-in Ethernet, will cause the serialnumberd daemon to exit immediately when launched. This will impair certain services, such as Apple File Service (AFP).

Published Date: Feb 20, 2012

Logic Pro songs sound different when played in Logic Express

This article has been archived and is no longer updated by Apple.

Songs created in Logic Pro that contain Logic Pro Instrument tracks may sound different when played in Logic Express.

This happens because Logic Express will substitute a similar GarageBand Instrument for the Logic Pro Instrument (for example, an EVD6 track will be assigned to the GarageBand Clavinet), and the sound settings from the Logic Pro Instrument may not carry over. The degree of disparity varies according to what Instruments or Plug-ins are being used to create the song in Logic Pro.

Conversely, songs created in Logic Express and then opened in Logic Pro will always sound the same.

Published Date: Feb 20, 2012

Mac OS X Server: New users see question marks in the Dock

This article has been archived and is no longer updated by Apple.

A new user with a server-based home directory may see question marks in her Dock.

This happens because Mac OS X Server uses default Mac OS X settings when creating new user home directories on the server. These default Dock contents include links to applications such as iMovie and iPhoto. If those applications are not present on the client computer, the links to them will appear as question marks in the new user's Dock.

Published Date: Feb 20, 2012

GarageBand: Double-byte characters appear incorrectly in imported podcast tracks

This article has been archived and is no longer updated by Apple.

Double-byte characters (such as those in Japanese) in podcast chapter markers display incorrectly when imported into GarageBand 3.

Solution

This issue only occurs with imported tracks, not during export. To work around this issue, replace the affected characters with the correct ones before exporting the podcast.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

iDVD and QuickTime 7.1: iDVD stops responding when previewing project

This article has been archived and is no longer updated by Apple.

If you have updated to QuickTime 7.1, iDVD may stop responding when you preview your project. This can occur when you use constant bit rate MP3 audio in your project.

Solution

Update to QuickTime 7.1.2 or later.

Published Date: Feb 20, 2012

iMac (17-inch Mid 2006) starts up to black screen or no video

This article has been archived and is no longer updated by Apple.

An iMac (17-inch Mid 2006) may start up to a black screen (with no video). It may also occur if you have just changed the brightness of the display. If this happens, the computer will sound like it's starting up, but the display stays black. In this case, if you hold down the power key to shut the computer down and then try to start it up again, the situation would not be resolved.

If this occurs, follow the steps below—the first steps are to regain normal operation, and the second set of steps are to prevent the issue from happening again.

Get video back

1. Shut down the computer by pressing and holding the power button on the back of the iMac until it turns off.
2. Reset the NVRAM. The computer should display a grey screen, then start normally.

Prevent it from happening again

1. From the Apple menu, choose Software Update...
2. Make sure the Mac OS X 10.4.8 system software update is selected, and install it. The update will require that you restart your computer after installing.
   An alternative to Software Update is to download the Update from Apple Software Downloads (http://www.apple.com/support/downloads/).

Note: If you choose not to install the Mac OS X 10.4.8 software update, the following steps will also prevent the issue from occurring again:

1. From the Apple menu, choose System Preferences.
2. Choose the Displays pane of System Preferences.
3. Temporarily select a resolution other than the 1440 x 900 native resolution.
4. Switch back to your preferred resolution and close System Preferences.

Published Date: Oct 7, 2016

Mac OS X 10.3 or later: Can‘t log into AFP servers using SSH connection

This article has been archived and is no longer updated by Apple.

When you try to make a secure AFP connection, you may receive this alert message:

> "Cannot make a secure connection to "<Server>"
>
> Secure connection failed. Please contact your server administrator. To connect with reduced security, click Continue.

Solution

In the Terminal, execute this command:

```
ssh username@hostname
```

If the response is:

```
ssh: connect to host hostname port 22: Operation timed out
```

... then SSH is most likely not enabled on the server, or the server is in sleep mode.

If the response is:

```
The authenticity of host 'hostname (xxx.xxx.xxx.xxx)' can't be established. RSA key fingerprint is
fa:71:73:98:bd:05:bb:7c:07:b6:55:8f:2f:1b:b0:da. Are you sure you want to continue connecting (yes/no)?
```

... then the host key is not known. Just type yes, and continue.

If the response is:

```
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
@    WARNING: REMOTE HOST IDENTIFICATION HAS CHANGED!     @
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
IT IS POSSIBLE THAT SOMEONE IS DOING SOMETHING NASTY!
Someone could be eavesdropping on you right now (man-in-the-middle attack)!
It is also possible that the RSA host key has just been changed.
The fingerprint for the RSA key sent by the remote host is
7a:43:4e:40:b2:e0:be:f8:00:99:38:b8:dc:72:e5:02.
Please contact your system administrator.
Add correct host key in .ssh/known_hosts to get rid of this message.
Offending key in .ssh/known_hosts:1
RSA host key for hostname has changed and you have requested strict checking.
Host key verification failed.
```

... then the host key does not match the one previously saved. You may want to edit your known_hosts file. But be sure that the server really has changed its key (most common during reinstallation/upgrading).

To learn more, execute

```
man ssh
```

in Terminal.

Published Date: Feb 20, 2012

Mac OS X Server: Controlling kernel parameter settings

This article has been archived and is no longer updated by Apple.

Starting with Mac OS X Server 10.3, config files control certain sysctl/kernel parameters, such as the maximum number of processes, maximum number of open files, and so forth. Apple installs one config file to specify settings that differ between Mac OS X and Mac OS X Server:

```
/etc/sysctl-macosxserver.conf
```

If you want to override any of these settings, you should read the instructions contained in that file, but do not modify that actual file. Instead, put the settings you want to change in a new file at this pathname:

```
/etc/sysctl.conf
```

The new file bearing this name will be processed after the Apple-provided one, and your settings will thus take precedence. For more details about what settings are available, see the man page for sysctl(8).

Published Date: Feb 20, 2012

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Final Cut Express: Troubleshooting Basics

If Final Cut Express isn't starting up properly or performing normally, try these basic troubleshooting steps to remedy the situation. Please note that these steps aren't exhaustive and are not intended to cover any specific issue. They are fundamental, basic steps that are most effective in getting Final Cut Express into good working order, and are the steps most often suggested by AppleCare Technical Support.

This article has been archived and is no longer updated by Apple.

Confirm requirements and versions

1. **Check system requirements**
   Make sure that you haven't overlooked any hardware aspect that's required to use Final Cut Express. You can view the system requirements on the Final Cut Express Technical Specifications page.

2. **Update to the latest software versions**
   Choose **Apple > Software Update** and make sure that you have the most recent updates for your versions of Final Cut Express, QuickTime, and other important system files. Installing the latest updates ensures that your software has the latest improvements and enhancements.

3. **Check compatibility and driver versions for third-party devices**
   If you're using a third-party storage system, input device, or something else, check the support area on the manufacturer's website to be sure that you're using the latest version of the relevant driver or other software for your device, if necessary. To see if your video device has been qualified for use with Final Cut Express, review: Final Cut Express: Camcorder support.

Delete the User Preferences

You can resolve many issues by restoring Final Cut Express back to its original settings. This will not impact your project files, but you should verify your Scratch Disk location setting after doing this. To reset your Final Cut Express user preference settings to their original state, do the following:

1. In the Finder, go to ~/Library/Preferences
   Note: The tilde (~) represents your Home folder.
2. Remove the "com.apple.finalcutexpress.plist" file from the Preferences folder.
3. Remove the "Final Cut Express User Data" folder from the Preferences folder.

Final Cut Express

Another approach you might consider is reinstalling Final Cut Express. To do this effectively, you need to remove the application then install Final Cut Express and use Software Update to install additional updates. You don't have to remove everything that was installed with Final Cut Express. Follow the steps below to completely reinstall a fresh copy of Final Cut Express.

Note: Make sure that you have your installation discs handy before starting this.

On Mac OS X v10.5

1. Open the Applications folder. Drag the Final Cut Express application to the Trash.
2. Go to `/Library/Receipts`.
3. In the Receipts folder, select the `FinalCutExpress.pkg` file.
4. Choose **View > as List** to view the contents in a list.
5. Click the Date Modified column header so you can easily see all of the receipts that were installed at the same time as Final Cut Express.
6. Drag the FinalCutExpress.pkg receipt to the Trash, as well as any other items that have the same modification date within 3 minutes of the FinalCutExpress.pkg's modification date.
7. Click the Name column header to sort the list alphabetically.
8. Drag any other receipts whose names begin with "Final Cut Express" to the Trash.
9. Insert your Final Cut Express installation disc and install Final Cut Express.
10. When finished, choose **Software Update** from the **Apple** (□) menu to update your software to the latest version.

On Mac OS X v10.6

1. Open the Applications folder. Drag the Final Cut Express application to the Trash.
2. Insert your Final Cut Express installation disc and install FInal Cut Express.
3. When finished, choose **Software Update** from the **Apple** (□) menu to update your software to the latest version.

For further information on settings or installation, please refer to the Final Cut Express documentation available on your installation discs.

Published Date: Oct 25, 2015

Helpful?

Yes No

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QuickTime 7: Supported Operating Systems

This article has been archived and is no longer updated by Apple.

QuickTime 7 is supported on Mac OS X (10.3.9 or later), Microsoft Windows 2000, Windows XP Home Edition, and Windows XP Professional.

QuickTime 7 is not supported on Windows XP Professional x64 Edition.

Related documents

301301: "iTunes for Windows not currently supported with Windows XP Professional x64 Edition"

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Published Date: Feb 20, 2012

Mac OS X 10.4.6 or later: AFP share points may mount as read only

This article has been archived and is no longer updated by Apple.

After updating to Mac OS X 10.4.6 or later, Apple File Service (AFP) share points from Mac OS X 10.3.9 servers may be mounted read only.

This can occur if the volume originated from an AppleShare IP migration, and the AppleShare IP administrator had selected the "Can't move, rename, or delete this item (locked)" option, which set the user immutable flag on the share point. The AFP client in Mac OS X 10.4 to 10.4.5 ignored this flag, but that is no longer the case, so some share points may appear read only.

Solution

To change the Finder flags using a 10.4.6 or later client:

1. Log into the AFP server as the owner of that share point.
2. In the Terminal, execute the command `cd /Directory`, where `Directory` is the location of the share point.
3. Execute `ls -lo`, and you will see that the "uchg" flag is set on the share point, indicating that it is immutable. For example:

```
server:/Shared Items admin$ ls -lo
total 112
drwxrwxr-x   2 root   admin  uchg 68 Sep  9  2005 Public
drwxr-xr-x   2 admin  admin  -    68 Jun  5 14:02 Public2
server:/Shared Items admin$
```

4. Execute: `sudo chflags nouchg sharepointName`
5. Execute `ls -lo` again to verify that the "uchg" flag is now cleared.

Published Date: Oct 7, 2016

Remote Desktop 3.0: Some reports appear blank or respond with an error message

This article has been archived and is no longer updated by Apple.

When you try to generate a report for User History or Application Usage, Remote Desktop 3.0 may return a blank report or a "Failed on All" message.

Solution

1. Go to Preferences in the Remote Desktop application. For Task Server, be sure that the checkboxes for these items are selected:
   - Collect Application Usage data
   - Collect User Accounting Data
   - Upload report data to the Task Server on a schedule

2. In the Change Schedule window, be sure all the days are checked.
3. Select the client system in the Remote Desktop admin. Get Info on that client by choosing **File > Get Info** or pressing Command-I.
4. Click the Data Settings tab, and deselect "Upload on a schedule" (if selected), then reselect "Upload on a schedule."
5. Click the Use Default Schedule button.
6. When creating a report (Report->Application Usage, etc), verify that the date range is correct, as the end date defaults to yesterday, and click the checkbox for "Rebuild data for report" in order to refresh reporting information.

Note: Application Usage report information is not recorded until a running application is quit or another application is brought to the foreground.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

MacBook, MacBook Pro: Scheduled startup requires power cord to be plugged in

This article has been archived and is no longer updated by Apple.

If you set your MacBook or MacBook Pro to start up at a specified, scheduled time using the Energy Saver pane of System Preferences, you will need to make sure your computer is connected to the AC power adapter at the time it is scheduled to start up. The computer will only start up on schedule when connected to AC power. If the schedule start up time occurs and no AC adapter is connected, the computer will start up automatically when the AC adapter is connected.

Published Date: Oct 7, 2016

DVD Studio Pro 4.1: Script Command Inspector doesn‘t open when system language is set to German

This article has been archived and is no longer updated by Apple.

The Script Inspector in DVD Studio Pro has two displays: A general Script Inspector that appears when no command lines in the script are selected and a Script Command Inspector that appears when you select a command line.

In the German version of DVD Studio Pro 4.1, the Script Command Inspector window does not open when you select a command line.

Solution

The only workaround currently is to change the system language or to force DVD Studio Pro to run in another language. To do this:

1. Select the DVD Studio Pro application in the Finder.
2. Choose **File > Get Info**.
3. Deselect German in the Languages section of the Info window.

Published Date: Feb 20, 2012

Aperture: Color shift when in full screen mode

This article has been archived and is no longer updated by Apple.

If you are using a second display on a PowerBook G4 or MacBook Pro, you see a color shift on the second display when entering Full Screen mode.

Solution

To resolve the issue, make the external display your default display.

1. Open the Color Sync utility, located at /Applications/Utilities.
2. Click the Devices icon.
3. Click the disclosure triangle next to Displays.
4. Select your second display.
5. Click the Make Default button.

Published Date: Oct 7, 2016

Using stereoscopic graphics in Mac OS X

This article has been archived and is no longer updated by Apple.

Stereoscopic graphics are supported through OpenGL in Mac OS X 10.4.3 or later. The following guidelines are recommended:

- A cathode ray tube (CRT) display capable of a 100Hz vertical refresh rate is required for full-screen and windowed stereo display modes. LCD displays are not supported.
- A graphics card that supports the vigorous demands necessary for stereoscopic 3D graphics must be used, such as an NVidia Quadro FX 4500 (PCI Express) card. **Note**: The NVIDIA Quadro FX 4500 requires both the 16-lane PCI Express graphics slot *and* an adjacent PCI Express slot.
- A stereo-enabled application that can use OpenGL stereo functions. You can search for applications here.
- Stereo goggles with a Mini-DIN connector are supported. In the event your video card does not have a VGA output, a DVI-to-VGA adapter can be used.

Stereoscopic graphics have been tested with a PowerPC G5 Quad 2.5GHz computer with optional NVidia Quadro FX 4500 video card installed.

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Published Date: Feb 20, 2012

Aperture: IPTC Metadata in TIFF images no longer appears on Intel-based Mac

This article has been archived and is no longer updated by Apple.

After you update to Mac OS X 10.4.7 on an Intel-based Mac, Aperture, Preview, and iPhoto will no longer display IPTC metadata for certain TIFF files. The affected TIFF files are those to which you added IPTC metadata in Aperture in Mac OS X 10.4.6 or earlier and then exported from Aperture as TIFF files.

The issue affects these products when used on an Intel-based Mac:

- Aperture 1.1
- Preview
- iPhoto 6
- Mac OS X 10.4.7

Solution

Re-export any affected images from Aperture after updating to Mac OS X 10.4.7.

Published Date: Feb 20, 2012

Mac mini (Early 2006), MacBook - Video distortion in shadow areas around windows

This article has been archived and is no longer updated by Apple.

On MacBook and Mac mini (Early 2006) computers, areas around windows or under the menu bar that should show a drop shadow may instead show pixilation or distortion. This issue can occur when system memory is depleted or completely used up.

If this occurs, update your computer to Mac OS X version 10.4.7 or higher, available via Automatic Software Update or from the Apple Support Downloads page at http://www.apple.com/support/downloads/.

Published Date: Feb 20, 2012

Remote Desktop: Curtain Mode button dimmed when controlling some clients

This article has been archived and is no longer updated by Apple.

When using Remote Desktop to control a computer that does not have a display attached, the Curtain Mode button is dimmed.

To use Curtain Mode, the client must be running Mac OS X 10.4 or later and must have a display attached to it.

Published Date: Feb 20, 2012

iPhoto 6: Unable to import .jpe files

This article has been archived and is no longer updated by Apple.

When you try to import a .jpe file from the Finder into iPhoto 6, you may receive an alert message indicating that the file could not be imported because it is in an unrecognized format.

Additionally, iPhoto 6 may unexpectedly quit if you attempt to import a .jpe file directly from a digital camera or when you try to edit a .jpe file that you brought into your library prior to upgrading from an earlier version of iPhoto.

Solution

Files ending in the .jpe extension are JPEG formatted photos created by some digital cameras that contain an embedded color profile. In order for iPhoto 6 to properly recognize these files, you will need to update to iPhoto 6.0.4 or later. If you drag or drop a .jpe file onto the iPhoto window or icon in iPhoto 6.0.4, you may get an unrecognized format alert. Be sure the file name ends in .jpeg or .jpg.

Published Date: Oct 7, 2016

Remote Desktop: Port priority affects which IP address can be used for ARD management functions

This article has been archived and is no longer updated by Apple.

If you have configured multihoming on an Apple Remote Desktop (ARD) client, the management feature is restricted to the primary IP address, which is determined by the port order in System Preferences. The Observe, Control, and Curtain features will work on all IP addresses regardless of priority.

If you try to manage the client via a secondary IP address, Remote Desktop will display the message "This task will fail."

This issue affects Remote Desktop 2.0 and later.

Solution

To avoid the issue, use the IP address with higher priority on multihomed ARD clients for management functions.

Published Date: Feb 20, 2012

Network Install: Regional locale information does not match default language

This article has been archived and is no longer updated by Apple.

After using Network Image Utility to create an installation image with a specific default language, the default time zone and input menu settings set by the installer may be incorrect; they do not match the settings for your region.

This happens because Mac OS X sets Pacific (Cupertino, CA) as the default time zone location and the United States as the region format regardless of what the default language is selected for the network install.

Solution

For managed client users, the client will assume the same localized settings as the language Mac OS X Server was installed with. For unmanaged systems or other situations in which the locale needs to be set automatically, preconfigure a Mac OS X client with the desired locale and then create a Network Install image from that client system.

Published Date: Feb 20, 2012

iTunes: Backup DVDs from my Mac don‘t work on my Windows PC

Audio CDs burned in iTunes and data DVDs burned using iTunes on a Mac may not be recognized when inserted into a Windows PC with Drag-to-Disc software installed. In some cases, the Drag-to-Disc software is installed as part of Roxio's Easy CD & DVD Creator suite.

This article has been archived and is no longer updated by Apple.

Follow the steps below to remove the Drag-to-Disc software. **Note:** If you ever need to reinstall Drag-to-Disc, you will need the original software disc.

1. Close all programs on your Windows PC.
2. Open the Add/Remove Programs Control Panel (Click Start and then click Control Panel. Open Add/Remove Programs.
3. Select Easy CD & DVD Creator in the list and click the Change button. **Note**: This may also be called "Easy CD Creator" or "Easy Media Creator."
4. When the Easy CD & DVD Creator Installshield Wizard screen appears, click Next.
5. Select the Modify option and then click Next.
6. In the Custom Setup screen, click the menu icon to the left of the "Drag-to-Disc" option and then click "This feature will not be available" so that the red "X" icon is showing and then click Next.
7. Click the Install button and the Drag-to-Disc software will be removed from your computer. When the process is complete, click the Finish button.
8. If you are prompted to restart your computer when the uninstallation has finished, select the option to restart. If you are not prompted to restart, please restart your machine from the "Start" menu
9. After restarting your computer, open iTunes and reinsert your iTunes data DVD or audio CD into your computer.

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Published Date: Aug 10, 2012

Helpful?

Yes No

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Aperture unexpectedly quits when Decklink HD Pro SL Card is installed

This article has been archived and is no longer updated by Apple.

If a Blackmagic Decklink Pro SL card is installed, Aperture may quit unexpectedly during launch or when importing images.

Solution

To resolve this issue, disable the Video Desktop feature:

1. Open System Preferences.
2. Select the Blackmagic Decklink preference pane.
3. In the Video Desktop section of the Video pane, change the setting to "Disabled after restart."
4. Restart your computer.

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Published Date: Oct 7, 2016

Mac OS X Server 10.4.7 resolves SMART reporting in Seagate Tonka drives

This article has been archived and is no longer updated by Apple.

If you installed 80GB or 500GB drives for your Apple Xserve or Xserve RAID (part number M9449G/A for the 80 GB Seagate Tonka drive and MA207G/A for the 500 GB Seagate Tonka drive), you'll need to apply the Mac OS X Server 10.4.7 Server Software Update to enable SMART support for these drives.

The 10.4.7 Server update can be found at http://www.apple.com/support/downloads/.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

Logic does not recognize REX files

This article has been archived and is no longer updated by Apple.

Logic does not recognize ReCycle (REX) files if the required library is not installed.

Solution

The file "REX Shared Library" must be installed on your system. Prior to version 7.2, this file was installed as part of the Logic installation. You can download the installer from the Propellerheads web site.

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Published Date: Feb 20, 2012

iPod Tutorials

This article has been archived and is no longer updated by Apple.

Learn how to use your iPod with our step-by-step instructions and easy-to-follow movies about the following topics:

- Syncing to your iPod
- Transferring purchased music and videos from iPod to your computer
- Maximizing iPod Playback Time
- Moving Your Music Library to Another Computer
- Solving Problems
- and more...

Visit www.apple.com/support/ipod/tutorial

Published Date: Feb 20, 2012

Aperture: Self-printed PDF book appears to have extra blank page

This article has been archived and is no longer updated by Apple.

When you create a PDF file of an Aperture book, an extra blank page appears between the cover and and the first page in Aperture's book layout.

Solution

This is normal. The blank page represents the inside of the front cover. This page must be left blank, so it's not included in Aperture's book layout view. You don't need to alter the layout of your book to account for the extra page.

Published Date: Oct 7, 2016

Power Macintosh G3: Read Me Clarification

There has been some confusion about a particular line in the Power Macintosh G3 Read Me which needs to be clarified.
This article has been archived and is no longer updated by Apple.
The G3 Read Me file states:

If you have Ethernet selected in the AppleTalk Control Panel, you should disconnect any LocalTalk cable. A software condition prevents having a LocalTalk cable connected to the computer if the AppleTalk Control Panel is not set to the Modem or Printer port. If you wish to switch between Ethernet and LocalTalk, you must disconnect the LocalTalk cable when you switch to Ethernet.

Based on this statement, some people have assumed that the LocalTalk Bridge is not compatible with the G3. This is not true. When the LocalTalk Bridge is running, AppleTalk is active on both the Ethernet and LocalTalk ports. The statement above applies only to the case where the computer is physically connected to a LocalTalk network but AppleTalk is not active on the LocalTalk port.

Note: The software condition mentioned in the Read Me has been fixed in Mac OS 8.1.
Published Date: Feb 20, 2012

Boot Camp Beta: More than one firmware update might be required to use Boot Camp

This article has been archived and is no longer updated by Apple.

As mentioned in the Boot Camp Beta FAQ article, you should install the latest firmware updates available for your Intel-based Mac.

You might need to download and install more than one firmware update before you can use Boot Camp Beta depending on which Mac you have. For example, with an iMac (Early 2006), installing only the latest SMC firmware update may not be sufficient--the latest EFI firmware update may also required. Be sure to install all of the appropriate firmware updates for your computer. You can obtain the latest EFI and SMC updates for your Mac by visiting http://www.apple.com/support/downloads .

Published Date: Feb 20, 2012

Final Cut Pro 5.1.1: Updating older projects to address duplicated frames in P2 media

This article has been archived and is no longer updated by Apple.

Final Cut Pro 5.1.1 resolves an issue in using the Import Panasonic P2 feature with 720p/24PN footage that can result in duplicate frames in rendered sequences. The issue does not occur with P2 media that is imported into Final Cut Pro 5.1.1. But the issue can still occur in Final Cut Pro 5.1.1 if the project contains 720p/24pn P2 media that was imported using an earlier version of Final Cut Pro 5.

Try one of the following methods to address the P2 media in such projects.

If the original P2 footage is still available, re-import clips using Final Cut Pro 5.1.1:

1. Open Final Cut Pro 5.1.1.
2. Create a new project and save it as "Temp" or something similar.
3. Choose **File > Import > Panasonic P2** and import the same clips from P2 card(s) as those used in the original project.
4. Quit Final Cut Pro. (Saving the "Temp" project at this point is not necessary.)
5. In Finder, navigate to your **Capture Scratch** folder and display window contents so that you can see the clips you just captured, as well as those in the original project.

The illustration above shows an example of how things might look at this point.

6. Select the clips in the Temp folder, and drag them to the folder for your project. For example, in the illustration above, you would drag the selected files to the folder named "MyProject_720p24pn".
7. Because that location already contains identically-named files, Finder will alert you.

8. Select the **Apply to all** checkbox, and then click **Replace** to replace all the original clips with the newly imported ones.
9. Open your original project in Final Cut Pro 5.1.1.
10. At this point, your timeline clips will be connected with their newer versions and should be online in the project.

11. Disable the track visibility button (highlighted in the image above) for each track that contains rendered items based on the P2 media. Click **Continue** to "unrender" the items in the track.
12. Click the track visibility button(s) back on.
13. Render the sequence.

If the original P2 footage is not still available, export clips from the Browser as new QuickTime movies:

Important: Back up your original clips before taking these steps. You should not need them, but the following steps will overwrite your original clips. In the event of a power failure or other accident, your footage could be lost permanently. Back up for safety!

1. Open the older project in Final Cut Pro 5.1.1 and select all the P2 clips in the Browser.
2. Choose **File > Batch Export**.
3. In the **Export Queue** window that opens, click **Settings**.
4. In the **Batch** window that opens, click **Set Destination**.
5. Navigate to the Capture Scratch folder, and then click the **New Folder** button.

6. Name the new folder "Temp" or something similar, and click **Create**.
7. In the **Choose a Folder** window, the new "Temp" folder should be highlighted. Click **Choose**.

8. Now the **Batch** window should look like the image above. Click **OK.**
9. Click **Export** in the **Export Queue** window, and Final Cut Pro will create new versions of your P2 clips in the "Temp" folder.
10. Quit Final Cut Pro.
11. In Finder, navigate to your **Capture Scratch** folder and display window contents so that you can see the clips you just exported, as well as those in the original project.

The illustration above shows an example of how things might look at this point.

12. Select the clips in the Temp folder, and drag them to the folder for your project. For example, in the illustration above, you would drag the selected files to the folder named "MyProject_720p24pn".
13. Because that location already contains identically-named files, Finder will alert you.

Select the **Apply to all** checkbox, and then click **Replace** to replace all the original clips with the newly created ones.

14. Open your original project in Final Cut Pro 5.1.1.
15. At this point, your timeline clips will be connected with their newer versions and should be online in the project.

16. Disable the track visibility button (highlighted in the image above) for each track that contains rendered items based on the P2 media. Click **Continue** to "unrender" the items in the track.
17. Click the track visibility button(s) back on.
18. Render the sequence.

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Published Date: Feb 20, 2012

iMovie HD 6: Theme drop zones play whole clip

This article has been archived and is no longer updated by Apple.

Symptom

When using themes in iMovie HD 6, you may find that clips you have shortened play in their entirety when placed in the theme's drop zone.

To work around this behavior, export the edited clip, and reimport it into your project:

1. Select the clip you want to use in the drop zone.
2. Choose **Share > QuickTime**.
3. Choose **Full Quality** from the **Compress movie for** pop-up menu.
4. Select the option to "Share selected clips only."
5. Click Share
6. Name and save the file.
7. Choose **File > Import**.
8. Select the file you just saved.
9. Click Open.
10. Drag the newly imported clip into the desired drop zone.

Published Date: Feb 20, 2012

About the security content of iTunes 6.0.5

This article has been archived and is no longer updated by Apple.

This document describes the security content of iTunes 6.0.5, which can be downloaded and installed using Software Update, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred, and any necessary patches or releases are available. To learn more about Apple Product Security, visit the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to Use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

iTunes 6.0.5

- **iTunes**

  CVE-ID: CVE-2006-1467

  Available for: Mac OS X v10.2.8 or later, Windows XP / 2000

  Impact: An integer overflow in iTunes could cause a denial of service or lead to the execution of arbitrary code

  Description: The AAC file parsing code in iTunes versions prior to 6.0.5 contains an integer overflow vulnerability. Parsing a maliciously-crafted AAC file could cause iTunes to terminate or potentially execute arbitrary code. iTunes 6.0.5 addresses this issue by improving the validation checks used when loading AAC files. iTunes 6.0.5 is freely available from http://www.apple.com/itunes/download/. Credit to ATmaCA working with TippingPoint and the Zero Day Initiative for reporting this issue.

Published Date: Oct 7, 2016

Final Cut Pro: Abort Capture behaves differently when capturing to Xsan

This article has been archived and is no longer updated by Apple.

Final Cut Pro allows you to make a number of settings that control different aspects of its behavior while capturing media. One of these settings is "Abort capture on dropped frames" (**Final Cut Pro > User Preferences > General**).

With this option selected, capture stops immediately when a dropped frame is detected. When capturing to a directly connected or internal HFS+ volume, all media for the clip that was captured up to the point of the dropped frame is preserved. A clip for that media file is placed in the Browser.

But if you're capturing media to an Xsan volume, the "Abort capture on dropped frames" setting behaves differently: The clip media up to the point of the dropped frame is **not** preserved.

If this occurs, you can try to capture the clip again. If the cause for the dropped frame is not due to a problem on the tape, the next capture attempt may proceed without issue. But if repeated attempts always result in an aborted capture, you can re-log the clip, setting its outpoint to just before the point where the dropped frame occurs. This should allow you to capture media up to that point without difficulty

Published Date: Oct 7, 2016

Remote Desktop 2: "Didn‘t upgrade to version 2.1"

This article has been archived and is no longer updated by Apple.

When using the Upgrade Client Software feature from the Manage Menu in the Remote Desktop admin application, you may encounter this alert message:

> "Failed on all. Didn't upgrade to version 2.1."

Additionally `/var/log/system.log` on the client computer contains this entry:

```
localhost /System/Library/CoreServices/RemoteManagement/ARDAgent.app/Contents/MacOS
ARDAgent: CheckDestination: Package install folder is invalid.
```

Solution

This is caused by incorrect permissions of the `/private/tmp` folder, which should be owned by root with a group of wheel:

```
drwxrwxrwt 12 root wheel 408 14 Oct 13:35 /private/tmp
```

You can use Disk Utility to repair the permissions of an affected computer's system volume. Alternatively, you can execute the following command on the affected client systems:

```
sudo chown root:wheel /private/tmp
```

Published Date: Feb 20, 2012

Remote Desktop: Client software is out of date message

This article has been archived and is no longer updated by Apple.

After upgrading Remote Desktop administration software, this alert message may appear:

> The Remote Desktop Client software on this computer is out-of-date.
>
> The Remote Desktop Administrator software requires a newer version of the client software. Open "System Preferences" and check "Software Update".

Solution

Restart the computer and launch Remote Desktop again.

Published Date: Feb 20, 2012

Mac OS X Server: Mobile Users do not appear in the Login Window

This article has been archived and is no longer updated by Apple.

When local-only accounts are not allowed to log in, Mobile User accounts do not appear in the Login Window.

Solution

While mobile accounts don't appear in the list of users at the Login Window, they can still log in using the "Other..." option.

To display Mobile User accounts at the Login Window, make sure the "Allow local-only accounts" option is enabled in Workgroup Manager's Computer List Access settings.

Published Date: Feb 20, 2012

Nike + iPod: How to recalibrate if you get unexpected results

This article has been archived and is no longer updated by Apple.

When you calibrate Nike + iPod, make sure you are running or walking at a steady, natural pace for the specified calibration distance. If you run or walk with an inconsistent pace or travel a distance that is over or under the expected calibration distance, you may get unexpected results (such as incorrect distance of a workout). For best results, first reset the calibration and then recalibrate, instead of just calibrating again.

Follow these steps to reset the calibration and recalibrate.

1. Connect the Nike + iPod receiver to iPod nano, and wear the Nike+ shoes with the sensor properly inserted. Walk around to activate the sensor.
2. On the iPod nano, navigate to **Nike+iPod > Settings > Sensor > Calibrate**.
3. Select the incorrect calibration setting and press the Center button.
4. Select "Reset to Default", and then press the Center button to confirm the reset.
5. Go to **Nike+iPod > Settings > Sensor > Calibrate** and calibrate again with a known distance.

For more information on calibrating Nike + iPod, see the Nike + iPod Users Guide.

Published Date: Oct 7, 2016

QuickTime MPEG-2 Playback Component: Playback of 4:2:2 profile MPEG-2 files is not supported

This article has been archived and is no longer updated by Apple.

The QuickTime MPEG-2 Playback Component provides QuickTime users with the ability to import and play back MPEG-2 content, including both multiplexed (aka muxed, where the audio and video tracks are interleaved together into one track) and non-multiplexed (aka elementary) streams.

The QuickTime MPEG-2 Playback Component is ideal for previewing MPEG-2 video such as that used in DVD-Video content authoring. But there are some kinds of MPEG-2 media that are not supported by the MPEG-2 Playback Component.

Unsupported MPEG-2 Media Types

- Playback of 4:2:2 profile MPEG-2 streams
- Playback of transport streams (which combine audio and video with independent time bases)
- AC3 audio (audio is not decoded)
- Ripped DVD content (content from a DVD video disc saved to another drive)

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Published Date: Feb 20, 2012

Nike + iPod: Workout history is only for currently linked sensor

This article has been archived and is no longer updated by Apple.

You can use multiple Nike + iPod sensors with one iPod nano (though the receiver can only be linked to one sensor during a workout). When you view the Workout History on the iPod nano, it will only display information for the currently linked sensor.

Symptoms

- You share an iPod nano with someone else using Nike + iPod, and your workout history is not displayed or seems incorrect on the iPod nano.
- You have multiple Nike + iPod shoes and sensors, and your workout history is not displayed or seems incorrect on the iPod nano.
- Your Nike + iPod sensor was serviced, and now you can no longer view your previous workout history on the iPod nano, including personal bests and totals.

View on nikeplus.com

To view workout data from multiple sensors together, use iTunes 6.0.5 or later to upload the workout data to nikeplus.com, and view your workout history online instead of on your iPod nano.

Link your sensor

The Workout History information displayed on your iPod nano screen only applies for the currently linked sensor. If you share an iPod nano with another Nike + iPod user and you want to view your workout data on the iPod nano, first link your sensor.

If you are using multiple shoes/sensors with your iPod nano, you will only see the workout history of the currently linked sensor.

Name sensors and specify nikeplus.com accounts

To view your workout data by sensor, use the iPod Preferences in iTunes 6.0.5 or later to name each sensor and specify the appropriate nikeplus.com account name for each one. Then use the nikeplus.com site with the respective user name and password to view your workout history by sensor.

For more information on using multiple sensors, see the Nike + iPod Users Guide.

Published Date: Oct 7, 2016

QuickTime: Saving From Plug-in

This article describes how to save a QuickTime movie from your web browser, when using a QuickTime 3 or 4 plug-in.
This article has been archived and is no longer updated by Apple.
The free version of the QuickTime version 3 and 4 plug-in does not provide the capability to save a movie.

The ability to save is present in the QuickTime Pro version of the plug-in. On the right side of the control bar is a downward pointing triangle which, when clicked, displays a pop-up menu containing two Save options (Figure 1 and 2).

Figure 1: QuickTime Pro plug-in save options (Microsoft Windows).

Figure 2: QuickTime Pro plug-in save options (Mac OS).

You may choose to save the the movie as a QuickTime movie or as Source. Saving as a QuickTime movie includes the entire movie contents as a self-contained file. Saving as Source saves a reference or a pointer to the movie. When you attempt to play a source, it looks for the entire movie at the location saved within the source file.

Note: Webmasters have the ability to disable the save function. If you have QuickTime Pro installed and cannot save a movie, contact the Webmaster to see if they have disabled the save feature.

Published Date: Feb 20, 2012

Nike + iPod: How do I manually upload workout data?

This article has been archived and is no longer updated by Apple.

The easiest way to upload your workout data to nikeplus.com is to enter a Nike.com login ID and password. You can do this when you first connect an iPod nano or iPod nano (second generation) with Nike + iPod workout data on it to your computer. After you enter this information, any new workout data is automatically uploaded to nikeplus.com whenever you connect the iPod nano or iPod nano (second generation) to your computer. This occurs regardless of whether you are syncing music manually or automatically.

If you prefer, it is also possible to manually upload workout data to the nikeplus.com website. Here's how:

When you click on your iPod nano or iPod nano (second generation) there is a "Nike + iPod" tab with a checkbox:
"Automatically send workout data to nikeplus.com"

If you uncheck this checkbox, iTunes will prompt you to upload your workout data each time you connect your iPod nano or iPod nano (second generation).

If you decline the prompt to upload your workout data, but then change your mind and want to upload it, eject your iPod nano and then reconnect it. If there is workout data that has not been uploaded yet, you will see another prompt.

For more information on how to upload workout history, see iTunes Help.

Published Date: Oct 7, 2016

QuickTime: MoviePlayer High Quality Setting

This article describes the High Quality setting in MoviePlayer (and some other QuickTime application programs).

This article has been archived and is no longer updated by Apple.
The High Quality setting is used to tell the codec being used on the selected track to use any higher quality decompression that may be available. This availability is very codec dependent; not all codecs have high quality features.

Turning on High Quality generally takes playback out of the real time mode--higher quality equals lower throughput.

Example: Playback of a 16 bit color or 24 bit color movie on an 8 bit color display. With High Quality turned on, the dithering to 8 bit color is better than with it turned off. However, the higher quality dithering may come at the cost of real time play back depending on the speed of the CPU.

Another area where the High Quality setting makes a difference is with text displayed from a text track. With High Quality turned on, the text is rendered as anti-aliased text. Without High Quality turned on, the text renders without any anti-aliasing. As with other High Quality media, playback of anti-aliased text is at a lower speed than when High Quality is turned off.

So what is the benefit of the High Quality setting? If you are going to recompress a movie, which is a non-real-time action, the typical level of compression artifacts is reduced by turning on the High Quality setting for those tracks which can respond to a high quality setting.
Published Date: Feb 20, 2012

Using iMac (17-inch Mid 2006) with Bluetooth devices

This article has been archived and is no longer updated by Apple.

The iMac (17-inch Mid 2006) computer can be used with Bluetooth wireless devices such as the Apple Wireless Keyboard and Apple Wireless Mouse by using an external USB Bluetooth Adapter.

Published Date: Feb 20, 2012

iDVD 6: Looped movies do not play on burned DVD

This article has been archived and is no longer updated by Apple.

Symptom

If you choose **Advanced** > **Loop Movie**, the movie may not play when selected from the DVD menu screen on your burned DVD. In this case, the movie may preview correctly in iDVD, but after the movie is burned, clicking the button to play the selected movie appears to do nothing when playing the actual disc.

Solution

To resolve this issue, add a transition to the button assigned to the looped movie. After setting your movie to loop, follow these steps:

1. If you are in Map view, exit Map view (click Return or choose **View** > **Hide Map**).
2. Select the button linked to the looped movie from the Menu preview pane.
3. Click Buttons in the iDVD window to open the Buttons pane.
4. Choose a transition from the **Transitions** pop-up menu.

Adding the transition should allow the movie to play when selected from the menu.

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Published Date: Oct 7, 2016

Logic Pro 7: Troubleshooting Basics

This article has been archived and is no longer updated by Apple.

If Logic Pro isn't starting up properly or performing normally, try these basic troubleshooting steps to remedy the situation. Please note that these steps aren't exhaustive, and are not intended to cover any specific issue. They are fundamental, basic steps that are most effective in getting Logic Pro into good working order, and are the steps most often suggested by AppleCare Technical Support.

Confirm requirements and versions

1. **Check system requirements**
   Make sure that you haven't overlooked any hardware aspect that's required to use Logic Pro. You can view the system requirements on the Logic Pro Technical Specifications page.
2. **Update to the latest software versions**
   Choose **Apple > Software Update** and make sure that you have the most recent updates for your versions of Logic Pro, QuickTime, and other important system files. Installing the latest updates ensures that your software has the latest improvements and enhancements.
3. **Check compatibility and driver versions for third-party devices**
   If you're using a third-party sound card, MIDI interface, storage system, control surface, or plug-ins, check the support area on the manufacturer's website to be sure that you're using the latest version of the relevant driver or other software for your product. For information on troubleshooting possible issues with Audio Unit plug-ins, click here.
4. **Check for Pro Application Support updates**
   Make sure you are using the latest version of Pro Application Support. For more information click here.

Test with no audio driver

You can isolate issues with audio devices by launching Logic with no audio driver. Press and hold down the Control key immediately after Logic starts to launch. A dialog asking whether you wish to launch audio drivers will appear. Click "No" and see if Logic launches normally.

Test using the computer's built-in audio hardware

If you use external audio hardware, try setting Logic to use the built-in audio hardware on your computer. Choose **Audio > Audio Hardware and Drivers** from the main Logic menu. Click the Core Audio tab and choose **Built-in Audio** from the **Driver** pop-up menu. If you are using DAE, disable it first. If the issue is resolved using built-in audio, refer to the manufacturer of your audio interface.

Launch Logic with a new default song

Sometimes song files can become damaged, causing unexpected behavior in Logic. If you use an Autoload or other template, damage to the template can cause unexpected results with any song subsequently created from it. To create a completely fresh song hold down the Option key and choose **File > New**. Test to see if the issue is resolved in the new song. Sometimes, issues with the data in a song can be repaired. Open an affected song and choose **Options > Song Information** from the main menu. Click the "Reorganize Memory" button.

Delete the User Preferences

You can resolve many issues by restoring Logic Pro back to its original settings. This will not impact your song files. To reset your Logic Pro user preference settings to their original state, do the following:

1. In the Finder, go to ~/Library/Preferences. **Note**: The tilde (~) represents your Home folder.
2. Remove the "com.apple.logicpro.plist" file from the Preferences folder.
3. Drag the "Logic" folder from the Preferences folder to your Desktop. Note that if you have programmed any custom key commands, this will reset them to the defaults. You can import your key commands from the copy on your Desktop by following the instructions on page 46 of the Logic Pro 7 Reference Manual. If you use the Project Manager you will also need to rescan your system.

Remove receipts and reinstall Logic Pro

Another approach you might consider is reinstalling Logic Pro. To do this effectively, you need to remove the application and its receipts, then install Logic Pro and use Software Update to install additional updates. You don't have to remove everything that was installed with Logic Pro. Follow the steps below to completely reinstall a fresh copy of Logic Pro. **Note**: Make sure that you have your installation discs handy before starting this.

1. Open the Applications folder.
   Drag the Logic Pro application to the Trash.
2. Go to /Library/Receipts.
3. In the Receipts folder, select the "Logic Pro.pkg" file.
4. Choose **View > as List** to view the contents in a list.

5. Click the Date Modified column header so you can easily see all of the receipts that were installed at the same time as Logic Pro.
6. Drag the Logic Pro.pkg receipt to the Trash, as well as any other items that have the same modification date within 3 minutes of the Logic Pro.pkg's modification date.
7. Click the Name column header to sort the list alphabetically.
8. Drag any other receipts whose names begin with "Logic Pro" to the Trash.
9. Insert your Logic Pro installation disc and install Logic Pro.
10. When finished, use Software Update (under the Apple menu) to update your software to the latest version.

For further information on settings or installation, please refer to the Logic Pro documentation available on your installation discs.

Published Date: Oct 7, 2016

Logic Express 7: Troubleshooting Basics

This article has been archived and is no longer updated by Apple.

If Logic Express isn't starting up properly or performing normally, try these basic troubleshooting steps to remedy the situation. Please note that these steps aren't exhaustive, and are not intended to cover any specific issue. They are fundamental, basic steps that are most effective in getting Logic Express into good working order, and are the steps most often suggested by AppleCare Technical Support.

Confirm requirements and versions

1. **Check system requirements**
   Make sure that you haven't overlooked any hardware aspect that's required to use Logic Express. You can view the system requirements on the Logic Express Technical Specifications page.
2. **Update to the latest software versions**
   Choose **Apple > Software Update** and make sure that you have the most recent updates for your versions of Logic Express, QuickTime, and other important system files. Installing the latest updates ensures that your software has the latest improvements and enhancements.
3. **Check compatibility and driver versions for third-party devices**
   If you're using a third-party sound card, MIDI interface, storage system, control surface, or plug-ins, check the support area on the manufacturer's website to be sure that you're using the latest version of the relevant driver or other software for your product. For information on troubleshooting possible issues with Audio Unit plug-ins, click here.
4. **Check for Pro Application Support updates**
   Make sure you are using the latest version of Pro Application Support. For more information click here.

Test with no audio driver

You can isolate issues with audio devices by launching Logic Express with no audio driver. Press and hold down the Control key immediately after Logic Express starts to launch. A dialog asking whether you wish to launch audio drivers will appear. Click "No" and see if Logic Express launches normally.

Test using the computer's built-in audio hardware

If you use external audio hardware, try setting Logic Express to use the built-in audio hardware on your computer. Choose **Audio > Audio Hardware and Drivers** from the main Logic menu. Click the Core Audio tab and choose **Built-in Audio** from the **Driver** pop-up menu. If the issue is resolved using built-in audio, refer to the manufacturer of your audio interface.

Launch Logic Express with a new default song

Sometimes song files can become damaged, causing unexpected behavior in Logic Express. If you use an Autoload or other template, damage to the template can cause unexpected results with any song subsequently created from it. To create a completely fresh song hold down the Option key and choose **File > New**. Test to see if the issue is resolved in the new song. Sometimes, issues with the data in a song can be repaired. Open an affected song and choose **Options > Song Information** from the main menu. Click the "Reorganize Memory" button.

Delete the User Preferences

You can resolve many issues by restoring Logic Express back to its original settings. This will not impact your song files. To reset your Logic Express user preference settings to their original state, do the following:

1. In the Finder, go to ~/Library/Preferences. **Note**: The tilde (~) represents your Home folder.
2. Remove the "com.apple.logicexpress.plist" file from the Preferences folder.
3. Drag the "Logic" folder from the Preferences folder to your Desktop. Note that if you have programmed any custom key commands, this will reset them to the defaults. You can import your key commands by following the instructions on page 38 of the Logic Express 7 Reference Manual.

Remove receipts and reinstall Logic Express

Another approach you might consider is reinstalling Logic Express. To do this effectively, you need to remove the application and its receipts, then install Logic Express and use Software Update to install additional updates. You don't have to remove everything that was installed with Logic Express. Follow the steps below to completely reinstall a fresh copy of Logic Express. **Note**: Make sure that you have your installation discs and serial number handy before starting this.

1. Open the Applications folder.
   Drag the Logic Express application to the Trash.
2. Go to /Library/Receipts.
3. In the Receipts folder, select the "Logic Express.pkg" file.

4. Choose **View > as List** to view the contents in a list.
5. Click the Date Modified column header so you can easily see all of the receipts that were installed at the same time as Logic Express.
6. Drag the Logic Express.pkg receipt to the Trash, as well as any other items that have the same modification date within 3 minutes of the Logic Express.pkg's modification date.
7. Click the Name column header to sort the list alphabetically.
8. Drag any other receipts whose names begin with "Logic Express" to the Trash.
9. Insert your Logic Express installation disc and install Logic Express.
10. When finished, use Software Update (under the Apple menu) to update your software to the latest version.

For further information on settings or installation, please refer to the Logic Express documentation available on your installation discs.

Published Date: Oct 7, 2016

Logic Pro, Logic Express: Spinning disc cursor after recording

This article has been archived and is no longer updated by Apple.

Symptom

After simultaneously recording more than four audio tracks, the spinning disc cursor may appear for a long time when you stop recording, but before the waveforms are calculated.

Solution

Record audio to a drive that is not journaled. **Note**: It is **not** recommended that journaling be disabled on the main startup drive. Use a second drive formatted to "Mac OS Extended" rather than "Mac OS Extended (Journaled)" for audio recording.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Help Viewer "flickers" when viewing a particular page in Mac OS X 10.4

This article has been archived and is no longer updated by Apple.

In Mac OS X 10.4 or later, Help Viewer could appear to "flicker" while trying to display a particular page if there is no valid connection to the Internet.

Solution

Either make sure there is a valid Internet connection before opening a Mac Help page or follow the steps below.

1. Quit Help Viewer if it is open.
2. In the Finder, choose **Go to Folder** from the **Go** menu.
3. Go to this folder: /Library/Documentation/Help/
4. Control-click the MacHelp.help icon.
5. Choose "Show Package Contents" from the pop-up (contextual) menu .
6. Open the Contents folder, then the Resources folder.
7. Open the the English.lproj folder, then the gfx folder.
8. Find "xicnitun.gif" file.
9. Change the name to "xicnitn.gif".

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Final Cut Pro 5: Unexpectedly quits after importing XDCAM Clips

This article has been archived and is no longer updated by Apple.

Issue

After importing a number of XDCAM clips into Final Cut Pro using Sony's PDZK-P1 XDCAM Transfer Software (available from Sony), it's possible for Final Cut Pro to enter a condition where it may unexpectedly quit.

Solution

This issue is addressed by the Final Cut Pro 5.1.4 Update.

If you are using a version of Final Cut Pro 5 prior to the Final Cut Pro 5.1.2 update mentioned above, the rest of this document describes how you can anticipate this issue and what steps you can take to avoid possible loss of related data or work.

In the particular case of this workflow, the likelihood of an unexpected quit is related to the number selected for the "Levels of Undo" setting under **Final Cut Pro > User Preferences > General**. Specifically, if you have the Levels of Undo set to a low number, the possible condition for an unexpected quit will occur more frequently. Conversely, the unexpected quit will occur less frequently if you increase the number for the Levels of Undo setting. Closing and reopening Final Cut Pro after using XDCAM Transfer will prevent the condition which can cause the unexpected quit.

Because changing the Levels of Undo setting may only serve to postpone an unexpected quit, it is also recommended that you save your work often while using XDCAM Transfer, as well as just after importing XDCAM clips.

The following steps serve as an example of a workflow that can be used to work abound this issue:

1. Choose **Final Cut Pro > User Preferences > General**.
2. Change the **Levels of Undo** setting to **99** (the highest setting).
3. Click OK to close the **User Preferences** window.
4. Create and save a new project with appropriate settings for the XDCAM media you will be using.
5. Begin importing your XDCAM clips using the XDCAM Transfer Software.
6. Import 99 clips or fewer at one time. After importing, save the project, quit and relaunch Final Cut Pro.
7. If Final Cut Pro unexpectedly quits after you save the project, simply reopen your project and resume work where you stopped. Continue importing your XDCAM clips until finished, saving your project frequently.
8. When you have finished importing XDCAM clips for this work session, save your project, quit Final Cut Pro, and relaunch Final Cut Pro before continuing to edit.
9. The unexpected quit should no longer occur once you have finished using XDCAM Transfer, and then quit and restarted Final Cut Pro.

Note: Since the unexpected quit is related to the number of Levels of Undo, it's a good idea to save your project **before** you take a number of actions equal to the number of Undo levels set in User Preferences.

For more information on using the Sony PDZK-P1 XDCAM Transfer Software, please consult its accompanying documentation, the "XDCAM Transfer User Guide.pdf."

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Nike + iPod: Can workouts be removed from the nikeplus website?

This article has been archived and is no longer updated by Apple.

There is no way to remove workout data from the nikeplus website.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Mac OS X 10.4: Enabling smart card login

This article has been archived and is no longer updated by Apple.

Mac OS X 10.4 Tiger greatly enhances integration for smart cards, as described in this advanced article. The configuration required is much simpler than in previous Mac OS X versions.

Important: The format of the configuration file and the scripts used to configure smart card login have changed from Mac OS X 10.3.x. Do **not** copy or use these files directly from a previous version of Mac OS X, or it may make the system unusable. It is no longer necessary to manually run pcscd, as this daemon is started automatically by Mac OS X when it detects a smart card reader.

It is safe to install a successfully modified /etc/authorization to enable smart card login on any client system, even those without smart card readers. If no reader or card is present, the user will continue to see the default login window, and there will be no performance impact.

To support login with a smart card on Mac OS X 10.4, the card must support signing with a public key. In addition, the card itself must have a plugin, known as a tokend, that can communicate with securityd and the card itself.

Tokends installed with Mac OS X 10.4

There are three tokends installed as part of the base Mac OS X installation.

Tokend	Smart card specification
"CAC"	US Federal Government: CAC: Common Access Card GSC-IS: Government Smart Card Interoperability Specification v2.1
"BELPIC"	Belgian Personal Identity Card
"JPKI"	Japanese Public Key Infrastructure card

Smart cards that are not compliant with the specifications listed above would require a supporting tokend be installed for the smart card to be recognized and available to applications.

Enabling smart card login

Enabling smart card login is controlled through entries in the /etc/authorization file. Perform the following steps in Terminal to modify the authorization file.

1. Execute this command: `sudo -s`
2. Execute this command: `cd /etc`
3. Execute this command: `cp authorization authorization.orig`
4. Execute this command: `cp authorization /tmp/authorization.mod`
   Don't quit Terminal.
5. Next, edit the "/tmp/authorization.mod" file in pico, or your favorite text editor, or the plist editor that comes with the Apple Developer Kit.
6. Make the following changes to the"mechanisms" Array inside the "system.login.console" rights:
   - After the string "<string>builtin:auto-login,privileged</string>" add the string "<string>builtin:smartcard-sniffer,privileged</string>"
   - After the string "<string>builtin:reset-password,privileged</string>" remove the string "<string>authinternal</string>" then add string "<string>builtin:authenticate,privileged</string>"
7. Make the following changes to the "mechanisms" Array inside the "authenticate" rules:
   - add the following string to the beginning of the array "<string>builtin:smartcard-sniffer,privileged</string>"
   - after the string "<string>builtin:authenticate</string>" remove the string "<string>authinternal</string>" then add the string "<string>builtin:authenticate,privileged</string>"
8. After saving the changes, go back to Terminal and execute the following command (while still in the sudo -s session):

```
cp /tmp/authorization.mod /etc/authorization
```

This final step will replace the system's active authorization file with your edited version. These changes take place immediately so you do not need to restart.

Smart cards and Directory Services

Part of the login process is to do a lookup for the expected user in a directory service such as Open Directory, LDAP, or Active Directory. The first and recommended method to link a smart card user with a record in a directory service is to add the hash of the public key to the user's directory record. This is the most convenient and most secure way of identifying a smart card user. The second method is to lookup the user based on values drawn from the email signing certificate as required for the US Federal Government smart card use.

A script is preinstalled to assist you in binding a smart card to a user's local directory domain record. This is /usr/sbin/sc_auth:

```
myhostname#  /usr/sbin/sc_auth -h
Usage:  sc_auth accept [-v] [-u user] [-k keyname] # by key on inserted card(s)
        sc_auth accept [-v] [-u user] -h hash # by known pubkey hash
        sc_auth remove [-v] [-u user] # remove all public keys for this user
        sc_auth hash [-k keyname] # print hashes for keys on inserted card(s)
```

An example of the output from this for a US Department of Defense Common Access Card is:

```
myhostname% sc_auth hash
01C2F20D8964BE7701B57B63B0A1795B8F2604C1 Identity Private Key
443F30C356E676F447CD4DA89F46CC0CCED19737 Email Signing Private Key
4845564C1F8C6B378C19B8F262CE422933CF1FD1 Email Encryption Private Key
```

To add a user to the local directory

```
myhostname% sudo sc_auth accept -u myuser -h 01C2F20D8964BE7701B57B63B0A1795B8F2604C1
```

...where "01C2F20D8964BE7701B57B63B0A1795B8F2604C1" is the hash for the key associated with the Identity Private Key. Refer to the script for further usage instructions. You will need to run this as a user authorized to modify the directory. In this example, any of the hash entries listed could have been used for associating the card to the account. If desired, more than one smart card can be associated with a single user account by running the script again with the hash from the additional card(s).

The script adds a field to the user's authentication_authority property. For example, after executing the command above, the authentication_authority property for the user looks like:

```
myhostname% dscl . -read /Users/myuser
...
    "authentication_authority" = ( ";ShadowHash;", ";pubkeyhash;
01C2F20D8964BE7701B57B63B0A1795B8F2604C1" );
    ...
```

One can immediately log in to a new session using the smart card.

Smart card login uses Open Directory for all of its user lookups, so any supported directory structure will function properly.

Other Directory schema

The method used by sc_auth described above is the recommended way to link a user to their directory entry. However, some sites use an alternative lookup method or are unable to modify their schema for various reasons. To address this, there is a way to configure the smart card authorization plugin to use an attribute mapping method which maps various attributes from a certificate on the smart card to a different field in the directory. This is primarily provided to support the Common Access Card, although it does work with similarly designed smart cards.

The configuration file is an array of dictionaries. Each dictionary in this array represents the data needed to determine one search key in an Open Directory search. If no configuration file is present, the built in method of using the public key hash will be used. The file is at /etc/caclogin config.plist .

Example:

```
    <dict>
        <key>fields</key>
        <array>
            <string>NT Principal Name</string>
        </array>
        <key>formatString</key>
            <string>$1</string>
        <key>dsAttributeString</key>
            <string>dsAttrTypeNative:ntprincipalname</string>
```

```
    </dict>
```

This might produce a search string key (dsAttributeString) of "0123456789@mil". Note that the token after "dsAttrTypeNative:" would be the actual name of the attribute to use in your directory schema.

```
 <dict>
        <key>fields</key>
        <array>
            <string>RFC 822 Name</string>
            <string>NT Principal Name</string>
            <string>Country</string>
        </array>
        <key>formatString</key>
            <string>$1#$2/$3</string>
        <key>dsAttributeString</key>
            <string>dsAttrTypeNative:uniqueid</string>
    </dict>
```

This might produce a search string of "smith@navy.mil#0123456789@mil/US":

There was a similar, but more complicated way of doing this in Mac OS X 10.3. To support the improved integration of smart cards, some unused functionality was removed, providing a much simpler configuration.

The only fields that may appear in the "fields" section of the file are

Key String	Example
Country	US
Organization	U.S. Government
Organizational Unit:1	DoD
Organizational Unit:2	PKI
Organizational Unit:3	USN
Common Name	SURNAME.GIVEN.MI.1160048910
RFC 822 Name	gsurname@navy.mil
NT Principal Name	1160048910@mil

These will be extracted from the e-mail signing certificate. Spaces and capitalization are significant. "Organizational Unit:1" refers to the top level OU and will typically be "DoD". "Organizational Unit:3" refers to the bottom level OU and may be for example "USN".

Example of /var/log/secure.log:

```
May 26 22:55:11 envy SecurityAgent[3900]: Showing Login Window
May 26 22:55:25 envy com.apple.SecurityServer: Token reader SchlumbergerSema eGate 0 0 inserted into system
May 26 22:55:25 envy com.apple.SecurityServer: token inserted into reader SchlumbergerSema eGate 0 0
May 26 22:55:32 envy com.apple.SecurityServer: reader SchlumbergerSema eGate 0 0 inserted token "[User
Key]               " ([User Key]              ) subservice 37 using driver com.apple.tokend.coolkey
```

(This is where the PIN prompt login window appears.)

```
May 26 22:55:32 envy SecurityAgent[3900]: Showing Login Window
May 26 22:55:36 envy SecurityAgent[3900]: User Authenticated: continue login process
May 26 22:55:44 envy com.apple.SecurityServer: Succeeded authorizing right system.login.console by process
/System/Library/CoreServices/loginwindow.app for authorization created by
/System/Library/CoreServices/loginwindow.app.
May 26 22:55:44 envy com.apple.SecurityServer: Succeeded authorizing right system.login.done by process
/System/Library/CoreServices/loginwindow.app for authorization created by
/System/Library/CoreServices/loginwindow.app.
```

A good method for validating that the Smart Card is being recognized by the system is that the smart card appears in the Keychains list. When selecting the keychain in the list all certificates and keys appear within the Keychain Access window.

Published Date: Feb 20, 2012

Mac OS X 10.4: Windows Server 2003 IIS Web Server fails GET call on .DS_Store and ._ files

This article has been archived and is no longer updated by Apple.

Issue or symptom

If the WebDAV client in Mac OS X 10.4 attempts to do a GET on .DS_Store or any ._ file, a Microsoft Windows 2003 IIS Web Server may return a 404 error.

Solution

The Web server included with Windows Server 2003 does not recognize the MIME types for these files. By default, the Windows Server 2003 does not serve unknown MIME types. For information on how to resolve this issue please see this Microsoft support document.

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Published Date: Oct 7, 2016

WebObjects: About the WebObjects 5.3.2 Update

This article has been archived and is no longer updated by Apple.

This article contains an overview and download information for the WebObjects 5.3.2 Update. WebObjects 5.3.2 is primarily for developers who want to develop WebObjects applications with Mac OS X 10.4 using the Xcode 2.4 and the WebObjects 5.3.2 Developer Tools. The WebObjects 5.3.2 Developer tools are bundled with the Xcode 2.4 tools release. WebObjects 5.3.2 is formally qualified and supported on the Java 1.4.2 platform.

The WebObjects Current Patch List (http://docs.info.apple.com/article.html?artnum=70037) contains information on all available patches and updates for all versions of WebObjects. Read this document if you're not sure which update you need on your system.

This update addresses the issues and adds support for the features listed below:

- Security improvements
- Incompatibilities with Xcode 2.4 Developer tools on Mac OS X 10.4
- Other improvements

Starting with the Mac OS X Server 10.4, the WebObjects StartupItems mechanism for auto-starting WebObjects services migrated to launchd-based services. The documentation for deploying WebObjects applications can be found at (http://developer.apple.com/documentation/WebObjects/Deployment/Deploying_Applications/index.html). This documentation has been updated to describe the features of Mac OS X Server 10.4.

Security

As part of our security improvements, OpenBase services are not started by default. In order to start services and enable OpenBase applications, follow the steps below:

1. Open /Library/StartupItems/OpenBase/OpenBase in Terminal.app or a text editor as root (sudo in Terminal.app).
2. Uncomment the lines:
    - #/Library/OpenBase/bin/openexec
    - #/Library/OpenBase/bin/openmonitor
3. In Terminal.app, type the command:
    - SystemStarter restart
4. Open /Applications/OpenBase/OpenBaseManager.app.

    Note: if OpenBase still is not accessible, you may need to restart your computer
5. Start the databases such as WOMovies, and so forth.

JDK Support

WebObjects supports JDK 1.4.2 Update 2. However, there are no known, major incompatiblities with J2SE 5.0 Update 4 and WebObjects 5.3.2.

Notes

- If you want to use JDK 1.4 when JDK 1.5 Update 4 is already installed see this article: (http://docs.info.apple.com/article.html?artnum=75505)
- Use the latest OpenBase drivers from http://www.openbase.com to ensure the best JDK compatibility.
- When compiling WebObjects .war, single servlet directory deployment or legacy war bundle applications, make sure to set the javac compiler target and source arguments to "1.4+" to ensure compatibility with J2EE containers.

WebObjects 5.3.2 Developer for Mac OS X 10.4

System requirements

WebObjects 5.3.2 Developer requires:

- Mac OS X 10.4 or later
- Xcode 2.4 Developer tools

- Java 1.4.2 Update 2

If you have not yet updated to the necessary version of Mac OS X or Developer Tools, you must do so before installing WebObjects 5.3.2. Mac OS X 10.4 and the Xcode 2.2 Developer tools are available through Software Update and ADC downloads.

If you are creating a new Mac OS X WebObjects 5.3.2 development system, you should install the software in the following order:

1. Install Mac OS X 10.4.
2. Run the Xcode 2.4 installer.
3. Select the 'Custom Install' option.
4. Enable the WebObjects install packages.

WebObjects 5.3.2 Deployment for Mac OS X 10.4 Server

This update is available through the Software Update feature of Mac OS X. If you use this method, only the proper update for the software which you have installed on your system is visible and available for download.

System requirements

WebObjects 5.3.2 Deployment requires:

- Mac OS X Server 10.4.7 or later
- Java 1.4.2

If you are creating a new Mac OS X WebObjects 5.3.2 deployment system, you should install the software in the following order:

1. Install Mac OS X Server 10.4.7

Important: WebObjects 5.3.2 is part of the default install of Mac OS X Server 10.4.7. It is not necessary to install either the WebObjects 5.3 Server Update or WebObjects 5.3.1 Server Update.

Configuration tasks

To configure and start the WebObjects services

1. Start the Server Admin application
2. Select the WebObjects service
3. Select the settings tab
4. Configure the wotaskd and monitoring services
5. Hit the 'Start' button

Important: You do not need to manually edit the apache.conf file with the line. We have already inserted it for you.

```
# Including WebObjects Configs Include /System/Library/WebObjects/Adaptors/Apache/apache.conf
```

Troubleshooting

1. My application is throwing the exception "com.webobjects.foundation.NSForwardException for java.lang.NoClassDefFoundError: javax/servlet/ServletContext"

For some reason, the necessary packages are not in your classpath. Debug your classpath to make sure the javax.servlet.* classes are there. If the classes are not found, the resolution is to download the servlet.jar and put it into /Library/Java/Extensions or in your classpath. The servlet.jar can be found with many open source distributions, such as Apache's Tomcat.

2. How do I convert my legacy WebObjects application to build as a true war bundle?

In Xcode, configure your build settings to the following:

```
SERVLET_SINGLE_DIR_DEPLOY = NO
SERVLET_STUB_WAR = NO
SERVLET_TRUE_WAR = YES
SERVLET_DEPLOY_LICENSE = <your deployment license>
SERVLET_WEBAPPS_DIR = /Library/JBoss/3.2/deploy
```

Add the JavaWOJSPServlet.framework to your project.

You should also verify that all of your custom frameworks are being built as jar files and are installed or linked into /Library/WebObjects/lib.

3. Interface Builder and the WebObjects Assistant in Xcode is complaining about the 'Enterprise Objects' palette not being installed.

The 'Enterprise Objects' palette is not loaded by default in the Xcode 2.2 release and beyond and has been moved from an auto-loaded location in /Developer/Palettes to /Developer/Extras/Palettes. This mainly affects people building Java Client nib-based applications.

To load the palette from the new location:

1. Launch Interface Builder
2. Go to the menu item Tools --> Palettes --> Palette Preferences
3. Delete the 'Missing' Enterprise Objects palette reference
4. Add a new reference to the Palette in /Developer/Extras/Palettes

4. Some examples (ThinkMovies) crash when on a JDK 1.4 system.

The resolution is to rebuild with the JDK 1.4 compiler with the JavaBusinessLogic framework located in: /Developer/Examples/JavaWebObjects/Frameworks

Verify that the new JavaBusinessLogic framework is installed into /Library/Frameworks.

5. Java Client applications are not starting when hosted through the Tiger 10.4 Client and Server webserver

Try repopulating your webserver document root with the version found in: /System/Library/WebObjects/WODocumentRoot

Deprecation Notice

Note: As of the release of Xcode 2.4, the Cocoa Java bridge has been deprecated. This means that, while still supported with Xcode 2.4, future releases of Xcode may not support the bridge or other dependent features. As a result, the following additional WebObjects developer applications are also being deprecated:

- EOModeler
- EOModeler Plugin
- WebObjects Builder
- WebServices Assistant
- RuleEditor
- WOALauncher

This also means that the Xcode Java bridge templates have been deprecated, and should not be used for new Java bridge-based development.

Published Date: Feb 20, 2012

iWeb: Menu items are unavailable after reinstall

This article has been archived and is no longer updated by Apple.

Symptoms

When iWeb is opened after a reinstall of the original disc, many of the menu items may be unavailable and new page creation may not be possible. Also the theme selection screen may not appear if there was no existing site in iWeb.

Note: These issues could occur if the iWeb software was updated prior to a reinstall using the original disc.

Solution

When you perform a reinstall from the disc, the original version of iWeb that shipped with the computer is installed, but the Receipts from the updated version of iWeb is still in place causing Software Update not to recognize that an update is needed. To resolve this issue, simply download and install the latest version of iWeb.

Related Links

iWeb 1.1.1
Apple Support Downloads
Published Date: Oct 7, 2016

Mac OS X: Text to Speech voices can be previewed in English only

This article has been archived and is no longer updated by Apple.

Issue or symptom

You cannot preview Mac OS X's speech voices except when using the English language version of Mac OS X. In non-English language versions, the Play button is dimmed ("grayed out").

Note: Voices can speak text in any language version of Mac OS X (the words are pronounced in English regardless of the Mac OS X language version).

Solution

As a workaround, speak some text with the voice to hear what it sounds like.

Published Date: Feb 20, 2012

Using Fibre Channel switches and hubs with Apple Fibre products

This article has been archived and is no longer updated by Apple.

Apple has certified certain companies' products to function properly in conjunction with the Xserve RAID. For a listing of these companies, please see
(www.apple.com/xserve/raid/certifications.html)

- If using a Qlogic switch, please refer to "Xsan: Using QLogic switches with Apple Fibre Channel Cards."
- If using an Emulex switch, please refer to "Xsan: Configuring Emulex Switches"

When using Fibre Channel switches or Fibre Channel hubs with Apple Fibre Channel Cards (HBAs) and Xserve RAIDs in a Storage Area Network (SAN) topology such as an Xsan deployment, or in a Network Area Storage (NAS) deployment, you may need to modify the port settings to ensure constant communication between devices on the fibre network. The port settings may vary depending on whether your using a Fibre Channel switch or a Fibre Channel hub. Also, the port settings may vary depending on whether the fibre switch or hub port will connect to an Apple Fibre Channel Card or to an Xserve RAID.

In fibre network terminology, hosts such as an Xserve or a Power Mac G5 workstation are known as initiators, and storage devices such as the Xserve RAID are known as targets.

Fibre Channel switches and hubs can either create a topology called FC-SW also referred to as a “fabric﷒? of they may create a topology called FC-AL also referred to as “arbitrated loop.﷒? Contact the manufacturer of your switch to determine which topology your switch creates.

If using an Arbitrated Loop (FC-AL) switch or hub

When a device joins or leaves the Fibre Channel arbitrated loop, a Loop Initialization Process (LIP) is communicated across the fibre network to notify targets and initiators that a device has joined or left the arbitrated loop. The LIP communication will cause a temporary halt of communication on the fibre network. In order to avoid disruptions in Fibre Channel communications, it is necessary to configure your switch or hub in such a way as to prevent Initiators from receiving the LIPs.

When using Arbitrated Loop switches or hubs with Apple Fibre Channel Cards (HBAs) and Xserve RAIDs you may need to modify the switch/hub port settings to ensure constant communication between devices on the arbitrated loop. The fibre hub port settings will vary depending on whether the fibre switch/hub port will connect to an Apple Fibre Channel Card or to an Xserve RAID. On typical Fibre Channel switches/hubs, one may set port property setting to acknowledge LIPs or to not acknowledge LIPs.

If the Fibre Channel switch/hub port is connected to an Apple Fibre Channel Card, set the port property settings to not acknowledge LIPs.

If the Fibre Channel switch/hub port is connected to an Xserve RAID, set the port property settings to acknowledge LIPs.

For all other Fibre Channel switch/hub port connections, consult the manufacturer of the switch/hub.

For instructions on how to change port property settings, please consult the hub manufacturer.

Consult the manufacturer of the switch to verify that a supported version of firmware is installed on the switch.

Important: If your Initiators are nodes in a High Performance Computing Cluster, they may rely on LIPs for proper functionality.

If using a Fabric (FC-SW) switch

When a device joins or leaves the Fibre Channel fabric, a Registered State Change Notification (RSCN) is communicated across the fibre network to notify targets and initiators that a device has joined or left the fabric. The RSCN communication will cause a temporary halt of communication on the fibre network. In order to avoid disruptions in Fibre Channel communications, it is necessary to configure your switch in such a way as to prevent Initiators from receiving the RSCNs.

When using fibre switches with Apple Fibre Channel Cards (HBAs) and Xserve RAIDs you may need to modify the port settings to ensure constant communication between devices on the fabric. The fibre switch port settings will vary depending on whether the fibre switch port will connect to an Apple Fibre Channel Card or to an Xserve RAID. On typical Fibre Channel switches, one may set port property setting to acknowledge RSCNs or to not acknowledge RSCNs.

If the Fibre Channel switch port is connected to an Apple Fibre Channel Card, set the port property settings to not acknowledge RSCNs.

If the Fibre Channel switch port is connected to an Xserve RAID, set the port property settings to acknowledge RSCNs.

For all other Fibre Channel switch port connections, consult the manufacturer of the switch.

For instructions on how to change port property settings, please consult the switch manufacturer.

Consult the manufacturer of the switch to verify that a supported version of firmware is installed on the switch.

Important: If your Initiators are nodes in a High Performance Computing Cluster, they may rely on RSCNs for proper functionality.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

About Security Update 2006-004

This article has been archived and is no longer updated by Apple.

This document describes Security Update 2006-004, which can be downloaded and installed using Software Update, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred, and any necessary patches or releases are available. To learn more about Apple Product Security, visit the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to Use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Security Update 2006-004

- **AFP Server**

  CVE-ID: CVE-2006-1472

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9

  Impact: When file sharing is enabled, file and folder items may be disclosed to unauthorized users

  Description: An issue in the AFP server allows search results to include files and folders for which the user performing the search has no access. This may lead to information disclosure if the names themselves are sensitive information. If the permissions of the items allow it, the contents may also be accessible. This update addresses the issue in Mac OS X v10.3.9 by ensuring that search results only include items for which the user is authorized. For Mac OS X v10.4 systems, the issue was addressed in Mac OS X v10.4.7.

- **AFP Server**

  CVE-ID: CVE-2006-1473

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.7, Mac OS X Server v10.4.7

  Impact: When file sharing is enabled, authenticated users may cause a crash or arbitrary code execution

  Description: The AFP server contains an integer overflow that can be triggered by an authenticated user. A malicious user with access to the AFP server may be able to cause a denial of service attack or aribtrary code execution with system privileges. The AFP server is not enabled by default on Mac OS X. This update addresses the issue by performing additional validation. Credit to Dino Dai Zovi of Matasano Security for reporting this issue.

- **AFP Server**

  CVE-ID: CVE-2006-3495

  Available for: Mac OS X Server v10.3.9, Mac OS X Server v10.4.7

  Impact: When file sharing is enabled, authenticated local users may be able to access files or folders of other users through AFP

  Description: On Mac OS X Server, the AFP server supports reconnection of file sharing sessions after a network outage. The storage of reconnect keys is world-readable. It may be possible for an authenticated local user to read the reconnect keys, use them to impersonate another user over AFP, and access files or folders with the privileges of the impersonated user. This update addresses the issue by protecting the reconnect keys with appropriate file system permissions. This issue only affects Mac OS X Server.

- **AFP Server**

  CVE-ID: CVE-2006-3496

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.7, Mac OS X Server v10.4.7

  Impact: When file sharing is enabled, a maliciously-crafted AFP request may cause the AFP server to crash

  Description: An unchecked error condition exists in the AFP server that may lead to a crash. By carefully crafting an invalid AFP request, an attacker may be able to trigger this condition and cause a denial of service. This update addresses the issue by handling the formerly unchecked error condition.

- **AppKit, ImageIO**

CVE-ID: CVE-2006-3459, CVE-2006-3461, CVE-2006-3462, CVE-2006-3465

Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.7, Mac OS X Server v10.4.7

Impact: Viewing a maliciously-crafted TIFF image may lead to an application crash or arbitrary code execution

Description: Buffer overflows were discovered in TIFF tag handling (CVE-2006-3459, CVE-2006-3465), the TIFF PixarLog decoder (CVE-2006-3461), and the TIFF NeXT RLE decoder (CVE-2006-3462). By carefully crafting a corrupt TIFF image, an attacker can trigger a buffer overflow which may lead to an application crash or arbitrary code execution. This update addresses the issue by performing additional validation of TIFF images. Systems prior to Mac OS X v10.4 are affected only by the TIFF NeXT RLE decoder issue (CVE-2006-3462). Credit to Tavis Ormandy, Google Security Team for reporting this issue.

Note: A fifth issue discovered by Tavis Ormandy, CVE-2006-3460, does not affect Mac OS X.

- **Bluetooth**

  Available for: Mac OS X v10.4.7, Mac OS X Server v10.4.7

  Description: The security of the Bluetooth Setup Assistant has been improved in this update for Mac OS X v10.4.7. The length of the automatically generated passkey used for pairing has been increased from six characters to eight characters.

- **Bom**

  CVE-ID: CVE-2006-3497

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.7, Mac OS X Server v10.4.7

  Impact: Opening a maliciously-crafted archive may lead to an application crash or arbitrary code execution

  Description: An issue in Bom's compression state handling may cause heap corruption. By carefully crafting a corrupt Zip archive and persuading a victim to open it, an attacker may be able to trigger this condition which could lead to an application crash or arbitrary code execution. Note that Safari will automatically open archives when "Open `safe' files after downloading" is enabled. This update addresses the issue by properly handling such malformed Zip archives. Credit to Tom Ferris of Security-Protocols.com for reporting this issue.

- **DHCP**

  CVE-ID: CVE-2006-3498

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.7, Mac OS X Server v10.4.7

  Impact: When bootpd is enabled, a maliciously-crafted BOOTP request may cause arbitrary code execution

  Description: A stack buffer overflow exists in bootpd's request processing. By carefully crafting a malicious BOOTP request, a remote attacker may be able to trigger the overflow and cause arbitrary code execution with the privileges of the system. Note that bootpd is not enabled by default in Mac OS X, and must be manually configured in order to be enabled. This update addresses the issue by performing additional bounds checking.

- **dyld**

  CVE-ID: CVE-2006-3499

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.7, Mac OS X Server v10.4.7

  Impact: Malicious local users may influence dynamic linker output with undesirable consequences

  Description: Malicious local system users may specify dynamic linker options that cause output to standard error. This output contains informational content and potentially user-specified content. As a result, privileged applications that parse or reuse standard error may be influenced inappropriately. This update addresses the issue by ignoring the problematic dynamic linker options in privileged applications. Credit to Neil Archibald of Suresec LTD for reporting this issue.

- **dyld**

  CVE-ID: CVE-2006-3500

  Available for: Mac OS X v10.4.7, Mac OS X Server v10.4.7

  Impact: Malicious local users may influence the loading of dynamic libraries in order to gain elevated privileges

  Description: An improperly handled condition in the dynamic linker may lead to including dangerous paths when searching for libraries to load into privileged applications. As a result, malicious local users may cause the dynamic linker to load and execute arbitrary code with

elevated privileges. This update addresses the issue by properly selecting search paths when executing privileged applications. Credit to Neil Archibald of Suresec LTD for reporting this issue.

- **fetchmail**

  CVE-ID: CVE-2005-2335, CVE-2005-3088, CVE-2005-4348, CVE-2006-0321

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.7, Mac OS X Server v10.4.7

  Impact: Multiple issues in the fetchmail utility may lead to denial of service or arbitrary code execution

  Description: Several issues in the fetchmail utility were discovered. The most serious issue could lead to arbitrary code execution when fetching mail from a malicious POP3 mail server. All issues are described at the fetchmail website (fetchmail.berlios.de). This update addresses the issues by updating fetchmail to version 6.3.4. In addition, fetchmail is no longer distributed as a privileged utility.

- **gunzip**

  CVE-ID: CVE-2005-0988

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.7, Mac OS X Server v10.4.7

  Impact: Malicious local users may be able to modify permissions of files owned by another user when the command line tool gunzip is run

  Description: A race condition may allow a malicious local user to modify the permissions of files owned by another user executing gunzip. This issue is only exploitable when executing gunzip on files in directories that are modifiable by other users. This update addresses the issue by properly handling files while decompressing.

- **gunzip**

  CVE-ID: CVE-2005-1228

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.7, Mac OS X Server v10.4.7

  Impact: Decompressing maliciously-crafted files with "gunzip -N" may lead to arbitrary file replacement or creation

  Description: A directory traversal vulnerability is present in the command line utility gunzip when it is used with the non-default "-N" option. By carefully crafting a malicious compressed file and persuading a user to open it with "gunzip -N", an attacker may replace or create arbitrary files with the privileges of the victim. This update addresses the issue by properly stripping paths from files when decompressing.

- **Image RAW**

  CVE-ID: CVE-2006-0392

  Available for: Mac OS X v10.4.7, Mac OS X Server v10.4.7

  Impact: Viewing a maliciously-crafted Canon RAW image may lead to an application crash or arbitrary code execution

  Description: By carefully crafting a corrupt Canon RAW image, an attacker can trigger a buffer overflow which may lead to an application crash or arbitrary code execution. This update addresses the issue by performing additional validation of Canon RAW images. This issue does not affect systems prior to Mac OS X v10.4.

- **ImageIO**

  CVE-ID: CVE-2006-3501

  Available for: Mac OS X v10.4.7, Mac OS X Server v10.4.7

  Impact: Viewing a maliciously-crafted Radiance image may lead to an application crash or arbitrary code execution

  Description: By carefully crafting a corrupt Radiance image, an attacker can trigger an integer overflow which may lead to an application crash or arbitrary code execution. This update addresses the issue by performing additional validation of Radiance images. This issue does not affect systems prior to Mac OS X v10.4.

- **ImageIO**

  CVE-ID: CVE-2006-3502

  Available for: Mac OS X v10.4.7, Mac OS X Server v10.4.7

  Impact: Viewing a maliciously-crafted GIF image may lead to an application crash or arbitrary code execution

Description: By carefully crafting a corrupt GIF image, an attacker can trigger an undetected memory allocation failure which may lead to an application crash or arbitrary code execution. This update addresses the issue by performing additional validation of GIF images. This issue does not affect systems prior to Mac OS X v10.4.

- **ImageIO**

  CVE-ID: CVE-2006-3503

  Available for: Mac OS X v10.4.7, Mac OS X Server v10.4.7

  Impact: Viewing a maliciously-crafted GIF image may lead to an application crash or arbitrary code execution

  Description: By carefully crafting a corrupt GIF image, an attacker can trigger an integer overflow which may lead to an application crash or arbitrary code execution. This update addresses the issue by performing additional validation of GIF images. This issue does not affect systems prior to Mac OS X v10.4. Credit to Tom Ferris of Security-Protocols.com for reporting this issue.

- **LaunchServices**

  CVE-ID: CVE-2006-3504

  Available for: Mac OS X v10.4.7, Mac OS X Server v10.4.7

  Impact: Visiting a malicious web site could cause JavaScript to execute in the local domain

  Description: Download Validation may erroneously identify certain files containing HTML as "safe". If such a file is downloaded in Safari and Safari's "Open `safe' files after downloading" option is enabled, the HTML document will automatically be opened from a local URI. This would allow any JavaScript code embedded in the document to bypass access restrictions normally imposed on remote content. This update provides additional checks to identify potentially malicious file types so that they are not automatically opened. This issue does not affect systems prior to Mac OS X v10.4.

- **OpenSSH**

  CVE-ID: CVE-2006-0393

  Available for: Mac OS X v10.4.7, Mac OS X Server v10.4.7

  Impact: When remote login is enabled, remote attackers may cause a denial of service or determine whether an account exists

  Description: Attempting to log in to an OpenSSH server ("Remote Login") using a nonexistent account causes the authentication process to hang. An attacker can exploit this behavior to detect the existence of a particular account. A large number of such attempts may lead to a denial of service. This update addresses the issue by properly handling attempted logins by nonexistent users. This issue does not affect systems prior to Mac OS X v10.4. Credit to Rob Middleton of the Centenary Institute (Sydney, Australia) for reporting this issue.

- **telnet**

  CVE-ID: CVE-2005-0488

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.7, Mac OS X Server v10.4.7

  Impact: When the command line tool telnet is used to connect to a malicious TELNET server, environmental variables may be disclosed

  Description: When connected to a TELNET server, the client may send the contents of arbitrary environment variables to the server if the server requests them. Some environment variables may contain sensitive information that should not be sent over the network. This update addresses the issue by ensuring that only non-sensitive variables and variables that the user has explicitly requested are are shared with the server. Credit to Gael Delalleau and iDEFENSE for reporting this issue.

- **WebKit**

  CVE-ID: CVE-2006-3505

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.7, Mac OS X Server v10.4.7

  Impact: Visiting a malicious web site may lead to arbitrary code execution

  Description: A maliciously-crafted HTML document could cause a previously deallocated object to be accessed. This may lead to an application crash or arbitrary code execution. This update addresses the issue by properly handling such documents. Credit to Jesse Ruderman of Mozilla Corporation for reporting this issue.

- **AppKit, ImageIO**

TA24252_About_Security_Update_.pdf

CVE-ID: CVE-2006-3459, CVE-2006-3461, CVE-2006-3462, CVE-2006-3465

Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.7, Mac OS X Server v10.4.7

Impact: Viewing a maliciously-crafted TIFF image may lead to an application crash or arbitrary code execution

Description: Buffer overflows were discovered in TIFF tag handling (CVE-2006-3459, CVE-2006-3465), the TIFF PixarLog decoder (CVE-2006-3461), and the TIFF NeXT RLE decoder (CVE-2006-3462). By carefully crafting a corrupt TIFF image, an attacker can trigger a buffer overflow which may lead to an application crash or arbitrary code execution. This update addresses the issue by performing additional validation of TIFF images. Systems prior to Mac OS X v10.4 are affected only by the TIFF NeXT RLE decoder issue (CVE-2006-3462). Credit to Tavis Ormandy, Google Security Team for reporting this issue.

Note: A fifth issue discovered by Tavis Ormandy, CVE-2006-3460, does not affect Mac OS X.

Published Date: Oct 7, 2016

Final Cut Pro: Timecode Error when capturing from Canon XL H1

This article has been archived and is no longer updated by Apple.

If you're using Final Cut Pro to capture media from a Canon XL H1 via FireWire, it's possible for Final Cut Pro to report a timecode error, when actually, the tape being captured appears to have no timecode errors.

"Unable to Locate Timecode
The timecode appears to be missing from the tape.
Please verify that tape is timecoded correctly. "

Confirm the following settings before capturing:

1. Choose **Final Cut Pro > Easy Setup**.
2. From the pop-up menu choose **HDV - 1080i60 FireWire Basic**.
3. Click **Setup**.
   (Using the "Basic" variant of the HDV FireWire device control protocol with the Canon XL H1 helps to ensure greater interoperability).

Was the tape recorded on another device?
In some cases, a device may read timecode data more reliably if the tape being read was recorded on the same device (or an identical device). You can narrow down the possible cause by trying a test capture from a tape that was recorded in the XL H1.

This document will be updated as more information becomes available.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

iWeb: Some podcasting categories have been discontinued

This article has been archived and is no longer updated by Apple.

You can use iWeb to submit your podcast series to the iTunes Store, so that it appears on the Podcast page when people visit the music store online. Visitors to the music store can listen to or download your podcast for free.

In iWeb, you submit your podcast by choosing **Submit Podcast to iTunes** from the **File** menu. In the submission window, the **Category** pop-up menu allows you to select an appropriate choice from a list of categories.

Some publishing categories that appear in the Submit window have been discontinued on the iTunes Store. Discontinued publishing categories include:

- Public Radio
- International
- Talk Radio

Other categories have been renamed slightly and the structure may have changed slightly. Example: A podcast that is submitted as "Arts & Entertainment > Games" will now be automatically categorized under "Games and Hobbies" at the top level.

If you choose a discontinued or renamed category in iWeb, you will have an opportunity to select a different category in iTunes.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Final Cut Pro 5.1: About timecode accuracy with Analog-to-DV converters

This article has been archived and is no longer updated by Apple.

Summary

This document discusses an issue that can occur in Final Cut Pro when using an analog-to-DV converter device along with a third-party adapter for serial device control. This is a common configuration for using Final Cut Pro to capture media that has timecode from older analog tape formats like Beta SP, VHS, or Hi8.

Symptom

Some analog-to-DV converter devices send FireWire timecode to Final Cut Pro during capture, even when no timecode is being sent to the analog-to-DV converter. Because timecode may also be received via the serial connection, a timing mismatch can occur, potentially causing the media in and out points to be off slightly if you use the Capture Clip or Batch Capture functions.

Workaround

You can work around this problem by setting or adjusting media handles when logging clips. (For details on Logging and Capturing media, please refer to the Final Cut Pro User's Manual, available under the Help menu in Final Cut Pro).

In most cases, setting or adjusting the handle value to include an additional 15 frames should provide enough extra media to include the desired in and out points, even when conflicting timecode is received by the analog-to-DV converter during capture.

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Published Date: Feb 20, 2012

Logic Pro: User interface for plug-ins may not open

This article has been archived and is no longer updated by Apple.

Symptom

User interfaces for plug-ins on Audio Instruments sometimes do not open. When this happens, the affected plug-ins have no effect.

Solution

This occurs if plug-ins are inserted in slot 16 or higher on the Audio Instrument. Avoid using more than 15 plug-ins (besides the instrument plug-in) on any single Audio Instrument channel. If there are empty slots available before the affected plug-ins, use the hand tool in the Track Mixer to move the plug-ins to the earlier slots.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Mac OS X Server 10.4: Avoid leading spaces when renaming neighborhoods in the Network view of Workgroup Manager

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you rename a neighborhood in the Network view of Workgroup Manager so that it starts with a space, the neighborhood will not be available. The "Layout" tab will list the neighborhood, but it will not exist within the LDAP domain.

The neighborhood will not appear in the Network view in the Finder of a bound client unless you rename it, delete it, and recreate it.

Solution

Rename the neighborhood so it has no leading space(s). Then, delete the neighborhood and recreate it before it becomes available again. Only removing the leading space from the existing record will not resolve the issue.

Published Date: Feb 20, 2012

How to enable iTunes in the Windows XP Firewall

This article has been archived and is no longer updated by Apple.

When the firewall in Windows XP is enabled, it may prevent iTunes from accessing the Internet unless iTunes is listed as an exception.

To make sure that your firewall is not blocking iTunes:

1. On the **Start** menu, click **Control Panel**
2. Double-click Internet Connections
3. Right-click the network interface you use for Internet access and from the shortcut menu choose **Properties**.
4. In the Properties window, click the Advanced tab.
5. In the Windows Firewall section, click the Settings button.
6. In the Windows Firewall window, make sure that the "Don't allow exceptions" option is not selected, and then click the Exceptions tab.
7. Make sure that iTunes is checked under "Programs and Services" and click OK. If iTunes isn't listed under Programs and Services, click Add Program. If iTunes isn't listed in the Programs list, click Browse, navigate to the iTunes program (often at `C:\Program Files\iTunes\iTunes`), select it and click Open. Note that iTunes may also appear as "iTunes.exe."
8. Click OK in the "Add a Program" window.
9. Click OK in the "Windows Firewall" windows.
10. Click OK in the Properties window.

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Published Date: Oct 7, 2016

DVD Studio Pro: AC-3 (Dolby Digital) audio may not play back in HD DVD projects

This article has been archived and is no longer updated by Apple.

Summary

An HD DVD authored in DVD Studio Pro 4.1 can contain Dolby Digital Professional AC-3 and DTS compressed audio files or uncompressed (linear PCM) audio files.

Compressor 2.1 allows you to encode Dolby Digital AC-3 audio files. You can encode audio assets, containing from 1 to 5.1 channels, using the Compressor batch and preset capabilities.

Symptom

If you have encoded your assets on an Intel-based Mac, you can import AC-3 audio assets into an HD DVD project, but the tracks may not play back after you build the HD DVD.

This issue does not occur in Standard Definition DVD projects or with AC-3 files encoded on a Power-PC based Mac.

Solution

If you are compressing your DVD assets on an Intel-based Mac, use Linear PCM audio in HD DVD projects.

This document will be updated as more information becomes available.

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Published Date: Feb 20, 2012

Adjust volume for individual items in iTunes

This article has been archived and is no longer updated by Apple.

Depending on how they were created, some songs, videos, or podcasts may be louder or quieter than the other items in your library. iTunes is capable of adjusting the volume automatically so that all of your songs, videos, and podcast have the same volume using Sound Check. iTunes also has a built-in feature that lets you adjust volume levels for individual tracks. Any adjustments you make using the instructions below will stick with that item—whether you're playing them in iTunes or on an iPod.

1. In iTunes, select a song, video, or podcast you'd like to adjust.
2. From the **File** menu, choose **Get Info**.
3. Click the Options pane from the window that appears
4. Adjust the volume to desired level.

5. Click OK.

For further information on listening responsibly, please visit apple.com/sound.

Published Date: Oct 7, 2016

Xsan 1.4: Updating Open Directory for Xsan ACLs

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you plan to use access control lists (ACLs) with Xsan 1.4, and your Open Directory system that was created with Mac OS X Server 10.4.5 or earlier, you may need to update your SAN's Open Directory domain.

Only Open Directory domains created using Mac OS X Server 10.4.6 or later contain the record types needed to support ACLs. If your SAN directory domain was created using Mac OS X Server 10.4.5 or earlier, you need to run a script to add the records to the directory.

Note: This article does not apply if you use Active Directory.

Solution

Update your Open Directory domain for Xsan ACL support:

1. On the server that hosts your Open Directory domain, download the script. You can get the script from here. If your directory server is not connected to the Internet, download the file via a computer that is connected to the Internet, then copy the file to the directory server.

2. On the directory server, double-click the OpenDirectoryACLUpdate.dmg file to mount the disk image volume.
3. Open Terminal (/Applications/Utilities).
4. Execute this command to run the script as the root user:

   ```
   sudo /Volumes/OpenDirectoryACLUpdate/CreateDomainSID
   ```

5. Enter the directory domain's administrator user name and password when prompted.

Published Date: Oct 7, 2016

Final Cut Pro: Minimum Allowable Free Space setting fails with HDV

This article has been archived and is no longer updated by Apple.

Final Cut Pro's preferences include a setting that lets you set the minimum space you want to keep available on a scratch disk. If you have limited scratch disk space, you may want to set this to the amount of disk space you want available for render files. If you use most of your disk space for captured clips, you may run out of space when rendering transitions, and clips with filters or motion parameters applied to them.

If you're working with HDV, it's important to note that this setting is not respected with HDV captures. If you wish to reserve a certain amount of free space on your scratch disk when capturing HDV, you'll need to monitor disk usage yourself.

To determine how much free space is available on a hard drive, follow these steps:

1. Locate the hard drive icon in the Finder.
2. Click the icon once to highlight it.
3. Choose **File > Get Info**.
4. The amount of available free space on the disk is listed in the Info window.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

About the Xsan 1.4 Update

This article has been archived and is no longer updated by Apple.

There are two updates for Xsan 1.4: "Xsan 1.4 Update for 10.4 (PowerPC)" and "Xsan Admin 1.4 Update". An "Xsan 1.4 Uninstaller" is also available. These are available from both Apple Downloads and Software Update.

Important: Read before continuing

Before installation

- Xsan 1.1 or later is required in order to install Xsan 1.4.
- If you are setting up a new Xsan deployment, please see this article for the proper installation order.
- Be sure that all Metadata Controllers (MDCs) are updated before you make any configuration changes.
- Before installing, please review the Xsan Migration Guide.
- During installation, do not change any Xsan settings using Xsan Admin or a command-line tool.

After Installation

To prevent an inconsistent volume state, run the `cvfsck` command on each Xsan volume after the MDCs have been updated with Xsan 1.4 Update.

Metadata Controller (MDC) software version

Your MDCs must always have software versions (both Xsan and Mac OS) that are the same or more recent than the most recent client versions. Specifically, if *any* client in your Xsan network is using Xsan 1.4 with Mac OS X 10.4.7 or later, then your metadata controllers (MDCs) must also be updated to Xsan 1.4 on the same version of Mac OS X 10.4.7 or later.

Software Update Installation

Software Update may have referred you to this document. Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

A standalone installer is available from Apple Downloads.

Remote Installation

If you need to install the update on a remote computer, use the `softwareupdate` command-line tool.

Hardware Requirements

- Xserve or Xserve G5
- Power Mac G5 (any)
- Power Mac G4 (dual 800 MHz or faster)

Storage Network Requirements

- Apple Fibre Channel PCI, PCI-X, or PCI-E Card

Compatibility Matrix

See Xsan: Compatibility of SAN clients with Xsan and StorNext controllers.

What's new in Xsan 1.4

Xsan 1.4 Update for 10.4 (PowerPC)

The Xsan 1.4 update improves reliability and is recommended for all systems running Mac OS X or Mac OS X Server version 10.4 or later. It includes improvements for:

- Using file system access control lists (ACLs)
- Labeling and initializing LUNs greater than 2TB in size
- AFP and NFS performance when re-sharing Xsan volumes

- Handling file system quotas and notifications
- Compatibility with Apple and third-party applications

Xsan Admin 1.4 Update

The Xsan Admin 1.4 Update improves reliability for remotely administering, configuring, and maintaining Xsan deployments. It includes improvements for:

- Labeling and initializing Fibre Channel LUNs larger than 2 TB
- Growing Fibre Channel storage pools and volumes
- Working with multiple Xsan metadata controllers in a heterogeneous environment
- Displaying progress messages while performing lengthy operations
- Preventing manually modified configuration settings from being overwritten during a save
- Accurately reporting Fibre Channel multipathing errors

Xsan 1.4 Uninstaller

This uninstaller removes Xsan, the Xsan Admin application, and Xsan documentation files. **Note**: Before removing Xsan, you should back up all of your data and volumes.

Xsan 1.4 documentation

Xsan 1.4 administrators can find Xsan 1.4 documentation here.

Published Date: Oct 7, 2016

Mac OS X Server: Unable to add the root user to service-based ACL for SSH

This article has been archived and is no longer updated by Apple.

Issue or symptom

When using a service-based Access Control List (ACL) for ssh services, you may be unable to add the root user to the list of allowed users.

Solution

Add the root user to the ACL using niutil in Terminal.

1. Open Terminal
2. Execute this command on a single line

```
sudo dseditgroup -o edit -a root -t user com.apple.access_ssh
```

Published Date: Oct 7, 2016

Mac OS X Server: AppleShare performance tuning for client and server

This article has been archived and is no longer updated by Apple.

Learn how you can "tune" AppleShare performance for both Mac OS X client and server in this advanced article.

Client tuning

The AFP client in Mac OS X has the ability to check network latency to the server and select a network packet size based on the result. The client does this by measuring the response time of the first packet it sends to the server to open the AFP connection. This response time is measured in milliseconds and compared to configurable settings in the AFP client.

Note: The client tuning steps below do not affect a Network Home user. The client settings are only loaded after a user logs in. The Network Home user takes its defaults from the system prior to user login.

The values of all AFP client settings can be accessed in Terminal with the following command:

```
defaults read -g com.apple.AppleShareClientCore
```

The two settings that this article will cover are:

- afp_wan_threshold
- afp_wan_quantum

On a standard Mac OS X 10.4.x system, the values reported in Terminal will be zero for both values. This tells the client to use the Apple-supplied standard values of:

- "afp_wan_threshold" = 30; (milliseconds)
- "afp_wan_quantum" = 32768; (bytes) (Mac OS X 10.4.8 and 10.4.7 build 8K1079 or later)
- "afp_wan_quantum" = 8192; (bytes) (other versions of Mac OS X 10.4.7 or earlier)

If the response time is greater than the afp_wan_threshold, then the AFP client assumes that the server is either far away (possibly located across a WAN), or being accessed over a slow link. In this case, the AFP client chooses the afp_wan_quantum size for communicating with the AFP server.

If the round trip timing is less than the afp_wan_threshold, then its assumed that the server is close by (on a LAN) or being accessed through a fast link. The LAN quantum value is 128K or 131072 bytes.

Because the AFP client sets the value of afp_wan_quantum based on its first connection with the server, cases where the AFP server is experiencing loads that artificially slow it's network response time will affect all clients that connect during that time. For all clients connecting to the server on your LAN, you can set the WAN quantum equal to the LAN quantum with this single-line Terminal command:

```
defaults write -g com.apple.AppleShareClientCore -dict-add afp_wan_quantum -int 131072;
```

This command allows the AFP client to use the LAN quantum size regardless of the server's response time when the client first connected.

Please note that if your clients do connect to other servers that are not on your LAN, they will choose the 128K quantum size which can impact your user's experience with those servers. In addition, these client tuning steps will not affect a user with an AFP Network Home Directory.

Server Tuning

For servers not acting as either Network Home or Portable Home Directory servers, more than 150 users can be supported.

For best performance of the server with all connected clients, each server should have at least 2 GB of memory. AFP server maintains caches for each client of both the files that client is using and memory for network communication.

Default Server settings

In /Library/Preferences/, the file "com.apple.AppleFileServer.plist" contains the default threads setting. It is found below "maxThreads". These are the settings for different versions of the operating system:

	AFP defaults
Mac OS X Server version originally installed	**AFP threads**
Mac OS X Server 10.4 for PowerPC (any version)	40
Mac OS X Server 10.4 Universal (any version)	200

maxThreads can be increased to as much as 400 without incurring significant performance penalties (edit the .plist file in the text editor or your choice). After 400 server threads, there can be performance issues with the AFP server due to memory allocation requirements. Threads are not bound to any particular user. The server maintains a pool of threads that perform work as it arrives. Under many workloads a small number of threads can effectively serve a large number of clients. Servers that support large data I/O workloads may benefit from an increased number of threads.

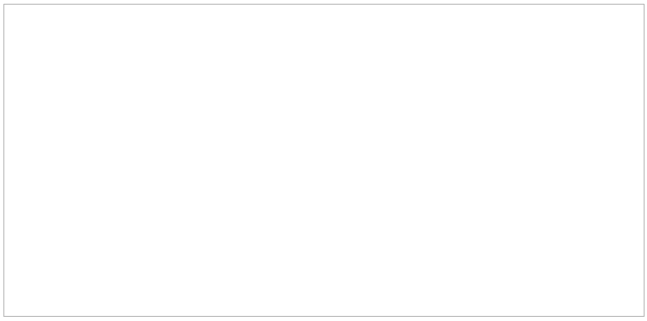
To find the optimum number of threads for your server, start with 200 and test performance and monitor bandwidth usage. Then increase threads by 50 until you reach 400 or a plateau where bandwidth does not increase with the increase in threads. It is important to note that the AFP server will not use the new threads unless it is stopped and started either using the GUI or the command line.

Tip: The the Terminal command `top`, then look for the column labeled "#TH". This number will increase as more users connect, and can be used to confirm how many threads the AFP server is actually using as you test.

Published Date: Oct 7, 2016

MacBook: White substance on memory cards or slots

Some MacBook memory cards or memory slots have a white substance on their connection surfaces.



This article has been archived and is no longer updated by Apple.

The white substance is a high-quality lubricant used by factories to facilitate installation of memory DIMMs. The grease will not damage the memory or any MacBook components.

Over time the lubricant may evaporate and become less visible. Future RAM installations will not require additional lubricant.

Note: While the grease presents no potential harm if it contacts your skin, it should be washed off using soap and warm water.

Published Date: Apr 22, 2014

Helpful?

Yes No

Start a Discussion

in Apple Support Communities

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Some Apple software may not work if your firewall is blocking UDP port 626

This article has been archived and is no longer updated by Apple.

When setting up firewalls on your local network, be sure to configure them in such a way that allows computers running Mac OS X and Mac OS X Server to communicate over UDP port 626. Local network firewalls may be configured on the computers themselves or on the Ethernet network.

Some Apple software products use this port to check whether any other computers on the same (local) network are using the same serial number. If port 626 is blocked, then certain services may not start as expected, or you may not be able to use some applications.

It is not necessary to leave UDP port 626 open on firewalls that connect a private network to the Internet.

Published Date: Feb 20, 2012

iWeb 1.x: Hyperlink text color and mouseover color cannot be changed

This article has been archived and is no longer updated by Apple.

In iWeb 1.x, the color of your text hyperlinks is determined by the template that you use for the page and cannot be changed in the Text Inspector or in the Show Fonts window.

Note: In iWeb 2.0.2 or later, it is possible to change the text and mouseover color for your text links in the Link Inspector.

Published Date: Feb 20, 2012

Final Cut Pro: About the Blackmagic Gamma filter for Final Cut Pro

This article has been archived and is no longer updated by Apple.

When using Final Cut Pro 5.x to open clips previously captured with DeckLink 4.x or older drivers, a gamma shift may be seen in the video in some cases. A filter can be used to adjust the gamma to the expected level.

Background information

Blackmagic uncompressed 8 and 10-bit codecs were originally introduced before Final Cut Pro provided its own uncompressed codecs.

Final Cut Pro 5.x provides uncompressed 4:2:2 codecs for both SD and HD video. Accordingly there is no longer a need for the Blackmagic codecs and they are no longer included with the DeckLink and Multibridge drivers.

A side effect of the switch from Blackmagic to Apple uncompressed codecs is that a gamma shift may be observed if media that was rendered with the Blackmagic uncompressed 8 or 10-bit codecs is opened in to Final Cut Pro 5.x. This is due to differences in treatment of gamma levels between the codecs.

Solution

Download and install the Blackmagic Gamma filter for Final Cut Pro. Apply this gamma filter to your legacy clips and they will now appear correctly in Final Cut Pro 5.x. You will need to render any video to which the Blackmagic Gamma filter is applied for smooth playback or output to tape.

Click this link to learn more and to download the filter from the Blackmagic website.

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Published Date: Feb 20, 2012

Remote Desktop cannot use Active Directory Groups for management

This article has been archived and is no longer updated by Apple.

After enabling directory-based administration, Remote Desktop may show an "Access Denied" status field if an Active Directory group is used for Directory Services authorization.

Symptom

When following the instructions listed in the Remote Desktop 3 Admin Guide to enable access using Directory Services, if the Administrator Access Group used resides in Active Directory then members of that group may be unable to administer the Remote Desktop clients.

Solution

Option 1

1. Bind an Open Directory Master server to Active Directory.
2. Create Remote Desktop management groups in Open Directory.
3. Add Active Directory Users or Groups to the Open Directory group.
4. Bind the client systems to both Active Directory and Open Directory.

Option 2

1. Create Remote Desktop management groups in the local NetInfo database on each client.
2. Add Active Directory Users or Groups to the local group.

Published Date: Feb 20, 2012

Mac OS X: LACP required for Link Aggregation

This article has been archived and is no longer updated by Apple.

Link aggregation allows you to aggregate or combine multiple physical links that connect your Mac to a link aggregation device (a switch or another Mac) into a single logical link. The result is a fault-tolerant link with a bandwidth equal to the sum of the bandwidths of the physical links.

Mac OS X uses the Link Aggregation Control Protocol (LACP) to negotiate the link aggregation. LACP must be supported on all link aggregation devices involved.

Published Date: Oct 7, 2016

Mac OS X 10.4.7 or later: One Preview window opens if twenty or more images are opened simultaneously

This article has been archived and is no longer updated by Apple.

Issue or symptom

In Mac OS X 10.4.7 or later, if you open more than nineteen images at once with Preview, the twentieth and successive images will open in a single window.

Solution

This is expected behavior. Use the Preview drawer to view particular images.

Published Date: Feb 20, 2012

iWeb: Hit counter may be reset after republishing a site

This article has been archived and is no longer updated by Apple.

Symptom

In some circumstances, a hit counter will reset to zero after you add or change content and republish your site.

Solution

After you make changes to your site and publish it, save your site by choosing **File** > **Save**.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Remote Desktop: Installing a package on clients that are at a login window

This article has been archived and is no longer updated by Apple.

Before installing a software package on a client via Remote Desktop, use the ARD Lock Screen command first, then install.

After installing the software, restart any client computers that are at the login window.

Additional information

When installed at the login window, some packages installers will display a dialog which will allow the client to login as root even though the login window is still displayed. Because of this, you should restart the client computers when running a package installation task to prevent any unauthorized users from obtaining root access.

Published Date: Feb 20, 2012

Remote Desktop: Unable to install because a later version is already installed

This article has been archived and is no longer updated by Apple.

Issue

When running the Remote Desktop 2.0 installer and choosing a volume to install to, the installer may state that a more recent version of the software is already installed.

This can happen after a client is installed using a Custom Remote Desktop Installer package (via Remote Desktop Admin), and then tries to install from the Remote Desktop 2.0 CD.

Solution

Remove the following items, then run the Remote Desktop 2.0 installer again:

- /Library/Receipts/PantherSharing.pkg
- /Library/Receipts/RemoteDesktopClient220.pkg

Published Date: Feb 20, 2012

Remote Desktop 2: Copy Items task fails if the file‘s owner name is longer than 8 characters

This article has been archived and is no longer updated by Apple.

Issue

When copying items whose owner's short name is longer than 8 characters, the copy task may fail.

Solution

Change the ownership of the file(s) being copied to a user who's short name is 8 or fewer characters long.

Published Date: Feb 20, 2012

Remote Desktop 2: How to use ssh tunneling to control a VNC Server

This article has been archived and is no longer updated by Apple.

Learn how to use Remote Desktop 2 to control a VNC Server via an ssh tunnel.

Note: If you don't have the AppleVNCServer running on your machine, you can forward port 5900 and skip step 4.

1. Open an ssh connection to a remote computer to port forward the port:

   ```
   ssh -L 5910:remoteserver.apple.com:5900 -f -N user@remoteserver.apple.com
   ```
2. Enter the password as you would in a typical ssh connection.
3. Open Remote Desktop and add 127.0.0.1 to the list with the name and password of the remote machine. Add to the list without verifying the password.
4. Get Info on the computer you added and click the Edit button.
5. Add the port number from step 1 (in this example, 5910). Be sure to add a colon between the IP Address and the port number, such as "127.0.0.1:5910".
6. Click Done. When you control or observe the "127.0.0.1" machine, you will be accessing the remote computer.

Note: Remote Desktop 3 introduces an option to encrypt all network data, which uses an ssh tunnel when controlling or observing.

Published Date: Feb 20, 2012

Mac OS X 10.3, 10.4: Preventing users from opening non-approved applications via a URL

This article has been archived and is no longer updated by Apple.

Issue or solution

Users can be restricted from opening certain applications using Parental Controls and Workgroup Manager but applications will still be able to open and launch restricted applications. Opening an application from another application is called "sub-launching".

Solution

On Mac OS X 10.3 or later-based computers bound to Mac OS X Server, you can allow or disallow sub-launching by using the following steps on the server:

1. In Workgroup Manager, select a user, group, or computer list.
2. Click Preferences, then Applications.
3. Select the "Allow approved applications to launch non-approved applications" checkbox to enable sub-launching, or deselect the option to disable it.

On Macintosh computers running Mac OS X 10.4 or later, you can use Parental Controls in Accounts preferences to disable sub-launching. Deselect the "Allow supporting programs" checkbox (in Finder & System).

Note: On Mac OS X 10.3-based client computers, sub-launching cannot be disabled through System Preferences.

Published Date: Oct 7, 2016

Logic becomes unresponsive when connecting to a network location

This article has been archived and is no longer updated by Apple.

Symptom

Logic may stop responding when you try to connect to a network location from a file selector window within Logic.

Solution

Open the connection to a network location in the Finder before trying to browse to it from within Logic.

Published Date: Feb 20, 2012

Xsan: "wheel" is the group owner of files created on an Xsan volume

This article has been archived and is no longer updated by Apple.

In Mac OS X and Mac OS X server, when creating files and folders, group ownership is automatically set to match the group ownership of the parent folder. However, by default, Xsan volumes have their group ownership set to "wheel". As a result, all files and folders created on an Xsan volume have group ownership set to "wheel".

If this does not suit your site's workflow, manually change a folder's group ownership to another group in the Finder.

After changing the group ownership on a folder, all files and folders created within the folder will have group ownership set to match the parent folder's group ownership.

Published Date: Feb 20, 2012

iLife: Alert message appears when attempting to share media between applications

This article has been archived and is no longer updated by Apple.

Issue or symptom

When attempting to use the Share feature of an iLife application, you are unable to send the media between the applications because an unexpected error occurs.

Examples:

- When attempting to share or export a slideshow from iPhoto, an alert message appears, "An error occurred while exporting the slideshow. The export movie file could not be created."
- When attempting to send a movie from iMovie to iDVD, an alert message appears, "The movie could not be sent to iDVD, because of an unknown error. Please make sure that iDVD is properly installed so that your project disk has write permission and that you have enough disk space. Error 0".
- When attempting to share files from iMovie or iPhoto to iDVD, the iDVD project opens, but will not save. No alert message is displayed.
- When attempting to share a movie from iMovie to iTunes for use on your iPod, an alert message appears: "Movie could not be sent to iTunes because of an unknown error. Error 0".

Solution

Make sure that you have the following folders in your home folder, and that you have read/write permissions for these folders:

- Documents
- Music
- Photos
- Movies

If these folders are missing or renamed, you may not be able to send media between iLife applications.

Related Document

300381: "Don't rename or move iLife applications"

Published Date: Feb 20, 2012

Remote Desktop: Controlling a computer that has stopped responding

This article has been archived and is no longer updated by Apple.

Issue or symptom

When controlling a computer via ARD 2.0 or later that has lost power or has stopped responding, the control session may remain active on the Remote Desktop Admin computer.

Solution

You can dismiss the control session by closing the control window or clicking the "Exit control or observe session" button when using full screen mode. If the client comes back online while the control session is still active, it may automatically reconnect.

Note that the 'Trying to reconnect...' message does not display during this time.

Published Date: Feb 20, 2012

Logic: Clicks and pops when playing instruments live

This article has been archived and is no longer updated by Apple.

Symptom

The output from Audio Instruments may have clicks, pops, and crackles during a live performance.

Solution

This issue can be caused by brief spikes in processor load required by some instrument or effect plug-ins at high sample rates and/or low buffer sizes. These processor overloads will usually not show up in Logic's Audio Performance meter. Raise the audio driver buffer size or reduce the song sample rate to resolve the issue.

To raise the audio driver buffer size choose **Logic Pro > Preferences > Audio > Drivers** and set the next higher value for the "I/O Buffer Size" setting.

Published Date: Feb 20, 2012

iPhoto: Burning a disc when more than one optical drive is connected

This article has been archived and is no longer updated by Apple.

Summary

iPhoto may not be able to burn a disc if the computer has more than one optical drive available.

Symptom

When burning a disc from iPhoto, you are prompted to insert recordable media. Both optical drive trays may open. In this case, no matter which tray you insert the recordable media into, iPhoto does not find the inserted disc, but instead cancels the burning process.

Solution

To avoid this issue, insert your blank media into one of the drives before you select the option to burn a disc in iPhoto. Close any drive trays that are opened. If you are prompted by the Finder that you have inserted blank media, click Ignore in the dialog that appears. Then select the option to burn in iPhoto.

Published Date: Feb 20, 2012

About Security Update 2006-004 for Mac Pro

This article has been archived and is no longer updated by Apple.

This document describes Security Update 2006-004 for Mac Pro, which can be downloaded and installed using Software Update, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred, and any necessary patches or releases are available. To learn more about Apple Product Security, visit the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to Use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Security Update 2006-004 for Mac Pro

Security Update 2006-004 was released on August 1, and details are available via:
http://docs.info.apple.com/article.html?artnum=304063

Mac Pro computers ship with Mac OS X v10.4.7 Build 8K1079. Also, the existing Xserve hardware now includes Mac OS X Server v10.4.7 Build 8K1079.

The fixes provided in Security Update 2006-004 (August 1 release) are contained in Build 8K1079, with the exception of the ones listed below for ImageIO and OpenSSH. The fixes for these issues were not fully tested in time for the manufacturing of the Mac Pro, and are being provided via this security update.

This update is a proper subset of the full Security Update 2006-004 released on August 1. Existing systems that have already applied Security Update 2006-004 (Aug 1 release) do not need to install this update.

The following security fixes are provided only for systems running Mac OS X v10.4.7 Build 8K1079 or Mac OS X Server v10.4.7 Build 8K1079 to reach the full security level provided with Security Update 2006-004 (August 1 release).

- **ImageIO**

  CVE-ID: CVE-2006-3459, CVE-2006-3461, CVE-2006-3462, CVE-2006-3465

  Available for: Mac OS X v10.4.7 Build 8K1079, Mac OS X Server v10.4.7 Build 8K1079

  Impact: Viewing a maliciously-crafted TIFF image may lead to an application crash or arbitrary code execution

  Description: Buffer overflows were discovered in TIFF tag handling (CVE-2006-3459, CVE-2006-3465), the TIFF PixarLog decoder (CVE-2006-3461), and the TIFF NeXT RLE decoder (CVE-2006-3462). By carefully crafting a corrupt TIFF image, an attacker can trigger a buffer overflow which may lead to an application crash or arbitrary code execution. This update addresses the issue by performing additional validation of TIFF images. Systems prior to Mac OS X v10.4 are affected only by the TIFF NeXT RLE decoder issue (CVE-2006-3462). Credit to Tavis Ormandy, Google Security Team for reporting this issue.

  Note: A fifth issue discovered by Tavis Ormandy, CVE-2006-3460, does not affect Mac OS X.

- **OpenSSH**

  CVE-ID: CVE-2006-0393

  Available for: Mac OS X v10.4.7 Build 8K1079, Mac OS X Server v10.4.7 Build 8K1079

  Impact: When remote login is enabled, remote attackers may cause a denial of service or determine whether an account exists

  Description: Attempting to log in to an OpenSSH server ("Remote Login") using a nonexistent account causes the authentication process to hang. An attacker can exploit this behavior to detect the existence of a particular account. A large number of such attempts may lead to a denial of service. This update addresses the issue by properly handling attempted logins by nonexistent users. This issue does not affect systems prior to Mac OS X v10.4. Credit to Rob Middleton of the Centenary Institute (Sydney, Australia) for reporting this issue.

Published Date: Oct 7, 2016

Safari: Downloaded file‘s filename may have an additional extension

This article has been archived and is no longer updated by Apple.

Issue or symptom

When you download files in Safari, an extra filename extension may be added.

For example, if you download a JPEG (.jpg) file, the downloaded file might be named "filename.jpg.html" instead of "filename.jpg".

Solution

If the filename extension added by Safari is not accurate, delete the extension from the file name and the file should open in the correct application. If it does not, use Get Info in the Finder to force the file to open with a certain application, such as described here.

Additional information

Safari might add these extensions based on information received from the website about the file type. If file type sent by the server does not match the extension, Safari may append an extension to ensure the file is recognized by the Finder.

Published Date: Feb 20, 2012

iMac (Early 2006), MacBook Pro, MacBook Pro (17-inch) may stop responding when external display is rotated to 90 degrees

This article has been archived and is no longer updated by Apple.

Symptom

With an external display connected and rotated to 90° (degrees), the computer may become unresponsive when viewing certain multimedia content on the external display.

Solution

Restart the computer to resolve the issue.

Update to Mac OS X 10.4.9 to prevent this issue.

Published Date: Feb 20, 2012

Mac OS X 10.2.8 or earlier: Japanese PS printer always prints at A4 paper size even if Custom Paper Size is set

This article has been archived and is no longer updated by Apple.

In Mac OS X 10.2.8 or earlier, a Japanese PostScript printer always prints with an A4 paper size even if Custom Paper Size is set.

Published Date: Oct 7, 2016

AppleWorks 6: Can‘t install due to privileges alert

This article has been archived and is no longer updated by Apple.

Symptom

When you attempt to install AppleWorks 6 in Mac OS X, you may receive this alert message during the installation:

> "You do not have enough access privileges for this installation" error code 1008:5,-5000

Solution

This indicates a permissions issue in a location where AppleWorks is attempting to install an item. Be sure that you are installing as an administrator and that you have read/write access to the Applications folder. You may also want to try using the "Fix Disk Permissions" option in Disk Utility.

In addition to this, if you have a Classic System Folder (Mac OS 9) on your hard disk, you should choose **Fix OS 9 Permissions** from the **File** menu in Disk Utility. This option is different from the general "Fix Disk Permissions" option in the Disk Utility window.

Published Date: Feb 20, 2012

Boot Camp Beta 1.1: VGA adapters, Mini-DVI adapters are not supported

This article has been archived and is no longer updated by Apple.

Issue or symptom

With Boot Camp Beta 1.1 and Windows XP, VGA adapters are not supported, even if they work in Mac OS X. For example, you cannot use displays, projectors, or TV output devices if they require a VGA adapter.

Video output over Mini-DVI adapters for MacBook computers, or DVI-to-VGA adapters for MacBook Pro computers, is also not supported even if it works in Mac OS X.

Solution

If your VGA-based device connects directly to your Mac with no adapter, it should work.

This document will be updated as more information becomes available.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Mac OS X Server 10.3, 10.4: Open Directory Failover may not succeed until Open Directory Clients are restarted

This article has been archived and is no longer updated by Apple.

Issue or symptom

After configuring Mac OS X Server to be an Open Directory Replica, Open Directory Failover may not succeed until Open Directory clients are restarted.

Solution

Restart existing Open Directory Clients to allow them to failover to the new Open Directory Replica.

Published Date: Oct 7, 2016

DVD Studio Pro: QuickTime and Simulator display incorrect gamma for MPEG-2 HD DVD content

This article has been archived and is no longer updated by Apple.

Issue or symptom

When comparing your source video to encoded HD DVD MPEG-2 assets, it may appear that the levels have shifted and that the image is darker after compression. This is the result of incorrect gamma interpretation by QuickTime Player and the DVD Studio Pro Simulator.

Solution

HD DVD's authored in DVD Studio Pro won't demonstrate this gamma shift when played in a set-top player.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

About the security content of Xsan Filesystem 1.4

This article has been archived and is no longer updated by Apple.

This document describes the security content of Xsan Filesystem 1.4, which can be downloaded and installed using Software Update, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred, and any necessary patches or releases are available. To learn more about Apple Product Security, visit the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to Use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Xsan Filesystem 1.4

- **Xsan**

  CVE-ID: CVE-2006-3506

  Available for: Mac OS X v10.4.7, Mac OS X Server v10.4.7

  Impact: Malicious users may be able to cause systems using Xsan to crash or execute arbitrary code

  Description: A buffer overflow may occur in the Xsan Filesystem driver when processing a path name. A malicious user with write access to an Xsan volume may be able to trigger the overflow on systems directly attached to Xsan. This could lead to a system crash or arbitrary code execution with system privileges. This update addresses the issue by performing additional validation of path names. Credit to Andrew Wellington of the Australian National University for reporting this issue.

Published Date: Oct 7, 2016

Xsan: Some file and folder names may not be readable on Windows or Linux

This article has been archived and is no longer updated by Apple.

Issue or symptom

Files and folders with names that contain 2-byte characters may appear incorrectly when created on Xsan and viewed from Microsoft Windows or Linux, or vice-versa.

Note: 2-byte characters are commonly used in Japanese, Chinese, and Korean fonts.

Solution

Rename the file or folder so that it contains only ASCII characters.

This document will be updated as more information becomes available.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

PowerPC G3-based Macs do not support Mac OS X Server 10.4.7 (Universal) retail box

This article has been archived and is no longer updated by Apple.

Issue or symptom

The retail box version of Mac OS X Server 10.4.7 (Universal) does not support PowerPC G3-based Macs, but Mac OS X Server 10.4 (non-universal) updated to version 10.4.7 does support PowerPC G3-based Macs.

Solution

Mac OS X Server 10.4 (non-universal) install media and software updates work on G3 based Macintosh computers. Consult your Mac OS X Server documentation for information about supported configurations.

Published Date: Oct 7, 2016

Boot Camp Beta 1.1: Windows XP boots to a blue screen

This article has been archived and is no longer updated by Apple.

Issue or symptom

After installing Windows XP using Boot Camp Assistant, Windows XP may start to a blue screen.

Solution

1. Restart Windows while holding the F8 key (Safe Mode).
2. Select the choice "Last Known Good Configuration."
3. When prompted, choose Microsoft Windows XP Home or Professional.
4. Boot back into Windows.
5. Reinstall drivers from the Macintosh Drivers CD you made before installing Boot Camp Beta.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

AirPort: Issues connecting to third-party wireless access points using proprietary speed enhancement options

This article has been archived and is no longer updated by Apple.

Issue or symptom

Some third-party wireless network access points offer proprietary non-standard speed boosting modes that only work with wireless client cards from the same vendor. If you have an access point that uses these special modes, they may cause issues for your standards-based AirPort wireless cards. If you have any issues, check the wireless setting on your third-party router and disable any specialized modes.

Solution

If you encounter any issues connecting wirelessly to your third-party access point, try disabling AirPort on your computer and connect to the wireless access point with an ethernet cable. Review the settings and disable any special, proprietary speed boosting features. You may need to contact the vendor of your access point for assistance with the configuration changes.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Mac Pro: Video frame rate appears to be slow in some programs

This article has been archived and is no longer updated by Apple.

If you are running Mac OS X 10.4.7 on your Mac Pro and notice that the video in some programs or games appears to be slow, check the Mac OS X build number. The build number is available in the About This Mac window. To locate the build number:

- From the Finder, go to the Apple menu and select About This Mac.
- When the About This Mac window appears, click on the gray text that says "Version 10.4.7" directly under the large words "Mac OS X".
- This will toggle the text to give you the build number. It should say "Build 8K1079" or something similar.

If your build number is 8K1054 or anything less than 8K1079, use the Install discs that came supplied with your computer to perform an Archive and Install. This will update your computer's version of Mac OS X to Build 8K1079 and should improve the video performance.

Published Date: Feb 20, 2012

About the Mac OS X 10.4.8 Update (delta)

This article has been archived and is no longer updated by Apple.

The Mac OS X 10.4.8 Update (delta) updates Mac OS X 10.4.7 to version 10.4.8 on both Intel-based Macs and PowerPC-based Macs. (If you are updating from *Mac OS X 10.4, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, or 10.4.6* to 10.4.8, see this article instead.)

Important: Please read before installing.

- After installing the delta version of this update on an Intel-based Mac, the computer will restart two times--the first restart after installing this update may take several minutes; please allow it to complete.
- You may experience unexpected results if you have third-party system software modifications installed, or if you've modified the operating system through other means. (This does not apply to normal application software installation.)
- The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to update.
- If issues occur during installation--for example, Software Update quits unexpectedly, please see this article.

Installation

There are two ways to update to Mac OS X 10.4.8: Use Software Update or the standalone installer. You only need to use *one* of these methods to update your computer.

Automatic Software Update

Software Update, located in the **Apple** menu, will automatically download the latest Apple software. (Software Update might have linked you to this article to learn more about the update.) Note that the update's size may vary from computer to computer when installed using Software Update. Some updates must be installed prior to others, so you may need to run Software Update more than once to get all of the available updates.

Standalone installer

Download the update installer and run it manually. This a useful option when you need to update multiple computers but only want to download the update once. Two versions of the standalone installer are available from Apple Downloads: a delta and combo.

- The delta update for PowerPC and Intel-based Macs installer (described here) updates Mac OS X 10.4.7 to 10.4.8.
- The combo update installer (described in this article) updates Mac OS X 10.4, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, 10.4.6, and 10.4.7 to 10.4.8.

What's included?

This update offers many improvements, including the following, which apply to both Intel- and Power-PC-based Macs unless otherwise noted:

Printing

- Adds support for CDSASSL (Common Data Security Architecture Secure Sockets Layer) printer connections.
- Addresses an issue for Mac OS X 10.4.7 in which some documents containing some Chinese or Korean language characters might not print as expected.

Finder and Apple applications

- Resolves an issue in which a Finder alert message with the buttons "Initialize", "Ignore", and "Eject" might not appear after connecting a partitioned FireWire hard drive.
- Addresses a potential issue in which Preview may unexpectedly quit.
- Improves reliability of iTunes syncing with certain iPod models.

Networking and modem

- Resolves performance issues that could occur when connecting to a Comcast network.
- Improves security by adding support for EAP-FAST for AirPort wireless authentication.
- Improves Express Card behavior for portable Intel-based Macs.
- Improves reliability for connections made in Ireland with an external Apple USB Modem.
- Improves connection reliability for external Apple USB Modems when resuming an Internet connection after answering an incoming call.
- A computer restart is no longer needed to restart nfsd.
- Improves Apple File Sharing client performance by changing the default AFP WAN quantum size.. More...

- Windows File Sharing now generates only one process, avoiding an issue that could cause a Mac OS X computer to become unresponsive if it won a master browser election.
- Improves reliability when faxing in France or Belgium via an external Apple USB Modem.

Third-party

- Resolves an issue for Microsoft Word in which Word might stop responding when saving a file that uses certain OpenType fonts.
- Adds RAW image decoding support for these cameras: Sony DSLR-A100, Nikon D2Xs, Fuji FinePix S2 Pro, Fuji FinePix S3 Pro (+Highlights) and Konica Minolta 7.
- Resolves an issue in which thumbnails may appear blank when importing RAW images from a Canon 30D camera.
- Resolves an issue for Microsoft PowerPoint in which the display resolution might not change as expected after switching from a PowerPoint presentation to a different application via Command-Tab.
- Improves compatibility for Canon EOS Utility software after connecting a Canon EOS Kiss Digital camera to a PowerPC-based Mac.
- Improves compatibility for the TV Tracker 2 Dashboard widget.

Other

- Includes recent Apple security updates.
- Improves the accuracy of Rosetta numerics and addresses Altivec translation issues on Intel-based Macs.
- ColorSync matching no longer fails when using a V4 ICC profile in an application opened with Rosetta on an Intel-based Mac.
- Addresses an issue in which some USB devices connected to a PCI card may not be recognized after starting up or waking the computer.
- Resolves an issue in which external USB-based video cameras may not be available after quitting the application that is using it.
- Reduces time needed to transfer data from a USB-based image scanner.
- Improves responsiveness of the Translation Dashboard widget.
- Addresses an issue in which text typed with the Hangul input method may not be visible while the Caps Lock key is active, on PowerPC-based Macs.
- Adds support on Intel-based Macs for multiple cores to LAPACK and BLAS routines in the Accelerate framework; the maximum number of threads used by Accelerate BLAS routines is now limited by the environment variable VECLIB_MAXIMUM_THREADS; addresses an issue with some complex BLAS routines in the Accelerate framework that were encountering an illegal instruction.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

About the Mac OS X Server 10.4.8 (PowerPC) Update (combo)

This article has been archived and is no longer updated by Apple.
This software updates Mac OS X Server (PowerPC) versions 10.4, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, 10.4.6 and 10.4.7 to Mac OS X Server 10.4.8. It is a "combo" update that combines fixes delivered with versions 10.4.1 through 10.4.8. If you already have Mac OS X Server 10.4.7 (PowerPC), you can download a smaller update to update to version 10.4.8.

The 10.4.8 Server Update is recommended for all servers and includes fixes for the operating system and various applications, services and technologies. **Note**: The Mac OS X 10.4.8 Update (for *client* Macs) also includes fixes for the AFP client software. Apple recommends installing this update on client machines in conjunction with updating Mac OS X Server.

Important: Please Read Before Installing

- After installing this update, the computer will restart two times.
- You must have an administrator account password that does not contain spaces or Option-keyed characters to install this update. The password may not be left blank (you can change your password if needed).
- You may experience unexpected results if you've installed third-party system software modifications, or if you have modified the operating system through other means. This doesn't apply to normal software installation.
- The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.
- This update can be installed on non-startup volumes, but you should only do this if the current startup volume has already been updated to Mac OS X Server 10.4.8. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are two ways to update to Mac OS X Server 10.4.8: Use Software Update or install from a standalone installer.

Software Update Installation
Software Update may have referred you to this document. For more information on this feature, see "How to Update Your Software."

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Note: This version of Mac OS X Server is built as a multi-package and should not be used with Software Update's "Download Only" and "Install and Keep Package" options. If you need to save these packages for later use, try the manual update instead.

Standalone Installer
A standalone installer is also available from Apple Downloads.

Remote Installation
If you need to install the update on a remote computer, you can do so using the softwareupdate command-line tool.

What's included?

This update delivers many fixes. Because this is a combo update, it includes fixes delivered with the Mac OS X Server 10.4.8 delta update as well as these previous Mac OS X Server 10.4.x updates: 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, 10.4.6, and 10.4.7.

Published Date: Oct 7, 2016

About the Mac OS X Server 10.4.8 (PowerPC) Update (delta)

This article has been archived and is no longer updated by Apple.

This software updates Mac OS X Server 10.4.7 (PowerPC) to version 10.4.8. **Note**: PowerPC-based Macintosh Servers with Mac OS X Server (Universal) 10.4.7 installed should use the Mac OS X Server (Universal) 10.4.8 Update instead.

Important: Please Read Before Installing

- You must have an administrator account password that does not contain Option-keyed characters to install this update. The password may not be left blank (you can change your password if needed).
- You may experience unexpected results if you've installed third-party system software modifications, or if you have modified the operating system through other means. This doesn't apply to normal software installation.
- The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.
- This update can be installed on non-startup volumes, but you should only do this if the current startup volume has already been updated to Mac OS X Server 10.4.8. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

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Software Update installation

Software Update may have referred you to this document. For more information on this feature, see "How to Update Your Software."

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Note: Do not use the "Download Only" or "Install and Keep Package" options in Software Update. The resulting download will not install on your server. If you need a standalone installer, follow the instructions in the next section.

Standalone installer
A standalone installer is also available from Apple Downloads. The Mac OS X Server 10.4.8 (PowerPC) Update specifically updates version 10.4.7 (PowerPC) to version 10.4.8. There is also a combo update installer available, which will update any version of Mac OS X Server 10.4 (PowerPC) to 10.4.7.

Remote installation
If you need to install the update on a remote computer, you can do so using the "softwareupdate" command-line tool or the Server Admin application. Information about the Server Admin application can be found here.

What's included?

Apple File Service (Server)

- Addresses Apple File Server performance, particularly on servers with many sharepoints.

Apple File Service (Client)

- Reduces load on server when copying large files.
- Increases the default WAN quantum value to 32678. More...

NetBoot/Netinstall

- Added latest hardware releases (as of this update) to Model Filters within System Image Utility.

NFS

- Fixes a socket handling issue that could prevent nfsd from restarting.

Password Server

- Addresses a potential issue in CFArrayRemoveAllValues.
- Addresses an issue for 10.4.6 and 10.4.7 that prevented saving changes to the Password Server security policy.

Networking

- Adds support for TCP Selective Acknowledgments to improve performance on congested networks.

Windows File Service

- SMB server now honors membership in 16 or more groups.

Other

- Eliminates extraneous system log messages such as the following during password server replication: "/usr/bin/gzip: stat on /var/db/authserver/syncfile1150955872.635883: No such file or directory".

This update also includes security updates for Mac OS X Server 10.4. For detailed information on Security Updates, please visit this website: http://www.info.apple.com/kbnum/n61798.

Published Date: Oct 7, 2016

About the Mac OS X Server 10.4.8 (Universal) Update

This article has been archived and is no longer updated by Apple.

This software updates Mac OS X Server 10.4.7 (Universal) to version 10.4.8. **Note**: If you have PowerPC-based Macintosh Servers with Mac OS X Server 10.4.7 (non-Universal) installed, you should use the Mac OS X Server (PowerPC) 10.4.8 Update instead.

Important: Please Read Before Installing

- After installing this update, the computer will restart two times—the first restart after installing this update may take several minutes; please allow it to complete.
- You must have an administrator account password that does not contain Option-keyed characters to install this update. The password may not be left blank (you can change your password if needed).
- You may experience unexpected results if you've installed third-party system software modifications, or if you have modified the operating system through other means. This doesn't apply to normal software installation.
- The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.
- This update can be installed on non-startup volumes, but you should only do this if the current startup volume has already been updated to Mac OS X Server 10.4.8. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are two ways to update to Mac OS X Server (Universal) 10.4.8: Use Software Update or install from a standalone installer.

Software Update Installation

Software Update may have referred you to this document. For more information on this feature, see "How to Update Your Software."

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone installer
A standalone installer is also available from Apple Downloads. The Mac OS X Server 10.4.8 (Universal) Update specifically updates version 10.4.7 (Universal) to version 10.4.8.

Remote installation
If you need to install the update on a remote computer, you can do so using the "softwareupdate" command-line tool or the Server Admin application. Information on the Server Admin application can be found here.

What's included?

This update delivers many fixes.

AFP Server

- Fixes a race condition in AFP's buffer handling code for Intel-based servers.

Filesystem

- Increases the maximum number of vnodes on servers with at least 2 GB of RAM

NetBoot/Netinstall

- Added latest hardware releases (as of this update) to Model Filters within System Image Utility.

Networking

- Adds support for TCP Selective Acknowledgments to improve performance on congested networks.

NFS

- Fixes a socket handling issue that could prevent nfsd from restarting.

QuickTime Streaming Server

- Enables streaming movies to localized versions of the QuickTime Player

Xsan

- Resolves a potential kernel panic issue when operating with Xsan and other memory-intensive kernel extensions.

This update also includes the standalone security updates released since Mac OS X Server 10.4.7. For detailed information on Security Updates, please visit this website: http://www.info.apple.com/kbnum/n61798.

Published Date: Oct 7, 2016

Mac Pro, Xserve (Late 2006) and Xserve (Early 2008): Doesn‘t boot over 2 GB Fibre Channel card

This article has been archived and is no longer updated by Apple.

The LSI 7202EP HB card is available for the Mac Pro as a configure-to-order option.

The Mac Pro accesses the disk subsystem attached to this card while booted from the internal drive, but booting to drives attached to this card is not supported.

Published Date: Oct 7, 2016

Mac OS X 10.3.9: Disk Utility "Image/device is too large" alert

This article has been archived and is no longer updated by Apple.

Issue or symptom

In Mac OS X 10.3.9, Disk Utility may fail when trying to create an image from a device if the device's capacity is larger the 8 GB -- a "Image/device is too large" alert appears in Disk Utility when this happens.

Solution

Use one of these workarounds:

- Use the "Image from Folder..." option in Disk Utility instead.

  or

- Start from an external drive that contains a version of Mac OS X 10.3 earlier than 10.3.9. Then, use Disk Utility from the external drive to image the device.

  or

- Image the device from a Mac OS X 10.4 Tiger-based computer.

Published Date: Oct 7, 2016

Final Cut Studio: About external video-monitoring conflicts

This article has been archived and is no longer updated by Apple.

Summary

Some of the applications included with Final Cut Studio are able to display output to an external video device. Viewing such output on a precisely calibrated monitor is the best way to accurately evaluate color and framing of material that is intended to be viewed on a television. Apple Qualified video interfaces are evaluated with each of the Final Cut Studio applications that can access them for output. Other applications, such as iMovie HD and Final Cut Express also allow external video monitoring.

Issue

It's possible for a minor conflict to arise if a Final Cut Studio application is running at the same time as another application, which also uses external video output. If both applications are set to access the same video output device in such a case, switching directly from one application to another may cause unexpected results. In many cases, you might see an alert message, such as this one:

The video output device could not be opened.

This situation is merely a display characteristic; it won't affect your projects or your media.

Solution

In unusual instances, if the application has lost contact with the video interface, you can simply quit the application, then open it again. If you're working in two Final Cut Studio applications that require video output from the same device, you can quit the first application prior to opening the second.

If both applications need to be running simultaneously, you can set one of the two applications so that it will not output video. This should allow you to actively move between the applications with ease. Check the user guide under the Help menu for specific steps for each application.

Published Date: Feb 20, 2012

Mac OS X: Exposé puts all open windows in one row

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you have several open windows that are lined up together and invoke Exposé, the windows will be shown in a single row (line) across the screen. For example, if the open windows are all touching the Mac OS X menu bar.

Solution

Move any one of the windows slightly so that is it not inline with the other windows, then invoke Exposé again.

Published Date: Feb 20, 2012

Desktop Printer Utility: No Mac OS 8.0 Support

When I launch the Desktop Printer Utility I receive the error "This version of Desktop Printer Utility does not work with Mac OS 8.0" but I updated to 8.1 and still get the message.
This article has been archived and is no longer updated by Apple.
Desktop printer Utility is not currently supported under Mac OS 8.0. Therefore, if you are running Mac OS 8, this error message is correct. You should upgrade to Mac OS 8.1 or later for access to Desktop Printer Utility.

If you are running any other system software version such as 7.6.1 or 8.1 and you encounter this error message, be certain you have the desktop printer spooler and desktop printmonitor active in the extensions folder. Having these extensions disabled will cause the misnomer to occur.
Published Date: Feb 20, 2012

Motion 2.1: Rendering issues in 16-Bit projects on Mac Pro

This article has been archived and is no longer updated by Apple.

Issue or symptom

Motion 2 supports the following project bit depths:

- 8-Bit integer
- 16-Bit Float
- 32-Bit Float

When working in 16-bit float on a Mac Pro with either the NVIDIA GeForce 7300 GT or the ATI Radeon 1900 XT, you may notice the following issues:

- Dark outlines on text or shape object edges
- Slight Luminance shifts
- Feather size grows when using multiple shapes

Solution

Avoid using 16-bit bit-depth if you are working with the above configuration.

For high quality rendering, use the 32-bit float setting in your Motion project. You can set the bit-depth of your project in the General pane of the Project Properties window.

To improve performance while working, turn off **Preview for Float Bit Depth** in the **View** pop-up menu. The **View** pop-up menu is located in the upper-right corner of the Canvas (below the Timing icon).

32-bit float rendering produces extremely fine color accuracy, eliminates banding artifacts, and even improves quality when rendering to 8-bit formats.

Additional information

Note: Motion 2.1 (Universal) is compatible with the Mac Pro. Motion 2.1 is available as part of Final Cut Studio 5.1. Upgrade options are available at http://www.apple.com/universal/crossgrade/.

This document will be updated as more information becomes available.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Mac OS X: Some Dashboard widgets contain information for the United States or in English only

This article has been archived and is no longer updated by Apple.
Some Dashboard widgets contain information for the United States or in the English language only, such as:

- The Business widget (formerly Phone Book) and the People widget return information for the United States only.
- The Dictonary widget only contains English language words.
- The Flight Tracker widget contains flight information for other countries, however, the information is only available in English.

Published Date: Feb 20, 2012

Unchecked iTunes songs do not appear in Front Row song list

This article has been archived and is no longer updated by Apple.

If your Front Row song list seems to be missing songs, open iTunes and check whether the songs have been deselected in your iTunes Library.

Front Row does not display songs that are unchecked in the iTunes Music Library. If you wish to play these songs, either check them in the iTunes Library and go back to Front Row, or play them directly from iTunes.

Published Date: Feb 20, 2012

Mac OS X Server: Apple-specific postfix options

This article has been archived and is no longer updated by Apple.

These are the Apple-specific options for the Postfix main.cf configuration file:

- enable_server_options

  Valid options: yes, no
  Set this value to yes if you have set email auto-forwarding for any users who would normally receive mail locally via Work Group Manager.

- smtpd_use_pw_server

  Valid options: yes, no
  Set to yes if using Password Server, otherwise standard open source SASL authentication is used.

- smtpd_pw_server_security_options

  Valid options (one or more): login, plain, cram-md5, gssapi
  Set this option to the desired authentication method(s) you wish to enable for authenticated SMPT relay. This option is used in conjunction with smtpd_use_pw_server and is ignored if smtpd_use_pw_server is set to “no?.

Published Date: Feb 20, 2012

Xsan 1.4: Security issues related to StorNext Windows clients in ACL environment

This article has been archived and is no longer updated by Apple.

Issue or symptom

The Access Control List functionality in Xsan 1.4 is designed to be compatible with the ACL functionality in Quantum's StorNext file system for Microsoft Windows. However, file and folder permissions issues have been discovered in ACL-enabled Xsan environments where Windows StorNext and StorNextFX systems have been present, even if those systems are no longer part of the SAN.

Solution

If you intend to enable ACLs on your Xsan volume and currently have, or intend to have, the affected versions of Windows StorNext clients as part of the SAN, update the StorNext software to the latest version before enabling ACLs.

For Xsan installations that currently have, or have ever had, the affected versions of Windows StorNext clients as part of the SAN, it is suggested that you update the StorNext software to the latest version. In addition, to avoid any potential security concerns, it is suggested that you back-up all data on the volume, delete the volume, recreate the volume and restore the data.

Before introducing StorNext or StorNext clients to the SAN, be sure to update them to the latest version of Stornext or StorNextFX.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

Mac OS X Server 10.3.9: "Download Files To:" field may not enforce certain settings when managing Internet preferences for a group

This article has been archived and is no longer updated by Apple.

Issue or symptom

When managing Internet preferences and web settings for a group, the "Download Files To:" field may not enforce certain settings. This can occur when specifying a group folder as the download location.

Solution

Add "/Volumes" to the beginning of the path.

For example, if the download path is /Groups/testgroup/ , change it to: /Volumes/Groups/testgroup/ .

Published Date: Feb 20, 2012

Final Cut Pro: Send To Motion evokes QuickTime Player instead of Motion

This article has been archived and is no longer updated by Apple.

Issue

If you have designated QuickTime Player as Final Cut Pro's external editor for video files, you might find that the Send To Motion feature fails to open the resulting Motion project in Motion. Instead, the **.motn** project opens in QuickTime Player.

Solution

In the majority of workflows, it is not necessary to explicitly designate QuickTime Player as the external editor for video files. If you clear the setting so that no application is selected as the external editor for video files, Final Cut Pro will use the application that Mac OS X uses to open video files, which by default, happens to be QuickTime Player.

Follow these steps to clear the setting for external editors

1. In Final Cut Pro, choose **Final Cut Pro > System Settings**.
2. Click the **External Editors** tab.
3. Click the **Clear** button for Video Files to clear that setting.

This document will be updated when more information becomes available.

Published Date: Feb 20, 2012

iPhoto: Issues using System Preferences Desktop picture feature

This article has been archived and is no longer updated by Apple.

Issue or symptom

Some photos in your iPhoto library may not be accessible from the Desktop tab of the "Desktop & Screen Saver" pane of System Preferences if you have deselected the option to "Copy files to iPhoto Library folder when adding to library" in iPhoto preferences.

The "Change Picture" duration option at the bottom of the Desktop tab may not be available with some iPhoto albums.

Solution

To work around this issue, export the photos you want to use from iPhoto to a folder in your Pictures folder. Select this folder using the "Choose folder..." option in the Desktop tab of the Desktop & Screen Saver system preference pane.

Additional information

Published Date: Feb 20, 2012

FAT32-formated volumes with files larger than 2 GB are supported by Mac OS X 10.3 or later

This article has been archived and is no longer updated by Apple.

FAT32-formated volumes with files larger than 2 GB are supported in Mac OS X 10.3 or later.

Published Date: Oct 7, 2016

Pro Apps Update 2006-02

This article has been archived and is no longer updated by Apple.

Pro Applications Update 2006-02 addresses several issues with underlying frameworks and shared components for Apple's professional applications and is strongly recommended for all users of Final Cut Studio 5.1, Final Cut Pro 5.1, Motion 2.1, Soundtrack Pro 1.1, DVD Studio Pro 4.1, LiveType 2.1, Compressor 2.3, Apple Qmaster 2.3, and Final Cut Express HD 3.5.

Pro Application Update 2006-02 updates the following components

HDVCodec

HDVCodec addresses performance fixes with certain decks and also improves video quality specifically superblack preservation.

This update is required for customers using Final Cut Pro 5.1 and above.

DVCProHDCodec

DVCProHDCodec addresses performance and stability issues.

This update is required for customers using Final Cut Pro 5.1 and above.

Uncompressed 422

Uncompressed 422 delivers a fix for some gamma/color shifts when moving clips between Final Cut Pro and Adobe After Effects. Video quality issues have been fixed and performance improvements have been achieved on Intel-based Macs.

This update is required for customers using Final Cut Pro 5.1 and above and recommended for customers using any of the Final Cut Studio 5.1 applications.

IMXCodec

IMXCodec delivers performance improvements, improved compatibility of encoded bitstreams specifically encoded frames now adhere strictly to the correct maximum size, and improved video quality specifically superblack preservation.

This update is recommended for Final Cut Studio 5.1 customers.

LiveType Support

LiveType support is updated for new development tools on Intel-based Macs.

This update is required for customers using Final Cut Pro 5.1 and above and Final Cut Express HD 3.5.

PluginManager, Fxplug, ProFX, and FxPlugWrapper

These shared components deliver Effects Support in Final Cut Pro 5.1.2.

This update is required for customers using Motion 2.1 and Final Cut Pro 5.1 and above.

Helium

Helium delivers a fix for using 4 processors on Quad Power Mac G5 computers.

This update is required for customers using Compressor 2.1 and above.

Requirements for this update

- Mac OS X 10.4.4 or later
- QuickTime 7.0.4 or later
- Motion 2.1.2 (if Motion is installed)

Published Date: Feb 20, 2012

Where did my Music Videos go in iTunes 7?

This article has been archived and is no longer updated by Apple.

With the release of iTunes 7, music videos are no longer grouped with Movies in the iTunes source list. They are instead grouped with Music.

However, all of your music videos can be found in a new Music Videos Smart Playlist that automatically updates whenever you add another music video to your Library.

If you have deleted the Music Videos Smart Playlist, follow these steps to recreate it.

1. Open iTunes.
2. Choose **File > New Smart Playlist**.
3. Set rule to Video Kind is Music Video and click OK.

4. A new Smart Playlist will appear in the source list.
5. Rename the playlist to "Music Videos."

Published Date: Feb 20, 2012

Logic Pro: Labeling Aggregate Device I/O

This article has been archived and is no longer updated by Apple.

When you create an Aggregate Device in Audio/MIDI setup, the names for inputs and outputs shown in Logic can sometimes be more generic than you might like. You can use Logic's I/O labels to name the inputs and outputs more clearly.

- Choose **Audio > Audio Configuration** from Logic's main menu.
- In the Audio Configuration window choose **View > I/O Labels**.
- For each input and output listed, select the button under "Long I/O Label." Double-click in the text box to the right of the button and type in the label you would like to use for the input or output. If you like, you can also type a Short I/O label name that Logic will use when there's not enough room to display the full long name.

The I/O labels will be used for all songs, there is no need to create them more than once, unless you decide to change the label names.

Published Date: Feb 20, 2012

AppleWorks: Cannot install versions earlier than 6.2 on Intel-based Macs

This article has been archived and is no longer updated by Apple.

AppleWorks versions earlier than 6.2 cannot be installed on Intel-based Macs. The earlier versions of the installers require Mac OS 9 or Classic for installation, which is not available for the Intel-based computers.

Published Date: Feb 20, 2012

Logic Pro quits during startup while Updating Tree

This article has been archived and is no longer updated by Apple.

Issue or symptom

When you launch Logic Pro, it may quit unexpectedly at the point where the startup screen progress indicator says "Updating Tree".

Solution

This behavior indicates an issue with the Project Manager database. Go to ~/Library/Preferences/Logic (where "~" represents your user folder) and drag the folder named "PM Data" to the Trash.

After you delete the "PM Data" folder, you'll need to rebuild the Project Manager database. See page 421 of the Logic Pro Reference manual for details.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Server Assistant temporarily changes local machine‘s time zone when creating a config file

This article has been archived and is no longer updated by Apple.

Issue or symptom

When using Server Assistant to "Save setup information in a file or directory record," the time zone on the local machine may be temporarily changed.

Solution

The time zone should revert to the original setting after Server Assistant finishes. If it does not revert, reset it using Date & Time preferences.

Published Date: Feb 20, 2012

Mac OS X Server 10.4 (Japanese): Kotoeri keyboard layout not available in Server Assistant "Keyboard" pane until restart

This article has been archived and is no longer updated by Apple.

Issue or symptom

When upgrading Mac OS X Server 10.3.x to Mac OS X 10.4 Server using CD installation media, the Kotoeri keyboard layout may not appear in the "Keyboard" pane of Server Assistant.

Solution

Restart the server. The Kotoeri keyboard layout should become available.

Published Date: Oct 7, 2016

Intel-based Macs: Some applications unexpectedly quit while printing using an SMB home directory

This article has been archived and is no longer updated by Apple.

Issue or symptom

While logged in using an SMB-based network home directory, applications that are not Universal, or Universal applications that are forced to run with Rosetta may unexpectedly quit when printing.

Solution

This does not occur when using an AFP-based network home directory, however if AFP is not available, use this workaround to print from affected applications:

1. Choose **Print** from the **File** menu.

2. Set desired print options.

3. Click Preview.

4. Click Print in the Preview window.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Mac OS X 10.4: Upgrade Mac OS X 10.3 software RAIDs

This article has been archived and is no longer updated by Apple.

After upgrading to Mac OS X 10.4 Tiger, upgrade any Mac OS X 10.3 Panther software RAIDs to Mac OS X 10.4 software RAIDs. This will enable you to use all of the benefits of Tiger software RAIDs.

Published Date: Feb 20, 2012

Adjusting brightness on the Fifth Generation iPod

This article has been archived and is no longer updated by Apple.

You can adjust the brightness of the display for Fifth Generation iPod models (also known as iPod with video). To use this feature ensure that you have one of the following iPods and have updated to the latest version of iPod software:

- Fifth Generation iPod
- Fifth Generation iPod (Late 2006)

To adjust the brightness of an iPod's display, select **Settings > Brightness** and use the Click Wheel to move the slider. Move the slider to the left to dim the screen, move it to the right to increase the brightness.

Your iPod's brightness level will have a direct impact on battery life. By lowering the brightness level, you can increase the iPod's playback time. It is possible to adjust iPod's brightness level while watching a slideshow or a video.

To adjust brightness while viewing a slideshow

1. Start the slideshow.
2. Press the Center button.
3. When the brightness bar appears, use the Click Wheel to change the brightness of the display.
4. Press the Center button when the brightness level is to your liking or wait 2 seconds and the change will take effect on its own.

To adjust brightness while viewing a video

1. Start the video.
2. Press the Center button twice.
3. When the brightness bar appears, use the Click Wheel to change the brightness of the display.
4. Press the Center button when the brightness level is to your liking or wait 2 seconds and the change will take effect on its own.

Note: The brightness setting on the iPod only affects the iPod display. If you are viewing a slideshow or video on a television, use the brightness controls on the television instead. Within each iPod Game purchased from the iTunes Store, you can also adjust the brightness setting.

Published Date: Feb 20, 2012

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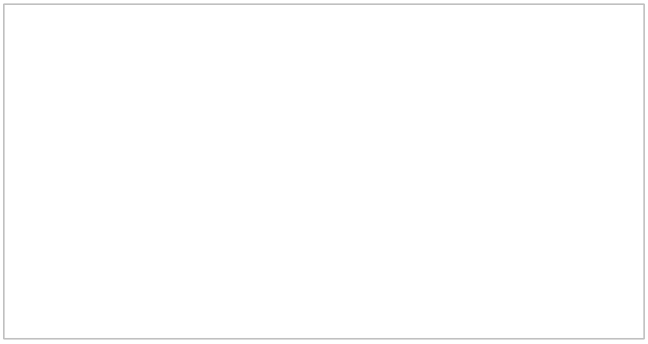

Find out about your coverage

AppleCare products give you additional repair coverage and technical support. If you already bought an AppleCare product, you can manage it online.

Check coverage for your product

Let’s get that fixed

If your Apple device needs repairs, you can go to an Apple Store, visit an Authorized Service Provider, or mail in your device. Whatever you choose, we'll make sure your device works the way it should.

Choose a repair option

Beware of counterfeit parts

Some counterfeit and third party power adapters and batteries may not be designed properly and could result in safety issues. To ensure you receive a genuine Apple battery during a battery replacement, we recommend visiting an Apple Store or Apple Authorized Service Provider. If you need a replacement adapter to charge your Apple device, we recommend getting an Apple power adapter.

Also non-genuine replacement displays may have compromised visual quality and may fail to work correctly. Apple-certified screen repairs are performed by trusted experts who use genuine Apple parts.

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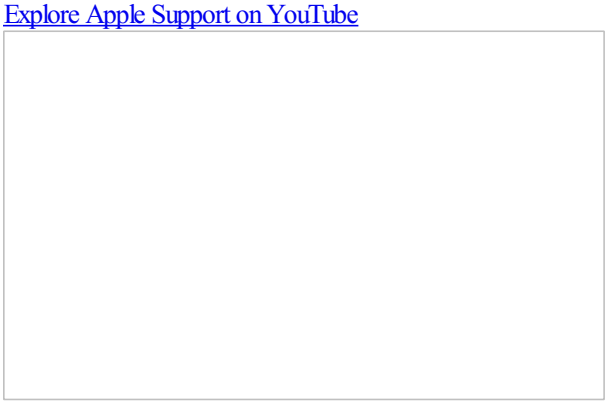
Explore Apple Support on YouTube



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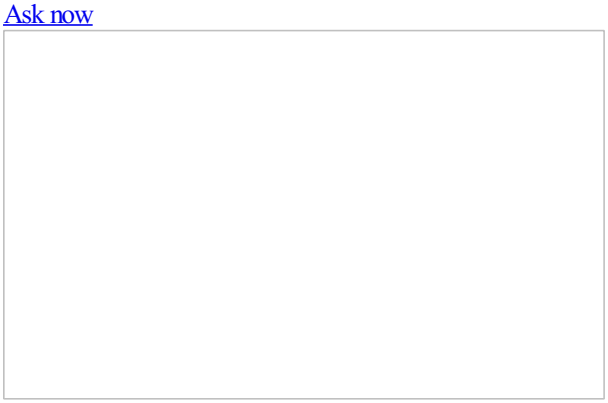

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- iPhone 6s Program for Unexpected Shutdown Issues
- Multi-Touch Repair Program for iPhone 6 Plus
- Apple AC Wall Plug Adapter Recall Program
- Beats Pill XL Speaker Recall Program
- All Programs

iPod: Ignoring battery warnings could result in loss of saved game and high score

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you're playing a purchased game on your iPod and the battery is depleted, the game in play and any potential high score will be lost.

Solution

Check your battery icon occasionally while playing a game. If the icon turns red, connect power immediately. If you play until no power remains, the current game's state (and its potential high score) will be lost.

Note: Not all games display the battery icon at all times. Some have the option of turning it on or off. Some only display the battery in the menus.

It is best to charge your iPod fully before playing a game.

Published Date: Feb 20, 2012

Aperture: Previews do not update after changing Limit Preview Size Preference

This article has been archived and is no longer updated by Apple.

Issue or symptom

After you change the Limit Preview Size setting in Aperture's Preferences, existing previews are not changed, even if you choose **Images > Update Previews**.

Solution

Changing the Limit Preview Size setting does not mark existing previews as out of date. In order to force existing previews to be regenerated using a new size setting, select the desired images, press Option and choose **Images > Generate Previews**.

Published Date: Oct 7, 2016

Aperture: New default Toolbar icons not displayed

This article has been archived and is no longer updated by Apple.

Issue or symptom

Aperture 1.5 offers a new set of default Toolbar icons, but in some cases they may not appear.

Solution

If you customized your Toolbar in a previous version of Aperture, then the new Toolbar icons will not display by default when you upgrade to version 1.5. There are two ways to resolve the issue:

Option 1

- Control-click the Toolbar and choose **Customize Toolbar** from the shortcut menu.
- Drag the icons you'd like to display from the icons dialog to the Toolbar.
- Click **Done** in the icons dialog.

Option 2

Please note that the this method will reset all of your Aperture preferences to their default settings.

- Quit Aperture if it is running.
- Go to `~/Library/Preferences` (where "~" represents your User folder.) and drag the file `com.apple.Aperture.plist` to the Trash.
- Launch Aperture.

Published Date: Oct 7, 2016

iWeb: Vertical lines may cause Internet Explorer to quit

This article has been archived and is no longer updated by Apple.

Issue or symptom

Vertical lines used in an iWeb web page can cause Internet Explorer 6 on Windows to unexpectedly quit while loading the published page. The issue only occurs with lines that have a width of 1 point or less.

Solution

This issue does not occur when viewing iWeb pages with the Firefox browser on Windows or with any Mac browsers.

You can avoid this issue while creating your site in iWeb by using vertical lines in your page design with a line width greater than 1 point. You can adjust line width in the Graphic Inspector.

This document will be updated as more information becomes available.

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Published Date: Feb 20, 2012

Backup 3: Use caution when backing up to CD-RW or DVD+-RW

This article has been archived and is no longer updated by Apple.

SUMMARY:

Discusses a potential data loss issue with Backup

DISCUSSION:

Backup 3 performs incremental backups, backing up only files that have changed since your last backup. This also occurs if you are backing up to a CD-RW or DVD±RW.

If you performed a backup to a CD-RW or DVD±RW, and later wish to backup changes that have occurred in your backup set to the same disc, you should do another Full Backup, rather than a normal backup. Doing a normal backup may lead to you inadvertently not having a back up any files in your back up set that have no changed.

To perform a full backup, select **Plan** > **Full Backup**.

Published Date: Feb 20, 2012

iPod nano (Second Generation): Left and right audio channels crossed after reset

This article has been archived and is no longer updated by Apple.

Symptom or Issue

After resetting iPod nano (Second Generation) one or more times, the left and right audio channels may get crossed.

Solution

Update the iPod nano (Second Generation) to software version 1.0.1 or later.

Published Date: Oct 7, 2016

About the security content of QuickTime 7.1.3

This article has been archived and is no longer updated by Apple.

This document describes the security content of QuickTime 7.1.3E, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

QuickTime 7.1.3 Update

- **QuickTime**

  CVE-ID: CVE-2006-4381, CVE-2006-4386

  Available for: Mac OS X v10.3.9 and later, Windows XP/2000

  Impact: Viewing a maliciously-crafted H.264 movie may lead to an application crash or arbitrary code execution

  Description: By carefully crafting a corrupt H.264 movie, an attacker can trigger an integer overflow or buffer overflow which may lead to an application crash or arbitrary code execution with the privileges of the user. This update addresses the issue by performing additional validation of H.264 movies. Credit to Sowhat of Nevis Labs, Mike Price of McAfee AVERT Labs, and Piotr Bania for reporting these issues.

- **QuickTime**

  CVE-ID: CVE-2006-4382

  Available for: Mac OS X v10.3.9 and later, Windows XP/2000

  Impact: Viewing a maliciously-crafted QuickTime movie may lead to an application crash or arbitrary code execution

  Description: By carefully crafting a corrupt QuickTime movie, an attacker can trigger a buffer overflow which may lead to an application crash or arbitrary code execution with the privileges of the user. This update addresses the issue by performing additional validation of QuickTime movies. Credit to Mike Price of McAfee AVERT Labs for reporting this issue.

- **QuickTime**

  CVE-ID: CVE-2006-4384

  Available for: Mac OS X v10.3.9 and later, Windows XP/2000

  Impact: Viewing a maliciously-crafted FLC movie may lead to an application crash or arbitrary code execution

  Description: By carefully crafting a corrupt FLC movie, an attacker can trigger a heap buffer overflow which may lead to an application crash or arbitrary code execution with the privileges of the user. This update addresses the issue by performing additional validation of FLC movies. Credit to Ruben Santamarta of reversemode.com working with the iDefense VCP Program, and Mike Price of McAfee AVERT Labs for reporting this issue.

- **QuickTime**

  CVE-ID: CVE-2006-4388

  Available for: Mac OS X v10.3.9 and later, Windows XP/2000

  Impact: Viewing a maliciously-crafted FlashPix may lead to an application crash or arbitrary code execution

  Description: By carefully crafting a corrupt FlashPix file, an attacker can trigger an integer overflow or buffer overflow which may lead to an application crash or arbitrary code execution with the privileges of the user. This update addresses the issue by performing additional validation of FlashPix files. Credit to Mike Price of McAfee AVERT Labs for reporting this issue.

- **QuickTime**

CVE-ID: CVE-2006-4389

Available for: Mac OS X v10.3.9 and later, Windows XP/2000

Impact: Viewing a maliciously-crafted FlashPix may lead to an application crash or arbitrary code execution

Description: By carefully crafting a corrupt FlashPix file, an attacker can trigger an exception leaving an uninitialized object. This may lead to an application crash or arbitrary code execution with the privileges of the user. This update addresses the issue by performing additional validation of FlashPix files. Credit to Mike Price of McAfee AVERT Labs for reporting this issue.

- **QuickTime**

CVE-ID: CVE-2006-4385

Available for: Mac OS X v10.3.9 and later, Windows XP/2000

Impact: Viewing a maliciously-crafted SGI image may lead to an application crash or arbitrary code execution

Description: By carefully crafting a corrupt SGI image, an attacker can trigger a buffer overflow which may lead to an application crash or arbitrary code execution with the privileges of the user. This update addresses the issue by performing additional validation of SGI image files. Credit to Mike Price of McAfee AVERT Labs for reporting this issue.

- **QuickTime**

CVE-ID: CVE-2007-0754

Available for: Mac OS X v10.3.9 and later, Windows XP/2000

Impact: Viewing a maliciously-crafted QuickTime movie may lead to an application crash or arbitrary code execution

Description: By carefully crafting a corrupt QuickTime movie, an attacker can trigger a buffer overflow which may lead to an application crash or arbitrary code execution with the privileges of the user. This update addresses the issue by performing additional validation of QuickTime movies. Credit to Ganesh Devaraja of TippingPoint DVLabs for reporting this issue.

Published Date: Oct 7, 2016

Final Cut Pro: Avoid using both drop frame and non-drop frame timecode on the same tape

This article has been archived and is no longer updated by Apple.

Capturing from tapes recorded with both drop frame and non-drop frame timecode may produce unexpected results. In some cases, the timecode on the resulting clips may be inaccurate. Inaccurate timecode on captured clips can negatively impact subsequent workflow steps, such as re-capturing, using Media Manager, or exporting reliable EDL or XML files from affected projects.

Solution

Before shooting or recording your source tape, plan to use either drop frame or non-drop frame timecode for the entire tape.

If you are working with a tape that already contains sections of both drop frame and non-drop frame timecode, avoid using the Capture Now feature to capture the entire tape in one operation. Instead, try treating each section of different timecode as if it were a separate tape.

In other words, the clip(s) you acquire in a single capture operation should only come from within a contiguous section of either drop frame or non-drop frame timecode. After you have captured the desired media from a section, shuttle the tape into the next section of timecode, and begin capturing from within that one, and so on.

Background: About Drop Frame and Non-Drop Frame Timecode

When working with NTSC video, you have the option to use drop frame timecode to compensate for the fact that NTSC video has a frame rate of 29.97 fps, while the timecode runs at 30 fps. Timecode can only be represented by whole numbers, so drop frame timecode periodically skips numbers so that the timecode count and the amount of actual time passed stays in sync. This way, the timecode count matches the the number of hours, minutes, and seconds that it takes for your video footage to play. NTSC video can use either drop frame or non-drop frame timecode.

Note: No video frames are dropped when you use drop frame timecode. Only the associated timecode numbers are skipped.

For more information on the subjects discussed in this document, refer to the Final Cut Pro User Manual, available under the Help menu in Final Cut Pro.

Published Date: Feb 20, 2012

Boot Camp Beta: MacBook, MacBook Pro - Built-in display stays on after lid is closed

This article has been archived and is no longer updated by Apple.

Issue or symptom

While running Microsoft Windows XP using Boot Camp Beta, the built-in display of your MacBook or MacBook Pro computer may remain on when the display lid is closed and an external display is connected.

Solution

To disable the internal display while running Windows XP:

1. From the **Start** menu, select **Control Panel**.
2. Open Display settings.
3. Click the Settings tab, then Advanced, to bring up the ATI settings.
4. Click the Displays tab.
5. Click the "disable flat panel display" button under Panel.
6. Click Apply.

The built-in display of your MacBook or MacBook Pro should now be disabled while in Windows XP. It is expected behavior for the display to be off when the lid is closed.

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Published Date: Feb 20, 2012

Mac OS X: How to combine RAID sets in Disk Utility

This article has been archived and is no longer updated by Apple.

This article applies to Mac OS X 10.4 or later and Disk Utility version 10.5 or later (included with Mac OS X 10.4 Tiger).

RAID sets can be combined in a variety of ways to increase their usefulness. For example, you can create a RAID 10 set by combining a mirrored RAID and a striped RAID. This would allow you to combine the fast disk access of a striped RAID set (RAID 0) with the data protection features of a mirrored RAID set (RAID 1).

To combine RAID sets:

1. Create three blank RAID schemes in Disk Utility (two mirror and one stripe, or two stripe and one mirror).
2. Drag two of the drives to the first set.
3. Drag the other two drives to the second set.
4. Then in the RAID window drag the first and second set into the third scheme.
5. Click Create.

Published Date: Oct 7, 2016

Front Row: Black screen when using video mirroring and display rotation

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you use an external display rotated to 90 or 270 degrees and you enable video mirroring on that display, you may notice that Front Row doesn't present as expected. Instead, you see a black screen on the external display.

Solution

If you need to use Front Row with two displays, either use extended desktop mode or rotate your external display at either 0 or 180 degrees.

Click here for more information about the display rotation feature.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Safari does not connect to secure sites that use only 56-bit encryption

This article has been archived and is no longer updated by Apple.

Safari will not connect to secure web sites that use 56-bit encryption or less. Safari requires at least 128-bit or higher encryption, which is stronger than 56-bit or 40-bit.

Published Date: Feb 20, 2012

LaserWriter 8500: Chicago Accented Characters not Printing

The LaserWriter 8500 doesn't print accented characters, umlaut, cedilla, grave accent .. etc., when using the Chicago TrueType font. If I use a different font, these characters print correctly.
This article has been archived and is no longer updated by Apple.
Was an issue with older versions of Chicago and Geneva such as those versions that shipped with Mac OS 8.1. The newer correct fonts ship on the LW 8500 CD and newer versions of the Mac OS including Mac OS 8.5.

Workarounds:

1) Replace the Chicago TrueType font in your Fonts folder with the version that shipped on the CD-ROM disc for your LaserWriter 8500 or a Mac OS 8.5 CD.
2) Use the Apple Printer Utility to download the Chicago TrueType font to the printer.
Published Date: Feb 20, 2012

Logic Pro and Logic Express: No sound with Mac Pro

This article has been archived and is no longer updated by Apple.

Issue or symptom

Logic does not output sound when you use the built-in audio hardware on the Mac Pro.

Solution

Versions of Logic prior to 7.2.3 are not compatible with the built-in audio hardware on the Mac Pro — they do not allow the outputs to be assigned in Logic's **Audio > Audio Hardware & Drivers** window.

Logic Pro and Logic Express 7.2.3 provides access to all three outputs available on the Mac Pro:

- Built-in Output (the speaker)
- Built-in Line Output (the line out jack on the back of the Mac Pro)
- Built-in Digital Output (the optical audio output on the back of the Mac Pro)

Published Date: Feb 20, 2012

Power Mac G5 (Late 2005), iMac G5 (Ambient Light Sensor): FireWire bus stops responding after computer restarts with FireWire audio device attached

This article has been archived and is no longer updated by Apple.

Issue or symptom

If a FireWire audio device is connected to a Power Mac G5 (Late 2005) or an iMac G5 (Ambient Light Sensor) while the computer is restarting, the FireWire bus will stop responding and no FireWire devices will be detected on the bus. The device may stop responding or stop charging, depending on the specifics of the device.

Products affected

- FireWire device
- Power Mac G5 (Late 2005)
- iMac G5 (Ambient Light Sensor)

Solution

You can restore the Firewire bus by resetting the SMU (System Management Unit). To learn how to reset your particular computer SMU please see:

301733: "**iMac G5: How to Reset the SMU**"
300341: "**How to reset the SMU on a Power Mac G5 (Late 2004) or Power Mac G5 (Late 2005)**"

Published Date: Oct 11, 2016

Apple portables: Some key combinations may not be recognized

This article has been archived and is no longer updated by Apple.

Some key combinations that may work on standard keyboards may not be recognized on Apple's portable computers. This includes combinations containing more than four keys and some combinations of three keys across the home row (asdfghjkl;').

This is done to avoid an issue with modern keyboards called "phantom keys". Phantom keys occur when the controller reports a key to be down that is not really down. To avoid this, the controller will stop sending keycodes if key combinations are pressed simultaneously that can cause this condition—combinations like more than four keys or some combinations of three home-row keys.

If you require the use of combinations that are not possible with the Apple portable computers' built-in keyboard, you can connect an external keyboard to the computer. Since the matrix used on external keyboards is different, they will allow different key combinations that aren't available on built-in keyboards.

Published Date: Feb 20, 2012

Intel-based Mac may become unresponsive in target disk mode

This article has been archived and is no longer updated by Apple.

Issue or symptom

Some Intel-based Macs can become unresponsive while being used in FireWire target disk mode for long periods of time. The FireWire icon will stop moving, and the disk cannot be accessed from another Macintosh computer over FireWire.

Solution

This behavior can be corrected with a firmware update to the computer that becomes unresponsive while in Target Disk Mode. Startup that computer into Mac OS X, then follow the instructions in this article.

Published Date: Oct 11, 2016

iMac (Late 2006): Screen saver may activate even when set to "Never" activate

This article has been archived and is no longer updated by Apple.

Issue or symptom

Even if you set your iMac (Late 2006) computer's screen saver never to activate, you may find that the screen saver starts after your computer has been idle for awhile.

Solution

Move the mouse or press a key on the keyboard to deactivate the screen saver.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Power Macintosh: Display Resolutions in the Monitors & Sound control panel

We have several Power Macintosh computers in our office and we have a mixture of Apple displays computers running different versions of the Mac OS.

When we go into the Monitors & Sound control panel on our different computers, we notice that we each get different display resolution options.

1. How does the Monitors & Sound control panel know which display resolutions are available?
2. How can we tell which display resolutions should appear as options in the Monitors & Sound control panel?
3. What is the difference between "Recommended" and "All" display resolutions in the Monitors & Sound control panel?
4. Why does Apple include both Macintosh and VGA or VESA resolutions on Power Macintosh computers?

This article has been archived and is no longer updated by Apple.

Question: How does the Monitors & Sound control panel know which display resolutions are available?

Answer: The Monitors & Sound control panel depends on a component of the Mac OS called the Display Manager. The Display Manager allows you to dynamically change the arrangement and display modes of the displays attached to the computer.

The video device driver is also responsible for telling the Display Manager what display modes are available. In determining what type of display is attached to your video port, device drivers usually examine the display's sense code. A device driver can associate each sense code with a default display mode and a set of required and optional display modes for the display.

The latest version of the Apple Displays software at the time of this writing is version 1.7.1. This software is available from the Apple Software Updates Web site at http://www.apple.com/swupdates. For more detailed information regarding the Display Manager and video device drivers, refer to the Display Device Driver Guide and Display Manager documentation available on Apple's Developer Web site at http://www.apple.com/developer.

Question: How can we tell which display resolutions should appear as options in the Monitors & Sound control panel?

Answer: Most Power Macintosh computers ship with a Technical Information booklet that details the video modes supported by that particular computer. In some cases, this information is provided as a section in the User's Manual/Guide. This information should tell you what resolution and screen refresh rates your computer is capable of. With this information, you can check with your display's documentation to see what resolutions and refresh rates it supports.

As long as the computer and display's supported resolutions and refresh rates match, these resolutions and refresh rates should appear in the Monitors & Sound control panel under "Recommended" or "All" display resolutions. If these resolutions do not, you may not have the correct display software installed on your computer or the display may not be properly connected to the computer.

Question: What is the difference between "Recommended" and "All" display resolutions in the Monitors & Sound control panel?

Answer: In most cases, you will want to select from the Recommended choice of resolutions. These resolutions are known to work well with the monitor attached to your computer. Also, these are also the required and default display modes for your computer. All required display modes appear when the user opens the Monitors and Sound control panel. For a particular type of display (for example, a 21-inch video monitor), a required display mode is one that Apple requires the display to support.

On some Macintosh and Power Macintosh computers, users can choose All resolutions from the Monitors & Sound control panel to reveal additional resolutions that your monitor might also support. This might be useful if your computer provides video output or video mirroring to a TV or VCR. Some resolutions that appear under "All" may look better than those that are recommended. Some of these resolutions that appear under "All" might cause the picture to flicker or be distorted. If you choose a resolution from the list, and your monitor goes black, wait a few seconds and it will return to its previous setting.

Question: Why does Apple include both Macintosh and VGA (Video Graphics Array)/VESA (Video Electronics Standards Association) resolutions on Power Macintosh computers?

Answer: Most of the recent Power Macintosh computers are compatible with Windows-based VGA/VESA displays in addition to Apple displays. If our Power Macintosh computers only supported Macintosh resolutions, customers would have less of a choice in the displays they use.

Additionally, most of the recent Apple Displays are cross-platform displays that can be used on both Macintosh and PC computers. This is why you will see both Macintosh and VGA/VESA resolutions appearing on some Power Macintosh computers when an Apple Display is connected.

Published Date: Feb 20, 2012

Mac OS X 10.3 or later: About automatic PostScript-to-PDF conversions

This article has been archived and is no longer updated by Apple.

Mac OS X 10.3 or later automatically converts PostScript (.ps) or Encapsulated PostScript (.eps) files to PDF when viewing in Preview, Mail, or certain third-party applications. The conversion process typically takes a short period of time (depending on the complexity of the file), and may take longer for the first conversion within each user account. Any subsequent PostScript files viewed by the same user should be converted to PDF faster than the first time.

The conversion process may also be noticeably slower if the com.apple.psnormalizer files are removed from /Library/Caches.

A delay may be noticed the first time any user of the computer prints a PostScript file by dragging it onto the icon of a non-PostScript printer. However, there should be no additional delay the next time any user of the computer prints a PostScript file this way.

Published Date: Oct 11, 2016

Mac OS X 10.3 or later: Close System Preferences after changing location for saved faxes

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you use the Print & Fax pane of System Preferences to change the location where received faxes are saved, but you leave the Print & Fax pane open, received faxes may not get saved correctly if the target folder does not already exist.

Solution

After changing the location where received faxes should be saved, close the Print & Fax pane of System Preferences by clicking the Show All button or by quitting System Preferences. This ensures that the folder you specified as the saved fax location will be created.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

iTunes for Mac cannot launch after repairing with Norton Disk Doctor

This article has been archived and is no longer updated by Apple.

Issue or symptom

iTunes for Macintosh cannot launch after using Norton Disk Doctor.

Norton Disk Doctor reports the following:

> A major error was found in the file listed below. The BSD mode for the symbolic link is incorrect. Symbolic links are special files similar to aliases. (15, 20)
>
> HARD DRIVEA:Applications:iTunes.app:Contents: Frameworks:iPodUpdater.framework:Versions:A:iPodUpdater

Solution

While you can run Norton Disk Doctor, make sure you do not chose to repair this error. If you repair the error, you will need to reinstall iTunes.

Contact Symantec for further information.

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Published Date: Feb 20, 2012

Aperture: Changes to keyboard shortcuts in version 1.5

This article has been archived and is no longer updated by Apple.

Some of the keyboard shortcuts in Aperture have changed in version 1.5. Here's a summary of what's different:

Applying Ratings to images

In previous versions, the shortcuts to apply ratings were **Command–Option–** ***rating number 1-5*** (i.e. **Command–Option–3** to apply a three star rating). This is now simply ***number 1-5*** (press the 3 key to apply a 3 star rating). It is also possible to apply ratings by using **Command–*number 1-5***, which matches the keyboard shortcuts for rating images in iPhoto."

The shortcuts to increase and decrease ratings have also changed:

- To decrease the rating press **Command–-** (the previous shortcut **-** will also work).
- To increase the rating press **Command–=** (the previous shortcut = will also work).

Some keyboard shortcuts dealing with applying a rating of *reject* have changed:

- To apply a rating of *reject* to an image use **Command–9** (was previously **0**).
- To apply a rating of *reject* and select the next image, press **Control–9** (was previously **Control–0)**.
- To apply a rating of *reject* to a compared imaged, press **Option–9** (was previously **Option–0**).
- To apply a rating of *reject* and clear the last rating applied, press **Shift–9** (was previously **Shift –0**).

Keywords

In previous versions, keywords from the Keyword buttons on the Control Bar were assigned using the **1-9** number keys. In Aperture 1.5 this is done using **Option–1-9**. In Aperture 1.5, the keyboard shortcuts **1-9** are an alternate way of applying ratings to images.

To add a new keyword, press **Option–`** (was previously **9**).

To remove keywords from images, press **Option–Shift–*keyword number*** (i.e. **Option–Shift–4** to remove the keyword from button 4). This was previously done with **Shift–*number 1-8***.

To remove all keywords press **Option–Shift–9** (was previously **Shift–9**).

To summarize, **Option** has been added to all the keyboard shortcuts for working with keywords.

Changes to Built-in Layouts

The built-in layouts in Aperture 1.5 have been simplified. There are now three built-in layouts:

- *Display Basic* (previously known as *Display Standard*): **Option–Shift– S**
- *Display Viewer*: **Option– Shift –V**
- *Display Browser*: **Option–Shift–B**

The following layouts have been removed:

- *Display Ratings and Keywords*: **Option–Shift–R**
- *Display Adjustments and Filters*: **Option–Shift–F**
- *Display Project Management*: **Option–Shift–M**

Note that if you configured buttons in the toolbar for any of the above layouts, the buttons will continue to work, although the associated keyboard shortcuts will not. If you remove a button for a legacy layout in Aperture 1.5, there is no way to get it back.

Control Bar and Inspectors

In previous versions the Control Bar was toggled with **Shift–D**. This is now done simply with **D**. **Shift – D** now toggles the Keyword buttons on the Control Bar.

To show Archive in the Metadata Inspector, press **Control–R** (was previously **Control–A**).

To toggle the Adjustments Inspector, press **Control–A**.

Loupe Controls

The keyboard shortcuts to adjust the size of the Loupe have changed:

- The shortcut to decrease the Loupe size is **Option**–_ (was previously **Command**–-).
- The shortcut to increase the Loupe size is **Option**–+ (was previously **Command**– =).

To switch between the new Centered Loupe and the classic Loupe, press **Command**–~.

To detach the Loupe from the cursor (classic Loupe only), press ~.

Published Date: Feb 20, 2012

iTunes 7: How to improve performance while burning or ripping CDs

This article has been archived and is no longer updated by Apple.

Symptom

If you have a large music library, you may notice that iTunes 7 performance might be slow when you first open iTunes or when you are burning or ripping an audio CD.

Solution

Update to iTunes 7.0.1 or later to resolve this issue.

Published Date: Oct 7, 2016

Aperture: New Vault Contents sometimes shows more files than expected

This article has been archived and is no longer updated by Apple.

Issue or symptom

When you create a vault, the New Vault Contents dialog sometimes indicates there are more referenced files than you expected.

Solution

This happens when you shoot RAW+JPEG and store the images outside the Aperture Library. The New Vault Contents dialog counts both the RAW and the JPEG copy of each referenced image.

Published Date: Oct 7, 2016

Aperture: Pixel Grid in Loupe sometimes not available

This article has been archived and is no longer updated by Apple.

Issue or symptom

The Pixel Grid option is sometimes dimmed in the **View > Show Pixel Grid in Loupe** menu. You may also see this happen in the **Loupe** pop-up menu.

Solution

The Pixel Grid is only available with Loupe magnification settings of 400% or greater. At lower settings, the option is dimmed.

Published Date: Oct 7, 2016

Mac OS X 10.4: Adobe products may need to be re-activated after Archive and Install

This article has been archived and is no longer updated by Apple.

You may need to re-activate installed Adobe software after performing an Archive and Install of Mac OS X 10.4 Tiger. The re-activation is not considered an "incremental attempt," so it should be successful in most cases. See Adobe Support Knowledgebase document 331418 for more information.

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Published Date: Oct 7, 2016

Mac OS X 10.4: Close printer queue window before printing from Classic

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you have a printer queue window open when printing from a Classic application, the print job may not print or appear in the printer's queue.

Solution

Make sure the printer's queue window is not open and the printer's icon is not on the Dock with a triangle by it (indicating it is open).

After closing the printer's queue window or quitting the printer queue application shown on the Dock, try printing from Classic again.

Additional information

Mac OS X 10.4 or later allows Classic applications to print to printers that were added in Mac OS X without installing printer drivers in Classic or selecting the printer in Chooser.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Mac OS X 10.4: Printer sharing also shares fax modems

This article has been archived and is no longer updated by Apple.

Issue or symptom

When Printer Sharing is enabled in Sharing preferences or "Share these printers with other computers" is selected in the Sharing tab of Print & Fax preferences, any fax modems in your Fax List will also be shared with other computers in your local network.

This happens even if "Let others send faxes through this computer" is disabled in the Sharing tab of Print & Fax preferences.

Solution

If you do not want to share your fax modem with other computers in your local network you can do one of the following:

- Turn off Printer Sharing in Sharing preferences. This will also stop sharing your printers with other computers in your local network.
- Or, remove the fax modem from the Fax List, in Printer Setup Utility (located in /Applications/Utilities):

    1. Click "Set Up Fax Modem..." in the Faxing tab of Print & Fax preferences, or select **Show Fax List** from the **View** menu in Printer Setup Utility.
    2. Select any modems you do not want to share in the list and click Delete.

Note: The next time you send a fax from your computer, your fax modem(s) will automatically be added back to the Fax List--you must remove them again from the list after sending a fax to stop sharing them with other computers in your local network.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

About the Xsan 1.4.1 update

This article has been archived and is no longer updated by Apple.

There are two updates for Xsan 1.4.1: "Xsan 1.4.1 Update for 10.4" and "Xsan Admin 1.4.1 Update". These are available from both Apple Downloads and Software Update.

Important: Read before continuing

Before installation

- Xsan 1.1 or later is required in order to install Xsan 1.4.1.
- If you are setting up a new Xsan deployment, please see this article for the proper installation order.
- Be sure that all Metadata Controllers (MDCs) are updated before you make any configuration changes.
- Before installing, please review the Xsan Migration Guide.
- During installation, do not change any Xsan settings using Xsan Admin or a command-line tool.

After Installation

To prevent an inconsistent volume state, run the `cvfsck` command on each Xsan volume after the MDCs have been updated with Xsan 1.4.1 Update.

Metadata Controller (MDC) software version

Your MDCs must always have software versions (both Xsan and Mac OS) that are the same or more recent than the most recent client versions. Specifically, if *any* client in your Xsan network is using Xsan 1.4.1 with Mac OS X 10.4.8 or later, then your metadata controllers (MDCs) must also be updated to Xsan 1.4.1 on the same version of Mac OS X.

Software Update Installation

Software Update may have referred you to this document. Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone Installer

A standalone installer is available from Apple Downloads.

Remote Installation

If you need to install the update on a remote computer, use the softwareupdate command-line tool.

Hardware Requirements

- Xserve or Xserve G5
- Mac Pro
- Power Mac G5 (any)

Storage Network Requirements

- Apple Fibre Channel PCI, PCI-X, or PCI-E Card

Compatibility Matrix

See Xsan: Compatibility of SAN clients with Xsan and StorNext controllers.

What's new in Xsan 1.4.1

Xsan 1.4.1 Update for 10.4

The Xsan 1.4.1 update improves reliability and is recommended for all systems running Mac OS X or Mac OS X Server version 10.4. It includes fixes for:

- Reliable metadata controller failover
- Using file system access control lists (ACLs)
- Labeling and initializing LUNs greater than 2TB in size
- AFP and NFS performance when re-sharing Xsan volumes
- Handling file system quotas and notifications
- Compatibility with Apple and third party applications

TA24380_About_the_Xsan_update.pdf

If you will be updating a SAN containing heterogeneous (Intel and PowerPC) Metadata Controllers (MDCs), please read this article.

Xsan Admin 1.4.1 Update

The Xsan 1.4.1 updatedelivers overall improved reliability for remotely administering, configuring and maintaining Xsan deployments. It includes fixes for:

- Labeling and initializing Fibre Channel LUNs larger than 2TB in size
- Expanding storage pools and volumes
- Working with multiple Xsan metadata controllers in a heterogeneous environment
- Displaying progress messages while performing lengthy operations
- Preventing custom configuration changes from being overwritten during a save
- Accurately reporting Fibre Channel multipathing errors

Xsan 1.4 Uninstaller

The Xsan 1.4 Uninstaller removes Xsan, the Xsan Admin application, and Xsan documentation files. The Xsan 1.4 Uninstaller is appropriate version to use when uninstalling Xsan 1.4.x installations and can be obtained from Apple Downloads, or can be found on the Xsan 1.4 installer media.

Note: Before removing Xsan, you should back up all of your data and volumes.

Xsan 1.4 documentation

Xsan 1.4.x administrators can find Xsan 1.4 documentation here.

Published Date: Oct 7, 2016

Mac OS X 10.4.8: Some content will not play in older QuickTime Player versions

This article has been archived and is no longer updated by Apple.

Mac OS X 10.4.8: Some content will not play in older QuickTime Player versions

After applying the Mac OS X 10.4.8 Combo Update on an Intel-based Mac, older versions of QuickTime Player may fail to handle some content as expected. In this situation, movies display only blank, white video, and no audio is heard. Image files may also appear as blank in QuickTime Player.

Affected media types include:

- .mov
- .mp4
- .m4v
- .jpg
- .png

Solution

Update QuickTime to 7.1 or later. You can get QuickTime updates from the QuickTime web site, or by using Software Update, available under the Apple menu.

Published Date: Feb 20, 2012

Logic Pro: Logic Pro 7.2.3 offers optimized audio I/O Support on Mac Pro

This article has been archived and is no longer updated by Apple.

Issue or symptom

Some audio I/O combinations on the Mac Pro are not available in the **Audio Hardware & Drivers** window under Logic Pro 7.2.0 and 7.2.1.

Solution

Updating from Logic Pro 7.2.0/7.2.1 to Logic Pro 7.2.3 gives access to all audio I/O combinations on the Mac Pro.

Published Date: Feb 20, 2012

Aperture: Some XMP sidecar files contain no metadata

This article has been archived and is no longer updated by Apple.

Issue or symptom

Some XMP sidecar files generated by Aperture may contain no metadata when opened in other applications.

Solution

This occurs when the IPTC field *Urgency* is populated with alphabetical characters. Aperture 1.5 does not allow non-numeric characters to be entered into the *Urgency* field, but projects created in previous versions may have non-numeric characters there. Replace any alphabetical characters in the *Urgency* field with numeric characters, or simply leave the field empty before exporting XMP sidecar files.

This issue is resolved in Aperture 1.5.1. If the *Urgency* field contains non-numeric characters, it is not exported to XMP sidecar files. All Aperture 1.5 users are encouraged to update to version 1.5.1 to take advantage of this, and many other enhancements. For more details on what is changed in Aperture 1.5.1, click here.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Aperture: Media Browser continues to show previews after sharing is disabled

This article has been archived and is no longer updated by Apple.

Issue or symptom

Photos from the Aperture library are still visible in other applications' Media Browser after you disable the **Share previews with other applications** preference in Aperture.

Solution

This is expected behavior. Existing previews in the Aperture will continue to be visible, but new photos from Aperture will not.

This issue is resolved in Aperture 2.x.

Published Date: Oct 7, 2016

Final Cut Studio doesn‘t display or import Flash content after upgrading to QuickTime 7.3.1

This article has been archived and is no longer updated by Apple.

Issue or Symptom

- You may be unable to open or import Flash media elements in Final Cut Studio.
- Existing projects that contain Flash elements may not perform as expected, or may appear to be missing elements.

Products affected

- Final Cut Studio
- QuickTime 7.3.1

Solution

Flash is not supported in QuickTime 7.3.1. Use QuickTime-based movie formats in Final Cut Studio applications.

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Published Date: Feb 20, 2012

PowerBook G4 and Apple Cinema Display (30-inch DVI) resolutions

This article has been archived and is no longer updated by Apple.

When you connect an Apple Cinema Display (30-inch DVI) to a PowerBook G4, you may find that the highest available resolution is 1280 x 800, even though the optimum resolution for the display is 2560 x 1600.

This is normal unless you are using a PowerBook G4 that comes equipped with a dual-link DVI port, such as:

- PowerBook G4 (15-inch Double-Layer SD)
- PowerBook G4 (17-inch Double-Layer SD)
- PowerBook G4 (15-inch 1.67/1.5GHz)
- PowerBook G4 (17-inch 1.67GHz)

These models were introduced in 2005 and come with the ATI Mobility Radeon 9700 video cards. Dual-link DVI ports were also available as Configure-to-order options in some other PowerBook G4 computers. Only these models of PowerBook G4 are able to support the optimum resolution for the Apple Cinema Display (30-inch DVI).

Published Date: Oct 7, 2016

Power Macintosh G3: TV/FM Tuner Module Compatibility

Can I use the TV/FM Tuner card from my previous Macintosh computer in my new G3?
This article has been archived and is no longer updated by Apple.
No, the TV/FM Tuner module is not currently supported on either the Desktop or Minitower Power Macintosh G3 computer.
Published Date: Feb 20, 2012

Aperture: Some text from Copyright field missing in exported images

This article has been archived and is no longer updated by Apple.

Issue or symptom

In some cases, the end of the text from the IPTC *Copyright* field is missing when images are exported from Aperture and viewed in another application.

Solution

The *Copyright* field is limited to 128 characters in exported versions, although it is possible to enter more than 128 characters into the field in Aperture. If a master is exported with an XMP sidecar file (Aperture 1.5), then the *Copyright* field is not limited to 128 characters.

This document will be updated as more information becomes available.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

Final Cut Pro 5.1.2 won‘t open after installing Motion 2.1

This article has been archived and is no longer updated by Apple.

Final Cut Pro 5.1.2 won't open after installing Motion 2.1

If you install Motion 2.1 *after* installing the Final Cut Pro 5.1.2 update, Final Cut Pro may subsequently fail to open.

Solution

To remedy this situation, take the following simple steps:

- From the **Apple menu**, choose **Software Update**.
- The Software Update panel will appear and will connect to the internet briefly. An item should appear in the list, named **"Pro Applications Update 2006-02 1.0"**.

- Click **Install** to install the update.

Additional information

This situation can occur if you install Motion 2.1 by running the installer found on the Final Cut Studio main installation disc. If you install Motion 2.1 by running the installer found on the Motion installation disc, the issue will not occur.

Published Date: Feb 20, 2012

Aperture: Elements of user interface do not match language setting

This article has been archived and is no longer updated by Apple.

Issue or symptom

After you change the language in the International preference pane to one of the supported languages in Aperture 1.5, Aperture's keyword button sets, Metadata Overlays, and Metadata pull-down menu retain the previous language. Also, the Viewer list view shows only the Version name for each image. These issues also occur when updating from Aperture 1.0/1.1 to 1.5 on a German, French or Japanese system.

Solution

Aperture does not overwrite existing keyword button sets when you upgrade or change the system language, to protect any custom sets you may have created. To reset the keyword button sets to the defaults using the current language setting, do this:

1. Quit Aperture if it's running.
2. Go to `~/Library/Preferences/` (where "~" represents your home folder).
3. Drag the `com.apple.Aperture.plist` file to the Trash.
4. Go to `~/Library/Application Support/Aperture`.
5. Drag the contents of `~/Library/Application Support/Aperture` to the Trash.
6. Open Aperture.

Note that you will lose any custom keyword button sets you have created, but any keywords already applied to images will remain.

Published Date: Oct 7, 2016

Apple Wireless Mighty Mouse: Tracking light not visible

This article has been archived and is no longer updated by Apple.

Unlike previous Apple optical mice, you may notice that you can't see the tracking light on the Apple Wireless Mighty Mouse. This is normal.

The Apple Wireless Mighty Mouse uses a improved laser optical tracking system. Because the laser operates in the infrared part of the spectrum, it remains invisible the human eye. It also operates at such a low voltage that it is harmless if directed into the eye.

Click here for more details on the Apple Wireless Mighty Mouse.

Published Date: Oct 7, 2016

Aperture: System becomes unresponsive when external editor opens

This article has been archived and is no longer updated by Apple.

Issue or symptom

When you send a large image from Aperture to an external editor, the computer may become unresponsive when the external editor starts to load.

Solution

This situation can occur when there is too little space available on the boot drive or partition. The reason this may happen is that some external editors copy the image to a temp directory on the boot drive/partition. The best way to avoid this issue is to maintain a healthy amount of free space on your boot volume. For information on other issues related to working with external editors see the following documents:

- Aperture: A large image "could not be located" when sending to external editor
- Aperture: Only one image opens when sending multiple images to Photoshop
- Aperture displays "Images Can't be Located" when sending files to an external editor.

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Published Date: Oct 7, 2016

Aperture: Compatibility Checker gives error for unsupported graphics card

This article has been archived and is no longer updated by Apple.

Issue or symptom

When run on an iMac G5 with a GeForce FX 5200 Ultra video card, the Aperture 1.5 Compatibility Checker shows the message

> "Your graphics card is not supported."

followed by

> "Error: The installed graphics card does not meet the minimum system requirements by Aperture."

Solution

This happens on iMac G5 1.6 Ghz systems. Aperture 1.5 requires an iMac G5 running at 1.8 Ghz or faster, but the Compatibility Checker erroneously indicates that the graphics card is the reason the computer is unsupported.

This issue is resolved in Aperture 1.5.1.

Published Date: Feb 20, 2012

Replacement hard drives often require formatting before use

This article has been archived and is no longer updated by Apple.

Although replacement hard drives are often formatted and ready for use immediately after installation, you may find that your replacement hard drive doesn't appear as a valid volume for installing the OS.

Before assuming that there is an issue with your replacement drive, make sure it has been properly formatted by initializing the drive through the "Disk Utility" program. You may either start up from another volume like the Installation DVD that came with your computer, or launch "Disk Utility" from the menu of the Installer.

Published Date: Feb 20, 2012

LaserWriter 8: LPR Printing May Be Slower Than AppleTalk

Print jobs sent over TCP/IP using the LPR protocol take longer to print than those sent over AppleTalk.
This article has been archived and is no longer updated by Apple.
LaserWriter 8 version 8.5.1 and later, includes an IP printing feature. This allows you to use the LPR protocol to print to many Apple LaserWriter printers over IP. The LaserWriter driver uses the LPR protocol to send PostScript print jobs to IP-enabled printers, allowing network administrators to integrate Apple LaserWriter printers into IP-only networks.

In most environments, printing over AppleTalk is the preferred network protocol for printing to PostScript printers. When using the LPR protocol, there are four situations that may cause print jobs sent over TCP/IP to take longer to print than those sent over AppleTalk. They are outlined below.

Situation 1
Printing is slower if MacIP is selected as the network connection instead of Ethernet in the TCP/IP control panel. Certain physical networks and dialup networking protocols, notably LocalTalk and Apple Remote Access Protocol (ARAP)-for dial up connections-cannot transmit TCP/IP. To allow TCP/IP connectivity over these networks, MacIP tunnels (wraps) the IP packets within AppleTalk packets so they can be transmitted across non-TCP/IP networks. The AppleTalk packets are received by a MacIP gateway that forwards the unwrapped IP packets to the destination.

Open the TCP/IP control panel and look the "Connect via" pop-up menu. If MacIP is selected then your print jobs are going from TCP/IP to AppleTalk and back to TCP/IP again. This requires additional time. If your network connection is not over LocalTalk or ARAP, then you should be able to set the "Connect via" pop-up menu to Ethernet to speed up communication.

Situation 2
Print jobs may take longer if you print to a print queue on a print server instead of printing directly to a printer. For optimal print performance, make sure your desktop printer is configured to print directly to the printer.

Situation 3
AppleTalk print jobs are optimized, and therefore smaller, so they require less time to be transmitted and processed by the printer.

At the beginning of each AppleTalk print job, the LaserWriter 8 driver opens a network connection to the printer and sends a query job to determine:

- PostScript language level compatibility (PostScript Level 1, 2 or 3)
- available file format (binary, ASCII)
- installed fonts

The LaserWriter driver uses the information it receives from the printer to optimize the AppleTalk print job. The LPR protocol cannot use this PostScript "backchannel" query mechanism. Because it does not know all of the printer's characteristics, the driver must make conservative assumptions about the printer's print and communications capabilities when creating a print job. This results in a print job that takes longer to transmit and print, but one that is more universally compatible.

In LaserWriter 8 version 8.7, which is part of Mac OS 9, LPR printer compatibility was enhanced. LaserWriter 8.7 examines the PPD file selected for your desktop printer to learn the printer's characteristics. The PPD includes information such as which fonts are present in the printer's ROM, if the printer has or is capable of using a TrueType rasterizer, if is it a color device, what product it is, its print resolution, its PostScript version, and what language level it can use. With this information, the LaserWriter 8.7 driver builds a more fully optimized LPR print job than earlier versions of the LaserWriter 8 driver. Despite this, an AppleTalk print job may be optimized to an even greater extent because of this protocol's use of the PostScript backchannel.

Situation 4
When the LaserWriter 8 driver prints over AppleTalk, it builds a print job using the full range of the possible eight-bit binary numbers, having a range of 0 to 255 possible byte values. Since not all printers work with this full binary range, only bytes in the ASCII range, 0 to 127, are used to insure compatibility under LPR, and many low control codes are avoided as well. Print jobs built using only values 0 to 127 are larger than print jobs that use the full range, and they take longer to transmit and process.
Published Date: Feb 20, 2012

Fifth Generation iPod resets when playing some mono MP3 songs and podcasts

This article has been archived and is no longer updated by Apple.

Symptom

Some customers may experience an issue where a Fifth Generation iPod will reset when attempting to play certain MP3 files or podcasts encoded as MP3. This symptom may occur with any MP3 file encoded at 32Khz or higher with a mono channel.

Solution

Update to iPod Software 1.2.1 or later using the latest version of iTunes.

Published Date: Oct 7, 2016

Aperture: Folders or Projects missing after 1.5 update installed

This article has been archived and is no longer updated by Apple.

Issue or symptom

Folders or projects may disappear after you update to Aperture 1.5

Solution

The first thing to be sure of when this happens is that you do not empty the Trash until you have performed the following steps, or you may lose images.

Before proceeding with the following steps, check the issue described here. If this does not resolve the issue proceed as follows.

This happens when you use a period (".") as the first character in the folder/project name. The computer treats files or folders that start with a period as hidden files. If this happens, and you have an up-to-date vault, then do the Reinstall and Recover steps. If you don't have a vault or your vault is not up-to-date, then follow the Terminal steps below.

Reinstall and Recover

Note: Make sure that you have your installation discs and serial number handy before starting this.

1. In the Finder, go to `/Library/Receipts` and drag all receipts whose names start with "Aperture" to the Trash.
2. Drag the Aperture application from `/Applications` to the Trash.
3. Locate your Aperture Library (by default located at `~/Pictures`) and rename it something like `Aperture Library.old`.
4. Install a previous version of Aperture.
5. Recover your Aperture library from a vault.
6. Rename the folders and projects so that their names do not start with a period (".").
7. Re-apply the Aperture 1.5 update.

Terminal Steps

If you do not have an up-to date Vault, you may be able to recover some or all of the missing images by doing the following:

Warning: These steps involve entering commands in the Terminal application. Users unfamiliar with Terminal and UNIX-style environments should proceed with caution. The entry of incorrect commands may result in data loss and/or unusable system software.

1. Open the Terminal application from `/Applications/Utlities`.
2. At the prompt, type
   `defaults write com.apple.finder AppleShowAllFiles YES`
3. Log out and then back in. This will cause the changes from the previous step to take effect.
4. Open the Trash. If there are any of your missing folders there, drag them out of the Trash to the Desktop.
5. Rename any items from the previous step whose names start with "."
6. Control-click your Aperture Library and choose **Show Package Contents** from the shortcut menu.
7. If any of the project package or folder names in the library start with ".", rename them.
8. If you used a "." to start any folder names inside projects, then Control-click any of the project packages that contain those folders, choose **Show Package Contents**, and rename the folders.
9. Open Aperture. It will detect the renamed items.
10. If you recovered any items from the Trash, re-import the images from the Desktop.
11. At the prompt in the Terminal application, type
    `defaults write com.apple.finder AppleShowAllFiles NO`
12. Quit Terminal.
13. Log out and then back in. This will cause the changes from the previous step to take effect.

Published Date: Oct 7, 2016

Aperture: Some projects seem to be missing after updating to Aperture 1.5

This article has been archived and is no longer updated by Apple.

Issue or symptom

After you update to Aperture 1.5, the Project Pane may not show all your projects.

Solution

In some cases, the Project Pane settings are changed by updating to Aperture 1.5. To resolve the issue, change the setting in the **Projects** pop-up menu from **Show Favorites** or **Show Recent** to **Show All**.

If the issue continues, see this document.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

Aperture: New and updated Automator actions do not behave as expected

This article has been archived and is no longer updated by Apple.

Issue or symptom

This issue may manifest in several ways:

- When you choose the **Import by Reference** option in the **Import Images** Automator action, imported images are placed in the Aperture Library (managed).
- When you use the **Export Images** action, images may be exported using the version name, rather than the file naming preset you selected.
- You choose **Export Images**, but it shows up as **Export Versions** in your workflow.

Solution

These issues can occur when you have updated from Aperture 1.1.2 to 1.5. To resolve the issues, delete the file `~/Library/Caches/com.apple.automator.actioncache`.

This issue is resolved in Aperture 1.5.1.

Published Date: Feb 20, 2012

Mac OS X 10.4.8: Black rectangle may appear after installing Mac OS X 10.4.8 update

This article has been archived and is no longer updated by Apple.

Issue or symptom

After installing the Mac OS X 10.4.8 Update, a black rectangle may appear around the cursor and follow the pointer's movement.

Solution

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **Universal Access**.
3. Click the Seeing tab.
4. Click Options.
5. Deselect "Show preview rectangle when zoomed out".
6. Click Done.

Published Date: Feb 20, 2012

Aperture 1.5 may fail to open on some iMac G5 computers

This article has been archived and is no longer updated by Apple.

Issue

Aperture may fail to open on a 1.8 GHz iMac G5 that has an NVIDIA GeForce FX 5200 Ultra graphics card.

Affected Products:

- 1.8 GHz iMac G5 with GeForce FX 5200 Ultra graphics
- Aperture 1.5

Solution

This issue is resolved in Aperture 1.5.1.

Related document

304488: Aperture: Compatibility Checker gives error for unsupported graphics card
Published Date: Feb 20, 2012

DVD Studio Pro: For motion menu background assets, use DV QuickTime sources with High Quality setting

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you use DV video content as a menu background element, the menu may not be rendered with the best possible quality if the High Quality QuickTime option is not set in the asset.

Solution

This issue occurs rarely, and only with DV QuickTime movies. You can avoid this issue by setting the High Quality option for your asset as follows.

Perform the following steps before importing the asset:

1. Open the movie file with QuickTime Player.
2. Choose **Window > Show Movie Properties**.
3. In the Properties window, select the Video Track.
4. Select the Visual Settings button. (If you do not see the Visual Settings button, try selecting the Audio Track, then reselect the VideoTrack to refresh the button display).
5. Select the High Quality check box if it isn't already selected.
6. Save the file.

Note: In QuickTime 7 and later, you can select a preference to always use high-quality video setting when available. If that preference is set, then the High Quality property will be selected by default when you open the file in QuickTime player.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Mac OS X 10.4: Speech Commands window is empty

This article has been archived and is no longer updated by Apple.

Issue or symptom

When using Speakable Items in Mac OS X 10.4, the Speech Commands window may be empty (blank) and Speakable Items may not respond to any spoken commands.

Solution

This can happen if Address Book contains any Company cards that have no name in the Company field.

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **Speech**.
3. Click the Speech Recognition tab.
4. Click the Off button next to Speakable Items.
5. Click the Commands tab.
6. Select Address Book from the list of command sets.
7. Click the Configure button.
8. Deselect any entries named "(null)".

9. Click Save when done.
10. Click the On button next to Speakable Items.

Additional information

If you would prefer to make the "(null)" address cards speakable, use these steps instead of the steps above:

1. Open Address Book (/Applications/Address Book).
2. Look at all cards that have been designated as a Company (icon looks like buildings) and make sure each of these cards has a name entered in the Company field, even if there is already a name entered in the First and Last fields.
3. Turn Speakable Items off, then back on.

Note: If you see "(null)" Address Book cards on an Intel-based Mac, and the Speech Commands window is not blank, see this article instead.

For other tips about using spoken commands see this article.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

iMovie: Use iMovie HD after migrating to a new computer

This article has been archived and is no longer updated by Apple.

After using Setup Assistant or Migration Assistant to migrate applications from a computer that has iMovie installed (version 4.0.1 or earlier) to a computer that has iMovie HD installed (version 5 or later), the destination computer will have both iMovie and iMovie HD installed. The iMovie icon on the Dock of any migrated users will open the older version of iMovie, which will not have as many features as iMovie HD and may not function properly with other iLife applications. The older version of iMovie can safely be removed from the system and iMovie HD should be used instead.

Related documents

304302: "Intel-based Mac: Some migrated applications may need to be updated"
Published Date: Oct 7, 2016

MacBook Color Profile changes after installing Mac OS X 10.4.8 Update

This article has been archived and is no longer updated by Apple.

Issue or symptom

After installing the Mac OS X 10.4.8 update, some MacBook computers will have a new color profile that is more consistent with other MacBook and MacBook Pro computers but may appear to have a blue tint when compared to the previous profile.

Solution

You can determine which profile you're using by opening the folder /Library/ColorSync/Profiles/Displays/. If you see a file named "Color LCD-4271780.icc" then you have the newer profile. If you don't see a file with this exact name, then the profile you have after installing Mac OS X 10.4.8 is the same one you had prior to installing the Mac OS X v10.4.8 update. (Not all MacBooks will have an updated color profile. If your computer doesn't have an updated profile, this article does not apply to your computer.)

If you don't like the updated profile, you have two choices. You can create a custom profile, or you can return to the previous default profile.

Previous profile

If you prefer to return to the color profile you had before updating, you can download it here. (The profile has been compressed into a .zip file - you may need to unzip the file in order to get the color profile with the .icc suffix.)

To install the profile:

1. Copy the downloaded file, "Color LCD-4271780_1047.icc" into /Library/ColorSync/Profiles/
2. Open the Displays pane of System Preferences and select the Color tab.
3. Select the desired color profile. The profile you used to use, that you just downloaded, is named "Color LCD v10.4.7". The profile that was updated with Mac OS X 10.4.8 is "Color LCD".

If your MacBook did not require the newer profile, then you won't see the "Color LCD v10.4.7" profile in the list even if you add it to your profiles folder. Profiles that were not created on your computer are filtered from the list.

Custom profile

You can also create a custom profile by clicking the Calibrate button in the Color tab of the Displays preference pane. This will open the Display Calibrator Assistant. Using expert mode, you can choose the color temperature you prefer.

Published Date: Feb 20, 2012

Aperture: Tips on Using Edge Sharpen in Aperture 1.5

This article has been archived and is no longer updated by Apple.

Basics

The Edge Sharpen adjustment in Aperture is a professional tool that's used to sharpen photos. Unlike some sharpeners, Edge Sharpen has four special characteristics:

- **Only edges are sharpened**
  Edge Sharpen computes an edge mask and uses it to constrain the results of the sharpening operation. This means that, with the right settings, you should be able to sharpen your image without bringing up the texture in the noise, or in the sky. This can be useful in sharpening the edges of a face without introducing pockmarks.

- **Only image luminance is sharpened**
  Typical sharpeners work in the RGB color space. This can cause unusual colors to appear. So Edge Sharpen performs its sharpening only on the luminance information of the image, leaving the hue and saturation alone.

- **Image luminance is sharpened in a perceptual space**
  Sharpening should be accomplished in a space that has equal steps for equal perceptual steps. The Aperture Edge Sharpen adjustment does this so that the sharpening effect will be approximately the same in shadow areas as it is in the midtones.

- **Three sharpening passes are employed**

  It has often been mentioned on professional photography sites that typical sharpening algorithms can be improved by using several small sharpening steps with lower intensity. Usually the visual improvement is a decrease in the "ringing" around hard edges. These three sharpening passes are accomplished at different pixel radii (you can think of them as 1, 2, and 4 pixels, although their exact radii, actually standard deviations, are slightly different). Also, each sharpening pass uses a lowered intensity to purposefully avoid excessive "ringing" around edges. The relative contributions of each sharpening pass can be controlled using the Falloff slider.

Note: The 1, 2, and 4 scales were chosen specifically because they straddle the typical sharpening radius for a digital camera image (2.2 pixels).

Parameters

You can control Edge Sharpen to get professional results.

Intensity
The Intensity slider controls the overall amount of sharpening applied. Drag the Intensity slider to the right to increase the amount of sharpening applied to the image, and drag the Intensity slider back to the left to reduce it.

Edges
The Edges slider controls which pixels are edges and which are not. Drag the Edges slider to the right to increase the number of pixels that qualify as edges, and drag the Edges slider back to the left to restrict sharpening further. If you see noise increasing in a flat area of the image, like the sky, decrease the Edges parameter value.

Falloff
The Falloff slider controls how much sharpening is applied during the three sharpening passes at 1, 2, and 4 pixels respectively. Usually, the most sharpening happens in the 1-pixel pass, less in the 2-pixel pass, and less still in the 4-pixel pass. Drag the Falloff slider to the right to equalize the amount of sharpening power between the three sharpening radii, and drag the Falloff slider back to the left to increase the total sharpening power proportionately at the smallest features. Typically you should set the falloff parameter to a value between 0.4 and 0.7; a value of 0.7 means that, proportionately, only 70 percent of the sharpening power applied at the 1-pixel scale is applied at the 2-pixel scale, and only 49 percent of the 1-pixel scale sharpening is applied at the 4-pixel scale. Note that total intensity (between the three passes) always adds up to the indicated value of the Intensity slider.

Workflow

To sharpen an image:

1. Set the Intensity slider to the maximum value to see the effect of the operation.
2. Adjust the Edges slider so you can see which parts of the image are being sharpened. If possible, adjust the Edges slider so that edges are sharpened, but noise and texture in the image are not affected.
3. Adjust the Falloff slider so that the edge sizes you want sharpened the most are accentuated.
4. Decrease the Intensity parameter value until the sharpening effect is appropriately subtle. Usually a value of 0.5 is too much.

Edge Sharpen and RAW Edge Sharpening

TA24421_Aperture_Tips_on_Using_Edge_Sharpen_in_Aperture_.pdf

You can control the amount of sharpening applied in the RAW demosaic process as well. It is controlled by the Intensity and Edges sliders in the RAW Fine Tuning adjustment. This sharpening is generally applied to all your RAW files, so you might want to turn it down (or off) and apply sharpening as an adjustment later. If you want sharpening applied automatically as part of your RAW workflow, leave the settings at the default values. They are intended to "undo" the effect of the camera's internal anti-aliasing filter and provide a suitably sharp image right out of RAW conversion.

Published Date: Oct 7, 2016

Nike + iPod Voice Kits: Frequently Asked Questions

This article has been archived and is no longer updated by Apple.

Spoken feedback is available in some languages other than English. If you set your iPod to a language in which spoken feedback is available and connect it to your computer, iTunes prompts you to download a version in the other language. If you set your iPod back to English, you can still hear spoken feedback in English. You can have only one non-English version of spoken feedback on your iPod at a time.

Which languages are available?
English has been available since the Nike + iPod Sport Kit was introduced. Japanese, French, Italian, German, and Spanish were released on 16 Oct 2006.

What is the size of a voice kit?
13 MB - 14 MB, depending on the language

What is hardware is required?

- Nike + iPod Sport Kit
- An iPod nano or iPod nano (Second Generation)
- Nike+ ready shoes

What software is required?

- iTunes 7.0.1 or later (Mac or Windows) with an Internet connection[1]
- iPod nano with iPod nano software 1.3 or later
- iPod nano (Second Generation) with iPod nano Second Generation software 1.1 or later

Where is the voice kit stored once it is downloaded?
Mac `~/Library/iTunes/Nike + iPod Voice Kits/`
Windows: `C:\Documents and Settings\yourusername\Application Data\Apple Computer\iTunes\Nike + iPod Voice Kits`

How do I get a particular voice kit to load onto iPod?

1. Make sure you are using the correct version of iTunes on your computer.
2. Make sure you are using the correct version of iPod software on your iPod nano.
3. If you have never connected the Nike + iPod Sport Kit Receiver to your iPod nano, do so now, wait 10 seconds and then remove the Receiver from the iPod nano.
4. Set the iPod to the desired language (Choose **Settings > Language**).
5. Connect iPod nano to your computer and open iTunes if it does not open automatically.
6. You will be prompted to download the latest voice kit for that language, if available.

How do I know that I have done these steps correctly?
When you connect iPod you will see the following:

or (in Japanese):

When you click "Install", the iTunes LCD will display the download progress as shown:

(in Japanese):

What can I do if I experience a problem with a voice kit and want to reload them?

1. Delete the "Nike + iPod Voice Kits" folder
   Mac:
   `~/Library/iTunes/Nike + iPod Voice Kits`
   Windows:
   `C:\Documents and Settings\yourusername\Application Data\Apple Computer\iTunes\Nike + iPod Voice Kits`
2. Restore iPod nano with latest software
3. Pick the language on iPod .
4. Connect and disconnect Nike + iPod Sport Kit receiver.
5. Connect iPod nano to your computer and make sure iTunes opens.
6. Follow the prompts to download the voice kits for that language, if available.

Notes

1. You must be connected to the Internet to get the voice kits.

Published Date: Oct 7, 2016

GarageBand: Imported movie does not play to end

This article has been archived and is no longer updated by Apple.

Issue or symptom

A movie you import into GarageBand may not play all the way to the end.

Solution

If the movie is longer than the maximum GarageBand song length of 1999 bars, then the movie will stop playing when that point is reached. Lower the tempo of the song so the entire movie fits within 1999 bars.

Published Date: Feb 20, 2012

Aperture: Previews are recreated after turning off generation in preferences

This article has been archived and is no longer updated by Apple.

Issue or symptom

You delete the previews in your library, or for a project, and disable "New projects automatically generate previews" in the Aperture preferences. The next time you open Aperture, the previews are recreated.

Solution

The preference *New projects automatically generate previews* only governs how new projects are handled. To prevent preview generation for projects that had previously had them, select the project in the Project Pane, click the Action menu (gear icon) in the upper right corner and disable *Maintain Previews for Project*. To prevent preview generation for all projects, highlight the Library in the Project Pane, click the gear icon and disable *Maintain Previews for all Projects*.

Published Date: Oct 7, 2016

Aperture: Changes in Aperture 1.5.1

This article has been archived and is no longer updated by Apple.

Changes in Aperture 1.5.1

Aperture 1.5.1 addresses more than 100 issues related to overall reliability and performance in all areas of the application. Here is a partial summary of the specific issues that have been addressed in this release:

Keywords

- Fixed some issues that prevented keywords from being properly added to or deleted from the Keyword HUD.
- Sorting of keywords in the Keyword HUD is now case-insensitive.
- Improved reliability when importing keyword list from a text file.
- Shift–clicking the Keyword button now correctly removes the corresponding keyword from the selected image(s).
- Multiple keywords applied to a single image and exported using XMP sidecar files now appear as separate keywords when viewed in applications such as Extensis Portfolio.

Loupe

- The most recent setting for the size of the Loupe is now retained for subsequent work sessions.
- Contextual menu commands for Loupe are now accessible via the the contextual menu on the Light Table.
- Improved reliability when using the Loupe while making adjustments in book and web gallery views.

Cropping

- Crop aspect ratio is now properly retained after deselecting a cropped image.
- Crop tool no longer reverts to the "1:1" setting when returning to a cropped image.

Previews

- Improved responsiveness when making Adjustments when the "Maintain Previews for Project" option is activated.
- Improved responsiveness while Previews are being generated.
- Previews for versions are all now correctly deleted when versions are deleted.
- Duplicating an adjusted version automatically generates an up-to-date preview.
- New previews are now automatically generated for duplicate versions.

Metadata presets

- Addressed issue with metadata presets in Import and Batch Change that prevented users from updating fields.

File renaming

- File naming changes applied during a relocate or consolidate operation are now properly updated in the database.

iPhoto Library import

- Improved reliability when importing an entire iPhoto Library or selected albums into Aperture.

Watermarks

- Watermarks now scale properly when applied on export.

Consolidate/Relocate

- Improved reliability when relocating the contents of an entire Library.
- Dialog now warns that consolidating images may revert files to their original names.
- Exporting or relocating a selected group of images while renaming them with a format that uses a counter or sequence now correctly preserves the order of images.

Managing Referenced Files

- Improved reliability when using Manage Referenced Files to reconnect to master images.

- Improved reliability when reconnecting to images that have been moved to a DVD/CD.
- The Mount/Unmount button in Manage Referenced Files dialog now properly updates Volume status.

Lift & Stamp

- Resolved a database issue that occurred when using Lift and Stamp with the *Create new versions when making adjustments* preference turned on.
- Keywords that are "lifted" and then deleted from the Lift & Stamp HUD are now omitted when stamped.

Print dialog

- Image preview resizes correctly when the Print dialog is resized.
- Changes to Colorsync profile and gamma settings in the Print dialog are now correctly reflected in the image preview in the Print dialog.

AppleScript and Automator

- Fixed an issue that occurred when exporting Versions with Current Version Name using Automator.
- The Extract Metadata Action now properly exports the selected metadata when used in an Automator workflow.

Image Deletion

- Fixed an issue that could occur when deleting duplicate versions in List View.
- The Delete Project dialog box now displays the name of the project being deleted.
- Fixed an issue which could cause performance to degrade after deleting Externally Edited images.
- Aperture's database now properly reflects the deletion of referenced images that are stored on a network volume.

Miscellaneous issues addressed

- Improved reliability when exporting Projects.
- Aperture now properly validates and runs on 1.8 GHz iMac with NVIDIA GeForce FX 5200 graphics card.
- Improved performance when switching in and out of Full Screen mode.
- Aperture no longer allows users to create folders with a period (.) as the first character.
- Pressing Option–Zero now clears rating from Compare image.
- Fixed an issue that prevented images with a "@" in the filename to be properly copied to a Vault.
- Fixed an issue with Autostacking offline images when in List View.
- Captions for books that were created using previous versions of Aperture are now correctly linked.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

Disk Copy 6.1: Checksum Verification

This article describes an anomaly with the Checksum Verification preference in Disk Copy 6.1.
This article has been archived and is no longer updated by Apple.
Disk Copy does not report Checksum Verification while reading or creating disk images, even though you request it.

This behavior was corrected in Disk Copy version 6.1.1 which is available for download from the Apple Software Updates Web site at http://www.apple.com/swupdates.
Published Date: Feb 20, 2012

iSync, iCal: About the "Completed" status of "To-Do" events on Nokia phones

This article has been archived and is no longer updated by Apple.

After syncing To-Dos between iCal and certain Nokia phones using iSync in Mac OS X 10.4 or later, To Dos may not show an updated "Completed" status, even after the phone has been properly synchronized.

Events that have been marked "Not-Completed" on the phone after being set as "Completed" may also not be updated in iCal.

This can happen with Nokia Series 60 phones such as the N70.

This document will be updated as more information becomes available.

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Published Date: Oct 7, 2016

Final Cut Pro will not open in Curtain Mode under Apple Remote Desktop

This article has been archived and is no longer updated by Apple.

Issue

Apple Remote Desktop 3 includes a new feature called **Curtain Mode**. This feature enables a Remote Desktop administrator to temporarily disable the display on a Remote Desktop client machine while it is being controlled, effectively hiding the screen contents behind a "curtain." Final Cut Pro 5.1.2 cannot be opened on a Remote Desktop client while Curtain Mode is active.

Affected Products:

- Final Cut Pro
- Apple Remote Desktop Client

Solution

To work around this issue, open Final Cut Pro before activating Curtain Mode.

Note: Using Final Cut Pro remotely via Apple Remote Desktop is possible, but somewhat unconventional. Usually, an editor will sit at the computer for more responsive interactivity while editing in Final Cut Pro.

This document will be updated as more information becomes available.

Related Terms: can not cannot

Published Date: Feb 20, 2012

Final Cut Pro 5: May drop frames of 1080pA24 media on 1.67GHz PowerBook G4 models

This article has been archived and is no longer updated by Apple.

Issue

While the PowerBook models that operate at 1.67GHz are qualified to run Final Cut Pro 5, testing has shown that there may be dropped frames if you are working with DVCPRO HD 1080pA24 media.

Because the 1080pA24 media on tape is actually recorded at 29.97 interlaced frames per second (fps), Final Cut Pro has to remove the redundant fields, resulting in a 23.98 fps movie on your scratch disk. Performing the on-the-fly removal of redundant frames is a very performance-intensive operation, and the 1.67 GHz PowerBook G4 models may drop frames when attempting to Print to Video in the 1080pA24 format.

Affected Products

- Final Cut Pro 5
- PowerBook G4 (15-inch 1.67 GHz)
- PowerBook G4 (17-inch 1.67 GHz)

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Aperture: "Insufficient Disk Space" error when importing images

This article has been archived and is no longer updated by Apple.

Issue or symptom

Sometimes when you try to import images into Aperture, an error dialog indicating that more disk space is needed occurs, although there is more than the indicated amount of space available.

Solution

Aperture requires that a certain amount of unused disk space be kept in reserve. You may find situations where this dialog comes up when there are several hundred megabytes free, even after accounting for the space required for the images you wish to import. It's good practice to keep at least 1 GB free on the volume where the Aperture library is stored.

Published Date: Oct 7, 2016

About Apple Remote Desktop 3.1

This article has been archived and is no longer updated by Apple.

Apple Remote Desktop (ARD) version 3.1 can be installed on computers that have:

- Mac OS X 10.3.9 or later.
- An Ethernet (recommended), Airport, or FireWire over IP network connection
- Apple Remote Desktop (ARD) 3.0

Apple Remote Desktop 3.1 is a Universal Binary updater application and will upgrade Apple Remote Desktop 3.0 installations on Intel- or PowerPC-based Macintosh computers which meet the above criteria.

Update packages

Apple Remote Desktop 3.1 provides two update packages:

- Apple Remote Desktop 3.1 Client
- Apple Remote Desktop 3.1 Admin

These updates can be downloaded from Apple downloads.

Compatibility with previous versions of Apple Remote Desktop

Apple Remote Desktop 3.1 allows you to Control or Observe Apple Remote Desktop version 2.0 or later and 3.0 clients.

If you choose not to upgrade your clients to the current version, you will have limited backwards compatibility and will only be able to control/observe computers that are running version 2.x or later of the client software.

Improvements

Apple Remote Desktop 3.1 offers numerous improvements, including:

Software distribution

- Install Package task now supports installing Apple Installer packages that have packages outside the .mpkg
- Addresses issues when copying files to root ("/") on PowerPC clients
- Copy Items task now correctly supports copying of files with aliases

Asset management

- PCI Reports now called Expansion Card Reports
- Software reports now also report architecture type of applications
- System Information Report can now report on Lights Out Management configuration and settings
- Administration Settings Report can now report on Lights Out Management settings
- Application Usage Reports no longer allows for a start date to be later than the end date
- You can now drag computer lists and computers into the the Remote Spotlight Search window

Remote control

- You can now power on an Xserve with Lights Out Management
- Send UNIX panel now correctly focuses cursor in the script field
- Enter key now invokes the Send button in Send UNIX panel
- The Lock Screen and Curtain Mode tasks can now display custom lock screen images
- Send UNIX task no longer has limits on length of commands/scripts being sent to client computers

Remote assistance

- Improved support for using right mouse buttons to invoke contextual menus
- When performing a drag-and-drop copy, Apple Remote Desktop will now prompt you if a same-named item already exists in the location
- Improved compatibility with third-party VNC viewers and servers
- Addresses an issue that could cause video to be displayed improperly when sharing screens
- Control/observe toolbars now retain their settings correctly

Automation

- Copy Items action now also works with computer lists

- AppleScript dictionary now includes support for Power On task for Xserves with Lights Out Management
- Workflows that include Choose Remote Computer and Choose Computer List actions now properly retain their settings when they are re-opened
- Using the "copy to me" task in AppleScript no longer cause the application to unexpectedly quit
- Execute AppleScript action now correctly handles quotes in the input
- AppleScript no longer sends extra quotes in the results of a Send UNIX task
- AppleScript now correctly interprets Install Package tasks that use a Task Server

Other

- Network scanners now support Bonjour-only discovery of Apple Remote Desktop and VNC-enabled client computers
- Get Info panel now supports setting username and password for the Xserves Lights Out Management
- Computer lists can now display the Lights Out Management status of Xserves
- Addresses issue of Smart Computer Lists occasionally clearing out entries in other computer lists
- Apple Remote Desktop now correctly recognizes users that login using Active Directory account with machine administration rights
- kickstart can now correctly configure clients for VNC access
- Resolves an issue when the client idle time in computer lists reported thousands of hours
- Computers that have multiple network interfaces can now be used as Task Servers
- Addresses issues in which IP addresses could occasionally be displayed inverted
- Resolves the issue of not being able to include individual icons for the Sleep/Wake/Restart/Shutdown on your toolbar
- Addresses an issue with computers disappearing form smart computer lists after quitting the Apple Remote Desktop application
- If System Preferences has been restricted from opening, the Remote Desktop menu extra will now not allow launching of System Preferences
- Addressees an issue in which task items could occasionally be dimmed ("grayed out")
- Support for administrators that are in more than 14 groups
- The Installed RAM column of computer lists no longer rounds up values
- Authenticating using directory services based accounts no longer conflicts with mobile accounts in Active Directory
- Authenticating using directory services can now be throttled to minimize load on directory servers

For more support information, visit the Apple Remote Desktop support page.

Published Date: Oct 7, 2016

Final Cut Pro: Canceling render may take longer when rendering media with processor-intensive effects

This article has been archived and is no longer updated by Apple.

When Final Cut Pro is rendering media, you can cancel the render at any point in its progress by clicking the Cancel button. If the cancel button seems unresponsive for a moment after you click it, don't worry; the render operation will stop momentarily.

This can occur in some cases when Final Cut Pro is rendering media that requires a lot of processing power (i.e., clips that have a lot of effects or superimposed elements). In such a case, it's only necessary to click the Cancel button once, and Final Cut Pro will cease rendering.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

MacBook Pro: What to do if bus-powered FireWire devices don‘t appear in menus or behave correctly

This article has been archived and is no longer updated by Apple.

Your MacBook Pro may not recognize your FireWire device properly—it doesn't appear in menus, it's not recognized or it doesn't behave properly.

If you find this to be the case, the device probably came with an external power supply, and is demanding more power than the FireWire standard provides through the bus. This issue can also appear if a number of FireWire devices are plugged in to the same bus and demand more power than the bus provides.

(Bus-powered devices derive their power from a source on the bus to which they are attached. Self-powered devices come with an AC adapter and plug into a wall socket for power as well as into the computer.)

Be sure always to use the power supply if one came with a FireWire product. If you are connecting more than one device, use a self-powered FireWire hub or switch.

Published Date: Oct 7, 2016

iPhoto: iPhoto unexpectedly quits when importing movies

This article has been archived and is no longer updated by Apple.

Issue or symptom

When importing small movie files (such as .avi files) from a still camera or other device, iPhoto may unexpectedly quit.

Solution

1. Check the following locations for non-Apple plug-ins:
   - ~/Library/QuickTime/ (that is, the QuickTime folder inside the Library folder in your home directory)
   - /Library/QuickTime/ (that is, the QuickTime folder inside the Library folder at the root level of your computer)
2. Remove the non-Apple plug-ins you find in those locations.
3. Log out and log back in and see if iPhoto now imports the movie files correctly. If so, contact the developer of the plug-in you removed for more information, or to see if an update to the plug-in is available.

Published Date: Oct 7, 2016

Mac OS X Server 10.4: Serial number "invalid" alert after enabling firewall service on an Intel-based Mac

This article has been archived and is no longer updated by Apple.

Issue or symptom

After enabling Mac OS X Server 10.4's firewall service on an Intel-based Mac, you may see an alert message stating that the serial number is "invalid."

Solution

Update to Mac OS X Server 10.4.9 or later.

Published Date: Feb 20, 2012

.Mac Webmail: Ways to use Address Book entries to create new messages

This article has been archived and is no longer updated by Apple.

If you want to email a contact in your .Mac Webmail Address Book, there are two ways to go about this:

1. Start typing the contact's name—the autocompletion feature should fill in the information.
2. Find the contact in the Address Book in the left pane, and then click on the email address to create a new message.

Note: Don't use method 2 (click on the Address Book email address) if you're already composing a new message. If you're already composing a new message and you click an email address in your address book, you'll see an alert message that says "This message has not been sent. To close this message without sending it, click OK."

Published Date: Oct 7, 2016

Don‘t leave .Mac Webmail while composing an email

This article has been archived and is no longer updated by Apple.

Issue or symptom

When you create a new email in the three-pane layout of .Mac webmail, a separate window pops up for your email composition. Make sure you don't navigate to another site from the main .Mac webmail page while you're writing your email. If you navigate outside of webmail with that window, your message will appear to send but will not actually be sent.

Affected Product

- .Mac webmail

Solution

Be sure to complete your email message and click send while the mac.com site is still in the main window. If you need to view a different webpage while composing your email, open a new window for the different webpage.

Published Date: Feb 20, 2012

Final Cut Express may unexpectedly quit if the display color setting is changed to thousands

This article has been archived and is no longer updated by Apple.

Final Cut Express HD is capable of handling millions of different colors—all of the colors in the video gamut and beyond. For editors to work with all these colors effectively, Final Cut Express HD is designed to be run while your computer's display is set to show millions of colors, as opposed to thousands or fewer.

For best results, be sure that your display is set to show millions of colors before you open Final Cut Express HD. If you change the color setting for your display from millions of colors to thousands while Final Cut Express is running, you may encounter unexpected results or Final Cut Express HD may unexpectedly quit.

Checking your display color settings

Follow these steps to check the color setting for your display.

1. Choose **Apple** > **System Preferences**.
2. Choose **View** > **Displays** to open display preferences.
3. From the **Colors** pop-up menu, choose **Millions**.

If you have more than one display connected, there will be a separate settings panel for each display. Verify that each is set to Millions of colors.

Published Date: Feb 20, 2012

Mac OS X 10.4: Quit System Preferences to retain Master Password changes

This article has been archived and is no longer updated by Apple.

Issue or symptom

After changing the Master Password in Security preferences, the old password remains in effect.

Solution

To retain the Master Password change, Quit System Preferences.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

.Mac: System Status Says some members may experience intermittent mail delivery errors

This article has been archived and is no longer updated by Apple.

Sometimes the .Mac Support site shows a System Status announcement that says "Some members may be experiencing intermittent delivery errors when trying to send mail from their mail clients. .Mac mail on the web and all other .Mac services are unaffected. Read more for interim solutions." This article explains that message in more detail.

What can I expect while this is happening?

You may experience intermittent difficulties sending mail from your .mac address using your computer's mail application.

What can I do while this is happening?

You will be able to send mail intermittently. If you experience difficulties sending .Mac mail using a mail application on your computer, try sending your mail from .Mac Mail on the web. To access .Mac Mail on the web, go to http://www.mac.com/ and click the Mail link at the top left of the menu bar.

If you need to interact with a .Mac Support specialist, go to the .Mac Support Page at http://www.apple.com/support/dotmac/. Select the appropriate topic, fill out the form at the bottom of the page, and click "Send Question." Our support experts will make every effort to reply within 24 hours.

What can I expect after this is resolved?

When the issue is resolved, you will be able to send and retrieve .Mac mail from your computer's mail application as usual.

Published Date: Feb 20, 2012

Mac OS 8: Items Cannot Be Left In Trash Message

When I place an item in the Trash, a message appears stating that the item cannot be left in the Trash and needs to be deleted immediately.

This article has been archived and is no longer updated by Apple.
If your date gets reset to an invalid year such as 1904, this may occur under Mac OS 8.0 or Mac OS 8.1. This is more common on PowerBook models, where if the unit is left without power for a lengthy period of time the backup battery can drain causing PRAM to get reset along with the date and time.

To resolve this, open the Date & Time control panel and set the correct date.

Published Date: Feb 20, 2012

Apple Portables running Mac OS X 10.4.8 or later: How to use trackpad screen zooming

This article has been archived and is no longer updated by Apple.

On Apple portables that include trackpad scrolling and are running Mac OS X 10.4.8, you can use the trackpad in addition to keyboard commands, to control screen zooming.

To zoom the image on the screen using the trackpad, hold down a modifier key and gesture with a forward finger motion on the trackpad. The reverse motion will zoom back out. (By default, the modifier key is the Control key—but this can be customized in the Keyboard & Mouse pane of System Preferences.)

Screen zooming is already set up on your Apple portable running Mac OS X 10.4.8 or later. It may even already be enabled. To personalize screen zooming:

1. Open the Keyboard & Mouse pane of System Preferences.
2. Select the Trackpad tab.
3. Select or deselect “Zoom while holding” and enter a modifier key or keys to turn zooming on or off. (To use multiple modifier keys, press them at the same time.)

There are four user-configurable options that adjust how you can move within a zoomed screen and how smooth the image will look:

- Select "Continuously with the pointer" to make the zoomed image shift continuously as you move the mouse.
- Select "Only when the pointer reaches an edge" to prevent the zoomed image from moving until you move the pointer to one edge of the screen.
- Select "So the pointer is at or near the center of the image" to keep the center point of the screen near the pointer as you move it.
- Select "Smooth images" to make the zoomed screen images appear smooth when you press Option-Command.

Published Date: Feb 20, 2012

.Mac Webmail: Scrollbar issues when expanding the Address Book

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you are using Safari to access your .Mac Webmail and you expand your Address Book on the bottom left, you may notice that the scrollbar doesn't move up to indicate that there is more information lower in the window. (This only happens when using the 2-pane layout.)

Solution

Be sure to click the downward pointing arrow at the bottom of the scrollbar so you can scroll down and see the rest of the Address Book contents.

Published Date: Feb 20, 2012

.Mac Webmail: Entourage folder accents convert to HTML tags

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you use Microsoft Entourage as a mail client and have a folder name that contains an accent, those accents may be converted into HTML tags when the account is accessed in .mac Webmail.

Solution

Name your folders using only unaccented letters.

This document will be updated as more information becomes available.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

.Mac Webmail: Firefox issues when sending mail

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you try to send a message with a large attachment in .Mac Webmail using the Firefox browser, be sure not to click Close right after Send— if you do, Firefox may unexpectedly quit.

Solution

To avoid this situation, either don't close immediately after sending, or use Safari.

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Published Date: Feb 20, 2012

QuickTime MPEG-2 Playback Component plays only first 4 GB of file

This article has been archived and is no longer updated by Apple.

The QuickTime MPEG-2 Playback Component provides QuickTime users with the ability to import and play back MPEG-2 content, including both multiplexed (a.k.a. muxed, where the audio and video tracks are interleaved together into one track) and non-multiplexed (a.k.a. elementary) streams.

The QuickTime MPEG-2 Playback Component will only play the first 4 GB of an MPEG-2 file. QuickTime will open files that are larger, but only the first 4 GB of a given movie will be played.

This document will be updated as more information becomes available.

Related documents

300516: "Using the QuickTime MPEG-2 Playback Component with VOB files"
303971: "QuickTime MPEG-2 Playback Component: Playback of 4:2:2 profile MPEG-2 files is not supported"

Published Date: Feb 20, 2012

Aperture: Switching between Aperture Libraries

This article has been archived and is no longer updated by Apple.

In Aperture, you can change the active library you are using for importing and editing pictures. Changing this library will change which photos are displayed in the Photos pane of iMovie, iDVD, and the Desktop Pictures and Screen Saver system preference panes.

To access a different Aperture Library:

1. Choose **Aperture > Preferences**, or press Command–comma (,).
2. Click Choose under the Library Location option.
3. Navigate to and select the Library you want, then click Select.
4. Quit Aperture and then reopen it.

If you don't already have an additional Aperture Library and want to create one, navigate to the folder where you want to create the library at step 3, and then click Select.

By default, Aperture creates a new Library file named Aperture Library. It’s recommended that you rename Library files to avoid any mix-ups or the possibility of overwriting one Library file with another accidentally. After renaming a Library file, make sure to open Aperture and select the renamed Library file.

When you have multiple Library files and you want to switch between them, you use the Preferences window in Aperture to select the Library you want. You then quit and reopen the application to complete the switch.

Additional information is available in the "Working with Library Files" section of the Aperture User's Guide.

Published Date: Oct 7, 2016

How Final Cut Pro calculates Broadcast Wave File Time at a Video Rate of 29.97 frames per second

This article has been archived and is no longer updated by Apple.

If you import the same Broadcast Wave file (BWF) into Final Cut Pro and other editing applications, certain timecode numbers may be calculated differently. The following section explains how Final Cut Pro accurately calculates time when importing Broadcast Wave files.

In Final Cut Pro, there are three factors that affect the calculated timecode value of an imported Broadcast Wave file:

1. **The true frame rate of NTSC video:**

   Timecode calculation is fairly straightforward, with the exception of NTSC-related frame rates. Calculating timecode for NTSC video is complicated because it's true frame rate is not simply 30, nor is it 29.97. The actual frame rate is 30 * 1000/1001, which equals 29.9700299700299700 (repeating). Timecode calculated using 29.97 (instead of 30 * 1000/1001) can be inaccurate, especially as the duration of media increases. Final Cut Pro uses the more accurate calculation (30 * 1000/1001).

   For more information, see SMPTE 170M-1999 "Composite Analog Video Signal - NTSC for Studio Applications."

2. **Mapping audio samples to video frames:**

   Timecode is calculated for digital audio files by mapping a certain number of audio samples to each video frame. When the sample rate is an integer multiple of the video frame rate, the timecode count can be accurately mapped to the sample count. For example, if the audio sample rate is 48000 Hz and the video rate is 25 fps, every 1920 audio samples is equivalent to one video frame.

   However, with NTSC-related video rates, there is no simple relationship between the number of audio samples per second and video frames per second. To avoid ambiguity, the Society of Motion Pictures and Television Engineers (SMPTE) specifies how many audio samples should be mapped to each video frame. The number of audio samples per frame is varied on a frame-by-frame basis to form a consistent pattern. Instead of an exact number of samples per frame, a consistent pattern of varying samples is spread over several frames.

   When you import a Broadcast Wave file, Final Cut Pro calculates timecode based on two parameters:

   - The time base (frame rate) of the currently selected sequence preset
   - The audio sample rate of the imported Broadcast Wave file

   When the sequence preset frame rate is 29.97 fps and the sample rate of the Broadcast Wave file is defined in the SMPTE specification, Final Cut Pro uses the repeating frame patterned defined in the SMPTE specification.

   For more information, see sections 3.15 and 14.3 of ANSI/SMPTE 272M-1994 "Formatting AES/EBU Audio and Auxiliary Data into Digital Video Ancillary Data Space."

3. **Dropframe indicators in Broadcast Wave files:**
   There is no ratified standard to indicate or detect whether a Broadcast Wave file was recorded with drop frame or non-drop frame timecode. Although there are several de facto ways this information is stored, Final Cut Pro 5.1.2 does not support reading this information. Instead, Final Cut Pro 5.1.2 always calculates non-drop frame timecode for Broadcast Wave files.

To modify the timecode of a Broadcast WAVE file to drop frame:

1. In the Browser, select the audio clip whose timecode you want to modify.
2. Choose **Modify > Timecode**, then choose Drop Frame from the **Format** pop-up menu.

Detailed SMPTE technical documents and specifications, including those referenced in this document, are available from the SMPTE website.

Published Date: Feb 20, 2012

Remote Desktop: Understanding privileges and security

This article has been archived and is no longer updated by Apple.

Remote Desktop in Sharing preferences

It is not necessary to use an administrative user when assigning privileges in the Remote Desktop pane of Sharing preferences. For improved security, you should use a non-administrative user to restrict access privileges.

If multiple users will be administering a computer with different needs, create separate user accounts on the computer and assign privileges accordingly.

For information on the privileges in Sharing preferences, refer to page 60 in the ARD 3 Admin Guide or pages 38 and 39 in the ARD 2.2 Admin Guide.

Non-administrative users using the admin application ("user mode")

Restrictions for non-admin users are defined in the Security section of Remote Desktop administrators's preferences window. Only administrators may change these settings. For information on user mode settings, refer to page 66 in the ARD 3 Admin Guide or page 51 in the ARD 2.2 Admin Guide.

These settings are designed to prevent non-administrative users from using certain features within the admin application. If you have a user who needs limited access to features, in addition to specifying user mode restrictions, you should create a new user account on the client computer and define privileges accordingly.

For example, if Rita needs to be able to install packages onto clients and obtain reports, create a new user account on the client systems and then assign her the appropriate privileges in the Remote Desktop pane of Sharing preferences, as described above.

Published Date: Feb 20, 2012

Mac OS X Server 10.4.8: Password Server may not start

This article has been archived and is no longer updated by Apple.

Issue or symptom

After updating from Mac OS X Server 10.4.7 to 10.4.8, Password Server may not start. Server Admin may report that the Password Service has stopped.

The ApplePasswordServer.Error.log (in /Library/Logs/PasswordService/) may contain the message, "CUDPListener: internal error, RSA key hash not set."

Solution

The following steps will rebuild your /var/db/authserver/authserverreplicas file.

1. Using these guidelines, create a new file on your desktop named "make-replica-file".

2. Paste this content into the file:

```
#!/bin/sh

if [ `id -u` != 0 ] ; then
  echo "You must run this script as root."
  exit
  elif [ ! -s "/usr/sbin/mkpassdb" ] ; then
  echo "This script can only be run on Mac OS X Server"
  exit
  fi

# try the LDAP config record
  export LDAPConfigRecord=`dscl /LDAPv3/127.0.0.1 -read /Config/passwordserver PasswordServerList | sed 's/PasswordServerList: //'`
  echo $LDAPConfigRecord | grep "No such key" > /tmp/authserverreplicas.test
  if [ ! -s /tmp/authserverreplicas.test ] ; then
  echo "$LDAPConfigRecord"
  exit
  fi

# make the ID string
  export key=`mkpassdb -key`
  export keyID=`echo -n "$key" | md5 | awk '{print toupper($0)}'`

# Get the IPv4 for en0 and look it up
  export QueriedIPAddress=`ifconfig | grep -A 1 "en0" | grep "inet " | sed 's/.*inet //;s/ .*//'`
  export QueriedDNS=`dig -x $QueriedIPAddress | grep -A 1 "ANSWER SECTION" | sed 's/;;.*//;s/.*PTR//' | tr "\\n\\t" "  " | sed 's/ //g' | awk '{print substr($0,0,length($0)-1)}'

echo "<?xml version=\\"1.0\\" encoding=\\"UTF-8\\"?>"
  echo "<!DOCTYPE plist PUBLIC \\"-//Apple Computer//DTD PLIST 1.0//EN\\" \\"http://www.apple.com/DTDs/PropertyList-1.0.dtd\\">"
  echo "<plist version=\\"1.0\\">"
  echo "<dict>"
  echo "        <key>ID</key>"
  echo "        <string>$keyID</string>"
  echo "        <key>Parent</key>"
  echo "        <dict>"
  echo "                <key>DNS</key>"
  echo "                <string>$QueriedDNS</string>"
  echo "                <key>IDRangeBegin</key>"
  echo "                <string>0x00000000000000000000000000000001</string>"
  echo "                <key>IDRangeEnd</key>"
  echo "                <string>0x000000000000000000000000000001f5</string>"
  echo "                <key>IP</key>"
  echo "                <string>$QueriedIPAddress</string>"
  echo "        </dict>"
  echo "        <key>Status</key>"
  echo "        <string>AllowReplication</string>"
  echo "</dict>"
  echo "</plist>"
```

3. In Terminal, execute these commands:

```
$ chmod +x ~/Desktop/make-replica-file
$ sudo ~/Desktop/make-replica-file > ~/Desktop/authserverreplicas
$ chmod 644 ~/Desktop/authserverreplicas
$ sudo chown root:wheel ~/Desktop/authserverreplicas
$ sudo mv ~/Desktop/authserverreplicas /var/db/authserver
```

4. Restart the server.

Published Date: Oct 7, 2016

Final Cut Pro: Multiclips may lose sync if "Remove Subclip Limits" is used

This article has been archived and is no longer updated by Apple.

Issue

If you have a multiclip that has unexpectedly lost sync between its constituent clips, check to see if any of those clips are subclips.

It's perfectly fine to create multiclips comprised of subclips, but there's an important caveat to keep in mind:

- Avoid using the **Remove Subclip Limits** command on any subclips which are included as parts of multiclips. If you do so, the timing of that subclip within the multiclip may fall out of sync with the other parts of the multiclip.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Using systemsetup on Xserve (Intel Xeon) with Apple Remote Desktop 2.x

This article has been archived and is no longer updated by Apple.

Issue or symptom

The systemsetup tool embedded in the ARDAgent.app does not work correctly on Xserve (Intel Xeon) systems when executed with the argument:
`-setwaitforstartupafterpowerfailure`

Solution

There are two different versions of the systemsetup tool in the Mac OS X Server build installed on Xserve (Intel Xeon). One resides in `/usr/sbin` and the other is embedded in ARDAgent.app.

The version of systemsetup tool in `/usr/sbin` in Mac OS X Server on Xserve (Intel Xeon) systems has been updated to function properly when executed with the argument `-setwaitforstartupafterpowerfailure`.

When using this command remotely (within Apple Remote Desktop's *Send UNIX Command* feature) the full path of `/usr/sbin/systemsetup` should be specified rather than simply referencing the tool. If the specific path is not stated, Apple Remote Desktop defaults to using the internal and outdated version.

Published Date: Oct 7, 2016

About the security content of Xcode Tools 2.4.1

This article has been archived and is no longer updated by Apple.

This document describes the security content of Xcode Tools 2.4.1, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Xcode Tools 2.4.1

- **GDB**

  CVE-ID: CVE-2006-4146

  Available for: Mac OS X v10.4 and later

  Impact: Opening a maliciously-crafted DWARF binary with GDB may lead to arbitrary code execution

  Description: GDB, the GNU Debugger, is susceptible to multiple vulnerabilities that may lead to arbitrary code execution when loading maliciously-crafted DWARF binaries. This update addresses the issues by performing additional validation while handling DWARF binaries. Credit to Will Drewry and Tavis Ormandy of the Google Security Team for reporting this issue.

Published Date: Oct 7, 2016

.Mac Webmail: After renaming a contact, the contact may not be searchable

This article has been archived and is no longer updated by Apple.

Symptom or Issue

If you rename a contact using "quick contact"—by changing the name in the First and Last Name fields, you may not be able to filter your messages by that changed name using the Webmail Search field.

The Webmail Search field searches through your message headers. Often when you receive a message in your inbox, it arrives with a first and last name already associated with it. The Webmail Search field looks for precisely that original first and last name. The Webmail Search field also looks for the email address. It doesn't look for the "quick contact" information you have entered.

Solution

There are two ways to deal with this:

- Enter email address in Webmail Search field
  You can retrieve all messages sent from a particular email address if you enter that email address in the Webmail Search field. The Search field will often find the messages even when you've only typed the beginning of the address.
- Sort by "From:"
  If you want to search for email messages from a contact whose name you have changed in your .Mac Address Book, you can sort your webmail by sender by clicking on the "From" category at the top of the sender column. Then your messages will all be ordered by who sent you the message, and all mail from that contact will be grouped together.

Published Date: Feb 20, 2012

Aperture: Album not visible in Project Pane after restoring from Vault

After you restore your library from a vault, one or more albums may not be visible in the Project pane.

This article has been archived and is no longer updated by Apple.

This issue is resolved in Aperture 3.

Published Date: Oct 7, 2016

iPod 101: Tour the Store

This article has been archived and is no longer updated by Apple.

Now that you've got access to everything that the iTunes Store has to offer, let's go shopping! If you like the feeling of being a kid in a candy store, feel free to roam the virtual aisles without our guidance. Or settle in here to get an overview of the stores within the store and how to navigate through everything.

- Getting Around—The Navigation Bar
- The Homepage
  - Spotlight Items—The latest and greatest
  - Left Column Items—Find music, videos, and podcasts, redeem cards, and more
  - Middle Section Content—New releases, staff favorites, and more
  - Right Column Items—Top songs, albums, and videos

Getting Around—The Navigation Bar

If you're not already in the iTunes Store, go there now (just click iTunes Store in the iTunes Source list). Notice the navigation bar above the iTunes Store page, right below the iTunes display? No matter where you are in the store, you can click the back and forward arrow buttons, the home tab (the button with the house), and any tabs that mark the path you've traveled to jump back and forth to previous locations, like you do with your web browser. Any time you want to go back to the iTunes Store homepage, just click the home tab.

Use the navigation buttons and tabs at the top of the pane to get around the iTunes Store.

The Homepage

Want a little tour before you explore? Read on to discover the iTunes Store sections and special features.

The iTunes Store homepage gives you quick access to the various sections in the store and features some highlights and exclusives that you won't want to miss. The homepage layout is used in other areas of the iTunes Store too. If you click Audiobooks in the left column, you'll be taken to the audiobooks store page, which looks just like the homepage except that you'll see audiobook images and content instead of albums. Likewise, if you choose any media category in the top left column, you'll get a page that has the same look and feel except it's geared toward your chosen media preference. Here's a look at the sections you'll find on most store pages.

Spotlight Items

Check out the three top panes to see the latest releases and exclusives.

At the top of the page, you'll see three rotating panels that change over time. This is where we highlight new items, exclusive content, and other things that are sure to spark interest. To get more details, just click the item to go to its page.

Left Column Items

Starting from the Top

If you have a favorite media, and don't want to be bothered with all the rest, just click any of the iTunes Store pane categories, and bam, you've got everything you ever wanted in that category laid out before your eyes. Choose from Music, Movies, TV Shows[1], Music Videos, Audiobooks,

Podcasts, or even iPod Games. One click and you're in heaven.

View Videos
iTunes isn't just about music—you can watch videos right in your iTunes window too. And if you have a Fifth Generation iPod (with video), you can transfer videos from your iTunes library to your iPod. If you need a little visual stimulation, check out the music videos, TV shows, and in the U.S. movies and movie trailers available in the iTunes Store.

Find What you want Fast in the iTunes Store Pane
If you came shopping with a specific media in mind—you just have to find out what happened on that episode of LOST you missed—click TV Shows in the iTunes Store pane to go to the TV Shows page, or click Movies or Music Videos for similar pages. The new page will share the same layout but the middle section will break-out the media into easy-to-browse categories that make your shopping target a cinch to find!

If you're looking for podcasts or audiobooks, click the Podcasts or Audiobooks link to visit those stores. If you want to learn more about finding and subscribing to podcasts, see "Plug into Podcasts." We'll talk more about how to find and purchase audiobooks (as well as music) in "Browse and Buy Books and Music."

Just Looking- For Video Suggestions?
If you're in the mood for video—but aren't sure quite what—check out the Top Movies, Top TV Episodes, or Top Music Videos panes. Each pane is a top-10 best-sellers list. Click the pane title to go to the store for that media, or click any top-10 title to go to a page for all the video buzz. You can check out the credits, the plot, customer reviews, or see the trailer. Click the Add Movie button to add the video to your shopping cart, or the Pre-order button to get a bargain on pre-release titles.

Middle Section Content

Find what's new
In the middle part of the homepage, you'll find some scrollable panes and additional featured items. Here's a look at what you'll generally find in this section.

Scrollable panes
The middle section contains several scrollable panes that let you scroll through a row of corresponding selections and click what you like to go to that selection's page. Some of the panes also have tabs just under the title bar. The tabs let you zero-in on whatever media type you want in that pane topic. Click Alternative, under New Releases, to skip the top-of-the-pop stuff.

The Lastest and Greatest
The New Releases pane contains (no surprise) new media additions. Click the pane's right or left arrow to scroll the album content forward or backward, or click See All to (you guessed it) see all new releases. New Releases displays all new additions by week (we add stuff every Tuesday, so make it a point to swing by the store).

The What's Hot pane keeps you up to date with what's currently toping the charts. Chances are, if you've heard somebody talking about new music or video, it's listed here. Click the tabs, or See All, to get a broader look at What's Hot.

Recommendations—From the Staff
The iTunes store staff keeps up with it all. They not only know what's hot now, but what was hot in the past, and what will be hot tomorrow. Check out the selections in Staff Favorites if you're in the mood to expand your collections, or branch out into new areas.

Get exclusive stuff
The **EXCLUSIVELY ON iTunes** section features exclusive albums by artists that offer special in-studio live performances, choose album tracks, and interviews with the artist about their careers and music. Select an artist in the list to view the album's contents or click See All (or the iTunes Originals header) to view all iTunes Originals albums. To preview any song on any iTunes Originals album, just choose a song in the preview pane and double-click it.

The Exclusives section showcases albums and songs that are iTunes exclusives, meaning you won't find these items anywhere else at that particular time, or prereleases (albums or songs that you can buy right now before the album gets released worldwide). As with the New Releases section, you can use the pane's arrows to scroll through content or click See All to view everything. If you're curious to see what some iTunes Store staffers listen to, check out the Staff Favorites section, while the Just Added section features albums that are new to the iTunes Store.

Get freebies
Who said that nothing in life is free? Check out the songs (and even audiobooks from time to time) in the **FREE ON iTunes** section for free song downloads (in addition to our free single of the week).

Other items change constantly, depending on what promotions we're running. For example, you may find links to various win-a-free-song redemptions, album pre-orders, new celebrity playlists and iTunes Essentials, and other fun stuff.

Right Column Items

In a Hurry?
The Quick Links pane gives you immediate access to additional services like searching, account maintenance, support and other purchasing options like buying and redeeming iTunes gift cards.

Browse
If you want a quick way to scope out audio files by genre or sales charts, TV shows and videos, or chart-topping music, click **Browse** to display the browser, which lists several music genres and store categories including audiobooks and podcasts. Select any item to display a submenu (if applicable) in the next pane and keep picking stuff until you find what you want. You should wind up with a list of audio or video files for your selection in the preview pane. To get a 30-second preview of any song or a 20-second preview of any video, just choose an item and double-click it.

Power Search for stuff
If you know what you're looking for, you can search for things by typing names or words in the Search iTunes Store field in the top-right corner of the iTunes window or click **Power Search**. The Power Search pane provides search fields for Song, Artist, Album, and Composer, as well as a Genre pop-up menu (drop-down menu in Windows) to enter your criteria as needed. This way, you can search for, say, the band "The Killers" without having to see every "killer" song.

Account
Review and change all your important account information, including name, address, credit card numbers, reviewing nickname, and the iTunes Terms of Service and Privacy policies.

Gift-giving options and redemptions
You don't need a credit card to buy music, videos, and audiobooks. You can use iTunes Gift Certificates, Gift Cards, an Allowance, or even redeem free song codes in the iTunes Store. You can also give an Allowance and purchase iTunes Gift Certificates too. Buy and Redeem allows you to purchase and send gift cards, or add funds to an account to allow—or limit—how family members can make iTunes purchases.

Got a Problem?
Support gives you direct access to on-line customer service, billing support, trouble-shooting resources, and general tips and advice for new users.

Just Looking—For Other Suggestions?
Just as the left-side column displays the top-10 lists for video, the right-side column show the top lists for Top Songs, Top Albums, Top Audiobooks, and Top Podcasts.

Today's Top Songs
This pane displays the day's top 10 most downloaded songs. You can click any of the songs listed to go to that album's (or song's) page in which you can preview the song, purchase it, and even buy the entire album. If you want to see all other songs vying for the iTunes Store popularity contest.

Today's Top Albums
Below Top Songs, you'll find a section dedicated to the top downloaded albums of the day. Like the Top Songs, the Top Albums pane displays the current top 10 most downloaded albums—click any album in the list to view that album's page. Click any album to go to that album's page.

Today's Top Audiobooks
Midway down the right column, you'll find a pane that lists the top five most downloaded audiobooks of the day. Click any audiobook to go to that audiobook’s page.

Today's Top Podcasts
At the bottom of the right column, you'll find the list of the top five most downloaded podcasts of the day. Click any podcast to go to that podcast’s page.

1. Some features for the iTunes Store mentioned in these lessons are not available in all stores, including AOL login, TV shows, and movies.

Take me to the I Need More Music index Take me to Lesson 3: Browse and Buy Music and Books

Published Date: Oct 7, 2016

How to Browse and Buy Videos from the iTunes Store

This article has been archived and is no longer updated by Apple.

Not only can you purchase music and audiobooks from the iTunes Store, with iTunes 7 or later you can buy music videos, movies, and even television shows[1] that play directly in iTunes. If you have Apple TV, you can view purchased videos on your TV. And if you've got a Fifth Generation iPod (with video), you can copy videos to your player to watch videos whenever and wherever you want. Here's how to browse, preview, and purchase videos.

- Browse and Buy Music Videos
- Browse and Buy Movies
- Browse and Buy TV Shows

Important Information about your iTunes Purchases

Digital Rights Management (DRM) protected video files purchased from the iTunes Store are protected by FairPlay, Apple's digital rights management system. FairPlay allows you to play your music on up to five computers at a time, enjoy unlimited syncing with iPods, and sync to up to five Apple TVs.

The iTunes Store also offers music videos without DRM protection, from participating record labels. These DRM-free songs, called "iTunes Plus," have no usage restrictions and feature higher-quality encoding. There are no burn limits and iTunes Plus music will play on all iPods, Mac or Windows computers, Apple TVs, and many other digital music players.

For more information about FairPlay authorization, see the "Authorization FAQ" page on the iTunes Store Customer Service page.

Browse and Buy Music Videos

Why wait for music channels to play your favorite music videos when you can own your own copy from the iTunes Store?

If you want a little visual to go with your music, check out the 9000+ music videos available in the iTunes Store—just click the Music Videos link in the left column under iTunes Store. Like other iTunes Store pages, the Music Videos store features the same familiar sections. You can browse the various sections for videos, click a genre under **GENRES** in the left column, or type an artist's name in the Search iTunes Store field in the upper-right corner to see videos (and music) from that artist.

Click any item to go to that music video's purchase page, which displays a Preview button, the purchase price, and all other music videos available for that artist. If you browsed for videos by genre, you can view a music video's page by clicking the small arrow button to the right of the music video name in the video list pane (all video files that appear in a list pane will display a TV icon next to their name so you can tell them apart from music files).

You can preview and purchase your chosen video on any music video page, as well as view all other videos available for that artist.

Click the Preview button to watch a 20-second snippet of your chosen video play on the page (or double-click a video listing if you're viewing a selection in the video list pane). You can also click any other video on a page to go to that music video's page and get a preview.

1-Click Shopping
If you set up the store for 1-Click shopping, simply click any "Buy Video" button to immediately purchase and download that video to your iTunes library. iTunes adds the video to your Purchased playlist in the Source list so you can keep track of all purchases you've made from the store.

With 1-Click shopping, you'll see "Buy Video" buttons, which let you purchase and download videos with a simple click.

Shopping Cart
If you've opted to use a shopping cart, click any "Add Video" button to add that video to your shopping cart, which appears in the iTunes Source list under Store (click the disclosure triangle next to Store if you don't see Shopping Cart listed).

If you see "Add Video" buttons, clicking them adds videos to a virtual shopping cart from which you can purchase and download items.

If you want to see what's in your shopping cart, just choose Shopping Cart in the Source list. Your pending purchases are listed in a preview pane just like what you see in any album or singles page. You can choose to buy everything in your shopping cart or buy items singly if that's your prerogative. Your total purchase price for everything in your cart appears at the bottom of the window.

To buy everything, click the "Buy Now" button at the bottom-right corner of the window. If you only want to buy certain items, click the "Buy Video" button next to the video you want. iTunes downloads your purchases to your iTunes library and adds the video to a Purchased playlist in the Source list so you can keep track of what you've bought from the store. To remove an item from your shopping cart, click the round X button to the right of a "Buy" button, or choose an item and press Delete on your keyboard.

With shopping cart purchases, you can decide to buy everything in your cart or choose the items you want.

Browse and Buy movies

Watch big screen cinema in the palm of your hands, browse through a full catalog of old and new releases available for purchase and download.

Enjoying a night at the movies is now easier than ever when you download Movies from the iTunes Store. You can find all your favorite classics, as well as latest releases, from film studios such as Disney, Paramount, and Lionsgate. From the iTunes Store, click Movies to access a catalog filled with great movies and short films available for purchase.

Just click any movie poster to view details about that movie, read the plot summary, view a trailer, or check out the customer reviews. When you're ready to purchase, click the Buy Movie or Add Movie icon, you can also send a movie as a gift to your family or friends. Following the download, you can sync it with your iPod or enjoy your movie selection on your computer in iTunes. You can also sync or stream the movie to an Apple TV.

Browse and Buy TV Shows

No need to stay home and be a couch potato. The iTunes Store features lots of new and vintage shows for purchase that you can view on your computer, Apple TV, or iPod anywhere.

Forget programming your VCR, setting TiVo, or rushing to get home on time to catch your favorite TV show. You just might find it in the iTunes Store. Just click TV Shows under iTunes Store in the left column on the iTunes Store homepage to view all of the television shows available for purchase.

The TV Shows store is set up just like our music and audiobooks store and features current hit shows such as Lost, The Office, Desperate Housewives, Monk, and Law & Order, as well as classics including Alfred Hitchcock Presents, Dragnet, and Knight Rider. You'll also find various sketches from Late Night with Conan O'Brien and The Tonight Show with Jay Leno.

Just click any show icon, choose a show from the Top TV Shows chart in the right column, or choose a network from the Network section in the left column and then a show from there to go to a show's page. Each show page displays all of the episodes available for each season—you'll see the current season, but you can check out all back episodes too by clicking a Previous Season icon if there are more episodes available.

Just double-click any episode to view a 20-second preview (by default, iTunes plays the clip in the artwork and video viewer pane).

To preview any episode, choose one in the preview pane, then double-click it to watch a 20-second clip. You can buy individual episodes (click

the "Buy Episode" or "Add Episode" button), a group of episodes within the current season (click the "Buy All Episodes" or "Add All Episodes" button), or purchase an entire season (click the "Buy Season" or "Add Season" button). To purchase a TV show, follow the same instructions for buying music videos here.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

1. Some features for the iTunes Store mentioned in these lessons are not available in all stores, including AOL login, TV shows, and movies.

Published Date: Oct 7, 2016

About contacts, schedules, and notes on your iPod

This article has been archived and is no longer updated by Apple.

Why carry around business cards, sticky notes, or scraps of paper when you can store your contacts, schedules, to-do lists, and other notes on your iPod?

If you want to have phone numbers, email addresses, meeting times, grocery lists, driving directions, and other bits of information at your fingertips, you can stick the data in any iPod model with a display screen. And every iPod allows you to use it as a "disk drive" to shuttle your projects and music files between your computers. Here are the ways iPod can make your life easier for those times when you need to get your life in order.

- Organize My Contacts and Schedule
- Take a Note
- Viewing my Contacts, Schedule, and Notes on my iPod
- Shuttle My Projects and Music

Organize My Contacts and Schedule

If you've got contacts on your computer, you can easily turn your iPod into a more sophisticated version of your little black book.

If you've got phone numbers, email addresses, and other personal information for those very important people in your life stored on your computer, you can easily take it all with you on your iPod.

If you're using a Mac, you can easily sync contacts in Address Book with your iPod. If you're using Windows, you can easily sync contacts from Microsoft Outlook or Outlook Express. Alternatively, you can transfer contact information from any Mac or Windows contacts manager that can export (or supports) contacts in vCard (.vcf) file format, such as Palm Desktop, Microsoft Entourage, and Eudora.

Syncing Contacts and Calendars on a Mac

On a Mac, you can use iTunes to sync contacts from Address Book, or your calendars from iCal, directly to your iPod. Check out "Mac OS X 10.4: Use iTunes for iPod syncing" to see how on a Mac.

Syncing Contacts and Calendars on Windows

On Windows, you can use iTunes to sync contacts from your Outlook or Outlook Express address book, or your calendar from Microsoft Outlook, directly to your iPod. Check out "Syncing contacts and calendars to iPod with iTunes for Windows" to see how on Windows.

Adding Contacts Manually (Mac and Windows)

You can easily copy contacts from popular address book applications and programs on either your Mac or Windows PC by simply dragging vCard files directly into the Contacts folder on your iPod.

If you don't have iCal or one of the Windows Outlook applications, you can still add contacts from other popular address books and calendars manually, by using vCards. Check out "iPod: Importing Contacts and Appointments" to find out how.

Take a Note

TA24468_About_contacts_schedules_and_notes_on_your_iPod.pdf

To read text files on your iPod, just convert them to plain text files and drag them into the Notes folder on your iPod.

Grocery lists, to-do items, driving directions, a cheat sheet that details your blind date's interests—if you can type (or copy) a note, you can take it with you on your iPod and refer to it as often as needed. Just remember to keep your notes fairly brief—you can cram in up to 4096 characters (4 KB total) per note.

To see how to make your iPod "notable", check out "Storing and reading notes with your iPod".

Viewing my Contacts, Schedule, and Notes on my iPod

Viewing Contacts

When you're done copying your contacts, click the eject button next to your iPod icon in the Source list, then disconnect your iPod from your computer. To view your contacts, just choose **Extras > Contacts** to view a list of your contact names (to change how these are sorted and displayed, see the Contacts section of "What's on the Menu." To view the details, use the Click Wheel to highlight a name and press the Center button.

Viewing Calendars

When you're done copying your calendars, click the eject button next to your iPod icon in the iTunes Source list, then disconnect your iPod from your computer. To view your schedule, just choose **Extras > Calendars**. To view your entire schedule (all calendars together), select All. To view an individual calendar, choose its name in the list.

Your iPod displays a calendar graphic marked by flags, which indicate an event (or scheduled item). To view an event, use the Click Wheel to scroll to the date, press the Center button to view a list of all events for that date, then choose an item to view its details.

Viewing Notes

When you're done copying over your notes, click the eject button next to your iPod icon in the iTunes Source list, then disconnect your iPod from your computer. To view your notes, just choose **Extras > Notes** to view a list of all notes on your iPod. To read one, scroll the Click Wheel to highlight its name and press the Center button (use the Click Wheel to scroll down the document too).

Shuttle My Projects and Music

If you haven't already figured it out by now, you can use any iPod model as an external hard drive, allowing you to copy files onto it and shuttle items from one computer to another. This comes in handy if you need to work on projects at the office or school and at home, or you want to transfer your digital music collection from your old computer to a new one. Here's how to enable this feature.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

QuickTime: Quality settings for BMP export cannot be changed

This article has been archived and is no longer updated by Apple.

When exporting to BMP format in QuickTime Pro, you may notice that any changes you make to the "Quality" slider in the Export Options window revert back to the default settings.

This is expected behavior based on available specifications for the BMP codec. Quality specifications are not available for the BMP codec.

Published Date: Feb 20, 2012

TA24470_Official_Apple_Support.pdf

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Update to iOS 12

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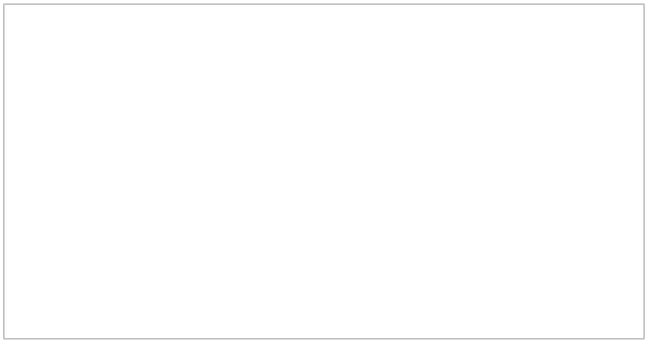


Find out about your coverage

AppleCare products give you additional repair coverage and technical support. If you already bought an AppleCare product, you can manage it online.

Check coverage for your product

Let’s get that fixed

If your Apple device needs repairs, you can go to an Apple Store, visit an Authorized Service Provider, or mail in your device. Whatever you choose, we'll make sure your device works the way it should.

Choose a repair option

Beware of counterfeit parts

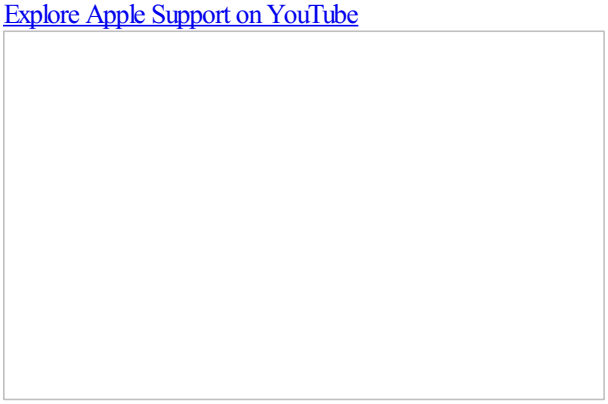
Some counterfeit and third party power adapters and batteries may not be designed properly and could result in safety issues. To ensure you receive a genuine Apple battery during a battery replacement, we recommend visiting an Apple Store or Apple Authorized Service Provider. If you need a replacement adapter to charge your Apple device, we recommend getting an Apple power adapter.

Also non-genuine replacement displays may have compromised visual quality and may fail to work correctly. Apple-certified screen repairs are performed by trusted experts who use genuine Apple parts.

Watch. And Learn.

Videos designed to make your experience shine. Our YouTube channel is live, and we're adding new How-to and tips & tricks content weekly to answer your most asked questions.

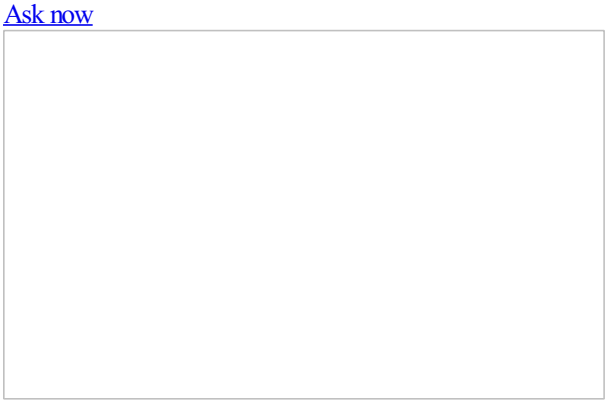
Explore Apple Support on YouTube



Have a question? Ask everyone.

The members of our Apple Support Community can help answer your question. Or, if someone's already asked, you can search for the best answer.

Ask now



Want to talk with someone?

Get help by phone, chat, or email, set up a repair, or make a Genius Bar reservation.

Contact Apple Support

Join us for Today at Apple sessions

Explore how to capture photos with iPhone. Learn to sketch on iPad. And do more of what you love every day at Apple.

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Be aware of scams involving App Store & iTunes Gift Cards.

Learn more

Exchange and Repair Extension Programs

- iPhone 8 Logic Board Replacement Program
- Keyboard Service Program for MacBook and MacBook Pro
- 13-inch MacBook Pro (non Touch Bar) Battery Replacement Program
- iPhone 7 Repair Program for "No Service" Issues
- iPhone 6s Program for Unexpected Shutdown Issues
- Multi-Touch Repair Program for iPhone 6 Plus
- Apple AC Wall Plug Adapter Recall Program
- Beats Pill XL Speaker Recall Program
- All Programs

Intel-based Macs audio may get out of sync with input source

This article has been archived and is no longer updated by Apple.

Issue or symptom

The computer's audio and input source may go out of sync when a device is plugged in or removed from the line-out jack while monitoring the input source.

Solution

Stop and restart the playback. If this doesn't work, close the application you are using and open it again, then start the playback again.

Published Date: Oct 7, 2016

Boot Camp Beta 1.1.2: Disable wireless if Apple external USB modem disconnects unexpectedly in Windows XP

This article has been archived and is no longer updated by Apple.

Issue or symptom

With Boot Camp Beta 1.1.2 and Windows XP, an Apple external USB modem may not connect or may remain connected to an ISP for only a few minutes, then disconnect unexpectedly.

Solution

In some cases, disabling 802.11 wireless networking in Windows XP may resolve the issue.

Warning: Boot Camp Beta is preview software licensed for use on a trial basis for a limited time. Do not use Boot Camp Beta in a commercial operating environment or with important data. You should back up all of your data before installing this software and regularly back up data while using the software. Your rights to use Boot Camp Beta are subject to acceptance of the terms of the software license agreement that accompanies the software.

Important: Apple does not provide technical phone support for using Boot Camp Beta, burning the Macintosh Drivers CD, or installing Windows XP. Support is available on Apple's website. Fee-based support agreements are not available for Boot Camp Beta.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

Holding the Volume Down button while docking may prevent iPod shuffle (Second Generation) from being recognized by iTunes

This article has been archived and is no longer updated by Apple.

While connecting your iPod shuffle (Second Generation) to the dock, inadvertently pressing and holding the Volume Down button (-) may cause the iPod to not be seen by iTunes. If this happens, follow these steps:

Mac users

1. Remove iPod shuffle (Second Generation) from the dock.
2. Reset your iPod shuffle (Second Generation). To reset, switch the power on, then off—and leave the power off for 5 seconds. This will reset your iPod.
3. Reconnect your iPod shuffle (Second Generation) to the dock for it to be properly recognized.

Windows users

1. In the Notifications area of the Taskbar, left-click the Safely Remove Hardware icon.

Note: If you don't see the Safely Remove Hardware icon in the Taskbar, you can remove iPod shuffle (Second Generation) from the dock.

2. Choose **Safely remove USB Mass Storage Device - Drive(E:)** from the shortcut menu. In some cases, the drive letter may be different. If you have other USB drives attached, you may need to repeat this if you're not sure which drive letter corresponds to your iPod.

3. Reset your iPod shuffle (Second Generation). To reset, switch the power on, then off—and leave the power off for 5 seconds. This will reset your iPod.
4. Reconnect your iPod shuffle (Second Generation) to the dock for it to be properly recognized.

Published Date: Oct 7, 2016

Mac OS X 10.4.8: Account password can‘t be changed on some Intel-based Macs

This article has been archived and is no longer updated by Apple.

Issue or symptom

After updating to Mac OS X 10.4.8 on some Intel-based Macs, a non-administrator user might not be able to change their password.

Solution

Download and install the Mac OS X 10.4.8 Combo Update (Intel).

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

TA24476_Aperture_Trial_version_cant_be_updated_to_version_.pdf

Aperture: Trial version can‘t be updated to version 1.5.1

This article has been archived and is no longer updated by Apple.

Issue or symptom

After you install the Aperture 1.5 Trial version, you can't update to Aperture 1.5.1.

Solution

This is expected—the Aperture 1.5 Trial version cannot be updated while running with a trial serial number. If you buy Aperture from the Trial, it is possible to update to 1.5.1 after you have entered the full serial number.

There is one scenario where Software Update may offer the Aperture 1.5.1 update after you install the Aperture 1.5 Trial. If you install the trial version and run Software Update before launching the Aperture Trial for the first time, Software Update will offer Aperture 1.5.1. Do **not** install the update—it will render the trial serial number inoperative. If you have already updated the trial version, just delete the Aperture application from `/Applications` and then reinstall the Aperture 1.5 Trial.

Published Date: Feb 20, 2012

Play podcasts with iPod

This article has been archived and is no longer updated by Apple.

If you haven't heard of it by now, podcasting is the new generation of entertainment media that allows listeners to subscribe to radio-style shows available on the Internet that get downloaded to their computers automatically. It's like listening to a radio show on demand.

With podcasts, you're no longer strapped with having to wake up early, stay up late, or hunker down at work or in class with headphones on just to catch a radio show—you can choose when and where to listen to shows. With iTunes 4.9 and later, you can browse for podcasts, preview episodes, subscribe to and download podcasts, play them, and sync them to your iPod for play while you're on the go.

Rather than scour the web, you can find tons of podcasts to subscribe to (for free!) in the iTunes Store.

Podcasts come in a lot of varieties—everything from glossy news, music, or talk shows to verbal blogs from regular folks from around the globe. The ones offered on the iTunes Store are free, but others may charge a subscriber fee. You'll find professionally created podcasts from major broadcasters (such as ESPN, NPR, CNN, the Wall Street Journal, and Disney), shows from known personalities (including Rick Steves, Ebert & Roeper, the Simpsons, and Adam Curry), and plenty of stuff from lesser knowns who are finding new celebrity in this new medium. For more information about podcasts, be sure to visit our Podcasting page.

iTunes displays podcasts you've downloaded in the Podcasts section in the Source pane too, making finding them easy. Just choose Podcasts in the iTunes Source pane to view the pane. Of course, if you haven't subscribed to any podcasts, your list will be empty, but it doesn't have to stay that way for long. One of the best sources to find podcasts is none other than the iTunes Store, and these podcast subscriptions won't cost you a penny.

Show Me How

Browse, Preview, Subscribe to, and Play Podcasts

To find, preview, subscribe to, download, and play a podcast from the iTunes Store and then copy it to your iPod, do this:

1. In the Podcasts pane in iTunes, click the "Podcast Directory" link at the bottom part of the iTunes window. The iTunes Store opens in your iTunes window, displaying a selection of podcasts.
2. If any podcast displayed or listed on the podcast homepage catches your eye, you can click it to access it. Or browse for podcasts by typing a word or words in the “Search iTunes Store” field in the upper-right corner of iTunes, clicking a category of interest from the Categories list below search, or clicking the item in the CATEGORIES list in the right-column. For browsing purposes, click the "Comedy" link under CATEGORIES.
3. You'll see podcast listings organized by provider, popularity, release dates, and other helpful categories in the resulting window. Scope out the contents. Then click on any show name or graphic that catches your eye to view its details.
4. A typical podcast's page includes details such as the show name, description, subscription fee (if any—most say "Free"), and associated website (if applicable). It'll also list all available podcast episodes. To preview an episode, choose one from the list and double-click it.

Most will provide a 1 minute, 30 second preview of the show. Others will stream the whole show to you. Listen to as many previews as you like. If you see an "i" icon next to an episode description, you can click it to reveal more details about the show.

5. When you find a podcast that you like and want to subscribe, click the Subscribe button. A dialog opens, asking if you're sure that you want to subscribe. If that is your intent, click Subscribe.

To subscribe to a podcast, simply click its Subscribe button in any page.

6. iTunes downloads the most recent episode and will automatically download future episodes whenever you open iTunes. To view your new subscription, choose Podcasts in the Source pane. If the individual episodes aren't displayed, click the disclosure triangle to the left of the podcast name to reveal them. If an episode is dimmed, it hasn't been downloaded to your computer (these are older episodes); if you want it, click the Get button next to it.
7. To play a podcast in iTunes, simply double-click the episode to hear it.
8. To copy a podcast to your iPod, either enable podcast syncing or drag any episode to your iPod icon in the Source pane.

Voice Your Own Podcast

If you're looking to break into the broadcasting industry or simply want to take blogging (or your opinions) to an audible worldwide level, consider creating your own podcast. All you need is a computer with recording software to capture your talent, a server to host the file, and a little imagination and planning.

Whether you use GarageBand or other audio recording software, you can create your own podcast without much effort.

If you're using a Mac and have GarageBand, you can easily create your own podcast complete with music, pictures, and web links. We provide some guidance, tips, and instruction on our "GarageBand: Recording Your Podcast" page. You can also use QuickTime 7 Pro; see "Creating Podcasts with QuickTime 7 Pro" for instructions.

If you're a Windows users, you can follow the same instructions for GarageBand but substitute your preferred audio recording application for GarageBand (the concepts and principles are the same). Or follow the same instructions for QuickTime 7 Pro.

Published Date: Oct 7, 2016

About the Mac OS X Server 10.4.9 (PowerPC) Update (delta)

This article has been archived and is no longer updated by Apple.

This software updates Mac OS X Server 10.4.8 (PowerPC) to version 10.4.9.

Note: PowerPC-based Macintosh Servers with Mac OS X Server (Universal) 10.4.8 installed should use the Mac OS X Server (Universal) 10.4.9 Update (delta) instead.

The 10.4.9 Server Update is recommended for all PowerPC-based servers and includes fixes for the operating system and various applications, services and technologies.

Note: Apple recommends installing the Mac OS X 10.4.9 client update on client machines in conjunction with updating Mac OS X Server to 10.4.9. Also, if your PowerPC server has Mac OS X Server 10.4.7 or 10.4.8 (Universal) installed, you should use the Mac OS X Server 10.4.9 (Universal) Update (combo) or Mac OS X Server 10.4.9 (Universal) Update (delta), respectively. For Xsan installations, all connected clients and servers must be updated to version 10.4.9 in order to benefit from the Xsan-related inclusions in this update.

Important: Please Read Before Installing

You must have an administrator account password that does not contain Option-keyed characters to install this update. The password may not be left blank (you can change your password if needed).

You may experience unexpected results if you've installed third-party system software modifications, or if you have modified the operating system through other means. This doesn't apply to normal software installation.

The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.

This update can be installed on non-startup volumes, but you should only do this if the current startup volume has already been updated to Mac OS X Server 10.4.9. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are two ways to update to Mac OS X Server 10.4.9: Use Software Update or install from a standalone installer. Software Update installation Software Update may have referred you to this document. For more information on this feature, see "How to Update Your Software."

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Note: Do not use the "Download Only" or "Install and Keep Package" options in Software Update. The resulting download will not install on your server.

If you need a standalone installer, follow the instructions in the next section.

Standalone installer

A standalone installer is also available from Apple Downloads. The Mac OS X Server 10.4.9 (PowerPC) Update (Delta) specifically updates version 10.4.8 (PowerPC) to version 10.4.9.

There is also a combo update installer available, which will update any version of Mac OS X Server 10.4 (PowerPC) to 10.4.9.

Remote installation

If you need to install the update on a remote computer, you can do so using the "softwareupdate" command-line tool or the Server Admin application. Information about the Server Admin application can be found here.

What's included?

File Sharing Services

- Addresses AFP connection issues when authenticating Active Directory users who are members of several groups.
- Resolves SMB/CIFS server deadlocks and service interruption issues.
- Addresses NFS server non-responsiveness at shutdown.

Directory Service

- Improves authentication of Windows clients that are bound to Active Directory.
- Addresses an issue that could prevent Open Directory authentication when using Ethernet Link Aggregation Print Service.

- Addresses slow performance of non-cached DNS queries and provides an update to BIND version 9.3.2.

Print Service

- Resolve an issue that could produce many more copies of a document than were requested, when using the Print Server DNS.

Networking

- Better TCP performance for Windows clients and servers.

File System

- Resolves issues with using rsync to copy files that have extended attributes.
- Issues with copying read-only files to AFP shares on Xsan and UFS volumes are addressed.
- Resolves issues copying files with extended attributes from an AFP share of an Xsan volume.
- Addresses an issue affecting Mac Pro client connections to AFP service.
- Addresses an issue that could cause reduction of performance when browsing AFP directories.

Other

- Creating and managing VLANs from the command-line is now possible.
- Resolves an issue with setting startup wait period after a power loss.
- Includes the latest worldwide time zone and Daylight Saving Time (DST) rules as of January 8, 2007 (2007-01-08).
- Directory listings are now properly displayed after moving directories with 'mv'.
- This update also includes recent security updates for Mac OS X Server 10.4; for detailed information on Security Updates, see this article: http://www.info.apple.com/kbnum/n61798.

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Published Date: Oct 7, 2016

About the Mac OS X Server 10.4.9 (PowerPC) Update (combo)

This article has been archived and is no longer updated by Apple.

This software updates Mac OS X Server (PowerPC) versions 10.4, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, 10.4.6, 10.4.7 and 10.4.8 to Mac OS X Server 10.4.9. It is a "combo" update that combines updates delivered with versions 10.4.1 through 10.4.9. If you already have Mac OS X Server 10.4.8 (PowerPC), you can download a smaller update to update to version 10.4.9.

The 10.4.9 Server Update is recommended for all PowerPC-based servers and includes updates for the operating system and various applications, services and technologies. **Note**: Apple recommends installing the Mac OS X 10.4.9 Client update on client machines in conjunction with updating Mac OS X Server to 10.4.9. Also, if your PowerPC server has Mac OS X Server 10.4.7 or 10.4.8 (Universal) installed, you should use the Mac OS X Server 10.4.9 (Universal) Update (combo) or Mac OS X Server 10.4.9 (Universal) Update (delta), respectively. For Xsan installations, all connected clients and servers must be updated to version 10.4.9 in order to benefit from the Xsan-related inclusions in this update.

Important: Please read before installing

- You must have an administrator account password that does not contain spaces or Option-keyed characters to install this update. The password may not be left blank (you can change your password if needed).
- You may experience unexpected results if you've installed third-party system software modifications, or if you have modified the operating system through other means. This doesn't apply to normal software installation.
- The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.
- This update can be installed on non-startup volumes, but you should only do this if the current startup volume has already been updated to Mac OS X Server 10.4.9. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are two ways to update to Mac OS X Server 10.4.9: Use Software Update or install from a standalone installer.

Software Update installation

Software Update may have referred you to this document. For more information on this feature, see "How to Update Your Software."
Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.
Note: This version of Mac OS X Server is built as a multi-package and should not be used with Software Update's "Download Only" and "Install and Keep Package" options. If you need to save these packages for later use, try the manual update instead.

Standalone installer

A standalone installer is also available from Apple Downloads.

Remote Installation

If you need to install the update on a remote computer, you can do so using the softwareupdate command-line tool.

What's included?

This update delivers many fixes. Because this is a combo update, it includes fixes delivered with the Mac OS X Server 10.4.9 delta update as well as these previous Mac OS X Server 10.4.x updates: 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, 10.4.6, 10.4.7 and 10.4.8.

Published Date: Oct 7, 2016

About the Mac OS X Server 10.4.9 (Universal) Update (delta)

This article has been archived and is no longer updated by Apple.

This software updates Mac OS X Server 10.4.8 (Universal) to version 10.4.9. **Note**: If you have PowerPC-based Macintosh Servers with Mac OS X Server 10.4.8 (PowerPC) installed, you should use the Mac OS X Server (PowerPC) 10.4.9 Update instead.

The 10.4.9 (Universal) Server Update is recommended for all servers currently running Mac OS X Server (Universal) versions 10.4.7 or 10.4.8, and includes updates for the operating system and various applications, services and technologies.

Note: Apple recommends installing the Mac OS X 10.4.9 Client update on client machines in conjunction with updating Mac OS X Server to 10.4.9. Also, if your PowerPC server has Mac OS X Server 10.4.x (PowerPC) installed, you should use the Mac OS X Server 10.4.9 (PowerPC) Update (combo) or Mac OS X Server 10.4.9 (PowerPC) Update (delta), as appropriate. For Xsan installations, all connected clients and servers must be updated to version 10.4.9 in order to benefit from the Xsan-related inclusions in this update.

Important: Please Read Before Installing

- You must have an administrator account password that does not contain Option-keyed characters to install this update. The password may not be left blank (you can change your password if needed).
- You may experience unexpected results if you've installed third-party system software modifications, or if you have modified the operating system through other means. This doesn't apply to normal software installation.
- The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.
- This update can be installed on non-startup volumes, but you should only do this if the current startup volume has already been updated to Mac OS X Server 10.4.9. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are two ways to update to Mac OS X Server (Universal) 10.4.9: Use Software Update or install from a standalone installer.

Software Update Installation

Software Update may have referred you to this document. For more information on this feature, see "How to Update Your Software."

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone installer

A standalone installer is also available from Apple Downloads. The Mac OS X Server 10.4.9 (Universal) Update specifically updates version 10.4.8 (Universal) to version 10.4.9 (Universal). There is also a combo update installer available, which will update Mac OS X Server 10.4.7 (Universal) to 10.4.9.

Remote installation

If you need to install the update on a remote computer, you can do so using the "softwareupdate" command-line tool or the Server Admin application. Information on the Server Admin application can be found here.

What's included?

The 10.4.9 Server Update is recommended for all servers and includes updates for the operating system and various applications, services and technologies.

File Sharing Services

- Addresses AFP connection issues when authenticating Active Directory users who are members of several groups.
- Resolves SMB/CIFS server deadlocks and service interruption issues.
- Addresses NFS server non-responsiveness at shutdown.

Directory Service

- Improves authentication of Microsoft Windows clients that are bound to Active Directory.
- Addresses an issue that could prevent Open Directory authentication when using Ethernet Link Aggregation Print Service.

Print Service

- Resolves an issue that could produce many more copies of a document than were requested when using the Print Server.

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- Better TCP performance for Windows clients and servers.

File System

- Resolves issues with using rsync to copy files that have extended attributes.
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- Addresses an issue affecting Mac Pro client connections to AFP service.
- Addresses an issue that could cause reduces performance when browsing AFP directories.

Other

- Creating and managing VLANs from the command-line is now possible.
- Resolves an issue with setting startup wait period after a power loss.
- Includes the latest worldwide time zone and Daylight Saving Time (DST) rules as of January 8, 2007 (2007-01-08).
- Addresses issues with handling Server serial number authentication if firewall services are enabled on Intel-based Macs.
- Directory listings are now properly displayed after moving directories with 'mv'.
- This update also includes recent security updates for Mac OS X Server 10.4; for detailed information on Security Updates, see this article.

Published Date: Oct 7, 2016

About the Mac OS X Server 10.4.9 (Universal) Update (combo)

This article has been archived and is no longer updated by Apple.

This software updates Mac OS X Server (Universal) versions 10.4.7 and 10.4.8 to Mac OS X Server (Universal) 10.4.9. It is a "combo" update that combines updates delivered with versions 10.4.7 through 10.4.9. If you already have Mac OS X Server 10.4.8 (Universal), you can download a smaller update to update to version 10.4.9.

The 10.4.9 Server Update is recommended for all Intel-based servers and any supported PowerPC-based server already running Mac OS X Server 10.4.7 or 10.4.8 (Universal). This update includes fixes for the operating system and various applications, services and technologies. **Note**: Apple recommends installing the Mac OS X 10.4.9 client update on client machines in conjunction with updating Mac OS X Server to 10.4.9. If your server is running Mac OS X Server 10.4.x (PowerPC), you should use the Mac OS X Server 10.4.9 (PowerPC) Update (combo) or Mac OS X Server 10.4.9 (PowerPC) Update (delta). For Xsan installations, all connected clients and servers must be updated to version 10.4.9 in order to benefit from the Xsan-related inclusions in this update.

Important: Please Read Before Installing

- You must have an administrator account password that does not contain spaces or Option-keyed characters to install this update. The password may not be left blank (you can change your password if needed).
- You may experience unexpected results if you've installed third-party system software modifications, or if you have modified the operating system through other means. This doesn't apply to normal software installation.
- The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to install.
- This update can be installed on non-startup volumes, but you should only do this if the current startup volume has already been updated to Mac OS X Server 10.4.9. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are two ways to update to Mac OS X Server 10.4.9: Use Software Update or install from a standalone installer.

Software Update installation

Software Update may have referred you to this document. For more information on this feature, see "How to Update Your Software." Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Note: This version of Mac OS X Server is built as a multi-package and should not be used with Software Update's "Download Only" and "Install and Keep Package" options. If you need to save these packages for later use, try the manual update instead.

Standalone installer

A standalone installer is also available from Apple Downloads.

Remote installation

If you need to install the update on a remote computer, you can do so using the softwareupdate command-line tool.

What's included?

This update delivers many fixes. Because this is a combo update, it includes fixes delivered with the Mac OS X Server 10.4.9 delta update as well as the previous Mac OS X Server 10.4.8 (Universal) Update.

Published Date: Oct 7, 2016

Mac OS X 10.4.8: Activity Monitor shows AirPort process taking unexpected CPU time, computer runs "slow" with third-party VPN client

This article has been archived and is no longer updated by Apple.

Issue or symptom

After updating to Mac OS X 10.4.8, if some third-party VPN client software is installed, Activity Monitor may show the AirPort process taking 90% or more of the CPU time, and the computer may seem "slow".

Solution

Make sure your third-party VPN client software is up-to-date. Contact your network administrator or the manufacturer of your VPN client software.

This document will be updated as more information becomes available.

Published Date: Oct 7, 2016

iPod shuffle (Second Generation): LED behavior after charging

This article has been archived and is no longer updated by Apple.

Issue or symptom

You may notice that the status light on the iPod shuffle may not change from orange to green after prolonged charging (two or more hours).

Solution

If you observe this condition, you should take the following steps.

1. Disconnect the iPod shuffle (Second Generation) from the dock.
2. Turn the iPod shuffle (Second Generation) off.
3. Wait for 5 to 10 seconds.
4. Turn the iPod shuffle (Second Generation) back on.

The status light on the iPod shuffle (Second Generation) should now be green indicating that it is charged.

Published Date: Oct 7, 2016

Mac OS X 10.4: "Mail cannot update your mailboxes because your home directory is full" alert

This article has been archived and is no longer updated by Apple.

Issue or symptom

While opening Mail, you may see this alert message even if your Home is not full:

"Mail cannot update your mailboxes because your home directory is full. You must free up space in your home folder before using Mail. Delete unneeded documents or move documents to another volume."

Solution

Verify that your home directory is not full

Choose **Home** from the Finder's **Go** menu and make sure the volume is not full by checking the space available on the drive.

If it is full you can free up space on the volume by removing (or archiving to a different volume) files and documents such as ones in your Documents folder and on your desktop.

If your home directory is not full

1. Quit Mail if it's running.
2. Choose **Go to Folder** from the Finder's **Go** menu, then type :
   ~/Library/Mail/
3. Move the file named "Envelope Index" to the desktop.
4. Open Mail. Your will be alerted that your Mail messages will be imported again. Click OK.

Once the issue is resolved, you can remove (delete) the "Envelope Index" file from your desktop

.

Published Date: Oct 7, 2016

Mac OS X Server 10.4: How to renew a signed certificate

This article has been archived and is no longer updated by Apple.

Learn how to renew a signed certificate in Mac OS X Server 10.4 or later. A server certificate allows secure transactions between the server and clients. Certificates are provided by Certificates Authorities--organizations that are trusted to issue safe certificates. Some Certificate Authorities (CA) include Thawte, Verisign, and Entrust. Certificates normally expire after a period of time for security reasons.

Renewing an expired certificate

Important: These steps will leave your server without a certificate until the new certificate is issued. You can use a self-signed Certificate Authority and certificate to fill the gap. The clients will need the CA certificate to be added.

1. Refer to the Mac OS X Server Security Configuration Guide (chapter 8) to delete the expired certificate.
2. Refer again to the Mac OS X Server Security Configuration Guide to request a certificate from a CA and add it.

Renewing a certificate that has not yet expired

1. Open Terminal (/Applications/Utilities).
2. Execute this command to create a Certificate Signing Request:

   ```
   certtool r certrequest.pem k=CertRequest.keychain c
   ```

   Note: You cannot use Server Admin because it does not allow two certificates with the same common name.
3. Open Keychain Access (/Applications/Utilities).
4. Click Show Keychains.
5. Select CertRequest.
6. Export the private key.
7. Submit the certificate "certrequest.pem" to the Certificate Authority (CA) of your choice--the CA will explain you what to do with the CSR in order to purchase or renew a certificate.
8. After the CA provides you with a new certificate (typically it is mailed to you), log in as root on the server.
9. Open Keychain Access.
10. Locate the keys related to the existing certificate and export them (this works only as root).
11. Log out.
12. Open Server Admin.
13. In the Computers & Services list, select the server you are renewing a certificate for.
14. Click Settings.
15. Click Certificates.
16. Delete the existing certificate.
17. Click Import.
18. Select the certificate file and the private key file (the one exported in step 6 above).
19. Click Import.

If the import does not succeed, open the system log and look for the text "[CertificateManager importIdentity:]" to determine the cause of the issue and resolve it. You can import back the expiring certificate using the private key exported in step 10.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

Xsan 1.4.1: PowerPC MDCs log quota messages and disappear from Computer List after updating Intel MDCs

This article has been archived and is no longer updated by Apple.

Issue or symptom

When upgrading heterogeneous Metadata Controllers, or MDCs, either Intel- or PowerPC-based, to Xsan 1.4.1, PowerPC-based MDCs may log quota messages and disappear from the Computer List until they are updated.

Solution

Be sure to upgrade all MDCs to Xsan 1.4.1. Once all MDCs are updated to Xsan 1.4.1, this issue should be resolved.

Published Date: Oct 7, 2016

Apple CD ROM Drives: Using CD-RW Discs

This article describes the use of CD-RW discs with Apple CD-ROM drives.
This article has been archived and is no longer updated by Apple.
The only drives that are qualified to read CD-RW formatted discs are the 24x drives that are in desktop Power Macintosh computers (including iMac).

PowerBook CD-ROM Drives and older desktop CD-ROM drives may read some of the discs but it would be unsupported and unreliable. CD-RW is really designed as a backup format for a computer with a CD-RW drive. If you want to use CDs made on other Macintosh computers the CDs should be formatted as CD-R instead of CD-RW.

Published Date: Feb 20, 2012

About the security content of Apple Remote Desktop 3.1

This article has been archived and is no longer updated by Apple.

This document describes the security content of Apple Remote Desktop 3.1, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Apple Remote Desktop 3.1

- **Apple Remote Desktop**

  CVE-ID: CVE-2006-4413

  Available for: Apple Remote Desktop 3.0

  Impact: Malicious local users may be able to modify packages used to install or upgrade client systems

  Description: Apple Remote Desktop includes built-in packages used to install and upgrade client systems. The permissions on these packages could allow them to be altered by malicious local users on Apple Remote Desktop admin systems. This could lead to the execution of arbitrary commands with root privileges on client systems when Apple Remote Desktop client software is installed or upgraded. This issue has been addressed by applying more restrictive permissions on the built-in installation packages. Credit to Andrew Mortensen of the University of Michigan for reporting this issue.

Published Date: Oct 7, 2016

QuickTime Pro: About annotations in Mobile MP4 3GPP movies

This article has been archived and is no longer updated by Apple.

QuickTime Pro enables content creators to export movie files in 3GPP formats that can be played on mobile devices. If you export a movie in the Mobile MP4 3GPP format, it's important to note that only certain annotation fields will be present in the resulting movie.

Supported Annotation Fields:

- Title
- Author
- Copyright
- Description

For example, if your source movie contains annotations for Comment, Title and Description, the resulting 3GPP Mobile MP4 format movie will only contain the Title and Description annotations.

More information about QuickTime, 3GPP, and other mobile formats is available from the QuickTime Mobile Technologies page.

Published Date: Feb 20, 2012

About the security content of Security Update 2006-007

This article has been archived and is no longer updated by Apple.

This document describes Security Update 2006-007, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Security Update 2006-007

- **AirPort**

  CVE-ID: CVE-2006-5710

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.8, Mac OS X Server v10.4.8

  Impact: Attackers on the wireless network may cause arbitrary code execution

  Description: A heap buffer overflow exists in the AirPort wireless driver's handling of probe response frames. An attacker in local proximity may be able to trigger the overflow by sending maliciously-crafted information elements in probe responses. This issue affects eMac, iBook, iMac, PowerBook G3, PowerBook G4, and Power Mac G4 systems equipped with an original AirPort card. This issue does not affect systems with the AirPort Extreme card. This update addresses the issue by performing additional validation of probe response frames. Credit to H D Moore of Metasploit for reporting this issue.

- **ATS**

  CVE-ID: CVE-2006-4396

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.8, Mac OS X Server v10.4.8

  Impact: Local users may be able overwrite or create files with system privileges

  Description: The Apple Type Services server insecurely creates error log files. As a result, a malicious local user may be able to overwrite or create files with system privileges. This update addresses the issue by creating error logs securely.

- **ATS**

  CVE-ID: CVE-2006-4398

  Available for: Mac OS X v10.4.8, Mac OS X Server v10.4.8

  Impact: Local users may be able to run arbitrary code with raised privileges

  Description: Multiple buffer overflows were discovered in Apple Type Services server. By sending a maliciously-crafted service request, a local user may trigger these overflows. This may lead to a crash or arbitrary code execution with system privileges. This update addresses the issue by performing additional validation on service requests. This issue does not affect systems prior to Mac OS X v10.4.

- **ATS**

  CVE-ID: CVE-2006-4400

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.8, Mac OS X Server v10.4.8

  Impact: Viewing maliciously-crafted font files may lead to arbitrary code execution

  Description: The Apple Type Services server contains a stack buffer overflow in font processing. By carefully crafting a corrupt font file, an attacker can trigger the buffer overflow which may lead to a crash or arbitrary code execution with system privileges. Font files are processed when opened or previewed in Finder. This update addresses the issue by performing additional validation of font files.

- **CFNetwork**

CVE-ID: CVE-2006-4401

Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.8, Mac OS X Server v10.4.8

Impact: Visiting FTP URIs may inject arbitrary FTP commands

Description: By enticing a user to access a maliciously-crafted FTP URI, an attacker can cause the user's FTP client to issue arbitrary FTP commands to any accessible FTP server, using the credentials of the victim. This issue may also facilitate attacks of other line oriented protocols, such as SMTP. This update addresses the issue by performing additional validation of URIs.

- **ClamAV**

  CVE-ID: CVE-2006-4182

  Available for: Mac OS X Server v10.4.8

  Impact: Processing maliciously-crafted email messages with ClamAV may lead to arbitrary code execution

  Description: ClamAV is updated to version 0.88.5 to address several security issues. ClamAV was introduced in Mac OS X Server v10.4 for email scanning. The most severe of these issues could lead to arbitrary code execution with the privileges of ClamAV. Further information is available on the ClamAV project web site (www.clamav.net).

- **Finder**

  CVE-ID: CVE-2006-4402

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.8, Mac OS X Server v10.4.8

  Impact: Browsing a shared directory may lead to an application crash or arbitrary code execution

  Description: A heap buffer overflow may be triggered when the Finder is used to browse a directory containing a corrupt ".DS_Store" file. By enticing a user to browse a directory containing a maliciously-crafted ".DS_Store" file, an attacker may be able to trigger the overflow. This could lead to an application crash or arbitrary code execution with the privileges of the user running Finder. ".DS_Store" files may be included in archives, on disk images, and on network file systems. This update addresses the issue by performing additional validation of ".DS_Store" files.

- **ftpd**

  CVE-ID: CVE-2006-4403

  Available for: Mac OS X v10.3.9

  Impact: When FTP Access is enabled, unauthorized users may determine account name validity

  Description: When attempting to authenticate a valid user, the FTP server may crash during a failed login attempt. The crash does not occur when attempting to authenticate unknown users. This behavior can be used to determine if an account name is valid. This issue is addressed by resolving the crash condition. FTP Access is not enabled by default. Mac OS X Server v10.3.9, Mac OS X v10.4, Mac OS X Server v10.4, and later systems are not affected. Credit to Benjamin Williams of the University of Canterbury for reporting this issue.

- **gnuzip**

  CVE-ID: CVE-2006-4334, CVE-2006-4335, CVE-2006-4336, CVE-2006-4337, CVE-2006-4338

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.8, Mac OS X Server v10.4.8

  Impact: Uncompressing a file with gunzip may lead to an application crash or arbitrary code execution

  Description: By carefully crafting a malicious compressed file, an attacker may be able to trigger any of several vulnerabilities in gunzip when the file is processed. The most severe of these issues could lead to an application crash or arbitrary code execution. Many applications use the gunzip command for decompression, including command-line tools such as tar and services such as Mail Server. This update addresses the issue by performing additional validation of compressed files. Credit to Tavis Ormandy of the Google Security Team for reporting this issue.

- **Installer**

  CVE-ID: CVE-2006-4404

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.8, Mac OS X Server v10.4.8

  Impact: When installing software as an Admin user, system privileges may be used without explicit authorization

Description: Admin users are normally required to authenticate before executing commands with system privileges. However, the Installer allows system privileges to be used by Admin users when installing certain packages without requiring authentication. This update addresses the issue by requiring authentication before installing software with system privileges.

- **OpenSSL**

  CVE-ID: CVE-2006-2937, CVE-2006-2940, CVE-2006-3738, CVE-2006-4339, CVE-2006-4343

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.8, Mac OS X Server v10.4.8

  Impact: Multiple vulnerabilities in OpenSSL

  Description: OpenSSL is updated to version 0.9.7l to address several critical vulnerabilities. The most severe of these vulnerabilities may lead to impersonation of services using SSL or TLS, or to arbitrary code execution. Further information is available via OpenSSL advisories at http://www.openssl.org/news/vulnerabilities.html.

- **perl**

  CVE-ID: CVE-2005-3962

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.8, Mac OS X Server v10.4.8

  Impact: Perl applications with unsafe string handling may be vulnerable to arbitrary code execution

  Description: An integer overflow exists in Perl's format string functionality. This integer overflow may lead to arbitrary code execution in Perl applications which use format strings unsafely. This update addresses the issue by performing additional validation of uses of format strings.

- **PHP**

  CVE-ID: CVE-2006-1490, CVE-2006-1990

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.8, Mac OS X Server v10.4.8

  Impact: PHP applications may be vulnerable to denial of service or arbitrary code execution

  Description: PHP is updated to version 4.4.4 to address several security issues in the Apache module and scripting environment. Applications using affected APIs may be vulnerable. The most severe of the vulnerabilities may lead to arbitrary code execution. Further information is available on the PHP project web site (www.php.net).

- **PHP**

  CVE-ID: CVE-2006-5465

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.8, Mac OS X Server v10.4.8

  Impact: PHP applications may be vulnerable to arbitrary code execution

  Description: Buffer overflows exist in the htmlentities() and htmlspecialchars() functions. These buffer overflows may lead to arbitrary code execution in applications using the affected APIs. This update addresses the issue by performing additional validation of input to the affected APIs.

- **PPP**

  CVE-ID: CVE-2006-4406

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.8, Mac OS X Server v10.4.8

  Impact: Using PPPoE on an untrusted local network may lead to arbitrary code execution

  Description: When PPPoE is enabled, an attacker on the local network may be able to trigger a buffer overflow. This could lead to a system crash or arbitrary code execution with system privileges. This update addresses the issue by performing better validation on PPPoE traffic. PPPoE is not enabled by default. Credit to the Mu Security research team for reporting this issue.

- **Samba**

  CVE-ID: CVE-2006-3403

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.8, Mac OS X Server v10.4.8

  Impact: When Windows Sharing is enabled, remote attackers may cause a denial of service

Description: The list of active connections tracked by Windows Sharing may grow unbounded. An attacker may be able to create many connections, leading to memory exhaustion and a denial of service. This update addresses the issue by limiting the number of active connections. Windows Sharing is not enabled by default.

- **Security Framework**

  CVE-ID: CVE-2006-4407

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9

  Impact: Secure Transport may not negotiate the best cipher available

  Description: Secure Transport provides the ability to encrypt and authenticate data using several ciphers. When a connection is made, the best mutually-supported cipher should be used. Due to the order they are evaluated, it is possible for Secure Transport to use a cipher that provides no encryption or authentication when better ciphers are available. This update addresses the issue by giving priority to better ciphers. Applications using Secure Transport through CFNetwork, such as Safari, are not affected by this issue on systems with Security Update 2006-006 or later. This issue does not affect systems using Mac OS X v10.4.8 and later. Credit to Eric Cronin of gizmolabs for reporting this issue.

- **Security Framework**

  CVE-ID: CVE-2006-4408

  Available for: Mac OS X v10.4.8, Mac OS X Server v10.4.8

  Impact: Processing X.509 certificates may lead to a denial of service

  Description: It is possible to create an X.509 certificate containing a public key that could consume a significant amount of system resources during signature verification. An attacker may cause a system to process such a certificate, leading to a denial of service. This issue does not affect systems prior to Mac OS X v10.4. Credit to Dr. Stephen N. Henson of Open Network Security for reporting this issue, and to NISCC for coordinating.

- **Security Framework**

  CVE-ID: CVE-2006-4409

  Available for: Mac OS X v10.4.8, Mac OS X Server v10.4.8

  Impact: When using an HTTP proxy, certificate revocation lists cannot be retrieved

  Description: On systems that are configured to use an HTTP proxy, the Online Certificate Status Protocol (OCSP) service is unable to retrieve certificate revocation lists. This update addresses this issue by using the system proxy settings in ocpsd. This issue does not affect systems prior to Mac OS X v10.4. Credit to Timothy J. Miller of the MITRE Corporation for reporting this issue.

- **Security Framework**

  CVE-ID: CVE-2006-4410

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9

  Impact: Certain revoked certificates may be erroneously honored

  Description: The revocation list from an issuing authority may not be consulted for certain leaf certificates. This update addresses the issue through improved handling of the certificate revocation list. This issue does not affect Mac OS X v10.4.7 and later systems. Credit to Jose Nazario of Arbor Networks for reporting this issue.

- **VPN**

  CVE-ID: CVE-2006-4411

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.8, Mac OS X Server v10.4.8

  Impact: Malicious local users may gain system privileges

  Description: Under certain circumstances, the VPN server may execute commands without properly cleaning the environment. This may allow a malicious local user to create files or execute commands with system privileges. This update addresses the issue by ignoring the user's environment when executing commands.

- **WebKit**

TA24494_About_the_security_content_of_Security_Update_.pdf

CVE-ID: CVE-2006-4412

Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.8, Mac OS X Server v10.4.8

Impact: Visiting a malicious web site may lead to arbitrary code execution

Description: A maliciously-crafted HTML document could cause a previously deallocated object to be accessed. This may lead to an application crash or arbitrary code execution. This update addresses the issue by properly handling such documents. Credit to Tom Ferris of Security-Protocols for reporting this issue.

Published Date: Oct 7, 2016

Xserve: Server Monitor does not authenticate with server over subnet

This article has been archived and is no longer updated by Apple.

Issue or symptom

After changing a username or password with Server Monitor, the Xserve may stop authenticating remote Server Monitor users.

Solution

To correct this, perform the following steps:

1. Make the necessary changes to the username or password using Server Monitor.
2. Quit Server Monitor.
3. Shut down the Xserve that is the target of these changes.
4. Remove the power cord from the back of the Xserve.
5. Wait 30 seconds and plug the power cord back in.
6. Power the server back on.

Communicating with the Xserve with Server Monitor across subnets should now function as expected.

Related Terms: Lights Out Management LOM

Published Date: Oct 7, 2016

Aperture: Some Uncompressed DNG files show wrong color palette

This article has been archived and is no longer updated by Apple.

Issue or symptom

Some DNG images created with Adobe DNG Converter 3.5 or later may have the wrong color palette when viewed in Aperture, Preview, or iPhoto.

Solution

Digital Camera RAW Support Update 1.0 added support for DNG files created using the Universal Binary versions of Adobe DNG converter (version 3.5 or later) on Intel-based Macs. Uncompressed DNG files created with this configuration may display an incorrect color palette.

This issue has been addressed in Digital Camera RAW Support Update 1.0.1. Any Uncompressed DNG files demonstrating this issue should be regenerated after the new update has been installed. Digital RAW Support Update 1.0.1 can be downloaded from here.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Canon EOS Kiss Digital X images not recognized after Digital Camera RAW Support Update 1.0

This article has been archived and is no longer updated by Apple.

Issue or symptom

In some cases, images from the Canon EOS Kiss Digital X camera are not recognized as supported, even after the Digital Camera RAW Support Update 1.0 has been installed.

Solution

Digital Camera RAW Support Update 1.0 provided support for the Canon EOS 400D / Canon Digital Rebel XTi, and implied support for the Canon EOS Kiss Digital X. However, it did not correctly support the Canon EOS Kiss Digital X. This was fixed in the Digital Camera RAW Support Update 1.0.1. The update can be downloaded from here.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

Monitors: Influence of External Magnetic Fields

This document describes how external magnetic fields can affect the performance of a computer monitor.
This article has been archived and is no longer updated by Apple.
Magnetic fields can present image distortion or jitter on a computer monitor. External fields can impinge upon the monitor's internal magnetic field, which controls the electron beams writing the image on the screen. The external field interferes with or disrupts the internal field, causing the screen image to jitter, distort, drift, or to lose color quality.

Typical sources of external fields include common electrical equipment placed near the affected monitor, such as another monitor, video systems, scanners, fluorescent or task lights, electric clocks--just about anything that can be plugged in and turned on. Not so obvious sources include nearby power lines, transformers, switch panels, or wall and floor wiring.

Another source of external fields could come from metal cabinets that can build up a magnetic field over time. This magnetic field can easily be removed by using a degaussing coil on all the metal cabinets or desks that are near the display.

Published Date: Feb 20, 2012

Xserve Intel (late 2006): Flashing question mark appears during start up

This article has been archived and is no longer updated by Apple.

Issue or symptom

You may encounter a flashing question mark when trying to start (boot) an Xserve Intel (Late 2006).

Solution

Make sure that the Xserve is not locked. If it is locked, use the Allen key that came with the server to unlock it.

After the Xserve has started, use Startup Disk preferences (in System Preferences) to select a valid system. Setting the startup disk will allow the computer to start properly even if it is locked.

Published Date: Oct 7, 2016

Aperture: Using Watermarks in Aperture 1.5.2

This article has been archived and is no longer updated by Apple.

Aperture 1.5.2 includes a new *Scale watermark* setting in the export setting window that addresses issues regarding how watermarks are scaled when applied to exported images.

If the *Scale watermark* box is left unchecked, then the watermark will appear on your exported images at its actual pixel size, regardless of how your images are scaled. This replicates the behavior of watermarks in Aperture versions prior to 1.5.1. Let's say for example that you create a watermark that is 100 pixels by 100 pixels. If you apply the watermark to an export that is 50% of the Original Size, with the *Scale watermark* setting unchecked, the watermark will be 100 pixels square. If you export the same image at Original Size, the watermark will still be 100 pixels square (and will, therefore, take up less space on the resulting original-size image). Below are some examples:

Here is an image exported at it's original size without *Scale watermark*.

Here is the same image and watermark exported at 50 percent of original size, again without *Scale watermark*.

In this workflow, you would typically create watermarks of various sizes to use, depending on the final export size of the images.

If the *Scale watermark* box is checked, then the watermark size is scaled relative to the export size. This replicates the behavior of watermarks in Aperture 1.5.1. In this case, the size of the watermark (in terms of actual pixel dimensions) changes, depending on how the image itself is to be scaled. In this workflow, the watermark is automatically reduced in size so that it proportionally always takes up the same amount on space on your resulting exported images. Here are some examples of images exported with watermark scaling:

Here is an image exported at its original size, with *Scale watermark* enabled.

Here's the same image and watermark exported at 50 percent size, again with *Scale watermark* enabled.

Note however, that watermarks are never scaled up in size. If the export size is larger than the original image, the watermark will not scale.

Published Date: Feb 20, 2012

Aperture: Tips on using a RAW+JPEG workflow in Aperture

This article has been archived and is no longer updated by Apple.

Some cameras can be configured to create both a RAW and JPEG file for each shot you take, and Aperture is well suited for maintaining and working with both masters of each image. Here are some tips on using RAW+JPEG in Aperture.

Importing Images

When you import RAW+JPEG, the Import Panel will only show the RAW images on the memory card or other media, but the JPEG master of the images will still be imported. If you don't want both the RAW and JPEG images to be imported at the same time, simply separate them into separate folders in the Finder (drag the .jpg versions into a sub-folder, for example) before importing them into Aperture.

Viewing and Working with JPEG Masters

Under normal circumstances, you will only see the RAW master of each image in the Aperture browser, and all adjustments will be applied to the RAW images. If you would like to work with the JPEG master, highlight the image and choose **Images > New Version from Master JPEG**. Note that if the image you select has no associated JPEG master, this menu item will be dimmed.

The RAW and JPEG images are treated as a single master

In a RAW+JPEG workflow, the two images are treated as a single master. If you have imported the images as referenced, avoid deleting either the RAW or JPEG from the Finder - Aperture will lose connection with the remaining master as well.

Published Date: Oct 7, 2016

What is Lights Out Management?

This article has been archived and is no longer updated by Apple.

Lights Out Management (LOM) is Apple's implementation of the remote monitoring and management protocol Intelligent Platform Management Interface (IPMI) developed by Intel.

The addition of Lights Out Management to Xserve provides for the monitoring of over 100 sensors that measure voltage, temperature, fan speeds, etc. Using Server Monitor, one can get a fairly complete picture of the health of an Xserve.

In addition to monitoring LOM can also be used to control some functions of an Xserve. Xserve can be shutdown or restarted from a remote location via the implementation of LOM in Server Monitor. Even if the Xserve is in an unresponsive state, one should be able to gain access via LOM.

The LOM process is controlled by a dedicated processor. This processor works independently of the two Xeon processors in the Xserve, leaving them to focus on server tasks.

The LOM processor is accessed through one or both of the built-in Ethernet ports. Each built-in Ethernet port has two MAC addresses assigned: One is dedicated to the LOM processor, the other is used by Mac OS X Server. This means there are two MAC addresses accessible by Mac OS X Server, and two dedicated to the LOM processor.

During the setup process, IP addresses are assigned to one and/or both MAC addresses reserved for the LOM processor. These IP addresses used by the server and the IP addresses used by the LOM processor must be different. Additionally, an account is created to access the LOM processor. This account is used to access LOM features and data but is not used in any other part of the system.

To manage LOM access (IP addresses and account information), use Server Monitor. This is the only location, outside of the setup assistant, where this information can be accessed. The LOM account will not show up in Workgroup Manager, nor will the LOM interface be visible in System Preferences. For more information on managing LOM access, see Server Monitor Help.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Xserve: Do not use 2-byte characters in Lights Out Management (LOM) account name

This article has been archived and is no longer updated by Apple.

Issue or symptom

The Xserve (Late 2006) LOM processor does not support 2-byte characters in its user account name. 2-byte characters are commonly used in Japanese, Chinese, and Korean fonts.

Solution

Do not use 2-byte Japanese, Chinese, or Korean language characters or input methods when setting up or changing the LOM user account.

For more information on LOM user account settings, consult Server Monitor Help.

Published Date: Oct 7, 2016

Final Cut Pro: Cancelling render may change the render state of audio tracks

This article has been archived and is no longer updated by Apple.

Issue

In some cases, if you cancel a render operation that involves audio tracks, a portion of audio content which previously was rendered, may afterwards be unrendered.

Workaround

This behavior is simple to work around; just render the audio again. Audio content will render in Final Cut Pro in a fraction of the time it takes to render video.

Follow these steps to render audio items in the Timeline:

1. Select the audio clips that need rendering.
2. Choose **Sequence > Render Selection > Audio**

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

About Xserve RAID Admin Tools 1.5.1

This article has been archived and is no longer updated by Apple.

Xserve RAID Admin Tools Software Release v1.5.1

Installation instructions

The following new items are in this release:

- RAID Admin v1.5.1
- firmware-1.5.1-1.51.xfb
- READ ME FIRST Folder

If you installed this software via the Software Update mechanism, all of the above items will be installed in a new folder "Xserve RAID Update", located in the Applications/Utilities folder. If you are installing from CD, drag all items to your preferred location on your host computer's hard disk.

The versions of RAID Admin and Xserve RAID firmware in this release should replace all earlier versions.

Support for 750 GB drive modules

This release provides support for the new 750 GB Xserve RAID drive modules offering a massive 10.5 TB of combined capacity. Xserve RAID systems MUST be updated with this release in order to utilize these new drive modules. Systems with older firmware will not be able to recognize the new drive modules, therefore it is recommended that all systems be updated prior to installing new modules. See the "Xserve RAID firmware update instructions" section at the end of this document for more details on performing this update. Always backup all data on the Xserve RAID before applying any updates.

What's New in this Release

- Support for 750 GB Xserve RAID drive modules.
- Changes to Host Cache Flushing performance setting are properly saved on RAID controller.
- Fixes SCSI protocol compatibility issues with Microsoft Windows.
- Addresses an encoding issue--passwords may now contain any valid Unicode character.
- Automatically updates the current session password after password is changed in system settings.
- "IDE Error" event log message details are now correctly displayed in hexadecimal.
- Removes LUN Masking from Advanced panel.
- Closes an unused TCP/IP port (192) on the Controller Module.

Xserve RAID firmware update instructions

This release includes the latest version of firmware for your Xserve RAID. Use the RAID Admin application to upgrade any Xserve RAID system that requires new firmware. You can check the current version of firmware on an Xserve RAID by looking at the Firmware Version field in the Components monitoring tab in RAID Admin. Select a system in the monitoring list, click the Components tab, and select the upper or lower controller module in the display.

Important: Before updating the firmware, you should have all Xserve RAID volumes unmounted from all host systems to prevent possible data loss. The firmware update process will cause an automatic restart of the Xserve RAID that will interrupt data availability. The new firmware will not disturb your existing RAID sets or enclosure settings including password, system name, and email notifications. Always backup all data on the Xserve RAID before applying any updates.

Before updating new firmware, RAID Admin will disable the disk and RAID controller caches. This is done to prevent stale data in the controller's memory from being used in the new firmware. Note: Do not quit RAID Admin while the firmware update process is taking place. Original cache settings will be restored by RAID Admin at the end of the firmware update process.

To update the firmware:

1. Open RAID Admin and choose an Xserve RAID system in the monitoring list.
2. From the **System** menu, choose **Update Firmware**, then select the "firmware-1.5.1-1.51.xfb" file.

RAID Admin will determine whether your Xserve RAID system's firmware needs updating and proceed with the update when you select the Update button. Both the management coprocessor's and RAID controller's firmware will be updated on the upper and lower controller modules. The firmware update will require several minutes to complete. Do not interrupt this operation until it is done. The Xserve RAID will restart when the firmware update is complete in order for the new firmware to take effect. Verify the new firmware versions by looking in the Components tab

after the Xserve RAID has restarted.

Procedure for adding and moving drives and arrays

Xserve RAID Admin update 1.5 and later implements a new procedure regarding how hard drives are added to an Xserve RAID and how RAID arrays are moved from one Xserve RAID to another. The new procedure adds a measure of safety to prevent inadvertently changing drives from a RAID set into Spares.

If an inserted drive is determined to be part of a RAID set, the drive will be flagged with a solid amber LED and marked with an "Unavailable" status. Before the drive can be used as a Spare or in creating a RAID set, the user must use the "Make Drive Available For Use" function, under Utilities in the toolbar.

When an entire RAID array is moved from one Xserve RAID to another, the RAID array may not be recognized due to internal conflicts with a RAID array already in the unit. To resolve these conflicts and bring the inserted array online, use the Recognize Array function, under Utilities in the toolbar.

Procedure for Replacing a Controller Module

Before replacing a Controller module, upgrade to the latest Xserve RAID firmware. To upgrade the firmware on an Xserve RAID, follow the instructions in the "Xserve RAID firmware update instructions" section. Whenever upgrading firmware or replacing a Controller module, be sure to stop all host activity to the RAID, unmount any RAID volumes from all hosts, and perform a full backup of all data.

After installing a new Controller module and making sure the Xserve RAID is fully ready with all LEDs green, it may be necessary to upgrade the firmware on the new module so both Controller modules have the same firmware versions. Finally, synchronize the settings on the new Controller module with the other module by holding down the System Identifier button and momentarily pressing the reset button on the back of the new Controller module (using a paperclip or small screwdriver). Settings synchronized are: System Name, Location, Contact settings, Monitoring and Management Passwords, Email notification list and server, audible alert, power failure, and SNMP settings.

Published Date: Oct 7, 2016

Final Cut Studio: Best practices when naming projects and assets

This article has been archived and is no longer updated by Apple.

Discussion

This document discusses general guidelines for naming Final Cut Studio projects and related media assets. It's important to be aware that certain characters can be interpreted as functions, wildcards or path designators, and their use should be avoided when naming drives, folders, assets or projects.

Outside of Final Cut Studio, other applications may also reserve certain characters as functional, and their use in file or path names may produce unexpected results.

Tried and true

In audio, video and multimedia workflows on Mac OS X, Microsoft Windows, and most Linux distributions, the vast majority of applications will work ideally with files and paths named with characters limited to the following set:

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z
1 2 3 4 5 6 7 8 9 0
- _ (These last two are often called "minus," and "underscore".)

Best to Avoid

The following list of characters may cause issues if used in file or path names. In many cases these characters are OK to use, or the operating system will prevent you from using them in file or path names. But it's still a good general rule of thumb to avoid these if you plan on using the named file in a workflow that includes multiple applications, people, operating systems, or file systems. Issues may range from unexpected behaviors in applications, to applications or systems failing to recognize files and folders:

/ \ * & @ # $ % ? < > : ; ( )

All the rest:

Characters not listed in the two lists above will generally work OK in most cases on Mac OS X. Keep in mind, this article isn't intended to address any specific issues or surefire solutions. Rather, these are general guidelines, intended for robust results in complicated workflows. If you're creating a file or a project that you intend to send to people who are using other applications, or are using other operating systems, or, if you're not sure of what your workflow will be, using file names comprised of characters in the **Tried and true** set will produce the most robust results.

Published Date: Feb 20, 2012

iMovie HD 6: Red tint on imported photos

This article has been archived and is no longer updated by Apple.

Issue or symptom

After importing a photo into your iMovie project, the photo may appear to have a red cast or pink tint.

Solution

Check to see if the photo file is in the BMP format. If so, convert the photo to JPEG or TIFF before adding it to your project. You can convert the photo by exporting it from iPhoto or Preview and selecting the new file format when saving.

Related documents

iPhoto 6.0 Help: Exporting photos
Preview 2.1 Help: Converting graphic file types in Preview
Published Date: Oct 7, 2016

Logic: JazzText font displays as black squares

This article has been archived and is no longer updated by Apple.

Issue or symptom

When the font JazzText is assigned to a text style in the Score, text that uses that style displays as black squares.

Solution

This is a known issue with the *JazzText* font. Use the *JazzTextExtended* font instead.

This document will be updated as more information becomes available.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Final Cut Pro: Capturing audio and video to separate files not available with HDV

This article has been archived and is no longer updated by Apple.

In most cases, Final Cut Pro allows you to capture audio and video either together, as one file, or as separate audio and video files.

Capturing HDV is an exception. Even if you have selected the "Capture Audio and Video to Separate Files" option in Capture Settings, HDV clips will each be written to a single file in the Capture Scratch destination, and will contain both audio and video.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Migration Assistant (Japanese): Kotoeri Input Method not available on Mac OS X registration page after transferring data

This article has been archived and is no longer updated by Apple.

Issue or symptom

After finishing data transfer from another Mac, Migration Assistant doesn't allow you to use the Kotoeri keyboard input method for Mac OS X registration. This may occur even if Command-Space is pressed or the Kana key is pressed.

Solution

Quit by pressing Command-Q. To complete the registration, double click the "User Registration" icon in your Home (Kotoeri input will be available).

This document will be updated as more information becomes available.

Published Date: Oct 8, 2016

New User‘s Guides

This article has been archived and is no longer updated by Apple.

Our new user's guides will lead you through the basic steps to get you started fast. You’ll find links to the latest software downloads, installation instructions, helpful troubleshooting guides, and where to go to learn more.

iPod + iTunes

iPod iPod shuffle iPod Nano iTunes

Macs

Mac Portables Mac Pro and Mac Mini iMac

Published Date: Oct 8, 2016

Mac OS X 10.4: Getting help using input methods

This article has been archived and is no longer updated by Apple.

If you are looking for documentation on using one of the input methods included with Mac OS X 10.4, follow these steps:

1. Select the input method you wish to use, by following the steps listed here.
2. Click the Input Menu (a flag or input method icon) on the menu bar and select the Help for the input method you are using:
    - Kotoeri Help
    - Hangul Input Method Help
    - Simplified Chinese Input Method Help
    - Traditional Chinese Input Method Help

NOTE: The documentation is written in the language the input method is designed for and is not localized (translated) into the language currently in use by Mac OS X.

Published Date: Oct 8, 2016

About Security Update 2006-008

This article has been archived and is no longer updated by Apple.

This document describes Security Update 2006-008, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Security Update 2006-008

- **QuickTime for Java, Quartz Composer**

  CVE-ID: CVE-2006-5681

  Available for: Mac OS X v10.4.8, Mac OS X Server v10.4.8

  Impact: Visiting a malicious web site may lead to information disclosure

  Description: Java applets may use QuickTime for Java to obtain the images rendered on screen by embedded QuickTime objects and upload them to the originating web site. When this facility is used in conjunction with Quartz Composer, it becomes possible to capture images that may contain local information. This update addresses the issue by disallowing Quartz Composer compositions in unsigned Java applets. Quartz Composer compositions continue to function locally. Applications and signed Java applets that utilize QuickTime and QuickTime for Java are unaffected. This issue does not affect systems prior to Mac OS X v10.4. It also does not affect the Windows platform. Credit to Geoff Beier for reporting this issue.

Published Date: Oct 8, 2016

DVD Studio Pro: Format to DLT drive does not complete on Mac Pro

This article has been archived and is no longer updated by Apple.

Issue

DVD Studio Pro allows you to format a DVD project to a DLT drive. DLT drives are typically connected to your computer with a SCSI card.

If you attempt to format a DLT drive on a Mac Pro, the write may not be successful. If this occurs, the progress bar window will report "Writing lead in data" but will not progress any further and the write will need to be cancelled.

Solution

As a workaround, inquire with your replicator about alternative delivery methods such as external hard drive or recordable DVD.

This document will be updated as more information becomes available.

Published Date: Oct 8, 2016

Mac OS 8: QuickTime Movies Won‘t Play From ISO-9660 CDs

Since I upgraded to Mac OS 8.0 (or 8.1), my computer crashes when I try to play QuickTime movies from an ISO-9660 CD-ROM.
This article has been archived and is no longer updated by Apple.
Using Mac OS 8.0 or Mac OS 8.1 with QuickTime 2.5 installed, QuickTime movies may not play back correctly or may cause the computer to stop responding when played from an ISO-9660 CD. If the movies are dragged to the hard drive first, they work correctly.

If the movies are played from a standard Macintosh format CD, they work correctly. Using system software 7.6.1 or earlier, the problem doesn't occur.

This issue was fixed in QuickTime 3. The latest version of QuickTime can be downloaded from Apple's web site:
http://www.apple.com/quicktime/
Published Date: Feb 20, 2012

Mac OS X 10.4: Burn folders containing items on an NTFS volumes may not burn

This article has been archived and is no longer updated by Apple.

Burn folders can contain items where the original data resides on an NTFS-formatted volume. When you try to burn a CD and/or DVD with data from an NTFS volume, the burn process may not be completed and the CD or DVD may be left untouched.

NTFS is a read-only disk format for Mac OS X 10.4 Tiger. As a workaround you can copy the data from the NTFS volume to an HFS+ volume, then use the copied data as the source files for the burn folder. You will then be able to burn to a CD or DVD.

This document will be updated as more information becomes available.

Published Date: Oct 8, 2016

Aperture: Chroma Blur and Sharpening adjustments and Auto Noise Compensation option not available with some RAW images

This article has been archived and is no longer updated by Apple.

Issue or symptom

With some RAW images, the Chroma Blur and Sharpening adjustment controls are dimmed or the Auto Noise Compensation option is not available.

Solution

The RAW decoding available in Aperture 1.1 or later offers control of Chroma Blur and Sharpening and Auto Noise Compensation.

Some camera RAW formats do not support these particular adjustments. In these cases the Chroma Blur and Sharpening controls and the Auto Noise Compensation will be dimmed.

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Published Date: Oct 10, 2016

Xsan Tuner incorrectly reports volume is mounted read-only

This article has been archived and is no longer updated by Apple.

Issue or symptom

Attempting to run Xsan Tuner from different workstations as users with differing UIDs may result in Xsan Tuner reporting that the volume is mounted read-only on one of the workstations.

Solution

Use Get Info in the Finder to change the permissions of the Xsan Tuner folder (at the root level of the volume) to allow read-write access for either Group or Others. Xsan Tuner will then be able to simultaneously write to the Xsan Tuner folder as different users from different workstations.

Additional information

Xsan Tuner creates a folder at the root of an Xsan volume named Xsan Tuner. It writes data to this folder and then measures performance statistics about the writing of the data or of reading it. The default permissions on the Xsan Tuner folder allow only the first user account that used Xsan Tuner to write data to the folder, and other users receive the inaccurate read-only message.

Published Date: Feb 20, 2012

Power Macintosh G3: Apple Basic Color Monitor

I have an Apple Basic Color Monitor and a Macintosh G3, yet I cannot seem to get the monitor to sync to the G3 using the VGA adapter that came with the monitor while connected to built-in video.
This article has been archived and is no longer updated by Apple.
You will need an adapter placed between the VGA-Mac adapter and the computer that adds a horizontal and vertical sync signal.

The most common mistake when using an inline adapter with a VGA-based display such as the Basic Color Monitor on a G3 is to set the adapter to VGA/SVGA. If you already have an inline adapter that converts the pinouts from VGA to DB15 (which in the case of the Basic Color Monitor you would), then the second inline adapter would only need to be set to provide the two separate sync signals. The rest of the adapter should be set to an open state. Most VGA to DB15 adapters do not provide the additional horizontal and vertical sync signals and that is why the second adapter is needed.

In some instances you will also need to initially reset the PRAM on the Macintosh G3 after the adapters have been set correctly to establish the proper sync signal.
Published Date: Feb 20, 2012

Using JBoss application server in Safari with Mac OS X 10.4.5 or later

This article has been archived and is no longer updated by Apple.

Issue or symptom

The JBoss Management Console may not work in Safari with Mac OS X 10.4.5 or later and Java 1.5. This article explains how to revert to version 1.4.2 of the Java plug-in to resolve the issue.

Solution

- Make sure that Java is enabled in Safari: Open Safari Preferences and click Security. "Enable Java" should be selected.
- Quit Safari.
- In the Finder, navigate to (/Applications/Utilities/Java/J2SE 5.0). You can do this by selecting **Go to Folder** from the **Go** menu, then going to /Applications/Utilities/Java/J2SE 5.0.

  Note: If this folder is not present, then you don't have Java 1.5 installed.

- Double-click Java Preferences. In the General tab, select "Use version J2SE 1.4.2".
- Click Save, then quit Java Preferences.
- Open Safari and load the JBoss Management console at (https://localhost:40000).

Additional information

To configure and start the JBoss Management console, please see Administering Application Servers.

Published Date: Oct 10, 2016

Final Cut Pro: Insert Edit/Assemble Edit unavailable in Edit to Tape window

This article has been archived and is no longer updated by Apple.

The Edit to Tape features in Final Cut Pro require precise device control in order to accurately start and stop recording at the desired timecode locations on tape. If the Insert Edit or Assemble Edit buttons in the Edit to Tape window are not available (don't respond to clicking), you may need to modify the settings on your video recorder. Most professional video decks feature on-screen menus which allow a number of the device's settings to be displayed and changed.

For details about the capabilities of your video equipment, check the documentation that came with it. For more information about equipment requirements for using Edit to Tape features, refer to the Final Cut Pro User Manual.

Published Date: Feb 20, 2012

Final Cut Express: Capture Project feature is not available with HDV projects

This article has been archived and is no longer updated by Apple.

The Capture Project feature in Final Cut Express HD allows you to capture or recapture all the clips in a given project. In order to accurately capture the desired clips, this feature depends on reliable timecode on the source tape. Because many HDV camcorders and decks do not record timecode, this feature is unavailable if you are working in a project that uses the HDV-Apple Intermediate Codec setting.

Published Date: Feb 20, 2012

Logic: CoreAudio System Overload Messages

This article has been archived and is no longer updated by Apple.

When you work with Logic, you may occasionally see this error message:

> **System Overload. The audio engine was not able to process all required data in time.**

The following is a discussion of what this message means, and some strategies to help avoid it.

When you work with audio in Logic, several areas of your computer are put to work. When Logic records and plays back audio tracks CPU power and hard disk I/O capacity is needed. Audio DSP effects and software instruments require CPU power and RAM. No computer has infinite capacity in any of these areas, and there may be times when a Logic project will require more power than your computer is able to deliver at a given moment. When this happens, the System Overload message appears. This dialog is not generally an indication that anything is wrong with Logic or your computer, but is rather an indication that there not enough CPU power, RAM, or hard disk bandwidth to do what the song is asking at the time. You can get an idea of how much of your computer's capacity is in use by looking at the System Performance window. You can access it by choosing **Options > Audio > System Performance**.

The window has two meters. The *Audio* meter shows the amount of CPU and RAM capacity used. On multi CPU/core computers, it will be subdivided to show performance for each CPU/core. The *Disk I/O* meter shows the amount of disk bandwidth used. Watch the meters as the song plays to get an idea of what area may be running short of resources.

System Configuration

The first step in preventing System Overload error messages is to make sure your computer is optimally configured.

- Quit other applications when running Logic. In most cases, open applications that you are not actively using will have little impact on your computer. However, it is possible for other open applications to use enough computer resources to cause overload error messages in Logic.
- Make sure your computer has plenty of RAM. Many DSP effects are heavily RAM dependent. Extensive use of the EXS24 also may require a lot of RAM.
- Be sure that any drive you use to record audio is formatted *Mac OS Extended (Journaled)*. Avoid using UNIX formatting, and don't record to drives formatted FAT32. Use a disk maintenance utility to regularly check and repair your drives' directory structure and to make sure that your files are not fragmented.
- If your projects typically involve many audio tracks, consider a dedicated hard drive for audio. If your computer supports multiple internal drives, then an additional internal 7200 RPM drive would be a good choice. If your computer does not have space for an extra drive, then a FireWire drive may be a good option. Many portable computers have 5400 or even 4200 RPM internal drives, so using a faster FireWire drive may improve audio track performance considerably. Again, look for a 7200 RPM drive.
- If you work with a lot of EXS24 instances in a typical project, then a dedicated drive for sample storage may be worth considering, especially if you use the *Virtual Memory* option in the EXS24 (see below under **Workflow Strategies**).

Audio Drivers Preferences

There are several adjustments that can be made in the Audio Drivers window.

- The Input Buffer is like a bucket that must be filled with incoming audio data before it is passed through to the CPU, and the Output Buffer is like a bucket that must be filled with processed audio data before it is passed through to the outputs. The *I/O Buffer Size* setting controls the size of these buckets. The lower this setting, the less latency between the time you play something into Logic and the time you hear it. The trade-off is that lower buffer settings increase the load on the CPU. Increasing the I/O Buffer Size may prevent System Overload error messages. However, the increased latency may be an issue when recording. One possible strategy would be to work with a low I/O Buffer Size while tracking, and then to increase the size while mixing. The practicality of this approach depends on your workflow. For purely audio recording (not involving Audio Instruments), you may be disable the *Software Monitoring* check box and monitor your audio directly from the source. In this case, you can set the I/O Buffer Size to a large number even while recording audio.
- The *Process Buffer Range:* setting determines how large a buffer Logic sets aside for its mixing engine. As with the *I/O Buffer Size*, smaller settings decrease latency, but increase CPU load. The default setting of *Medium* is usually fine, but if you experience frequent System Overloads, then try setting it to *Large*.
- *ReWire behavior:* comes into play if you are sending MIDI to another application via ReWire. There are two settings *Playback Mode (Less CPU Load)* and *Live Mode (Higher CPU Load)*. Leave this set to *Playback Mode* unless you are playing live from Logic into another application through ReWire.

Sample Rate

The song's sample rate directly affects the CPU and hard disk load. For example, if you double the sample rate from 44.1 kHz to 88.2 kHz, you double the amount of data that must be streamed from the hard drive for each audio track to be played. The CPU also must work harder to process the audio. Don't necessarily assume that the highest sample rate your audio interface supports is the best one to use. Always balance the considerations of audio quality, anticipated delivery medium for the final product, and computer performance when selecting the sample rate for any project

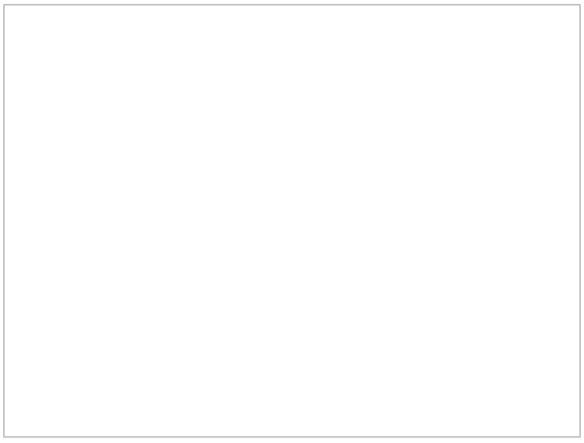
Workflow Strategies

As a project progresses, it may reach a "tipping point" where System Overload messages start to appear. Here are some ideas to avoid this:

- Avoid having an Audio Instrument track selected in the Arrange. When an Audio Instrument track is highlighted, Logic must devote enough CPU resources to insure that anything you *might* play live into the track can be processed. When you are mixing, try to keep an Audio or classic MIDI track highlighted as you work. Only select an Audio Instrument track at times when you are actually working with that particular track.
- Freezing tracks can be a very effective strategy. When a track is frozen, it is rendered as a simple audio file with all DSP, and all plug-ins on the track are disabled in the background. This can save large amounts of CPU power. Keep in mind that freezing Audio Instrument tracks actually adds to the load on the hard disk, so if Disk I/O is the source of overloads, freezing these tracks may be counterproductive.
- Limit the voices used by Audio Instruments. Many of Logic's Audio Instruments offer control over the maximum number of voices available per instance of the instrument. Reducing the number of voices can reduce the CPU load. For example, if you have a Sculpture track that never plays more than two simultaneous notes, then you could reduce the number of voices to two, saving some CPU power for other

tasks.

- The EXS24 offers an option to stream samples from disk rather than load them completely into RAM. To access the controls for it, click the Options button in the upper right area of the EXS24 window and choose **Virtual Memory**.



  - The *Disk Drive Speed:* setting calibrates the performance of Virtual memory to your hard drive. On a modern desktop Mac, either *Medium* or *Fast* should be appropriate. On a portable computer with a slow (4200 RPM) disk drive, *Slow* may be the best option.
  - *Hard Disk Recording Activity:* allows you to balance the performance of the EXS24 streaming with the demands that your audio tracks may place on Disk I/O. If you use very few audio tracks, set it to *Less*. If you typically work with a large number of audio tracks, *Average* or *Extensive* may be the better choice. Whether or not to enable Virtual Memory at all is another trade-off between RAM and hard drive performance. If most of your System Overloads seem to be accompanied by peaks in the Audio meter in System Performance, then enabling Virtual Memory may help, especially if you load lots of EXS24 samples in a typical project. If the Disk I/O meter is peaking, then turning off Virtual Memory may be the better choice. Settings in the Virtual Memory window are global—they affect all instances of the EXS24 in all songs.
- Use Bus channels to share CPU intensive effects among multiple tracks. Whenever possible, avoid putting reverbs and delays on individual channels. Put them on a Bus, and send to them from each track. If a track requires a different sounding reverb than the rest of the song, try a less CPU intensive reverb like the SilverVerb or GoldVerb. If you are processing multiple tracks with the same EQ and/or compressor, insert the plug-ins on a bus and set each track you wish to process to output to that bus.
- Under **Logic Pro > Preferences > Audio > General** there's a setting for *Sample Accurate Automation* with three possible settings. The default is *Volume, Pan, Sends*, but may also be set to *Off* or *Volume, Pan, Sends, Plug-in Parameters*. The more automation parameters set to be sample accurate, the more load may potentially be placed on the CPU.

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Published Date: Feb 20, 2012

Final Cut Studio: Video out from Motion or Final Cut Pro is sometimes sporadic

This article has been archived and is no longer updated by Apple.

Issue or symptom

Video out to an external monitor may be sporadic or the image displayed on the monitor may freeze.

Solution

Video playback to an external monitor from Final Cut Pro or Motion may be sporadic if Soundtrack Pro is using the same Video Out device. Soundtrack Pro is capable of sending to an external device in the background, but this may interfere with playback from other applications. Stop playback in Soundtrack Pro before starting playback from other applications.

Published Date: Feb 20, 2012

Final Cut Pro: Blank image may result if the end of a sequence is exported as a Photoshop image

This article has been archived and is no longer updated by Apple.

Issue

If you export a still image from the end of a Final Cut Pro sequence, it's possible for the result to be a blank white image, instead of the sequence's last frame.

Solution

Before you export the still, be sure that the playhead position is at the **beginning of the last frame**, instead of after the last frame.

In normal editing, this might be hard to see, but the following illustrations show the end of a sequence as seen at a high zoom-level in the Timeline. Note the difference in the location of the playhead in the illustrations.

The playhead in the correct position for exporting the last frame as a still image

The playhead in the wrong position for exporting the last frame as a still image

Follow these steps to reliably export the last frame as a still.

1. Click in the **Timeline**, so that it is the active window.
2. Press the **End** key on your keyboard, and the playhead will move to the end of the sequence. At this point, the playhead position is after the end of the last frame.
3. Press the **Left Arrow** key on your keyboard once to move the playhead back one frame.
4. Choose **File > Export > Using QuickTime Conversion**.
5. From the **Format** pop-up menu, choose **Still Image**.
6. Click **Save**.

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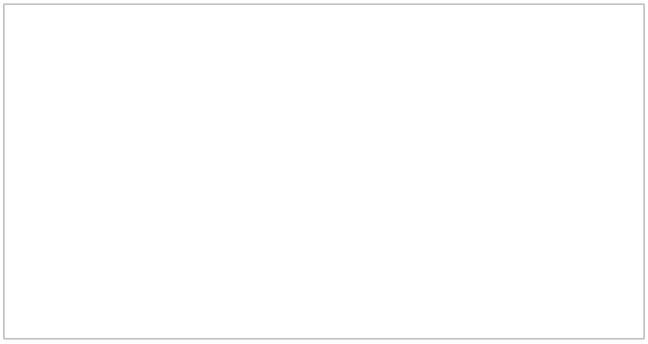

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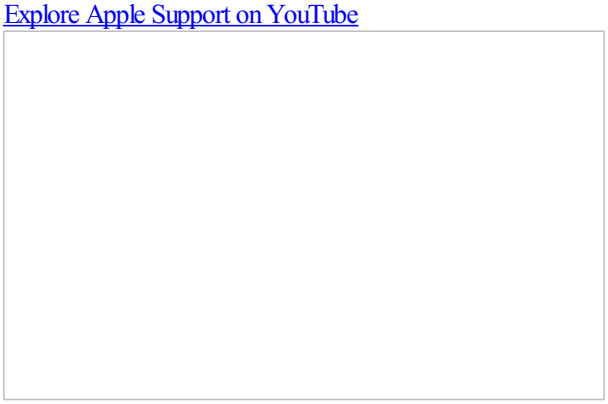

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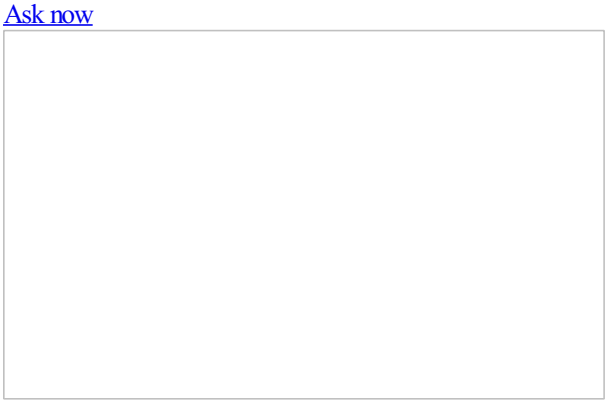

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- iPhone 6s Program for Unexpected Shutdown Issues
- Multi-Touch Repair Program for iPhone 6 Plus
- Apple AC Wall Plug Adapter Recall Program
- Beats Pill XL Speaker Recall Program
- All Programs

What does the USB port do on the Apple TV?

This article has been archived and is no longer updated by Apple.

The USB port on the back of the Apple TV is only used for service and diagnostics. A USB keyboard, mouse, hard drive, or any other device will not be recognized by Apple TV.

Published Date: Oct 10, 2016

DVD Studio Pro: Some HD DVD verification warnings do not indicate an issue

This article has been archived and is no longer updated by Apple.

Issue

When you submit an HD project for replication, the replicator may use a verifier to ensure the project is compliant with the HD DVD specification. It is important for the replicator to have the latest version of the verifier to ensure that false error messages are not found in your projects.

The following warnings from the Toshiba verifier may appear in reports but do not indicate an issue and can be ignored:

- ERROR(HLI,1100): The period of two different HLI shall not overlap.
- ERROR(BTNI,1004): Start Y-coordinate value is out of range.
- ERROR(BTNI,1007): End Y-coordinate value is out of range.
- ERROR(TT_SRP,1101): TT_PB_TY1 is '1b' although Jump/Call Instruction does not exist in the cell command or "FOAC_BTNN" in TT_DOM. VI5-111.
- ERROR(TT_SRP,1121): TT_PB_TY3 is '1b' in spite of Link/Jump/Call Instruction not existing in "BTN_CMD" in TT_DOM. VI5-111.
- ERROR(EVOBU_SRI,1200): V_FWD_Exist1 of FWDI is not proper. FWDI_1/V_FWD_Exist1(0h), [LBN: 265153(File 1:265153)] VI5-353.
- ERROR(EVOB,8007): The value of EVOBU_SE_E_PTM does not suit the video field.
- ERROR(EVOB,8002): The presentation period of EVOBU is not in agreement with the video field.
- ERROR(EVOB,8004): When EVOBU contains video, presentation start time must be equal to the top video field.
- ERROR(EVOB,8004): When EVOBU contains video, presentation start time must be equal to the top video field.
- ERROR(EVOB,9002): When the presentation period of EVOBU is longer than the presentation period of the video data contained in it, there must be sequence_end_code behind the last coding screen.
- WARNING(NSML_AGLI,1000): It is impossible to get C_PBI/C_CAT because there is no PGC that uses Cell in which this EVOBU is contained, for this reason, it cannot judge whether NSML_AGLI is proper or not.
- WARNING(SML_AGLI,1001): It is impossible to get C_PBI/C_CAT because there is no PGC that uses Cell in which this EVOBU is contained, for this reason, it cannot judge whether SML_AGLI is proper or not.
- WARNING(EVOBU_SRI,1000): Since there is no PGC which uses Cell in which this EVOBU is contained and the presentation time information on EVOBU cannot be acquired, it cannot judge whether EVOBU_SRI is proper.

Note: The text of the error message may vary but the error ID can be used to determine if the error is valid or not.

Solution

These particular verification error messages are not valid and do not indicate an issue with your master.

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Published Date: Oct 10, 2016

Mac OS X 10.4.8: System Preferences unexpectedly quits after configuring iTunes Artwork screen saver

This article has been archived and is no longer updated by Apple.

Issue or symptom

System Preferences may unexpectedly quit in Mac OS X 10.4.8 after setting the iTunes Artwork screen saver to use two rows in Desktop & Screen Saver preferences. You may not be able to open System Preferences after this happens.

Solution

To avoid the issue, use any iTunes Artwork screen saver Row setting besides 2 (the default is 5).

To resolve the issue if you are affected, go to your Home folder and remove a plist file (~/Library/Preferences/ByHost/com.apple.screensaver.iTunesArtwork.xxxxxxxxxx.plist) :

1. In the Finder, choose **Home** from the **Go** menu.
2. Open the Library folder.
3. Open the Preferences folder.
4. Open the ByHost folder.
5. Locate the file named "com.apple.screensaver.iTunesArtwork.xxxxxxxxxx.plist" and remove it (the "xxxxxxxxx" is a random set of numbers).
6. Open System Preferences.

Note: Removing this file may reset other System Preferences settings. Adjust your System Preference settings as desired.

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

XServe RAID: 750 GB drives take many hours to initialize

This article has been archived and is no longer updated by Apple.

A seven disk Xserve RAID array containing 750 GB drive modules may take up to seventy (70) hours to complete initialization. 750 GB drive modules require initialization times greater than previous drive modules due to their increased capacity. This is expected behavior. Rigorous integrity checking is also performed during this time.

Published Date: Oct 10, 2016

TA24546_Apple_GSX_Login.pdf

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AirPort Extreme (802.11n): May incorrectly appear to be powered by a connected USB device

This article has been archived and is no longer updated by Apple.

Issue or symptom

The status LED on an AirPort Extreme may be lit if certain self-powered USB devices (for example, printers, hubs, or a storage device) are connected and powered but the external power supply of the AirPort Extreme is off (unplugged from the AirPort or the wall outlet). The AirPort Extreme is not operating correctly in this state.

Solution

1. Disconnect all USB devices from the base station.
2. Turn on the AirPort Extreme base station and wait for it to start completely.
3. Reconnect the USB storage device.

Note: You should also avoid using any USB storage device that draws power from multiple USB ports (with a Y-adapter, for example). Use an external power source for the device and a regular (not Y-cable) to connect to the AirPort.

Published Date: Feb 20, 2012

Installing Apple Remote Desktop Admin 3.0 if a later client version is already installed

This article has been archived and is no longer updated by Apple.

Issue or symptom

The Remote Desktop 3.0 package installer will not install on a computer that has a later (newer, that is) client version installed.

Solution

1. Uninstall the later client software. See this article for detailed steps.
2. Install the admin and/or the client software using the Apple Remote Desktop 3.0 Installer.
3. After installing ARD 3.0, use Software Update to update to the latest version.

Published Date: Oct 10, 2016

About the WebObjects DST Update (WebObjects 5.3.3)

This article has been archived and is no longer updated by Apple.

This document contains an overview and download information for the WebObjects DST Update. In March 2007, several countries will change the way they observe Daylight Saving Time (DST), including the United States and Canada. Many of the new 2007 time zone and Daylight Saving Time rules for the United States and Canada were anticipated but several other regions only recently adopted time zone and DST changes.

To address these changes, WebObjects DST is a combined update that addresses issues with the WebObjects supplied date classes using the latest DST and time zone information available as of January 8, 2007 (2007-01-08). You should install these updates even if their computer is not being used in an affected time zone.

WebObjects DST Update upgrades WebObjects components to version 5.3.3.

WebObjects DST Update is formally qualified for the Java 1.4.2 platform. The Java for Mac OS X 10.4, Release 5 updates the JDK 1.4 version on the Tiger. There are no known issues with the WebObjects DST Update on J2SE 5.0 platform on Mac OS X.

Note: AppleCare Enterprise Support customers using earlier versions of WebObjects should contact their support team for information on patch availability.

Important: If you are deploying WebObjects as .war bundles or Single Servlet Directory Deployments, you will need to rebuild with WebObjects DST Update installed and redeploy the application.

Installing WebObjects DST Update on a Developer Tools system for Mac OS X 10.4 or later

The WebObjects DST Update is available through Software Update in Mac OS X. If you have not yet updated to the correct version of Mac OS X or Developer Tools, you must do so before installing the WebObjects DST Update. Xcode 2.4.1 Developer tools are available through ADC downloads.

System requirements

- Xcode 2.4.1 (for developer systems)
- Java for Mac OS X 10.4 Release 5
- WebObjects 5.3
- Mac OS X 10.4.8 or later

If you are updating from a WebObjects 5.3.0 or WebObjects 5.3.1 development system

Install the software in the following order:

1. Run the Xcode 2.4.1 installer.
2. Select the Custom Install option.
3. Select the WebObjects install packages.
4. Use Software Update and upgrade to the latest Java 1.4 (Java for Mac OS X 10.4 Release 5 or later).
5. Run Software Update and install the WebObjects DST Update.

If you are updating from a WebObjects 5.3.2 development system

Install the software in the following order:

1. Run Software Update and upgrade to the latest Java 1.4 (Java for Mac OS X 10.4 Release 5 or later).
2. Run Software Update and install the WebObjects DST Update.

If you are creating a new Mac OS X WebObjects DST updated development system

Install the software in the following order:

1. Install Mac OS X 10.4.
2. Run Software Update and upgrade to the latest version of 10.4.
3. Run Software Update and upgrade to the latest Java 1.4 (Java for Mac OS X 10.4 Release 5).
4. Run the Xcode 2.4.1 installer.
5. Select the Custom Install option.
6. Enable the WebObjects install packages.
7. Run Software update and install the WebObjects DST Update.

Installing the WebObjects DST Update for Mac OS X 10.4 Server

TA24549_About_the_WebObjects_DST_Update_WebObjects_.pdf

This update is available through the Software Update feature of Mac OS X. If you use this method, only the proper update for the software which you have installed on your system is visible and available for download.

System requirements

- Mac OS X Server 10.4.8 or later
- Java for Mac OS X 10.4 Release 5
- Installation of WebObjects 5.3 Server Manual Software Update
- Installation of WebObjects 5.3.1 Server Software Update

If you have not yet updated to the correct version of Mac OS X Server, you must do so before installing the WebObjects DST Update.

If you are updating a WebObjects 5.2.4 system or creating a new install on Mac OS X 10.4 Server

1. Install the WebObjects 5.3 Server Manual Software Update.
2. Install the WebObjects 5.3.1 Update through Software Update.
3. Install the WebObjects DST Update through Software Update.
4. Upgrade the current version of Java to Java for Mac OS X 10.4 Release 5.

Note: The WebObjects Server 5.3 Update is available only from Apple Downloads.

If you are updating Mac OS X WebObjects 5.3.0 deployment system

Install the software in the following order:

1. Install the WebObjects 5.3.1 Update through Software Update.
2. Install the WebObjects DST Update through Software Update.
3. Upgrade the current version of Java to Java for Mac OS X 10.4 Release 5.

If you are updating Mac OS X WebObjects 5.3.1 or 5.3.2 on Mac OS X 10.4 Server

Install the software in the following order:

1. Install the WebObjects DST Update through Software Update.
2. Upgrade the current version of Java to Java for Mac OS X 10.4 Release 5.

Published Date: Feb 20, 2012

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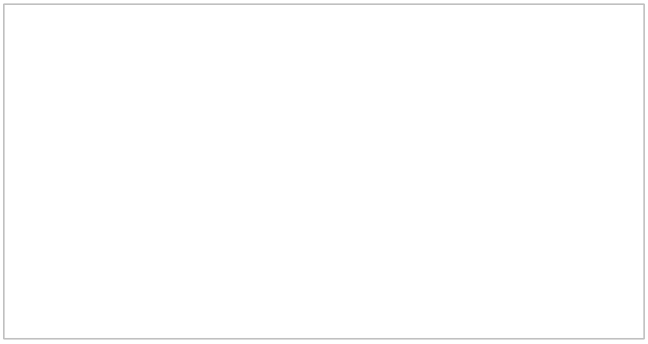

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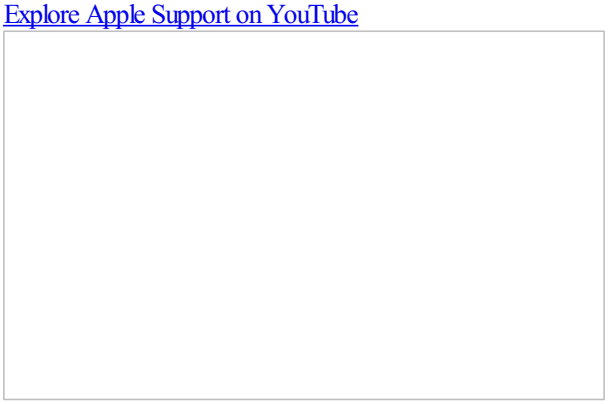

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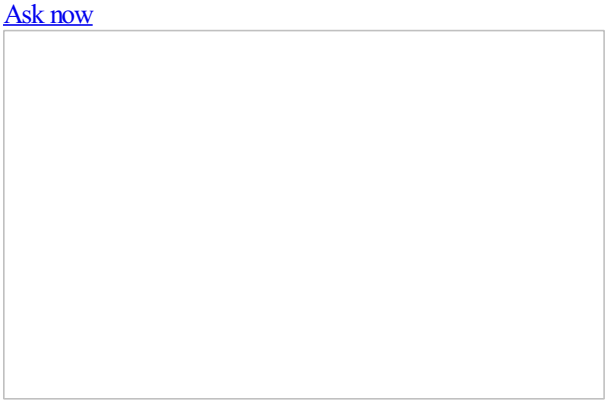

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- iPhone 6s Program for Unexpected Shutdown Issues
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- Beats Pill XL Speaker Recall Program
- All Programs

AirPort Extreme (802.11n): USB storage devices that use removable media are not supported

This article has been archived and is no longer updated by Apple.

AirPort Extreme (802.11n) base stations, which work with USB storage devices, do not support USB devices that use removable media such as a floppy disk drive or an optical drive.

Published Date: Oct 10, 2016

AirPort Extreme (802.11n): Using an attached USB storage device as a home directory is not recommended

This article has been archived and is no longer updated by Apple.

You should not use a USB storage device connected to an AirPort Extreme (802.11n) base station as a home directory. An AirPort Extreme (802.11n) base station may not be able to locate a home directory on an attached USB device if it is powered off or if the enumeration order of attached storage devices changes.

Published Date: Feb 20, 2012

Mac OS X 10.4 (Japanese): Spotlight search field unexpectedly opens with Command-Space key combination

This article has been archived and is no longer updated by Apple.

Issue or symptom

In the Japanese language version of Mac OS X 10.4, the Command-Space key combination should switch the Kotoeri input source. However, after some installations of Mac OS X 10.4, the Command-Space key combination may open Spotlight instead of switching the input source.

Solution

Follow these steps to restore the Mac OS X 10.4 Tiger (Japanese language version) default keyboard shortcuts (which are: Command-Space to select the previous input source, and Control-Space to open Spotlight's search field).

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **Keyboard & Mouse**.
3. Click Keyboard Shortcuts.
4. Click the Restore Defaults button.
5. Close System Preferences.

Additional information

This may occur when if you upgrade from Mac OS X 10.2.8 to Mac OS X 10.4 via an Archive and Install installation. Or, this may occur when you transfer data from Mac OS X 10.2.8 or earlier using Mac OS X 10.4's Migration Assistant.

Published Date: Oct 10, 2016

Power Macintosh G3 All-in-one: Connecting An External Monitor

The Power Macintosh G3 All-In-One comes with a Built-In monitor capable of handling resolutions up to 1024 x 768. An external monitor can also be connected to the built-in monitor port located in the back of the computer. This port supports resolutions up to 1920 x 1080.
This article has been archived and is no longer updated by Apple.
The Built-in monitor and the second monitor connected to the Built-in monitor port must share the same mode. (Mode is a combination of resolution and screen refresh rates.)

Depending on the type of monitor you connect, you may need to change the built-in monitor's setting to one that both monitors can display. To change the monitor mode, use the Monitors and Sound control panel or the Control Strip.

Also, the external monitor you connect may support modes that the built-in monitor does not. If you select one of these modes for the second monitor, the built-in monitor powers down and appears to be turned off. Video will only be displayed on the external monitor. If this occurs, you can restore the image to the built-in monitor by selecting a mode that both monitors support.

When the built-in monitor starts up again, its screen image wavers for a moment. This is part of the normal process that protects the monitor from damage.

Note: Since the Built-In video port is only capable of mirroring the Built-In monitor, it cannot be used to expand desktop display space. A PCI video card must be installed, and an external monitor connected to it to expand desktop space. Also, due to the external monitor's video mode limitations, the external monitor may not be able to support the 1920 x 1080 mode.

In addition, the external built-in video port is not a separate graphics port like on the Power Macintosh G3 Minitower and Desktop models. The Power Macintosh G3 AIO only has one graphics controller, it drives both the internal and external displays and is meant for video mirroring, therefore, there are some limitations on the video modes supported for external monitors.
Published Date: Feb 20, 2012

AppleCare Direct Mail-In Repair Service

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Important Customer Information

SERVICE AND ESTIMATE

Apple offers service on your product under the following conditions. If the service is not under warranty or an Apple extended service contract, Apple will service the product for the estimate provided to you when you arranged service. The estimated cost is contained on the shipping label attached to this packaging. The estimate is valid for thirty (30) days from the date on the label. If Apple does not receive your product within thirty (30) days you will need to contact Apple again to arrange service. If after inspecting your product Apple determines that the estimate must be revised, Apple will contact you for approval of the revised estimate. If you have any questions about the estimate please contact Apple at the telephone number below.

Note: You are entitled to a written estimate of the cost of repairs. The estimate must include all costs for parts and labor. Apple will not charge for work done or parts supplied in excess of the estimate unless you, the customer, approve the additional charge. This estimate of repair charges is valid for 30 days from the date of estimate. You must notify Apple if you claim a tax exemption and provide Apple with a tax exemption number at the time you receive this estimate. The cost of shipping is included in the estimate.

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If the repair is covered under warranty or an Apple extended service contract, the terms of the warranty or the Apple extended service contract shall apply. Otherwise, the Repair Terms and Conditions shall apply to the repair service.

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Although a product may be covered under warranty or an extended service contract, Apple will not be obligated to repair or replace a product if the product or the product failure is subject to a coverage exception described in the warranty or the extended service contract. Coverage exceptions include: damage caused by accident, abuse, misuse, or misapplication; substantial modification of the product without the written permission of Apple; or the removal or defacing of the product's serial number. If the repair is not eligible under warranty or an extended service agreement due to a coverage exception, Apple will contact you to determine if you want Apple to repair the product for the price that Apple estimates.

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Apple provides a 90-day warranty on repair service. This means that if within 90 days of service, a defect arises in the service parts used, Apple will service your product again at no charge. You may have longer warranty coverage if your product is still covered under its original warranty or an extended service contract. Please review the terms of your warranty, extended service contract, or the Repair Terms and Conditions for details.

DIAGNOSTIC FEE

If the product repair is not covered under warranty or an extended service contract Apple reserves the right to charge up to $100 USD for diagnostic services performed on your product, if (i) service is not required, (ii) service requires the repair of a third-party part or product, (iii) service is declined by you after Apple has revised its estimate due to service being excluded from warranty or Apple extended service contract coverage, or (iv) service is declined by you after Apple has revised its estimate due to service requiring additional parts or labor.

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During the course of a repair, it is possible that software or data on your hard disk may be erased. Apple cannot overemphasize the importance of backing up your hard disk before sending your product to Apple for service.

IMPORTANT: Apple disclaims responsibility for all loss, corruption, or damage to software applications, data, or any information stored in any product given to Apple for service.

When sending in an Apple portable product for repair, make sure to check that the computer has at least 3 GB of free space on the hard disk. The repair center requires at least 3 GB of free disk space to install and run diagnostic software for these computer models.

iTunes Music De-authorization

Because some repairs may affect or delete a computer's authorization to play music or videos purchased from the iTunes Music Store, you must always de-authorize your product before shipping it to Apple for service. Information on authorization and de-authorization is available from the iTunes Help menu. If you need to recover any authorization lost during service, contact iTunes Music Store Customer Service via the iTunes Help menu.

Security Software De-authorization

You must disable all security software installed on your product when given to Apple for service. Products received with systems that are password-protected will either be returned un-repaired, or the repair will be delayed. If you did not provide the necessary passwords when the repair was set up, or if you need assistance disabling the security software, contact Apple at the number below.

Third-Party Products

Apple will not repair third-party (non-Apple branded) products (such as modems, RAM cards, hard disks) installed in your product. If Apple receives a product that has an issue with a third-party product, the product will be returned with an explanation that the defective component is not an Apple product.

SHIPPING PRODUCTS TO APPLE

You may check the status of your repair request online at www.apple.com/support/selfservice/status. If your request is open, you may send your product to Apple for repair using the original dispatch number. If Apple has canceled, call Apple to create a new repair request. Using a canceled dispatch number will cause service delays.

IMPORTANT: Requests for service are good for 30 days. If Apple has not received your product within 30 days of your original request for service, Apple may cancel its offer to repair.

Lost or Damaged Items

If your product is lost or damaged in transit to the AppleCare Repair Center, contact Apple immediately. Apple will investigate and file a claim on your behalf with the appropriate carrier. Apple is not responsible for any liability for damage or loss to your product while in transit.

REPAIR STATUS AVAILABLE ONLINE

Repair status for your product is available online by going to www.apple.com/support/selfservice/status. If you have questions about a specific product repair, you may also contact Apple at 800-APL-CARE (800-275-2273) seven days a week from 6 a.m. to 6 p.m. (Pacific time).

TECHNICAL ASSISTANCE

Many questions concerning your product can be answered at www.apple.com/support. If you require technical assistance you may also contact Apple at 800-APL-CARE (800-275-2273) seven days a week from 6 a.m. to 6 p.m. (Pacific time).

APPLECARE MAIL-IN REPAIR SERVICE LOCATIONS:

Portables:
Houston, TX 77042 BEAR License Number: E77041

Portables:
Memphis, TN 38134 BEAR License Number: E80932

Displays:
Louisville, KY 40299 BEAR License Number: E80791

TA24555_AppleCare_Direct_MailIn_Repair_Service.pdf

Apple Inc.
1 Infinite Loop
Cupertino, CA 95014
BEAR License Number: E78234

Published Date: Feb 20, 2012

Customer Shipping Preparation for Portables

This article has been archived and is no longer updated by Apple.

AppleCare Direct Mail-In Repair Service

Before you mail anything to Apple, please be aware of Apple's repair terms and conditions.

Step 1 - Back up your data
Step 2 - De-authorize iTunes
Step 3 - De-authorize security software
Step 4 - Disclose coverage exceptions
Step 5 - Package the product
Step 6 - Ship out the product

Step 1 – Back Up Your Data

Apple cannot over-emphasize the importance of backing up hard disk data before sending a product to Apple for repair. During the course of the repair, it is possible that software or data on the hard disk may be erased.

- Read the disclaimer in AppleCare's Direct Mail-in Repair Service Information concerning the integrity of hard disk data.
- When sending in an Apple portable product for repair, make sure to check that the computer has at least 3 GB of free space on the hard disk. The repair center requires at least 3 GB of free disk space to install and run diagnostic software for these products. Follow the steps below to check for available hard disk space:
  1. Click once on the hard disk icon on your desktop to highlight it.
  2. From the File menu, choose Get Info.
  3. The resulting window indicates how much hard disk space is available.

Step 2 - iTunes Music De-authorization

Some repairs may affect or delete a computer's authorization to play music or videos purchased from the iTunes Store. Customers should always back up computer data, including iTunes music and videos, and de-authorize the computer prior to a repair. To recover any authorization lost during a repair, customers can contact iTunes Store Customer Service via the iTunes Help menu.

Step 3 - Security Software De-authorization

Please disable security software installed on your Apple product. Products received with systems that are password-protected will either be returned un-repaired, or the repair will be delayed.

- If you did not provide the necessary passwords when the repair request was set up, or if you need assistance disabling the security software, contact Apple Dispatch at 800-APL-CARE (800-275-2273) before sending in the product.

Step 4 - Coverage Exceptions Disclosure

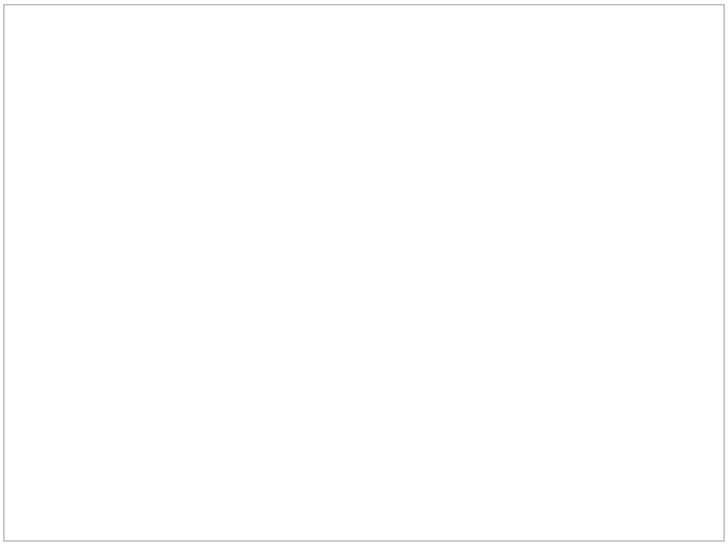
To prevent any delays in the repair process, be sure to disclose any coverage exceptions such as damage caused by accident, abuse, misuse, or misapplication; substantial modification of the product without the written permission of Apple; or the removal or defacing of the product’s serial number.

Step 5 - Packaging

- Follow the illustrated packaging instructions enclosed with the Apple product box.
- Pack only the Apple computer in the box provided.
- Do not include the AC adapter, power cord, extra batteries, pc cards, manuals or any software discs unless specifically instructed by an

Apple representative.

- Make sure any CD or DVD discs have been removed from the optical drive.
- Any installed RAM, airport card, hard drive and battery should remain installed.



Step 6 - Shipping instructions

1. **EZ Return Label**
   Remove the top shipping label from your shipping box, beginning at the area highlighted in yellow that states "EZ RETURN LABEL -LIFT HERE." Make sure that the bottom label remains attached to the shipping box. It is your return shipping label.
2. **Verify Information**
   On the bottom label that remains with the shipping box, please verify that the product serial number and dispatch numbers are correct and clearly visible.
3. **Your Copy**
   Retain the customer copy of the airbill for your records. Use the airbill number/tracking number from the return shipping label to track your shipment. Your invoice estimate is on the back of the removed top shipping label (see step 1). Customers who are responsible for any type of repair fee will receive an actual invoice separately in the mail five to seven business days after the completed repair.
4. **Ship via FedEx**
   Bring the boxed and sealed product to a FedEx location, or contact FedEx at 800-GO-FEDEX (800-463-3339) to arrange a pickup. Be sure to give the package to a FedEX representative. Do not leave the package in a FedEx drop box.

Terms and Conditions

If you have any other concerns or questions, you can further review Apple's complete Repair terms and conditions here.

Published Date: Feb 20, 2012

AirPort Extreme (802.11n): TSN/WPA Windows clients may have connectivity issues

This article has been archived and is no longer updated by Apple.

Some Windows clients may not be able to properly implement the Transitional Security Networks (TSN) version of WPA. TSN provides access for both WPA capable clients as well as WEP only clients. If a Windows client has issues connecting to an AirPort Extreme (802.11n), try using TSN/WEP instead.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

About Xsan 1.4.2

This article has been archived and is no longer updated by Apple.

There are two updates for Xsan 1.4.2: "Xsan 1.4.2 Update" and "Xsan Admin 1.4.2 Update". These are available from both Apple Support Downloads and Software Update.

Important: Read before continuing

Before installation

- Xsan 1.1 or later is required in order to install Xsan 1.4.2.
- If you are setting up a new Xsan deployment, please see this article for the proper installation order.
- Be sure that all Metadata Controllers (MDCs) are updated before you make any configuration changes.
- Before installing, please review the Xsan Migration Guide.
- During installation, do not change any Xsan settings using Xsan Admin or a command-line tool.
- If upgrading system software to Mac OS X 10.5 Leopard, upgrade all Xsan 1.4.x systems to 1.4.2 before upgrading to Leopard.

After Installation

To prevent an inconsistent volume state, you should unmount, stop, and run the `cvfsck` command on each Xsan volume after the MDCs have been updated with Xsan 1.4.2 Update.

Metadata Controller (MDC) software version

Your MDCs must always have software versions (both Xsan and Mac OS) that are the same or more recent than the most recent client versions. Specifically, if any client in your Xsan network is using Xsan 1.4.2 with Mac OS X 10.4.10 or later, then your metadata controllers (MDCs) must also be updated to Xsan 1.4.2 on the same version of Mac OS X.

Software Update installation

Software Update may have referred you to this document. Because some updates are prerequisites for others, you may need to use Software Update more than once to get all available updates.

Standalone installer

A standalone installer is available from Apple Support Downloads.

Remote installation

If you need to install the update on a remote computer, use the `softwareupdate` command-line tool.

Hardware requirements

- Xserve or Xserve G5
- Mac Pro
- Power Mac G5 (any)
- Storage Network Requirements
- Apple Fibre Channel PCI, PCI-X, or PCI-E Card

Compatibility matrix

See Xsan: Compatibility of SAN clients with Xsan and StorNext controllers.

What's new in Xsan 1.4.2

The Xsan 1.4.2 update addresses numerous issues related to overall reliability, usability and compatibility. It includes specific fixes for:

- Mounting Fibre Channel LUNs on Mac OS X Leopard
- Metadata controller failovers during power outages and network disconnects
- Memory-related issues that could result in slow system performance or non-responsiveness
- Reducing fragmentation of large files and frame drops during ingest
- Preventing file system metadata corruption
- Hosting Xsan volumes on Intel-based metadata controllers
- Defragmenting files after a volume bandwidth expansion

- Compatibility with Apple and third-party applications

Uninstalling

The Xsan 1.4.2 Uninstaller removes Xsan, the Xsan Admin application, and Xsan documentation files. The Xsan 1.4.2 Uninstaller is appropriate version to use when uninstalling Xsan 1.4.x installations and can be obtained from Apple Support Downloads.

Note: Before removing Xsan, you should back up all of your data and volumes.

Xsan 1.4 documentation

Xsan 1.4.x administrators can find Xsan 1.4 documentation here.

Published Date: Oct 10, 2016

AirPort Extreme (802.11n): USB volume does not appear in Airport Disk Utility, or appears with an unexpected name

This article has been archived and is no longer updated by Apple.

Issue or symptom

A USB storage device connected to an AirPort Extreme (802.11n) base station may not appear in AirPort Disk Utility, or may not appear with the expected name. This can happen if the device's volume is named with high ASCII characters or 2-byte characters.

Solution

Disconnect the volume, connect it to a computer, and rename the storage volume so it has no high ASCII or 2-byte characters. Then, reconnect it to the base station.

Additional information

Two-byte characters are commonly used in Japanese, Chinese, and Korean fonts. High ASCII characters are "extended ASCII" characters that you typically type using the Option key. They are listed in table II of this webpage: (http://www.cdrummond.qc.ca/cegep/informat/Professeurs/Alain/files/ascii.htm).

Important: Mention of third-party websites and products is for informational purposes only and constitutes neither an endorsement nor a recommendation. Apple assumes no responsibility with regard to the selection, performance or use of information or products found at third-party websites. Apple provides this only as a convenience to our users. Apple has not tested the information found on these sites and makes no representations regarding its accuracy or reliability. There are risks inherent in the use of any information or products found on the Internet, and Apple assumes no responsibility in this regard. Please understand that a third-party site is independent from Apple and that Apple has no control over the content on that website. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

Aperture: How to burn images to optical media

This article has been archived and is no longer updated by Apple.

Although Aperture does not offer a direct way to burn images to optical media (CD, DVD, etc.), you can combine the various export features Aperture offers with the disc burning capabilities of OS X to accommodate many workflows. Here are some tips:

CD & DVD Preferences

When you insert a blank optical disc, there are several actions that your system may take, depending on your System Preferences settings. These procedures assume that you have the system set to open a Finder window when a disc is inserted. To set your system:

1. From the **Apple** menu, choose **System Preferences**.
2. Click the CDs & DVDs icon in the System Preferences window (or choose **View > CDs & DVDs**).
3. Choose **Open Finder** from the **When you insert a blank CD** pop-menu.
4. Choose **Open Finder** from the **When you insert a blank DVD** pop-up menu.
5. Close the System Preferences window

Exporting Versions to share with clients

You may sometimes wish to send a client a disc with sample images from a shoot. In most cases you will wish to send adjusted versions of the sample images.

1. Insert a blank disc into the computer's optical drive.
2. The disc will appear on your Desktop as "Untitled CD" or "Untitled DVD." Rename it as you like.
3. Select an image or group of images in Aperture's browser and choose **File > Export > Export Version**.
4. In the Export dialog, select the export preset you wish to use and navigate to the burn folder on your Desktop. In the image below, the burn folder has been named "Aperture Export 1/24/2007".

5. Click the Export Versions button. The image versions will be rendered to the burn folder. If you have specified a Subfolder Format as part of the export preset, subfolders will be created.
6. If necessary, select additional images and export them to the burn folder.
7. When you have exported all the images needed, double-click the disc icon on the Desktop to open the burn folder. Click the Burn button in the upper right corner of the window.

Backing up masters

If you wish to burn your original master images to an optical disc, follow these steps:

1. Insert a blank disc into the computer's optical drive.
2. The disc will appear on your Desktop as "Untitled CD" or "Untitled DVD." Rename it as you like.
3. Select an image or group of images in the Aperture browser.
4. Choose **File > Export > Export Masters**.
5. In the Export dialog, select the Subfolder Format and Name Format you wish to use. If you wish to export metadata along with the master images, select Create IPTC4XMP sidecar file.
6. Navigate to the burn folder. In the image below, it is named "Aperture Master Backup."

7. Click the Export Masters button. The masters will be copied to the burn folder, along with XMP side car files, if you so specified.
8. If necessary, select additional images and export them to the burn folder.
9. When you have exported all the masters needed, double-click the disc icon on the Desktop to open the burn folder. Click the Burn button in the upper right corner of the window.

Backing Up Projects

You can selectively backup particular projects to a disc.

1. Insert a blank disc into the computer's optical drive.
2. The disc will appear on your Desktop as "Untitled CD" or "Untitled DVD." Rename it as you like.
3. In the Projects Panel highlight the project you wish to back up.
4. Right-click (or Ctrl-click) the project icon in the Project Panel. Choose **Export > Export Project** from the shortcut menu.
5. The export project dialog will open.

6. Navigate to the burn folder. In the image above, it's named "Aperture Project Backup."
7. Click the Save button. If the project consists of managed images, all the project data including masters will be copied. If the project contains referenced images, whether or not the referenced masters are copied depends on whether the Consolidate images into exported project option is selected in the Export dialog. It is very important to select this option if you want the referenced masters to be included in the backup.
8. If necessary, select additional projects and export them to the burn folder.
9. When you have exported all the projects needed, double-click the disc icon on the Desktop to open the burn folder. Click the Burn button in the upper right corner of the window.

Archiving projects containing managed images

You can reference the master images for projects to optical discs, while keeping JPEG previews available for viewing within Aperture. This procedure presupposes that you have created JPEG previews for the projects you archive as described below. For more information on JPEG previews, click here.

1. Insert a blank disc into the computer's optical drive.
2. The disc will appear on your Desktop as "Untitled CD" or "Untitled DVD." Rename it as you like.
3. Highlight a project you'd like to archive in the Project Panel
4. Select an image in the browser, then press Command + A to select all the images in the project.
5. Right-click (or Ctrl-click) the project in the Project Pane and choose **Relocate Masters for Project** from the shortcut menu.
6. The Relocate masters dialog will open.
7. Choose the Subfolder Format and Name Format you'd like to use, and navigate to a locally accessible folder on a local hard drive.
8. Click the Relocate Masters button. The master images will be moved from the Aperture library to the folder specified in the previous step.
9. If necessary, select additional projects and relocate them as well. You may wish to create a folder for each project.
10. Drag the folder(s) containing the relocated masters to the burn folder.
11. Double-click the disc icon on the Desktop to open the burn folder. Click the Burn button in the upper right corner of the window.
12. When the burn and verification has completed, check to be sure your master images are safely archived. You can check by opening them with Preview.
13. If you like, you can delete folder(s) containing the master images from your hard drive. The JPEG previews will still be available. If you need the masters again in the future, copy them from the optical disk, and reconnect them, or reconnect to the images directly on the disc. For more details on reconnecting images, see page 137 of the Aperture User Manual.
    .

Archiving projects containing referenced images

1. Insert a blank disc into the computer's optical drive.
2. The disc will appear on your Desktop as "Untitled CD" or "Untitled DVD." Rename it as you like.
3. Drag the folder that contains the masters to the burn folder for the disc. If the masters for the project are scattered in different locations, you may wish to first select them all in the Aperture browser and choose **File > Relocate Masters for Project**.
4. If necessary, repeat for any additional referenced projects you'd like to archive.
5. Double-click the disc icon on the Desktop to open the burn folder. Click the Burn button in the upper right corner of the window.
6. When the burn and verification has completed, check to be sure your master images are safely archived. You can check by opening them with Preview.
7. If you like, you can delete folder(s) containing the master images from your hard drive. The JPEG previews will still be available. If you need the masters again in the future, copy them from the optical disk, and reconnect them, or reconnect to the images directly on the disc. For more details on reconnecting images, see page 137 of the Aperture User Manual.

For more general information about burning discs in OS X, click here.

Published Date: Feb 20, 2012

Some USB Bluetooth adaptors may not allow wireless keyboard or mouse to wake some Macs from sleep

This article has been archived and is no longer updated by Apple.

Issue or symptom

Some third-party USB Bluetooth adaptors, such as the D-Link DBT-120 (C1 rev or later) may not allow wireless keyboards or mice to wake some Macs from sleep.

Solution

Note: Your Mac may have Bluetooth built-in, making the use of a USB adaptor unnecessary.

To wake the computer

To wake the computer, press the computer's power button once. This will wake the computer from sleep. If you see an alert asking if you'd like to Restart, Sleep, Shutdown or Cancel. click Cancel.

Workaround for the issue

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **Bluetooth**.
3. Make sure Allow Bluetooth devices to wake this computer is selected (checked).

If this setting is dimmed ("grayed out") and you have a D-Link DBT-120 adaptor, follow these steps:

1. Disconnect the USB Bluetooth adaptor.
2. See if the adaptor's "HW" version is C1 or later.

Apple has identified issues waking from sleep with certain models of the D-Link DBT-120 adaptor with hardware versions of C1 or later. Models with versions of B2 through B4 are not affected by this issue.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Related documents

86524 What to do if "Allow Bluetooth devices to wake this computer" option is not available

Published Date: Oct 10, 2016

Mac OS X 10.4 (Japanese): Name a software RAID with ASCII characters initially

This article has been archived and is no longer updated by Apple.

When setting up a software RAID with Disk Utility in the Japanese language version of Mac OS X 10.4, you should initially give the software RAID a name that uses ASCII characters only (not 2-byte characters). For example, characters used in the English language, but not Japanese.

After installation is complete, you can rename the software RAID with a Japanese character-based name (2-byte characters) if you wish.

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

About the Daylight Saving Time Update for Mac OS X 10.3.9

This article has been archived and is no longer updated by Apple.

The Daylight Saving Time Update for Mac OS X 10.3.9 updates your Daylight Saving Time and time zone rules to the latest available information as of January 7, 2007 (2007-01-07). This includes the new start and end dates for Daylight Saving Time in the US and Canada, as well as recent time zone updates in Australia, Brazil, and other countries.

This update requires Mac OS X 10.3.9 or Mac OS X Server 10.3.9. It is available via automatic Software Update, or as a standalone update. You only need to use one of these methods to update your computer.

For more information about the 2007 Daylight Saving Time changes and other Apple Daylight Saving Time updates, see this article.

Published Date: Feb 20, 2012

About the Daylight Saving Time Update for Mac OS X 10.4.8

This article has been archived and is no longer updated by Apple.

The Daylight Saving Time Update for Mac OS X 10.4.8 updates your Daylight Saving Time and time zone rules to the latest available information as of January 7, 2007. This includes the new start and end dates for Daylight Saving Time in the province of Alberta, Canada, as well as recent time zone updates in Australia, Brazil, and other countries. The new 2007 Daylight Saving Time rules for the US and the rest of Canada are already installed as of Mac OS X 10.4.5 or later (see this article for more information).

This update requires Mac OS X 10.4.8 or Mac OS X Server 10.4.8. It can be installed on both Intel- and PowerPC-based Macs. It is available via automatic Software Update, or as a standalone download. You only need to use one of these methods to update your computer.

For more information about the 2007 Daylight Saving Time changes and other Apple Daylight Saving Time updates, see this article.

Published Date: Feb 20, 2012

AirPort Extreme 802.11n Enabler requires AirPort Extreme Update

This article has been archived and is no longer updated by Apple.

Issue or symptom

The AirPort Extreme 802.11n Enabler requires AirPort Extreme Update 2007-001 or later. If you attempt to install the AirPort Extreme 802.11n Enabler without first installing the AirPort Extreme Update 2007-001 or later, this alert will appear:

"You cannot install AirPort Extreme 802.11n Enabler on this volume. This volume does not meet the requirements for this update."

Solution

Download and install the AirPort Extreme Update.

Published Date: Oct 10, 2016

Mac OS X Server 10.4: Using High Availability IP Failover

This article has been archived and is no longer updated by Apple.

High Availability IP Failover may not work as expected in Mac OS X Server 10.4.7 (Universal) or later.

IP failover does not work with Intel-based Macs and Mac OS X Server 10.4.7 - 10.4.10

With Mac OS X Server 10.4.7 (Universal) or 10.4.10, IP failover does not work with Intel-based Macs. Update to Mac OS X Server 10.4.11 or later to use IP failover with Intel-based Macs.

Do not use mixed architectures in failover pairs

Do not mix Intel and PowerPC architectures in failover pairs. For example, if the master server is a Xserve Quad Xeon, do not use a Xserve G5 as failover. Conversely, a Mac Pro (Intel-based) should not be used as failover for a Xserve G5 (PowerPC-based).

Important: If you do not follow this guideline, data loss may occur.

Location of the failover scripts

The scripts are located in:

```
/Library/IPFailover
```

This folder is not present by default; you must create it yourself.

Note: The High Availability Administration guide incorrectly states the (/Library/Failover) directory is the location of the user-defined failover scripts.

Published Date: Oct 10, 2016

TA24572_Logic_MP_files_sometimes_play_too_early.pdf

Logic: MP3 files sometimes play too early

This article has been archived and is no longer updated by Apple.

Issue

MP3 files added to the Arrange window may play 528 samples earlier than expected.

Solution

Insert a Sample Delay plug-in on any affected track, and set the delay to 528 samples to compensate.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Mail Database and Store sizes are not updated in Server Admin

This article has been archived and is no longer updated by Apple.

Issue or symptom

The displayed size of the Mail Server database and Mail Store may not update in real time when viewed in the Server Admin Mail section.

Solution

The Server Admin/Mail plug-in displays only the most-recently polled size of the Mail Database and Mail Store, which is checked once every 30 minutes. The Refresh button accesses the most-recently retrieved values only.

Published Date: Oct 10, 2016

Automatically trained SpamAssassin databases are unused

This article has been archived and is no longer updated by Apple.

Issue or symptom

Mail sent to the "junkmail" and "notjunkmail mailboxes" for automatic training may not be used to train the database in the correct location.

Solution

If this happens, follow these steps to resolve the issue:

1. Log in as root.
2. Move the unused SpamAssassin database aside with this Terminal command (on a single line):

```
# mv /var/amavis/.spamassassin /var/amavis/.spamassassin.old
```

3. Create a link in that location to the correct database with this Terminal command:

```
# ln -s /var/clamav/.spamassassin /var/amavis/.spamassassin
```

Published Date: Oct 10, 2016

TA24576_Apple_TV_About_the_Status_Light.pdf

Apple TV: About the Status Light

This article has been archived and is no longer updated by Apple.

Apple TV has a status light (LED) on the front that indicates what's happening.

If Status Light	**Apple TV** is
Is solid white	ON
Is off	OFF or in STANDBY
Blinks amber	Starting up
Flashes white once	Accepting a command from the remote
Flashes amber once	Rejecting a command from the remote (you've paired a remote with **Apple TV** but you're using a remote that's not paired). Please see "Pairing and Unpairing the Apple Remote with Apple TV."
Alternates between white and amber	Having issues, refer to Service FAQ

Published Date: Oct 10, 2016

ATA, IDE, EIDE and ATAPI Defined

The information below outlines the general definition of each of these terms.
This article has been archived and is no longer updated by Apple.

IDE/ATA

The original, base specification for the family of interfaces described in this section is called both IDE and ATA. The name IDE is the more popular of the two, even though it is misleading since it stands for integrated drive electronics which refers to putting the logic board with the hard disk much more than it has anything to do with the interface. The more correct name is ATA or AT Attachment, which defines the standard interface.

The original IDE/ATA standard defines the following features and transfer modes:

Two Hard Disks: The specification calls for a single channel, shared by two devices that are configured as master and slave.

PIO Modes: ATA includes support for PIO modes 0, 1 and 2.

DMA Modes: ATA includes support for single word DMA modes 0, 1 and 2, and multiword DMA mode 0.

"Plain" ATA does not include support for enhancements such as ATAPI support for non-hard-disk IDE/ATA devices, block mode transfers, or logical block addressing.

The Power Macintosh G3 (Blue & White) and all subsequent Macintosh computers have master and slave capability. Prior Macintosh computers, including all Performa models and all Power Macintosh Models with four-digit model names, do not have this capability. For more information, please see article 24342: "**Power Macintosh G3: Master and Slave Support and Configuration**"

EIDE

Enhanced IDE, also called EIDE, is the term that Western Digital uses to describe its advanced drives that incorporate the performance improvements defined in ATA-2, along with several other refined protocols. EIDE has become a widely-accepted term in the industry, which would be great if not for the fact that it is used to stand for so many things, some of them completely different. For this reason, the term has been criticized--not least by Western Digital's competitors--for being confusing and vague.

Western Digital describes its Enhanced IDE program as including the following improvements over ATA:

ATA-2: EIDE includes all of the improvements that are part of ATA-2, including higher-speed transfer modes.

ATAPI: EIDE includes support for non-hard-disk devices on the IDE/ATA channel.

Dual IDE/ATA Host Adapters: The EIDE standard includes support for dual IDE/ATA host adapters, allowing four IDE/ATA/ATAPI devices to be used.

The Power Macintosh G3 (Blue & White) and all subsequent Macintosh computers have master and slave capability. Prior Macintosh computers, including all Performa models and all Power Macintosh Models with four-digit model names, do not have this capability. For more information, please see article 24342: "**Power Macintosh G3: Master and Slave Support and Configuration**"

ATAPI

AT Attachment Packet Interface (ATAPI is the description used to identify non-hard-disk devices used on the IDE/ATA channel. This includes CD-ROM, tape, and ZIP type drives. You could say that ATAPI refers to ATA drives that support removable media.

For more information see article 24342: "**Power Macintosh G3: Master and Slave Support and Configuration**"
Published Date: Feb 20, 2012

What is a Transitional Security Network (TSN)?

This article has been archived and is no longer updated by Apple.

A Transitional Security Network (TSN) is a network that uses the Transitional Security Network Protocol that allows clients to authenticate with networks in the most secure way possible, based on the capabilities of their hardware and software. Computers capable of connecting using the WPA standard will be able to authenticate using a WPA password. Computers that do not meet the requirements to authenticate using WPA will use WEP instead.

The same password is used on all clients of the Transitional Security Network, regardless of the specific authentication method they use.

Published Date: Feb 20, 2012

About Security Update 2007-002

This article has been archived and is no longer updated by Apple.

This document describes Security Update 2007-002, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Security Update 2007-002

- **Finder**

  CVE-ID: CVE-2007-0197

  Available for: Mac OS X v10.4.8, Mac OS X Server v10.4.8

  Impact: Mounting a maliciously-crafted disk image may lead to an application crash or arbitrary code execution

  Description: A buffer overflow exists in Finder's handling of volume names. By enticing a user to mount a malicious disk image, an attacker could trigger this issue, which may lead to an application crash or arbitrary code execution. A proof of concept for this issue has been published on the "Month of Apple Bugs" website (MOAB-09-01-2007). This update addresses the issue by performing additional validation of disk images. This issue does not affect systems prior to Mac OS X v10.4. Credit to Kevin Finisterre of DigitalMunition for reporting this issue.

- **iChat**

  CVE-ID: CVE-2007-0614, CVE-2007-0710

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.8, Mac OS X Server v10.4.8

  Impact: Attackers on the local network may be able to cause iChat to crash

  Description: A null pointer dereference in iChat's Bonjour message handling could allow a local network attacker to cause an application crash. A proof of concept for this issue in Mac OS X v10.4 has been published on the "Month of Apple Bugs" website (MOAB-29-01-2007). A similar issue exists in Mac OS X v10.3. This update addresses the issues by performing additional validation of Bonjour messages.

- **iChat**

  CVE-ID: CVE-2007-0021

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.8, Mac OS X Server v10.4.8

  Impact: Visiting malicious websites may lead to an application crash or arbitrary code execution

  Description: A format string vulnerability exists in the iChat AIM URL handler. By enticing a user to access a maliciously-crafted AIM URL, an attacker can trigger the overflow, which may lead to an application crash or arbitrary code execution. A proof of concept for this issue has been published on the "Month of Apple Bugs" website (MOAB-20-01-2007). This update addresses the issue by performing additional validation of AIM URLs.

- **UserNotification**

  CVE-ID: CVE-2007-0023

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.8, Mac OS X Server v10.4.8

  Impact: Malicious local users may be able to obtain system privileges

  Description: The UserNotificationCenter process runs with elevated privileges in the context of a local user. This may allow a malicious local user to overwrite or modify system files. A program that triggers this issue has been published on the "Month of Apple Bugs" website (MOAB-22-01-2007). This update addresses the issue by having UserNotificationCenter drop its group privileges immediately after

launching.

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Published Date: Oct 10, 2016

Mac OS X 10.4 or later: Unable to define custom envelope or label sizes in Address Book

This article has been archived and is no longer updated by Apple.

Issue or symptom

The first time you try to define a custom label size or a custom envelope size, you may be unable to edit the numbers displayed in the measurement fields (height, width, margins, and so forth).

Solution

As a workaround, follow these steps:

1. Open Address Book.
2. Select a card which includes a mailing address.
3. From the **File** menu, choose **Print...**.
4. In the Print Dialog window, choose Define Custom from the Layout pop-up menu.
5. Enter a Layout Name and click OK.
6. You should now be able to edit the numbers in the measurement fields.

If you still cannot edit, leave the Print dialog open and switch to another application, then switch back to the Address Book Print dialog. You should now be able to edit the numbers in each of the measurement fields.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Mac OS X 10.4.4 or later: Address Book cards show up as "(null)" in Speech preferences

This article has been archived and is no longer updated by Apple.

Issue or symptom

Address Book cards that do not contain a company name will be displayed with the name "(null)" when the Address Book command set is configured in the Speech pane of the System Preferences. All Address Book speech commands will work normally with these "(null)" cards, except the command "[Phone, Fax, Pager] for [Full name, Nickname]" which will not display a phone number.

Solution

To get Address Book cards to show up correctly in the Speech pane of System Preferences or to be able to display a phone number from an Address Book card using a speech command, complete these steps:

1. Open Address Book.
2. Click Edit at the bottom of the Address Book window.
3. Click on the names of people in Address Book and look for cards that contain a blank Company field (the word "Company" will be displayed in gray under the person's name).
4. Click on the dimmed (gray) word "Company" on the card and type in a name. If the person is not associated with any company, you can enter their name again in the Company field. You do not need to check the box next to the word "Company".

Any Address Book cards that have a name entered in the Company field should be displayed correctly when configuring Address Book commands in the Speech pane of System Preferences.

Note: You can now use the person's name with the speech command "[Phone, Fax, Pager] for [Full name, Nickname]" but when the phone number gets displayed on-screen, it will show the company's name (rather than the person's name) above the phone number.

Additional information

If the Speech Commands window is blank in Mac OS X 10.4 or later, see this article instead.

Published Date: Feb 20, 2012

Mac OS X 10.4.9: "Disk image you are opening may be damaged..." alert appears

This article has been archived and is no longer updated by Apple.

Issue or symptom

Mac OS X 10.4.9 improves the ability of Mac OS X to detect damaged or corrupted disk images before mounting them. Mounting a damaged or corrupted disk image can result in data loss or corruption. This alert appears when you try to open or (mount) a damaged disk image:

> "The disk image you are opening may be damaged and could damage your system. Are you sure you want to open this disk image?"

Solution

If you have another copy of the files that are on the affected disk image

1. Make a new image in Disk Utility and copy the original files to the new image.
2. Discard the original, affected image.
3. As a precaution, open (mount) the new image, open Disk Utility, and repair the new image. Continue to repair until no issues are found.

If you have no other copy of the files on the affected disk image

Try repairing the directory structure of your disk images with Disk Utility.

1. Make a copy of the affected image in the Finder (select it, then from the Finder's **File** menu choose **Duplicate**). A duplicate image whose name ends with "copy" will be created (you will need sufficent free disk space).
2. Open (mount) the copied disk image file in the Finder. When the alert appears, click "Open".

   Important: If you are unable to mount the image in the Finder, the image may be unusable. If you are able to open the image in a previous version of Mac OS X, some data may be damaged. Use the data with caution.

3. Open Disk Utility (located in the Utilities folder, within the Applications folder).
4. Select the copied disk image's icon in the left side of the Disk Utility window, then click Repair Disk. A verification will be performed and, if necessary, repairs.
5. Click Repair again. Repeat this step until no issues are found on the image.

   Note: If repairs cannot be performed because the image is read-only, convert the image to a read/write format with a new name (don't replace the existing image with a same-named image). Then perform step 4 and 5 on the converted image. After repairs are complete, you can convert the image back to a read-only format and rename it if desired.

You should now be able to use the disk image without any issues.

Additional information

It is possible for a damaged disk image to cause directory issues to your Mac OS X volume.

Published Date: Oct 10, 2016

Apple TV (1st generation) cannot join networks that use high ASCII or double-byte characters in the password

Apple TV (1st generation) cannot connect to a wireless network that contains high (extended) ASCII or double-byte (Unicode) characters (such as Japanese, Korean, or Chinese) in its password.

This article has been archived and is no longer updated by Apple.

Update to the current Apple TV (1st generation) software. For steps, see: "How to update Apple TV (1st generation) software".

Published Date: Mar 22, 2013

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Yes No

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Ports on Apple Quad Channel 4GB Fibre Channel Card displayed incorrectly in Fibre Channel Utility

This article has been archived and is no longer updated by Apple.

When using the Apple Quad Channel 4GB Fibre Channel Card, the Fiber Channel Utility may display the port numbers incorrectly.

Regardless of which port numbers appear in this utility, ports are numbered 3, 2, 1 and 0 from the top in Fibre Channel Utility. See below for examples of correct and incorrect port numbering as reported by Fibre Channel Utility.

Correct port numbering in Fibre Channel Utility

Incorrect port numbering in Fibre Channel Utility

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

Mac OS X 10.4.5 or later: Headphone volume reverts to default setting after restarting computer

This article has been archived and is no longer updated by Apple.

Issue or symptom

After restarting in Mac OS X 10.4.5 or later on some Intel-based Macs, the output volume level and balance settings for headphones or other devices connected to your computer's headphone jack may revert to the default settings. The default settings are: Mute is disabled, volume is set to 56% of maximum, and balance is equal for the left and right channels.

Solution

Adjust the volume level and balance as desired after restarting the computer.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Logic: Position in Transformer window can‘t be reset after Setting to "All"

This article has been archived and is no longer updated by Apple.

Issue

When you set the *Position* parameter in the Transform Window to "All", it is no longer possible to set it to any other value.

Solution

This happens when you change the *Position* parameter in one of the Transform presets. To reset the *Position* parameter, deselect the *Hide unused parameters* check box.

Published Date: Feb 20, 2012

Aperture: Benefits included with the Mac OS X 10.4.9 Update

This article has been archived and is no longer updated by Apple.

The Mac OS X 10.4.9 Update includes many benefits for Aperture:

- Adds support for the RAW image formats of these third-party cameras: Leaf Aptus 17, Leaf Aptus 22, Leaf Aptus 65, Leaf Aptus 75, Leaf Valeo 11, Leaf Valeo 17, Leaf Valeo 22, Leica Digilux 3, Nikon D40, Pentax K10D, Pentax K110D, Pentax K100D, Panasonic Lumix DMC-L1, Samsung GX-1L.
- Improved Spot & Patch results: The update contains changes to Core Image that improve the visual correctness of images using Spot & Patch adjustment.
- Reduces issues of temporary "black" Viewer: Mac OS X 10.4.9 addresses several issues that could cause the Viewer to temporarily turn black when displaying adjusted images.
- GPS metadata is preserved when image versions are exported.
- Incorporates all RAW file format compatibility and other imaging issues originally addressed in Digital Camera RAW Support Update 1.0.1. This update improved RAW file format compatibility for the Canon Digital Rebel XTi / 400D / Kiss X Digital, Nikon D80, and Pentax *ist DS. It also addressed the following issues: Handling of large Canon RAW files (.CRW); DNG compatibility on Intel-based Macs; Lines sometimes appearing in images exported from Aperture. For more information, see this page or this page.

For more information about this update, see About the Mac OS X 10.4.9 Update (delta).

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Published Date: Oct 10, 2016

iPhoto 6: Setting regional calendar preferences

This article has been archived and is no longer updated by Apple.

Learn how to set region-specific preferences for iPhoto calendars.

Why are my iPhoto calendars in English, even though my primary language is set to something else?

- iPhoto uses the Region setting in the Formats tab of the International System Preferences pane to format its calendars. If you change the setting in this tab to match your region, the language change should be reflected the next time you relaunch iPhoto and create a new calendar.
- If you do not see your Region listed, select the option to "show all regions" in this preference pane.

How can I change my calendar to start weeks on Monday instead of Sunday?

- If you are in an English-speaking country and want your calendar week to start on Monday, set your Region in the Formats tab of the International preference pane to United Kingdom.
- If you are in an English-speaking country and want your calendar week to start on Sunday, set your Region in the Formats tab to United States or Canada.

Published Date: Feb 20, 2012

iMovie HD 6: Static in transitions using MPEG-4 project

This article has been archived and is no longer updated by Apple.

Issue or symptom

Audio may be missing or static may be introduced when adding transitions or effects (such as Reverse) to an MPEG-4 or iSight-based iMovie project.

Solution

Remove the existing transition or effect, extract the audio from the affected clips, and reinsert the transition or effect.

1. Select the transition that caused this issue and press the delete key to remove it.
2. Select the clip or clips that will be used to build the transition or effect.
3. From the **Advanced** menu, choose **Extract Audio**. (The extracted audio appears as a separate clip in the audio track of the timeline viewer).
4. Reinsert the transition or effect.

Published Date: Oct 10, 2016

Java: Updating time zones for earlier Java installations and backward compatibility

This article has been archived and is no longer updated by Apple.
In 2007, several countries and regions changed the way they observe Daylight Saving Time (DST). General information about these changes can be found here . How these changes affect Mac OS X specifically is described in this article.

To address these changes in Java, Apple has released two Java updates: Java for Mac OS X 10.4, Release 5 and Java for Mac OS X 10.3, Update 5, which are available in Software Update or from Apple Downloads. These updates add support for the latest Daylight Saving Time (DST) and time zone information as of January 8, 2007 using the Olson Timezone data version 2007a.

Important: The introduction of Olson Timezone (TZ) data, version 2007a or later may not allow backward compatibility for the Eastern, Hawaiian, and Mountain time zones for some Java applications under certain circumstances. See this article for information about using Sun's tzupdater tool to update your time zones, for best backward compatibility.

Compatibility issues (advanced)

For three time zones, Eastern Standard Time (EST), Hawaiian Standard Time (HST) and Mountain Standard Time (MST), backwards compatibility may not work in Java under certain circumstances. In Java 1.1 and earlier, some three-letter time zones followed Daylight Saving time rules instead of being fixed offsets of Greenwich Mean Time (GMT). If a Java application used these three-letter time zone designations, they may be assuming the previous behavior. The third-party utility "tzupdater", available from Sun Microsystems at http://java.sun.com/developer/technicalArticles/Intl/tzupdatertool.html, can be used to update your Java installation to preserve this backwards-compatible behavior.

To update your Java with the backwards compatibility option, first download tzupdater. Then in Terminal go to the directory where you installed tzupdater and execute the following command on a single line:

```
sudo /System/Library/Frameworks/JavaVM.framework/Versions/1.5.0/Commands/java -Djava.vendor="Sun Microsystems Inc." -jar tzupdater.jar  -f -bc -u
```

Verify the changes were installed by using this command:

```
/System/Library/Frameworks/JavaVM.framework/Versions/1.5.0/Commands/java -Djava.vendor="Sun Microsystems Inc." -jar tzupdater.jar -bc -t
```

If no issues are reported, you have successfully updated Java. Please see the documentation that comes with Sun's tzupdater for additional information.

See Sun Alert 102836 for more details on the Olson Timezone data backwards compatibility issue.

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Published Date: Feb 20, 2012

Final Cut Pro: Ethernet network volumes should not be used for capture or playback

This article has been archived and is no longer updated by Apple.

Issue

In Final Cut Pro, hard drives designated as "scratch disks," store captured and rendered media for editing, playback, and output. Final Cut Pro may drop frames during capture, playback, or output if you have set the scratch disk location to be a network hard drive that is connected to your computer via Ethernet.

Scratch disk performance is a critical aspect of your editing system. The available data rate of your disks must match or exceed the video format you are using.

Even in cases where the data rate of the Ethernet standard exceeds the data rate required by the video format you are using, dropped frames can occur. This can happen because Final Cut Pro will often need to access more than one stream of audio/video media at a time. Additionally, the available bandwidth on an Ethernet network must accommodate the overhead required by networking protocols, as well as any traffic on the network generated by other users or by automated processes. In most professional workflows, Ethernet will not provide sufficiently high sustainable bandwidth for the smooth transfer of video and audio data needed by Final Cut Pro. (This includes "wired" Ethernet formats, as well as wireless variants, i.e., 802.11a, b, g and n.)

Solution

Use hard drives installed inside your computer, or external drives that are directly connected to your computer via FireWire or SCSI. Multi-user or high-capacity environments may require a RAID or SAN that is directly connected to the computer via a Fibre Channel connection.

For more information about setting scratch disks, refer to the Final Cut Pro User Manual.

Published Date: Feb 20, 2012

AirPort Extreme (802.11n): Use AirPort Utility, only, to configure the AirPort Extreme (802.11n) base station

This article has been archived and is no longer updated by Apple.

AirPort Extreme (802.11n) base stations include AirPort Utility. You should always use AirPort Utility, not any other AirPort assistants or utilities, when setting up or configuring your AirPort Extreme (802.11n) base station.

Note: Unexpected results may occur when using other utilities with this base station, such as the AirPort Setup Assistant or AirPort Admin Utility--do not use these with an Airport Extreme (802.11n) base station.

Related Terms: AU 5.0 download

Published Date: Feb 20, 2012

AppleCare Agreements - Information and FAQs

This article has been archived and is no longer updated by Apple.

Because Apple creates the hardware, operating system and many built-in applications, Apple computers are truly integrated systems with vastly superior support. AppleCare offers a range of service and support products to meet your needs. In addition, there are numerous online resources within the AppleCare Support website that provide valuable information and instruction.

For information about all AppleCare Products and Services, please visit www.apple.com/support/products .

For questions related to AppleCare Protection Plan, please visit the AppleCare FAQ page at http://www.apple.com/support/products/faqs.html.

Published Date: Feb 20, 2012

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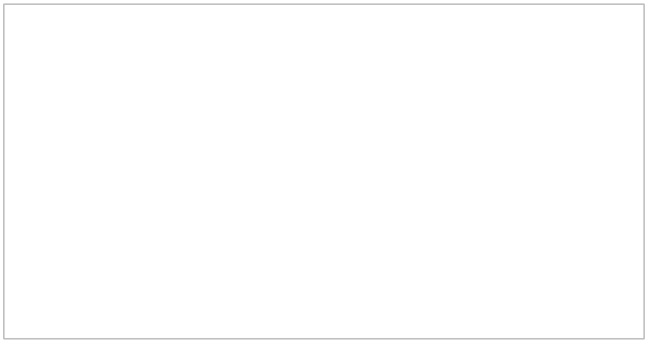

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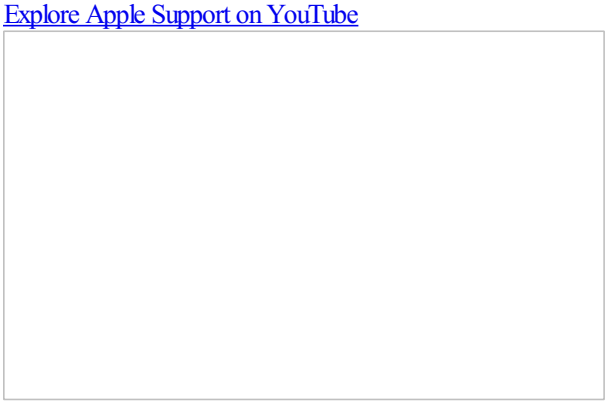

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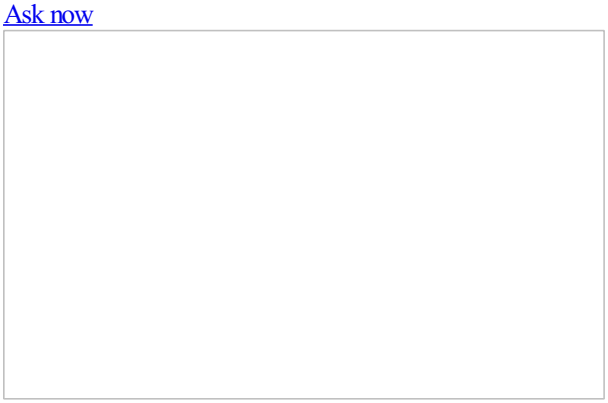

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- Multi-Touch Repair Program for iPhone 6 Plus
- Apple AC Wall Plug Adapter Recall Program
- Beats Pill XL Speaker Recall Program
- All Programs

Apple TV: Some languages may not display correctly

This article has been archived and is no longer updated by Apple.

The following languages are currently not supported on Apple TV:

- Arabic
- Bulgarian
- Croatian
- Czech
- Greek
- Hebrew
- Hungarian
- Portuguese
- Polish
- Romanian
- Thai
- Turkish

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

Mac OS X Server (Universal) 10.4.7 through 10.4.10: May become unresponsive when clients search mounted network volumes

This article has been archived and is no longer updated by Apple.

Issue or symptom

As clients search mounted network volumes, the kernel_task process (pid 0) on the server is allocated more and more RAM. System administrators may notice that the amount of RAM allocated to the kernel_task process may be close to 2 GB. On servers configured with 2 GB or 3 GB of RAM, this can result in server performance degrading, or the server becoming unresponsive, or restarting unexpectedly.

Solution

Update to Mac OS X Server 10.4.11 to resolve this issue.

If you are uable to update to Mac OS X Server 10.4.11 you can make following change to /etc/rc.server to improve performance in this situation. This is recommended only if your server has 2 GB, 3 GB, or 4 GB of RAM.

1. Make a copy of /etc/rc.server with this command:

   ```
   $ sudo cp /etc/rc.server /etc/rc.server.bak
   ```
2. As the root user, open /etc/rc.server in the text editor of your choice.
3. Locate this line in /etc/rc.server:
   sysctl -w kern.maxnbuf=90000
4. Change the number 90000 to 20000, so that the line reads:
   sysctl -w kern.maxnbuf=20000
5. Save the changes made to /etc/rc.server.
6. Restart the server.

Published Date: Oct 10, 2016

Final Cut Pro: Codec error when exporting as H.264

This article has been archived and is no longer updated by Apple.

Issue

If you export a QuickTime movie from Final Cut Pro 5 in the H.264 format, it's possible for the operation to result in a message that says, "Codec error."

If this happens, no file is exported. This can occur if you choose **File > Export > QuickTime movie**, and then choose Custom, and set H.264 as the compressor.

Workarounds

To avoid this issue, you can export from Final Cut Pro via different export options:

You can export using Compressor, which offers a high degree of control over the options available when exporting as H.264.

1. Choose **File > Export > Using Compressor**.
2. Choose a Setting (or create a custom Setting) in Compressor with the H.264 options you desire.
3. If necessary, refer to the Compressor User Manual for further information on using Compressor.

You can also export using QuickTime Conversion, which offers fewer options than Compressor, but may be simpler to use.

1. Choose **File > Export > Using QuickTime Conversion**.
2. In the **Save** window, choose **QuickTime Movie** from the **Format** pop-up menu.
3. Click the **Options** button to open the Movie Settings window.
4. Click the **Settings** button in the **Video** portion of the Movie Settings window.
5. Choose **H.264** from the **Compression Type** pop-up menu.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Xsan: File System Status reported by cvfsck does not indicate need for repair

This article has been archived and is no longer updated by Apple.

Issue or symptom

When using `cvfsck` to verify or repair an Xsan filesystem, the Xsan Volume's "File System Status" is reported as "Clean" or "Dirty", but not whether repair is needed or not.

Solution

The File System Status does not reflect whether the filesystem is damaged or not. Do not reference the File System Status when deciding whether or not a filesystem needs repair.

In order to determine if a filesystem is corrupted, look at the last lines of the cvfsck report. If you see a message such as this:

"`*Warning*: !!READ_ONLY!! File system 'Volume_Name' would have been modified!`"

... then your volume is in need of repair.

Published Date: Oct 10, 2016

Apple TV: IR interference can prevent your remote from working

This article has been archived and is no longer updated by Apple.

Most televisions and stereos use infrared remote (IR) controls. Using several infrared remotes at the same time can scramble IR communications and prevent your Apple TV from receiving IR commands from your remote. Use remotes individually to prevent interference.

Published Date: Oct 10, 2016

Export your iMovie projects to use on Apple TV

This article has been archived and is no longer updated by Apple.

You can watch your home movies on Apple TV by exporting them from iMovie. Depending on your source material (SD or HD), the iMovie export option provides video encoding up to 1280x720, 24 fps Progressive. QuickTime 7.1.5 or later is required.

Note that files created using the "Movie to Apple TV" option will **not** be compatible with iPod.

Follow these steps to export your iMovie to Apple TV:

1. In iMovie, choose **Share > QuickTime**.
2. From the **Compress movie for** pop-up menu, choose **Expert Settings**.

3. Click Share.
4. When the "Save exported file as" window appears, choose **Movie to Apple TV** from the **Export** pop-up menu.

5. From the **Where** pop-up menu, select a destination for your movie then click Save.

Once you completed these steps you can import your movie into iTunes so you can use it with Apple TV.

1. Open iTunes.
2. Locate your exported movie and drag it to the iTunes Movies library.
3. Sync the movie to Apple TV.

Note: If you have setup iTunes to copy files to iTunes Music folder, then you can delete your exported file. This option is located in the iTunes Preferences. Choose **iTunes > Preferences** and click Advanced. Click the General tab and then see if the "Copy files to iTunes Music folder when adding to library" option is selected.

Published Date: Oct 10, 2016

Final Cut Pro: Additional RAM may be recommended for High Definition video formats

This article has been archived and is no longer updated by Apple.

Issue

Final Cut Pro may drop video frames in cases where there is not enough system memory available. For instance, if you're editing an uncompressed 8-bit or 10-bit high-definition codec, and you're monitoring video externally via a PCI or PCI-E video interface, Final Cut Pro may drop frames occasionally if your computer does not have sufficient system RAM.

Solution

Install additional RAM in your computer to increase the amount of memory available to Final Cut Pro. **Note:** The following table corresponds to the memory recommendations for Final Cut Pro only. If you run other applications at the same time as Final Cut Pro, they will allocate additional memory from the system, reducing the amount available to Final Cut Pro.

HD formats:	Suggested RAM
HDV formats	2 GB
Compressed HD formats	2 GB
Uncompressed HD formats	4 GB

Refer to manufacturer's recommendations for the memory requirements of your video interface:

- AJA Video Systems, manufacturer of the KONA family of video interfaces
- Blackmagic Design, manufacturer of the DeckLink family of video interfaces

Note: On Mac Pro systems, the distribution of memory modules may affect the performance characteristics of your video applications. See Final Cut Studio: For best performance on Mac Pro, install memory in risers symmetrically.

Important: Mention of third-party websites and products is for informational purposes only and constitutes neither an endorsement nor a recommendation. Apple assumes no responsibility with regard to the selection, performance or use of information or products found at third-party websites. Apple provides this only as a convenience to our users. Apple has not tested the information found on these sites and makes no representations regarding its accuracy or reliability. There are risks inherent in the use of any information or products found on the Internet, and Apple assumes no responsibility in this regard. Please understand that a third-party site is independent from Apple and that Apple has no control over the content on that website. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Final Cut Pro: P2 clips should be named with fewer than 255 characters

This article has been archived and is no longer updated by Apple.

Issue

If you name a P2 clip with a very long name in the Import Panasonic P2 window, it's possible that the clip might not be added to your project when you import.

Solution

Use fewer than 255 characters when naming clips in the Import Panasonic P2 window.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

AirPort Extreme (802.11n): Configuring ports for Personal File Sharing and Windows File Sharing

This article has been archived and is no longer updated by Apple.

Issue or symptom

When configuring Port Mapping with the AirPort Extreme (802.11n) base station to share Personal and Windows File Sharing, AirPort Utility may display an exclamation point next to the default public port assignments, indicating an issue.

Solution

By default, Personal File Sharing uses port 548 as the public port. Windows File Sharing uses 137-138 as default public ports.

These will need to be changed to an unused port in order to share these services between the base station network and the external network. Also, you should avoid port 548 because it is reserved for AirPort disk.

If the sharing a hard disk function is not needed from your base station, go to the Airport Utility and uncheck the 'Enable file sharing' checkbox in the File Sharing tab. This will free up port 548 and ports 137-138.

See this article for information about which ports are already in use by other services.

Published Date: Oct 10, 2016

Logic Pro/Express: Faders or Buttons on Control Surface trigger MIDI notes instead of expected functions

This article has been archived and is no longer updated by Apple.

Issue or symptom

When you use buttons or faders on a control surface with Logic, the controls may not act as expected. If a Software Instrument or MIDI track is selected, the faders and buttons may trigger MIDI notes.

Solution

This can happen if a MIDI interface or USB keyboard is disconnected while Logic is running. Avoid changing your physical MIDI setup while Logic is running. If this does happen, reconnect the missing device, or quit and relaunch Logic.

Published Date: Feb 20, 2012

Mac OS X 10.4: Repeatedly asked to insert Install DVD Disc 2 during installation

This article has been archived and is no longer updated by Apple.

Issue or symptom

When installing Mac OS X 10.4 with the Install DVDs that came with your computer, you might be asked to insert Disc 2 repeatedly. This can happen if the disc is unreadable.

Solution

Check Disc 2 for smudges, scratches, or debris. Wiping the disc clean with a soft, lint-free cloth may help.

If the issue persists, use another Disc 2. If another Disc 2 is not available, you can complete the installation of Mac OS X with just Disc 1; follow these steps:

1. Hold your Mac's power button until it turns off.
2. With Disc 1 in hand, press the power button and immediately insert it and hold the C key until you see the Apple logo. Your Mac should start from Disc 1.
3. Once started from Disc 1, start the installation process again.
4. When the "Easy Install on 'Macintosh HD'" window appears, click the Customize button. (If your destination volume is not named "Macintosh HD", a different name will appear.)
5. Uncheck (deselect) the item "Bundled Software". You may need to click it twice to deselect it.
6. Click the "Install" or "Upgrade" button to begin the installation. Disc 2, which contains additional bundled software, should not be needed for this installation. At the end of the installation you will have a functional Mac to use.

Note: Contact AppleCare Support about getting a replacement installation Disc 2. Once you have a a replacement Disc 2, you can use it to install the bundled software. You may need to perform an Archive & Install installation to install the bundled software from Disc 2.

Published Date: Feb 20, 2012

Mac OS X Server Netinstall: Create new images on servers running the same version of system software

This article has been archived and is no longer updated by Apple.

Issue or symptom

Netinstall image creation may not occur if the system version of the image is significantly newer than the system version running on the server. For instance, if you try to create a Mac OS X 10.4 image on a server running Mac OS X 10.3, you will see the message "A bill of materials (BOM) file required to create this file image is missing from the source" and the image will not be created.

Solution

Make sure that the server is running the same reference release (for example, 10.4.x) as the Netinstall image you are creating.

Published Date: Oct 10, 2016

DVD Studio Pro: Disable CSS before converting a project to HD

This article has been archived and is no longer updated by Apple.

Issue

If CSS is enabled in the Region/Copyright tab of the Disc Inspector for a Standard Definition project, and you convert that project into a High Definition project, the CSS setting will be stuck on, and you will be unable to switch it off for that project.

Solution

Before you convert a Standard Definition project to a High Definition project, make certain that the **Format for CSS** checkbox in Disc Inspector is **not checked**.

The **Format for CSS** checkbox should not be checked when converting a SD project to HD.

Even though CSS is not applicable in the context of High Definition DVD projects, unexpected results may occur if you attempt to format a project that had CSS enabled when it was converted from Standard Definition.

If you have already converted an SD project that had Format for CSS selected to an HD project, you can still format the HD project for replication if you deselect the Copyright Management checkbox, also in the Disc Inspector's Region/Copyright tab.

Published Date: Feb 20, 2012

Final Cut Pro: Subclip sent to Soundtrack Pro may be longer than intended

This article has been archived and is no longer updated by Apple.

Issue or symptom

When you send a subclip from Final Cut Pro to a Soundtrack Pro Audio File Project, the resulting project may contain the entire original clip from which the subclip was created.

Solution

This is a known issue. Although the Soundtrack Pro Audio File Project may appear to be too large, the in and out points will still be correct in Final Cut Pro.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

About FireWire 400 Technology

Learn about FireWire 400 technology used for Macintosh computers.
This article has been archived and is no longer updated by Apple.

What is FireWire?

FireWire is a cross-platform implementation of the high speed serial data bus -- defined by IEEE Standard 1394-1995 -- that can move large amounts of data between computers and peripheral devices. It features simplified cabling, hot swapping and transfer speeds up to 400 megabits per second. Major manufacturers of multimedia devices are already adopting the FireWire technology.

Invented at Apple, FireWire enables the connection of new digital consumer products including digital camcorders, digital video tapes, digital video disks, set-top boxes, and music systems directly to the personal computer. Apple is a cofounder of the 1394 Trade Association and is actively participating in the group's market and technology development activities.

Mac OS Support

The Mac OS is being extended to provide services and support for FireWire drivers and the applications that control them. This support exists below the Toolbox level, so developers of existing high-level applications do not need to modify their code to take advantage of FireWire input/output (I/O).

Main features of Mac OS support for FireWire include:

- A hardware abstraction layer that isolates peripheral driver code from host adapter driver code. This lets the computer work with multiple FireWire cards from different vendors.
- Automatic startup and runtime driver loading by a system expert.
- A native driver model for PCI-based Power Macintosh computers running System 7.6 and later.
- Works with many third party drivers for many device types.
- Hot connect and disconnect capabilities for devices.
- Asynchronous and isochronous services for drivers.
- Bus topology management.

Mac OS supports these features through a FireWire family expert and a set of FireWire family services.

FW Interface Modules

The FireWire interface module (FWIM) software architecture abstracts the hardware specifics of a FireWire card or logic board implementation into a standard interface. It resembles the SCSI interface module (SIM) architecture described in Inside Macintosh: Devices. The FWIM architecture lets multiple FireWire cards and devices from multiple vendors work together in a single system.

A FWIM is a hardware driver that Mac OS uses to access a FireWire bus. It exports a driver descriptor that Mac OS uses to match it with a FireWire card. When starting up, the Mac OS scans the Name Registry for devices that have a driver with the service category 'fwim'. It loads the appropriate FWIM and calls the FWIM's initialization routine. It then uses the FWIM interface to scan the bus for FireWire devices and loads their drivers, as described below. In this way, the Mac OS keeps track of which FWIM is associated with each device driver.

FW Device Drivers

FireWire device drivers follow the architecture described in Designing PCI Cards and Drivers for Power Macintosh Computers. Each driver is a Macintosh code fragment that exports a driver description structure.

When a FireWire bus reset occurs, the FireWire expert scans the bus for attached devices. It creates a Name Registry entry for each device, containing the device's Spec_Id and Sw_Version values. The expert then loads and installs the appropriate driver for each device by matching these values to the driver's description structure.

Once installed, the driver registers itself with the set of FireWire family services supplied by the Mac OS. Some of these services are described below.

Asynchronous Request Services

FireWire family services can be used to send asynchronous requests to nodes on a FireWire bus, including basic read, write, and lock requests. Atomic routines are also provided for logical bit operations, addition, and incrementing.

The asynchronous request services use reference IDs, which identify entities on the FireWire bus such as drivers, devices, interface cards, the isochronous resource manager, the bus manager, or the root device. A driver can use its own reference ID to specify the target of an asynchronous request. Using reference IDs reduces the complexity of a FireWire driver by making it unnecessary to deal with node IDs, topology generation numbers, and bus resets.

Isochronous Services
FireWire family services in Mac OS provide support for the isochronous data streams specified by the IEEE 1394 standard. These services include allocating isochronous channel numbers and bandwidth, as well as setting up and controlling data streams between a remote device and the local node or between multiple remote devices.

Isochronous services provide a flexible buffering mechanism to support a wide variety of data formats. They use isochronous channel IDs to construct pathways between devices and identify all the information needed to manage data transfers. Channel IDs also help coordinate the construction and control of isochronous channels between multiple drivers.

Configuration ROM Services
Mac OS services are provided for searching and accessing configuration ROMs on local and remote nodes of a FireWire bus, using relatively simple data structures. These services make it unnecessary for the driver to interpret the format of the CSR Configuration ROM directory hierarchy specified by the IEEE 1394 standard. Using configuration ROM entry IDs, drivers can reference specific entries in a CSR Configuration ROM and access their values.

FCP Services
Certain FireWire family services can be used to send Function Control Protocol (FCP) commands in a way similar to asynchronous requests. These services help drivers interpret and match FCP responses to outstanding FCP commands.

Bus Topology Services
FireWire family services help obtain information about the topology of a FireWire bus. Using them, a driver can access information such as the current bus topology map, a device's node ID, or a device's unique ID.
Published Date: Feb 20, 2012

Apple Product Security: Common Criteria

This article has been archived and is no longer updated by Apple.

Common Criteria is an internationally approved set of security standards that provides a clear and reliable evaluation of the security capabilities of Information Technology products.

By providing an independent assessment of a product's ability to meet security standards, Common Criteria gives customers more confidence in the security of Information Technology products and leads to more informed decisions. Security-conscious customers, such as the U.S. Federal Government, are requiring Common Criteria certification as a determining factor in purchasing decisions. Since the requirements for certification are clearly established, vendors can target very specific security needs while providing broad product offerings.

The international scope of Common Criteria, currently adopted by fourteen nations, allows users from other countries to purchase Information Technology products with the same level of confidence, since certification is recognized across all complying nations.

Evaluating a product with respect to security requires identification of the customer's security needs and an assessment of the capabilities of the product. Common Criteria aids customers in both of these processes through two key components: protection profiles and evaluation assurance levels.

Common Criteria Tools & Administration Guide:

- Common Criteria Configuration & Administration Guide
- Common Criteria Tools for Mac OS X v10.3.6 - 10.3.9
- Common Criteria Tools for Mac OS X v10.4

Additional Resources:

See the following resources for further information:

- Common Criteria White Paper
- NIAP Evaluation Report
- National Information Assurance Partnership (NIAP) Home Page
- Common Criteria Test Cases (.dmg Setup file)

Published Date: Feb 20, 2012

Mac OS: Open Transport Compatibility

A general statement has been used to describe Mac OS/Open Transport compatibility:

Open Transport is supported on system software versions 7.1, 7.1.1, 7.1.2, 7.5.3, 7.5.5 or later. System software version 7.5.3 or later is recommended. No other system software versions are supported.

However, the statement does not specifically state compatibility with 7.6, 7.6.1, Mac OS 8 and 8.1.

Specifically, what are the supported versions of Open Transport with Mac OS 8.1 - what are the supported methods for installation?

Also, if OT 1.3 is supported by 7.1, what is the supported method for installation? Attempting to install OT 1.3 will result in the error that OT must be installed via the 8.1 installer.
This article has been archived and is no longer updated by Apple.
This is really fairly simple:

1) Open Transport 1.2 is available and supported only on Mac OS 8.

2) Open Transport 1.3 and 1.3.1 are available and supported only on Mac OS 8.1.

3) Previous versions of OT are supported on Systems running 7.1 or greater. Although you could run the OT 1.2 standalone installer from Mac OS 8.0 disk without having Mac OS 8.0 installed it is not a supported configuration. OT 1.3 and 1.3.1 will only install on a Mac OS 8.1 based system.
Published Date: Feb 20, 2012

AirPort Extreme (802.11n) Base Station: Issues connecting to a WEP (TSN) protected network

This article has been archived and is no longer updated by Apple.

Issue or symptom

A computer or device may not connect to a AirPort Extreme (802.11n) Base Station's wireless network with a WEP (Transitional Security Network) password. This article does not apply to Macs with built-in AirPort Extreme (802.11g) cards.

Solution

Configure the affected computer or the wireless third-party device to connect via WEP 40/128-bit ASCII. For example, to do this on a Mac OS X-based computer that has an original AirPort card, follow these steps:

1. Click the AirPort icon and then **Other...** from the pulldown menu.

2. In the Closed Network window, select the desired Network Name from the pulldown menu, or type it in.

3. Select **WEP 40/128-bit ASCII** from the Wireless Security pulldown menu.

4. Enter the password of the network in the Password field and click OK.

Additional information

305595: AirPort Quick Assist
106424: AirPort: Joining an encrypted wireless network
AirPort 5.0 Help: Password-protecting your wireless network
AirPort 5.0 Help: Hiding the name of your network

Published Date: Feb 20, 2012

About the security content of Mac OS X 10.4.9 and Security Update 2007-003

This article has been archived and is no longer updated by Apple.

This document describes the security content of Mac OS X 10.4.9 and Security Update 2007-003, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Installation note

Software Update will present the update that applies to your system configuration. Only one is needed. Security Update 2007-003 will install on Mac OS X v10.3.9 and Mac OS X Server v10.3.9 systems.

Mac OS X v10.4.9 contains the security fixes present in Security Update 2007-003 and will install on Mac OS X v10.4 or later, as well as Mac OS X Server v10.4 or later systems.

Security Update 2007-003 / Mac OS X v10.4.9

- **ColorSync**

  CVE-ID: CVE-2007-0719

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: Viewing a maliciously-crafted image with an embedded ColorSync profile may lead to an unexpected application termination or arbitrary code execution

  Description: A stack buffer overflow exists in the handling of embedded ColorSync profiles. By enticing a user to open a maliciously-crafted image, an attacker can trigger the overflow, which may lead to an unexpected application termination or arbitrary code execution. This update addresses the issue by performing additional validation of ColorSync profiles. Credit to Tom Ferris of Security-Protocols for reporting this issue.

- **CoreGraphics**

  Available for: Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: Viewing a malformed PDF Document may lead to an application hang

  Description: CoreGraphics has been updated to address the issue described on the Month of Apple Bugs web site (MOAB-06-01-2007), which may lead to an application hang.

- **Crash Reporter**

  CVE-ID: CVE-2007-0467

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: Crash Reporter may allow a local admin user to obtain system privileges

  Description: Crash Reporter uses an admin-writable system directory to store logs of processes that have been unexpectedly terminated. A malicious process running as an admin can cause these logs to be written to arbitrary files as root, which could result in the execution of commands with elevated privileges. This issue has been described on the Month of Apple Bugs web site (MOAB-28-01-2007). This update addresses the issue by performing additional validation prior to writing to log files.

- **CUPS**

CVE-ID: CVE-2007-0720

Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

Impact: Remote attackers may cause a denial of service during SSL negotiation

Description: A partially-negotiated SSL connection with the CUPS service may prevent other requests from being served until the connection is closed. This update addresses the issue by implementing timeouts during SSL negotiation.

- **Disk Images**

  CVE-ID: CVE-2007-0721

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: Mounting a maliciously-crafted disk image may lead to an unexpected application termination or arbitrary code execution

  Description: A memory corruption vulnerability exists in diskimages-helper. By enticing a user to open a maliciously-crafted compressed disk image, an attacker could trigger this issue which may lead to an unexpected application termination or arbitrary code execution. This update addresses the issue by performing additional validation of disk images.

- **Disk Images**

  CVE-ID: CVE-2007-0722

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: Mounting a maliciously-crafted AppleSingleEncoding disk image may lead to an unexpected application termination or arbitrary code execution

  Description: An integer overflow vulnerability exists in the handler for AppleSingleEncoding disk images. By enticing a local user to open a maliciously-crafted disk image, an attacker could trigger the overflow which may lead to an unexpected application termination or arbitrary code execution. This update addresses the issue by performing additional validation of AppleSingleEncoding disk images.

- **Disk Images**

  CVE-ID: CVE-2006-6061, CVE-2006-6062, CVE-2006-5679, CVE-2007-0229, CVE-2007-0267, CVE-2007-0299

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.8, Mac OS X Server v10.4.8

  Impact: Downloading a maliciously-crafted disk image may lead to an unexpected system shutdown or arbitrary code execution

  Description: Several vulnerabilities exist in the processing of disk images that may lead to an unexpected termination of system operations or arbitrary code execution. These have been described on the Month of Kernel Bugs and Month of Apple Bugs web sites (MOKB-03-11-2006, MOKB-20-11-2006, MOKB-21-11-2006, MOAB-10-01-2007, MOAB-11-01-2007 and MOAB-12-01-2007). Since a disk image may be automatically mounted when visiting web sites, this allows a malicious web site to cause a denial of service. This update addresses the issue by performing additional validation of downloaded disk images prior to mounting them.

- **DS Plug-Ins**

  CVE-ID: CVE-2007-0723

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: Unprivileged LDAP users may be able to change the local root password

  Description: An implementation flaw in DirectoryService allows an unprivileged LDAP user to change the local root password. The authentication mechanism in DirectoryService has been fixed to address this issue.

- **Flash Player**

  CVE-ID: CVE-2006-5330

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

Impact: Playing maliciously-crafted Flash content could allow an HTTP request splitting attack

Description: Adobe Flash Player is updated to version 9.0.28.0 to fix a potential vulnerability that could allow HTTP request splitting attacks. This issue is described as APSB06-18 on the Adobe web site at http://www.adobe.com/support/security/

- **GNU Tar**

  CVE-ID: CVE-2006-6097

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: Extracting a maliciously-crafted tar archive may lead to arbitrary files being overwritten

  Description: GNU Tar does not correctly handle tar archives that contain a GNUTYPES_NAME record with a symbolic link. By enticing a local user to extract a maliciously-crafted tar archive, an attacker may cause arbitrary files to be overwritten with the permissions of the person using tar. This issue has been addressed by performing additional validation of tar files.

- **HFS**

  CVE-ID: CVE-2007-0318

  Available for: Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: Removing a file from a maliciously-crafted mounted filesystem may lead to a denial of service

  Description: An HFS+ filesystem in a mounted disk image can be constructed to trigger a kernel panic when attempting to remove a file from a mounted filesystem. This has been described on the Month of Apple Bugs web site (MOAB-13-01-2007). This update addresses the issue by performing additional validation of the HFS+ filesystem.

- **HID Family**

  CVE-ID: CVE-2007-0724

  Available for: Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: Console keyboard events are exposed to other users on the local system

  Description: Insufficient controls in the IOKit HID interface allow any logged in user to capture console keystrokes, including passwords and other sensitive information. This update addresses the issue by limiting HID device events to processes belonging to the current console user. Credit to Andrew Garber of University of Victoria, Alex Harper, and Michael Evans for reporting this issue.

- **ImageIO**

  CVE-ID: CVE-2007-1071

  Available for: Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: Viewing a maliciously-crafted GIF file may lead to an unexpected application termination or arbitrary code execution

  Description: An integer overflow vulnerability exists in the process of handling GIF files. By enticing a user to open a maliciously-crafted image, an attacker can trigger the overflow which may lead to an unexpected application termination or arbitrary code execution. This update addresses the issue by performing additional validation of GIF files. This issue does not affect systems prior to Mac OS X v10.4. Credit to Tom Ferris of Security-Protocols for reporting this issue.

- **ImageIO**

  CVE-ID: CVE-2007-0733

  Available for: Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: Viewing a maliciously-crafted RAW Image may lead to an unexpected application termination or arbitrary code execution

  Description: A memory corruption issue exists in the process of handling RAW images. By enticing a user to open a maliciously-crafted image, an attacker can trigger the issue which may lead to an unexpected application termination or arbitrary code execution. This update addresses the issue by performing additional validation of RAW images. This issue does not affect systems prior to Mac OS X v10.4. Credit to Luke Church of the Computer Laboratory, University of Cambridge, for reporting this issue.

- **Kernel**

  CVE-ID: CVE-2006-5836

Available for: Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

Impact: Malicious local users may be able to cause a denial of service

Description: Using the fpathconf() system call on certain file types will result in a kernel panic. This has been described on the Month of Kernel Bugs web site (MOKB-09-11-2006). This update addresses the issue through improved handling for all kernel defined file types. Credit to Ilja van Sprundel for reporting this issue.

- **Kernel**

  CVE-ID: CVE-2006-6126

  Available for: Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: Executing a maliciously-crafted Mach-O binary may lead to an unexpected termination of system operations.

  Description: An implementation issue exists in the kernel's handling of faults while loading Mach-O binaries. This could allow a malicious local user to cause a kernel panic. This issue has been described on the Month of Kernel Bugs web site (MOKB-23-11-2006). This issue only affects systems with Intel processors. This issue does not allow kernel memory corruption and can not lead to privilege escalation. This update addresses the issue by performing additional validation of Mach-O binaries.

- **Kernel**

  CVE-ID: CVE-2006-6129

  Available for: Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: Executing a maliciously-crafted Universal Mach-O binary may lead to an unexpected termination of system operations or arbitrary code execution with elevated privileges

  Description: An integer overflow vulnerability exists in the loading of Universal Mach-O binaries. This could allow a malicious local user to cause a kernel panic or to obtain system privileges. This has been described on the Month of Kernel Bugs web site (MOKB-26-11-2006). This update addresses the issue by performing additional validation of Universal binaries.

- **Kernel**

  CVE-ID: CVE-2006-6173

  Available for: Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: Executing a maliciously-crafted program may lead to a system hang

  Description: The shared_region_make_private_np() system call allows a program to request a large allocation of kernel memory. This could allow a malicious local user to cause a system hang. This issue does not allow an integer overflow to occur, and it cannot lead to arbitrary code execution. This issue has been described on the Month of Kernel Bugs web site (MOKB-28-11-2006). This update addresses the issue by additional validation of the arguments passed to shared_region_make_private_np().

- **Kernel**

  CVE-ID: CVE-2007-0430

  Available for: Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: Malicious local users may be able to cause a system hang

  Description: The shared_region_map_file_np system call allows a program to request a large allocation of kernel memory. This could allow a malicious local user to cause a system hang. This issue does not lead to arbitrary code execution. This update addresses the issue through additional validation of the arguments passed to shared_region_map_file_np. Credit to RISE Security for reporting this issue.

- **MySQL Server**

  CVE-ID: CVE-2006-1516, CVE-2006-1517, CVE-2006-2753, CVE-2006-3081, CVE-2006-4031, CVE-2006-4226, CVE-2006-3469

  Available for: Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: Multiple vulnerabilities in MySQL, the most serious of which is arbitrary code execution

  Description: MySQL is updated from version 4.1.13 to 4.1.22. Further information is available via the MySQL web site at http://dev.mysql.com/doc/refman/4.1/en/news-4-1-x.html

- **Networking**

  CVE-ID: CVE-2006-6130

  Available for: Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: Malicious local users may be able to cause an unexpected termination of system operations or execute arbitrary code with elevated privileges

  Description: A memory corruption issue exists in the AppleTalk protocol handler. This could allow a malicious local user to cause a kernel panic or gain system privileges. This has been described on the Month of Kernel Bugs web site (MOKB-27-11-2006). This update addresses the issue by performing additional validation of the input data structures.

- **Networking**

  CVE-ID: CVE-2007-0236

  Available for: Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: Maliciously-crafted AppleTalk requests may lead to a local denial of service or arbitrary code execution

  Description: A heap buffer overflow vulnerability exists in the AppleTalk protocol handler. By sending a maliciously-crafted request, a local user can trigger the overflow which may lead to a denial of service or arbitrary code execution. This has been described on the Month of Apple Bugs web site (MOAB-14-01-2007). This update addresses the issue by performing additional validation of the input data.

- **OpenSSH**

  CVE-ID: CVE-2007-0726

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: A remote attacker can destroy established trust between SSH hosts by causing SSH Keys to be regenerated

  Description: SSH keys are created on a server when the first SSH connection is established. An attacker connecting to the server before SSH has finished creating the keys could force the keys then to be recreated. This could result in a denial of service against processes that rely on a trust relationship with the server. Systems that already have SSH enabled and have rebooted at least once are not vulnerable to this issue. This issue is addressed by improving the SSH key generation process. This issue is specific to the Apple implementation of OpenSSH. Credit to Jeff Mccune of The Ohio State University for reporting this issue.

- **OpenSSH**

  CVE-ID: CVE-2006-0225, CVE-2006-4924, CVE-2006-5051, CVE-2006-5052

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: Multiple vulnerabilities in OpenSSH, the most serious of which is arbitrary code execution

  Description: OpenSSH is updated to version 4.5. Further information is available via the OpenSSH web site at http://www.openssh.org/txt/release-4.5.

- **Printing**

  CVE-ID: CVE-2007-0728

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: An unprivileged local user can overwrite arbitrary files with system privileges

  Description: Insecure file operations may occur during the initialization of a USB printer. An attacker may leverage this issue to create or overwrite arbitrary files on the system. This update addresses the issue by improving the printer initialization process.

- **QuickDraw Manager**

  CVE-ID: CVE-2007-0588

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

Impact: Opening a maliciously-crafted PICT image may lead to an unexpected application termination or arbitrary code execution

Description: A heap buffer overflow vulnerability exists in QuickDraw's PICT image processing. By enticing a user to open a maliciously-crafted image, an attacker can trigger the overflow which may lead to an unexpected application termination or arbitrary code execution. This update addresses the issue by performing additional validation of PICT files. Credit to Tom Ferris of Security-Protocols and Mike Price of McAfee AVERT Labs for reporting this issue.

- **QuickDraw Manager**

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: Opening a malformed PICT image may lead to an unexpected application termination

  Description: QuickDraw Manager has been updated to address the issue described on the Month of Apple Bugs web site (MOAB-23-01-2007), which may lead to an unexpected application termination. This issue can not lead to arbitrary code execution.

- **servermgrd**

  CVE-ID: CVE-2007-0730

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: Remote attackers may be able to access Server Manager without valid credentials

  Description: An issue in Server Manager's validation of authentication credentials could allow a remote attacker to alter the system configuration. This update addresses the issue by additional validation of authentication credentials.

- **SMB File Server**

  CVE-ID: CVE-2007-0731

  Available for: Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: A user with write access to an SMB share may be able to cause a denial of service or arbitrary code execution

  Description: A stack buffer overflow vulnerability exists in an Apple-specific Samba module. A file with an overly-long ACL could trigger the overflow, which may lead to a denial of service or arbitrary code execution. This update addresses the issue by performing additional validation of ACLs. This issue does not affect systems prior to Mac OS X v10.4. Credit to Cameron Kay of Massey University, New Zealand for reporting this issue.

- **Software Update**

  CVE-ID: CVE-2007-0463

  Available for: Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: Opening a maliciously-crafted Software Update Catalog file may lead to an unexpected application termination or arbitrary code execution

  Description: A format string vulnerability exists in the Software Update application. By enticing a user to download and open a Software Update Catalog file, an attacker can trigger the vulnerability which may lead to an unexpected application termination or arbitrary code execution. This has been described on the Month of Apple Bugs web site (MOAB-24-01-2007). This update addresses the issue by removing document bindings for Software Update Catalogs. This issue does not affect systems prior to Mac OS X v10.4. Credit to Kevin Finisterre of DigitalMunition for reporting this issue.

- **sudo**

  CVE-ID: CVE-2005-2959

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4 through Mac OS X v10.4.8, Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: A local user with sudo access to a bash script can run arbitrary commands with elevated privileges

  Description: A user-modified sudo configuration could allow environment variables to be passed through to the program running as a privileged user. If sudo is configured to allow an otherwise unprivileged user to execute a given bash script with elevated privileges, the user may be able to execute arbitrary code with elevated privileges. Systems with the default sudo configuration are not vulnerable to this issue. This issue has been addressed by updating sudo to 1.6.8p12. Further information is available via the sudo web site at

http://www.sudo.ws/sudo/current.html

- **WebLog**

  CVE-ID: CVE-2006-4829

  Available for: Mac OS X Server v10.4 through Mac OS X Server v10.4.8

  Impact: A remote attacker can conduct cross-site scripting attacks through Blojsom

  Description: A cross-site scripting vulnerability exists in Blojsom. This allows remote attackers to inject JavaScript into blog content that will execute in the domain of the Blojsom server. This update addresses the issue by performing additional validation of the user input. This issue does not affect systems prior to Mac OS X v10.4.

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Published Date: Oct 10, 2016

About the security content of iPhoto 6.0.6

This article has been archived and is no longer updated by Apple.

This document describes the security content of iPhoto 6.0.6, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

iPhoto 6.0.6

- **iPhoto**

  CVE-ID: CVE-2007-0051

  Available for: Mac OS X version 10.3.9, and Mac OS X version 10.4.3 or later

  Impact: Subscribing to a maliciously-crafted photocast may lead to arbitrary code execution

  Description: A format string vulnerability exists in iPhoto. By enticing a user to subscribe to a maliciously-crafted photocast, a remote attacker can trigger the vulnerability which may lead to arbitrary code execution. This has been described on the Month of Apple Bugs web site (MOAB-04-01-2007). This update addresses the issue by performing additional validation while handling photocast subscriptions. Credit to Kevin Finisterre of DigitalMunition for reporting this issue.

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Published Date: Oct 10, 2016

Final Cut Pro: Restart Final Cut Pro after sleep to prevent display issues

This article has been archived and is no longer updated by Apple.

Issue

If you put your computer to sleep while Final Cut Pro is running, it's possible that Final Cut Pro may display the content of its windows incorrectly.

Note: If this occurs, your project and media files will be unaffected.

Solution

If the content displayed in Final Cut Pro appears incorrectly after you wake your computer from sleep, save your project, then quit and restart Final Cut Pro.

To prevent this issue from occurring, quit Final Cut Pro before putting your computer to sleep. You can change sleep settings in the Energy Saver pane in System Preferences.

On a portable Mac, the computer will usually go to sleep if you close your computer's display, regardless of the settings made in Energy Saver*.

*For more information about subtleties in sleep and Energy Saver settings, refer to Mac OS X: Why your Mac might not sleep or stay in sleep mode.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

WebObjects 5: Updating time zone data

This article has been archived and is no longer updated by Apple.

This article describes a procedure for updating the time zone data for all WebObjects 5 versions. It is not necessary to use this procedure to update the WebObjects 5.3 time zone data.

Time zone data are stored in a file named zoneinfo.zip that may be present on the file system itself as well as in JavaFoundation.jar, javafoundation.jar, and wojavaclient.jar archives. These files are present in various file system locations depending on the WebObjects version and the operating system on which WebObjects is installed. Both WebObjects Developer and Deployment installations should be updated. These files can also be present on standalone Web servers without full WebObjects installations.

To update the WebObjects time zone data, current compiled time zone data must first be archived in a file named zoneinfo.zip. Then all existing instances of zoneinfo.zip must be replaced with this new zoneinfo.zip.

WebObjects applications do not need to be rebuilt to take advantage of the time zone data update.

The follow examples assume that Mac OS X is the operating system and /tmp is your working folder.

Important: The following procedure is known to work with WebObjects 5.2.4 under Mac OS X 10.4 and can be followed similarly for other WebObjects 5 versions on other platforms by experienced system administrators. However, because this procedure has been tested only with WebObjects 5.2.4 under Mac OS X 10.4, it may not work for all WebObjects 5 versions under all platforms. Users who are unfamiliar with the command line interface and manual configuration in general should proceed with caution or, preferably, seek assistance. Assistance in updating WebObjects' time zone data is not part of Apple's complimentary technical support but is included among the benefits of an AppleCare Enterprise Support fee-based support package.

Creating zoneinfo.zip

1. Locate one of the following three sources of compiled time zone data; any will work under Mac OS X, Windows, or Solaris.

    - The most convenient compiled time zone data source is the Mac OS X time zone data in /usr/share/zoneinfo. To incorporate the 2007 Daylight Saving Time (DST) changes, the Mac OS X "Daylight Saving Time Update", offered by Software Update, must have been installed.
    - Other UNIX systems such as Solaris include compiled time zone data. For example, under Solaris 8, compiled time zone data are in /usr/share/lib/zoneinfo. To incorporate the 2007 DST changes, the Solaris time zone data must be version 2007a or later.
    - Download raw time zone data and C source for Zone Info Compiler (`zic`). Build `zic` and use it to compile the raw time zone data. To incorporate the 2007 DST changes, time zone data version 2007a or later must be downloaded. Note that to build `zic` in Mac OS X 10.4 or later, you need to use:
      "`make CFLAGS=-DSTD_INSPIRED`".

2. Create a "zoneinfo.zip" ZIP archive of the contents of the compiled time zone data folder. For example, under Mac OS X in a Terminal window assuming that the com/webobjects/foundation/TimeZoneInfo path exists in your working folder, /tmp, enter these commands, each on a single line:

```
cd /usr/share/zoneinfo
zip -r /tmp/com/webobjects/foundation/TimeZoneInfo/zoneinfo.zip *
```

Updating time zone data

3. Log in with system administrator privileges.
4. Stop all running instances of WebObjects applications, JavaMonitor, and the WebObjects Task Daemon (wotaskd).
5. Replace all zoneinfo.zip files on your system with the new zoneinfo.zip file that you created in Step 2 above.

    - zoneinfo.zip can be in the Web server document folder, in /System and /Library on Mac OS X, and in $NEXT_ROOT/Library and $NEXT_ROOT/Local/Library on Windows and Solaris, where $NEXT_ROOT is the folder in which WebObjects was installed. On Mac OS X, Spotlight will not find all files that need to be updated, so use a utility such as `find` instead. On a standalone Web server without a full WebObjects Deployment installation, the files that need updating will be only in the Web server document folder.
    - Rename each found file with an "orig" file extension to preserve the original in its original folder should you need to revert the update.

6. Replace the zoneinfo.zip file in all JavaFoundation.jar, javafoundation.jar, and wojavaclient.jar archive files.

    - Search for these JAR files in the same file system locations as zoneinfo.zip (see step 5 above).
    - Rename each found file with an "orig" file extension to preserve the original in its original folder should you need to revert the update.
    - Use the jar command line utility (`jar`) to replace "com/webobjects/foundation/TimeZoneInfo/zoneinfo.zip" in each found .jar file with "com/webobjects/foundation/TimeZoneInfo/zoneinfo.zip" created in Step 2 above.
      Extending the example in step 2, to update /Library/WebObjects/lib/JavaFoundation.jar, enter the following statement on a single line

with /tmp as the current folder:

```
jar -uf /Library/WebObjects/lib/JavaFoundation.jar com
```

- The Java versions required by WebObjects 5 should include a jar utility (`jar`) that supports replacement of a component of a JAR archive. But some previous Java versions may not, so use the jar command-line utility (`jar`) included with Java 1.3.1 or later.

7. If WebObjects applications are deployed in self-contained WAR archives, JavaFoundation.jar, javafoundation.jar, wojavaclient.jar in each WAR archive must also be updated using a similar approach.
8. After all updates have been completed, restart wotaskd, JavaMonitor, and all instances of WebObjects applications.

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Published Date: Feb 20, 2012

Mac OS X Server 10.4: Installation language determines login window keyboard layout

This article has been archived and is no longer updated by Apple.

Issue or symptom

In Mac OS X Server 10.4, the keyboard layout used at the login window on the server matches the installation language, not the keyboard layout selected in Server Assistant. For example, if you choose English in the Installer, and then choose the French keyboard layout in the Server Assistant, login window will use the US Keyboard layout, not the French keyboard layout.

Solution

To switch to the desired keyboard layout at the login window, follow the steps in "Mac OS X: How to change the keyboard layout at the login window".

Published Date: Oct 10, 2016

Mac OS X Server 10.4: Unable to switch keyboard layouts in input menu

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you choose a keyboard layout in Server Assistant other than the one that matches the language chosen in the Mac OS X Server installer, you cannot switch between keyboard layouts in the input menu (the menu that often looks like a little flag icon).

For example, if you chose English when installing Mac OS X Server, but then choose the French keyboard layout in Server Assistant, when you log into the server after restarting you will have options for both French and US keyboards in the input menu. However, selecting the US flag icon will not change the keyboard layout.

Solution

1. From the input menu, choose **Open International**. This will open the Input Menu tab of the International pane in System Preferences.
2. Uncheck (deselect) the box next to the input method that does not work. ("US" in the example above.)
3. Reselect "Show input menu in menu bar".
4. Quit System Preferences.
5. Choose **Open International** from the input menu again.
6. Reselect the desired input method.
7. Quit System Preferences.

You may now switch between all available keyboard layouts in the Input Menu as desired.

Published Date: Oct 10, 2016

AirPort Extreme (802.11n): WPA Personal password requested when associating via WEP (TSN)

This article has been archived and is no longer updated by Apple.

If you have configured your AirPort Extreme (802.11n) Base Station to use WEP (Transitional Security Network (TSN)), but join the Base Station from a Mac or wireless device that supports WPA, you will be asked to enter your WPA Personal password.

If you join the AirPort Extreme (802.11n) Base Station from a computer that supports WEP only, you will be asked to enter your WEP password.

Note: The password you enter will be the same for either computer. For Mac computers that support WPA it is normal behavior to be prompted for WPA, even though the Base Station is configured to use WEP.

Additional information

The AirPort Extreme 802.11n base station can be configured to allow clients to associate with the wireless network using WEP (TSN), several types of WPA, and WPA2. WPA offers a higher level of security than WEP, but some wireless devices only support WEP.

If you would like to verify that your AirPort Extreme 802.11n Base Station is using WPA or WEP, open AirPort Utility, select your AirPort Base Station, then click the AirPort Summary tab.

Published Date: Oct 10, 2016

iTunes: Motorola phone featuring iTunes may not appear in Source list when connected to MacBook

This article has been archived and is no longer updated by Apple.

This article does not cover iPhone support in iTunes. For more information about iPhone support in iTunes, click here.

Symptom

When connecting a Motorola phone featuring iTunes to a MacBook, the phone may not appear in iTunes Source list.

Products Affected

- Motorola phone featuring iTunes
- MacBook
- MacBook (Late 2006)

Solution

Reinstalling the iTunes Phone Driver should resolve this issue:

1. Quit iTunes.
2. Navigate to the /System/Library/Extensions folder.
3. Open the Extensions folder.
4. Drag the iTunesPhoneDriver.kext file to the Trash.

   Note: You may be prompted to enter your Mac OS X administrator name and password when moving this file to the Trash. Enter your name and password if so prompted and click **OK**.

5. Download the latest version of iTunes.
6. Perform a custom install of iTunes and ensure that only "iTunes Phone Driver" is checked as shown below.

7. Restart the computer when prompted.

Related documents

301974: "Motorola phone featuring iTunes: Connectivity troubleshooting tips"
301975: "Using a Motorola phone featuring iTunes"
Published Date: Feb 20, 2012

Some photos may not be rotated correctly when viewed on Apple TV

This article has been archived and is no longer updated by Apple.

Photos that were originally saved using iPhoto version 4 (or earlier) and taken with a camera that saves rotation information may not display correctly on Apple TV. The photo looks fine in iPhoto, but Apple TV may rotate the photo twice when presented with this type of rotation information.

To correct this behavior:

1. Locate and select the photo in iPhoto.
2. From the **Photo** menu, choose **Revert to Original**.
3. In iTunes, resync the corrected photo onto your Apple TV.

Published Date: Oct 10, 2016

Apple Studio Display 15-inch LCD: Video Anomalies When Changing Resolutions

I have an Apple Studio Display 15-inch LCD and when I change resolutions, either through the control strip or from the Monitors and Sound control panel, my screen will either display vertical bars, a checkerboard pattern or go black for a few seconds before displaying the selected resolution. Is this normal?

This article has been archived and is no longer updated by Apple.

Yes, this is normal operation for any multiple resolution display. The display will show different video anomalies such as lines, checkerboard patterns, or may go black for a second in order for the video circuitry to switch to the selected resolution.

Published Date: Feb 20, 2012

QuickTime: Some applications don‘t launch after updating to QuickTime 7.1.5 in Mac OS X 10.3.9

This article has been archived and is no longer updated by Apple.

Issue or symptom

Certain third-party applications may no longer open or unexpectedly quit on when opening after updating to QuickTime 7.1.5 in Mac OS X 10.3.9. Affected applications include (but may not be limited to) FaxSTF, World of Warcraft, TurboTax 2006, and Full Tilt Poker.

The Console log may show the following error message:

```
Error locating symbol - dlcompat: Symbol "_JVTDecoOpen" not found
```

Solution

If you have a critical need to use one of these applications, choose one of the following:

- Perform an Archive and Install, preserving user and network settings, then apply all necessary updates with the exception of QuickTime 7.1.5.
  or
- Download and install QuickTime 7.2.

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Published Date: Feb 20, 2012

iBook G3 and G4: Power consumption and thermal output (BTU) information

This article has been archived and is no longer updated by Apple.

Learn about the power consumption and thermal output of iBook computers.

iBook G3 and G4 12-inch or 14-inch
All models with 45 or 65 Watt Wall Adapter

Power Consumption		Thermal Output	
Idle	**CPU Max**	**Idle**	**CPU Max**
13 W	53 W	44 BTU/h	181 BTU/h

Notes

1. Power consumption data (Watts) is measured from the wall power source and includes all power supply and system losses. Additional correction is not needed.
2. "CPU Max" is defined as running a compute-intensive test application that maximizes processor usage with battery in charge mode and is therefore maximum power consumption of the computer plus losses of the power adapter.
3. These numbers reflect power adapter maximum power consumption operating within ambient temperature range of 50° F to 95° F (10° C to 35° C).

Published Date: Feb 20, 2012

Sleep issues or a kernel panic may occur if a storage device is mounted via a PCI card that doesn‘t support sleep

This article has been archived and is no longer updated by Apple.

Issue or symptom

Issues may occur when waking the computer from sleep if a storage device is connected to a PCI or PCI/e card that doesn't support sleep, and its volume is mounted in the Finder:

- The computer may not wake
- A kernel panic may appear
- The computer may wake, but this alert message may appear, and the connected storage device will no longer be available (mounted):

  "**Device Removal**
  The device you removed was not properly put away. Data might have been lost or damaged. Before you unplug your device, you must first select its icon in the Finder and choose Eject from the File menu."

Products affected

- Desktop Macs with PCI/e expansion slots (such as Power Mac G4, Power Mac G5, and Mac Pro computers)
- PCI expansion cards with USB 2.0 ports
- PCI expansion cards with FireWire ports

Solution

Connect the storage device(s) to your Mac's built-in USB or FireWire port instead of through a PCI card. The internal bus should retain a physical connection to the device during sleep, as long as the device is FireWire/USB 2.0-compliant.

You should not connect storage devices--such as USB drives or FireWire drives, memory card readers, and other storage devices that are mounted as volumes in Finder--to PCI cards, unless the card is designed to prevent the computer from sleeping. PCI bus power is normally turned off in sleep mode; storage devices will be disconnected from Finder when this occurs, which may prevent the Mac from waking from sleep for several minutes (or at all).

Alternatively, you can use Energy Saver preferences in System Preferences to disable computer sleep. Move the "Put the computer to sleep when it is inactive for" slider to "Never". However, this would not prevent the computer from attempting to sleep if **Sleep** were chosen from the **Apple** menu.

Note: This issue does not affect devices such as printers, scanners, and other non-storage device because they do not "mount" in Finder. These devices re-enumerate when the computer wakes up. Some printers include media card readers, which may appear in the Finder as a storage volume. If the printer is connected to a PCI expansion card's USB or FireWire port, and the is card media mounted in Finder, the media's volume will be unmounted when the computer sleeps.

Additional information

Peripheral Component Interconnect (PCI) or PCI Express (PCI/e) cards allow you to customize your Mac for the special needs of your workflow. Adding PCI or PCIe cards can provide additional power and productivity by means of video cards, video management, RAID controllers, network cards, or more.

Related documents

303698	Mac OS X: Why your Mac might not sleep or stay in sleep mode
86400	Mac OS X: Apple Fibre Channel and SCSI PCI Card Can Prevent Deep Sleep

Published Date: Feb 20, 2012

Apple TV: Syncing time and streaming performance dependent on the speed of wireless network

This article has been archived and is no longer updated by Apple.

Syncing and streaming audio and video is much more demanding on a wireless network than browsing web pages or transferring small files.

The better your network performance is, the better your Apple TV experience will be. Note that the network will only be as fast as the slowest device. While Apple TV supports 802.11n, if your computer only supports 802.11b, then the network connection will work at 802.11b speeds.

There are a number of ways to optimize your wireless network performance. Wireless networks can be subject to interference from a number of sources. Obstructions built into walls and other structures can have a negative impact as well.

See this document for some help understanding interference and obstruction issues.

In optimizing your home network, the first place to start might be the location of your wireless access point or base station. Placing your wireless access point in a location with as few sources of interference and obstructions results in better performance.

The same interference and obstructions rules apply to the iTunes computer that contains the content you are syncing or streaming. If you are trying to sync or stream from a location where networking impediments are present, you may encounter longer syncing times and poor streaming performance.

Here are some things to check to see if your host system is in a good wireless location.

- If you are on a Mac, open Internet Connect (located in /Applications). The number of bars indicate the robustness of your networking connection. Move to a location where you have the maximum number of bars for the best performance.
- On a Windows-compatible computer, check the wireless icon on the bottom right hand corner of your screen. Move your cursor over the icon to see if you have Excellent signal strength. Left-click on the icon to obtain a more detailed display. Move to a location where your strength is the highest for best performance.

Finally, the location of your Apple TV unit is subject to the same interference and obstruction issues as the access point and iTunes host computer. Try to eliminate interference and obstructions as much as possible in that location or use a wired connection to your wireless access point if possible.

Published Date: Oct 10, 2016

Mac OS X 10.4.9: Media Eject key delay

This article has been archived and is no longer updated by Apple.

Issue or symptom

After installing Mac OS X 10.4.9, pressing the Media Eject key on the Apple keyboard does not immediately eject media from the optical disc drive nor display the on-screen eject symbol.

Solution

To prevent accidentally ejecting media, Mac OS X 10.4.9 adds a slight delay to the Media Eject key before it takes effect. To eject a disc, hold the Media Eject key. The disc will eject normally and the eject symbol will appear.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

iMovie HD 6: "Pop" or "Beep" noise when selecting iSight

This article has been archived and is no longer updated by Apple.

Issue or symptom

When selecting the iSight camera to record in iMovie, you may hear a "pop" or "beep" noise.

Solution

You can safely ignore the short feedback loop you experience when selecting iSight camera to capture source in iMovie. This does not indicate a hardware issue with your computer. Simply wait for the momentary feedback to stop before you continue to record with iSight from iMovie.

Published Date: Oct 10, 2016

Mac OS X: HP Setup Assistant unexpectedly appears

This article has been archived and is no longer updated by Apple.

Issue or symptom

After installing HP printer software, the HP Setup Assistant may appear each time the computer starts up.

Solution

To prevent the HP Setup Assistant from appearing each time the computer starts, complete the HP Setup Assistant or refer to this HP support article.

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Published Date: Feb 20, 2012

Apple TV does not play purchased content after "deauthorize all"

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If you Deauthorize All in your iTunes Store account, purchased content may no longer play on Apple TV.

To correct this, deauthorize and then re-authorize the computer that you sync Apple TV with.

1. In iTunes, choose **Store > Deauthorize Computer**.
2. Then choose **Store > Authorize Computer**. Enter your account login and password if prompted.
3. Select your Apple TV in the Source list and choose **File > Sync Apple TV**.

Published Date: Oct 10, 2016

Boot Camp Beta 1.2: Windows XP (SP2) unable to connect to 802.11n wireless router or AirPort Extreme (802.11n) Base Station

This article has been archived and is no longer updated by Apple.

Issue or symptom

With Boot Camp Beta 1.2, you may not be able to associate your Intel-based Mac to an AirPort Extreme (802.11n) Base Station, or any other 802.11n-based router using Windows XP (SP2). This can happen when the configuration is set to use 802.11n (5 GHz) and authentication uses WPA2 (in Security settings).

Solution

Microsoft has acknowledged this issue with Windows XP and has a fix available. Follow the steps in Microsoft "hotfix" 893357.

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Published Date: Feb 20, 2012

Where do I set my computer‘s name for Apple TV?

This article has been archived and is no longer updated by Apple.

Use these steps to change the shared name of your iTunes library when it appears as a source for syncing and streaming data on your Apple TV.

1. On your computer, open iTunes preferences (In Windows choose **Edit > Preferences** . On a Mac choose **iTunes > Preferences**).
2. Click General.
3. In the field labeled "Shared Name," enter the name you would like to appear.
4. Click OK.

The name you entered is what will appear on your Apple TV under Sources.

If you want to change the name of your Apple TV, double-click the name in the Source list in iTunes and type the new name.

Published Date: Oct 10, 2016

Apple Studio Display 15-inch LCD: No Video After Adjustment

I am using an Apple Studio Display 15-inch LCD with a Power Macintosh and when adjusting the screen position, via the Monitors and Sound control panel, my display lost video and went black. Is there a way to restore the video without restarting my computer?

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Yes, if you encounter a situation where you loose video after adjusting the display through the Monitors and Sound control panel, simply press and release the reset button on the bottom left corner on the front of the Apple Studio Display. The reset button is recessed and is labeled on the front of the display with the arrow pointing left .

Published Date: Feb 20, 2012

Apple TV: Where to find the Ethernet and wireless ID

This article has been archived and is no longer updated by Apple.

For some network configurations, you may need to know the Ethernet or Wireless ID* of your Apple TV. On Apple TV, you can find the network address using the following:

- Software version 1.x: **Settings > About**
- Software version 2.0: **Settings > General > About**

The Apple TV network IDs (both Ethernet and wireless) can also be found on the UPC label on the Apple TV box. This is the same label that lists the serial number for your Apple TV.

*** What is the Ethernet or Wireless ID?**

The Ethernet or wireless hardware address (also called a Media Access Control address or an IEEE MAC address) is a number that uniquely identifies a computer that has an Ethernet (or wireless) interface. It is typically written as six hexadecimal numbers separated by periods or colons, for example, "00:80:0:2:20:ef".

Published Date: Oct 10, 2016

Boot Camp Beta 1.2: Mac may not transition from Standby to Hibernate in Windows XP

This article has been archived and is no longer updated by Apple.

Issue or symptom

Two-button mice, such as the Apple Mighty Mouse, may prevent Microsoft Windows XP hibernation on an Intel-based Mac, even though hibernation is enabled in the Power Options Control Panel.

Solution

If you have a multi-button mouse device connected to your Mac, and hibernation in Windows XP does not work as expected, disable the power management setting "Allow this device to bring the computer out of standby".

Follow these steps while booted in (started from) Windows XP with the multi-button mouse connected to the computer:

1. Select Start > Control Panel.
2. Click the Performance and Maintenance category.
3. Select the System Control Panel icon.
4. Click the Hardware tab in the System Properties dialog box.
5. Click the Device Manager button.
6. Expand "Mouse and other pointing devices".
7. Double click HID-compliant mouse.
8. Click the Power Management tab in the HID-compliant mouse Properties window.
9. Deselect "Allow this device to bring the computer out of standby".
10. Click OK.

Additional information

For additional information about Hibernate in Windows XP go here, and search on "Hibernate".

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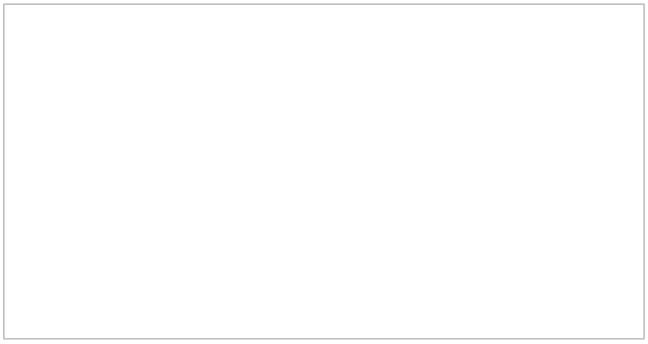

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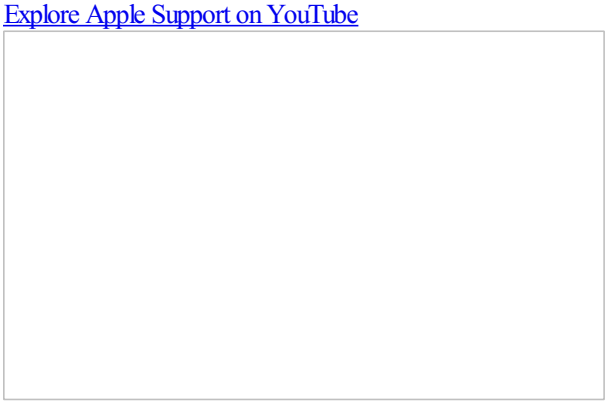

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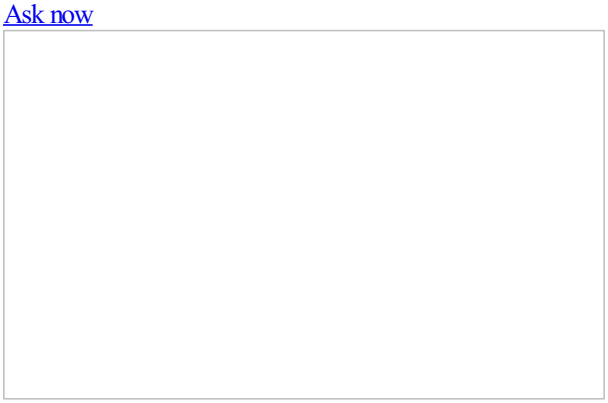

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- iPhone 6s Program for Unexpected Shutdown Issues
- Multi-Touch Repair Program for iPhone 6 Plus
- Apple AC Wall Plug Adapter Recall Program
- Beats Pill XL Speaker Recall Program
- All Programs

Apple Studio Display 15-inch LCD: Vertical Dark Bars At Startup

I have an Apple Studio Display 15-inch LCD that I just connected to my Power Macintosh CPU and noticed that there are dark bars running vertically down the screen when I started the computer. Is this an issue with my computer or my display?
This article has been archived and is no longer updated by Apple.
The dark bars that you are seeing are due to the tracking settings which need to be adjusted. To adjust the tracking for the Apple Studio Display you will need to install the Apple Display Software which shipped on a CD with your display or install Apple Displays 1.7.1 software <**http://www.info.apple.com/swupdates**> .

Adjusting Tracking

1) Install the Apple Display software.

2) Either select the control button on the bottom of the display or select the Monitors & Sound control panel from the Apple menu.

3) If using the control button, select the course tracking icon or the fine tracking icon.

4) In the Monitors & Sound control panel, select Flat Panel.

Figure 1, Monitors & Sound control panel

5) Click Tracking and adjust the tracking until the dark bars are not visible or until the screen appears smooth. You will need to adjust the Coarse adjustment first and then the Fine adjustment.

Figure 2, Tracking window
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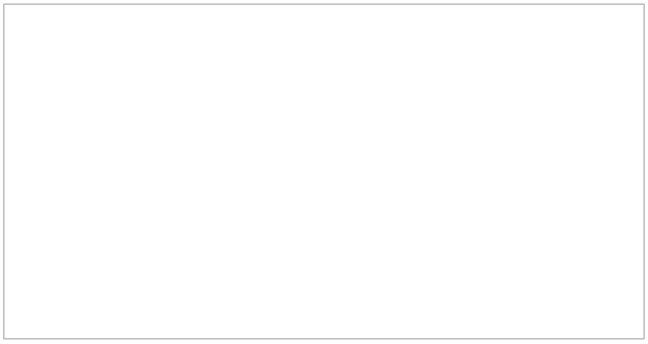

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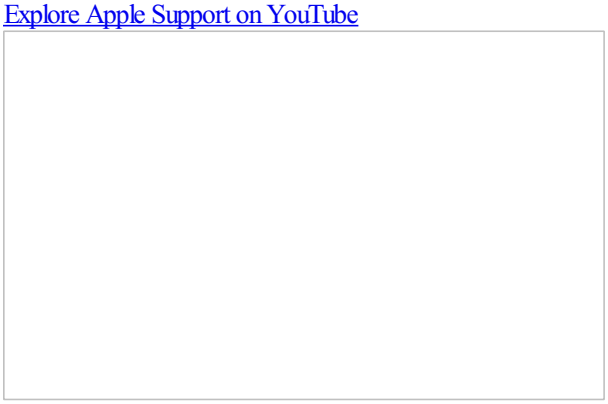

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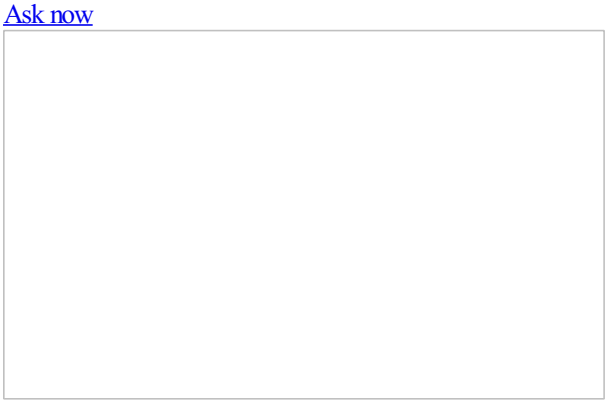

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Artbox Configuration

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Network Configuration

Access to lds from Java clients

The java clients need direct access to the LDS for data transfers. `/usr/artbox/conf/artbox.conf` contains the configuration for `LDS_ADDRESS`. This must be set to the IP address of the ethernet interface (found by using ifconfig).

Changes to `artbox.conf` are not read until the storeserver is restarted using:

```
service artbox restart
```

Webstart

The artbox http server runs on port 80. It is important that the apache ServerName is an address or hostname that can be resolved by remote machines, as it is used by the webstart php scripts to create a url. This can be achieved by having an entry in `/etc/hosts` of the hostname resolving to the IP address of the external network interface (see above), or manually by adding the ServerName directive to `/usr/artbox/conf/httpd.conf` (and restarting httpd). It should be possible to use an IP address as the ServerName if isn't possible to edit the local hosts file of the client.

To access the java client via webstart, browse the following the url:

```
http://<artbox>/artbox
```

Changes to `httpd.conf` are not read until the storeserver is restarted using:

```
service artbox restart
```

Artbox Licence

To install an artbox license, upload the file to your server and run the following command:

```
px_lic upload < <licence_key_file>
```

Be sure the date on the server is correct since if the date is accidentally set too early, a license created for today's date will not work.

Artbox Configuration

This section describes how to configure an artbox system from scratch, as well as how to re-initialise the database so that from-scratch configuration can be done on an existing system.

Note: ab_config usage is printed out when it is run with no arguments.

Devices, copy templates and analyse params

1. Create some devices. Use the javaui for this. The standard devices for a demo artbox should be:

   ```
   # ContentBase: [artbox Content] (/home/cb1)
   # Filesystem: [artbox Watchers] (/home/media/artbox_watchers)
   ```

   The creation order of devices is important, because each device is assigned an id starting at 1 from the time the database is first initialised, so in this case, artbox Content will have address `/dev/1` and artbox Watchers will have address `/dev/2`.

   Note: Whenever an entity (device or subscription) is created using ab_config, the address of the newly created entity is output by `ab_config`. `ab_config` can be found in `/usr/artbox/sbin`.

2. Create "standard" templates.

   ```
   ab_config --mode copy_templates
   ```

3. Configure analyse params.

```
ab_config --mode analyse_params --params /usr/artbox/conf/artbox_params
```

Note: steps 2 and 3 may be performed as many times as desired without starting from scratch.

If artbox has order management enabled the following steps are required for assets to be attached to orders.

```
ab_config --mode attach_sub_response
ab_config --mode srcattach_sub_response
```

Permitted templates

To allow all copy templates for a particular device, instead of configuring them manually in the java ui, this may be done using ab_config, e.g:

```
ab_config --mode permitted_templates --addr /dev/2
```

Note: the preferable thing to do now is use the Java UI for this (in the Administration/Template tab)

Rebuilding the database from scratch

```
artbox stop
/usr/artbox/sbin/ab_initdb --reinit
```

All the data needs to be purged from any contentbase devices that were configured (and are to be reconfigured with the same root path), so for each contentbase device, do:

```
cd <path to contentbase device>
rm -rf *
artbox start
```

Obviously this process will erase all your database configuration and data files which reside in contentbase devices.

Direct database queries

To access the artbox database directly, do:

```
psql px pxdb
```

More ab_config Tricks

Getting a list of devices

The easiest way to find out the address of a particular device is to use ab_config to search for devices:

```
ab_config --mode search --addr /dev
```

Because this output is rather overwhelming, and you might want to find a single device of a particular name, you can do the following:

```
ab_config --mode search --addr /dev | grep "DEVICE_NAME = artbox Content"
```

Which will show the device details for the device called "artbox Content."

Samba Configuration

After you finish configuring the artbox, you must configure Samba.

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Proximity Artbox Software Architecture Overview

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Artbox consists of a set of servers that communicate with each other by sockets (either TCP or Unix), and several clients. Each server is a single-threaded process written in C++ and using an asynchronous mode of operation. As far as possible all I/O is non-blocking. Artbox makes extensive use of the STL class and template library.

The major components of artbox are:

Storeserver

A server which handles the asset management role. It manages storage of media assets and metadata in the database. The storeserver is the main application server, in that most clients connect to the storeserver, and not to other components.

LDS

The Local Device Server is a server which handles communications with other devices and coordinates media operations such as transcoding. It knows nothing about the database. The storeserver sends requests to the LDS to perform device and media functions. It has implementations of a variety of network protocols.

Clipcopier

To perform video transcodes, the LDS starts up a clipcopier process for each transcode job. The clipcopier can either run locally on the same host as the LDS, or it can be configured so that a number of machines are available for running clipcopier jobs, using inetd.

OMS Server

The Order Management System server manages most aspects of the workflow state of orders. The OMS is still in transition from the previous PHP-only architecture, so some functions are still performed by PHP talking directly to the database. The direction Artbox is taking is to move database-access functions to the OMS server, so artbox has a single point of contact with the database for workflow operations.

Java UI

The main client for artbox is written in Java. It communicates with the Storeserver, sending requests and interpreting the responses.

PHP UI

There is also have a PHP client for artbox, so that artbox can be accessed via web pages. This is currently primarily used in parts of the Order Management system and the Newsroom system.

Newsroom Plugin

The newsroom plugin integrates with both iNews and ENPS newsroom systems, allowing news producers to both search for assets in the Storeserver and perform workflow functions in the OMS.

External components

- postgres
- quicktime
- ligos
- ffmpeg
- libjpeg
- libpng
- libtiff
- apache
- php
- libxml2
- mxflib
- ruby
- wine

- XMP toolkit

extensible metadata sets

Artbox's pxmodel and database schema allows complete customisation of what metadata fields particular types of entities will have.

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Artbox Custom Data Definition

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The scripts which artbox uses to configure the data as shipped can also be used to set up data required specifically for a particular customer.

The basic procedure is to create a new file in CSV (comma-separated value) format, which can be maintained by most spreadsheet programs, and create a new `initdata.conf` file. Details vary depending on what sort of data requires the customisation. These files must be located in:

```
/usr/artbox/sql/custom
```

Once you have the data set up, you can get your changes into the database by running:

```
/usr/artbox/sbin/ab_initdb
```

Depending on the type of data, you can get updates propagated to the database by running that script again after editing the data files. Just be aware that in most cases, we don't attempt to capture changes to user-modifiable data, as we want to avoid clobbering anything someone may have done using the artbox ui itself. However we do capture additions of new fields etc.

Configuring an initdata.conf file

The initdata.conf file can normally be found in `/usr/artbox/sql` on a production artbox system. It provides instructions as to which data files should be processed using which scripts. An example of what a current (at time of writing) one looks like is:

```
# $Id: initdata.conf,v 1.5 2004/10/21 06:55:41 ben Exp $
#
# Config file for initdata.rb. The first column is the table name, the
# second is a list single character flags and the third is an optional
# ruby sub-script. Flags are:
#
# g - .dat file must be generated from a .def file
# d - a .dat file is processed directly by the ruby script
# r - use script in 3rd colum to insert data rather than a direct copy
#
# The r flag takes precedence over c and only works if a script is
# specified. If the r flag is specified on its own, then the .def file
# is read directly by the .rb script
#
# Columns must be tab separated

# <table name>  <flags>  [script]
pxtraitclass  gr  insTraitClass.rb
pxuser   rd  insUser.rb
pxgroup   rd  insGroup.rb
pxgrouphasuser  rd  insGroupHasUser.rb
pxschema  gr  insSchema.rb
pxentitylinktype gr  insEntityLinkType.rb
pxenum   r  insEnum.rb
pxenumentry  r  insEnumEntry.rb
pxmdfield  r  insMdField.rb
pxtrait   gr  insTrait.rb
pxmdgroup  r  insMdGroup.rb
pxmdgrouphasfield r  insMdGroupHasField.rb
pxmdmap   r  insMdMap.rb
pxeventstatus  gr  insEventStatus.rb
```

The comments at the top explain the flag codes reasonably well. For each sort of data file, you could create a new data file of the appropriate type, and add a line to this file, using the script appropriate to the type of data.

You will need to create your own initdata.conf file inside the custom directory. The database update script will detect this file and execute it's contents.

Metadata Fields

The script which processes metadata fields is `insMdField.rb`. The data file needs to have fourteen columns, interpreted as follows:

- **`;fieldid:`** a unique concise text name for the field id, must be unique among all metadata fields
- **`;name:`** a name for the field
- **`;datatype:`** the data type, the name of a Kt-type, examples are KtInt, KtString, KtString32, KtDateTime, KtIntXY, PxTimecode,

KtBool

- **;description:** a description for the field, this is used in roll-over text
- **;rangemin:** if the field is of a numeric type, and the values are to have a lower limit, enter the value, otherwise enter null
- **;rangemax:** for numeric fields, the upper limit, if any, otherwise null
- **;suffix:** a text suffix to appear after the value in the user interface, eg units for a measurement
- **;removable:** t for true, f for false, whether or not it should be possible for the admin to remove this field definition in artbox, usually t
- **;definable:** t/f, whether or not to allow editing of the definition of this field in artbox, usually t for a custom field
- **;enumid:** if the values of this field are to be taken from an enum (aka look-up), the text id of the enum, otherwise null
- **;defaultvalue:** the default value for the field, if any, otherwise null
- **;fieldcategory:** a flag to indicate whether the field has any special meaning, usually 0 for custom fields
- **;mdgroupcategoryid:** for custom metadata, this should always be custom
- **;hints:** display hints to the user interface, see other fields for examples, leaving this blank is a good default

Metadata Group

Metadata groups are inserted with the insMdGroup.rb script. The data file has nine columns, as follows:

- **;mdgroupid:** a concise text id for the md group, unique among all metadata groups
- **;name:** the name of the md group
- **;trait:** which trait this md group corresponds to. For asset metadata, this will usually be either "asset", if the field should apply to all assets, or the specific name of the trait for an asset type (eg asset_graphic, asset_animation)
- **;removable:t/f,** whether this md group should be removable in artbox, usually t
- **;definable:t/f,** whether the configuration of this md group should be modifiable in artbox, usually t
- **;action:** a comma-delimited list of actions where this md group will apply, for example view details,edit details,create
- **;mdgroupcategoryid:** the category of md group, usually custom for custom md
- **;priority:** a number that determines the order of appearance of the tab for this md group, a higher number means it appears further to the right, ie after other fields. In practice 10 is about the highest number you'd want to use here.
- **;hints:** a set of values giving hints to the user interface about how to display this md group, blank is a good default

Metadata Map

Metadata maps are inserted with the insMdMap.rb script. The data file has three columns, as follows:

- **;fieldid1:** field ID of the source field to be mapped from
- **;fieldid2:** field ID of the destination field to be mapped to
- **;priority:** map priority. if more than one field id maps to the same field id, the map with the highest priority will take precedence. the higher the priority number, the higher the map priority.

Setup

Once you have a correctly formatted CSV document, the following preparations should be completed when importing data:

1. Copy the CSV document to `/usr/artbox/sql/custom`
2. Convert the line endings of the CSV document to Unix-style endings ('\\n'), if required
3. Remove any blank rows
4. Ensure that certain characters are correctly escaped for the database, single quote entries ' should be escaped to \\'
5. Add an entry to `/usr/artbox/sql/custom/initdata.conf` to reference the customer specific metadata.

   For example, if you have custom field metadata in a CSV document named "`/usr/artbox/sql/custom/mystation-md.csv`", then run the following command:

   ```
   mystation-md
   r
   insMdField.rb
   ```
6. Ensure that artbox is not running by running `artbox stop`
7. Run the update script and check to see if there are any error messages

   ```
   /usr/artbox/sbin/ab_initdb
   ```
8. Restart artbox by running `artbox start`

Published Date: Feb 20, 2012

Artbox Diagnostics

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There are various tools available to help diagnose the artbox storeserver.

Database Deadlocks

With multiple database sessions it is conceivably possible for two database sessions to deadlock each other because they both perform queries that require the database to acquire particular locks. And it is not possible to satisfy either, for example one session has a lock on A and wants a lock on B, the other session has a lock on B and wants a lock on A. Postgres will normally detect this condition after a short period and fail one query with an error, allowing the other to proceed, so in practice it's most likely that you'll just see the occasional error that reports a deadlock.

To view a database session deadlock you can use:

```
ps ax | grep postgres
```

This lists all current running postgres processes. Each process has a short description of what its currently doing in the ps output, which will be one of "idle" (ie. no query pending), "idle in transaction" (ie. a transaction has been started on this connection, but it's not currently processing a query) or actual SQL command (ie. SELECT, INSERT, etc).

If you see two connections that have the same SQL command state for a long period of time, that might be a deadlock. You would need to wait quite a long time, polling `ps` all the time, to be certain of that. If the deadlock doesn't resolve itself, then restarting the storeserver should fix it.

Internal Storeserver Deadlock

Much more common are internal storeserver deadlocks. The storeserver usually has multiple requests being serviced at once, and so has its own system of avoiding inconsistent simultaneous updates—it has its own locks, which can be a source of deadlock contention. The other sources of deadlock contention are the database connections and the connection to LDS.

If a particular request seems to have just stopped, a deadlock might be responsible.

You can get some idea of what is happening with `ps ax | grep postgres`, as before. Sometimes you can tell if there's a deadlock if one or more connections are noted as "idle in transaction." This might mean that whatever task within the storeserver that should be sending the next request to that connection is waiting for something else. The somethings else it might be waiting for include a database connection, which might be waiting for a database lock it can't get now, another internal lock, or an LDS request. However, it is possible for a deadlock to happen that does not involve the database, so don't rely on `ps` for the whole story.

If a deadlock happens, the best way to diagnose what is actually happening is to dump the state of the storeserver, which you can do using:

```
ab_config --mode dump_state
```

This will produce a file pms_state.dump in the working directory of the storeserver executable (on a production artbox this is normally /usr/artbox/logs) which contains a complete description of all the things going on inside the storeserver at that instant, all the tasks and subtasks, what they are doing, what locks they have, what locks they are waiting for, whether they have a database query in progress, whether they are inside a database transaction, and whether they have an LDS request in progress.

This command will now also get LDS to produce a similar dump file, which is useful for diagnosing any problems where LDS seems to be not responding, or seems to be doing some stuff but just ignoring others. The LDS dump file is called lds_state.dump and is written to the LDS working directory, which on a production artbox is also /usr/artbox/logs.

The file is laid out as an indented hierarchy, so you can see which tasks are children of other tasks. Generally speaking, a task will complete after all its children have completed, so any task that has children is likely to be waiting for one or more of its children to do something.

To fix a deadlock, restart the storeserver. Make sure to capture the state dump before restarting for further troubleshooting.

Published Date: Feb 20, 2012

Artbox Hardware Requirements

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Artbox Hardware Specifications

Current machine specifications for 'single box' artbox call for a machine with the following:

Processor
- 2 x 3.2 GHz Intel Xeon processors[1]

Memory
- 2 GB

Disk
- 2 x 36 GB 15,000 RPM disk in RAID 1 configuration for the system and database, this can't be used for media or artbox "tmp"
- *n* x *y* GB 10,000 RPM disk in RAID 5 configuration for media subsystem and artbox "tmp" (eg. 4 x 143 GB 10,000 RPM disks)

RAID Controller
- RAID controller with two channels

Network
- 2 x 1000Base-T NICs

For details on hardware and software for an artbox failover (high availability) solution, see artbox failover solution.

Performance Options

For an extra performance boost, the 10,000 RPM SCSI disks can be replaced with 15,000 RPM models. This would be more suitable with machines with high throughput. Also, the RAID controller could be replaced with a PCI-X model.

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Published Date: Feb 20, 2012

Artbox Still Sequence Support

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This page discusses the capabilities of artbox to support "still sequences" and "composite clips."

Currently, artbox only support poll watching and monitoring, but not scanning, of "still sequences." You can create a poll watcher to watch for entity type "still sequence."

Artbox supports copying from a stillseq plus audio composite clip to anything. This is performed by searching and watching a device for entity type composite clip.

Artbox supports copying from a clip to a "still sequence." This is performed by creating a template which has a wrapper format of "still sequence" with one video track.

Artbox supports copying a clip to a composite clip which can be a "still sequence" clip plus an audio clip. The template editor now supports creating these double wrapper templates.

Artbox does not support copying to a "still sequence" and creating an asset from it. This is true for all destination device types.

Published Date: Feb 20, 2012

Artbox: Edit In Place

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Important: If upgrading from a version of artbox prior to 3.2.6, make sure you follow all the upgrade notes for each intervening release.

"Edit-in-place" allows users to directly access asset "primary representations" through artbox. This functionality is only available to clients running on Mac OS or Windows. Filesystem, Contentbase, SMB, NFS and FTP devices are supported. For a client to make use of this functionality is must be able to make an smb share to the root of the given device.

Configuration

Supported devices now have two new fields, "Macintosh EIP URI" and "Windows EIP URI". These fields should be "file:" URI paths that point to the base of the associated device (usually smb paths).

A Mac path will look similar to: file://Volumes/PROXIMITY;TRINITY/devices/fs1.
A Windows path will look similar to: file://trinity/gavin/devices/fs1.

Currently the mount on the mac has to be manually mounted. There is also a new security action "Edit Media" that can be configured for each user group.

The client

There are two ways you can use the "Edit-in-place" functionality in the Java UI.

"Edit Media"

If the Java client supports EIP for a given asset the "Edit Media" option will be available in the asset context menu. When you select this option the source file will be opened with a native application associated with the source file type.

"Drag n Drop"

Click the area below the asset that says "Click here to access" If the task bar says "Drag to application (original)" you are able to drag the asset source to an application in your client (ie. Edit-in-place). if the task bar says "Drag to desktop (copy)" you only have a copy of the original asset source (ie. no Edit-in-place).

Published Date: Feb 20, 2012

Artbox Database Backup

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Important: If upgrading from a version of artbox prior to 3.2.6, make sure you follow all the upgrade notes for each intervening release.

Artbox Database Backup, Recovery and Failover

As of version 1.0.6 of the pxpginstall package, there is built-in support for backup and point-in-time-recovery of the postgres database. Documentation of how it works follows.

As of version 1.0.9 it also supports failover to a standby database using PITR.

Backup & Recovery

What you can achieve with the backup system provided here is to be able to recover from losing the main database storage, or from a severe database corruption, or even from a catastrophic user error. The advantages it has over using pg_dump are that you should be able to get back online in minutes, rather than hours, and you should be able to get back to a very recent state of the database, such as to within seconds before losing the database, rather than just to the last time you did a dump.

Failover

The failover support provided here lets you set up a dedicated standby database server (the secondary), which will keep itself busy keeping up to date with the primary. The database on the secondary will not be available for use while it is in standby mode.

If anything goes wrong with the primary, or it's necessary to shut it down for whatever reason, the secondary can be brought up and running in a state identical to the state the primary was in when it went down. The process of bringing the secondary up should be very quick (seconds after someone initiates it).

PITR

PITR (Point In Time Recovery) is a postgres feature which allows recovery of a database to a particular point in time by using the write-ahead-log (WAL) files. The WAL keeps a record of every transaction, and its initial intended use was for robustness against power failures and the like, so that the database can ensure reliability by syncing just the one file (such as the WAL file) to disk, rather than having to endure the cost of syncing all its open files to disk all the time. If a database goes down unexpectedly, for whatever reason, next time it starts up it tries to recover by playing forward whatever WAL files it can find. This feature can also be used to recover in other circumstances, allowing us to do both backups and failover.

Configuration

The configuration of both backup and failover is set up in the file `/var/lib/pgsql/pitr.conf`.

An example of its contents follows:

```
# $Id: pitr.conf,v 1.1 2005/09/09 05:52:27 tim Exp $

# A set of variables used to configure the use of PITR for
# backup and/or failover
# This file consists of a set of variable assignments, of the form
# <variable>=<value>
# note the lack of space around the equals sign

# do we want pitr backup enabled? 1 or 0
PX_DB_BACKUP_ENABLE=1

# path to archive, where we put the backup wal files
PX_DB_ARCHIVE_PATH=/var/lib/pgsql/backups

# path of the directory above the database directory
PX_DB_DATA_PATH=/var/lib/pgsql

# name of the database directory
PX_DB_DATA_DIR=data

# do we want failover enabled? 1 or 0
PX_DB_FAILOVER_ENABLE=1
```

```
# where we (the primary) write wal files so they can be fed to the secondary
PX_DB_FAILOVER_WRITE_PATH=/var/lib/pgsql/failover_write

# where we read wal files from if we are the secondary
PX_DB_FAILOVER_READ_PATH=/var/lib/pgsql/failover_read
```

The comments in the file are hopefully reasonably explanatory. Note that backup and failover can both be enabled or disabled independently. Set the corresponding variable to 0 to disable it.

For backup, the location to store backup files can be altered from the default if desired if you may to put the files on some remote networked storage.

For failover, both primary and secondary machines need a version of this file. The PX_DB_FAILOVER_WRITE_PATH is where the primary will put its failover files. The PX_DB_FAILOVER_READ_PATH is that very same directory, but as viewed from the point of view of the secondary. The secondary will read failover files from that directory.

Enabling PITR

PITR is enabled using the archive_command postgres configuration setting. If no form of PITR is being used, that should be set to `archive_command=''` in postgresql.conf.

To enable it, set it to `archive_command = '/usr/sbin/pitr_archive_wal.rb %p %f'`

Restarting the database server is required after changing this setting (which of course also requires shutting down artbox in the meantime).

As it is now possible to disable backup and/or failover in the pitr.conf file, you could keep PITR enabled in the archive_command setting as above, but disable both backup and failover in the pitr.conf; this wouldn't be too bad, it would just mean that pitr_archive_wal.rb script would be run every now and then and would do nothing.

To enable backup, enable pitr as above and set PX_DB_BACKUP_ENABLE=1 in the pitr.conf file. To enable failover, set PX_DB_FAILOVER_ENABLE=1 in the pitr.conf file. Set them to 0 to disable them.

Performing a Backup Snapshot

Periodically, such as a nightly cron job, the postgres data directories should be backed up. The script `/usr/sbin/pitr_backup.sh` when run as user postgres will do this job. Sometimes tar will emit complaints to the effect that some file or other changed while it was reading it—this is entirely expected.

This script will always make the backup snapshot (even if backups are disabled). If failover is enabled, it will also copy the snapshot to the failover directory. In other words, if you want failover but don't want backups, you have to run this script anyway, and you will get backup snapshots made.

Purging Old Backups

Old backup files can be purged using /usr/sbin/pitr_purge.rb which should also be run from cron. It accepts an optional argument, the number of days of data to keep. If you don't specify, it defaults to seven so that it throws out anything older than seven days. This script could be run either as root or as postgres.

Thought needs to be given about how long files should be kept for. If the ability to restore to some very ancient state is required, then separate provision needs to be made to copy selected snapshots somewhere where they will be archived.

Restoring from Backup

If you had to restore from a backup, do the following. First, if the existing database is still actually running, shut it down with the command:

```
artbox stop
service postgresql stop
```

Next, have a look in /var/lib/pgsql/backups/data:

```
ls -lrt /var/lib/pgsql/backups/data
```

What you should see in this directory is one or more tar balls, where the filenames have the form `YYYYMMDDhhmm.tar.gz`

The YYYYMMDDhhmm bit is the backup label. Find the most recent one, and use its backup label to run `/usr/sbin/pitr_restore.sh <backup label>` as the user postgres. You can expect this to take a few minutes.

Once it has finished, you should be able to restart the database server, `service postgresql start` and then restart artbox.

Note: It helps to have plenty of disk space available when restoring, since an extra copy of the database might be recreated.

Directory Layout

Artbox keeps the backups in a peer directory to the database data directory, `/var/lib/pgsql/backups`. Data snapshots are in `/var/lib/pgsql/backups/data` and archived write-ahead-log files are in `/var/lib/pgsql/backups/wal`. At the time artbox does a snapshot, grab the required wal files that might not be archived yet and put them in `/var/lib/pgsql/backups/pending_wal`.

The pitr_purge script throws out any pending_wal files that are already in wal, as well as throwing out anything older than the specified or default number of days.

The restore script moves aside the existing database data directory, if any, and recreates it by untarring the tarball from `/var/lib/pgsql/backups/data`. The archived WAL files are moved back during database startup. The expected result is that we restore the state of the database to the time of the last archived WAL segment, such as the most recent file in `/var/lib/pgsql/backups/wal`.

In the restore script try to use any remaining WAL files from the old installation just before the database quit. If these files are known to be damaged, the old data directory should be removed or moved aside before restoring.

The file `/var/lib/pgsql/pitr.conf` specifies the location of the backup archive. This could be set to somewhere else by editing this file.

Long-term and off-site backups

The backup system described here is short-term and has no built-in allowance for off-site backups. Which means that by itself it's not yet a really useful solution for securing some customer's data. What is needed in addition is to periodically make copies of the contents of `/var/lib/pgsql/backups` and store those copies remotely, or on tape. This could be done on any sort of basis—the more often it's done, the better the ability to recover to a recent state of the database.

Another option would be to make clever use of some remote filesystem and symlinks, and have the `/var/lib/pgsql/backups` directory (or another directory, if you've edited pitr.conf) actually be on a remote system.

Restoring to an empty database

If the server is currently unrestorable create a `/var/lib/pgsql/backups` directory and restore into it the most recent snapshot you have of that directory. You can restore on a similarly configured machine with the same version of postgres which is binary-compatible with the one that was running on the original machine.

Then do the restore process as described above.

Rebuild the text index in PostgreSQL 8.0

A limitation of postgres that is due to be removed in version 8.1 is that GiST indexes (which includes tsearch2 indexes) are not supported by the write ahead log. This means that restoring the database as described above will not by itself restore the state of the text index. An extra step is required. After following the above instructions for restoring start up:

```
psql px pxdb
```

and then run:

```
reindex table pxentity;
\\q
```

Note that in PostgreSQL 8.1 this step is not required.

Setting up a failover primary

You need to choose some shared directory, which can be accessed by both primary and secondary, on a partition which has a reasonable amount of free disk space. There are various ways to achieve a shared directory, such as NFS or shared arrays, but it's probably a good idea to make sure the directory is not on the local disk of the primary, since one of the things we want to be able to recover from is loss of the primary's disks.

You also need to ensure that both primary and secondary can access the directory, and that the user and group ids are consistent enough between the two that the same user/group on both machines will be identified. If the database files normally belong to the user postgres, belonging to group postgres, so as long as you ensure that this user exists on both machines with the same user number, and that the sharing is set up to let this user access the directory.

With this directory chosen, enable failover in the pitr.conf and set PX_DB_FAILOVER_WRITE_PATH to point to the directory. And then make sure that the usual pitr_backup.sh script has been run at least once (as user postgres) since you enabled failover (see the Performing a Backup Snapshot section above).

Setting up a failover secondary

Once you have the primary database running, with failover enabled, you then need to set the secondary going. Edit the pitr.conf file on the secondary to set PX_DB_FAILOVER_READ_PATH to point to the shared directory discussed above.

The secondary needs to already have a `/var/lib/pgsql directory`, since that's where the pitr.conf file is read from. This directory should be owned by postgres:postgres. You don't need a data directory there to start with, although the postgres rpm quite likely made one for you at installation time. It doesn't hurt if there is one there, as the standby script will move it aside.

The version of PostgreSQL on the secondary must match that of the primary in at least the first two numbers, for example 8.1.2 on primary and 8.1.3 on secondary is okay, but 8.1.3 on primary and 8.0.3 on secondary is not. The hardware architectures on the two machines must also match, for example Intel to PowerPC won't work. This is the same criterion for whether you can upgrade a database without needing a dump/restore. The best option, of course, is to have identical versions of postgres on the two machines.

If any database is running on the secondary, stop it now using: `service postgresql stop`.

Look in the failover read directory, in the snapshot subdirectory. You should see a set of files with filenames of the form `YYYYMMDDhhmm.tar.gz`.

The YYYYMMDDhhmm bit is the backup label. Choose the most recent file, and use its backup label in the following command as user postgres:

```
/usr/sbin/pitr_failover_start_standby <backup label>
```

Once this completes, start up the database using: `service postgresql start`.

From this point on, the database will be in recovery mode indefinitely. Every time the primary finishes a WAL file, it will be fed to the secondary, so the secondary will bring itself up to date. When no WAL file is available, the secondary just waits for it. The database on the secondary will refuse all connection requests in this state.

If anything goes wrong with the secondary, or you need to stop it for some reason, you certainly can. Just start again at the beginning of this section. There is no particular point to restarting the standby periodically, but if you need to you can restart it from any more recent snapshot.

Bringing the secondary up

Should you need to bring the secondary database up into production then there are two paths to follow. In the case where you are carefully and deliberately bringing the primary down, under control, then you should run the following on the primary, as user postgres, after stopping its database:

```
/usr/sbin/pitr_finalise_archive.rb
```

This ensures that the most recent WAL file, which may not have been completed, gets copied to the failover directory. The result of this should be that the secondary will notice it has an incomplete WAL file, and complete the recovery. If it hasn't come up after a minute or two, you could try running the command mentioned below for the uncontrolled failover case, since it seems conceivable that if you were incredibly unlucky with your timing, the last WAL file copied across by the above might actually be complete.

If necessarily, proceed to bring the secondary up as best it can. This means the database will not be completely up to date, as the last WAL file might not be available—how far behind it is depends on how active it has been recently.

You bring it up by running the following on the secondary, as user postgres:

```
/usr/sbin/do_pitr_failover.sh
```

What this does is write a file named FAILOVER_NOW into the failover read directory. The restore script will recognize this as the signal to stop the recovery, and bring the database up fully. The database should come up quite quickly.

Once you've followed either of the above two approaches, verify that the database is up and running by attempting to connect to it using:

```
psql px pxdb
```

As soon as you can do this, then the database is ready for use, and you can point the artbox storeserver and the order management system at it, such as by reconfiguring them.

Once your database is running again, you need to start planning for the future. Your former secondary is now your primary. Assuming that either the old primary or its replacement is going to be brought back online at some point, you will want that box to become the secondary. So you'll need to start again at the "Setting up a failover primary" section and go from there. The failover directory will need to be cleaned up a bit before you re-use it properly—it's probably a good idea to use a completely different directory for failover from now on. At the least, you need to remove the FAILOVER_NOW file.

From this point on, either the old secondary and primary will reverse roles forevermore, or you will revert the old secondary to being a secondary again— which means you have to do this failover process one more time, to get the old primary or its replacement up to date with the new primary, and then failover to become the new primary.

Dealing With Symlinks

A common scenario is that a postgres database may be installed in the usual `/var/lib/pgsql`, but the data subdirectory might be a symlink to some other drive or partition. You can handle that case by careful configuration. In the pitr.conf file (which is always in /var/lib/pgsql), you set the PX_DB_DATA_PATH to point to the actual directory the database lives in, such as the direct, non-sym-linked, path to the data. This still needs to be in the directory above the actual data directory. The PX_DB_DATA_DIR variable still needs to refer to the name of the directory in PX_DB_DATA_PATH that contains the database. It is important, by the way, for this directory name to be the same on both primary and secondary.

For example, if you have a big disk mounted at /var/big/disk, the actual database data directory is at /var/big/disk/data, and you have /var/lib/pgsql/data symlinked to /var/big/disk/data, then as long as you set PX_DB_DATA_PATH to /var/big/disk, everything should work.

Note: If the actual data directory is on some shared array, such as with a SAN, make sure that the two database servers do *not* use the same data directory.

Published Date: Feb 20, 2012

Artbox Failover Solution

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Highly Available Shared Disk Solution

This solution provides a highly available artbox, at relatively low cost. Two Dell PowerEdge 2850[1] are connected to a shared SCSI disk array (Dell PowerVault 220[1]). This will provide a Highly Available solution. In terms of this solution, this specifically means that if one of the PowerEdge 2850's becomes disconnected from shared storage (be it a hardware or software issue), the other box will automatically take over the load.

For the shared storage, direct attached SCSI was chosen as it offered the best price and performance for a two box solution. Networked Attached Storage (NAS) is not an option for this solution as it would not be able to offer the performance that we require for the database. Fiber Channel solutions, whilst they provide more flexibility, are prohibitively expensive and would not fit within the some organization's price constraints.

Hardware

- 2 x Dell PowerEdge 2850[1] but with the following changes:
  - 2 x 73 GB 15,000 RPM disks for the system (RAID 1)
  - PERC4/DC Raid Controller card for connection to the Power Edge
- 1 x Dell PowerVault 220S, with the following:
  - Redundant Power Supply
  - 9 x 146 GB 10,000 RPM SCSI Drives configured as RAID 5 (to give 1 GB available space, and a 'hot spare' disk)

or

- 1 x HP ProLiant DL380 G4 Packaged Cluster with MSA500 G2 (8U configuration), with the following:
  - 2 x 73 GB 15,000 RPM disks for the system (RAID 1) for each local server.
  - Redundant Power Supply
  - 14 x 146 GB 10,000 RPM SCSI Drives configured as RAID 5 (to give 1 GB available space, and a 'hot spare' disk), or as many as the customer requires.

Software

- 2 x RedHat ES 3.1[1]
- 1 x RedHat Cluster Manager[1]

Configuration Notes

- The PowerEdge 73G RAID 1 is used for the OS, artbox software and temp storage.
- The PowerVault is is configured (at least two partitions: 1 for db, 1 for media) & mounted. The postgresql database is copied to it, and a symlink made from /var/lib/pgsql
- Each box has it's own dongle, and there is a license server running on each box. The license will be the same, apart for the dongle ID.
- RedHat Cluster Manager[1] is used to manage the failover processes (mounting of RAID, starting and stopping of services, taking up of 'artbox' IP address)
- Each machine is configured with a fixed IP address. There is also an virtual address for 'Artbox' — this is taken up by whichever machine is the current 'master'.
- Heartbeat connection will be redundant—network and serial connection should be used
- When both boxes are operational, extra performance might be gained by used the secondary box as the LDS server (this requires testing). At a later stage, when we are able to support multiple LDS's we would be able to fully utilize CPU cycles on both boxes to allow more processes to run simultaneously

Limitations

- The maximum cable length of the SCSI cables is 4 meters, so the servers need to be in close proximity to each other
- As the media and database is shared, any corruption to those items will exist on both boxes. Other backup techniques should be used in conjunction with this solution.
- If the PowerVault shuts down unexpectedly, artbox becomes completely unavailable. Backups must be used to get up and running again.

Installation

TA24665_Artbox_Failover_Solution.pdf

1. Install RedHat ES[1] on each of the servers. Update with the latest patches if possible. Partition the RAID 1 internal system disks as you see fit. Give each one a fixed IP address and DNS entry.
2. Install artbox on each machine, as you normally would on a single box solution. Use the latest version available.
3. Disable any artbox components from being able to start up on the default runlevel. Eg:

   ```
   /sbin/chkconfig artbox off
   ```

   This needs to be done for the following init scripts:

   ```
   artbox  artbox-clipcopy  artbox-copyd  artbox-lds  artbox-newsroomd auto_pg_autovacuum postgresql
   ```

   Stop any of these services from currently running.

4. Attach a dongle to both boxes. Pxlicensed is required to be running on each box, and each will require a separate license.
5. Configure one of the RAID cards to have a different ID. Connect up the PowerVault to the two PowerEdges. From the primary box, make 4 partitions:
   - 2 x 10 MB; no filesystem required (they are RAW, for quorum)
   - 1 x 30 GB; format as ext3 (for DB)
   - 1 partition with the rest of the hard drive capacity; format as ext3 (for data)
6. Try to mount the db and data partition somewhere onto the first box. Write some data to them to check, then unmount. Do the same on the second box—you should see the previously written data. They cannot be mounted on each box at the same time otherwise data corruption occurs.
7. Make a directory on each box for both the DB partition and the Data partition. An example:

   ```
   /mnt/data   (for data partition)
   /mnt/db     (for database partition)
   ```

8. On the primary box, mount the database partition on the directory created for it. Move the database to it:

   ```
   mv /var/lib/pgsql /mnt/db/
   ```

   make a symlink from the new location to the old:

   ```
   ln -s /mnt/db/pgsql /var/lib/pgsql
   ```

   Unmount the DB partition.

   On the secondary box, remove the /var/lib/pgsql, and make the same symlink. Mounting the DB partition is not required.

9. Subscribe to, download and install the RedHat Cluster Manager[1] rpms. These should be the following (the version numbers might be different):
   - clumanager-1.2.22-2.i386.rpm
   - piranha-0.7.10-2.i386.rpm
   - rh-cs-en-3-2.noarch.rpm
   - ipvsadm-1.21-9.ipvs108.i386.rpm
   - redhat-config-cluster-1.0.3-1.noarch.rpm
10. Now would be a good time to read the cluster manager documentation was installed. it can be found here:

    ```
    /usr/share/doc/rh-cs-en-3
    ```

11. As per the documentation, create the raw devices file and start the service. This needs to be done on each box. As an example, here is the one on the prototype sydney setup. The partitions will vary:

    ```
    [root@artbox02 root]# cat /etc/sysconfig/rawdevices
    # raw device bindings
    # format:  <rawdev> <major> <minor>
    #          <rawdev> <blockdev>
    # example: /dev/raw/raw1 /dev/sda1
    #          /dev/raw/raw2 8 5
    /dev/raw/raw1   /dev/sdb1
    /dev/raw/raw2   /dev/sdb2
    ```

12. Now configure the cluster. The following files can be used for a base (username/pass is default xenobox pair):

    ```
    artbox02.proximity.com.au:/etc/clustermanager.xml
    artbox02.proximity.com.au:/etc/samba/smb.conf.media
    ```

    Get each of those files. In clustermanager.xml, you will need to modify the following two lines:

    ```
    <cluquorumd loglevel="6" pinginterval="" tiebreaker_ip="192.168.128.2"/>
    ```

    replace that with the ipaddress of hades for testing.

```
<service_ipaddress broadcast="192.168.128.255" id="0" ipaddress="192.168.128.217"
netmask="255.255.255.0"/>
```

replace with a spare ipaddress. This is the virtual address that will be the one used to contact Artbox and the samba service

In the smb.conf.media file, modify as appropriate for the setup (the 'path' might be the only variable that require changing for testing)

13. Edit /usr/artbox/conf/artbox.conf on each machine. Modify the following lines:

```
LDS_ADDRESS={whatever is the HA virtual address}
PX_LICENCE_SERVER={the local machine}
```

14. Start the cluster manager on each box:

```
/etc/init.d/clumanager start
```

Monitoring

To monitor the system, and the states of the various managed processes, the following X tool can be used:

```
redhat-config-cluster
```

This can either be run on the primary or the secondary machine. As it is an X program, it can be run remotely—for example, from a Mac OS X desktop

Testing

Simulation of node disconnection if the HA cluster can be done by shutting down or pulling network out of a node. In the case of the later, the HA software realizes that it cannot contact the tiebreaker IP, and does a hard forced reboot. In both cases, the secondary node should compensate within a few seconds. Either method can, and should, be tried.

The following should be tested when a node disconnection is simulated:

1. Searching assets (click on 'search' every few seconds). There should be about 10-15 seconds when a 'connection refused' is reported by the Java UI, but then should work as before.
2. Uploading to a device.
3. Copying to a the Samba share (into an watch folder).
4. Copying from the Samba share.
5. Copying from one device to another in the middle of a scan when a number of jobs are 'queued.'

Artbox will not put jobs that are in the RUN or WAIT state into FAIL state automatically. The benefit is that jobs that were in the RUN or WAIT state prior to the failover cannot be retried.

Upgrading

This process is a little more complex that a usual upgrade, as both nodes need to be upgraded.

1. Use the 'redhat-config-cluster' program to stop all of the 'Artbox' processes. Everything except Postgresql and auto_pg_autovacuum should be stopped
2. On the primary node, upgrade the artbox rpms as normal. Note that postgres should be running on this box
3. Using the 'redhat-config-cluster' program, start all of the previously stopped processes.
4. On the secondary box, there should be no artbox or postgres processes running. Upgrade the rpms as normal. The artbox rpm will print a number of errors to the effect that it is unable to connect the database - this can safely ignored. The software should now be up to date
5. Test the HA by intentionally failing the primary node

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Published Date: Feb 20, 2012

Apple Studio Display 15-inch LCD: Restart To Clear Video Anomalies

I have an Apple Studio Display 15-inch LCD and when I started up I noticed that the screen is all white to where you can't see anything on the display. Is this a problem with the display?
This article has been archived and is no longer updated by Apple.
When troubleshooting an Apple Studio Display for a failure specific to the display and not the computer.

First, with the system powered down, disconnect the ADB cable on the CPU, disconnect the AC power to the display, reconnect the AC power to the display, and reconnect the ADB cable on the CPU.

Next, verify the keyboard's ADB cable is connected to the ADB port on the Apple Studio Display's stand.

Finally, startup the computer to confirm if the problem remains.

A few examples of symptoms which may be resolved by performing the steps above are as follows:

- No video
- All white raster
- Random/predominant color throughout the display
- Function keys on the bottom of the display don't respond

If the problems remain, after performing the steps above, contact an Apple Authorized Service Provider in your area or contact Apple at 800-919-2775 for service.
Published Date: Feb 20, 2012

Artbox SMB Config

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After you finish installing Artbox, you must now make sure that samba is setup correctly. Here is the proper smb.conf file that needs to be present in /etc/samba/smb.conf. Remember to edit the workgroup setting as this is Station Specific.

```
# This is the main Samba configuration file. You should read the
# smb.conf(5) manual page in order to understand the options listed
# here. Samba has a huge number of configurable options (perhaps too
# many!) most of which are not shown in this example
#
# Any line which starts with a ; (semi-colon) or a # (hash)
# is a comment and is ignored. In this example we will use a #
# for commentary and a ; for parts of the config file that you
# may wish to enable
#
# NOTE: Whenever you modify this file you should run the command "testparm"
# to check that you have not made any basic syntactic errors.
#
#======================= Global Settings =====================================
[global]

# workgroup = NT-Domain-Name or Workgroup-Name
   workgroup = PROXIMITY

# server string is the equivalent of the NT Description field
   server string = Artbox

# if you want to automatically load your printer list rather
# than setting them up individually then you'll need this
   printcap name = /etc/printcap
   load printers = yes

# It should not be necessary to spell out the print system type unless
# yours is non-standard. Currently supported print systems include:
# bsd, sysv, plp, lprng, aix, hpux, qnx, cups
   printing = cups

# this tells Samba to use a separate log file for each machine
# that connects
   log file = /var/log/samba/%m.log

# Put a capping on the size of the log files (in Kb).
   max log size = 0

# Security mode. Most people will want user level security. See
# security_level.txt for details.
   security = share

# You may wish to use password encryption. Please read
# ENCRYPTION.txt, Win95.txt and WinNT.txt in the Samba documentation.
# Do not enable this option unless you have read those documents
   encrypt passwords = yes
   smb passwd file = /etc/samba/smbpasswd

# The following are needed to allow password changing from Windows to
# update the Linux system password also.
# NOTE: Use these with 'encrypt passwords' and 'smb passwd file' above.
# NOTE2: You do NOT need these to allow workstations to change only
#        the encrypted SMB passwords. They allow the Unix password
#        to be kept in sync with the SMB password.
   unix password sync = Yes
   passwd program = /usr/bin/passwd %u
   passwd chat = *New*password* %n\\n *Retype*new*password* %n\\n
     *passwd:*all*authentication*tokens*updated*successfully*

# You can use PAM's password change control flag for Samba. If
# enabled, then PAM will be used for password changes when requested
# by an SMB client instead of the program listed in passwd program.
# It should be possible to enable this without changing your passwd
# chat parameter for most setups.

   pam password change = yes
```

```
# This parameter will control whether or not Samba should obey PAM's
# account and session management directives. The default behavior is
# to use PAM for clear text authentication only and to ignore any
# account or session management. Note that Samba always ignores PAM
# for authentication in the case of encrypt passwords = yes

  obey pam restrictions = yes

# Most people will find that this option gives better performance.
# See speed.txt and the manual pages for details
   socket options = TCP_NODELAY SO_RCVBUF=8192 SO_SNDBUF=8192

# DNS Proxy - tells Samba whether or not to try to resolve NetBIOS names
# via DNS nslookups. The built-in default for versions 1.9.17 is yes,
# this has been changed in version 1.9.18 to no.
   dns proxy = no

#============================ Share Definitions ==============================
[homes]
   comment = Home Directories
   browseable = no
   writable = yes
   valid users = %S
   create mode = 0664
   directory mode = 0775

[media]
   comment = Media
   path = /home/media
   guest only = yes
   public = yes
   writable = yes
   force user = artbox
   force group = artbox
   create mask = 0765
```

Now that you have the correct config file and it is in /etc/samba/smb.conf, you must now make sure that Samba is setup to run on startup. Run `'chkconfig smb on'`. This will make Samba run each time at start-up.

Published Date: Feb 20, 2012

Artbox Newsroom Plugin Boolean Searching

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Boolean Searching

The Boolean Searching feature provides the Newsroom plugin user with a more powerful search interface through the single-field google-style search form. All metadata fields and all servers (for which the user has view permission) are searched with a single text criteria field. The feature allows the use of various special search tokens to intelligently narrow down a search. The special tokens are explained below.

Implicit ANDs

An 'AND' is implicitly added between each word in a search query. This means that each word in a search query is taken to be a separate query string, but all words are required in the metadata of each media object returned in the search results.

For example, a search query of *Foo Bar* would return all media objects who's metadata contains the string 'Foo' and also contains the string 'Bar'.

Exact Matching

In order to search for an exact string, including spaces and punctuation characters, place quotes around the string. Characters within a quoted string will be matched exactly, and no special meaning will be applied to any of the quoted characters.

For example, the search query *"Mug Shot"* will return media objects with the following metadata:

- Mug Shot
- Mug Shots of perps

but **not:**

- Mugs taking Shots
- Ugly Mugs get shot
- Mugs
- Shots of Paris

Explicit Exclusions

By prepending a '-' (minus character) in front of any search element, anything matching that element will be explicitly excluded from the search results.

For example, *rain -train* will return all media objects who's metadata contains the string 'rain', except for those that contain the string 'train'.

Word Stops

The substring search behavior may be inhibited by placing word stop anchors at the beginning and/or end of a word.

For example, <*rain*> will return media objects with the discrete word 'rain' in their metadata, but **not** 'train' or 'rains' or 'brain'.

Another example, <*cat* will return media objects with the word 'caterpillar' in their metadata, but **not** 'bobcat'.

Escaping Special Characters

Sometimes you may want to search for a character that usually has special meaning (ie. < > - " \\). In order to remove the special meaning of the character, precede the character with a '\\'. To search for a '\\', enter '\\\\'.

For example, you may want to search for 'help-desk'. In order to remove the special meaning of the character '-' (explicit exclusion), use the search query *help\\-desk*.

Published Date: Feb 20, 2012

Artbox Consolidated Install

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Operating System Install

1. Set up and test server platform. Install all hardware, create hardware based RAID's, disk mirroring, etc. Note server RAM amount and gather IP addresses, DNS and Gateway settings.
2. Obtain and create CD's of the most current version of Red Hat Linux (CentOS 4.6 is recommended, Artbox will not run on CentOS 5).
3. Boot from 1st Linux CD. Pick graphical install. Skip media check, apply a language choice, and then choose "Server" profile.
4. Choose manual partition with Disk Druid. Delete any and all existing drive partitions. If prompted, choose to erase all data.
5. Create 3 partitions on primary drive in the following order:
    - mount point:/boot - filesys type:ext3 - size:100MB - fixed size - force to be a primary partition
    - mount point:not applicable - filesystype:swap - size:(installed RAM x 2) - fixed size - force to be a primary partition
    - mount point:/ - filesys type:ext3 - fill to max allowable size - force to be a primary partition

    Note: if your system has a split RAID, set the data partition to `/home`

    - Accept "Grub" as default boot loader.
6. Configure NIC for fixed static IP address. Choose Activate on boot. Do not use DHCP. Include valid DNS and Gateway addresses. For hostname use artbox.yourdomain.
7. Set a secure root password that you will remember.
8. Disable SELinux, no firewall. Click "proceed" all the way past warning about no firewall.
9. For Package Group Selection, include:
    - XWindow
    - Gnome
    - Editors
    - Text Based Internet
    - Graphical based Internet
    - Server Configuration Tools
    - Mail Server
    - Windows File Server
    - FTP Server
    - Development Tools, click "Details" make sure "Ruby" is checked.
    - Administration Tools
    - System Tools

    Note: Do not install Postgresql or any type of SQL.

10. Complete the CD install and agree to Linux License.
    1. Set correct time and date. Enable net time protocol. Accept default servers and see if system connects and synchs. If not, contact your system admin to find the settings for your location.
    2. Make sure the hardware clock uses UTC
    3. Change to 1024x768 screen resolution. Do not create any other users. Skip sound check and additional package install.
    4. Continue and log in as root.

Artbox Installation

1. Create /root/artbox from a terminal session or at the command prompt.

    ```
    mkdir /root/artbox
    ```

2. Download the artbox install RPMs into /root/artbox

    The directory must contain:

    - artbox-3.2.11-1.i686.rpm
    - artbox-lds-3.2.11-1.i686.rpm
    - artbox-clipcopy-3.2.11-1.i686.rpm
    - artbox-clipcopy-common-1.0.7-1.i686.rpm
    - artbox-jre-1.4.2_03-1.i686.rpm
    - pxlicenced-1.0.6-1.i686.rpm
    - pxpginstall-1.0.8-1.i386.rpm

- postgresql-8.1.3-1PGDG.i686.rpm
- postgresql-contrib-8.1.3-1PGDG.i686.rpm
- postgresql-libs-8.1.3-1PGDG.i686.rpm
- postgresql-server-8.1.3-1PGDG.i686.rpm
- QuickTimeFullInstaller.exe

Note: The version numbers and names of the RPM may vary depending on which version of artbox you are running.

3. Obtain and secure a valid Artbox license file for the install.
4. Change to install directory.

```
cd /root/artbox
```

5. Uninstall any latent versions of Postgresql.

```
rpm -e --nodeps `rpm -qa | grep postgresql`
```

6. Install the Postgresql package installer.

```
rpm -Uvh pxpginstall-1.0.8-1.i386.rpm
```

7. Use this command to install all Postgresql RPM's. Do not install Postgresql RPM's manually.

```
pxpginstall --pg_81
```

8. Install License service.

```
rpm -Uvh pxlicensed-1.0.5-1.i686.rpm
```

9. Start the license service

```
service pxlicensed start
```

10. Install Artbox clipcopy-common and java modules.

```
rpm -Uvh artbox-clipcopy-common-1.0.7-1.i686.rpm
artbox-jre-1.4.2_03-1.i686.rpm
```

11. Start the clipcopy service

```
service artbox-clipcopy start
```

12. Install Apple Quicktime Licensing. This process emulates a Windows software installer.
    1. Copy the Quicktime installer program into the correct directory.

    ```
    cp /root/artbox/QuickTimeFullInstaller.exe  /usr/artbox/share/wine/Install/
    ```

    2. Start the Quicktime installer program from a shell prompt

    ```
    /usr/artbox/sbin/install_quicktime
    ```

    3. Direct a web browser to *http://ip-of-artbox:5802*
    4. Run through the installation, use the secure password you set earlier.
13. Install main Artbox modules.

```
rpm -Uvh artbox-3.2.11-1.i686.rpm artbox-lds-3.2.11-1.i686.rpm artbox-clipcopy-3.2.11-1.i686.rpm
```

14. Start the Artbox service.

```
artbox start
```

15. Start this service (this service is automatically launched in 3.2.12).

```
service pg_autovacuum start
```

Artbox Pre-Configuration

1. Create the directories needed for basic Artbox operation. "'Maintain name and capitalization patterns.'"

```
mkdir /home/artbox/Contentbase /home/artbox/Media /home/artbox/Watchers
```

2. Change the following settings in /etc/samba/smb.conf:

```
workgroup=(YOUR WINDOWS DOMAIN)
server string = Artbox
security = share
```

3. Add the following type of entry in /etc/samba/smb.conf. Modify and repeat for each share.

```
Artbox Watchers
```

```
comment = Artbox Watchers
path = /home/artbox/Watchers
guest only = yes
public = yes
writable = yes
force user = artbox
force group = artbox
create mask = 0765
```

4. Start the samba service manually.

```
service smb start
```

5. Make sure Samba starts automatically on server startup.

```
chkconfig smb on
```

6. Assign ownership to each Samba share directory

```
chown -R artbox /home/artbox/path-to-share
chgrp -R artbox /home/artbox/path-share
```

7. Mount and test samba shares from a computer client. Test file read and write to each share.

Artbox Basic Configuration

1. Edit /usr/artbox/conf/httpd.conf.

```
ServerName = ip-of-artbox
```

2. Edit /usr/artbox/conf/artbox.conf.

```
LDS ADDR = ip-of-artbox
```

3. Direct a web browser to *http://ip-of-artbox*. Artbox web interface should start up. Login with user "admin" and password "admin".
4. Go to License link. Copy and paste in the text of a valid Artbox license into the windows towards the bottom of the screen. Hit apply button. and then logout.
5. Restart the Artbox service to take the configuration and license changes.

```
artbox restart
```

6. Direct a Java-capable browser to *http://ip-address-of-artbox/artbox*.
7. Run the downloaded .JNLP program—This is Artbox's Java Interface. When login screen appears, type in artbox IP.
8. Login with username "admin" and password "admin"
9. Go to Administration > Devices (not the Devices tab on the main screen)
10. Create the very first device—a contentbase named "Artbox Contentbase", with path to /home/artbox/Contentbase.
11. Create a second device—a file system named "Artbox Watchers" with path to /home/artbox/Watchers
12. Run commands to initialize transcode templates.

```
ab_config --mode copy_templates
ab_config --mode analyse_params --params /usr/artbox/conf/artbox_params
```

Order Management System Configuration

1. Execute the following commands to initialize OMS responses.

```
ab_config --mode attach_sub_response
ab_config --mode srcattach_sub_response
```

2. In artbox java app, create a group labeled "artist".
3. Create the following directories on the artbox server.

```
mkdir /home/artbox/CompletedAssets /home/artbox/SourceMaterial
```

    1. Create a contentbase device in the java app called Completed Assets. Set path as /home/artbox/CompletedAssets.
    2. Create a contentbase device in the java app called Source Material. Set path as /home/artbox/SourceMaterial.
4. Log in to artbox web interface as admin
5. Create a City, and then a Station
6. Create user account for artist and add to artist group. Enable all permissions for artist.
7. In Global Settings choose Source Material and Completed Assets Servers
8. In Stations create a publish destination

Published Date: Feb 20, 2012

Mac OS X 10.4: Reading .plist preference files

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Mac OS X applications typically store preference settings in plist files, such as "com.apple.Mail.plist". In Mac OS X 10.3.9 and earlier, plist files were typically in XML format. In Mac OS X 10.4 and later, plist files are often in binary format for faster application performance.

Reading .plist files

Important: You should not usually modify preference files directly. Instead, you should use the associated application's Preferences menu(s) to customize your settings.

In certain situations you may need to read preference files directly using one of the following methods.

- The Property List Editor application, included with Apple's Developer Tools, can open plist files in both XML and binary formats.
- You can read a binary plist file in a text editor by converting it to XML format. Use the following command in Terminal:
  ```
  plutil -convert xml1 /path/to/file.plist
  ```
  Be sure to replace "/path/to/file.plist" with the full path to the file you want to convert.

Published Date: Feb 20, 2012

Apple Studio Display 15-inch LCD: Vertical Gray Bar With Monitors & Sound

I have an Apple Studio Display 15-inch LCD and when I adjust the horizontal position to the maximum position, either to the right or to the left, through the Monitors and Sound control panel, I notice a 1/4 inch vertical gray bar going down the edge of the screen. Is this normal?
This article has been archived and is no longer updated by Apple.
Yes, when you move the position of the display (raster) all the way to the left or right of the screen, you are displaying an area of the display which is outside of the usable area. This area can be various colors other than gray.

To correct this problem, adjust the screen position, through the Monitors and Sounds control panel, so that the raster is centered in the usable area of the display.
Published Date: Feb 20, 2012

Artbox: Setting Up a Samba Share

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This setup configuration allows for open sharing, where everyone has read, write, and delete permission.

```
[global]
  workgroup = proximity
  server string = Samba Server
  guest account = guest
  log file = /var/log/samba/%m.log
  max log size = 0
```

By default this is set to 'user' in RH8. It has to be changed to 'share' to work as a fully open share.

```
  security = share
  encrypt passwords = yes
  smb passwd file = /etc/samba/smbpasswd
  unix password sync = Yes
  passwd program = /usr/bin/passwd %u
  passwd chat = *New*password* %n\\n *Retype*new*password* %n
    \\n *passwd:*all*authentication*tokens*updated*successfully*
  pam password change = yes
  obey pam restrictions = yes
  socket options = TCP_NODELAY SO_RCVBUF=8192 SO_SNDBUF=8192

  dns proxy = no
```

Normally the [homes] section is enabled but it's recommended to disable it. A directory that is being shared as part of [homes] such as /home/publisher is treated differently then other directories, even if it is shared under another name.

```
[homes]
comment = Home Directories
browseable = no
writable = yes
valid users = %S
create mode = 0664
directory mode = 0775
```

If you want users samba doesn't recognize to be mapped to a guest user map to guest = `bad user`.

This is an example of how to share the CD-ROM of the machine running Samba to everyone. If you want to make a writable share, just change the path to something that can actually be written to and then change writable to yes.

```
[cdrom]
  comment = CD-ROM Drive
  path = /mnt/cdrom
  browseable = yes
  writable = no
  guest ok = yes
  public = yes
```

Make sure that the path that you are sharing exists. So for example if your path line read as "path = /foobar" you would go to the command line and do "mkdir /foobar". And after use "chmod 777 /foobar" on the directory you want shared.

Published Date: Feb 20, 2012

Artbox Workflow Configuration

This article has been archived and is no longer updated by Apple.

Disclaimer: Proximity Corporation provided the information in this article and it was deemed accurate as of 30 May 2007. Apple Inc. is not responsible for the article's content. This article is provided as is and may or may not be updated in the future.

The Artbox Workflow application can be configured in any number of ways so the purpose of this document is to outline a set of general guidelines that should hopefully allow us to have a consistent configuration across most customers.

General Setup

Devices

For any Artbox Workflow installation you will usually have configure at least 3 devices, the completed assets server, source material server and a publish destination device.

- Completed Assets Server
  - Media attached to an order for completion from the upload applet is copied to the completed assets server. An associated asset is always created and it's type is determined when the initial order is made. It is important to note that not all completed orders assets are stored on the completed assets server, if the order is completed using the Completed Material subscription the media could be sitting on any artbox device.
  - As a general rule the completed assets device has been configured as a dedicated "contentbase" (it should be a different device from the artbox contentbase /dev/1). A contentbase is advised as it stops filename clashes and is quicker to manage than a large flat filesystem.
- Source Material Server
  - The source material server is used to attach supplementary content to an order.
  - It is advised to configure this as a local filesystem device. The usefulness of the content is generally limited to the lifetime of the associated order.
  - This functionality seems to be rarely used.
- Publish Devices
  - Publish devices are the devices where media gets copied to when an order is complete.
  - Content also gets copied to a publish device after a drag n' drop operation.

User Groups

In general there are at least two types of Artbox user groups configured, artist and news.

- Users in the artist group in most cases use the artbox UI to manage content and the web based workflow tool to manage orders. Users in the artist group generally will access to all but the admin functionality in artbox.
- Users in the the news groups generally only use the newsroom plugin to access artbox. In most cases these users should only be able to browse assets that are play-out ready (ie. they shouldn't see the whole asset base). Because of this we are generally using the asset filter "stored on" field to restricts those in the news group to see assets stored on the "completed assets" device.
- Obviously user group requirements could vary from station to station.

Assets

All completed orders are associated with at least one asset. This is particularly important for the order process through the plugin as newsroom people will find complex asset types confusing and it makes the system more prone to operator error.

Completing Orders from a Quantel

Use the following suggested instructions to attach graphics to orders with one of the Quantel MO fields:

- Edit the "Asset Filter" metadata group and add the "Description (Custom Metadata)" field to the fields
- Create a metadata field called "Quantel Attach Tag Id" and make it a string type.
- Do a metadata map (1 way) from "Description (Quantel Netcomm device)" to "Quantel Attach Tag Id". (priority 3)
- Do a metadata map (1 way) from "Quantel Attach Tag Id" to "Attach Tag Id". (priority 3)
- Create an new media asset type called "Quantel Graphic". (with no mdgroups selected)
- Create a new metadata group called "Quantel Order" with the flowing properties
  - Add the "Quantel Attach Tag Id" field to Fields selected
  - Add "View Details, Edit Details and Create" to Actions
  - Add "Quantel Graphic" to Types[[/Traits]].
  - Set the priority to 5
- Edit the "Quantel Graphic" Asset type and add the "Graphic" and "Quantel Order" metadata groups

- Change all Quantel scans so that they create "Quantel Graphic" asset types. (The quantels must be scanned for this to work)
- Add a new copy response called "Quantel Order" and add the following details.
    - Destination "Completed Assets Server"
    - Template depends on destination device (Targa for Deko Stills)
    - Asset type "Graphic"
    - Default values otherwise
- Add a new asset subscription called "Quantel Order" with the following details.
    - Event Type Filter "Create"
    - Response List "Quantel Order"
    - Asset Type "Quantel Graphic" (on asset filter tab)
    - Description "begins with" "%t" (on asset filter tab)
- Now if you put an order tag in the description field of a MO on a quantel that MO will be attached to the order after the next scan on that device.

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Published Date: Feb 20, 2012

Managed Client: How to prevent profanity from appearing in Dictionary

This article has been archived and is no longer updated by Apple.

You can use Workgroup Manager to prevent profane words from appearing in Dictionary:

1. In Workgroup Manager, select a user, group, or computer list record.
2. Click Preferences, then the Details tab.
3. Click "Add" and add this preference file:
   ~/Library/Preferences/com.apple.Dictionary.plist

4. Double-click "com.apple.Dictionary" in the list to edit it.
5. Click the Often domain, then click the Clear button to remove all the entries.
6. Expand the Always domain by clicking the disclosure triangle.
7. Click "New Key" and enter this information:
   name: parentalControl
   type: boolean
   value: true

8. Click Apply Now.
9. Click Done to exit the preference editor.

The record selected in step 1 will now be prevented from seeing expletive words in Dictionary.

Published Date: Feb 20, 2012

Apple Studio Display 15-inch LCD: Calibration Lists No Profile

I have an Apple Studio Display 15-inch LCD and when I tried to calibrate the display, via the Monitors and Sounds control panel, there was no profile to select for the Apple Studio Display in the monitor calibration assistant's profile's list.

Is this a known problem and if so what profile should I select for this display?
This article has been archived and is no longer updated by Apple.
The monitor calibration assistant's profile list is a static list where the Apple Studio Display 15-inch LCD profile did not make it into the 2.5 release of ColorSync. This is not an issue with the profile selection in the Color panel, just with the calibration assistant's profile list.

Until the next release of ColorSync is available use the Generic Color LCD profile for this display.
Published Date: Feb 20, 2012

Fixing Incorrect Song or Album Listings in iTunes

This article has been archived and is no longer updated by Apple.

When you purchase a single track or extended play (EP), especially as a pre-release single before the release of a new album, then later complete the album using "Complete My Album", the track's information may be different from that of the rest of the tracks on the album. This will cause the album track listing to be out of order in your playlist.

The highlighted track below is an example of how these tracks may appear in your library. Notice that the track numbering as well as the album information is incorrect.

Correcting this is simple! By editing the information of the song, you will correct the sort order and the song will appear correctly in album view.

Editing Track Information in iTunes

To view and edit a song or video's info in iTunes:

- Click once on the track title to select it
- From the **File menu**, choose **Get Info**
- Click the Info tab

You will see a screen like the one below:

Before you edit the affected track's information, you may want to look at the Info tab of one of the other songs on the album. This may reveal additional information which is not displayed in your default iTunes track listing.

You can also use the arrow links in iTunes to find the updated track listing in iTunes for the affected song. Once you've found the track on the iTunes Store, select it and choose "Get Info" from the File Menu to view the Track Number and Album information for the file.

- **Note:** Arrow links to the iTunes Store can be enabled/disabled from the General tab in iTunes Preferences.

In this example there are three pieces of information that need to be updated to correctly display this track in the album's listing:

- Album title
- Track Number
- Genre
    - **Note:** The Genre information is not displayed in the iTunes track listing by default. The correct Genre listing can be found by viewing the Info tab on another song on this album.

Type in the correct information for this track and then click OK.

After you have changed the information and clicked OK to save your changes, the track will appear in your album listing in the correct order.

Published Date: Apr 5, 2013

Boot Camp 2.0: iSight camera gamma settings available for Windows XP-based applications

This article has been archived and is no longer updated by Apple.

With Boot Camp 2.0 (included with Mac OS X 10.5 Leopard) and Microsoft Windows XP, one of two gamma settings can be used for a built-in iSight camera. For example, you may need to enter the gamma value in a webcam application such as Skype.

The gamma value can be set to either 1.0 or 2.20.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Important: Apple does not provide technical phone support for installing, using, or recovering Microsoft Windows. Support is available for using Boot Camp Setup Assistant, as well as installing or restoring Boot Camp software while booted into Windows. Support articles and discussions may also be available on Apple's support website.

Published Date: Feb 20, 2012

Apple Remote Desktop: Accessing data in the ARD database using industry-standard database tools

This article has been archived and is no longer updated by Apple.

Apple Remote Desktop (ARD) versions 2.x and 3.x store system information gathered from clients in a PostgresSQL database. This data can be accessed by
industry-standard ODBC compliant database tools or via command-line tools. The data can used for archival purposes, customer reporting, and client maintenance.

To learn more about accessing the data in the Apple Remote Desktop database, see this article.

Note: The complimentary support included with new Apple products does not include assistance for these advanced procedures. However, fee-based support is available through AppleCare in both a single incident and annual contracts. See Mac OS X Server Software Support for more information. Single-incident support
contacts must be purchased directly from AppleCare.

Published Date: Feb 20, 2012

Apple Studio Display 15-inch LCD: Green Tint Throughout Display

I have an Apple Studio Display 15-inch LCD running on a Power Macintosh with a Radius ThunderColor 30/1600 PCI video card. I've noticed that my display has a predominant green color throughout. Is this a problem with my display or my computer?

This article has been archived and is no longer updated by Apple.

The predominant green color that is displayed is due to the fact that the video source syncs to green video which incorporates VSync and HSync. The best way to get around this problem would be to use a different video card or by obtaining a third party display adapter such as Griffin Technologies Mac Sync Adapter.

Published Date: Feb 20, 2012

iSync 2.4: Some Sprint-based Motorola phones may not be recognized

This article has been archived and is no longer updated by Apple.

Issue or symptom

iSync 2.4, included with the Mac OS X 10.4.9 Update, supports many phones. Due to firmware differences, some Sprint-based phones manufactured by Motorola may not be recognized by iSync 2.4.

Solution

The same versions of these Motorola phones offered for sale by other service providers are not affected by this issue.

This document will be updated as more information becomes available.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

About Xserve Lights-Out Management Firmware Update 1.1

This article has been archived and is no longer updated by Apple.

This update provides enhanced reliability to the monitoring and management features of Intel-based Xserves by changing the Lights-Out Management environment. This update is strongly recommended for all Intel-based Xserve systems.

The Xserve Lights-Out Management Firmware Update 1.1 works only on Intel-based Xserve systems. The update implements version 1.2.8 of the firmware.

Typically, the Lights-Out Management firmware can be updated without requiring a restart and without impacting running Mac OS X Server services. Existing lights-out management settings will be preserved and current Server Monitor connections will be interrupted. If an issue occurs during the firmware flashing, you may be prompted to perform a full firmware flash, which requires a server restart and re-entering the lights-out management settings in Server Monitor.

How to update the firmware

To update the firmware on your Intel-based Xserve, follow one of the sets of steps below. You can print these instructions so that they are available while you update the firmware.

Important: Before proceeding with the update, you should write down your current Server Monitor lights-out management settings.

Updating the Lights-Out Management firmware on the Xserve (directly)

A keyboard and display must be connected to the Xserve to perform these steps, as well as a video card to connect the display to.

1. Download the update using Software Update or the `softwareupdate` command line tool--you'll receive a disk image named Xserve LOM Firmware Update 1.1.
2. Mount the Xserve LOM Firmware Update 1.1 disk image.
3. Double-click the LOMUpdate.pkg file on the disk image. This installs the updater in (/Applications/Server) on the selected volume.
4. Go to (/Applications/Server).
5. Double-click Xserve Light-Out Management Firmware Update.
6. Click the Update button.
7. Authenticate as an administrator.

It will take about two minutes to complete the flash and verification. Once complete, the Update application will confirm the successful flash, display the current version, then quit. The Lights-Out Management processor in the Xserve automatically will reboot and should begin running the new firmware without any interruption to Mac OS X Server running on the host.

If an issue occurs during flashing, you may be prompted to perform a full firmware flash, which requires you to restart the server and re-enter the lights-out management settings in Server Monitor. After a full firmware flash, the current version will not be available until after the restart has been performed. You may run the updater again to see the current firmware version.

Updating the Lights-Out Management firmware remotely using Remote Desktop

1. On a Remote Desktop admin computer, download the update using Software Update or the `softwareupdate` command line tool--you'll receive a disk image named Xserve LOM Firmware Update 1.1.
2. Mount the Xserve LOM Firmware Update 1.1 disk image.
3. Copy the package file named "LOMUpdate.pkg" to the desktop of your Remote Desktop admin computer.
4. Open Remote Desktop.
5. Select the target server(s) in your preferred computer list
6. Either drag the "LOMUpdate.pkg" package into the window or choose **Install** from the **Remote Desktop** menu. This installs the updater in (/Applications/Server) on the selected volume.
7. From the **Remote Desktop**, choose **Unix** (for "Send Unix Command").
8. Run the updater on the Xserve by typing the following command on a single line:

```
sudo /Applications/Server/Xserve\\ Lights-Out\\ Management\\ Firmware\\ Update.app/Contents/MacOS/Xserve\\ Lights-Out\\ Management\\ Firmware\\ Update -remote
```

It will take about two minutes to complete the flash and verification. Once complete, the Update application will confirm the successful flash, display the current version, then quit. The Lights-Out Management processor in the Xserve automatically will reboot and should begin running the new firmware without any interruption to Mac OS X Server running on the host.

If an issue occurs during flashing, you may be prompted to perform a full firmware flash, which requires you to restart the server and re-enter the lights-out management settings in Server Monitor. After a full firmware flash, the current version will not be available until after the restart has been performed. You may run the updater again to see the current firmware version.

Updating the Lights-Out Management firmware remotely using Terminal

1. Use Terminal to SSH into the Intel-based Xserve that you wish to update (as an administrator).
2. After connecting via SSH, use the softwareupdate command line tool to install the Xserve LOM Firmware Update. This installs the updater application in the Xserve's (/Application/Server) directory, but does not perform the firmware update itself.
3. To update the firmware, run the updater with this single-line command (in Terminal):

```
sudo /Applications/Server/Xserve\\ Lights-Out\\ Management\\ Firmware\\ Update.app/Contents/MacOS/Xserve\\ Lights-Out\\ Management\\ Firmware\\ Update -remote
```

If your Intel-based Xserve's firmware needs to be updated, the Xserve Lights-Out Management Firmware Updater will display instructions (in English, in the Terminal window). If your firmware is up to date or if an issue occurs, that information will be sent to the Terminal window. If a full update is required, Terminal will display a message indicating that, and you'll need to re-enter your Lights-Out Management settings using Server Monitor when the update is complete.

If an issue occurs during flashing, you may be prompted to perform a full firmware flash, which requires you to restart the server and re-enter the lights-out management settings in Server Monitor. After a full firmware flash, the current version will not be available until after the restart has been performed. You may run the updater again to see the current firmware version.

Published Date: Oct 10, 2016

Windows clients can‘t bind to domain using NTLMv2 if the PDC‘s domain is lower case

This article has been archived and is no longer updated by Apple.

Issue or symptom

Windows clients can't bind to domain using NTLMv2 if the PDC's domain is lower case.

Solution

Use one of these workarounds:

- Use an uppercase domain name (Server Admin -> Windows -> Settings -> General tab)

  or

- When binding the Windows client to the PDC, specify the admin name with the domain name in upper case (`DOMAIN\\diradmin`, for example)

Published Date: Oct 10, 2016

AppleShare IP: Changing Default Port Numbers

The following questions are discussed in this article.

1) I would like to run another service on my Power Macintosh G3 Server besides AppleShare IP, but find that the AppleShare IP HTTP service is using Port 80. I'd like to change the port assignment. How do I accomplish that?

2) I changed the PORT resources to a range of ports made available to me by the network administrator. When I tried to log into the AppleShare server via the Chooser, a 'server not responding' message was displayed.
This article has been archived and is no longer updated by Apple.
1) I would like to run another service on my Power Macintosh G3 Server besides AppleShare IP, but find that the AppleShare IP HTTP service is using Port 80. I'd like to change the port assignment. How do I accomplish that?

Answer) The following modification will allow you to change the port assignments used by the AppleShare IP server. However, the steps provided are unsupported and could result in non-functioning software. Great care should be taken when performing software modifications. Always make a backup of your software prior to performing any changes or modifications.

The following steps refer to the use of the ResEdit utility, available via Apple Software Updates:
ResEdit_2.1.3.sea.bin The ResEdit utility is an unsupported application.

Warning: The instructions in this article refer to using ResEdit to alter your software. Apple, Inc., is not liable for any damage done to your software through the use of ResEdit.

1. Quit all open applications.

2. Make a copy of the "AppleShare IP Web & File" extension located in your System Folder: Extensions folder.

3. Launch the ResEdit application.

4. Using the File: Open dialog box, open the copy of the "AppleShare IP Web & File" extension you created in step 2.

5. ResEdit will display the available resources for the file. Locate and open the resource labeled "PORT."

6. In the PORT window, locate and open the resource ID #1002 "HTTP Port Number."

7. A window displaying the HEX (Base 16) values will appear, with the HEX value "0050" denoting the port value of 80.

8. Using a scientific calculator, convert the desired port number to a HEX value and enter in the number in the location of the current value.

For example, Port 85 would replace the default "0050" with "0055."

9. Close all windows, save your changes and quit ResEdit.

10. Move the original "AppleShare IP Web & File" extension to a safe location and move the modified version of the file into the System Folder: Extensions folder.

11. Restart the computer and startup the AppleShare IP file server.

2) I changed the PORT resources to a range of ports made available to me by the network administrator. When I tried to log into the AppleShare server via the Chooser, a 'server not responding' message was displayed.

Answer) The AppleShare Client looks for the AppleTalk over TCP/IP port number to be 548. The AppleShare Client won't be able to connect to the server if this is changed. There are two ways you can connect to an AppleShare Server whose PORT resource has been changed.

* Use the Chooser's "Server IP Address..." button to manually specify the IP address of the Server, followed by a colon and the new port number.

For example: www.yourdomain.com:xxxx

* Change the default AppleShare port number from the Macintosh client by altering the 'DATB' resource (ID=1407) to match that of the server's new AFP port number.

Note: The client won't be able to connect to another AppleShare IP 5.0 Server whose port number has not been altered, unless you manually

connect via Chooser's "Server IP Address..." button and explicitly specify the port number after the "colon" notation.

Published Date: Feb 20, 2012

Aperture: Importing Images from Leaf Aptus CF Cards

This article has been archived and is no longer updated by Apple.

Issue or symptom

Compact Flash cards formatted on Leaf Aptus cameras do not show up as CF cards in the Aperture Import panel.

Solution

This is an issue with the way the camera formats the CF card. The card shows up as a mounted hard drive. To access the images from the card, click Local Files in the Import panel, and then select the CF card from the list of external volumes. Take care not the use the "Store files in their current location" option when importing images from Leaf CF cards in this way.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Mac OS X: Using a UFS-formatted volume as a startup disk is not recommended

This article has been archived and is no longer updated by Apple.

Using Mac OS X with a UFS-formatted startup ("boot") volume may be possible, but it is not recommended (deprecated).

Published Date: Oct 10, 2016

PowerBook G3 Series: System Reset Key Sequence

This article describes the new key sequence used to reset the computer.
This article has been archived and is no longer updated by Apple.
The Macintosh PowerBook G3 Series has a new key sequence to reset the system: Shift-Fn (function)- Ctrl (control)-Power. This sequence is also printed on the back I/O panel of the PowerBook.

The first three keys are located in the lower left hand corner of the keyboard. The power button is just above the F9 and F10 keys.

This key sequence is the equivalent to a hardware reset button and will reset the Power Management Unit and the PRAM (parameter RAM).

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. To visually identify which type of computer you have, close the display and inspect the display case. A Macintosh PowerBook G3 has a small, six-color Apple logo on the display case. A Macintosh PowerBook G3 Series computer has a large Apple logo on the display case that is not six-colored.

Published Date: Feb 20, 2012

About Security Update 2007-004

This article has been archived and is no longer updated by Apple.

This document describes Security Update 2007-004, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Security Update 2007-004

- **AFP Client**

  CVE-ID: CVE-2007-0729

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: A local user may obtain system privileges

  Description: Under certain circumstances, AFP Client may execute commands without properly cleaning the environment. This may allow a local user to create files or execute commands with system privileges. This update addresses the issue by cleaning the environment prior to executing commands.

- **AirPort**

  CVE-ID: CVE-2007-0725

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: A local user may be able to execute arbitrary code with elevated privileges

  Description: A buffer overflow vulnerability exists in the AirPortDriver module which processes control commands for AirPort. By sending malformed control commands, a local user could trigger the overflow which may lead to arbitrary code execution with elevated privileges. This issue affects eMac, iBook, iMac, PowerBook G3, PowerBook G4, and Power Mac G4 systems equipped with an original AirPort card. This issue does not affect systems with the AirPort Extreme card. This update addresses the issue by performing proper bounds checking.

- **CarbonCore**

  CVE-ID: CVE-2007-0732

  Available for: Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: A local user may be able to execute arbitrary code with elevated privileges

  Description: The CoreServices daemon could allow a local user to obtain a send right to its Mach task port, which may lead to arbitrary code execution with elevated privileges. This update addresses the issue by through improved checks in the CoreServices interprocess communication. This issue does not affect systems prior to Mac OS X v10.4.

- **diskdev_cmds**

  CVE-ID: CVE-2007-0734

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: Opening a maliciously-crafted UFS disk image may lead to an unexpected application termination or arbitrary code execution

  Description: A memory corruption vulnerability exists in fsck. It is possible to cause fsck to be run automatically on a disk image when it is opened. By enticing a user to open a maliciously-crafted disk image, or to run fsck on any maliciously-crafted UFS filesystem, an attacker could trigger the issue which may lead to an unexpected application termination or arbitrary code execution. This update addresses the issue by performing additional validation of UFS filesystems.

- **fetchmail**

  CVE-ID: CVE-2006-5867

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: fetchmail may send passwords in plain text, even when configured to use TLS

  Description: fetchmail is updated to version 6.3.6 to fix a vulnerability that could allow authentication credentials to be sent in plain text, despite being configured to use TLS. This issue is described on the fetchmail web site at http://fetchmail.berlios.de/fetchmail-SA-2006-02.txt

- **ftpd**

  CVE-ID: CVE-2006-6652

  Available for: Mac OS X v10.3.9, Mac OS X v10.4.9

  Impact: FTP operations by authenticated FTP users may lead to arbitrary code execution

  Description: lukemftpd has been updated to version tnftpd 20061217 to address a buffer overflow vulnerability in the handling of commands with globbing characters that could lead to arbitrary code execution. This issue does not affect Mac OS X Server v10.3.9 or Mac OS X Server v10.4.9. Credit to Kevin Finisterre of DigitalMunition for reporting this issue.

- **GNU Tar**

  CVE-ID: CVE-2006-0300

  Available for: Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: Listing or extracting a maliciously-crafted tar archive may lead to an unexpected application termination or arbitrary code execution

  Description: A buffer overflow vulnerability exists in the handling of PAX extended headers in GNU tar archives. By enticing a local user to list or extract a maliciously-crafted tar archive, an attacker can trigger the overflow which may lead to an unexpected application termination or arbitrary code execution. This issue has been addressed by performing additional validation of tar files. This issue does not affect systems prior to Mac OS X 10.4.

- **Help Viewer**

  CVE-ID: CVE-2007-0646

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: Opening a help file with a maliciously-crafted name may lead to an unexpected application termination or arbitrary code execution

  Description: A format string vulnerability exists in the Help Viewer application. By enticing a user to download and open a help file with a maliciously-crafted name, an attacker can trigger the vulnerability which may lead to an unexpected application termination or arbitrary code execution. This has been described on the Month of Apple Bugs web site (MOAB-30-01-2007). This update addresses the issue by eliminating any format string processing of file names.

- **HID Family**

  CVE-ID: CVE-2007-0724

  Available for: Mac OS X v10.4 through Mac OS X v10.4.9, Mac OS X Server v10.4 through Mac OS X Server v10.4.9

  Impact: Console keyboard events are exposed to other users on the local system

  Description: Insufficient controls in the IOKit HID interface allow any logged in user to capture console keystrokes, including passwords and other sensitive information. This update addresses the issue by limiting HID device events to processes belonging to the current console user. Credit to Andrew Garber of University of Victoria, Alex Harper, and Michael Evans for reporting this issue. This fix was originally distributed via the Mac OS X v10.4.9 update. However, due to a packaging issue it may not have been delivered to all systems. This update redistributes this fix in order to reach all affected systems.

- **Installer**

  CVE-ID: CVE-2007-0465

  Available for: Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: Opening an installer package with a maliciously-crafted name may lead to an unexpected application termination or arbitrary code

execution

Description: A format string vulnerability exists in the Installer application. By enticing a user to download and install an installer package with a maliciously-crafted file name, an attacker can trigger the vulnerability which may lead to an unexpected application termination or arbitrary code execution. This issue has been described on the Month of Apple Bugs web site (MOAB-26-01-2007). This update addresses the issue by eliminating any format string processing of file names. This issue does not affect systems prior to Mac OS X v10.4.

- **Kerberos**

  CVE-ID: CVE-2006-6143

  Available for: Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: Running the Kerberos administration daemon may lead to an unexpected application termination or arbitrary code execution with system privileges.

  Description: An uninitialized function pointer vulnerability exists in the MIT Kerberos administration daemon (kadmind), which may lead to an unexpected application termination or arbitrary code execution with system privileges. Further information on the issue and the patch applied is available via the MIT Kerberos website at http://web.mit.edu/kerberos/advisories/MITKRB5-SA-2006-002-rpc.txt. This issue does not affect systems prior to Mac OS X v10.4. Credit to Andrew Korty of Indiana University for reporting this issue to the MIT Kerberos Team.

- **Kerberos**

  CVE-ID: CVE-2007-0957

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: Running the Kerberos administration daemon or the KDC may lead to an unexpected application termination or arbitrary code execution with system privileges.

  Description: A stack buffer overflow vulnerability exists in the MIT Kerberos administration daemon (kadmind), as well as the KDC, which may lead to an unexpected application termination or arbitrary code execution with system privileges. Further information on the issue and the patch applied is available via the MIT Kerberos website at http://web.mit.edu/kerberos/advisories/MITKRB5-SA-2007-002-syslog.txt. Credit to the MIT Kerberos Team and an anonymous researcher working with iDefense for reporting this issue.

- **Kerberos**

  CVE-ID: CVE-2007-1216

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: Running the Kerberos administration daemon may lead to an unexpected application termination or arbitrary code execution with system privileges

  Description: A double-free vulnerability exists in the GSS-API library used by the MIT Kerberos administration daemon (kadmind), which may lead to an unexpected application termination or arbitrary code execution with system privileges. Further information on the issue and the patch applied is available via the MIT Kerberos website at http://web.mit.edu/kerberos/advisories/MITKRB5-SA-2007-003.txt. Credit to the MIT Kerberos Team for reporting this issue.

- **Libinfo**

  CVE-ID: CVE-2007-0735

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: Visiting malicious websites may lead to an unexpected application termination or arbitrary code execution

  Description: In some cases, Libinfo does not correctly report errors to applications that use it. By enticing a user to visit a maliciously-crafted web page, an attacker can cause a previously deallocated object to be accessed, which may lead to an unexpected application termination or arbitrary code execution. This update addresses the issue by performing appropriate error reporting in Libinfo. Credit to Landon Fuller of Three Rings Design for reporting this issue.

- **Libinfo**

  CVE-ID: CVE-2007-0736

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: Remote attackers may be able to cause a denial of service or arbitrary code execution if the portmap service is enabled

Description: An integer overflow vulnerability exists in the RPC library. By sending maliciously-crafted requests to the portmap service, a remote attacker can trigger the overflow which may lead to a denial of service or arbitrary code execution as the 'daemon' user. This update addresses the issue by performing additional validation of portmap requests. Credit to the Mu Security Research Team for reporting this issue.

- **Login Window**

  CVE-ID: CVE-2007-0737

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: A local user may obtain system privileges

  Description: Login Window does not sufficiently check its environment variables. This could allow a local user to execute arbitrary code with system privileges. This update addresses the issue by through improved validation of Login Window environment variables.

- **Login Window**

  CVE-ID: CVE-2007-0738

  Available for: Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: The screen saver authentication dialog may be bypassed

  Description: Under certain conditions, the user's preference to "require a password to wake the computer from sleep" is ignored, and a password is not required to wake from sleep. This update addresses the issue by through improved handling of this preference.

- **Login Window**

  CVE-ID: CVE-2007-0739

  Available for: Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: The loginwindow authentication dialog may be bypassed

  Description: Under certain conditions, the software update window may appear beneath the Login Window. This could allow a person with physical access to the system to log in without authentication. This update addresses the issue by only running scheduled tasks after the user login. This issue does not affect systems prior to Mac OS X v10.4.

- **network_cmds**

  CVE-ID: CVE-2007-0741

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: Remote attackers may be able to cause a denial of service or arbitrary code execution if Internet Sharing is enabled

  Description: A buffer overflow vulnerability exists in the handling of RTSP packets in natd. By sending malformed RTSP packets, a remote attacker may be able to trigger the overflow which may lead to arbitrary code execution. This issue only affects users who have Internet Sharing enabled. This update addresses the issue by performing additional validation of rtsp packets.

- **SMB**

  CVE-ID: CVE-2007-0744

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: A local user may obtain system privileges

  Description: Under certain circumstances, SMB may execute commands without properly cleaning the environment. This may allow a local user to create files or execute commands with system privileges. This update addresses the issue by cleaning the environment prior to executing commands.

- **System Configuration**

  CVE-ID: CVE-2007-0022

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: Local admin users may execute arbitrary code with system privileges without authentication

Description: Admin users have the ability to alter system preferences through the writeconfig utility. When the writeconfig utility launches the launchctl utility, it does not clean the environment inherited from the user. This could allow arbitrary code execution with system privileges without authentication. This issue has been described on the Month of Apple Bugs web site (MOAB-21-01-2007). This update addresses the issue by cleaning the environment before calling the launchctl utility.

- **URLMount**

  CVE-ID: CVE-2007-0743

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: A local users may obtain other user's authentication credentials

  Description: The username and password used to mount remote filesystems through connections to SMB servers are passed to the mount_smb command as command line arguments, which may expose them to other local users. This update addresses the issue by securely passing the authentication credentials to the mount_smb command. Credit to Daniel Ball of Pittsburgh Technical Institute, Geoff Franks of Hauptman Woodward Medical Research Institute, and Jamie Cox of Sophos Plc for reporting this issue.

- **VideoConference**

  CVE-ID: CVE-2007-0746

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: Remote attackers may be able to cause an unexpected application termination or arbitrary code execution if iChat is running.

  Description: A heap buffer overflow vulnerability exists in the VideoConference framework. By sending a maliciously-crafted SIP packet when initializing an audio/video conference, an attacker can trigger the overflow which may lead to arbitrary code execution. This update addresses the issue by performing additional validation of SIP packets.

- **WebDAV**

  CVE-ID: CVE-2007-0747

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: A local user may obtain system privileges

  Description: When mounting a WebDAV filesystem, the load_webdav program may be launched without properly cleaning the environment. This may allow a local user to create files or execute commands with system privileges. This update addresses the issue by cleaning the environment prior to executing commands.

- **WebFoundation**

  CVE-ID: CVE-2007-0742

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9

  Impact: Cookies set by subdomains may be accessible to the parent domain

  Description: An implementation issue allows cookies set by subdomains to be accessible to the parent domain, which may lead to the disclosure of sensitive information. This update addresses the issue by performing additional validation of the domain to which a cookie is being sent. This issue does not affect systems running Mac OS X v10.4. Credit to Bradley Schwoerer of University of Wisconsin-Madison for reporting this issue.

Published Date: Oct 10, 2016

Mac OS X 10.4: Restart or shutdown delay if AFP volume is mounted but server may not be contacted.

This article has been archived and is no longer updated by Apple.

Issue or symptom

If an AFP volume is mounted, but the server becomes unavailable and cannot be contacted, significant delays may occur when trying to shut down or restart the computer.

Solution

As a workaround, unmount any AFP volumes before restarting or shutting down. If volumes were not unmounted, wait until Mac OS X completes the AFP timeout.

If you have waited a considerable amount of time, you can force restart the computer:

- Hold the computer's power button until it turns off.
- Advanced option: If ssh is enabled on the computer, try to ssh into the affected system with an administrator account and perform the following command to force restart: `sudo reboot`

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Mac OS X 10.4: Recently-copied files disappear from improperly unmounted volume

This article has been archived and is no longer updated by Apple.

Issue or symptom

Files copied to a disk that is improperly unmounted or disconnected may not appear on the disk when it is connected again. For example, if you disconnect an external FireWire-based hard disk from your computer without first unmounting the volume in the Finder or Disk Utility, this issue may occur.

Solution

Properly unmount the volume before disconnecting the disk.

If this issue occurs, you should use Disk Utility to verify that the volume is free of directory damage. Repair the volume if any directory issues are detected. Then, copy the data to the volume again (and unmount it correctly).

Additional information

This can happen if the disk cache is not emptied ("flushed") due to an improper unmount of the destination volume.

Published Date: Feb 20, 2012

Mac OS X volume does not appear in Finder or on the desktop after restart or log in

After the installation of some Mac OS X updates (for example, the Mac OS X 10.4.9 Update), you may notice that the start up (boot) volume no longer appears in Finder windows (such as when using **Go -> Computer**) or on the desktop (if this preference is enabled).

This article has been archived and is no longer updated by Apple.

1. Use the Mac OS X installation disc that shipped with your computer to install Xcode, or download it from the Apple Developer Connection and install it.
2. Open Terminal (in the Utilities folder). Type this command, followed by Return:

   ```
   sudo /Developer/Tools/SetFile -a v /
   ```

   Note: The sudo command requires an admin user account with a non-blank password.
3. Restart.

Published Date: Jun 12, 2012

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Yes No

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PowerBook G3 Series: Mac OS Extended Format Compatibility Issues

This article discusses compatibility issues with the PowerBook G3 Series' new and improved file format called Mac OS Extended format.
This article has been archived and is no longer updated by Apple.
Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. To visually identify which type of computer you have, close the display and inspect the display case. A Macintosh PowerBook G3 has a small, six-color Apple logo on the display case. A Macintosh PowerBook G3 Series computer has a large Apple logo on the display case that is not six-colored.

The PowerBook G3 Series' hard disk uses a new, improved file format called Mac OS Extended format (sometimes called HFS Plus). Mac OS Extended format has two benefits: it increases the number of files you can store on your hard disk, and it lets your computer work with data more efficiently than previous formats.

Using Norton Utilities
Norton Utilities version 3.5 is not compatible with Mac OS Extended format. When version 3.5.3 or 3.5.2 detects a Mac OS Extended format drive, it will not attempt to repair the drive.

Warning: Norton Utilities versions 3.5.1 and earlier cannot recognize that a hard disk is in Mac OS Extended format . Using Norton Utilities version 3.5.1 or earlier on your hard disk can result in hard disk corruption and loss of all your data.

If you experience problems with your hard disk, Apple Computer recommends using the version of Disk First Aid included on your system software CD. See the Symantec Web site for more information on Norton Utilities and Mac OS Extended format.

Using Other Hard Disk Utility and Disk Locking Programs
Some other disk utility and disk locking programs are incompatible with Mac OS Extended format. Before you attempt to use a disk utility or disk locking program, make sure the version you have is compatible with Mac OS Extended format. Check the documentation that came with the program or contact the manufacturer or the vendor that supplied the program.

Using SCSI Disk Mode
To use your PowerBook in SCSI disk mode, the computer to which you are connecting your PowerBook must have Mac OS 8.1 or later installed. If the computer has an earlier version of system software, you will not be to access your PowerBook's hard disk.
Published Date: Feb 20, 2012

PowerBook G3 Series: Wake on Ring not Supported

This article discusses the Wake on Ring function of the PowerBook G3 Series.
This article has been archived and is no longer updated by Apple.
Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. To visually identify which type of computer you have, close the display and inspect the display case. A Macintosh PowerBook G3 has a small, six-color Apple logo on the display case. A Macintosh PowerBook G3 Series computer has a large Apple logo on the display case that is not six-colored.

Wake on Ring function is not supported on the Macintosh PowerBook G3 Series system. The Wake on Ring function allows the system to wake up when an incoming phone call is detected on the modem port.

The Energy Saver control panel contains the option "Wake up when the modem detects a ring" under the Network Connections section. On the PowerBook G3 Series, you will see this option with it?s checkbox grayed out. Although this may give the impression some additional hardware or software will enable this function, as an unsupported feature, no changes to the system will enable the check box.

Figure 1, Energy Saver control panel

Published Date: Feb 20, 2012

Mac OS X Server 10.4.9,10.4.10: Mac OS 9 client cannot copy some files via AFP

This article has been archived and is no longer updated by Apple.

Issue or symptom

File larger than about 1.5 MB may not successfully copy from a Mac OS 9.2.2 client to Mac OS X Server 10.4.9 via AFP. The copy may stop and this alert may appear:

> "The file server's connection has unexpectedly closed down."

Solution

Download and install the Mac OS X Server 10.4.11 Update or later.

Published Date: Feb 20, 2012

Samsung D600, D900: Issues syncing events with iCal in Mac OS X 10.5

This article has been archived and is no longer updated by Apple.

Samsung D600 and D900 Bluetooth cellular phones may contain firmware that may cause any of the following issues to occur when creating or synching events with iCal in Mac OS X 10.5 Leopard:

- A note or timed event that's added to a previously created event may not sync with iCal.
- Anniversary events created on the phone may not display a title in iCal after synching. You may notice the "Occasion" field appears instead in the "Notes" section (of an event) in iCal.
- Anniversary events created on the phone with "Occasion" and "Date" fields may appear incorrectly as all-day events that occur on the following day, after being synched.

This document will be updated as more information becomes available.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

iSync 2.4: Issues syncing Motorola E815 phone via Bluetooth

This article has been archived and is no longer updated by Apple.

Issue or symptom

When trying to pair sync a Verizon-issued Motorola E815 phone with iSync, this alert may appear:

"iSync Cannot Connect With This Device"

Solution

Connect the phone to the computer with a USB cable instead of using Bluetooth.

Due to firmware differences, some Verizon-based phones manufactured by Motorola may not be recognized by iSync 2.4.

Related articles

305365 iSync 2.4: Some Sprint-based Motorola phones may not be recognized

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Published Date: Feb 20, 2012

About Security Update 2007-004 v1.1

This article has been archived and is no longer updated by Apple.

This document describes Security Update 2007-004 v1.1, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Security Update 2007-004 v1.1

Security Update 2007-004 v1.1 includes the contents of Security Update 2007-004, plus the following fixes:

- **AirPort**

  Available for: Mac OS X v10.3.9

  This update corrects an issue where the AirPort connection may be lost after waking from sleep. This issue only affects Mac OS X v10.3.9 with Security Update 2007-004.

- **FTPServer**

  CVE-ID: CVE-2007-0745

  Available for: Mac OS X Server v10.4.9

  Impact: Users with ftp access may be able to navigate to directories outside the normal scope

  Description: Security Update 2007-004 applied an incorrect ftp configuration file for Mac OS X Server v10.4.9 systems. Users with ftp access, who would normally be restricted to certain directories, may be able to access directories outside the normal scope. This update addresses the issue by restoring the correct version of the ftp configuration file. This issue only affects Mac OS X Server v10.4.9 with Security Update 2007-004.

Mac OS X 10.4.9 (client) and Mac OS X Server 10.3.9 systems that have installed Security Update 2007-004 do not require Security Update 2007-004 v1.1. If the security update has not yet been installed on these systems, then they should be updated using Security Update 2007-004 v1.1.

Published Date: Oct 10, 2016

"iSync does not support the device" alert, or red dot appears next to device icon

This article has been archived and is no longer updated by Apple.

Issue or symptom

- When opening iSync, a red dot may appear next to your device icon(s), or an "iSync does not support the device" alert message may appear.
- Clicking a device's icon may cause an "iSync does not support the device" alert message to appear.

This might happen if an incompatible third-party device plug-in has been installed, or if a compatible plug-in for the device was removed, or in other situations.

Solution

If your phone or device is listed on the iSync Compatibile Devices Page:

1. Remove the phone or device (that appears with a red dot next to it) from iSync.
2. Reinstall the third-party plug-in that allows the device to work with iSync.
3. Add the device back to iSync. (To learn about adding a Bluetooth-based phone, see this article; for a USB-based phone, see this article.)

If your phone or device is *not* listed on the iSync Compatibile Devices Page, contact the device's manufacturer to see if a compatible plug-in is available. If no plug-in is available, remove the device/phone from iSync.

Additional information

Some phones may require the use of a third-party or USB cable to work with iSync. Some Palm devices require that Palm Desktop 4.2.1 or later software be installed; Pocket PC and Palm OS-based PDAs require third-party software.

See also: "iSync 2.2 or later: Some phones may require a firmware update".

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Open Transport: DHCP Leases

When I use a DHCP server to assign an IP address, it does not maintain the IP address upon the next restart. What is causing this?
This article has been archived and is no longer updated by Apple.
The DHCP specification (RFC 2131) does not guarantee that a client computer will always receive the same IP address on every startup. The permanency of a particular IP address is largely determined by the configuration of the DHCP server. For maximum permanency, the DHCP server should be configured so that a specific IP address is reserved for a particular client computer.

However, there are a couple of provisions in the DHCP specification that may minimize the number of IP address changes:

1) Retaining Lease Across Restarts (DHCP INIT-REBOOT)

Starting with Mac OS 8.5, which ships with Open Transport 2.0, the DHCP client will automatically attempt to retain its lease between restarts by asking for a new lease on its previous IP address. Depending on the DHCP server implementation, the client may or may not receive a new lease on the same IP address.

Prior to Mac OS 8.5, with Open Transport 1.x, the DHCP client did not attempt to retain its lease between restarts. Upon restart, it would always ask for any new lease. Depending on the DHCP server implementation, the client may or may not receive a new lease on the previous IP address.

2) Using The Remainder Of Lease If Server Unavailable

In any version of Mac OS, if the DHCP server is unavailable on startup, the DHCP client will not attempt to use the remainder of its lease. This may increase the likelihood that a different IP address will be provided once communications with the DHCP server are once again available.
Published Date: Feb 20, 2012

Xserve RAID: Disable Controller Write Cache when using JBOD mode

This article has been archived and is no longer updated by Apple.

You should disable the "Use Controller Write Cache" feature when using an Xserve RAID in JBOD ("Just a Bunch of Disks") mode.

To disable "Use Controller Write Cache"

1. Open Xserve RAID.
2. From the Main menu, choose Settings.
3. Choose Performance.
4. Deselect the "Use Controller Write Cache" option.

Additional information

The Xserve RAID Controller Write Cache queues data before it is written to the disks. In the unlikely event that queued data cannot be written to a hard drive that is a member of an Xserve RAID in JBOD mode, there is a possibility that the data could be lost, unless you disable the "Use Controller Write Cache" feature.

Published Date: Feb 20, 2012

Apple Wireless Keyboard: Cleaning the battery contacts

This article has been archived and is no longer updated by Apple.

The Apple Wireless Keyboard is powered by batteries that you install in the compartment on the underside of the keyboard. To clean the battery contacts in the battery compartment, remove the batteries and rub a clean pencil eraser over the two flat (positive) contact surfaces.

Cleaning the (negative) spring contacts is not necessary.

After cleaning the contacts, turn the keyboard over and remove any residue that the eraser may have left in the battery tray. Reinsert the batteries (or install fresh ones) replace the battery tray cover, and slide the keyboard power switch to On. The green power LED should light up, then flash, as it pairs with the computer. The LED will go off after the keyboard is paired up.

Additional information

The battery contacts can develop a coating that could prevent enough power from getting to the keyboard. This could prevent the keyboard's Bluetooth transmitter from pairing with the computer your attempting to use it with.

Related articles

86467: Bluetooth: How to Set Up Your Apple Wireless Keyboard

Published Date: Feb 20, 2012

Mac OS X: About the Send PDF to iPhoto feature

This article has been archived and is no longer updated by Apple.

Mac OS X 10.4 and later include an option that allows you to send a picture to iPhoto using the PDF workflow feature of the print dialog. You can access this feature by selecting "Send PDF to iPhoto" from the PDF menu in the print dialog.

This feature uses an Automator workflow to create a PDF printout, and then convert that PDF to a JPEG. The JPEG is then sent to iPhoto. This workflow is installed by Mac OS X and is stored in `/Library/PDF Services/`.

Some important notes about this feature:

- What is imported in iPhoto is a JPEG representation of the PDF, not the PDF itself.
- This feature works with iPhoto 6 or later.

To learn more about creating your own PDF workflows, visit the AppleScript and Automator sections of the Apple website:

- http://www.apple.com/macosx/features/automator/
- Setting up workflows for creating PDF files
- Running a workflow on a PDF in the Print dialog
- Saving a workflow as a plug-in

Published Date: Feb 20, 2012

NetBoot service item is dimmed in Server Admin 10.4 and can‘t be administered

This article has been archived and is no longer updated by Apple.

Issue or symptom

The Netboot or other service list items in Server Admin Computers & Services column may be dimmed ("grayed out"). Dimmed items cannot be administered in Server Admin.

Solution

1. On the affected server, quit Server Admin.
2. Delete the /var/servermgrd/ directory.
3. In Terminal, execute this command:

   ```
   sudo launchctl stop com.apple.servermgrd
   ```
4. Restart Server Admin.

Published Date: Feb 20, 2012

About the security content of Darwin Streaming Server 5.5.5

This article has been archived and is no longer updated by Apple.

This document describes the security content of Darwin Streaming Server 5.5.5. Darwin Streaming Server is an open source project available via: (http://developer.apple.com/opensource/server/streaming/index.html).

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Darwin Streaming Server 5.5.5

- **Darwin Streaming Server**

  CVE-ID: CVE-2007-0749

  Impact: A remote attacker may be able to cause an unexpected application termination or arbitrary code execution

  Description: A stack buffer overflow exists in the Darwin Streaming Proxy. By sending maliciously-crafted RTSP requests, a remote attacker can trigger the overflow, which may lead to an unexpected application termination or arbitrary code execution. This update addresses the issue by performing additional validation of RTSP requests. Credit to an anonymous researcher working with the iDefense VCP for reporting this issue.

- **Darwin Streaming Server**

  CVE-ID: CVE-2007-0748

  Impact: A remote attacker may be able to cause an unexpected application termination or arbitrary code execution

  Description: A heap buffer overflow exists in the Darwin Streaming Proxy. By sending maliciously-crafted RTSP requests, a remote attacker can trigger the overflow, which may lead to an unexpected application termination or arbitrary code execution. This update addresses the issue by performing additional validation of RTSP requests. Credit to an anonymous researcher working with the iDefense VCP for reporting this issue.

Published Date: Oct 10, 2016

ARA 3.0: Incompatible with PowerBook 150 Internal Modem Control Panel

If you install ARA 3.0 or OT/PPP on a PowerBook 150, the internal modem may not function.
This article has been archived and is no longer updated by Apple.
If you open the Modem control panel, the "Connect via:" pop-up menu will not allow you to switch from "Modem/Printer Port" to "Internal Modem".

Because of this, the Remote Access or PPP control panel will attempt to dial through the external serial port and will either not receive a dial tone or report that the port is busy. The same will be true for other communications programs that rely on the settings in the Modem control panel.

The only workarounds for this problem at this time are:

- Use something other than ARA 3.0 and OT/PPP (ARA 2.1 and FreePPP for example)
- Use an external modem.

Published Date: Feb 20, 2012

Final Cut Pro: Digital Cinema Desktop displays white

This article has been archived and is no longer updated by Apple.

Issue

Final Cut Pro's Digital Cinema Desktop feature may display a blank white image instead of your video, if it is viewed on a display that is connected to a second graphics card.

Solution

Final Cut Pro is able to display its content on one or two computer displays, but in order to utilize the Digital Cinema Desktop feature on your secondary display, it will need to be connected to a second port on your main graphics card. Digital Cinema Desktop is not supported on a display that is not connected to your primary graphics card.

Related Document

302671: "Final Cut Pro supports up to two displays at a time"

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

iChat: Some Buddy List icons don‘t look like they should

This article has been archived and is no longer updated by Apple.

Issue or symptom

Icons of buddies on your iChat Buddy List may sometimes appear as a blue globe, white square, or appear with no icon. This can happen with both AIM- and .Mac-based accounts.

Solution

Server issues on the AIM network can cause this issue. If you are affected, contact America Online for more information.

Note that text, audio, and video chats will still work--this issue affects icon appearance only.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

Final Cut Studio 2: About the Outer Glow filter

This article has been archived and is no longer updated by Apple.

Final Cut Pro 6 includes a video filter called Outer Glow. You may already be familiar with this filter, as it was also available in Motion 2. In Final Cut Studio 2, the Outer Glow filter is available in both applications, but in some cases, its behavior in Final Cut Pro is slightly different than it is in Motion.

The Outer Glow filter adds a glow to the outer border of an object's alpha channel. For example, if you add Outer Glow to text in Motion or Final Cut Pro, the text will have the glow applied to its edges, giving the appearance of a glowing outline for the characters.

Issue

If you add the Outer Glow filter to a video clip (or still image), there can be a difference in effect between what you might see in Final Cut Pro versus Motion.

- In Motion, the glow will be applied to the edges of the clip, essentially extending the size of the object by the radius of the glow on each edge.
- In Final Cut Pro, a clip's edges describe its total visible area. If you apply the Outer Glow filter to a clip that has no alpha channel, there will be no visible change, because Final Cut Pro doesn't display anything beyond the edges of a clip.

Workaround

You can achieve the same effect in Final Cut Pro as in Motion by nesting. The following steps describe one way to apply the Outer Glow filter to the edges of a clip in Final Cut Pro.

1. Add a clip to the Timeline.
2. Double-click that clip in the Timeline.
3. Use the wireframe handles in the Canvas (or the Scale parameter in the Viewer) to scale the clip down to the desired size.
4. Choose **Sequence > Nest Item(s)**.
5. Click **OK** in the Nest Items window that appears.
6. Click once on the newly-nested sequence in the Timeline to select it.
7. Choose **Effects > Video Filters > Glow > Outer Glow**.

Now you should see the effect applied to the edges of the nested clip.

Published Date: Feb 20, 2012

QuickTime: Enhanced podcasts created in iWeb display "?" in Safari after QuickTime 7.1.6 update

This article has been archived and is no longer updated by Apple.

Issue or symptom

After updating to QuickTime 7.1.6, enhanced podcasts (podcasts with added images) in websites created with iWeb may display a QuickTime logo with a question mark in Safari.

Solution

To resolve this issue, install QuickTime 7.2.

Published Date: Feb 20, 2012

iWeb 1.x: Password-protected sites don‘t publish to .Mac

This article has been archived and is no longer updated by Apple.

Issue or symptom

When you try to publish a site to .Mac with user name and password protection, an alert message "There was an error updating .Mac" may appear. This happens if you use upper case letters in the user name.

Solution

When choosing a user name and password, use the following guidelines:

Note: This issue is resolved in iWeb 2.x.

User name

- The user name can only contain characters from this set: `0123456789_.abcdefghijklmnopqrstuvwxyz` (lower case letters only).
- It must start with a letter.
- It cannot end with a period.
- It cannot contain two periods in a row.
- It must be between 3 and 20 characters.

Password

- The password may only contain characters from this set: `!\\"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\\\\]^_`abcdefghijklmnopqrstuvwxyz{|}` (upper or lower case letters are allowed).
- It cannot end with a period.
- It cannot contain two periods in a row.
- It must be between 6 and 20 characters.

Published Date: Feb 20, 2012

Security Update 2007-004 may affect SQL Anywhere 9, IBM Workplace Forms Viewer, some other applications

This article has been archived and is no longer updated by Apple.

Issue or symptom

Applications that use the DYLD_LIBRARY_PATH environmental variable may have issues after installing Security Update 2007-004.

Products affected

- SQL Anywhere 9
- IBM Workplace Forms Viewer
- Other applications that use the DYLD_LIBRARY_PATH environmental variable

Solution

Check with the application's vendor to see if a later version is available (that is, a newer version of the application that does not depend on the DYLD_LIBRARY_PATH environmental variable).

If no updated version is available, you can use one of the following workarounds to avoid the issue.

Workaround: Edit the application's info.plist

This workaround is recommended because it does not reintroduce the vulnerability that was addressed by Security Update 2007-004.

1. Quit the affected application if it is running.
2. Go to the application's icon in the Finder.
3. Control-click or right-click the application's icon.
4. From the contextual menu that appears, choose Show Package Contents.
5. Open the Contents folder.
6. Open the "info.plist" file in a text editor, such as TextEdit.
7. Add the following to the file:

```
<key>LSEnvironment</key>
<dict>
<key>VARIABLE</key>
<string>VALUE</string>
</dict>
```

Note: If you later wish to undo this change, edit the info.plist file again and remove the text you added above.

Workaround: Use Terminal

1. Log in as an administrator.
2. Open Terminal (/Applications/Utilities).
3. Type this command on a single line, followed by Return.

```
sudo touch /var/db/.AllowDYLDEnvironmentVariables
```

Note: This workaround will reintroduce the DYLD_LIBRARY_PATH environmental variable vulnerability that was addressed by Security Update 2007-004. After installing a version of the affected application that does not depend on the DYLD_LIBRARY_PATH environmental variable, you should use this Terminal command to "undo" the command in step 3 above:

```
sudo rm /var/db/.AllowDYLDEnvironmentVariables
```

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Identifying your AirPort Extreme (802.11n) base station

This article has been archived and is no longer updated by Apple.

When configuring multiple AirPort Extreme (802.11n) base stations in AirPort Utility, it may not be obvious which base station you are working with.

AirPort Utility makes it easy to identify your base station:

1. Select a base station from the list on the left side of the AirPort Utility window.
2. Click Continue, or manually configure your base station by pressing Command-L or by choosing **Manual Setup** from the **Base Station** menu.
3. Enter the administrator password for the base station if prompted.
4. Choose **Identify...** from the **Base Station** menu. The base station's status light will begin flashing amber and green and this alert will appear:

   "**Identify**
   The status light on the selected AirPort Extreme is now flashing amber and green."

To stop the lights from flashing, click "Stop Flashing".

Published Date: Feb 20, 2012

Fetch 5 does not connect via FTP, "unrecognized protection level" alert

This article has been archived and is no longer updated by Apple.

Issue or symptom

When using Fetch 5 with a GSSAPI connection to Mac OS X Server, the connection may not succeed. An alert may appear in Fetch stating that there is an "unrecognized protection level".

Solution

As a workaround, deselect "Encrypted Connection" in the Fetch connection window.

Additional information

By default, Fetch 5 tries to establish an encrypted FTP connection. The FTP server in Mac OS X Server does not support this type of protection.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Xsan: Client computer stops responding after moving item(s) to Trash

This article has been archived and is no longer updated by Apple.

Issue or symptom

The Finder of an Xsan client may stop responding ("hang") indefinitely if an item residing on a StorNext filesystem is moved to the Trash. This alert may also appear:

> "Preparing move to 'Trash'."

This can happen if you have enabled Trash Manager on your SNSM filesystem(s),

Products affected

- StorNext 3.0 and earlier
- Xsan (all versions)

Solution

Follow these steps to replace the .Trashes directory (which is used by the Finder) with a single file named ".Trashes". After following these steps, the client's Finder will immediately delete files instead of storing until Trash is emptied (similar to how Trash is deleted immediately from network-mounted volumes).

On the client computer:

1. Open Terminal
2. Execute these commands, each on a single line. Change [FilesystemName] to the name of your StorNext filesystem.

```
sudo rm -r /Volumes/[FilesystemName]/.Trashes

sudo touch /Volumes/[FilesystemName]/.Trashes
```

Additional information

Both the Finder and the StorNext Storage Manager (SNSM) Trash Manager manage trash handling.

Published Date: Feb 20, 2012

Motion: Video artifacting may occur if VRAM becomes full

This article has been archived and is no longer updated by Apple.

Issue or symptom

When Motion is running, and the Video RAM (VRAM) in your graphics card becomes full, it's possible for the display of objects in Motion to become corrupted. This can occur on video cards that meet the System Requirements for Motion, and is more likely to occur on cards that have a relatively low amount of VRAM.

This issue only affects the display of in-project imagery. In other words, Motion's GUI elements are not affected. Also, if this issue occurs, the display of other applications and Mac OS X elements are not affected.

These images illustrate how the artifacts might appear.

The image above illustrates the user's intended effect: A particle system with many star objects.

This image shows the same as above, but with some texture corruption becoming visible as the number of particles increases.

This image shows another frame from the same project as those above.

Solution

For Intel-based Macs, download and install the Mac OS X 10.4.10 Update or later.

If you have a PowerPC-based Mac, consider these workarounds:

In the interest of minimizing occurrences of this issue, try these actions to make more VRAM available to Motion:

- Quit as many other applications as practical. This issue can especially be affected by applications that process or display graphics (or otherwise vie for VRAM).
- If the project uses large still images, try changing the setting for Large Stills in Motion Preferences to **Down-Res to Canvas Size**. Using fewer and/or smaller images may also help.
- Use fewer and/or smaller video files.
- Use fewer particles in particle systems.
- Use a lower bit depth setting in Project Properties.
- Occurrence of this issue can be somewhat random. It may be worthwhile to save the project and quit Motion, and then open the project again.

Published Date: Feb 20, 2012

Quartz Extreme requires millions of colors

This article has been archived and is no longer updated by Apple.

Issue or symptom

Quartz Extreme is disabled if you use a color setting of Thousands or 256 colors in Display preferences (16-bit and 8-bit, respectively). When Quartz Extreme is disabled in these color modes, you may not be able to use iMovie, and some Mac OS X effects may not render properly (such as the cube effect when changing users via Fast User Switching, or the ripple effect when adding widgets in Dashboard).

Solution

Open Displays preferences and select Millions from the Colors pop-up menu.

Related articles

- 303683: iMovie HD 6 requires Quartz Extreme-compatible graphics cards
- 301347: Mac OS X 10.4: Requirements for Quartz Extreme and Core Image graphics
- 300998: Final Cut Express HD requires a Quartz Extreme AGP graphics card

Published Date: Feb 20, 2012

Xserve: Receiving Software Update notifications on a "headless" configuration

This article has been archived and is no longer updated by Apple.

Issue or symptom

An Xserve without a display connected to it ("headless") may not receive Software Update notifications. In this case, no available updates are listed in Software Update.

Solution

Use one of the following workarounds.

- Use the softwareupdate command-line tool in Terminal to list and install updates. For more information about softwareupdate, type "`man softwareupdate`" in Terminal, or refer to the Command Line Administration documentation here.

- Use Server Admin, instead, to check for and install updates.
- Create a launchd job to automate the process. For more information about launchd and why it's preferred over cron, see Getting Started with launchd.

- Create a cron job to automate the process. You can find more information about cron jobs in this article or via these Terminal commands:

```
man 8 cron
man 1 crontab
man 5 crontab
```

Published Date: Feb 20, 2012

Portables: Keycap Replacement

Two types of keycaps are on the keyboard. The smaller number, letter, function, and arrow keys can be very easily snapped back in place if they come off. The remaining large keys (such as the spacebar) require more care to replace them.
This article has been archived and is no longer updated by Apple.

Keycap Replacement

Step 1

With the U-shaped clip in place, use a plastic tool to tuck the rubber plunger under the black circular opening. See Figure 1.

Figure 1 Plunger and clip

Step 2

Insert the top clip so that the side pins face downward. See Figure 2.

Figure 2 Pins

Step 3

Slide the top clip forward so that its slotted end is caught beneath the black hook on top of the keyswitch location.

Step 4

Press the top clip down carefully, taking care not to pop out the plunger.

Step 5

Bow out the "arms" of the U-shaped clip to lock the pins inside the U-shaped clip. The locked clips should lie flat.

Spacebar Replacement

Follow these steps to replace the spacebar. See Figure 3.

Step 1

Make sure the plunger mechanism is reassembled per the keycaps instructions.

Step 2

Secure the ends of the keycap's metal bar to the hooks on the keyswitch location.

Step 3

Align the keycap over the locked clips and press down.

Figure 3 Spacebar replacement

Published Date: Feb 20, 2012

About Security Update 2007-005

This article has been archived and is no longer updated by Apple.

This document describes Security Update 2007-005, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Security Update 2007-005

- **Alias Manager**

  CVE-ID: CVE-2007-0740

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: Users may be misled into opening a substituted file

  Description: In certain circumstances, an implementation issue in Alias Manager will not show identically-named files contained in identically-named mounted disk images. By enticing a user to mount two identically-named disk images, an attacker could mislead the user into opening a malicious program. This update addresses the issue by performing additional validation of mountpaths. Credit to Greg Bolsinga of Blurb, Inc. for reporting this issue.

- **BIND**

  CVE-ID: CVE-2007-0493, CVE-2007-0494, CVE-2006-4095, CVE-2006-4096

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: Multiple vulnerabilities in BIND, the most serious of which is remote denial of service

  Description: BIND is updated to version 9.3.4. Further information is available via the ISC web site at http://www.isc.org/index.pl?/sw/bind/

- **CoreGraphics**

  CVE-ID: CVE-2007-0750

  Available for: Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: Opening a maliciously crafted PDF file may lead to an unexpected application termination or arbitrary code execution

  Description: An integer overflow vulnerability exists in the handling of PDF files. By enticing a user to open a maliciously crafted PDF file, an attacker could trigger the overflow which may lead to an unexpected application termination or arbitrary code execution. This update addresses the issue by performing additional validation of PDF files. This issue does not affect systems prior to Mac OS X v10.4.

- **crontabs**

  CVE-ID: CVE-2007-0751

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: The daily /tmp cleanup script may lead to a denial of service

  Description: Filesystems mounted in the /tmp directory may be deleted when the daily cleanup script is executed, which may lead to a denial of service. This update addresses the issues by updating the daily cleanup script to prevent find commands from descending into mounted filesystems.

- **fetchmail**

  CVE-ID: CVE-2007-1558

Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

Impact: fetchmail password disclosure may be possible

Description: fetchmail is updated to version 6.3.8 to address a cryptographic weakness that could lead to the disclosure of fetchmail passwords. Further information is available via the fetchmail web site at http://fetchmail.berlios.de/fetchmail-SA-2007-01.txt

- **file**

  CVE-ID: CVE-2007-1536

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: Running the file command on a maliciously crafted file may lead to an unexpected application termination or arbitrary code execution

  Description: A heap buffer overflow vulnerability exists in the file command line tool, which may lead to an unexpected application termination or arbitrary code execution. This update addresses by performing additional validation of files that are passed to the file command.

- **iChat**

  CVE-ID: CVE-2007-2390

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

  A remote attacker may be able to cause a denial of service or arbitrary code execution

  Description: A buffer overflow vulnerability exists in the UPnP IGD (Internet Gateway Device Standardized Device Control Protocol) code used to create Port Mappings on home NAT gateways in iChat. By sending a maliciously crafted packet, a remote attacker can trigger the overflow which may lead to an unexpected application termination or arbitrary code execution. This update addresses the issue by performing additional validation when processing UPnP protocol packets in iChat.

- **mDNSResponder**

  CVE-ID: CVE-2007-2386

  Available for: Mac OS X v10.4.9, Mac OS X Server v10.4.9

  A remote attacker may be able to cause a denial of service or arbitrary code execution

  Description: A buffer overflow vulnerability exists in the UPnP IGD (Internet Gateway Device Standardized Device Control Protocol) code used to create Port Mappings on home NAT gateways in the OS X mDNSResponder implementation. By sending a maliciously crafted packet, a remote attacker can trigger the overflow which may lead to an unexpected application termination or arbitrary code execution. This update addresses the issue by performing additional validation when processing UPnP protocol packets. This issue does not affect systems prior to Mac OS X v10.4. Credit to Michael Lynn of Juniper Networks for reporting this issue.

- **PPP**

  CVE-ID: CVE-2007-0752

  Available for: Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: A local user may obtain system privileges

  Description: An implementation issue exists in the PPP daemon when loading plugins via the command line, which allows a local user to obtain system privileges. This update addresses the issue through validation of user privileges. This issue does not affect systems prior to Mac OS X v10.4. Credit to an anonymous researcher working with the iDefense VCP for reporting this issue.

- **ruby**

  CVE-ID: CVE-2006-5467, CVE-2006-6303

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: Denial of service vulnerabilities in the Ruby CGI library

  Description: Multiple denial of service issues exist in the Ruby CGI library. By sending maliciously crafted HTTP requests to a web application using cgi.rb, an attacker could trigger an issue which may lead to a denial of service. This update addresses the issues by applying the Ruby patches.

- **screen**

CVE-ID: CVE-2006-4573

Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

Impact: Multiple denial of service vulnerabilities in GNU Screen

Description: The screen command line tool is updated to address multiple denial of service vulnerabilities. Further information is available via the GNU web site at http://lists.gnu.org/archive/html/screen-users/2006-10/msg00028.html

- **texinfo**

  CVE-ID: CVE-2005-3011

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: A vulnerability in texinfo may allow arbitrary files to be overwritten

  Description: A file handling issue exists in texinfo, which may allow a local user to create or overwrite files with the privileges of the user running texinfo. This update addresses the issue through improved handling of temporary files.

- **VPN**

  CVE-ID: CVE-2007-0753

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9,Mac OS X v10.4.9, Mac OS X Server v10.4.9

  Impact: A local user may obtain system privileges

  Description: A format string vulnerability exists in vpnd. By running the vpnd command with maliciously crafted arguments, a local user can trigger the vulnerability which may lead to arbitrary code execution with system privileges. This update addresses the issue by performing additional validation of the arguments passed to vpnd. Credit to Chris Anley of NGSSoftware for reporting this issue.

Note: Security Update 2007-005 v1.1 was released to remove a configuration file that prevented the BIND service from automatically starting after applying the security update. The BIND service is not enabled on default configurations, and is mainly used with a Server system. For systems using BIND which applied Security Update 2007-005, manually re-enabling the BIND service will correct the issue. Security Update 2007-005 v1.1 made no changes to the security content of Security Update 2007-005. Systems that have applied Security Update 2007-005 do not need to apply Security Update 2007-005 v1.1.

Published Date: Oct 10, 2016

About the Mac OS X 10.4.10 Server Update for PowerPC (delta)

This article has been archived and is no longer updated by Apple.

The Mac OS X Server 10.4.10 (PowerPC) Update (delta) updates Mac OS X Server 10.4.9 (PowerPC) to version 10.4.10 on PowerPC-based Macs. (If you are updating from a previous version of Mac OS X Server 10.4.x (PowerPC) to 10.4.10 see this article.)

Important: Please read before installing

- You may experience unexpected results if you have third-party system software modifications installed, or if you've modified the operating system through other means. (This does not apply to normal application software installation.)
- The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to update.
- It is recommended that you backup your system prior to installing any updates.
- If issues occur during installation--for example, Software Update quits unexpectedly--please see this article.

Installation

To update your Mac to Mac OS X Server 10.4.10, use Software Update or the standalone installer. You only need to use one of these methods to update your computer.

Software Update

Software Update, located in the Apple menu, will automatically check for the latest Apple software using the Internet. (Software Update might have linked you to this article to learn more about the update.) If your computer is not up to date, software updates for your computer will appear that you can install. Note that an update's size may vary from computer to computer when installed using Software Update. Also, some updates must be installed prior to others, so you should run Software Update more than once to make sure you have all available updates.

Standalone installer

Download the update installer and run it manually. This a useful option when you need to update multiple computers but only want to download the update once. Two versions of the standalone installer are available from Apple Downloads: a delta and combo.

- The delta update for PowerPC (described in the article you're reading) updates Mac OS X Server 10.4.9 (PowerPC) to 10.4.10.
- The combo update installer (described in this article) updates Mac OS X Server (PowerPC) 10.4, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, 10.4.6, 10.4.7, 10.4.8, or 10.4.9 to 10.4.10.

What's included?

The following modifications are included in this update:

Third-party

- Adds RAW image decoding support for the following cameras: Panasonic DMC-LX1, Panasonic DMC-LX2, Leica M8, Leica D-LUX 2, Leica D-LUX 3, Fuji S5 Pro, Nikon D40x, and Canon EOS 1D Mk III.
- Resolves an issue in which some DNG images may appear tinted or distorted.
- Improves compatibility of Mathematica 6 with 64-bit Macs.

Bluetooth

- Addresses an issue in which a Bluetooth headset may show up as an available device for sound output in the Sound preference pane after it had been removed from Bluetooth preferences.

USB

- Improves reliability when using the IR remote control after waking from sleep.
- Improves reliability when mounting external USB hard drives

Other

- Improves responsiveness when using the Control-Eject key combination to display a shutdown dialog.
- Addresses a specific issue in which users importing video from a DV camera may experience dropped frames
- Includes recent Apple security updates.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

About the Mac OS X Server 10.4.10 Update for PowerPC (combo)

This article has been archived and is no longer updated by Apple.

The Mac OS X Server 10.4.10 (PowerPC) Update (combo) updates any version of Mac OS X Server 10.4.x (PowerPC) to version 10.4.10 on PowerPC-based Macs. (If you are updating from Mac OS X Server 10.4.9 (PowerPC) to 10.4.10 see this article.)

Important: Please read before installing

- You may experience unexpected results if you have third-party system software modifications installed, or if you've modified the operating system through other means. (This does not apply to normal application software installation.)
- The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to update.
- It is recommended that you backup your system prior to installing any updates.
- If issues occur during installation--for example, Software Update quits unexpectedly--please see this article.

Installation

To update your Mac to Mac OS X Server 10.4.10 (PowerPC), use Software Update or the standalone installer. You only need to use one of these methods to update your computer.

Software Update

Software Update, located in the Apple menu, will automatically check for the latest Apple software using the Internet. (Software Update might have linked you to this article to learn more about the update.) If your computer is not up to date, software updates for your computer will appear that you can install. Note that an update's size may vary from computer to computer when installed using Software Update. Also, some updates must be installed prior to others, so you should run Software Update more than once to make sure you have all available updates.

Standalone installer

Download the update installer and run it manually. This a useful option when you need to update multiple computers but only want to download the update once. Two versions of the standalone installer are available from Apple Downloads: a delta and combo.

- The combo update for PowerPC installer (described in the article you're reading) updates Mac OS X Server (PowerPC) 10.4, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, 10.4.6, 10.4.7, 10.4.8 or 10.4.9 to 10.4.10.
- The delta update installer (described in this article) updates Mac OS X Server 10.4.9 (PowerPC) to 10.4.10.

What's included?

For a list, see About the Mac OS X Server 10.4.10 (PowerPC) Update (delta).

This update delivers many improvements. Because this is a combo update, it includes fixes delivered with the Mac OS X Server 10.4.10 (PowerPC) Update (delta) as well as these previous Mac OS X Server 10.4.x updates: 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, 10.4.6, 10.4.7, 10.4.8 (PowerPC) and 10.4.9 (PowerPC).

Published Date: Oct 10, 2016

About the Mac OS X Server 10.4.10 Universal Update (combo)

This article has been archived and is no longer updated by Apple.

The Mac OS X Server 10.4.10 (Universal) Update (combo) updates any version of Mac OS X Server 10.4.x (Universal) to version 10.4.10 on PowerPC-based and Intel-based Macs.

Note: There is no delta update for Mac OS X Server 10.4.10 (Universal).

Important: Please read before installing

- You may experience unexpected results if you have third-party system software modifications installed, or if you've modified the operating system through other means. (This does not apply to normal application software installation.)
- The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to update.
- It is recommended that you backup your system prior to installing any updates.
- If issues occur during installation--for example, Software Update quits unexpectedly--please see this article.

Installation

To update your Mac to Mac OS X Server 10.4.10 (Universal), use Software Update or the standalone installer. You only need to use one of these methods to update your computer.

Software Update

Software Update, located in the Apple menu, will automatically check for the latest Apple software using the Internet. (Software Update might have linked you to this article to learn more about the update.) If your computer is not up to date, software updates for your computer will appear that you can install. Note that an update's size may vary from computer to computer when installed using Software Update. Also, some updates must be installed prior to others, so you should run Software Update more than once to make sure you have all available updates.

Standalone installer

Download the update installer and run it manually. This a useful option when you need to update multiple computers but only want to download the update once. One version of the standalone installer for Mac OS X Server 10.4.10 (Universal) Update is available from Apple Downloads: there is no delta for Mac OS X Server 10.4.10 (Universal) update installer.

- The combo Universal update installer (described in the article you're reading) updates Mac OS X Server (Universal) 10.4.7, 10.4.8 or 10.4.9 to 10.4.10.

What's included?

This update delivers several improvements, including:

Third-party

- Adds RAW image decoding support for the following cameras: Panasonic DMC-LX1, Panasonic DMC-LX2, Leica M8, Leica D-LUX 2, Leica D-LUX 3, Fuji S5 Pro, Nikon D40x, and Canon EOS 1D Mk III.
- Resolves an issue in which some DNG images may appear tinted or distorted.
- Improves compatibility of Mathematica 6 with 64-bit Macs.

Bluetooth

- Addresses an issue in which a Bluetooth headset may show up as an available device for sound output in the Sound preference pane after it had been removed from Bluetooth preferences.

USB

- Improves reliability when using the IR remote control after waking from sleep.
- Improves reliability when mounting external USB hard drives.
- Resolves an issue in which a TomTom GO 910 may not be recognized when connected via USB to an Intel-based Mac.

Other

- Improves responsiveness when using the Control-Eject key combination to display a shutdown dialog.
- Addresses a specific issue in which users importing video from a DV camera may experience dropped frames
- Includes recent Apple security updates.

Because this is a combo update, it also includes fixes delivered with the Mac OS X Server 10.4.9 (Universal) update as well as the previous Mac OS X Server 10.4.8 (Universal) Update.

Published Date: Oct 10, 2016

Power Macintosh G3 All-in-one: APU v1.2 Incompatible

Apple Printer Utility v1.2 is not compatible with the Power Macintosh G3 All-in-one.
This article has been archived and is no longer updated by Apple.
Though the utility may launch and allow you to inspect or change your printers' configuration, upon quitting Apple Printer Utility, it will crash, then will likely hang your Power Macintosh G3 shortly thereafter.

Apple recommend you upgrade and use the latest version of the Apple Printer Utility, v2.2, posted on Apple Software Updates both as a standalone and accompanying LaserWriter 8.5.1.

Note: Apple Printer Utility v1.2 was shipped with LaserWriter 4/600 PS and with LaserWriter 8.2.2.

This article can help you locate the software update mentioned here:

- Article 14724: "**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.

Published Date: Feb 20, 2012

Motion 3: Content includes new Fire Burst.mov

This article has been archived and is no longer updated by Apple.

Issue

Motion 3 includes a new version of the content asset named **Fire Burst.mov**. If you created a project in a previous version of Motion that included Fire Burst.mov, you may notice that the asset has changed. The asset that was named Fire Burst.mov in Motion 2 is now called **Fire Burst 2.mov** in Motion 3.

Solution

If you created a project in Motion 2 using the Fire Burst.mov asset, you can restore the original appearance by simply replacing Fire Burst.mov in your project in Motion 3, with the new Fire Burst 2.mov asset.

Published Date: Feb 20, 2012

Xserve G5: Locked enclosure may prevent proper startup

This article has been archived and is no longer updated by Apple.

Issue or symptom

If the Xserve is locked at startup, it may not boot properly or appear on the network.

Solution

To resolve the issue, set the startup disk in System Preferences appropriately:

1. Unlock the computer and allow it to start up.
2. Temporarily disconnect any devices other than the keyboard and mouse that are connected to the USB or FireWire ports.
3. Disconnect any external speakers.
4. If there is a disc in the optical drive, eject it.
5. In the Startup Disk pane of System Preferences, set the startup disk as appropriate or use the `systemsetup` command.

Additional information

Under typical conditions, fans may create a slight hum that varies based on the rotational speed and the amount of air the fans move. Also, the normal operation of the hard drive and optical disc drive may generate whirring and scratching sounds that may be audible to a user. Some customers may be able to hear a faint buzzing or humming noise when their display brightness is adjusted below full brightness. These sounds do not indicate an issue.

Published Date: Oct 10, 2016

Final Cut Pro: FxPlug - Working with high RGB values in High-Precision YUV

This article has been archived and is no longer updated by Apple.

Issue

Many FxPlug filters in Final Cut Pro and Motion are able to generate very high RGB values, even extending beyond the gamut of traditional video. When these values are converted from their native RBG color space to the YUV color space in a High-Precision YUV sequence, the results will be mathematically accurate, but due to differences in the available values between these color spaces, it's possible for the result to appear differently than intended.

In some cases this may result in bright, saturated colors in the highlight areas of the rendered result.

Solution

The **RGB Limit** filter can be used accommodate this color space difference. In this context, the following steps demonstrate how to apply the RGB Limit filter to a clip to achieve the desired result:

1. Double-click the clip in the Timeline so that it appears in the Viewer.
2. Choose **Effects > Video Filters > Color Correction > RGB Limit**.
3. In the Viewer's Filter tab, make the following settings in the RGB Limit filter:
    - Select the **Minimum RGB Limiting** check box.
    - Set the **Clamp Levels Below** parameter to **0%**.
    - Select the **Maximum RGB Limiting** check box.
    - Set the **Clamp Levels Above** parameter to **100%**.
    - Deselect the **Max RGB Reduction** check box.

Published Date: Feb 20, 2012

Mac OS: Empty White Box On Screen

While using your Macintosh, an empty white dialog box with a ">" sign in the upper left-hand corner may appear. The box looks like an error message box, but there is no error message in it. This article describes the phenomenon and tells what to do when the box appears.
This article has been archived and is no longer updated by Apple.
The white box is the debugger window. It is also called the programmer's window. Certain buttons on old computers or key combinations on newer computers (all Power PC-based computers, for example) generate a special signal to the computer. This signal is called a "Non-Maskable Interrupt" or NMI. (An interrupt is a hardware signal that tells the computer to stop what it is doing and devote its attention to a more important task.)

Note: Typing "g" or "g Finder" will dismiss the empty box if it was entered on purpose.

The default key combination which causes the box to appear is "Command-Power". The power key is the key in the upper right hand corner of an Apple Extended Keyboard or an Apple Design Keyboard. It is also called the Reset key. This key has an icon that looks like a triangle pointing to the left. The switch is also called the debugger switch, the interrupt switch or the programmer's switch.

Also, if the Command key or Power key is stuck (or the computer thinks it is stuck), typing the other of the two keys may cause this to appear. Use Key Caps to see if a key is stuck down.

Note: The Power key may not actually turn the computer on.

If you have a debugger installed (such as Apple Computer's MacsBug), you may get a more elaborate screen with low-level information about how the computer's memory is being used. This information is useful only to someone with a knowledge of assembly language programming and Mac OS Memory Management.

To exit MacsBug, try the following steps:

1. Type "g" and Return. If MacsBug was entered on purpose, either by the user or some debugging code in a program, you should be able to continue.

2. If the MacsBug screen comes right back, Type "es" and return. This is roughly equivalent to force quitting the current application. If this works, save your work in your open applications and restart the computer.

3. If the above steps fail, you can type "rs" or "rb" to restart your computer. All unsaved work is lost.

4. If none of the above options work, press Command-Control-Power or toggle the power switch to restart your computer. All unsaved work is lost.

Once the computer is no longer in MacsBug, you may remove it from the System Folder by dragging MacsBug out of the System Folder and restarting the computer.

Published Date: Feb 20, 2012

Final Cut Pro: Render CAF files for Timeline playback

This article has been archived and is no longer updated by Apple.

Final Cut Studio 2 supports the preview and playback of CAF (Apple Core Audio Format) audio content.

CAF content included with Final Cut Studio 2 is compressed using the Apple Lossless codec. When you use this CAF content in Final Cut Pro, you can preview it normally in the Viewer, but it will need to be rendered in order for it to be played back in a sequence at full quality.

Note: Final Cut Pro does not support compressed audio formats for Timeline playback. This includes "lossy" formats such as AAC and .mp3, as well as the high-quality Apple Lossless codec used to encode the Final Cut Studio 2 content for Soundtrack Pro. For Timeline playback, simply render the audio first.

Published Date: Oct 10, 2016

iTunes Store: How Complete My Album works with iTunes Plus

This article has been archived and is no longer updated by Apple.

How does Complete My Album work for iTunes Plus?

Complete My Album is offered with many iTunes Plus albums. Note that if you've purchased an AAC Protected single at 128 kbps and want the iTunes Plus version of the album, you must first upgrade your iTunes library to iTunes Plus before using Complete My Album.

This explains the Complete My Album Rules with iTunes Plus music:

Owned Tracks	Album available in iTunes Plus?	CMA Offer
AAC Protected	No	CMA to AAC Protected album (deliver remaining AAC Protected tracks)
AAC Protected	Yes	Must upgrade your iTunes library to Plus first, then see Plus rules below
Mixed	No	No CMA offer
Mixed	Yes	Must upgrade your iTunes library to Plus first, then see Plus rules below
Plus	No	No CMA offer
Plus	Yes	CMA to Plus album (deliver remaining Plus tracks)

- If the tracks you own are iTunes Plus, the Complete My Album offer will deliver the remaining iTunes Plus tracks.
- If the tracks you own are AAC Protected or a mix of both AAC Protected and iTunes Plus, you must upgrade your iTunes library to iTunes Plus first, before the album is eligible for Complete My Album.

If an AAC Protected album that contains a music video is eligible for upgrade to iTunes Plus, the audio tracks will be upgraded to iTunes Plus, but if the music video is not available in iTunes Plus, the music video will be omitted from the iTunes Plus album, as well as the Complete My Album offer. In other words, the AAC Protected album with music video may be upgraded to an iTunes Plus album without music video.

Note: The Complete My Album expiration date is based on the date the track was purchased, not when it was upgraded.

For more information about iTunes Plus, please visit the iTunes Plus FAQ.

For more information about Complete my Album, see this document.

Published Date: Oct 10, 2016

Final Cut Studio: Third-party appearance themes may cause issues

This article has been archived and is no longer updated by Apple.

Issue

If you have installed third-party appearance modifications or other software designed to supersede the Mac OS X user interface, Final Cut Studio's window contents and other graphic elements may become corrupted or may display artifacts or distortion.

Solution

Disable or remove the third-party appearance modifications if they interfere with the display or functionality of Final Cut Studio applications.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

Motion 3: Third-party Plug-in path does not appear in preferences

This article has been archived and is no longer updated by Apple.

Motion can read third-party After Effects-compatible plug-ins in addition to FxPlug plug-ins. When Motion is on a Power PC-based Mac, there is a setting in Motion preferences that allows you to point to a folder where such plug-ins are located on your disk.

Issue

If you are running Motion 3 on an Intel-based Mac, you will not see this option in preferences. This is because After Effects-compatible plug-ins are not supported on Intel-based Macs.

Solution

Many third-party plug-in developers are now supporting Apple's native FxPlug plug-in format. Contact the makers of your After Effects-compatible plug-ins to inquire if they have an updated FxPlug version.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

Mac OS X Server 10.4: DNS Service does not start automatically after installing Security Update 2007-005 (v1.0)

This article has been archived and is no longer updated by Apple.

Issue or symptom

After installing Security Update 2007-005 (v1.0), the Mac OS X Server 10.4 DNS service may not start automatically when the server starts up.

Solution

As a workaround, start the DNS Service in Server Admin. You should only need to do this once--it will continue to use your previous DNS configuration and will start automatically after future restarts.

This issue does not occur with Security Update 2007-005 (v1.1) for Mac OS X Server 10.4.9.

Published Date: Feb 20, 2012

About the security content of Xserve Lights-Out Management Firmware Update 1.0

This article has been archived and is no longer updated by Apple.
This document describes the security content of Xserve Lights-Out Management Firmware Update 1.0, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Xserve Lights-Out Management Firmware Update 1.0

- **Xserve Lights-Out Management Firmware**

  CVE-ID: CVE-2007-2387

  Available for: Intel-based Xserve systems

  Impact: A remote user may be able to gain admin privileges on an Xserve system with IPMI configured in a particular manner

  Description: A security vulnerability in Apple's implementation of IPMI may allow an unprivileged ipmitool user to gain administrative privileges on an Xserve system. This update addresses the issue by requiring a password for remote usage of IPMI. This issue only affects Intel-based Xserve systems. Credit to James Wilson of LithiumCorp for reporting this issue.

Published Date: Oct 10, 2016

Apple Remote Desktop 3: Which tasks are not encrypted?

This article has been archived and is no longer updated by Apple.

Apple Remote Desktop 3 encrypts most tasks using AES 128-bit encryption. For more information on ARD's encryption, see this article.

ARD 3 does not encrypt the following tasks:

- Wake
- Share Screen
- Upgrade Client Software

You may choose to encrypt Copy Items and Install Package tasks. Encryption can be enabled globally for these features in the Admin application's preferences. Also, encryption for these tasks may be enabled or disabled before executing the task.

Enabling encryption for these tasks may increase the time required to complete a task. LAN users will see see faster speeds without encryption enabled, but WAN users may not.

When dragging and dropping files, the item will be encrypted if the administrator chose to "Encrypt all network data" before starting the Control or if the "Encrypt network data when using Copy Items" checkbox is enabled. Otherwise, than the copy will not be encrypted.

When controlling computers, you can choose to encrypt passwords and keystrokes only or all network data. This encryption is done using an SSH tunnel. If the client does not have SSH access enabled, no encryption will be used.

VNC servers do not support Remote Desktop's encryption--you will see a warning when connecting to a VNC server. However, if you're using an SSH tunnel to connect, the keystrokes will be encrypted; if you're using SSH and the "Encrypt all network data" option when controlling, all network data will be encrypted.

Published Date: Feb 20, 2012

Mac OS X Server 10.4: Entering Japanese user names in Workgroup Manager

This article has been archived and is no longer updated by Apple.

If you are using Japanese as the primary language on your server, use the following steps to create a new user with a Japanese name in Workgroup Manager.

1. Click the Accounts button
2. Click the New User button
3. Input user's name into the Name field this way:
    - Type the user's last name first (if user's full name is "山田花子", input "山田")
    - Press the Space bar
    - Type the user's first name (if user's full name is "山田花子", input "花子")
4. Input a password and set others, then click Save

In the above example, "山田　花子" should appear in the Name field. In the Info panel, "山田" appears in the left side ("Last") field and "花子" appears in the right side ("First") field of the Name line.

Published Date: Oct 10, 2016

Managed Client: "Set Once" settings not applied at Mobile user‘s first login

This article has been archived and is no longer updated by Apple.

Issue or symptom

The first time a Mobile user account (PHD user) logs in, "Set Once" managed preferences may not be applied.

Solution

Log out and back in to apply the MCX "Set Once" settings.

Published Date: Oct 10, 2016

iSync: Putting a Mac to sleep when synching with the Motorola KRZR

This article has been archived and is no longer updated by Apple.

Issue or symptom

When synching a Motorola KRZR phone with iSync, if the computer is put to sleep during a sync session (or the phone is moved outside of Bluetooth range) an alert message may appear that says:

"There was an error pushing some changes to the phone. The synchronization may have been cancelled on the phone."

On later, subsequent syncs (after this has occurred once already) a different alert message may appear which states that the connection to the phone "failed," and, that you may need to make sure the phone is powered on.

Solution

Avoid putting your Mac to sleep when synching data with a Motorola KRAZR phone.

If you have experienced this issue and continue to receive alert messages when you sync with a Motorola KRZR, follow the manufacturer's instructions for performing a master reset of the phone.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Error -3234 when trying to update or restore iPod or connecting to the iTunes Store

This article has been archived and is no longer updated by Apple.

Issue or symptom

When trying to update or restore an iPod or connecting to the iTunes Store, you may see the following error message: "An unknown error occurred (-3234), make sure Internet connection is active."

Solution

Check to see if you got a security pack with your Internet connection software, if so use these steps to try removing the parental control:

1. Right-click the TDC-securitypack icon in the Notifcation area (System tray) and choose **TDC securitypack** from the shortcut menu.
2. If the "TDC parental control-guide" has not yet been used, run through that first. When this is done, login as an administrator in the TDC parental control.
3. Click "Installation and update."
4. Select the products to install and then deselect the box "TDC parental control."
5. Click Apply Now.
6. Restart computer and the parental control will be removed.

Now try to update or restore the iPod or connect to the iTunes Store.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Final Cut Pro 6.0.1: HD ProRes 422 capture requires Mac Pro or Power Mac G5 Quad 2.5 Ghz

This article has been archived and is no longer updated by Apple.

Capturing HD resolution video using the ProRes 422 format requires a Mac Pro with Intel Xeon processors or a Power Mac G5 Quad 2.5 Ghz, and a qualified third-party capture card.

Other Mac systems may drop frames when capturing High Definition video in the ProRes 422 format.

For more information about Apple ProRes 422 and devices qualified for use with Final Cut Studio 2, see the following resources:

- Final Cut Studio 2 System Requirements
- Final Cut Studio Partners
- Qualified Devices Guide

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

Mac OS X Server 10.4, 10.5: Pointing non-managed clients to a specific Software Update server

This article has been archived and is no longer updated by Apple.

If you are not using Client Management, you can use one of the following Terminal commands to point non-managed client computers to a particular Software Update server. These commands must be run by an admin user.

To change the setting for all users on the workstation:

```
defaults write /Library/Preferences/com.apple.SoftwareUpdate CatalogURL [URL]
```

To undo the change and point all users back to the Apple Software Update server:

```
defaults delete /Library/Preferences/com.apple.SoftwareUpdate CatalogURL
```

Note: Replace "`[URL]`" with the URL of the Software Update server, including the port number and the name of catalog file (index.sucatalog). For example, `http://su.domain_name.com:8088/index.sucatalog`

Published Date: Oct 10, 2016

Logic: Third-party appearance themes, input managers, or other system modification software may cause issues with opening files

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you have installed third-party appearance modifications, input managers, or other software designed to supersede the Mac OS X user interface, Logic Pro/Express may exhibit a continuous spinning disc pointer when you use the Open File dialog.

Solution

Disable or remove the third-party appearance modifications if they interfere with the display or functionality of Logic.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Motion: About memory cache and performance

This article has been archived and is no longer updated by Apple.

Background

Motion's caching will utilize your computer's RAM, taking as much memory as defined in the Project Cache preference.

To view or change this setting in Motion, do the following:

1. Choose **Motion > Preferences**.
2. Click **Cache** in the toolbar to reveal the Cache pane.

The Project Cache setting represents the percentage of your computer's total memory that you wish to use. The larger the number, the more memory will be available to Motion to cache frames, resulting in a higher likelihood of consistently smooth playback.

The Project Cache setting is retained as global to Motion; when you close a project, the memory is still reserved while Motion is running. This memory reservation may affect the performance of other applications that are running at the same time as Motion.

Considerations

Depending on your work style, there are a number of approaches to balancing the memory requirements of Motion and other applications that you run.

- If you run many applications simultaneously, try a lower Project Cache setting, so that memory will be available for other applications as well as Motion.
- If you prefer a high Project Cache setting for increased performance while using Motion, you can quit Motion when you are finished, so that the reserved memory will become available to other applications.
- Adding more physical RAM to your computer is another way to allow Motion to have a relatively large memory reservation, with a lower Project Cache percentage setting. This allows a proportionately larger amount of memory to be used by other applications.

Published Date: Oct 10, 2016

iTunes 7.2 for Windows doesn‘t open

This article has been archived and is no longer updated by Apple.

Symptom

Some customers using iTunes 7.2 for Windows may experience an issue where iTunes doesn't open and shows the alert message below:

Solution

1. Delete any copies of "iTunesSetup.exe" that were previously downloaded.
2. Re-download iTunes from the iTunes download page.
3. Reinstall iTunes with the freshly downloaded copy of the iTunes installer.

For more information about issues with iTunes opening please review this article.

Published Date: Oct 10, 2016

Mac OS X 10.4.9: Unable to automatically receive faxes

This article has been archived and is no longer updated by Apple.

Issue or symptom

After updating to Mac OS X 10.4.9, your computer may be unable to automatically receive faxes. When an incoming fax call is coming in, the modem may not detect the incoming call or attempt to answer it.

Solution

Download and install the Mac OS X 10.4.11 Update or later.

Published Date: Feb 20, 2012

Mac OS X Server PDC: Windows users are unable to locate roaming profiles

This article has been archived and is no longer updated by Apple.

Issue or symptom

Users whose accounts reside on, or originated on, Windows servers are unable to access home directories hosted by a Mac OS X Server PDC. The client machine will receive a message such as "can't locate roaming profile" or "unable to locate roaming profile".

Solution

Affected users accounts are not members of the default group on Mac OS X Server, staff GID=20. Add staff GID=20 to the group membership for these accounts.

Published Date: Oct 10, 2016

MacBook Pro display issue related to "hot-plugging"

This article has been archived and is no longer updated by Apple.

Issue or symptom

When hot-plugging an external display into your MacBook Pro, you may notice the external display occasionally stays dark, or the internal display of the MacBook Pro appears to flash or turn black.

Sometimes, when switching from an S-Video to a DVI connection, the internal display may appear black or display only the mouse cursor.

Solution

1. Wait 5 seconds for the screen to automatically re-size or activate.
2. If this doesn't occur after 5 seconds, click on **Detect Displays** in the Displays pane of System Preferences.
3. If the internal (or external) display still doesn't re-size or activate, press the F7 key to turn on mirroring mode, or restart the computer.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

MacBook Pro (2.4/2.2GHz): Icons for video clips recorded with built-in iSight camera appear dark in iMovie

This article has been archived and is no longer updated by Apple.

Issue or symptom

On MacBook Pro (2.4/2.2GHz) computers, the icons for video clips in iMovie sometimes appear dark in the Clips pane when they are recorded with the built-in iSight camera.

The first time you use your built-in iSight camera, the camera may need to calibrate itself. As a result, the first few frames recorded by the camera may appear dark.

Solution

If you have footage recorded when using your camera for the first time, use iMovie to remove the first few frames that were used to create the icon, or try recording the footage again.

Published Date: Feb 20, 2012

Mac OS X: Clearing the Finder "Open With" contextual menu

This article has been archived and is no longer updated by Apple.

Ever wondered how to "clear" the Finder's Open With... contextual menu choices of any extraneous or older applications? (This is the menu that appears when you control-click or "right-click" a document icon.)

If your Open With... menu is filled with too many choices to easily scroll through, you can remove the less-commonly used choices. These steps will clear the list except for the most current applications that can open your document.

1. From the Finder **Go** menu, choose **Home**.
2. Open the Library folder in the Home window.
3. Open the Preferences folder.
4. Find com.apple.LaunchServices.plist.
5. Rename "com.apple.LaunchServices", such as to "com.apple.LaunchServices.old", or move it to the Trash.

The next time you use the Open With.... contextual menu in the Finder, only current applications will be listed. Some items may return if the application that controls them adds itself back to the list.

Published Date: Feb 20, 2012

iChat: Which third-party USB cameras are compatible with iChat in Mac OS X 10.4.9 or later?

This article has been archived and is no longer updated by Apple.

For iChat video chats in Mac OS X 10.4.9 and later, you can use a third-party USB camera which is UVC compliant (or, of course, a built-in or external iSight camera).

Contact the manufacturer of your third-party USB camera if you have questions about UVC compliance.

Published Date: Oct 10, 2016

About the security content of Apple TV 1.1

This article has been archived and is no longer updated by Apple.

This document describes the security content of Apple TV 1.1.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Apple TV 1.1

- **Apple TV**

  CVE-ID: CVE-2007-2386

  Available for: Apple TV

  Impact: A remote attacker may be able to cause a denial of service or arbitrary code execution

  Description: A buffer overflow vulnerability exists in the UPnP IGD (Internet Gateway Device Standardized Device Control Protocol) code used to create Port Mappings on home NAT gateways in the Apple TV implementation. By sending a maliciously crafted packet, a remote attacker can trigger the overflow which may lead to an unexpected application termination or arbitrary code execution. This update addresses the issue by performing additional validation when processing UPnP protocol packets. Credit to Michael Lynn of Juniper Networks for reporting this issue.

Installation note:

This update is only available directly to the Apple TV, and will not appear in your computer's Software Update application, or in the Apple Downloads site.

The Apple TV device will automatically check Apple's update server on its weekly schedule. When an update is detected, it will download it and present the user with the option to install the update immediately or later. We recommend applying the update immediately if possible. Selecting "later" will present the option about a week later when the device once again checks for available updates.

The automatic update process may take up to a week depending on the day that the Apple TV device checks for updates. Alternatively, you may manually update your Apple TV using the TV interface by selecting Settings > Update Software.

To check that the Apple TV has been updated, use the TV interface:

- Navigate to Settings
- Select About
- The Software Version after applying this update will be "1.1"
- To exit the About screen to the main menu, press Menu

Published Date: Oct 10, 2016

Safari Beta 3.0 for Windows: Web page‘s "Print" link does not open printing window

This article has been archived and is no longer updated by Apple.

Issue or symptom

Some Web pages have a "Print" link that is designed to bring up a Print window when they are clicked. However, in Safari Beta 3.0 for Windows, clicking such a link may not bring up a Print window.

Solution

To print the page, choose **Print...** from the **File** menu or press Ctrl-P.

This document will be updated as more information becomes available.

Important: Safari Public Beta is preview software licensed for use on a trial basis for a limited time. Do not use Safari Public Beta in a commercial operating environment or with important data. You should back up all of your data before installing this software and regularly back up data while using the software. Your rights to use Safari Public Beta are subject to acceptance of the terms of the software license agreement that accompanies the software.

Important: Apple does not provide technical phone support or fee-based support agreements for using Safari Beta 3.0 for Windows. Support is available on Apple's website.

Published Date: Feb 20, 2012

Safari Beta 3.0 for Windows: Do not install Safari at C:\

This article has been archived and is no longer updated by Apple.

When installing Safari Beta 3.0 for Windows, you should let it install in the default location.

However, if you want to change the default location of Safari, do not install it at the root of the C drive, or "C:\\" . Doing so may cause issues in Safari.

This document will be updated as more information becomes available.

Important: Safari Public Beta is preview software licensed for use on a trial basis for a limited time. Do not use Safari Public Beta in a commercial operating environment or with important data. You should back up all of your data before installing this software and regularly back up data while using the software. Your rights to use Safari Public Beta are subject to acceptance of the terms of the software license agreement that accompanies the software.

Important: Apple does not provide technical phone support or fee-based support agreements for using Safari Beta 3.0 for Windows. Support is available on Apple's website.

Published Date: Feb 20, 2012

Safari Beta 3.0 for Windows: Start with page one when printing a Web page

This article has been archived and is no longer updated by Apple.

When printing a multiple-page Web page in Safari Beta 3.0 for Windows, always start with page 1 in the Print Range. If you start with page 2 or higher, the pages may not print.

This document will be updated as more information becomes available.

Important: Safari Public Beta is preview software licensed for use on a trial basis for a limited time. Do not use Safari Public Beta in a commercial operating environment or with important data. You should back up all of your data before installing this software and regularly back up data while using the software. Your rights to use Safari Public Beta are subject to acceptance of the terms of the software license agreement that accompanies the software.

Important: Apple does not provide technical phone support or fee-based support agreements for using Safari Beta 3.0 for Windows. Support is available on Apple's website.

Published Date: Feb 20, 2012

Avoiding radio frequency interference

This article has been archived and is no longer updated by Apple.

Nearly every electronic device is subject to radio frequency (RF) interference from external sources if inadequately shielded, designed, or otherwise configured to be compatible. As a result, iPhone may cause interference with other devices. Follow these instructions to avoid interference problems.

- **Aircraft**
  Federal Aviation Administration (FAA) regulations may prohibit using wireless devices while in the air. For more information about using Airplane mode to turn off the iPhone wireless transmitters, see the iPhone User's Guide.
- **Vehicles**
  Radio frequency signals may affect installed or inadequately shielded electronic systems in motor vehicles. Check with the manufacturer or its representative regarding your vehicle.
- **Electronics Devices**
  Most modern electronic equipment is shielded from RF signals. However, certain electronic equipment may not be shielded against the RF signals from the iPhone.
- **Pacemakers**
  The Health Industry Manufacturers Association recommends that a minimum separation of 6 inches (15 cm) be maintained between a handheld wireless phone and a pacemaker to avoid potential interference with the pacemaker. Persons with pacemakers:
    - Should always keep iPhone more than six inches from their pacemaker when the phone is turned on
    - Should not carry iPhone in a breast pocket
    - Should use the ear opposite the pacemaker to minimize the potential for interference

  If you have any reason to suspect that interference is taking place, turn iPhone off immediately.

- **Hearing Aids**
  The iPhone may interfere with some hearing aids. If it does, consult the hearing aid manufacturer or your physician for alternatives or remedies.
- **Other Medical Devices**
  If you use any other personal medical device, consult the manufacturer of your device or your physician to determine if it is adequately shielded from external RF energy.

  Turn the iPhone off in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals and health care facilities may use equipment that is sensitive to external RF energy.
- **Posted Facilities**
  Turn off the iPhone in any facility where posted notices so require.
- **Blasting Areas**
  To avoid interfering with blasting operations, turn off iPhone when in a "blasting area" or in areas posted "Turn off two-way radio." Obey all signs and instructions.

FCC Compliance Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

Important: Changes or modifications to this product not authorized by Apple could void the EMC compliance and negate your authority to operate the product. This product has demonstrated EMC compliance under conditions that included the use of compliant peripheral devices and shielded cables between system components. It is important that you use compliant peripheral devices and shielded cables between system components to reduce the possibility of causing interference to radios, televisions, and other electronic devices.

Published Date: Feb 20, 2012

AppleVision 1.6.1: Read Me

This article comprises the Read Me for AppleVision software version: 1.6.1. This software was released by Apple on June 16, 1998 and is available for downloading from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Description:
If you are using the Apple Studio Display, AppleVision 750AV or AppleVision 1710AV connected to a PowerBook G3 Series with Apple Displays Software 1.6 software installed, you may get an error message that reads, "AppleVision failed to load completely." when you wake up your computer. Version 1.6.1 of the "AppleVision" extension significantly reduces the frequency of the error message occurring.

IMPORTANT: Apple Displays Software 1.6 includes the extension "AppleVision" 1.6. Please refer to the documentation included with this software for complete details.

Editor's Note: A newer version of this software, version 1.7.1, has been released. Refer to Knowledge Base article 58278: "**Apple Displays Software 1.7.1 Read Me**"

This article has been archived and is no longer updated by Apple.
Information about AppleVision 1.6.1

Who should install this software?

Customers using Apple Displays Software 1.6 on a PowerBook G3 Series connected to one of the following displays:

- Apple Studio Display
- AppleVision 750AV
- AppleVision 1710AV

This software was tested with the U.S. English versions of Mac OS 7.5 through Mac OS 8.1.

IMPORTANT: Apple Displays Software 1.6 includes the extension "°AppleVision" 1.6.

Why is this software needed?
If you are using the Apple Studio Display, AppleVision 750AV or AppleVision 1710AV connected to a PowerBook G3 Series with Apple Displays Software 1.6 software installed, you may get an error message that reads, "AppleVision failed to load completely." when you wake up your computer. Version 1.6.1 of the "°AppleVision" extension significantly reduces the frequency of the error message occurring.

Installation instructions
Drag the extension named "°AppleVision" to your System folder. It will be automatically routed to the Extensions folder. Restart your computer.
Published Date: Feb 20, 2012

AppleShare IP: Setting up the Mail Server to Send and Receive Through Dialup

I have a dialup connection to the Internet, and want to set up my AppleShare IP mail server to dial up several times a day, send any outgoing mail, and pick up any incoming mail. Is this possible? How would I set it up?
This article has been archived and is no longer updated by Apple.
Yes, you can set up ASIP mail server to send/receive mail several times a day. In brief, you can make arrangements that all outgoing mail be relayed to your ISP's mail server for delivery to its ultimate location, and that any incoming mail be delivered to your ISP's mail server until you are online and it can be delivered to you.

Important: In this scenario, you will want the ASIP mail server to have connectivity to two separate IP network segments:

- Your local area network, so that users can exchange mail with the ASIP Mail server
- Your PPP connection, so that the mail server can exchange mail with other mail servers on the Internet.

To do this, you will need some type of router or gateway, such as Vicom Internet Gateway. This allows the server to connect via a PPP connection, yet maintain a connection (by mirroring a port), to your private IP network. Without such a router or gateway, your users will not be able to send/receive mail from the server if it is set to use the PPP port for all TCP/IP connections.

Setting up ETRN to retrieve mail from your Internet Service Provider
ETRN (extended turn) command uses a mechanism to define extensions to the SMTP service whereby a client may request that the server start the processing of its mail queues for messages that are waiting at the server for the client machine. If any messages are at the server for the client, then the server should create a new SMTP session and send the messages at that time.

1. Verify with your ISP that they can support ETRN requests.
2. Ask your ISP to set up a "backup" mail server for your domain name, example: "acme.com". They will need to modify the MX-List for "acme.com", to list their own mail server as a mail exchanger for acme.com.
3. Ask the ISP for the name of the mail server they have specified as a backup for your mail server (For the purposes of this example we will call that mail server "mail.myisp.com".)
4. Open ASIP Mail Admin and start the Mail Server program.
5. After both are up and running, open the host list window in Mail Admin.
6. Choose "Show Host List" from the Server menu.
7. Click the Create New Host button in the host list window.
8. When the "name" dialog box opens, enter the name of your ISP's mail server --"mail.myisp.com".
9. When this entry shows up in the list, select it and click the Edit Host button in the Host List window.
10. In the Edit Hosts Window for the ISP mail server, click the Schedule Tab.
11. Choose Set Allowed Connection Times from the pop-up menu.
12. Set up a schedule of allowed connection times on the 7-day, 24-hour panel. Green means allowed to connect at that time, gray means do not connect at that time.
13. Click the Remote Mail Polling (ETRN) checkbox in the lower right hand corner. This will allow the ASIP 6.0 Mail Server to poll your ISP's mail server during allowed connection times and ask it to download any mail waiting for your domain name.

Forwarding all your remote mail through one SMTP mail server.
When running with a dialup connection, it is sometimes useful to have all your outgoing mail sent to one SMTP mail server so that your AppleShare IP mail server doesn't waste time sending mail to various mail servers all over the Internet (which may be down or unreachable at the time your server is connected). Forwarding all your mail to another SMTP mail server with a timed Internet connection is a method of off-loading mail delivery to another server that has the bandwidth and the time to complete the message delivery process.

1. Open Mail Admin with the ASIP Mail Server running
2. Choose Mail Server Settings from the Server menu.
3. Click the Mail Out Tab.
4. Click the Relay all SMTP mail via checkbox
5. In the text field next to the check box enter the name of your ISP's mail server.
6. Click Save and close the window.

All outgoing mail will now be forwarded to the designated SMTP mail server to complete the delivery process. Setting this option has no effect on mail that is being delivered to your local users, it will only affect mail that has to be delivered to other mail servers.

Set Up the AppleShare IP Mail Server
Set Up the AppleShare IP Mail Server with its name for aliases or private IP networks (such as with the Vicom Gateway or other PPP dialup IP

gateways).

1. Open Mail Admin with the ASIP Mail Server running
2. Determine the domain name(s) that your ISP has registered for your company or mail server. These are the name(s) other people will use to send you mail.
3. Open the Host List window in Mail Admin.
4. Click the New Host button in the Host List window.
5. Enter the domain name of your mail server.
6. Select the host you just created when it appears in the list.
7. Click the Edit Host button.
8. Click the mail-out tab.
9. Click the Relay all SMTP mail via checkbox.
10. Enter the private-IP address of your ASIP mail server in the text box.
11. Click Save.
12. Repeat starting at step 4 for each additional name you want your mail server to know about.

Setup a default schedule for all outgoing mail

1. Open Mail Admin with the ASIP Mail Server running.
2. Open the Host List window in Mail Admin.
3. Choose Edit Default Host Profile from the Server menu.
4. Click each of the four tabs Mail In, Mail Out, Schedule, and Network.
5. Make sure all settings are the way you want them for all outgoing mail. In particular, make sure to set up the schedule that you want mail to be sent with.
6. Click Save.

Note: Do NOT click the Remote Mail Polling feature for Default hosts, you only need to enable this feature for a single host, not all of them.

Now any time your users send mail to any other Internet mail server, the outgoing mail will wait until an allowed connection time to be sent. Using this in combination with the global server setting to relay all outgoing mail via one server is a powerful combination. ASIP mail server holds all your outgoing mail until an allowed connection time, and then all the mail is sent to one SMTP server at once.
Published Date: Feb 20, 2012

About the security content of the Mac OS X 10.4.10 Update

This article has been archived and is no longer updated by Apple.

This document describes the security content of the Mac OS X 10.4.10 Update, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

- **Networking**

  CVE-ID: CVE-2007-2242

  Available for: Mac OS X v10.4 through Mac OS X v10.4.9, Mac OS X Server v10.4 through Mac OS X Server v10.4.9

  Impact: Remote attackers may be able to adversely affect network performance

  Description: A design issue exists in the IPv6 protocol's handling of type 0 routing headers. Depending on network topology and capacity, the reception of specially crafted IPv6 packets may lead to a reduction in network bandwidth. This update addresses the issue by disabling the support for type 0 routing headers. This issue does not affect systems prior to Mac OS X v10.4.

Published Date: Oct 10, 2016

Using Access Control Lists to restrict access to an AirPort Extreme (802.11n) base station

This article has been archived and is no longer updated by Apple.

With AirPort Utility and Mac OS X, you can use an Access Control List (ACL) to restrict access to your AirPort base station network to specific computers that you specify. You can export an Access Control list as a text file with AirPort Admin Utility, then use AirPort Utility to upload the list to a new AirPort Extreme (802.11n) base station.

To import an existing Access Control list:

1. Open AirPort Utility in Mac OS X and select the base station you will be sending the list to.
2. Configure the base station manually by choosing **Manual Setup** from the **Base Station** menu or by pressing Command-L.
3. Option-click the **File** menu and choose "Import Access Controls".
4. Navigate to your saved Access Control list.

Published Date: Feb 20, 2012

Final Cut Pro 6: "Media Manager File Trim" issue resolved by Mac OS X 10.4.10 Update

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you are using Final Cut Pro 6 with Mac OS X 10.4.9, you might encounter an issue when using Media Manager in which operations unexpectedly result in a message that states "Media Manager File Trim Failed".

Solution

Download and install the Mac OS X 10.4.10 Update, or later.

Related articles

- 306080: Final Cut Pro: Error 12 message when performing Media Manager operation on clip with long file name

Published Date: Feb 20, 2012

Soundtrack Pro 2: No audio output when using FireWire for video output

This article has been archived and is no longer updated by Apple.

Issue or symptom

In some situtations, there may be no audio when outputting video to a FireWire device from Soundtrack Pro 2.

Solution

This can occur when using a stereo submix setting in the Multitrack Editor. Change the submix setting to surround 1-6 as a workaround.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

iMac: Open Firmware and Exiting to Mac OS

This article describes what has happened, and what to do, when the following white screen appears on an iMac that is starting up:

```
Apple iMac Open Firmware X.XX built on XX/XX/98 at XX:XX:XX
Copyright 1994-1998 Apple Computer, Inc.
All Rights Reserved.
ok
0)
```

This article has been archived and is no longer updated by Apple.

This screen is the iMac Open Firmware screen. Beginning with Power Macintosh computers with PCI slots, Power Macintosh computers rely on a firmware operating system called "Open Firmware" for controlling hardware. Open Firmware is a cross-platform firmware standard for controlling hardware and is used by all PCI-based Mac OS computers. Open Firmware is used mainly by Apple hardware developers. There is very little need for iMac users to ever need to start up into Open Firmware.

Although it is fairly difficult to mistakenly start up into Open Firmware, you may accidentally start up into Open Firmware by holding down the Command-Option-O-F keys at restart or power on before any video is displayed on the screen. The iMac should never start up into Open Firmware on its own.

If you are at the Open Firmware screen and want to start up into Mac OS, simply type "`mac-boot`" without the quotes at the command prompt and press Return to exit Open Firmware. The iMac should exit Open Firmware and continue starting up into Mac OS.

Published Date: Feb 20, 2012

Portable Home Directory: Don‘t back up certain directories or restore them from a backup

This article has been archived and is no longer updated by Apple.

Issue or symptom

Restoring a Portable Home Directory from a backup can result in data loss if certain directories are restored.

Solution

To avoid possible data loss issues after restoring a mobile account's Home from a backup, do not restore (~/Library/Mirrors).

To avoid this issue, always exclude the (~/Library/Mirrors) folder when creating a mobile account backup.

Published Date: Oct 10, 2016

About Security Update 2007-006

This article has been archived and is no longer updated by Apple.

This document describes Security Update 2007-006, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Security Update 2007-006

- **WebCore**

  CVE-ID: CVE-2007-2401

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9 or later, Mac OS X Server v10.4.9 or later

  Impact: Visiting a malicious website may allow cross-site requests

  Description: An HTTP injection issue exists in XMLHttpRequest when serializing headers into an HTTP request. By enticing a user to visit a maliciously crafted web page, an attacker could conduct cross-site scripting attacks. This update addresses the issue by performing additional validation of header parameters. Credit to Richard Moore of Westpoint Ltd. for reporting this issue.

- **WebKit**

  CVE-ID: CVE-2007-2399

  Available for: Mac OS X v10.3.9, Mac OS X Server v10.3.9, Mac OS X v10.4.9 or later, Mac OS X Server v10.4.9 or later

  Impact: Visiting a maliciously crafted website may lead to an unexpected application termination or arbitrary code execution

  Description: An invalid type conversion when rendering frame sets could lead to memory corruption. Visiting a maliciously crafted web page may lead to an unexpected application termination or arbitrary code execution. Credit to Rhys Kidd of Westnet for reporting this issue.

Published Date: Oct 10, 2016

About the Safari Beta 3.0.2 for Mac OS X

This article has been archived and is no longer updated by Apple.

The Safari Beta 3.0.2 for Mac OS X was released on June 22, 2007. This beta software is for trial purposes and intended to gather feedback prior to a full release.

Safari Beta 3.0.2 for Mac OS X addresses the following Safari issues:

- Includes the latest security updates for Safari.
- Safari might unexpectedly quit when parental control features are enabled for an account.
- Safari might unexpectedly quit when sending a news headline as an email from Google Reader.

Safari Beta 3.0.2 for Mac OS X also updates WebKit to address the following issues:

- There may be missing quoted text when replying to an email message containing HTML.
- Spaces might not appear when when typed at the beginning of a line, when replying to an email message containing HTML.
- Improves stability of Mail.
- An issue in which incoming iChat messages could be delayed.
- Improves compatibility with Dashboard widgets that make use of plug-ins.
- Improves compatibility with Dashboard widgets that have a search field.
- Addresses an issue in which BBEdit might unexpectedly quit while dragging text outside of an HTML preview window.

Important: Safari Public Beta is preview software licensed for use on a trial basis for a limited time. Do not use Safari Public Beta in a commercial operating environment or with important data. You should back up all of your data before installing this software and regularly back up data while using the software. Your rights to use Safari Public Beta are subject to acceptance of the terms of the software license agreement that accompanies the software.

Important: Apple does not provide technical phone support or fee-based support agreements for using Safari Beta 3.0. Support is available on Apple's website.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

iMovie HD 6: Incorrect clip duration when capturing HDV 1080i 25 fps

This article has been archived and is no longer updated by Apple.

Issue or symptom

When capturing HDV 1080i 25 frames per second (fps), the clip duration shown in the iMovie HD project may be longer than it appeared on the camera. This may also affect iDVD projects created from this iMovie HD project.

- HDV 1080i 25 fps is commonly used in PAL regions
- HDV 1080i 30 fps is commonly used in NTSC regions

Solution

Follow these steps to work around the issue:

1. Open a new project and import the HDV 1080i 25 fps footage from the camera.
2. Once the footage is captured from the camera, close and save the project.
3. In the Finder, find the project, control-click or right-click on it then select to show package contents.
4. In the new window, open the media folder and drag the clip(s) into the media shelves of a new or existing iMovie HD 6 project.

Repeat these steps every time you import HDV 1080i 25 fps footage from a camera.

Published Date: Feb 20, 2012

Apple Displays : Visible Diagonal Lines

I have several diagonal lines on my monitor sloping upward and to the right. What are these lines and how can I get rid of them

This article has been archived and is no longer updated by Apple.

These are retrace lines and they are normally not visible when the display is in proper alignment. If the lines cannot be removed by changing the brightness or contrast adjustments, the display will require service. An Apple-authorized service provider can repair or properly align the display for proper brightness and white balance.

Published Date: Feb 20, 2012

Configuring an AirPort Extreme (802.11n) base station to forward a range of ports

This article has been archived and is no longer updated by Apple.

An AirPort Extreme (802.11n) base station can be configured to forward multiple ports from the Internet to inside your NAT/network.

Enter the port XXX-YYY as shown below. Note that there are no spaces in the port range.

Published Date: Oct 10, 2016

AirPort Admin Utility is renamed after AirPort Utility is installed

This article has been archived and is no longer updated by Apple.

After you have installed and updated AirPort Utility, the application "AirPort Admin Utility" is renamed to "AirPort Admin Utility for Graphite and Snow".

AirPort Admin Utility for Graphic and Snow can be used to configure earlier AirPort base stations, but not to configure an AirPort Extreme (802.11n) base station. If you have one of these older base stations, you can still configure it using the AirPort Admin Utility for Graphite and Snow.

Related articles

- ap2043: "AirPort Utility 5.0 Help: Setting wireless options for your network"
- 107908: "Identifying AirPort hardware"

Published Date: Feb 20, 2012

PowerBook G3 Series: Backup Battery Purpose and Life

How long can the internal backup battery in my PowerBook G3 Series or PowerBook (FireWire) maintain the date and time settings?
This article has been archived and is no longer updated by Apple.
The main function of the backup battery is to maintain the contents of RAM (random-access memory) and the date and time while you swap out the main battery.

Important: This should only be done while the PowerBook is turned off or in sleep mode.

A fully charged internal backup battery allows you to leave a G3 Series PowerBook in sleep mode for approximately 4 minutes before it shuts down. This should be adequate time to remove and replace a main battery.

The original PowerBook G3 Series has the ability to use two expansion bay devices and run from the AC adapter with no main battery installed.

Note: The PowerBook G3 (Bronze keyboard)and PowerBook (FireWire) do not have this capability.

If you choose to store or transport the PowerBook without a main battery installed, a fully charged backup battery by itself maintains date and time, as well as other PRAM (parameter RAM) settings, for approximately 5 hours after shutdown.

Storing and transporting the PowerBook with a main battery installed greatly increases the amount of time that these settings are maintained in nonvolatile memory.

If you find that the computer is not holding the date and time, try resetting the Power Manager, as described in article 14449: "**PowerBook: Resetting Power Manager**".

If the date and time are not held after a shutdown, it is likely that the backup battery is either discharged or needs replacement. Follow these steps to charge the backup battery:

1. Remove the main batteries.
2. Reset the Power Manager as described in article 14449: "**PowerBook: Resetting Power Manager**".
3. Connect the AC power adapter for 4 hours to fully charge the backup battery.If discharged main batteries are installed in the computer, recharging the backup battery may take up to 48 hours to completely charge.

If the date and time are still not held after a shutdown, have the backup battery replaced by an Apple Authorized Service Provider.

For additional information on testing the internal PowerBook battery, refer to article 30017: "**PowerBook: Testing Backup Battery**"
Published Date: Feb 20, 2012

DVD Player: Plays HD DVD discs authored in DVD Studio Pro only

This article has been archived and is no longer updated by Apple.

DVD Player, included with Mac OS X, can be used to watch DVD movies on your computer. You can watch movies recorded on standard DVD-video discs or you can view DVD projects that are stored on your hard disk.

DVD Player can play HD DVD discs that were authored using Apple's DVD Studio Pro.

Note: DVD Player cannot play HD DVD discs that were not authored in DVD Studio Pro, even if a compatible HD DVD drive is connected to, or installed in, your computer.

Published Date: Oct 10, 2016

Color 1.0 and 1.0.1: Network-based home directories are not supported

This article has been archived and is no longer updated by Apple.

Issue or symptom

Color (a part of Final Cut Studio 2) only supports home directories when they are in the default Mac OS X location, which is `/Users`. Color does not support network-based home directories.

If a home directory resides on the network or outside the default Mac OS X location (the "Users" folder), Color may not start or be fully functional.

Solution

Before installing Color, make sure you have an administrator account whose home directory resides in the default location on the local disk.

Only use Color if your Home is in the standard, default location (/Users).

Additional information

This issue is resolved in Color 1.0.2.

For more information about installing Color, refer to the document named Installing Your Software, included on the main Final Cut Studio installation disc.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

SerialDMA 2.1 Update: Read Me

Name: SerialDMA Update

Version: 2.1

Released: July 8, 1998

Requires:
SerialDMA 2.1 extension works with U.S. English Mac OS 7.6.1, 8.0, or 8.1, and any of the following Mac OS computers: Power Macintosh 4400, Power Macintosh 5500, Power Macintosh 6500, Twentieth Aniversary Macintosh, Power Macintosh 7220, Power Macintosh G3, PowerBook 2400, PowerBook G3, or PowerBook G3 Series.

Description:
Includes version 2.1 of the SerialDMA extension, which supplies a replacement serial driver for a specific set of Mac OS computers. This new driver fixes an incompatibility that prevents certain serial devices, such as digital cameras, from establishing an initial connection. If you are using one of the Mac OS computers listed above, and you are using a serial device which cannot establish an initial connection, you should install this update.

Instructions:
This software consists of a self-mounting Disk Copy compressed image (.smi) file. Download this software to your hard drive and then double-click it to use it. You do not need Disk Copy to access .smi files.
This article has been archived and is no longer updated by Apple.
Note: This extension is no longer needed with Mac OS 8.5 and later.

Important Information About SerialDMA Update 2.1

What is the SerialDMA Update?
Serial DMA Update 2.1 consists of version 2.1 of the SerialDMA extension, which supplies a replacement serial driver for a specific set of Mac OS computers. This new driver fixes an incompatibility that prevents certain serial devices, such as digital cameras, from establishing an initial connection.

Who Needs to Install the SerialDMA Update?
If you are using one of the following Mac OS computers listed below, and you are using a serial device which cannot establish an initial connection, you should install this update.

Power Macintosh 4400
Power Macintosh 5500
Power Macintosh 6500
Power Macintosh 7220
Power Macintosh G3
Twentieth Aniversary Macintosh

PowerBook 2400
PowerBook G3
PowerBook G3 Series

Note: The PowerBook 3400 Is not supported by this update.

Software Required:
SerialDMA 2.1 extension works with U.S. English Mac OS 7.6.1, 8.0, or 8.1.

Installing SerialDMA Update 2.1:
1. Run the installer.
2. After installing, you must reboot for the software to take effect.

Note: This article mentions an Apple software update. You may search for software updates in the Software Updates Library at following URL: "**http://asu.info apple.com**"
Published Date: Feb 20, 2012

Remote Desktop reports Mac OS X 10.4.9 after Mac OS X 10.4.10 Update is installed

This article has been archived and is no longer updated by Apple.

Issue or symptom

Remote Desktop 3.1 may report that a computer has Mac OS X version 10.4.9 even though is has actually been updated to Mac OS X 10.4.10.

Solution

To verify which Mac OS X version is installed, check the Build information, which should be correct even if the version is not:

Mac OS X version	Build (PowerPC-based Mac)	Build (Intel-based Mac)
10.4.9 (client or server)	8P135	8P2137
10.4.10 (client)	8R218	8R2218 or 8R2232
10.4.10 (server)	8R218	8R2218b

Note: If the Mac OS X Server 10.4.10 Update (Universal) is installed on a PowerPC-based server, the Intel build number appears.
Published Date: Feb 20, 2012

MacBook Pro: Install MacBook Pro Software Update 1.0 before EFI Firmware Update 1.3

This article has been archived and is no longer updated by Apple.

The EFI Firmware Update 1.3 resolves a display issue on MacBook Pro 2.2GHz and 2.4GHz 15-inch computers. This update is available via Software Update preferences or as a standalone installer from Apple Downloads. MacBook Pro Software Update 1.0 must be installed before installing MacBook Pro EFI Firmware Update 1.3.

System Requirements

- MacBook Pro 2.2GHz or MacBook Pro 2.4GHz
- Mac OS X 10.4.9 or later
- MacBook Pro Software Update 1.0 installed

Install MacBook Pro Software Update 1.0 before EFI Firmware Update 1.3

MacBook Pro Software Update 1.0 must be installed before installing MacBook Pro EFI Firmware Update 1.3.

If MacBook Pro Software Update 1.0 has not been installed, *MacBook Pro EFI Firmware Update 1.3 will not appear in Software Update*.

If MacBook Pro Software Update 1.0 has been installed and the MacBook Pro EFI Firmware Update 1.3 has been downloaded but has not been installed, or the installation was canceled, you can double-click "MacBook Pro EFI Firmware Update", located in (/Applications /Utilities), to run the installer again.

Published Date: Feb 20, 2012

Power Macintosh G3: Digital Camera Issue

I have a digital camera that I'm using with my Power Macintosh G3 and I can't seem to establish an initial connection with it using the serial port.
This article has been archived and is no longer updated by Apple.
This is a known issue and is resolved with SerialDMA 2.1 Update, which consists of version 2.1 of the SerialDMA extension. This new driver fixes an incompatibility that prevents certain serial devices, such as digital cameras, from establishing an initial connection. If you are using one of the following Mac OS computers, and you are using a serial device which cannot establish an initial connection, you should install this update.

- Power Macintosh 4400
- Power Macintosh 5500
- Power Macintosh 6500
- Twentieth Anniversary Macintosh
- Power Macintosh 7220
- Power Macintosh G3
- PowerBook 2400
- PowerBook 3400
- PowerBook G3
- PowerBook G3 Series.

For more information on the SerialDMA 2.1 Update and how to get it, see the following article:
Article 30581: "**SerialDMA 2.1 Update: Read Me**"
Published Date: Feb 20, 2012

Motion: Tips for using gestures

This article has been archived and is no longer updated by Apple.

If you use a third-party graphics tablet and pen with your computer, you can use gestures to navigate within Motion and to perform tasks such as editing, copying and pasting, and so forth. Gestures are continuous, uninterrupted patterns that are drawn in the Motion user interface using your tablet and pen.

If Motion does not respond to gestures as expected, these tips may help resolve the issue:

- Confirm that you have installed the latest compatible drivers for your graphics tablet. Consult the manufacturer's website for the latest information about available drivers.
- Verify that Handwriting Recognition is enabled in Ink preferences (in System Preferences).
- If your Mac OS X startup volume has a name with more than 26 characters (including spaces), Motion might not respond to gestures as expected. Change the name of your Mac OS X disk so that has 26 or fewer characters (including spaces).
- If you have assigned a pen button as the trigger for gesture input method in Motion preferences, be sure that the same pen button does not have a function assigned to it by the tablet's software. For example, if you are using a Wacom tablet, and you wish to assign a pen button to invoke gesture input method in Motion, you should check the assignment for that pen button in Wacom Tablet preferences in System Preferences. Change the assignment to "Application Defined" or "Ignore" for that pen button in the Wacom Tablet pane to allow Motion to define the action for that button.

Choose **Help > Motion User Manual** in Motion for detailed information about using and configuring gestures.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Final Cut Pro 6.0.1: Incorrect AVCHD clips may be transferred

This article has been archived and is no longer updated by Apple.

Issue or symptom

Final Cut Pro 6.0.1's Log and Transfer window allows you to ingest footage from numerous disks, cards, or connected devices. For example, you can transfer footage from a connected AVCHD camcorder as well as from a SD card.

In some cases, it's possible for AVCHD footage from a different clip to appear in a logged clip after it has been ingested. This may happen if you attempt to transfer clips from more than one connected device or mounted volume at the same time.

Solution

Have only one connected device or mounted volume at a time in the Log and Transfer window. If more than one volume icon appears in the Log and Transfer window, disconnect or eject all but one.

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

Final Cut Pro 6.0.1: Working with spanned AVCHD clips

This article has been archived and is no longer updated by Apple.

A spanned AVCHD clip is a clip that consists of two or more media files. Spanned clips are created whenever you record a single shot that exceeds the file size limit of the recording device.

When this happens, the camcorder continues recording the shot to a new media file. If that file reaches the limit, the camcorder will go on to another new media file, and so on. **Note:** With spanned clips, you will not see multiple clips in your camcorder's clip browser, because the camera treats the spanned media segments as if they were a single clip.

Because AVCHD media uses an inter-frame compression method, it's necessary for the the camcorder to assess a number of frames (known as a GOP, or Group Of Pictures) in order to record or display any one given frame. When the camcorder stops recording one of a spanned clip's media files and goes on to recording another, it may record the same frames at the end of one segment, as well as at the beginning of the next. This is done so that the GOP structure of the recording can remain intact rather than being broken, ensuring smooth playback on your camcorder.

When Final Cut Pro 6 transfers spanned AVCHD clips to your computer, these extra frames are accounted, but there may be some resulting issues that you should be aware of:

- In the Log and Transfer window, you can preview AVCHD clips to review their contents, and decide whether or not you want to transfer them to your project. If you play a clip that is the second or subsequent segment of a spanned clip, there may be a brief "blink" of black video just as the playback begins. This is normal, and does not indicate a problem with the clip. This may also occur if you scrub the playhead in the preview section of the Log and Transfer window.

- After being transferred to the Browser, some of the clips from spanned clips (specifically, the second and subsequent segments) may have slightly different Media Start and Duration times than indicated in the Log and Transfer window. For example, if the Media Start time of a clip is 00:00:00:00 in the Log and Transfer window, it may appear as 00:00:00:20 or 00:00:00:24 after being transferred to the Browser. In such cases, your clips should always contain slightly more total media than indicated, as opposed to less. All of your footage will be included. The offset in these cases will be less than one second.

- Approximately one half second of audio may be silent at the tail end of all but the last clips in a spanned AVCHD clip. The audio will be present in the redundant section at the beginning of the next clip segment of that spanned clip.

- The second and subsequent clips of a spanned clip may have extra frames added at the front of each clip segment after being transferred. This allows for some overlap, so that the clips can be re-joined in the Timeline. AVCHD doesn't use traditional timecode, so the Media Start times for the spanned clip segments will all be within one second of 00:00:00:00. Because of this, you can't use the clips' timecode to join the spanned clip segments. It may require extra care to re-join the clips in the Timeline with precision.

This document will be updated as more information becomes available.

Related articles

- 305831: "Final Cut Pro 6.0.1: Incorrect AVCHD clips may be transferred"

Published Date: Feb 20, 2012

Apple Studio Display 15-inch LCD: No Black and White Video Support

I have an Apple Studio Display 15-inch LCD and when I try to view black and white composite video I get no video with an error message "No Video Signal" displayed. I am able to view color composite video with no problem. Is this a problem with my display?

This article has been archived and is no longer updated by Apple.

The Apple Studio Display 15-inch LCD does not support black and white video modes. Only color video modes are supported.

Published Date: Feb 20, 2012

Mac OS X 10.5: Using DTrace instead of KTrace

This article has been archived and is no longer updated by Apple.

The command line-based process debugging tool KTrace, which is used for tracing kernel processes in Mac OS X 10.4 and earlier, is not included with Mac OS X 10.5 Leopard. There is no manual entry (`man`) for the command line-based process debugging tool KTrace.

Mac OS X 10.5 or later utilizes a more robust kernel tool called DTrace.

You can learn more about DTrace and its usage by opening Terminal and typing: `man dtrace`

Published Date: Feb 20, 2012

TA24817_iMovie_rsquo_Dragging_media_from_the_Finder.pdf

iMovie ’08: Dragging media from the Finder

This article has been archived and is no longer updated by Apple.

In iMovie ’08, if you drag media from the Finder desktop into iMovie, drag the media to an event in the Event Library list. If you drag it anywhere else, the media won't be added to iMovie.

Otherwise, to import media into iMovie ’08, choose **File > Import Movies**. You can then navigate to your and select the movie to import.

Published Date: Oct 10, 2016

iMovie ’08: Can‘t drag movies from Media Browser

This article has been archived and is no longer updated by Apple.

In iMovie ’08, you may find that you cannot drag movie files from the Media Browser's audio pane (as pictured below) into your iMovie Project or Event areas.

If this happens, choose **File > Import Movies**. Then navigate to your movie to select it and other import options. You can also drag a movie from the Finder to an Event in the Event Library.

Published Date: Oct 10, 2016

iMovie ’08: Preview of MPEG-2 content from a random access camera is interlaced

This article has been archived and is no longer updated by Apple.

Issue

When a random access camera that uses MPEG-2 is used to import video into iMovie ’08, the import window opens automatically but the previewed clips are interlaced as shown below:

Solution

Even though the preview is interlaced, once the video is imported into iMovie ’08 your video will no longer be interlaced.

Published Date: Oct 10, 2016

iMovie ’08: Thumbnails won‘t update if photo is cropped

This article has been archived and is no longer updated by Apple.

Issue

If you crop a photo in iMovie ’08, the thumbnail for that photo doesn't update. For example, when you place a portrait photo into a project it displays a portrait thumbnail. If you crop that photo as a landscape, it will now display in the project as a landscape photo, but the thumbnail still shows the photo as a portrait.

Solution

This is normal. Thumbnails are designed to retain their original state.

Published Date: Oct 10, 2016

iMovie ’08: Exporting two movies of equal size to YouTube results in one rejected as a duplicate

This article has been archived and is no longer updated by Apple.

Issue

When you export two movies of equal duration to YouTube, the second movie may be rejected by YouTube as a duplicate. This may occur even though the second movie has a different title.

Solution

To prevent your movie from being rejected as a duplicate, make a slight change to the duration of your second movie. This will help them to be differentiated by YouTube when they are uploaded.

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Published Date: Oct 10, 2016

TA24822_iMovie_rsquo_Project_names_with_periods_are_truncated_.pdf

iMovie ’08: Project names with periods are truncated

This article has been archived and is no longer updated by Apple.

In iMovie ’08, when you create a project name that contains a period ("."), the period and all subsequent characters following the period in the title name are not displayed.

For example, if you name your project "My Vacation.Hawaii" the title will be listed as "My Vacation"—the period and all subsequent characters are not shown.

Published Date: Feb 20, 2012

Safari 3 Public Beta: Unexpectedly quits when opened in Mac OS X 10.4

This article has been archived and is no longer updated by Apple.

Issue or symptom

Safari 3 Pubic Beta may unexpectedly quit when opened in Mac OS X 10.4.

Solution

Delete the Safari History.plist file from (~/Library/Safari/):

1. From the Finder's **Go** menu choose **Home**.
2. In the Home window, open the Library folder.
3. Open the Safari folder.
4. Delete the file named "History.plist".

You should now be able to open Safari 3 Public Beta.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Apple TV: iTunes Store Country Selection

This article has been archived and is no longer updated by Apple.

With Apple TV version 1.1, you can now access a new Settings feature called iTunes Store. After initial setup, or a software update, Apple TV will attempt to automatically set the iTunes Store locale to the device's location. You can then preview content such as Top Songs or Top Music Videos if it's available in your locale.

You can also choose a different setting to preview store content from a different locale or to simply overwrite the setting that Apple TV has chosen for you.

Published Date: Feb 20, 2012

Apple TV: Use your YouTube account to log into YouTube on Apple TV.

This article has been archived and is no longer updated by Apple.

Issue or symptom

YouTube's web site allows members to use either their YouTube account or Google account to log in.

At this time, YouTube members can only use their YouTube account to log in from Apple TV.

Solution

Use only your YouTube account to log in to YouTube from Apple TV.

This document will be updated as more information becomes available.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Mac OS X 10.4.10: No sound from some FireWire audio interfaces

This article has been archived and is no longer updated by Apple.

Issue or symptom

After updating to Mac OS X 10.4.10, some FireWire audio interfaces may have no sound output.

Solution

To resolve this issue, install the **FireWire SDK 24 for Mac OS X** from the Development Kits page.

Note: This download requires an Apple Developers Connection (ADC) account. If you are not an ADC member, you can create an account at no charge.

After you have installed the FireWire SDK 24 package, go to `/Developer/FirewireSDK23/FireWireComponents/FireWire Audio 2.0.1` and install AppleFWAudio-2.0.1fc1-e8.pkg.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

How to use an iPhoto slideshow with iWeb 1.x

This article has been archived and is no longer updated by Apple.

You may want use an iPhoto slideshow in iWeb 1.x. Although there is no direct way to share a slideshow from iPhoto, it can be easily done by exporting the slideshow as a QuickTime movie.

1. Select the slideshow in the iPhoto Source list.
2. Choose **File > Export**.
3. Select a destination and name for the movie in the file selector dialog, and click the **Export** button.
4. After the slideshow has been saved, you can drag the exported .mov file to a page in iWeb.

If you are a .Mac member, you can create a Photos page, which automatically includes a Slideshow button. Published iWeb 1.x pages to .Mac can then be viewed as slideshows.

Published Date: Feb 20, 2012

About the security content of QuickTime 7.2

This article has been archived and is no longer updated by Apple.

This document describes the security content of QuickTime 7.2, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

QuickTime 7.2

- **QuickTime**

  CVE-ID: CVE-2007-2295

  Available for: Mac OS X v10.3.9, Mac OS X v10.4.9 or later, Windows Vista, XP SP2

  Impact: Viewing a maliciously crafted H.264 movie may lead to an unexpected application termination or arbitrary code execution

  Description: A memory corruption issue exists in QuickTime's handling of H.264 movies. By enticing a user to access a maliciously crafted H.264 movie, an attacker can trigger the issue which may lead to an unexpected application termination or arbitrary code execution. This update addresses the issue by performing additional validation of QuickTime H.264 movies. Credit to Tom Ferris of Security-Protocols.com, and Matt Slot of Ambrosia Software, Inc. for reporting this issue.

- **QuickTime**

  CVE-ID: CVE-2007-2392

  Available for: Mac OS X v10.3.9, Mac OS X v10.4.9 or later, Windows Vista, XP SP2

  Impact: Viewing a maliciously crafted movie file may lead to an unexpected application termination or arbitrary code execution

  Description: A memory corruption issue exists in QuickTime's handling of movie files. By enticing a user to access a maliciously crafted movie file, an attacker can trigger the issue which may lead to an unexpected application termination or arbitrary code execution. This update addresses the issue by performing additional validation of movie files. Credit to Jonathan 'Wolf' Rentzsch of Red Shed Software for reporting this issue.

- **QuickTime**

  CVE-ID: CVE-2007-2296

  Available for: Mac OS X v10.3.9, Mac OS X v10.4.9 or later, Windows Vista, XP SP2

  Impact: Viewing a maliciously crafted .m4v file may lead to an unexpected application termination or arbitrary code execution

  Description: An integer overflow vulnerability exists in QuickTime's handling of .m4v files. By enticing a user to access a maliciously crafted .m4v file, an attacker can trigger the issue which may lead to an unexpected application termination or arbitrary code execution. This update addresses the issue by performing additional validation of .m4v files. Credit to Tom Ferris of Security-Protocols.com for reporting this issue.

- **QuickTime**

  CVE-ID: CVE-2007-2394

  Available for: Mac OS X v10.3.9, Mac OS X v10.4.9 or later, Windows Vista, XP SP2

  Impact: Viewing a maliciously crafted SMIL file may lead to an unexpected application termination or arbitrary code execution

  Description: An integer overflow vulnerability exists in QuickTime's handling of SMIL files. By enticing a user to access a maliciously crafted SMIL file, an attacker can trigger the issue which may lead to an unexpected application termination or arbitrary code execution. This update addresses the issue by performing additional validation of SMIL files. Credit to David Vaartjes of ITsec Security Services, working with the iDefense VCP, for reporting this issue.

- **QuickTime**

  CVE-ID: CVE-2007-2397

  Available for: Mac OS X v10.3.9, Mac OS X v10.4.9 or later, Windows Vista, XP SP2

  Impact: Visiting a malicious website may lead to arbitrary code execution

  Description: A design issue exists in QuickTime for Java, which may allow security checks to be disabled. By enticing a user to visit a web page containing a maliciously crafted Java applet, an attacker can trigger the issue which may lead to arbitrary code execution. This update addresses the issue by performing a more accurate permissions check. Credit to Adam Gowdiak for reporting this issue.

- **QuickTime**

  CVE-ID: CVE-2007-2393

  Available for: Mac OS X v10.3.9, Mac OS X v10.4.9 or later, Windows Vista, XP SP2

  Impact: Visiting a malicious website may lead to arbitrary code execution

  Description: A design issue exists in QuickTime for Java. This may allow Java applets to bypass security checks in order to read and write process memory. By enticing a user to visit a web page containing a maliciously crafted Java applet, an attacker can trigger the issue which may lead to arbitrary code execution. This update addresses the issue by performing additional validation of Java applets. Credit to Adam Gowdiak for reporting this issue.

- **QuickTime**

  CVE-ID: CVE-2007-2396

  Available for: Mac OS X v10.3.9, Mac OS X v10.4.9 or later, Windows Vista, XP SP2

  Impact: Visiting a malicious website may lead to arbitrary code execution

  Description: A design issue exists in QuickTime for Java. JDirect exposes interfaces that may allow loading arbitrary libraries and freeing arbitrary memory. By enticing a user to visit a web page containing a maliciously crafted Java applet, an attacker can trigger the issue which may lead to arbitrary code execution. This update addresses the issue by removing support for JDirect from QuickTime for Java. Credit to Adam Gowdiak for reporting this issue.

- **QuickTime**

  CVE-ID: CVE-2007-2402

  Available for: Mac OS X v10.3.9, Mac OS X v10.4.9 or later, Windows Vista, XP SP2

  Impact: Visiting a malicious website may lead to the disclosure of sensitive information

  Description: A design issue exists in QuickTime for Java, which may allow a malicious website to capture a client's screen content. By enticing a user to visit a web page containing a maliciously crafted Java applet, an attacker can trigger the issue which may lead to the disclosure of sensitive information. This update addresses the issue by performing a more accurate access control check.

Published Date: Oct 10, 2016

iWeb: Shadows behind photos not visible in Firefox

This article has been archived and is no longer updated by Apple.

Issue or symptom

Photos with shadows behind their frames, such as those used on pages with the Goldenrod theme, do not display as expected when viewed in Firefox—the shadows are missing.

Solution

This is expected, Firefox does not support shadows.

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Published Date: Feb 20, 2012

Final Cut Pro 6: About loading network settings on a per-workstation basis

This article has been archived and is no longer updated by Apple.

Final Cut Pro checks local and network directories on startup

Each time it is opened, Final Cut Pro checks two local directories for Easy Setups, plug-ins, master templates, window and keyboard layouts, button bars, and so forth. Final Cut Pro can also check a network path.

Final Cut Pro checks these local directories:

- `/Users/username/Library/Preferences/Final Cut Pro User Data/`
- `/Library/Application Support/Final Cut Pro System Settings/`

Final Cut Pro checks this network path:

- `/Network/Library/Application Support/Final Cut Pro/`

The network path is accessible if:

- Your computer is connected to a server running Mac OS X Server.
- Your network administrator has properly configured the accounts within your local network so that your computer has access to the above directory.

To disable loading network settings on a per-workstation basis

If your network environment is configured as mentioned above, you can disable loading settings from the network on a per-workstation basis.

Follow the instructions below for each Final Cut Pro workstation that you do **not** want to check the network for settings:

1. Open TextEdit (or another text editing application).
2. Choose **Save** from the **File** menu.
3. Name the text file "DisableNetworkPlugins.txt" and save it to the following location on the local workstation:
   `/Library/Application Support/Final Cut Pro System Support/Plugins/`

For more information about setting up accounts within your local network, contact your network administrator or the documentation included with Mac OS X Server.

Published Date: Feb 20, 2012

Final Cut Studio 2: Tips for creating and using templates

This article has been archived and is no longer updated by Apple.

Master templates in Final Cut Pro are templates created in Motion that allow you to quickly customize design elements such as titles and opening credits. This article discusses some issues to keep in mind when creating templates in Motion and when using them in Final Cut Pro.

- When you create templates in Motion, it's important to save them as templates, and not as regular Motion projects. In Motion, choose **Save as Template** from the **File** menu to save a project as a template that can be used in Final Cut Pro and in Motion. When you **Save as Template** in Motion, your project will automatically be coordinated with the Template Browser. If you merely chose **Save**, or if you use Finder to place standard Motion projects in the locations where Motion Templates are stored, the templates might not perform as desired in the Template Browser, and may not open as expected in Final Cut Pro.

- Don't use the Finder to move or rename templates. If you do, any instances of the template used in projects may go offline, or may otherwise not perform as expected. To rename a template or save it in a different theme, do the following:
  1. Open the template in Motion.
  2. From the **File** menu, choose **Save as Template...**.
  3. Type a name for the template.
  4. Choose a theme where you want to keep it (click **New Theme...** to create a new theme for your new or customized templates).
  5. Click Save.

- Don't use the Finder to create aliases of templates or theme folders. Aliases are not supported by the Template Browser.

- When a Motion template file is saved in Motion, the video standard assigned to the template is stored in a metadata tag, but it does not ensure that the resolution and frame rate will correspond in all Final Cut Pro sequences. Make sure that the templates you create and choose have the resolution and frame rate you want.

For more information about using master templates in Final Cut Pro, refer to the Final Cut Pro User Manual, available in Final Cut Pro's Help menu. For more information about creating templates in in Motion, refer to the Motion User Manual, available in Motion's Help menu.

Published Date: Feb 20, 2012

Power Macintosh G3 300 MHz: Printing to LW 300, 350 w/ VM off

Apple has discovered an issue printing to the LaserWriter 300 and LaserWriter 350 from 300 MHz Power Macintosh G3 computers that have virtual memory turned off.
This article has been archived and is no longer updated by Apple.
Symptoms include one or more of the following:

- Following error message: "Communication error with the LaserWriter 300 printer has occurred. Please check the Peripheral 8 cable connections and try printing again."
- No error but only prints a blank page
- No error but output is vertically compressed

Workaround

Turn on virtual memory if printing to a LaserWriter 300 or LaserWriter 350 from a 300 MHz Macintosh G3 computer.
Published Date: Feb 20, 2012

TA24837_Official_Apple_Support.pdf

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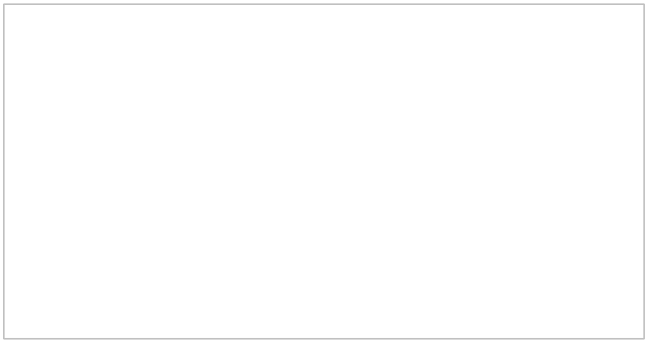

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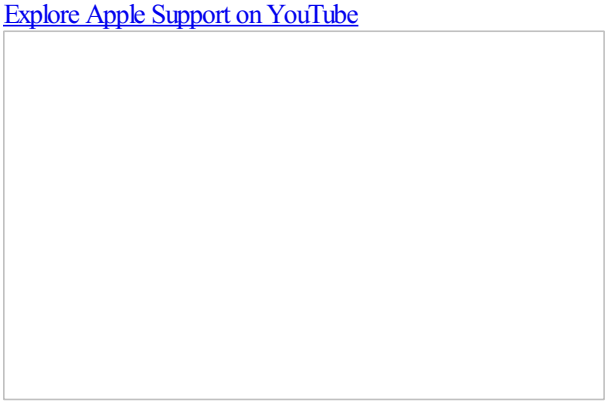

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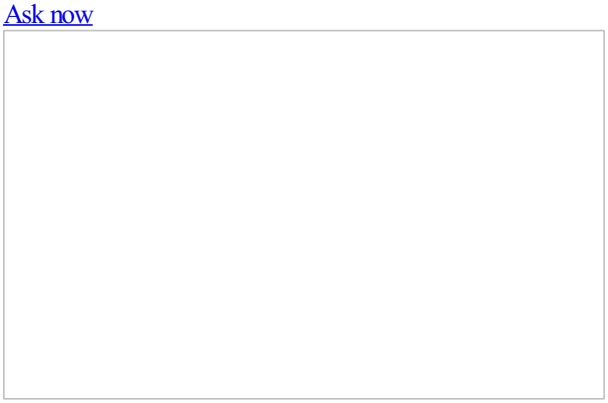

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- iPhone 6s Program for Unexpected Shutdown Issues
- Multi-Touch Repair Program for iPhone 6 Plus
- Apple AC Wall Plug Adapter Recall Program
- Beats Pill XL Speaker Recall Program
- All Programs

AppleScript: Calling the File Transfer Element in Mac OS X 10.5

This article has been archived and is no longer updated by Apple.

When using AppleScript in Mac OS X 10.5 Leopard, the "Service" property of the "File Transfer" element may use a slightly different nomenclature than expected.

For example, if you were to write a script that returns attributes about a file transfer, you could notice the term "Service" actually representing the "Account" field, whereas the "Account" term is actually representing the "Buddy" field.

This does not impact the ability to write AppleScripts using these terms, it is merely a different use of terminology.

Published Date: Feb 20, 2012

Final Cut Pro 6.0.1: About transferring AVCHD footage

This article has been archived and is no longer updated by Apple.

You can transfer AVCHD footage to your scratch disk using the Log and Transfer window in Final Cut Pro. The workflow for transferring AVCHD footage from a camcorder or disk is similar to the Panasonic P2 workflow. However, there are some important differences:

- AVCHD support is available only on Intel-based Macintosh computers.
- AVCHD camcorders typically connect to computers via USB 2.0, not FireWire.
- DVD-based AVCHD camcorders are not currently supported in Mac OS X.
- Standard definition video recorded with AVCHD camcorders cannot be accessed in the Log and Transfer window.
- Preview of AVCHD video in the Log and Transfer window is limited to 1x forward playback. Scrubbing the playhead does not update the video in the Preview area until you stop scrubbing.
- AVCHD footage is transcoded to the Apple ProRes 422 codec or the Apple Intermediate Codec. You can choose the destination codec in the Log and Transfer window preferences.
- When you choose to transfer AVCHD audio in the Logging area, audio is automatically mixed down to stereo.
- It is not possible to delete clips on an AVCHD volume, even if read-and-write permissions on the volume are set to allow file deletion. This behavior is different on P2 volumes, where clip deletion is allowed when proper read-and-write permissions are set.
- AVCHD files are transferred as entire files from beginning to end. It is not possible to set In and Out points before transferring the clips.

For more information about AVCHD, refer to the document, HD and Broadcast Formats, available under the Help menu in Final Cut Pro 6.0.1

Related article

- 305833: "Final Cut Pro 6.0.1: Working with spanned AVCHD clips"
- 305831: "Final Cut Pro 6.0.1: Incorrect AVCHD clips may be transferred"

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

Mac OS X Server: How Do I Upgrade To Mac OS X Server?

How do I upgrade to Mac OS X Server?
This article has been archived and is no longer updated by Apple.
Mac OS X Server is a new product. An upgrade is not available.

For information on how to purchase Mac OS X Server, please see the main Apple web site at **http://www.apple.com**, or contact your local Apple reseller.
Published Date: Feb 20, 2012

iPhone: Disconnecting iPhone from Your Computer

This article has been archived and is no longer updated by Apple.

Unless iPhone is syncing with your computer, you can disconnect iPhone from your computer at any time.

When iPhone is syncing with your computer, iPhone shows "Sync in progress." If you disconnect iPhone before it's done syncing, some data may not have been transferred. When iPhone is done syncing, iTunes shows "iPhone sync is complete."

To cancel a sync so you can disconnect iPhone, drag the slider on iPhone.

Tip: If you get a call during a sync, the sync is cancelled automatically and you can unplug iPhone to answer the call. Connect iPhone after the call to finish syncing.

Published Date: Feb 20, 2012

Mac OS X Server: Frequently Needed Device Names

During installation of Mac OS X Server, a number of devices are probed and initialized. Booting in verbose mode (-v argument) allows you to watch the initialization process as Mach/BSD initializes the system.
This article has been archived and is no longer updated by Apple.
To aid in following the flow, and to better understand Open Firmware designations, here is a short list of some of the more important devices:

scX	SCSI Controller	Typically, sc0 and sc1
sdX(y)	SCSI Device (partition)	X = integer, y = alphabetic partition number, ie, sd0
hcX	hardware (IDE) controller	usually hc0
hdX(y)	IDE Device (partition)	X = integer, y = alphabetic partition number, ie, hd0
enX	ethernet interface	usually en0 or en1

There are many other Mach/BSD device types. These few represent the ones you are most likely to need to know.
Published Date: Feb 20, 2012

iPhoto: How to determine which version of iPhoto you are using

This article has been archived and is no longer updated by Apple.

Follow these steps to determine which version of iPhoto you are using:

1. Open iPhoto.
2. From the iPhoto menu, choose **About iPhoto**. A window appears that displays your iPhoto version.

Check to see if an update is available for iPhoto by running Software Update from your computer..

Published Date: Feb 20, 2012

Common Mailman administrative tasks

This article has been archived and is no longer updated by Apple.

This advanced article describes how to perform some common Mailman tasks:

- Reset Mailman to defaults
- Back up Mailman data
- Restore from a Mailman backup
- Migrating from one server to another

Reset Mailman to defaults

1. Make sure that Mailman is not running. Mailman can be stopped in Terminal with this command:

   ```
   sudo /usr/share/mailman/bin/mailmanctl stop
   ```

   If Mailman is not running, it is OK if a message such as this appears:
   "PID unreadable in: /private/var/mailman/data/master-qrunner.pid
   [Errno 2] No such file or directory: '/private/var/mailman/data/master-qrunner.pid'Is qrunner even running?"

2. Move the existing Mailman database directory. In Terminal:

   ```
   sudo mv /var/mailman /var/mailman.old
   ```

3. Create new mailman database directory and sub-directories with these Terminal commands:

   - `sudo mkdir /var/mailman`
   - `sudo mkdir /var/mailman/archives`
   - `sudo mkdir /var/mailman/archives/private`
   - `sudo mkdir /var/mailman/archives/public`
   - `sudo mkdir /var/mailman/data`
   - `sudo mkdir /var/mailman/lists`
   - `sudo mkdir /var/mailman/locks`
   - `sudo mkdir /var/mailman/logs`
   - `sudo mkdir /var/mailman/qfiles`
   - `sudo mkdir /var/mailman/spam`

4. Set permissions on newly-created directories with this Terminal command:

   ```
   sudo /usr/share/mailman/bin/check_perms -f
   ```

5. Restart Mailman's master qrunner by running the following command.

   ```
   sudo /usr/share/mailman/bin/mailmanctl start
   ```

Back up Mailman data

1. Make sure that Mailman is not running. Mailman can be stopped in Terminal with this command:

   ```
   sudo /usr/share/mailman/bin/mailmanctl stop
   ```

   If Mailman is not running, it is OK if a message such as this appears:
   "PID unreadable in: /private/var/mailman/data/master-qrunner.pid
   [Errno 2] No such file or directory: '/private/var/mailman/data/master-qrunner.pid'Is qrunner even running?"

2. Execute this Terminal command, replacing the target path as desired:

   `ditto -c -z /var/mailman` *(Path_to_backup_file)*

3. Restart Mailman's master qrunner with the following command.

   ```
   sudo /usr/share/mailman/bin/mailmanctl stop
   ```

Restore from a Mailman backup

1. Make sure that Mailman is not running. Mailman can be stopped in Terminal with this command:

   ```
   sudo /usr/share/mailman/bin/mailmanctl stop
   ```

   If Mailman is not running, it is OK if a message such as this appears:
   "PID unreadable in: /private/var/mailman/data/master-qrunner.pid
   [Errno 2] No such file or directory: '/private/var/mailman/data/master-qrunner.pid'Is qrunner even running?"

2. Move the existing Mailman database directory via Terminal:

   ```
   sudo mv /var/mailman /var/mailman.old
   ```

3. Restore from a backup with this command:

   ```
   ditto -x (Path_to_backup_file) /var/mailman
   ```

   Note that there is a space after -x and before /var.

4. Set permissions on newly created directories with:

   ```
   sudo /usr/share/mailman/bin/check_perms -f
   ```

5. Restart Mailman's master qrunner by running the following command:

   ```
   sudo /usr/share/mailman/bin/mailmanctl stop
   ```

Migrating from one server to another

1. Log in to the new Mailman server as root (or "sudo -s" to become root).
2. Make sure that Mailman is not running. Mailman can be stopped in Terminal with this command:

   ```
   sudo /usr/share/mailman/bin/mailmanctl stop
   ```

   If Mailman is not running, it is OK if a message such as this appears:
   "PID unreadable in: /private/var/mailman/data/master-qrunner.pid
   [Errno 2] No such file or directory: '/private/var/mailman/data/master-qrunner.pid'Is qrunner even running?"

3. Run the following Terminal command, replacing *(FQDN)* with the fully qualified domain name of the previous Mailman server.

   ```
   ssh (FQDN) ditto -c /var/mailman - | ditto -x - /var/mailman
   ```

   This will copy the mailman data to the new server over an ssh connection.

4. Set permissions on newly-created directories with:

   ```
   sudo /usr/share/mailman/bin/check_perms -f
   ```

5. Log in to the new Mailman server as an administrator and execute the following Terminal command on a single line. *(FQDN)* with the fully qualified domain name of the new Mailman server. This will change the URL information for the mailing lists to the new server's fully qualified domain name.

```
sudo /usr/share/mailman/bin/list_lists -b | xargs -I'{}' sudo /usr/share/mailman/bin/withlist -l -r fix_url '{}' -u (FQDN) -v
```

6. Restart Mailman's master qrunner by running the following command.

   ```
   sudo /usr/share/mailman/bin/mailmanctl start
   ```

Published Date: Feb 20, 2012

Motion: Motion unexpectedly quits after MacBook Pro Software Update 1.0

This article has been archived and is no longer updated by Apple.

Issue or symptom

When running Motion (included with Final Cut Studio) after installing MacBook Pro Software Update 1.0 on a MacBook Pro 2.2 or 2.4 GHz computer, Motion may unexpectedly quit.

Solution

Download and install MacBook Pro Software Update 1.1.

Published Date: Oct 10, 2016

Mac OS X 10.5: About syncing with a Motorola RAZR V6 MAXX phone

This article has been archived and is no longer updated by Apple.

Issue or symptom

You may notice that syncing a Motorola RAZR V6 MAXX phone with iSync takes a little longer than some other Motorola phones in Mac OS X 10.5.

Solution

It may take around four minutes to sync the phone, depending on the amount of data on the phone and/or if the contents were deleted first and are being re-synced from your Mac.

You should wait for iSync to complete the sync. Do not unpair the phone after beginning a sync session.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

iPhoto 6: Dragging RAW files from iPhoto to Finder

This article has been archived and is no longer updated by Apple.

Issue or symptom

Dragging a rotated RAW file from iPhoto to the Finder produces a JPEG proxy file instead of a copy of the original, unedited RAW file. It does not matter if the file was rotated manually or automatically.

Solution

To ensure that the original, unedited RAW file is copied, press and hold the **Option** key when dragging a file out of iPhoto.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

MacBook Pro: Video display issues after installing EFI Firmware Update 1.3

This article has been archived and is no longer updated by Apple.

Issue or symptom

After installing EFI Firmware Update 1.3 on a MacBook Pro (15-inch 2.2 or 2.4GHz), the internal video display may appear bluish in color, like a 'waterfall', or display other 'shimmering' video effects. This effect persists on the internal display through restarts and resolution changes.

Solution

- Reset the PRAM/NVRAM on your MacBook Pro.
- See article 2238 for instructions on how to reset PRAM.

Published Date: Feb 20, 2012

Final Cut Pro 6: Rendered items may require re-rendering after opening project

This article has been archived and is no longer updated by Apple.

Issue or symptom

In some cases, rendered items may become unrendered after quitting and then re-opening a project in Final Cut Pro 6. In these cases, the render bar will indicate that the items are rendered, but if you attempt to play the video, you will see "Unrendered" in the Canvas.

This can happen if you duplicate a sequence with rendered items, then quit, then re-open Final Cut Pro. The duplicated sequence will remain rendered, but the original sequence may require re-rendering.

Solution

This issue has been resolved in Final Cut Pro 6.0.2. Final Cut Studio 2 users can update to Final Cut Pro 6.0.2 by choosing **Software Update** from the **Apple** menu.
Notice: Pro Applications Update 2007-02 needs to be installed first. Afterwards, you will see updates for Final Cut Studio 2 applications in Software Update.

Published Date: Feb 20, 2012

Final Cut Pro 6.0.1: H.264 playback in Viewer results in "General Error"

This article has been archived and is no longer updated by Apple.

Issue or symptom

In Final Cut Pro 6.0.1, if you attempt to load an H.264 clip into the Viewer, the clip might not be shown and a "General Error" message may appear.

Affected Products:

- Final Cut Pro 6.0.1
- H.264 format media files
- QuickTime 7.1.6

Solution

Download and install QuickTime 7.2 or later. If your Final Cut Pro system is connected to the Internet, you can update QuickTime by choosing **Software Update** from the **Apple** menu.

Published Date: Feb 20, 2012

DVD Studio Pro 4: Creating buttons that play only specific chapters of a video track

This article has been archived and is no longer updated by Apple.

DVD Studio Pro 4 gives you the choice of playing individual chapters separately, without having to play the rest of a track, by using the Story feature. This may be helpful if you would like a short piece of the track as a preview in your project, for example.

Here is one way you can create buttons that play only specific chapters of a video track in DVD Studio Pro 4:

1. Create a Menu that you would want to go back to when finished playing a chapter.
2. Import a movie with existing chapter markers (from Final Cut Pro or Compressor, for example), then add to the video track stream in the Track Editor. Or, you can import a movie and add chapter markers in the Track Editor (See the DVD Studio Pro User Manual page 70 for more information).
3. In the Track Editor, select each chapter marker you want to play individually, then set the End Jump in the Inspector to the Menu you just created.
4. Create a new Story for the Video stream by selecting the Video Track, then from the **Project** menu choose **Add to Project > Story**.
5. Double click the Story track to get the Story Editor.
6. Move all the chapters from the left side of the Editor to the right side.
7. Go back to the Menu you created earlier and create a new button.
8. Set the button's target to your Story track (this is now your "Play All" button).
9. Create a Button for each Chapter you would like to play individually.
10. Select each of these buttons individually, then set the Target to the chapter you would like that button to play.

For more information, from the DVD Studio Pro **Help** menu choose **DVD Studio Pro User Manual**.

Published Date: Feb 20, 2012

Mac OS X Server: What Unix-Compatible Alternatives Are There?

My hardware will not support Mac OS X Server. What are my other options for accessing Unix-style functionality?
This article has been archived and is no longer updated by Apple.
Alternatives:

- MkLinux, now part of The Research Institute at Grenoble, is still available from non-Apple mirror sites. The MkLinux web site at http://www.mklinux.org contains links to all non-Apple sites where MkLinux can be downloaded.
- MachTen, from Tenon Intersystems, http://www.tenon.com, is a BSD Unix implementation that runs as a Mac OS application. Mac and Unix applications can be run side-by-side.
- LinuxPPC is a non-Apple version of a Unix-style operating system that is available from **http://www.linuxppc.org**

If intercommunication with non-Mac OS X Server Unix-compatible systems from within the Mac OS is your goal, an X11 server for Mac OS such as Apple's MacX, White Pine's eXodus, or Tenon's X-Ten are some of the solutions available. An X11 server gives a workstation the ability to display and interact with X11 applications ("clients": backwards from usual terminology) running on traditional Unix-compatible servers or hosts such as Sun, HP, Cray, linux, SCO, and many others.

There are also a variety of Unix-compatible systems that are available for 68000 series Mac OS computers.

Published Date: Feb 20, 2012

Final Cut Pro: Error 12 message when performing Media Manager operation on clip with long file name

This article has been archived and is no longer updated by Apple.

Issue or symptom

Performing a Media Manager operation on clips that have long names may result in this alert message:

> "**Media Manager File Trim Failed**
> The attempt to Trim '*(your_clip_with_long_filename)*' failed with an error code of 12. You can retry this operation, skip this file, or abort the operation entirely."

In the specific case described in this article, the error message will refer to an error code of 12.

Product affected

- Final Cut Pro

Solution

In the Finder, rename the media files so that is contains 32 or fewer characters (or, 15 or fewer double-byte language characters). This character limit includes spaces and the filename extension.

Note: Renamed files may be reported as offline and need to be reconnected in Final Cut Pro.

Additional information

This can occur if you choose the following Media Manager options on a clip that has a long name (such as "This is a clip of cupcakes that look really yummy"):

- Media: Use existing
- "Delete unused media from selected clip" is enabled
- "Duplicate selected clip and place into a new project" is disabled

This can occur with clips that have filenames (in the Finder) of 33 or more total characters, including spaces and the file extension.

With double-byte language characters (Japanese, for example), this can occur with clips that have file names (in the Finder) of 16 or more characters, including spaces and the file extension.

This document will be updated as more information becomes available.

Related articles

- 305734: "Final Cut Pro 6: "Media Manager File Trim" issue resolved by Mac OS X 10.4.10 Update"

Published Date: Feb 20, 2012

Mac OS X Server: Are Mac OS Disk Formats Supported?

Does Mac OS X Server support Mac OS standard (HFS) and Mac OS extended (HFS+) disk formats?
This article has been archived and is no longer updated by Apple.
Mac OS X Server supports Mac OS standard and Mac OS extended formats, and volumes with this format can be auto-mounted within the Mach/BSD environment.

Mac OS disk format support is provided by the utility "`hfs.util`" found in `/usr/filesystems/hfs.fs/`. This service is on by default. Administrative access is needed to change its status.

Files that Mac OS X Server inherently understands (.tiff, .html, text, Read Me files, and some others) can be double-clicked within the Mac OS X Server Workspace Manager, and they will open in the appropriate applications. Some other file types may be opened from within an appropriate application.
Published Date: Feb 20, 2012

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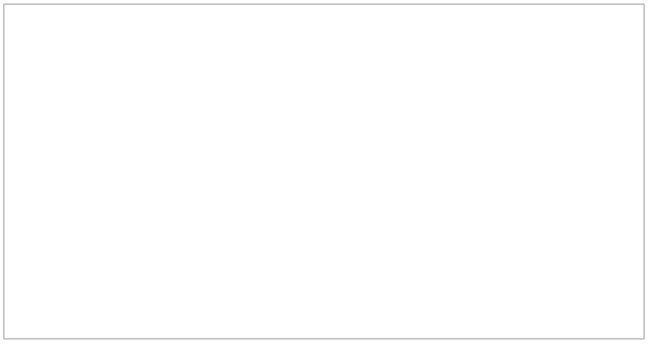

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Beware of counterfeit parts

Some counterfeit and third party power adapters and batteries may not be designed properly and could result in safety issues. To ensure you receive a genuine Apple battery during a battery replacement, we recommend visiting an Apple Store or Apple Authorized Service Provider. If you need a replacement adapter to charge your Apple device, we recommend getting an Apple power adapter.

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- iPhone 6s Program for Unexpected Shutdown Issues
- Multi-Touch Repair Program for iPhone 6 Plus
- Apple AC Wall Plug Adapter Recall Program
- Beats Pill XL Speaker Recall Program
- All Programs

Mac OS X: VPN settings unavailable after using Migration Assistant

This article has been archived and is no longer updated by Apple.

Issue or symptom

VPN settings in Internet Connect VPN may not appear to be transferred when using Migration Assistant to transfer a user's Home from one computer to another.

Solution

The settings actually are transferred but just not accessed. You can either enter them manually again, or access your VPN settings with these steps:

1. From the Finder's **Go** menu, choose **Go to Folder**.
2. Go to (type) this folder path, followed by Return:

   ```
   ~/Library/Preferences/ByHost
   ```

   The ByHost window opens. You might want to view as a List (press Command-2).

3. In the ByHost folder, select (click one time) the file named "com.apple.networkConnect.##########.plist" (where "##########" is a series of numbers and letters, the Ethernet ID).
4. From the Finder's **File** menu, choose any color label that you wish so that the file is easy to recognize in the ByHost folder.

5. From the Finder's **Go** menu, choose **Applications**.
6. Open Internet Connect.
7. From the Internet Connect **File** menu, choose **Import Configuration**.
8. Drag the color-labeled "com.apple.networkConnect..." file from the ByHost folder to the Import Configuration window.
9. Click Open. The VPN settings should now be available.

   Note: The Ethernet ID can be found in Network preferences or in Network Utility (located in /Applications/Utilities). In Network preferences, select the interface from the "Network Status" pop-up menu, click the "Configure..." button, then click the Ethernet tab.

Published Date: Feb 20, 2012

Mac OS X 10.4 Server: Using cyradm to delete a user‘s mailboxes from the mail store

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you delete an email user from Mac OS X 10.4 Server, the deleted user's mailboxes are not automatically removed from the mail store.

Products affected

- Mac OS X 10.4 Server

Solution

Use these steps to remove the deleted user's mailboxes.

Note: These steps involve editing a cyrus configuration file. If you're not familiar with editing text configuration files, see this article before proceeding.

1. Open the file (/etc/imapd.conf) and look for this line:
   `admins: cyrusimap`
2. Consider which user that you would like to be able to function as the mail administrator. The local administrative account may be a good choice. Add that user's short name after `cyrusimap` separated by a comma and space. For example, if the administrator has a short name of "appleadmin", the result should look like this:

   ```
   admins: cyrusimap, appleadmin
   ```
3. Save the file and restart the Mail service with Server Admin.

   Note: The administrator that was set up in the previous step must have IMAP mail enabled for them in Workgroup Manager. In addition, IMAP access must be enabled in Server Admin -> Mail -> Settings -> General. Verify that the account has IMAP mail enabled in Server Admin and, if not, enable it.
4. Open Terminal on the server and enter the following command on a single line:

   ```
   /usr/bin/cyrus/admin/cyradm -u appleadmin localhost
   ```
5. You'll be prompted for the account password. Enter it, then you'll see the cyradm interactive prompt:

   ```
   localhost>
   ```

   Note: If desired, type "?" (without quotes) to see a full command list and explanation of each command.

   Note: To see a list of all the user's mailboxes, use the `lm *username*` command.
6. Use the `sam` command to create an ACL on the mailbox so that appleadmin has access to delete it.
7. Use the `dm` command to delete the appropriate mailbox.

Example

After a user named "misteruser" has been deleted from Workgroup Manager:

1. Complete steps 1-4 above.
2. get a list of just misteruser's mailboxes with this command (at the `localhost>` prompt):

   ```
   lm *misteruser*
   ```

   This shows mailboxes such as this:

```
Other Users/misteruser (\\HasChildren)
Other Users/misteruser/Sent Messages (\\HasNoChildren)
Other Users/misteruser/Drafts (\\HasNoChildren)
Other Users/misteruser/Sent Messages (\\HasNoChildren)
```

3. Examine the current ACL on their top-level mailbox with `lam`:

   ```
   lam Other\\ Users/misteruser
   ```

   This shows output such as this:

   ```
   misteruser lrswipcda
   ```

4. Create a full control ACL for the appleadmin user with this command:

   ```
   sam Other\\ Users/misteruser appleadmin lrswipcda
   ```

5. Verify the new ACL has been created:

   ```
   lam Other\\ Users/misteruser
   ```

   This shows output such as this:

   ```
   misteruser lrswipcda
   appleadmin lrswipcda
   ```

6. Delete misteruser's mailbox:

   ```
   dm Other\\ Users/misteruser
   ```

7. Verify that it's deleted:

   ```
   lm *misteruser*
   ```

Published Date: Oct 10, 2016

Xsan 1.4.2 and earlier: cvcp does not copy extended attributes for individual file copies

In Xsan 1.4.2 and earlier, copying an individual file using `cvcp` does not copy the file's extended attributes. Since preservation of a file's extended attributes is essential for proper functioning of many file types, you should avoid copying files with `cvcp` in this way.

This article has been archived and is no longer updated by Apple.

To ensure extended attributes are copied in Xsan 1.4.2 and earlier, copy files using one of these ways:

1. Use the Finder (drag and drop).
2. With Mac OS X v10.4 and later, use the command line utility `cp` . Run `man cp` to learn more.
3. If using `cvcp`, copy the directory containing the files you would like to copy instead of copying files individually.

Xsan 2.1.1 and earlier versions store extended attributes in AppleDouble files, which are not visible in the Finder. In Xsan 1.4.2 and earlier versions, these AppleDouble files are not copied when copying files individually using cvcp. However, when copying a directory, all files within the directory are copied--including any AppleDouble files in the directory.

To learn more about the `cvcp` utility, type `man cvcp` in Terminal on a Mac that has Xsan installed.

Published Date: May 13, 2013

Helpful?

Yes No

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iMovie: Format external hard disks as HFS Extended for best performance

This article has been archived and is no longer updated by Apple.

Because digital video can take up a significant amount of hard drive space, storing your digital video on an external hard disk can be a convenient way to prevent your Mac OS X hard disk from becoming full.

Format your FireWire or USB 2.0 hard disk as **HFS Extended** for best performance with iMovie. Some hard disks come from the factory in other formats that are not as well suited for iMovie.

Formating an external hard disk is usually done when it's brand new. If you want to reformat a drive that already contains data, be sure to back up the data to another drive beforehand. **NOTICE:** Reformatting a hard disk will permanently erase all of the data on it.

Tip: You can check the format of your hard drive by clicking its icon in Finder and then choosing **Get Info** from the File menu. The format is displayed in General information in the Info window.

To format a hard disk as HFS Extended

Note: Formatting a hard drive will permanently erase all of the data on it. Formatting an external hard drive is usually something you'll do when it's brand new. If you want to format a drive that already contains data, be sure to back up the data to another drive beforehand.

1. Connect your external hard drive to your computer.
2. Open Disk Utility from the Utilities folder in Applications.
3. Select the name of your hard disk in the left column of the Disk Utility window so that it's highlighted.
4. Click **Erase** to show the formatting options pane.
5. From the Volume Format menu, choose **Mac OS Extended**.
6. Click **Erase** (in the lower-right corner).

Note: USB 2.0 hard disks work best with iMovie when directly connected to your computer. Disks connected to an Airport Base Station are not supported with iMovie. USB 1.x disks are not supported with iMovie.

Published Date: Feb 20, 2012

.Mac: Renaming your Web Gallery

This article has been archived and is no longer updated by Apple.

The default title of your .Mac Web Gallery is "My Gallery". If you want to change it, follow these steps:

1. Open iPhoto '08.
2. From the **iPhoto** menu, choose **Preferences**.
3. Click on the Web Gallery icon at the top of the Preferences window.
4. Change the text in the "Web Gallery Title" field to whatever want your Web Gallery to be called.
5. Close the preferences window.

Your Web Gallery will automatically be updated.

Published Date: Oct 10, 2016

.Mac: Viewing your private Web Gallery album on the Web

This article has been archived and is no longer updated by Apple.

If you have published a private album from iPhoto '08 to your .Mac Web Gallery (an album in which you chose "Only me" from the "Album Viewable by:" pop-up menu) , you can access it on the Web via the album's direct URL. If you don't know the URL to your private album, you can find it in iPhoto '08:

1. Open iPhoto '08.
2. Select your published album in the iPhoto Source list (under Web Gallery). The contents of the private album appear in the iPhoto viewing area. The URL appears under the title.
3. Click the arrow to the right of the title to go to the Web Gallery on the Internet.

   Tip: Bookmark the album in your Web browser.

Additional information

For information on publishing protected Web Gallery albums, see ".Mac: Protecting Web Gallery movies with a password". To publish a private album, chose "Only me" from the "Album Viewable by:" pop-up menu (instead of choosing "Edit names and passwords") in the iPhoto publishing sheet.

Published Date: Oct 10, 2016

Power Macintosh: Power light delay at Startup

I'm using a Power Macintosh 6500 and I get a 45 second delay during the startup. I think this delay might be similar to the one the 6400/6360/5400's had after OS 7.6.1 was released. I'm measuring the delay from the time the startup chime occurs to when the power light comes on. What's going on?
This article has been archived and is no longer updated by Apple.
A delay in the power light to appear may occur on cold starts (i.e. starting up after a shutdown, instead of a restart). The delay occurs during the memory/hardware test phase of the boot process. The delay can be longer in seconds based on the amount of RAM that is installed.

For customers that are unhappy with this delay, Mac OS 8.5 offers a hidden feature to disable the startup memory tests. To do this in Mac OS 8.5, hold down the" Command - Option" keys while opening the Memory control panel. Below the RAM disk information part of the window, there will be a set of radio buttons to selectively turn on or off the startup memory tests.

For additional information see the following article:
Tech Info Library Article 24215: "**Macintosh Performa 6400 Series: Frequently Asked Questions**".
Published Date: Feb 20, 2012

About the security content of iPhone v1.0.1 Update

This article has been archived and is no longer updated by Apple.

This document describes the security content of iPhone v1.0.1 Update, which can be downloaded and installed via iTunes as described below.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

iPhone v1.0.1 Update

- **Safari**

  CVE-ID: CVE-2007-2400

  Available for: iPhone v1.0

  Impact: Visiting a malicious website may allow cross-site scripting

  Description: Safari's security model prevents JavaScript in remote web pages from modifying pages outside of their domain. A race condition in page updating combined with HTTP redirection may allow JavaScript from one page to modify a redirected page. This could allow cookies and pages to be read or arbitrarily modified. This update addresses the issue by correcting access control to window properties. Credit to Lawrence Lai, Stan Switzer, and Ed Rowe of Adobe Systems, Inc. for reporting this issue.

- **Safari**

  CVE-ID: CVE-2007-3944

  Available for: iPhone v1.0

  Impact: Viewing a maliciously crafted web page may lead to arbitrary code execution

  Description: Heap buffer overflows exist in the Perl Compatible Regular Expressions (PCRE) library used by the JavaScript engine in Safari. By enticing a user to visit a maliciously crafted web page, an attacker may trigger the issue, which may lead to arbitrary code execution. This update addresses the issue by performing additional validation of JavaScript regular expressions. Credit to Charlie Miller and Jake Honoroff of Independent Security Evaluators for reporting these issues.

- **WebCore**

  CVE-ID: CVE-2007-2401

  Available for: iPhone v1.0

  Impact: Visiting a malicious website may allow cross-site requests

  Description: An HTTP injection issue exists in XMLHttpRequest when serializing headers into an HTTP request. By enticing a user to visit a maliciously crafted web page, an attacker could trigger a cross-site scripting issue. This update addresses the issue by performing additional validation of header parameters. Credit to Richard Moore of Westpoint Ltd. for reporting this issue.

- **WebKit**

  CVE-ID: CVE-2007-3742

  Available for: iPhone v1.0

  Impact: Look-alike characters in a URL could be used to masquerade a website

  Description: The International Domain Name (IDN) support and Unicode fonts embedded in Safari could be used to create a URL which contains look-alike characters. These could be used in a malicious web site to direct the user to a spoofed site that visually appears to be a legitimate domain. This update addresses the issue by through an improved domain name validity check. Credit to Tomohito Yoshino of Business Architects Inc. for reporting this issue.

- **WebKit**

TA24874_About_the_security_content_of_iPhone_v_Update.pdf

CVE-ID: CVE-2007-2399

Available for: iPhone v1.0

Impact: Visiting a maliciously crafted website may lead to an unexpected application termination or arbitrary code execution

Description: An invalid type conversion when rendering frame sets could lead to memory corruption. Visiting a maliciously crafted web page may lead to an unexpected application termination or arbitrary code execution. Credit to Rhys Kidd of Westnet for reporting this issue.

Installation note

This update is only available through iTunes, and will not appear in your computer's Software Update application, or on the Apple Support Downloads site. Make sure you have an Internet connection and have installed the latest version of iTunes from (www.apple.com/itunes).

iTunes automatically checks Apple's update server on its weekly schedule. When an update is detected, it will download it. When the iPhone is docked, iTunes will present the user with the option to install the update. We recommend applying the update immediately if possible. Selecting "don't install" will present the option the next time you connect your iPhone. The automatic update process may take up to a week depending on the day that iTunes checks for updates.

You can manually obtain the update via the "Check for Updates" button or menu choice in iTunes. After doing this, the update can be applied when your iPhone is docked to your computer.

To check that the iPhone has been updated:

1. Navigate to Settings on the iPhone.
2. Click General.
3. Click About. The version after applying this update will be "1.0.1 (1C25)".

Published Date: Feb 20, 2012

About the security content of Safari 3 Beta Update 3.0.3

This article has been archived and is no longer updated by Apple.
This document describes the security content of Safari 3 Beta Update 3.0.3, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Safari 3 Beta Update 3.0.3

- **Safari**

  CVE-ID: CVE-2007-3743

  Available for: Windows XP or Vista

  Impact: Adding bookmarks may lead to an unexpected application termination or arbitrary code execution

  Description: A stack buffer overflow vulnerability exists in Safari's bookmark handling. By enticing a user to add a bookmark with an overlong title, an attacker may trigger the issue which may lead to an unexpected application termination or arbitrary code execution. This update addresses the issue by performing proper bounds checking. This issue does not affect Mac OS X systems.

- **WebKit**

  CVE-ID: CVE-2007-2408

  Available for: Mac OS X v10.4.9 or later, Windows XP or Vista

  Impact: Visiting a malicious website may allow Java applets to load and run even when Java is disabled

  Description: Safari provides an "Enable Java" preference, which when unchecked should prevent the loading of Java applets. By default, Java applets are allowed to be loaded. Navigating to a maliciously crafted web page may allow a Java applet to be loaded without checking the preference. This update addresses the issue through a stricter check of the "Enable Java" preference. Credit to Rhys Kidd and Scott Wilde for reporting this issue

- **WebKit**

  CVE-ID: CVE-2007-3742

  Available for: Mac OS X v10.4.9 or later, Windows XP or Vista

  Impact: Look-alike characters in a URL could be used to masquerade a website

  Description: The International Domain Name (IDN) support and Unicode fonts embedded in Safari could be used to create a URL which contains look-alike characters. These could be used in a malicious web site to direct the user to a spoofed site that visually appears to be a legitimate domain. This update addresses the issue by through an improved domain name validity check. Credit to Tomohito Yoshino of Business Architects Inc. for reporting this issue.

- **WebKit**

  CVE-ID: CVE-2007-3944

  Available for: Mac OS X v10.4.9 or later, Windows XP or Vista

  Impact: Viewing a maliciously crafted web page may lead to arbitrary code execution

  Description: Heap buffer overflows exist in the Perl Compatible Regular Expressions (PCRE) library used by the JavaScript engine in Safari. By enticing a user to visit a maliciously crafted web page, an attacker may trigger the issue, which may lead to arbitrary code execution. This update addresses the issue by performing additional validation of JavaScript regular expressions. Credit to Charlie Miller and Jake Honoroff of Independent Security Evaluators for reporting these issues.

TA24875_About_the_security_content_of_Safari_Beta_Update_.pdf

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

Mac OS X Server 10.4.10: NetBoot service does not start

This article has been archived and is no longer updated by Apple.

Issue or symptom

After updating to Mac OS X Server 10.4.10, the NetBoot service may not start automatically.

Solution

Using Server Admin, stop the NetBoot service and then start it again. This will configure the service to launch on startup properly.

Published Date: Feb 20, 2012

Remote Desktop: Managed Clients see blue screen when screen is locked

This article has been archived and is no longer updated by Apple.

Issue or symptom

When application access is restricted, managed Remote Desktop clients may see a blue screen when the screen is locked, and the screen may not be unlockable.

Solution

Restart the client computer to gain access to the computer.

To avoid the issue, if you're using Parental Controls to restrict application access, enable the "Allow Supporting Programs" option in the Finder & System settings.

If you're using Managed Client settings in Workgroup Manager on a Mac OS X Server, enable the "Allow approved applications to launch non-approved applications" option (also known as sub-launching).

Published Date: Feb 20, 2012

Disk Copy 6.3 Scripts: Read Me

Note: For information on Disk Copy 6.3.3, see "Disk Copy 6.3.3: Read Me"

Description:
AppleScripts that extend the functionality of Disk Copy, version 6.3 or greater. They are provided as examples of how to use AppleScript to control Disk Copy, and gain access to features not present in the user interface. Create self-mounting image will prompt the user to select a disk image, verify it, then let the user save it as a self-mounting image. AppleScripts can be executed directly from Disk Copy by placing them in a folder named 'Scripts' in the same folder as Disk Copy. When a Scripts folder containing AppleScripts is present, a new menu will appear in Disk Copy named "Scripts". AppleScripts selected from this menu will have their "on run" handler executed.

Floppy insert preferences will prompt the user to decide what action Disk Copy will take if a floppy disk is inserted while Disk Copy is the foreground application. The "Make an Image" button will result in the floppy being saved as a disk image, and the "Copy" button will result in the floppy being copied and restored onto another floppy. Segment Image will ask the user how they want to segment an image (by size or number of parts), prompt the user to select a disk image, verify it, then save the image segmented. Using the Script Editor or other AppleScript script editor, the contents of the scripts can be viewed.

This software consists of a self-mounting Disk Copy compressed image (.smi) file. Download this software to your hard drive and then double-click it to use it. You do not need Disk Copy to access smi files.

Note: Disk Copy 6.3 Scripts, released July 17, 1998 requires Disk Copy 6.3 or greater, and a Mac OS based computer with AppleScript installed.

This article has been archived and is no longer updated by Apple.

Disk Copy Scripts Read Me

Create self-mounting image, Floppy insert preferences, and Segment Image are AppleScripts that extend the functionality of Disk Copy, version 6.3 or greater. They are provided as examples of how to use AppleScript to control Disk Copy, and gain access to features not present in the user interface.

This Read Me will explain the basic functions of these AppleScripts.

System requirements

Create self-mounting image, Floppy insert preferences, and Segment Image require Disk Copy 6.3 or greater, and a Mac OS based computer with AppleScript installed.

Script Descriptions

Create self-mounting image will prompt the user to select a disk image, verify it, then let the user save it as a self-mounting image

Floppy insert preferences will prompt the user to decide what action Disk Copy will take if a floppy disk is inserted while Disk Copy is the foreground application. The "Make an Image" button will result in the floppy being saved as a disk image, and the "Copy" button will result in the floppy being copied and restored onto another floppy.

Segment Image will ask the user how they want to segment an image (by size or number of parts), prompt the user to select a disk image, verify it, then save the image segmented.

Using the Script Editor or other AppleScript script editor, the contents of the scripts can be viewed.

Published Date: Feb 20, 2012

Mac OS X Server: Anonymous FTP users cannot save to shares

This article has been archived and is no longer updated by Apple.

Issue or symptom

Anonymous FTP users cannot write to a share point, even though the file permissions allow it. A "Permission denied" alert message appears.

Solution

By default, anonymous users are only allowed to save files to the folder (/Library/FTPServer/FTPRoot/uploads) and its subfolders. Anonymous users are only allowed to create folders in (/Library/FTPServer/FTPRoot/uploads/mkdirs).

To change the default, follow these steps:

1. Set the home folder of the FTP user to the desired location.
    a. Open Workgroup Manager and connect to the server.
    b. Select the Local node in the pull-down under the tool bar.
    c. From the **View** menu, choose Show System Users and Groups.
    d. Select the FTP user.
    e. Edit the user's home in the Home tab. **Note**: If the FTP user is missing in Workgroup Manager, first connect to the FTP server as anonymous.

2. Open the file ftpaccess located in (/Library/FTPServer/Configuration/).
3. Locate these lines:

```
upload /Library/FTPServer/FTPRoot /uploads yes ftp daemon 0666 nodirs
upload /Library/FTPServer/FTPRoot /uploads/mkdirs yes ftp daemon 0666 dirs 0777
```

4. Replace "`/Library/FTPServer/FTPRoot`" with FTP user's home directory path in the above lines. The FTP server will use the FTP user home folder as root.
5. Save the changes.
6. The uploads folder needs to be created with the appropriate permissions for user FTP to allow saving to the share. Refer to this document for more information.

Published Date: Feb 20, 2012

Apple System Profiler: Processor Speed and HD Space Calculation

This article explains why there are differences between what Apple System Profiler and the Finder report and what is listed on the computer's product data sheet.
This article has been archived and is no longer updated by Apple.
Apple System Profiler performs a calculation to determine processor clock speed based on 66.7 MHz system bus speed (66.7 * 5 = 333.5 MHz). When it calculates a value of 333.5 MHz, for example, it rounds up to the next whole digit (334 MHz in this case). Apple conservatively advertises this processor as 333 MHz because it is not quite 334 MHz.

Currently, the hard disk drive industry measures disk capacity as 1MB = 1,000,000 bytes (1000 * 1000). The Mac OS Finder and Apple System Profiler measure disk drive capacity as 1MB = 1,048,576 bytes (1024 * 1024).

For example, if you take a 4.0 GB hard drive (4000776192 bytes = total size), the following interpretations can occur: If you divide the total bytes by 1,048,576 bytes, the Mac OS Finder and Apple System Profiler show this space as follows: 4000776192 bytes = 3815.4375 MB = 3.7 GB
If you divide the total bytes by 1,000,000 bytes, the hard disk drive industry measures drive capacity as follows: 4000776192 bytes = 4000.776192 MB = 4.0 GB

For more information, see the related article:
Knowledge Base article 30065: "**Macintosh Hard Drive: Is It Missing Space?**"
Published Date: Feb 20, 2012

Safari: Reloading a page always bypasses cache

This article has been archived and is no longer updated by Apple.

When you reload a Web page in Safari (by clicking the Reload icon or by pressing Command-R in Mac OS X or Ctrl-R in Safari Beta 3.x for Windows), cache files are bypassed. You don't need to hold Shift or any other modifier keys.

Published Date: Feb 20, 2012

Motion 3: Nudge keyboard command has no effect

This article has been archived and is no longer updated by Apple.

Issue or symptom

The Motion 3 keyboard command for nudging objects by one pixel (Command-Arrow) has no effect.

Solution

Objects can be moved using the mouse pointer (cursor), or via controls in the Inspector.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

iPod shuffle (2nd Generation) may take 90 seconds to appear in iTunes

This article has been archived and is no longer updated by Apple.

Issue

When iPod shuffle is in a very low battery state, it may take up to 90 seconds after being connected to the computer before the device appears in iTunes.

Solution

Connect your iPod shuffle to a computer or wall charger and leave connected for at least 90 seconds. During this time iPod shuffle should have an amber light, but will not appear in iTunes. After 90 seconds, the iPod shuffle will appear in iTunes (if connected to a wall charger, then reconnect the iPod shuffle to the computer).

Published Date: Feb 20, 2012

Mac mini (Mid 2007): displays black screen during DVD restore

This article has been archived and is no longer updated by Apple.

Issue or symptom

If your Mac mini (Mid 2007) goes into sleep mode after ejecting DVD1 during a restore from the DVDs that shipped with the computer, it may quit unexpectedly then display a black screen.

Solution

To work around this issue, perform the following steps:

1. Remove the DVD that was ejected.
2. Press and hold the power button on the back of the computer until the power LED on the front of the computer turns off. Once the LED is off, release the power button.
3. Press the power button on the back on the computer to turn the Mac mini on again. The Mac mini should restart and prompt you for DVD2.
4. Insert DVD2 to proceed with the restore.

Published Date: Feb 20, 2012

iMac (Mid 2007): No Remote rest for Apple Remote

This article has been archived and is no longer updated by Apple.

The iMac (Mid 2007) ships with an Apple Remote. Unlike some previous iMac models, the iMac (Mid 2007) does not include a magnetic Remote rest for storing the remote on the iMac.

Published Date: Feb 20, 2012

iMac (Mid 2007): External features, ports and connectors

This article has been archived and is no longer updated by Apple.

Learn about the external features, ports and connectors on the iMac (Mid 2007) computer. All ports and connectors covered in this document are located on the Input/Output (I/O) panel on the bottom right side on the back of the computer.

Features

Built-in microphone

The internal microphone operates independently from all other audio input ports and is always available. The internal microphone supports recording at bit depths of 16, 20, or 24 bits per sample and at sample rates of 44.1 kHz, 48 kHz, or 96 kHz. Audio recorded from the microphone is presented as a stereo data stream with the same data on both the left and right channels. The microphone gain can be adjusted from -16 dB to +30 dB.

Built-in iSight camera

Video chat using iChat AV over a broadband connection, take pictures using Photo Booth or capture video through iMovie HD. The camera has an indicator light that glows when the iSight camera is in use.

Slot-loading optical disc drive

The SuperDrive can read CD-ROM, photo CD, audio, and DVD discs. It can write to CD-R, CD-RW, DVD±R, DVD±RW, and DVD±R Double-Layer (DL) discs.

Built-in infrared (IR) receiver for Apple Remote

The infrared-based Apple Remote works with the built-in IR receiver for use with Front Row to access DVD Player, iPhoto, iTunes, and QuickTime Player.

I/O ports

Apple Mini-DVI video output port

Using the Apple Mini-DVI video output port, you can mirror video or extend the size of the Mac OS X desktop (extended desktop mode) with a compatible DVI (Digital Visual Interface) display or VGA (Video Graphics Display) or projector using the appropriate Apple Mini-DVI adapter:

- For DVI displays, use the Apple Mini-DVI to DVI Adapter (M9321G/A).
- For VGA displays or projectors use the Apple Mini-DVI to VGA Display Adapter (M9320G/A).
- For televisions, projectors or VCRs that use S-video or composite video connectors, use the Apple Mini-DVI to Video Adapter (M9319G/A).

Video mirroring allows you to see the same image that is on the iMac (Mid 2007) flat-panel display, on an external monitor, television or projector.

Extended desktop mode allows you to connect an external display and use that area in addition to the built-in display for your desktop.

Ethernet port (10/100/1000 Base-T)

The iMac (Mid 2007) has a built in Ethernet port for 10Base-T/UTP, 100Base-TX and 1000Base-T Gigabit operation. The iMac (Mid 2007) computer can be connected to an Ethernet cable from a cable or DSL modem, hub, switch, or router, or to another Macintosh computer.

The connected device can be either a 10Base-T, 100Base-T or 1000Base-T device; the port automatically detects which type of device is connected. You don't have to use an Ethernet crossover cable to connect to other Ethernet devices.

Five USB (Universal Serial Bus) 2.0 ports

The back of the iMac (Mid 2007) has a total of three USB 2.0-compliant ports. You can connect both USB 2.0- and USB 1.1-compliant devices to these ports. The USB 2.0 ports support both low-speed, full-speed and high-speed data transfers, at up to 1.5 megabits per second (Mbit/s), 12 Mbit/s, and 480 Mbit/s respectively.

The aluminum Apple keyboard contains a USB hub with two high-speed USB 2.0 ports.

All the USB ports use USB Type A connectors, which have four pins each.

Audio line input/optical digital audio input port

Line input

The analog line input operates independently from all other audio input ports and is always available. The line input supports recording at bit depths of 16, 20, or 24 bits per sample and at sample rates of 44.1 kHz, 48 kHz, or 96 kHz. Audio recorded from the line input is presented as a stereo data stream. The line input gain can be adjusted from -16 dB to +30 dB.

During input of a 1 kHz, 1 VRMS (-3 dBFS) sine wave (44.1 kHz input sample rate, 24-bit sample depth, 0.0 dB input gain, no weighting) the audio line input has the following nominal specifications:

- Jack type: 3.5 mm (1/8-inch) stereo
- Maximum input voltage: 3 VRMS (+11.8 dBu)
- Minimum voltage input for full scale output: 63 mVRMS (-21.5 dBu) at input gain = +30 dB
- Input impedance: > 20 kilohm
- Frequency response: 20 Hz to 20 kHz, +0.5 dB/-3 dB
- Signal-to-noise ratio (SNR): >90 dB
- Total harmonic distortion + noise (THD+N): <-85 dB (0.006%)
- Channel separation: > 85 dB

Optical digital input

The digital audio input has the following electrical characteristics (nominal specifications), based on input of a 1 kHz sine wave at 0 dBFS input level, 24-bit sample depth, and 44.1 kHz sample rate (unless otherwise specified below):

- FSI – input sample rates: 44.1 kHz, 48 kHz, or 96 kHz
- Bits per sample: 16, 20, or 24
- Signal-to-noise ratio (SNR): >130 dB
- Total harmonic distortion + noise (THD+N): <-130 dB (0.0003%)

Sound output/digital audio output port

Line/Headphone output

The headphone output is automatically selected for audio output if no external S/PDIF optical digital output device is detected. The headphone output supports a stereo data stream at bit depths of 16, 20, or 24 bits per sample and at sample rates of 44.1 kHz, 48 kHz, or 96 kHz. The headphone output volume can be adjusted from 0.0 dB to -64 dB.

During playback of a 1 kHz sine wave at -3 dBFS voltage level, 24-bit sample depth, 44.1 kHz output sample rate, 100 k load (unless otherwise specified) the audio output has the following nominal specifications:

- Jack type: 3.5 mm (1/8-inch) stereo combo
- Maximum output voltage: 1.6 VRMS (+6.3 dBu)
- Output impedance: <24 ohms
- Frequency response: 20 Hz to 20 kHz, +0.5 dB/-3 dB
- Signal-to-noise ratio (SNR): >90 dB
- Total harmonic distortion + noise (THD+N): <-80 dB (0.007%)
- Channel separation: >85 dB

S/PDIF optical digital output

The S/PDIF (Sony/Philips Digital Interface Format) optical digital output is automatically selected when an S/PDIF optical digital output device is detected on the external combination audio port. The S/PDIF optical digital output supports pulse-code modulation (PCM) and Arc Consistency Algorithm #3 (AC-3) audio formats with the following stereo data stream characteristics:

- PCM: 16, 20, or 24 bits per sample at sample rates of 44.1 kHz, 48 kHz, or 96 kHz

- AC-3: 16 bits per sample at sample rates of 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, or 192 kHz

The S/PDIF optical output channel status conforms to International Electrotechnical Commission (IEC) 60958-3 consumer mode digital audio.

During playback of a 1 kHz sine wave (S/PDIF output format at 0 dBFS output level, 44.1 kHz sample rate, 24-bit sample depth, unless otherwise specified) the digital audio output has the following nominal specifications:

- Jack type: 3.5 mm (1/8-inch) stereo combo
- Digital audio signal-to-noise ratio (SNR): >130 dB
- Digital audio total harmonic distortion + noise (THD+N): <-130 dB (0.00003%)

One FireWire 400 and one FireWire 800 port

The iMac provides one FireWire 400 port and one FireWire 800 port supported by an Open Host Controller Interface (OHCI) FireWire controller with a FireWire 800 PHY (Physical Layer).

The FireWire 400 port supports Institute of Electrical and Electronics Engineers (IEEE) 1394a with a maximum data rate of 400 Mbps (50 MBps). The FireWire 800 port supports IEEE 1394b with a maximum data rate of 800 Mbps (100 MBps).

The iMac (Mid 2007) supports 7 W for each port, for a total of 14 W.

The iMac (Mid 2007) computer supports Target Disk Mode (TDM).

Published Date: Feb 20, 2012

Apple Remote Desktop: Why features may be grayed out in the Admin application

This article has been archived and is no longer updated by Apple.

When features are unavailable (grayed out or dimmed) in the Remote Desktop Admin application, the application is probably being run in Non-administrator Access or User Mode.

User Mode was introduced in Remote Desktop 2.0.

Non-administrator Access or User Mode is activated when a non-administrative user opens Remote Desktop to administer Apple Remote Desktop client computers. The administrator of the computer with Remote Desktop Admin installed can choose which features and tasks are available to non-administrator users.

See the Apple Remote Desktop Admin Guide for more information.

Published Date: Feb 20, 2012

About the Mac OS X 10.4.11 Update

This article has been archived and is no longer updated by Apple.

The Mac OS X 10.4.11 Update updates Mac OS X Tiger (versions 10.4 through 10.4.10) to version 10.4.11.

Important: Please read before installing

- You may experience unexpected results if you have third-party system software modifications installed, or if you've modified the operating system through other means. (This does not apply to normal application software installation.)
- The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to update.
- It is recommended that you backup your computer prior to installing any updates.
- If issues occur during installation--for example, Software Update quits unexpectedly--please see this article.

Installation

To update to Mac OS X 10.4.11, use Software Update or the standalone installer. You only need to use one of these methods to update your computer.

Software Update

Software Update, located in the Apple menu, will automatically check for the latest Apple software using the Internet. (Software Update might have linked you to this article to learn more about the update.) If your computer is not up to date, software updates for your computer will appear that you can install. Note that an update's size may vary from computer to computer when installed using Software Update. Also, some updates must be installed prior to others, so you should run Software Update more than once to make sure you have all available updates.

Standalone installer

Download the update installer and run it manually. This a useful option when you need to update multiple computers but only want to download the update once. These versions of the standalone installer are available from Apple Downloads.

- The delta update for PowerPC-based Macs updates Mac OS X 10.4.10 (PowerPC) to 10.4.11.
- The delta update for Intel-based Macs updates Mac OS X 10.4.10 (Intel) to 10.4.11.
- The combo update for PowerPC-based Macs updates Mac OS X (PowerPC) 10.4, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, 10.4.6, 10.4.7, 10.4.8, 10.4.9, or 10.4.10 to 10.4.11.
- The combo update for Intel-based Macs updates Mac OS X (Intel) 10.4.6, 10.4.7, 10.4.8, 10.4.9, or 10.4.10 to 10.4.11.

What's included?

The following modifications are included in this update:

Improvement	Platform	Category
Includes Safari 3	PowerPC, Intel	Internet
Adds RAW image decoding support for the following cameras: Panasonic Lumix DMC-FZ50, Leica V-Lux 1, Olympus E-400, Olympus EVOLT E410, Olympus EVOLT E510, Canon EOS 40D	PowerPC, Intel	Third-party
Improves compatibility when using OpenType fonts in QuarkXPress	PowerPC, Intel	Third-party
Improves reliability when running VMWARE's Fusion	Intel	Third-party
Improves support for using Image Capture to import pictures taken on your iPhone	PowerPC, Intel	iPhone
Improves syncing between iPhone and Yahoo! address books	PowerPC, Intel	iPhone
Addresses an issue copying files from a Mac OS 9 AFP sharepoint	PowerPC, Intel	Networking
Improved reliability advertising an AFP sharepoint over Bonjour	PowerPC, Intel	Networking

Addresses an issue which could prevent the use of port mapping when sharing your Mac's internet connection	PowerPC, Intel	Networking
Improves reliability when trying to authenticate to an AFP share using Kerberos	Intel	Networking
Improves compatibility with third-party wireless wide-area network devices	Intel	Networking
Improves reliability when mounting external USB hard drives.	Intel	USB
Adds support for Microsoft Presenter Mouse 8000	PowerPC, Intel	Bluetooth
Addresses an issue in which selecting two rows of album art within the iTunes artwork Screen Saver may cause System Preferences to unexpectedly quit	PowerPC, Intel	Other
Includes updated Daylight Saving Time information for customers in Australia, New Zealand, and the United States state of Indiana	PowerPC, Intel	Other
Allows the use of the special keys on aluminum Apple Keyboards to control Aperture slideshows	PowerPC, Intel	Other
Addresses an issue in which help content for some applications may be displayed in English when using the computer in another Mac OS X language	Intel	Other
Addresses issues with certain Apple Dashboard widgets: Unit Converter, Calculator, Stocks	PowerPC, Intel	Other
Includes recent Apple security updates	PowerPC, Intel	Other

Combo updates: The combo update delivers many improvements. It includes modifications delivered above as well as these previous Mac OS X 10.4.x updates.

- For PowerPC only - 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, 10.4.6
- For PowerPC and Intel - 10.4.7, 10.4.8, 10.4.9, or 10.4.10

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

About the Mac OS X Server 10.4.11 Update

This article has been archived and is no longer updated by Apple.

This software updates Mac OS X Server 10.4.x to version 10.4.11. This update is available as either a "combo" or "delta" update installer, for either PowerPC-only or Universal Mac OS X Server 10.4.x systems, and can be obtained via Software Update or standalone installer (manual download).

Important: Read before installing

- You may experience unexpected results if you have third-party system software modifications installed, or if you've modified the operating system through other means. (This does not apply to normal application software installation.)
- The installation process should not be interrupted. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Downloads to update.
- It is recommended that you backup your system prior to installing any updates.
- If issues occur during installation--for example, Software Update quits unexpectedly--please see this article.

Installation

To update your Mac to Mac OS X Server 10.4.11, use Software Update or the standalone installer. You only need to use one of these methods to update your computer.

Software Update

Software Update, located in the **Apple** menu, will automatically check for the latest Apple software using the Internet. (Software Update might have linked you to this article to learn more about the update.) If your computer is not up to date, software updates for your computer will appear that you can install. Note that an update's size may vary from computer to computer when installed using Software Update. Also, some updates must be installed prior to others, so you should run Software Update more than once to make sure you have all available updates.

Standalone installer

Download the update installer and run it manually. This a useful option when you need to update multiple computers but only want to download the update once. These versions of the standalone installer are available from Apple Support Downloads:

- The delta update for PowerPC updates Mac OS X Server 10.4.10 (PowerPC) to 10.4.11.
- The delta update for Intel-based or PowerPC-based Macs updates Mac OS X Server 10.4.10 (Universal) to 10.4.11.
- The combo update installer for PowerPC updates Mac OS X Server (PowerPC) 10.4, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, 10.4.6, 10.4.7, 10.4.8, 10.4.9 or 10.4.10 to 10.4.11.
- The combo update for Intel-based or PowerPC-based Macs (called the "Universal Update") updates any version of Mac OS X Server 10.4.x (Universal) to version 10.4.11 on PowerPC-based and Intel-based Macs.

What's included?

The following modifications are included in this update (each applies to both PowerPC and Intel platforms unless otherwise noted):

Improvement	Category
Copying files over AFP from Mac OS 9 computers	AFP
Membership issues when users are in more than 16 groups	User management
Correct handling of the FTP LIST command	Networking
High availability failover between Intel and PowerPC servers	Networking
Registering servers on the local network with Bonjour	Networking
Proper handling of aliases on UFS and Xsan volumes	Filesystems
Setting ACL permissions when using chmod	Filesystems
Avoiding possible memory panics in 2GB and 4GB RAM configurations	Other
Time zone changes for 2007	Other
Searching for files over AFP from Mac OS 9 computers (Intel-based servers only)	AFP
Recent Apple security updates.	Other

Combo updates: The combo updaters deliver many improvements, including modifications detailed above as well as those in previous Mac OS X Server 10.4.x updates:

- (For PowerPC) 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, 10.4.6, 10.4.7, 10.4.8, 10.4.9 and 10.4.10
- (For Universal) 10.4.8, 10.4.9 and 10.4.10

Published Date: Oct 10, 2016

iMac (Mid 2007): Some fonts may appear incorrectly rendered

This article has been archived and is no longer updated by Apple.

Issue or symptom

You may notice slight rendering differences with some fonts on iMac (Mid 2007) computers running Mac OS X 10.4.10. Text may appear offset or left-justified in applications such as iPhoto or in some Dashboard widgets. In some cases, the font may appear less smooth.

Solution

To address the issue:

1. Log in with an administrator account (or a user account that allows you to install software, make changes, and so on).
2. Open the Terminal application from Applications/Utilities.
3. Cut-and-paste (or carefully type) the following text at the prompt:
   ```
   sudo rm -r /Library/Caches/com.apple.ATS
   ```
4. Press the 'Enter' key.
5. When prompted for your password, enter the password you use to login (or install software) and press the 'Enter' key again.
6. Close the Terminal application and restart the computer. The fonts should now look properly rendered.

Published Date: Feb 20, 2012

Mac OS X 10.5: About syncing contact photos on a Samsung D600 phone

This article has been archived and is no longer updated by Apple.

Issue or symptom

When syncing a Samsung D600 phone with Mac OS X 10.5 Leopard, you may notice that a photo that has been added to a contact on the phone itself may no longer appear after later adding (or changing) a picture for the same contact in the Mac OS X Address Book and syncing.

Solution

To avoid this issue, update any photos (or other contact information) in Address Book before syncing. Edit contact photos only on the phone itself.

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Published Date: Feb 20, 2012

iMac (24-inch Mid 2007): About the 2.8 GHz Intel Core 2 Extreme Processor

This article has been archived and is no longer updated by Apple.

You can order your iMac (24-inch Mid 2007) computer with a 2.8 GHz Intel Core 2 Extreme Processor. This is a dual-core, Intel processor with 4 MB shared L2 (level 2) cache, an 800 MHz frontside bus and it supports Intel 64 architecture.

Because this processor is a dual-core processor, the Apple System Profiler and About This Mac window identify the processor as "Intel Core 2 Duo."

For more information about the Intel Core 2 Extreme Processor, see Intel's product brief.

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Published Date: Oct 10, 2016

iSync: Modifying event durations on Motorola V180 and V220 phones in Mac OS X 10.5

This article has been archived and is no longer updated by Apple.

Issue or symptom

On a Motorola V180 or V220 phone, when editing the duration of events that were created in iCal in Mac OS X 10.4, then synced to the phone, the duration options may only be shown as 5 minutes (instead of 1 hour, for example).

Solution

To avoid this issue, make changes to the event duration time in iCal before syncing events to a Motorola V180 or V220 phone.

Some duration time options may no longer appear on the phone once the events have been synced from a Mac.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

iTunes: Installation of some third-party software utilities may prevent disc burning

This article has been archived and is no longer updated by Apple.

Issue

Installation of DAEMON Tools or similar software utilities that provide "virtual" recorders may prevent CD burning functionality in iTunes or optical drives not being seen. In these cases, iTunes software may report "no recorders found on the system" or may prevent access to your optical drives where it is not seen by the computer system. iTunes may also indicate no burning software or burner is present. Uninstalling DAEMON Tools or other similar software utilities will not solve the issue.

Solution

Download and install the latest "SCSI Pass Through Direct" (SPTD) drivers. SPTD drivers are commercially available Device IO drivers and are used by virtual drive emulator software utilities such as DAEMON Tools and other vendors.

If you use Duplex Secure software ,the issue is resolved with an updated SPTD driver available here:
www.duplexsecure.com/downloads

If you use DAEMON Tools, download the latest version here:
www.disc-tools.com/download/daemon

If an update is not yet available for your software, uninstall DAEMON Tools or similar software utilities and then delete `sptd.sys` from `C:\\Windows\\System32\\Drivers` and then restart the computer.

Important: Mention of third-party websites and products is for informational purposes only and constitutes neither an endorsement nor a recommendation. Apple assumes no responsibility with regard to the selection, performance or use of information or products found at third-party websites. Apple provides this only as a convenience to our users. Apple has not tested the information found on these sites and makes no representations regarding its accuracy or reliability. There are risks inherent in the use of any information or products found on the Internet, and Apple assumes no responsibility in this regard. Please understand that a third-party site is independent from Apple and that Apple has no control over the content on that website. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

Mac OS X Server 10.5: About using drives for network Time Machine backups

This article has been archived and is no longer updated by Apple.

With Mac OS X Server version 10.5, you can store network Time Machine backups on both internal and external hard drives. If you choose an external USB or FireWire drive for your backups, take care to prevent accidental disconnection during the backup process. Before physically disconnecting the drive, be sure eject the drive icon in the Finder. If the drive does not eject, wait until the backup is complete and try again.

Published Date: Feb 20, 2012

iLife ‘05: System Requirements

This article has been archived and is no longer updated by Apple.

iLife ’05 requires the following:

Hardware

- Macintosh computer with a PowerPC G3 (400 MHz or faster), G4, or G5 processor.
- 600 MHz G3 or faster required for GarageBand.
- G4 or G5 required for GarageBand software instruments and advanced photo editing in iPhoto 5.
- 733 MHz G4 or faster required for iDVD.
- 1 GHz G4 or faster required to use HD features of iMovie HD
- 256 MB of RAM (512 MB recommended).
- 512 MB RAM required to use HD features of iMovie HD.
- 1024 x 768 display resolution.
- 4.3 GB of disk space required to install GarageBand, iTunes, iPhoto, iMovie and iDVD.
- 250 MB to install iTunes, iPhoto and iMovie only.

Software

- Mac OS X v10.3.4 or later.
- Mac OS X v10.3.6 or later required to use HD features of iMovie HD.
- Mac OS X v10.3.6 or later required to work with RAW photos (iPhoto 5).
- QuickTime 6.5.2 (included)
- DVD drive required to install GarageBand and iDVD.
- Apple SuperDrive (or 733 MHz G4 processor) required for iDVD.
- Burning DVDs requires an Apple SuperDrive DVD burner.

Published Date: Feb 20, 2012

iLife ‘04 system requirements

This article has been archived and is no longer updated by Apple.

iLife ’04 requires the following:

Hardware

- Macintosh computer with a PowerPC G3, G4 or G5 processor.
- 600 MHz G3 or faster required for GarageBand.
- G4 or faster required for GarageBand software instruments.
- 733 MHz G4 or faster required for iDVD.
- 256 MB of RAM required.
- 1024 x 768 display resolution.
- 4.3 GB of disk space required to install GarageBand, iTunes, iPhoto, iMovie and iDVD.
- 250 MB to install iTunes, iPhoto and iMovie only.

Software

- Mac OS X 10.2.6 or later.
- Mac OS X 10.2.8 or later recommended.
- QuickTime 6.4 or later (QuickTime 6.5 included).
- DVD drive required to install GarageBand and iDVD.
- Burning DVDs requires an Apple SuperDrive DVD burner.

Published Date: Feb 20, 2012

Mac OS X Server 10.4: Create admin users in Server Monitor with Roman characters only

This article has been archived and is no longer updated by Apple.

Issue or symptom

Server Monitor authentication information created from two-byte characters will appear garbled and authentication will not work. Two-byte characters are commonly used in Japanese, Chinese, and Korean fonts.

Solution

When creating administration users for Server Monitor, only use Roman characters for the username and password.

Published Date: Feb 20, 2012

AppleShare: How Privileges are Stored

This article explains how Apple Share file sharing privilege are stored and how to move them to another computer.
This article has been archived and is no longer updated by Apple.
Two files are key to maintaining privileges on the file server, the Users & Groups Data File and the invisible AppleShare PDS files. This article explains how they work together.

AppleShare PDS and PDF files

Every user and group that you create is automatically assigned a unique ID number. Similarly, every folder has its own unique ID number. AppleShare uses these ID numbers--not the names of the Users, Groups, or Folders--to determine who has access to the various folders on the server.

Each volume on the server has a file that maintains the access privileges of the folders on that volume. For standard read/write volumes, the file is stored at the root level of the volume. It is an invisible file called "AppleShare PDS". (PDS stands for Parallel Data Structure.)

The file is invisible so it won't be moved or renamed accidentally. If the file is moved or renamed, a new one will be created, and all privileges for that volume would be reset to the default (administrator is owner, no one else has privileges).

For read-only volumes such as CD's, the file that stores the privileges is located in the startup volume's System Folder: Preferences: AppleShare IP Preferences: Access Privileges folder; and will be called '<name of CD>.PDF', for example "AppleShare 6.0.PDF". For Personal File Sharing, these files are stored in the volume's System Folder: Preferences: File Sharing folder; and follow the same name structure. These PDF files work the same as the PDS files; if they are moved or renamed, a new one will be created, with default privileges.

Because the PDS files use unique numbers to identify the users, groups, and folders, the information in the PDS file will be invalid if these numbers change. As examples:

If you created a new Users & Groups data file, with all the same names and groups as the original, and substituted it for the original, privileges would be lost because the ID numbers would no longer match.

Similarly, if you did a Finder-copy of all your shared data to another hard drive, those copied folders would no longer have privileges (even if you also moved the PDS file over to the new volume), because the copied folders have different ID numbers associated with them. The information in the PDS file would be invalid, and privileges would be reset to the default.

Keeping U&G Data File and PDS files in sync

When File Services are starting up (and you see "this may take a few minutes" dialog), AppleShare is checking the information in the PDS and PDF files, and the data in the Users & Groups Data File, and the folders on the volume, to make sure all information is still valid.

Checking the privileges at start up can take some time, depending on the number of folders that need to be checked, and whether or not you're using explicit or inherited privileges at the server. See the section on Explicit vs. Inherited privileges for more details.

If it finds discrepancies, such as a single user no longer exists in the Users & Groups data file (such as what might happen if you restored that file from a backup), it will return that folder to default privileges. All privileges are lost when none of the information is found to be valid, which might happen if you do a clean system install, and don't restore your Users & Groups Data File into place before starting up the file server.

As a precaution when doing a clean install on the server, you can backup not only the Users & Groups Data File, but the PDS file for each volume on the server. If you should lose privileges at some point during the clean install process, you can restore the appropriate PDS backup file to its volume, and get privileges back.

In order to back up the PDS files, you must first make them visible. It is recommended if you have AppleShare IP 5 or 6 to use the AppleShare IP First Aid Tool. This utility will allow you to backup the Users & Groups Data File and AppleShare PDS File, it creates an AppleShare IP First Aid file that can be used for restoring. You can also make AppleShare PDS Files visible so they can be backed up with ASIP First Aid.

AppleShare IP First Aid 6.2 will work without AppleShare IP installed, allowing one to backup or move shared items and privileges from Mac to Mac. This is an unsupported utility and users should backup the AppleShare PDS and Users & Groups Data File in case difficulties do arise. You can get ASIP First Aid from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Without the AppleShare IP First Aid Tool this can be done with a disk utility, such as ResEdit, Norton Disk Editor or File Buddy. These applications will let you view the "Finder Info" for the files, and turn off the "invisible" flag. You'll also need to make sure that you keep them straight, so you know which PDS file goes with which volume. You might do that by placing the backup files in a folder named after the volume it came from.

Moving file sharing services to a different computer

If you want to move all file sharing services to a different computer, you'll need to move the Users & Groups Data File from the server to the new computer (replacing the one that's already there in the Preferences folder), restart, and make sure its recognized before you begin to move the shared data over.

When moving the shared data, you need to do so in a way that will preserve access privileges. Backing up and restoring with a utility like Retrospect is one way to go (AppleShare must be running during both the backup and restore process). Or you can use the Web & File Admin's "Duplicate Folder" command (which also maintains privileges) to copy all folders to be moved to an external disk, then just move that external disk over the new server. You could then use the "Duplicate Folder" command to move the data from the external to an internal disk again.

Troubleshooting Difficulties with File Sharing Starting Up

PDS files can sometimes get corrupted, which can have various symptoms, the most common is the server stays in "starting up" mode forever. Other symptoms might be that your share points keep getting unshared, or privileges don't change as expected.

This can happen with Personal File Sharing as well as with AppleShare File Servers. Difficulties starting up could also be an indication of corruption in the Users & Groups Data File, but this is not as common.

If you're experiencing such difficulties, keep the following in mind:

- Every volume on the desktop, except for floppy disks, is going to have an invisible PDS file on it, whether you share it or not.
- Check for available free space on every volume on desktop; if there's not enough free space on the disk to create the PDS file, the startup process may hang. A good rule of thumb is to keep 10% of a drive's capacity free. For a 1GB drive, this means 100MB should be free. This also helps accommodate temporary files that need to be created, such as spool files created when printing. The bare minimum for the PDS files is around 300K.
- If you have a current backup of the Users & Groups Data File, you can try swapping it out. This should cause you no loss of data, if you do it right (drag existing U&G Data File to desktop, drag backup to System Folder: Preferences, then restart the computer).
- If you suspect the fault is with PDS file corruption, check the PDF files (which hold the access privileges for any CD that's inserted into the server). With AppleShare IP, they're in the System Folder: Preferences: AppleShare IP Preferences: Access Privileges folder. With Personal File Sharing, they're in the System Folder: Preferences: File Sharing folder. Move those files to another location, and see if File Sharing starts up.
- If you're still having difficulty, try moving the AppleShare PDS files to another location one by one, to see if you can determine which file is causing the issue. Do so by making the files visible first, then moving the files to a folder, appropriately named to represent the volume the file came from. If you find out they're not the culprit after all, you can return them to their original location, and have your privileges restored.
- Another method is to simply unmount volumes from the desktop, then try starting up file sharing. Of course you can't do this with the startup disk.

Published Date: Feb 20, 2012

Mac OS X 10.4.10: No sound input or output with Plantronics USB headset, microphone, or audio adapter

This article has been archived and is no longer updated by Apple.

Issue or symptom

After updating to Mac OS X 10.4.10, there may be no audio input or output from a Plantronics USB audio device (such as microphone or headset).

Solution

1. Make sure the device is connected to a USB port.
2. Open Audio MIDI Setup, which is in the Utilities folder within the Applications folder.
3. Make sure the Default Input pop-up menu (under System Settings) is set to the device.
4. Choose your device from the "Properties For" pop-up menu.
5. In the bottom right area of the window (under Audio Output), deselect the "Mute" checkbox.

This document will be updated as more information becomes available.

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Published Date: Feb 20, 2012

UPS does not appear in Energy Saver preferences

This article has been archived and is no longer updated by Apple.

Issue or symptom

An uninterruptible power supply (UPS) connected to your computer via USB may not appear in Energy Saver preferences until it is reset.

Solution

Follow these steps to reset the connection between the UPS and the computer:

1. Shut down the computer that the UPS is connected to.
2. Turn off the UPS and disconnect it from the AC outlet.
3. Leave the UPS disconnected and turned off for 2 or 3 minutes.
4. Connect the UPS to the AC outlet and computer again.
5. Start the computer up.
6. Verify that the UPS is recognized by Energy Saver preferences in System Preferences.

Published Date: Oct 10, 2016

Final Cut Pro: Flip4Mac MXF components may cause unexpected quit

This article has been archived and is no longer updated by Apple.

Issue or symptom

With more than one Flip4Mac component installed, Final Cut Pro may unexpectedly quit when you open it in Mac OS X 10.4.10.

Solution

Delete or temporarily remove the following items:

- Library/Application Support/Final Cut Pro System Support/Plugins/Flip4Mac Editcam Plugin.bundle
- Library/Application Support/Final Cut Pro System Support/Plugins/Flip4Mac XDCAM Plugin.bundle
- Library/Application Support/Final Cut Pro System Support/Plugins/Flip4Mac Profile Plugin.bundle
- Library/Preference Panes/Flip4Mac Editcam.prefPane
- Library/Preference Panes/Flip4Mac XDCAM.prefPane
- Library/Preference Panes/Flip4Mac Profile.prefPane
- Library/Frameworks/Flip4MacPro.framework
- Library/QuickTime/Flip4Mac Editcam.component
- Library/QuickTime/Flip4Mac XDCAM.component
- Library/QuickTime/Flip4Mac Flip4Mac Profile.component

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Final Cut Pro: Media-Managed projects with .stap files may not open on other computers

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you use the Send To Soundtrack feature in Final Cut Pro to create a .stap file (Soundtrack Pro Audio File Project) in a sequence, and that sequence is then copied using Media Manager, the resulting project may not open if it is moved to another computer.

If you try to open such a project on another computer, the project may not open and you may see this message:

> Searching for movie data in file "*filename*".

Solution

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

About the security content of AirPort Extreme Base Station with 802.11n Firmware 7.2.1

This article has been archived and is no longer updated by Apple.

This document describes the security content of AirPort Extreme Base Station with 802.11n* Firmware 7.2.1. Firmware version 7.2.1 is installed into an AirPort Extreme Base Station with 802.11n* by running the AirPort Utility which is provided with the Base Station.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

AirPort Extreme Base Station with 802.11n* Firmware 7.2.1

- **AirPort Extreme Base Station with 802.11n***

  CVE-ID: CVE-2007-2242

  Available for: AirPort Extreme Base Station with 802.11n*

  Impact: Remote attackers may be able to adversely affect network performance

  Description: A design issue exists in the IPv6 protocol's handling of type 0 routing headers. Depending on network topology and capacity, the reception of specially crafted IPv6 packets may lead to a reduction in network bandwidth. This update addresses the issue by disabling the support for type 0 routing headers. This issue does not affect the Gigabit Ethernet version of AirPort Extreme Base Station with 802.11n*.

Installation note for Firmware version 7.2.1

Firmware version 7.2.1 is installed into an AirPort Extreme Base Station with 802.11n* by running the AirPort Utility which is provided with the Base Station.

(*) Based on an IEEE 802.11n draft specification

Published Date: Oct 10, 2016

Soundtrack Pro: Clips with "/" as part of name may not be found when a multitrack project is loaded

This article has been archived and is no longer updated by Apple.

Issue or symptom

When you load a multitrack project, Soundtrack Pro may not locate clips that have a slash ("/") character, also known as a solidus, as part of their name.

This can happen in situations in which a clip name includes a "/" character that is not preceded by a space. For example, a clip named "1/2 speed noise effect" would exhibit the issue, while one named "Half open / half closed door" would not.

Solution

Avoid slash characters when naming clips.

Published Date: Feb 20, 2012

iDVD: Using .AVI Files in iDVD

This article has been archived and is no longer updated by Apple.

Issue or symptom

The .AVI (Audio Video Interleave) file format is a container format which may contain audio and video codecs (compression formats) not supported by QuickTime and therefore not supported in iDVD.

In some cases, you may encounter issues with audio or video when adding .AVI assets to an iDVD project, or when attempting to burn a DVD or create a disc image from that project.

Affected products

- iDVD

Solution

If you encounter audio or video issues, perform a general .AVI compatibility test for iDVD by first verifying the specific .AVI file being used is compatible with QuickTime Player.

If a project is not successful during burning or disc imaging, or if it is not visible or audible in iDVD Preview mode, use the following steps to determine if the assets themselves are supported or damaged:

1. Locate the .AVI file used in the iDVD project and open it in QuickTime Player.
2. From the Window menu, choose **Show Movie Inspector**.
3. Compare the codecs listed in the QuickTime Inspector window under the Format listing to the supported codecs listed on the official QuickTime Specifications page.
4. If the codecs are supported by QuickTime, play the file in its entirety in QuickTime Player while checking for any audio or video issues or artifacts.

Additional information

See "QuickTime: About Playing .AVI Files" for related information.

Published Date: Feb 20, 2012

Audio hardware requirements for working with surround sound in pro audio applications

This article has been archived and is no longer updated by Apple.

If you plan to work with surround sound in Soundtrack Pro or Logic Pro, you'll need an audio interface with enough discrete outputs to accommodate the surround format you plan to work with. For example, if you work in 5.1, you'll need at least 6 outputs (for the 5 channels, plus the LFE channel).

The built-in optical hardware output included with some Macs cannot be used for monitoring surround with Logic Pro and Soundtrack Pro, because it requires a surround encoded audio stream, such as that output by a DVD. Neither Logic Pro nor Soundtrack Pro can playback surround encoded audio; they output discrete audio streams that can be encoded later in the authoring process by an application such as Compressor.

Published Date: Feb 20, 2012

Mac OS X Server 10.5: How to override DHCP Client IDs

This article has been archived and is no longer updated by Apple.

The configurable option in Network System Preference to set a DHCP client ID can be overridden by the DHCP server in Mac OS X 10.5 Leopard Server.

Administrators may choose to configure DHCP Client IDs on their network client units in order to statically assign a DHCP provided IP Address to a computer in a specific location. Also, some ISPs required that a DHCP Client ID be configured in order for a DHCP lease to be acquired.

However, if a DHCP Client ID is improperly configured, the network client unit may not properly acquire a DHCP Address. To avoid this, configure your DHCP Server to override the DHCP Client ID settings on network client units.

To configure this feature, edit the server's DHCP configuration file, named "bootpd.conf" located in /private/etc:

1. If DHCP service is running, stop the service in Server Admin.
2. Using a text editor, add two lines near the end of the bootpd.conf file (which is in /private/etc). **Note:** The first line defines the dhcp_ignore_client_identifier key, and the second line enables the key with the boolean "true" value. The key and value should be inserted near the end of bootpd.conf but before last two preexisting lines of the file. The last 4 lines should look like this:

```
<key>dhcp_ignore_client_identifier</key>
<true/>
</dict>
</plist>
```

3. Enable DHCP service again.

After following these steps, as leases are renewed, DHCP Client IDs should be overridden. This should be evident by the absence of Client IDs in Server Admin > DHCP > Clients.

Published Date: Oct 10, 2016

Xserve (Late 2006): Issue with waking from sleep

This article has been archived and is no longer updated by Apple.

Issue or symptom

Some Xserve (Late 2006) computers with Mac OS X Server 10.4.10 and some PCI cards, may experience issues when waking from sleep. The computer may not wake properly and needs to be restarted.

Solution

Prevent the computer from sleeping by setting the Energy Saver system preference option for the computer, to **Never**. See this article for more details.

Published Date: Oct 10, 2016

iWeb: Some movies on pages created by iWeb may not play in a browser

This article has been archived and is no longer updated by Apple.

Issue or symptom

Some movies added to pages in iWeb may play properly before being published, but do not play properly once published and viewed with a browser.

Solution

This issue occurs with DivX-encoded movies. If you are creating your own movies, use H.264 to encode them. If you have a movie that is already encoded with DivX, you can do the following:

1. Open iTunes.
2. From the **File** menu, choose **Add to Library...** and add your movie.
3. Select the movie in your iTunes library.
4. From the **Advanced** menu, choose **Convert Selection for Apple TV**.
5. After iTunes has finished converting the movie, drag the new movie file from the iTunes library to your Desktop.
6. Replace the DivX-encoded movie in iWeb with the newly created copy from your Desktop.
7. Republish your site from iWeb.

Published Date: Feb 20, 2012

Xserve RAID: Internal IP address configuration

This article has been archived and is no longer updated by Apple.

Issue or symptom

RAID Admin may not allow you to configure the Xserve RAID with an IP address in the range 10.254.0.0 to 10.254.255.255 or use a network that conflicts with this range. For example, RAID Admin may not allow you to assign the Xserve RAID the IP address 10.0.0.1 with the subnet mask 255.0.0.0.

The Xserve RAID uses the network 10.254.0.0/16 (subnet mask 255.255.0.0) for internal communications. RAID Admin may not allow you to configure the network interfaces with any address in this range.

Solution

Use a network that does not conflict with 10.254.0.0/16 (subnet mask 255.255.0.0). For example, use 10.253.0.0/16 (subnet mask 255.255.0.0) network to avoid a conflict.

Published Date: Oct 10, 2016

iSync: Syncing Sony Ericsson K700i and Z1010 contacts that use double-byte characters in Mac OS X 10.5

This article has been archived and is no longer updated by Apple.

Issue or symptom

You may notice that when synchronizing contacts with a Sony Ericsson K700i or Z1010 phone in Mac OS X 10.5, vCards which contain long entries with double-byte characters may not sync, or an alert message may appear. Double-byte characters are used in languages such as Japanese, Chinese, and Korean.

In some cases, these entries may be truncated in Address Book.

Solution

To avoid this issue with these phones, try reducing the number of characters used in contacts which contain double-byte characters.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

iSync: Unable to sync with Sony Ericsson W900i phone after canceling a sync

This article has been archived and is no longer updated by Apple.

Issue or symptom

If a synchronization session is cancelled in iSync in Mac OS X 10.5, subsequent synchronization attempts may not complete, or may report an alert message.

This issue can occur if a synchronization session has been cancelled by clicking the "Cancel Now" button in iSync.

Solution

To begin synchronizing the Sony Ericsson W900i again with iSync, reset the phone device by powering it off and back on. Future synchronization attempts should work as expected.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

iSync: Unable to sync with Nokia 6102 or 6103 phone after canceling a sync

This article has been archived and is no longer updated by Apple.

Issue or symptom

If a synchronization session is cancelled in iSync in Mac OS X 10.5 Leopard, you may notice the phone displays a "Quitting Sync"alert for an extended period of time.

Subsequent synchronization attempts may not compete, or may report a different alert message.

This issue can occur if a synchronization session has been cancelled by clicking the "Cancel Now" button in iSync.

Solution

To sync your Nokia 6102 or 6103 phone again, simply power it off and then back on. Future synchronization attempts should work as expected.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

iSync: Syncing the postal address field with Nokia 6230i phones in Mac OS X 10.5

This article has been archived and is no longer updated by Apple.

Issue or symptom

Nokia 6230i phones support entering postal address fields (on the phone device) that include up to 126 characters. However, when synching this field via iSync, the first 60 characters only may be synchronized.

Solution

To avoid this phone issue, use 60 characters or less in the postal address field, or consider abbreviations.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

iSync: Syncing All Day events with Sony Ericsson K610i, K790i, K800i in Mac OS X 10.5

This article has been archived and is no longer updated by Apple.

Issue or symptom

All Day events created in iCal and then synched to a Sony Ericsson K610i, K790i, or K800i phone will appear to be marked as All Day Events, but this status may instead appear as the start / end time of the event. This occurs if the All Day Event is edited after synchronization.

Solution

Apple has identified this as limitation of the mobile phone device.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

iSync: Syncing the birthday field with Samsung D900 phones in Mac OS X 10.5 Leopard

This article has been archived and is no longer updated by Apple.

Issue or symptom

Contacts initially created on a Samsung D900 phone and then synchronized using iSync may display a birthday of "January 1st, 1900" in Address Book.

Solution

By default, the Samsung D900 phone assigns an "empty" birthday to each new contact that's been created initially on the phone when synchronizing using iSync.

If you want a contact's birthday information to appear correctly, crate the contact in Address Book instead of on the phone device.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

iSync, iCal: Syncing recurring events in different time zones with Nokia N71 or N80 Series Phone

This article has been archived and is no longer updated by Apple.

Issue or symptom

When synchronizing recurring events with a Nokia N71 or N80 phone and iCal in Mac OS X 10.5 Leopard, the events may appear to shift a day earlier (or later) if the last day of the event is located in a time zone with different Daylight Saving rule in effect.

Solution

Apple has identified this as a limitation of some phones, such as the N71 and N80 series phones.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

iSync, iCal: Unable to sync All Day events with a Motorola K1 series phone in Mac OS X 10.4, 10.5

This article has been archived and is no longer updated by Apple.

Issue or symptom

All day (or single, multiple day) events that are created on the Motorola K1 series phones and then synced with an iCal calendar in Mac OS X 10.4 or Mac OS X 10.5 Leopard may show up as single day events instead.

Solution

Motorola K1 phones currently do not support the syncing of these kinds of events with iCal.

Published Date: Feb 20, 2012

iWeb 2: Some pages do not display properly in Safari 1.3.2 and earlier

This article has been archived and is no longer updated by Apple.

Issue or symptom

Blog, podcast, album and photo pages created with iWeb may not display correctly in Safari 1.3.2 or earlier.

Solution

Many of the features offered on iWeb-created pages require Safari 2.0 (Mac OS 10.4) or later. To take advantage of those features, update to Mac OS 10.4 or later.

Published Date: Feb 20, 2012

Video podcast is clipped or truncated at the edges when displayed on the iPod touch

This article has been archived and is no longer updated by Apple.

Issue or symptom

When playing a video or video podcast on the iPod touch, the video may be truncated or clipped at the edges.

Solution

Choose **Settings > Video** and set the Fullscreen option to ON.

Published Date: Feb 20, 2012

iMac: Frequently Asked Questions (1 of 2)

This article contains frequently asked questions (FAQ) the original iMac, introduced 1998-07, with answers to those questions. Later models may have different features and functionality which are documented in the Knowledge Base.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. What Is the difference between SDRAM and SGRAM?
2. What resolutions does the iMac built-in display support?
3. Does the USB keyboard perform the same way the ADB keyboard on other Macintosh and Power Macintosh computers performed?
4. Does the Apple USB mouse light up?
5. Can I attach an external display to iMac?
6. How fast is the CD-ROM drive in iMac?
7. Is the CD Drive just like the drive on other Macintosh computers?
8. How can I take care of the CD-ROM drive on iMac?

Question 1: What Is the difference between SDRAM and SGRAM?

Answer: iMac comes with two different types of memory: SO SDRAM and SO SGRAM. The former, SDRAM, is Synchronous Dynamic Random Access Memory, the memory iMac uses to run the Mac OS and applications. The latter, SGRAM, is Synchronous Graphic Random Access Memory, the memory iMac uses to display video. In both cases, the "SO" stands for "small outline."

iMac comes with 32MB of SO SDRAM (expandable to 128MB on the revision /A iMac, and 256MB on the revision /B iMac and the 266 megahertz iMac) and 2MB of SO SGRAM (expandable to 6MB). Adding more SDRAM allows you to run more applications. Increasing SGRAM (to either 4Mb or 6MB of video RAM) provides better 3D performance.

Note: Although revision /A iMac computers may work with larger capacity SO-DIMM's than stated, these larger sizes weren't available for official testing at the time of product development, and so therefore aren't included.

Question 2: What resolutions does the iMac built-in display support?

Answer: The 15-inch (13.8-inch, diagonal, viewable image size) built-in display supports three resolutions:

* 640x480 at 117Hz
* 800x600 at 95 Hz
* 1024x768 at 75Hz

The three resolutions/refresh rates have all been optimized for the iMac display and offer excellent performance and an extremely crisp image.

What do these numbers mean? The first set of numbers in each of the descriptions above stands for the resolution (the number of pixels displayed). For example, if you set the resolution to "640x480," the monitor displays an image that measures 640 pixels (horizontally) by 480 pixels (vertically). The second number indicates the refresh rate for that specific resolution. With faster refresh rates, you see less "flicker" and experience less fatigue--that is, you can work longer without your eyes getting tired.

Which is the best resolution/refresh rate? It depends on what you do. Try each one, and see which you like best. Keep in mind that the more pixels you choose to display, the smaller the resulting image will be onscreen. Let's say you have a spreadsheet open in AppleWorks (formerly ClarisWorks) and want to see as many columns and rows as possible. Setting the resolution to 1024x768 will allow you to see as much display real estate, as possible. If you're designing a graphic element for use on a web page, however, you may want to see as much detail as possible, so you may set the resolution to 640x480. Again, as you work with iMac, you'll find out what works best for you.

Question 3: Does the USB keyboard perform the same way the ADB keyboard on other Macintosh and Power Macintosh computers performed?

Answer: Although it's a USB--rather than an ADB--device and although it uses a USB cable and connects via the USB port, in every other way, its a keyboard just like any other Macintosh keyboard.

It has a power button, just like other Macintosh keyboards, that you can use to start up or shut down the computer.

Keyboard commands--like Command-Q for quit, Command-P for print, Command-W for close, etc--work the same way as they did on other Macintosh keyboards.

You still reset PRAM by holding down the Command, Option, "P," and "R" keys immediately after restarting the computer. You still tell the computer that you want to startup from a CD (rather than from the hard drive) by holding down the "C" key after a restart. And you still type

special characters and include diacritical marks the way you would with other Macintosh keyboards you may have used in the past.

Like other Macintosh keyboards, it includes a numeric keypad, a set of arrow (or cursor) keys, a set of function keys, and "Help," "Home," "Pg Up," and "Pg Dn" keys.

Quite distinctive, the translucent keyboard is designed to complement iMac. It includes two USB ports, one on either side, so you connect the mouse to either the left or right side of the keyboard.

For more information on the Keyboard that comes with iMac, be sure to check out the Mac OS Info Center. Just click on the icon for the "Mac OS Info Center." From the Main Menu, click on the following links to read more about the Keyboard and Mouse:

* Tell Me About My Computer
* Using Your Computer
* Working With the Keyboard and Mouse

Question 4: Does the Apple USB mouse light up?

Answer: No, the original round USB mouse does not light up.

Question 5: Can I attach an external display to iMac?
Answer: Apple designed the iMac with a very sharp, 15-inch internal display but did not include a video-out port that would allow customers to connect a second display.

More recent versions of the iMac do allow an external VGA type display to be connected to support video mirroring. Check your owners documentation to determine if your iMac has an external VGA port.

Question 6: How fast is the CD-ROM drive in iMac?

Answer: The 24x-speed CD-ROM Drive in iMac has the following specifications:

Disc Speed

* Up to 24X (twenty-four-times speed)

Disc Diameters Supported

* 120 millimeter (mm) (4.7 inches)
* 80 mm (3.2 inches)

Data Capacity

* 656 megabytes (MB), Mode 1
* 748 MB, Mode 2

Modes Supported

* Audio CD
* CD-ROM: Modes 1 and 2
* Photo CD: Single session and multisession
* Video CD
* CD-ROM XA (Mode 2, Form 1 and Form 2)
* CD-I (Mode 2, Form 1 and Form 2)
* CD-I Ready
* CD-Bridge
* CD-WO
* Enhanced Music CD (CD Plus)
* CD-RW

Laser

* Type: Semiconductor laser GaAlAs
* Wavelength: 780 nanometers (nm)
* Output power: 0.6 milliwatts (mW)
* Beam divergence: 53.4* +/- 1.

Question 7: Is the CD drive just like the drive on other Macintosh computers?

Answer: In functionality and performance, the 24x-speed (maximum) CD-ROM drive in iMac offers the same high level of quality that customers find in other Power Macintosh desktop computers and supports all of the modes listed above.

There are, however, see a couple of differences when you open the tray and insert a compact disc.

First Minor Difference. On iMac, the CD tray is spring activated rather than motorized. What does that mean? With drives in other Power Macintosh computers you may have used in the past, when you hit the button to eject the CD tray, you activated a small motor that opened the tray, completely extending it. In iMac, when you hit the button to eject the CD tray, you engage a spring-activated mechanism that pops the door open halfway. To open the tray completely, you gently pull the tray out until it's completely open.

Second Minor Difference. The CD tray incorporates a tiny spindle. The spindle, like the spindle found in many portable CD-ROM players, includes small tabs that are designed to hold the CD-ROM disc securely in position. So, instead of just dropping the CD-ROM disc into place on the tray (as you did on other Power Macintosh computers), on iMac, you'll need to:

* Place the center hole of the CD-ROM disc over the center spindle on the tray, with the disc label facing up.
* Place the hole in the center of the disc directly over the spindle, straddle your index and middle fingers over the hole, and press down until you feel the disc snap into place.
* Spin the disc once (to make certain that the disc is laying flat) before closing the tray.

Question 8: How can I take care of the CD-ROM drive on iMac?

Answer: In caring for the 24x-speed CD-ROM drive, you should keep the following recommendations in mind as you use the drive:

* Position your computer so that when the tray opens, it doesn't bump into anything.
* Be sure to close the tray when you're not using it.
* Do not leave the disc tray open. If dust gets on the lens of the CD-ROM drive, the drive may have problems reading your compact discs.
* Do not put anything (for instance, a cup) on top of the tray when it is open.
* Do not use excessive force when opening the tray.
* Do not touch the lens on the tray with your fingers.
* Do not wipe the lens with a paper towel or other abrasive surface. If you need to clean the lens, see an Apple-authorized service provider for a lens cleaner.
* Keep your computer equipment away from any source of liquid (such as wash basins, bathtubs, and shower stalls). If you drink coffee or other beverages while you're at your computer, take care not to spill.
* Avoid exposing your equipment to damp or wet weather. If your system is near a window, be sure the window is closed in rainy weather.

When you handle CD-ROM discs, you should also remember to:

* Hold a disc by the edges or by one edge and the center hole. Do not touch the data surface of the disc (the side without the label).
* To clean discs, wipe the shiny surface with a soft, damp cloth, working in straight lines from center to edge. Do not use any form of cleaning agent.
* To avoid damage to your discs, keep these points in mind:

- Do not exposed discs to direct sunlight
- Do not spill liquids on CD-ROM discs.
- Do not scratch CD-ROM discs
- Do not write on the discs
- Do not put tape on the discs
- Do not get dust on discs

Additional iMac FAQ's can be found in the following article:

Article 30649: **iMac: Frequently Asked Questions (2 of 2)**

Published Date: Feb 20, 2012

Mac OS X: Adjusting Date & Time for New Zealand‘s late 2007 Daylight Saving Time changes

This article has been archived and is no longer updated by Apple.

In the second half of 2007, New Zealand began observing 27 weeks of Daylight Saving Time each summer. These new Daylight Saving Time rules are included in Mac OS X 10.4.11 and Mac OS X 10.5 Leopard.

Published Date: Feb 20, 2012

iMac: Frequently Asked Questions (2 of 2)

This article contains frequently asked questions (FAQ) the original iMac, introduced 1998-07, with answers to those questions. Later models may have different features and functionality which are documented in the Knowledge Base.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. Is There a Way I Can Secure iMac to a Desktop?
2. Can I Attach External Devices to iMac?
3. Apple's Data Sheet for iMac Says that it Comes with "Built-in Stereo Speakers with SRS Sound." What is that?
4. Can I Get On-Site Service if I Need to Have iMac Repaired?

Question 1: Is There a Way I Can Secure iMac to a Desktop?

Answer: Yes. You can safeguard iMac by purchasing a locking cable kit. You can attach one end of the cable to your desk (or other solid fixture), and you can attach the other end to iMac, threading the cable through the built-in handle on the back of the computer.

Question 2: Can I Attach External Devices to iMac?

Answer: iMac offers a number of ways you can attach external devices.

For example, iMac has sound input and output ports (or "jacks") you can use to connect such audio equipment as tape decks or audio CD players, external speakers, and microphones. If you like to listen to music while you work on iMac, but you don't want to disturb other people, you also have two headphone jacks right on the front of iMac to use.

You can connect other types of external devices--like floppy disk drives, hard drives, printers, scanners, modems, digital cameras, etc.--to one of the Universal Serial Bus (USB) ports. iMac, itself, comes with two such ports, and there are two additional ports on the USB Keyboard that comes with iMac.

Finally, if you're using iMac in a network environment and want to send a file to the LaserWriter down the hall, you can use the built-in 10/100 BASE-T Ethernet port to connect to the Ethernet network in your office.

Question 3: Apple's Data Sheet for iMac Says that it Comes with "Built-in Stereo Speakers with SRS Sound." What is that?

Answer: Sound Retrieval System (or SRS) sound is proprietary technology used to enhance the sound you hear on iMac. Apple has licensed this technology from SRS Labs, including it in quite a number of computers prior to iMac. According to SRS Labs, SRS differs from stereo and other sound expansion techniques because it is based on the human hearing system. Our ears are complex instruments that allow us to hear in three dimensions.

Microphones and traditional stereo playback systems only produce flat, two dimensional sound images which are somewhat limited compared to "real live sound." SRS compensates for these limitations by re-establishing the necessary information that allows us to hear in three dimensions. The results are incredible and startlingly close to real-life. For more information refer to http://www.srslabs.com/ . Follow the path to 3D sound.

Like many options on your iMac, SRS Sound can be enabled or disabled (turned on or off) without affecting anything other than the sound you hear from the built-in speakers. That is, it does not otherwise affect the computer's usability, compatibility or performance.

Try it both ways, and see which you prefer.

Question 4: Can I Get On-Site Service if I Need to Have iMac Repaired?

Answer: Yes.

All iMac computers are covered by Apple's One-Year Limited Product Warranty. That warranty qualifies iMac for carry-in service whereby repairs are performed at the facility of an Apple Authorized Service Provider.

For customers who would prefer to have service performed at their own location, Apple provides a number of options.

AppleCare Protection Plan

For full details, refer to the **AppleCare Protection Plan** Web page.

Direct from an Authorized Apple Reseller

Many Authorized Apple resellers offer their own service options, so if you're interested in an on-site service option for iMac, contact an Authorized Apple reseller in your area.

If you live in the US and would like to locate an Authorized Apple reseller in your area, call 1-800-538-9696 or visit Apple's web site at http://buy.apple.com. If you live in Canada, you can either call 1.800.665.2775 or visit Apple's web site at http://www.apple.ca/buy.

TA24942_iMac_Frequently_Asked_Questions_of_.pdf

Additional iMac FAQ's can be found in the following article:

Article 30648: **iMac: Frequently Asked Questions (1 of 2)**

Published Date: Feb 20, 2012

Mac OS X 10.4: How to use a PPPoE connection while maintaining Bonjour for local network devices

This article has been archived and is no longer updated by Apple.

If you use a PPPoE connection to your Internet service provider in Mac OS X 10.4, follow these steps if you wish to maintain Bonjour connections to your other local network devices while connected to your ISP, such as a network-based printer or another local Mac sharing music through iTunes.

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **Network**.
3. From the "Show:" pop-up menu, choose "Network Port Configurations".
4. Click "New...".
5. From the "Port:" pop-up menu, choose the same network port you are using for your PPPoE connection.
6. Name the new port the name in the "Port:" pop up menu and append DHCP at the end, for example "Built-in Ethernet DHCP".
7. From the "Show:" pop-up menu, choose the new port you have just created.
8. Click the TCP/IP tab.
9. Make sure that the value for the "Configure IPv4" pop-up menu is "Using DHCP".

This will allow your Mac to establish your PPPoE client connection to your ISP and continue to have local DHCP addressing to communicate to your local network devices.
Published Date: Feb 20, 2012

Mac OS X 10.4: Keychain Access does not import RSA keys larger than 4096 bits

This article has been archived and is no longer updated by Apple.

For security purposes, Keychain Access in Mac OS X 10.4 does not accept RSA keys that are greater than 4096 bits. If you attempt to import a larger key, you may see an alert that states "CSP_INVALID_ATTR_KEY_LENGTH".

Published Date: Feb 20, 2012

USB 1.1: FAQ (1 of 4)

This article contains frequently asked questions (FAQ) regarding USB, with answers to those questions. Additional articles are listed at the bottom of this article.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. What is USB 1.1?
2. How fast is USB 1.1 compared to other connection methods?
3. What is a USB hub?

Question 1: What is USB 1.1?

Answer: Universal Serial Bus (or USB for short) is an industry standard for connecting peripheral devices to personal computers. Apple is adopting USB in its products for a variety of reasons:

- it's an industry standard, so there will be a wide variety of solutions available to Apple customers
- it offers the true plug-and-play simplicity our customers expect from Apple products
- it's fast, offering data transfer rates of up to 12Mbps
- it can support up to 127 devices!
- it features hot plug and hot unplug--that is, you don't have to shut down iMac to connect a new or disconnect an existing USB device

As well as USB 1.1, as described above, USB 2.0 is a newer industry standard that allows for data transfer rates of up to 480Mbps. The data in this article is for USB 1.1.

Question 2: How Fast is USB 1.1 Compared to Other Connection Methods?

Answer: USB offers data transfer rates of up to 12Mbps. This compares very favorably to other Apple connection methods:

Connection Method	Data Transfer Rate	Used For
ADB	.01Mbps	Input devices like mice, keyboards, joysticks, etc.
Serial	.023Mbps--2Mbps	QuickDraw printers and telephony devices
USB	12Mbps	All of the above, and more
Ethernet	10/100/1000Mbps	Laser printers, network connections, etc.

Question 3: What is a USB hub?

Answer: A hub is a USB device that includes extra ports into which other USB device can be attached. Some hubs, like the keyboard, are bus powered, deriving their power from a source on the bus to which they are attached.

Others are self-powered. These come with an AC adapter that plugs into an electrical outlet and supplies power to the hub. There are several companies that sell hubs today.

Some self-powered hubs are likely to function solely as hubs, acting as a source of power and allowing you to plug several downstream devices into them. Other devices may include a built-in hub (like the Apple USB Keyboard) that serve a primary function but also provide other ports into which another device can be connected.

Other USB FAQ's can be found in the following articles:

- Article 30651: "**USB 1.1 FAQ (2 of 4)**"
- Article 30652: "**USB 1.1 FAQ (3 of 4)**"
- Article 30653: "**USB 1.1 FAQ (4 of 4)**"

Published Date: Feb 20, 2012

iPod game error message when launching different game types

This article has been archived and is no longer updated by Apple.

Issue or symptom

Trying to open a purchased iPod game (Tetris, Sudoku, or Ms. PAC-MAN for example) after playing a built-in game (Vortex, iQuiz, or Klondike) may result in the following message:

> "This game cannot be launched. Connect your iPod to iTunes and reinstall the game."

The same issue may occur if you play a purchased game first, then try to open a built-in iPod game.

Solution

Reset your iPod before opening a different type of game (built-in or purchased).

To prevent this issue from recurring, use iTunes to update your iPod software to version 1.0.1 or later. See Updating iPod if you need assistance.

Published Date: Feb 20, 2012

USB 1.1: FAQ (2 of 4)

This article contains frequently asked questions (FAQ) regarding USB 1.1, with answers to those questions. Additional articles are listed at the bottom of this article.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. Does the USB 1.1 Keyboard perform the same way the ADB keyboard on other Macintosh and Power Macintosh computers performed?
2. Can I use the keyboard or mouse from my earlier Macintosh model with a USB 1.1-equipped Macintosh?
3. How can I use SCSI, ADB, LocalTalk, and other serial devices on a Macintosh without a serial port?
4. What type of cable does USB require?

Question 1: Does the USB 1.1 keyboard perform the same way the ADB keyboard on other Macintosh and Power Macintosh computers performed?

Answer: Although it's a USB--rather than an ADB--device and while it uses a USB cable and connects via the USB port, in every other way, it's a keyboard just like any other Macintosh keyboard.

Question 2: Can I use the keyboard or mouse from my earlier Macintosh model with a USB 1.1-equipped Macintosh?

Answer: Not directly. The keyboard and mouse that came with earlier models of Macintosh and Power Macintosh computers were Apple Desktop Bus (or ADB) devices and would require an adapter to connect to a USB equipped Macintosh.

Question 3: How can I use SCSI, ADB, LocalTalk, and other serial devices on a Macintosh without a serial port?

Answer: Beginning with iMac, Apple computers features support for USB, and many peripheral manufacturers are quickly transitioning to this new connection method. There are a multitude of adapters available for a variety of external devices. Check the Apple Products Guide at http://guide.apple.com for more information.

Question 4: What type of cable does USB require?

Answer: USB cables look slightly different from the cables you own now. Cables for all Macintosh peripheral devices have two identical connectors with five or more contacts. USB cables have new, universal connector cables: one side has a Type A plug and the other has a Type B plug.

The Type A plug connects to a host--like your iMac computer--or an upstream hub. The Type B plug connects to the USB device itself. These are the same cables that are used for USB devices for PC Compatible computers and UNIX systems.

Other USB FAQ's can be found in the following articles:

- Article 30650: "**USB 1.1 FAQ (1 of 4)**"
- Article 30652: "**USB 1.1 FAQ (3 of 4)**"
- Article 30653: "**USB 1.1 FAQ (4 of 4)**"

Published Date: Feb 20, 2012

Mac OS X 10.5: Compatibility with Windows-shared printers

This article has been archived and is no longer updated by Apple.

Issue or symptom

You can browse for a printer being shared from a Microsoft Windows-based PC but may not be able to print to it.

Solution

Adjust the shared printer's name so that it is less than 15 characters long.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

USB 1.1: FAQ (3 of 4)

This article contains frequently asked questions (FAQ) regarding USB, with answers to those questions. Additional articles are listed at the bottom of this article.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. What kinds of devices will I be able to connect to a USB 1.1-equipped Macintosh?
2. I just purchased a USB printer. How do I connect it to my computer?
3. What about support for USB audio devices?

Question 1: What kinds of devices will I be able to connect to a USB 1.1-equipped Macintosh?

Answer: Quite a few. USB can accommodate:

Input Devices

- Keyboards
- Mice
- Joysticks
- Graphics tablets

Storage Devices

- Floppy drives
- Hard drives
- Removable storage drives

Printing Devices

- Ink jet printers
- Laser printers

Imaging Devices

- Scanners
- Digital Cameras
- Displays

Telephony Devices

- Modems
- Speakerphone modems

Connectivity Devices

- Hubs

Question 2: I just purchased a USB printer. How do I connect it to my computer?

Answer: Your first step should be to check with the manual that came with your new printer.

The manual should explain how to install the driver used to communicate with the printer and any other software the printer needs. (By the way, with some USB devices, you won't have to install a driver because Apple includes some USB drivers with the Mac OS, and other devices don't need them.)

After installing the software (if necessary)

- Turn on the printer
- Plug its USB cable into one of computer's USB ports
- Open the Chooser and select the icon for your printer

Question 3: What about support for USB audio devices?

Answer: Apple has always provided excellent built-in sound-in and sound-out features in its systems and continues to do so. iMac continues this support by providing stereo surround sound speakers, a built-in microphone, and line-in and line-out audio connectors for external devices.

With the iMac (Slot Loading), USB audio is available. This includes speakers and microphones based on the USB interface. Additionally, Mac OS 9 introduces USB audio support for other USB equipped Power Macintosh computers.

Other USB FAQ's can be found in the following articles:

- Article 30650: "**USB 1.1 FAQ (1 of 4)**"
- Article 30651: "**USB 1.1 FAQ (2 of 4)**"
- Article 30653: "**USB 1.1 FAQ (4 of 4)**"

Published Date: Feb 20, 2012

USB 1.1: FAQ (4 of 4)

This article contains frequently asked questions (FAQ) regarding USB 1.1, with answers to those questions. Additional articles are listed at the bottom of this article.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. Where can I find out about USB products available from third-party developers?
2. What kinds of error messages regarding USB devices might I see? What can I do about them?

Question 1: Where can I find out about USB Products available from Third-Party developers?

Answer: At the following addresses, among others:

- http://www.macsoftware.apple.com
- http://www.apple.com/usb
- http://guide.apple.com

As you shop for USB devices, you're likely to find many that will work with the Mac OS. If you want to find devices that have been specifically tested for compatibility with Mac OS, look for products that have both a USB logo and the Mac OS logo. If a USB product you're interested in has the USB logo only, check with the vendor manufacturing the product and ask about Mac OS compatibility before making your purchase.

Question 2: What kinds of error messages regarding USB devices might I see? What can I do about them?

Answer: If you encounter any difficulties with USB devices, they will be easily resolved. There are three kinds of error messages or dialog boxes Mac OS may use to alert you to a USB issue. These include:

- Not Enough Power to Function
- Not Enough Power for All Functions
- No Driver Found

Not Enough Power to Function

Mac OS will generate a Not Enough Power to Function message if:

- a device attempts to draw too much power from the USB bus.
- one or more devices plugged into a hub requires more power than is available.
- you've attached a self-powered device (like a printer or floppy drive) and forgot to plug it into an electrical outlet.

What to do? If you're using a self-powered device, check to see if the device is plugged into an electrical outlet. If not, try connecting the device directly to your iMac or to a port on a self-powered hub. If you're connecting the USB device to a self-powered hub, make sure the hub is plugged into an electrical outlet.

Not Enough Power For All Functions

Mac OS will generate a Not Enough Power for All Functions message if there is enough power to supply some but not all of the functionality the device is designed to provide.

What to do? As above, see if the USB device has its own power cord and, if it does, plug it into an electrical outlet. Otherwise, try plugging the cable for the USB device directly into to your iMac or to an available port on a self-powered hub. If you're connecting the USB device to a self-powered hub, make sure the hub is plugged into an electrical outlet.

No Driver Found

Mac OS will generate a No Driver Found message if a driver for the USB device you just connected cannot be found in the System Folder. If you get this message, you may have forgotten to install the software that came with the device, or you may have put the device driver (that is, the software that allows iMac to recognize and communicate with the USB device) in the wrong place in your System Folder.

What to do? Reinstall the software driver from the CD-ROM that came with the product, or download and install the driver from the product vendor's Web or FTP site on the Internet.

For more information on USB troubleshooting, refer to the following articles:

- Article 43023: "**USB: Troubleshooting Error Messages**"

- Article 58033: "**USB: Device Troubleshooting**"

Other USB FAQ's can be found in the following articles:

- Article 30650: "**USB 1.1 FAQ (1 of 4)**"
- Article 30651: "**USB 1.1 FAQ (2 of 4)**"
- Article 30652: "**USB 1.1 FAQ (3 of 4)**"

Published Date: Feb 20, 2012

Apple Wired and Wireless Keyboard (2007): Keyboard Software Update 1.2

This article has been archived and is no longer updated by Apple.

If you are using the aluminum Apple Wired Keyboard or the aluminum Apple Wireless Keyboard make sure that you have installed the Keyboard Software Update 1.2 to ensure proper compatibility.

If you're running Mac OS 10.4.10, this update can be installed using Apple Software Updates while the Apple Keyboard (2007) is connected to your computer. Otherwise, you can manually download the update from keyboard and mouse support page.

Published Date: Feb 20, 2012

iPhoto: Edits performed in external editor not reflected in iPhoto

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you are using an external editor and do not access the external editor from iPhoto, the edits you make may not be reflected when viewing the image in iPhoto.

Solution

For best results, use iPhoto's built-in options for editing with an external editor.

Do not drag photos from the iPhoto window to the external editor's icon in the Finder or Dock. Instead, use iPhoto preferences to configure access to an external editor. This allows you to double-click or control-click an image in iPhoto to send it to the external application for editing.

Additional information

See iPhoto help for more information on accessing an external editor from iPhoto.

Published Date: Feb 20, 2012

iMac: Translucent Plastics FAQ

This article contains frequently asked questions (FAQ) regarding the iMac case, with answers to those questions.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. What kind of material is the iMac made of?
2. What color is iMac?
3. Is the iMac case durable?

Question 1: What kind of material is the iMac made of?

Answer: The iMac case is made from a translucent polycarbonate plastic.

Question 2: What color is iMac?

Answer: The original iMac was available in Ice and Bondi blue. In January 1999, Apple introduced iMacs in five new colors: Blueberry, Strawberry, Grape, Tangerine and Lime. In August, 2000, Apple introduced iMac computers in Indigo, Ruby, Sage, Graphite, and Snow. Refer to http://www.apple.com/imac for current colors.

Question 3: Is the iMac case durable?

Answer: Polycarbonate plastic is tough and should stand up to normal wear quite well. The iMac case should be at least as durable as the plastics used on other computer cases. Of course, you'll still have to exercise reasonable care. Don't scratch it with something sharp or rub it with something abrasive. Don't drop anything heavy on it, and don't drop iMac on the floor. Be careful with liquids, both hot and cold.

Both the User's Guide you receive with iMac and the html-based Mac OS Info Center on iMac's hard drive contains tips on keeping iMac clean. The latter, for example, advises the following:

Cleaning your equipment

- Use a damp, soft, lint-free cloth to clean the computer's exterior. Avoid getting moisture in any openings.
- Don't use aerosol sprays, solvents, or abrasives.

Important: Do not use any substance containing isopropyl alcohol or damage will result.

Cleaning the computer case

To clean the case, do the following:

1. Turn off the computer completely and then disconnect the power plug. (Pull the plug, not the cord.)

2. Wipe the surfaces lightly with a clean, soft, lint-free cloth.

Cleaning the screen

To clean the screen, dampen a clean, soft, lint-free cloth with water and wipe the screen. Do not spray liquid directly on the screen. Or you can use the packets (available in most office supply outlets) specifically for this purpose.

Keep in mind that while iMac's case is as durable as those on other computer equipment, scratches and other kinds of minor cosmetic damage may appear more readily because the plastics are translucent rather than opaque. So be especially careful with sharp objects, abrasive materials, or caustic substances.

Published Date: Feb 20, 2012

Mac OS X Server 10.4 and 10.5: NetBoot and NetInstall compatibility

This article has been archived and is no longer updated by Apple.

Image creation tools compatibility

Tool	Works with	Can create
Image creation tools included with Mac OS X Server 10.5	Mac OS X 10.5 client or server	Mac OS X 10.5 images (client or server)
Image creation tools included with Mac OS X Server 10.4	Mac OS X 10.4 client or server	Mac OS X 10.4 images (client or server)

NetBoot, NetInstall hosting compatibility

Mac OS X Server 10.4.4 or later, including Mac OS X Server 10.5, can host NetBoot and NetInstall images of both Mac OS X 10.4 and 10.5.

Published Date: Feb 20, 2012

MacBook Pro: Using the incorrect DVD for startup may cause the computer to stop responding

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you try to startup your MacBook Pro from a MacBook DVD, the MacBook Pro may display a message saying you are using an incorrect DVD or the computer may stop responding.

Solution

Always verify that you have the correct DVD prior to using it for startup.

Published Date: Feb 20, 2012

Mac OS X 10.5: Changing your user account picture

This article has been archived and is no longer updated by Apple.

To change your user account picture in Mac OS X 10.5 Leopard:

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **Accounts**.
3. Click the current image (the image just left of the "Change Password" button). A menu appears in which you can quickly select a new picture or choose Edit Picture.

Published Date: Oct 10, 2016

Mac OS X Server version 10.5: JBoss not included

This article has been archived and is no longer updated by Apple.

Mac OS X Server version 10.5 does not include the JBoss Application Server, which was included in Mac OS X Server 10.4.

JBoss is open source software and is available directly from the JBoss website.

Important: Mention of third-party websites and products is for informational purposes only and constitutes neither an endorsement nor a recommendation. Apple assumes no responsibility with regard to the selection, performance or use of information or products found at third-party websites. Apple provides this only as a convenience to our users. Apple has not tested the information found on these sites and makes no representations regarding its accuracy or reliability. There are risks inherent in the use of any information or products found on the Internet, and Apple assumes no responsibility in this regard. Please understand that a third-party site is independent from Apple and that Apple has no control over the content on that website. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

iDisk Syncing: Color labels for folders do not sync in Mac OS X 10.4

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you are using iDisk Syncing, and choose a color label for a folder, the color label will not sync to other computers using iDisk Syncing, or appear on other computers that connect directly to your iDisk.

Solution

This is expected behavior. Color labels for files will sync.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

iSync: Deleting birthday fields with Sony Ericsson W800i phones and Mac OS X 10.5 Leopard

This article has been archived and is no longer updated by Apple.

Issue or symptom

When deleting the birthday field of contacts in the Mac OS X 10.5 Address Book, they may not correctly synchronize or still appear on some Sony Ericsson phones, such as the W800i.

Solution

On the phone, delete the birthday field.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

iSync: Transferring events from iCal to Nokia E61/E62 phones

This article has been archived and is no longer updated by Apple.

Issue or symptom

Events created in iCal in Mac OS X 10.4 or 10.5 that include notes can synchronize with Nokia E61/E62 phones, but the note field's contents may not appear on the phone.

Solution

Create an event requiring a note entry on the phone device first, then synchronize. The resulting event in iCal will appear with notes.

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Published Date: Feb 20, 2012

iSync: Marking "To-Do‘s" with Nokia 7370 phones in Mac OS X 10.5, 10.4

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you have an iCal "To Do" that has been marked as complete, synced to a Nokia 7370 phone, then marked as "not completed" on the phone and synced again, the "due date" of the event may be changed to exactly two weeks into the future.

Solution

Apple has identified this as a limitation of the phone device.

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Published Date: Feb 20, 2012

iCal: To Do items synced with Nokia N70 phones remain "completed"

This article has been archived and is no longer updated by Apple.

Issue or symptom

Nokia N70 phones have a "Mark as not done" option for To Do items. If the "Mark as not done" phone option is used on a synced iCal To Do item whose status is "completed", the status will not change in iCal..

Solution

Change the "completed" status of To Do items in iCal instead of on the phone.

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Published Date: Feb 20, 2012

Mac OS X 10.5 Leopard: Using Apple Hardware Test after erasing your disk

This article has been archived and is no longer updated by Apple.

Some Intel-based Macs ship with Apple Hardware Test and Mac OS X 10.4.x preinstalled on the hard drive. If an Erase and Install installation of Mac OS X 10.5 Leopard is performed using a retail Leopard installation disc, Apple Hardware Test will be erased and not reinstalled on these Macs.

If you're in this situation and need to use Apple Hardware Test, simply start from the DVD that came with your computer (not the Leopard installation disc) while holding the "D" key. Apple Hardware Test will run from the DVD.

Published Date: Feb 20, 2012

Mac OS X 10.4: Some Help content displays in English when primary language set to Japanese or Spanish

This article has been archived and is no longer updated by Apple.

Issue or symptom

In some cases, if the primary Mac OS X 10.4 language is set to Japanese or Spanish, some applications' Help content will appear in English instead of their specified language.

Solution

Download and install the Mac OS X 10.4.11 Update, or later.

If the issue persists after installing Mac OS X 10.4.11 or later

1. If the application's Help content continues to be displayed in English, close the affected application.
2. Click the Finder icon in the Dock, then choose **Home** from the **Go** menu.
3. Open the Library folder.
4. Open the Caches folder.
5. Locate the file named "com.apple.helpui folder" and move it to the Trash.
6. Close the Caches folder.
7. Back in the Library folder, open the Preferences folder.
8. Locate the file named "com.apple.helpviewer.plist" and move it to the Trash.
9. Locate the file named "com.apple.help.plist" and move it to the Trash.
10. Open the affected application again.

Published Date: Feb 20, 2012

Final Cut Pro: Drop zone content is lost if project is moved to another computer

This article has been archived and is no longer updated by Apple.

Issue

If you use Master Templates in Final Cut Pro which utilize drop zones, the content that you place in those drop zones may be lost if you move the project to another computer. Using Media Manager to move the project will not prevent this issue.

Affected Products

- Final Cut Pro 6

Solution

After moving a project to another computer, it will be necessary to manually move and re-add the media for each drop zone.

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

Mac OS X Server 10.4: "Client response doesn‘t match what we generated" log messages

This article has been archived and is no longer updated by Apple.

You may see entries such as the following in the system.log in Mac OS X Server:

```
/usr/sbin/PasswordService: client response doesn't match what we generated
```

This message means that user authentication did not work due to an incorrect password.

In most cases, this occurs when someone mistypes his or her password when logging in.

You can find more details in the Password Service Server log.

Note: If your Mac OS X client computers are set up to bind to LDAP using a computer name and password in Directory Access, and the password for that account has expired or been changed, you will see this message. To resolve it, you must unbind and rebind each client using the correct password.

Published Date: Feb 20, 2012

Mac OS X 10.4, 10.5: "Show Log" dimmed in Disk Utility when started from the Mac OS X Install disc

This article has been archived and is no longer updated by Apple.

Issue or symptom

"Show Log" may be dimmed ("grayed out") in Disk Utility when started from the Mac OS X installation disk.

Solution

When you are started from the Mac OS X installation disc, Disk Utility actually sends its log messages to the Installer log. To view these messages, click the Installer window to bring it to the front, then choose **Installer Log** from the **Window** menu.

Note: In Mac OS X 10.5, quit Disk Utility to bring the Installer window to the front and view the Installer log.

Published Date: Feb 20, 2012

Some installer package files work with Mac OS X 10.5 only

This article has been archived and is no longer updated by Apple.

Issue or symptom

The Installer application in Mac OS X 10.4 may close without any alert or installation attempt when using certain package files (files whose name ends with ".pkg").

Solution

If you can't install a certain package file in Mac OS X 10.4.x, make sure that the software you are attempting to install is compatible with the version of Mac OS X that you are using.

Some installer package files (files whose name ends with ".pkg") are intended for use with Mac OS X 10.5 only. Such package files may cause Installer to "silently quit" without installing, in Mac OS X 10.4.x or earlier.

Note: This issue does not affect installations of Mac OS X 10.5 itself "over" Mac OS X 10.4 or earlier because your Mac will start from the Mac OS X 10.5 disc before installing Leopard.

Published Date: Oct 10, 2016

Mac OS X Server version 10.5: How to prevent Spotlight from indexing certain directories

This article has been archived and is no longer updated by Apple.

In Mac OS X Server version 10.5 Leopard, you have the ability to enable Spotlight indexing on sharepoints. Some sharepoints may contain directories that you want to exclude from indexing. These directories may include items such as print spools, mail storage and scratch files used in work-flow.

In order to prevent Spotlight from indexing a directory, append ".noindex" to the name. For example:

/Volumes/Server HD/Shared/**printer.noindex**/main-spool

In the example above, nothing below the printer.noidex directory will be indexed.

If appending ".noindex" to the path causes issues for a particular application, you can use a symbolic link to designate an appropriate path.

For example, if your printing application expects to find its spool at (/Volumes/Server HD/Shared/spool), you can create the ".noindex" directory and a symbolic link that will allow everything to function properly:

```
mkdir "/Volumes/Server HD/Shared/spool.noindex"
ln -s "/Volumes/Server HD/Shared/spool.noindex/"    "/Volumes/Server HD/spool"
```

`ls -l` would show the following:

```
lrwxr-xr-x   1 admin admin      13 Sep 25 12:58 spool -> spool.noindex
drwxr-xr-x  2 admin admin      68 Sep 25 12:58 spool.noindex
```

Spotlight will recognize that the "real" path is "spool.noindex" therefore, the "spool.noindex" directory will not be indexed, while the application will look for the "spool" path and work as expected.

Published Date: Feb 20, 2012

Mac OS X: Startup key combination from paired Bluetooth keyboard may not work on a PowerPC-based Mac

This article has been archived and is no longer updated by Apple.

Issue or symptom

Some startup key combinations, such as holding the C key during start up to start from a bootable disc or holding T to start in FireWire Target Disk mode, may not work on some Power-PC based Macs that uses a paired Bluetooth keyboard.

Solution

Use a USB keyboard (or built-in keyboard if your Mac has one) to perform the desired startup keyboard combination.

Published Date: Feb 20, 2012

AppleShare IP 5.0.x: Using ARA 3.0 PS on same machine

This article contains information on using AppleShare IP 5.0.x and Apple Remote Access 3.0 Personal Server on the same computer.
This article has been archived and is no longer updated by Apple.
AppleShare IP 5.0 originally did not provide User fields for the ARA CallBack or Enable Dial-In features. If you install ARA Personal Server 3.0 and AppleShare IP 5.0 on the same computer, you should upgrade to AppleShare IP 5.0.2 or later.

Installation Order - ARA Personal Server has to be installed first. If not, current User information will not be imported into AppleShare IP 5.0.x's User list. Your ARA server will not work if installed after AppleShare IP 5.0.x.

ASIP 5.0.2/5.0.3 fully supports ARA 3.0 PS dial-in. However, it is not fully compatible with ARA CallBack. ARA CallBack works as follows in ASIP 5.0.2/5.0.3:

- ARA CallBack still works for users that were configured for call back in ARA before AppleShare IP was installed. However, after installing AppleShare IP, the 'call user back' button will be unchecked and the call back number will be dimmed. Call back is actually still active, although the window indicates otherwise.

- ARA CallBack will not work for users created after AppleShare IP was installed. However, Dial-in will still function.

- ARA CallBack will no longer work for users whose call back information was modified in AppleShare IP. However, Dial-in will still continue to function.

Workarounds:
1) Run ARA and AppleShare IP on separate computers
2) Configure ARA CallBack users before installing AppleShare IP.
Published Date: Feb 20, 2012

Mac OS X 10.5: Parental Controls - "Can administer printers" should be set locally

This article has been archived and is no longer updated by Apple.

Parental Controls in Mac OS X 10.5 Leopard provides the ability to remotely administer managed user preferences. When remotely administering a computer, the "Can administer printers" option can be checked or unchecked but the changes will not apply on the remote computer. To enable or disable the option "Can administer printers", go to the remote computer itself and make the change using Parental Controls preferences on that computer.

Published Date: Oct 10, 2016

Mac OS X 10.4, 10.5: VoiceOver manuals available in Braille

This article has been archived and is no longer updated by Apple.

Embossed Braille versions of the "VoiceOver Getting Started" manuals are available for $29.99 each by calling 1-800-APL-CARE (1 800 275 2273). Major Credit cards are accepted, and shipping is free worldwide.

The embossed manuals are available in grade 2 (contracted) Braille in US English only. Please specify which version you prefer when ordering: Mac OS X version 10.5 Leopard or Mac OS X version 10.4 Tiger.

You can request an electronic Braille (.BRF) version of this manual by sending an email accessibility@apple.com .

PDF versions of these manuals are also available for free download from (www.apple.com/accessibility/).

Published Date: Feb 20, 2012

Mac OS X 10.4 or later: Finder may stop responding on logout with mounted network volumes

This article has been archived and is no longer updated by Apple.

Issue or symptom

If a wireless network's shared volume (disk) is mounted when you log out of Mac OS X 10.4 or later, the Finder may stop responding.

Solution

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **Network**.
3. From the "Show" pop-up menu, select AirPort.
4. Click the Options button.
5. *Deselect* (uncheck) "Disconnect from wireless networks when I log out".
6. Click OK.
7. Close the Network preferences window and save the changes.

To avoid the issue, manually eject any mounted wireless volumes before logging out. Leave the "Disconnect from wireless networks when I log out" option deselected.

Published Date: Feb 20, 2012

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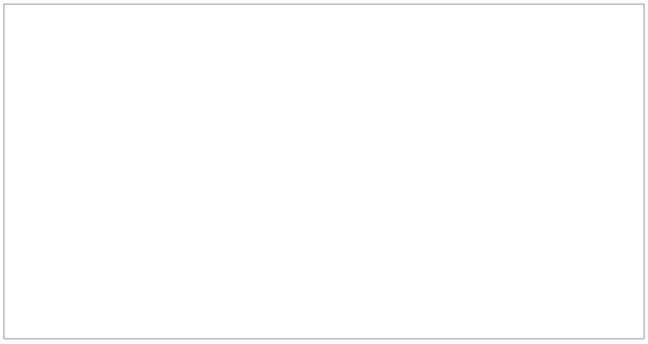

Find out about your coverage

AppleCare products give you additional repair coverage and technical support. If you already bought an AppleCare product, you can manage it online.

Check coverage for your product

Let’s get that fixed

If your Apple device needs repairs, you can go to an Apple Store, visit an Authorized Service Provider, or mail in your device. Whatever you choose, we'll make sure your device works the way it should.

Choose a repair option

Beware of counterfeit parts

Some counterfeit and third party power adapters and batteries may not be designed properly and could result in safety issues. To ensure you receive a genuine Apple battery during a battery replacement, we recommend visiting an Apple Store or Apple Authorized Service Provider. If you need a replacement adapter to charge your Apple device, we recommend getting an Apple power adapter.

Also non-genuine replacement displays may have compromised visual quality and may fail to work correctly. Apple-certified screen repairs are performed by trusted experts who use genuine Apple parts.

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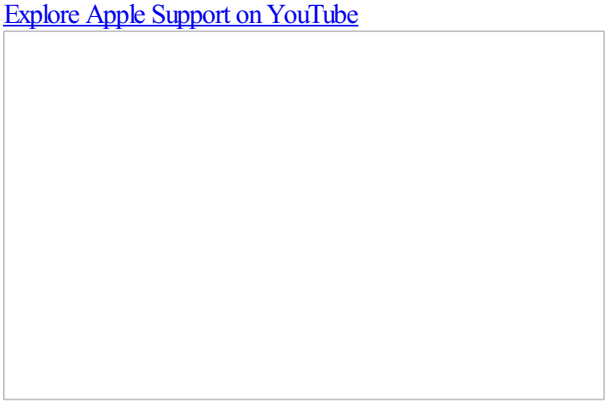
Explore Apple Support on YouTube



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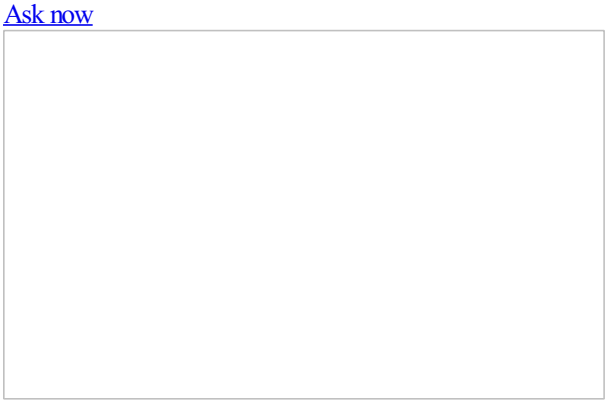

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Get help by phone, chat, or email, set up a repair, or make a Genius Bar reservation.

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Explore how to capture photos with iPhone. Learn to sketch on iPad. And do more of what you love every day at Apple.

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- Keyboard Service Program for MacBook and MacBook Pro
- 13-inch MacBook Pro (non Touch Bar) Battery Replacement Program
- iPhone 7 Repair Program for "No Service" Issues
- iPhone 6s Program for Unexpected Shutdown Issues
- Multi-Touch Repair Program for iPhone 6 Plus
- Apple AC Wall Plug Adapter Recall Program
- Beats Pill XL Speaker Recall Program
- All Programs

AppleShare IP: Folders appear locked with AppleShare File Server running

If I am running AppleShare IP on my server, some of the folders appear locked. Even if I am at the server machine itself, lock icons appear next to the folder in the Finder and I can't move or rename the folder. These folders may or may not be inside of a Share point, but they are only locked when AppleShare is running. Why is AppleShare locking these folders?
This article has been archived and is no longer updated by Apple.
These folders have been set in AppleShare for "Can't Move, Rename, or Delete this folder." This is a setting in AppleShare Web & File Admin. If you open up the Disks and Share Points window in the Web & File Admin, navigate to the folder in question, and open up the privileges window for that folder, you will see a check box for "Can't Move, Rename, or Delete this folder." If you remove the check in that box, the locks will disappear.

The AppleShare IP Mail Folder is locked by default when the folder is first created. This is because the mail server depends on the precise name and location of that folder. If the folder is renamed or moved, the mail server will not see the mail database, and users may loose their mail as a result.
Published Date: Feb 20, 2012

Macintosh: Difference Between Install CD and Restore CD

This article explains the difference between software CDs that come with many Macintosh computers.

This article has been archived and is no longer updated by Apple.
Many Macintosh computers come with CD-ROM discs: Software Install and Software Restore. These CDs contain similar software, but they provide two different functions.

Install

This disc allows customers to install separate software components. Customers may install the Mac OS, either through an easy or custom installation. Installers for utilities and bundled applications that come with the computer are also usually present.

Restore

This disc or discs allows customers to restore the Macintosh computer's software to its original configuration. This disc includes all of the software that came with the computer, including system software. Customers may choose to replace the software on their computer (at least the software that came with the computer), or they may erase the computer's hard disk-including any data files they may have saved and additional applications they may have installed.

After erasing the hard disk, the computer's software is restored to its original configuration.

Published Date: Feb 20, 2012

Mac OS X Server version 10.5: About Kerberized NFS

This article has been archived and is no longer updated by Apple.

Secure NFS with Kerberos

Mac OS X 10.5 Leopard makes Kerberos security available for NFS. This article describes how to configure NFS exports and mounts to use Kerberos.

Without Kerberos, NFS exports and mounts use a standard form of user identification known as AUTH_SYS. In each NFS request sent to the server, the NFS client simply inserts the user's user and group IDs (UID and GID) and group list into a credential that the server uses to check access against the permissions of each directory and file in the exported filesystem. Since the user of the NFS mount is not required to authenticate when mounting, it is convenient to use, though it is also not very secure. It would be relatively easy for a rogue client or user to masquerade as another user.

An NFS filesystem that is exported and mounted with Kerberos security is much more secure. To mount and access the filesystem a user must have a valid Kerberos ticket obtained from the Kerberos KDC (Key Distribution Center), and this ticket is further validated by the server. The server must also have a valid Kerberos credential so that it can authenticate itself to the client; the security works in both directions. Furthermore, the NFS data that passes over the network between client and server can also be integrity protected to prevent unauthorized alteration or privacy protected to prevent disclosure to a malicious user on the network.

Like NFS itself, Kerberized NFS is an Internet standard. It is implemented by most operating systems and NFS vendors. Kerberized NFS can be used by mounts using NFS versions 2, 3 or 4 and over UDP or TCP connections.

Exporting with Kerberos

Before a filesystem can be NFS-exported with Kerberos, the server must be configured with NFS service principals in its Kerberos keytab file. This can be created in an Apple Open Directory environment using the sso_util utility (type `man sso_util(8)` in Terminal to learn more). Generally these will be created automatically when doing an authenticated binding to the Open Directory service. In other environments the Kerberos administrator can generate keys for the nfs principals and extract the appropriate keytabs using the tools for their Kerberos implementation.

When you set up a Mac OS X NFS server that will serve clients other than Mac OS X clients, you should limit the keys to only support single DES. For more information see this article.

On the server, you can verify that the Kerberos service principals for nfs are set up correctly with the klist command:

```
$ sudo klist -ke | grep nfs

6 nfs/server.company.com@OD.COMPANY.COM (ArcFour with HMAC/md5)

6 nfs/server.company.com@OD.COMPANY.COM (DES cbc mode with CRC-32)

6 nfs/server.company.com@OD.COMPANY.COM (Triple DES cbc mode with HMAC/sha1)

2 nfs/LKDC:SHA1.23A473C08D62474C23E1C2BDB2259CA587D58BB4@OD.COMPANY.COM (ArcFour with HMAC/md5)

2 nfs/LKDC:SHA1.23A473C08D62474C23E1C2BDB2259CA587D58BB4@OD.COMPANY.COM (DES cbc mode with CRC-32)

2 nfs/LKDC:SHA1.23A473C08D62474C23E1C2BDB2259CA587D58BB4@OD.COMPANY.COM (Triple DES cbc mode with HMAC/sha1)
```

Once the Kerberos keytab is set up, the filesystem can be exported using the NFS exports file (type `man exports(5)` in Terminal for more information). By default, an NFS filesystem is exported with standard AUTH_SYS security. For example, the following /etc/exports entry exports a filesystem with AUTH_SYS security and provides mount access to sub-directories:

```
/Volumes/data -alldirs
```

To export this filesystem with Kerberos, you must use the "sec=" option which takes a list of security flavors, separated by colons. The list is organized in preference order. Here is the same filesystem exported with Kerberos authentication:

```
/Volumes/data -alldirs -sec=krb5
```

The server can use Kerberos to provide additional services such as data integrity protection and data privacy. The following export has a security list that allows simple Kerberos authentication (krb5) (most preferred) or alternatively, Kerberos authentication with data protection (krb5i), or Kerberos authentication with data protection and data privacy (krb5p).

```
/Volumes/data -alldirs -sec=krb5:krb5i:krb5p
```

The server will allow the client to use any of the security flavors that appear in the list.

Migrating clients to Kerberos

When changing an export to use Kerberos, you may need a transition period to make sure that all the clients that mount that export are capable of using Kerberized NFS and that all users have Kerberos credentials registered with the KDC. You can continue to use standard AUTH_SYS security for those clients that still need it simply by adding "sys" to the preference list. For example:

```
/Volumes/data -alldirs -sec=krb5:sys
```

This entry exports the filesystem with Kerberos authentication preferred, but continues to allow non-Kerberized mounts. Once all the clients and users are capable of Kerberized mounts, you can remove the ":sys" from the export to make it fully secure.

Alternatively, you can selectively associate security with specific clients. For example, if just two clients are incapable of Kerberized mounts and must continue to use standard AUTH_SYS security, you can create an export specific to them:

```
/Volumes/data -alldirs -sec=krb5
/Volumes/data -alldirs -sec=sys client1 client2
```

Mounting with Kerberos

To successfully mount a Kerberized NFS filesystem you must have a valid Kerberos credential, or in Kerberos parlance, a TGT or "Ticket Granting Ticket." If the client is successfully bound to an Open Directory server that has your Kerberos credentials set up in its KDC, then the TGT will be obtained automatically when you log in. You can use the Kerberos klist command to check whether you have a TGT:

```
$ klist
Kerberos 5 ticket cache: 'API:1'
Default principal: john@OD.COMPANY.COM
Valid Starting  Expires    Service Principal
10/20/07 12:09:44  10/20/07 22:09:44 krbtgt/OD.COMPANY.COM@OD.COMPANY.COM
renew until 10/27/07 12:09:44
```

Or, if you have no TGT:

```
$ klist
klist: No Kerberos 5 tickets in credentials cache
```

Alternatively, you can use the /System/Library/CoreServices/Kerberos utility to display your Kerberos tickets.

Assuming you have a Kerberos TGT, you can then do the mount normally using either the mount command, or the automounter. For example:

```
$ mount server:/Volumes/data /mnt
```

Or use the automounter:

```
$ ls /net/server/Volumes/data
README.txt dir1 dir2
```

Once the mount is complete, you may notice that in addition to your Kerberos TGT you now have a ticket that provides access to your new NFS mount:

```
$ klist
Kerberos 5 ticket cache: 'API:1'
Default principal: john@OD.COMPANY.COM
Valid Starting Expires    Service Principal
09/20/07 12:09:44 09/20/07 22:09:44 krbtgt/OD.COMPANY.COM@OD.COMPANY.COM
renew until 09/27/07 12:09:44
09/20/07 14:13:53 09/20/07 22:09:44   nfs/server.company.com@OD.COMPANY.COM
```

```
renew until 09/27/07 12:09:44
```

Security mount option

Notice that you do not need to use any special mount options. The client will check the server's "sec=" list of security flavors associated with the export, and use the most preferred flavor that it allows.

However, there is a "sec=" mount option that can be used to mandate a specific security flavor. For example, if the server exports with "-sec=krb5:krb5i:krb5p" and you require a mount with data integrity protection, then you can select that using the "sec=" mount option:

```
$ mount -o sec=krb5i server:/Volumes/data /mnt
```

If the server doesn't support that flavor, the mount will not work. For example, if the server exports with just "-sec=krb5" then the mount will not work if you use the "sec=krb5i" option:

```
$ mount -o sec=krb5i server:/Volumes/data /mnt
  mount_nfs: can't access /Volumes/data: Authentication error
```

Security failover

It's possible that a Kerberized mount might not work. The issue might occur for a variety of reasons: The user may not have Kerberos credentials, or the server may not have a valid keytab or be misconfigured. If for any reason a Kerberized mount does not work, the NFS mount command then attempts a mount with standard AUTH_SYS security. This mount failover will succeed only if the export on the server allows the use of AUTH_SYS, for example:

```
/Volumes/data -alldirs -sec=krb5:sys
```

Failover is per-user; it could occur even on a successful mount. You, as a user with valid Kerberos credentials, may have performed the mount and have access to it, but another user without Kerberos credentials might log into your client and attempt to access the same mount. If the export is configured to allow failover to AUTH_SYS, then that user will get AUTH_SYS access, while you continue to use the filesystem with Kerberos credentials.

A server administrator should enable the failover to AUTH_SYS only to facilitate client migration to Kerberos. Once the migration is complete, the failover should be disabled by removing the option to use AUTH_SYS.

Error messages

If for some reason a Kerberized mount does not work, the mount command will most likely display "Authentication error" and nothing more. If a Kerberized automount does not work, the message may be just "Operation not permitted." These messages provide little clue as to the root cause of the issue. Fortunately, the gssd daemon, which sets up Kerberized mounts, logs more descriptive messages to the system log. For example, in /var/log/system.log:

```
gssd[5740]: nfs client Kerberos: server:/Volumes/data, uid=92 - Can't display user interface from this
environment
```

This message from gssd shows that the error originated from the NFS client. A server error would display "nfs server." The issue occurred while the user with uid=92 was trying to access the filesystem mounted from server:/Volumes/data. In this case, the error message is "Can't display user interface from this environment" which is expected when a user has no Kerberos credentials. In this case, the user with uid=92 has been denied access. Kerberos authentication is performed not only at mount time, but whenever a new user attempts to access the mount, so gssd messages may also be logged if the filesystem is successfully mounted, but access is subsequently denied to some user for lack of Kerberos authentication.

Superuser access

Some applications may attempt to use your Kerberized NFS mount as superuser with UID=0, either directly through a setuid executable or sudo, or indirectly via a system daemon.

It is common for the superuser not to have any Kerberos credentials, which would normally prevent any access to a Kerberized mount. Since superuser proxy access is common, the NFS client makes an exception and allows superuser to use the Kerberos credential of the user that mounted the filesystem. To the server, the access will appear to be coming from the user that did the mount, not superuser.

This substitution of credentials works only if superuser is attempting to access a Kerberized filesystem that is already mounted. Unless superuser is already set up with a Kerberos credential, it cannot mount a Kerberized filesystem from scratch. This may take some adjustment since historically, mounts could done only by superuser. A regular user can do NFS mounts as long as the directory being mounted on is owned by the user.

Kerberized NFS and Tickets

If you are a registered Kerberos user you authenticate with a new TGT automatically when you first log in, or when you re-authenticate through

screen lock. A TGT is effective only until its expiry time, though it will can be renewed up to a maximum renewable lifetime. For example a TGT displayed by the klist command shows output similar to this:

```
Valid Starting Expires    Service Principal

09/20/07 12:09:44 09/20/07 22:09:44 krbtgt/OD.COMPANY.COM@OD.COMPANY.COM
renew until 09/27/07 12:09:44
```

This TGT was issued at 12:09 and is valid for 10 hours. It can be renewed for up to a week. These expiry times and limits are set up by the Kerberos administrator with the intent of making users re-authenticate periodically to limit ticket exposure without being too burdensome.

When you do a Kerberized mount, the gssd daemon uses the TGT to obtain a ticket for the mount. The klist command will display this ticket also:

```
09/20/07 14:13:53 09/20/07 22:09:44   nfs/server.company.com@OD.COMPANY.COM
renew until 09/27/07 12:09:44
```

Once the mount is complete, the session key from the Kerberos ticket is cached with the mount and remains valid as long as the server continues to accept the ticket. There is no further interaction with Kerberos on the client unless the server restarts or rejects the ticket.

If the mount requires a new ticket, NFS notifies the gssd to renew the ticket with the your current TGT. This process is completely invisible to users and applications that use the mount.

If re-authentication is needed and there is no TGT available because you have logged out, further access to the mount by long-running processes initiated by you in the background will be rejected with an EAUTH error and gssd will log messages to the system log identifying the user and the mount.

Data integrity, privacy, and performance

Kerberos security comes in three flavors:

- **krb5** - Secure authentication
- **krb5i** - Secure authentication and data integrity
- **krb5p** - Secure authentication, data integrity, and privacy

A server administrator needs to choose the kind of security that the clients should use, keeping in mind that there is a performance overhead when using data integrity or privacy.

With krb5 security, the RPC header on each NFS request and reply is digitally signed. The overhead in generating and checking this digital signature is very small, so performance is not noticeably affected.

If krb5i security is used, the entire payload in every NFS request and reply is digitally signed and the signature is verified by the receiver. The overhead in computing and checking this digital signature is proportional to the size of the payload. Small metadata operations, such as listing small directories or obtaining file attributes generate small requests and replies, so performance will may not be noticeably affected. However, if you are copying large files to or from the server, the data may take almost twice as long to transfer.

The performance impact of krb5p security is even greater. Not only is the entire payload digitally signed, but the data is further processed to encrypt it before it is sent. The receiver must then decrypt the data before it can compute and check the digital signature. Again, the performance impact is proportional to the amount of data transferred. If you are copying files back and forth between client and server, it may take five times longer to transfer using krb5p.

Additional information

- NFS Exports Manual Page - in Terminal, type `man exports`
- NFS Mount Manual Page - in Terminal, type `man mount_nfs`
- sso_util Manual Page - in Terminal, type `man sso_util`
- klist Manual Page - in Terminal, type `man klist`
- MIT Kerberos Web Site (http://web.mit.edu/kerberos/www)
- RFC 2203: RPCSEC_GSS Protocol Specification (http://www.ietf.org/rfc/rfc2203.txt)
- RFC 2623: NFS Version 2 and Version 3 Security Issues and the NFS Protocol's Use of RPCSEC_GSS and Kerberos V5 (http://www.ietf.org/rfc/rfc2623.txt)

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TA24986_Mac_OS_X_Server_version_About_Kerberized_NFS.pdf

Published Date: Feb 20, 2012

Remote Desktop: Can only Observe and Control if user account has no password

This article has been archived and is no longer updated by Apple.

Remote Desktop will only allow you to control and observe a Mac if the ARD user has a blank password. All other tasks will not work.

The status will show "No Password" and will not appear in a 'ready' status.

To perform other tasks using Remote Desktop, specify a user who has a password configured when adding the computer in Remote Desktop Admin.

You may also use Directory-based authentication in this scenario. Refer to page 63 of the Remote Desktop 3.1 Admin Guide for more information about directory-based authentication.

Published Date: Feb 20, 2012

Apple Keyboard (2007): Right Shift key doesn‘t work with Kotoeri shortcut

This article has been archived and is no longer updated by Apple.

Issue or symptom

The right Shift key on an aluminum Apple Keyboard (2007) does not work when using the Kotoeri shortcut (Option+Shift+Fn+F5) to switch to 'Romaji' input mode.

Solution

The keyboard functions as designed. Please use the **left** Shift key of the aluminum Apple Keyboard to use the Kotoeri shortcut to switch to 'Romaji' input mode.

Published Date: Oct 10, 2016

About iMac Software Update 1.2.1 for Tiger

This article has been archived and is no longer updated by Apple.

Discussion

This update is for 20-inch and 24-inch aluminum iMac computers with 2.0, 2.4, or 2.8 GHz processors running Mac OS X Tiger.

It improves the performance and reliability of graphics-intensive games and applications and fixes an issue that some customers encountered when installing Mac OS X Leopard after applying iMac Software Update 1.2.

Published Date: Feb 20, 2012

Mac OS X 10.5: Using iChat Backdrop Effects

This article has been archived and is no longer updated by Apple.

Backdrop Effects is a Mac OS X 10.5 Leopard iChat feature that "removes" the background of your video chat and replaces it with a picture of your choosing, leaving you in the foreground. It works much like a "green screen" used by actors in a Hollywood studio.

This works by taking a snapshot of the background when you are not chatting. Since the computer knows what the background is, parts of it can be replaced with images or movies. Since you were not part of the background when the snapshot happened, you will not be ignored, hence you or any other object will be able to move "on top of" the background.

Tips for using iChat Backdrop Effects

To avoid "holes" in your foreground image (in other words, in your image), make the background as uniform in color as possible, and make that color as different from colors in the foreground as possible. Your background image should not include color shades that match your clothing, hair, or skin tone. For example, if your Backdrop image is mostly a bright blue sky, and you are wearing a similarly bright blue shirt, "holes" may appear in your shirt where it overlaps the background sky.

If any part of the background moves after the detection, the moving objects will not be part of the background anymore. "Holes" will appear. You should pay attention to shadows that are part of the background but move when the user moves back in front of the camera. Make sure not to move your camera after the background snapshot takes place.

Reflective surfaces in the background should be avoided.

A dark room makes it harder for this effect to work. Make your area as well-lit as possible.

Note: You can press Command-Option-R to reset the background at any time in iChat.

Published Date: Oct 11, 2016

Mac OS X Server version 10.5 Leopard: Do not enable SSL for wiki sites hosted by Apache 1.3

This article has been archived and is no longer updated by Apple.

Issue or symptom

When using Apache 1.3 on Mac OS X Server version 10.5 Leopard to host a website with the wiki service enabled, do not enable SSL for that site in Server Admin. If SSL is enabled in this configuration, links in dynamically generated page content will begin with "http://" instead of "https://" preventing proper functionality.

Solution

If you must use SSL with the wiki service, use the default Apache 2 Web Server. If you must use Apache 1.3, disable SSL for any sites hosting a wiki.

Published Date: Feb 20, 2012

Mac OS X 10.5: About Kerberos in Mac OS X 10.5 clients

This article has been archived and is no longer updated by Apple.

Mac OS X 10.5 Leopard utilizes Kerberos to make it easier to share services with other Macs.

Kerberos is a "single sign on" technology. When you connect to a Mac that supports Kerberos, just like any Mac OS X 10.5 Mac, you are granted a "ticket" that permits you to continue to use services on that machine, without re-authenticating, until your ticket expires.

For example, consider two Mac OS X 10.5-based Macs, named "laptop" and "family". "Family" has screen sharing and file sharing turned on. If "laptop" connects to one of the shared folders on "family", "laptop" can subsequently connect to screen sharing on "family" without having to supply login credentials again.

Between 10.5 clients, this Kerberos exchange is only attempted if you connect using Bonjour. For example, if you navigate to the Mac in Finder, or use Finder's **Go** menu to connect to server "my-machine.local".

Normally, once your computer has gained a Kerberos ticket in this manner, you should keep that Kerberos ticket until it expires.

If you want to manually remove your Kerberos ticket, you can do so using the Kerberos utility in Mac OS X 10.5:

1. Open Keychain Access (in /Applications/Utilities).
2. From the **Keychain Access** menu, choose **Kerberos Ticket Viewer**.
3. In the Kerberos application's Ticket Cache window, find the key that looks like "`yourusername@LKDC:SHA1...`" followed by a long string of alphanumeric characters.
4. Click "Destroy" to delete that key.

Published Date: Feb 20, 2012

Mac OS X Server version 10.5: Migrating MySQL Data when upgrading from Mac OS X 10.3 or 10.4

This article has been archived and is no longer updated by Apple.

Mac OS X Server version 10.5 Leopard preinstalls MySQL 5.0.45. Users upgrading from Mac OS X Server 10.3 or 10.4 to version 10.5 will need to migrate their MySQL data to ensure compatibility with the new version of MySQL.

This article outlines the steps needed to perform migration of standard MySQL databases. Users with more complex database designs may wish to refer to the documentation provided at www.mysql.org for additional documentation to help with migrating their database to MySQL 5.0, or refer to the links listed at the end of this article.

Before installing Mac OS X Server version 10.5 Leopard

Prior to upgrading your Mac OS X Server system, administrators should create a backup of their existing MySQL database.

This article describes how to migrate the default versions of MySQL included in Mac OS X Server 10.3.9 and 10.4.10 or 10.4.11. Mac OS X Server version 10.3.9 preinstalls version 4.0.18 of MySQL. Server version 10.4.10 preinstalls MySQL version 4.1.22. If you are unsure of the version of MySQL installed on your system, enter the following command in Terminal:

```
mysql --version
```

If you are using a version of MySQL other than those listed above, you may require additional steps not outlined below. For additional information about special steps needed by your version MySQL, refer to the links listed at the end of this article.

Preserving MySQL data

To migrate your MySQL databases from one computer to another, you can use the `mysqldump` command from a Terminal window. The mysqldump command has several forms depending on the scope of data to be backed up: Individual tables, single databases or the entire set of databases on the server.

To back up individual tables, type:

```
mysqldump database tb1 [tb2 tb3...] > backup-file.sql
```

(where *database* is the name of the database containing the listed tables and *tb1*, *tb2*, and *tb3* represent table names)

To back up one or more databases, type:

```
mysqldump --databases db1 [db2 db3...] > backup-file.sql
```

To back up **all** databases on the system, type:

```
mysqldump --all-databases > backup-file.sql
```

Preserving data with restricted privileges

To back up tables or databases that require root access (for example, grant tables or other restricted data), run mysqldump with the `--user=root & -p` options:

```
mysqldump --user=root -p --all-databases > backup-file.sql
```

The -p option will cause mysqldump to prompt for the MySQL "root" password before proceeding.

The resulting backup files from this command should be stored in a safe location that will not be modified during the Mac OS X Server upgrade process.

Additional instructions for database backup and restoration can be found in the MySQL documentation at www.mysql.org or the links listed at the end of this article.

After installing/upgrading to Mac OS X Server version 10.5 Leopard

Once the Mac OS X Server upgrade (or installation) is complete, make sure that the MySQL service is active before attempting to import backup data. The MySQL service can be activated using Server Admin or the serveradmin command.

```
serveradmin start mysql
```

Importing MySQL backup data into MySQL 5.0

To import database backups, use the mysql command line tool in Terminal. To perform the import, type:

```
mysql < backup-file.sql
```

To import into databases that require privileged access, run mysql with the --user=root & -p options:

```
mysql --user=root -p < backup-file.sql
```

The -p option will cause mysql to prompt for the MySQL "root" password before proceeding.

Additional instructions for database backup and restore can be found in the MySQL documentation at www.mysql.org or the links listed below.

Performing a MySQL 5.0 direct upgrade

For users that may have performed a system upgrade to Mac OS X Server 10.5 without previously saving their MySQL database, it is possible, in some circumstances, to perform a direct upgrade of the database version to MySQL 5.0 using the mysql_upgrade utility.

Before attempting to perform a direct upgrade, you should create a mysqldump backup of your database prior to the using mysql_upgrade to ensure that the original database is not affected by conversion failure or other interruption. It is also recommended that you consult the documentation provided at www.mysql.org about issues that may impact database upgrades.

To perform a direct upgrade of the MySQL database to version 5.0, type the following in Terminal:

```
/usr/bin/mysql_upgrade
```

Note: Due to an issue in version 5.0.45 of the mysql_upgrade tool, the full path to the tool must be used when executing mysql_upgrade.

To perform the upgrade for databases that may require privileged access, type:

```
/usr/bin/mysql_upgrade --user=root --password
```

Once the conversion is finished, the MySQL data will be compatible with MySQL 5.0.

Additional documentation

For comprehensive information regarding backup and restore of MySQL data, visit the www.mysql.org web site. The following articles will also provide information about optional steps that may be needed to address your specific database configuration:

- http://www.mysql.org/doc/refman/4.1/en/upgrading-from-4-0.html
- http://www.mysql.org/doc/refman/5.0/en/upgrading-from-4-1.html

Additional information about MySQL and Mac OS X Server can be found in the Mac OS X Server Upgrading and Migrating for Version 10.5 guide.

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Published Date: Feb 20, 2012

Mac OS X 10.5: Sherlock is not supported

This article has been archived and is no longer updated by Apple.

Features formerly provided by Sherlock can now be found in Dashboard.

Sherlock itself does not work with Mac OS X 10.5 Leopard.

Manually copying Sherlock from a version of Mac OS X prior to Leopard is not supported (and you should manually remove Sherlock).

Published Date: Feb 20, 2012

Mac OS X Server version 10.5: CoreFoundation Messages in Apache error log when performing Spotlight website search

This article has been archived and is no longer updated by Apple.

With Mac OS X Server version 10.5, with the Advanced Configuration, you can use the Server Admin application's Web panel to enable Web-based Spotlight searching for a website. Note that such searches might produce many messages such as the following in Apache's error log:

```
The process has forked and you cannot use this CoreFoundation functionality safely. You MUST exec().
Break on __THE_PROCESS_HAS_FORKED_AND_YOU_CANNOT_USE_THIS_COREFOUNDATION_FUNCTIONALITY___YOU_MUST_EXEC__() to debug.
```

This message does not indicate a configuration issue and it will not prevent the Spotlight search from returning the correct results.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

QuickTime 3: Windows Uninstall

The QuickTime 3 UnInstaller fails to remove all files installed by the QuickTime 3 Installer.
This article has been archived and is no longer updated by Apple.
When using Add/Remove Programs in Windows 95 to uninstall QuickTime 3 for Windows, the following files are not deleted from your hard drive.

Note: This also applies to Windows 98.

Windows\\System directory files:
3dviewer.dll
indeo4.qtx
ir41_qc.dll
ir41_qcx.dll
qd3d.dll
qd3d_ir2.q3x
qd3dcustomelements.q3x
quicktime.cpl
quicktime.qtp
quicktime.qts
quicktimemusicalinstruments.qtx
quicktimevr.qtx
rave.dll

Windows directory file:
uninst.exe

To correct this, these files must be manually deleted from your system using Windows Explorer or Find File. For more information on using these features, consult Windows on-screen help by choosing Help from the Start button.

The uninstaller also fails to remove all Windows Registry entries entered by the installer. The following entries remain in the Registry after running uninstall.

Hkey Classes Root:
quicktime.aif
quicktime.aifc
quicktime.aiff
quicktime.dif
quicktime.dv
quicktime.mac
quicktime.mov
quicktime.pct
quicktime.pic
quicktime.pict
quicktime.pntg
quicktime.psd
quicktime.qif
quicktime.qt
quicktime.qti
quicktime.qtif
quicktime.sd2
quicktimeextension
quicktimeimage
quicktimemovie
quicktimepreferences
quicktimesystem

There may also be other remaining entries. While these items are not needed on systems no longer running QuickTime, there are no known issues associated with leaving them in the Registry. If you wish to remove them, this must be done manually using the Registry Editor.

NOTE: Editing the Registry is recommended only in cases where it is required to restore your computer to a properly functioning state, and when performed by an experienced computer user. In all cases, it is strongly advised to make a full backup copy of your Registry before making any changes to it.

TA24997_QuickTime_Windows_Uninstall.pdf

Published Date: Feb 20, 2012

Mac OS X Server version 10.5: Group Web services not available after upgrade from 10.4

This article has been archived and is no longer updated by Apple.

Issue or symptom

After an upgrade from Mac OS X Server version 10.4 to Mac OS X Server version 10.5, site-specific Web services are not accessible for the default website. Server Admin Web shows the Services for Groups checkboxes in an indeterminate state (with a "-" in the checkboxes instead of a check mark).

Solution

1. In Server Admin, select the Web Service.
2. Click the Sites tab.
3. Select the default site from the list.
4. Click the Web Services tab.
5. Click the desired Web service checkboxes (once to disable, twice to enable).
6. Click the Save button.

Published Date: Feb 20, 2012

Mac OS X 10.5: Some Sharing settings may not be preserved after migration or installation

This article has been archived and is no longer updated by Apple.

Issue or symptom

Some Sharing settings may not be preserved when performing an Archive and Install installation of Mac OS X 10.5 Leopard, or when migrating from a previous version of Mac OS X to Mac OS X 10.5.

This can happen if sharing services such as Remote Login, Windows Sharing, or FTP Access were enabled within the Sharing preferences on the previous system before the Mac OS X 10.5 installation; they will not be enabled in the Mac OS X 10.5 once the migration or installation is complete.

Solution

To re-enable Windows Sharing

1. Open System Preferences
2. Click Sharing
3. Within the list of available services, highlight File Sharing, then click the Options button
4. In the sheet that appears, enable (click the check box next to) "Share files and folders using SMB"

To re-enable any other sharing service

1. Open System Preferences
2. Click Sharing
3. Within the list of available services, enable (check) the "On" box for each service you wish to use

Published Date: Feb 20, 2012

Mac OS X Server 10.4, 10.5: Mail database issues after migrating to a different server

This article has been archived and is no longer updated by Apple.

Issue or symptom

After migrating a mail server from a PowerPC-based server to an Intel-based server, or vice-versa, POP and IMAP services may not work and various "DBERROR" messages may appear in the system.log file. This can happen in Mac OS X Server version 10.4, 10.5, or later.

Solution

1. Make sure that POP and IMAP are not running on the mail server.
2. Delete the deliver.db file located in the directory specified by the "Database location" field in Server Admin (the default location is /var/imap/db).
3. In Server Admin, click the Advanced tab, then click the Database pane.
4. Delete the contents of the db directory located in the directory specified by the "Database location" field in Server Admin (the default location is /var/imap/db). Note: Do not delete the db directory itself, only its contents.

Published Date: Oct 11, 2016

Mac OS X Server version 10.5: Clients aren‘t auto-configured if user or server Name includes 2-byte or high-ASCII characters

This article has been archived and is no longer updated by Apple.

Issue or symptom

If a user's account name, or the server's computer name, contains a 2-byte or high-ASCII character, that user's applications (such as Mail or iChat) will not be automatically configured when they bind to a Mac OS X Server version 10.5 Leopard standard configuration.

Note: 2-byte characters are used to represent Japanese, Chinese, and Korean characters. High-ASCII characters are "extended ASCII" characters such as **ü** or **é**. They are listed in table II of this webpage: (http://www.cdrummond.qc.ca/cegep/informat/Professeurs/Alain/files/ascii.htm).

Solution

Download and install Mac OS X Server version 10.5.1 or later.

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Published Date: Feb 20, 2012

Workgroup Manager: Legacy tab settings only apply to clients using Mac OS X 10.4 or earlier

This article has been archived and is no longer updated by Apple.

When managing application access in Mac OS X Server version 10.5, the settings under the Applications tab only apply to Mac OS X 10.5 Leopard or later-based clients. The settings under the Legacy tab only apply to Mac OS X 10.4 or earlier-based clients.

It's possible to manage both the settings under the Applications and Legacy tabs in Workgroup Manager for the same record. Doing this will allow Leopard clients to use the newer application access controls (under the Applications tab), while also allowing 10.4 or earlier clients to use the previous application access controls (under the Legacy tab).

Published Date: Oct 11, 2016

AppleScript, Mac OS X 10.5: Remote Apple Events setting not preserved after upgrading

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you use Remote Apple Events with AppleScript, after performing an upgrade installation (or Archive and Install) of Leopard from an earlier version of Mac OS X, you may notice that your "Remote Apple Events" setting is "off" (the default setting). With AppleScript, Remote Apple Events are extensible mechanisms commonly used in AppleScript for handing interprocess messages used for inter-application communication and also for applications running on different computers connected to a network.

Solution

Turn Remote Apple Events back on in Sharing preferences (in System Preferences).

Additional information

For more information about Sharing settings changing when migrating or performing an Archive and install of Mac OS X 10.5, see this article.

Published Date: Feb 20, 2012

Apple Remote Desktop 3.2: Customizing date formats

This article has been archived and is no longer updated by Apple.

Apple Remote Desktop (ARD) version 3.2 includes support for international, non-Gregorian calendar formats such as Japanese, Islamic, Buddhist, and Hebrew calendars.

ARD 3.2 makes customizable date formatting available in Mac OS X 10.4 or later. To customize a date or time format:

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **International**.
3. Click Formats.
4. Click the Customize button in either the Dates or Times section.

ARD 3.2 uses the following date formats: Short Date, Medium Date, Full Date.

ARD 3.2 uses the following time formats: Short Time, Medium Time.

Published Date: Feb 20, 2012

Mac OS X Server version 10.5: iChat client does not authenticate with Active Directory credentials

This article has been archived and is no longer updated by Apple.

Issue or symptom

When authenticating to a Mac OS X Server version 10.5 iChat server that is bound to Active Directory, clients that are *not* configured to use Kerberos will not be able to authenticate, when using Active Directory credentials.

Solution

Either configure the iChat client to use Kerberos authentication or disable the use of CRAM-MD5 authentication on the iChat server.

Option 1: Configure a client to use Kerberos

1. In iChat, choose **Preferences** from the **iChat** menu.
2. Click the Accounts pane.
3. Click the "Server Settings" tab.
4. Enable (check) the "Use Kerberos v5 for authentication" box.

Option 2: Disable use of CRAM-MD5 authentication on the iChat server

To do this, you will need to edit the authentication settings in the file /etc/jabberd/c2s.xml and restart the jabberd service:

1. Open the file /etc/jabberd/c2s.xml: sudo pico /etc/jabberd/c2s.xml
2. In the editing window, locate the authentication settings:

```
<traditional>
<plain/>
<cram-md5/>
<!--
<digest/>
<zerok/>
-->
</traditional>
```

3. To disable CRAM-MD5 authentication, comment out the line containing "`<cram-md5/>`" by adding "`<!--`" at the beginning of the line, and "`-->`" at the end:

```
<traditional>
<plain/>
<!-- <cram-md5/> -->
<!--
<digest/>
<zerok/>
-->
</traditional>
```

4. Save the changes (press Control-O), and exit pico (press Control-X)
5. Restart the jabberd service, like this:

```
launchctl unload /System/Library/LaunchDaemons/org.jabber.jabberd.plist

launchctl load /System/Library/LaunchDaemons/org.jabber.jabberd.plist
```

Published Date: Feb 20, 2012

Power Macintosh G3: CD Tray Automatically Opens

Some Power Macintosh G3 Desktop computers may have a slight interference between the front bezel CD eject button and the eject button on the drive itself. Upon powering up the computer, the CD tray may automatically open.

This article has been archived and is no longer updated by Apple.

The fix is to release and reseat the top cover as far forward (towards you as you are facing the computer) as possible.

Published Date: Feb 20, 2012

Mac OS X Server version 10.5: Diskless NetBoot clients stop responding during startup

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you select the option for Diskless NetBoot on a Mac OS X 10.5 image hosted on a Mac OS X Server version 10.5 NetBoot server, the NetBoot client may stop responding soon after it starts up.

Solution

Download and install the Mac OS X Server 10.5.1 Update or later.

As a workaround (until you are able to update to 10.5.1 or later), you can disable Diskless NetBoot.

Published Date: Feb 20, 2012

Xsan 1.4.2: Rebooting MDC may lead to shutdown delay

This article has been archived and is no longer updated by Apple.

Issue or symptom

Rebooting an MDC running Xsan 1.4.2 on Mac OS X 10.4.x or Mac OS X Server 10.4.x may result in a potentially endless shutdown delay.

This issue may occur sporadically on Mac OS X 10.4.x and Mac OS X Server 10.4.x systems with Xsan 1.4.2.

Solution

If shutdown process does not complete after several minutes, it may be necessary to force-restart the affected computer.

This document will be updated as more information becomes available.

Published Date: Oct 11, 2016

Mac OS X Server version 10.5: Configuring forward Web Proxy

This article has been archived and is no longer updated by Apple.

Issue or symptom

Users connecting to your Mac OS X Server version 10.5 Web Proxy server cannot connect to the Internet, or load the Mac OS X Server's Web page when trying to connect to other sites.

Solution

To configure Web service forward proxy settings:

1. Open Server Admin and connect to the server.
2. Click the disclosure triangle to the left of the server. The list of services appears.
3. From the expanded Servers list, choose Web.
4. Click Settings, then click Proxy.
5. Click (check) the Enable Forward Proxy checkbox. If a forward proxy server is enabled, each site on the server can be used as the proxy.
6. Click the "Control Access To Proxy" checkbox to limit access and then enter the domain name that is permitted access in the “Allowed Domain” field. Generally, when limiting who can use your Web server as a proxy, you should limit access to a specific domain. Users in that domain may obtain access.
7. Create the Cache Folder. In a terminal window, enter:

```
sudo mkdir /var/run/proxy
sudo chown www:www /var/run/proxy
```

Note: This is the default cache folder. You can choose or create a different folder for the cache, but you must make sure that the owner and group are both www and have read and write access. To choose a different folder, click the Choose... button or type the path into the Cache Folder field in Server Admin. If you are administering a remote server, File service must be running on the remote server to use the Choose... button.

8. Set the disk cache target size and set an interval for emptying the cache. When the cache reaches this size, the oldest files are deleted from the cache folder.
9. To add a host to block, click the Add (+) button and enter its URL. Add the names of all hosts you want to block. You can import a list of websites by dragging the list to the list of blocked hosts. The list must be a text file with the host names separated by commas or tabs (also known as csv and tsv strings). Make sure the last entry in the file is terminated with a carriage return/line feed; otherwise, it is overlooked.
10. Click Save.
11. Click the Sites tab and select the default site (the one whose Address is listed as "*").
12. Click the Aliases tab.
13. Select the Alias listed as "*".
14. Click the minus ("-") button to delete the Alias.
15. Click Save.

Published Date: Feb 20, 2012

Xsan: Changing configured notifications relay hostname may require reboot

This article has been archived and is no longer updated by Apple.

Issue or symptom

If a SAN is already configured to send notifications, and the configured hostname is changed, notifications may continue to be sent using the previously-configured hostname.

Solution

Restart the computer on which the Notifications configuration was updated.

Published Date: Oct 11, 2016

Mac OS X Server version 10.5: To optimize performance on heavily-loaded webservers, disable mem_cache_module

This article has been archived and is no longer updated by Apple.

Issue or symptom

When running Apache 2, if you have a very high-volume webserver, or are running benchmarks, you should disable mem_cache_module.

Solution

Disabling mem_cache_module can improve performance. To disable mem_cache_module:

1. Open Server Admin.
2. Go to Web.
3. Click Settings.
4. Click the Modules tab.
5. Deselect (uncheck) "mem_cache_module".
6. Click Save.

Published Date: Feb 20, 2012

iMac: Less Available Memory Due to ROM in RAM

Why do I have a little less memory available on iMac than I do on other Power Macintosh G3 Computers after startup?
This article has been archived and is no longer updated by Apple.
Compared to a similarly equipped 233-MHz Power Macintosh G3 computer (desktop or minitower) with 32MB of DRAM and running Mac OS 8.1, iMac uses approximately 4MB more DRAM.

That's because iMac is unique in a number of ways. For example, iMac contains 1MB of ROM on the logic board and also loads Mac OS ROM into RAM when you start up your computer. This increases the amount of memory the system uses but also improves overall performance.

Of course, the amount of DRAM you actually have to run applications varies depending on the specific way you configured your computer--for example, how many extensions and other system resources you use.

That's why we recommend that you leave Virtual Memory (VM) turned On. If you turn VM off, system size will increase to 17.5MB.
Published Date: Feb 20, 2012

Mac OS X Server version 10.5: MySQL libraries available for download

This article has been archived and is no longer updated by Apple.

Issue or symptom

MySQL client libraries and headers are not included with Mac OS X Server 10.5. If you are developing a MySQL client application for Mac OS X 10.5, you'll need to download the MySQL client libraries and headers.

Solution

The MySQL client libraries and headers are available for download and installation from (http://www.opensource.apple.com/darwinsource/Current/).

- The MySQL sources are available from (http://www.opensource.apple.com/darwinsource/tarballs/other/MySQL-43.tar.gz), and also include instructions on using the supplied Makefile.
- A binary download that can be installed on Leopard Server is available from (http://www.opensource.apple.com/darwinsource/other/MySQL-43.binaries.tar.gz).

To install:

1. Download the file.
2. If the download doesn't automatically produce a folder on your desktop, double-click it to unzip it to a folder named "MySQL-43.binaries" which has a file named "MySQL-43.root.tar.gz" in it (as well as the readme file). **Note:** Do not double-click/unzip the "MySQL-43.root.tar.gz" file that is within the folder.
3. Open Terminal.
4. Type `cd` (but do not press Return).
5. Drag the "MySQL-43.binaries" folder from your desktop to the Terminal window to populate the cd path, then press Return.
6. Execute this command:

```
sudo tar -xzvf MySQL-43.root.tar.gz -C /
```

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Published Date: Feb 20, 2012

Mac OS X Server 10.5 Leopard: Remote access to built-in camera requires logged-in user on client Mac

This article has been archived and is no longer updated by Apple.

Issue or symptom

When using the `pcastagentd` command-line utility to access a remote Mac OS X 10.5 Leopard client's built-in iSight camera over ssh, an alert message about not connecting to the camera may appear.

Solution

Make sure a user account is logged in on the client Mac before attempting access to its camera via `pcastagentd` and ssh. This command should work even if a screensaver is password-protecting the computer.

Note: You can bind to the camera while no user is logged in, but recording will not work unless a user is logged in.

Published Date: Feb 20, 2012

Mac OS X Server version 10.5: Hosting a wiki without enabling blog services

This article has been archived and is no longer updated by Apple.

You can host a wiki without enabling blog services for a particular group with these steps:

1. Enable Web services and wiki/blog services for a particular site.
2. On the Open Directory Master, open Preferences in Workgroup Manager.
3. Click "Show all records Tab and Inspector."
4. Click the Accounts icon
5. Click the target tab:

6. From the pop-up menu, choose Groups.
7. Click the disclosure triangle next to the ServicesLocator attribute.
8. Delete the value that ends in ":blog".
9. Save the changes.

Published Date: Feb 20, 2012

Using USB Braille displays with VoiceOver in Mac OS X 10.5 Leopard

This article has been archived and is no longer updated by Apple.

VoiceOver in Mac OS X 10.5 Leopard supports refreshable USB Braille displays.

While VoiceOver is running (press Command-F5 to turn it on or off), you can connect a compatible USB Braille display and start working with no additional setup or configuration.

You can also use a Braille display while installing Mac OS X Leopard itself.

Additional information about using Braille displays with VoiceOver is available in VoiceOver Help in Leopard.

Supported Braille displays

Alva BC 640
Alva 544 Satellite
Alva 544 Satellite Traveller
Alva 570 Satellite Pro
Alva 584 Satellite Pro

Baum PocketVario 24
Baum SuperVario 32
Baum SuperVario 40
Baum SuperVario 64
Baum SuperVario 80
Baum VarioConnect 24
Baum VarioConnect 32
Baum VarioConnect 40

Freedom Scientific Focus 40
Freedom Scientific Focus 80
Freedom Scientific PAC Mate 20
Freedom Scientific PAC Mate 40
Freedom Scientific PAC Mate BX420 (display only)
Freedom Scientific PAC Mate BX440 (display only)
Freedom Scientific PAC Mate QX420 (display only)
Freedom Scientific PAC Mate QX440 (display only)

Humanware BrailleConnect 24
Humanware BrailleConnect 32
Humanware BrailleConnect 40
Humanware Brailliant 24
Humanware Brailliant 32
Humanware Brailliant 40
Humanware Brailliant 64
Humanware Brailliant 80

Optelec Voyager 44

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Published Date: Feb 20, 2012

iPhone: What to do if visual voicemail greeting is incorrect

This article has been archived and is no longer updated by Apple.

Issue or symptom

The visual voicemail personal greeting on iPhone may not match the standard voicemail personal greeting.

Solution

This is most likely caused by dialing into your voicemail, instead of using visual voicemail, to change an option such as new greeting, or changing to or from the default greeting.

The recommended way to change your voicemail greeting is by choosing **Phone > Voicemail > Greeting**, which will then in turn synchronize with your standard voicemail greeting so they both are the same.

In most cases, voicemail greeting changes made by dialing your voicemail will be synced back to visual voicemail on iPhone if you are using iPhone Software 1.1.3 or later.

Published Date: Oct 11, 2016

Mac OS X Server version 10.5: NetInstall images created from a volume may not restore

This article has been archived and is no longer updated by Apple.

Issue or symptom

A NetInstall image created from a volume may not be able to restore clients.

Solution

1. In the .nbi folder for the affected image, mount the NetInstall.dmg file.
2. Get Info on the mounted disk image and make sure "Ignore ownership on this volume" is not selected (not checked) .
3. Execute the following command in Terminal:

```
/usr/sbin/asr imagescan --source '/Volumes/NetInstall/System/Installation/Packages/System.dmg' --filechecksum
```

4. When the asr command completes, unmount the NetInstall image.

Published Date: Feb 20, 2012

Mac OS: "AppleTalk Network Has Been Interrupted" Error

I keep getting the message "Access to your AppleTalk network has been interrupted. When the network becomes available again, a message on your screen with notify you."

Why is this happening?
This article has been archived and is no longer updated by Apple.
Some Ethernet-ISDN bridges used for remote LAN-to-LAN connectivity drop the connection when there is no active data transfer, and dial on demand when there is information to be transferred. If a user's local network does not include an AppleTalk router, a message appears each time the connection is dropped.

There is also an issue with Apple Remote Access 3.0 which can cause the message. ARA processes incoming Router Table Maintenance Protocol (RTMP) packets. ARA 3.0 incorrectly processes these packets. On some networks, this can cause the client to assume that the network is inaccessible. In this situation, an alert is posted to notify the user that access to the AppleTalk network has been interrupted. If additional RTMP packets are processed correctly, the network is assumed to be available again. ARA Client 3.1.2, which ships with Mac OS 8.5, resolves this issue.

Workarounds include:
1. Disable Apple Remote Access 3.0 extensions via the Extensions manager control panel.

2. Use the "AppleTalk Options" control panel, available by downloading "OT 1.1.2-Extras.sea" from the Apple Software Updates site.

After downloading, the AppleTalk Options control panel is located in the Open Transport Extras -> Network Options -> AppleTalk folder.
- Drag the control panel to your System Folder and Restart.
- After restarting the computer, check the option for "Suppress router-related alerts."

Note: This option will only avoid the interruption message, it will not resolve any loss of network connectivity.

3. Select the Advanced User mode in the AppleTalk control panel (select User Mode under the Edit Menu). Once you are in Advanced User mode, check the User defined box. Enter a valid network number and try a random node number (between 1 and 253) and close the AppleTalk control panel. If the node number is not already being used you can reopen the control panel and uncheck the User defined box. If the node number is already being used, reopen the control panel and try another node number. Repeat the process until a valid AppleTalk address is entered.

If the problem still occurs after the above suggestions the next thing to do is to test the unit on an isolated network to see if it only occurs on the large network.

Article 24549 titled **ARA 3.0: "AppleTalk Network Not Available" Message**, may be of some assistance in resolving this issue also.

This article can help you locate the software update mentioned here:

- Article 14724: "**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.

Published Date: Feb 20, 2012

Apple Portables: Wait for pulsing sleep indicator light before moving system

This article has been archived and is no longer updated by Apple.

When putting your Apple portable computer into sleep mode, be sure to wait a few seconds until the sleep indicator light starts pulsing before moving your Apple portable computer. The pulsing light indicates that the computer is fully asleep and the hard disk has stopped spinning.

Important: Moving your computer while the disk is spinning can damage the hard disk, causing loss of data or the inability to startup from the hard disk.

Published Date: Feb 20, 2012

Mac OS X 10.5: Unable to start up after installing Apogee audio drivers

This article has been archived and is no longer updated by Apple.

Issue or symptom

Installing earlier Apogee audio drivers may prevent Mac OS X 10.5 Leopard from starting up.

Note: Mac OS X 10.4.x installations with older Apogee drivers that are updated to Leopard are not affected by this issue.

Solution

This can happen if you install an earlier Apogee driver on Leopard. Current drivers for the Ensemble and Symphony card can be found on the Apogee Leopard page.

If your Mac is affected, repair permissions and reinstall Leopard:

1. Restart your Mac while holding the **Option** key.
2. When a screen showing the available startup partitions appears, press the **Eject** key.
3. Insert the Mac OS X 10.5 install DVD and select it as the startup disk.
4. After the Mac has started up from the disc, choose a language
5. Choose **Utilities** from the **Disk Utility** menu.
6. Use Disk Utility to select the system drive and click the **Repair Permissions** button.
7. Quit Disk Utility.
8. In the **Select Destination** window, choose the partition Leopard is to be installed on. This should be the same partition as used before. Click the **Options** button and choose "Update Mac OS X".
9. The computer will restart after installation has completed.

After your system has been reinstalled, download and install updated Apogee software and drivers from the Apogee Leopard page.

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Published Date: Feb 20, 2012

iPhone: The time does not automatically set in some countries

This article has been archived and is no longer updated by Apple.

Issue or symptom

The time on iPhone does not automatically set in some countries. This is because not all cellular network providers support this feature.

Solution

To manually set the iPhone time, choose **Settings > General > Date & Time > Set Date & Time** (You may need to tap **Set Automatically** to Off before you can see Set Date & Time).

Published Date: Oct 11, 2016

About the security content of Xcode Tools 2.5

This article has been archived and is no longer updated by Apple.

This document describes the security content of Xcode Tools 2.5, which can be downloaded and installed from http://developer.apple.com/tools/download/.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see Apple Security Updates.

Xcode Tools 2.5

- **gdb**

  CVE-ID: CVE-2006-2362

  Available for: Mac OS X v10.4.x, Mac OS X v10.5

  Impact: Processing a file with maliciously crafted TekHex content may lead to an unexpected application termination or arbitrary code execution

  Description: A buffer overflow exists in gdb's handling of files with Tektronix Hex Format (TekHex) content. By enticing a user to run gdb's "restore" command on a maliciously crafted TekHex file, an attacker may cause an unexpected application termination or arbitrary code execution. This update addresses the issue by performing additional validation of TekHex records.

- **WebObjects**

  CVE-ID: CVE-2006-5327, CVE-2006-5328

  Available for: Mac OS X v10.4.x, Mac OS X v10.5

  Impact: An unprivileged local user may be able to obtain system privileges

  Description: The Xcode WebObjects package contains a demo version of OpenBase for use with WebObjects example code. This demo version of OpenBase may allow a local user to obtain system privileges. This update addresses the issue by disabling the Apple-provided demo version of OpenBase. Credit to Kevin Finisterre of Netragard for reporting these issues.

Published Date: Oct 11, 2016

DVD Studio Pro: Attempting to read multiple DLTs may not work

This article has been archived and is no longer updated by Apple.

Issue

Attempting to read multiple DLTs (Digital Linear Tapes) or dual layer DLTs may result in the application becoming unresponsive.

Affected Products

- DVD Studio Pro 4.2.0
- OS X 10.4.10

Workaround

Update to Mac OS X 10.4.11 to resume proper functionality of DVD Studio Pro if you are using the application to read DLTs.

Published Date: Feb 20, 2012

LaserWriter 8.4.1: Apple Printer Software Read Me

This document contains some important reminders and some information about your Apple LaserWriter Printer Software for Mac OSÂbased computers. You may want to print this document and keep it for future reference.

The topics are:

- Desktop PrintMonitor Version 2.0.1
- Apple Printer Utility Version 2.1.1
- LaserWriter 8 Printer Driver Version 8.4.1

This article has been archived and is no longer updated by Apple.

Desktop PrintMonitor Version 2.0.1

- New Features in Version 2.0.1

Enhanced user interface - desktop printer icons display the icon of the printer selected, unless the PostScript Printer Description file for the printer selected is not installed in your Printer Descriptions folder. In this case, the desktop printer icon displays the icon for LaserWriter 8.

- Hints and Shortcuts

The Desktop Printers folder in the Apple Menu provides a convenient shortcut to desktop printers. This is especially helpful if you have moved your desktop printer icons off the desktop. Command-L key combination is a shortcut equivalent to the Set Default Printer command in the Printing menu. Holding down the Option and Shift keys makes the Hold and Resume buttons function as Stop Print Queue and Start Print Queue. To print additional copies of a file, you can select the spool file waiting in the print queue and choose Duplicate from the File menu.

- Creating Desktop Printers

To create a desktop printer, select a printer in the Chooser and click the Create/Setup button. If you have System 7.5 or later, you can create multiple desktop printers from within the Chooser, but if you're running an older version of system software, you can only create one desktop printer per Chooser session.

- System Software Requirements for Desktop Printing

Desktop printing requires System 7.1 or later of the Macintosh Operating System (Mac OS). If you have System 7.0 or earlier and you want to use desktop printing, you can upgrade your Mac OSÂbased computer to use a later version of system software. Contact your Apple-authorized dealer.

- Printing with Multiple Desktop Printers

To avoid AppleTalk errors, print to no more than five desktop printers simultaneously.

- Using Desktop PrintMonitor on a Non-English System

If no desktop printer icon appears after you install the printer software, it may mean the Installer installed PrintMonitor 7.1.2 and did not install the Desktop PrintMonitor. (PrintMonitor 7.1.2 is installed if you have an earlier version of the PrintMonitor. Later versions of the PrintMonitor are not replaced.) You have three options: Use PrintMonitor 7.1.2 (or a later version).

Obtain a set of installation disks for the printer software in the language of your system software from your Apple-authorized dealer and install it. Upgrade your system software to System 7.5.1 and install the printing software again. An English language version of the Desktop PrintMonitor software is installed.

- Using the Desktop Printer Menu and the Printer Selector Control Strip

The desktop printer menu extension can be installed using the Custom Install option.

The Desktop Printer menu appears on the right-hand side of your menu bar. It will normally appear to the immediate left of the Guide menu. The Desktop Printer menu lists the names of all active desktop printers. A check mark is displayed next to the name of the default printer. Selecting the name of a printer from this list makes the printer the new default.

The Printer Selector control strip module is installed only on computers that already have control strip software installed. The Printer Selector adds an item to the control strip that provides functionality identical to the Desktop Printer menu.

- Support and Compatibility Information

Some third-party printers do not support desktop printing. If your printer is not an Apple product, and no desktop printer icon is created after you select your printer in the Chooser, it is likely that your printer does not support Desktop PrintMonitor. Please contact the vendor of your printer to see if there is a version of the driver that is compatible with Desktop PrintMonitor.

When you choose Save or Open in your application programs, you will see your desktop printers listed as if they were folders, but you should not save or open any documents in them. If you do, you will not be able to access your documents.

Desktop PrintMonitor supports drag-and-drop printing for all files that cause the Print Command in the File menu to become enabled. Since clipping files do not enable the Print command, drag-and-drop printing is not supported for them.

Apple's Fax Sender software is not supported by Desktop PrintMonitor. Fax Sender is fully functional when Desktop PrintMonitor is installed. However, it does not get the benefit of Desktop PrintMonitor's features. When you select Fax Sender in the Chooser you will not have a default desktop printer until you choose a printer icon and select "Set Default Printer" from the Printing menu.

Spool files and desktop printers must use the same version of the LaserWriter 8 driver. You may encounter errors if you drag spool files that were created with one version of LaserWriter 8 to a desktop printer created with another version of the LaserWriter 8 driver.

If, after installing the LaserWriter 8.4.1 driver, your print jobs "stall" in their desktop printer queue, try restarting both your computer and the printer.

- Tips for Desktop Printing Troubleshooting

Error message "-192"Â or "15"

--Problem: After installing Desktop PrintMonitor and restarting your Mac OS computer you see error messages "-192" or "15" when you try opening files or folders in the Finder. This may occur when Now Startup Manager's preferences file has become corrupted.

Solution: Restart your computer with extensions disabled (hold down the Shift key while restarting). Delete the "Now Startup Manager" preferences file, and restart the computer again with extensions enabled. Important: Before deleting your Now Norton Startup preferences, you may want to record them or write them down before you delete this file.

--Desktop printer cannot be found

Problem: When you try to print, your spool files are moved to the Trash and an alert is displayed saying that the desktop printer could not be found.

Solution: There are two likely solutions to this problem. First, it is possible that your desktop printer has somehow become damaged. To fix this, drag the desktop printer icon to the Trash and reselect the printer in the Chooser. A new desktop printer icon will be created.

Second, your printer software may not be using a file format that is completely compatible with Desktop PrintMonitor. If your printer software is not published by either Apple Computer or Adobe Systems, it is possible that it is not making proper and legitimate use of PrintMonitor. If this is the case, your printer software will not work properly with Desktop PrintMonitor. The only resolution to this problem is to disable Desktop PrintMonitor and use old PrintMonitor. To print the documents you were working on follow these steps:

1. Empty the Trash.
2. Go to the Chooser and turn off background printing.
3. Print documents again.

To correct desktop printing:
4. Drag the desktop printer to the Trash.
5. Go to the Chooser and turn background printing back on.
6. Create a new desktop printer.

--Not enough memory message when dragging files to desktop printer

Problem: When you drag documents created by different software applications to your desktop printer icon, a message is displayed indicating that there is not enough memory to continue.

Solution: You may not have enough memory available to launch all of the software applications corresponding to the documents you have selected. You can resolve this situation by printing your documents individually or in smaller groups.

- Options dimmed in Printing menu
Problem: "Get Printer Info" and "Change Setup" appear in your Printing menu, but can't be selected.

Solution: These are two new functions supported by LaserWriter v8.4. If these or other items in the menu appear dimmed and cannot be selected, it is because you are using a version of the LaserWriter 8 printing software that doesn't support their respective functions.

- Spool files sometimes don't appear when using Connectix Speed Copy

Problem: Spool files don't always appear in the Desktop Printer queue after copying with Speed Copy.

Solution: Close and open the Desktop Printer queue window to make the file appear.

Apple Printer Utility Version 2.1.1

- Printer Support

The Apple Printer Utility program works with all Apple PostScript Level 1 and Level 2 printers. If this software is used with a non-Apple printer or with a printer developed after this release, a set of generic features will be available. The generic feature set consists of options that are common to most PostScript printers. These features should work with non-Apple printers but are not specifically supported by Apple.

- Printing the Font Sample List

Duplicate fonts in the printer's ROM, RAM, or hard disk, may not print on the font sample sheet and font totals may be incorrect. However, these fonts are available and will print correctly on any documents printed by the user. Note: The hard disk option is not available for all Apple printers.

- Working with a Large Number of Downloaded Fonts

If you plan on working with a large number of downloaded fonts, you will need to increase the memory allocation for the Apple Printer Utility. To do this, quit the Apple Printer Utility, select its icon and choose Get Info from the File menu. Increase the memory in the Preferred Size box, then close the Get Info window. The amount of memory required grows dynamically as the number of fonts in the printer increase. Increase the Apple Printer Utility's Preferred Size memory by 100K to 500K and try downloading again.

- Working with Kanji Systems

The script mode changes to Kotoeri when clicking into an input field. To recover from this problem select a one-byte script from the script menu in the upper right corner of the screen.

- Working with Kanji/Japanese Fonts

Downloading Kanji fonts is not a supported feature of this software and program errors may occur. Increase the Apple Printer Utility's Preferred Size memory by the size of each Kanji font you want to download.

- Downloading PostScript Fonts on a GX System With the Apple Printer Utility

When GX is installed, any PostScript fonts (often called Type 1 fonts) in the Fonts folder are converted to GX fonts, and the original PostScript fonts are copied to a new folder called Archived Type 1 Fonts which is created in the System Folder. If you want to download these fonts to your printer using the Apple Printer Utility, you must send the fonts in the Archived Type 1 Fonts folder, not the GX-converted versions in the Fonts folder. Downloading GX fonts that were not previously Type 1 fonts and converted by GX works correctly.

- Removing Fonts From a Hard Disk Attached to a Printer

This paragraph is relevant if you are using a printer that will have a hard disk drive attached to it. The LaserWriter 12/640 PS does not support a hard disk drive attachment.

If a font is downloaded to both the printer's RAM and the printer's hard disk with the same name, and you remove the font on the hard disk, the RAM font will also be removed. If you remove the RAM font, the font on the hard disk will not be removed.

LaserWriter 8 Printer Driver Version 8.4.1
The software includes version 8.4.1 of the Apple LaserWriter 8 printer driver, which works with Apple LaserWriter printers. This section contains information about LaserWriter 8 and information on using it with several of the printers.

- What's New in Version 8.4.1

LaserWriter 8.4.1 provides improved functions and application compatibility.

In LaserWriter 8.4 Get Printer Info or Change Setup can not be used when Connectix' Speed Doubler is also in the Extensions folder. LaserWriter 8.4.1 corrects this conflict with Speed Doubler.

- Larger Print Area

Some printers support both US Letter and US Letter Small paper sizes. To prevent text from clipping or wrapping to the next line on different printers, use US Letter Small. To get the widest possible margins from your printer model, use US Letter.

- Using PostScript Fax

PostScript Fax is an option for the LaserWriter Select 360, the LaserWriter 16/600 PS, and the LaserWriter Pro 810. If you use a PostScript Fax option with any of these printers, you should use LaserWriter 8f version 8.2.3f. PostScript Fax is no longer supported with LaserWriter drivers 8.3 and beyond. See the section "How To Get Updated Printer Software" at the end of this Read Me for information on obtaining LaserWriter 8f version 8.2.3f if you don't already have it.

- Using Color Matching

When ColorSync 2.0 is installed and the ColorSync Profiles folder contains printer profile(s), there are two options in addition to color/grayscale output:

PostScript Color Matching/Printer's Default is the preferred color-matching choice. When you are printing to a PostScript Level 2 printer, and it is efficient to let the printer do most of the work, this option is a good choice.

ColorSync Color Matching is an alternative color-matching selection. It invokes the ColorSync system software to perform color matching for the printed document, matching your monitor and printer's profile and sending the correct color information to the printer. With ColorSync Color Matching, most of the work is done by your Macintosh.

- Here are some tips on using color matching:

Color output will vary depending on the application you are using.

Documents that use ColorSync 1.0 embedded profiles convert to the profile set up in the ColorSync 2.0 System Profile control panel.

When you print with PostScript Color Matching selected and ColorSync 2.0 is not installed, the driver uses the Apple 13" RGB Standard profile.

Application programs that generate their own PostScript may have problems color matching EPS or TIFF images correctly. Converting the image to a PICT file corrects the problem.

- PPD Files

The LaserWriter 8 driver uses PostScript Printer Description (PPD) files to determine the characteristics of the printers it uses. PPD files contain information about individual PostScript printers. For example, PPD files describe the paper-handling capabilities of printers: the number of paper trays, their capacity, and the paper sizes they handle.

To take full advantage of your printer's features, you need to go through a simple setup procedure. When selecting your printer for the first time, or after installing an additional option, click the Create/Setup button in the Chooser. This procedure causes the LaserWriter driver to query the printer for its characteristics and associate a particular PPD file with the printer.
Published Date: Feb 20, 2012

Xsan: Computer showing IPv6 address may not allow authentication

This article has been archived and is no longer updated by Apple.

Issue or symptom

In Xsan Admin, you may see computers that you wish to authenticate are displayed with only their IPv6 addresses, and you may not be able to authenticate them.

Solution

Use Network preferences to disable IPv6 on all of the SAN computers. After making the change on each computer, restart that computer.

Published Date: Oct 11, 2016

Mac OS X Server 10.5: Unable to join Windows clients to PDC after upgrading

This article has been archived and is no longer updated by Apple.

Issue or symptom

When attempting to join a Windows client to a Mac OS X Server version 10.5 Leopard that was upgraded from Mac OS X Server 10.4 Tiger, you may receive an "access denied" alert on the Windows client.

The workgroup name is stored in two places. This issue may occur if the two names do not match.

Solution

Check the workgroup name in Server Admin for the SMB server, and in the WINS tab in Network preferences.

1. Open Server Admin
2. Select SMB from the services on the left
3. Click the Settings button
4. Click the General tab
5. Note the name of the workgroup
6. Open System Preferences
7. Click Network
8. Select the appropriate interface on the left
9. Click the Advanced button
10. Click the WINS tab
11. Enter the same workgroup name that you noted in Server Admin

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Published Date: Feb 20, 2012

MacBook (Late 2007): Instruments are grayed out and content may not download in GarageBand after restoring from DVD

This article has been archived and is no longer updated by Apple.

Issue or symptom

After restoring your operating system from the DVDs that came with your MacBook (13-inch Late 2007), you may notice that some instruments in the GarageBand Track Info window are grayed out. You may also notice that content may not download in the GarageBand Loop Browser when you click a grayed-out loop and select a Download Now option.

Solution

To address these issues, reinstall GarageBand from your DVD set using the following procedure:

1. Insert Mac OS X Install Disc 1.
2. Click **Install Bundled Software Only**.
3. In the Installer window, click **Continue**.
4. Click **Continue** to accept the Software License Agreement.
5. Click **Agree**.
6. Click **Customize**.
7. Toggle the triangle next to Bundled Applications
8. Select **GarageBand** and click **Install**.
9. Continue installation and type in your password.
10. After DVD1 ejects, locate and insert Mac OS X Install Disc 2. Garage Band will reinstall.
11. When the Install Succeeded screen appears, click **Close**.

Published Date: Feb 20, 2012

iPod classic and iPod nano (3rd generation) show date of January 15, 2000

This article has been archived and is no longer updated by Apple.

Issue or symptom

The iPod may show a date of January 15, 2000 when it is new or after it has been restored.

Solution

Update to iPod Software 1.0.3 or later. See this document for steps to update iPod.

Published Date: Feb 20, 2012

Managed Client: Settings not applied on first login after startup in Mac OS X 10.4

This article has been archived and is no longer updated by Apple.

Issue or symptom

Preferences specified in Workgroup Manager may not be applied when logging in for the first time after startup.

Solution

On the client computer, edit (or create) /etc/rc.local and add the following line:

```
/bin/sleep 10
```

Published Date: Feb 20, 2012

Mac OS X 10.5, iChat: Echo, feedback, or "whine" in audio or video chats

This article has been archived and is no longer updated by Apple.

If you hear an echo, feedback, or "whine" when you speak during a video or audio chat with another Mac OS X 10.5 user, it is possible that iChat's noise cancellation is not fully functioning on the remote side of the conference.

Ask the other participant to try the following steps one at a time while you are still connected. After each step, it may be necessary to speak for a few seconds to test whether or not the change helped.

1. If the microphone on the remote side is close to the speakers (and not built-in), adjust the speakers and/or the microphone so that they are further apart.

2. Adjust the volume of the microphone in Sound preferences:
    a. From the **Apple** menu, choose **System Preferences**.
    b. Click the Sound icon.
    c. Click the Input tab.
    d. Move the Input Volume slider to the left, but not so far that the other person can't hear you.

3. If the issue persists, adjust the speaker volume. First try to lower the volume. If this does not work (or the volume is already low), raise the speaker volume and see if this helps.
4. If the issue persists, restart the audio or video conference.

Remember, if you hear an echo, feedback, or whine when you speak, then it is the remote side that must make these adjustments. Conversely, if the other person says that they hear an echo, feedback, or whine when they speak, then it is likely you need to make these adjustments.

Published Date: Feb 20, 2012

Final Cut Pro 6: Master Templates do not display in Mac OS X 10.5 Leopard

This article has been archived and is no longer updated by Apple.

Issue

On computers running Mac OS X 10.5 Leopard, Master Templates (templates created in Motion) do not display in Final Cut Pro 6. If you open a Master Template in Final Cut Pro, it may appear in the Viewer and the Canvas as blank or black on a computer with Leopard.

Solution

This issue is addressed by updating to Motion 3.0.2 and Final Cut Pro 6.0.2.

Choose **Software Update** from the **Apple** menu to get the latest updates for your Final Cut Studio software, or go to Apple Downloads.

Published Date: Oct 11, 2016

iTunes 7.4 for Windows: Low bit-rate AAC files may sound distorted

This article has been archived and is no longer updated by Apple.

Issue

In some cases, audio files encoded in iTunes 7.4 on Windows may sound distorted, or may play back with the wrong duration. This can happen if you choose a low bit-rate (80 kbps or lower) for encoding in iTunes preferences.

Solution

To prevent this issue, update to iTunes 7.5.

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Published Date: Feb 20, 2012

About the Mac OS X Server 10.5.1 Update

This article has been archived and is no longer updated by Apple.

This software updates Mac OS X Server version 10.5 to version 10.5.1.

Important: Read before installing

- You must have an administrator account password that does not contain spaces or Option-keyed characters to install this update. The password may not be left blank. If you need to change your password, see this article.
- You may experience unexpected results if you've installed third-party system software modifications, or if you have modified the operating system through other means. (This doesn't apply to normal software installation.)
- The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Support Downloads to install.
- This update can be installed on non-startup volumes, but you should only do this if the current startup volume has already been updated to Mac OS X Server version 10.5.1. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are three ways to update to Mac OS X Server 10.5.1: Use Software Update, install from a standalone installer, or install on a remote computer via the `softwareupdate` command.

Software Update installation

Software Update may have referred you to this document. For more information on this feature, see this article. Because some updates are prerequisites for others, you may need to use Software Update more than once to obtain all available updates.

Standalone installer

Download the update installer and run it manually. This a useful option when you need to update multiple computers but only want to download the update once.

Remote installation

If you need to install the update on a remote computer, you can do so using the `softwareupdate` command-line tool.

What's included?

This update delivers several improvements, including:

Server Preferences

- Addresses an issue which could prevent external users from being added to a newly-created group in Server Preferences.

NetBoot

- Addresses an issue in which 10.5.x-based software images could lead to an unresponsive NetBoot client.

Open Directory

- Addresses an issue blocking control of client application access when usernames contain non-ASCII characters.
- Addresses intermittent Password Server errors.

SMB File Service

- Addresses an issue in which Microsoft Windows clients may misinterpret shared folders' ACL settings.

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Published Date: Oct 11, 2016

Mac OS: When and Why to Perform a Clean Installation

This article discusses system software faults or symptoms that may require a clean installation of system software to resolve. Specific instructions on performing a clean installation may be found in the articles listed in the Discussion section.
This article has been archived and is no longer updated by Apple.
Clean installation refers to a method of preparing for and installing the Mac OS operating system such that the existing System Folder is disabled and a new one created. Links to additional information about performing a clean installation for different Macintosh computers and Mac OS operating system versions can be found at the end of this article.

What Is a Clean Installation?
A standard system software installation modifies and updates the existing System Folder. A clean installation disables the existing System Folder, leaving all files in place, and directs the Installer to create a new System Folder. The old System Folder will be renamed "Previous System Folder," and from there you can drag any fonts, preferences, or other necessary files to the new System Folder. You should drag as few items as possible, since some items in the previous System Folder may be the cause of your difficulties.

A clean system installation brings the system software back to the standard configuration. This is necessary when system software is unusable or has been modified, preventing a normal installation. It is also useful as a final step in troubleshooting.

When To Perform a Clean Installation
A clean installation may be appropriate in the following circumstances:

- when issues occur either during system startup or after startup is complete.
- when the Mac OS installer fails to complete.
- to fix a flashing question mark on startup.
- when the System Folder has become cluttered with unneeded or unfamiliar software.

In most of these instances, a clean installation should not be the first step in troubleshooting. The more premature a clean installation, the less productive it will be in identifying the source of the trouble.

Perform the following troubleshooting procedures to help you determine whether a clean installation is appropriate. Taking the time up front to locate the source of the issue will save you time in the long run.

Stops Responding During Startup

1. Hold down the Shift key while starting up the computer to disable extensions. If the computer fails to start up, there may be an issue with the core system software.

2. Start up from a known-good system disc such as the system software CD that came with the computer, a bootable floppy disk, or a bootable external hard drive. If starting up from another system disk succeeds, the system on the hard disk is unusable.

3. Perform a clean installation (links to instructions are at the end of this article).

Exception: If the computer starts up to a Type 41 error with extensions off, the issue is probably with the Finder alone. Instead of performing a clean installation, drag the Finder file from the System Folder to the Trash, then perform a regular installation over the existing System Folder.

Stops Responding While Using a Particular Program or During Program Installation

1. Start up from a known-good system disc such as the system software CD that came with the computer, a bootable floppy disk, or a bootable external hard drive. If certain extensions are needed to run the program you are testing, start up from a disk or CD that contains the necessary extensions.

2. Run the program to see if it crashes with known-good system software. If you cannot reproduce the troublesome behavior, your system software may be unusable.

3. Perform a clean installation.

Random Faults
There may be a fault with the core system software that affects system stability.

1. Start up from a known-good system disc such as the system software CD that came with the computer, a bootable floppy disk, or a bootable external hard drive. If certain extensions are needed to run the program you are testing, start up from a disk or CD that contains the necessary extensions.

2. Run programs one at a time to see if they stop responding with known-good system software. If you cannot reproduce the fault, your system software may be unusable.

3. Perform a clean installation.

Fault During Clean Installation
A Mac OS Installer fault may occur when a clean installation is needed.

1. Disconnect or turn off all peripherals except the keyboard, mouse, and monitor.

2. Perform a clean installation.

Flashing Question Mark on Startup

1. Start up from a known-good system disc such as the system software CD that came with the computer, a bootable floppy disk, or a bootable external hard drive.

2. Look in the System Folder for files named System and Finder. Some computers (for example, an iMac) also include a file named Mac OS ROM.

3. Use Find File to locate the files if they are not found in the System Folder.

4. Move the files back to the root level of the System Folder by dragging them onto the closed System Folder.

5. Restart the computer from the hard drive.

6. If the computer still fails to start up successfully, confirm that the System Folder is "blessed" by looking at the closed System Folder icon on the hard drive. If it does not have a small Happy Mac face or Macintosh computer icon superimposed upon it, open the System Folder, then close it and check again. If the System Folder icon still does not appear as described, use Find File to search for "System Folder". There should be only one System Folder on a Macintosh volume. If there is more than one on the same volume (not on different volumes), give the other System Folder(s) a different name, then restart.

7. If the computer still fails to restart successfully, one or more of the system files may be unusable.

8. Open the System Folder and double-click on the System file to open it. If it opens successfully, perform a clean installation; otherwise, drag the System file from the System Folder to the Trash, then perform a regular installation over the existing System Folder.

System Folder Cluttered
After many program installations and removals, the System Folder can become cluttered with extensions and other files that are of uncertain origin or that may no longer be needed. This creates wasted storage space and RAM. Clean installations performed for this reason are done for convenience, not necessity.

Related documents

58176: "**Mac OS 8.5, Mac OS 9: Performing a Clean Installation**"
26055: "**Mac OS 8.0 & 8.1: Clean Installation Instructions**"
22065: "**Mac OS 8.0: Clean Installation Instruction for Performa Computers**"
30034: "**Mac OS 7.6: Clean Installation Instructions**"
22048: "**Performa w/Geoport: Restore Modem SW & Clean 7.6 Installation**"
16095: "**System 7.5: Clean Installation Procedure**"

Published Date: Feb 20, 2012

MacBook (Late 2007): Preview may close without warning when saving adjusted jpeg files

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you use the Preview application to adjust the brightness or contrast, then save a jpeg image, Preview may close without warning and not save the image.

Solution

Import the jpeg into iPhoto to make the desired brightness or contrast adjustments. Do not adjust jpeg images with the Preview application on the MacBook (Late 2007).

Published Date: Feb 20, 2012

iPhoto 2: Can‘t publish to .Mac, "Please upgrade to a newer version..." appears

This article has been archived and is no longer updated by Apple.

Issue or symptom

You are unable to use iPhoto 2 to publish to .Mac. This alert appears:

> **Important Notice**
> We apologize for the inconvenience, but the ability to order books and prints is no longer supported in iPhoto 2. Please upgrade to a newer version of iPhoto to order these products

Solution

Upgrade to a newer version of iPhoto. For example, iPhoto included with iLife '08 lets one publish pictures to .Mac via iPhoto.

Note: Earlier Macs that do not support iLife '08 can use iPhoto from iLife '04, '05 or '06 to publish (upload) pictures to .Mac.

Additional information

See "iPhoto 2: Ordering books and prints not supported".

Published Date: Feb 20, 2012

Final Cut Pro: Intermittent stream breaks with JVC GY-HD250U

This article has been archived and is no longer updated by Apple.

Issue

When capturing from the JVC GY-HD250U camcorder, it's possible that there may be occasional breaks in the data stream, similar to what would be expected if the recording had been stopped, and then started again. If this occurs, Final Cut Pro will treat such breaks as a timecode break. Depending on the setting chosen in the "On timecode break" pop-up menu in the General tab of User Preferences, Final Cut Pro may abort capture, or may begin capturing a new clip at that point.

Solution

If this issue occurs, try the following steps to remedy the situation:

1. Check to see if your camcorder has been upgraded to the latest firmware available from JVC: http://pro.jvc.com/pro/attributes/HDTV/soft/200_upgrade/index.html
2. Test with a new tape.
3. It may be necessary to use a cleaning tape. Consult your JVC GY-HD250U Operator's Manual for details.

You can shorten the amount of lost record time due to this issue by lowering the Pre-roll value in Device Control Presets.

For more information about the topics discussed in this document, refer to the Final Cut Pro User Manual, available under the Help menu in Final Cut Pro.

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Published Date: Feb 20, 2012

Mac OS X 10.5: Large file downloads timeout and need to be restarted

This article has been archived and is no longer updated by Apple.

Issue or symptom

When using Mac OS X 10.5 to download large files, a timeout may occur after downloading a portion of the file. When restarting the download, the cycle may repeat. After several download restarts, the file may be fully downloaded.

This can happen with earlier Juniper NetScreen Internet router devices.

Solution

Upgrade to a later (newer) third-party router, or use an AirPort base station.

Additional information

For more information, see this Juniper support article.

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Published Date: Feb 20, 2012

iPod: Audio heard when volume level is set to 0

Music and other audio may still be heard from the iPod even when the volume level is set to 0, or the lowest setting.

This article has been archived and is no longer updated by Apple.

If you want the iPod audio to be silent, press the Play/Pause button to pause playback.

Published Date: Mar 28, 2014

Helpful?

Yes No

Start a Discussion

in Apple Support Communities

Ask other users about this article Ask other users about this

Submit my question to the community

See all questions on this article See all questions I have asked

Mac OS X 10.4: Calculator, Unit Converter widget, and Stocks widget may not work correctly

This article has been archived and is no longer updated by Apple.

Issue or symptom

The Calculator application, the Unit Converter Dashboard widget, and the Stocks widget rely on data from the Internet that changes daily. In some cases, they may appear to have stopped working even if there is an active Internet connection:

- When using the Calculator application, nothing may happen when choosing Currency from the Convert menu.
- When using the Unit Converter widget, the message "Data unavailable" or "Update failed" may appear when choosing Currency from the pop-up menu.
- When using the Stocks widget, stock values may be blank and the message "Error retrieving chart" may appear.

Solution

Download and install the Mac OS X 10.4.11 Update or later.

Published Date: Feb 20, 2012

iSync, Mac OS X 10.4: Issues with iSync and Palm device if Palm Desktop not installed

This article has been archived and is no longer updated by Apple.

Issue or symptom

iSync may be unresponsive, or may not open at all, if Palm devices have been added to iSync but Palm Desktop software is not installed. This article applies to Mac OS X 10.4 through 10.4.11.

Solution

1. Quit all running applications.
2. From the Finder's **Go** menu, choose **Go to Folder**.
3. Go to this folder (type or paste the following):
   `~/Library/Application Support/SyncServices/`
4. Delete the folder named "Local". **Note**: Do not remove any other folders from the SyncServices folder, if you see others.
5. Reinstall Palm Desktop 4.2.1 or later software before opening iSync.

Additional information

For more information about using Palm devices with iSync, see this article. If your device supports Bluetooth, see this article.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

iSync: No alert when syncing with full Nokia N90 phone

This article has been archived and is no longer updated by Apple.

Issue or symptom

When exceeding a Nokia N90 phone's usable memory, the device may display "Phone memory full, please delete some data". However, iSync may not give an indication that the phone's memory is full when initially synchronizing the device.

In this situation, if sync session is initiated with iSync you may notice that some events or contacts may not be synced to the phone.

Solution

Reduce some of the data stored on the phone to increase the available memory.

Once there's an acceptable amount of free space on the phone, it will synchronize as expected via iSync.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Mac OS X Server version 10.5: Descriptions in Software Update not sorted with Packages

This article has been archived and is no longer updated by Apple.

Issue or symptom

When viewing Software Update packages in Server Admin, the descriptions may not maintain the original sorting order. If sorted by any criteria, the descriptions may no longer correctly correspond with the highlighted package.

Solution

After sorting, quit and open Server Admin to return to the correct order in which the descriptions match the package.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Enabling QuickTime Streaming authenticated access for Active Directory users

This article has been archived and is no longer updated by Apple.

Issue or symptom

Active Directory users may be unable to authenticate to a QuickTime Streaming server.

Solution

When using a Mac OS X QuickTime Streaming service that is bound to Active Directory, the "basic" authentication scheme must be selected in the QuickTime Streaming setting's access panel. The QuickTime Streaming server default authentication scheme is digest authentication, which is not supported by the Active Directory configuration.

Published Date: Feb 20, 2012

iMac: Using Floppy Disk-Based Installers

This article tells how to install software that comes on floppy disks onto an iMac computer.
This article has been archived and is no longer updated by Apple.
If you have not already done so, do take the time to contact the manufacturer to see whether they publish their software on compact disc. Few companies continue to distribute their software solely on floppy disks. As programs have grown in size and installers have become more sophisticated, the CD-ROM has almost entirely replaced the floppy disk as the preferred medium for the distribution and installation of software.

Nevertheless, if the software is simply not available on CD, consider the following possible alternatives:

A. Install the program over a network.

If your iMac is connected via ethernet to another computer that has a floppy disk drive, it may be possible to perform a network installation of the software from that computer. Not all software installers will permit this kind of installation. To set up a network installation, proceed as follows:

1. Create an empty folder on the hard drive of the computer that has the floppy disk drive. We will call it "Net Install," though the name is not important.

2. Insert the floppy disk and drag its icon on top of the Net Install folder. Do not open the floppy and drag its contents; rather, drag the whole floppy disk icon. The contents of the floppy will then be recreated inside the Net Install folder, in a subfolder of the same name as the floppy. Repeat this step for every other floppy in the installation set. Afterward, the Net Install folder will contain a subfolder representing each floppy disk in the set.

3. Open the Net Install folder, then open the folder representing the first floppy disk in the set. If you see an installer and an installer script inside, move them both out of that folder and into the root level of the Net Install folder, alongside the other floppy disk folders you created. If you do not see a separate installer script, it may be necessary to leave the installer where it is for this to work. Try it both ways if necessary.

4. Set up the Net Install folder to be shared over the network, then go to the iMac and log on to that shared volume. Once mounted on the iMac's desktop, you can open the Net Install folder and double-click the program installer within to begin installation on the iMac. Alternatively, you can drag-copy the whole Net Install folder to the iMac's hard drive, then run the installer from there. If, during the course of the install, you are asked to insert a floppy, cancel the install and try moving the installer into or out of the root level of the Net Install folder, as per step 3. Then try installing again. If that too fails, a network installation is probably not possible with that software.

B. Create disk images on another computer.

This is a variant of the network install, except that a disk image of a floppy contains ALL of the contents of the original floppy, including invisible files. The previous method excludes those files, the lack of which can cause an installation to fail.

Disk images are created with utilities like Disk Copy, from Apple Computer, or ShrinkWrap, from Aladdin Systems. Once created, a disk image can either be opened over the network or copied first to the iMac computer's hard disk, then opened from there. For software that comes on multiple floppy disks, ensure that all of the disk images that represent them have been mounted before initiating the install. For more information on the creation and use of disk images, refer to the instructions provided with the disk image utility.

C. Obtain a USB device that can use floppy disks. There are a variety of external storage solutions available for the iMac, some of which can use floppy disks.
Published Date: Feb 20, 2012

Final Cut Studio: Format new hard disks as Mac OS Extended for best performance

This article has been archived and is no longer updated by Apple.

Hard disk drives are sometimes sold pre-formatted in in a disk format other than Mac OS Extended, and may not perform ideally with Final Cut Studio applications. Other disk formats, such as FAT32, Mac OS Standard (HFS), New Technology File System (NTFS) and UNIX File System (UFS) may not provide ideal results.

Hard disks installed in your computer, or connected externally via FireWire should be formatted using the Mac OS Extended disk format, also known as HFS Plus.

Formatting a hard disk is usually done when it's brand new. If you want to reformat a disk that already contains data, be sure to back up the data to another disk beforehand. **Notice:** Reformatting a hard disk will permanently erase all of the data on it.

Tip: You can check the format of a hard disk by clicking its icon in Finder and then choosing **Get Info** from the **File** menu. The format is displayed in General information in the Info window.

To format a hard disk as Mac OS Extended

1. Open Disk Utility from the Utilities folder in Applications.
2. Select the name of your hard disk in the left column of the Disk Utility window so that it's highlighted.
3. Click **Erase** to show the formatting options pane.
4. From the **Volume Format** menu, choose **Mac OS Extended**. (For best performance, do **not** select the "Journaled" option on disks that will primarily be used for Final Cut Studio media input/output.)
5. Click **Erase** (in the lower-right corner).

Published Date: Feb 20, 2012

Mac OS X Server version 10.5: Location of canned email templates

This article has been archived and is no longer updated by Apple.

Emails templates are used for emails sent to newly-created users who have mail accounts, invitation emails to imported users, and notifications emails to external users who are added to groups. These emails are generated using a Ruby template stored in (/usr/share/servermgrd/bundles/servermgr_accounts.bundle/Contents/Resources/templates/).

For information about how to manipulate these files see this Developer Connection website.

Published Date: Feb 20, 2012

Mac OS X 10.5: Unable to quit running application or restart; "The application cannot be launched, -600" alert

This article has been archived and is no longer updated by Apple.

Issue or symptom

When attempting to quit an open (running) application in Mac OS X 10.5, you may notice the application still appears in the Dock as if it is running. The application may be unresponsive.

If you try to open the application again, you may receive an alert such as this:

> "The application (name) cannot be launched. -600."

...where "(name)" is the affected application's name.

If this happens, you may also not be able to shut down or restart your computer.

This can happen if an incompatible version of Intego ContentBarrier is installed.

Solution

Update to the latest version of Intego ContentBarrier.

This document will be updated as more information becomes available.

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Published Date: Feb 20, 2012

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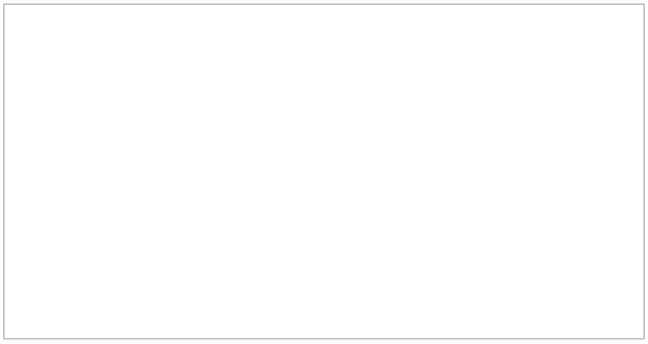

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Some counterfeit and third party power adapters and batteries may not be designed properly and could result in safety issues. To ensure you receive a genuine Apple battery during a battery replacement, we recommend visiting an Apple Store or Apple Authorized Service Provider. If you need a replacement adapter to charge your Apple device, we recommend getting an Apple power adapter.

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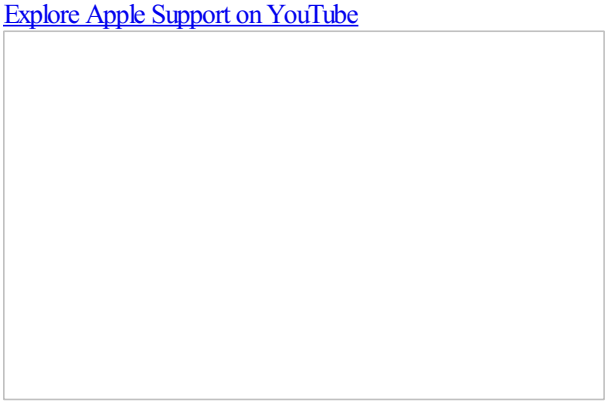

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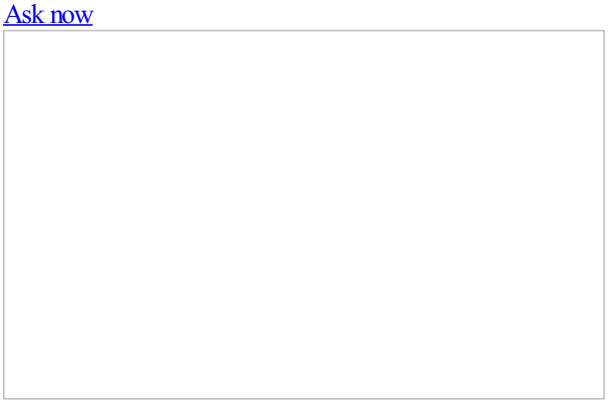

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- iPhone 6s Program for Unexpected Shutdown Issues
- Multi-Touch Repair Program for iPhone 6 Plus
- Apple AC Wall Plug Adapter Recall Program
- Beats Pill XL Speaker Recall Program
- All Programs

Logic or GarageBand may quit unexpectedly when starting with Mac OS X 10.5 Leopard if Melodyne is installed

This article has been archived and is no longer updated by Apple.

Issue or symptom

Logic Pro/Express and GarageBand may quit unexpectedly when starting on a computer with Mac OS X 10.5 Leopard if Melodyne 3.x is also installed.

Solution

The issue is caused by Melodyne's ReWire support. To resolve it:

1. Go to `/Library/Application Support/Propellerhead Software/Rewire`. Move the files "MelodyneRewireDevice" and "MelodyneRewireDevice.plugin" to the Trash.
2. Go to `/Library/Application Support` and move the alias "MelodyneRewireDevice" to the Trash.

For further information on this issue, and general Melodyne support in Leopard, go to the Celemony site.

Additional information

The Melodyne application, and plug-in will both continue to function after these steps are performed. However, ReWire connection between Melodyne and other applications will not be possible.

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Published Date: Feb 20, 2012

iPod touch: Don‘t restore an iPhone backup to an iPod touch

This article has been archived and is no longer updated by Apple.

Issue or symptom

Restoring an iPhone backup to an iPod touch may result in unexpected behavior on the iPod touch (such as the device resetting repeatedly).

Solution

If you have restored an iPhone backup to your iPod touch, restore the iPod touch to factory condition, and then select the correct backup to restore your settings.

If you experience difficulty restoring your iPod, then see this document for steps to put your iPod touch into recovery mode.

Use iTunes to update to iPod touch Software 1.1.3 or later to prevent this issue from occurring.

Published Date: Oct 11, 2016

"Some of the required files are missing" error when opening iTunes 7.5 or Error -2093 error when opening QuickTime Player 7.3

This article has been archived and is no longer updated by Apple.

Issue or symptom

After updating to QuickTime 7.3 and iTunes 7.5, the following error message may appear when opening iTunes:

> "Some of the required files are missing."

When opening QuickTime Player, an error -2093 may appear.

Solution

Remove any copies of iTunesSetup.exe that are currently on your hard drive. Then, download and install a fresh copy of the iTunes 7.5 installer (which includes QuickTime 7.3) from here:
http://www.apple.com/itunes/download/

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Published Date: Oct 11, 2016

Apple FireWire Kit: Description

This article describes the Apple Firewire Kit for the Power Macintosh G3 computer. More information on Firewire is available at http://www.apple.com/firewire/ .
This article has been archived and is no longer updated by Apple.
The Apple FireWire Kit lets you use your FireWire-based digital video (DV) camcorder to produce professional-quality digital video more easily and less expensively than ever before. It also provides an excellent way to get in on the ground floor of the latest trend in digital interfaces: FireWire, an advanced cabling, connection, and communications standard originally conceived by Apple engineers and specifically developed to meet the needs of the rapidly converging worlds of personal computing and consumer electronics.

The Apple FireWire Kit consists of a three-port FireWire PCI card, a 2-meter FireWire cable, and Adobe Premiere plug-ins that support capture, edit, and play back, as well as to export to tape. With the addition of a DV camcorder or deck with a FireWire port and a QuickTime-based video-editing application, the Apple FireWire Kit gives you a great way to get outstandingly crisp, clear digital video footage into your Macintosh.

Working with digital video avoids the degradation in quality inherent to earlier, analog-based video cards, which required you to convert video data between digital and analog formats. And the high-speed, high-capacity nature of FireWire, not to mention its flexibility and scalability is already prompting more and more hardware developers to adopt this standard--which means that you may soon be able to choose from a wealth of advanced digital devices, from cameras to scanners to printers.

Technical specifications:
- Supports 200-Mbps bandwidth
- Supports asynchronous data transfer, as well as isochronous data transfer, which provides guaranteed bandwidth for your video and audio data streams
- Supports flexible configuration options, including daisy-chaining and branching for peer-to-peer implementations (FireWire does not allow closed-loop connections)
- Allows for the addition or removal of devices while the connection is active

The user must supply:
- A FireWire-based DV camcorder or deck
- A QuickTime 3-based video-editing application that supports video import and export

This option includes:
- FireWire PCI card with three ports
- 2-meter FireWire cable (6-pin to 4-pin)
- FireWire system software extensions
- Two plug-ins for Adobe Premiere 4.2
--DV Device Control allows you to control your camera remotely
--DV Export enables you to record your edited footage onto tape
- QuickTime 3 Pro software

The Apple FireWire Kit works with any Power Macintosh G3 desktop or minitower computer running Mac OS 8.1 system software.

For additional information on FireWire, see the following knowledgebase article:

Article 24502: "**FireWire Card: Read Me**"
Published Date: Feb 20, 2012

Mac OS X 10.5, iChat: Unable to participate in some chats on a PowerPC G4 867Mhz Mac

This article has been archived and is no longer updated by Apple.

Issue or symptom

You may be unable to participate in a video or audio chat in Mac OS X 10.5 Leopard on PowerPC-based Macs that have an 867Mhz G4 processor. The iChat **Video** menu may not appear, and under the Connection Doctor's Capabilities tab your computer may be listed as "unable to participate in a video conference" due to bandwidth/network issues.

You may also receive an alert when you attempt to respond to a video conference such as:

> "NAME has invited you to participate in a Video Chat, but your computer does not support video conferencing."

(Where NAME is the name of the buddy that invited you to the video chat.)

Solution

Download and install Mac OS X 10.5.2 or later.

Published Date: Feb 20, 2012

About the security content of Safari 3 Beta Update 3.0.4

This article has been archived and is no longer updated by Apple.

This document describes the security content of Safari 3 Beta Update 3.0.4 for Microsoft Windows XP or Vista.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Safari 3 Beta Update 3.0.4

- **Safari**

  CVE-ID: CVE-2007-4692

  Available for: Windows XP or Vista

  Impact: An issue in Safari Tabbed browsing may lead to the disclosure of user credentials

  Description: An implementation issue exists in the Tabbed browsing feature of Safari. If HTTP authentication is used by a site being loaded in a tab other than the active tab, an authentication sheet may be displayed although the tab and its corresponding page are not visible. The user may consider the sheet to come from the currently active page, which may lead to the disclosure of user credentials. This update addresses the issue through improved handling of authentication sheets. Credit to Michael Roitzsch of Technical University Dresden for reporting this issue.

- **Safari**

  CVE-ID: CVE-2007-1351, CVE-2007-1352, CVE-2007-2754

  Available for: Windows XP or Vista

  Impact: Multiple vulnerabilities in FreeType v2.2.1

  Description: Multiple vulnerabilities exist in FreeType v2.2.1, the most serious of which may lead to arbitrary code execution. This update addresses the issue by updating FreeType to version 2.3.5. Further information is available via the FreeType site at http://www.freetype.org/

- **WebCore**

  CVE-ID: CVE-2007-3758

  Available for: Windows XP or Vista

  Impact: Visiting a malicious website may lead to cross-site scripting

  Description: A cross-site scripting issue in Safari allows malicious websites to set JavaScript window properties of websites served from a different domain. By enticing a user to visit a maliciously crafted web page, an attacker may be able to get or set the window status and location of pages served from other websites. This update addresses the issue by providing improved access controls on these properties. Credit to Michal Zalewski of Google Inc. for reporting this issue.

- **WebCore**

  CVE-ID: CVE-2007-3760

  Available for: Windows XP or Vista

  Impact: Visiting a malicious website may lead to cross-site scripting

  Description: A cross-site scripting issue in Safari allows a malicious website to bypass the same origin policy by hosting embedded objects with javascript URLs. By enticing a user to visit a maliciously crafted web page, an attacker may cause the execution of JavaScript in the context of another site. This update addresses the issue by restricting the use of the javascript URL scheme and adding additional origin validation for these URLs. Credit to Michal Zalewski of Google Inc. and Secunia Research for reporting this issue.

- **WebCore**

CVE-ID: CVE-2007-3756

Available for: Windows XP or Vista

Impact: Visiting a malicious website may lead to the disclosure of URL contents

Description: Safari may allow a web page to read the URL that is currently being viewed in its parent window. By enticing a user to visit a maliciously crafted web page, an attacker may be able to obtain the URL of an unrelated page. This update addresses the issue through an improved cross-domain security check. Credit to Michal Zalewski of Google Inc. and Secunia Research for reporting this issue.

- **WebKit**

  CVE-ID: CVE-2007-4671

  Available for: Windows XP or Vista

  Impact: JavaScript on websites may access or manipulate the contents of documents served over HTTPS

  Description: An issue in Safari allows content served over HTTP to alter or access content served over HTTPS in the same domain. By enticing a user to visit a maliciously crafted web page, an attacker may cause the execution of JavaScript in the context of HTTPS web pages in that domain. This update addresses the issue by preventing JavaScript access from HTTP to HTTPS frames. Credit to Keigo Yamazaki of LAC Co., Ltd. (Little eArth Corporation Co., Ltd.) for reporting this issue.

- **WebKit**

  CVE-ID: CVE-2007-4698

  Available for: Windows XP or Vista

  Impact: Visiting a malicious website may lead to cross-site scripting

  Description: Safari allows JavaScript events to be associated with the wrong frame. By enticing a user to visit a maliciously crafted web page, an attacker may cause the execution of JavaScript in the context of another site. This update addresses the issue by associating JavaScript events with the correct source frame.

- **WebKit**

  CVE-ID: CVE-2007-4812

  Available for: Windows XP or Vista

  Impact: Visiting a malicious website may lead to arbitrary code execution

  Description: A buffer overflow exists in Safari's handling of the status bar. By enticing a user to visit a maliciously crafted web page, an attacker may cause arbitrary code execution. This update addresses the issue by re-implementing the status bar handling.

Published Date: Oct 11, 2016

Aperture: Applescript to access Aperture library generates an error under Leopard

This article has been archived and is no longer updated by Apple.

Issue or symptom

An AppleScript used to select a project in Aperture may generate the error message "Aperture got an error: Can't get project *'yourprojectname*"' when run on Mac OS X 10.5 Leopard. The same script runs without an error message on Mac OS X 10.4 Tiger.

Solution

This may happen if you do not specify the library to be used in your script. This has always been the best practice, but it was not mandatory under OS X 10.4.x. For example, this script fragment will generate the error message:

```
tell application "Aperture"
      activate

      set x to name of every project
      choose from list x with prompt "Select a project"
      set ap_proj to item 1 of result
      set ap_proj to project ap_proj

end tell
```

The solution is to add the following line to the script, on the line below `tell application "Aperture"`:

```
tell library 1
```

You will also need to add an additional `end tell` statement on the line before the existing `end tell`. So the resulting script fragment will look like this:

```
tell application "Aperture"
      tell library 1
        activate

        set x to name of every project
        choose from list x with prompt "Select a project"
        set ap_proj to item 1 of result
        set ap_proj to project ap_proj
     end tell
end tell
```

Published Date: Feb 20, 2012

Final Cut Pro 6.0.2: QuickTime 7.3 or later is required

This article has been archived and is no longer updated by Apple.

Issue

Final Cut Pro 6.0.2 requires QuickTime 7.3. If you open Final Cut Pro 6.0.2, and you don't have QuickTime 7.3 or later, you will see an alert message, such as the following:

This system does not meet the following minimum requirements:

- Final Cut Pro requires that your system have QuickTime 7.3.0 installed; this system has QuickTime 7.2.1 installed.

Note: If you previously updated to QuickTime 7.3, and then upgraded your computer from Mac OS X 10.4 Tiger to Mac OS X 10.5 Leopard, it's possible that QuickTime 7.2.1 may have been installed with Leopard, and you will need to update QuickTime to 7.3 again.

Solution

Choose **Software Update** from the **Apple** menu to update to QuickTime 7.3 or later. Alternately, you can download QuickTime from the QuickTime Web site.

Published Date: Feb 20, 2012

Mac OS X 10.5: HP LaserJet 1200 prints "error" message at end of each print job

This article has been archived and is no longer updated by Apple.

Issue or symptom

An "error reporting" message may be printed after each print job sent from Mac OS X 10.5 to an HP LaserJet 1200 printer.

Solution

As a workaround, you can turn off error reporting in Mac OS X 10.5:

1. Open Terminal (in /Applications/Utilities).
2. Execute this command on a single line:

```
defaults write com.apple.print DoPostScriptErrorHandler NO
```

Note: To re-enable print error reporting, you can execute this similar command in Terminal:

```
defaults delete com.apple.print DoPostScriptErrorHandler
```

This document will be updated as more information becomes available.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 11, 2016

iTunes 7.5 for Mac: Unable to change a smart playlist from "Match All" to "Match Any"

This article has been archived and is no longer updated by Apple.

Issue or symptom

If you edit a Smart Playlist to change "Match all" to "Match any," and then go back to edit the list again, the Match option has reverted to Match all. If you click OK without changing the Match option, the Smart Playlist will change to reflect Match all.

Solution

Use Software Update to update to iTunes 7.6 or later to resolve this issue.

If you're not able to update and you want to "Match any" of the rules, then edit the Smart Playlist again and choose "Match any" again.

Published Date: Feb 20, 2012

iTunes 7.5 for Mac: Criteria of "Video Kind" in Smart Playlist not saved

This article has been archived and is no longer updated by Apple.

Issue or symptom

Creating a new Smart Playlist or editing an existing playlist with the criteria of "Video Kind" will result in no matches from your iTunes Library because the rule for the Smart Playlist will not be saved.

If you try to edit the Smart Playlist, the "Match the following rule" field will be blank or empty after you click OK. Any additional criteria that is part of the Smart Playlist will remain, but they will produce results from the entire library, not just videos.

Note: Any Smart Playlists that were created prior to updating to iTunes 7.5 will continue to work as long as you don't try to edit the Smart Playlist.

Solution

Use Software Update to update to iTunes 7.6 or later to resolve this issue.

Published Date: Feb 20, 2012

iMac: Power Supply Specifications

This article provides the power specifications for the iMac, with the exception of the iMac (Summer 2000). Refer to the the Apple Spec database online at http://www.info.apple.com/applespec/applespec.taf for information on that model.
This article has been archived and is no longer updated by Apple.
These same power supply specifications are listed in the Mac OS Info Center on your computer's hard disk.

The iMac's power supply is rated to 240 volts and has auto-switch capability.

AC Line Input

- Line voltage: 100-240 volts alternating current (V AC) wide range
- Frequency: 50-60 Hz
- Power: 220 volt-amperes (VA) maximum continuous

DC Power

- Continuous output: 80 watts (W)

Output voltage Maximum current
+5 V 14.6 A (1)
+5 V (trickle) 0.1 A
+3.3 V 12.0 A (1)
+12 V 1.5 A
-12 V 0.2 A

(1) Not more than 70 W total combined power.

Power Requirements for Devices You Can Connect

Universal Serial Bus (USB)

- Computer: 500 milliamperes (mA) per device based on USB 1.0 Specifications
- Keyboard: 100 milliamperes (mA) per device based on USB 1.0 Specifications
- Microphone
  Voltage: +5 V
  Current: 20 mA
  Power: 100 mW

Published Date: Feb 20, 2012

Mac OS X 10.5: Unable to manually establish dial-up connection via AirPort base station

This article has been archived and is no longer updated by Apple.

Issue or symptom

After you install Mac OS X 10.5, you may not be able to manually connect to a dial-up Internet connect through an AirPort base station.

Solution

Either configure your AirPort base station to automatically connect, or, if you wish to manually control the connection, connect your telephone line directly to your computer's built-in modem or an Apple USB modem and use it instead, if available.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Mac OS X Server version 10.5.1: Virtual mail users require additional short name to become active

This article has been archived and is no longer updated by Apple.

Issue or Symptom

Virtual email users may experience rejected emails by the server until the user short name is added.

Solution

In order to get the virtual email domain to accept emails, enter the short name of the virtual email and the short name of the user.

For example, John Smith's email address is johnsmith@virtualdomain.com. Be sure to include the short name johnsmith and johnsmith@virtualdomain.com.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Power Macintosh G3: PATHWORKS error on startup

I have a G3-based Macintosh computer that I am setting up with DIGITAL PATHWORKS. When the DECnet line setting is set to 'ethernet', I get the following message from PATHWORKS on startup:

"error => could not find Ethernet driver"

Is PATHWORKS supported on G3-based Macintosh computers?
This article has been archived and is no longer updated by Apple.
This is a known issue between PATHWORKS for Mac and the ethernet drivers for G3-based Macintosh computers. PATHWORKS will not function when the DECnet line setting is set to 'ethernet' on these machines.

Customers using PATHWORKS for Mac should also be aware of the following developments at Compaq/DIGITAL:

- Compaq/DEC discontinued support for PATHWORKS for Mac as of 7/1/1998.
- Compaq/DEC will not be testing PATHWORKS for Mac for Year-2000 (Y2k) compliance.

PATHWORKS supports three types of DECnet connections:
- ethernet
- AppleTalk
- modem

Although DECnet-over-ethernet connections are known not to work, DECnet-over-AppleTalk (including AppleTalk over ethernet) or modem connections may still be possible. Apple has not done any testing, and we are not aware of any testing done by Compaq/DEC before they discontinued support of their product.

The current information is true for G3 computers up to and including Mac OS 8.1. The Mac OS 8.5 ethernet driver for the G3 now provides support for the "eadr" resource, which allows the "ethernet" line setting for PATHWORKS to be used.

Although Apple has added support for this resource, we have done no testing of PATHWORKS on Mac OS 8.5.

Published Date: Feb 20, 2012

Final Cut Pro 6: Log and Transfer may fail if "FxFactory" is installed

This article has been archived and is no longer updated by Apple.

Issue

You may be unable to transfer P2 or AVCHD media in the Final Cut Pro 6 Log and Transfer window if FxFactory is installed.

Solution

This issue is addressed in FxFactory 2.0.1.

For more information about FxFactory 2.0.1, visit the Noise Industries web site.

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Published Date: Feb 20, 2012

Mac OS X 10.5: Configuring a Lexmark printer driver

This article has been archived and is no longer updated by Apple.

See this Lexmark support page for details about how to configure your Lexmark printer driver.

Note that these instructions apply to Lexmark printers connected via Bonjour.

Note: In step 3, you will have to wait for the "Searching for new drivers" to time out, then choose the "Select a driver to use..." option from the "Print Using:" pop-up menu.

This document will be updated as more information becomes available.

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Published Date: Feb 20, 2012

Final Cut Pro 6: About the Log and Transfer Window

This article has been archived and is no longer updated by Apple.

You can use the Log and Transfer window to transfer footage recorded on Panasonic P2 cards and other non-tape-based media to your computer.

Historically, video footage has been recorded on videotape. As digital acquisition quickly replaces analog technology, camcorders are starting to record footage as files on non-tape-based media such as hard disks, solid-state cards, and optical discs. Final Cut Pro can transfer file-based media to your computer using the Log and Transfer window.

For information about using the Log and Transfer Window, refer to the document, **HD and Broadcast Formats**, available under the Help menu in Final Cut Pro. You can also download the document (in PDF format) from the Apple Support site, here.

You can find more information in the "Final Cut Pro 6 Release Notes."

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Published Date: Feb 20, 2012

iMac: Video RAM Expansion

This article provides specific technical information relating to the video RAM and upgrade capabilities of iMac.
This article has been archived and is no longer updated by Apple.
The iMac computer includes 2 MB of SGRAM for video on the main logic board. The video RAM can be expanded up to 6 MB by installing an additional 4 MB of SGRAM on a 144-pin SO-DIMM (small outline dual inline memory module).

The chips on the DIMM must be 3.3 V SGRAM chips. The speed of the SGRAM chip must be 100 MHz or greater, corresponding to a cycle time of 10 ns or less.

Increasing the size of the installed video RAM from 2 MB to 4 or 6 MB increases the maximum color depth available at the highest monitor resolutions. Any additional video RAM that isn't used for the current display mode is available to QuickDraw 3D applications for more data storage, such as textures, which results in faster 3D graphics performance.
Published Date: Feb 20, 2012

Final Cut Pro 6.0.2: Render quality settings and render times

This article has been archived and is no longer updated by Apple.

Issue

Render times for a given project can be different in Final Cut Pro 6.0.2 than in previous versions. If your project contains Master Templates or Motion projects, this difference may be attributed changes in the Quality setting for Master Templates and Motion Projects.

Solution

Depending on settings in preferences, Final Cut Pro 6.0.2 may render Motion templates and Motion projects at Best quality, which can take a longer time than if Quality is set to Normal or Draft. You can change this setting for Master Templates and Motion projects in the **Render Control** pane of **User Preferences**.

When the Quality setting for Master Templates and Motion Projects is set to Normal, Final Cut Pro 6.0.2 renders your templates at the same quality seen when rendering the templates at Normal quality in Motion. If you determine that the rendering quality is not high enough, as might be the case when your Motion templates or projects use render-intensive features such as 3-D text rotation or 3-D particles, you can change the render quality to Best. However, rendering Motion templates and projects at Best quality can greatly extend the time it takes to render your movie.

Note: Selecting the "Always Use Best Quality When Rendering Movies" checkbox in the Render Control pane of User Preference sets Final Cut Pro to always render your Motion templates and projects at Best quality during export or rendering to disc, no matter which quality you selected from the Quality pop-up menu. To render your Motion templates and projects at the Normal or Draft quality, be sure this checkbox is not selected.

Published Date: Feb 20, 2012

Xserve RAID: Error when rebuilding parity

This article has been archived and is no longer updated by Apple.

Issue or symptom

The Xserve RAID utility 'Rebuild Parity Data' may quit unexpectedly and the following error message may appear in the event log:

```
Data Was Lost During A Rebuild Operation
```

Solution

You may safely ignore this error message. Simply repeat the parity rebuilding process until it successfully completes.

Published Date: Oct 11, 2016

Final Cut Pro 6.0.2: Master Templates in updated projects may require adjustment

This article has been archived and is no longer updated by Apple.

Issue

In Final Cut Pro 6.0.2, if you open a project that was created in an earlier version of Final Cut Pro 6, Master Templates used in the project may appear to be scaled differently than expected.

For example, this can occur if your project uses a High Definition format Master Template in a Standard Definition sequence.

Solution

In such cases, you can resize the Master Template instances in your project so that they are scaled correctly. Alternately, you may wish to replace the Master Templates used in your project.

Related Document

307045: "Final Cut Pro: Update Final Cut Pro 6.0.2 and Motion 3.0.2 together"

Published Date: Feb 20, 2012

About the Mac OS X 10.5.2 Server update

This article has been archived and is no longer updated by Apple.
This software updates Mac OS X Server version 10.5 or version 10.5.1 to 10.5.2.

Important: Read before installing

- The installation process should not be interrupted, *even if the progress bar remains unchanged for several minutes*. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Support Downloads to update.
- You must have an administrator account password that does not contain spaces or Option-keyed characters to install this update. The password may not be left blank. If you need to change your password, see this article.
- You may experience unexpected results if you've installed third-party system software modifications, or if you have modified the operating system through other means. (This doesn't apply to normal software installation.)
- This update can be installed on non-startup volumes, but you should only do this if the current startup volume has already been updated to Mac OS X Server version 10.5.2. The simplest way to avoid issues from an improper installation is to start up from the volume that you wish to update.

Installation

There are three ways to update to Mac OS X Server 10.5.2: Use Software Update, install from a standalone installer, or install on a remote computer via the `softwareupdate` command-line utility.

Software Update installation

Software Update may have referred you to this document. For more information on this feature, see this article. Because some updates are prerequisites for others, you may need to use Software Update more than once to obtain all available updates.

Standalone installer

Download and manually install the update. The installer is available from Apple Support Downloads. This a useful option when you need to update multiple computers but only want to download the necessary update once.

Remote installation

If you need to install the update on a remote computer, you can do so using the `softwareupdate` command-line tool.

What's included?

This update delivers several improvements, including:

Software Update Server
Addresses an issue which could prevent Software Update Server from working properly on a system that had been upgraded from Mac OS X Server 10.4.x.

Mail Server
Addresses an issue in which Virtual Mail users were required to have short names configured in order to become active.

Password Server
Addresses an issue that could block object changes from being propagated to Open Directory replica servers.

The Mac OS X Server 10.5.2 update also includes improvements provided in the Mac OS X Server 10.5.1 update.

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Published Date: Oct 11, 2016

Xsan: Synchronizing clocks is important

This article has been archived and is no longer updated by Apple.

Xsan relies on each Xsan node having synchronized clocks. Therefore, each Xsan node should be configured to share a common Network Time Protocol Server. You can configure this setting in Date & Time preferences, in System Preferences.

Note: For computers running Mac OS X 10.4.x, see the this article.

Published Date: Oct 11, 2016

How to identify audio file types and formats of regions in Logic

This article has been archived and is no longer updated by Apple.

Logic Pro/Express supports several audio file types and formats. These fall into three general types:

- PCM audio files (such as AIFF, WAV and SD2).
- Compressed audio files (such as AAC and MP3).
- Looping audio files (such as Apple Loops and ACID Loops)

Additionally, audio files may be different channel formats, such as mono, split stereo, interleaved stereo, or surround. You can easily tell at a glance what type and format a region in your arrangement is, by the glyph that follows its name:

Glyph	What it represents
	This glyph represents a mono PCM audio file
	This glyph represents a split stereo PCM audio file
	This glyph represents an interleaved stereo PCM audio file
	This glyph represents a surround PCM audio file (Logic Pro only)
	This glyph represents a mono compressed audio file
	This glyph represents a stereo compressed audio file
	This glyph represents a mono looping audio file
	This glyph represents a stereo looping audio file

This glyph represents a recording you've made where you've enabled "Follow Tempo" in the region parameter box.

You can find more detailed information about your audio regions, including bit depth, sample rate and specific file type in the Audio Bin.

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Published Date: Feb 20, 2012

Mac OS X 10.5: Finder may restart when trying to change file permissions

This article has been archived and is no longer updated by Apple.

Issue or symptom

When trying to change file permissions in a Finder Get Info window, the Finder itself may restart after the "+" button is clicked.

This issue can affect accounts that were migrated from Mac OS X 10.4 Tiger.

Products affected

- Mac OS X 10.5

Solution

1. Log in as an administrator.
2. Open Terminal (in /Applications/Utilities).
3. Type the following commands, each on a single line and followed by Return (enter an admin password when prompted):

```
sudo dscl . create /Groups/username GroupMembership username

sudo dscl . change /Groups/username RecordName username _username
```

Replace the italicized "*username*" with your account username (which is also the name of the user's Home folder, in the Users folder). Remember to include the underscore "_" before your user name in the second command.

If you have more than one account on the computer affected by this issue, you should run these two commands again for each account, substituting with the appropriate user name each time.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

iMac: Changing Internet Setup Assistant Configurations

This article explains how to re-enter your Internet Setup Assistant information.
This article has been archived and is no longer updated by Apple.
Internet Setup Assistant automates the creation of configurations, rather than having to go to each individual control panel and manually enter information. If you have already created a configuration though, and need to make changes, use the following guide to determine where the information is stored.

Internet Setup Assistant modifies the following control panels:

AppleTalk - The settings in this control panel determine how your computer will connect to an AppleTalk (EtherTalk) network or printer. The AppleTalk control panel also allows the connection to be active on a remotely-connected network (Remote Only).

Dial Assist - The settings in this control panel determines what area code you are calling from, if you need to dial a 9 to reach an outside line and other options specific to your connection.

Modem - The settings in this control panel determine what modem your computer uses and how it is used.

Remote Access - The settings in this control panel determine what number your computer dials, what username and password is used and other options specific to your connection.

TCP/IP - The setting in this control panel determines the network connection information, such as domain name, domain name service, router (gateway) address, subnet mask and other options specific to your connection.

These control panels comprise the user interface to Open Transport networking, the name given to modern networking in the Mac OS.

After locating the appropriate control panel to be modified, open the control panel, and note the name of the control panel. For example, "TCP/IP (Work)" appears in the title of the window. This determines what configuration is active. Making changes while the configuration is active, then closing the control panel and saving changes, modifies the configuration.

To learn more about each control panel, use Balloon Help found under the Help Menu while the control panel is open or press the help button on the keyboard.

For additional information see the following articles:

- Article 58041: "**iMac: Changing Internet Settings and Applications**"
- Article 24550: "**iMac: Using Multiple Internet Configurations**"
- Article 75085: "**Open Transport: TCP/IP Configuration**"

Published Date: Feb 20, 2012

Qloud plug-in may cause iTunes to freeze or quit

This article has been archived and is no longer updated by Apple.

Issue

In some cases, having the Qloud plug-in for iTunes for Windows installed can cause iTunes to freeze or unexpectedly quit when opened. Follow the instructions below to remove the plug-in and resolve this issue.

Solution

Remove the Qloud plug-in using the steps below:

1. Quit iTunes.
2. Navigate to the Qloud plug-in folder typically located in the `C:\\Program Files\\iTunes\\Plug-Ins\\Qloud` folder as shown below:

3. Open the `iTunesQLoudSetup` application. If you see the security warning shown below, click Run.

4. When the Qloud Setup application opens, select the uninstall option shown below:

5. When the uninstall is complete, delete the Qloud folder located at `C:\\Program Files\\iTunes\\Plug-Ins\\`

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Published Date: Feb 20, 2012

Compressor/Apple Qmaster versions 2.3 and earlier and version 3.0 not supported on Mac OS X 10.5 Leopard

This article has been archived and is no longer updated by Apple.

Issue or symptom

Compressor/Apple Qmaster versions 2.3 and earlier and version 3.0 are not supported on Mac OS X 10.5 Leopard.

Solution

Compressor and Apple Qmaster 2.3.1 and later or version 3.0.1 or later are supported on Mac OS 10.5 Leopard. Use Software Update to ensure you have the latest updates.

Published Date: Oct 11, 2016

Aperture sometimes quits unexpectedly after upgrade to Mac OS X 10.5 Leopard

This article has been archived and is no longer updated by Apple.

Issue or symptom

Aperture sometimes quits when starting up after you install Mac OS X 10.5 Leopard.

Solution

This can happen if you use Aperture 1.5.4 or earlier. Update to Aperture 1.5.6 or later to resolve this issue. You can get the Aperture 1.5.6 update here. Additional information about the Aperture 1.5.6 update can be found here.

Published Date: Feb 20, 2012

Sorting Spotlight search results in Mac OS X 10.5

This article has been archived and is no longer updated by Apple.

Mac OS X 10.5 Leopard allows you to order your Spotlight or Finder search results to make them easier to look through.

You can sort your search results by Name, Kind or Last Opened. Clicking on any of these fields will change the order in which the search results are displayed.

Published Date: Feb 20, 2012

Mac OS X Server: How To Change Startup Mode

For Troubleshooting purposes the startup mode of Mac OS X Server may be changed temporarily from the default full boot.
This article has been archived and is no longer updated by Apple.
To change the startup hold down the appropriate mnemonic key:

"v" - starts system in verbose mode.
"s" - starts system in single user mode.
"option" - starts system from Mac OS 8 partition (if available).
Published Date: Feb 20, 2012

MacBook Pro (Late 2007): Display issues (shimmering) after DVD restore

This article has been archived and is no longer updated by Apple.

Issue or symptom

A MacBook Pro (Late 2007, 2.4/2.2GHz) computer may have display issues or shimmering, if it is restored using the DVDs that came with the computer.

Solution

These issues can be corrected by applying the most recent software updates available for this platform.

To apply these updates, perform the following steps.

1. From the **Apple** menu in the upper left corner of the screen, select Software Update.
2. Click the **Install** button and follow the on-screen instructions to install the latest Mac OS X software updates for your computer.

Published Date: Feb 20, 2012

Final Cut Express 3.5 and earlier not supported on Mac OS X 10.5 Leopard

This article has been archived and is no longer updated by Apple.

Issue or symptom

Final Cut Express version 3.5 and earlier are not supported on Mac OS X 10.5 Leopard.

Solution

Final Cut Express 3.5.1 and later versions are supported on Mac OS X 10.5 Leopard. Use Software Update to ensure you have the latest updates.

Published Date: Oct 11, 2016

Mac OS X Server: Determining Hardware Ethernet Address

How to determine the hardware ethernet address of a Mac OS X Server computer.
This article has been archived and is no longer updated by Apple.

Mac OS X Server 10.x

1. Open the Apple System Profiler application found at /Applications/Utilities.
2. Look in the Network Overview of the System Profile to find your Mac Address.

On Mac OS X Server 1.x,

1. Open the Terminal application.
2. Type: `netstat -I en0`
   Note: This assumes en0 is the Ethernet interface.
3. Press Return

The hardware Ethernet address is located in the Address column of the output.

If the computer is connected to a NetInfo network using broadcast binding, the hardware address and owner of the machine can be determined by typing the following command:

```
nidump -r /machines .. > machines.txt
```

The file machines.txt may then be searched for a person's name, IP address, or hardware Ethernet address.
Published Date: Feb 20, 2012

.Mac Sync: Last sync incorrectly noted as "Today"

This article has been archived and is no longer updated by Apple.

Issue or symptom

In Mac OS X 10.5 Leopard's .Mac preferences (in System Preferences), your last sync may incorrectly be noted as having occurred "Today", even if you have not synced yet today.

Solution

If you sync again, the Last Sync notice in .Mac preferences will be updated as expected. If you have enabled displaying Sync Status in the Menu bar, the Sync menu item will show the last sync date correctly.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Motion 3: Text on a Path - Resolving glyph flipping

This article has been archived and is no longer updated by Apple.

Issue

In Motion 3, text on a path is possible even when that path is a 3D curve. When text follows a 3D path in this fashion, the glyphs tend to automatically "point up" so that they stay oriented with the global up direction. This behavior simplifies working with text on 3D curves.

In some cases you will want the glyphs to stay upside-down as they follow a path, rather than flipping over to point upwards.

The following illustration shows a case where automatic glyph-flipping is not desired.

We can see that the artist intended the text to follow the curve upward through the arc, but instead of the letters remaining upside-down, they flip over and look backwards. As the letters pass where the path aligns with the vertical axis, they flip to point upward, rather than just flowing with the path in a simple fashion.

Solution

This behavior can be controlled by adding a couple of points to the curve and by flipping the normal for curve points where text is upside-down.

In the illustration below we can see the same project as above has been improved by adding control points to the curve at the inflection points (Note the new points on the curve where the path goes vertical).

After adding new points to the curve, control-click on the first point where the text is flipping, and choose **Flip Normal** from the shortcut menu. Follow along the curve, and Flip Normals for other curve points where you want the text upside-down.

Published Date: Feb 20, 2012

MacBook (Late 2007): Using the appropriate software restore DVD

This article has been archived and is no longer updated by Apple.

Issue or symptom

If the wrong software restore DVDs are used with the MacBook (13-inch Late 2007), you may experience issues including, but not limited to, the Ethernet and DVI ports not functioning correctly or intermittent video.

Solution

In the event the computer needs to be restored to factory settings, or an 'Archive and Install' needs to be performed, it is important to use the software restore DVDs included with the MacBook (13-inch Late 2007).

The MacBook (13-inch Late 2007) requires the Mac OS X 10.5 Leopard operating system. If the operating system needs to be reinstalled, you must use the discs that were included with the computer. Installing older versions of the operating system (such as Mac OS X 10.4 Tiger) is **not** recommended or supported.

Published Date: Feb 20, 2012

About sRAW Images from Canon 40D Cameras with Apple photo applications

This article has been archived and is no longer updated by Apple.

Note: sRAW images are not supported from any camera. This document describes specific symptoms that may be seen with the Canon EOS 40D camera if the sRAW format is used.

The Canon EOS 40D camera offers an option to shoot images in a format called "sRAW", in addition to RAW and JPEG. As indicated on the Mac OS X 10.5 RAW Camera Support page, RAW images from the EOS 40D are supported. However, sRAW images are not supported. If you try to open sRAW images from the EOS 40D you may see some of the following issues:

- Attempting to open an sRAW image in Preview on Intel-based computers running Mac OS X 10.5 Leopard may cause Preview to quit unexpectedly.
- sRAW images opened with Preview on PowerPC-based or Intel-based computers running Mac OS X 10.4.11 Tiger will display garbage.
- sRAW images can be imported into iPhoto on Intel-based computers running Mac OS X 10.5 Leopard, but iPhoto may quit unexpectedly when you try to edit them.
- sRAW images can be imported into Aperture on Intel-based computers running Mac OS X 10.5 Leopard, but Aperture may quit unexpectedly when opened if there are sRAW images in the Aperture library.
- sRAW images can be imported into iPhoto and Aperture on PowerPC-based or Intel-based computers running Mac OS X 10.4.11 Tiger, but the images will display garbage.

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This issue is resolved in Aperture 3.

Published Date: Feb 20, 2012

MainStage: Controls sometimes flash black

This article has been archived and is no longer updated by Apple.

Issue or symptom

Some onscreen controls may flash black sporadically while playing.

Solution

This sometimes happens with the nVidia 5200 graphics card while in Performance or Full Screen mode. It is more likely to happen with display resolution settings of 1600 x 1200 or higher. It may help to lower the display resolution for the computer:

1. Choose **Apple** menu > **System Preferences**.
2. Choose **View** > **Displays**.
3. Click the "Display" tab in the Displays window.
4. Select a lower resolution setting for your display.

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Published Date: Feb 20, 2012

Boot Camp 2.0, Mac Pro: Windows XP Device Manager indicates that Intel(R) 5000 Series Chipset PCI Express devices may not be working properly

This article has been archived and is no longer updated by Apple.

Issue or symptom

With Boot Camp 2.0 and a Mac Pro, while viewing the contents of Device Manager in Microsoft Windows XP, Intel(R) 5000 Series Chipset PCI Express devices may be displayed with a yellow exclamation point icon:

When inspecting these devices, Device Status in the General tab may state "This device is not working properly because Windows cannot load the drivers required for this device (Code 31)".

Product affected

- Boot Camp 2.0, included with Mac OS X 10.5 Leopard
- Mac Pro
- Microsoft Windows XP (any version)

Solution

These indicators in Device Manager can be safely ignored. No additional drivers or other software is needed.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Important: Apple does not provide technical phone support for installing, using, or recovering Microsoft Windows. Support is available for using Boot Camp Setup Assistant, as well as installing or restoring Boot Camp software while booted into Windows. Support articles and discussions may also be available on Apple's support website.

Published Date: Feb 20, 2012

Final Cut Pro 6: About 60 fps Drop Frame Timecode Support

This article has been archived and is no longer updated by Apple.

Issue

Final Cut Pro 6.0.2 has support for 60 fps drop frame timecode. This includes support for capture, export via QuickTime, FireWire device control, and third-party interfaces. 60 @ 30 timecode can also be displayed in drop frame mode.

If you edit a 60 fps clip with drop frame timecode into an empty sequence, the sequence's drop frame setting may not be set as expected.

Affected products

- Final Cut Pro 6.0.2

Solution

To correct the drop frame setting of the sequence, choose **Sequence > Settings**, click the Timeline Options tab, and then select the Drop Frame checkbox.

Note: Sequences that use 60 fps timecode have the Drop Frame option selected by default (as is the case with sequences that use 30 fps timecode). Many devices that use 60 fps timecode use non-drop frame timecode by default, so you may want to change your sequence settings (choose **Sequence > Settings**, click the Timeline Options tab, deselect the Drop Frame option, and then click OK).

Published Date: Feb 20, 2012

Updating the Purchased playlist

This article has been archived and is no longer updated by Apple.

Selections you purchase from the iTunes Store are associated with your Purchased Playlist:

If you do not find your purchases there, don't worry—you can easily associate them with your Purchased playlist.

Step 1: Locate your iTunes Store purchases

There are a few ways to locate your purchases.

Get Info Method

You can identify iTunes Store purchases by viewing the Summary information.

1. Locate the song in the iTunes browser by clicking a Library icon such as Music, Movies, or TV Shows and then typing the purchased title (artist or album name) in the Search field.
2. When you locate the item in the iTunes browser, click once to select it.
3. From the **File** menu, choose **Get Info**.
4. Click the Summary tab. The purchaser's name and account indicate that the song was purchased from the iTunes Store:

File Format Method

You can identify iTunes Store purchases by the following file formats:

- Purchased AAC audio file
- Protected AAC audio file
- Purchased MPEG-4 video file
- Protected MPEG-4 video file

File formats are shown in the Kind column.

Tip: If you do not see the Kind column, select an iTunes Library such as Music, Movies, or TV Shows. Choose **View > View Options** and select Kind. Or you can also press the Control key and click (or right-click) a column heading to see a list of the view options.

Step 2: Select the purchased items

Select adjoining items by holding down the Shift key and clicking the first and last items.

Select multiple, non-adjoining items by holding down the Command key (on a Mac) or the Control key (on Windows) and clicking the purchased items.

Tip: To sort your Library by Kind, click the Kind column heading at the top.

Step 3: Associate the selected items with your Purchased playlist

Drag the selected items into your Purchased playlist or Control-click, and then choose **Add to Playlist > Purchased** from the shortcut menu.

The items should now display in your Purchased playlist.

TA25119_Updating_the_Purchased_playlist.pdf

Additional information

For help creating your own playlists and burning CDs see click here if you have a Mac or here if you use Windows.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

About the MPEG-2 component included with iMovie ‘08

This article has been archived and is no longer updated by Apple.

iMovie '08 includes an MPEG-2 component that provides import support for certain iMovie '08 compatible MPEG-2 video cameras. This MPEG-2 component does **not** provide import/export functionality for MPEG-2 files in iMovie '08 or QuickTime.

In order to play back MPEG-2 files in QuickTime, you need the MPEG-2 Playback Component. This component provides playback functionality in QuickTime only and does **not** provide MPEG-2 export functionality in QuickTime Pro or iMovie.

Published Date: Oct 11, 2016

About the security content of Java Release 6 for Mac OS X 10.4

This article has been archived and is no longer updated by Apple.

This document describes the security content of Java Release 6 for Mac OS X v10.4, which can be downloaded and installed via Software Update preferences, or from Apple Downloads.

For the protection of our customers, Apple does not disclose, discuss, or confirm security issues until a full investigation has occurred and any necessary patches or releases are available. To learn more about Apple Product Security, see the Apple Product Security website.

For information about the Apple Product Security PGP Key, see "How to use the Apple Product Security PGP Key."

Where possible, CVE IDs are used to reference the vulnerabilities for further information.

To learn about other Security Updates, see "Apple Security Updates."

Java Release 6 for Mac OS X 10.4

- **Java**

  CVE-ID: CVE-2007-5862

  Available for: Mac OS X v10.4.10 and later, Mac OS X Server v10.4.10 and later

  Impact: A malicious webpage can remove or insert items in the keychain

  Description: An access check may be bypassed for Keychain updates. A specially crafted Java applet may be able to add or remove items from a user's Keychain, without prompting the user. This update addresses the issue through an improved access check. This issue does not affect systems running Mac OS X v10.5 and later. Credit to Bruno Harbulot of the University of Manchester for reporting this issue.

- **Java**

  CVE-ID: CVE-2006-4339, CVE-2006-6731, CVE-2006-6736, CVE-2006-6745, CVE-2007-0243, CVE-2007-2435, CVE-2007-3004, CVE-2007-3005, CVE-2007-3504, CVE-2007-3698, CVE-2007-3922, CVE-2007-4381, CVE-2007-5232

  Available for: Mac OS X v10.4.10 and later, Mac OS X Server v10.4.10 and later

  Impact: Multiple vulnerabilities exist in Java 1.4

  Description: Multiple vulnerabilities exist in Java 1.4, the most serious of which may lead to arbitrary code execution and privilege escalation. These are addressed by updating Java 1.4 to version 1.4.2_16. These issues are already addressed in systems running Mac OS X v10.5 and later.

- **Java**

  CVE-ID: CVE-2006-4339, CVE-2006-6731, CVE-2006-6745, CVE-2007-0243, CVE-2007-2435, CVE-2007-2788, CVE-2007-2789, CVE-2007-3004, CVE-2007-3005, CVE-2007-3503, CVE-2007-3504, CVE-2007-3655, CVE-2007-3698, CVE-2007-3922, CVE-2007-4381, CVE-2007-5232

  Available for: Mac OS X v10.4.10 and later, Mac OS X Server v10.4.10 and later

  Impact: Multiple vulnerabilities exist in J2SE 5.0

  Description: Multiple vulnerabilities exist in J2SE 5.0, the most serious of which may lead to arbitrary code execution and privilege escalation. These are addressed by updating J2SE 5.0 to version 1.5.0_13. These issues are already addressed in systems running Mac OS X v10.5 and later.

Published Date: Oct 11, 2016

Outlook 2003 may not immediately refresh newly synced groups from iPod touch or iPhone

This article has been archived and is no longer updated by Apple.

Issue or symptom

When syncing Groups with Outlook 2003 and the iPhone/iPod touch, newly added Groups may not immediately display in Outlook.

Solution

To refresh the Group list view, click Calendar or a different Outlook application such as Notes or Tasks and then go back to Outlook Contacts to view the updated Group list.

Additional information

This issue does not occur on Outlook 2007.

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Published Date: Feb 20, 2012

Mac OS X Server 10.4, 10.5: Unable to bind to server via "Encrypt using SSL"

This article has been archived and is no longer updated by Apple.

Issue or symptom

When binding to an Mac OS X Server version 10.4.x or 10.5.x via the "Encrypt using SSL" option, Directory Utility may return a message that states:

"Unable to add server. [server name or IP address] does not support directory connections encrypted with SSL.".

Solution

1. On the Open Directory Master create a self-signed certificate. Make sure that the certificate's common name matches the fully qualified domain name (FQDN, such as "www.example.com") of the server.
2. On the client, open Terminal and use the following command to obtain the certificate from the master:

```
openssl s_client -connect myServerName:636
```

3. Copy the lines starting from "-----BEGIN CERTIFICATE-----" up to and including the "-----END CERTIFICATE-----" line.
4. Using these guidelines, create a file on the desktop named "mycert".
5. Paste the information you copied in step 3 into the file.
6. Execute the following command Terminal:

```
sudo mv ~/Desktop/mycert /etc/openldap/
```

7. Edit /etc/openldap/ldap.conf.
8. Under the line "TLS_REQCERT demand" add "TLS_CACERT /etc/openldap/mycert".
9. Restart the client.
10. Open Directory Utility and bind to the LDAP server using SSL.

Published Date: Oct 11, 2016

Mac OS X 10.5: Mail message attachment(s) are not saved

This article has been archived and is no longer updated by Apple.

Issue or symptom

Mail messages that are saved via **Save As...** (in Mail's **File** menu), may not include any message attachment(s) in the saved copy.

Solution

After saving the email message, manually save the attached file(s):

- With the message open, click the "Save" button that appears at the top of the message (between the To: field and message body)

  or

- Drag the attachment's icon or picture from the Mail message body to a different location, such as your desktop

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Artists do not appear in Artists menu on iPod if part of a compilation

This article has been archived and is no longer updated by Apple.

When songs are part of a compilation, the artists associated with those songs will not appear in **Music > Artists** on the iPod classic or iPod nano (3rd generation) after updating to iPod software 1.0.3.

To see these artists in the Artists menu, select the song in your iTunes library and choose **File** > **Get Info**. Click the Info tab and deselect the option "Part of a compilation" at the bottom of the window.

For additional information click here.

Published Date: Feb 20, 2012

Final Cut Pro: Lack of responsiveness due to network volumes

This article has been archived and is no longer updated by Apple.

Issue

When you switch from another application back to Final Cut Pro, there may be a delay or you may see the spinning disc cursor for a moment.

This can occur if you have a network volume mounted (e.g., via File Sharing) that is connected via a slow network link.

Solution

Unmount any network volumes not required by the work you're doing. Any slow network volumes that are mounted to your computer may cause occasional delays in Final Cut Pro performance, as it polls drives for availability.

See "Final Cut Pro: Choosing a Hard Disk" for additional tips.

Published Date: Feb 20, 2012

Mac OS X 10.5: Developer preview of Java SE 6 for Leopard available from the Apple Developer Connection

This article has been archived and is no longer updated by Apple.

A developer preview of Java SE 6 for Leopard is available via the Apple Developer Connection (ADC) (http://connect.apple.com).

Java is an important technology included as a core feature of Mac OS X, and Apple puts forth extensive effort to make sure Java performs well, is reliable, compatible, and secure. Every Mac running Tiger or Leopard has great support for the most widely-used versions of Java, both Java 1.4.2 and Java SE 5. These versions are regularly updated with security fixes and compatibility improvements to support the widest collection of Java applications in production.

The Java SE 6 release for Leopard is targeted at Java developers. This version of Java for Mac OS X requires an Intel-based Mac capable of running 64-bit applications, including computers with Core 2 Duo processors and any Mac Pro computer. Java SE 6 takes advantage of Leopard's 64-bit capabilities to offer unique performance capabilities for current and future generations of Macs. Please see the release notes included with the Java SE 6 download for additional information about this preview release.

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Published Date: Feb 20, 2012

Mac OS X Server 10.4: Quota information in Server Admin not available after updating to 10.4.11

This article has been archived and is no longer updated by Apple.

Issue or symptom

After updating to Mac OS X Server version 10.4.11, Server Admin may report "Data not available" when viewing disk quota usage.

Solution

You can use Server Admin Tools 10.5 on a Mac OS X 10.5 Leopard-based client to view disk quotas on the Mac OS X Server 10.4.11 server. See this article for admin tools compatibility information.

Additional information

Published Date: Oct 11, 2016

Ethernet: Crossover Cable Pinout

This article lists the pinout and signal assignments for a 10Base-T Ethernet crossover cable.
This article has been archived and is no longer updated by Apple.
Cabling should be Category 5 Unshielded Twisted Pair (UTP) wire for optimum performance.

Here are the pinout assignments:

From	To
1	3
2	6
3	1
4	none
5	none
6	2
7	none
8	none

Here are the signal assignments:

Pin	Signal
1	TD+
2	TD-
3	RD+
4	not used by 10BaseT (1)
5	not used by 10BaseT (2)
6	RD-
7	not used by 10BaseT
8	not used by 10BaseT

Notes:

1. On a telephone line this is TIP.
2. On a telephone line this is RING.

Published Date: Feb 20, 2012

Mac OS X Server version 10.5: Migrating a wiki to another server

This article has been archived and is no longer updated by Apple.

Learn how to move a Mac OS X Server version 10.5 wiki to another server.

Note: Both servers need to be connected to the same Directory Service and the group must be located in Open Directory.

1. Prior to moving any data, use Server Preferences to disable wiki for the group you will be moving.
2. Stop Web Service to make sure no changes occur during this procedure.
3. Migrate the folder located at (/Library/Collaboration/Groups/*group_short_name*/) to the new server, preserving permissions.

   Note: This path is the default location. If you do not see this folder in this location, check Server Admin's Web Services pane to see if the location was changed.

4. Re-enable wiki for the group and choose the new server to host that group's wiki.
5. Start Web Service.
6. Verify that you can access the group's data on the new server.

If the two servers are not part of the same directory structure

In this situation, you'll need to recreate the group on the new server's directory structure, then copy the files to the new server.

1. Determine the GUID of the group using Work Group Manager (use the Inspector to find the value for GUID.)
2. Open the file located at: (path to Collaboration folder/Groups/*group_name*/metadata.plist)
3. Find the GUID key.
4. Replace the value there with the value you found in the new group,
5. Save.
6. Enable wiki on the new group and choose the new server as the host for the new group's wiki.
7. Start Web Service.
8. Verify that you can access the group's data.

Published Date: Feb 20, 2012

Mac Pro (Early 2008): Dongle may not be recognized

This article has been archived and is no longer updated by Apple.

Some applications use an external hardware device that connects to the USB port to authorize the use of the software on your Macintosh. This device is commonly referred to as a "dongle."

If your application is having trouble locating a dongle that is plugged into a display or keyboard, try plugging it into one of the USB ports on the CPU. This should allow your application to more easily locate the dongle and authorize use of your software.

Note: If issues persist on the Mac Pro's USB ports, refer to the third-party vendor that provided the dongle.

Published Date: Feb 20, 2012

Mac Pro (Early 2008): NetBoot client won‘t restart with Mac Pro RAID Card

This article has been archived and is no longer updated by Apple.

Issue or symptom

NetBoot client on a Mac Pro (Early 2008) that contains a Mac Pro RAID Card may unexpectedly shut down before reaching the Finder.

Solution

Remove the Mac Pro RAID Card from the Mac Pro (Early 2008). A Mac Pro (Early 2008) computer containing a Mac Pro RAID Card is not a supported NetBoot configuration.

Published Date: Oct 11, 2016

PowerBook G3 Series: No Sound After Sleep

Sometimes after I bring my PowerBook G3 Series out of sleep, I notice that the sound no longer works. Why is this?
This article has been archived and is no longer updated by Apple.
There is an issue where after sending or receiving a fax with FaxSTF, the sound will stop working after the PowerBook has been brought out of sleep if FaxSTF is set to answer calls.

Workarounds:

- Set FaxSTF to "Answer on never" in the Fax Browser settings.
- After the issue occurs, put the PowerBook to sleep and then bring it out of sleep once again. The audio will start working again and will continue to work until the PowerBook has restarted and the problematic scenario occurs again.

It is normal behavior for the sound input to change to Internal Modem when coming out of sleep if FaxSTF is set to answer calls.

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. To visually identify which type of computer you have, close the display and inspect the display case. A Macintosh PowerBook G3 has a small, six-color Apple logo on the display case. A Macintosh PowerBook G3 Series computer has a large Apple logo on the display case that is not six-colored.
Published Date: Oct 4, 2008

Mac OS X 10.5: Web Sharing - Relocated Home directory leads to "Forbidden 403" website message

This article has been archived and is no longer updated by Apple.

Issue or symptom

If your home directory location has been changed from the default location, your Personal Web Sharing content may not be accessible to others.

Note: If this issue occurs under different circumstances (the user's Home has *not* been relocated), follow the steps in Mac OS X 10.5: Web Sharing - "Forbidden 403" message appears instead of website content.

Solution

To resolve this issue, edit the user account's Web Sharing configuration file to point at the correct location of your Home. In the following instructions, replace "*myname*" with your username (this is the same name as your user's Home folder in the Users folder.)

1. In the Finder, from the **Go** menu choose **Go to Folder**.
2. Type: `/etc/apache2/users/`
3. Click Go.
4. Drag "*myname*.conf" to the desktop. If you do not see *myname*.conf, follow steps 1 through 6 in this article to create that file on the desktop.
5. Double-click the desktop copy of "*myname*.conf".
6. Replace the string "/Users/*myname*/Sites/" with the correct path to your home directory.
7. Save the file.
8. Follow the steps from 8 through to 20 in this article.

You should now be able to access your website content as expected.

Published Date: Feb 20, 2012

Mac OS X 10.5: Network locations migrated from Mac OS X 10.4 do not retain WINS configuration settings

This article has been archived and is no longer updated by Apple.

Issue or symptom

WINS configuration settings (in the WINS tab of Network preferences, in System Preferences) may not be retained for Network Locations migrated from Mac OS X 10.4.

Solution

Create a new network location (via "Edit Locations..." in the "Location" pop-up menu, in Network preferences).

Configure the new location with the desired WINS settings.

Published Date: Feb 20, 2012

Macintosh: Random Behaviors When No Printer Is Chosen

If a printer selection has never been made, application programs may exhibit a variety of symptoms. This article explains the issue, and tells how to select a printer even if one is not connected.

This article has been archived and is no longer updated by Apple.

Symptom

If a printer selection has never been made, application programs may exhibit a variety of symptoms including:

- The computer stops responding.
- The computer stops responding, and a System error type 1 (or 11) message appears.
- When trying to send a fax by using the Command-Option keyboard shortcut, an error message appears and states that no printer is selected in the Chooser; you are unable to fax.

Solution

The computer may have never been set up to use a printer. Many application programs assume that a printer has been chosen; when that isn't the case, the application(s) may exhibit the symptoms listed above.

If a printer is connected

If your computer is connected to a printer, use the Chooser to select the printer. Close the Chooser and restart your computer before trying to print again.

If a printer is not connected

Macintosh with USB port

If you do not have any USB-compatible printer drivers installed (none of Apple's serial printer drivers, such as ImageWriter or StyleWriter, are USB-compatible), and are not connected to a network printer, there are no printers left in the Chooser to select. In that event, select the "FaxPrint" driver (found in the Chooser) instead. Note that a desktop printer icon is not created for the "FaxPrint" driver. Print commands invoke the Send Fax dialog box instead of the standard Print dialog box.

All other Macintosh computers

Use the Desktop Printer Utility to set up a desktop printer that is not associated with any actual printer (see Figure 1). Then use the Chooser to select the newly-created desktop printer.

Figure 1 Creating a desktop printer that is not associated with any printer.

Alternatively, if the modem port or serial port is unused, set up a "phantom" serial printer selection through the unused port. For example, set up a StyleWriter printer connection through the printer port if your printer port is not being used. If both the modem port and the serial port are being used, you can use the Chooser to set up a fax driver connection.

Technical Background

Setting up a Macintosh without a printer selection is undesirable. There are a few ways that this can happen:

- You skip the Mac OS Setup Assistant at startup.
- When going through the Mac OS Setup Assistant, in the section on selecting a printer, if "Network" is chosen and there is no printer on the network, the Assistant allows you to continue, but no printer is chosen.
- If desktop printing has been turned off, resetting the PRAM causes the Macintosh to forget its printer selection.

Published Date: Feb 20, 2012

Aperture 2: Externally edited images are automatically located alongside originals

This article has been archived and is no longer updated by Apple.

The way externally edited images are handled in Aperture 2 is somewhat different than in past versions. In prior versions, the TIFF or PSD file created by Aperture for external editing was always stored as a managed image in the Aperture library, whether the source image was managed or referenced. In Aperture 2, externally edited images are automatically stored at the same location as the original. After you have edited the image externally, you can choose **File > Relocate Master** to move the image to any location you like.

Published Date: Feb 20, 2012

Aperture 2: Date on exported master image may be different in rare circumstances

This article has been archived and is no longer updated by Apple.

Issue or symptom

In certain rare cases, the date for exported masters may be different than the original.

Solution

This can happen if the original master had no EXIF date. In those cases, IPTC data will be used. If there is no IPTC date, then the modification date for the master image file will be used. This is expected behavior.

Published Date: Feb 20, 2012

Aperture 2: Avoid making manual changes to your library structure

This article has been archived and is no longer updated by Apple.

It has never been considered good practice to manually alter the contents of the Aperture library in the Finder. In Aperture 2.x and later it is especially important to avoid manual changes within the Aperture Library. Make all changes to your library from within Aperture, whenever possible. If you experience issues with your Aperture library, restore it from a recent backup, if one is available, or rebuild the library by holding down the Command-Option keys when starting Aperture.

Published Date: Feb 20, 2012

Xserve (Early 2008): Use only Apple-approved 800MHz DDR2 fully buffered ECC memory

This article has been archived and is no longer updated by Apple.

Issue or symptom

Use of RAM not approved by Apple in Xserve (Early 2008) computers may lead to operational issues, including:

- Excessive ECC memory issues logged in the system log and Server Monitor
- Kernel panics
- Memory not recognized at start-up

Solution

Use only Apple-approved, 800 MHz DDR2 fully buffered ECC memory in Xserve (Early 2008) system configurations.

Published Date: Oct 11, 2016

Xserve (Late 2006) and later: Lights Out Management is incompatible with Link Aggregation on Xserve with Intel processors only

This article has been archived and is no longer updated by Apple.

Issue or symptom

When link aggregation is enabled on an Xserve (Late 2006) computer with an Intel processor and you are using both built-in Ethernet interfaces, Lights Out Management (LOM) services may become inaccessible.

Solution

Xserve computers with Intel processors can be configured to use either Link Aggregation or be accessible via Lights Out Management. However, both cannot be used at the same time.

Additional information

For more information on Link Aggregation, see Mac OS X 10.4 Help: Combining Ethernet ports and Mac OS X 10.5 Help: Combining Ethernet ports.

For more information on Lights Out Management, see What is Lights Out Management?

Published Date: Oct 11, 2016

Mac OS X 10.5: "Missing usb class driver" appears when printing to Lexmark printer

This article has been archived and is no longer updated by Apple.

Issue or symptom

The alert message "Missing usb class driver" may appear when trying to print to a Lexmark printer using a driver included with Mac OS X 10.5 Leopard.

Solution

1. Use the troubleshooting steps in this Lexmark support article to completely remove older drivers.

   Note: You must remove /Library/Printers/Lexmark and /System/Library/Extensions/LexmarkUSBMerge.kext.

2. Restart.
3. Reinstall the driver included with Leopard via Optional Installs on the Leopard Install DVD.

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Published Date: Feb 20, 2012

Mac Pro: Supported Microphones

This article has been archived and is no longer updated by Apple.

This article describes microphones supported for use with Mac Pro computers.

The microphone input jack supports line-level input signals. A microphone is not provided in the accessory kit for these computers. The previously-available Apple PlainTalk microphone is not compatible with these computers - although the PlainTalk microphone supplies a line-level signal, it does not use a standard 3.5 mm stereo miniplug, and can't be used with these systems. There are various third-party line-level microphones available that are compatible with the audio line-in port on these units, as well as third-party USB microphones that may be used via a USB connection instead. Examples of devices that provide line-level input include CD players, cassette decks, self-powered microphones, and DVD players. Griffin Technology's iMic adapter allows the use of most mic-level sound input devices.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Xserve (Early 2008): Power consumption and thermal output (BTU) information

This article has been archived and is no longer updated by Apple.

Learn power consumption and thermal output information for Xserve (Early 2008) running Mac OS X 10.5.

Notes

- **Power Consumption** data in watts (W) is measured from the wall power source and includes all power supply and system losses. Additional correction is not needed.
- **CPU Max** is defined as running a compute-intensive test application that maximizes processor usage and therefore power consumption.
- **Disk Max** is defined as running a test application that generates continuous input/output to a RAID set consisting of all internal disks in the system.
- These numbers reflect a 23 Celsius (73.4 Farenheit) ambient temperature running environment. Increased ambient temperatures require faster fan speeds which increase power consumption. At 35 C (95 F), 60 W should be added to reflect increased power consumption.
- These numbers reflect no PCI cards installed.

Xserve (Early 2008)

Configuration : One 2.8 GHz quad-core Intel Xeon Processor, single 80 GB 7200 RPM SATA Apple Drive Module, 2 GB RAM (2x1 GB 800 MHz DDR2 ECC fully buffered DIMMs), ATI Radeon X1300 graphics with 64 MB RAM, no PCI cards

Power Consumption			Thermal Output		
Idle	**CPU Max**	**CPU+Disk Max**	**Idle**	**CPU Max**	**CPU+Disk Max**
204 W	244 W	247 W	694 BTU/h	830 BTU/h	840 BTU/h

Xserve (Early 2008)

Configuration :Two 2.8 GHz quad-core Intel Xeon Processor, single 80 GB 7200-rpm SATA Apple Drive Module, 2 GB RAM (2x1 GB 800 MHz DDR2 ECC fully buffered DIMMs), ATI Radeon X1300 graphics with 64 MB RAM, no PCI cards

Power Consumption			Thermal Output		
Idle	**CPU Max**	**CPU+Disk Max**	**Idle**	**CPU Max**	**CPU+Disk Max**
215 W	294 W	297 W	731 BTU/h	1000 BTU/h	1010 BTU/h

Xserve (Early 2008)

Configuration : Two 3.0 GHz quad-core Intel Xeon Processor, single 80 GB 7200-rpm SATA Apple Drive Module, 2 GB RAM (2x1 GB 800 MHz DDR2 ECC fully buffered DIMMs), ATI Radeon X1300 graphics with 64 MB RAM, no PCI cards

Power Consumption			Thermal Output		
Idle	**CPU Max**	**CPU+Disk Max**	**Idle**	**CPU Max**	**CPU+Disk Max**
220 W	315 W	317 W	748 BTU/h	1072 BTU/h	1078 BTU/h

Xserve (Early 2008)

Configuration : Two 3.0 GHz quad-core Intel Xeon Processor, three 1 TB 7200-rpm SATA Apple Drive Module, 32 GB RAM (8x4 GB 800 MHz DDR2 ECC fully buffered DIMMs), Xserve RAID Card, ATI Radeon X1300 graphics with 64 MB RAM, no PCI cards

Power Consumption			Thermal Output		
Idle	**CPU Max**	**CPU+Disk Max**	**Idle**	**CPU Max**	**CPU+Disk Max**
285 W	381 W	385 W	970 BTU/h	1296 BTU/h	1310 BTU/h

Xserve (Early 2008)

Configuration : Two 3.0 GHz quad-core Intel Xeon Processor, three 300 GB 15,000-rpm SAS Apple Drive Module, 32 GB RAM (8x4 GB 800 MHz DDR2 ECC fully buffered DIMMs), Xserve RAID Card, ATI Radeon X1300 graphics with 64 MB RAM, no PCI cards

Power Consumption			Thermal Output		
Idle	**CPU Max**	**CPU+Disk Max**	**Idle**	**CPU Max**	**CPU+Disk Max**
300 W	395 W	409 W	1021 BTU/h	1344 BTU/h	1391 BTU/h

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Published Date: Oct 11, 2016

iPod touch: What to do if iTunes does not show Mail sync options

This article has been archived and is no longer updated by Apple.

Issue or symptom

When installing the iPod touch January Software Upgrade for the first time, the Sync Mail accounts option may not appear in iTunes.

Solution

Use this document to verify the iPod touch January Software Upgrade is installed. Then disconnect iPod touch from the computer and then reconnect iPod touch to the USB port.

Additional information

If the issue persists, see article #307243 for additional troubleshooting information.

Published Date: Oct 11, 2016

V.90 Protocol: Connectivity Discussion

This article explains why (and when) your computer should use a modem script that limits modem speed to 33.6 kbps, when the modem itself is capable of a 56 kbps connection.
This article has been archived and is no longer updated by Apple.
The iMac modem is the first modem Apple shipped that supports the V.90 protocol. Although derived from the competing x2 and K56flex protocols, the V.90 specification has undergone changes.

When a modem is attempting to establish a connection with another modem it will attempt to connect at the highest speed possible. The speed of the connection is determined by two factors:

1. The capabilities of the other modem:
The remote modem must support the same protocols. The iMac modem supports both V.90 and K56flex protocols so it can connect to other modems that use these protocols at speeds between 33.6 kbps and 53 kbps (although the modem technology is capable of 56 kbps, FCC regulations limit the top speed to 53 kbps). If the remote modem does not support either of these protocols, the iMac modem will then try using the V.34 protocol which has a top speed of 33.6 kbps. The modems will continue to try slower protocols until they find one that both modems are capable of supporting.

2. Quality of the connection:
Modem connections are being made over regular voice telephone lines. The quality of a connection between two points can be different each time the connections is made. Once the modems have negotiated a protocol to use, they test the ability of the connection to sustain the speed of the connection. The higher the speed of the connection, the more susceptible it is to noise on the phone lines. Therefore, even when making a V.90 connection between the same two points, one connection could be 44000 bps while the other could be 38000 bps.

If the quality of the connection is such that it can not support the slowest V.90 connection then the modems steps down to the next protocol.

What we are observing with the iMac modem is this V.90 implementation is overly aggressive. Instead of negotiating down to support a slower but more stable connection, the modem keeps trying to connect at a higher speed. This causes the remote modem to determine that a connection can't be established and it hangs up.

There are times when this aggressive behavior manages to complete a connection, only to be dropped minutes later since the quality of the phone connection really can not support that connection speed.

The V.34 only modem script is a workaround for customers that are unable to connect using the V.90 protocol. In many cases, even if the V.90 implementation negotiated downward properly, the resulting connection might end up being between 28.8 kbps and 33.6 kbps due to phone line quality. In these cases there is no performance difference between using the V.34 and V.90 protocols.

Apple is working with others in the modem industry to improve the behavior of the V.90 implementation. The iMac modem is capable of being upgraded with software.

Currently, modem firmware updates are available from the Apple Software Updates updates page.

For additional information on 56 kbps connectivity, see:
Article 24482: "**56Kbps Modems: Getting the Fastest Connection**"
Published Date: Feb 20, 2012

Aperture 2: Newly supported images may not display properly after upgrade from Aperture 1.5.x to 2.0

This article has been archived and is no longer updated by Apple.

Issue or symptom

In cases where you have imported images from an unsupported camera into your Aperture 1.5.x library and then upgraded to Aperture 2.0, the images may display improperly, even though the camera is now supported. Issues may include:

- The aspect ratio may be incorrect.
- The Console may display warnings that "0x0" is not a valid image size.
- The images cannot be added to books, web pages, light tables, etc.
- Aperture may quit unexpectedly if an affected image is published to a Web Gallery.

Solution

To resolve this issue, select the affected images and choose **File > Migrate Images**. Note that this will only work for images supported in Aperture 2.0. Images from cameras not supported by Aperture 2.0 will not display correctly.

Published Date: Feb 20, 2012

Aperture 2: Some referenced images may be reimported even when Do Not Import Duplicates is selected

This article has been archived and is no longer updated by Apple.

Issue or symptom

When you choose to import new images from a folder that contains some images already referenced by your Aperture library, duplicates of the pre-existing images are sometimes imported, even when you choose the **Do Not Import Duplicates** option.

Solution

This can happen if you have edited the referenced images with another application. Aperture recognizes that the images have changed, and reimports them as new images.

Published Date: Feb 20, 2012

iTunes 7.6: If you are asked to accept incoming network connections

This article has been archived and is no longer updated by Apple.

Issue or symptom

Each time iTunes 7.6 is opened, you may see a message about accepting incoming network connections.

Solution

Download and reinstall iTunes from www.apple.com/itunes/download

Published Date: Feb 20, 2012

Xserve RAID: Best practices for data integrity

This article has been archived and is no longer updated by Apple.

These are suggested guidelines for deploying Xserve RAIDs help to ensure consistent access to data stored on RAID volumes.

Using caches

Enable the Xserve RAID controller cache and Drive caches to improve performance when reading and writing data to your Xserve RAIDs. Note that enabling these options requires that you to use backup batteries and uninterruptible power supply units.

Additionally, to ensure consistent communication between Fibre Channel devices, disable the RAID Admin feature named "Enable Host Cache Flushing." Disabling this feature also requires that you to use uninterruptible power supply units. For more information about this and about configuring the Xserve RAID for maximum performance, see this article.

Deploy a backup solution

There are many means of backing up data, including hardware solutions and software solutions. The backup process may be as simple as a drag and drop of vital files to a local or network volume or may be as complex as using a software solution that backs up data to a hardware solution, such as a tape library or Disk Array, on a schedule. For more information on backup solutions, please contact your Apple Sales Representative.

Maintain filesystem integrity

Schedule runs of Disk Utiliy or an alternate filesystem utility.

Use latest firmware

Ensure that Xserve RAIDs are running the most recent version of Xserve RAID firmware. To verify Xserve RAID firmware versions, choose **Raid Admin > Components** and click on the image of the controller. To upgrade a controller's firmware, download the most recent version of RAID Admin which includes the most recent version of firmware.

Unmount filesystems from initiators before rebooting targets

Before performing any operation that may cause an Xserve RAID to be restarted, unmount any filesystems that correspond to the target which is to be restarted. Certain administrative changes will result in Storage Devices restarting. The Xserve RAID will restart if any of the following settings are configured:

RAID Admin > Create Array
RAID Admin > Delete Array
RAID Admin > Settings > System
RAID Admin > Settings > Network
RAID Admin > Settings > Fibre Channel
RAID Admin > Advanced > Slicing
RAID Admin > Advanced > LUN Masking

Also, avoid performing changes in **RAID Admin > Advanced > Expansion** that will delete a pre-existing array if the array is acting as a LUN that has been incorporated into the Xsan Volume.

Published Date: Oct 11, 2016

Internet Setup Assistant: Where Are Settings Stored?

This article describes where the Internet Setup Assistant stores its settings and how to access these settings without re-using the Internet Setup Assistant.
This article has been archived and is no longer updated by Apple.
The Internet Setup Assistant is designed to simplify the setup and configuration of a Macintosh for Internet access. There are times, however, when it would be convenient to modify these settings without going through the Internet Setup Assistant. This article will describe where the information gathered by the Internet Setup Assistant is stored.

All the information necessary for an Internet connection is managed by several control panels. All of these control panels are conveniently accessible from the Remote Access menu when the Remote Access control panel is open.

Note: This article assumes a dial up connection to an Internet service provider (ISP).

1. Open the Remote Access control panel.

2. Select Configurations from the File menu (or type Command-K). This displays the list of existing configurations.

To modify an existing configuration, select it from the list and click the Make Active button.

To create a new configuration, select an existing configuration and click the Duplicate button. Click the Rename button to give the new configuration a unique name. Click the Make Active button.

The Remote Access control panel contains the following:
- User name (for your ISP account)
- Password (for your ISP account)
- Access phone number (access number for your ISP)

If you make any changes you are prompted to save them when closing the Remote Access control panel.

3. Click on the Remote Access menu while the Remote Access control panel is open. This menu lists several other control panels. The other control panels of interest for configuring an ISP connection are Modem and TCP/IP.

4. Open the Modem control panel.

Note: The Configurations option described above in the Remote Access control panel is also available in the Modem control panel.

5. Select the port that the modem is connected to in the Connect via: pop up menu.

6. Select the modem script in the Modem: pop up menu.

Other settings include enable/disable modem sound, tone/pulse dialing, and whether the dial tone should be ignored.

7. Open the TCP/IP control panel and make the selections listed below.

Note: The Configurations option described above in the Remote Access control panel is also available in the TCP/IP control panel.

- Connect via: For most ISPs this should be set to PPP.
- Configure: For most ISPs this should be set to Using PPP Server.
- Name server addr: Enter the domain name server (DNS) addresses here.
- Search domain: Enter the domain name here.

The Apple Location Manager 2.0 provides a convenient way of grouping the settings in the Remote Access and TCP/IP control panels. For further information open the Location Manager and click the question mark for online help.
Published Date: Feb 20, 2012

Promise VTrak RAID: Drives are reported "Dead" or Offline

This article has been archived and is no longer updated by Apple.

Issue or symptom

In certain cases, Promise VTrak RAID drives that belong to an array may go offline. One such case occurs when a RAID head is booted before its corresponding expansion chassis. In such situations, the drives that compose an array may be Offline, which results in the physical drives status being reported as "Dead" and the Logical Drive status reported as Offline in the web administration interface. The arrays drives light may be red.

Solution

To resolve this issue, an administrator should manually bring the drives online. To do so, follow these steps:

Shutdown and Boot the RAID Head and expansion chassis in the correct order.

Establish a Telnet connection to the RAID head over port 2300. To do so, open Terminal (in /Applications/Utilities) and issue the following command:

```
telnet IP_Address 2300
```

Replace *IP_Address* with the IP Address assigned to the RAID heads Ethernet port. If you are not certain what IP Address is assigned to the Promise RAID, refer to the Product Manual.

3. Authenticate when prompted. If you are not certain what administrator name and password is assigned to the Promise RAID, refer to the Product Manual.
4. Issue the following command:

```
phydrv
```

This command will produce a list of drives and their status. Drives with red lights may be reported with status "Dead".

In this example, Drives 17 and 18 are reported as "Dead":

```
============================================================
PdId Model Type CfgCapacity Location OpStatus ConfigStatus
============================================================
16 ST3750640NS SATA 698.49GB Encl1 Slot16 OK Array0 SeqNo4
17 ST3750640NS SATA 698.49GB Encl2 Slot1 Dead Array0 SeqNo5
18 ST3750640NS SATA 698.49GB Encl2 Slot2 Dead Array0 SeqNo6
```

5. For each of the drives with the OpStatus, Dead, issue the following command:

```
phydrv -a online -p PdId
```

Replace *PdId* with the PdId number which corresponds to the number farthest to the left in the previous steps output. For example, to bring Drive 17 online, the following command would be issued: `phydrv -a online -p 17`

Once this command has been executed for each drive that is reported Dead, issue the following command again to review the status of the drives:

```
phydrv
```

Notice that the drives that were reported offline are now reported as Forced Online. For example:

```
============================================================
PdId Model Type CfgCapacity Location OpStatus ConfigStatus
============================================================
16 ST3750640NS SATA 698.49GB Encl1 Slot16 OK Array0 SeqNo4
17 ST3750640NS SATA 698.49GB Encl2 Slot1 Forced Onl Array0 SeqNo5
18 ST3750640NS SATA 698.49GB Encl2 Slot2 Forced Onl Array0 SeqNo6
```

If a drives OpStatus remains Dead, contact Promise Support.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

No audio during iTunes Store video playback with iTunes 7.6 for Windows XP

This article has been archived and is no longer updated by Apple.

Issue or symptom

You may hear no audio when playing videos purchased from the iTunes Store.

Solution

This only affects content purchased from the iTunes Store. You may be able to play this content in QuickTime Player. The content will sync and play normally with audio to iPod and iPhone.

Update to QuickTime 7.4.1 to restore full playback of the affected content in iTunes.

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Published Date: Feb 20, 2012

iPhone: SMS messages may be displayed in the wrong order when sending or receiving text messages

This article has been archived and is no longer updated by Apple.

Issue or symptom

When sending or receiving text messages on the iPhone, the SMS messages may be displayed out of sequence.

Solution

Use iTunes to update to iPhone Software 1.1.4 or later.

If the issue continues:

- Make sure iPhone is setup to receive the network time. Choose **General** > **Date & Time** and turn **Set Automatically** to ON. (Note that in some locations, network time may not be available and in some cases, you may not see this option).
- If the issue continues after turning this setting on, the issue may be occurring because messages are being sent in quick succession (more common if the messages consist of only a few short words).

Published Date: Feb 20, 2012

Mac OS X 10.5, Ink: Handwriting recognition cannot be enabled

This article has been archived and is no longer updated by Apple.

Issue or symptom

You might not be able to enable Handwriting recognition in Ink preferences (in System Preferences). This may occur on some Macs that shipped with Leopard pre-installed.

Solution

Use this workaround to enable handwriting recognition:

1. From the Finder's **Go** menu, choose **Utilities**.
2. Open Terminal.
3. Carefully type (or paste) the following command, then press Return.

   ```
   sudo rm /System/Library/Caches/com.apple.IntlDataCache*
   ```

4. Enter your admin password if prompted for it.
5. Type or paste the following command in Terminal, then press Return.

   ```
   sudo rm /var/folders/*/*/-Caches-/com.apple.IntlDataCache*
   ```

6. Type or paste the following command in Terminal, then press Return.

   ```
   rm ~/Library/Preferences/com.apple.ink*
   ```

7. Restart the computer.

Published Date: Feb 20, 2012

Aperture 2: RAW 2.0 not available with some cameras

This article has been archived and is no longer updated by Apple.

Issue or symptom

RAW 2.0 decoding of RAW images in Aperture 2 is not available with certain cameras. In these cases, the Recovery and Black Point setting sliders are dimmed.

Solution

A few cameras do not support RAW 2.0 decoding. In these cases, the only available options will be RAW 1.1 and RAW 1.0. Settings only offered with RAW 2.0, such as Recovery and Black Point in the Exposure adjustment are not available in these cases.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Mac OS X Server version 10.5: Setting up KDC to support Kerberized NFS for non-Mac OS X clients

This article has been archived and is no longer updated by Apple.

In Mac OS X Server version 10.5, Apple's Kerberized NFS implementation strictly follows RFC 1964 and as a result only supports single DES encryption. However, Open Directory or other Kerberos environments will often set up multiple keys with differing encryption types. Mac OS X 10.5 clients will only request key types that they support, so the additional key offerings will not cause an issue for Mac OS X clients. However, a non-Mac client of a Mac OS X NFS server could request a session key that the server can not handle. If you are an administrator of such an environment, it will be necessary for you to remove the offending keys from the directory or KDC. This can be done with the `kadmin` command.

Use the following commands to generate only single DES keys for the server and update the keytab by removing the current keys for the nfs server from the KDC and the keytab then creating a new single DES key and adding it to the keytab.

Example

In the following example, `TEST.EXAMPLE.COM` is the name of the Kerberos realm, "`macos-x-nfs.example.com`" is the name of the server, and "`adminuser`" is the name of a user with administrative access to the KDC. Substitute the correct realm, host and user names for your server in each command.

1. Authenticate to the KDC. Enter the password for "`adminuser`" at the prompt.

```
$ sudo kadmin -r TEST.EXAMPLE.COM -p adminuser/admin@TEST.EXAMPLE.COM
Password:

Authenticating as principal adminuser/admin@TEST.EXAMPLE.COM with password.
Password for adminuser/admin@TEST.EXAMPLE.COM: (adminuser/admin's Kerberos password)
```

2. Verify that the NFS service principal has undesirable keys via get_principal:

```
kadmin: get_principal nfs/macos-x-nfs.example.com@TEST.EXAMPLE.COM

Principal: nfs/macos-x-nfs.example.com@TEST.EXAMPLE.COM
Expiration date: [never]
Last password change: Tue Oct 09 14:56:57 PDT 2007
Password expiration date: [none]
Maximum ticket life: 0 days 10:00:00
Maximum renewable life: 7 days 00:00:00
Last modified: Tue Oct 09 14:56:57 PDT 2007 (adminuser/admin@TEST.EXAMPLE.COM)
Last successful authentication: [never]
Last failed authentication: [never]
Failed password attempts: 0 Number of keys: 3
Key: vno 3, Triple DES cbc mode with HMAC/sha1, no salt
Key: vno 3, ArcFour with HMAC/md5, no salt
Key: vno 3, DES cbc mode with CRC-32, no salt
Attributes:
Policy: [none]
```

3. Note that Triple DES and ArcFour are listed in addition to a single DES key. To correct this, remove the the principal with the `delete_principal` command:

```
kadmin: delete_principal nfs/macos-x-nfs.example.com@TEST.EXAMPLE.COM

Are you sure you want to delete the principal "nfs/macos-x-nfs.example.com@TEST.EXAMPLE.COM"? (yes/no): yes

Principal "nfs/macos-x-nfs.example.com@TEST.EXAMPLE.COM" deleted.
Make sure that you have removed this principal from all ACLs before reusing.
```

4. Add the principal back (using `randkey` since this is a service principal) with the `-e` option to specify only the single DES key des-cbc-crc:normal.

```
kadmin: add_principal -randkey -e des-cbc-crc:normal nfs/macos-x-nfs.example.com@TEST.EXAMPLE.COM
```

```
WARNING: no policy specified for nfs/macos-x-nfs.example.com@TEST.EXAMPLE.COM; defaulting to no policy
Principal "nfs/macos-x-nfs.example.com@TEST.EXAMPLE.COM" created.
```

5. Verify that only the single DES key has been added by issuing the `get_principal` command again.

```
kadmin: get_principal nfs/macos-x-nfs.example.com@TEST.EXAMPLE.COM

Principal: nfs/macos-x-nfs.example.com@TEST.EXAMPLE.COM
Expiration date: [never]
Last password change: Tue Oct 09 15:00:38 PDT 2007
Password expiration date: [none]
Maximum ticket life: 0 days 10:00:00
Maximum renewable life: 7 days 00:00:00
Last modified: Tue Oct 09 15:00:38 PDT 2007 (adminuser/admin@TEST.EXAMPLE.COM)
Last successful authentication: [never]
Last failed authentication: [never]
Failed password attempts: 0
Number of keys: 1
Key: vno 2, DES cbc mode with CRC-32, no salt
Attributes:
Policy: [none]
```

6. Remove the old set of keys from the keytab.

```
kadmin: ktremove nfs/macos-x-nfs.example.com@TEST.EXAMPLE.COM

Entry for principal nfs/macos-x-nfs.example.com@TEST.EXAMPLE.COM with kvno 3 removed from keytab
WRFILE:/etc/krb5.keytab.
Entry for principal nfs/macos-x-nfs.example.com@TEST.EXAMPLE.COM with kvno 3 removed from keytab
WRFILE:/etc/krb5.keytab.
Entry for principal nfs/macos-x-nfs.example.com@TEST.EXAMPLE.COM with kvno 3 removed from keytab
WRFILE:/etc/krb5.keytab.
```

7. Add the new key to the keytab.

```
kadmin: ktadd -e des-cbc-crc:normal nfs/macos-x-nfs.example.com@TEST.EXAMPLE.COM

Entry for principal nfs/macos-x-nfs.example.com@TEST.EXAMPLE.COM with kvno 3, encryption type DES cbc mode
with CRC-32 added to keytab WRFILE:/etc/krb5.keytab.
```

8. Quit:

```
kadmin: quit
```

Additional information

For more information about Kerberized NFS in Mac OS X Server version 10.5, see this article.

Published Date: Feb 20, 2012

Using the O2 Cloud Wi-Fi hotspot in the UK after iPhone has been replaced

This article has been archived and is no longer updated by Apple.

Issue or symptom

You may not be able to use the O2 Cloud Wi-Fi hotspot in the UK after iPhone has been replaced.

Solution

If your O2 tariff contract includes free O2 cloud Wi-Fi coverage and your iPhone has been replaced, please contact O2 with the new Wi-Fi Address to ensure you have access to the Cloud network with your new iPhone.

To find the Wi-Fi Address tap **Settings > General > About** and scroll down to Wi-Fi Address.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

56 kbps Modem: Checking and Changing Country Codes

This document describes how to check and change modem country codes in the internal 56 kbps modem.
This article has been archived and is no longer updated by Apple.
The internal modem uses country specific parameters based on the setting of the country code. This code can be set with AT commands or by using the Modem Country Selector. (This application ships with computers outside the United States.)

Checking the Country Code

The easiest method for checking and changing country codes is to use the Mac OS 9 only application; Modem Country Selector. If you are using Mac OS X, and want to useModem Country Selector you must restart in Mac OS 9, as it does not function as a classic application in Mac OS X. Steps for using the Modem Country Selector application are listed in the Using the Modem Country Selector section.

As an alternative to Modem Country Selector, you can use AT Commands with the modem. The steps for using AT commands are listed in the Using AT Command sections.

Using the Modem Country Selector

1. Double-click the Modem Country Selector application icon.
The Modem Country Selector application opens.
Note: The country the modem is set for automatically appears in the pop-up country menu.

2. Choose the country in which the modem will be used from the pop-up menu.

3. Click OK.

4. When a message appears saying the modem is configured, click OK to quit the application.

The modem is now properly set up for use in the chosen location.

Using AT Commands in Mac OS 9

1. Open the Modem control panel.
Choose Null Modem 9600 from the Modem menu.

2. Close the Modem control panel.
A save dialog appears.

3. Save the changes to the Modem control panel.

4. Open Remote Access control panel.

5. Click Options.

6. Click the Protocol tab.

7. Select Connect to a command-line host:
If Use terminal window is not selected, also select that option.

8. Click OK

9. Enter any number or letter into the number and password area of the Remote Access control panel.
This enables the Connect button.

10. Click Connect.
A modem terminal window appears.

11. type `ATI5` into the terminal, then press return.
The country code is returned.

Important This document covers different modems. An additional code is needed to determine how to interpret the country code.

12. Type `ATI12` into the terminal, then press return.
A register code is returned.

If `S1, D1` or `J1` is returned after entering `ATI12`, then use the `S1, D1` or `J1` column in the country code table. Otherwise use the first code column to determine what country code the modem is currently set to.

Once finished, you should choose your original Modem menu setting again.

Using AT Commands in Mac OS X

The process for checking the country code under Mac OS X is similar to Mac OS 9.

1. Network system preference.
2. Click the Modem tab.
3. Choose Null Modem 9600 from the Modem menu.
4. Click the PPP tab in the Network system preference.
5. Click PPP options.
6. Select Connect using a terminal window (command line)
7. Click OK
8. Enter any number or letter into the number and password area of the Remote Access control panel.
9. Either open Internet Connect and click connect, or if the Modem status is available in the menu bar, choose connect.
A modem terminal window opens.
10. type `ATI5` into the terminal, then press return.
The country code is returned.

Important This document covers different modems. An additional code is needed to determine how to interpret the country code.

11. Type `ATI12` into the terminal, then press return.
A register code is returned.

If `S1, D1` or `J1` is returned after entering `ATI12`, then use the `S1, D1` or `J1` column in the country code table. Otherwise use the first code column to determine what country code the modem is currently set to.

Once finished, you should choose your original Modem menu setting again.

Changing Country Codes

The easiest way to change country codes in the modem is to use the Modem Country Selector in Mac OS 9. However you can also use an AT command to change the country code.

1. Use the procedures listed in the Checking Country Codes to open a modem terminal window.
2. Find the proper country code in the Country Code table.

3. If `ATI12` results in `D1` or `J1`, then type **`AT+GCI=xx`**, where xx is the country code you want to set the modem to.

Otherwise:

Type **`AT*NCx`**, where x is the country code you want to set the modem to.

Examples for D1 and J1 result codes:

To set the modem for proper use in Germany, use **`AT+GCI=42`**

To set the modem for proper use in Sweden, use **`AT+GCI=A5`**

Examples for non-D1 result codes:

To set the modem for proper use in Germany, use **`AT*NC6`** OR **`AT*NC14`** depending on which modem is installed in your computer.

To set the modem for proper use in Sweden, use **`AT*NC14`** (the same setting is used in all non-USB internal Apple modems).

Country Codes
Use the appropriate Code column that corresponds to the result you received when you used the ATi12 command.

Country	Code	S1 Code	D1 Code	J1 Code	Country	Code	S1 Code	D1 Code	J1 Code
Argentina	22	22	-	07	Israel	18	18	-	58
Australia	40	40	09	09	Italy	8	8	59	59
Austria	1	1	0A	0A	Japan	43	43	00	00
Belgium	2	16	0F	0F	Korea	22	47	61	61
Brazil	22	22	-	16	Latin America	22	22	B5	-
Bulgaria	27	27	-	1B	Luxembourg	9	9	-	-
Canada	22	22	20	20	Malaysia	47	47	6C	6C
Chile	22	22	-	25	Mexico	22	22	-	-
China	22	47	26	26	Netherlands	10	14	7B	7B
Columbia	22	22	-	27	New Zealand	40	40	7E	-
Czech Republic	47	47	2E	2E	Norway	11	16	82	82
Denmark	3	16	31	31	Philippines	22	22	89	-
Finland	4	14	3C	3C	Poland	16	47	47	-
France	5	5	3D	3D	Portugal	16	15	8B	8B
Germany	6	14	42	42	Czech Republic	47	47	2E	2E
Greece	16	16	46	-	Singapore	47	47	9C	9C
Guam	22	22	48	-	Spain	13	15	A0	A0
Hong Kong	22	22	50	50	Sweden	14	14	A5	A5
Hungary	16	16	-	-	Switzerland	15	15	A6	A6
Iceland	16	16	52	-	Taiwan	22	47	FE	-
India	22	22	53	-	Thailand	22	22	A9	A9
Indonesia	22	22	54	-	United Kingdom	16	16	B4	B4
Ireland	16	16	57	57	United States	22	22	B5	B5

Published Date: Feb 20, 2012

Mac OS X Server: Editing Files in Single User Mode

My server won't start up into the Workspace Manager. How can I edit files in single-user mode?
This article has been archived and is no longer updated by Apple.
To learn how to boot into single-user mode see the following article:

Article 30837: "**Mac OS Server: Booting into Single-User Mode**"

We ship a number of common editors with Mac OS X Server, including ed, emacs, ex, edit, and vi. Unfortunately, some of these editors do not work well in single-user mode. Some require better terminal support than is available in single-user mode; others try to write to /tmp, which isn't possible while booted from a read-only file system such as a CD-ROM; others are just plain unfriendly to the uninitiated.

Fortunately, the standard Mac OS X Server distribution includes pico, a simple, display-oriented text editor that overcomes the above problems. In order to use pico, you will need to change your terminal settings.

Note: The "#" symbol does not need to be typed. It represents the prompt at which commands are typed.

```
# TERM=vt100
# export TERM
# ^L (This means hold down the control key and the L key, then press return. This is so that the screen will draw.)
# pico the.file.you.want.to.edit
```

Here are the only commands you really need to know in order to edit a file using pico, some of which are displayed right at the bottom of the screen:

Ctrl-F: Move Forward a character
Ctrl-B: Move Backward a character
Ctrl-P: Move to the Previous line
Ctrl-N: Move to the Next line
Ctrl-D: Delete the character at the cursor position (or just use Backspace to delete the previous character)
Ctrl-X: Save the file and quit (press "y" and then Return to confirm the save)
Ctrl-G: Display help text listing the above commands and more

Normally, pico will also let you use the arrow keys to move around. However, these keys have not been mapped yet when you're in single-user mode, so you will need to use the Control-key combinations above. Similarly, you may be used to a keymapping that uses a different key (such as the Caps Lock key) as the Control key. This mapping has not happened yet either in single-user mode, so the Control key is in fact the Control key.

See also: The pico(1) System Reference Manual page
Published Date: Feb 20, 2012

TA25193_Apple_TV_Some_menu_items_may_not_appear_with_software_version_.pdf

Apple TV: Some menu items may not appear with software version 2.0

This article has been archived and is no longer updated by Apple.

Issue or symptom

After upgrading to Apple TV software version 2.0, the following menu items may appear to be missing:

- In Movies: Top Movies, Genres, All HD, Search
- In TV Shows: Top TV Shows, Genres, TV Networks, Search
- In Music: Top Music, Music Videos, Genres, Search
- In Podcasts: Top Podcasts, Genres, Podcast Providers, Search

Note: Not all iTunes Stores offer the same content. The list of available items varies by country.

Solution

Your menu items should appear after following these steps:

1. Navigate to **Settings** > **General**.
2. In the General menu, select **iTunes Store**.
3. Pick the store for the country where you are located. A checkmark will appear next to your selection.

Published Date: Feb 20, 2012

WebObjects 5.4.1 release notes

This article has been archived and is no longer updated by Apple.

This document contains an overview and download information for the WebObjects 5.4.1 Update. WebObjects 5.4.1 is primarily for developers who want to develop WebObjects applications with Mac OS X 10.5. WebObjects 5.4.1 is formally qualified and supported on the Mac OSX Leopard/Java 5 platform. Please note that WebObjects 5.4.1 is tested to work with the default Xcode installation location and is not guaranteed to work with other installation locations. The upgrade installer always updates the default location for WebObjects frameworks.

This update addresses the following issues:

- Issues with serializing/deserializing webservices data
- Deadlock issues in EOF
- SQL generation for various database vendors
- Issues with WebObjects Foundation collection classes
- Deployment tool fixes
- Additional fixes

Installing WebObjects 5.4.1 Developer System

The WebObjects 5.4.1 Developer Update is available as an ADC download at http://developer.apple.com/tools/download/ and http://connect.apple.com/. It requires Mac OS X 10.5 Leopard.

System requirements

- Java 5
- WebObjects 5.4
- Mac OS X 10.5 or later

If you are installing a clean WebObjects 5.4 system, install the software in the following order:

1. Run the Xcode 3.0 installer.
2. Select the Custom Install option.
3. Select the WebObjects install packages.
4. Use Software Update and update to the latest Java 5
5. Go to ADC Tools download at http://developer.apple.com/tools/download/ or http://connect.apple.com/.
6. Download the WebObjects 5.4.1 update

If you are updating from WebObjects 5.4 to WebObjects 5.4.1 Developer, install the software in the following order:

1. Run Software Update and upgrade to the latest version of 10.5.
2. Run Software Update and upgrade to the latest Java 5 release.
3. Download the WebObjects 5.4.1 from http://developer.apple.com/tools/download/ or http://connect.apple.com/ and run the update installer.

Installing WebObjects 5.4.1 update for Mac OS X Server version 10.5

This update is available through the Software Update feature of Mac OS X Server. It is part of the Mac OS X Server 10.5 update and is not an individual download.

System requirements

- Mac OS X Server version 10.5 or later
- Java 5

If you are updating a WebObjects 5.4 system or creating a new install on Mac OS X Server version 10.5

1. Install Mac OS X Server version 10.5
2. Run Software Update to update to Mac OS X Server version 10.5.2

Resolved issues

EOF

ID	Name	Description	Workaround
1 5044578	Enum EOAttribute values should be case insensitive	Enumerated values should be case insensitive	This issue has been resolved
2 5405227	Vertical inheritance does not generate the right sequence table name	When doing vertical inheritance with sequences the table name inserted in the generated SQL is incorrect. The name inserted is the parent entity even through the parent is abstract and does not have a table name	This issue has been resolved
3 5511895	Fontbase dates are incorrectly formatted with the WebObjects 5.4 Frontbase JDBC plugin	The time segment is incorrectly formatted if the hour, minutes or seconds are only on digit i.e. 15:15:60 will work but 9:9:9 will generate 9:9:9 instead of 09:09:09	This issue has been resolved
4 5516082	Deadlock in EOF when creating multiple cooperating object stores	Deadlock in EOF when calling EOObjectStoreCoordinator.addCooperatingObjectStore()	This issue has been resolved
5 5544517	Generics API definition for NSArray.arrayByAddingObjectsFromArray() causing compile issues	The method signature for NSArray.arrayByAddingObjectsFromArray(NSArray<E> otherArray) was changed to arrayByAddingObjectsFromArray(NSArray<? extends E> otherArray).	This issue has been resolved
6 5575439	Invalid SQL generated for schema creation with some database plugin	Invalid SQL is generated for database plugin that does not overwrite createTableStatementsForEntityGroup method.	The issue has been resolved
7 5605821	ClassCastException thrown when serializing/deserializing EOAndQualifiers	A ClassCastException was thrown when serializing/deserializing EOAndQualifiers	This issue has been resolved

WODeployment

ID	Name	Description	Workaround
1 5464564	Version number on JavaMonitor page title	WebObjects version number on login page of JavaMonitor is not updated	This issue has been resolved
2 5467390	JavaMonitor migration tab should be removed.	Unsupported feature	The issue has been resolved
3 5614958	Files not appearing in JavaMonitor path wizard on Leopard Server	Files not appearing in JavaMonitor path wizard on Leopard Server	This issue has been resolved

WOExamples

ID	Name	Description	Workaround
1 5585707	The WOStats page was broken in some instances	The WOStats page was broken in some instances	This issue has been resolved

WOF

ID	Name	Description	Workaround
1 5405221	Incorrect handling of Ajax Form	WOForm is not submitted correctly for AJAX request	This issue has been resolved
2 5405486	Default class path in WSDD	The hard coded default client.wsdd refer to non existent class path	The issue has been resolved
3 5407816	PageFragmentCache is not using the set size	PageFragmentCache uses the default constructor from LinkedHashMap and never uses the pageFragmentCacheSize on WOApplication.	The issue has been resolved
4 5474379	WODless element, attribute and xml namespaces	WODless element, attribute are not properly rendered.	This issue has been resolved
5 5531460	WSDL does not includes Types declaration	The Web Service Registrar need to keep track of required types and include it in the WSDL.	The issue has been resolved
6 5567988	WebServices NSData and NSTimstamp	WebService NSData and NSTimstamp and incorrectly serialized	The issue has been resolved
7 5569244	Handling corrupted JPEG image header	Check and handle JPEG header	The issue has been resolved
8 5573199	WebObjects App unix launch script no longer platform independent	WebObjects App unix launch script no longer platform independent due to some network services detection code. This is now parameterized out for only OS X.	This issue has been resolved
9 5585621	Inconsistencies in http header key handling in WOMessage	Handle keys set in the internal header dictionary.	The issue has been resolved

WOFoundation

ID	Name	Description	Workaround
1 3325344	NSMutableArray listIterator doesn't implement set() and is broken in other ways	put(), set() should be supported on collection classes.	This issue has been resolved
2 5084986	NSMutableArray.set(int, obj) is not implemented	NSMutableArray.set(int, obj) is not implemented	This issue has been resolved
3 5278732	MSMutableArray - subList(...).clear() incorrect implementation	subList() returns a cloned version of the subList instead of a live view on the underlying array.	This issue has been resolved
4 5417143	Time stamp in WO log file	The time stamp shows GMT time with local time zone.	The issue has been resolved
5 5438593	MSMutableArray - subList(...).clear() incorrect implementation	subList() returns a cloned version of the subList instead of a live view on the underlying array.	This issue has been resolved

6	5515597	Plist deserialization does not work when not connected to the network	This is due to improper lookup of references to 'Apple Computer' instead of 'Apple, Inc' for the DTD reference	This issue has been resolved
7	5533962	NSArray(Object []) constructor behavior does not match documentation	The constructors for NSArray were not properly respecting/ignoring null values according to the documented specification.	This issue has been resolved
8	5578204	NSBundle class loading breaks for embedded frameworks	NSBundle class loading breaks for embedded frameworks	This issue has been resolved
9	5606848	Conversion from NSData (byte) to HEX String throws exception	Conversion from NSData (byte) to HEX String throws an IndexOutOfBoundsException.	This issue has been resolved

Published Date: Feb 20, 2012

About the Safari 3.1 Update

This article has been archived and is no longer updated by Apple.

Installation

To update to Safari 3.1, use Apple Software Update or a standalone installer. You only need to use one of these methods to update your computer.

Software Update

Software Update will automatically check for the latest Apple software using the Internet. (You might have followed a Software Update link to this article to learn more about the update.) If your computer is not up-to-date, other available software updates will appear.

Standalone installer

Download the update installer and run it manually. This is a useful option when you need to update multiple computers but only want to download the update once.

Improvements

Performance

- Improves JavaScript performance

Standards

- Adds support for CSS 3 web fonts
- Adds support for CSS transforms and transitions
- Adds support for HTML 5 <video> and <audio> elements
- Adds support for offline storage for Web applications in SQL databases
- Adds support for SVG images in <img> elements and CSS images
- Adds support for SVG advanced text

Microsoft Windows

- Improves Back/Forward performance
- Supports signed Java applets
- Shows Caps Lock icon in password fields
- Adds support for showModalDialog
- Localized in 16 languages
- Adds support for International Domain Names
- Improves handling of Japanese, Chinese, and Korean text
- Contextual menu now allows opening a link in a window or tab
- Improves pop-up blocking to work with plug-ins

Compatibility

- Increases site compatibility

Stability

- Improves application stability

Developer

- Adds option in Safari preferences to turn on the new Develop menu which contains various web development features
- Allows access to Web Inspector
- Allows access to Network Timeline
- Allows editing CSS in the Web Inspector

- Allows custom user agent string
- Improves snippet editor

Other

- Double clicking on the Tab Bar opens new tab
- Includes URL metadata when images are dragged or saved from browser
- Opens Download and Activity window in current Space
- Supports trackpad gestures for back, forward, and magnify on MacBook Air and compatible MacBook Pro computers
- Shows Caps Lock icon in password fields

Security

- For information about the security content of this update, visit this website.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 11, 2016

Mac OS X Server: Hangs at "autonfsmount" Message

Sometimes a server that was working fine may hang during boot at the message "autonfsmount" (Or "Mounting Remote Filesystems" in graphical mode). You can tell exactly where the machine is hanging by entering the "-v" option at the boot: prompt.
This article has been archived and is no longer updated by Apple.
The reasons for this may be:

1. The network information may have been configured incorrectly.
2. The server has been configured properly for a network, but is currently not on the network.
3. You may have booted with the "config=Default" option which effectively takes you off the network because the default configuration does not include a network driver.

Solution:
Your server will eventually boot after a very long series of timeouts, but you can overcome this by resetting its network configuration information to a default state.

The best way to do this is to boot in single user mode and replace the file.
Published Date: Feb 20, 2012

Apple TV: Tip - Author your own movie content with AC-3 audio for true surround sound

This article has been archived and is no longer updated by Apple.

If your Apple TV is connected to a Dolby Digital-capable sound system, your content can have true surround sound.

Apple TV will pass through 5.1 surround sound audio encoded in Dolby Digital AC-3. The AC-3 audio must be properly included in the movie in order for it to pass through correctly.

To create content for use with Apple TV, the movie must have two audio tracks:

- Advanced Audio Coding (AAC) stereo
- AC-3 track for surround

Note: Both tracks should have the same sample rate (48 kHz is normal).

For compatability, the following is required:

- Both tracks must be provided.
- The AAC track should be first and it must be enabled.
- The AC-3 track should appear after the AAC track and it should be disabled by default.
- The AC-3 track must also use the appropriate MPEG-4/ISO standard.

Apple TV uses the AC-3 track as a pass-through mode only. For example, it passes data out to an A/V receiver capable of Dolby Digital playback. The AC-3 audio is sent over the HDMI and the optical audio output of Apple TV.

To select AC-3 data through these ports, go to **Settings > Audio > Dolby Digital Out** and select **On**.

These movies can be created using applications such as FinalCut Express and FinalCut Pro.

Note: The AAC track is used in any situation where just stereo output is required.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

iCal: Some calendar events do not appear after installing Mac OS X 10.5.2 Update

This article has been archived and is no longer updated by Apple.

Issue or symptom

After installing the Mac OS X 10.5.2 Update, some iCal events may not appear.

Solution

1. Quit iCal.
2. Quit Mail if it's running.
3. From the Finder's **Go** menu, choose **Home**.
4. Open the Library folder.
5. Open the Calendars folder.
6. Move the "Calendar Cache" file to the Trash.
7. Open iCal.

You may see a message stating that your calendars are being updated. You can delete the "Calendar Cache" file that you moved in step 5.

Published Date: Feb 20, 2012

iPod shuffle (2nd generation) song capacity

This article has been archived and is no longer updated by Apple.

iPod shuffle (2nd generation) is available in 1 GB and 2 GB capacities. The 2 GB model can hold up to 500 4-minute songs in 128-kbps AAC format.

Issue

Customers using the 2 GB model with iPod software 1.0.3 may notice that iTunes displays a 480 song maximum in the Settings tab when the iPod is connected to iTunes as shown below:

Solution

To resolve this issue, update iPod shuffle (2nd generation) to iPod software version 1.0.4 or later. For more information about iPod shuffle specifications, please visit www.apple.com/ipodshuffle/specs.html.

Published Date: Oct 11, 2016

Mac OS X 10.5: Hard drive disappears from the Finder

This article has been archived and is no longer updated by Apple.

Issue or symptom

A connected drive may not appear in the Finder, even though you can navigate to it via the Finder's **Go** menu.

Solution

1. Open Terminal (located in /Applications/Utilities).
2. In Terminal, type or paste this command on a single line:

   ```
   xattr -d com.apple.metadata:kMDItemFinderComment
   ```

   (Leave a space at the end but do *not* press Return yet.)

3. Append the path to the affected drive to the above command. For the startup volume, that path is "/".

   - For example, for the startup volume the entire command would be:

   ```
   xattr -d com.apple.metadata:kMDItemFinderComment /
   ```

   - For a volume *other* than the startup volume, add "/Volumes/" and its name to the path. Remember to add a "\\" character before any spaces. For example, if the affected volume is named "My Mac drive", the entire command would be:

   ```
   xattr -d com.apple.metadata:kMDItemFinderComment /Volumes/My\\ Mac\\ Drive
   ```

4. Press Return once you have verified the command is typed correctly.
5. In the Terminal window, type:

   ```
   sudo chflags nohidden (PATH)
   ```

   Replace *(PATH)* with the path to the volume that is affected by the issue, as you did in step 3.
   For example, to make your startup volume visible again you would use this command:
   ```
   sudo chflags nohidden /
   ```

6. Press Return.
7. Quit Terminal.
8. Log out and back in again (or restart).

Your drive should be visible.

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

Mac OS X Server: niutil Utility

This article will show you how to use niutil to manipulate a NetInfo database.
This article has been archived and is no longer updated by Apple.

Why use niutil?

Despite its reputation, niutil is fairly simple. Its options allow you to create, examine, and destroy NetInfo directories or properties. Many of the things you can do with niutil you can also do with NetInfoManager. Because it is easy to make mistakes on a command line, it is usually safer to use NetInfoManager when making modifications to NetInfo.

Sometimes, though, niutil is the only choice-for example, if you are logged in over a modem without access to the graphic interface.

niutil options

- option function: list Display the subdirectories of a given NetInfo directory.

- read: Display the properties and values associated with a given NetInfo directory.

- create: Create a NetInfo directory.

- createprop: Create a property.

- destroy: Destroy a NetInfo directory.

- destroyprop: Destroy a property.

- t: Identify the domain with tagged domain notation.

- p: Propt for the root password of the domain.

A look at the database

The two options for examining a NetInfo database are list, for directories, and read, for properties. With each, you must indicate the domain to read and the path of the directory. Because you're only examining the NetInfo database, there's no danger here.

list

You use the list option to examine the subdirectories of a given NetInfo directory. The following command looks at the subdirectories of the /machines directory in the parent domain (..):

niutil -list .. /machines

The output of this command includes the number of each subdirectory and, by default, the value or values of the name property. In this case, each subdirectory represents a host entry stored in the parent domain.

35 earth_dialin
33 earth_remote
2 earth mailhost
34 pluto
37 venus

If you want to examine the values of a different property, simply include the name of the property in the command:

niutil -list .. /machines serves

The output lists the values of the serves property instead of the name property. Notice that directory 35 (earth_dialin) has no value; it does not have a serves property.

35
33 earth_remote/local
2 earth/local ./network
34 mars/local
37 venus/local

read

The read option displays the properties associated with a given NetInfo directory. The following command shows the properties stored in the host entry for earth in the parent domain:

niutil -read .. /machines/earth

The output includes each property key and the associated value(s). Notice that this directory has a host alias (mailhost) stored as the second value of the name property.

name: earth mailhost
ip_address: 192.82.163.1
serves: earth/local ./network ../super

If you can't access a domain with a relative name (".", "..", or "/"), you can use tagged domain notation with the t option. Remember that tagged domain notation is in the form host/tag, where host is the name or Internet address of the computer serving the domain, and tag is the tag of the NetInfo database. The following command lists the properties stored in the directory /users/root (the root user account) in the domain tagged super served from the host earth:

niutil -read -t earth/super /users/root

The output of this command contains all the properties for a user account:

name: root
uid: 0
gid: 1
realname: Operator
home: /
shell: /bin/csh
_writers_passwd: root
passwd: Vbg0X7ZIQSEIU

The most familiar way to specify a NetInfo directory is with the value of the name property, and so far, the examples have all used this method. However, you can also identify a directory by the value of some other property. For example, the following command displays the properties associated with the subdirectory under /users that has a uid property with a value of 0 in the root domain:

niutil -read / /users/uid=0

Because the root account has user ID 0, the output of this command is the same as if you had indicated /users/root.

What if the value you specify is ambiguous-if more than one directory has a property with the indicated value? The following command looks in the current domain for a user account that has the default group ID 1. Group ID 1 is the group wheel, and the users root, daemon, and me have it as their default group. Any guesses as to the result?

niutil -read . /users/gid=1

The read option displays only the properties for a single directory. The first directory that matches the specified path is displayed, as determined by the directory number. In this case, root has the lowest directory number, and its directory is the first one found. Remember, the list option displays directory numbers as well as, by default, the value of the name property.

Finally, if you know the directory number, you do not need to use a path. For example, the output of niutil with the list option used earlier shows us that /machines/earth in the parent domain is directory number 2. The following commands are equivalent:

niutil -read .. /machines/earth
niutil -read .. 2

create

The following command creates a new directory named admins under the /aliases directory in the parent domain:

niutil -create .. /aliases/admins
niutil -read .. /aliases/admins
name: admins

As you can see from this output, you now have a new directory with a single property, name, assigned the value admins. A mail alias without any members, however, is not very useful.

Note: When using create, be careful what you type so you create only directories you intend to create.

createprop

The next command creates a new property and assigns it several values:

```
niutil -createprop .. /aliases/admins members root
celia george mary
niutil -read .. /aliases/admins
```

The output from the second command shows that the new property members has been created and assigned the values root, celia, george, and mary.

Note: Be very careful with createprop because it will overwrite an existing property that has the same key.

name: admins

members: root celia george mary

If you use the createprop option to set the value(s) of an existing property, that property is overwritten. For example, the following command overwrites the name property so this mail alias can be used with either lowercase or uppercase letters:

```
niutil -createprop .. /aliases/admins name admins
ADMINS
niutil -read .. /aliases/admins
name: admins ADMINS
members: root celia george mary
```

If you want to modify a domain and you are not logged into the server as root, you need to use the p option. When you use this option, you are prompted for the root password of the domain you're modifying:

```
niutil -create -t -p earth/super /aliases/engineers
Password:
```

Destructive Options

The final pair of options is used to destroy directories or properties: destroy for directories and destroyprop for properties. Be very careful with both of these-you don't get a chance to change your mind.

destroy

Sometimes you may need to eliminate an existing directory. For example, let's say you make a mistake while entering a command to create a new mail alias directory:

```
niutil -create .. /aliases/admisn
```

To destroy the offending directory so you can start over, enter the following:

```
niutil -destroy .. /aliases/admisn
```

Of course, you can also fix this situation by using createprop to overwrite the name property.

destroyprop

Sometimes you need to destroy only a specific property. For example, say you made the following mistake when trying to create the members property in a new mail alias:

```
niutil -createprop .. /aliases/admins root celia
george mary
```

As the output below shows, you've created a new property named root instead of a property named members.

niutil -read .. /aliases/admins
name: admins
root: celia george mary

You correct the situation by destroying the mistake and starting over:

niutil -destroyprop .. /aliases/admins root

Note: The following section pertains only to Mac OS X Server versions 1.x, which were released prior to May 2001.

Final Note:
There is a program very similar to niutil called "liutil". It works in pretty much the same way, but the "domain" argument is a path to a NetInfo database rather than a domain in the NetInfo hierarchy. For example, rather than:

niutil -list . /

You can do the same operation on your local database like so:

niutil -list /etc/netinfo/local.nidb /

It must be noted, though, that niutil should be used whenever NetInfo is running on the database you are editing. Specifically, you should not use liutil to edit /etc/netinfo/local.nidb unless you are in single user mode without having started nibindd (1100_DirectoryServices). liutil is particularly useful for editing the NetInfo database when nibindd can't start due to a misconfigured NetInfo database, (See Article 30767: **Mac OS X Server: "Cannot Connect to Network" Error)**. In particular, when NetInfo is set up to bind to a parent server (e.g. the "Use NetInfo" option in Setup Assistant) and there is no parent, you can use liutil to fix that up in single user mode, usually like so:

liutil -destroyprop /etc/netinfo/local.nidb /machines/broadcasthost serves

It is also useful for copying the template local.nidb and editing it for installation on a computer later.

Published Date: Feb 20, 2012

Mac OS X: What is Lookupd?

Relatively few processes communicate directly with NetInfo. Yet, many processes need information that resides in NetInfo. How do these processes get that information? They use an intermediary: lookupd.

This article explains what lookupd is and what it does, and gives you some tips on spotting and fixing problems that involve it.
This article has been archived and is no longer updated by Apple.

What Is Lookupd?

Lookupd is a daemon that simplifies the tasks of the Unix-style library routines that need system and network administration information. These routines, such as getpwuid(), gethostbyname(), and getgrent(), are principally part of the C library (also known as libc). They access information like user names, computer addresses, and group IDs.

Lookupd gets information from NetInfo, the DNS, NIS, and the Unix-style system files. (The Unix-style system files are actually accessed as part of consulting NIS.) It uses Mach messages and SunRPCs to provide information to callers, usually libc routines.

Lookupd was created to avoid rewriting all the libc routines any time a new information service is added. If, for example, we wanted client processes to get network administration information from a relational database, we could modify lookupd so it referenced the information in the database. This would be easier than modifying all the appropriate libc routines to give them relational database access.

In addition to providing a centralized data access service, lookupd also caches some information. This caching improves system responsiveness and decreases network traffic.

When searching for information, lookupd consults its information sources in the following order:

1. lookupd's cache
2. The NetInfo domain hierarchy
3. The DNS, if appropriate
4. NIS

This search order applies in all of Apple's releases through Mac OS X Server. To find out about the DNS see Albitz and Liu 1992, and Nemeth, Snyder, and Seebass 1989; to find out about NIS see Nemeth, Snyder, and Seebass 1989, and Stern 1991.

Lookupd Caching

There are various types of lookupd caches, and each type is flushed and refreshed differently. The following sections provide details.

Password entries cache

One of the caches maintained by lookupd holds the information used by the getpwent() library routine. This routine lists the users known to the system (see Computer Systems Research Group 1986 and the system manual pages). lookupd can optionally cache the information it provides to getpwent(). The cache is enabled by default.

lookupd uses a "lazy refresh" on this cache. By default, lookupd loads the cache when it starts, normally at boot time. It then refreshes the cache only if the cache is referenced. At regular intervals, lookupd checks to see whether the cache has been referenced, and reloads it if it has. In addition, if the cache is referenced after a periodic check, lookupd sends the old data to the caller, then refreshes the cache. (See the lookupd(8) system manual page.)

To gain some perspective about this cache, consider that Mac OS X Server uses getpwent() only to complete a partial user name. For example, you can invoke this function in Workspace Manager's Finder by typing ~ followed by a partial user name, and pressing the Escape key. For example, if smarco is a user name, type "~smar", then press Escape. The Finder completes the name for you if the prefix you supplied is unique.

Logged-in user cache

The user information for the currently logged-in user and the root user are cached when someone logs in through loginwindow. lookupd refreshes this cache every 20 minutes and whenever the logged-in user changes his or her password. It clears the cache when the user logs out.

Local host information

The host information--host name and Internet address--for the local computer are cached when lookupd starts. If these change, lookupd must be restarted, typically by rebooting the computer.

Printers

Information regarding available network printers is also cached by lookupd. Each time the printer database is accessed through lookupd, lookupd verifies the validity of the cache by comparing the current checksums of the source databases with the checksums from when the cache was last loaded. If the cache is out of date, lookupd reloads it and sends the new data to the caller. If the cache is current, lookupd just sends the data from the cache.

Unix-Style Groups

The cache for Unix-style groups is maintained and consulted just like that for printers. It's referenced by the getgrent() library routine, but not by getgrnam() or getgrgid().

Other hosts

Lookupd maintains a one-record cache for information about computers other than the local computer. The cache contains the most recently referenced host name and Internet address. lookupd accesses the cache in response to calls to gethostbyname(), but not for calls to gethostbyaddr().

Mount points

The cache for mount points--locations for imported file systems--is like the cache for printers. It's accessed for calls to getmntent().

Looking It Up With Lookupd

Now let's examine what happens when an application makes a call to a library routine that provides system administration information. For this example, assume the application calls gethostbyname() to get information about a particular computer. The remote computer is Tute.EDU and is outside Rhino Aviation's network.

First, the application invokes gethostbyname(). This executes code in libc; the libc code checks to see if NetInfo is running. It is, so the libc code sends a Mach message to lookupd, requesting that a gethostbyname() operation be performed.

When it receives the Mach message, lookupd first checks to see if the request is for information about the local computer. It isn't, so lookupd then checks to see if the last host name referenced was Tute.EDU. If it was, lookupd would return the information from the cache. For this example, though, let's assume some other computer was referenced last.

Mac OS X Server lookupd consults NetInfo to get the information. This results in an NI_LOOKUPREAD SunRPC message to the local NetInfo server--netinfod local. Since the information isn't in NetInfo, this call returns an error and lookupd repeats the process, ascending the NetInfo domain hierarchy. This may require locating an appropriate NetInfo server, and so could require connecting or binding. (See "NetInfo Binding and Connecting.")

Since the information isn't in NetInfo and the application process is requesting machine-related information, eventually lookupd consults the DNS, using the normal resolver library routines. In this example, it finds the information in the DNS. It then returns the host information for Tute.EDU, using a Mach message, to the gethostbyname() libc routine. The libc routine then returns the information to the client application.

If the information hadn't been available from the DNS, then lookupd could have checked NIS, using the normal NIS semantics. At Rhino, though, NIS isn't used, so lookupd always stops with the DNS.

Managing Lookupd

Ordinarily, you may not have to deal with lookupd directly, so you don't need to do anything to manage it. However, if you want to know what lookupd is doing over time, it can log all requests it handles. You can also restart it if it's running into problems or if you need to refresh caches or tallies. The following sections explain how to work with lookupd.

Logging lookupd requests

Beginning in Mac OS X Server, lookupd can log information about requests it receives. You can set the logging option for lookupd in the system startup script /etc/rc. Logging is described fully in the system manual pages under lookupd(8).

For example, the arguments -L file cause lookupd to log information about requests it receives to the specified file. Logged information includes the called procedure, the number of calls to the procedure since lookupd started, the time required to process this request, and the total time consumed by all instances of this type of request. (Times are in microseconds.) When appropriate, the argument to the call is also logged, and the argument is prefixed with an asterisk if the data was retrieved from the cache. Example 1 shows an example of lookupd logging output.

Example 1: Logged information about lookupd

```
getservbyname Ncalls: 1 Elapsed: 78 Total time: 78
gethostbyname (rhino) Ncalls: 1 Elapsed: 32 Total time: 32
getservbyname (ntp) Ncalls: 2 Elapsed: 108 Total time: 186
getmntent Ncalls: 1 Elapsed: 3384 Total time: 3384
gethostbyname (sabre) Ncalls: 2 Elapsed: 18 Total time: 50
gethostbyname (ranger) Ncalls: 3 Elapsed: 51 Total time: 101
gethostbyname (*ranger) Ncalls: 4 Elapsed: 0 Total time: 101
setpwent Ncalls: 1 Elapsed: 24 Total time: 24
getpwnam (smarco) Ncalls: 5 Elapsed: 28 Total time: 46
setloginuser (672) Ncalls: 1 Elapsed: 64 Total time: 64
getpwnam (*smarco) Ncalls: 6 Elapsed: 1 Total time: 47
getmntent (*) Ncalls: 3 Elapsed: 39 Total time: 3461
gethostbyname (ranger) Ncalls: 5 Elapsed: 38 Total time: 406
getpwnam (*smarco) Ncalls: 7 Elapsed: 0 Total time: 47
getpwuid (*67) Ncalls: 8 Elapsed: 1 Total time: 27
initgroups (smarco) Ncalls: 1 Elapsed: 239 Total time: 239
getgrent Ncalls: 1 Elapsed: 1407 Total time: 1407
getpwuid (*0) Ncalls: 9 Elapsed: 0 Total time: 41
getpwnam (*root) Ncalls: 8 Elapsed: 0 Total time: 353
gethostbyaddr Ncalls: 1 Elapsed: 32 Total time: 32
getpwuid (22) Ncalls: 10 Elapsed: 27 Total time: 68
gethostbyaddr Ncalls: 2 Elapsed: 12 Total time: 44
getservbyport Ncalls: 1 Elapsed: 49 Total time: 49
```

Note: Since lookupd is invoked by `/etc/rc` at system boot time, you have to modify `/etc/rc` and restart the system to enable logging. You can't turn logging on and off dynamically in Mac OS X Server.

Restarting lookupd

Sometimes, you might want to restart lookupd. For example, you might want to force a cache to refresh, change the NetInfo servers being used, or reset the totals reported by the logging feature. You restart a lookupd daemon by sending it a "hang-up" signal, also called a SIGHUP.

To do this, first find the lookupd process ID number, using ps for example. Then, run the following command as root, substituting the process ID number for pid:

```
kill -HUP pid
```

This kills and automatically restarts lookupd.

If you were instead to try to restart lookupd by terminating it and rerunning the program, your computer would hang, because the library functions would be unable to contact the new instance. (If you ever find yourself in this state, reboot the computer.)
Published Date: Feb 20, 2012

iMac: Update Fails Because Application Cannot Quit

I have an Epson printer and I had to reinstall my system software recently. Now I am trying to install the iMac Update but it continues to loop into a message asking me to quit other active applications. I continue to click OK but the message keeps coming up.
This article has been archived and is no longer updated by Apple.
Note: When the system software is reinstalled, any necessary system updates must also be reinstalled.

The installer requires that no other application programs be open before the iMac Update can be installed. It is likely there have been additional attempts to print so that there are items in the Epson printer queue. The Epson Monitor application will continue to relaunch as long as items are waiting to be printed.

There is no quit option available from the Epson Monitor application. The printer documents are stored in the Spool folder of the Epson folder inside the Extensions folder. Clearing the Epson Monitor of all the documents waiting to be printed or actually deleting all the documents from the Spool folder would allow the Epson Monitor application to quit.

One possible procedure would be to restart the iMac with the extensions off. The Epson printer drivers are no longer active and the iMac Update software should now install as intended. Once the iMac is restarted, the printer queue should automatically start up, because of all the documents left in its queue. You should also close any open windows when in the Finder.

Please contact Epson if further assistance is required on removing items from the Epson Monitor.

Knowledge Base article 17159: "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Feb 20, 2012

Apple Modems: Ringer Equivalency Numbers (REN)

This article lists the Ringer Equivalency Numbers (REN) of Apple modems.
This article has been archived and is no longer updated by Apple.
- Global Village Bronze: 0.7 (used on most Performas prior to 1995)
- Global Village Gold II for Performa: 0.8 (used on the Performa 6100 and some 630 series machines)
- Global Village Gold IIv (used in the Performa 6200 and 5300 series): 0.80
- Global Village Platinum V (used in the Performa 6300, 6320, 6290, and some 6400 series): 0.88
- GeoPort Telecom Adapter: 0.7 (stand-alone kit; also included with some Performa 6116s)
- GeoPort Telecom Adapter II: 0.5 (stand-alone kit)
- iMac Internal Modem : 0.3

Published Date: Feb 20, 2012

iMac: Read Me

The following article contains important information about your iMac.
This article has been archived and is no longer updated by Apple.
This document contains important late-breaking information about your iMac computer, including:

Using Your iMac

- Starting up: Mac OS ROM and System Enabler 462 files
- Using the correct disk as a startup disk
- Restarting your computer
- Adjusting the volume for audio CDs and CDs with audio
- Using the iMac internal 56K modem
- Using the built-in speakers
- Using the built-in microphone
- Using infrared
- Working with a RAM disk
- Performance problems using Ethernet
- Determining the amount of Virtual Memory using Apple System Profiler
- Turning Virtual Memory off when installing third-party applications
- Allocating memory for third-party applications
- Performing a clean installation of software

Third-party Software Compatibility Issues

- Using up-to-date Internet browsers
- Using Netscape Navigator 4.0.5
- Installing third-party applications that install QuickTime
- Playing QuickTime movies via America Online
- Using FreePPP
- Using Norton Utilities

Third-Party Hardware Compatibility Issues

- Using Universal Serial Bus (USB) devices with your computer
- Printing to an HP670 printer using a Belkin F5U002 USB cable
- Using ADB dongles

For additional information, see Mac OS Help and the online documentation that came with your computer. Apple provides substantial information online. If you have access to the World Wide Web (WWW), you can check the latest information about the iMac in the support area at the following Uniform Resource Locator (URL): '**www.apple.com/support/imac**'

Using Your iMac

Starting up: Mac OS ROM and System Enabler 462 files

The System Folder contains two important files-Mac OS ROM and System Enabler 462. These files are required for your computer to properly start up. If you delete either of these files or move them to another folder, your computer will not successfully start up.

Using the correct disk as the startup disk

If you selected a CD as the startup disk in the Startup Disk control panel, and you start up your computer without a CD or with a CD other than the software install or software restore CD that came with your computer, a single folder with a reappearing question mark appears on the screen. The computer will then search for any available System Folder and start up. If no System Folder is available, you must insert the software install or software restore CD that came with your computer and restart your computer. If you do not want to start up from a CD, make sure you select the hard disk as the startup disk in the Startup Disk control panel.

Restarting your computer

If you are having problems with your computer, you can often eliminate the problem by restarting your computer, which clears the computer's memory. A restart allows you to save changes to any open documents and will close any open applications. To restart your computer, open the

Special menu and choose Restart, or press the power button on your Apple USB keyboard or on the front of the computer. A dialog box appears. Click Restart.

If your computer freezes while you are working, the power button may not restart your computer. (The Control/Command/power key combination used in earlier Macintosh computers will not work.) You may need to reset your computer manually. Open the cover on the side of your computer and locate the Reset hole (it's the upper hole on the right side, between the Ethernet and modem ports). Carefully insert the end of a large straightened paper clip into the hole and push gently. Do not use excessive force. Your computer should start up.

For more information, see the Emergency Handbook that came with your computer.

Adjusting the volume for audio CDs and CDs with audio

If you can not hear an audio CD or audio portions of a CD, check the volume level in the AppleCD Audio Player and set it to a higher level, if necessary. If you started up your computer from a bootable CD, the volume for the AppleCD Audio Player may be set to zero.

Using the iMac internal 56K modem

Setting up your modem

In most cases, before you can use your modem with a communications program or connect to an online service, you need to set up your modem. You may be asked for the following information:

- In the Modem control panel, make sure the option in the Connect via pop-up menu is "Internal Modem."
- The internal modem is called the "iMac Internal 56K."
- The modem initialization string "AT&F" will reset the modem to the default factory settings.

Note: You may be able to use this initialization string as the necessary setup information in a communications program that does not have the modem profile "iMac Internal 56K" in its list of modems.

- If your communications program has an option for hardware handshaking, turn it on. In some communications programs, this is called "flow control"; the option you select is "Hardware" or CTS & RTS (DTR).

If you have difficulty using a communications program, make sure you selected the correct port and modem name in the setup information. If problems persist, shut down your computer (from the Special menu, choose Shut Down). This turns off your computer and resets the modem. Then press the power button to turn your computer on.

Note: Restarting your computer will not solve the problem.

Having your computer go to sleep when using a communications program
---
Many communications programs can be set up to check the modem port for incoming calls. If so, your computer will not go to sleep automatically (after the specified interval in the Energy Saver control panel). For more information, see the documentation that came with your communications program.

Setting the modem connect speed for communications software

Communications programs may want you to set a maximum port speed as part of their setup procedure. The port speed indicates the speed that the computer communicates with the modem. In most cases, you want to set the maximum port speed to the highest speed available.

Sending commands to the modem using AT commands

You can send commands to the internal modem using a standard set of codes known as the AT Command Set. These commands are in the document "AT_Commands.pdf," located in the Internal Modem folder.

Using FAXstfTM with your modem

To quick fax from a third-party application other than the Fax application, a printer must be designated using the Chooser (from the Apple (□) menu, select Chooser). After selecting a printer, hold down the FAXstfTM "activation keys" to change the Print command to the Fax command.

Additional tips

Apple recommends that you don't open more than one communications programs at a time (for example, attempting to access an ISP when you're receiving or sending a fax). An error message may appear, or the application may freeze. Make sure that the communications programs, such as a

fax application, are not set to automatically answer incoming calls.

Recently the International Telecommunications Union (ITU), one of the organizations working on forming international standards for communications, announced the ratification of the V.90 standard for 56K modems. Previous to the ratification of the V.90 standard there were two proposed standards for 56K modems, x2 and K56flex. The iMac Internal 56K modem supports both the V.90 and K56flex standards. For more information on the V.90 upgrade, go to the support information on Apple's web site at: http://www.apple.com/support

Using the built-in speakers

The built-in speakers may distort louder audio sources. To avoid this, turn the volume down or use headphones or external speakers.

Using the built-in microphone

If you are recording sound using the built-in microphone and the background noise of the computer is in the recording, use another microphone to record, such as the Apple PlainTalk Microphone.

Using infrared

The Apple USB mouse has an optical sensor which can interfere with infrared transmissions. When you transmit information or connect to a network via infrared, make sure the mouse is not directly in front of the infrared port on your computer.

Working with a RAM disk

The RAM disk cannot be used as a startup disk. If you create a RAM disk, its icon will not be displayed in the Startup Disk control panel.

The contents of a RAM disk are saved to the startup drive when you restart your computer. The contents are restored, once the computer restarts. Large RAM disks may add additional time to shutting down and restarting the computer.

WARNING The contents of the RAM disk can be lost if:

- the startup drive is read-only, such as a CD-ROM disc
- the startup drive does not have sufficient space to store the contents of the RAM disk
- the startup drive does not have a valid System Folder
- the computer loses power

IMPORTANT It is highly recommended that you periodically back up the data on your hard disk to an external storage device or network file server.

Performance problems using Ethernet

If you experience performance problems on your Ethernet network, check with your network administrator. Your computer performs best when the Ethernet port is set to auto-negotiate.

IMPORTANT: The duplex mode of an Ethernet link to a switch is not detected if the port at the switch port is not auto-negotiating. If the switch port is not auto-negotiating, your computer will detect the appropriate speed but default to half duplex operation. If the switch port at the other end of the link is configured for full duplex operation, a large number of late events can occur on the link. Set the switch port to auto-negotiated operation where possible. If this isn't possible then set the switch port to half duplex operation. For more information, see the documentation that came with the Ethernet switch.

Determining the amount of Virtual Memory using Apple System Profiler
---
The Apple System Profiler 2.0.1 incorrectly calculates the current amount of Virtual Memory. To view the correct amount of Virtual Memory available, open the Memory Control Panel.

Turning Virtual Memory off when installing third-party applications
---
Some third-party applications may need virtual memory turned off in order to install the application properly. You can turn virtual memory back on after installation. For information on turning virtual memory off and on, see Mac OS Help.

Allocating memory for third-party applications

Some third-party applications may need to have more memory allocated to them in order for them to run or print properly. For information on increasing the amount of memory for an application, see Mac OS Help.

Performing a clean installation of software

Before you do a clean install of your system software, turn File Sharing off in the File Sharing control panel.

Third-party Software Compatibility Issues

Using up-to-date Internet browsers

Apple recommends that you use Netscape 4.0.5 or later, or Microsoft Internet Explorer 4.0.1 or later, both are included with your computer. If you use earlier versions, you may experience problems.

Using Netscape Navigator 4.0.5

To set a different home page using Netscape Navigator 4.0.5, you must use the Internet Config application. To do this, double-click the hard disk icon, then double-click the Internet folder icon. Double-click the Internet Utilities folder icon, then double-click the Internet Config folder icon. Double-click the Internet Config icon to start the application. Click the World Wide Web button. In the Home Page text box, type in the full text of the Universal Resource Locator (URL) of the desired home page.

Installing third-party applications that install QuickTime

QuickTime 3.0 is currently installed on your computer. Some third-party applications install QuickTime as part of their installation process. If an application installs a version of QuickTime earlier than QuickTime 3.0, make sure you do a custom install of the third-party application so you don't install an earlier version of QuickTime. If an earlier version of QuickTime is inadvertently installed on your computer, you can replace it by reinstalling QuickTime 3.0, located in the CD Extras folder on the iMac Software Install CD.

Playing QuickTime movies via America Online

To play QuickTime movies from the Internet using America Online, the QuickTime Plug-in, version 2.0 or later, must be in the AOL Plug-ins folder. You can download this plug-in from any QuickTime supported web site.

Using FreePPP

If your Internet Service Provider (ISP) requires that TCP/IP be configured for FreePPP, FreePPP starts and tries to connect when attempting to access a server via the Chooser. If this happens, you need to reconfigure the TCP/IP control panel. In the "Connect via" pop-up menu, choose AppleTalk (MacIP) or Ethernet built-in.

Using Norton Utilities

Norton Utilities 3.5.3 or earlier is not compatible with the new Mac OS Extended format of hard drives, also known as HFS+. Apple recommends using Disk First Aid 8.2 or later if you need to test and repair your hard disk. For more information, see the Emergency Handbook that came with your computer.

Third-Party Hardware Compatibility Issues

Using Universal Serial Bus (USB) devices with your computer

Some Universal Serial Bus (USB) devices may not be supported by the iMac because of recent changes in the USB Specifications.

Apple recommends that you do not plug in or unplug USB devices while you are using an application.

Printing to an HP670 printer using a Belkin F5U002 USB cable

If you've connected a Hewlett Packard HP670 printer to your computer using a Belkin F5U002 USB cable, when you attempt to choose the printer, a message appears saying the computer was unable to choose a printer. Do the following:

- Make sure the USB cable is firmly connected to the parallel port on the printer.
- Make sure the printer is turned on.
- Make sure the USB cable is firmly connected to a USB port on your computer.

Note: Apple recommends that you contact the printer manufacturer for their recommendation on what type of cable to use with their printer.

Using ADB dongles

Some applications require the use of an ADB (Apple Desktop Bus) dongle for security purposes to prevent software piracy. The iMac uses

Universal Serial Bus (USB) technology. You may be able to use a USB dongle with these applications. For more information, contact the software manufacturer.

July 16, 1998

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Published Date: Feb 20, 2012

LaserWriter 12/640: Disabling the Startup Page

I cannot disable the Startup page on my Apple LaserWriter 12/640 with the Apple Printer Utility. Each time I reboot the printer a Startup page prints.

Also when I relaunch the Apple Printer Utility the print startup page option is checked again.
This article has been archived and is no longer updated by Apple.
The Apple LaserWriter 12/640 will print a Startup page when powered on whenever the Communication Switch is in the "reset" or "factory default" position, that is the switch is in the "out" position.

If you do not want a Startup page to print when the printer is powered on, place the Communication Switch in the "normal" or "customize" location, in the "in" position, then via the Apple Printer Utility uncheck the checkbox for "Print a startup page each time the printer is turned on."

Note: When you try with the Apple Printer Utility to disable the Startup page when the switch is in the reset position, this dialog is displayed:

Warning:
Some settings will not be saved on the next power cycle. (See switch position)

If you receive this message, place the Communication Switch in the normal position sometime before restarting the printer to not print the startup page.
Published Date: Feb 20, 2012

SCSI: Cable Connection and Termination

Questions and answers about SCSI cable connection and termination. The answers are most significant where users share SCSI devices.
This article has been archived and is no longer updated by Apple.
Question: Can a SCSI system cable with terminator remain connected to a Macintosh without the other cable end being attached to a SCSI device?

Answer: Yes, the SCSI can be terminated and connected. There shouldn't be any difficulties with this setup.

Question: If a SCSI peripheral is attached (for example, system cable to HD 80SC), can the SCSI extender or SCSI peripheral cable be attached to the last "real" SCSI device with the other end of the cable left unattached?

Answer: SCSI cables can be connected to the last SCSI device in the chain, provided they are terminated.

Question: Does a terminator go on the last device, or at the end of the last piece of cable?

Answer: As long as these cables are connected, they are considered part of the SCSI bus -- whether connected to a device or not. As part of the bus, you need to terminate the the last cable if not connected to another device.
Published Date: Feb 20, 2012

PowerBook: Rear Panel I/O Ports

This article provides I/O panel information for the following PowerBook computers: 500 Series, 5300, 1400, 2400, 3400/G3, and G3 Series.

For additional portables I/O Panel information please visit the following articles:
"PowerBook 100 Series: I/O Ports"
"PowerBook Duo & Portable: I/O Ports"
"PowerBook G4: Identifying I/O Ports of Each Model"
This article has been archived and is no longer updated by Apple.

PowerBook 500 I/O Panel

PowerBook 5300 I/O Panel

PowerBook 1400 I/O Panel

PowerBook 2400 I/O Panel

PowerBook 3400/G3 I/O Panels

TA25224_PowerBook_Rear_Panel_IO_Ports.pdf

PowerBook G3 Series I/O Panel

PowerBook G4 I/O Panel

Published Date: Feb 20, 2012

iMac Discussion Board: Frequently Asked Questions (1 of 2)

This article contains frequently asked questions (FAQ) regarding iMac, with answers to those questions, and information regarding technical issues that may be encountered with an iMac. Additional iMac Discussion FAQs are listed at the end of this article.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. My iMac has difficulties with sleep or the Energy Saver control panel. The computer does not sleep when I want it to, or fails to respond when it should wake from sleep.
2. Why does my USB mouse only move in one direction?
3. Why does my USB keyboard and mouse not respond?
4. I have my keyboard and mouse plugged into my USB hub and it does not work right. What's wrong?
5. The files in my windows are sorted in the wrong order. How do I change them back to the way I had them?
6. What causes the Type 12 error when I launch iMovie?
7. What other information is available on iMovie?
8. Can I use those business cards or other oddly shaped CD-ROM discs in my slot loading iMac?
9. Some of my DVD movies do not mount while others work fine. What causes this?
10. When I watch a DVD movie it skips occasionally. What can I do about it?
11. How can I improve the audio synchronization when I play a DVD movie?
12. A flashing question mark is displayed on the screen momentarily when the iMac starts up. It goes away but I was wondering why it happens and how to get rid of it.
13. My Control Strip moved up near the left center of the screen. How did it get up there? How do I move it back down?

Question 1: My computer has difficulties with sleep or the Energy Saver control panel. The computer does not sleep when I want it to, or fails to respond when it should wake from sleep.

Answer: Answer: Please refer to these articles:

Article 30894: "**Mac OS: Energy Saver Troubleshooring**"

Article 58645: "**USB Enabled Macintosh: Troubleshooting Sleep Issues**"

Article 25048: "**Mac OS: Do Not Remove Multiprocessing Folder**"

Question 2: Why does my USB mouse only move in one direction?

Answer: Article 25066: "**USB Mouse: Intermittently Loses Tracking In One Axis**"

Question 3: Why does my USB keyboard and mouse not respond?

Answer: Article 24508: "**iMac: Not Responding To Keyboard Or Mouse**"

Question 4: I have my keyboard and mouse plugged into my USB hub and it does not work right. What's wrong?

Answer: Article 24935: "**USB: Keyboard Should Not Be Plugged Into USB Hub**"

Question 5: The files in my windows are sorted in the wrong order. How do I change them back to the way I had them?

Answer: Article 24640: "**Mac OS: Finder Lists Are In Reverse Order**"

Question 6: What causes the Type 12 error when I launch iMovie?

Answer: Article 25113: "**iMovie: (Type 12) & DVD Player (ControlStripLib) Errors**"

Question 7: What other information is available on iMovie?

Answer: The following Knowledge Base articles cover a variety of iMovie questions:

- Article 25112: "**iMovie: iMovie Help Does Not Appear/Open After System Software Clean Installation**"
- Article 60731: "**iMovie: Unable to Output When Using Sony DVMC-DA2**"
- Article 60624: "**iMovie: Saving DV Video to European Cameras**"
- Article 60563: "**iMovie: Shelf Spaces Available With Different Monitor Resolutions**"**iMovie: Importing Non-DV QuickTime Movies**"
- Article 60616: "**iMovie: Setting Resolution to 640x480 Forces Application to Quit**"
- Article 25140: "**iMovie: Cannot Open; "SoundLib--SoundConverterSetInfo" Not Found**"
- Article 60562: "**iMovie: Files Split At 1.9 GB When Capturing Clips**"
- Article 60565: "**iMovie: Transition and Title Clip Progress Bars**"
- Article 24787: "**Digital Video: Movies Look Bad When Played Back on Mac and/or TV**"

- Article 31150: "**iMovie & Final Cut Pro: Cannot Export to Tape Error**"
- Article 60625: "**iMovie: SECAM DV Not Available**"

Question 8: Can I use those business cards or other oddly shaped CD-ROM discs in my slot loading iMac?

Answer: Article 58641: "**Macintosh: Using Nonstandard Discs in Optical Media Drives**"

Question 9: Some of my DVD movies do not mount while others work fine. What causes this?

Answer: The following articles discuss this situation:

- Article 58382: "**Troubleshooting a CD-ROM or DVD-ROM Disc That Does Not Appear on the Desktop**"
- Article 30878: "**DVD Discs: Cannot See on Desktop and/or No Sound**"

Question 10: When I watch a DVD movie it skips occasionally. What can I do about it?

Answer: Article 31020: "**Apple DVD Player: How to Reduce Skipping or Stuttering**"

Question 11: How can I improve the audio synchronization when I play a DVD movie?

Answer: Article 60718: "**Apple DVD Player: How to Improve Audio Synchronization**"

Question 12: A flashing question mark is displayed on the screen momentarily when the iMac starts up. It goes away but I was wondering why it happens and how to get rid of it.

Answer: Article 58042: "**iMac: Blinking Question Mark at Startup**"

Question 13: My Control Strip moved up near the left center of the screen. How did it get up there? How do I move it back down?

Answer: Article 60241: "**Mac OS: Moving the Control Strip**"

Part 2 of this FAQ can be found in the following article:

- Article 88014: "**iMac Discussion Board: Frequently Asked Questions (2 of 2)**"

Published Date: Feb 20, 2012

TCP/IP: IP Addresses for Private Networks

This article tells how to configure a stand-alone TCP/IP network, or a network that is connected to the Internet using Network Address Translation.
This article has been archived and is no longer updated by Apple.
If you are not connecting to the Internet, you can use IP addresses from ranges having been reserved specifically for use on private IP networks. If you plan to connect your private network to the Internet using a router that supports Network Address Translation, also called NAT and "IP Masquerading." Please read the note at the end of this article.

An IP address is comprised of a network number and a node number; when selecting IP addresses for your network, computers on the same network segment, or "subnet", must have:

- The same network number: the portion of the IP address that represents the network number must be the same for all devices on the same network.
- Unique node numbers: the node number is what distinguishes one device from another.
- The same subnet mask: the mask is what determines how the IP address is subdivided into Network portion and Node portion.

This table assists you in selecting IP addresses for your Private IP network. This is not the entire range of addresses available for Private IP networks, just a subset.

Range (for a single subnet)	Default Subnet Mask	Class	Network # Portion	Node # Portion	Sample addresses for a computers on a single network segment*
10.0.0.0 through 10.255.255.255	255.0.0.0	A	10	0.0.0	10.0.0.1 through 10.255.255.254
172.16.0.0 through 172.16.255.255	255.255.0.0	B	172.16	0.0	172.16.0.1 through 172.16.255.254
192.168.0.0 through 192.168.0.255	255.255.255.0	C	192.168.0	0	192.168.0.1 through 192.168.0.254
192.168.1.0 through 192.168.1.255**	255.255.255.0	C	192.168.1	0	192.168.1.1 through 192.168.1.254

* When converted to binary, node addresses that are all zeroes (.0, or '00000000') and all ones (.255, or '11111111') are reserved for referring to the network itself, and for the network's broadcast address, respectively. So addresses 192.168.0.0 and 192.168.0.255 would not be available addresses for client workstations.

** There are many more Class C addresses available for Private IP networks: in fact, you can use any class C address in the range 192.168.0.x through 192.168.255.x (where x would represent the node ID, a number between 1 and 254); just remember that, with default subnet mask, the first 3 octets must be the same for all devices on the network (it is the first 3 octets that specify the network number for a Class C address).

Recommendation: Use a different Class C address for each subnet on your private Intranet.

Note: If your network is to be "hidden" from the internet by a hardware or software router that is configured for Network Address Translation (NAT, or "IP Masquerading"); your documentation for that product may suggest using one of these networks numbering schemes, too. Such a router has two (or more) IP addresses.

The IP address on the side of your router that connects to your Internet services (ISP or WAN) may be permanently assigned, or it may be assigned dynamically when your router connects. (DHCP or BOOTP protocols are commonly used to assign an IP address for dial-up, ISDN,

and cable modem connections.) The network interface on the local side of the router is an address within the range that all your other local machines use. Thus, the two interfaces on your router are on different logical networks, and may use different subnet masks, but ALL the addresses on the local side must be on the same logical network. This must be so in order that the local side of the router and your client systems may communicate with one another; it is then the router's job to pass traffic between the two different logical networks it serves -- yours, and the Internet.

It could be that additional routing needs to be done on the local side of your network. It then becomes possible that the subnet mask in use on your local subnet which connects to the outside-world router may require a subnet mask that is different from the one the router uses for its own port on your local subnet.

Your local network could be subdivided into several smaller networks by another router (such as another hardware or software router), or a server capable of routing. Such a server would have multiple ethernet ports configured, and might be a Mac OS X, Novell, or Windows NT server. On each resulting subnet, that subnet's lowest-number legal node address is usually assigned to the routing or gateway port by convention.
Published Date: Feb 20, 2012

TCP/IP: Using TCP/IP Instead of AppleTalk on Your Network

Use this information when migrating from AppleTalk to TCP/IP on your network.
This article has been archived and is no longer updated by Apple.
Important: Before beginning, be sure not confuse the terms "AppleShare" and "AppleTalk." The information used in activities known as AppleShare and File Sharing is carried in "packets" across your network. These packets may be of the type "AppleTalk" or "TCP/IP."

First, you need IP addresses for each device on your network, which you must get from your network administrator or Internet service provider. If you are setting up a private IP network that will not be connected to the Internet, then see this technical document to determine what IP addresses to use.

Article 30821: "**TCP/IP: Setting up a Private Network**"

Second, set up each computer's TCP/IP control panel either via DHCP, via BootP, or manually, as appropriate for your network. If Configuring manually, you will need the following information:

- IP address
- Subnet mask
- Router's IP address (if any)
- Name server's IP address (if any)

Third, you'll need applications or processes that use TCP/IP. AppleTalk is the only protocol for File Sharing in Mac OS 8.6 and earlier and for many Apple LaserWriter Printers, so you would need alternatives to these. File Sharing in Mac OS 9 and later can be done using TCP/IP as an option in the File Sharing control panel. AppleShare IP server software allows you to share files using TCP/IP. It also includes TCP/IP services for email, FTP, web service, and Windows sharing (SMB).

Fourth: Printing. Many third-party printers and Apple's later LaserWriter printers support printing via LPR, a TCP/IP protocol. The method used to set up the printer with an IP address depends on the printer you have. You can search the Apple Spec Database and the Knowledge Base for more information on Apple printers.

To print via LPR, you will need a print driver that supports LPR. The Desktop Printer Utility included with Mac OS 8.1 and later supports LPR.

You need to determine which of your network applications use TCP/IP versus AppleTalk.
Published Date: Feb 20, 2012

Drive Setup 1.6.1: Read Me

This document provides important information about Drive Setup 1.6.1.

Drive Setup installs software (called a disk driver) that allows your computer to communicate with the hard disk. Use Drive Setup 1.6.1 to update your disk driver or to reinitialize a disk. When you initialize a disk, all of its contents are erased. A version history is at the end of this document.

IMPORTANT: Earlier versions of Drive Setup can reintroduce issues resolved with Drive Setup 1.6.1.
This article has been archived and is no longer updated by Apple.

When to use Drive Setup 1.6.1

- Immediately after you set up your computer for the first time.
- Any time you install Mac OS versions 7.5.x, 7.6, 7.6.1, 8.0, 8.1 or 8.5 on your computer, you should use Drive Setup 1.6.1 to update the driver on your hard disk again. If you are using a version of Mac OS prior to 7.6, it is not necessary to use Drive Setup 1.6.1 to update your hard disk drive.

Note: Drive Setup 1.6.1 was tested with and is supported with System 7.5 through Mac OS 8.5.

At Ease and Drive Setup 1.6.1

If you are using At Ease 4.0, 4.0.1, or 5.0, and wish to update your hard disk driver using Drive Setup 1.6.1, please follow these steps before using Drive Setup 1.6.1. (If you are using At Ease 3.0 or earlier, these steps are not applicable.):

- Launch the At Ease Administration program.
- From the Security menu, choose System Settings.
- Make sure that the option "Prevent users from bypassing security by starting up from a floppy disk." is not selected.

Using Drive Setup 1.6.1 to Update a Hard Disk

This section describes how to use Drive Setup 1.6.1 to update your hard disk. You may have Drive Setup 1.6.1 on a CD or you may have downloaded Drive Setup 1.6.1 from an Apple Web site.

To use Drive Setup 1.6.1 to update your hard disk, follow these steps:

1. Back up your hard disk and turn off any hard disk security software. Using Drive Setup to update a hard disk driver with security software turned on may cause problems.

IMPORTANT: Apple strongly recommends that you make a copy of the information on your hard disk before you update the disk using Drive Setup.

2. Insert your system software CD in the CD-ROM drive and restart your computer using the CD.

Note: To learn how to start up your computer using a system CD, see the user's manual that came with your computer.

3. Locate Disk First Aid on the CD and open the program.

4. Select your hard disk and click Repair.

Note: Disk First Aid checks your hard disk and repairs problems it finds. For more information about Disk First Aid, see the user's manual that came with your computer.

5. When you have finished, quit Disk First Aid and restart your computer.

6. When your computer restarts, eject the system CD and use Drive Setup 1.6.1 as follows.

7. Open Drive Setup 1.6.1.

WARNING: When Drive Setup opens, do not click Initialize. Doing so erases all the information on your hard disk.

8. Select your hard disk in the List of Drives list.

9. Choose Update Driver from the Functions menu.

IMPORTANT: If Update Driver is not available, your hard disk may be protected by security software. See the manual that came with the software to learn how to turn off security while you update the disk.

10. Click OK when a message appears telling you that you must restart your computer.

11. Quit Drive Setup when you see the message, Driver update was successful.

12. In the Finder, choose Restart from the Special menu.

If you have problems or Drive Setup fails to update the disk, see the troubleshooting chapter in the user's manual that came with your computer.

IMPORTANT: If your computer has one or more previous versions of Drive Setup on the hard disk, Apple recommends that you replace these older version(s) of Drive Setup with version 1.6.1 of Drive Setup.

Recovering From Disk Problems
If, when you start up your computer using a system software CD, you see a message asking you to initialize your hard disk, do not click Initialize. It may be possible to recover the hard disk using Disk First Aid or another disk utility. To learn how to use Disk First Aid, see the troubleshooting chapter in the user's manual that came with your computer. If you are using another disk utility, see the manual that came with the software.

Initializing Your Hard Disk
If you need to initialize your hard disk, see the user's manual that came with your computer or the system software CD you are using to learn how to do so. When you are finished initializing and installing system software on your hard disk, use Drive Setup 1.6.1 to update your hard disk. See 'Using Drive Setup 1.6.1 to Update a Hard Disk' earlier in this document.

Tips and Troubleshooting

1) Update Driver command is dimmed

If the Update Driver command is dimmed, the desired disk is either not supported, or it's previously been updated with a non-Apple utility. If the disk isn't supported, check the instructions that came with your computer or disk to see if the manufacturer includes or recommends a disk utility, and use that utility to update the driver. If you have updated or formatted the disk with a non-Apple utility, you will need to use that utility again to perform the update. To ensure a successful update, obtain the latest version of the utility.

2) Using Drive Setup with Energy Saver

Before you use Drive Setup to perform an extended operation, such as testing the disk, open the Energy Saver control panel and select Never for the Hard Disk Sleep option to prevent the hard disk from spinning down before Drive Setup is finished.

3) Manually mounting volumes

Drive Setup allows you to partition a hard disk into several volumes when you initialize the disk. You can also select whether or not to mount a volume automatically when you start up your computer by using the 'Automount on startup' option. Beginning with Drive Setup 1.3, a more reliable method of mounting volumes automatically is being used, to ensure correct operation with virtual memory. You cannot use a disk utility program (for example, SCSI Probe version 4.3) to mount volumes manually if the program does not support the new way volumes are mounted. However, you can use Drive Setup to mount volumes manually.

4) Reinstalling Additional Software

Some computers come with additional software installed. If you want to reinstall this additional software using the 'restore' CD that came with your computer, quit Drive Setup before you reinstall the software. Icons will not appear on the desktop if Drive Setup is open when you reinstall the software.

5) Waiting for initialization to complete

Sometimes Drive Setup indicates that it has finished initializing a disk when it has not completely finished. Wait for your new volumes to appear in the Finder before continuing.

Improvements to Drive Setup (version history)

- Version 1.6.1 - Fixed a potential data transfer problem on the PowerBook 5300 and PowerBook 2300 operating in SCSI Disk Mode.
- Version 1.6 - Fixed a problem where ATA drives did not properly sleep. Also fixed a problem where Media bay devices were not properly reported on PowerBooks.
- Version 1.5 - Added support for Power Macintosh G3 computers. Fixed a problem where the write cache on some ATA drives was disabled following a restart.
- Version 1.4 - Added support for Mac OS Extended format for Mac OS 8.1. Supports all Macintosh computers that are supported by Mac OS 8.1 as well as all computers supported by Drive Setup version 1.3.x.

TA25229_Drive_Setup_Read_Me.pdf

- Version 1.3.1 - Fixed a problem on ATA drives that in rare cases could cause the loss of files/hard drive after a shutdown with Mac OS 7.6.1 and 8.0 systems.
- Version 1.3 - Updated to work with all Macintosh computers that are supported by Mac OS 8. Incorporates Mac OS 8 appearance. Takes full advantage of the increased throughput of Ultra SCSI-2 Fast/Wide drives.
- Version 1.2.5 - Limited release for Power Macintosh Workgroup Servers 7350 and 9650. NOT RECOMMENDED for other computers. Superseded by later versions.
- Version 1.2.4 - Updated to access drives with SCSI IDs greater than 7 (SCSI-2 Fast/Wide). Added the ability to repair a disk that is damaged by updating with Drive Setup 1.2.2 after initializing with Apple HD SC Setup 7.1.2 or earlier.
- Version 1.2.3 - Fixed a problem in which large reads and writes on the hard disks of Performa 6400 series computers could cause hangs. Added the ability to update from Apple HD SC Setup drivers.
- Version 1.2.2 - Improved recognition of secured volumes. Made minor changes for compatibility with the Mac OS 7.6 Installer.
- Version 1.2.1 - Limited release for a few Power Macintosh computers sold in some European markets. NOT RECOMMENDED for other computers. Superseded by later versions.
- Version 1.2 - Includes SCSI MESH patch for PCI Power Macintosh computers. Added support for selected 68k-based Mac OS computers with internal ATA hard drives.

IMPORTANT: Apple HD SC Setup should only be used with older 68k-based Mac OS computers.
Published Date: Feb 20, 2012

Power Mac 8100/80AV: Mac OS 8.1 and PAL Video

I am doing video output work on my Power Macintosh 8100/80AV computer with Mac OS 8.1 system software installed. I noticed that the NTSC/PAL format options are not available on the "monitor and sound" control panel. Since my Power Macintosh 8100/80AV is NTSC/PAL video out capable, I would like to use this feature.

- How can I turn on this Video Display option?
- Is this fixed in Mac OS 8.5?

This article has been archived and is no longer updated by Apple.

With Mac OS 8.1, Monitors & Sound control panel version 1.3.3 is installed. This control panel does not provide any options for setting NTSC/PAL video out. These options can be set by installing and using the Monitors control panel which is installed in the Apple Extras->Monitors Extras Folder. Double-Click the Monitors control panel and click the "Options..." button. The user will be presented with the Video Display Options window. From here, a user should be able to select "Display Video on Television" in either NTSC or PAL Standard.

This feature has been added to the Monitors & Sound control panel that is installed with Mac OS 8.5. With Mac OS 8.5, Monitors & Sound control panel version 1.4.2 is installed. This newer version now includes a button called "Added Options...". By clicking this button the user will be presented with the Video Display Options window that will allow the user to select "Display Video on Television" in either NTSC or PAL Standard.

Published Date: Feb 20, 2012

ARA Personal Server 3.0: Can‘t Be Set To Answer Calls

When I install Apple Remote Access Personal Server on a Power Macintosh running Mac OS 8, I cannot set my computer to answer calls. Call Answering does not appear in the Remote Access Menu. I also get the following error when opening Answering from the Remote Access Menu "There was a problem gathering information about Answering."

How can I enable call answering?
This article has been archived and is no longer updated by Apple.
The most likely reason that Call Answering is unavailable is that Apple Remote Access (ARA) Client (which does not include the Call Answering feature) is also installed. This can occur with Mac OS 8.5, 8.5.1, and 8.6, and ARA client versions 3.0, 3.1.2, and 3.1.3.

Many versions of Mac OS 8 include Apple Remote Access Client as part of the default installation. When you install Apple Remote Access Personal Server 3.0, it does not replace any ARA Client already installed. Because of this, Call Answering does not appear as an option. In some cases, you may see Call Answering but get error messages when trying to access Answering features.

To verify what's installed, you can use the Extensions Manager. Select as Packages from the View menu. Look for the ARA package, you will only want ARA 3.0 Personal Server present. If you see ARA Client, then you need to remove that software.

Extensions Manager

Note: The installer for ARA personal server installs modem scripts on your computer. Modem scripts with the same name as those installed by Personal Server 3.0 will be overwritten. The procedure below will restore any scripts that came with your computer. If you have problems with your modem after installing ARA Personal Server following this procedure, try downloading a new script from your modem manufacturer.

In order to use ARA Personal Server on a computer that already has ARA Client installed:

1. On the install disc that contains your system software, double-click the file named Install Remote Access. This file is located in the ARA Client Only or Apple Remote Access Client folder, either of which will be within the Software Installers folder.

2. Select Custom Remove from the pulldown menu.

3. Select the Apple Remote Access client for Power Macintosh.

4. Click Remove.

5. After the removal is complete, run the installer again.

6. This time choose Custom Install from the pulldown menu.

7. Select only the Remote Access modem scripts.

8. Click Install.

9. Restart

10. On the Apple Remote Access Personal Server CD, double-click the file named Install Remote Access.
This file is located in the ARA 3.0 Personal Server folder

11. Select Custom Install

12. Select all items in the list except the Remote Access modem scripts.

13. Click Install

14. Restart.

System Install/Clean Install Procedure
If you are installing Mac OS 8 on a computer on which you intend to use ARA Personal Server, be sure to click the "Customize" button on the Install Software screen, select custom installation from the pull-down menu to the right of the Apple Remote Access package, and choose only the Remote Access Modem scripts. Then install the Server, making sure to install only the server software and not the modem scripts.
Published Date: Feb 20, 2012

Mac OS X Server: Basic Introduction To NetInfo Domains

This article is a brief introduction to NetInfo domains. It introduces new terms and the structure of the hierarchy.
This article has been archived and is no longer updated by Apple.

Introduction

A NetInfo domain is a hierarchical collection of NetInfo database(s) that provide system resources and network administrative information. This article discusses a three level domain hierarchy because it is the most common. The number of levels in the hierarchy is unlimited, but it is rare that more than three are needed. Below is of graphic a what a three-level domain may look like.

Figure 1 A three-level domain

Every computer that uses NetInfo has a local domain and a local database that is a repository of information that pertains specifically to that computer. The level above the local domain is usually called the network domain or network database and is a repository of shared system resources and administrative data. The next level is the root domain or root database and it is the repository of shared information for the entire network. So, each level of the domain has a corresponding database.

Processes

Also, each domain has its own server process that controls the domain. This process is called netinfod. When this process is viewed in ProcessViewer, and the Path & Arguments tab is selected, the domain the process serves is listed. On most computers it says netinfod local (master). If the computer is also a server for network domains it has processes for those. The computer serving /eng in the graphic has a netinfod local and a netinfod network process running.

Tags

Through out this article the terms local database and network database have been used. These are the *tags* (names) of the database. The local database tag is always "local" and the domain above the local domain is usually "network" (this is only by convention). The root database's tag is usually given a name that makes it easily identifiable, a school name, or business name. In this article the root domain's tag is Computers. A database tag is important when the hierarchy is being managed with NetInfoManager and command line utilities such as niutil.

Searching the Hierarchy

Before searching is covered a few more new terms are needed. The root domain is the *parent* domain for the entire network. The /eng and /mktg domains are the *children* of the root domain and the local domains are its *grandchildren*. Consequently, the /eng and /mkgt domains are parents for the local domains below.

When an application needs information it starts by searching the local NetInfo domain by contacting the netinfod for the local domain and the database is searched for the information. If the information is not the local database the parent netinfod process is contacted and its database is searched. This continues until the information is found and returned to the application or until the root domain is searched an no information is found. Thus domains at the same level are isolated.

In closing, domains are fundamental when constructing a NetInfo network. The domain structure can easily be made to mirror a company's internal structure keeping departments separate for security reasons, or they can mirror the company's physical layout such as regions, states, buildings and floors. Planning a domain map should be the first step of creating a NetInfo network.
Published Date: Feb 20, 2012

AppleShare IP 6: PASS Protocol

Many email clients use the PASS protocol to change a user's password. Because it raises security issues, it is off by default and must be explicitly be enabled by the server administrator.
This article has been archived and is no longer updated by Apple.
Eudora & eMailer (and other email clients) use a protocol called "PASS" to change a user's password.

AppleShare IP 6.x comes with "PASS off by default. This is because "PASS" is a "clear-text" based protocol with limited security support. Because of this, it was decided to make the administrator explicitly enable this protocol.

To enable "PASS", go to the "Server" menu in the Mail Admin, choose "Advanced Settings" (The Mail Server must be running to do this.) and click on the "Protocols" tab. Make sure that the "PASS" protocol is enabled.
Published Date: Feb 20, 2012

iMac: Use Mac OS Extended Format

You should format your iMac's hard disk using the Mac OS Extended format instead of the Mac OS Standard format.
This article has been archived and is no longer updated by Apple.
If you decide to reformat your iMac's hard disk, you should use Mac OS Extended format, sometimes called HFS Plus format, because it is more efficient than the Mac OS Standard format.

For more information on Mac OS Extended format, see the following Knowledge Base article:

Article 30344: "**Mac OS: About Mac OS Extended Format**"

Published Date: Feb 20, 2012

Mac OS: Print Window Command May Not Print Correctly

Icons and text may be clipped or simply not printed, when printing many items using the Finder's Print Window command.

Note: Updating to Mac OS 9.1 resolves this issue.

This article has been archived and is no longer updated by Apple.

Symptom

Icons and text may be clipped or simply not printed, when printing many items using the Finder's Print Window command. This may occur from all view options: Icons, Buttons, and List.

Solution

If you encounter this issue, you may be able to fully print the contents of the window by:

- Changing the View to another setting: Icons, Buttons, or List.
- If the View setting is as Icon, try selecting another icon size. (Choose View Options from the View menu.)
- If View is set as Icon, reposition the icons in the folder.
- Reducing the number of items in the folder before printing.

Note: These solutions may not work in all cases. Some window contents may continue to be clipped even when printed in list view.

Published Date: Feb 20, 2012

PowerBook: Printing to an IrDA Printer

This article explains how to set up an IrDA-capable PowerBook to print to an IrDA-capable laser printer.

This article has been archived and is no longer updated by Apple.
First, make sure that your computer can communicate with the printer. Open the Infrared control panel to check that the computer "sees" the printer. Next, open the AppleTalk control panel and make sure that AppleTalk is set up to use the IrDA port. Lastly, follow these steps to create a new Infrared desktop printer with the Desktop Printer Utility:

1. Open the Desktop Printer Utility.
2. Choose New from the File menu; a window appears (see Figure 1).
3. Select "Printer (Infrared)" from the list and click OK; a window opens (see Figure 2).
4. Click the Change button; a window containing a list of available PostScript Printer Description files appears (see Figure 3).
5. Select your printer from the list and click Select. If your printer does not appear in the list, select Generic (you may want to contact the printer manufacturer for their PostScript Printer Description (PPD) file).
6. Choose Save As from the File menu and save the printer file as a desktop printer.

The icon of your newly created desktop printer appears on the desktop.

Figure 1 Creating a new desktop printer

Figure 2 Picking the PPD file

Figure 3 List of Printer Description files

Published Date: Feb 20, 2012

Mac OS: What is a Memory Leak?

This article defines the term "memory leak."
This article has been archived and is no longer updated by Apple.
A memory leak refers to memory that is not released by an application program when the program no longer needs it. This can lead to a crash or to the program displaying an out of memory message.

To resolve a memory leak, increase the amount of memory that a program uses (to delay the effect of the leak) or get an updated version of the program that has been corrected.
Published Date: Feb 20, 2012

AppleShare IP 6.x: IMAP with Netscape Communicator 4.5

This article discusses compatibility of AppleShare IP (ASIP) 6.x and the IMAP client in Netscape Communicator 4.5.
This article has been archived and is no longer updated by Apple.
ASIP 6.0 and the IMAP client in Netscape Communicator 4.5 are not compatible.

In addition, there is a problem with Netscape Communicator 4.5 and AppleShare IP 6.1 IMAP support. Although the AppleShare IP 6.1 Mail Server supports nested IMAP folders, Communicator will not properly display these nested folders. The folders are still present and all mail in them is still intact -- the nested folder simply fails to appear in Communicator's mailbox browser. If your AppleShare IP mail account contains nested folders, you will not be able to access them with Netscape Communicator 4.5.

At this time Apple recommends the use of other IMAP clients for access to nested folders. The AppleShare IP 6.1 Mail Server is fully compatible with a number of other IMAP clients offering full support for nested folders, including Netscape Communicator 4.04.
Published Date: Feb 20, 2012

AppleShare IP Print Server‘s Log: Number Of Copies

The ASIP Print Server's Log sometimes lists the number of Copies printed in a print job and other times recorded is N/A. Why the inconsistency?
This article has been archived and is no longer updated by Apple.
The ASIP Print Server's Log will record the number of Copies printed as N/A if the print job was created by a LaserWriter driver older than LaserWriter 8, version 8.6, or possibly by a PostScript driver on another type of computer other than a Macintosh.

LaserWriter 8.6 includes a new DSC comment, %RBINumCopies, in the print job listing the number of Copies to be printed that a spooler or document accounting program could look for and log.

Therefore, when the number of Copies in the Log reads N/A, the job was created by an old printer driver. If a numeric value is given for the number of Copies, the print job was created by LaserWriter 8.6 or newer.
Published Date: Feb 20, 2012

iMac: Troubleshooting "No Video" Issues with an External Monitor

One of the troubleshooting techniques used is to attach an external monitor. If there is no video on the external monitor, then the fault is generally assumed to be in the logic board area while the presence of a clear external video signal indicates a fault with the analog board.

However, if the wrong type of monitor is attached to the iMac, it produces no video even if the can is generating a valid video signal and thus leading to an inaccurate diagnosis of the situation. Apple has seen a number of service providers who have attached older monitors that do not produce a signal on the iMac leading them to replace multiple working parts in search of the fault.

This article has been archived and is no longer updated by Apple.
This article covers repair procedures for authorized service providers on selected Apple products, but we have published them in the Knowledge Base for the general public for educational purposes. At this time, there are a limited number of repairs that a customer can perform and these are covered under the customer installable parts program http://www.info.apple.com/installparts. If you have not been authorized to perform these procedures, please contact Apple (800-APL-CARE in the USA) or your local authorized service provider to schedule a repair.

DANGER! This procedure exposes you to high voltages that can result in death or serious injury. DO NOT ATTEMPT THIS PROCEDURE IF YOU HAVE NOT BEEN CERTIFIED AS AN APPLE-AUTHORIZED TECHNICIAN.

Symptom

No video

Solutions

Symptom

1. On the original iMac, connect an external monitor (to the connector located on the audio/video interconnect board) to determine whether the issue is in the logic board/mass storage chassis (can assembly) or in the head area (CRT, power supply, analog board). If there is no video on the external monitor, then the fault is generally assumed to be in the logic board area. The presence of a clear external video signal indicates a fault with the analog board. Note: On iMac computers with a video out port, connect the monitor directly to the video out port.

2. Make sure to connect a display that produces video at and supports the resolutions listed below. If the wrong type of monitor is attached to the iMac, it produces no video even if the logic board/mass storage chassis (can assembly) is generating a valid video signal and thus leading to an inaccurate diagnosis of the situation. Apple has seen a number of service providers who have attached older monitors that do not produce a signal on the iMac leading them to replace multiple working parts in search of the fault.

The iMac is capable of producing video only at the following resolutions:

640x480 at 117Hz

800x600 at 95hz

1024x768 at 75hz

Monitors, such as the older sync on green monitors, produce no image when attached to the iMac. Newer monitors that are fixed resolution monitors, even though they may work on a Power Macintosh G3, do not produce a good image on the iMac.

In order to use an external monitor as a troubleshooting aid, the monitor must be one of the newer multiscan, AppleVision, or ColorSync monitors.

Note: If you are still experiencing video problems, refer to:

article 31262: **iMac (Summer 2000): Wavy or Flickering Picture on the Screen**

Published Date: Feb 20, 2012

Apple Studio Display 15" LCD: Windows 4.0 Server Installation

I am trying to install the driver for the Apple Studio Display 15" LCD on a Windows NT 4.0 server. When installing, a message is displayed stating a later version is required for this machine. Is there a later version?
This article has been archived and is no longer updated by Apple.
There is no need to install this file on Windows NT 4.0.

Windows NT 4.0 does not use this file since it only allows you to select information about the adapter and does not allow you to select the type of monitor that is attached. Windows NT allows you to select the scan rate manually. Just set the desktop area and scan rate to one supported by the Apple Studio Monitor. 1024 x 768 with a scan rate of 75 Hz is a good setting. Supported settings are listed in the manual for the Apple Color Studio display.

Note: The word driver here is incorrect. The only software to install is the Applemon.inf file on the CD. This is actually a text file that lists settings supported by the monitor. Windows 95 uses this to control what settings it makes available to the user in the Display control panel. For example, Windows 95 automatically adjusts the scan rate based on information in this file when you change resolutions.
Published Date: Feb 20, 2012

Network Printer Missing: Running Windows NT

We have an Apple LaserWriter printer on a network with Macintosh and PC-compatible computers, including an NT server. We have always been able to see LaserWriter printer, but after installation of the NT server, the Apple printer no longer shows up in the Chooser.
This article has been archived and is no longer updated by Apple.
Your NT computer has most likely been configured to capture the printer. When setting up a printer on an NT workstation the printer capture option defaults to on. Capturing the printer hides the printer from the Chooser. On Windows NT Server computers, with Services for Macintosh (SFM) installed, this is intended to force users to print through the NT Server. On Windows NT Workstation computers, which lack Services for Macintosh, this prevents computers from seeing the AppleTalk printer entirely with no option to print through a server.

If the printer has been set up via AppleTalk on the Windows NT computer:
1) Go to the printer's Properties
2) Click on the 'Ports' tab
3) Click on 'Configure Port...'
4) Uncheck 'Capture this AppleTalk printing device'

For more information about Windows NT printing services, contact your network administrator, Microsoft, or check your Windows NT documentation.
Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Use Proper CD/DVD Headphone Jack & Volume Adjustment

I have a Power Macintosh G3 (Blue and White) computer, and when I try to plug a headphone into the jack on the front of the CD drive, it does not fit.
This article has been archived and is no longer updated by Apple.
The port and volume adjustment control on the front of the CD or DVD drive are not intended for use on these computers. Instead, there is a line-out connection on the back of the computer for external speakers or headphones.

Volume control is adjusted in the control strip module or in the Sound control panel. These should be used to adjust system sounds, rather than the volume adjustment control on the front of the CD or DVD drive.

Disregarding this advice and attempting to use the volume adjustment control on the front of the CD or DVD drive may cause damage to the drive bezel.

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Apple DVD Player Cannot Open

I just received my Power Macintosh G3 (Blue and White), and when I try to launch Apple DVD Player from the Apple menu, I get the following error message:

"Apple DVD Player can not open because the required hardware was not found. If you have another application open that uses sound or video, quit that application and open Apple DVD Player again. If you are using a PowerBook, make sure your PC card is installed in the bottom slot. (216)."

The only option is to Quit.
This article has been archived and is no longer updated by Apple.
This error message is expected behavior if either the DVD drive or the decoder card (for decoding MPEG-2 and AC-3 data) are not present. If the Power Macintosh G3 (Blue and White) was purchased from Apple, either as a standard configuration or Build-To-Order, with a DVD drive as part of the configuration, the decoder card would be included by default (present as a daughtercard on the ATI Rage 128 video card).

Is the Appropriate Hardware Present?
In order to play a DVD movie, a computer must have a DVD-ROM drive and a DVD Decoder card installed. Typically, the presence of a DVD-ROM drive can be determined by looking at the label on the tray which a DVD/CD would sit in. If the drive is DVD capable, you will see DVD stenciled on the tray.

To determine the presence of a DVD-Decoder in your Power Macintosh G3, use the Apple System Profiler version 2.1 or greater. Specific information for the different Power Macintosh G3 series computers follows. If you are running Mac OS 8.1, you will need to download an updated version of the Apple System Profiler from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Power Macintosh G3 (Platinum): Open the Apple System Profiler. Under the System Profile tab, click the triangle to expand the Hardware Overview information. Under this heading you will see either Personality Card or an Attributes topic with a description of the card next to it. If it's a DVD card, it will say "Apple Audio/Video DVD Card." If it does, the DVD Decoder is installed.

Power Macintosh G3 (Blue and White): Version 2.2 of the Apple System Profiler, which is included with Mac OS 8.6, can be used to determine if the DVD Decoder is installed in the G3 Blue and White. Open the Apple System Profiler. Under the System Profile tab, click the triangle to expand the Hardware Overview information. Under this heading you will see the Attributes topic, with the wording "DVD decoder present". If you are running Mac OS 8.5.1, you will have to visually identify whether the DVD decoder is installed. This can be done by opening the side door on the computer and looking to see if there is a small daughter card attached to the video card. The daughter card is the DVD decoder, and if it is present we will assume that it is available for use.

Are the Appropriate Software Components Installed and Active?
The Power Macintosh G3 requires that the following extensions be present and active in order to view a DVD Movie:

- Apple CD/DVD Driver
- ATI Driver Update
- ATI MPP Manager
- ATI Resource Manager
- DVD Decoder Library
- DVD Region Manager
- QuickTime
- QuickTime PowerPlug
- UDF Volume Access
- Video Startup

The Extensions Manager can be used to create a minimal extensions set in order to view DVD Movies. Refer to article 30929: "**Mac OS 8.x: Extensions Troubleshooting/Extensions Manager Features**" if assistance is required in creating a custom set within the Extensions Manager.

If a DVD drive is present and this error message persists:

1. Clean the disc with a soft, lint-free cloth.

2. Turn off AppleTalk in the AppleTalk control panel or the Chooser.

3. Quit out of all open applications and attempt to launch Apple DVD Player again.

4. If the error message persists, restart the computer and attempt to launch Apple DVD Player again.

5. Have you selected a remote volume to auto-mount on startup? If so, use the Chooser to navigate to that volume by logging on to the file server, and when presented with the list of volumes on that server, deselect the checkbox next to the volume name. Repeat this step for all volumes set to auto-mount on startup. Restart the computer, and attempt to launch Apple DVD Player again. For more information on this topic, please see article 30970: "**Apple DVD Player: Conflict If Servers Mounted at Startup.**"

6. If the error message persists, check to see if QuickTime 4 is installed. If it is, make sure that either the Full or Custom install has been performed. See article 58381: "**QuickTime 4: Common Issues After a Basic Install**", for additional information.

7. If the error message persists:

- Go into the Extensions Manager control panel (under Apple Menu->Control Panels).
- Go to View menu and choose View...as Packages.
- Go to the Selected Set pull-down menu, choose Mac OS 8.5 All. On the lower right side of the control panel there is a button saying "Duplicate set." Click on it; name the duplicate set "DVD."
- Scroll through the packages listed, and click once in the box to the left of Power Macintosh G3 2.0, turning the entire package on. Do the same for the packages ATI Multimedia Component and Apple DVD Software 1.1.
- On the lower left side of the control panel is a button saying "Restart." Click on it.
- If the issue is resolved, troubleshoot the issue by identifying the extension causing the conflict.

8. If the issue is not resolved by setting extensions to Mac OS 8.5 All + Power Macintosh G3 2.0 [package], delete the Apple DVD Player preferences. They are in the System Folder in a folder named Preferences. Then restart the machine.

9. If the error persists, reinstall the Apple DVD Player application from the software CD that came with your Power Macintosh G3. The DVD Player does not have a separate installer on the CD. Delete the folder containing the Apple DVD Player application (in the Applications folder), and from the CD window, open Apple Software Restore. Select the option for Restore in Place.

10. If Speech Recognition is installed and listening is turned on, Speech Recognition will take control of the sound input source. To properly play the DVD movie, turn off Speakable Items.

11. Lastly, there may be difficulties with the System file or another file in the System Folder. Use your system CD to perform a clean install of the system software. You can find the clean install option by clicking the Options button in the Installer.

For more information on how to perform a clean install, see article 58176: "**Mac OS 8.5/8.6: Performing A Clean Install**"

For more information on how to troubleshoot an extension conflict, go to the Help menu (when in the Finder) and open Mac OS Help. Search for information on Resolving Extension Conflicts.
Published Date: Feb 20, 2012

VGA Port: Pinout Description

This article provides descriptions of the signals present on the standard analog DB15 video connector, otherwise known as VGA.

Note: The pinout descriptions in this article do not apply to the digital video connector.

This article has been archived and is no longer updated by Apple.
The analog video connector on many Apple computers is a standard DB15 (also called D-sub-15) connector, which is used with VGA, SVGA, or XGA monitors. Figure 1 shows the pin configuration and the table lists the signal pin assignments.

Figure 1 VGA connector

PIN	SIGNAL NAME	DESCRIPTION
1	RED	Red video signal
2	GREEN	Green video signal
3	BLUE	Blue video signal
4	MONID(0)	Monitor ID signal 0
5	GND DDC	Return
6, 7, 8	AGND_VID	Analog video ground
9	+5V_IO 5 V	Power for I/O device
10	GND	HSYNC and VSYNC ground
11	VGA_ID	VGA ID signal
12	MONID(2)	Monitor ID signal 2
13	HSYNC	Horizontal synchronization signal
14	VSYNC	Vertical synchronization signal
15	MONID(1)	Monitor ID signal 1

Published Date: Feb 20, 2012

PowerBook G3 Series: GV fax 2.6.5 and DVD Incompatibility

When I play a DVD movie, I cannot hear any sound.

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. To identify which type of computer you have, close the display and inspect the display case. A Macintosh PowerBook G3 has a small, six-color Apple logo on the display case. A Macintosh PowerBook G3 Series computer has a large Apple logo on the display case that is not six-colored.
This article has been archived and is no longer updated by Apple.
If you have installed the GlobalFax Software for the PowerBook G3 Series and have it set to auto receive faxes, it will change the sound in source to internal modem.

There are two workarounds for the customer:
1) Change the sound in source to Zoomed Video after launching the Apple DVD Player
2) Turn off the Receive Fax option in the GlobalFax settings.
Published Date: Feb 20, 2012

Remote Access: Modem Not Responding Alert

This article discusses a Remote Access alert when receiving an incorrect response, or no response, from the modem.

This article has been archived and is no longer updated by Apple.

Symptom

When Remote Access receives an incorrect response, or no response, from the modem, the connection attempt fails with the "modem not responding" alert:

Figure 1: Apple Remote Access alert

Solution

Use the following troubleshooting path to identify the source of the failure. If Open Transport/PPP is installed, substitute "PPP control panel" for "Remote Access control panel" throughout.)

1. Reset the modem and check connections

"Check connections" in the alert refers to the modem's connection to the computer, not the telephone outlet. This is not easily checked for internal modems, but for external modems, check the modem and power cables for secure connections and signs of damage. This is especially important if the symptom is intermittent or can be caused by moving the modem or its cables. If the modem normally provides any visual signs that it is turn on, such as illuminated LEDs, check for them.

- External modems: press the modem's reset button if it has one, or turn it off for at least 15 seconds. If the modem does not have its own power cord, it draws power from the computer. In this case, disconnect the modem from the computer.
- Internal modems: shut down the computer for at least 15 seconds.

2. Set up the Modem control panel

Set up the Modem control panel to use the appropriate modem script. Apple internal modems use the following scripts:

- Power Macintosh G3 (Blue and White): Power Mac G3 Internal 56K, Power Mac G3 Int56K (v.34 Only) (See Note 1)
- PowerBook G3 Series: PowerBook G3 Internal 56K, PowerBook G3 Int56K (v.34 Only) (See Note 1)
- iMac: iMac Internal 56K, iMac Internal 56K (v.34 Only) (See Note 1)
- Power Macintosh G3 and Power Macintosh 6500: Apple/GV 56K (See Note 1)
- PowerBook 3400 and PowerBook G3: PowerBook 3400/G3 Internal 33.6 (See Note 1)
- GeoPort Telecom Adapter (internal or external): GeoPort/Express Modem (See Notes 1 & 2)
- Power Mac G4 (AGP Graphics): Apple Internal 56K Modem (v.34) (See Note 1)
- Power Mac G4 (AGP Graphics): Apple Internal 56K Modem (v.90) (See Note 1)

Notes:

1. When setting up the Modem control panel, ensure the "Connect via" selection is pointing to the correct port or modem.
2. GeoPort/Apple Telecom hardware and software are not supported under Mac OS 8.6 and higher.

Figure 2: Modem control panel

3. Set up the Remote Access control panel and test

- Open the Remote Access control panel. Enter any name (user ID), password, and telephone number.

Figure 3: Remote Access control panel

- Click Connect. If the symptom persists, continue to the next step.

4. Use the Mac OS All set in the Extensions Manager control panel

Open the Extensions Manager control panel and choose the Mac OS All set from the Selected Set menu (see Figure 4). For example: Mac OS 8.6 All, iMac All, and so forth.

Figure 4: Extensions Manager control panel

If the modem requires any extra extensions (excluding fax or telephony extensions), they are installed and enabled if the checkbox next to their name is selected. Extensions Manager asks to duplicate the Mac OS All set before additional extensions can be enabled. Click OK.

Modems that came with Apple computers require the following extensions:

- Apple 56K modem (but not Apple/GV 56K modem) depending on the computer::
  - iMac Modem Extension
  - Power Mac G3 Modem
  - PowerBook G3 Series Modem
- GeoPort Telecom Adapter:
  - Apple Telecom Modem
  - Express Modem Tool
  - GeoPort for Power Macintosh
  - GeoPort Telecom Adapter
  - GeoPort Serial Driver
  - Serial Extension (PM 6100/7100/8100 only)
  - Shared Library Manager
  - Shared Library Manager PPC
  - Express Modem control panel.
- PowerBook 3400/G3 Internal Modem/Ethernet 33.6 card:
  - PowerBook 3400 Ethernet extension
    and
  - PowerBook 3400 Modem extension
    or
  - PowerBook 3400/G3 Modem extension only

Close Extensions Manager and restart the computer. Any extensions that may have captured the modem port are disabled and remain so until reenabled in Extensions Manager.

After restarting, open the Remote Access control panel and click Connect. If the symptom does not recur and the modem works correctly, perform extensions troubleshooting to isolate the extension or extensions causing the symptom. If the symptom persists, continue to the next step.

For more information on troubleshooting extensions, please see article 30929: "**Mac OS: Extensions Troubleshooting/Extensions Manager Features.**"

5. Reset Parameter RAM

Choose Restart from the Special menu, then immediately press and hold down the Option-Command-P-R keys on the keyboard. Continue pressing the keys until the computer chimes or restarts twice. This will not work if the Caps Lock key is depressed, and may not work with non-Apple keyboards.

Open the Remote Access control panel and click Connect. If the symptom does not recur, it indicates there was a conflicting setting in Parameter RAM. Perform extensions troubleshooting, but the fault may not return, even after reenabling the extensions.

For more information on resetting Parameter RAM, please see article 2238: "**Macintosh: How to Reset PRAM and NVRAM.**"

6. Delete preferences

Damaged Remote Access preferences may be at fault and are easy to confirm prior to additional troubleshooting.Depending upon your connection method, move these preference files to the desktop:

- Remote Access users:

  - System Folder : Preferences : Modem Preferences

  - System Folder : Preferences : Remote Access : Remote Access Connections

- Open Transport/PPP users:

  - System Folder : Preferences : Modem Preferences

  - System Folder : Preferences : PPP Preferences

Repeat steps 2 and 3 to set up the control panels and test. If the symptom persists, the preferences were not at fault. To reclaim the information they contained, move them back to their original locations and allow them to replace the newer preference files.

7. Use Apple Hardware Test

If the computer came with Apple Hardware Test, start up from the Apple Hardware Test CD-ROM disc and open the Quick or Extended tests. If the Apple Hardware Test detects a modem error, note the error code, and contact Apple or an Apple Authorized Service Provider.

Apple Hardware Test is included with the following computers:

- iMac (Summer 2000)
- Power Mac G4 (Gigabit Ethernet)
- Power Mac G4 Cube
- PowerBook (FireWire)

8. Reinstall the modem software, if applicable

This issue deals with software required to enable even the barest functionality. Many modems don't require specific software for a data connection. Such software is needed usually for faxing or telephony (using the modem for voice calls). However, a modem might require an extension to enable data compression and error correction.

- If the modem requires basic software, check with the manufacturer for a newer version. GeoPort Telecom Adapters users, for example, sometimes install older versions of Apple Telecom.
- If the modem requires basic software and the modem was working successfully before, the software may be unusable. Reinstall the modem software. For Apple modems, this would include the GeoPort Telecom Adapters. For other Apple modems, continue to the next step.
- Also, ensuring the modem software or extension software is correctly configured may resolve the issue.

9. Perform a clean installation or clean restore

Perform a clean install or clean restore of the operating system. If there is any connectivity or modem software to be installed separately, do so immediately afterward.

Repeat steps 2 and 3 to retest. If the issue still exists, a hardware repair may be necessary. When using an external modem, the condition may be further isolated between the computer and modem by testing the modem on another computer, or confirming that other devices work on the modem port of this computer.

If the issue persists after performing the above steps, contact the modem manufacturer for further troubleshooting assistance. If the modem was manufactured by Apple, seek service from an Apple Authorized Service Provider or contact AppleCare for service instructions.

For more information on performing a clean installation, please see:

Article 60496: "**Mac OS 9: Performing a Clean Installation**"

Article 58176: "**Mac OS 8.5/8.6: Performing a Clean Installation**"

Article 26055: "**Mac OS 8.0 & 8.1: Clean Installation Instructions**"

Article 22065: "**Mac OS 8.0: Clean Installation Instruction for Performa Computers**"

Article 30034: "**Mac OS 7.6: Clean Installation Instructions**"

Article 22048: "**Performa w/Geoport: Restore Modem SW & Clean 7.6 Installation**"

Article 16095: "**System 7.5: Clean Installation Procedure**"

For more information on performing a clean restore, please see:

Article 31204: "**Clean Restore: How to Perform**"

Published Date: Feb 20, 2012

Power Macintosh G3: Rebuilding the Desktop can disable Iomega Driver extension

On a Power Macintosh G3 that includes an Iomega Zip Drive, it is possible to disable the Iomega Driver extension when holding down the Command and Options keys to rebuild your desktop.
This article has been archived and is no longer updated by Apple.
When holding down the Command-Option keys, through the entire boot sequence, the Iomega Driver extension is temporarily disabled. Inserting a Zip disk would result in the disk not appearing on the Desktop.

There are three workarounds for this problem:

- If you are attempting to rebuild the Desktop on your Power Macintosh G3, wait until all extensions are loaded before you press and hold down the Command-Option keys. An easy way to determine this is to wait until the progress bar under the Mac OS logo is almost completely to the right side.
- If you have already rebuilt the Desktop on your Power Macintosh G3, you can load a temporary driver by launching the Iomega Guest application. This application is typically located in the Utilities folder within the Iomega folder.
- After the Desktops rebuild is complete, restart your Macintosh.

Published Date: Feb 20, 2012

iMac: Resetting the CD-ROM Eject Mechanism

After ejecting the iMac's CD-ROM tray by using the manual eject hole, the eject mechanism may require resetting before the tray latches properly.

This article outlines a procedure that may be used with those customers who feel comfortable performing the procedure. Any Apple Authorized Service Provider can perform the procedure.
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Tools

One straightened paper clip or similar tool.

1. Place the iMac on its left side (when facing the computer) on a non-abrasive surface to prevent scratching the case.

2. Hold the CD-ROM tray open such that the bottom of the tray is visible. Be careful not to touch the lens on the other side. See Figure 1.

Figure 1 Eject Mechanism

3. Move the exposed tab of the eject mechanism toward the CD bezel as shown in Figure 2. Continue until it clicks into position. The eject mechanism is now properly engaged.

Figure 2 Eject Mechanism Reset

As the eject mechanism is engaged, the small, forward portion of the mechanism becomes exposed as shown in Figure 3.

Figure 3 Eject Mechanism Gap

4. If the eject mechanism does not engage, ensure that the small gap between the tray bezel and the metal housing is clear of obstructions. See Figure 4.

Figure 4 Engaged eject mechanism and small gap

If the CD-ROM tray still does not latch closed, the iMac requires service. An Apple Authorized Service Provider can remove the drive and repeat the procedure, or replace the drive if that fails.

Published Date: Feb 20, 2012

PowerBook G3 Series: Displaying Video In Simulscan Mode

Sometimes when trying to watch QuickTime movies on both the PowerBook display and an external monitor (in Simulscan mode), the video only shows up on the PowerBook display. Why is this?
This article has been archived and is no longer updated by Apple.
The second generation PowerBook G3 Series have the ATI LT Pro video hardware which is capable of displaying multiple resolutions on the built-in PowerBook display. If the ATI Driver Update 1.4.7 or later is installed, this computer is capable of displaying the same image on the internal screen and an external monitor at multiple resolutions.

However, when viewing some QuickTime movies or DVD video, the video may only show up on the PowerBook display if the simulscan resolution is not the "native" resolution.

On a 14" or 13" display, the native resolution is 1024 x 768. On a 12" display the native resolution is 800 x 600. So to resolve the issue, change the resolution to the native resolution for your screen size.

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. To visually identify which type of computer you have, close the display and inspect the display case. A Macintosh PowerBook G3 has a small, six-color Apple logo on the display case. A Macintosh PowerBook G3 Series computer has a large Apple logo on the display case that is not six-colored.
Published Date: Feb 20, 2012

Displays: Using the Ambient Light Tool

What is the ambient light tool and how do I use it with my monitor?
This article has been archived and is no longer updated by Apple.
ColorSync capable displays ship with a lollipop-shaped device, called the ambient light tool. This tool is used to measure the lighting conditions surrounding the display, so that the display can adjust itself for accurate color matching. The tool has a reflective surface which changes color depending on the surrounding lighting conditions.

Figure 1, Ambient Light Tool

To create an ambient light setting:

1. Open the Monitors and Sound Control Panel and click the Color button. To get truer color rendering, you should set a white point for the monitor before correcting for ambient light.

2. Set the monitor to millions of colors.

3. From the Ambient Light pop-up menu, choose Custom.

4. Because your monitor needs to be calibrated, a dialog box appears asking if you want to recalibrate now. Click OK. (The screen will flash for a minute or two while the monitor recalibrates.)

5. You will then be presented with a palette of color samples. Hold the ambient light tool up to the screen and select the sample that best matches the light tool.

6. If none of the predefined color samples match the light tool to your satisfaction, select the sample that is closest to a match, then click the More Choices button. Drag the Brightness slider (above the color triangle) until the color sample matches the ambient light tool exactly. (When the tool and the sample match, the circle in the center of the tool seems to disappear.)

7. Click Save. Give the current setting a name and click Save. This name should show up in the Ambient Light menu as the currently selected setting.

To use an ambient light tool setting:

1. Open the Monitors and Sound Control Panel and click the Color button.

2. Choose an ambient light setting from the Ambient Light pop-up menu. If you haven't created any custom ambient light settings, then Custom or None will be the only choices available in the menu. Follow the previous steps to create a setting.

To modify an ambient light setting:

1. Open the Monitors and Sound Control Panel and click the Color button.

2. Open the Ambient Light pop-up menu and choose the custom ambient light setting that you want to modify.

3. Then open the Ambient Light pop-up menu again, and choose the Modify command at the bottom of the menu. (The Modify command should include the custom ambient light setting you selected.)

4) Follow steps 5 and 6 above in creating an ambient light setting.

To remove an ambient light setting:

1. Open the Monitors and Sound Control Panel and click the Color button.

2. Open the Ambient Light pop-up menu and choose the custom ambient light setting that you want to remove.

3. Then open the Ambient Light pop-up menu again, and choose the Delete command at the bottom of the menu. (The Delete command should include the custom ambient light setting you selected.)

Published Date: Feb 20, 2012

AppleShare IP 6.1.1 Web & File Update: ATTO SCSI Card Issue

After installing the AppleShare IP 6.1.1 Web & File Update, the Web and File Server no longer starts up. We upgraded another server, and it did not have any problems. The only difference is that the one that will not start up has an ATTO SCSI card. Have you heard of this?

This article has been archived and is no longer updated by Apple.

ATTO has investigated this issue and has made an update to their firmware to resolve this issue for their ExpressPCI-PSC, DC, UL2S, and UL2D SCSI card models. Make sure you are running firmware v.1.3.4 or later available from the Atto Web site at **http://www.attotech.com**.

Published Date: Feb 20, 2012

Spanning Tree Protocol: AppleTalk and NetInfo Issues

When the Spanning Tree Protocol is enabled on an Ethernet bridge or switch port to which a Macintosh computer is directly connected the computer may be unable to use AppleTalk or NetInfo services.

Appletalk issues observed range from no AppleTalk services, local (to this specific network) AppleTalk services, degraded performance, and intermittent network services.

If the Spanning Tree protocol is enabled on the port to which a Macintosh computer is connected packets necessary for AppleTalk address assignment and network discovery can be dropped by the switch. This causes the Macintosh to acquire invalid or incomplete network information resulting in the behavior discussed above.
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I. Information on NetInfo
II. Information on AppleTalk and spanning tree

I. Spanning tree and NetInfo

Due to the time that may elapse between the network becoming active in Mac OS X and NetInfo becoming active, it is possible that spanning tree may block NetInfo requests when attempting to bind to a parent NetInfo server. Enabling "port fast" on the switch, or its equivalent, resolves this issue.

II. AppleTalk and spanning tree

Symptoms

The observed symptoms vary depending on several environmental factors. Differences in network topology, as well as differences in AppleTalk related values stored in system preference files can change the symptoms. Depending on your environment you may see one or more of the following symptoms.

Environment One

- AppleTalk routing is enabled on the network to which the computer is connected.
- The network number stored in the system preferences is not within the AppleTalk reserved start up range.
- The network number stored in the system preferences doesn't match the current network number assigned to the cable.

This would be a typical situation when moving a computer from one AppleTalk network to another.

The symptoms you would observe are:

1. Soon after the Finder loads an alert box with this message appears:

"Access to your AppleTalk network has been interrupted. To re-establish your connection, open and close the AppleTalk control panel."

2. Upon opening the AppleTalk control panel an alert box with this message appears:

"Your network number is no longer valid. It will be updated when the control panel is closed."

As requested, open and close the AppleTalk control panel to update the saved the configuration information. By doing this you store the correct network number (for this network) into the AppleTalk preferences file and into PRAM.

3. A few seconds later an alert box with this message appears again:

"Access to your AppleTalk network has been interrupted. To re-establish your connection, open and close the AppleTalk control panel"

Open the Chooser, no zones are displayed in the zone list. If you select a service (for example, AppleShare Servers) you may see devices that are physically located on the same network, but devices located on other networks are not visible. The reason for this behavior is that by attempting to update the information (node, net, zone, and so forth) associated with the interface (by opening and closing the AppleTalk control panel) the Ethernet driver was reloaded. Reloading the Ethernet driver causes the link signal to drop thus causing the Spanning Tree Protocol to restart the convergence process.

Environment Two

- AppleTalk routing is enabled on the network to which the computer is connected.
- The network number stored in the system preferences is within the AppleTalk reserved start up range.
- The network number stored in the system preferences doesn't match the current network number assigned to the cable.

This would be a typical situation when installing a new computer or after resetting a computer's PRAM.

The symptoms you would observe are:

1. Soon after the Finder loads an alert box with this message appears:

"Your AppleTalk network has become available. To use the network, open the AppleTalk control panel, then close it."

2. Upon opening the AppleTalk control panel an alert box with this message appears:

"Your network number is no longer valid. It will be updated when the control panel is closed."

As requested, open and close the AppleTalk control panel to update the saved the configuration information. By doing this you store the correct network number (for this network) into the AppleTalk preferences file and into PRAM.

3. A few seconds later an alert box with this message appears again:

"Your AppleTalk network has become available. To use the network, open the AppleTalk control panel, then close it. "

Open the Chooser, no zones are displayed in the zone list. If you select a service (for example AppleShare Servers) you may see devices that are physically located on the same network, but devices located on other networks are not visible. The reason for this behavior is that by attempting to update the information (node, net, zone, and so forth) associated with the interface (by opening and closing the AppleTalk control panel) the Ethernet driver was reloaded. Reloading the Ethernet driver causes the link signal to drop thus causing the Spanning Tree Protocol to restart the convergence process.

Environment Three

- AppleTalk routing is enabled on the network to which the computer is connected.
- The network number stored in the system preferences matches the current network number assigned to the cable.

This would be a typical situation when the Spanning Tree Protocol is first enabled on an existing network.

The symptoms you would observe are:

1. Soon after the Finder loads an alert box with this message appears:

"Your AppleTalk network is now available."

After receiving this message opening the Chooser results in what appears to be fully enabled AppleTalk services. You can browse the network and use its services. Unfortunately you may have the same node ID as another computer connected to the network and some communications may fail as a result.

Environment Four

- AppleTalk routing is not enabled on the network to which the computer is connected (a non-routed environment).

If your Macintosh is connected to a non-routed network the following symptoms appear:

1. In this environment the Mac OS displays no alerts. From the perspective of the computer everything is fine. All phases of the startup process completed successfully with no apparent difficulties. Unfortunately, there may still be difficulties.

2. One of the processes that occur during the startup process (if you have AppleTalk turned on) is that the computer attempts to acquire a unique AppleTalk node ID. Unfortunately, with Spanning Tree enabled the switch may drop critical packets necessary for the Macintosh to discover if the node ID it has selected is in use by another system. If multiple computers acquire the same AppleTalk node ID you can expect to see difficulties related to both performance and loss of services.

Note: TCP/IP based services are not affected.

Solution

Disable Spanning Tree

Spanning Tree can usually be selectively disabled on the switch ports to which Macintosh computers using dynamic address allocation are connected. In general, there is no benefit to having Spanning Tree enabled for a port to which there is a single workstation attached. To create a loop in such an environment, the user would need to have access to an Ethernet hub with two uplink ports, or two cross-over cables, as well as access to two switch ports.

Enable Fast Convergence

Several switch manufacturers have extended the Spanning Tree Protocol to allow the convergence time to be reduced. One of the enhancements usually available is the ability to safely and quickly move the port from the blocked state (listening and learning) to the forwarding state. For example, if the bridge detects a single device attached to a port it can quickly assume that no other bridges are attached to that port and move the port to the forwarding state almost immediately. Check the manufacturer's documentation for specific information on how to configure this option for your switch. For example, Cisco has an option called "portfast" that can be enabled on most of their switches. For additional information on this feature, see: http://www.cisco.com/warp/public/473/12.html

Tune the Forward Delay Timer

The Forward Delay timer can be tuned down to the minimum value. This value can usually be tuned down to a few seconds, which would give the switch enough time to move to the forwarding state before the address allocation packets were sent by the computer. If you choose to use this solution you must set these timers in the root bridge. The root bridge is the bridge that transmits these timer settings to all other designated bridges. Although you can set these timers on any bridge only the root bridge can effect the overall environment.

Spanning Tree Background

With the rapid deployment of layer 2 switches the use of the Spanning Tree Protocol has become common. Spanning Tree was originally developed for use with Ethernet bridges but has also been used in switches, since they themselves are layer 2 bridging devices. The Spanning Tree Protocol is an IEEE standard adopted in 1990 (IEEE 802.1D). Spanning Tree is a protocol designed to allow network designers to use layer 2 devices to create a loop free meshed topology. Loops in a layer 2 network can create packet storms, crippling a network and destroying network performance.

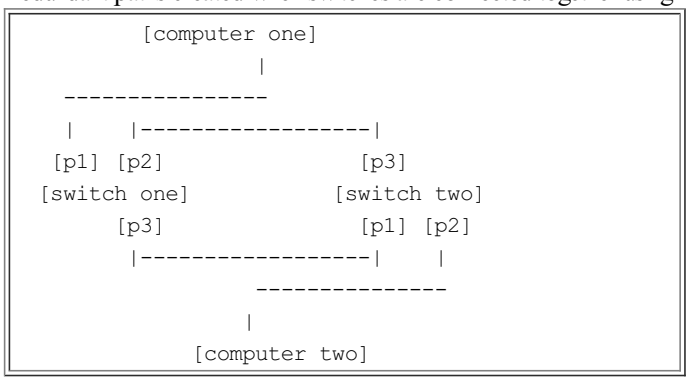
Basic Bridge Operation

The basic function of a bridge is to forward a packet from a source port to a destination port. The process involved in moving that packet involves multiple steps. Upon receiving a packet the bridge first looks in its address mapping table to determine if it has a known destination port for the packet. The bridge automatically builds the addressing mapping table by parsing the source address of packets it receives. It uses this address mapping table to determine where to forward packets. If the destination address is known, the bridge forwards that packet only to its destination port. If the destination address is not known, the bridge floods that packet over all the segments with the exception of the receiving one. This process works fine as long as there are no redundant paths in the network.

Without Spanning Tree the given the topology examples described below would create serious issues.

Example one

Redundant paths created when switches are connected together using more than one connection point.



In the above example computer one and computer two have two possible paths to each other.

For example, the paths computer one can use to get to computer two are:

- switch one/p1 -> switch one/p2 -> switch two/p3 -> switch two/p2.
- switch one/p1 -> switch one/p3 -> switch two/p1 -> switch two/p2.

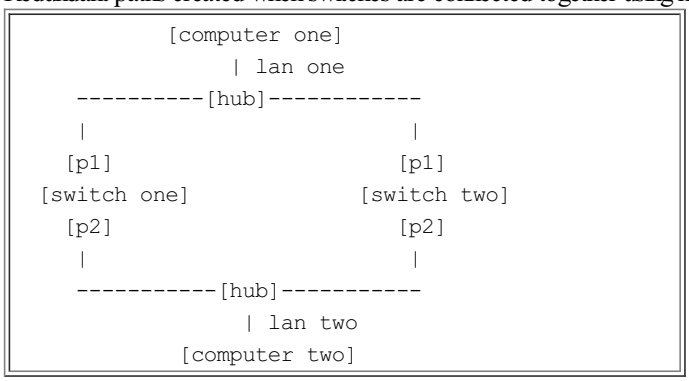
Without Spanning Tree the packets are transmitted to both switch one, and also to switch two, causing a loop.

For example, if computer one sends to computer two, but neither switch has computer two in its address table, the follow series of events occur.

- Computer one transmits a packet destined for computer two.
- Given the redundant paths both switch one and switch two see the packet from computer one.
- Switch one populates its address tables indicating that computer one is resident on port p1 of itself.
- Switch one forwards the packet to both ports p2 and p3.
- Switch two populates its address tables indicating that computer one is resident on port p3 and p1 of itself.
- Switch two forwards the packet received on port p3 to both ports p1 and p2.
- The packet (now in the second bridge hop) is forwarded back to the originating switch via p1.
- Switch one now populates its address tables indicating that computer one is resident on port p3 as well as on port p1.
- Switch one forwards the packet to both ports p1 and p2.
- The packet (now in the third bridge hop) is forwarded back to switch two via port p2.

As you can see a loop has formed that would continue forever.

Example two
Redundant paths created when switches are connected together using hubs to create paths.



Given this environment if computer one sends to system two, but neither switch has system two in its address table the follow series of events occur.

- Computer one transmits a packet destined for computer two.
- Given the redundant paths both switch one and switch two see the packet from computer one.
- Switch one populates its address tables indicating that computer one is resident on port p1 of itself.
- Switch two populates its address tables indicating that computer one is resident on port p1 of itself.
- Switch one forwards the packet to port p2.
- Switch two forwards the packet to port p2.
- Switch two populates its address tables indicating that computer one is resident on port p3 and p1 of itself.
- Switch one receives the packet from switch two on port p2.
- Switch one updates its address tables to indicate that computer one is resident on port p2 as well as port p1 of itself.
- Switch one forwards the packet to port p1 (remember it doesn't know where computer two is resident).

As you can see a loop has formed that would continue forever.

Basic Spanning Tree Operation

The purpose of Spanning Tree is to avoid and eliminate loops in the network by negotiating a loop free path. In the above examples, this means that one of the ports would need to be "disabled", or put into such a mode where it is not forwarding packets, but is still aware of the topology of the network.

The basic algorithm built-in to the protocol effectively disables the redundant links within the network. In order to determine which links to disable the switches exchange special messages, called bridge protocol data unit (BPDU) frames, that allow them to calculate a Spanning Tree and hence the active topology.

Although the Spanning Tree Algorithm is able to maintain a loop-free tree despite network changes, recalculation of the Spanning Tree is a relatively time consuming process. Standard Spanning Tree values for the maximum age of BPDUs (which is the length of time that BPDU

information is kept) is typically 20 seconds. The forwarding delay time, which is the length of time that ports are to remain in each of the listening and learning states, is 15 seconds. As a result, recalculation of the Spanning Tree following a network change takes approximately 50 seconds: 20 seconds for BPDU information to time out, 15 seconds in the listening state and another 15 seconds in the learning state.

As BPDU information is updated and/or timed-out, the Spanning Tree is recalculated and ports may transition from the blocked state to the forwarding state and vice versa. Rather than transition directly from the blocked state to the forwarding state, ports transition through two intermediate states: a listening state and a learning state. The bridge remains in each state for a preset period of time, called the forwarding delay. In the listening state, a port waits for information indicating that it should return to the blocked state. If, by the end of the forwarding delay time, no such information is received, the port transitions to the learning state. In the learning state, a port still blocks the receiving and forwarding of frames, but received frames are examined and the corresponding location information is stored. At the end of a second forwarding delay time, the port transitions from the learning state to the forwarding state, thereby allowing frames to be forwarded and received at the port.

It is very important to note that packet delivery is often delayed or fails completely as ports transition between states. That is, ports in the listening and learning states do not forward or receive frames. To the network users, these delays are perceived as service interruptions, which may present significant difficulties. In addition, certain applications, protocols (for example, AppleTalk address allocation and network discovery), or processes may time-out and shutdown during the reconfiguration process, resulting in even greater disruption to the network. Another disadvantage relates to subsequent message distribution. Following the reconfiguration process, messages are flooded across the network until the "new" destination ports are learned. Such flooding of messages can consume substantial communications and processor resources.

Tuning Spanning Tree Parameters

Changing Spanning Tree parameters, while resulting in fast convergence, may have unexpected and possibly detrimental results. Tuning Max Age down to the minimum value can result in BPDUs being discarded too early. During normal operation, the root bridge periodically transmits configuration BPDUs every hello time (usually every two seconds). These BPDUs are, in turn, propagated to bridges downstream from the root. If BPDU frames are inadvertently dropped, using a low value for Max Age may cause the bridge to trash its current configuration and recompute the Spanning Tree.

Tuning Forward Delay down to the minimum value (typically four seconds) means that when transitioning from blocking to forwarding a port spends four seconds in the listening state and four seconds in learning state. This means that there is only an eight-second window in the listening and learning states in which a BPDU indicating a loop must be received and processed. Setting this value too low may not account for the fact that BPDUs may be inadvertently dropped and can result in a loop and possibly a broadcast storm.

The information below provides descriptions of common Spanning Tree tunable parameters.

Common Spanning Tree Optimization Parameters

Parameter	Purpose
Max Age	Maximum time a BPDU received on a port is considered valid.
Forward Delay	Amount of time spent in Listening and Learning states. The total delay prior to forwarding, therefore, is FWDDELAY * 2.
Hello Time	Interval of time when the root bridge generates BPDU frames.
Bridge Priority	The settable portion of the Bridge ID. The bridge with the lowest Bridge ID is selected as the root.
Port Priority	Settable portion of the Port ID. Determines, between two equal cost paths, which one is selected to be in forwarding mode, putting the other link in blocking.

Questions and Answers

Question: Why does this only affect later Macintosh computers?
Answer: Later computers start up faster causing the packets used for AppleTalk address assignment to be sent while the port is still in the blocked state.

Question: Is Apple planning to change the way AppleTalk addresses are allocated to fix the problem?
Answer: Apple has no plans to change the algorithms used for AppleTalk address assignment.
Published Date: Feb 20, 2012

Mac OS Runtime for Java: Applet Security

Changing Java applet security settings in Microsoft Internet Explorer has no effect when using Mac OS Runtime for Java.
This article has been archived and is no longer updated by Apple.
Microsoft Internet Explorer's applet security settings are intended for the Microsoft Java virtual machine, not Mac OS Runtime for Java (MRJ).

To change the settings for MRJ, use Apple Applet Runner which is in the Apple Applet Runner folder, in the Mac OS Runtime for Java folder, in the Apple Extras folder. Apple Applet Runner has a user interface to change the properties file which controls the global security restrictions used in MRJ. To get to the properties dialog, select "Properties" from the "File" menu in Apple Applet Runner.
Published Date: Feb 20, 2012

Chooser: Server IP Address Button

When I click on the AppleShare icon on the left side of the Chooser window, a button called "Server IP Address" appears on the right-hand side.

Figure 1 Chooser Window

When I click on that button, it says to type in the IP address for your server. However, I get the error "No Response from the server, please try again." I know that server is running because I can see it in the Chooser. I know that the IP address is correct, because I can pull up a Web page from the Web server running on that computer. What's wrong?
This article has been archived and is no longer updated by Apple.
The most likely answer is that the server computer does not support connections of the AppleTalk Filing Protocol (AFP) using the Transmission Control Protocol (TCP). That "Server IP Address" button only looks for server computers that use AFP over TCP.

Figure 2 Server IP Address Icon

This button is NOT for connecting to servers that have a TCP/IP address and provide some other service. Examples of servers that this button DOES NOT apply to include: Web (HTTP) Servers, Printer (LPR) Servers, File Transfer Protocol (FTP) servers, Network File System (NFS) servers, Windows (SMB) servers, and AppleTalk-only servers.

Examples of servers that can use AFP over TCP include AppleShare IP 5 and later and the Apple File Services built into Mac OS X Server. Third-party AppleShare servers may support this feature. Read the server documentation or contact the server manufacturer to find out for sure.

If you connect to one of the above servers, you will see a file server icon with a globe in the lower right hand corner of that icon.

Figure 3 AppleTalk Server Icon

Figure 4 TCP Server Icon

Also, the "Where" line of the info window will show you connected via AppleTalk or TCP/IP.

Figure 5 AppleTalk Connection

Figure 6 TCP Connection

Only versions 3.7 and later of the AppleShare extension (sometimes called AppleShare client or AppleShare workstation), will display this button.

You can find the current version of the AppleShare extension at the Apple Downloads Web site at http://www.apple.com/downloads.
Published Date: Feb 20, 2012

ASIP: How To Do A Domain Depending Multiple Domain Mail Support

This article describes how to do a domain depending multi-domain mail support in AppleShare IP.
This article has been archived and is no longer updated by Apple.
AppleShare IP (ASIP) can handle email for multiple domains as long as you don't need a specific username to go to different people. That is, user1@domain1.com and user1@domain2.com have to be the same person.

You do this by setting up entries in DNS so that other SMTP mail servers will know that your ASIP Mail server is handling all mail for the given domains. Basically, you're setting up DNS so that mail.domain1.com and mail.domain2.com point to the same server.

Given:
ASIP Mail Server's IP Address: xxx.xxx.xxx.xxx
ASIP Mail Server's domain name: mail.domain.com

Set up a DNS MX-List for:
domain1.com MX
10 mail.domain.com
100 mail.your_isp.com <---- note this line is optional

domain2.com MX
10 mail.domain.com
100 mail.your_isp.com

domain3.com MX
10 mail.domain.com
100 mail.your_isp.com

AppleShare IP Mail will handle mail for any domain with an MX-List where the ASIP Mail server is the lowest priority alternative choice in the MX-List.
Published Date: Feb 20, 2012

AppleShare IP Print Server: Print Job Setup

I noticed when a printer is busy processing print jobs sent to it from clients, print jobs sent to the printer via an AppleShare IP Print Server do not print until all of the other jobs are completed. Why is this so?
This article has been archived and is no longer updated by Apple.
The AppleShare IP Print Server was designed so that when there are AppleTalk jobs waiting to be printed from both clients and ASIP, the clients' jobs print first.

Should you wish all AppleTalk print jobs for a printer to print on a first come, first serve basis, consider enabling the ASIP Print Server option to hide the printer. When the printer is hidden, the printer will no longer appear in the Chooser so to print to the printer, clients will select the ASIP print queue. Thereafter, all AppleTalk jobs sent to the printer will be done via ASIP Print Server and will be processed on a first come, first serve basis.

Printing via a print server may help you to be more productive because when you select to print, your jobs will be spooled to the ASIP Print Server quickly where they are stored and printed as the printer becomes available; meanwhile you can use your computer to tackle other tasks instead of waiting for your documents to print.

Another ASIP feature which also helps reduce the wait time for printing is to create a print queue with multiple printers attached to it, so several documents in the queue can print at the same time on different printers.
Published Date: Feb 20, 2012

Macintosh: About Hot Plugging ADB Devices

It is not safe to swap different ADB devices such as the mouse and keyboard when your Macintosh computer is turned on.
This article has been archived and is no longer updated by Apple.
Swapping ADB devices (unplugging a device cable and replacing with another device cable) while the computer is on is commonly known as "hot swapping" or "hot plugging" and is not a recommended practice. Doing so may, at the very least, cause erratic behavior such as sluggish or slow performance of the device in question. For instance, mouse movement of the screen pointer may be so slow that it is effectively unusable.

At the worst, hot swapping could damage the ADB controller chip on the logic board. The same would hold true for connecting video or SCSI cables while the computer is turned on. Unless the cable technology is specifically designed for hot swapping, such as USB or FireWire, you should not hot plug cables.

Restarting the computer will usually resolve performance issues with an ADB device that has accidentally been hot swapped.

Note: Such damage constitutes customer abuse and may not be covered under warranty.

Published Date: Feb 20, 2012

AppleWorks: ‘Disk is Full‘ Error When Saving to Windows Server

When saving certain AppleWorks 5 documents to a network server volume via Windows File Sharing (NT Server, AppleShare IP), I get the following message:

"Alert: The disk is full"

There is plenty of free space on the server. Also, if the file already exists, it can no longer be opened. If the file doesn't already exist, it is not created.
This article has been archived and is no longer updated by Apple.
Apple has identified that this may occur when saving files 1 MB or larger in size to network volumes in certain circumstances. The problem does not occur when saving files less than 1 MB in size, nor does it occur when saving files 1 MB or larger in size to a local drive.

Workaround:

You can avoid this situation by using the "Map Network Drive" feature to assign a drive letter to the network volume. To do this, follow these steps:

1. Open Network Neighborhood
2. Double-click the server
3. Right-click on the server volume you wish to map to a drive letter
4. Select "Map Network Drive"
5. Select a drive letter or use the default
6. Check "Reconnect at logon" if you wish to make this setting persistent across restarts - Click OK

Alternatively, you can save to your local hard drive and copy the file to the server volume.
Published Date: Feb 20, 2012

AppleWorks 5: Create Label Assistant does not use metric measurements

This article explains that the Create Label Assistant in AppleWorks 5 uses only inch measurements, not metric.
This article has been archived and is no longer updated by Apple.
The option to change units of measurement for a document is under the Rulers selection of the Format menu. If you have selected Centimeters as the units of measurement for a document, AppleWorks will convert measurements entered in Inches, Picas, etc. into their Centimeter equivalents. This type of conversion takes place in areas including Format Document, Column Height in Spreadsheets, and Object Size in Drawing documents.

However, the Create Labels Assistant does not convert values. If a value of '1.0 cm' is entered, it will be interpreted as '1.0 in'. The same is true if the document's rulers are set to Millimeters, Picas, or Points.

This behavior can be seen in the Windows and Macintosh versions of ClarisWorks/AppleWorks 5. A workaround is to use the Calculator under the Apple Menu to convert from your intended custom size to Inches, using the chart below:

Intended unit of measure	Divide by
Centimeters	2.54
Millimeters	25.4
Picas	6
Points	72

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Norton AntiVirus 5.0.3 Compatibility

I have a new Power Macintosh G3 (Blue and White) and after installing Norton AntiVirus 5.0.3, I notice there is a red "X" through the ATI Graphics Accelerator icon as the computer starts up. What is causing this?

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Symantec, the publisher of Norton AntiVirus, has identified a problem with the Auto-Protect extension part of NAV 5.0.3. A suggested work around can be found in the Symantec Knowledge Base by following the URL below:

http://service1.symantec.com/SUPPORT/num.nsf/docid/1999022607305211

Published Date: Feb 20, 2012

Mac OS X: Logging on Local & Network NetInfo accounts with the same user name.

My computer is part of a network wide NetInfo database, and I have a network NetInfo user account setup for me. I created a local user account with the same user name as the network user. I gave them different passwords so I could login to both, but when I login with the network Netinfo password the login window shakes back and forth. What is wrong?
This article has been archived and is no longer updated by Apple.
When you log in to Mac OS X Server, the computer will first run a check against the user names in the local NetInfo database, regardless of the presence of that name in an external NetInfo server database. If it finds the user name in the local NetInfo database, it will stop.

The computer will then check the password entered against the password it has stored for the local user. If you try to use a different password that has been setup for the network NetInfo account, it will fail.

To work around this, create a local user account with a different user name. For example:

Network NetInfo entry:
Username: bob Password: sled

Local Netinfo Entry:
Username: localbob Password: sled
Published Date: Feb 20, 2012

AppleWorks: Locked File Error When Installing

When iMac customers attempt to reinstall AppleWorks while started up from the iMac Software Install CD, the installation proceeds until the AppleWorks Help Files are written, at which point they get an error that states that the disk is locked. The installation quits at this point.
This article has been archived and is no longer updated by Apple.
Even though the Macintosh HD hard disk is selected as the destination disk, the AppleWorks installer attempts to write files to the currently active System Folder. When started up from the CD, this folder is locked. Running the installer while started up from the hard disk resolves this issue.
Published Date: Feb 20, 2012

Apple Remote Access: Error "-7117" was Detected

This article explains how to change the protocol Apple Remote Access uses when the error message "Connection attempt failed: Error "-7117" was detected" appears on your screen.

This article has been archived and is no longer updated by Apple.

Symptom

When connecting to the Internet using Apple Remote Access, the computer may appear to stop responding (hang, freeze). If you watch the status in the Remote Access control panel, you notice that the connection attempt hangs while determining protocol. See Figures 1 and 2.

Figure 1 Status Screen

If allowed to continue, an error message appears on the screen:

Figure 2 Error Message

Products affected

- Apple Remote Access

Solution

You must change the protocol that Apple Remote Access uses, as described below.

Click the Options button (Figure 3); the Options window appears.

Figure 3 Options Button

Next, click the Protocol tab; the Protocol pane appears within the Options window (see Figure 4). If you are receiving this error, the selection "Use protocol" is most likely set to Automatic.

Figure 4 Options Window - Protocol Pane

Change the Use protocol pop-up menu to match the protocol offered by the remote server. For standard Internet connections, the correct setting is PPP (see Figure 5). If you are connecting to an Apple Remote Access server, use ARAP.

Figure 5: Selecting the PPP Protocol

Click OK. The new settings take effect immediately. You will be asked to save the changes when the Remote Access control panel is closed.

Published Date: Feb 20, 2012

AISS 3.0 Bundle: Wrong Serial Number for Now Up-to-Date & Contact

The Apple Internet Server Solution bundle (AISS) 3.0, which was sold with some 7350/180 and 9650/233 servers, contains an incorrect serial number for Now Up-to-Date & Contact.
This article has been archived and is no longer updated by Apple.
To get a correct serial number, contact Now Software at 1-800-694-9647.
Published Date: Feb 20, 2012

Mac OS X Server: Apple File Services and long passwords

When I set up my root (Administrator) password or another administrative user's password in OS X setup assistant, I put in long passwords as I would in Unix. However, when I go to log onto the Apple File Services on the OS X server via the Chooser I can not put in my whole password, the computer beeps and gives me the message "You have entered more characters than the maximum number allowed".

This article has been archived and is no longer updated by Apple.

Type in the first 8 characters of the root or another administrative user password, and connect, this should let you log into the server. The Chooser will only allow you to type in 8 characters. This, however is not a problem since Unix based Operating Systems generally only use the first 8 characters of a password even though you are allowed to use longer passwords.

Published Date: Feb 20, 2012

AppleShare IP: Setting Privileges for Multiple Groups

How do I add privileges to more than one user/group when sharing a folder? I want one group to have read and write access to a folder, but I want another group to have just read access.
This article has been archived and is no longer updated by Apple.
Except where noted below, information in this article applies to both an AppleShare File Server and to Personal File Sharing.

The server administrator can define three different levels of access: Owner, User/Group, and Everyone. The Owner and User/Group fields can each define privileges for one user or for one group. While there is no way to add privileges for more than these three classes of users, it is still possible to achieve the desired results.

Example: You have a folder named "Documents" on your server. You want the "CopyWriters" group to have full read and write access to that folder, but you want the "ProofReaders" group to have read-only access to the folder.

Solution 1
Set the privileges for the shared folder as follows:

OWNER: CopyWriters: Read/Write
USER/GROUP: ProofReaders: Read Only
EVERYONE: None

For Personal File Sharing, this is located under "Sharing" in the "Get Info" window. For AppleShare, this is located in the Web & File Admin under "Show Disks & SharePoints".

The drawback to this scheme is that if a user in the CopyWriters group creates a new folder, that folder will be owned by that individual user (not the CopyWriters group). This means that user must manually change the privileges to allow other members of the CopyWriters group to access the folder. Until that happens, members of the CopyWriters group will see a locked folder.

Note: AppleShare 6.2 comes with the AppleShare IP Advanced Setup utility. This contains an option to "Make New Folders Inherit Their Privileges." By checking this box, the owner of a newly created folder will be the same as the enclosing folder. (In this example, the CopyWriters group is the owner of the new folder.)

Another thing to be aware of when assigning ownership to a group is that any member of the group will be able to change privileges to the folders which that group owns. This includes changing ownership so that nobody else can access the folder.

For a concrete example of how this principle is applied to a complex sharing setup, see the following article:

Article 12476: "**AppleShare 3.0.x: Set Up For Large Group Possibilities**"

Solution 2
OWNER: Administrator: Read/Write
USER/GROUP: CopyWriters: Read/Write
EVERYONE: Read Only

This solves the issue above of new folders locking out members of the CopyWriters group. The drawback is that everyone will be able to at least read files in this folder. Any user that can see this folder (including guests, if they are allowed) will have read-only access to the Documents folder.

You can address this by putting the Documents folder inside another folder that only members of CopyWriters and ProofReaders can access. That way, you can be sure that privileges granted to EVERYONE will only apply to members of the ProofReaders group.
Published Date: Feb 20, 2012

AppleShare IP: Basic SMB Client Troubleshooting

Listed below are some basic steps for troubleshooting difficulties in connecting to an AppleShare IP SMB server.
This article has been archived and is no longer updated by Apple.
If you are having any difficulties establishing, maintaining, or using an SMB connection to an AppleShare IP server, but there are no issues when using other protocols, try the following troubleshooting steps.

1) Update to the latest version of ASIP.

2) Map the server volume as a Network Drive on the Windows clients. To do this, follow these steps:
- Open Network Neighborhood
- Double-click the server
- Right-click on the server volume you wish to map to a drive letter
- Select "Map Network Drive"
- Select a drive letter or use the default
- Check "Reconnect at logon" if you wish to make this setting persistent across restarts - Click OK

Published Date: Feb 20, 2012

Mac OS X Server: Changing Apache HostnameLookups Value

Changing the HostnameLookups value in Apache from the default of "no" can cause performance problems and make your server vulnerable to Denial of Service attacks.

This article has been archived and is no longer updated by Apple.

The Apache "HostnameLookups" property allows Apache enter the actual hostname (vs. just the IP address) address into its logs. You should NOT change it from the default value of "No." Enabling HostnameLookups can seriously degrade your servers' performance and increase your risk of DenialOfService attacks.

Should it become necessary to resolve an IP address to a DNS name, the utility "logresolve" (located in the /usr/sbin directory) can be used to obtain this information.

To use logresolve:

1. Launch the logresolve utility.
2. Enter the IP address in question into the terminal window.
3. Press the return key.
4. The DNS name of that IP address displays in the terminal window.

Published Date: Feb 20, 2012

Mac OS X: The BSD "find" Command

The BSD "find" Command Searches UFS, HFS, and HFS Extended Volumes.
This article has been archived and is no longer updated by Apple.
Note: This information is valid for all versions of Mac OS X and Mac OS X Server.

The BSD "find" command implemented in Mac OS X Server will search Macintosh HFS and Macintosh HFS Extended volumes. Because volumes with these format types are auto-mounted in the root file system, searching the root volume "/" will locate files on any mounted local volume.

Thus, to locate a file typically found on an HFS Extended volume on a server that has netboot clients, enter:

```
find / -name "Mac NC #" -print &
```

This should return all occurrences of files or directories on "/" whose names include the string specified in quotes, and print it to standard io (the screen). The ampersand "&" specifies to do this in the background.

Note: In this example, the search string is in quotes; these quotes are necessary because of the space characters included in the string. Searching for a name that is all one word with no illegal characters, such as "hostconfig", does not require quotes. As in traditional BSD unix, the backslash character, "\\", may be used before an illegal character to cause it to be parsed as part of the search string:

```
find / -name Mac\\ NC\\ # -print &
```

You can also use the "locate" command, which is easy to use and faster than find. Simply type "locate" followed by the name or part of a name of files you are looking for and press Return. You should get a list displaying the paths to those files. The locate command searches a database of files on the drive, which can get out of date. If you are searching for a file that you know exists but is not found, you can run the 'weekly' script manually to update this database. To do so type the following command:

```
sudo sh /etc/weekly
```

Press Return, enter your password, and the weekly script will run and update your locate database.

Execute "man find" or "man locate" at the command line to get more information on using these commands.
Published Date: Feb 20, 2012

PowerBook G3 Series: DVD-Video Kit Installation

This article explains the correct procedure to follow when installing the Macintosh PowerBook DVD-Video Kit (M7164LL/B) or the DVD-Video PC Card (special order only-M6664LL/B) for the PowerBook G3 Series computers, with Apple DVD Software version 1.1 (including the necessary extensions required for the DVD hardware and software to function properly).
This article has been archived and is no longer updated by Apple.
Install the Apple DVD Player Software by clicking on the 'Install Apple DVD Software' icon within the Apple DVD Software CD folder (currently at version 1.1). To determine whether or not the Apple DVD Player Software has been preinstalled on the PowerBook, check to see if the Apple DVD Player alias is in the Apple Menu.

The installation of this software will create the Apple DVD Software 1.1 extension package, which includes the following extensions:

- Apple CD/DVD Driver (1.2) This extension enables the use of CD and DVD Discs. This driver replaces the Apple CD-ROM and Apple DVD-ROM driver, which are no longer necessary.
- ATI Driver Update (1.4.7) This extension updates the display driver for ATI hardware on the PowerBook.
- ATI MPP Manager (1.1.1) This extension enables the host CPU to communicate with the DVD-Video PC Card. It also manages the transfer of video stream data from the DVD-Video PC Card to the graphics chip on the PowerBook.
- Audio Tune Up (2.1) This extension updates the audio drivers on the PowerBook.
- DVD Decoder Library (1.1) This is the Decoder Library extension required to properly decode DVD discs.
- DVD PC Card Enabler (1.1) This is the PC Card Enabler extension for the DVD-Video PC Card.
- DVD Region Manager (1.0) This is the Region Manager extension for controlling region access with DVD discs.
- UDF Volume Access (1.2) This extension enables the PowerBook to read disks that are recorded in the Universal Disk Format?, which is the standard format for DVD discs. Please note that this extension supports volumes recorded at the Optical Storage Technology Association UDF m1.5 specification level.

All of these extensions must be installed and turned on for the DVD hardware and software to function normally. After the install is complete, restart the computer. Once at the desktop, insert the DVD-Video PC card. After the PC Card appears on the desktop, insert a DVD disc and run the Apple DVD Player application (an alias for this application is located in the root directory of the Apple Menu).

New enhancements to the player in version 1.1 include support to play movies designated for any one DVD-Video Region you choose, the ability to play DVD-Videos discs that use the PAL video standard, and the ability to pick up viewing right where you left off in a movie. This last feature will function even when you shut down your system, but you must not eject the disc.

For ideal DVD playback, disable Virtual Memory and set the Energy Saver control panel to maximum performance.

For best results when setting up the PowerBook to show DVD-Video on a television, set the resolution to 720x480 NTSC or 720x576 PAL from the Control Strip.

The latest version of the Apple DVD Player software is available for download from the Apple Software Updates Web site at **http://www.apple.com/swupdates**.

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, read article 24604: "**PowerBook G3, G3 Series: Identifying Different Versions**"

Published Date: Feb 20, 2012

Mac OS X Server: Workspace Manager Menus Disappear

In Mac OS X Server's Workspace Manager I have noticed that after quitting an application, all of the menus disappear except for the upper right-most process menu. How can I make the menus reappear?

This article has been archived and is no longer updated by Apple.

Simply clicking on an element within the Workspace Manager (such as the desktop or a window) will return the menus to their normal state.

Published Date: Feb 20, 2012

Apple DVD Player: Conflict If Servers Mounted at Startup

This article describes an issue with Apple DVD Player that can arise when servers are set to automatically mount using the Chooser.

Note: This issue has been addressed in Mac OS 9.
This article has been archived and is no longer updated by Apple.
If you use the Chooser to automatically mount servers at system startup time (using the checkbox next to the volume name), Apple DVD Player may not work after the next restart. Instead, you receive the error:

"Apple DVD Player cannot open because the Apple CD/DVD extension is not installed or the DVD-ROM module could not be found. Open the Extensions Manager control panel and make sure the Apple CD/DVD extension is installed and enabled. You may have to reinstall Apple DVD Player. If you are using a PowerBook, make sure your DVD-ROM module is properly installed. (217)"

This only happens with servers that require a name and a password.

When this feature is used, a dialog is displayed early in the startup process which prompts you to enter your name and password for access to the server. However, this dialog keeps the CD/DVD driver from registering itself properly and makes the Apple DVD Player application think that DVD hardware cannot be found.

To resolve the issue, open the Chooser and navigate to the server that is currently set to mount at startup. Turn off that feature by unchecking the checkbox next to the volume name in the Chooser. If you are currently unable to connect to the server(s) to uncheck this option, remove the AppleShare Prep file from the Preferences folder instead.

To achieve the same behavior without creating the conflict with Apple DVD Player, drop an alias to the server in your Startup Items folder.

Note: This issue has been addressed in Mac OS 9.
Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Video Mirroring

This article describes how to setup the Power Macintosh G3 (Blue and White) Teacher Bundle for video mirroring.
This article has been archived and is no longer updated by Apple.
This topic is discussed in detail in the ATI Xclaim VR Manual.pdf, pp. 30-35.

Anything you display on your monitor can be output to your TV or your VCR. To do this, proceed with the following steps:

1. Turn off your computer and TV or VCR.

2. Connect the video-out adapter that came with your computer (it is a Y-cable with a plug on one end, and two sockets on the other end) to the TV-out port on your ATI Xclaim VR card.

3. Determine if your TV or VCR has an S-video or composite (RCA) video input. Attach the appropriate cable to the appropriate socket on the video-out adapter.

Notes:

- If your TV or VCR has both S-video and composite connectors on it, you only need to use one of them. S-video will generally produce the highest quality image.

- You can connect two TVs or VCRs to your computer at the same time, one using S-video and the other composite (RCA) video, connected to the appropriate sockets on the video-out adapter cable. Both devices will display (or record) the same image simultaneously.

4. Turn on your computer and TV or VCR.

You can now either display video on the attached monitor and the TV or VCR (simulscan), or strictly to the TV or VCR. There are several ways to accomplish this.

Using the Monitors and Sound control panel:

1. From the Apple menu, go to Control Panels, and open Monitors and Sound.
2. Choose the resolution at which you wish your image to be displayed. Depending on the model of monitor you have attached to your computer, you may have some choices for Simulscan. If you choose one of these resolutions, the image will be displayed on the monitor and on the device (TV or VCR) attached to the video-out adapter.

Figure 1 Monitor and Sound Control Panel

3. You should get a dialog box alerting you: "The setting for your monitor has been changed. Click OK to confirm that the monitor is displayed correctly, or click Cancel to revert to the previous setting." If you do not make a choice, it will automatically revert to the previous setting.

Using the Control Strip:

1. From the Resolution Control Strip module, choose the resolution at which you wish your image to be displayed. Depending on the model of monitor you have attached to your computer, you may have some choices for Simulscan. If you choose one of these resolutions, the image will be displayed on the monitor and on the device (TV or VCR) attached to the video-out adapter.

Figure 2 Resolution Control Strip Module

2. You should get a dialog box alerting you: "The setting for your monitor has been changed. Click OK to confirm that the monitor is displayed correctly, or click Cancel to revert to the previous setting." If you do not make a choice, it will automatically revert to the previous setting.

Using the ATI Displays control panel:

1. From the ATI menu in the Control Strip, or from the Control Panels folder (accessible under the Apple menu), open ATI Displays.

2. Click on the Mac2TV hot spot on the control panel.

Figure 3 ATI Displays

3. A detailed settings window will appear, wherein you can specify your video preferences. For more information about this window and how to optimize your TV display, please refer to your ATI Xclaim VR Manual.pdf.

4. One you select your settings and turn Video Output on, you should receive an alert that Mac2TV is about to turn on and it will dim your monitor display. Simulscan is not an option in Mac2TV.

Figure 4 Mac2TV alert

Published Date: Feb 20, 2012

AppleWorks 5: Font Menu Settings not Retained

In AppleWorks 5 for Windows, the font menu settings are reset when the program is reopened.
This article has been archived and is no longer updated by Apple.
The Windows versions of AppleWorks 5 and ClarisWorks show 22 fonts in the Font Menu. The default set of fonts is changeable in a session by choosing 'Other' at the bottom of the Font Menu.

To make fonts appear or disappear from the Font Menu choose Other at the bottom of the Font Menu. Select fonts you want to appear in the Font Menu, and deselect fonts you want removed from the menu. This does not remove the fonts from your computer. When the AppleWorks program quits and reopens the Font Menu resets to the default set.

Also, AppleWorks for Windows offers an option for setting the Default Font, which determines the font AppleWorks uses for new word processing documents. The fonts it offers match the fonts offered in the Font Menu. Like the Font Menu, the Default Font preference change to the 22 default fonts when the program quits and reopens.
Published Date: Feb 20, 2012

AppleWorks: Excel Spreadsheets Translate as Empty

Translating a document using the XTND Translator for Microsoft Excel 3.0 or Microsoft Excel 4.0 may display an empty spreadsheet. This result is expected if the Excel document was protected with Excel's sheet or workbook protection.
This article has been archived and is no longer updated by Apple.
In order to display the content of an Excel sheet or workbook, it must not be protected with a password when it is opened by AppleWorks.

If an Excel spreadsheet document is protected with a password and then opened with AppleWorks, it displays as an empty spreadsheet. To make the data appear, the spreadsheet must be saved from Excel with the workbook and sheet protection disabled.

Explanations of steps to turn Excel's protection on and off, is offered by Microsoft.
Published Date: Feb 20, 2012

AppleWorks 5, ClarisWorks 5 for Windows: Windows Translator List

This article contains a list of translators (filters) included with the Windows version of AppleWorks 5 and ClarisWorks 5.

This article has been archived and is no longer updated by Apple.

Word Processing Translators:
[DataViz] AmiPro 2.0, 3.0, 3.1 WP (*.sam)
[DataViz] Rich Text Format RTF WP (*.rtf)
[DataViz] Word 6.0 Mac (*.doc)
[DataViz] Word Win 6.0/7.0 (*.doc)
[DataViz] Word Win 97 (*.doc)
[DataViz] WordPerfect DOS/Win 6.x (*.wpd)
[DataViz] Works Win 3.0 (*.wps)
[DataViz] Works Win 4.0 (*.wps)
HTML File (*.htm)
Rich Text Format (*.rtf)
Text File (*.txt)
Text File, DOS (*.txt)
Word for DOS 5.x (*.doc)
Word for Windows 2.x (*.doc)
Word for Windows 6.0 (*.doc)
WordPerfect 5.1 (*.doc)
WordPerfect 6.x (*wpd, *.doc)

Drawing Translators:
BMP File (*.bmp)
Computer Graphics Metafile (*.cgm) (import only)
EPS files TIFF preview (*.eps, *.ai) (import only)
GIF File (*.gif)
JPEG File (*.jpg)
Macintosh Picture File (*.pct)
Microsoft Video (*.avi) (import only)
Microsoft Windows MetaFile (*.wmf)
QuickTime Movie (*.mov, *.qt) (import only)
Tagged Image File Format (*.tif) (import only)
ZSoft® Paintbrush files (*.pcx, *.pcc) (import only)

Painting Translators:
BMP File (*.bmp)
Computer Graphics Metafile (*.cgm) (import only)
EPS files TIFF preview (*.eps, *.ai) (import only)
GIF File (*.gif)
JPEG File (*.jpg)
Macintosh Picture File (*.pct)
Microsoft Video (*.avi) (import only)
Microsoft Windows MetaFile (*.wmf)
QuickTime Movie (*.mov, *.qt) (import only)
Tagged Image File Format (*.tif) (import only)
ZSoft® Paintbrush files (*.pcx, *.pcc)

Spreadsheet Translators:
[DataViz] Excel 4.0 Mac (*.xls)
[DataViz] Excel 4.0 Win (*.xls)
[DataViz] Excel 5.0 Mac (*.xls)
[DataViz] Excel 5.0 Win (*.xls)
[DataViz] Excel 97 Win (*.xls)
[DataViz] Lotus 1-2-3 WK3 (*.wk3)
[DataViz] MS Works 3.0 SS Win (*.wks)
[DataViz] MS Works 4.0 SS Win (*.wks)
ASCII Text Files (tab delimited, *.txt)
DBF Files (dBase IV file format, *.dbf)
DIF Files (Data Interchange Format, *.dif)

Excel 3.0 Files (*.xls)
Lotus 123-1A Files (*.wks)
Lotus 123-2 Files (*.wk1)
Lotus 123-3 Files (*.wk3)
SYLK Files (Symbolic Link Format, *.slk)

Database Translators:
[DataViz] MS Works 3.0 DB Win (*.wdb)
[DataViz] MS Works 4.0 DB Win (*.wdb)
ASCII Text (tab delimited, *.txt)
DBF (dBase IV file format, *.dbf)
DIF (Data Interchange Format, *.dif)
SYLK (Symbolic Link Format, *.slk)
Published Date: Feb 20, 2012

ClarisWorks 5.0: Installs Older Version of Symbol Font

This article describes a minor issue with the installer for ClarisWorks 5.0, when installing on machines using Mac OS 8.5 or newer.
This article has been archived and is no longer updated by Apple.
Starting with Mac OS 8.5, the included Apple fonts were updated to include the European currency symbol, called the "euro.".

When installing ClarisWorks 5.0 on Mac OS 8.5 and later, the installer replaces the Symbol font with an older version. This older version does not include the euro symbol. Other fonts are not affected.

The AppleWorks 5.0.3 installer does not install an older version of the Symbol font.

To resolve this issue, you can do a Customized Install of the Symbol font from the Mac OS Install application to update to the newer font.

As a workaround, use another Apple-installed font that supports the euro symbol, such as Helvetica or Times.

For information regarding the euro currency symbol and which Apple fonts support it, see:
Tech Info Library Article 22222: "**Mac OS: The Euro Currency Symbol**"
Published Date: Feb 20, 2012

Open Transport 2.0.3: TCP/IP "Load only when needed" Behavior

After having installed Mac OS 8.6 I've noticed that my TCP/IP stack remains loaded when physically connected through Ethernet despite the fact that no applications or other services seem to be currently utilizing TCP/IP.
This article has been archived and is no longer updated by Apple.
The "Load only when needed" checkbox available through the Options button in the TCP/IP control panel no longer unloads the TCP/IP stack after two minutes of inactivity when physically connected through ARP-able media such as Ethernet. This change was introduced in Mac OS 8.6. Versions of Open Transport prior to 2.0.3 unload the TCP/IP stack two minutes after the last endpoint was closed. Open Transport 2.0.3 and later continue to respect the configured setting in the sense that the TCP/IP stack will not load until an endpoint is opened if the "Load only when needed" option is enabled. Point to Point Protocol (PPP) or Serial Line Internet Protocol (SLIP) sessions made through a serial connection will continue to respect the settings as configured in the TCP/IP control panel. The stack will unload for PPP and SLIP connections that are torn down.

Note: System extensions, such as the Time Synchronizer extension, can load the TCP/IP stack at startup and will not unload so the TCP/IP stack will remain active as the endpoint is never closed.
Published Date: Feb 20, 2012

TCP/IP Options: What does "Don‘t retain DHCP lease on Shutdown" do?

This article explains the effect of the "Don't retain DHCP lease on Shutdown" checkbox in the TCP/IP Options control panel, and explains why users may want to use it.
This article has been archived and is no longer updated by Apple.
Note: A detailed technical explanation the DHCP client, including this option, may be found in Knowledge Base article 58372: "**Open Transport: DHCP Client Behavior**"

By default, if a Mac running Mac OS 8.6 is shut down (or put to sleep, in the case of PowerBooks), it does not let the DHCP server know that it no longer needs the assigned IP address. Then, if the computer is booted (or a PowerBook is woken from sleep) before the lease expires, it will remember the last IP address and request to use it again.

One effect of this is that leases may be left dangling - meaning that even though the original client is not using the IP address, the server cannot give it out to another client which needs it since it wasn't explicitly released. Normally this is not a problem and the administrator can configure the DHCP server for an appropriate lease time.

By checking the box for "Don't retain DHCP lease on Shutdown" you are telling the client Macintosh to always release the IP address when the Mac is either shutdown or restarted. Then on next startup, the Mac will configure DHCP as if it were starting up for the first time. This may result in the Mac receiving a different IP address from the server.

There are a couple of situations where this may be preferable:

1. If there is an extreme shortage of IP addresses for the network and administrators want them released the instant they are not being used.

2. For computers that frequently move from one physical network to another. This is particularly relevant to PowerBooks. This way, you can be sure that (a) the IP address is released when the computer is no longer on the network and there is no chance the client will need it again, and (b) when the PowerBook boots or wakes up, it won't assume that it is on the same network it was on when it was shut down or put to sleep.

The default DHCP behavior for Mac OS 8.6 should provide optimum performance for most situations. Unless you are encountering one of the specific situations mentioned above, or unless you are specifically directed to do so by your network administrator, Apple recommends that you not alter the default 8.6 behavior by checking this box.

Note: There is currently an issue with the TCP/IP Options control panel that will not allow you do de-select this option once it is turned on. For a full description and work-around, refer to Knowledge Base article 58375: "**TCP/IP Options: Can't Turn Off "Don't Retain DHCP lease**"

If you have a CD with Mac OS 8.6 on it, the TCP/IP Options control panel may be found in the Network Extras folder. Otherwise, it is included in Open Transport Extras 2.0.3, available available for download from the Apple Software Updates Web site at http://www.apple.com/swupdates.
Published Date: Feb 20, 2012

QuickTime Streaming Server: General Information

Streaming is a service that sends live and stored multimedia over a network at a rate that lets a client computer play the media in real time. QuickTime Streaming Server streams QuickTime-compatible media to client applications that support QuickTime, including a Web browser with the QuickTime plug-in.
This article has been archived and is no longer updated by Apple.
You can use QuickTime Streaming Server to:

- Stream low-bandwidth and high-bandwidth multimedia (up to 1.5 megabytes per second)
- Reflect live broadcast streams, either unicast or multicast streams.
- Manage the number of concurrent connections to the streaming server and the maximum throughput per connection.
- Log server usage.
- Monitor server activity.

You can install QuickTime Streaming Server when you install Mac OS X Server release 1.1, or you can install it later. To install it later, use the Mac OS X Server installer and be sure to check the option to install QuickTime Streaming Server.

QuickTime Streaming Server software includes:

- QuickTime Streaming Server, installed in the /usr/sbin/QuickTimeStreamingServer directory.
- QuickTimeStreamingServerAdmin.app, installed in the /System/Administration/ directory.
- A sample multimedia file, installed in the /Local/Library/QuickTimeStreaming/Movies/ directory.
- A configuration file, installed in the /etc/ directory.

Protocols Used for Streaming:
QuickTime Streaming Server uses standard Internet protocols: Real-Time Protocol (RTP), Real-Time Streaming Protocol (RTSP), and Session Description Protocol (SDP). RTP sends data from the server to a client computer. RTSP controls the server from the client computer. It allows a stream to be started and stopped, much the way a VCR can be started and stopped. SDP is used to reflect a multicast.

For information on the files you can stream, see the section "File Formats and Compression Methods Compatible for Streaming."

Server Configuration:
Your server must have the following:

- An Ethernet connection set up already
- Enough hard disk space to store the multimedia you want to stream
- For best performance, three or more Wide Ultra SCSI hard disk drives are recommended.

Managing QuickTime Streaming Services:
You use QuickTimeStreamingAdmin.app to start or stop streaming services, to manage streaming traffic, and to monitor streaming activity. To open QuickTime Streaming Server Administration, choose QuickTime Streaming Admin from the Apple menu.

Starting or Stopping Streaming Services
To start streaming services, open Quick Time Streaming Server Administration and click Start Server in the Settings panel.

To stop streaming services, click Stop Server. If there are active connections to the streaming server, you see a message. You can choose to stop streaming immediately or wait until there aren't any active connections. If you choose to wait until there aren't any active connections, then no new connections will be established.

If streaming service does not start up:

1. Check the error log file for error messages.
2. Check to be sure QuickTime Streaming Server is in the usr/sbin/QuickTimeStreamingServer directory. The file isn't visible unless you look for it from Terminal.app. If it is not there, you need to reinstall QuickTime Streaming Server. (Terminal.app in located the /System/Administration directory.)

Making Multimedia Available for Streaming:
When QuickTime Streaming Server is installed, a folder named Movies is created automatically in the /Local/Library/QuickTimeStreaming/ directory. Users who connect to your streaming server can stream any multimedia files located this folder.

To use a different folder for streamed media, click the folder button in the Quick Time Streaming Server Settings panel. You can choose only one folder for streaming. All items in the folder you choose are available for streaming, so be sure to check the contents of the folder before you make

it available for streaming services.

For best performance, you can put media files on two or more hard disks. But because you can use only one folder for streaming, you need to create a symbolic link from the streamed media folder to the actual location of the media files. For information on creating a symbolic link, see the man pages for the "ln" command.

Setting Up Streaming Capacity:
You use Quick Time Streaming Server Administration to limit the number of connections and to set the maximum throughput allotted for streaming services. If you use your server for other services in addition to streaming, you may want to control how much of your server's capacity is dedicated to streaming.

Monitoring Server Activity:
You can track peak periods of usage by monitoring server activity. To view server activity, choose Show Activity Monitor from the Server menu. You can change the range of each histogram by clicking the low and high range buttons.

Logging and Viewing Access History:
Access history lets you see how many times each media file has been streamed since a particular date and time. To log access history, the Log Access checkbox in the QuickTime Streaming Server Settings panel must be checked. (It is checked by default.) To view Access History, choose Show Access History from the Server menu.

If you click the Clear button in the Access History window, information in the access log is copied to another file, named by date. If you don't clear the log, then access information older than one week is cleared automatically. If you want to delete the cleared access information, drag the dated file to the Trash.

If you want more details about what's being accessed, by whom, and when, you can view the file located at /Local/Library/QuickTimeStreaming/QuickTimeStreamingAccess.log. You may need to write a utility to process the file so you can view a digest of the most important information for your site. For example, you can write a script (using Perl, cshell, or a similar scripting tool) to tally the number of times users from a particular domain connected to the streaming server during a specific time period.

Logging and Viewing Error Messages:
A log of error messages can help you troubleshoot problems with streaming services. To log errors, open Quick Time Streaming Server Administration and be sure the Log Errors box in the Settings panel has a checkmark in it. (It is checked by default.) To view the error log file, choose Show Error Log from the Server menu.

If you click the Clear button in the Error Log window, information in the error log is copied to another file, named by date. If you don't clear the log, then error information older than one week is cleared automatically. If you want to delete the cleared access information, drag the dated file to the Trash.

Troubleshooting:
You will be able to troubleshoot streaming problems more easily if error logging is turned on. See the previous section, "Logging and Viewing Error Messages."

If performance seems slow:
If you are using the computer for streaming as well as other services, you may need to limit the number of connections or the throughput available for streaming so that other services do not slow down. If you do not want to reduce the number of streaming connections or the throughput, you may need to move other services to another computer.

1. If you are using 10-BaseT Ethernet, you may need to upgrade to 100-BaseT Ethernet.
2. Put media files on two or more hard disks. But because you can use only one folder for streaming, you need to create symbolic links from the streamed media folder to the actual location of each media file. For more information see the previous section "Making Multimedia Available for Streaming."
3. You may need to expand your server by adding additional hard disks, random-access memory, or Ethernet ports.

If streaming service quits unexpectedly:

1. Check the error log file for error messages.

If multimedia files are not streamed properly, or errors occur during streaming:

1. Check the error log file for error messages.
2. Check to be sure you have enough random-access memory to support the number of connections or throughput you've set up for streaming.
3. Check to be sure you are not running out of hard-disk space.

Preparing Media for Streaming:
Any "hinted" QuickTime file can be streamed. You use an application such as MoviePlayer Pro to export media as a hinted QuickTime movie.

A hint track contains information about the media file that's needed to stream the file properly. You must use an RTP hint track with QuickTime Streaming Server; other protocols will not work. Each track in a media file must have its own hint track.

Files do not need to be self-contained. If files are not self-contained, the files that they reference must also be placed directly on the server (AppleShare aliases will not work). In addition, files must have been prepared from the same volume, and placed on the same volume. (The file name in the hinted movie must be relative to the movie, not an absolute path onto another volume.) Enclosed files can be in "foreign" formats.

Reflecting a Multicast:
To reflect a multicast, copy the Session Description Protocol (SDP) file that describes the multicast to the streaming media folder you set up previously. You must use RTSP to reflect a multicast; other protocols will not work with QuickTime Streaming Server.

When you give your users the URL for the multicast, do not include the sdp extension. For example, if the sdp file is named "greatshow.sdp," the URL you give to your users is: "rstp://yourserver.yourdomain.com/greatshow"

Note: When you export a hinted streaming movie using MoviePlayer, you have an option to create an SDP file. This SDP file is unrelated to the SDP file needed to reflect a multicast. Do not make this type of SDP file and place it in the server directory. It will not work.

File Formats and Compression Methods Compatible with Streaming:

File Formats:

Video:
QuickTime, AVI

Audio:
AIFF/AIFC, Sound Designer II, System 7 Sound, uLaw (AU), WAV

MIDI:
Karaoke MIDI, Standard MIDI

Compression-Decompression Methods (CODECs)

Preferred video compressors:

- H.263
- Motion JPEG A
- Sorenson Video
- H.261

Preferred audio compressors:

- QDesign Music codec
- QUALCOMM Pure Voice
- DVI 4:1
- ALaw 2:1
- uLaw 2:1
- 16-bit raw

Supported video compressors:

- Animation
- Cinepak
- Graphics
- Motion JPEG B
- None
- Photo JPEG
- Video

Supported audio compressors

- IMA 4:1
- MACE 3:1
- MACE 6:1

Published Date: Feb 20, 2012

Macintosh Server G3: Multi-port Ethernet Card use under Mac OS 8.x

My Macintosh Server G3 is used in a dual boot configuration between Mac OS X Server and Mac OS 8.6. Why can't I use the Multi-port Ethernet Card under Mac OS 8.6?

This article has been archived and is no longer updated by Apple.

The Multi-port Ethernet Card is intended to be used with Mac OS X Server only. There are no drivers available for the card under Mac OS 8.x or Mac OS 9.x nor does Apple currently have plans to introduce any.

Published Date: Feb 20, 2012

AppleWorks 5: Editing Master Page of Business Plan Stationery

AppleWorks may quit unexpectedly when you try to edit the Master Page of the Business Plan Stationery template.
This article has been archived and is no longer updated by Apple.
In AppleWorks 5 for Mac OS and Windows, editing the Master Page of the Business Plan Stationery causes the application to quit.

Other Stationery templates are not affected. To work around this issue, create a new Drawing Document or open a similar template such as the Proposal Generator, copy the objects from the Business Plan, and paste them into the new document. You can then modify the layout, and edit the Master Page of the new document.
Published Date: Feb 20, 2012

Power Macintosh G3: Connecting to LCD Projector

This article explains how to connect the Apple Studio Display 17 to an LCD projector.
This article has been archived and is no longer updated by Apple.
The Apple Studio Display 17 was tested for use with Power Macintosh G3 systems running Mac OS 8.0 or later. It was not tested for use with other configurations such as LCD projectors. Some customers have reported that the following configuration works with some LCD projectors:

1. Connect the LCD projector directly into the Power Macintosh G3 video out connector.
2. Connect the VGA to Macintosh display adapter that shipped with the Apple Studio Display 17 (922-3769) to the Macintosh to VGA adapter (922-3764) supplied with the PowerMac G3.
3. Connect the display adapter to the VGA video out port on the LCD projector and connect the Apple Studio Display 17 cable to the paired video adapters.

Once the setup is confirmed, power on the G3, LCD projector, and the Apple Studio Display 17. Consult the LCD projector's users manual or manufacturer for determining the projection unit's supported resolutions.

Published Date: Feb 20, 2012

German Chicago Font v3.0.1: Changes

This article lists the issues resolved by version 3.0.1 of the German Chicago Font.
This article has been archived and is no longer updated by Apple.
A fault was discovered in the German Chicago font that would cause Adobe PageMaker and Illustrator to stop operating. This new font addresses the issue. Additionally, this version of the German Chicago font also contains a slightly modified 12 point bitmap to make zero and capital letter O, and capital letter I and digit one look different. There are no other changes in this font.

Note: A drag installation of this font is not sufficient because the font must be updated in both the System file and in the Fonts folder. Therefore, use the posted installer.

The font is for the German localized OS 8.5 and 8.5.1 and 8.6 only.

The Chicago 3.0.1 font is posted on the Apple Software Updates Web site at http://www.apple.com/swupdates.
Published Date: Feb 20, 2012

PowerBook, iBook: Using with Mobile Cellular Phones

This article discusses using PowerBook and iBook computers with mobile cellular phones.
This article has been archived and is no longer updated by Apple.
Question: Can I use the modem in my portable Apple computer to make a data/fax call through my mobile cellular phone?

Answer: Mobile phones come in two varieties, analog and digital.

Analog phones closely resemble the land line telephone network that we are most familiar with. Some mobile phones allow you to connect the phone to the internal modem of a PowerBook or iBook. Although this may work, Apple does not provide support for it.

Digital mobile phones are unable to use the internal modem in PowerBook and iBook computers because their modems are designed to be used with an analog telephone network, and not the digital network mobile phones use. Some vendors of mobile phones offer PC cards and cables that provide an interface with the mobile phone that simulates an analog modem. Check with your mobile phone vendor and mobile phone operator for options and accessories that work with your computer.

Question: The Mac OS 8.6 specifications say:

> "IrDa capabilities - Lets you check email using a compatible PowerBook and an IrDa-capable Nokia or Ericsson mobile phone (ISP required)."

How can I do this? Also, after updating my IrDA capable Macintosh to Mac OS 8.6, I noticed I have two new modem scripts, Ericsson Infrared and Nokia Infrared. What are these for?

Answer: Certain digital mobile phones, such as the Nokia 7110 and the Ericsson SH888 contain built in data communications capabilities. In order to take advantage of this feature, a serial connection between the computer and the phone must be established. One possible connection method is to use a serial cable that connects the phone to a serial port on the computer.

You can also use the IrDA port on the PowerBook and the phone to make a serial connection. Mac OS 8.6 can use the IrDA port as a serial port. In the Modem control panel, select "Infrared Port" in the Connect via pop-up menu. Select Ericsson Infrared, Nokia Infrared, or another modem script provided by the phone manufacturer. This configuration is readily available in locations where the GSM mobile phone standard is widely used. It may also work with other digital telephone standards. Check with your mobile phone system operator to determine if this feature can be used with their service.

For detailed information on the features of mobile phones, please see the Web sites for Ericsson and Nokia.

Notes:

1. iBook computers do not have an IrDA port.
2. For more information, consult the documentation for your cellular phone, or contact the phone's manufacturer.
3. While this article mentions specific phones, there may be others with similar capabilities. Always check with the phone vendor for current product availability and specifications.

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The following Knowledge Base article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"
Published Date: Feb 20, 2012

Powerbook G3 Series (Bronze Keyboard): How to Reinstall FAXstf

My Powerbook G3 Series (Bronze keyboard) came with FAXstf and I need to reinstall this software. How do I do this?
This article has been archived and is no longer updated by Apple.

Mac OS 8.6

The blue CD that came with the computer entitled "Macintosh PowerBook G3 Series" has a folder named "CD Extras." Inside the "CD Extras" folder is a folder named "FAXstf 5.0." Inside this folder is the "FAXstf Installer" that you use to reinstall the software.

If you run the Apple Software Restore program off the CD it reinstalls the FAXstf Software along with the original bundle that came with the computer.

Mac OS 9

1. Insert the Restore CD and, using Disk Copy, open the "PowerBook G3 Series HD.img" in the PowerBook G3 Restore: Configurations folder. This mounts an image of the original hard disk contents on your Finder desktop.

2. Drag the following items from the folder indicated to the respective folder on your hard disk:

Applications Folder - FAXstf 5.0 folder

System Folder:Apple Menu Items Folder - FaxStatus

System Folder:Extensions Folder - FaxPrint, FAXstf PPC Shared Library, FaxMonitor, STFInit, and STF Toolbox

System Folder - STF folder

Published Date: Feb 20, 2012

Quicktime 4 (Macintosh): What Gets Installed

This article lists what gets installed with each installation option of the QuickTime 4 Installer.
This article has been archived and is no longer updated by Apple.
The QuickTime installer offers three installation options: Minimum, Full and Custom. You can use the chart below to determine which components are installed with each selection.

QuickTime Folder	**Min**	**Full**	**Custom**	**PPC**	**68K**
QuickTime Player	Yes	Yes	Yes	Yes	Yes
QuickTime Plugin	Yes	Yes	Yes	Yes	Yes
QuickTime Read Me	Yes	Yes	Yes	Yes	Yes
QuickTime Updater	Yes	Yes	Yes	Yes	Yes
QuickTime Install Cache	Yes	Yes	Yes	Yes	Yes
Sample Movie	Yes	Yes	Yes	Yes	Yes
PictureViewer	No	Yes	Yes	Yes	Yes
Sample Image	No	Yes	Yes	Yes	Yes
Internet Config	Yes	Yes	No	Yes	Yes
Extensions Folder	**Min**	**Full**	**Custom**	**PPC**	**68K**
QuickTimeTM	Yes	Yes	Yes	Yes	Yes
QuickTimeTM MPEG Extension	Yes	Yes	Yes	Yes	No
QuickTimeTM PowerPlug	Yes	Yes	Yes	Yes	No
QuickTimeTM VR	Yes	Yes	Yes	Yes	Yes
QuickTimeTM Musical Instruments	No	Yes	Yes	Yes	Yes
QuickTimeTM Fire Wire DV Enabler	No	Yes	Yes	No	No
QuickTimeTM FireWire DV Support	No	Yes	Yes	No	No
Sound Manager	Yes	Yes	No	Yes	Yes
Sound Manager 68k	Yes	Yes	No	No	Yes
Internet Config 2.0.2	Yes	Yes	No	Yes	Yes
QuickDrawTM 3D	No	No	Yes	Yes	No
QuickDrawTM 3D IR	No	No	Yes	Yes	No
QuickDrawTM 3D RAVE	No	No	Yes	Yes	No
QuickDrawTM 3D Viewer	No	No	Yes	Yes	No
Apple QD3D HW Driver	No	No	Yes	Yes	No
Apple QD3D HW Plug-in	No	No	Yes	Yes	No
QD3DCustomElements	No	No	Yes	Yes	No
QuickTime Extensions Folder (subfolder of the extensions folder)	**Min**	**Full**	**Custom**	**PPC**	**68K**
QuickTime Internet Extras	Yes	Yes	Yes	Yes	Yes
QuickTime Streaming	Yes	Yes	Yes	Yes	No
QuickTime Streaming Extras	Yes	Yes	Yes	Yes	No
QuickTime Web Helper	Yes	Yes	Yes	Yes	Yes
QuickTime Streaming Authoring	No	Yes	Yes	Yes	No
QuickTime Player Extras	No	Yes	Yes	Yes	Yes
QuickTime Music	No	Yes	Yes	Yes	No
QuickTime Image	No	Yes	Yes	Yes	No
QuickTime Effects	No	Yes	Yes	Yes	No
QuickTime Captrue	No	Yes	Yes	Yes	No
QuickTime Authoring	No	Yes	Yes	Yes	No
QuickTime 68k	Yes	Yes	No	No	Yes
QuickTime VR 68k	Yes	Yes	No	No	Yes

QuickTime Authoring 68k	No	Yes	No	No	Yes
QuickTime Capture 68k	No	Yes	No	No	Yes
QuickTime Effects 68k	No	Yes	No	No	Yes
QuickTime Image 68K	No	Yes	No	No	Yes
QuickTime Music 68k	No	Yes	No	No	Yes
MRJ Libraries Folder (subfolder of the extensions folder)	**Min**	**Full**	**Custom**	**PPC**	**68K**
QuickTime for Java (QTJava.zip)	No	No	Yes	Yes	No
Control Panels Folder	**Min**	**Full**	**Custom**	**PPC**	**68K**
QuickTimeTM Settings	Yes	Yes	Yes	Yes	Yes

Published Date: Feb 20, 2012

QuickTime Streaming Server: Verifying Installation

How do I verify that QuickTime Streaming Server has been installed?
This article has been archived and is no longer updated by Apple.
To verify the released version of QTSS has been installed:
In a terminal window, the command '`QuickTimeStreamingServer -v`' should result with:

[hostname:~/updates_4.21] root# QuickTimeStreamingServer -v
QTSS/v66 Built on: Apr 16 1999 , 18:10:07
-d: Run in the foreground
-l: For each RTP stream, write a log of all timestamps & sequence
numbers
-r: Don't append any random offsets to timestamps & sequence numbers
-p XXX: Specify the default RTSP listening port of the server

To verify the location of the Movies directory:
The Movies directory contains all files that will be made available via QTSS. The location of this directory is listed in the Admin application:

- Under the Apple Menu, select Administration, then select QuickTimeStreamingServerAdmin

Place selfcontained, hinted movies in the Movies directory.

Notes:

1. QuickTime Streaming Server requires MacOSXServer patch 1 installed.

2. Settings for the QuickTimeStreamingServer are held in the NetInfo database under services/QuicktimeStreamingServer. Several of the settings can be set via the Admin app (under the Apple Menu, in Server Administration, select QuickTimeStreamingAdmin.app). Any setting can be manipulated via the NetInfoManager.app or manually using niutil (see the man pages).

For any changes to take affect, the QTSServer must be restarted.
Published Date: Feb 20, 2012

Apple DVD Player: How to Reduce Skipping or Stuttering

Movies may occasionally skip or stutter when you watch them from a DVD-Video disc on your computer. This article can help you reduce or eliminate skipping and stuttering.
This article has been archived and is no longer updated by Apple.

Mac OS X and Mac OS 9

Outdated Software

Make sure you have installed the latest version of the Mac OS and Apple DVD Player software. You can install the latest versions using the Software Update control panel (Mac OS 9) or preference pane (Mac OS X). You should also update to the latest version of QuickTime, which can be downloaded from (http://www.apple.com/quicktime).

Other Open Applications

Some application programs periodically access the hard disk while they are open. Common examples of this are programs with an auto-save feature and email programs that check email on a regular schedule. To ensure that open applications don't interfere with movie playback, quit all open applications before watching a movie from a DVD-Video disc.

> **Note**: For Mac OS X, this includes applications open in the Classic environment. If quitting Classic applications does not help, you can stop Classic using the Classic preference pane.

Virtual Memory

In Mac OS 9, virtual memory should be turned **on** when playing DVD movies. Virtual memory can be turned on in the Memory control panel. Changes take effect after restarting. With Mac OS X, virtual memory is always on.

Color Bit Depth

Sometimes decreasing the color bit depth can directly reduce skipping. Set the colors to Thousands and then open the Apple DVD Player application. The movie plays in full color and is not affected by this setting.

Dual-Layered DVD Discs

Movies that come on dual-layered DVD-Video discs can pause up to a second when switching to the second layer. Newer titles that use this technology and are susceptible to skipping/stuttering have a warning on the back of the case. Other titles use an advanced form of duplication that prevents this behavior. These behaviors are not specific to Apple computers. They happen on every DVD player.

Clean disc

Smudges, scratches, debris, and other anomalies on a disc's surface can interfere with an enjoyable viewing experience. You should make sure the disc is clean before playing it.

Mac OS 9 only

Network Time Server

If you have set the Date & Time control panel to use a Network Time Server, an invisible background application periodically attempts to connect to a server. This can briefly interrupt a movie's playback. To prevent this from happening, deselect Use a Network Time Server in the Date & Time control panel before watching a movie.

DHCP Servers

If the TCP/IP control panel is set to connect to the Internet using a DHCP server, but you aren't connected to the Internet, or if the DHCP server is not available, your computer may pause every five minutes or so. This pause causes the movie to stutter. To prevent this from happening, temporarily make TCP/IP inactive in the TCP/IP control panel. You may need to change the User Mode to Advanced in order to do this.

Extensions and Control Panels

A third-party extension or control panel could cause occasional delays in the system, affecting any real-time playback. Use the Extensions Manager control panel to reduce your extensions set.

Appearance Sounds

Enabling an Appearance sound track (from the Sound tab in the Appearance control panel) can cause sounds to stutter in the Apple DVD Player and other applications that play real-time audio. Make sure Appearance sound tracks are turned off. You may need to restart the computer before the sound quality improves.

Speakable Items

Having Speakable Items turned on can tax the processor enough to cause stutter in Apple DVD Player. Turn Speakable Items off in the Speech control panel while watching movies.

AirPort
If your computer uses AirPort, use the AirPort application or control strip module to turn off AirPort networking.

Sherlock Indexing
In Sherlock, open the Find menu and choose Index Volumes, and remove the mark from the Use Schedule checkbox for all of the volumes listed.

AppleTalk
AppleTalk and File Sharing can slow the computer down and cause skipping. Follow these steps to make AppleTalk inactive:

1. Open the AppleTalk control panel.
2. Choose User Mode from the Edit menu.
3. Click Advanced.
4. Click Options.
5. Click Inactive.
6. Click OK.

Published Date: Feb 20, 2012

AppleShare IP 6.2: "The item "" cannot be written, because you do not have enough access privileges"

I sometimes receive the following error when copying a folder to an AppleShare IP 6.2 server:

"The item "" cannot be written, because you do not have enough access privileges. Do you want to continue?"

If I continue, some files and folders are not copied. What's happening?
This article has been archived and is no longer updated by Apple.
This error can occur when copying a folder to an AppleShare IP 6.2 server under the following circumstances:

- You are copying a folder that contains one or more folders from a client running Mac OS 8.5, Mac OS 8.5.1, or Mac OS 8.6 to an AppleShare IP 6.2 server.
- You have write access to the destination folder, but you are not the owner of the destination folder.
- The "Folders will inherit their privileges" option is enabled in AppleShare IP Advanced Setup.

WORKAROUNDS:

There are two main workarounds:

1) The server administrator can disable the "Folders will inherit their privileges" option in AppleShare IP Advanced Setup.
2) Individually copy each folder to the server.
Published Date: Feb 20, 2012

Macintosh Stops Responding While Printing to HP DeskJet 810C

With Mac OS 8.6, your Macintosh will freeze if you disconnect the USB cable to your HP DeskJet 810C printer or power it off while printing to it.
This article has been archived and is no longer updated by Apple.
Be careful not to inadvertently disconnect the USB cable or power off the printer until after the print job has completed printing.

A hang will occur when printing from Mac OS 8.6 with Hewlett Packard's driver, DJ800's (USB/AT) version 1.0 or 1.1.

When printing from Mac OS 9 with these printer drivers the system's behavior differs depending upon whether the USB cable is disconnected or the printer is powered off. An error message may be displayed stating your Macintosh cannot communicate with the printer, or the job may not print completely. After reconnecting or powering on the printer, reprint the job.

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The following Tech Info Library article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"
Published Date: Feb 20, 2012

AppleShare IP 6.2: No Custom Installation Option

I have AppleShare IP 6.2, and I would like to install the different server components (Web & File Server, Mail Server, Print Server) on separate servers. However, there is no custom installation option available in the installer application. What should I do?
This article has been archived and is no longer updated by Apple.
The ability to install individual server components is not included in the AppleShare IP 6.2 installer on either the update CD or the stand-alone CD.

The software licensing agreement for AppleShare IP 6.2 allows the installation of only one copy of each server component, but each individual server component may reside on its own machine. To be able to run one of the server components (Mail, File, or Print) on one computer while running either one or both of the others, simply follow these steps:

1. Run the full installation of the AppleShare IP on all of the computers you wish to use as servers.

2. Open the Extensions Manager of each of the servers and deactivate the extensions you will not be using:

If removing the mail server, remove the following extensions:
- AppleShare IP Mail Config
- AppleShare IP Mail Server

If removing the print server, remove:
- AppleShare IP Print Config
- AppleShare IP Print Server

If removing the Web & File Server, remove:
- AppleShare IP Web & File
- AppleShare IP Web & File Config
- AppleShare IP Web & File Server

3. Restart the computer and open the Extensions (Disabled) folder inside the System Folder. The deactivated extensions will be there. Simply throw them away.
Published Date: Feb 20, 2012

Final Cut Pro: Converting Audio CD Files to 48 kHz Before Importing

This article discusses a method of converting audio CD tracks before importing them for use in a Final Cut Pro DV sequence. It also provides detailed instructions on how to carry out this conversion from within QuickTime Pro's MoviePlayer application (renamed QuickTime Player application in revisions of QuickTime 4 after the b16 rev).
This article has been archived and is no longer updated by Apple.
Audio CD files are sampled at 44.1 kHz. The Final Cut Pro manual recommends that you "convert audio CD files from 44.1 kHz to 48 or 32 kHz before importing them into your [DV] sequence. If you import CD audio files directly, you will experience audible distortions in the audio." (see page 131)

Note: The manual does not describe how to carry out this conversion.

The Final Cut Pro manual recommends you convert the audio track "before" importing it into the DV sequence. There is no option to convert to 48 kHz when selecting Import File from the File menu within Final Cut Pro.

To perform this sample rate conversion prior to importing an audio CD sound track for use in a DV sequence, open an editing application, such as QuickTime Pro's MoviePlayer, import the audio CD file at 44.1 kHz, then export it, changing the kHz rate to 48 in the process of exporting the file.

Finally, after the clip's kHz rate has been converted to 48 kHz during the export process, the file can be imported into Final Cut Pro, for use in a DV sequence.

Note: This import-and-convert-while-exporting process can also be done from within Final Cut Pro, using a process similar to the one this article describes.

The details of this conversion process using QuickTime Pro's MoviePlayer follows.

1. Insert the CD from which you wish to import a sound clip

2. With the CD mounted on the desktop, open the MoviePlayer application

3. Select Import from the File menu

4. Navigate to the CD in the dialog box that opens, select the desired track, and click Convert

5. In the resulting dialog box, give the track an appropriate name (e.g., "audio1-QTimport@44.1kHz").

6. If you want only a portion of the track, click the Options button, and select a starting and ending time with the slider, or simply by inserting the appropriate time points in the Start and End fields in the Audio Selection portion of the window, then click OK.

Note: Do not attempt to convert the kHz rate: 48 kHz is not an option from this window

7. Select the appropriate destination for the file, and click Save.

Wait for the Import progress bar to finish. When it is finished importing the sound clip, it will open the file in Movie Player.

8. Select Export from the File menu

9. In the dialog box that opens click the Options button

10. In the following dialog box, click Settings in the Sound portion of the window

11. In the Sound Settings window that opens, select 48 kHz from the Rate drop down menu, confirm the bit size and Stereo or Mono selection, and click OK.

Note: 48 kHz may already be selected in the Rate field; if so, you can simply click OK

12. The new Sound Setting rate should be displayed in the Sound Settings window now; if so, click OK.

13. Back in the original Export dialog box, give the file a new name (e.g., "audio1-QTexport@48kHz"), select the appropriate destination for the file, and click Save.

Wait for the Export progress bar to finish.

14. Quit Movie Player and launch Final Cut Pro.

15. From the File menu, select Import and File from the sub-menu.

16. Navigate to the folder where the exported 48 kHz file resides, select that file name and click Open

The file will now show up in your Final Cut Pro Browser window, ready to be moved into a DV sequence.
Published Date: Feb 20, 2012

AppleShare IP: Tips on Installing Software Successfully

How can I successfully install software applications on an AppleShare IP server?
This article has been archived and is no longer updated by Apple.
Before installing software on an AppleShare IP server, you need to quit all applications, turn off virtual memory, and turn off all extensions.

- Virtual memory can be turned off using the Memory control panel
- Extensions can be turned off using the Extensions control panel or by holding down the shift key while starting up the computer.

If your software installer does not automatically restart the computer at its completion, you will need to manually restart the server in order to turn all extensions back on. After restart, turn virtual memory on using the Memory control panel.
Published Date: Feb 20, 2012

Mac OS: Display Resolution Switching at System Startup Time

This article explains why a Macintosh computer's display may appear to momentarily flash or flicker when the computer is turned on, or why the display has a very large image that turns into a smaller image as the computer turns on.
This article has been archived and is no longer updated by Apple.
When you turn on your Macintosh computer, the display may appear to momentarily flash or flicker, or it may display a very large image that suddenly turns into a smaller image as the computer turns on. This is normal, as long as the Macintosh uses the resolution you chose in the Monitors control panel when the Finder finishes starting up. This behavior varies from Macintosh to Macintosh depending on the model, video card, software versions, and monitor. Essentially, the computer is determining which resolution, or screen size, to use as it starts up. As it determines and sets the correct resolution, it may flash, flicker, or display images at smaller resolutions until the final resolution is displayed.

If the preferred resolution is not available on the display after the computer has started up, you may not have set up the display correctly. If your computer and display have ADB or USB connections, make sure the display is connected properly, and that the latest version of Apple Displays software is installed.

There are a number of variables that determine a display's resolution setting at system startup time:

- computer model (video driver in ROM varies)
- version of Apple Displays software (resolution stored in PRAM or preference file)
- type of video card

On earlier computers, the resolution is stored in PRAM and is read at system startup time by the video driver in ROM. Later versions of Apple Displays software rely on a preference stored on the hard drive to set this resolution instead of the PRAM setting. This preference is read during the startup sequence, and is applied either during system startup time, or when the Finder starts up, depending on the video controller.

On some computers, you can use the Monitors control panel to set the PRAM setting to the resolution of your choice. This is not the case with all Macintosh computers.

Different video cards and built-in video handle resolution preference loading at different times, depending on when the driver for the video card and built-in video is loaded. Some computers and video cards (usually older models) do not recognize multiple scan displays when the computer is turned on, because the required driver is not built into ROM, and is only loaded when the Apple Displays Software loads.

AppleVision/ColorSync models have a unique sense pin setting that, when combined with the ADB connection, tells the computer that it is an AppleVision display. Until the AppleVision extension loads, some computers and video cards will read this sense pin as a 640 by 480 display since the sense pin algorithm is not yet complete. Therefore, the computer will start up in 640 by 480. After the AppleVision extension loads, the computer will recognize the display properly, and apply the user's preference for resolution setting. Again, depending which video controller is used, the preference may load the computer is turning on, or after it has started up.

Published Date: Feb 20, 2012

ASIP Print Server: Printing to Print Queue From Windows

How do I print from a Windows-based client to an AppleShare IP (ASIP) print queue?
This article has been archived and is no longer updated by Apple.
Starting with AppleShare IP (ASIP) 6.0, AppleShare IP Print Server supports two network printing protocols:

- PAP: This is the standard method of printing over AppleTalk-based networks
- LPR: This is an industry standard method of printing over TCP/IP-based networks

Note: AppleShare IP 5.x supports printing via PAP but not LPR.

In order to print to an ASIP print queue, a computer must be able to print via one of the two methods supported by the ASIP print server. Some versions of Windows provide the necessary client software to print over PAP and/or LPR. Others do not.

Here is a breakdown by Windows version:

Windows 95, Windows 98
Windows 95 and Windows 98 do not include any client software to print via PAP or LPR. To print from Windows 95 or Windows 98 to an ASIP print queue, you will need to acquire the necessary client software to print via PAP or LPR.

PAP: Products that provide Windows solutions for AppleTalk-based networking, including printing over AppleTalk include:

PC MACLAN by Miramar Systems, Inc.
http://www.miramarsys.com/

TSSTalk by Thursby Software Systems, Inc. (formerly COPSTalk, acquired from COPS, Inc.).
http://www.thursby.com

LPR: Any LPR client for Windows 9x should work. Products that provide LPR printing for Windows include:

ACITS LPR Remote Printing
http://www.utexas.edu/academic/otl/software/lpr/

INTELLIscribe by Brooks Internet Software, Inc.
http://www.intelliscribe.net

Windows NT 4.0
Windows NT 4.0 (Server and Workstation) includes client software to print via both PAP and LPR.

Information on how to configure Windows NT 4.0 for PAP printing is available on Microsoft's Web site at:
http://support.microsoft.com/support/kb/articles/q174/3/37.asp

Information on how to configure Windows NT 4.0 for LPR printing is available on Microsoft's Web site at:
http://support.microsoft.com/support/kb/articles/q195/6/43.asp

In addition, PC MACLAN (http://www.miramarsys.com/) and ACITS LPR Remote Printing (http://www.utexas.edu/academic/otl/software/lpr/) also provide alternative solutions for Windows NT.

Windows 3.1x
Windows 3.x does not include any client software to print via PAP or LPR. To print from Windows 3.x to an ASIP print queue, you will need to acquire the necessary client software to print via PAP or LPR. Although there used to be several products on the market, few are still available.

However, Miramar Systems, Inc. (http://www.miramarsys.com/) provides Personal MACLAN Connect as a freeware AppleTalk solution for Windows 3.x.

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The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"
Published Date: Feb 20, 2012

AppleShare IP: Troubleshooting Shared User & Groups

This article provides troubleshooting steps for different issues users may see with the shared User & Groups database feature in AppleShare IP 6.2

This article has been archived and is no longer updated by Apple.

Distributed databases, such as Shared Users & Groups, are inherently slower and more prone to various issues than non-distributed databases. You have moved from a simple architecture of a client talking to a server to a complex architecture of a client talking to a server talking to another server. There are twice as many communication links and twice as many chances that the total connection will fail. Thus, it's even more important to have reliable networking equipment, hardware, and software configurations than it was before for the Shared Users & Groups feature to perform as expected.

That said, it's generally much easier to administer one user and group list than eleven, so the extra precautions and risks associated with shared users & groups are often worth the effort.

Here is some troubleshooting advice for common issues:

Cannot Connect to Primary Server

1. Verify that the primary server address is correct.
2. Verify that the name and password of the owner (the "main administrator," which is also defined as the Machine Owner in the File Sharing control panel) is the same on the primary as it is on the secondary. Cases must match.
3. Ensure that TCP/IP is correctly set up on both computers.
4. Make sure that you've not set up TCP Filter to block port 687.

Primary Server Slow While Downloading Users

Downloading users is a stressful operation. Think of it as being functionally equivalent to every single user trying to log in to the server at the same time. Apple does not recommend frequent use of the Download All option. It is most useful in an initial setup operation, where you have a lot of time available (in addition to being stressful, downloading users takes a long time). During a download, the interface on either computer may become unresponsive. For routine use, Apple recommends using automatic downloading, which is far less taxing on the servers, computers, and networks.

Primary Server Crashes During a Download All

Download All traverses the entire user database. As such, it copies information from the primary to the secondary that may not have been accessed for a long time, or may never have been accessed. This is usually indicative of a bad Users & Groups Data File. You should obtain the latest AppleShare IP First Aid tool and reconstruct your Users & Groups file in accordance with the instructions that come with it.

Published Date: Feb 20, 2012

AppleShare IP: Maximum Number of TCP Filters

This article discusses the number of filters you can create with TCP Filter Admin, available with AppleShare IP 6.1 and later.
This article has been archived and is no longer updated by Apple.
TCP Filter Admin is limited to creating 250 filters.

If 250 filters do not provide sufficient flexibility for your situation, be sure to use wildcards. Using wildcards allows a whole range of IP addresses to be addressed with a singe filter, and should considerably reduce the necessary filters.

If you are approaching the 250 filter limit even with the use of wildcards, consider purchasing a hardware router for the task.

From an administrative standpoint, the list of filters can become hard to manage and design before you reach the technical maximum of 250 filters. You may want to consider a hardware router if your filter list is growing unmanageably long and complex.
Published Date: Feb 20, 2012

TCP/IP Control Panel: PPP Option Missing

This article explains why PPP might not be available as an option in the TCP/IP control panel, and offers solutions.
This article has been archived and is no longer updated by Apple.
PPP is not listed as a choice in the TCP/IP control panel under the following circumstances.

PPP Software Is Missing or Disabled
Check the Extensions folder of your System Folder, you should have an extension with the words Remote Access or PPP in its name. If you do not, try reinstalling the PPP software.

- Under Mac OS 8.5 and higher, PPP is part of the bundled Remote Access installer. Open the Mac OS installer and choose Custom Install. Then, select only the Remote Access installer from the listing and click Install.
- Under Mac OS 7.6-8.1, OT/PPP is included as part of the Mac OS installer. Open the Mac OS installer and choose Custom Install. Then, select only OT/PPP from the listing and click Install.
- Under earlier revisions of Mac OS with Open Transport 1.1.1 or higher installed, you can download and install the OT/PPP package from Apple Software Updates. Or, if you have purchased Remote Access 3.x separately, you can run the Remote Access Client installer to install PPP functionality.

For more information about downloading OT/PPP, search the Apple Software Updates Web site at http://www.apple.com/swupdates.

If your computer came with a Software Restore CD, and you are using the original system software that came with your Macintosh, Apple recommends that you use the software restore function of the Software Restore CD, instead of a custom installation of system components.

There are also third-party implementations of PPP available, such as MacPPP and FreePPP. If you are using one of these implementations, check the documentation included with them, and try re-installing the software to see whether it remedies the issue.

For more information about PPP solutions, refer to article 21073: "**MacPPP 2.5: Read Me for Open Transport 1.1**"

If you are using the Apple Internet Connection Kit, you should upgrade your PPP software to OT/PPP, Remote Access 3.x, or the latest version of a third-party implementation.

The Modem Software Is Not Installed Correctly
If you have an iMac, Power Macintosh G3 (Blue and White), or PowerBook G3 (Bronze keyboard), and you have an internal modem, you must have the correct modem extension installed in order for the computer to recognize the modem. You can usually tell whether this is the case by checking the Modem control panel. If the choice for internal modem is not available, it is likely that the modem extension is either not installed or inactive. You can re-install the modem software by custom installing it from the OS installer.

If you have a PowerBook and are using a PCMCIA modem, you may need to install additional software in order for the modem to be recognized. Some third party PCMCIA cards come with software, which is required for the modem to be recognized properly. Consult the documentation that came with your PCMCIA modem for installation instructions.

If you have a Macintosh using a GeoPort Telecom adapter, you must also install the Geoport/Express Modem software in order for the computer to recognize and use the modem, but this should not keep PPP from being listed as an available choice in the TCP/IP control panel.

If your computer came with a Software Restore CD, and you are using the original system software that came with your Macintosh, Apple recommends that you use the software restore function of the Software Restore CD, instead of a custom installation of system components.

There Is a System Software Issue
An extension or control panel may be preventing the PPP option from being listed in the TCP/IP control panel. You can troubleshoot this issue by using the Extensions Manager. Build a custom set by duplicating the Mac OS extensions set and adding only the extensions needed for your modem software and PPP.

For more information about extension conflicts, refer to:
article 15926: "**System 7.5: Accessing Extensions Manager To Troubleshoot Extension Conflicts**"
article 30929: "**Mac OS 8.x: Extensions Troubleshooting/Extensions Manager Features**"

A "PPP not installed" message can be caused by some versions of AOL Link. For more information about this issue refer to
TIL Online Archive Article 30064: "**Internet Dialer: PPP not installed Message**"

If the choice is still not available for internal modem, or if the PPP choice is still not available, try performing a clean installation of the system software, modem software, and PPP software in combination. Be sure to export or write down your TCP/IP and PPP settings before performing

a clean installation.

For more information about performing a clean installation, refer to:
article 50055: "**Miscellaneous Manuals**". Select Troubleshooting Handbook - How to Perform a Clean Installation.
article 30691: "**Mac OS: When & Why to Perform a Clean Install**"

The Modem Is Not Properly Installed or Active
For PCMCIA modems used with PowerBooks that have PCMCIA slots, the modem should appear on the desktop when installed properly. If you are having difficulties with your PCMCIA modem, try ejecting and reseating the modem, or try inserting the modem in another slot if available.

With internal modems, you may also have an issue where the modem is unseated, causing the Internal Modem choice to be unavailable in the Modem control panel. First, check the Modem control panel to see whether Internal Modem is an available choice. If not, then try the previous troubleshooting steps to check for software issues. If you have already tried re-installing the modem software, try resetting the PRAM.

Keep in mind, after resetting PRAM, you may need to change your AppleTalk preferences in the AppleTalk control panel or Chooser if you have a modem or serial printer connected to your printer port. Resetting the PRAM makes AppleTalk active on the printer port.

For more information about resetting the PRAM refer to article 2238: "**Macintosh: How to Reset PRAM and NVRAM**"

If the modem is still not recognized or operating properly and it is installed internally, the modem may need to be reseated. Consult the documentation that came with your Macintosh for instructions on modem installation or take your computer to an Apple-authorized service provider for assistance.

For additional information concerning general modem troubleshooting refer to article 43079: "**iMac Modem: Troubleshooting References**"
Published Date: Feb 20, 2012

Mac OS X Server: "System Panic" Message

I have Mac OS X Server installed on my machine and have received a message on the screen reporting a "System Panic." The server is not responding. What has happened?
This article has been archived and is no longer updated by Apple.
A System Panic, sometimes called a kernel panic, happens when the kernel cannot continue handling requests.

Below are several possible causes:

- In all likelihood, this is a very rare software crash that can happen despite the extremely strong nature of Unix-style operating systems like OS X Server. Heed the warning, restart into single-user mode, and run a file system check.

  For additional information on running a file system check see:
  Article 24501: "**Mac OS X Server: Why, When, and How to Run fsck for File System Maintenance**"

- If this warning message appears again, it is possible there is a hardware compatibility issue. Even if the original hardware is a supported factory configuration for Mac OS X Server, there could be a hardware component that has been added to the factory configuration and causing issues. Try removing any third party hardware that has been added.

- After confirming there is no hardware compatibility concerns, the server is still frequently reporting System Panics, there could be an issue with the operating system. Reinstalling Mac OS X Server from your installer CD should fix this issue.

  Caution: Remember that the Mac OS X Server installation erases the contents of the partition it is installed onto.

- If the system is a Mac OS X Server supported factory configuration, and the server frequently reports a System Panic even after a reinstall of the Mac OS X Server software, there could be a failure of a hardware component that shipped with the computer. The Macintosh should be taken to an Apple-authorized service provider.

  To locate the nearest Apple-authorized service provider visit the following Apple Web site:
  http://buy.apple.com/

Published Date: Feb 20, 2012

Disk First Aid: "HFS Wrapper Partition Damaged" Error

This article explains why you might receive the following error when running Disk First Aid:

"The HFS wrapper partition is damaged. You should make backup copies of your files, erase the volume, and restore."

This article has been archived and is no longer updated by Apple.
With Mac OS 8.1 and later, Mac OS can support both Mac OS Standard and Mac OS Extended formatted volumes. Mac OS Standard formatted volumes are sometimes called HFS volumes. Mac OS Extended formatted volumes are sometimes called HFS Plus volumes. Users can tell how a volume is formatted by selecting the volume in the Finder, and choosing Get Info from the File menu. The type of volume appears in the Format field.

Most HFS Plus volumes, including those created by Drive Setup and the Finder's "Erase Disk..." menu item, are really a type of hybrid. They are a HFS volume with a "pure" HFS Plus volume occupying most of the space on the HFS volume. The HFS volume is "wrapped around" the real (embedded) HFS Plus volume. That's why it is called a HFS wrapper. The HFS wrapper is not a separate partition, and both the HFS wrapper and the "real" or "pure" HFS Plus volume inside it are in the same partition, assuming the disk actually uses partitions.

The HFS wrapper functions

- It allows Mac OS 8.1 and later to start up from a HFS Plus formatted volume. The ROM of every computer shipped since the Mac Plus could recognize and mount HFS volumes, but not HFS Plus volumes. This means the ROM sees the HFS wrapper as an ordinary HFS volume, mounts it, and tries to start up from it. To make that happen, there is a tiny System file in the wrapper that contains just enough code to find the real System file in the embedded HFS Plus volume, and continue starting up from there.
- There is a Read Me file in the wrapper. The name is normally "Where_have_all_my_files_gone?". If a user tries to mount the volume on a system without HFS Plus support, anything before Mac OS 8.1, this is the only file visible. It is a SimpleText file that explains that this is a HFS Plus volume, and that they need Mac OS 8.1 or later to use the volume. This was designed this way to prevent the "This is not a Macintosh Disk. Do you want to erase it?" alert users would otherwise see.

In some cases, Disk First Aid 8.2 and later may report the following error message:

"The HFS wrapper partition is damaged. You should make backup copies of your files, erase the volume, and restore."

Disk First Aid can and does fix some kinds of damage to the HFS wrapper. Users should only see the above message if Disk First Aid could not fix the damage. If the error message appears everytime Disk First Aid is run on the volume, back up any important files, erase the volume and restore the software.

Although this type of damage is rare, the HFS wrapper can be damaged by having power removed from the computer when it is in use or after a crash when using incompatible software.

Published Date: Feb 20, 2012

Mac OS X Server 1.0: About Macintosh Manager

This document contains late-breaking information that supplements the information in your installation manual and Macintosh Manager Help.
This article has been archived and is no longer updated by Apple.

Installing Macintosh Manager Software on a Macintosh That Starts Up Locally

You can use the Macintosh Manager Installer to install client software or Macintosh Manger administration software on a Macintosh computer that starts up locally. The computer must meet the minimum system requirements for the software you are installing.

System Requirements for a Macintosh Manager Client Computer:

- Mac OS computer 68040 processor or later
- Mac OS version 8.1 or later
- 8 MB RAM (physically installed, not virtual memory)
- 2 MB hard disk space
- Appearance control panel 1.0.1 or later
- Ethernet networking set up

System Requirements for a Macintosh Manager Administration Computer:

- Macintosh PPC computer
- Mac OS version 8.5 or later
- 800 x 600 resolution display or better
- 16 MB RAM (physically installed, not virtual memory)
- 2 MB hard disk space (Additional space required on server for databases and preferences - possibly up to 4 MB)

Installing Macintosh Manager Software

To install software on a local-startup computer, follow these steps:

1. Start up the computer you want to install the software on.

2. Use the Chooser to mount the NetBoot server volume.

When you log in to the server, use any user name and password that has read access to the NetBoot server volume. For example, you can use the name "Administrator" and the password you set up for the Administrator of the Mac OS X Server.

3. Locate the Macintosh Manager Installer folder and open it.

4. Double-click the Installer icon.

5. Follow the onscreen instructions to install the appropriate software.

Once the software is installed, the computer restarts automatically.

If you're using AppleTalk, when the computer restarts it tries to locate and connect to a Macintosh Management server. It connects to the first one it finds in the local AppleTalk zone. If the computer finds a server, a log-in dialog box appears. A user logs in with a user name and password created with the Macintosh Manager software.

If you have more than one Macintosh Management server on your network or if you have an IP-only network, you may need to use the Server pop-up menu to choose a Macintosh Management server. If the server is not in the same AppleTalk zone as the computer, you use the Other menu to locate the server.

If you need to locate the server using an IP address, you can type either the IP address of the server or the domain name. To use a domain name, there must be a Domain Name Server (DNS) server connected to the network

Updating from At Ease for Workgroups Version 5.0

Important: If you've already set options in Macintosh Manager, the settings are deleted when you update From At Ease to Macintosh Manager.

The following items are not updated, or are partially updated, from At Ease to Macintosh Manager:

- Approved desktop printers for each workgroup: You will need to setup the desktop printers for all your workgroups after updating.
- Printer quota accumulations: All user printer usage counts are reset.

- Activity log: Macintosh Manager starts with an empty log.
- Automatically-mounted servers and desktop printers: At Ease 5.0 supports 32 "auto-mount" servers and 32 "approved" desktop printers. However, Macintosh Manager only supports ten servers and ten printers, so only the first ten of each will be used.
- Special folders: Macintosh Manager only supports one "special folder", whereas At Ease 5.0 supports ten. Only the first "special folder" will be used by Macintosh Manager.
- Workgroup Items: If the icons for a workgroup don't show up after updating, remove the item and then replace it. Any workgroup items, such as applications, found missing on a client workstation after the user logs in may show a standard document icon instead of its normal icon.

Macintosh Manager does not support these At Ease 5.0 features:

- preventing users from starting up from a floppy or other hard disk to bypass security
- Web access to user's documents
- eMate preference configuration
- customized startup pictures for the log-in screen

The steps you follow to update settings depends on when you plan to use the At Ease server as the Macintosh Management server, or a different server.

Updating At Ease 5.0 Settings to the Macintosh Management Server:

1. Make sure no users are connected to the At Ease server. Turn off AppleShare on the At Ease Server.

You should make back up copies of the files in case the updating doesn't work properly.

2. From your At Ease server, mount the volume which contains the Macintosh Manager folder and copy the At Ease Items WG 5.0 folder into the Macintosh Manager folder.

3. Copy the At Ease Server Prefs file from the At Ease server's Extensions folder into the At Ease Items WG 5.0 folder you just copied into the Macintosh Manager folder.

4. Log in to a client computer. Then open and log in to Macintosh Manager.

You are asked if you want to update from the At Ease settings in the Macintosh Manager folder.

5. Click Yes to update.

Updating may take several minutes.

User Information Not Synchronized

Macintosh Manager and Mac OS X Server each have a database that stores user information. When you create a user in Macintosh Manager, Macintosh Manager creates a user in each database. However, no attempt is made to synchronize the users in each database. If the administrator changes a Mac OS X Server user account (for example, by using Network Manager) then information between the two databases may be inaccurate. In most cases this won't present a problem because Macintosh Manager uses information from its own databases.

Logging Into Macintosh Manager: Administrator and "root"

The user name "root", along with the appropriate password, can always be used to log in to the administration application. The user name Administrator is an alias for the user name "root." If you change the alias, you will not be able to log in with the user name Administrator.

Using More Than One Macintosh Management Server, or Using a Macintosh Management Server Located in a Different AppleTalk Zone

If your Macintosh Management Server and NetBoot client computers are located in different AppleTalk zones, or you have more than one Macintosh Management Server in your current AppleTalk zone, you need to set up the Macintosh Manager Preferences file so it remembers the location of the server. Otherwise, your users will need to locate and choose a Macintosh Management Server each time the computer is restarted.

To set up the Macintosh Manager Preferences file so it remembers the location of the server:

1. Start up a client workstation and log in to the System Access workgroup, making sure the proper server was selected in the Log In window. The Macintosh Manager Preferences file on your client workstation will now remember the current server.

2. Take the Macintosh Manager Preferences file and copy it to another location, such as another server volume temporarily.

3. Copy this preference file into the Macintosh Manager Items folder located in the NetBoot System Image. (See the NetBoot Desktop Admin Read Me for instructions on modifying the NetBoot System Image.) You may need to create a Macintosh Manager Items folder if there isn't one.

The file you saved into the NetBoot's system image's Macintosh Manager Items folder (located in the System Folder). You may need to create a Macintosh Manager Items folder if there isn't one.

Preventing Users from Overwriting a Read-Only File

Even though users may not have permission to save a document to a folder, if the user is allowed to open the document, it may be possible for them to use an application's Save command to overwrite the file. To prevent users from overwriting a file, you can lock the file. To lock a file:

1. From the Finder, click the file's icon.
2. Choose Get Info from the File menu.
3. Select Locked.

If Copying Seems Slow

In general, copying files on a computer that uses Macintosh Manager is slower than copying on a computer that uses Mac OS version 8.5 or later, and doesn't have Macintosh Manager installed. This is due to Macintosh Manager security features.

Shared Folders' Names

The Volume Shared Folder in Macintosh Manager is actually named "Global Shared f", and the Workgroup Shared Folder is named "Group Shared f" on the client workstations.

Shared Folders in Restricted Finder and Unrestricted Finder Environments

Unrestricted Finder workgroups always have access to global and workgroup shared folders. These folders are located in the User Documents folder.

If a user opens a volume or workgroup shared folder that the user should have write access to and sees an icon that indicates the folder is read-only, close and then open the window. The read-only icon should disappear.

Printing and Restricted Finder Workgroups

You cannot delete print jobs from the desktop printer.

System Access Workgroup Settings

In general, most settings that you save under this workgroup do not get saved and restored on a NetBoot client computer because the system volume is read only. This includes the printer set in the System Access workgroup.

NetBoot Client Issues

Because Macintosh Manager only preserves files in certain locations when users log out, it's possible for a user to save a document to a disk and have it available to other users when they log in later on. Users should save documents only to their User Documents folder to avoid this problem.

Items saved to the system startup volume are available to users until the computer is restarted. When the computer is restarted, the items are deleted. If you want items to be preserved, you must set the appropriate options in Macintosh Manager.

If a NetBoot client computer shuts down unexpectedly, the preference files may not be saved.

Macintosh Management Server creates a sharepoint on the Mac OS X server called Macintosh Manager. The sharepoint looks like a shared folder and contains the User Documents folders and the Macintosh Manager Items. If a user has access to the Chooser, they can mount the Mac OS X server and access portions of the server volume in addition to the sharepoint.

Application Preferences

Application preferences are only saved if the file has changed. A file is changed if either the modification date or the file size changed while the user was logged in.

If you find your users are saving too many preferences, you should consider adding some preference files or folders to the list of exceptions in the administration program. Files added to the exceptions list are not be saved or restored when the user logs in or out, greatly increasing the login or logout speed. As an alternative, you can specify only certain files and folders you want to save and restore. This allows you to be selective in what a user preserves. See Macintosh Manager Help for more information.

A folder called MM User Default Prefs is automatically created in the Macintosh Manager Items folder on the server. You can put preference files or folders in here that they want a user to obtain the first time they log in. This folder is used if, and only if, there is no preference folder stored on the server for that user. The user's preferences are stored inside the MM Users folder on the server under a folder named by the user's name and the suffix "Prefs"

Once the user saves preferences to the server and creates a preferences folder, then the Default Prefs folder will not be accessed by that user.

Preserving Information About Open Windows

You can set options in Macintosh Manager so that information about open windows are saved from one session to another. If information about open windows are preserved, the windows that are open when a user logs out, are open when the user logs in again.

To preserve information about open windows, do this:

1. Open Macintosh Manager.
2. Click the Workgroups tab, then click the Options tab.
3. Choose Everything or Applications Preferences Only from the "Preferences to preserve" pop-up menu.

If Your Macintosh Manager Icons Don't Show Up Properly

If you have installed a previous version of At Ease for Workgroups on your client computers, your Macintosh Manager icons may be incorrect unless you rebuild your desktop. This can be done by holding the Command and Option keys down when entering the Finder.

If Printing Quotas Don't Seem to be Working Properly

Printing quotas are not enforced if the desktop printer name does not match the printer set up by the administrator for the workgroup.

Published Date: Feb 20, 2012

Apple Software Restore: Some Preferences May Be Lost

This article lists the software that is replaced when performing a "Restore in Place" with Apple Software Restore.

This article has been archived and is no longer updated by Apple.
When using Apple Software Restores (ASR) to perform a "Restore in place," the utility replaces only your original software (original system software, factory settings, and applications that came with your computer) with new copies from the Software Restore CD, leaving everything else on your disk untouched. ASR copies files from a Disk Copy disk image located in the Configurations folder on the iMac Software Restore CD.

Since ASR does not check for versions of software installed, it is possible for ASR to replace same name system software components with older versions. For example, users having installed the ATI Video Software Update may need to reinstall the update after performing a "Restore in place" with ASR.

Although most preferences are not affected by performing a "Restore in place," there are a several preferences you might want to save before using the Apple Software Restore. Saving these preferences avoids having to reconfigure important settings for Internet access, email and web browsing. Consider saving the following preferences, out of the Preferences folder, in the System Folder, into a separate folder or onto the Desktop before choosing "Restore in place":

Note: You may want to consider saving the entire Preferences folder, as this will save all preferences. Doing this will assure you have any Apple, or third-party preference files.

- Airport Prefs
- AMD Database
- AppleTalk Prefs
- ASLM Prefs
- Internet Prefs
- Modem Prefs
- Palm Desktop Info
- Quicktime Prefs
- Shockwave Prefs
- TCP/IP Prefs
- Explorer Prefs
- Extensions Manager Prefs
- Keychains Prefs
- Printing Prefs
- Total Access

This means many Internet settings may be lost when performing a "Restore in Place." To avoid having to reconfigure your computer to access the Internet, the TCP/IP, Modem, and Internet Preferences should be dragged out of the Preferences Folder (in the current System Folder) and placed on the desktop so that they can be placed back in the Preferences Folder after the Restore is complete.

Another concern would be the America Online and Explorer folders in the Preferences Folder. The Explorer folder contains the "favorites.html" file that stores all the favorites that have been saved in Microsoft Internet Explorer. The America Online folder contains the "AOL External Prefs" which contains the connection settings for America Online. If America Online and Internet Explorer are commonly used for Internet access, these folders should be saved into a separate folder or onto the desktop before performing the Restore, and then placed back in the Preferences Folder after the Restore is finished.

Notes:

1. If your computer came with both Mac OS 9.1 and Mac OS X installed on the hard disk, you should follow the restore procedure outlined in Article 60847 "Apple Software Restore: How to Perform a Multiple Disc Restoration"

2. This article also applies to the Power Macintosh G3 (Blue and White); the same preference files are affected.

3. Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**"

Published Date: Feb 20, 2012

Mac OS Runtime For Java 2.1.4: Read Me

This article comprises the Read Me for Mac OS Runtime for Java (MRJ) 2.1.4. This software was released by Apple on 11 August 1999, and is available for downloading from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Description
Mac OS Runtime for Java (MRJ) 2.1.4 is an upgrade to MRJ 2.1.3. It fixes two severe bugs that affected Java applications, but not applets.

- In some Java applications, windows would occasionally disappear or become non-functional.
- Quitting a Java application would occasionally cause another application to quit, or a file opened by another application to close. This would happen only when the second application had been launched, or the file opened, after MRJ opened a window.

This release is Bronze certified for running applications built with Oracle Developer 1.6.1 and deployed on Oracle Developer Server using Apple Applet Runner 2.1.4.

Requires
Mac OS 7.6.1 through Mac OS 8.6, QuickTime is recommended.
This article has been archived and is no longer updated by Apple.
About Mac OS Runtime for Java 2.1.4

Mac OS Runtime for Java (MRJ) 2.1.4 is an upgrade to MRJ 2.1.3. It fixes two severe bugs that affected Java applications, but not applets.

- In some Java applications, windows would occasionally disappear or become non-functional.
- Quitting a Java application would occasionally cause another application to quit, or a file opened by another application to close. This would happen only when the second application had been launched, or the file opened, after MRJ opened a window.

This release is Bronze certified for running applications built with Oracle Developer 1.6.1 and deployed on Oracle Developer Server using Apple Applet Runner 2.1.4.

Known Issues

- **Java Epoch Date:** Java's internal clock calculates dates as the time since January 1, 1970. If the system clock on your Macintosh is set to an earlier date, Java applets and applications may hang or exhibit other unusual behavior. Ensure that the current date in your Date &Time Control Panel is at least 1/1/70.

About Mac OS Runtime for Java 2.1.3

Mac OS Runtime for Java (MRJ) 2.1.3 is an upgrade to MRJ 2.1.2 that addresses several memory and applet security issues. This release is Bronze Certified for use with Oracle Developer 1.6 using Apple Applet Runner 2.1.3. For details on Oracle Bronze Certification, see **http://www.apple.com/java/**. This version of MRJ installs Apple Applet Runner 2.1.3, a utility for running Java applets outside of a Web browser. Apple Applet Runner is installed in the Mac OS Runtime for Java folder inside your Apple Extras folder. See "About Apple Applet Runner" for more details.

About Mac OS Runtime for Java 2.1.2

Mac OS Runtime for Java (MRJ) 2.1.2 is an upgrade to MRJ 2.1.1 that addresses several general Java security problems reported to us by Sun Microsystems, and fixes a number of outstanding developer issues.

About Mac OS Runtime for Java 2.1.1

Mac OS Runtime for Java (MRJ) 2.1.1 is an upgrade to MRJ 2.1 that updates JDK compatibility and addresses a number of outstanding issues from previous releases of MRJ. The major changes include:

- MRJ 2.1.1 is compliant with Sun Microsystem's Java 1.1.7 specification.
- MRJ 2.1.1 (English) can now be installed on all language versions of the Mac OS. See the note "For International Users" below for more information.
- MRJ 2.1.1 now correctly handles loading applets through a proxy server or firewall.
- Applets in the games section on Yahoo now display and work correctly.

TA25316_Mac_OS_Runtime_For_Java_Read_Me.pdf

About Mac OS Runtime for Java 2.1

Introduction

Mac OS Runtime for Java (MRJ) 2.1 is Apple's implementation of the Java Virtual Machine (JVM), based on Sun Microsystems' Java 1.1.6 specification. MRJ allows you to run Java applications and applets. (Running applets also requires a Web browser, such as Microsoft Internet Explorer, or an applet viewer such as the Apple Applet Runner.)

MRJ 2.1 makes many improvements over Apple's previous JVM, including greatly increased performance, improved reliability, and support for AppleScript and Sun's JFC/Swing. MRJ 2.1 also runs more applications and applets than earlier versions.

For the latest developments in Java for the Macintosh, see Apple's Java Web site at http://www.apple.com/macosx/features/java/

Configuring Your Web browser

Mac OS versions 8.0 and later come with a copy of Internet Explorer configured to work with MRJ. If you're using a different browser or if you got Internet Explorer from another source, you may need to configure it to use MRJ.

Note: Versions of Netscape Communicator/Navigator up to and including 4.5 use their own internal Java Virtual Machine and cannot be configured to use MRJ. Apple and Netscape are working together to develop a future version of Netscape Communicator/Navigator that will make use of MRJ. For more information on Netscape's browsers, you can monitor their Web site at http://home.netscape.com/computing

To configure Internet Explorer to use MRJ, choose Preferences from the Edit menu. In the Java Options section, make sure Java is enabled and Apple MRJ is selected as the Java Virtual Machine. To make your changes take effect, quit the browser and open it again.

Minimum System Requirements:

- Macintosh computer with a PowerPC processor
- System 7.6.1 or later
- 24 megabytes (MB) of RAM. For better performance, 32 MB of RAM is recommended, with virtual memory turned on and set to at least 33 MB. Installing more than 32 MB of RAM will greatly improve performance and increase the number of Java applets and applications that can run simultaneously.
- at least 20 MB of free disk space
- Using Java applets over the Internet requires Open Transport 1.1 or later and an active Internet connection.
- You may experience improved performance if you have QuickTime 3.0 installed. QuickTime 3.0 is installed with Mac OS 8.5, or you can download it at **http://quicktime.apple.com**.

Files Installed With MRJ 2.1

In the Extensions folder (inside the System Folder):

- MRJ Libraries folder, containing MRJ Lib, MRJ Symantec JITC, the MRJClasses folder and the lib folder
- MRJ Enabler extension (installed only on computers using Mac OS 8.1 or earlier)
- Text Encoding Converter 1.4.2
- Appearance Extension 1.0.3 (installed only on computers using Mac OS 7.6.1)

In the System Folder:

- A Text Encodings folder containing version 1.4.2 of the encodings

In the Control Panels folder (inside the System Folder):

- Appearance control panel 1.0.3 (installed only on computers using Mac OS 7.6.1)

In the Preferences folder (inside the System Folder):

- Appearance Preferences 1.0.3 (installed only on computers using Mac OS 7.6.1)

In the Apple Extras folder

- Mac OS Runtime for Java folder

For International Users

The MRJ 2.1 Installer installs U.S. English versions of the Text Encoding Converter 1.4.2 and associated text encodings. On most computers, these files replace older versions of the same files. However, on some computers sold outside the United States (such as computers sold in France), the filenames of the existing Text Encoding Converter and associated text encodings have been changed. On these computers, the MRJ Installer cannot recognize and replace the older files and does not install the Text Encoding software.

If you have a non-U.S. computer with Text Encoding 1.3 or later installed, MRJ works but may experience some text handling errors that don't occur on other computers.

If you have an earlier version of the Text Encoding software installed, an alert message appears during installation and tells you that your system software must be updated before MRJ can be installed.

Known Issues

- **Secure Sockets:** MRJ 2.1 does not support the Secure Sockets Layer interface (SSL), which allows applets to access Web pages via "https."
- **Appearance Manager 1.0:** If your system is using Appearance Manager 1.0 (which comes with Mac OS 8), you may see dialog boxes without borders or other visual inconsistencies. You should upgrade to Mac OS 8.1 or later. A free upgrade from 8.0 to 8.1 is available at Apple Software Updates Web site at http://www.apple.com/swupdates.
- **Games and modifier keys:** Some game applets use the Shift, Alt, and Control keys as game controllers. In some cases, these controls will not work as expected.
- **Apple Studio Display:** If you have an Apple Studio Display (flat-panel monitor) and Mac OS 8.1 or earlier installed, you may see cosmetic inconsistencies in the Monitors & Sound control panel. You should update your Apple Displays software, available from the Apple Software Updates Web site at http://www.apple.com/swupdates.
- **Yahoo games:** Multi-user Yahoo games do not work correctly using Internet Explorer and MRJ 2.1. Apple, Microsoft, and Yahoo are working together to resolve this problem.
- **Low memory:** When Java applications are running out of memory, MRJ may put up a blank window with no information in it and appear to crash. If this occurs, you can sometimes quit by selecting "Quit" from the Apple Menu (there is no Edit menu since Java did not start up properly). If several applications are running at the same time, quit unused applications to free up memory, or increase the amount of virtual memory in the Memory control panel, and then try the application again. If this problem persists, you may need to add additional physical RAM.
- **Printing:** If you use your browser's Print command to print a Web page that contains an applet, the page will contain a blank area where the applet should be. If available, use the applet's Print menu to print the page.

Miscellaneous notes

- **Java developers:** MRJ is a runtime environment and does not include development tools. If you are interested in Java development, you need a Java development environment and the MRJ Software Development Kit (MRJ SDK). For more information, see the MRJ developer page at **http://developer.apple.com/java/**.
- **Apple Applet Runner:** The Apple Applet Runner is now only available on the MRJ SDK. Apple Applet Runner 2.0, (which came with MRJ 2.0) is compatible with MRJ 2.1. For the latest version of Apple Applet Runner, download the MRJ SDK from the MRJ developer Web site at **http://developer.apple.com/java/**.
- **Swing:** MRJ 2.1 is compatible with both Swing 1.0.3 and SwingÂ 1.1. For more information or a copy of the Swing software, see the Sun Microsystems Web site at **http://java.sun.com/**. To run Swing-based applets and applications, place the "swingall.jar" file in the MRJClasses folder, in the MRJ Libraries folder in the Extensions folder (inside the System Folder).

Warning: Java technology is not fault tolerant and is not designed, manufactured, or intended for use or resale for online control of equipment in nuclear facilities, aircraft navigation or communication systems, or air traffic control computers in which the failure of the Java technology or Mac OS Runtime for Java could lead directly to death, personal injury, or severe physical or environmental damage.
Published Date: Feb 20, 2012

MacDNS: Configuration & Setup

This article provides a walk-through for setting up and configuring MacDNS. It is adapted from the MacDNS Administrator's Guide.
This article has been archived and is no longer updated by Apple.

Creating a zone file

The part of the Internet domain name space, for which your MacDNS server contains information, is called its zone of authority. You need to provide your MacDNS software with details about your particular zone.

To create a zone file with the information about your zone:

1. Choose New Zone File from the File menu. A Zone Information dialog box appears, with an untitled host list window for the zone file underneath it.

Important: When you first see the Zone Information dialog box, its text boxes contain "templates" of the information you need to enter. You can follow the style of the template when you provide the information for your own zone. In the instructions that follow, verify the template information is selected for a particular text box, then type your own zone's information (the template text should be completely deleted or replaced).

2. In the Zone Information dialog box, type the domain name of your zone in the Domain Name box.

The domain name should be the name you've registered, as explained earlier in the section "Registering Your Domain."

3. Type the DNS name of your server computer in the Primary Server box.

Note: Verify you type a DNS name, which is different from the name you might have chosen for your computer, for Macintosh file sharing.

4. Type the name of a secondary server, for the zone, in the Secondary Server box.

A secondary server keeps a copy of your zone's information; a secondary server is useful for spreading the name-service load across multiple machines, and for ensuring that a zone has name service even if the primary server fails.

Note: MacDNS does not function as a secondary server: it only functions as the primary name server.

5. Type your email address in the Administrator box.

Your address will be useful to other administrators, who may need to contact you for help debugging problems that arise.

6. Type an amount in the Refresh Interval box, and choose a unit of time from the adjacent pop-up menu (or confirm the default value).

The Refresh Interval indicates how often a secondary server will query your MacDNS name server to see whether new information is available. If something has changed, the secondary server updates its information, updating is called a zone transfer.

- The recommended Refresh Interval is 8 hours.

7. Type an amount in the Retry Interval box, and choose a unit of time from the adjacent pop-up menu (or confirm the default value).

The Retry Interval represents the interval a secondary server will wait before reattempting to contact the MacDNS server, if the first attempt has failed.

- The recommended Retry Interval is 2 hours.

8. Type an amount in the Expire Interval box, and choose a unit of time from the adjacent pop-up menu (or confirm the default value).

The Expire Interval is the interval a secondary server will cache zone information it has already received, if the MacDNS server can't be reached to provide a zone transfer. The Expire Interval will set a time at which the zone data can no longer be regarded as up to date; after that point, the data is not considered useful, and it's better for the secondary server to provide no data than obsolete data. Once the Expire Interval limit is reached, the secondary server removes all data about your MacDNS server from its database.

- The recommended Expire Interval is 7 days.

9. Type an amount in the Minimum TTL box, and choose a unit of time in the adjacent pop-up box (or confirm the default value).

TTL represents time to live. The Minimum TTL is the minimum time to live for an entry in the MacDNS database.

- The recommended Minimum TTL is 1 day.

The following figure shows an example of a completed Zone Information dialog box:

Figure 1: Zone Information dialog box

Note: The values for the Refresh, Expire, and Minimum Intervals shows that the figure is the recommended settings for keeping your zone up to date without excessive network traffic.

10. Click OK.

After you click OK, the title of the host lists window changes to the name you entered, as the domain name, in the Zone Information dialog box. The name is preceded by a diamond until you save the zone file.

Important: To ensure you have a permanent record of the host information for your zone, be sure to save the zone file (choose Save from the File menu).

Configuring your parent server
The MacDNS server relies on other DNS servers, called parent servers, for answers to queries that it doesn't have in its own database. Generally, the MacDNS server should use the DNS server for your Internet service provider as its parent. You may also enter other servers to be alternate parents, which will be used if the first parent server isn't available.

MacDNS uses the DNS information that is configured in the MacTCP or TCP control panel to obtain a default list of parent servers. If that information has not been configured or is incorrect, you will have to configure the parent server(s) yourself.

To verify that your parent server information is correct, or to add alternate parent servers:

1. Choose Set Parent Servers from the Hosts menu.

A dialog box similar to the following one appears.

Figure 2: Parent Servers

2. Verify the default parent server information is correct; if it isn't, select the server name or the server IP address, and type the correct information.

3. If you want to add alternate parent servers, type the applicable information in the Server Name and the Server IP Address boxes.

4. Click OK.

Note: When you click OK, the new parent server information takes effect immediately; you don't need to restart the MacDNS application.

Adding hosts
To add information about a host computer:

1. Choose Add Permanent Host from the Hosts menu. The Host Information dialog box appears. The following figure shows a Host Information dialog box; note that most of the information has been entered according to the subsequent task steps in this section.

Figure 3: Host Information

2. Type the name of the host in the Host Name box. When the Host Information dialog box first appears, a "template" name appears in the Host Name text box. The host name is the canonical or "real" name of the host. You assign this name permanently to the host. The host name must include the domain name; since the domain name is automatically included as part of the template, all you need to do is select "a-permanent-host" and type the first part of your host's name.

3. Type the IP address assigned to the host in the IP Address box.

4. Type an amount in the "Time to Live" box and choose a unit of time in the adjacent pop-up menu; or, confirm the default setting. The Time to Live indicates time that a remote DNS server can cache information about this host. The default is the minimum time-to-live value for the zone, which is usually a good choice.

5. (Optional) Type the name of aliases for this host in the Aliases text box. The names you type must be separated by commas. Each name must be a fully qualified domain name.

Note: You cannot use an alias name that does not include the domain name of the host. For example, you can use "www.company.com" for an alias of "sage.company.com", but you cannot use "www.provider.com", because "provider.com" is outside the "company.com" zone. To work around this restriction, you can create a new zone file for the "provider.com" domain and add "www.provider.com" as a permanent host. You can then assign the IP address of the "real" host machine (sage.company.com) to this host.

6. (Optional) Type mail exchanger information in the Mail Exchangers text box; each entry you type must consist of a numeric preference value, followed by a space, then the name of the host that will either process or forward mail for the host that you are adding.

The mail exchangers are alternate hosts which mail may be sent to for ultimate delivery to this host (see the appendix for more details about mail exchangers).

The preference value indicates the mail exchanger's priority; the lower the number, the greater the preference. The value itself is not important, as long as the number for the mail exchanger that you want to be used first is lower than the values for any other mail exchangers you have entered. Multiple entries must be separated by a comma.

The following example indicates the correct format for an entry that includes two mail exchangers:

10 email.webewidgets.com, 20 Ur-mail.webewidgets.com

7. (Optional) Select the computer type for the host you're adding in the Hardware pop-up menu.

If you leave "None" selected, no computer type will be returned for host information queries from other DNS servers.

8. (Optional) Select the operating system for the host you're adding in the Software pop-up menu.

If you leave "None" selected, no operating system type will be returned for host information queries from other DNS servers.

9. Click OK.

Adding hosts that require a mail exchanger only
The MacDNS program allows you to choose hosts that need mail exchange service only and no other Internet services. If a host needs special handling of its mail delivery only, you don't need to assign an IP address, but you can assign a mail exchanger. Such hosts are called MX-only hosts.

An MX-only host is most commonly used when your domain name itself is not an actual host computer. You can use the domain name as the MX-only host name, then use the name of your local email host (and possibly your Internet service provider's email host, if you have made arrangements to do so) as the mail exchanger.

To assign a mail exchanger for an MX-only host:

1. From the Hosts menu, choose Add MX-Only Host.

The MX-Only Host Information dialog box appears.

2. Type the name of the host in the Host Name text box.

3. Type an entry in the "Time to Live" box and select a value from the adjacent pop-up menu; or confirm the default value.

The default time-to-live value is the minimum TTL for the zone, usually a good choice.

4. Type the numeric preferences and the names of hosts to act as mail exchangers in the "Mail Exchangers" text box.

Figure 4: MX-Only Host Information

Multiple entries should be separated by a comma. The lower the number you assign as a preference value, the greater the preference is for a host to act as a mail exchanger.

5. Click OK.

Published Date: Feb 20, 2012

Mac OS X Server: Multiple UFS Partitions On The Same Physical Drive Not Supported

I want to have multiple UFS partitions on my hard drive, but I can't seem to do it. Is this possible?
This article has been archived and is no longer updated by Apple.
Now it is not supported or possible to create multiple UFS volumes on the same physical hard disk. However, it is possible to add multiple physical hard disks and format them in UFS.

To format a disk UFS, you may use a third party utility like Hard Disk Tools (HDT), by FWB, or a utility like pdisk or disk.

'Pdisk' and 'disk' are in Mac OS X Server.
/sbin/disk
/usr/sbin/pdisk

Pdisk and disk are two separate utilities. Pdisk can only edit the partition map of the drive, and does not format or initialize. Disk is used to initialize or format the drive/partition. It can also partition the drive but only into two partitions. You specify the size of the first partition and the second one is the rest of the drive.

The man page has further information on pdisk and disk. Pdisk is complex and the man pages should be consulted before using pdisk on any hard disk.

Also, if the hard drive already has a format (HFS/HFS+, Dos), it should automatically mount, and customers can use the 'initialize...' option under theTools menu in WorkSpaceManager.

Note: Any of these processes will erase the disk, removing all data.
Published Date: Feb 20, 2012

Energy Saver: Sleep and idle contrasted (Mac OS 9 and earlier)

I have set the Energy Saver control panel to never spin down the hard disk, but when I select sleep from the special menu, the hard disk still spins down. Why?

This document applies to Mac OS 9 and earlier.
This article has been archived and is no longer updated by Apple.
The slider controls, in the Energy Saver control panel, affect only what happens when the computer is left unattended, also known as an idle state.

Note: The button highlighted in the Energy Saver Control panel says "Idle Sleep."

This panel only controls what happens when the computer is left untouched for the time you specify in this panel. However, if you choose sleep from the Special menu, or from the dialog presented when you press the power key, you are manually ordering the computer to go to sleep, so these settings would be ignored.

The Energy Saver control panel is actually an application, which serves as a front-end to the Power Manager, which controls the power management hardware. Disabling Energy Saver will change the state of any of the user-definable settings, as these settings reside in the Energy Saver Preferences file.

When Energy Saver calls the Power Manager with the settings, the Power Manager writes 2 values to PRAM, the sleep timeout and hard drive sleep time as numbers from 0-255. Each number is an increment of 15 seconds so to sleep in 30 minutes, 120 is stored in PRAM. These are the only settings saved to PRAM.

Note: These are just the length of time, and not whether the system or hard disk sleep has been disabled (set too never).

Disabling Energy Saver will cause the system to sleep in about 1 hour, if the system were set to never sleep. This is true if booting with extensions off, or just removing the Energy Saver control panel. If the system were set to sleep at some specified time that will still be honored.

Also, the monitor will not dim, if the system is booted with extensions off or the Energy Saver control panel disabled. The monitor will be turned off when the system sleeps.

There are no user-definable settings for the sleep state, only for what happens when the computer is idling or waking. Putting the computer to sleep manually will always lead to the same behavior:

On all computers:
- the processor will go into a low-power mode
- video output will turn off, as a result the display may turn off as well
- the Apple-supplied hard disk will spin down

On PowerBooks:
- the Ethernet ports(s) will turn off *
- the PCMCIA port(s) will turn off *
- the Serial port(s) will turn off *
- the built-in modem will turn off *
- the ADB or USB connection will only respond to the power key on an external keyboard
- the CD or DVD drive will spin down
- Audio input and output will turn off

On some desktop and mini-tower computers:
- Audio input and output will turn off
- The CD or DVD drive will spin down

*** Note:** Network connectivity will be lost during the sleep state on a PowerBook. If you wish to use file sharing or remain connected to a dial-up internet connection, consider setting the Energy Saver control panel to sleep = never, setting separate timing to spin down the hard disk, and dim the display when not in use.

To wake a PowerBook, which is in sleep mode, from an externally connected keyboard, you must press the power key on the external keyboard or any key on the built-in keyboard. Other keys on the external keyboard will not wake the PowerBook from sleep in this power-saving state. If the PowerBook is not completely asleep, but has simply spun down the hard drive and dimmed the display on idle, pressing any key on either keyboard will "wake" the computer.

On computers running Apple Video Player or Apple DVD Player as the front most application, the computer will not go to sleep when left idle. Other applications, such as some fax software, will also prevent the computer from going to sleep when the Idle Sleep timeout value is reached.
Published Date: Feb 20, 2012

AppleShare IP Print Server: Managing Printers With Apple Printer Utility

Administering printers with Apple Printer Utility.

This article has been archived and is no longer updated by Apple.

Using the Apple Printer Utility to rename or change the IP address of a printer does not update the Print Server settings. Use the Print Server Admin to reconfigure the printer's queue with its new name, IP address, or both.

Published Date: Feb 20, 2012

Apple Software Install and Apple Software Restore differences

Confused about the different types of installation options available with "Apple Software Install" compared to "Apple Software Restore"?
This article has been archived and is no longer updated by Apple.

Apple Software Install

Custom Installation

Use this option to add or remove individual Apple software components.
See "Miscellaneous Manuals". Select the Troubleshooting Handbook - Reinstalling Your Computer's Software.

Clean Installation

A clean installation disables the existing System Folder, leaving all files in place, and directs the installer to create a new System Folder. The old System Folder will be renamed "Previous System Folder," and from there you can drag any fonts, preferences, or other necessary files to the new System Folder. It is recommended that you drag as few items as possible because some items in the previous System Folder may be the source of the difficulty.

See the following documents for additional information:

- "Mac OS: When and Why to Perform a Clean Install"
- "Miscellaneous Manuals". Select the Troubleshooting Handbook - Performing a Clean Installation.
- "Mac OS 8.5, Mac OS 9: Performing a Clean Installation"

Install

An installation with no options selected checks the current system files and replaces only the system files that are an older version than those on the disk image.

Apple Software Restore

There are two versions of Apple Software Restore. The first version is for computers that came only with Mac OS 9.1 and earlier. The second version is for computer that came with both Mac OS 9.1 and Mac OS X. If your computer came with both Mac OS 9.1 and Mac OS X installed on the hard disk, you should follow the restore procedure outlined in "Apple Software Restore: How to Perform a Multiple Disc Restoration" because the features listed here are not included with the multiple disc restoration.

Restore in Place

A restore in place replaces all the software that came installed on the computer without version checking. Extensions conflicts caused by third-party software may persist, because third-party software is unaffected by this type of install. See "Apple Software Restore: Some Preferences May Be Lost"

Important: Performing this action removes most updated system software components installed after the initial use of the system and replace them with what was originally installed upon first use. It is necessary to reinstall updates after the "Restore in Place" procedure has completed. It is not necessary, however, to reinstall firmware updates after this action is performed. On computers running Mac OS 9 or later, using the Software Update feature should ease any confusion about which updates are necessary and should automate the process of installing the updates. For more information about using the Software Update feature, see "Mac OS 9: How To Use The Software Update Control Panel".

Erase and Restore

An erase and restore erases the entire contents of the hard disk and restore it with the original disk image. See "iMac: System Software Reinstall Options".

Restore

A restore with no options selected places the contents of the Macintosh HD into a folder named Original Items. The hard disk is restored with the disk image. See "iMac: System Software Reinstall Options".
Published Date: Feb 20, 2012

iMac CD Update 2.0: Frequently Asked Questions

This article contains frequently asked questions (FAQ) regarding iMac CD Update 2.0, with answers to those questions.
This article has been archived and is no longer updated by Apple.

Questions answered in this article:

1. Which computers work with the iMac CD Update 2.0?
2. What improvements does the iMac CD Update 2.0 include?
3. Should the iMac CD Update 2.0 be installed on all iMac computers?
4. Does iMac CD Update 2.0 replace the iMac CD Update 1.0?
5. iMac CD Update 2.0 reports the "Update is NOT necessary", and the "Device has already been updated."
6. Does iMac CD Update 2.0 make any changes to the iMac if the updater reports that the "Update is NOT necessary"?
7. When I ran iMac CD Update 2.0 on my iMac, I got an error message that the update failed due to a "Program or drive configuration Error." What does this mean?

Question 1: Which computers work with the iMac CD Update 2.0?

Answer: iMac CD Update 2.0 will work on most 233 MHz, 266 MHz, and 333 MHz iMac computers.

Question 2: What improvements does the iMac CD Update 2.0 include?

Answer: iMac CD Update 2.0 places a new version of firmware on the CD-ROM drive to reduce disc vibration caused by unbalanced CDs. The update also corrects a ten-second pause that can occur intermittently on some iMac computers.

Question 3: Should the iMac CD Update 2.0 be installed on all iMac computers?

Answer: If your iMac has vibration noise when using certain unbalanced discs, or if your iMac intermittently pauses for ten seconds during normal use, then the update should be installed. If your iMac is not experiencing either of these issues, it is not necessary to install the update.

Question 4: Does iMac CD Update 2.0 replace the iMac CD Update 1.0?

Answer: Yes, iMac CD Update 2.0 replaces iMac CD Update 1.0. This update incorporates the firmware that was part of the iMac CD Update 1.0. If you have already used 1.0 to update your CD drive, then updating to 2.0 is unnecessary.

Question 5: iMac CD Update 2.0 reports the "Update is NOT necessary", and the "Device has already been updated."

Answer: There are two reasons why this message occurs.

- A previous version of the update, iMac CD Update 1.0, has already been installed on the iMac, and that is all that is required for your CD-ROM drive.
- The appropriate firmware update has already been installed during manufacturing.

In either case, the iMac CD Update 2.0 is not needed because the drive has already been updated with the latest firmware.

Question 6: Does iMac CD Update 2.0 make any changes to the iMac if the updater reports that the "Update is NOT necessary"?

Answer: If iMac CD Update 2.0 determines the latest firmware is already installed on the CD-ROM drive, a dialog box appears indicating that the update is unnecessary. Clicking OK will quit the updater, leaving the iMac and CD-ROM drive untouched.

Question 7: When I ran iMac CD Update 2.0 on my iMac, I got an error message that the update failed due to a "Program or drive configuration Error." What does this mean?

Answer: A "Program or drive configuration Error" indicates that you are attempting to update a CD-ROM drive that does not work with iMac CD Update 2.0.

Published Date: Feb 20, 2012

AppleShare Client 3.8.3: Requires Mac OS 7.6 or Later

Some AppleShare Client 3.8.3 Read Mes says Mac OS 8.1 or later is a system requirement. Is this correct?
This article has been archived and is no longer updated by Apple.
There are a couple of AppleShare Client 3.8.3 Read Me files that are incorrect; they claim the system requirement is Mac OS 8.1 or higher. These Read Mes are accessed from the Apple Software Updates, from the "ZM-AppleShare Client 3.8.3.smi" file, or when installed by the AppleShare IP 6.1 or 6.2 CD.

The correct system requirement is Mac OS 7.6 or higher, and this information is published in the following locations:

- Knowledge Base article 58360: **AppleShare Client 3.8.3: Read Me**
- The Read Me for AppleShare Client 3.8.3. This software was released by Apple on May 10, 1999 and is available for downloading from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Published Date: Feb 20, 2012

Mac OS X Server: How to Reset NetBoot Client Entries in NetInfo

Sometimes a NetBoot client may fail to start up from the NetBoot server even though the Network Disk is selected in the Startup Disk control panel, and the N key is pressed at system startup time. This may happen because the client information stored in NetInfo is unusable. This article explains how to delete the client information from NetInfo.
This article has been archived and is no longer updated by Apple.
It is possible that the information in the NetInfo database about a NetBoot client becomes unusable. If this happens, deleting the client's entry in NetInfo allows the default information to be restored when the client starts up again. Deleting these NetInfo entries does not result in loss of user data, and the entries are automatically restored when the client starts up again.

Please read article 60038: "**What is NetInfo?**" for instructions on backing up the NetInfo database before continuing.

To delete the NetBoot entries, log in as root or as a member of the wheel group.

1. Open NetInfoManager by choosing Server Administration from the Apple Menu, then choosing NetInfoManager from the submenu (`/System/Administration/NetInfoManager`).
2. In the Directory Browser, select the /machines directory.
3. Highlight the name of the NetBoot client that is not starting up from the NetBoot server.
4. Choose Delete from the Edit menu, or click the Trash button in the NetInfoManager window.
5. Save changes. **Note:** After saving changes, the MacNC id for the client that is not starting up from the NetBoot server is unused. This MacNC id will be reassigned to the next NetBoot client that has not already started up from the NetBoot server.
6. After you have confirmed the changes in Netinfo, restart the client in question.

Published Date: Feb 20, 2012

Internet Setup Assistant: Reusing Configuration Names

This article tells how to use the Internet Setup Assistant to create a configuration that uses the same name as a previous configuration.
This article has been archived and is no longer updated by Apple.
You must delete the configuration from the Modem, Remote Access, and TCP/IP control panels and delete the set from the Internet control panel. Additionally, you must remove the Internet Preferences file from the Preferences folder, in the System Folder. **Warning:** This removes all the preferences for the Internet control panel.

If your desired configuration is the only one in the Internet control panel, this is not really an issue, since it needs to be deleted anyway. This additional step allows you to reuse your desired configuration name. Another choice is to run a restore in place, which overwrites all the required preferences, but other preferences are lost too, so caution should be applied.

Additionally, without removing the Internet Preferences file, consider duplicating an existing Internet control panel set, modify it with your desired preferences, rename it, and use that name instead.
Published Date: Feb 20, 2012

WorldScript: 1-byte and 2-byte Script Systems Explained

This article defines the following terms:

- ASCII character set
- Script system
- 1-byte simple script system
- 1-byte complex script system
- 2-byte script system
- WorldScript I
- WorldScript I

This article has been archived and is no longer updated by Apple.

ASCII character set

ASCII is an acronym for American Standard Code for Information Interchange. The 7-bit ASCII character set contains 128 characters, including standard Roman upper and lower case letters, common punctuation marks, and control characters. 8-bit ASCII, sometimes called high ASCII or extended ASCII, contains an additional 128 values, which can be used by foreign writing systems for other characters that are not available in the standard 128 characters.

Script system

A script system is a collection of software facilities that provide for the representation of a specific writing system. It consists of a set of keyboard resources, a set of international resources, any fonts, and possibly a script system extension (1-byte or 2-byte). Script systems include Roman, Japanese, Arabic, Traditional Chinese, Simplified Chinese, Hebrew, Cyrillic, and Korean. Types of script systems include 1-byte simple, 1-byte complex, and 2-byte (also called 16-bit).

1-byte simple script system

A 1-byte simple script system supports a writing system with a small character set (requires only 1-byte characters), has a left-to-right text direction only, and that is non-contextual. The Roman script system is an example of a 1-byte simple script system.

1-byte complex script system

A 1-byte complex script system supports a writing system with a small character set (requires only 1-byte characters), but that is characterized by bidirectional or contextual text (characters whose appearance may be different, relative to their position to other characters). Arabic and Hebrew are examples of complex 1-byte script systems.

2-byte script system

A 2-byte script system supports a writing system with a large character set (requires 2-byte characters) and requires sophisticated procedures for character input. Japanese, Chinese, and Korean are examples of 2-byte script systems. 2-byte characters, such as Kanji, consist of two 8-bit (1-byte) characters which, placed beside each other, are displayed by the System as a single character.

WorldScript I

WorldScript I is an extension to the Mac OS that is used for all 1-byte complex script systems. Code in the extension reads tables in the script system's international resources to provide the proper text manipulation and formatting for that script. Simple 1-byte script systems do not need to use WorldScript I.

WorldScript II

WorldScript II is an extension to the Mac OS that is used for all 2-byte script systems. Code in the extension reads tables in the script system's international resources to provide the proper text manipulation and formatting for that script. WorldScript II functionality has been incorporated into Mac OS 9 and is no longer a separate extension.

Parts of this information were compiled from Apple's technical documentation, Inside Macintosh: Text.

Published Date: Feb 20, 2012

AppleShare Mail Server: How To Prevent Unauthorized Mail Relaying

This document explains how to prevent unauthorized mail relaying on an AppleShare mail server.
This article has been archived and is no longer updated by Apple.
To disable SMTP relay for ASIP 6.2 to prevent unsolicited email (sometimes called "spam"), follow these directions.

1. Update to Mac OS 8.6 and ASIP 6.2 (ASIP 6.2 is required for some settings).

2. Open the Mail Admin application.

3. Choose Mail Server Settings from the Server menu.

    - Click the "Mail In" tab, and put a checkmark in the "Require Local "From" Addresses to exist in Users & Groups."

4. Choose Advanced Mail Server Settings from the Server menu.

    - Click the "Network" tab and select "Always Check DNS."
    - Click the "Anti-Spam" tab and put a checkmark in "Check Incoming SMTP Connections."
    - Put a mark in the radio button "Use default server for spam rejection" (Real-time Blackhole List). Note - all known spammers and relayers of spam will be prevented from connecting to your server.
    - Put a checkmark in "Log connection if SMTP name does not match IP address."
    - Put a checkmark in "Reject if name does not match address." **Note:** This will lock out relayers spoofing your email server DNS name, but it will also lock out email servers with misconfigured DNS settings (which happens very frequently).

5. Choose Show Host List from the Server menu.

    - Delete all hosts on external networks except those you have modified manually. Do not delete hosts on your local network.

6. Choose Edit Default Host Profile from the Server menu.

    - Click the "Mail From" tab and put a checkmark in "Deliver mail from this host to local addressed only (no SMTP relay)."
    - Optionally, put a checkmark in "Log recipient rejections to error log." This allows you to log anyone attempting to relay through you.
    - Click the "Mail To" tab, and remove the checkmark (if present) for "Relay all SMTP mail via ...."
    - Click the "Network", and select "Use Advanced Settings."

7. Edit postmaster settings.

    - Open the Web & File admin.
    - Choose Show Users & Groups List from the Users menu.
    - Edit the settings for the Mail Administrator (postmaster) user account by double-clicking the user in the list.
    - Select Mail Settings from the pop-up menu and choose "None."

Published Date: Feb 20, 2012

AppleWorks: Font Smoothing Changes Font Spacing

The letter spacing and line breaks of an AppleWorks document are not the same on computers with Mac OS 8.1, and those with Mac OS 8.5 or later.

This article has been archived and is no longer updated by Apple.

One of the features introduced in Mac OS 8.5 is Font Smoothing, also called anti-aliased text. Font Smoothing softens the edges of text on the screen so the characters do not look jagged. The width of text on the screen may be different when smoothing is turned on, which may cause line breaks in your documents to change from how they were on a computer with Mac OS 8.1.

Follow these steps to make documents look the same on computers with both operating systems:

1. Turn off Font Smoothing:
   - Quit AppleWorks
   - Open the Appearance control panel.
   - Click the Fonts tab.
   - Deselect the Smooth all fonts on screen option.

2. Turn off Fractional Character Widths in AppleWorks Preferences.

3. Make sure the same printer is selected on each computer. Page dimensions are read from the printer driver, and this can contribute to differences in spacing. Choose Page Setup from the File menu to check this setting.

4. You may need to install identical fonts on all computers by copying some Mac OS 9 fonts to the computers with system software earlier than Mac OS 9. Although the font names may be the same, fonts with similar names may be from different vendors, or a font's metrics might have changed between Mac OS releases.

Published Date: Feb 20, 2012

ColorSync: Match Link via AppleScript

I have written an AppleScript using the "match link" verb, but it did not work. Below is my sample AppleScript:

```
on open dropitems
set MatchLink_Prof to choose file
tell application "ColorSync Extension"
repeat with i in dropitems
match link i through link MatchLink_Prof
end repeat
end tell
end open
```

I saved the script as an AppleScript application. After dropping JPEG or TIFF files onto the script and selecting a profile, such as the Color SW 2500 Pattern or Color LW 12/600 PS Profile, the script returns the error "Invalid link profile." What am I doing wrong?
This article has been archived and is no longer updated by Apple.
The following test was performed, and the script functioned correctly.

The script was pasted into Script Editor v1.1.3, running on a Mac OS 8.6 system, and saved as an Application. Several JPEG files were dropped onto the script and a link profile was selected; the script matched all the images correctly.

In the original tests, the Color SW 2500 Pattern or Color LW 12/660 PS regular profiles not link profiles were chosen, generating the error "Invalid link profile."

The "match link" verb is used with link profiles, which are unusual profiles consisting of two or more profiles combined into one. Although they are not often used, Apple has included the "match link" verb.

"match link" - transforms using a 'link' profile.

Example:
A RGB-CMYK-RGB link profile would transform an image from one device's RGB color space, match it to another device's CMYK color space, then save it back to yet another RGB color space. Finding such a link profile, on a web site or an installation disk, is unlikely; they are usually custom made for a specific solution, such as for a customer's specific devices used in a specific order.

If a true link profile had been used and problems encountered, then check whether the image is in the same space as the first profile in the link profile. A RGB-CMYK-RGB profile can only be used on RGB images, as it is going from RGB to CMYK to RGB. If the image were not RGB to start with, you would get an error.

When working with standard device profiles, such as the profiles Apple ships, or profiles obtain with other products, or downloaded from the manufacturers' web sites, you will want to use the verb "match" or "proof" instead of "match link."

"match" - transforms from a source profile to a destination profile, such as from RGB to CMYK, or RGB to RGB.

"proof" - transforms from a source profile to a destination profile to a proof profile, such as from RGB to CMYK to RGB.

For examples on how to use the match and proof verbs, examine the sample scripts "Match to specific profiles" and "Proof to specific profiles." These sample scripts may be found in the AppleScript Files folder in the ColorSync Extras folder located in the Apple Extras folder.
Published Date: Feb 20, 2012

Adobe Systems, Inc.

Some Adobe products include: Photoshop, Acrobat, Illustrator, PageMaker and Go Live.

This article has been archived and is no longer updated by Apple.
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URL: **http://www.adobe.com/**

Company Profile:
Provides graphic design, publishing, and imaging software for Web and print production.
Published Date: Feb 20, 2012

QuickTime: How to troubleshoot the web browser plug-In

Learn the process for troubleshooting QuickTime browser plug-ins.
This article has been archived and is no longer updated by Apple.
You can use the QuickTime Sample Movie (in the QuickTime folder) to make sure the QuickTime Plug-in is installed and working. If you don't have the QuickTime Sample Movie on your hard drive, you can use the Sorenson Sample movie available here.

Microsoft Internet Explorer
To test the QuickTime plug-in:

1. Open a new browser window.
2. Locate the QuickTime Sample Movie in the QuickTime folder, and position the window so you can see both the file and the browser window.
3. Drag the QuickTime Sample Movie icon onto the browser window.

A new window should appear and the movie should play. If you see an alert box, or if the window has no graphics, or plays no sound, try these steps:

1. Recopy the plug-in into the browser's plug-ins folder
2. Reinstall the browser.
3. If you have Mac OS 9 or earlier, troubleshoot system extensions conflicts.

For extension troubleshooting help, see "Mac OS: Extensions Troubleshooting/Extensions Manager Features"

Netscape Navigator and Communicator
To test the QuickTime plug-in:

1. Open a new browser window.
2. Locate the QuickTime Sample Movie in the QuickTime folder, and position the window so you can see both the file and the browser window.
3. Drag the QuickTime Sample Movie icon onto the browser window.

The movie should play. If you see an alert box, or if the window has a picture of a broken plug-in icon, or plays no sound, try these steps:

1. Quit the browser.
2. Copy the QuickTime plug-in from the QuickTime folder into the Netscape Plug-ins folder.
3. Reopen the browser.
4. Drag the Sample Movie onto the window.
5. If you have Mac OS 9 or earlier, troubleshoot system extensions conflicts.

Published Date: Feb 20, 2012

Mac OS 9: Microsoft Office 4.2.1 Compatibility Issues

There seem to be some compatibility issues with Microsoft Office 4.2.1 and Mac OS 9. Is there any way to resolve them?
This article has been archived and is no longer updated by Apple.
There are known issues when using Microsoft Office 4.2.1 with Mac OS 9. Some can be resolved by doing a clean installation of Mac OS 9 and then reinstalling Microsoft Office 4.2.1.

Note: The installer may become unresponsive if you try to switch applications while it is running.

If the above steps do not resolve the issues, there are only two solutions:

- Upgrade to Office 98.
- Reinstall the older version of Mac OS.

Published Date: Feb 20, 2012

PowerBook G3: Turn Processor Cycling Off When Using USB Adapter Card

This article describes a situation that may cause computers with USB Adapter Cards to stop responding and provides a workaround.
This article has been archived and is no longer updated by Apple.

Symptom

After installing the USB Adapter Card Support software from Apple, the PowerBook occasionally stops responding when a USB CardBus (PCMCIA style) card is installed.

Solution

PowerBook G3 computers, with CardBus cards, stop responding with USB Adapter Card Support installed if processor cycling is enabled. Use the Energy Saver control panel to turn off processor cycling for both battery and power adapter operation.

Published Date: Feb 20, 2012

Mac OS X Server: Excess Memory Usage by Terminal.app

Terminal.app seems to use a lot of memory; significant amounts of RAM are released when closing some terminal windows.
This article has been archived and is no longer updated by Apple.
The default setting for Terminal.app is to keep an infinite history for the window. All the data is stored in RAM, so closing the window will release the history and the RAM it uses.

Terminal.app has a preference to control the number of lines saved in the history buffer. This setting can be used to control Terminal.app's RAM usage.
Published Date: Feb 20, 2012

Macintosh: Restarting After Power Failure or System "Crash"

This article discusses ways to restart a Macintosh after a power failure or system "crash" and using an uninterruptible power supply (UPS).
This article has been archived and is no longer updated by Apple.
Depending on your hardware, there are different ways to restart your Macintosh after a power failure or system "crash". (The term "crash" does not imply damage to your computer.)

Power failure restart

Some early Macintosh computers have a slotted power button on the back of the computer. If your computer has this type of power button, you can press it in and turn it to a horizontal position (with the computer upright) to lock it in the on position. The computer will turn on when power is restored.

The Energy Saver and Auto Power On/Off control panels, on later Macintosh computers provide software solutions for power failures. See article 18127 "**Energy Saving Control Panels: Description & Compatibility**" for a matrix on which computers can use what versions of the Energy Saver or Auto Power On/Off software.

Notes

1. By default, the Energy Saver will not restart after a power failure.

2. When AppleShare IP is installed, the Energy Saver control panel settings are changed and all server settings are enabled. Choose Server Settings from the Preferences menu in the Energy Saver control panel to see the server settings. (See Figure 1.)

Figure 1 Energy Saver Server Settings window

If you use the Auto Power On/Off Control Panel (see Figure 2), the options are not enabled and you have to open the control panel and click the appropriate checkbox.

Figure 2 Auto Power On/Off window

System crash restart

There are third-party solutions that can monitor your computer and restart it after a system crash. These solutions usually consist of power supplies, software and either an ADB or USB dongle. When the software loses communication with the hardware dongle, a system crash or freeze is assumed and a monitoring software sends a command to restart the computer.

Note: Using the AppleShare IP settings is recommended for restarting the server.

These companies provide monitoring software and hardware solutions:

- APC (http://www.apcc.com)
- Sophisticated Circuits (http://www.sophisticated.com)

Uninterruptible Power Supply (UPS)

To provide power during a power failure, you can use an uninterruptible power supply (UPS). A UPS provides battery backup power during power failures by using a backup battery system.
Note: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement.
Published Date: Feb 20, 2012

AppleShare IP: Hiding PostScript Printers

Is there a list of printers that AppleShare IP may hide? AppleShare IP's Help implies you may hide nearly any printer; however, my understanding is the hide feature requires an Apple brand printer because this is an Apple ROM- (printer) based feature.
This article has been archived and is no longer updated by Apple.
Apple does not maintain a list of third-party AppleTalk printers that may be hidden with AppleShare IP. The process, using an industry-standard PostScript command, is the same as when capturing an Apple LaserWriter.

AppleShare IP uses a PostScript operator to change printers' AppleTalk Type; thereafter, the printer will not respond to NBP Lookups from and won't be visible to client Macintosh computers. The print server will know what printer's current AppleTalk Type, having changed it, and will be able to locate, open up a connection, and print to it.

If a printer or RIP, possibly used in combination with an optional network interface, doesn't support fully PostScript and the "appletalktype" PostScript operator, then the hide feature may not work. If you encounter such a device, you may wish to check with the manufacturer of that device to verify compatibility with this operator.
Published Date: Feb 20, 2012

Mac OS 9: Multiple Users--Creating A Saved Set Of Applications

This article tells how to create sets of applications in Multiple User control panel that can be selected for new Limited and Panel users.
This article has been archived and is no longer updated by Apple.
Once you create a user with a customized selection of applications, you can then "duplicate" that user, which creates a new person with the same application access privileges. Then modify any other desired privileges for the new user.
Published Date: Feb 20, 2012

Location Manager: Time Zone Module Conflicts With Date & Time DST

My Macintosh clock is wrong by one hour, and the Location Manager seems to be causing this when I change location settings. Why is this happening?
This article has been archived and is no longer updated by Apple.
When Set Daylight-Saving Time Automatically is checked in the Date & Time control panel, the time is actually adjusted forward or backward by changing the Greenwich Mean Time (GMT) offset by 1.

When a location is created using the Time Zone setting, the Location Manager remembers the GMT offset for the new location.

The Location Manager is not Daylight Saving Time-savvy and is unaware when the saved GMT offset for a location has been affected by a Date & Time control panel time shift. The Location Manager will change back to the GMT offset known before a Daylight Saving Time change occurred, thereby throwing the clock off by an hour.

After a Daylight Saving Time change, the Location Manager will also believe that the location needs updating, because it notices the different GMT offset.

Workaround
When a Daylight Saving Time switch occurs, you must edit each location with a Time Zone setting and apply a new GMT offset for each location.
Published Date: Feb 20, 2012

iMovie: Cannot Export to Tape Error

This article has been archived and is no longer updated by Apple.

When exporting to tape, the following message may appear

> "Not possible to record to your camera. Please check your camera to make sure the tape is in and the tape record tab is in the closed position."

This article explains why this might happen and offers a solution.

This occurs most often when using a Digital 8 Camera, which uses a Hi-8 tape for playback and recording. There are two different types of Hi-8 Tapes—Metal Particle and Metal Evaporative. iMovie can only export to Metal Particle tapes. Using Metal Evaporative tapes can result in this error message being generated.

If you receive this error, you should try to use a Metal Particle tape to export your digital video. There is a mechanical relationship between the camera and the tape that triggers these kinds of states; iMovie has to believe what the camera reports back to the application.

If everything else is working except the export, the most likely explanation is that the write-protect tab on the tape doesn't properly register with the camera. This results in the camera reporting the tape is write-protected or not present. It is sometimes possible to record to one of these tapes by putting a piece of cellophane tape over the write-protect tab, but the results of this process are not consistent. The recommended solution is to use the highest quality tape to export your video.

Published Date: Feb 20, 2012

Mac OS 9: Reregistering QuickTime Pro After Installation

This article explains why, after installing Mac OS 9, you may get a QuickTime message asking whether you want to upgrade to QuickTime Pro even after registering QuickTime.
This article has been archived and is no longer updated by Apple.
After installing Mac OS 9, you may need to be identified as a QuickTime Pro user again. To establish your QuickTime Pro registration again, you can:

- Re-enter the name and registration number into the QuickTime Settings control panel.
- Get the key resent to you, if you registered over the World Wide Web. For additional information, see Knowledge Base article 58453: "**QuickTime Pro: How to Get Key Resent if Lost**."
- Recover the old QuickTime Pro settings, if a clean installation was performed, by copying the QuickTime Preferences file from the Previous System Folder to the new System Folder using the following steps:

    1. Open the Preferences folder of your current System Folder and move the QuickTime Preferences file to the Trash.
    2. Open the Preferences folder of your previous System Folder and drop the QuickTime Preferences file onto the new System Folder. It will be automatically moved to the Preferences folder.
    3. Restart the computer and empty the Trash.

Published Date: Feb 20, 2012

Speakable Items: Using With IBM ViaVoice

This article describes the use of IBM's ViaVoice product while Speakable Items is active.
This article has been archived and is no longer updated by Apple.
Some users may wish to do both command and control using Speakable Items as well as dictation using ViaVoice. The one technical limitation is the Sound Manager, which permits only a single client to own the sound input source at any time. Therefore, it is required that the microphone be released and obtained by all speech systems in an orderly manner. Since there is no microphone arbitration policy provided by the Sound Manager, difficulties can arise when you attempt to run both Speakable Items and ViaVoice. To use both facilities simultaneously requires that you do all the microphone arbitration.

Use one of the following alternatives to start both facilities together.

Perform these steps first:

1. Open the Speech control panel and select Listening from the Options pop-up menu.
2. Select the "Key(s) toggle listening on and off" radio button. (This enables the keyword mode, instead of push to talk).
3. Select Speakable Items from the Options pop-up menu, in preparation for starting Speakable Items.

Alternative 1 - Starting Speakable Items first

1. Start Speakable Items from the Speech control panel. When Speakable Items is active, toggle listening off (by pressing the esc key).
2. Start SpeakPad and dictate.
3. To use Speakable Items, turn the microphone off in SpeakPad. Toggle listening on (by pressing the esc key) for Speakable Items.

Alternative 2 - Starting SpeakPad first

1. Start SpeakPad and dictate.
2. To use Speakable Items, turn the microphone off in SpeakPad.
3. Start Speakable Items from the Speech control panel.

Once both facilities are active, the essence of the manual arbitration is that when switching to SpeakPad, you must toggle listening off (by pressing the esc key) for Speakable Items, before turning SpeakPad's microphone on. Conversely, when you want to use Speakable Items, turn SpeakPad's microphone off before toggling listening on (by pressing the esc key) for Speakable Items.

The following situations will occur using the current release of Speakable items (for Mac OS 9) and ViaVoice:

- If Speakable Items is running and in keyword mode (not push to talk) then toggling listening off will release the microphone so that SpeakPad can obtain it. This is generally controlled by the esc key unless you have remapped it. If push to talk mode is used, Speakable Items will have to be turned off to release the microphone.
- If Speakable Items, or the Speech Listener or any PlainTalk client is running, SpeakPad will open and then quit, since it will not be able to obtain the microphone.
- If SpeakPad is running and enabled for dictation and you open Speakable Items, then Speakable Items will quit because it cannot obtain the microphone.
- If both applications are running, switching into SpeakPad while Speakable Items has the microphone will result in a notification that dictation is disabled because SpeakPad cannot get the microphone.

Published Date: Feb 20, 2012

Remote Access: How To Use DialAssist Settings

This article tells where to find the DialAssist settings for using a calling card.
This article has been archived and is no longer updated by Apple.
If the option for "Use DialAssist" is missing from the main Remote Access control panel follow these steps:

1. Choose User mode from the Edit menu.
2. Select Advanced and click OK.

The option "Use DialAssist" will now be placed next to "Save Password."

Enable Use DialAssist to have Remote Access use the DialAssist settings.
Published Date: Feb 20, 2012

Power Mac G4 (AGP Graphics): DVD-RAM Drive Differences

This article helps you identify the DVD-RAM drive in your Power Mac G4 (AGP Graphics) computer.
This article has been archived and is no longer updated by Apple.
Two different kinds of DVD-RAM drives were used in the Power Mac G4 (AGP) computers. They have the same specifications and are functionally similar, but were made by different manufacturers. Because these drives were provided by different vendors, there are some differences. The main differences between these two drives are the tray (the slot you put a disc into) and their ability to accept discs of nonstandard size and shape.

One of the DVD-RAM drives uses a slotted tray, shown in Figure 1 below. This drive accepts only discs of a standard size and shape.

Figure 1: Slotted tray

The other DVD-RAM drive (shown in Figure 2 below) uses a flat carrier tray. In addition to standard discs, it can accept discs of a nonstandard size and shape.

Figure 2: Flat carrier tray

For more information on the size and shape of discs that can be used in your DVD-RAM drive, please see article 58641: "**Macintosh: Using Nonstandard Discs in Optical Media Drives**"

Published Date: Feb 20, 2012

Final Cut Pro 2: Installing International Version On Localized Mac OS

When installing the International English version of Final Cut Pro 2.0 onto a Macintosh that has a localized version of Mac OS, you may have extension conflicts. This article provides steps to avoid this situation.
This article has been archived and is no longer updated by Apple.
When the Mac OS is localized into a foreign language, the file names of most system components are translated into that language.

Although the International English Installer for Final Cut Pro 2.0 installs the latest English FireWire and ATI (video) drivers, it does not remove the earlier localized drivers. Having both the earlier and later extensions present in your System Folder can cause your computer to be unstable when using Final Cut Pro.

To install International version of Final Cut Pro on localized OS, do the following:

1. Install the localized version of QuickTime 5 that corresponds to your localized version of the Mac OS.
2. Remove QuickTime FireWire DV Enabler.
3. Remove QuickTime FireWire DV Support.
4. Remove the additional two FireWire extensions.
5. Remove All ATI extensions.
6. Install Final Cut Pro 2.0.

For more information regarding which version of QuickTime to use with Final Cut Pro, please see article 24991: "**Final Cut Pro: Compatibility Matrix**"

Published Date: Feb 20, 2012

QuickTime Streaming Server: Creating Users And Groups

This article explains how to create users and groups, and assign privileges for QuickTime Streaming Server 2.0 authentication on Mac OS X Server.
This article has been archived and is no longer updated by Apple.
Note: Authentication requires that clients use QuickTime Player 4.1 or later. Earlier versions of QuickTime Player cannot authenticate. These users receive a 401 error if you use authentication with QuickTime Streaming Server 2.0.

Example: Adding a new user

```
root# /usr/sbin/qtpasswd -c /etc/qtusers bassanio
Adding password for bassanio.
New password:
Re-type new password:
```

To add another user, do the same, but leave off "-c," which clears the user and group file for the first user. To add each new user and password onto /etc/qtusers follow the example below.

Example: Adding an additional user

```
root# /usr/sbin/qtpasswd /etc/qtusers portia
Adding password for portia.
New password:
Re-type new password:
```

You can repeat this as often as you like, creating different user and group files for QuickTime access. This allows you to have different sets of users and passwords for each directory that needs protecting. The generated /etc/qtusers file is similar to the one show below.

```
bassanio:6rLfAC7rSDv6g
portia:UwtyIfJ/Ivp4o
```

If you have many users, they can be organized into groups by creating a text file /etc/qtgroups. (See example of format below.)

```
<group1>:    [&#91;<username1> <username2> <username3> ...&#93;]
<group2>:    [&#91;<username1> <username2> <username3> ...&#93;]
```

Example: /etc/qtgroups text file

```
File:  /etc/qtgroups
====================
everyone:     bassanio portia
engineering:  bassanio
marketing:    portia
```

Notice that a space separates each username. This means usernames cannot contain a space. Passwords do not have this limit.

In the local movie directory that you want to protect, create a file named 'qtaccess' with the following information. (You can use this as a template.)

```
AuthName QuickTime Streaming Server
AuthUserFile /etc/qtusers
AuthGroupFile /etc/qtgroups
require user bassanio
require group engineering
```

In this example, to authenticate with QuickTime 4.1, the user will either have to provide the name "bassanio" and the right password, or any valid username and password for a member of the group "engineering".
Published Date: Feb 20, 2012

Mac OS 9: Set-up and Management of The Multiple Users Control Panel

How to set up and manage the Mac OS 9 Multiple Users feature.
This article has been archived and is no longer updated by Apple.
Multiple users can use the same computer by creating a unique environment for each user. You, as the computer's owner, can create and control the following items.

- Which applications and hard disk locations each user can access.
- Create up to 40 different user accounts and one guest user account.
- Assign another user the privilege to create and manage user accounts.

To create and manage user accounts, open the Multiple Users control panel.

Note: Before using the Multiple Users control panel, confirm you have entered an owner name and password in the File Sharing control panel.

To create a new user account:

1. Click New User.
2. Enter the user name and password (optional).
3. Select the type of user: Normal, Limited, or Panels.
4. Click Show Setup Details.
5. Set up the login dialog box for each user by selecting an existing picture or dragging a picture from a Web browser.
6. Make additional settings.
    - User can change password: Allows the user to change the password you set and to set or change their voiceprint password.
    - Can Log In: If this is not checked, the user account is temporarily disabled.
    - Can Manage User Account: This user (account manager) can create, delete, or modify other accounts (except for the owner's). This checkbox is only disabled for a Normal user.
7. Click the close box to save your settings.

To create multiple users with the same settings:
Select a user whose settings you want to duplicate and click Duplicate.

To edit a user account:
Double-click the user name or select the user name and click Open and make the changes you want.

To set up a guest account:
Click Options, then click the Other tab and select the "Allow a Guest User Account" check box.
Published Date: Feb 20, 2012

Mac OS 9: Audio CD Skipping

This article describes how to prevent audio CDs from skipping when using Mac OS 9.0.x or QuickTime 4.1.
This article has been archived and is no longer updated by Apple.

Symptom

When playing audio CDs, the audio will momentarily skip while using the computer.

Affected Products

- QuickTime 4.1 and a Macintosh computer with built-in USB
- Mac OS 9.0.2 and a Macintosh computer with built-in USB
- Mac OS 9.0.3 and a Macintosh computer with built-in USB
- Mac OS 9.04 and a Macintosh computer with built-in USB

All of these products contain a new version of the Sound Manager (v 3.6.4) and support digital audio CD playback.

The new Sound Manager was changed to reduce audio latency in games and DVD software. This enhancement can lead to occasional skipping of digital CD audio playback when Virtual Memory is on and a virtual memory page fault occurs (virtual memory page faults occur when physical memory is low).

Solution

Install the Multimedia Update 1.0. The Multimedia Update 1.0 is available on Apple software update sites.

This article can help you locate the software update mentioned here:

- Article 14724: "**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.

Published Date: Feb 20, 2012

How to reduce startup time (Mac OS 9 and earlier)

Learn why, when starting up, the computer pauses with a gray screen or an alternating question mark and folder displayed. This document applies to Mac OS 9 and earlier--it does not apply to Mac OS X or later. For Mac OS X startup troubleshooting, see this document.
This article has been archived and is no longer updated by Apple.
Slow startup can be caused by several things:

- The most common cause is that a valid startup disk has not been selected. Use the Startup Disk control panel to select a volume with a valid System Folder.
- If you have large amounts of memory installed in the computer, it will take the computer longer to test the memory at startup before proceeding with the startup process. You can turn off the startup memory tests by holding down the Command and Option keys while opening the Memory control panel.
- If you have installed additional extensions or startup items, this can cause a longer startup process. Avoid installing unneeded items to reduce the startup time.
- Turning on Multiple Users/Macintosh Manager can introduce delays depending on whether the machine is started up locally or over a network, or the user account has been opened before or reconfigured. To decrease startup time, try installing the latest version of the Macintosh Manager Client/Multiple Users software. For more information, consult the Macintosh Manager client documentation.
- If the computer appears to pause for an extended period of time just before the Finder loads, the computer may be trying to automatically connect to a server volume that is not available. For more information about this issue, see technical documents 17697 and 25214 (links below).

If the computer is still taking an extended period to start up after the "Happy Mac" appears, and following the guidelines above, use some of the following basic troubleshooting steps to help resolve the issue.

Troubleshooting steps

- Disconnect any third-party peripheral devices.
- Use the Extensions Manager control panel to select the OS Base or OS All extension set, and restart the computer for the changes to take effect.
- If the above helps, verify your third-party devices and/or third-party software functions normally. Maybe the startup delay is normally given your particular configuration.
- If you are still experiencing long delays in startup, a clean installation of the OS may be in order, as it's possible that a damaged or corrupted file is causing the delays.

For additional information see the following documents:

Document 58042: "**Macintosh: Flashing Question Mark at Startup**"
Document 14438: "**Macintosh: Startup Problems Q & A**"
Document 17697: "**AppleShare Volumes: Disabling Automatic Log On**"
Document 25214: "**Mac OS 9: Brief Delay When Desktop First Appears**"
Published Date: Feb 20, 2012

iMovie: Voice recording stops after 5 minutes

This article has been archived and is no longer updated by Apple.

In iMovie 5 and earlier, while adding a voice track to a movie using the Record Voice feature, the recording stops after 5 minutes.

iMovie stops Record Voice after five minutes of continuous recording. This is an intentional limit to avoid wasting disk space if a user forgets to stop the recording manually, because the Record Voice feature uses about 10 MB of hard drive space per recorded minute.

To continue recording, click the Record Voice button again. If your previous recording stopped while you were speaking, you may need to crop the audio clip. See the iMovie online Help section "Working with Audio" for more information about cropping audio clips.

Published Date: Feb 20, 2012

Mac OS Runtime for Java 2.2: Requires Text Encoding Converter

When Mac OS Runtime for Java 2.2 (MRJ) launches, I get an error message that my system software is damaged and should be reinstalled. What could be causing this?

This article has been archived and is no longer updated by Apple.

Mac OS Runtime for Java 2.2 (MRJ) requires the Text Encoding Converter extension, which is normally part of the standard system software installation.

If this extension is not in your System Folder, you will get an error message that your system software is damaged and you should reinstall it. Reinstalling the system software will fix the issue.

Published Date: Feb 20, 2012

Mac OS Runtime for Java 2.2: Eliminating Certificates for Signed Applets

In Mac OS Runtime for Java 2.2 (MRJ), is there a way to eliminate a certificate after it has been accepted?
This article has been archived and is no longer updated by Apple.
MRJ can now accept certificates for signed applets. If you wish to eliminate a certificate after acceptance, you have two choices:

- Get MRJKey from the MRJ SDK. This tool will list the certificates and allow you delete selectively. MRJKey was left in the SDK because the user interface is not yet complete, but the application is usable. To get the MRJ SDK, go to **http://developer.apple.com/java/**.
- Delete the identitydb.obj file in the Preferences folder. This option is mentioned in About MRJ 2.2, but has the disadvantage of deleting all certificates, and requires that you reaccept the ones you really need.

Published Date: Feb 20, 2012

Macintosh: Memory Utilization Troubleshooting Chart

Macintosh memory (RAM) issues can have a number of symptoms. Below is a table of symptoms, possible causes, and troubleshooting steps.
This article has been archived and is no longer updated by Apple.

Symptom	Possible Cause	Troubleshooting Steps
When user tries to launch a program, a dialog box on screen indicates that there is not enough memory to open the program.	Memory has become fragmented.	Quit other programs in the order that you opened them and/or restart the Macintosh.
		Quit other programs that may be open.
		Turn on virtual memory (or increase its size).
		Reduce the size of the disk cache.
		Reduce the size of the RAM disk if there is one, or turn it off.
		Add more RAM to the Macintosh.
		Remove the contents of a large Clipboard. If you have a huge document sitting on the Clipboard as a result of copying, delete the contents. From the Finder, pull down the Edit menu and choose the Show Clipboard command. If a large segment of data resides in the Clipboard, simply replace it by copying a small word or a single character. The tiny piece of text will be copied to the Clipboard, replacing the huge amount of text that was there.
The application displays a dialog box warning that here is not enough memory to open the document.	Not enough memory allocated to program.	If the application has other documents open, close them.
		Increase the memory partition for the program.
	There is not enough memory to complete an operation.	Close document windows that you don't need.
		Check for a Large Clipboard.
		Increase the amount of memory allocated to the application. Remember that an application cannot occupy less memory than is designated in the Minimum size box; nor can it occupy more memory than is designated in the Preferred size box (both in the Get Info window) even if there is plenty of RAM.
		Work with smaller documents. If adjusting the memory allocation to the application successfully worked, you can also divide a very large text document into smaller separate text files.

		Streamline graphic files. You can economize on the amount of memory graphics files occupy by working on them in 72 dpi rather than 300 dpi and by using 256 colors rather than millions of colors.
Crashes occur when you run one or more specific programs, particularly older (before 1990) programs.	Program is incompatible with the Modern Memory Manager.	Obtain a newer, compatible version of the program.
User complains of slow performance. This problem is subject to user opinion. However, the user may state that performance has just recently degraded.	Virtual memory is adversely affecting performance.	Reduce the amount of virtual memory.
		Turn off virtual memory. Note, however, that turning off virtual memory on a Power Macintosh increases the amount of memory needed to run PowerPC-native programs.

Published Date: Feb 20, 2012

PowerBook: Models That Work With CardBus PC Cards

CardBus is a 32-bit implementation of the PC card (formerly PCMCIA) interface. This document lists the PowerBook models that work with CardBus technology.
This article has been archived and is no longer updated by Apple.
These computers work with CardBus PC cards:

- PowerBook G3 Series
- PowerBook G3 Series (Bronze Keyboard)
- PowerBook (FireWire)
- 15-inch PowerBook G4 (all models)
- 17-inch PowerBook G4 (all models)

For more information about differentiating between these models, see **PowerBook G3, G3 Series: Identifying Different Versions** or Identifying different models of PowerBook G4.
Published Date: Feb 20, 2012

iMovie: Audio Pops and Clicks

When playing a movie in iMovie, there are occasional clicks and pops in the audio portion of the DV footage..
This article has been archived and is no longer updated by Apple.

Symptom

When playing a movie in iMovie, there are occasional clicks and pops in the audio portion of the DV footage..

Solution

1. Make sure you have updated to the latest version of iMovie. Check Apple Software Downloads (http://www.apple.com/swupdates/) for information on the latest version.

2. If you are using the latest version and the issue still occurs, it's possible that you have a sound track enabled in the Appearance control panel. This can cause distortions in the audio within iMovie. Try turning the sound track off in the Sound tab of the Appearance control panel.

Published Date: Feb 20, 2012

AppleWorks: Restoring Unusable Database Document

If an AppleWorks database document will not allow new records to be added, or the document starts behaving erratically, use the following information to extract the data from the database and insert it into a new database.
This article has been archived and is no longer updated by Apple.
Important: This technique works best for databases in which all the fields are defined as text, such as an address list for mailing labels. If your database fields contain calculations or non-text field types, then you may refer to "AppleWorks: Document Recovery Techniques" for a more general process. Usually, these steps will restore the ability to create new records. The issue may persist in rare cases, following the exported data beyond the attempted restoration process. If this occurs in your case, you may have to either create a second database for additional data or recreate the database entirely.

For our example, we will refer to a database named "MyAddressBook."

Follow the steps to rebuild the database that correspond to the version of software you are using.

AppleWorks 5 and ClarisWorks 5

1. Open the affected database.
2. Choose Save As from the File menu. A dialog box appears.
3. At the top of the dialog box, use the pop-up menu to select the location where you will be saving the file. For simplicity, you may choose Desktop.
4. Near the middle of the dialog box, the text "Save As" appears. Below is a pop-up menu indicating the file type, which is most likely AppleWorks. Choose DBF from the File Type pop-up menu.
5. Below the pop-up menu appears the file name "MyAddressBook." Add a suffix of your choice to the file name. The suffix is to prevent overwriting the original file by generating a new copy. For simplicity, you may add the suffix ".dbf."
6. Click Save.
7. Close the affected database. If you are prompted to save changes, click Don't Save.
8. Choose New from the File menu. A New Document window appears.
9. Choose to open a new database document.
10. Create fields with the exact same names in the exact same order as the original database. Field names, for example, might be "name," "address," and "city/state/zip" for an address book. After creating fields, click Done.
11. Give the new database a name that distinguishes it from the original. Choose Save from the File menu. For simplicity, name the file "Myaddressbookv2." Click Save. Now, you should have a new database containing one empty record with the same fields as the original.
12. Choose Insert from the File menu. Using the dialog box that appears, navigate to the location where you saved the file MyAddressBook.dbf. Click once on the file name to select it, then click Insert.
13. Now you should see all your original data inserted into the new records. Normally, this will leave one blank record at the top of your database. You may delete the blank record by select it with the pointer then choosing Delete Record from the Edit menu. You may now save the new copy of your database.

AppleWorks 6

1. Open the affected database.
2. Choose Save As from the File menu. A dialog box appears.
3. At the top of the dialog box, use the pop-up menu to select the location where you will be saving the file. For simplicity, you may choose Desktop.
4. Near the bottom of the dialog box is a pop-up menu labeled File Format. The pop-up menu most likely says AppleWorks. Choose ASCII Text from the pop-up menu.
5. Above the File Format menu appears the Name field, which in our example would contain "MyAddressBook." Add a suffix of your choice to the file name. The suffix is to prevent overwriting the original file by generating a new copy. For simplicity, you may add the suffix ".txt."

6. Click Save.
7. Close the affected database. If you are prompted to save changes, click Don't Save.
8. Choose New from the File menu. A New Document window appears.
9. Choose to open a new database document.
10. Create fields with the exact same names in the exact same order as the original database. Field names, for example, might be "name," "address," and "city/state/zip" for an address book. After creating fields, click Done.
11. Give the new database a name that distinguishes it from the original. Choose Save from the File menu. For simplicity, name the file "Myaddressbookv2." Click Save. Now, you should have a new database containing one empty record with the same fields as the original.
12. Choose Insert from the File menu. In the dialog box that appears, navigate to the location where you saved the file MyAddressBook.txt. Choose All Available from the File Format pop-up menu. Click once on the file name to select it, then click Insert.
13. Now you should see all your original data inserted into the new records. Normally, this will leave one blank record at the top of your database. You may delete the blank record by selecting it with the pointer then choosing Delete Record from the Edit menu. You may now save the new copy of your database.

Published Date: Feb 20, 2012

Macintosh Manager/Multiple Users: Using the Notepad and Scrapbook

Limited and Panels users cannot access the Scrapbook or Notepad, even when given access to those applications. This article lists options that allow users to have an individual Notepad or Scrapbook, or share a single global Notepad or Scrapbook.

This article has been archived and is no longer updated by Apple.

For each user to have an individual Notepad or Scrapbook

1. Make a copy of the Notepad File or Scrapbook File (located in the System Folder).
2. Place the copy where the user can access it, such as the user's Documents folder.

Note: This solution may increase network traffic for Mac OS 9 clients because they access the Notepad or Scrapbook from the server.

For all users to share a single global Notepad or Scrapbook

Method 1

1. Place a copy of the Notepad File or Scrapbook File where all users have access, such as the Shared Documents folder. This may also increase network traffic for Mac OS 9 clients.

Method 2

1. Place the Notepad file or Scrapbook file in the Special Folder.
2. Make sure that the users are allowed Read/Write access to this Special Folder from the Workgroups: Privileges window in Macintosh Manager Admin.

Note: With this configuration there is no increased network traffic, but there will be a folder on a local workstation that users have read/write access to, and may bypass a disk quota if they save files into this Special Folder.

Published Date: Feb 20, 2012

Final Cut Pro 3: How to delete the preferences file

This document explains how to resolve issues caused by the preferences file in Final Cut Pro 3.
This article has been archived and is no longer updated by Apple.
One of the steps to follow when troubleshooting Final Cut Pro is to delete the Final Cut Pro Preferences file. Doing this restores Final Cut Pro to the settings you made when you installed the application. In Mac OS 9, the Final Cut Pro Preferences file is located in the Final Cut Pro Data folder within the Preferences folder, within the System folder. See Figure 1. In Mac OS X, it is located in the users Preferences folder (~/Library/Preferences/Final Cut Pro User Data) See Figure 2. This file contains user preferences for scratch disk settings, capture settings, window layouts, and so forth.

Figure 1 Final Cut Pro Preferences file in Mac OS 9

Figure 2 Final Cut Pro Preferences in Mac OS X

The preferences file can sometimes contain incorrect information, resulting in Final Cut Pro exhibiting unpredictable behaviors. This is easily fixed by following these steps:

Mac OS 9

1. Quit Final Cut Pro.
2. Drag the file **Final Cut Pro Preferences** from `System Folder:Preferences:Final Cut Pro User Data:`
3. Drag the file **Final Cut Pro MOA Cache** from `System Folder:Preferences:Final Cut Pro User Data:`
4. Open Final Cut Pro.

Important: Do not delete any of the other files in the Final Cut Pro User Data folder than the ones specified above in the Mac OS 9 section.

Mac OS X

1. Quit Final Cut Pro.
2. Drag the file **Final Cut 3.x Preferences** from `~/Library/Preferences/Final Cut Pro User Data/`
3. Drag the file **Final Cut Pro MOA Cache** from `~/Library/Preferences/Final Cut Pro User Data/`
4. Drag the file **com.apple.FinalCutPro.plist** from `~/Library/Preferences/`
5. Open Final Cut Pro.

Important: Note: Do not delete any of the other files in the Final Cut Pro User Data folder than the ones specified above.

Depending on the situation, you may need to restart your computer. Once this process is completed Final Cut Pro reverts to its installed defaults. Reset all of your desired application preferences to match what they were before--in particular your Scratch Disk Preferences, and the selected Sequence Settings.

To avoid recreating all your custom settings in the event you have to delete the preferences file again, follow these steps to save a clean copy of the file:

1. Make a duplicate of the Final Cut Pro Preferences file immediately after it is installed and configured for the first time.
2. Put the file in a safe place.

If you have to delete the preferences file again, you can simply replace it with a duplicate of the saved, clean file. This preserves your desired preference settings, while eliminating any unwanted behaviors that may have been caused by a faulty Final Cut Pro Preferences file.
Published Date: Feb 20, 2012

AppleWorks 6: Importing AppleWorks 5 Clippings Libraries

This article explains how to import clippings from AppleWorks 5 into AppleWorks 6.
This article has been archived and is no longer updated by Apple.
As described in AppleWorks 6 Help, you can import clippings libraries from AppleWorks 5 or ClarisWorks 5 into the AppleWorks 6 clippings palette. However, you must drag the individual AppleWorks 5 clipping library files into the root level of the AppleWorks 6 Clippings folder for the library to show up in the Clippings palette in AppleWorks 6.

Figure 1 Drag the individual library files directly into the AppleWorks 6 Clippings folder

Do not drag install the AppleWorks 5 Library folder, or its subfolders. Do not drag the AppleWorks 5 clippings libraries into subfolders of the AppleWorks 6 Clippings folder. If you put AppleWorks 5 library files into subfolders of the AppleWorks 6 Clippings folder, they will not appear in the AppleWorks 6 Clippings window.

When the libraries are installed correctly, a new, locked tab will appear in the AppleWorks 6 Clippings window for each imported AppleWorks 5 library.

Figure 2 Note the imported, locked tab which represents the imported AppleWorks 5 library
Published Date: Feb 20, 2012

Power Mac G4: Installing Update for AppleShare IP 6.1

The Power Mac G4 requires Mac OS 9 and AppleShare IP 6.3 or later, but my AppleShare IP installation CD is version 6.1. After installing Mac OS 9, I ran the AppleShare IP installer, and received the message: "The selected disk does not contain Open Transport 1.3 or later." How can I install AppleShare IP?
This article has been archived and is no longer updated by Apple.
The Open Transport 1.3 error message is erroneous, since any computer with Mac OS 9 includes Open Transport 2.5 or later.

Before proceeding, download the applicable AppleShare IP updater. You can run AppleShare IP 6.3 with Mac OS 9, but AppleShare IP 6.3.1 and Mac OS 9.0.4 are recommended. To find the most recent version of this software, please see Apple Software Updates available at http://www.apple.com/swupdates/ .

To install AppleShare IP on a Power Mac G4 computer, follow these steps:

1. Insert the AppleShare 6.1 CD.
2. Find and open the folder "Software Installers" located on the CD.
3. Open the folder "Install AppleShare IP 6.1" located on the CD
4. Scroll down to the folder "Extension Items" and open it.
5. Open the Extensions folder in the System Folder on the disk on which you want to install AppleShare IP.
6. Select all the files in the Extension Items folder on the CD except "Apple Enet" and drag them to the Extensions folder on the destination volume.
7. Without restarting, open the AppleShare IP 6.3 installer or 6.3.1 updater application.
8. Install the software.
9. After you have installed the update, restart the computer.
10. Open the AppleShare IP Setup application to configure your server.

Published Date: Feb 20, 2012

iBook, PowerBook (FireWire): How to Delete the Memory Contents File

This document explains how to delete the Memory Contents file on a computer that has had the Preserve memory contents on sleep option enabled in the Energy Saver control panel.
This article has been archived and is no longer updated by Apple.
Note: For compatibility reasons, the Preserve Memory Contents on Sleep feature has been removed in Mac OS 9 versions 9.0.4 and later. You may still see the option in the Energy Saver control panel but it will be dimmed.

The Memory Contents file is created by the Preserve memory contents on sleep option in the Energy Saver control panel. It can be rather large. (The size of the file depends on the amount of memory installed in a computer.)

After installing the Sleep Memory Extension or Mac OS 9.0.4, the Preserve memory contents on sleep checkbox in the Energy Saver control panel is dimmed and unavailable. However, the Memory Contents file created by this feature is not deleted. It is safe to delete this file and reclaim the hard disk space it takes up.

The Sleep Memory Extension, and Mac OS 9.0.4 Update are available from Apple Software Downloads (http://www.apple.com/swupdates/).

To delete the Memory Contents file:

1. Choose Sherlock 2 from the Apple menu.
2. Click Files.
3. Click Edit to open the More Search Options window. See Figure 1.
4. Click the file name checkbox.
5. Choose contains from the pop-up menu, and type "Memory" in the field next to this menu.
6. In Advanced Options click the "is" checkbox and choose invisible from the pop-up menu.
7. Click OK.

Figure 1: More Search Options Window

8. Click Search.

Figure 2: Sherlock 2 Window

9. Choose Move to Trash from the File menu. A warning dialog appears to let you know that the file must be deleted immediately.

Figure 3: File Menu Window

10. Click OK.

Figure 4: Warning Dialog

Published Date: Feb 20, 2012

AppleWorks: AppleWorks 6 Updater Log Error

After updating AppleWorks 6 to version 6.0.4, the AppleWorks 6 Updater Log file contains a line that says:

Update Error: -14

This article has been archived and is no longer updated by Apple.
This error is inconsequential. You can use AppleWorks 6.0.4 normally.

The AppleWorks 6.0.4 Updater is designed to update both the North American English and International English versions of AppleWorks 6. When the updater is opened, it attempts to update both versions. The Update Error: -14 error occurs when the updater tries to update the English version of the AppleWorks software that is not installed on your computer's hard disk.

Published Date: Feb 20, 2012

PowerBook Firmware Update 2.4: Read Me

This article contains the read me for the PowerBook Firmware Update 2.4 released on 2000-05-30.
It can be downloaded from the Apple Software Updates Web site at http://www.apple.com/swupdates/.
This article has been archived and is no longer updated by Apple.

About the PowerBook Firmware Update 2.4

The PowerBook Firmware Update 2.4 will only run on PowerBooks with built-in FireWire ports using Mac OS 9.0 or later.

Firmware updates are also available for iBooks, iMac computers with slot-loading CD or DVD drive, and Power Mac G4 models with AGP graphics.

The PowerBook Firmware Update 2.4 improves support for using a USB storage device, such as an external hard drive as a startup disk. For PowerBooks with built-in FireWire ports using Mac OS 9.0.4 or later, this update also allows you to use a FireWire storage device, such as an external hard drive, as a startup disk. There is also improved support for FireWire target disk mode.

Before you install the PowerBook Firmware Update 2.4, read the instructions below. You may want to print them for reference.

Note: After you install this update, the PRAM is reset. This may reset some of your control panels to default settings. See Mac Help, available in the Help menu, for more information on changing your control panel settings.

1. Make sure your PowerBook's power cord is connected and plugged into a working power source.

2. Double-click the PowerBook Firmware Updater icon.

Note: If a message says your firmware is up-to-date with version 2.4 of the PowerBook Firmware Updater, or that this version of the PowerBook Firmware Updater will not run on this computer, then you do not need this update. If a message says you need to install Mac OS 9.0, the firmware updater will not run until you install Mac OS 9.0 or later.

3. Follow the onscreen instructions. When prompted, click Shut Down in the dialog box to shut down your PowerBook.

4. After the computer has shut down, hold down the Command (Apple) key and Power button to start up your PowerBook.

5. Continue to hold down the Command key and Power button until you hear a long tone. Release the Command key and Power button when you hear the tone. The update starts automatically.

A status bar shows the progress of the update. When a message says your PowerBook's firmware has been successfully updated to version 2.4f1, you are finished.

Note: If a message says the update was not completed successfully, review the instructions and begin the update process again.

For more information, see www.apple.com/support
Published Date: Feb 20, 2012

Final Cut Pro: Avoiding Rendering of Audio Clips When Using Filters

This article describes a technique that may be used to avoid constantly re-rendering audio clips with filters that need to be edited frequently.
This article has been archived and is no longer updated by Apple.
In order to avoid constant re-rendering when editing filtered audio clips, you can isolate these clips into "nested" sequences. A nested sequence refers to a sequence that's edited into another sequence as if it were another clip of media. The advantage is that once the filtered audio clip is isolated and rendered within its own sequence, subsequent editing of the in and out points of the nested sequence don't affect the clip's render file.

Although this could be done by manually creating a new sequence, cutting and pasting the filtered audio clip into it, and then editing this new sequence to replace the original clip, there is a shortcut. Using the Sequence> Nest Items" menu item essentially does these things automatically.

Figure 1 shows an example sequence with just such a situation. A filter is applied to the audio clip named "Interview." The in point was changed, after first rendering it for playback, resulting in the loss of the render file and the need for re-rendering, indicated by the red bar above the timeline.

Figure 1: A multiple track edit, with an audio filter applied to the clip named "Interview"

To avoid the necessity of multiple renders in situations like this, follow the steps below:

Step One
Click on the audio clip that requires rendering to select it (the "interview" clip, in this situation), and then choose "Nest Items" from the Sequence menu. See Figure 2.

Figure 2: The Nest Items Menu

Step Two
This results in the Nest Items dialog box appearing. Enter a name, and enable the "Mixdown Audio" check box. This automatically renders the sequence as it replaces the original clip in your timeline. See Figure 3.

Figure 3: The Nest Items dialog box, with Mixdown Audio enabled

Step Three
You should see something similar to figure 4, with the rendered sequence named "Audio Effects 1" taking the place of the original audio clip. Notice that the red rendering bar has now turned grey as a result of enabling the "Mixdown Audio" checkbox. The in and out points of this sequence clip may now be edited at will, with no need for further rendering.

Figure 4: The finished edit, with the Audio Effect 1 sequence taking the place of the original filtered "interview" clip

Published Date: Feb 20, 2012

Power Mac G4 (AGP) & Servers: Unreadable Text in Certain Control Panels and Contextual Menus

This article describes a situation where text in certain control panels and contextual menus is unreadable.
This article has been archived and is no longer updated by Apple.

Symptom

Certain Mac OS control panels, such as Text and Sound, may exhibit unreadable text. Also, the use of contextual menus may result in unreadable text, the system may stop responding, or display system errors.

Note: This issue only appears on certain Power Macintosh G4 (AGP) computers with a 500 MHz microprocessor and Mac OS 9.0.2 installed.

Ways to detect

1. Open the Text control panel and click the Behavior pull down menu. See Figure 1.
2. Go to the Sound control panel and select Alert Sounds. See Figure 2.
3. Open a contextual menu.
   To open a contextual menu, press and hold down the Control key, while pointing to an item on the desktop and pressing and holding the mouse button.

Samples of the unreadable text:

Figure 1 Text control panel

Figure 2 Sound control panel

Solution

Rebuild the desktop and update the system software to Mac OS 9.0.4.

For instructions on how to rebuild the desktop, refer to article 10182: "**Rebuilding Desktop File and Icon Recovery**"

Use the Software Update control panel to download and install Mac OS 9 Update (9.0.4), if you are running Mac OS 9. You can also download the Mac OS 9 Update (9.0.4) from Apple Software Updates at **http://www.apple.com/swupdates**

Published Date: Feb 20, 2012

Mac OS 9.0.4: Some Display Resolutions Missing

This article discusses an issue with Mac OS 9.0.4 and missing display resolutions on some NuBus computers and non-PCI PowerBooks.
This article has been archived and is no longer updated by Apple.

Symptom

When using Mac OS 9.0.4 on some NuBus computers and non-PCI PowerBooks, display resolutions previously available may no longer appear in the Monitor Resolution control strip or Monitors control panel.

Solution

Install Video Extension 1.0, which can be downloaded from the Apple Software Updates Web site at http://www.apple.com/swupdates.

This Video Extension update restores access to all available resolutions with built-in video and video cards on NuBus computes and non-PCI PowerBooks.

Published Date: Feb 20, 2012

Color StyleWriter 4000 Series: Error When Using ColorSync 3.x Color Matching

This article discusses an issue with the Color StyleWriter 4000 Series Drivers and ColorSync 3.x.
This article has been archived and is no longer updated by Apple.

Symptom

An error message appears when printing a document to a Apple Color StyleWriter 4000 Series Printer with ColorSync selected as the Color Matching method. The specific error message displayed varies somewhat depending on the application you are printing from.

Example error messages

SimpleText and Claris Emailer may display two error messages:
Message 1: "status of " document_name": a printing error occurred (-4)."
Message 2: "SimpleText is unable to print this document. Please use the Chooser to select a printer. OK"

Photoshop
"Could not print "document_name" because of a program error. OK"

Microsoft Internet Explorer
"The Application "Internet Explorer" has unexpectedly quit, because an error of type 3 occurred. You should save your work in other open applications and restart the computer."

Products affected

- Color StyleWriter 4000 Series printer drivers
- ColorSync 3.0
- Mac OS 9.0

Solution

When printing to a Color StyleWriter 4000 Series printer from a Macintosh running Mac OS 9, do not use the ColorSync Color Matching option. Use the following steps to select a different option.

1. Choose Print from the File menu. (The Color StyleWriter Print dialog appears.)
2. Click Options. (The Options dialog appears.)
3. Choose a different Color Matching option, such as Auto, from the Color Matching pop-up menu.
4. Click OK. (The Print dialog reappears.)
5. Click Print to print the document.

Note: The default Color Matching setting is Auto so you would not see this error unless the default setting has been changed. Any Color Matching setting you choose for a document is saved with that document.
Published Date: Feb 20, 2012

Mac OS: Limited Access to Folder Named "Users"

When Multiple Users is active, access privileges to folders named "Users" on the root level of all disks are limited.

This article has been archived and is no longer updated by Apple.

Symptom

When Multiple Users is active folders do not appear in any folder named "Users" that is located on the root level of a disk.

Multiple Users automatically restricts access to any folder named "Users" or "users" on the root level of any disk (including file server volumes). Multiple Users treats any folder named "Users" on the root level of a disk as if it is the primary Users folder where Multiple Users stores documents and preferences. All folders (except one named the user's name) in any folder named "Users" on the root level of a disk are invisible to all Multiple Users users.

Products affected

- Multiple Users (Mac OS 9 standalone)
- Multiple Users (using any version of Macintosh Manager server)

Solution

- Move the folder named "Users" from the root level of the shared disk to another folder (Macintosh HD: Another Folder: Users).
- Rename the folder to something other than "Users" or "users".

Published Date: Feb 20, 2012

LaserWriter 8: HP LaserJet 2100TN Requires New PPD to Print Collated Copies

This article discusses an issue printing collated copies on a Hewlett-Packard (HP) LaserJet 2100TN printer using LaserWriter 8.
This article has been archived and is no longer updated by Apple.

Symptom

The Hewlett-Packard (HP) LaserJet 2100TN printer does not collate printed documents. It prints each page the number of times specified, but it does not collate them.

Solution

Download HP LaserJet 2100 Series PPD version1.3 or later-part of "HP LaserJet Family LaserWriter Driver 9.0" software-from Hewlett-Packard's Web site at http://www.hp.com/ .

After downloading the software, open the Installer and perform a custom installation of "All Printer Descriptions." This places the HP LaserJet 2100 Series v1.3 PPD in the Printer Description folder in the Extensions folder.

Set up the LaserJet 2100 Desktop Printer to use the new PPD:

1. Click the printer's Desktop Printer icon to select it. (The Printing menu appears in the menu bar.)
2. Choose Change Setup from the Printing menu. (The setup window appears.)
3. Click Auto Setup.
4. Click OK when completed.

Alternatively:

1. Drag the printer's Desktop Printer icon to the Trash.
2. Use the Chooser to create a new Desktop Printer.

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"
Published Date: Feb 20, 2012

LaserWriter 8.7: Duplex Printing on Letterhead Paper

Using LaserWriter 8.7 and the duplex option to print on letterhead paper may yield unanticipated results.

This article has been archived and is no longer updated by Apple.

Symptom

Using LaserWriter 8.7 and the duplex option to print on letterhead paper may yield unanticipated results.

Solution

Some Apple LaserWriter printers have optional duplex printing units, which allows printing on both sides of the paper. This is called duplex printing or two-sided printing.

With the duplex option installed, a single-sided print job will always start from the same side of the paper, top or bottom, depending on the printer. However, a two-sided print job starts printing on the opposite side of the paper from a single-sided print job.

When using the duplex option to print on letterhead paper, the letterhead paper must be oriented in the paper cassette according to the print job, whether it is a single-sided or two-sided print job.

If the printer has multiple cassettes and depending on the print job, the letterhead paper may need to be oriented differently in each paper cassette.

Published Date: Feb 20, 2012

Apple Software Restore: Set up LaserWriter 8 Software After Restoring

After restoring software, you must set up the LaserWriter 8 printer software before printing.
This article has been archived and is no longer updated by Apple.
Some computers come with a Software Restore CD that contains the Apple Software Restore application. This application restores all of the computer's original software, including the system software, factory settings, and applications.

After restoring software, you must set up the LaserWriter 8 printer software before printing, or an error will result.

Example error messages include:

> "The document "document_name" could not be printed, because no printer has been selected. Please use the Chooser to select a printer. OK"
>
> "Application_name' is unable to print this document. Please use the Chooser to select a printer. Cancel"

Restore options

Note: If your computer came with both Mac OS 9.1 and Mac OS X installed on the hard disk, you should follow the restore procedure outlined in Article 60847 "**Apple Software Restore: How to Perform a Multiple Disc Restoration**"

Erase "your_hard_drive" before restoring
This option completely erases the contents of the hard disk before restoring the original contents.

To use your Apple LaserWriter, set up your printer as you would normally using the Chooser, Desktop Printer Utility, or the Mac OS Setup Assistant. For assistance configuring your printer, search for "Selecting a printer" in the Help Center.

Restore in Place
This option replaces the original software (original system software, factory settings, and applications that came with the computer) with new copies from the Software Restore CD, leaving everything else on the hard disk unchanged.

Using this option your Apple LaserWriter Desktop Printers are visible on the desktop, or in whatever folder they were stored in prior to restoring any software. However, you need to set up your Desktop Printer prior to printing to it.

To set up the printer, follow these steps:

1. Click the Desktop Printer's icon to select it.
2. Choose Set Default Printer from the Printing. (For the default printer only.)
3. Choose Change Setup from the Printing menu. (A LaserWriter setup dialog appears.)
4. Click Auto Setup if you are configuring an AppleTalk printer, or click Change and select the PPD for printers connected via IP.
5. Repeat steps 1, 3 and 4 for each of your Desktop Printers.

Restore, saving original items (a new option in Apple Software Restore 2.x)
This option copies all files on your hard disk to a folder named "Original Items" then restores the original contents (original system software, factory settings, and applications that came with your computer).

This option moves any Desktop Printer icons into the Original Items folder. Move any Desktop Printer icons to the desktop, and follow steps 1 through 5 above.

When Setting Up Third Party PostScript Printers
The LaserWriter 8 driver uses PostScript Printer Description (PPD) files to determine the characteristics of individual printers. PPD files contain information about individual PostScript printers such as the paper-handling capabilities, the number of paper trays, their capacity, and the paper sizes they handle.

When using LaserWriter 8 printer software to print to a third-party PostScript printer, obtain a copy of the printer's PPD file from the vendor. Copy this file into the Printer Descriptions folder, then follow the appropriate procedure listed above. You can also use the Generic PPD with a third-party printer, but all of the printer's options may not be available.

Published Date: Feb 20, 2012

QuickTime Streaming Server: Configuration File Syntax Changed in Version 2.0.1

This article describes a change in the way configuration files are created using QuickTime Streaming Server 2.0.1.

This article has been archived and is no longer updated by Apple.
In QuickTime Streaming Server 2.0.1 (QTSS), the syntax of the configuration files has changed. When entering a string that contains spaces in a configuration file, the string must be enclosed in quotation marks.

QuickTime Streaming Server 2.0 syntax

- relay_source in_addr=224.98.98.45 src_addr=17.98.45.45 in_ports=5000 5002 5004 ttl=15
- relay_destination dest_addr=17.254.98.45 out_addr=17.98.45.45 dest_ports=1980 1982 1984
- relay_destination dest_addr=226.91.45.78 out_addr=17.98.45.45 dest_ports=10010 10012 10014 ttl=15

QuickTime Streaming Server 2.0.1 or later syntax

- relay_source "in_addr=224.98.98.45 src_addr=17.98.45.45 in_ports=5000 5002 5004 ttl=15"
- relay_destination "dest_addr=17.254.98.45 out_addr=17.98.45.45 dest_ports=1980 1982 1984"
- relay_destination "dest_addr=226.91.45.78 out_addr=17.98.45.45 dest_ports=10010 10012 10014 ttl=15"

If QTSS has been updated to QTSS 2.0.1 from an earlier version, existing configuration files must be edited manually to include the necessary quotes.

- The path to the QTSS Relay configuration file is: /etc/qtssrelay.conf
- On Darwin Streaming Server platforms, the path to the default Relay file is: /etc/streamingrelay.conf

Published Date: Feb 20, 2012

Mac OS: Setting the Clock for Daylight-Saving Time in Australia

This article explains how to manually set the computer's clock in the Date & Time control panel in order to accommodate the one-time change in start date for daylight-saving time in 2000.

This article has been archived and is no longer updated by Apple.
Normally, the computer's clock automatically changes from standard time to daylight-saving time. In 2000, however, several states and territories of Australia changed the start date of daylight-saving time to accommodate the Olympic Games in Sydney. The Mac OS Date & Time control panel was not programmed to change to daylight-saving time for this one-time event. Follow the steps below to manually set up the Date & Time control panel for daylight-saving time.

State or territory	Change to daylight-saving time	Change to standard time
South Australia	2000-10-29	2001-03-25
Victoria	2000-08-27	2001-03-25
Australian Capital Territory	2000-08-27	2001-03-25
New South Wales	2000-08-27	2001-03-25
Tasmania	2000-08-27	2001-03-25

- Clocks are advanced at 02:00 by one hour on start date for daylight-saving (summer) time.
- Clocks are wound back at 03:00 by one hour on end date for standard time.

Setting the computer's clock using the Date & Time control panel (Mac OS 8.5 or later)

1. Open the Date & Time control panel.
2. Click Set Time Zone.
3. Select the closest city in your time zone.
4. Click OK.
5. Click the checkbox to deselect the "Set Daylight-Saving Time Automatically" option.
6. Click the checkbox to select the "Daylight-Saving Time" option.
7. Close the Date & Time control panel.

After the special daylight-saving schedule is over on 2001-03-25, or if you leave any part of the country affected by this schedule prior to that date:

1. Open the Date & Time control panel.
2. Click Set Time Zone.
3. Select the closest city in your time zone.
4. Click OK.
5. Click the checkbox to select the "Set Daylight-Saving Time Automatically" option.
6. Close the Date & Time control panel.

Published Date: Feb 20, 2012

AppleWorks 6: Opening Files Stored on a NetWare Server

An alert box may appear when you open an AppleWorks 6 file stored on a NetWare server.
This article has been archived and is no longer updated by Apple.

Symptom

When opening a document stored on a NetWare server, an alert box appears with a message that says the document is damaged and cannot be opened.

Solution

The files are not actually damaged. Download and install AppleWorks 6.1.2 Update from Apple Software Updates (http://www.apple.com/swupdates/).

If you cannot download the update immediately, you may use these workarounds:

- Remove the ProSoft client and connect to the NetWare server using AppleTalk.
- Copy the document to your computer's hard disk before opening it. When you're finished working with the document, save it to the computer's hard disk and then copy it to the NetWare server volume.
- Save your documents in AppleWorks 5 format.

Published Date: Feb 20, 2012

Macintosh Manager: How to Set up Netscape Communicator Preferences

This document discusses how to set up Macintosh Manager and Netscape Communicator to allow users to update their bookmarks and preferences and have them retained regardless of the version of Mac OS on a client computer.
This article has been archived and is no longer updated by Apple.
By default, Netscape Communicator creates and stores user profiles in the Preferences folder on the local hard disk. The name and location of each profile is recorded in a file named Netscape Registry within the Preferences folder. If Netscape Communicator does not find this file when it opens, it wants to create a new profile. Macintosh Manager handles preferences differently, storing user preferences in individual Preferences folders on the server instead of using the Preferences folder on the workstation. Because of this difference, you must either create a new profile for every account or use Managed Preferences to supply a default profile the first time each user logs in. Managed Preferences is also needed to preserve changes to Netscape settings when you are using Mac OS 8.6 or earlier on your Macintosh Manager clients.

Follow the instructions below to create a default Netscape User profile, configure Managed Preferences to provide the default profile to all users, and select the correct profile location for each user. This will allow users to access and update their Netscape settings regardless of the version of Mac OS installed on the Macintosh Manager workstations. If you are not familiar with the Managed Preference Model, you should read technical document 106297, "**Macintosh Manager: The Managed Preference Model"** before continuing with this document.

Setting up Macintosh Manager and Netscape

Follow the steps below to set up Netscape Communicator for Macintosh Manager.

1. If there are any Macintosh Manager clients using Mac OS 8.6, select Copy only Internet preferences or administrator-defined preferences from the Global: Security tab in the Macintosh Manager Admin application (see Figure 1).

   This enables the Preserved Preferences feature for Mac OS 8.6 clients. Mac OS 9 clients do not use Preserved Preferences.

Figure 1 Preference Management window

2**.** Create the Managed Preferences folders.

   Create a User and Workgroup, and log in once. This creates the Managed Preferences folders in the sharepoint selected for group document storage for this Workgroup (also called the Workgroup Data Volume), by default Macintosh Manager folder on the server's hard disk.

3. Open Netscape Communicator on any client (in System Access).

   When Netscape Communicator opens the first time, it asks you to create a user profile. This will be the default profile for all Macintosh Manager users. You can name it anything you like. Once the profile has been created, you may add bookmarks and set application preferences such as home page location.

4. Place files into the Managed Preferences folders.

   Netscape Communicator records the location of user profiles in the Netscape Registry file. The Netscape Users folder and the Netscape Registry file are located in the Preferences folder on the workstation hard disk. Place a copy of each in the Initial Preferences folder on the Macintosh Management Server.

   If you are using any OS 8.6 workstations, or if you are using OS 9 workstations with Macintosh Manager 2.1.1 and the MMLocalPrefs extension, place another copy of the Netscape Registry file in the Preserved Preferences folder.

   Important: Do not place a copy of the Netscape Users folder into the Preserved Preferences folder. Doing so causes Macintosh Manager to replace the users' profiles on the server with whatever profiles it finds on the workstation.

Figure 2 Initial Preferences folder

5. For each user, log in to Macintosh Manager from any workstation that does not have previously created Netscape preferences and open Netscape.

If you use the workstation where you created the default profile, you must remove the Netscape Users folder from the local Preferences folder.

When Netscape opens, you are prompted to choose the Netscape Profile since the pre-configured user profile you created cannot be found in the Preferences folder on the workstation hard drive (See figure 3). Click Choose and then navigate to the Macintosh Manager user's Preferences folder on the Server (figure 4). A copy of the Netscape Users folder is already present. Open the folder and select the folder with the name of the default profile (figure 5).

If Netscape opens without asking you to select a profile, the Macintosh Manager workstation you are using has Netscape preferences already configured. Remove them and try again.

Figure 3

Figure 4

Figure 5

6. Quit Netscape and log out of Macintosh Manager.

The Netscape Registry has been updated with the location of that user's copy of the default profile. Netscape will now look to the user's Preferences folder on the Macintosh Manager server for its settings, no matter which version of Mac OS is installed on the client. As long as the Netscape Users folder is not copied into the Preserved Preferences folder, the Netscape preferences will be updated directly on the server, even from workstations running Mac OS 8.6 or earlier (or from OS 9 workstations using Macintosh Manager 2.1.1 and MMLocalPrefs).

Published Date: Feb 20, 2012

iMac (Summer 2000): Wavy or Flickering Picture on the Screen

The picture on the screen of some iMac (Summer 2000) computers may flicker or appear wavy.
This article has been archived and is no longer updated by Apple.

Symptom

Video "shadow bars" cascade down the computer's screen, causing the picture to flicker or appear wavy.

Solution

If possible, move your iMac computer to a different location to see if the condition still exists. This eliminates the possibility of environmental interference coming from objects such as metal desks/shelves, fluorescent lights, stand-alone speakers or electrical appliances.

If your iMac still has this issue, please take it to an Apple Authorized Service Provider for repair.

Note: The parenthetical product description (Summer 2000) refers to the summer of the Northern Hemisphere.

Published Date: Feb 20, 2012

AppleWorks 6: Equation Editor Symbol Font Error

When opening the Equation Editor, an alert box appears with an error message that says the Symbol font installed is not Equation Editor's.

This article has been archived and is no longer updated by Apple.

Symptom

When opening the Equation Editor, an alert box appears with the following message:

> "The TrueType Symbol font in the font suitcase Symbol inside the Fonts folder is not Equation Editor's. You must install Equation Editor's version of this font if you want to use TrueType. See Chapter 2 of the Equation Editor User Manual for more details." (See Figure 1.)

Figure 1 Equation Editor alert box

Solution

This message can be ignored. The version of Symbol font installed by Mac OS 9 contains all of the elements required for Equation Editor to function normally.

Published Date: Feb 20, 2012

Macintosh Manager 1.0 to 1.4.1: Saving Workgroup Documents to Another Volume

This article explains how to set up a workgroup's Documents folder on a volume other than the designated Macintosh Management volume. It also addresses different ways you can connect to volumes for use within the Macintosh Manager environment.
This article has been archived and is no longer updated by Apple.

Preparing to work with Macintosh Manager

The steps presented here require that you know how to set AppleShare privileges in AppleShare IP or Mac OS X Server (whichever you use). For general questions about setting privileges, see:

Article 60612: "**AppleShare IP 6.3: About Sharing, Share Points, and Access Privileges.**"

For explicit instructions on using the Mac OS Server Admin application to set privileges, choose AppleShare Help from the Help menu. Users of Mac OS X Server may review:

Article 60063: "**Mac OS X Server: Using Apple File Services Remote Administration**."

For related Macintosh Manager information and definition of the terms "authentication server," "volume," and "share point" that appear in this article, see:

Article 106031: "**Macintosh Manager: Ways to Mount Volumes.**"

Items that must be copied

Documents folder
By default, Macintosh Manager saves all user documents on the designated Macintosh Manager authentication server. When you change the location of a workgroup's Documents folder to a different volume, any documents previously saved within a Macintosh Manager share point on the authentication server remain where they were--they are not automatically copied to the new location. These documents must be manually copied to the new share point.

Managed Preferences
Each Macintosh Manager volume has its own set of Managed Preferences. If you are using Managed Preferences, you need to copy the Managed Preferences folder to the new volume or create new preferences.
Setting up a new volume

To select a different volume, follow the steps below:

1. **Open the Macintosh Manager Administration application.**
2. **Click the Workgroups Tab.**
3. **Choose the Workgroup to be edited.**
4. **Click the Options tab.**
5. **Choose Other from the Designated Macintosh Management server pop-up menu. The Select Server Volume window appears.**

Figure 1 Select Server Volume window

6. Click Chooser to connect to the volume you want the User's documents to be stored on.

There are two ways this can happen:

A. If the volume is located on the Macintosh Manager authentication server, select the file server in the Chooser (note that you are already logged in) and click OK. You are then presented with the other volumes to which Macintosh Manager has access privileges.

Figure 2 Chooser window

If you don't see the volume to which you are trying to connect, the privileges for that volume may not be set correctly. You should create a new user for each Documents Volume and assign that user as the Owner with read-write access. Then assign the Multiple Users User (or Macintosh Manager User for OS X Server) in the User/Group field with read-write access. If you do not do this, the Macintosh Manager admin application will not be able to connect to (mount) the volume to make changes later.

B. If the volume is located on a server other than the Macintosh Management server, select the file server in the Chooser, type in the user name and password that you want Macintosh Manager to use when connecting to the volume, and select the volume.

7. In the Select Server Volume window, select the volume on which you want to store the documents.

Figure 3 Select Server Volume window

The designated Macintosh Manager server has changed to the volume you selected.

Figure 4 Groups Documents Stored on Volume window

8. Select how the users will log in. This depends on how you originally connected to the volume.

If the volume is located on the Macintosh Manager authentication server, choose "Log in automatically as the following AFP user," then type in user name and password that was created for this Documents Volume, from Step 6-A.

Important: You should assign a different user (as created in Step 6-A) for each Documents volume that resides on the Macintosh Manager authentication server.

Note: When using this method to set up access to a volume which is local (physically connected) to the Macintosh Manager authentication server, users who belong to more than one workgroup will not be able to switch between them while logged on. In other circumstances this may be possible via the Macintosh Manager icon in the Menu Bar. Users affected by this may switch workgroups by logging off and logging back on to the new workgroup.

Figure 5 Server login window

If you connect to a volume from a server other than the Macintosh Manager authentication server, either type in the same user name and password used in Step 6-B, or click "Require users to complete the log-in dialog." If you select this option, users are prompted to log in to the server before receiving their documents.

8. Click Save and Test.

If you see an alert box with an error message that your documents can't be accessed at this time, be sure to read the error message for any helpful information. If access to the server was denied, your access privileges may not be set correctly.

Published Date: Feb 20, 2012

QuickTime 5 Public Preview: Error Message on Restart After Installation

After installing QuickTime 5 Public Preview and restarting the computer, you may see an alert box with the error: "Some of your QuickTime components failed to load because they are out of date."

This article has been archived and is no longer updated by Apple.

Symptom

After installing QuickTime 5 Public Preview and restarting the computer, you see an alert box with the error: "Some of your QuickTime components failed to load because they are out of date."

If you accept the option to try to update the software again, the update fails and the error appears again the next time you restart the computer.

Solution

1. Open the QuickTime Installer application.
2. Choose the Custom option to uninstall QuickTime 5 Public Preview.
3. Reinstall QuickTime 5 Public Preview.

Published Date: Feb 20, 2012

WebObjects 4.x: _BridgeClassgenInitialization Errors

This article discusses runtime exceptions that may happen when Objective-C/WebScript applications are integrated with Java frameworks for the first time.

This article has been archived and is no longer updated by Apple.

Symptom

When you integrate a Java framework into an Objective-C/WebScript WebObjects Application you might see errors such as these when you run the application:

- TestApp [PID] ObjCJava: while loading ObjCJava (ObjCJava)::
- TestApp [PID] _BRIDGEClassgenInitialization: ASSERTION FAILURE
- TestApp [PID] RAISING EXCEPTION name: NSInternalInconsistencyException
- TestApp [PID] reason: _BRIDGEClassgenInitialization: somebody else is using our NSClassFromString() hook!
- TestApp [PID] description: _BRIDGEClassgenInitialization: somebody else is using our NSClassFromString() hook

Solution

This error is caused by the Java bridge not being initialized. The Objective-C/WebScript application does not know there is a Java framework added to it and does not load the Java bridge Initialization code. When the application comes to the Java code it raises an exception as seen above.

Follow these steps to resolve this issue:

1. Make sure that your Java framework is of type "WebObjects Framework" instead of "Frameworks". The WebObjects framework type has support for Java.

2. In the Makefile.preamble file of your Objective-C/WebScript application uncomment the line:

```
JAVA_AWARE = YES
```

3. Do a Clean Build of the application and the Java Bridge should be correctly initialized.

Published Date: Feb 20, 2012

WebObjects 4.x: Issue Opening Netscape Browser on Windows NT

This article discusses how to resolve an issue opening a Netscape browser when running a WebObjects application.

This article has been archived and is no longer updated by Apple.

Symptom

If your default browser is Netscape and you open a WebObjects application with the Netscape browser already open, the browser window comes forward (or maximizes if it was minimized). The window does not become active and the meta refresh URL for the application you opened never gets posted. You have to go into the Launch Panel of Project Builder and cut and paste the URL from there to the browser's URL field.

Solution

There are two solutions depending on how the browser window is opened.

To bring up a new window every time the application runs

1. Open the Windows NT Explorer.
2. Choose Options from the View menu.
3. Click the Files Type tab.
4. Scroll to "Netscape Hypertext Document" option, select it, and click Edit.
5. In the Actions view, double-click the "Open" action.
6. In the window that opens, unselect the "Use DDE" checkbox.
7. Close all the windows.

To reuse an open browser window every time the application runs

1. Open the Windows NT Explorer.
2. Choose Options from the View menu.
3. Click the Files Type tab.
4. Scroll to "Netscape Hypertext Document" option, select it, and click Edit.
5. In the Actions view, double-click the "Open" action.
6. In the window that opens, type"NSShell" instead of "Netscape" in the Application field of the "Use DDE" group.
7. Close all the windows.

Published Date: Feb 20, 2012

Network Assistant 4.0.1: Bus Error at System Startup Time

This article discusses a bus error that occurs when the Network Assistant system extension loads.
This article has been archived and is no longer updated by Apple.

Symptom

The Server Schedule in Network Assistant 4.0.1 is configured to open Disk First Aid and rebuild the Desktop file of network clients at a scheduled time. If the clients are turned off and miss the scheduled time, a bus error occurs when the computers are restarted and the Network Assistant system extension loads.

Solution

Download and install the Apple Network Assistant Updater 4.0.2. The North American English version of this update is available from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Published Date: Feb 20, 2012

Mac OS X Server: Maximum RAM Supported

This article discusses the maximum amount of RAM that can be used with Mac OS X Server.

This article has been archived and is no longer updated by Apple.
The maximum amount of RAM that Mac OS X Server can use varies depending on the version of Mac OS X Server.

Mac OS X Server

- Mac OS X Server 1.0 can work with up to 1 GB RAM.
- Mac OS X Server 1.2 can work with up to 1.5 GB RAM.
- Mac OS X Server 10.0.x can work with up to 3 GB RAM.

Notes:

1. Some computers may have RAM limits below those of Mac OS X Server. For example, you can install only 1 GB of RAM in a Power Macintosh G3 (Blue and White) computer. Although Mac OS X Server 1.2 can work with up to 1.5 GB of RAM, you obviously cannot install that much in this computer.

2. To allow MacOS.app to function correctly with Mac OS X Server and 1 GB or more of RAM, type the following at the command line prompt in a Terminal window:

```
defaults write MacOS SysZoneMemorySize 0x10000000
```

Published Date: Feb 20, 2012

Mac OS 9: Third-Party Scripting Additions May Affect Startup

Third-party items added to the Scripting Additions folder may cause the computer to stop responding during startup.
This article has been archived and is no longer updated by Apple.

Symptom

During startup, the computer stops responding ("freezes"). An "unimplemented trap" error message may also appear.

Solution

1. Start up the computer with extensions disabled. (Hold down the Shift key while turning on the computer until the message "Extensions Off" appears.)

2. Open the Scripting Additions folder, which is in the System Folder.

3. Temporarily remove non-Apple items (place them on the desktop or in a folder outside of the System Folder). Leave these items in the Scripting Additions folder:

- Desktop Printer Manager
- Dialects folder (Mac OS 9.1 only)
- FileSharing Commands
- Keyboard Addition
- Keychain Scripting
- MonitorDepth
- Network Setup Scripting
- Remote Access Commands
- Sound Scripting (Mac OS 9.1 only)
- Speech Listener (Mac OS 9.1 only)
- Standard Additions
- URL Access Scripting

4. Restart the computer.

5. Third-party items that were removed from the Scripting Additions folder should be added back to the folder a few at a time (followed by a restart), to isolate the issue further. Contact the developer of any items which, when in the Scripting Additions folder, cause this issue.

Published Date: Feb 20, 2012

Macintosh Manager: End of File Database Issue

This article discusses a possible issue between Macintosh Manager Server/Multiple User Login Databases and the Epson Launcher extension.

This article has been archived and is no longer updated by Apple.

Symptom

The Macintosh Manager Server/Multiple User Login Databases can potentially be damaged when the Epson Launcher extension is installed and active on client computers.

Common error messages

- End Of File (EOF) error message appears when Macintosh Manager admin is opened
- Macintosh Manager Server cannot be accessed at this time (unknown problem)

To determine whether databases have become unusable, check the file size of "...DB.idx" files. The minimum file size (in bytes) is 4608 bytes. If the file is smaller than 4608 bytes, then it is most likely unusable.

Solution

1. Check client computers using Macintosh Manager or Multiple Users login to determine if the Epson Launcher extension is installed.
2. If installed, disable this extension on all Macintosh Manager clients.

The result of this appears to be some loss of background printing functionality, but the database issue does not seem to resurface.

In order to recover an unusable database follow the instructions in article 88023: "**Macintosh Manager: Recovering an Unusable Database**"

Apple is working with Epson to determine the best course of action toward final resolution on this matter.

Published Date: Feb 20, 2012

Power Mac G4 (Gigabit Ethernet): Does Not Turn on When Power Button Pressed

The Power Mac G4 (Gigabit Ethernet) computer does not turn on when you press its power button.
This article has been archived and is no longer updated by Apple.

Symptom

A limited number of Power Mac G4 (Ethernet Gigabit) computers do not turn on when you press their power button.

Solution

1. Make sure that the power cord is firmly plugged into the computer and the wall socket.

2. Try another wall socket to make sure power is getting to the computer.

3. Open the computer's door and make sure the ribbon cable to the front panel board is connected securely. The front panel board is located behind the power button. (See Figure 1.)

Figure 1 Front panel board cable

4. Also, make sure the front panel board ribbon cable is connected securely to the logic board. (See Figure 2.)

Figure 2 Front panel board ribbon cable

5. If the computer does not turn on after following steps 1 through 4, contact an Apple Authorized Service Provider.

Published Date: Feb 20, 2012

Mac OS 9: Web Browser Unable to Download Unless FTP Passive Mode is Enabled

When attempting to download a file from the Internet, the download process does not seem to begin, and the Web browser may display a "Setting Passive Mode" status message.

This article has been archived and is no longer updated by Apple.

Symptom

When attempting to download a file from the Internet, the download process does not seem to begin, and the Web browser may display a "Setting Passive Mode" status message.

Solution

1. Open the Internet control panel.
2. Click the Advanced tab.

Note: If you do not see an Advanced tab, choose User Mode from the Edit menu and click Advanced, then OK.

3. Click the File Transfer icon to select it.
4. Click the "Use FTP Passive Mode (PASV)" checkbox to enable that option.

Figure 1 Internet control panel with "Use FTP Passive Mode (PASV)" enabled

5. Close the Internet control panel.

Published Date: Feb 20, 2012

AppleScript: Saved AppleScripts Open With No Text in Script Editor

This article discusses an issue where an AppleScript cannot be edited after it is saved and reopened.

This article has been archived and is no longer updated by Apple.

Symptom

When an AppleScript file is opened in Script Editor, there is no text visible to edit.

Solution

If you downloaded the AppleScript 1.4.3 "Z" (English-International) version between 2000-05 and 2000-07, it is likely that you downloaded a damaged file.

The Software Update mechanism automatically downloads the version corresponding to your operating system. If you have an English-International version of Mac OS 9 and used the Software Update control panel to update to AppleScript 1.4.3, you would have received the damaged software.

A corrected version of AppleScript 1.4.3 English-International has been posted. It is available from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Note: Scripts created with the damaged version cannot be recovered; it is as if they have been saved as "run only."

Published Date: Feb 20, 2012

Mac OS 9: Installing or Removing Individual Components

This article explains how to custom install or custom remove individual Mac OS 9 components.

This article has been archived and is no longer updated by Apple.
To custom install or custom remove individual Mac OS 9 components follow the steps below.

1. Start up from an installation disc, either one that came with your computer, or a Mac OS 9 CD that you purchased. (You start up from the disc by inserting it into the drive, choosing Restart from the Special menu, and holding down the "C" key as the computer starts up.)
2. Open the disc by double-clicking its icon, if it is not already open.
3. Open the Mac OS 9 folder.
4. Double-click the "Mac OS Install" icon. The Welcome screen is displayed.
5. Click Continue. The Select Destination screen is displayed.
6. Choose the Destination Disk from the pop-up menu.
7. Click Select. The Important Information screen is displayed.
8. Click Continue. The Software License Agreement screen is displayed.
9. Click Continue.
10. Click Agree. (You must agree to the terms of the agreement before you can continue.) The Install Software screen is displayed.
11. Click Customize. The Custom Installation and Removal screen is displayed.
12. Choose items to install or remove.
    - Under Software Components, select one or more of the software components, to be installed or removed, by clicking to check the box to the left of each item..
    - Under Installation Mode, there are three options for most of the software components. The options are Recommended Installation, Customized Installation and Customized Removal. Select one of the three options.
13. Click Start.
14. After the installation or removal is complete, restart your computer.

Published Date: Feb 20, 2012

AppleScript: Alert Displayed When Printing Scripts From Script Editor

An alert box with an error message may appear if you print AppleScript text from the Script Editor application program.
This article has been archived and is no longer updated by Apple.

Symptom

An alert box with this error message appears after you print AppleScript text from the Script Editor application program:

> "Could not print the document because of a program error."

Although the error message says the document could not be printed, it actually is printed.

Solution

You can safely ignore this error message.

The alert box is displayed as a result of changes made to the printing code in CarbonLib 1.1. CarbonLib 1.1 or later may have been installed as part of another software package. To verify, check the version of the CarbonLib system extension in the Extensions folder.

This may be addressed in a future update to AppleScript.
Published Date: Feb 20, 2012

Apple Hardware Test 1.1: Power Mac G4 Read Me

This article comprises the Power Mac G4 Read Me for Apple Hardware Test 1.1.

This article has been archived and is no longer updated by Apple.

About Apple Hardware Test

Apple Hardware Test is a diagnostic tool for detecting problems with your computer's internal hardware components such as the logic board, memory, modem, video RAM, and Apple's AirPort card. It does not check externally connected hardware components such as USB drives or Firewire devices; it does not check non-Apple devices such as PCI cards from other vendors.

Before using Apple Hardware Test, disconnect external devices (excluding Apple keyboard, mouse, display, and speakers), and remove any non-Apple cards that were not included in Apple's shipping configuration of your system.

Apple Hardware Test does not check your computer for problems with the Operating System (OS) or other software related problems such as application or extension conflicts.

To use the Apple Hardware Test CD, restart your computer while holding down the C key until the "Loading..." icon appears, then you may release the C key. Loading will take approximately 45 seconds. Apple Hardware Test's main screen will appear. Follow the on-screen instructions and recommendations.

Apple Hardware Test for Power Mac version 1.1 is distributed only with the Power Mac G4, and will not work with any other computer.

If you suspect your computer has a hardware problem, the information provided by Apple Hardware Test can help identify the problem. If Apple Hardware Test detects a problem, an error code will be displayed. Please make a note of the error code before pursuing support options. If no hardware failure is detected, the problem may be software related.

Known issues

Apple Hardware Test cannot be used when a mouse is directly connected to the USB port on the display or on the Power Mac G4. Please connect the mouse to a USB keyboard.

The Apple Hardware Test CD will not be ejected on a Power Mac G4 when the Restart/Shutdown button in Apple Hardware Test us clicked. Either manually eject the CD, or use Mac OS to eject the CD.

It may take significantly more time than indicated (on the Apple Hardware Test screen) to run the Extended Test on a Power Mac G4 with more than 512 MB of RAM installed; durations between 18 and 20 minutes have been observed.

AppleCare Recommendations

Apple Hardware Test is one of several tools and procedures you can use when your Macintosh is having trouble. Here are some steps you can follow to help resolve problems. Please back up your data before performing any of these steps.

1. Turn the computer off and on.
You can often eliminate problems by selecting the "Shut Down" option from the Special menu to fully shut down the CPU, then restarting your system.

2. Check cables, peripherals, and user controls.
Shut down your computer. Then disconnect and reconnect all cables. Disconnect all peripherals (such as printers, scanners, cameras and external mass storage devices) to see if they are causing conflicts with your system. Adjust user controls on your monitors and other peripherals to see if this helps.

3. Turn off system extensions.
Restart your system while holding down the Shift key until the following message appears: "Extensions disabled." Then release the key. This turns off system extensions that often cause conflicts. If this solves your problem, use the Extensions Manager to turn off extensions that may be causing the problem.

4. Rebuild the desktop.
Restart your system while holding down the Option and Command keys. Click OK when asked if you want to rebuild the desktop.

5. Start up from the system CD that shipped with your computer.
Start your system from the system CD by holding down the C key until you see the smiling Mac face. If the system works properly when started (booted) from the system CD, you can generally assume that the problem relates to the software which is installed on your computer.

6. Start up from the Apple Hardware Test CD, and run the Quick and Extended Tests.
If the system does not work properly when started (booted) from a known-good system CD (Step 5), you can generally assume that the problem relates to your computer's hardware components. The Apple Hardware Test CD can often be used to start up your computer even if it will not boot into the Mac OS. If Apple Hardware Test passes both the Quick Test and the Extended Test, the problem may be software related. If Apple

Hardware Test detects a problem, make a note of the error code and contact Apple (Step 9).

7. Refer to Mac OS Help Center and the Internet for assistance.
The Mac OS help system under the Help menu in the Finder includes a wealth of technical information. Apple's Knowledge Base, and other resources for technical help and support are available 24 hours a day at www.apple.com/support.

8. Re-install Mac OS.
In many cases, a clean installation of the Mac OS will fix recurring problems. Back up any data before reinstalling. Please follow the instructions in your user manual or on your Restore CD to reinstall the Mac OS.

9. Contact Apple Service and Support for assistance.
If these steps don't help resolve the problem, please review the service and support material that accompanied your computer for information on how to contact AppleCare for further assistance. Apple reserves the right to change telephone hours at any time.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**"

Published Date: Feb 20, 2012

Mac OS: "Finder Could Not Start" Error Message

Your computer does not finish starting up and you see an alert box with an error message that says the "Finder could not start because 'DragLib-SetDragImage' could not be loaded."
This article has been archived and is no longer updated by Apple.

Symptom

The computer does not finish starting up. You see an alert box with an error message that says:

> "Finder could not start because 'DragLib-SetDragImage' could not be loaded."

Solution

Using the Software Restore or Software Install CD-ROM disc

1. Find the Software Restore or Software Install disc that came with your computer (or another disc that can be used as a startup disk).
2. Turn the computer on (or click Restart if the alert box is still on the screen).
3. Insert the disc.
4. Press the C key on the keyboard to start up the computer from the disc.
5. Open the computer's hard disk.
6. Open the System Folder.
7. Open the Extensions folder.
8. Find these files (one or both may be present):
   - Macintosh Drag and Drop
   - DragLib
9. Drag these files to the Trash.
10. Open the Startup Disk control panel.
11. Click the icon of your computer's hard disk.
12. Close the Startup Disk control panel.
13. Choose Restart from the Special menu.

OR

Disable extensions during startup

1. Turn the computer on (or click Restart if the alert box is still on the screen).
2. Press on hold the shift key.
This disables extensions and control panels.
3. Open the computer's hard disk.
4. Open the System Folder.
5. Open the Extensions folder.
6. Find these files (one or both may be present):
   - Macintosh Drag and Drop
   - DragLib

7. Drag these files to the Trash.

8. Choose Restart from the Special menu.

Some earlier software installers may install these extensions, which result in this error. Mac OS 9.1 ignores these extensions if they are installed, and does not produce this alert box and error message.
Published Date: Oct 11, 2016

Power Mac G4 Cube: Troubleshooting: Video: No Video on Monitor With Apple Display Connector

This article describes a possible solution when a monitor with an Apple Display Connector (ADC) connected to a Power Mac G4 Cube computer displays no video, but a monitor with a VGA-style connector does.

This article has been archived and is no longer updated by Apple.

Symptom

A monitor with an Apple Display Connector displays no video when connected to a Power Mac G4 Cube computer. However, if you connect a monitor with a VGA-style connector video appears on the display.

Solution

This article covers repair procedures for Apple Authorized Service Providers on selected Apple products, but the procedures are being published in the Knowledge Base for the general public for educational purposes only. At this time, there are a limited number of repairs that a customer can perform and these are covered under the Customer-Installable Parts program. For information on this program please visit http://www.info.apple.com/installparts/ .

If you have not been authorized to perform these procedures, please contact Apple (800-APL-CARE in the U.S.) or your local Apple Authorized Service Provider to schedule a repair.

Follow these steps:

1. Connect a known-good monitor with an Apple Display Connector (ADC).
2. Verify the monitor with an ADC has a known-good power source.
3. Make sure the display cable from the monitor is securely connected to the video card.
4. Make sure the video riser card and the video card are properly seated in their connectors.
5. Verify the cable connector at J3 on the video riser card is pushed in all the way. This connector provides the voltage for the ADC.

Figure 1 Cable connector at J3

6. If the monitor with an ADC still displays no video, contact Apple Support for further assistance.

Published Date: Feb 20, 2012

iTunes: MP3 Smart Encoding Adjustments

This article explains the function of the MP3 Smart Encoding Adjustments option in iTunes.
This article has been archived and is no longer updated by Apple.
If you choose to customize the MP3 encoding configuration, you can enable the Smart Encoding Adjustments option to allow iTunes to automatically adjust some of the internal parameters to improve the sound quality of converted files based on the original bit rate selection. This can include reducing the number of channels, encoded frequencies, or the sample rates.

Depending on the bit rate settings you select, you will hear different levels of quality in the music playback. Lower bit rate settings produce smaller file sizes but lower quality music playback. Higher bit rate settings create larger files but sound quality nearly as good as the source material.

iTunes does not override your choices if you've selected a specific sample rate or number of channels, even if the Smart Encoding Adjustments option is enabled. To allow iTunes to adjust your configuration, choose Auto from the Sample Rate pop-up menu, and click Auto in the Channels area.

Figure 1 MP3 Encoder

Published Date: Oct 11, 2016

Mac OS: Adobe Morisawa New CID Font Issue

This article discusses a possible issue with Adobe's Morisawa New CID Fonts.

This article has been archived and is no longer updated by Apple.

Symptom

The Adobe Morisawa New CID Fonts listed below may not print as expected from Mac OS 8.5, Mac OS 8.6, or Mac OS 9.x. Instead of the print job using the outline font downloaded to the printer, a less elegant looking, jagged bitmap of the font may print.

Beginning with Mac OS 8.5, the LaserWriter driver asks the Open Font Architecture (OFA) for the name of the Font to use in the print job; unfortunately, these Fonts have multiple names and the print job may be built using the wrong one. Thereafter, when the print job is processed by the printer, the font won't be found in the printer and a bitmap of the font will print instead.

Solution

Try one of the following solutions.

- Prior to printing, choose Page Setup from the File menu, choose PostScript Options from the pop-up menu and click "Unlimited Downloadable Fonts" to enable that option.
- Save the file as a PDF, then drag this file to the icon of the Desktop printer.
- In the Print dialog box, choose Save As File from the pop-up menu, then choose All But Standard 13 from the Font Inclusion pop-up menu. Print to a PostScript file, then drag this file to the icon of the Desktop printer.
- Download, install and use Adobe's PostScript driver AdobePS when printing these fonts.
- Obtain and install Adobe's ATM Font when printing these fonts.

Published Date: Feb 20, 2012

Apple DVD Player: Last Region Change Must Use Single Region Disc

The DVD drive will not play DVD-Video discs of the region you just switched to. Instead, you see an alert box with this error message: "This DVD-Video disc has a region code that does not match the region code set for your DVD drive. You cannot change the region code for your DVD drive."

This article has been archived and is no longer updated by Apple.

Symptom

The DVD drive will not play DVD-Video discs of the region you just switched to. Instead, you see an alert box with this error message:

> "This DVD-Video disc has a region code that does not match the region code set for your DVD drive. You cannot change the region code for your DVD drive."

Solution

1. Restart the computer.

2. Insert a single-region DVD-Video disc. Make sure the disc's region is the one you want to use to permanently set the DVD drive's region. For example, if you want the drive to play Region 2 discs, you should insert a disc that is only Region 2. **Important:** You will no longer be able to switch regions.

DVD-Video playback is normally restricted to one of six geographic regions. DVD-Video discs can usually only be played with a DVD player whose region matches the disc's. Apple's DVD solutions allow you to set or change your DVD drive's region setting up to five times. The last setting is permanently locked into the drive. When changing the region setting for the last time, you must use a DVD-Video disc approved for play in one region only.

For more information about DVD region encoding, see article 60183: "**Apple DVD Player: DVD-Video Region Discussion**"

Published Date: Feb 20, 2012

Apple System Profiler: Creating, saving, and printing reports

This article has been archived and is no longer updated by Apple.
Learn how to create, print or save an Apple System Profiler report in Mac OS 9 or earlier. For Mac OS X information, see this article.

Creating, printing or saving an Apple System Profiler (ASP) report

1. Make sure a printer is selected in the Chooser (see Selecting a printer below).
2. Choose Apple System Profiler from the Apple menu.
3. Choose New Report from the File menu.
4. In the dialog box that appears, select the items you want in your report and click OK.
5. Choose Print One Copy or Save from the File menu.

Selecting a printer

1. Choose Chooser from the Apple menu.
2. Serial or USB printer
   - In the Chooser, select the type of printer you want to use.
   - Click the port the printer is connected to.
   - Close the Chooser by clicking the Close box.
3. Network printer
   - In the Chooser, select the type of printer you want to use.
   - Click the name of the printer you want to use.
   - Close the Chooser by clicking the Close box.

Drag and drop

Most information displayed in the ASP window can be moved to the desktop or to other applications by using drag and drop. This provides a quick way to export specific portions of the ASP information.

- Move the mouse pointer over the information you want to export.
- Drag the information to the desktop or application.
- A text clipping file of this information is created on the desktop, or the text will appear in the application.

Published Date: Oct 11, 2016

Apple DVD Player: Opening DVD Content on Other Media

This article explains how to open DVD content located on other media such as a hard disk using Mac OS 9 and Apple DVD Player 2.3 or later.

This article has been archived and is no longer updated by Apple.

Normally, Apple DVD Player will play DVD content only from a DVD-Video disc. However, Apple DVD Player 2.3 and later can play DVD-formatted content from another source.

To enable playback from other sources:

1. Choose Preferences from the Edit menu.
2. Click the Advanced Controls tab.
3. Click the "Add 'Open VIDEO_TS' menu item to File Menu" checkbox to enable that option.

Figure 1 DVD Player prefs window

You can now (when playback is stopped) select a DVD-formatted VIDEO_TS directory using the Open command in the File menu.

Figure 2 Open VIDEO_TS menu window

Do not open the VIDEO_TS folder, but use this command to choose a VIDEO_TS folder that contains files that are in the DVD standard layout and format.

Figure 3 Select a VIDEO_TS folder window

Note: You cannot play DVD content from a server volume.

After you've selected a source folder, the player will ignore any DVD-Video discs on the desktop. To play from a disc, click Eject, or use the Open command to select the VIDEO_TS folder on the disc you want to play.

See technical document 42647 "**DVD Player 3.1: How to View DVD Content on Other Media**" for information on DVD Player 3.1 and Mac OS X

Published Date: Feb 20, 2012

Apple Pro Speakers: No sound from speakers

This document describes what to do if no sound comes from one or both Apple Pro Speakers connected to some Power Mac G4 computers.

This article has been archived and is no longer updated by Apple.

Symptom

There is no sound from one or both of the Apple Pro Speakers.

Solution

Follow these steps:

1. Push on the Apple Pro Speaker jack to make sure it is firmly inserted into the Apple Speaker sound output port
   - The Apple Pro Speaker jack has two detents. You should feel them as you push the jack into the sound output port. Giving the Pro Speaker's connector a slight twist while inserting it into the sound output port may make a better connection.
2. Verify the speaker volume and balance are set appropriately in the Sound control panel. Check to see if sound has returned.
3. Reset the Parameter RAM (PRAM) by following these steps:
   - Shut down the computer.
   - Locate the following keys on your keyboard: Command, Option, P, and R. You must hold these keys down simultaneously in this step.
   - Press the computer's power button and then simultaneously hold down the Command-Option-P-R keys. You must press these keys before the gray screen appears.
   - Continue to press the keys until the computer restarts twice, then release the keys.
   - The parameter RAM and the non-volatile RAM in your computer are reset to the default values. The clock setting is not changed.
4. If the computer emits normal startup sounds from the speakers, yet there is no sound present once Mac OS has started up, reinstall the system software from the Mac OS "Install" disc that came with your computer.

If the symptom persists after following these steps, call Apple for assistance in replacing the speakers.

For more information, see "Macintosh: How to Reset PRAM and NVRAM".

Related Documents

58764 Learn more about: Sound Output Ports

Published Date: Feb 20, 2012

Mac OS 9: Disc Burner - Drive Space Requirements

Your computer's hard disk must have at least twice the capacity of a CD-R or CD-RW disc in free space in order for Disc Burner to burn a disc.
This article has been archived and is no longer updated by Apple.

Symptom

An alert box with this message appears when you try to burn a disc:

> "The disc could not be burned because the startup disk is full."

Solution

Before you insert a blank CD-R or CD-RW disc, make sure that your computer's startup disk has at least twice the capacity of the disc available as free space. For example, if you are using a 650 MB CD-R disc you should make sure that your hard disk has at least 1.3 GB of available space.

Published Date: Oct 11, 2016

Mac OS 9.1: No Sound From Internal Modem When Network Setup Extension Is Disabled

With the Network Setup Extension disabled, the internal modem may not generate any sound.

This article has been archived and is no longer updated by Apple.

Symptom

With the Network Setup Extension disabled, the internal modem does not generate any sound.

Solution

Use the Extensions Manager to make sure the Network Setup Extension is installed and turned on.

If the extension is not installed, install Mac OS 9.1 Update, or, if you have the full Mac OS 9.1 Install CD, custom install Open Transport from the CD. Open Transport is located in the Network & Connectivity archive.

Related Documents

31288 Mac OS 9: Installing or Removing Individual Components

88166 Mac OS 9: Modem Makes No Sound

Published Date: Oct 11, 2016

Mac OS 9.1: Connection Issue With Some USB Modems

After updating to Mac OS 9.1, some types of USB modems will not respond properly when attempting to connect to an ISP.
This article has been archived and is no longer updated by Apple.

Symptom

After updating to Mac OS 9.1, some types of USB modems do not respond properly when attempting to connect to an ISP. With Mac OS 9.0.4 installed, the modem can connect to the Internet service provider (ISP) without any difficulty.

Solution

The standard USB modem driver included in Mac OS 9.1 is based on the USB Communications Device Class (CDC) specifications. Early USB modems that are not compliant with the CDC specifications may no longer behave as expected.

If you have difficulties with your USB modem after updating to Mac OS 9.1, contact the modem manufacturer to ask about an update.

Note: You may be able to restore functionality to your third-party USB modem by reinstalling Mac OS 9.0.4. For information on how to perform a clean installation of Mac OS 9.0.4, see article 60496: "**Mac OS 9: Performing a Clean Installation**."
Published Date: Oct 11, 2016

iMac (Early 2001): Software Installers Report the Disk Is Locked

In some cases, you may not be able to install software on an iMac (Early 2001) computer because an alert box appears with a message that says the disk is locked.

This article has been archived and is no longer updated by Apple.

Symptom

When installing software an alert box appears with a message that the software could not be installed because the disk is locked.

Solution

- If you started up the computer with a CD-ROM disc, try restarting the computer from the hard disk and then installing the software.
- The hard disk's directory structure may need to be repaired. Open Disk First Aid and verify or repair the disk before installing any software. To obtain the latest version of Disk First Aid, use the Software Update control panel or check Apple Software Updates (http://www.apple.com/swupdates/).
- If Disk First Aid cannot repair the hard disk or the Disk is Locked error persists, you may try a third-party drive repair utility.

Note: Before attempting any disk repairs, you should back up your data. Apple does not recommend nor support the use of third party drive repair utilities. Check with the vendor of the repair utility before using it for any specific recommendations.

For related information on Disk First Aid and Mac OS volumes, refer to the following articles:
Article 7565: "**Disk First Aid: Purpose**"
Article 13628: "**Disk First Aid: What to Do When it Finds an Error**"
Article 19516: "**Mac OS: Technical Overview of Disk Volume Structures**"

Published Date: Oct 11, 2016

Apple Location Manager: Frequently Asked Questions (2 of 3)

This article contains frequently asked questions (FAQ) regarding Apple Location Manager, with answers to those questions. Additional Apple Location Manager FAQ articles are listed at the bottom of this article.

This article has been archived and is no longer updated by Apple.

Questions answered in this article:

1. How do you turn the Location Manager on and off?
2. Can I create a Location and then save it as a file, export it?
3. Can I create a Location on a different computer and then import it to mine?
4. I have exported a Location and dropped it into my Locations folder located in the Location Manager Prefs folder. Why do I get an error message that Location Manager is not installed correctly?
5. Will At Ease's "Protect System Folder" option prevent Location Manager from switching Locations?
6. My "Home" and "Office" Locations will be similar, can I duplicate "Home" and then modify it to make the "Office" Location?
7. I have created my "Home" Location while I was at home, and then also created my "Office" location at home, but the "Office" Location is not working correctly?
8. I want to change the name of one of my Location, I do not see a Rename button?
9. I no longer use a Location I created. Can I delete this Location so it will no longer be a selection?
10. I am editing one of my Locations, and I notice that some of the Modules have a (bullet) in front of them?
11. When I change to my Location that I named "Office", it reports switching to "Ethernet" in the "Switching to Location" alert box, but when I go to the AppleTalk control panel it is set to Modem/Printer port?
12. When I switch to one of my Locations, an alert box appears that reports "Can't switch between Open Transport and Classic Network. Use the 'Network Software Selector' utility."
13. What other messages can appear in the "Switching to Location" alert box?
14. Can I edit multiple Locations at the same time?
15. How can I tell if a Module was written by Apple's or a third party?
16. I have installed a new Module in the "Location Manager Modules" folder located in the Extensions Folder in the System Folder but the new Module is not showing up in the Location Manager?

Question 1: How do you turn the Location Manager on and off?

Answer: You turn the Apple Location Manager program on by choosing a Location and you turn the program off by specifying no Location, "None (Off)", in the pop-up menu.

Question 2: Can I create a Location and then save it as a file, export it?

Answer: You may Export a Location for use with another computer. In the Location Manager in the Location Editing List, select the Location you want to export. Then go to the File menu and select Export Location. It will ask you where to save and what you wish to name the file in the Save As Dialog. See question 3 for more information.

Question 3: Can I create a Location on a different computer and import to mine?

Answer: You may Import a Location from another computer. First Export the Location on the other computer, see question 18 above, and copy the exported file to the computer you wish to perform the import. Then in the Location Manager go to the File menu and select Import Location. It will bring up the Open Dialog box. Select the Location you wish to import. If you already have a Location named the same as the Location you are trying to import it will give you the option of Canceling, Replace, or allow you to Rename it to something different.

- Importing a location from another computer does not guarantee that all the software required to use the location is installed. (Apple Location Manager does not install software.) For example, you may import a location that specifies "LaserWriter 300" as the default printer, but the location cannot switch to that printer unless you have the printer's driver software installed. Therefore, it's a good idea to check all the settings in a location you import to verify that they are available on the new computer.
- If you import any location that includes settings for a LaserWriter as the default printer, you must reselect and set up the printer in the Chooser. (Otherwise the location you imported will use the "generic" printer information for your LaserWriter instead of the specific information for the model identified in the original location.) You select and set up a LaserWriter by opening the Chooser, selecting the LaserWriter icon, selecting the printer's name, clicking the Setup button, and clicking Auto Setup. When the printer's model name appears, click OK.
- **Note:** your computer must be connected to the network the printer is on to update the LaserWriter correctly.

Question 4: I have exported a Location and dropped it into my Locations folder located in the Location Manager Prefs folder. Why do I get an error message that Location Manager is not installed correctly?

Answer: This is not the correct way to import a Location into the Location Manager. Please see Question 3 above for the correct way to import a Location.

Question 5: Will At Ease's "Protect System Folder" option prevent Location Manager from switching Locations?

Answer: If you are using At Ease on your computer and you establish Locations for Apple Location Manager, you may see an error message when a module for Location Manager interacts with part of the system software to which access has been restricted by At Ease. You may need to turn off the "Protect System Folder" option so that Location Manager operates correctly.

Question 6: My "Home" and "Office" Locations will be similar, can I duplicate "Home" and then modify it to make the "Office" Location?

Answer: You may Duplicate a Location in the Location Manager in the Location Editing List, select the Location you want to duplicate and then click the Duplicate button.

Question 7: I have created my "Home" Location while I was at home, and then also created my "Office" location at home, but the "Office" Location is not working correctly?

Answer: It is best to make the Location configuration while you are out that location. This way you can set all the different aspects of the Modules you will be adding to this Location, such as the printer you will be using, and then create the Location with these settings being active and working.

Question 8: I want to change the name of one of my Location, I do not see a Rename button?

Answer: To rename a Location, open the Location, and then change the name in the "Location Name" field and then close the Location window. It will ask if you want to save changes, click Save.

Question 9: I no longer use a Location I created. Can I delete this Location so it will no longer be a selection?

Answer: You may Delete a Location in the Location Manager in the Location Editing List, select the Location you want to delete and then click the Delete button.

Question 10: I am editing one of my Locations, and I notice that some of the Modules have a (bullet) in front of them?

Answer: While creating or editing a Location you may notice that a Module has a (bullet) in front of it, this means that the system values for this setting have changed since it was added to the Location you are currently editing. To save the new values, select the Module and then click the "Update" button.

Question 11: When I change to my Location that I named "Office", it reports switching to "Ethernet" in the "Switching to Location" alert box, but when I go to the AppleTalk control panel it is set to Modem/Printer port?

Answer: This applies to all Modules that change a control panel to a Configuration the user created. This includes AppleTalk, TCP/IP and Extensions Manager.

When you change to a Location it will change to the Configuration that you saved with this Location. If you named the Configuration in the AppleTalk control panel "Ethernet" it will report in the "Switching to Location" alert box that it has switched to "Ethernet" when you change the Location. This does not mean this Configuration is changing the AppleTalk control panel to Ethernet, but to the Configuration you named as "Ethernet". This Configuration named "Ethernet" could no longer be set to Ethernet but instead Modem/Printer port. You may have changed this Configuration to Modem/Printer port, or more likely you went into the AppleTalk control panel to change the setting and it asked you to Save and you selected "Save" instead of "Don't Save", thus changed the Configuration "Ethernet" to Modem/Printer port.

Note: To eliminate confusion it is best to name your Configurations the same name as the Location you will be using them with. Name the Configuration you will be using with the "Office" Location as "Office" in the AppleTalk, TCP/IP, and Extensions Manager control panel.

Question 12: When I switch to one of my Locations, an alert box appears that reports "Can't switch between Open Transport and Classic Network. Use the 'Network Software Selector' utility."

Answer: Check your Extensions Manager and make sure that the AppleTalk and TCP/IP control panel are not turned off, if so turn them on and restart. The Network Module is trying to change your Configuration but can not access one of these control panels. Make sure you can open and access both control panels, they may be damaged. The Location Manager requires that the software you wish to change with a Module be loaded properly to work correctly.

Question 13: What other messages can appear in the "Switching to Location" alert box?

Answer: Here are a few of the messages you may get:

- "No settings were changed" - This means that the current setting for this Module was the same as it was previously set.
- "The Auto-Open module cannot open the selected item during startup, It will be opened after the startup process is complete" or"The setting will take effect after startup is complete."- If you switch locations as the computer is starting up, Apple Location Manager may defer changing some settings, such as sound level or auto-opening a document, until the computer's startup procedure is complete. Usually you will see a message reporting that the switch to the new settings is being deferred.
- "Restart Needed" - If the computer has already loaded extensions you will need to restart in order for the new extension configuration to take effect, otherwise the new extensions configuration will load as the computer continues to boot.
- "New settings are available immediately" - The new settings for this module have been changed and have already taken effect.

- "Module Auto-Open Item" is not installed. Setting skipped since the module wasn't found. - The Module, is this example Auto-Open Item, is not located in the Location Manager Modules in the Extensions Folder in the System Folder. You will need to reinstall the Module and then restart the computer in order for the Module to be loaded properly. If you switch locations during startup and then switch again before continuing with the startup process, the deferred settings will only occur for the last location chosen. If there were deferred settings in the first location, they will be skipped.

Question 14: Can I edit multiple Locations at the same time?

Answer: Yes you can edit multiple Locations at the same time. You can have, as an example, your "Home" Location and your "Office" Location windows open side by side. You can even copy the settings you have added from one Location and paste them into another, if this is desired.

Select the Setting you wish to copy in the right hand list of the open Location window, example Time Zone in the "Settings for this Location" list for "Office". Then select copy from the Edit menu, click on the other Location, say "Home", to make it active and select the "Settings for this Location" list and then select paste from the Edit menu. It will not paste a setting that has already been added to this Location, in this example "Home".

Question 15: How can I tell if a Module was written by Apple's or a third party?

Answer: When you are editing a Location click on the Module in question and then hit the Get Info button in the center of the window. All Apple Computer's Modules will have on the first line of the Get Info window the name of the Module followed by Apple Computer. Example: Auto-Open Item Apple Computer.

Question 16: I have installed a new Module in the "Location Manager Modules" folder located in the Extensions Folder in the System Folder but the new Module is not showing up in the Location Manager?

Answer: Try restarting the computer. If you perform a Get Info on one of the Location Manager's Modules the kind is "system extension. "Most Modules require that you restart the computer for them to show up in the Location Manager and to work properly.

Other Apple Location Manager FAQ's can be found in the following articles:

Article 30118: **Apple Location Manager: Frequently Asked Questions (1 of 3)**

Article 31332: **Apple Location Manager: Frequently Asked Questions (3 of 3)**

Published Date: Feb 20, 2012

Apple Location Manager: Frequently Asked Questions (3 of 3)

This article contains frequently asked questions (FAQ) regarding Apple Location Manager, with answers to those questions. Additional Apple Location Manager FAQ articles are listed at the bottom of this article.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. I am using the Apple Guide for the Location Manager, the Location Manager Apple Guide tells me that the software you need, the Apple Location Manager control panel, is not installed.
2. Do I need the Location Manager INIT enabled. I like to run a lean extensions folder and want to disable all the extensions that I can?
3. I have selected in the Location Manager's Preferences to have the Location Manager Always ask me which Location to make active on startup, but it is not bringing up the dialog box?
4. Does the Location Manager use AppleScript to do it's magic?
5. The question mark for the Location Manager's Apple Guide in the upper right hand corner of the Location Manager window is dimmed, or if I click on it nothing happens?
6. I click the question mark to bring up the Location Manager's Apple Guide but it comes up to a blank Apple Guide button with the world Mobility entered but no headings or topics?
7. My Location Manager control strip has a red X going through it?
8. Will there be other Modules I can use with the Location Manager?
9. Can the Location Manager mount servers when I change Locations?
10. If I set the Chooser to open the server at startup, switch to a Location that turns off AppleTalk, and restart, an alert box states: "An AppleShare system error occurred. (Please run the Chooser to activate AppleTalk)."
11. What if there is no Module written to do what I need it to do?
12. Is the Location Manager scriptable?
13. Can I have the Location Manager change to a certain Location every time the computer starts up?
14. Why doesn't the current version (version 1.0) of the Networking Module support changing the PPP control panel configurations which is part of OT/PPP?
15. What are the software components of Location Manager?
16. When I "auto open" a certain control panel, and I click OK in the "Changes Made" window, Apple Script Editor opens, displaying a script. What is causing this?

Question 1: I am using the Apple Guide for the Location Manager, the Location Manager Apple Guide tells me that the software you need, the Apple Location Manager control panel, is not installed.

Answer: You have moved the Location Manager Control Panel out of the Control Panel folder inside the System Folder, or you have disabled the Location Manager with the Extensions Manager. Either move it back and restart or reactivate it in the Extensions Manager and restart to fix this.

Question 2: Do I need the Location Manager INIT enabled. I like to run a lean extensions folder and want to disable all the extensions that I can?

Answer: Yes you must have the Location Manager INIT enable to be able to use the Location Manager.

Question 3: I have selected in the Location Manager's Preferences to have the Location Manager Always ask me which Location to make active on startup, but it is not bringing up the dialog box?

Answer: You may have disabled the Location Manager INIT with the Extensions Manager. Make sure this extensions is active and installed in the Extensions Folder in the System Folder.

Question 4: Does the Location Manager use AppleScript to do it's magic?

Answer: No, you do not have to have AppleScript enabled in order to use the basic functions of the Location Manager. If you choose to have an AppleScript application be an Auto-Open Item then you will need to have AppleScript enabled. Also if you wish to use the Location Manager's Apple Guide then you will need to make sure AppleScript is enabled.

Question 5: The question mark for the Location Manager's Apple Guide in the upper right hand corner of the Location Manager window is dimmed, or if I click on it nothing happens?

Answer: Make sure the Apple Guide and AppleScript extensions are enabled in the Extensions Manager.

Question 6: I click the question mark to bring up the Location Manager's Apple Guide but it comes up to a blank Apple Guide button with the world Mobility entered but no headings or topics?

Answer: Make sure the file "Apple Location Mgr GA" is in the Extensions Folder inside the System Folder.

Question 7: My Location Manager control strip has a red X going through it?

Answer: You may have disabled the Location Manager INIT with the Extensions Manager. Make sure this extensions is active and in the Extensions Folder in the System Folder.

Question 8: Will there be other Modules I can use with the Location Manager?

Answer: In addition to the Modules that ship with the Location Manager software, Apple is also working with third-party developers to create additional Modules. Please refer to the Apple PowerBook web site http://www.powerbook.apple.com for information on additional Modules as they become available.

Question 9: Can the Location Manager mount servers when I change Locations?

Answer: Yes. Mount the server as normal, and then create an alias to it. Then in the Location add the Auto-Open Item Module and have it open this alias.

Question 10: If I set the Chooser to open the server at startup, switch to a Location that turns off AppleTalk, and restart, an alert box states: "An AppleShare system error occurred. (Please run the Chooser to activate AppleTalk)."

Answer: This is because the current Location does not have AppleTalk active. It is best use the Auto-Open Item Module to open an alias of the server as suggested in Question 39, that way only when you are at the location that needs this server will it try to mount.

Question 11: What if there is no Module written to do what I need it to do?

Answer: Remember that one of the Modules is Auto-Open Item. If what you need to do can be accomplished by using AppleScript, you can create an AppleScript application and then use the Auto-Open Item Module to open it up when you switch Locations.

Note: Apple Technical Support provides 90 day complimentary up and running support for AppleScript (installation, compatibility), but does not assist with creating or debugging scripts. Other resources for those wanted to get started with AppleScript include:

- AppleScript Software Development Tool Kit available through the Apple Developer's Catalog
- Several excellent books, available at your local bookstore
- On-line Discussion groups (applescript-users@solutions.apple.com)
- Web resources, such as the Apple Support page (search AppleScript) and http://www.latenightsw.com/scripting.html

Question 12: Is the Location Manager scriptable?

Answer: Yes, it is scriptable but not recordable. It supports the Required Suite (open, print, quit, run) and defines a Class called Location. Which can be used to get the Current Location selected, and to change the Current Location.

Note: Apple Technical Support provides 90 day complimentary up and running support for AppleScript (installation, compatibility), but does not assist with creating or debugging scripts. Other resources for those wanted to get started with AppleScript include:

- AppleScript Software Development Tool Kit available through the Apple Developer's Catalog
- Several excellent books, available at your local bookstore
- On-line Discussion groups (applescript-users@solutions.apple.com)
- Web resources, such as the Apple Support page (search AppleScript) and http://www.latenightsw.com/scripting.html

Question 13: Can I have the Location Manager change to a certain Location every time the computer starts up?

Answer: Apple Location Manager only changes system settings when you tell it to; it does not automatically change settings at startup (although you can use Preferences in the Edit menu to have the program prompt you to change settings). If you want Apple Location Manager to switch to a specific location each time the computer starts up, you can create an AppleScript script that performs that task. Put the script in the Startup Items folder and the location you want will be set at startup. Open the location you want to use at startup, then create the script below. Using the Script Editor application, type the following lines (The following example is from the "Apple Location Manager Read Me" file):

```
tell application "Finder"

    open file ((control panels folder as string) & "Location Manager")

    tell application "Location Manager"

        set current location to location "snd"

    end tell

end tell
```

Copy the script above exactly and substitute the name of your location for "snd"; for instance, type "Sample" if you want the Sample location to be used each time you start up. When finished typing the script, launch "Location Manager" then compile the script.

Note: Apple Technical Support provides 90 day complimentary up and running support for AppleScript (installation, compatibility), but does not assist with creating or debugging scripts. Other resources for those wanted to get started with AppleScript include:

- AppleScript Software Development Tool Kit available through the Apple Developer's Catalog
- Several excellent books, available at your local bookstore
- On-line Discussion groups (applescript-users@solutions.apple.com)
- Web resources, such as the Apple Support page (search AppleScript) and http://www.latenightsw.com/scripting.html

Question 14: Why doesn't the current version (version 1.0) of the Networking Module support changing the PPP control panel configurations which is part of OT/PPP?

Answer: This would only be needed if you have multiple PPP configuration you would like to change with different Locations. Most users probably only have one Internet Service Provider (ISP). The Networking Module is capable of changing the TCP/IP control panel from say Ethernet to PPP. So this is all that would be needed. If you have multiple ISP, or use different phone numbers (different Configurations) depending on which Location you are at, you could add an Auto-Open Item with a Location to open the PPP control panel so then you would only have to change the configuration manually in the PPP control panel.

Question 15: What are the software components of Location Manager?

Answer: The Location Manager consist of the following software components:

- Apple Location Manager Read Me", a text file, located on the hard drive window.
- Location Manager", an application, located in the Control Panels folder.
- Location Manager INIT", an extension, located in the Extensions Folder.
- Apple Location Mgr GA", an Apple Guide document, located in the Extensions Folder in the System Folder.
- Location Manager CSM", a control strip module, located in the Control Strip Modules Folder in the System Folder.
- Location Manager Modules", a folder, located in the Extensions Folder in the System Folder. This contains the Modules that the
- Location Manager can use. After installation of Version 1.0 it contains:
  - Auto-Open Item
  - Default Printer
  - Extensions Mgr
  - File Sharing
  - Network
  - Sound
  - TimeZone
- Location Manager Prefs", a folder, located in the Preference folder inside the System Folder that contains two items:
  - Location Manager 1.0 Prefs", a file.
- Locations", a folder, this contains the created Locations. After installation of version 1.0 will contain one item:
  - Sample"

Question 16: When I "auto open" a certain control panel, and I click OK in the "Changes Made" window, Apple Script Editor opens, displaying a script. What is causing this?

Answer: A corrupted preference is causing the script to open. Trash the Location Manager preferences folder, restart, and set up Location Manager again. You will find that AppleScript will not open in this fashion again.

Other Apple Location Manager FAQ's can be found in the following articles:

Article 30118: **Apple Location Manager: Frequently Asked Questions (1 of 3)**

Article 31331: **Apple Location Manager: Frequently Asked Questions (2 of 3)**

Published Date: Feb 20, 2012

AppleWorks 6 Update: Mac OS 9.1 and Mac OS X Installation

This article describes how AppleWorks 6 is installed in Mac OS 9.1 and Mac OS X 10.0 when updating from AppleWorks 6.x to AppleWorks 6.2
This article has been archived and is no longer updated by Apple.
The AppleWorks 6.2 Updater replaces your AppleWorks 6.x application with an application package that contains both AppleWorks 6.2 for Mac OS X 10.0, and AppleWorks 6.1.2 for Mac OS 8.1 through Mac OS 9.x.

An application package is not a single executable file, but a package of files that includes one or more executable binaries. In this case, the package contains two binaries, one for Mac OS 9.1, and one for Mac OS X 10.0.

Mac OS 9.1 Installation

When you start up a computer with Mac OS 9.1, and double-click on the AppleWorks 6.app file, AppleWorks 6.1 for Mac OS 9.1 opens.

Mac OS X Installation

When you start up a computer with Mac OS X 10.0, and double-click on the AppleWorks 6 file, the AppleWorks 6.2 for Mac OS X 10.0 opens.

Note: The ".app" extension is not visible in Mac OS X 10.0. The filename will appear as "AppleWorks 6" when in Mac OS X 10.0, and as "AppleWorks 6.app" when in Mac OS 9.1.

Published Date: Oct 11, 2016

Macintosh Manager 1.4: Explanation of the AFP File Server Usage Graph

This article explains the AFP File Server Usage graph in the Server Tab of Macintosh Manager Admin.
This article has been archived and is no longer updated by Apple.
In Macintosh Manager Admin, under the Server Tab, there is a graph that represents AFP File Server Usage of the Macintosh Management Authentication Server. The purple areas represent the actual server utilization for that time and the black line represents the average usage during that time. (See Figure 1)

Figure 1 AFP File Server Usage graph

The black line is usually most important when reading this graph to determine the sustained server load. It's possible (for example) to have a peak for a second or two and the purple will hit 100 percent but the black line might show the average usage to be around 20 percent. If the black line consistently runs high (above 80 percent), you should think about splitting up your Documents Storage between multiple servers or upgrading your current Macintosh Management Server to a faster server.

For information on saving files between multiple servers, see article 31265: "**Macintosh Manager 1.3: Saving Workgroup Documents to Another Volume**."

Published Date: Feb 20, 2012

QuickTime: Not All Keys Enable Pro Features

Not all QuickTime Pro keys will enable the pro features of QuickTime 5. This article explains which keys will and will not enable pro features.

This article has been archived and is no longer updated by Apple.

Not all QuickTime Pro keys will enable the pro features of QuickTime 5.

- QuickTime 3 Pro keys do not enable QuickTime 5 Pro features.
- QuickTime 4 Pro keys purchased before 2000-10-12 **do not** enable QuickTime 5 Pro features.
- QuickTime 4 Pro keys purchased on or after 2000-10-12 enable QuickTime 5 Pro features.
- QuickTime 5 Pro keys purchased after 2000-10-12 enable QuickTime 5 Pro features.

If you purchased a QuickTime Pro key before the above date, you **must** purchase a new key to enable QuickTime 5 Pro features. New keys may be purchased from The Apple Store (http://www.apple.com/store/) .

QuickTime 6 Pro
QuickTime 6 replaces earlier versions of QuickTime. A QuickTime 6 Pro key is required to unlock Pro features of QuickTime 6. If you wish to use a QuickTime 4 or 5 Pro key, you need to use an earlier version of QuickTime, which you can download from the Apple Support Web site (http://www.info.apple.com/usen/QuickTime/).

Published Date: Feb 20, 2012

Mac OS: Apple CD Audio Player and CD Control Installation

This article explains where to find and how to install AppleCD Audio Player and the CD control strip.

This article has been archived and is no longer updated by Apple.

Symptom

The Apple CD Audio player and the CD control strip are not installed on the computer.

Solution

Apple installs iTunes as the audio player of choice for listening to CDs. iTunes lets you create your own personal digital music library, allowing you to manage and play your collection of high-quality MP3s with drag-and-drop simplicity. With a compatible CD-RW drive, you can even create your own custom audio CDs for use in your car or home stereo system. Check out the iTunes Web site at http://www.apple.com/itunes/ .

However, if you want to use either AppleCD Audio Player or the CD control strip, the software is located on the Software Install CD. The following steps explain how to install the software.

1. Insert the Software Install CD.
2. Double-click the CD icon.
3. Double-click the CD Extras Folder.
4. Double-click the AppleCD Audio Player folder.
5. Drag copy the AppleCD Audio Player application onto the hard disk. (Place this application where it is convenient.)
6. Drag the CDStrip module on top of the closed System Folder. The files will be auto-routed to the correct folder within the System Folder. (Avoid lingering over the System Folder while drag coping or Mac OS spring loaded folder feature may open the folder.)
7. Restart the computer to activate the CD control strip.

You will now be able to use the AppleCD Audio Player and the CD control strip to listen to audio CDs.

Published Date: Oct 11, 2016

Macintosh Manager: FireWire Drives and Multiple Users Interaction

This article describes how different Macintosh Manager and Multiple Users users interact with removable media privileges and a FireWire hard drive connected to the same client computer.
This article has been archived and is no longer updated by Apple.

Symptom

A user who does not have "removable media" privileges logs in to a computer that has a FireWire hard drive connected to it and then logs out. A user with "removable media" privileges logs in, but the FireWire hard disk icon does not appear on the desktop. The only solution to re-enable access to the FireWire hard drive is to restart the computer.

To avoid a this symptom, a Macintosh Manager administrator or system owner must grant the "removable media" privilege to any users and their workgroup that could potentially log into a computer that has a FireWire hard drive connected to it.

These symptoms could potentially arise in either Macintosh Manager or Multiple Users if there is a mix of Removable Media privileges amongst workgroups (Macintosh Manager) or users (Multiple Users) logging into the same client computer.

Note: RAM disks are also considered a form of removable media. For details about RAM disk interaction the Macintosh Manager and Multiple Users environment, please see article number 31339: **Macintosh Manager: RAM Disks and Multiple Users Interaction** .

Solution

Macintosh Manager

1. Use the Macintosh Manager application to enable Read/Write access for Removable Media (Except CDs).
2. In the Macintosh Manager application, this setting can be set for each Restricted Finder and Panels workgroup and is located:
Workgroups tab -> <select workgroup> -> Privileges tab
3. In the Privileges section of the Privileges tab, choose Read & Write from the Removable Media (Except CDs) pop-up menu.

Multiple Users

1. Use the Multiple Users control panel to enable Read/Write access for other removable media.
2. In the Multiple Users control panel, this setting must be set for each Limited and Panels user and is located:
<select user> -> Click Open -> Edit "<user name>" window ->Privileges tab
3. In the "Allow access to" section of the Privileges tab, select "Other removable media"
4. Close the Edit "<user name>" window.

Published Date: Feb 20, 2012

Macintosh Manager: Disk Quota Behavior Described

This article describes Macintosh Manager disk quota.
This article has been archived and is no longer updated by Apple.

Symptom

Macintosh Manager enforces Soft Disk Quotas rather than Hard Disk Quotas.

Definitions

Soft Disk Quotas: User accounts have a fixed amount of disk space in their documents folder, which can be used for any purpose. Macintosh Manager enforces Soft Quotas by allowing the user to exceed the defined disk quota in order to save a single file. However, users are subsequently prevented from saving additional files because the quota has been exceeded.

Hard Disk Quota: This feature prevents users from exceeding their defined quotas before they can try to save a file. This is not a feature of Macintosh Manager.

Solution

Macintosh Manager administrators should periodically check user folder size to determine if quotas have been exceeded in order to prevent server volumes from becoming too full. This can be easily accomplished manually or by using Sherlock, AppleScript, or a third-party file utility.

Note: Enabling Macintosh Manager's disk quota feature and setting the value to 0 (zero) does not enforce a disk quota. Use a value of 1 or higher to enforce a disk quota.

Published Date: Feb 20, 2012

Macintosh Manager: RAM Disks and Multiple Users Interaction

This article discusses RAM disk usage in the Macintosh Manager or Multiple User environments. RAM disks are considered removable media while using the Macintosh Manager or Multiple User environments
This article has been archived and is no longer updated by Apple.

Symptom

Mac OS 9.x

RAM disks disappear from the desktop when a user logs out of the Macintosh Manager and Multiple User environments.

Mac OS 8.6 and earlier

An alert box appears with this message, and you have to restart the computer:

> "You do not have access privileges to use removable media volumes."

Solution

If the Macintosh Manager administrator wishes to grant access to RAM disks on client computers, the following settings should be enabled.

1. In the Macintosh Manager Admin Utility, enable "Read/Write access to Removable Media (except CDs)" under the Workgroups Tab:Privileges Tab:Privileges box:Removable Media (except CDs)

2. In Multiple Users, each user must be granted access to removable media separately. This setting is located in the Details section of each user account under the Privileges Tab: Other Removable Media.

3. In order to avoid the above symptoms an administrator must grant the Removable Media privilege to all workgroups (Macintosh Manager) or users (Multiple Users) who could potentially log in to a client using a RAM disk.

Note: Each client computer maintains the contents of the RAM disk locally, not the Macintosh Manager server. All users will have Read/Write access to the RAM disk if they are granted access to removable media. RAM disk contents are lost in the event of a loss of power or other improper shutdown of the computer.
Published Date: Feb 20, 2012

DVD Studio Pro: CMF and DDP Formats Overview

This article describes CMF and DDP formats as used when exporting a project to DLT tape.
This article has been archived and is no longer updated by Apple.
When building and formatting a project for DLT tape using DVD Studio Pro, there is an option to export as DDP or CMF.

DDP 2.0 (Disc Description Protocol)

DDP is an earlier format that was used by DVD replication facilities. Before CMF (Cutting Master Format) became a standard, a DVD-R disc could be used for testing a DVD-Video movie project, but could not be used as the master image. When DDP was the standard, you still had to write your project to DLT tape. DDP has been replaced by the Cutting Master Format, and you can supply either a DVD-R or a DLT tape as your master image.

CMF (Cutting Master Format)

CMF is the more common format for DLT tapes. DDP is an option in DVD Studio Pro because some replication facilities may require DDP format.

Published Date: Oct 11, 2016

DVD Studio Pro: Audio/Video Sync Drifts During Preview

When previewing a long project in DVD Studio Pro, in some instances the audio and video may be out-of-sync.
This article has been archived and is no longer updated by Apple.

Symptom

When previewing a long project in DVD Studio Pro, in some instances the audio and video may be out-of-sync unless the following steps are taken.

The preview is generated from three different decoders (audio, video and navigation) without a common time base. This occurs with especially long tracks or when SKIP actions using markers are involved. This only affects the preview mode.

Solution

For a more accurate preview, multiplex your project and preview it in Apple DVD Player.

1. In DVD Studio Pro, choose Build Project from the File menu, then select the destination for the built project.

2. In Apple DVD Player, make sure the option "Add 'Open VIDEO_TS' menu item to File Menu" is selected. This is under the Advanced Controls tab in Apple DVD Player preferences.

3. In Apple DVD Player, choose Open VIDEO_TS from the File menu, locate the VIDEO_TS folder you created, and preview the project.

Published Date: Oct 11, 2016

Power Mac G4 (Digital Audio): 40 GB and 60 GB Hard Drive Issue

This article discusses an issue with the 40 GB and 60 GB Quantum hard drives used in Power Macintosh G4 (Digital Audio) computers. It explains how to determine if your computer is affected and what steps you should take if it is.
This article has been archived and is no longer updated by Apple.

Symptom

Apple has become aware of an issue with 40 GB and 60 GB Quantum hard drives used in Power Mac G4 (Digital Audio) computers. A limited number of these drives have been found to damage files, cause data loss, and potentially prevent the computer from starting up. Only a small number of the computers built with these hard drives are affected. You can find out if your computer is affected by determining if its serial number falls within a certain range of numbers outlined below.

Solution

Identify the computer

Follow these steps to identify affected computers.

1. Check your computer's serial number. (It is located on the rear of the computer just below the power sockets).
2. Determine if the serial number begins with the characters "XA115". The complete serial number will have an additional six characters, and the whole format would look like this: " XA115XXXXXX", where the x can be any letter or number.

If the serial number begins with "XA115" then continue with the next step. If it does not begin with "XA115" then your computer's hard drive is not affected by this issue.

Identify the drive

Use Apple System Profiler to identify the model number and serial number of your computer's Quantum hard drive.

1. Open the Apple System Profiler application from the Apple menu.
2. Click the Devices and Volumes tab.
3. In the Devices and Volumes window, click the disclosure triangle next to Hard Drive and to the right of the Internal ATA 1 line.

A small box will open containing information about your computer's hard drive. If the vendor name is Quantum and the Product ID number is FIREBALLP AS40.0, for the 40 GB drive, or FIREBALLP AS60.0, for the 60 GB drive, this drive should be replaced. If another vendor's name and Product ID number appears, there is no need to replace the drive.

Please contact Apple to order a replacement drive or contact your local Apple Authorized Service Provider to have the drive replaced. This repair will be covered under the computer's limited warranty.

Notes

1. This issue only affects computers purchased in Canada and the United States.

Published Date: Oct 11, 2016

Network Assistant 4: Computer Won‘t Restart

When you try to restart a Network Assistant 4 client, the computer stops responding. A blank screen appears, as if the computer were restarting, but the power light (LED) remains on.

This article has been archived and is no longer updated by Apple.

Symptom

When you try to restart a Network Assistant 4 client, the computer stops responding. A blank screen appears, as if the computer were restarting, but the power light (LED) remains on.

Solution

Deselect the Voice Verification option in the Multiple Users control panel.

Note: Macintosh Manager clients must be logged out, or a dialog box will appear on the screen preventing the computer from restarting.

Published Date: Feb 20, 2012

Mac OS: Flashing Globe When Computer Turns On

If the Network Disk icon is selected in the Startup Disk control panel, and the computer is not connected to a NetBoot server, the computer will take significantly longer to start up.

This article has been archived and is no longer updated by Apple.

Symptom

The following startup sequence is observed:

1. The computer begins to start up.
2. A flashing or blinking globe appears on the screen. (This can last several minutes.)
3. A folder that has an alternating flashing question mark and the Mac OS logo inside appears on the screen. (This can last several minutes.)
4. The computer starts up normally.

Solution

This is happening because Network Disk is selected in the Startup Disk control panel and no NetBoot servers are available.

To resolve this issue, follow these steps:

1. Open the Startup Disk control panel.
2. Select the appropriate startup disk icon.
3. Close the Startup Disk control panel.
4. Restart the computer.

Published Date: Oct 11, 2016

PCMCIA for PowerBook: Frequently Asked Questions (2 of 2)

This article contains frequently asked questions (FAQ) regarding the PowerBook PCMCIA Expansion Module for the PowerBook 500 series, and the built-in PCMCIA (PC card) bay used in many other PowerBook computers, with answers to these questions.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. I inserted a modem card into my PowerBook, but nothing happened. What's wrong?
2. When I set up my fax software, it worked fine. Now, it never dials.
3. I'm getting the message that the modem card can't be ejected from my PowerBook because it's in use, but it's not in use.
4. The PCMCIA modem acts differently than an external modem rated at the same speed with the same software. Why is this?
5. I'm trying to eject a storage card, but my computer tells me I can't because the card is in use. But its not in use! There are absolutely no files or programs open.
6. Can I copy documents onto a storage card so that someone using a DOS-compatible laptop with a PCMCIA slot can read them after inserting the card?
7. What does PCMCIA stand for?
8. I inserted a hard drive into my PowerBook, and it has trouble ejecting.
9. I get poor and erratic results using a cellular phone with my PCMCIA modem.
10. I'm using a mass storage card with a Macintosh and a PC. Each computer shows a different set of files and folders, and claims to have the entire hard drive.
11. Dragging the icon to the trash (or using the other software controls) to eject a card sometimes does not work. I get a message that the card was not ejected successfully. But sometimes this same card does eject just fine.
12. Some cards are ejected all the way out and slide across my desk. Can the card be damaged if it falls off the desk?
13. Sometimes I get poor throughput or failed file transfers when I'm using a high-speed modem connection. Sometimes it works fine. Why?
14. Where else can I go for answers about my PowerBook?
15. Where can I get the latest Apple software updates for my PowerBook?

Question 1: I inserted a modem card into my PowerBook, but nothing happened. What's wrong?

Answer: In first release of the PCMCIA Expansion Module, modem cards don't appear on the desktop. If the PCMCIA Quick Eject control strip module is visible, then its appearance will reflect that either the upper or lower slot (or both) contains cards. If the control strip isn't visible (or isn't installed) then there will be no visible change when a modem card is inserted. However, the insertion of a modem is sensed by the software, and the modem is added to the list of devices available in the CTB (Communications Toolbox).

Programs which support the CTB (including MicroPhone, ARA) will display either upper card slot or lower card slot (or both, if you've inserted two PCMCIA modems) when you have the program open and are looking at the Connection dialog. The name and location of this setup command will vary from program to program. There's a popup menu in which you specify which port contains the modem you wish to use. With a PCMCIA modem, the names of the ports will always be either upper card slot or lower card slot. These ports only show up in the list while a modem is inserted in a slot.

This is different from the traditional printer and modem ports, which always appear, regardless of whether you have an external modem plugged into them. In the case of the PowerBook 500, 5300, 1400,and 190 series, which has only one physical serial port, it's called Printer-Modem Port.

With the PowerBook 5300, 1400 and 190 series, a PC Card's icon should always appear on the desktop if it is being recognized. If the icon does not appear, check to make sure all of the appropriate software is installed.

Question 2: When I set up my fax software, it worked fine. Now, it never dials.

Answer: Sometimes software doesn't successfully store the identity of the port to which your modem is connected. The software may have fallen back to its default of the Printer-Modem port. Or, you might have inserted the modem into a different slot than you used last time. Check the connection settings of your software; for the port, select either upper card slot or lower card slot as appropriate.

Question 3: I'm getting the message that the modem card can't be ejected from my PowerBook because it's in use, but it's not in use.

Answer: Some software, such as fax modem software, will put the modem into auto-answer mode. The modem may have to be considered busy while the modem listens for an incoming call. This can happen with a background process or a system extension, in which case there doesn't have to be an open application. Launch your software and check the setup controls to see if auto-answer is on. For example, if there's a control for Answer on <3> rings, you might have to temporarily turn the modem software off or set it to Answer on <never> to free up and then eject the modem. Refer to the users guide which came with your modem software for more information.

Question 4: The PCMCIA modem acts differently than an external modem rated at the same speed with the same software. Why is this?

Answer: Modems differ in their use of the Hayes command set. The PCMCIA Expansion Module and PowerBook 5300/1400 allow you to plug in a modem, but operating the modem and setting up your software to use the modem and connect to other services is not within the control of the PCMCIA hardware and software. You need to consult the user guide and/or the tech support service of your modem manufacturer and your modem software publisher to determine the correct AT commands.

To determine whether or not the modem is being made available (which is all that Apple's software is responsible for), get into the setup connection dialog. Its exact name and location varies from program to program. The method or tool (again, terms vary) should usually be Serial Tool. In some cases, Apple Modem Tool will also work.

When Serial Tool is selected, a window containing choices for port should appear. This window might have a horizontal scroll bar. The window will likely contain icons named, for example, modem/printer and upper card slot. If either upper card slot or lower card slot appears, then the PowerBook is working correctly (If the window also contains internal modem, then you have a built-in internal modem. This is not the same as your PCMCIA modem.) You should click the upper card slot (or lower card slot) icon to select the PCMCIA modem.

Further modem configuration, such as speed, handshaking, setup strings, AT commands, and so on, are the responsibility of the user, and the modem and software provider. Those settings should not be affected by whether the user has a modem plugged into the PCMCIA slot or an external modem plugged into the back of the computer. The PCMCIA Expansion Module and the 5300/1400 makes the modem available, but it does not control it.

Question 5: I'm trying to eject a storage card, but the computer tells me I can't because the card is in use. But its not in use! There are absolutely no files or programs open.

Answer: This is common when people start using any type of removable media, such as Syquest drives or PCMCIA cards. If File Sharing is on, then any drive which was in the computer when it started up can not be dismounted. Temporarily turn off File Sharing by using either the Control Strip module which looks like a folder or the Control Panel named Sharing Setup. After removing the card, you can turn File Sharing back on.

Question 6: Can I copy documents onto a storage card with my PowerBook so that someone using a DOS-compatible laptop with a PCMCIA slot can read them after inserting the card?

Answer: If you initialize a PCMCIA storage card on your Macintosh, it will be a Macintosh formatted volume, and a DOS-compatible laptop will probably not be able to recognize it unless her computer has software meant to translate Macintosh disks.

However, if you're using PC Exchange 2.0.2 or later, then a PCMCIA card formatted on a DOS machine should be readable. PC Exchange version 1.x handles DOS floppies only (not hard disks or removable devices like PCMCIA).

Question 7: What does PCMCIA stand for?

Answer: It stands for Personal Computer Memory Card International Association.

Question 8: I inserted a hard drive into my PowerBook, and it has trouble ejecting.

Answer: Some drives use a case that's not perfectly rectangular. The unusual shape can cause issues during ejection. If any card can not be ejected, even when you insert a paper clip into the proper hole, the card will need to be removed by an Apple Authorized Service Provider.

Note: The following unsupported workaround allows use of these types of cards: Insert a type I or Type II card (such as a modem or ATA flash card) into the top slot. Using a pair of needle nose pliers, pull the card out of the top slot. (If it was a storage card, and its icon had appeared on the desktop, drag the icon to the trash.) Physically pulling the card out of the slot without using any of the software ejection controls will leave the springs and levers in the top slot cocked back out of the way. The drive can then be inserted, used, and ejected normally. When you're done using the drive, insert a card into the top slot (as you do so you will not feel any resistance, because the springs are already cocked back). Then use the control panel or control strip to remove the card. It will auto-eject, and the springs will return to their normal position.

Question 9: I get poor and erratic results using a cellular phone with my PCMCIA modem.

Answer: Cellular modem connections can suffer from a variety of issues:

Signal Strength
Even though the phone itself indicates a strong signal, and voice calls are fine, data connections may be unreliable. If possible, try moving to a different area, preferably away from buildings and towards a known cell site.

Connection Speed
Connecting at 4800 bps or 7200 bps is often more successful than either 2400 or 9600 bps. If you add the AT command %B4800 or %B7200 to the modem initialization string of your communications program, your modem will only try to connect at that speed. It won't negotiate a speed with the other modem. This can significantly improve connections.

Sensitivity To Temporary Carrier Loss
Cellular connections undergo temporary interruptions much more often than traditional land-based phone lines. For example, when your connection is handed off from one cell to another (which can occur even when you are not moving), it's not uncommon for the carrier signal to disappear for an instant and then be reconnected. This happens automatically, usually without your noticing.

Modems use the S10 register to determine how long to wait before permanently hanging up the connection when a loss of carrier is detected. The duration of carrier loss which a modem will withstand before giving up the host varies from modem to modem, but many of the modems you're likely to connect to (such as those at online services) are likely to have a very short duration specified in the S10 register.\\

Even if your cellular modem's S10 register has been set (via a connection script or options file) to be tolerant of long periods of carrier loss, if the remote modem to which you're connecting to has a small value in the S10 register, your connection may fail often. If possible, ask the person in control of the other modem to set a larger value in the S10 register. Most modems allow a value from 1 to 255 (measured in tenths of a second). The default is often 14 tenths. Increasing this value to, say, 100 or more tenths.

Question 10: I'm using a mass storage card with a Macintosh and a PC. Each computer shows a different set of files and folders, and claims to have the entire hard drive.

Answer: This can happen if you take a Macintosh-formatted card, then initialize it on certain PC configurations, and then bring it back to the Macintosh for use under PC Exchange.

The Mac files and folders should all be gone, (because of the PC initialization) but they're still visible. During the initialization on the PC, the part of the disk which contained the Macintosh directory information wasn't deleted as it should have been. The drive is now in a dangerous and vulnerable state! Some of the files may still be opened (on each respective machine), but there are no guarantees, and the drive will certainly become corrupted if you continue to put more files on it.

If you have a drive in this state, you should immediately copy the files to a different location, such as the computer's internal hard disk. Do this both on the Macintosh and the PC. You may receive error messages, and some of the files may not be copied successfully, because each computer thinks it has full ownership of the same areas of the disk.

So far, this behavior has been seen only when the PC initialization is done with the IBM driver on a ThinkPad. The driver which comes with Ventura Micro software does not have this issue. Other versions of C&SS (Card & Socket Services) running on the ThinkPad are still under investigation.

If you reinitialize the drive in the Macintosh (using the Erase Disk command in the Special menu), it will no longer be recognizable to the PC, and you will be able to use it again safely if you use it only in the Macintosh.

Cards which are formatted on the PC (and never formatted on the Macintosh) can be used successfully going back and forth. The issue only occurs when a Macintosh-format card is re-formatted on a PC.

Question 11: Dragging the icon to the trash (or using the other software controls) to eject a card sometimes does not work. I get a message that the card was not ejected successfully. But sometimes this same card does eject just fine. Why?

Answer: Occasionally a card may not seat itself fully and cock the springs back quite all the way, so that the springs cannot push the card out when you request an ejection. Try pushing first on one corner of the card, making sure its firmly seated, then try the ejection again. If that does not work, push the other corner of the card and try the ejection.

If the card still does not auto-eject, you'll have to manually eject the card by inserting a bent paper clip into the hole next to the card. Notice that the upper and lower slots each have their own ejection hole.

Question 12: Some cards are ejected all the way out and slide across my desk. Can the card be damaged if it falls off the desk?

Answer: The amount of force necessary to disconnect the card from the internal connector and push it out varies widely from card to card. Type III hard drives are much heavier than Type I ATA flash cards, for example. For that reason its inevitable that some cards may come out far enough to leave the computer completely. PCMCIA cards are designed for the unpredictable rigors of portable computer users, and the chance of damaging the card is very low.

Question 13: Sometimes I get poor throughput or failed file transfers when I'm using a high-speed modem connection. Sometimes it works fine. Why?

Answer: If you have LocalTalk active, it can interfere with other high-speed serial activity. Modem connections with DTE or port speeds of 19,200 and above can be particularly sensitive to this issue.

If you're using LocalTalk, consider turning AppleTalk off (using the Chooser) while you're doing modem transfers. Keeping your DTE or port speed the same as your modem connection can help. Using hardware handshaking can also help. Consult the documentation for your modem and communication software for more information about DTE speed and hardware handshaking.

Question 14: Where else can I go for answers about my PowerBook?

Answer: If you haven't done so already, check the other PowerBook FAQ documents. Also, depending on where you found this FAQ, you should have access to Apple's Knowledge Base - located on the Internet at: <http://kbase.info.apple.com/>. This knowledge base is Apple's official tech support database and contains thousands of technical articles which are easily searchable.

Question 15: Where can I get the latest Apple software updates for my PowerBook?

Answer: To find the most recent version of Apple software, consult the Apple Software Updates Library at http://www.apple.com/swupdates .

Other PCMCIA for PowerBook FAQ's can be found in the following article:

TA25441_PCMCIA_for_PowerBook_Frequently_Asked_Questions_of_.pdf

- Article 16167: **PCMCIA for PowerBook: Frequently Asked Questions (1 of 2)**

Published Date: Oct 11, 2016

Mac OS 9.1: Outlook Express Unexpected Quits After Upgrading from Mac OS 9.0.4

Outlook Express may unexpectedly quit when trying to send an email on a computer with a Spanish or Swedish version of Mac OS 9.1 that has been upgraded from Mac OS 9.0.4.
This article has been archived and is no longer updated by Apple.

Symptom

Outlook Express unexpectedly quits with an error of type 2 when you try to send an email.

Solution

This is caused because duplicate versions of Text Encoding Converters files are installed.

Follow these steps to remove duplicate files from the Text Encodings folder:

Swedish Mac OS 9.1

1. Open the folder called Teckenkonvertering in the Systemmapp.

2. Drag the following Text Encoding files to the Trash.

- Västeuropeisk kodning
- Unicode-kodning
- Turkisk kodning
- Thai-kodning
- Symbol-kodning
- Koreansk kodning
- Japansk kodning
- Indisk kodning
- Hebreisk kodning
- Grekisk kodning
- Kyrillisk kodning
- Kinesisk kodning
- Kinesisk kodning (tillägg)
- Centraleuropeisk kodning
- Arabisk kodning

3. Restart the computer.

Spanish Mac OS 9.1

1. Open the folder called Codificaciones de texto in the Carpeta del Sistema.

2. Drag the following Text Encoding files to the Trash.

- Codificación Arabica
- Codificación Japonesa
- Codificación Centro Europea
- Codificación Coreana
- Codificación China
- Codificación de simbolos
- Adiciones codificaciones chinas
- Codificación Tailandensa
- Codificación Cirillica
- Codificación Turca
- Codificación Griega
- Codificación Unicode
- Codificación Hebrea
- Codificación de Lenguages del Este
- Codificación Indias

3. Restart the computer.

Published Date: Feb 20, 2012

Mac OS: Alert Appears When FireWire Hard Drive Is Disconnected

An alert appears when you disconnect a FireWire hard drive without choosing Put Away or Eject.

This article has been archived and is no longer updated by Apple.

Symptom

An alert appears when you disconnect a FireWire hard drive without choosing Put Awaw or Eject.

Mac OS X 10.0 Message

> "The storage device that you just removed was not properly put away before being removed from this computer. Data on the device may have been damaged or lost. In the future, please put away the device (Choose its icon and Eject it or Drag it to trash) before removing the device."

Mac OS 9 message

> "A FireWire disk has stopped responding. The problem must be corrected to prevent damaging the disk's contents. Please check all FireWire connections. If you added, removed, or turned a FireWire device on or off, try undoing what you did."

Solution

You should always put away a FireWire hard drive's disk icon(s) before disconnecting its cable or power.

Additional information

Mac OS 9
The computer is unusable until you dismiss the alert. Reconnect the FireWire cable to the computer and put away the drive's disk icon(s) by dragging it to the Trash. Or click its icon and choose Put Away from the file menu or Eject from the Special menu. You can also use the keyboard shortcuts by pressing the Command-Y keys or Command-E keys.

Mac OS X 10.0
Simply click OK, and continue working. However, you should reconnect the FireWire cable and put away the drive's hard disk icon(s) by dragging it to the Trash, Or click its icon and choose Eject from the File menu. You can also use the keyboard shortcuts by pressing the Command-E keys.

Published Date: Oct 11, 2016

Final Cut Pro and Final Cut Express: Compatibility With Multiple Users and Macintosh Manager

This article has been archived and is no longer updated by Apple.

Learn compatibility information about Final Cut Pro and Final Cut Express with multiple user configurations.

Multiple Users for Mac OS X

All local users can use Final Cut Pro and Final Cut Express in Mac OS X. Both Admin and non-admin users are supported. **Note**: Final Cut Pro and Final Cut Express should be installed only when logged in as an Admin user.

Macintosh Manager

Final Cut Pro and Final Cut Express do not work with a Macintosh Manager server environment.

NetBoot

Final Cut Pro and Final Cut Express are not supported with NetBoot. See "**Final Cut Pro and Final Cut Express: Not Compatible With NetInfo Login**" for more information

Multiple Users for Mac OS 9

Final Cut Pro 3 can be used in a single-computer multiple users environment using the Multiple Users control panel in Mac OS 9. Follow these steps to configure Multiple Users for Final Cut Pro 3 in Mac OS 9:

1. Install Final Cut Pro as an administrator.
2. Open the application.
3. Enter a name and serial number (provided with Final Cut Pro).
4. Quit the application.
5. Add Final Cut Pro to the User Applications list for each "limited" user in the Multiple Users control panel.

Published Date: Feb 20, 2012

Mac OS: "Can‘t Open Preferences File" Message

When a control panel is opened, an alert box with this message appears: "Can't open the 'control panels name' preferences file."
This article has been archived and is no longer updated by Apple.

Symptom

When a control panel is opened, an alert box with this message appears:

> "Can't open the 'control panels name' preferences file."

Solution

The preferences file can sometimes become unusable, resulting in unpredictable behaviors. This is easily fixed by following these steps:

1. Open the System Folder.
2. Open the Preferences Folder.
3. Drag the preference file in question to the Trash.
4. Choose Empty Trash from the Special menu.
5. Restart the computer. The control panel reverts to its default settings.
6. Open the control panel.
7. Reset the desired preferences to match what they were before.

Tip

You can save a good copy of a preferences file to avoid recreating custom settings if this symptom happens again:

1. Make a duplicate of the preferences file immediately after it is installed and set up for the first time.
2. Put the file in a safe place.

If you have to delete the preferences file again, you can simply replace it with a duplicate of the saved, clean file. This preserves your desired preference settings, and reduces any unwanted behavior that may have been caused by a unusable Preferences file.

Published Date: Oct 11, 2016

Deleting same-name user‘s folder in Mac OS 9.1 affects Mac OS X

After deleting a user's folder (home folder) in Mac OS 9.1, you are unable to use Mac OS X as that user.
This article has been archived and is no longer updated by Apple.

Symptom

After deleting a user's folder (home folder) in Mac OS 9.1, you are unable to use Mac OS X as that user. The Dock may contain several generic folder icons instead of applications; the user's desktop items, user-specific System Preference settings, Documents, Library, Movies, Music, Pictures, Public, Sites folders and contents may be lost.

Solution

The following two scenarios cause this issue:

1. You dragged the user's folder, or the entire Users folder to the Trash and then emptied the Trash.

Solution

Do not manually delete the Users folder or user's individual folder through the Finder. To properly delete a Mac OS X user, use the Users pane in the Mac OS X System Preferences application.

2. You created a user with the same name in the Mac OS 9.1 Multiple Users control panel, and the existing folder was deleted.

Solution

In the Mac OS 9.1 Multiple Users control panel, if a new user is created with the same name as a Mac OS X user, the following message appears:

> "A user folder for '<user name>' already exists. Do you want to keep the existing data, or delete the entire folder?"

Click Keep instead of Delete.

Alternatively, you may wish to use a different user name. If you clicked Delete and the deleted user's folder was the only user created for Mac OS X, you may need to reinstall Mac OS X.

However, if you previously created another (admin) user name, you may log out and log in with that name. You may then recreate the original user name in the Users pane, without reinstalling Mac OS X. However, the user's previous settings and documents will not be restored.

Notes

1. This issue cannot occur within the Classic environment of Mac OS X, nor if Mac OS X and Mac OS 9.1 are installed on different hard disk volumes.

2. You should always avoid deleting Mac OS X user folders while started up from Mac OS 9.1. Use the Mac OS X System Preferences to manage Mac OS X users instead of the Mac OS 9.1 Finder or Multiple Users control panel.

Related Documents

106167 Mac OS X: Using Your Home Directory
106256 Mac OS X 10.0: Deleting a Former User's Home Directory (Folder)
106241 Mac OS X 10.0: Generic Folders Appear in the Dock and Applications Folder

Published Date: Oct 11, 2016

Macintosh: How to Record Sounds Without a Sound Input Port

You can use a third-party microphone to record sounds on computers that do not have a sound input port.

This article has been archived and is no longer updated by Apple.

To record sounds on a computer that does not have a sound input port, you must purchase an external microphone or audio adapter that connects to the computer's Universal Serial Bus (USB) port(s). Click the Macintosh Products Guide link on the Apple USB Web site (http://www.apple.com/usb/) to find a USB microphone or USB audio adapter. Follow the instructions that come with your microphone to record sounds.

These computers do not have a sound input port:

- Power Mac G4 (QuickSilver)
- Power Mac G4 (QuickSilver 2002)
- Power Mac G4 (Digital Audio)
- Power Mac G4 Cube (CD-RW)
- Power Mac G4 Cube
- iBook
- iBook (FireWire)

These computers have a built-in microphone but do not have a sound input port:

- PowerBook G4
- PowerBook G4 (Gigabit Ethernet)
- iBook (Dual USB)
- iMac (Flat Panel)

For additional information, see technical document 58764: "**iMac (Flat Panel), Power Mac G4 (Digital Audio) and (QuickSilver): Sound Output Ports.**"

Note: The listing of these third-party products is for informational purposes only, and constitutes neither an endorsement nor a recommendation of these products.

Published Date: Oct 11, 2016

AppleWorks 6.2 Updater: Installer Will Not Open

With CarbonLib 1.3.1 or later installed and Extensions off, the AppleWorks 6.2 Update installer will not open.

This article has been archived and is no longer updated by Apple.

Symptom

With CarbonLib 1.3.1 or later installed and Extensions off, the AppleWorks 6.2 Update installer will not open. After double-clicking the AppleWorks 6.2 Update installer, an alert box with the following message appears:

Figure 1 AppleWorks 6.2 Update installer alert

Solution

Restart your computer with extensions enabled and open the updater again.

Published Date: Feb 20, 2012

Disc Burner: Filenames on CD-R Discs Truncated on Windows-Compatible Computers

Filenames on CD-R discs are truncated to 11 characters on Windows-compatible computers.

This article has been archived and is no longer updated by Apple.

Symptom

Filenames on CD-R discs made with Disc Burner are truncated to 11 characters (eight characters plus a three character filename extension) on Windows-compatible computers.

If you see this symptom on a Macintosh computer, see technical document 60779: "**Disc Burner 1.0: Standard Disc (HFS Plus/ISO 9660) Appears As ISO 9660 Disc**."

Solution

Download and install Authoring Support 1.1.3 or later from Apple Software Downloads (http://www.apple.com/swupdates/).

Published Date: Oct 11, 2016

MacDNS: Frequently Asked Questions

This article contains frequently asked questions (FAQ) regarding MacDNS, with answers to those questions.

This article has been archived and is no longer updated by Apple.

Questions answered in this article:

1. I need a "parent" server, why bother running MacDNS at all? Why not just use my ISP's name server?
2. I work for a large company/university with thousands of computers on the Net. Can I use MacDNS as my primary DNS server? Is MacDNS only for small and medium-sized LANs? What are its limits?
3. How should I configure MacTCP (or Open Transport) on the computer running MacDNS?
4. Can you quickly walk me through the process of setting up MacDNS to serve my domain? My domain name is "intercloud.com" and I am going to be running all my services (mail server, Web server, DNS server) on one computer.
5. Is it possible to specify more than one secondary name server for a given domain?
6. My secondary DNS provider wants the serial numbers for my domain data to be in "YYMMDDnn" format. Does MacDNS support this?
7. How do I serve multiple domains with MacDNS? I want to map "www.intercloud.com" and "www.tyrell.org" to my Web server.
8. How do I set up multiple default home pages on my Web server using MacDNS?
9. How do I set up a default MX record for my domain?
10. How do I set up a wildcard PTR entry for a block of addresses?
11. What can I do to speed up performance of MacDNS?
12. Why do I sometimes see incoming requests in the log file with my local domain name tacked on the end? (i.e. "www.apple.com.mydomain.com")
13. How can I add a new hardware/software type for a host? I have a bunch of PCs, but that isn't one of the hardware options.
14. How can I get rid of the dialog box that asks "Are you sure you want to quit MacDNS?"
15. I'm setting up MacDNS to serve an intranet at my office. Our network isn't connected to the Internet. Should I just make up arbitrary IP addresses for the hosts in my domain?

Question 1: I need a "parent" server, why bother running MacDNS at all? Why not just use my ISP's name server?

Answer: One clear advantage of running MacDNS is that it reduces the amount of outward-bound network traffic on your local-area network (LAN). Lookups for a given host name can be serviced very quickly from MacDNS's cache. Another advantage is that you have control of your domains, instead of your ISP having control. For example, you can add or remove hosts instantly, instead of waiting for a service provider to accomodate your request.

Question 2: I work for a large company/university with thousands of computers on the Net. Can I use MacDNS as my primary DNS server? Is MacDNS only for small and medium-sized LANs? What are its limits?

Answer: The number of hosts that MacDNS can support is limited only by the amount of memory available to the application.

While it is possible to serve an organization of any size with MacDNS, it is not currently possible to delegate subdomains to another name server. This means that you need to include all hosts from all the subdomains of your domain in the local database. For example, if you serve "domain.com," you would need to include "host1.subdomain.domain.com." and so forth. This requirement might be a nuisance for large sites that have many sub- domains in different locations. In such a situation, you may want to use a centralized, UNIX-based DNS server for the top-level domain, and MacDNS servers for individual subdomains.

Question 3: How should I configure MacTCP (or Open Transport) on the computer running MacDNS?

Answer: In general, you always want to enter the IP address of the computer that is running MacDNS in the "Domain Name Server Information" area of the MacTCP control panel. You can specify your computer's own IP address as the DNS server to use. This allows other services that may be running concurrently (such as WebSTAR or AIMS) to take advantage of MacDNS's caching, rather than generating outbound network requests.

If you are running Open Transport networking software, enter the IP address of the computer running MacDNS in the "Name server addr" area of the TCP/IP control panel.

Important: Do not specify your own IP address as a parent server in the MacDNS "Set Parent Servers..." dialog box! If you do, it's possible for requests to loop endlessly without being answered, because MacDNS will be forwarding lookups back to itself. (Note: this applies only to MacDNS 1.0. Later versions prevent this situation from occurring.)

Question 4: Can you quickly walk me through the process of setting up MacDNS to serve my domain? My domain name is "intercloud.com" and I am going to be running all my services (mail server, Web server, DNS server) on one computer.

Answer: Here's a checklist of steps to follow (and pitfalls to avoid), using "intercloud.com" as an example. Consult the MacDNS Administrator's Guide for additional information.

1. If you are connected to the Internet (as opposed to an isolated "intranet"), then you need to specify a parent server. Choose "Set Parent Servers..." from the Hosts menu, then type the name and IP address of at least one other DNS server. Usually this will be your ISP's name server, or a DNS server you were using previously.

2. Create a new zone file. The Zone Information dialog box appears.

1. Type your domain name (intercloud.com) in the Domain Name field.

2. Type the host name that you plan to give to your MacDNS computer in the Primary Server field (for example: ns.intercloud.com). The name you enter here must be the computer's canonical or "real" name, not an alias. If you have a secondary name server for your domain, type its name in the Secondary Server field. (See below if you have more than one secondary name server.)

3. Type the administrator's e-mail address in the Administrator field (for example: hostmaster@intercloud.com). Don't forget to add an account for this user on your mail server.

3. Create the required host entries for your domain.

Primary server entry:

Choose "Add Permanent Host" from the Hosts menu. Type the name of your primary server (ns.intercloud.com) in the Host Name field, and enter its IP address in the field below that. Since this computer is also going to act as a mail server and a web server, you will probably want to set up some additional names for this host. For example, type www.intercloud.com, mail.intercloud.com in the Aliases field to create two appropriate alias names for ns.intercloud.com. (See below if you need to create a name outside of the intercloud.com domain that points to this host.)

Domain name entry (with mail exchanger):

Your zone should include a separate host entry for the domain name itself (unless you specified intercloud.com as an alias of ns.intercloud.com in the previous step.) Since you don't have a "real" host named intercloud.com, choose "Add MX-Only Host" to create a new host entry for that name. Type 10 ns.intercloud.com in the Mail Exchangers field. This entry lets other mail servers know that ns.intercloud.com handles mail for the domain intercloud.com with a preference value of 10. Note that you can't specify 10 mail.intercloud.com here, because only the canonical name of a mail server can be used for MX mappings.

4. Save your zone file by choosing "Save As..." from the File menu. That's it!

Question 5: Is it possible to specify more than one secondary name server for a given domain?

Answer: Only one secondary name server can be entered in the Zone Information dialog, but MacDNS does support multiple secondary NS records. To specify more than one secondary name server, you'll need to edit the zone file manually with a text editor. Look for the line that says:

; Nameserver entries

After this line, you'll notice the secondary name server (NS) entry. If you need more secondary servers, just add additional lines. For example:

- mydomain.com. NS secondary.provider.net.
- mydomain.com. NS another.provider.net.
- mydomain.com. NS third.provider.net.
- mydomain.com. NS fourth.provider.net.

Question 6: My secondary DNS provider wants the serial numbers for my domain data to be in "YYMMDDnn" format. Does MacDNS support this?

Answer: MacDNS starts the serial number at 1 and increments it by 1 each time the zone file is saved. ("DNS and BIND," published by O'Reilly and Associates, describes this method as one of the good ways to manage serial numbers.) The YYMMDDnn format is not part of the DNS specification.

However, you can satisfy your provider's requirements simply by using a text editor to open and edit your zone file. The serial number is stored as part of the SOA (start of authority) record at the beginning of the file; it's the first number following the administrator's e-mail address. For example, if today is February 5, 1996, and it's the first change to this file today, you would change the number to 96020501. After you make this change, just re-open the zone file in MacDNS and you're set.

Question 7: How do I serve multiple domains with MacDNS? I want to map "www.intercloud.com" and "www.tyrell.org" to my Web server.

Answer: For each unique top-level domain name you want to serve, choose "New Zone File..." from the File menu and enter the domain name in the Zone Information dialog box. You can have multiple zone files open at once. Even if www.tyrell.org is just intended to be an alias to your Web server at www.intercloud.com, you still need to create a zone file for tyrell.org, because you are serving a host within that namespace. In the Zone Information dialog for tyrell.org, enter the same information that you specified for the intercloud.com zone (with the exception of the Domain Name

field, of course.) Add a permanent host entry for www.tyrell.org. You can then assign the IP address of the "real" host computer (www.intercloud.com) to this host.

When you map entries across multiple domains to a single IP address in this way, it's important to be aware of how reverse (PTR) queries for the IP address are handled. Only the canonical domain name for a given IP address is returned. Currently, MacDNS defines the canonical name for an IP address as the first permanent host entry it finds which matches that address. To ensure that MacDNS returns a particular name for a reverse lookup when cross-domain host names are mapped to an IP address, simply create or open the zone file containing that entry first.

Question 8: How do I set up multiple default home pages on my Web server using MacDNS?

Answer: You don't. Serving up a different default HTML page based on the domain name in a URL is an issue for HTTP server software (or an add-on product which runs on a Web server computer, such as HomeDoor from Open Door Networks).

Question 9: How do I set up a default MX record for my domain?

Answer: Enter the name of the default mail exchanger in the dialog box for the host whose name is the same as your domain name. (If there isn't one, then you need to create an "MX-only" host.) There's no need to enter explicit MX information for each host in the domain.

For example, if you are setting up MacDNS to serve "mydomain.net.", there are two possibilities:

> You have a host computer named "mydomain.net."
> Choose "Add Permanent Host..." from the Hosts menu to create a host named "mydomain.net."
>
> None of your host computers is actually named "mydomain.net."
> Choose "Add MX-Only Host..." from the Hosts menu to create a host named "mydomain.net."

Enter the MX information in the dialog box that appears. A sample mail exchanger record for "mydomain.net." might look like this:

10 mail.mydomain.net., 20 altmail.mydomain.net.

In this example, a computer named "mail.mydomain.net." is specified as the preferred SMTP mail server for this domain. The numbers 10 and 20 are preference values which indicate the relative priority of the mail exchangers: a lower number means a higher priority. Because "altmail.mydomain.net." has a higher preference value, mail will be routed to it only when the preferred server "mail" is unavailable.

Question 10: How do I set up a wildcard PTR entry for a block of addresses?

Answer: MacDNS does not currently support wildcard entries. Generally, this would be useful if you are running software (such as the Apple IP Gateway) which assigns IP addresses from a pool. To provide reverse name mapping for these IP addresses, you need to create a permanent host entry with a name for each (for example: "IP-pool-1.mydomain.com", "IP-pool-2.mydomain.com", and so on.)

Question 11: What can I do to speed up performance of MacDNS?

Answer: "Detailed" and "Microscopic" log messages can cause a noticeable performance hit. For fastest performance, choose "Important" or "Critical" from the pop-up menu at the bottom of the Message Log window, and keep the window closed when you are not actively monitoring the server.

Question 12: Why do I sometimes see incoming requests in the log file with my local domain name tacked on the end? (i.e. "www.apple.com.mydomain.com")

Answer: This situation usually occurs due to the way your client application and TCP/IP are configured on the client end. If you try to look up a name that isn't terminated with a dot, the client assumes that the name isn't a fully-qualified domain name and appends the default domain name to the end before sending off the request. If your DNS client is using MacTCP, try setting '.' as the default domain name; on the client computer, type a period in the box to the left of where you entered the IP address of the DNS server.

Question 13: How can I add a new hardware/software type for a host? I have a bunch of PCs, but that isn't one of the hardware options.

Answer: It's possible to add new hardware/software types to the popup menus that appear in the Host Information dialog box. However, you'll need to be familiar with ResEdit. Open the MacDNS server application and edit 'MENU' resources ID=8 and ID=9. Each menu item is in the form [name]#[command-ID]. If you add new items to the menu, be sure to continue the command IDs in sequential order (for example, 3002, 3003, 3004, 3005, and so on.) (Disclaimer: This information is provided for testing purposes only. Apple does not recommend or support this modification. Use ResEdit at your own risk.)

Question 14: How can I get rid of the dialog box that asks "Are you sure you want to quit MacDNS?"

Answer: Upgrade to the latest version of MacDNS, which no longer displays this dialog.

For users of versions earlier than 1.0.3, it's possible to remove the dialog by opening 'STR ' resource ID=354 with ResEdit. If the string is '1' (the

default value), the alert is displayed. To disable the alert, change this string to '0'. (Disclaimer: This information is provided for testing purposes only. Apple does not recommend or support this modification. Use ResEdit at your own risk.)

Question 15: I'm setting up MacDNS to serve an intranet at my office. Our network isn't connected to the Internet. Should I just make up arbitrary IP addresses for the hosts in my domain?

Answer: By convention, IP addresses that you assign for a private network should fall within the following three blocks of the IP address space:

10.0.0.0 to 10.255.255.255
172.16.0.0 to 172.31.255.255
192.168.0.0 to 192.168.255.255

Published Date: Feb 20, 2012

Disk Copy 6.1 (Or Later): Supported for Use with Disk Images

All future software releases will be packaged using a new disk image call New Disk Image Format (NDIF).

Apple will only support Disk Copy 6.1 (or later) or Disk Image Mounter 2.1 (or later) to access NDIF images and only support Disk Copy 6.1 (or later) to create NDIF disk images.

The most recent version of Disk Copy can be downloaded from the Apple Software Updates Web site at http://www.apple.com/swupdates.
This article has been archived and is no longer updated by Apple.
With the release of Disk Copy 6.1, Apple began transitioning all software releases (including online software archives) to a new packaging that will make downloading faster and easier. This packaging is a new type of disk image called New Disk Image Format, or NDIF. Disk images in NDIF format are compressed to save space and download time, and decompress transparently when they are in use. You can even mount and install software directly from NDIF disk images on the desktop instead of making floppy disks. The NDIF format also includes check sums which guarantee the data integrity of disk images. With Disk Copy 6.1 (or later), you can make your own NDIF disk images of folders or mounted disks.

Apple's goal is to provide strong assurances that any software packaged in a NDIF disk image is downloaded or otherwise transferred and installed correctly. Therefore, Apple will only support Disk Copy 6.1 (or later) or Disk Image Mounter 2.1 (or later) to access NDIF disk images and only support Disk Copy 6.1 (or later) to create NDIF disk images. If an Apple customer uses a different application to access or create NDIF images, Apple will be unable to provide support if any installation or usage problems occur.

Note: This does not apply to Disk Copy 4.2 format disk images, as its file format is published and available to third parties to implement. Apple however, does not endorse any specific third party application or utility for accessing software packaged in Disk Copy 4.2 format.

Disk Copy 6.1 (or later) or Disk Image Mounter 2.1 (or later) from Apple is the recommended applications to access all disk images released by Apple and the only supported applications to access NDIF disk images; Disk Copy 6.1 (or later) is the only supported application to create NDIF disk images.
Published Date: Feb 20, 2012

Mac OS 8: Unable To Start From Mac OS 8 CD

This article explains an issue with starting up a Macintosh computer with some Mac OS 8 CDs.

This article has been archived and is no longer updated by Apple.

Symptom

The Mac OS 8 CD will not start up.

Solution

This error is caused by AppleTalk being inactive on the computer. The CD was revised in the second printing to prevent this error, but Apple is not going to replace CDs of the first printing for this minor issue.

There are multiple work arounds - these are listed in the preferred order of the least disruption to your computer's settings:

1. Start up to the appropriate Disk Tools disk included in the Mac OS 8 box (there are images on the CD if you need to make replacements). This disk has a CD driver that will recognize Apple CD-ROM drives, and you can insert the Mac OS 8 CD and do your install from there.

2. Starting up with the CD, hold down the Shift key as soon as you see the "happy Macintosh" icon.

3. Start up to your regular hard disk, insert the Mac OS 8 CD, and run the Installer. If you chose this option, make sure you run Disk First Aid to check your hard disk while started to your Disk Tools disk first. As a recommendation, you should use the Clean Install option if you install this way to avoid altering the active System Folder. If you have a third-party CD-ROM drive, you will probably not be able to use the first choice (nor possibly the second), and this choice would be your first.

4. Start up to your regular hard disk, make AppleTalk active, and restart with the Mac OS 8 CD. Once you have finished the installation, you may make AppleTalk inactive again.

5. Reset your parameter RAM (which reactivates AppleTalk) and then you can start with the Mac OS 8 CD. This option is last because resetting parameter RAM may make some undesirable changes to your computer, such as serial port selection, deleting a RAM disk, or changing your choices in the Memory control panel.

The startup error does not represent a problem with your computer, nor does it

indicate a faulty CD disc, so you need not be concerned on those counts.

Published Date: Feb 20, 2012

Apple Menu Options: Clients Freeze when Connecting to Server

When I try to log into my AppleShare server from one of my workstations, the Chooser hangs indefinitely. The "Network Arrows" stay on in the upper left corner of the screen, and I can move the cursor, but I can't get any response from the computer unless I force-quit the Chooser.
This article has been archived and is no longer updated by Apple.
To avoid this symptom, try the following workaround: On client machines running System Software 7.5 and later, disable the Apple Menu Options control panel, or disable "Remember recently used items" in the Apple Menu Options control panel.

Note: Setting the "Remember recently used items" option for "Servers" to zero will not resolve the symptom.

On servers running versions of AppleShare File Server prior to 5.0.2/Mac OS 8.0, disable the Apple Menu Options control panel.

Note: This issue has been addressed in Mac OS 9

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

iMac: Parallel Printers Adapters

Connecting a parallel printer to a USB capable Macintosh like iMac or PowerBook G3 Series (Bronze keyboard).
This article has been archived and is no longer updated by Apple.
If you own an Epson printer, for approximately $40, you can purchase an Epson kit that includes:

- A parallel-to-USB converter
- A CD with all the software you need
- An installation guide

Both Hewlett-Packard and Alps have announced similar adapters for their printers.

Note: This information applies to customers in North America. Customer's in other parts of the world may not be able to purchase products mentioned in this article.
Published Date: Feb 20, 2012

iMac: Not Supported as Mac OS X Server 1.2.v3 or QuickTime Streaming Server

iMacs are not supported as Mac OS X Server 1.2v3 or QuickTime Streaming Servers.
This article has been archived and is no longer updated by Apple.
The Read Me included with the QuickTime Streaming Server incorrectly states the iMac can run Mac OS X Server. Mac OS X Server is supported on Power Macintosh G3, Macintosh G3 Server, and the Power Macintosh G3 All-In-One. It is not supported on the iMac or PowerBook G3.
Published Date: Feb 20, 2012

Mac OS X Server: NetBoot Drive Unmounter and Adaptec‘s 2940U2B SCSI Card

The NetBoot Drive Unmounter Utility does not protect SCSI hard drives attached to an Adaptec 2940U2B SCSI Card.
This article has been archived and is no longer updated by Apple.
The NetBoot Drive Unmounter Utility will not prevent the user of a NetBooted Power Macintosh G3 (Blue and White) from accessing the hard drives connected to the Adaptec 2940U2B SCSI Card. Apple recommends that the card be removed from a NetBoot client to prevent access to these SCSI drives.
Published Date: Feb 20, 2012

iBook, iMac (Slot Loading), G4 (AGP): LinkSys 5-Port Switch Auto-Negotiation

Under certain circumstances, iBook, iMac (Slot Loading), and G4 (AGP Graphics) computers may not be able to establish a link with the LinkSys EtherFast 10/100 Dual-Speed 5-Port Workgroup Switch (model EZXC55W).
This article has been archived and is no longer updated by Apple.
Apple and LinkSys are aware of an auto-negotiation issue that can cause the link to fail between the Workgroup Switch (model EZXC55W) and the following Macintosh computers.

- iBook
- iMac (Slot Loading)
- G4 (AGP Graphics)

Other Macintosh computers are not affected.

If you cannot achieve a link between these Macintosh models and this switch, please contact LinkSys technical support at 800-326-7114.
Published Date: Feb 20, 2012

Final Cut Pro: F15 or Shift and F12 Keyboard Shortcuts

In Final Cut Pro under the View menu for External Video, there is an option for Single Frame. The keyboard shortcut listed for this is F15. My keyboard does not have a F15 key.
This article has been archived and is no longer updated by Apple.
The Single Frame function can be useful for composite or other operations that can take a long time to render. Switching External Video to Single Frame will allow you to output the video to the program monitor when you depress F15 or the Shift and F12 keys.

Note: On the USB Apple Keyboards that ship with Power Macintosh G3 and G4 computers, there is no F15 key. Depressing the Shift and F12 keys will give you the same results.

Published Date: Feb 20, 2012

Final Cut Pro: Compatible PowerBook Computers

This article describes which PowerBook computers are compatible with Final Cut Pro.
This article has been archived and is no longer updated by Apple.
All importing, editing, and exporting features of Final Cut Pro work with PowerBook G3 Series (Bronze keyboard) computers and later.

Video capture and playback to tape features are enabled when using the Newer Technology FireWire 2 Go or Ratoc FireWire PC cards in the PowerBook G3 Series (Bronze keyboard) computer. The PowerBook (FireWire) computer has built-in FireWire ports, and does not require a separate PC card.

Published Date: Feb 20, 2012

AppleWorks 6: System Requirements

This document outlines the system requirements for AppleWorks 6.
This article has been archived and is no longer updated by Apple.

AppleWorks 6 for Macintosh

- An Apple computer with PowerPC processor
- 24 MB of memory (RAM) with Virtual Memory set to at least 25 MB
- Mac OS 8.1 or later
- A CD-ROM or DVD-ROM drive
- An Internet connection to access additional templates and clip art images
- QuickTime 4 (installed by the installer if not already present)
- CarbonLib (installed by the installer if not already present)

AppleWorks 6 for Windows

- An Windows-compatible computer with an Intel Pentium processor
- 32 MB of memory (RAM)
- A CD-ROM drive
- Microsoft Windows 95, 98, 2000, or ME English system software
- Quicktime 4.1.2 (included on the AppleWorks CD)
- Internet Explorer 5.5 (included on the AppleWorks CD)

Published Date: Feb 20, 2012

Mac OS X 10.1: About Security Update 2002-08-02

The Mac OS X Security Update 2002-08-02 improves security and updates system software.
This article has been archived and is no longer updated by Apple.
Note: This update should not be confused with Security Update 2002-07-18, or Security Update 2002-07-18 for v10.1.

Important: Read Before Installing

1. An Admin user password that does not contain spaces or Option-keyed characters is required to install. The password may not be blank. If your password must be changed, then follow these steps: Choose System Preferences from the Apple menu. Choose Users from the View menu. Select an Admin user and click Edit User. Click the Password tab. Change the password and click OK.

2. You may experience unexpected results if you have installed third-party system software modifications, or if you have modified the operating system through other means. This precautionary statement does not apply to the normal installation of application software.

3. The installation process should not be interrupted. Monitor progress by clicking the Detailed Progress disclosure triangle. If a power outage or other interruption occurs during installation, use the standalone installer (see below) from Apple Software Downloads to install.

Enhancements delivered with this update

This update includes fixes previously delivered with Security Update July 2002 as well as the following security enhancements:

- Includes a later version of OpenSSL.
- Includes a later version of Sun RPC.
- Includes a later version of Apache Mod_SSL.

Installation

You may use either a standalone installer or Automatic Software Update.

Automatic Software Update

To learn about this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**".

Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

Standalone Installer

A standalone installer is available from Apple Software Downloads (http://www.apple.com/swupdates/).

Mac OS X 10.1.5 and Security Update 7-18-02 are prerequisites for this update. For more information, see technical document 106713, "**Mac OS X 10.1: Chart of Available Software Updates.**"

Do not reinstall earlier Mac OS X updates

You should not reinstall earlier updates after using this update, including:

- Any numbered Mac OS X 10.0 update
- Mac OS X version 10.0 or 10.1
- Any numbered Mac OS X 10.1 update
- Security Update April 2002
- Security Update July 2002

Updates should be installed in the correct order. If for any reason you need to reinstall an earlier software update, the Mac OS X startup volume should be erased, after first backing up important documents and data. Reinstall Mac OS X, and install necessary updates in the correct order.
Published Date: Feb 20, 2012

Mac OS X 10.2.2: Sluggish system performance after installing HP printer drivers

After installing some HP printer drivers, the computer becomes sluggish or stops responding.
This article has been archived and is no longer updated by Apple.
When you install the driver software for certain HP products, the computer becomes sluggish or stops responding. Overall system performance degrades over time. Under certain conditions a kernel panic may result, forcing a restart.

This document applies to Mac OS X 10.2.2 and these products:

- HP Photosmart
- HP PSC (printer/scanner/copier) software
- Officejet D or G Series All-in-One

Using these HP products with earlier versions of Mac OS X, for example Mac OS X 10.2.1, does not produce this symptom.

This issue may be avoided by updating to Mac OS X 10.2.3 or later.

The following information may be referenced for Mac OS X 10.2.2.

Apple and HP have identified the causes of this issue, and are working closely together on a resolution. For more information, see this HP website.

As a workaround, uninstall the HP driver to return the system performance to previous levels. Restarting the computer or reinstalling the drivers does not resolve this issue.

To uninstall the driver software:

1. Open the HP driver's installer. Proceed through the installation process by entering your passphrase and accepting the license agreement.
2. When offered the option to Easy Install the listed drivers, choose "Uninstall" from the pop-up menu.
3. A dialog appears with this message: "Some software components may be shared by other HP products. Do you wish to "Remove All" components, or "Continue" removal of only specific components?" Click Remove All.

Note: The HPIJS for Mac OS X website (http://www.linuxprinting.org/macosx/hpijs/) offers HP printer drivers that work with Mac OS X 10.2. The site also explains how to install the HPIJS open source software and create a print queue for the driver.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.
Published Date: Feb 20, 2012

iLife: Cannot See iTunes Files in Other iLife Applications

Under some circumstances, you may not see the iTunes Library in other iLife applications (iMovie, iPhoto, and iDVD).
This article has been archived and is no longer updated by Apple.

Symptom

- When selecting audio for a slideshow in iPhoto, the option to choose music from iTunes is not available. The pop-up menu says "iTunes not found".
- When selecting audio in iMovie, the option to choose music from iTunes is not available. The pop-up menu says "iTunes not found".
- When you click the Audio button in iDVD the message "Launch iTunes or later to populate this list" appears.

Solution

- Run Software Update to make sure QuickTime, Mac OS X and your iLife applications to up to date.
- Make sure that iTunes has been opened at least once.
- The iTunes Music Library.xml file may be unusable. Try recreating the XML file used to populate the music listing. Follow these steps:
    1. Quit iPhoto, iMovie, iDVD and iTunes.
    2. Click the Finder icon in the Dock.
    3. Choose Go > Go to Folder
    4. Depending where your iTunes Music Library is, enter `~/Documents/iTunes` or `~/Music/iTunes` and click Go.
    5. Locate the "iTunes Music Library.xml" file and drag it to the Desktop.
    6. Open iTunes.
    7. Create a new playlist by choosing File > New Playlist.
    8. Quit iTunes.

Open the iLife applications and make sure you can see the iTunes Library in other applications.

Published Date: Oct 11, 2016

PowerBook G4 (12-inch): Audio Captured With USB Device Sounds Distorted If Display Dims or Sleeps

Audio captured through a USB input device may sound distorted if the display sleeps or dims as the computer saves the audio.
This article has been archived and is no longer updated by Apple.

Symptom

Captured audio sounds distorted at the point when the display went to sleep, dimmed, or when you woke it.

Solution

1. Choose Apple menu > System Preferences.
2. Choose View > Energy Saver.
3. Click Show Details.
4. Drag the slider to Never in the "Use separate time to put display to sleep" option.

Published Date: Oct 11, 2016

Power Mac G5: About Audio Playthru

Using third-party software, your Power Mac G5 computer is capable of audio playthru routing.
This article has been archived and is no longer updated by Apple.
To use audio playthru routing with your Power Mac G5 computer, purchase a third-party audio program that supports software audio playthru, such as LineIn from Rogue Amoeba Software or Sound Studio from Felt Tip Software.

Audio playthru routing allows you to hear sound from a microphone or other device plugged into the computer's sound input port.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 11, 2016

Power Mac G5: DVD video freezes or stutters, audio cuts out with Digital Audio Output enabled

This article has been archived and is no longer updated by Apple.

When "Digital Audio Output" is selected in DVD Player preferences, video may freeze or stutter, or audio may cut out after you pause a movie.
This document applies to:

- Mac OS X 10.3 through 10.3.2
- DVD Player 4.0
- Power Mac G5 (Dual 2.0 Ghz) computers

Solution

Download and install the Mac OS X 10.3.3 Update or later to avoid this issue.

If you're not ready to update, as a workaround, you can forward (fast forward) a few seconds, then resume playback. If that does not solve the issue, switch to "System Sound Output" in DVD Player preferences.

Published Date: Feb 20, 2012

Mac OS X: Configure Directory Access to Protect Your Mac From a Malicious DHCP Server

You can configure Directory Access or install an update to protect your Mac from a malicious DHCP server.

This article has been archived and is no longer updated by Apple.
Important: Download and install Security Update 12-19-03 to address this issue. You can get this update using Software Update preferences or from Apple Downloads (http://www.info.apple.com/support/downloads.html).

In many cases, your Mac is protected from this kind of exploit because the malicious DHCP server has to be part of your local network, or "subnet". If your computers are on your local network and you have a broadband connection (DSL or cable service) with a Network Address Translation device--such as an AirPort Base Station--this exploit is not possible unless you allow untrusted systems to connect to your local network. The attack is not possible on the public side of a Network Address Translation device and requires the malicious system to be on your local subnet.

If there is a chance that someone has put a malicious DHCP server on your subnet, or if your computer is using an untrusted network, there are two ways to protect your computer depending on if you use a directory service or not. If you don't know if your computer uses a directory service, ask your network administrator or Internet service provider.

You don't use a directory service

1. Click the Finder icon in the Dock.
2. From the **Go** menu, choose **Applications**.
3. Find the Utilities folder and double-click to open it.
4. Open the Directory Access utility.
5. Click the lock button, type your password, and click OK to authenticate.
6. Select the LDAP service and click Configure.
7. Deselect the "Use DHCP-supplied LDAP Server" option. See Figure 1.
8. Click OK. Your computer is no longer susceptible to this exploit.

Figure 1 Deselect the "Use DHCP-supplied LDAP Server" option

You use a directory service

If your Mac is configured to use a directory service, consult with your network administrator before changing any settings. Your network administrator will need to change the default setting from "automatic" to "custom" search policy in the Directory Access authentication tab and specify the correct LDAP server.

Additional information

A DHCP or "Dynamic Host Configuration Protocol" server can automatically make the settings in Network preferences that your computer needs to access the Internet. This greatly simplifies the steps to connect to the Internet because the software does all of the network administration. Many Internet service providers and network administrators depend on DHCP servers to assign your computer an IP or Internet address.
Published Date: Oct 11, 2016

Power Mac G5: How to Improve PCI Card Performance

Learn how to take advantage of improved PCI card performance in Power Mac G5 or Power Mac G5 (June 2004) computers with PCI-X slots.
This article has been archived and is no longer updated by Apple.
The architecture of the Power Mac G5 computer provides improved performance for PCI cards that transfer data (such as large video or graphic files) directly between cards.

To benefit from this performance, pair the cards in PCI slots 2 and 3. The slot numbers can be found on the left plastic card guide.

Published Date: Oct 11, 2016

Soundtrack 1.2: Late-Breaking News

This document contains late-breaking information about Soundtrack.
This article has been archived and is no longer updated by Apple.
For current information about product updates, tips and techniques, and qualified third-party devices, visit the Soundtrack website at http://www.apple.com/soundtrack.

Exporting Projects and Tracks

When exporting a project mix or a track, the length of the export file runs from the beginning of the playback region to the end of the playback region if a playback region exists. If no playback region exists, the export file runs from the beginning of the project to the end of the last audio clip in the project. If the project contains effects that produce sound beyond the end of the last audio clip, the export file will extend beyond the last audio clip until the effects stop generating sound. When exporting tracks, the lengths of all the audio files are the same and are based on the length of the longest track.

Duration of Exported QuickTime Files

When exporting a project to a QuickTime movie file, the export file runs from the beginning of the project to either the end of the video file or the end of the last audio clip in the project, whichever is later. The complete video is exported. If the project contains effects that produce sound beyond the end of the last audio clip, the export file will extend beyond the last audio clip until the effects stop generating sound. Projects exported to QuickTime are exported at a bit depth of 16 bits, whether the Export Bit Depth setting in the Project pane of the Preferences window is set to a bit depth of 16 bits or 24 bits. QuickTime is limited to an export bit depth of 16 bits. Some video files with a .mov extension, particularly video files created using some versions of iMovie 3 and movies exported from iMovie as Full Quality DV, may not be in a standard QuickTime movie format. If you try to export a project with a video file, and see an alert that the video is not a standard QuickTime movie, export the video from another application such as Final Cut Pro or QuickTime Pro to create a standard QuickTime movie of the file before exporting to QuickTime in Soundtrack. Note that Soundtrack cannot export a QuickTime file when the sample rate is 96 kHz.

Deleting Files in a Project

When a media file has been added to the Timeline of a project, and you move the file to the Trash, and then close the project, the file cannot be deleted from the Trash. An alert appears, saying that the file is still in use. To delete the file, quit Soundtrack, and then empty the Trash.

Similarly, when an audio file has been opened in Soundtrack Loop Utility, and you move the file to the Trash and then close the Soundtrack Loop Utility window, the file cannot be deleted from the Trash. An alert appears, saying that the file is still in use. To delete the file, quit Soundtrack Loop Utility, and then empty the Trash.

Placing Beat, Time, and Scoring Markers

If a beat marker or a time marker is placed at the same position as a Final Cut Pro scoring marker, the beat or time marker cannot be moved or deleted.

Video Files Located on a Server May Lose Synchronization During Recording

When you record audio in a project that contains a video file, if the video file is located on a server, the video's audio may not be synchronized with the project while recording. You may also experience Write errors while recording. To eliminate the problem, download the video file to your computer's hard disk. Similarly, you should not use a network-based device or server as the recording sessions location, as specified in the Recording Sessions Location field in the Recording pane of Soundtrack Preferences.

Importing a Video File With Audio Tracks

When you import a video file into a Soundtrack project, and the video file contains multiple audio tracks, only the first audio track is imported into the project.

Using Small Screen Resolutions

Soundtrack is intended to be used at a screen resolution of 1024 x 768 pixels or higher. If your computer is set to a screen resolution smaller than 1024 x 768, layouts may not display correctly, and changing the layout may cause unpredictable screen behavior.

Mute Always Overrides Solo

When both the Mute and the Solo buttons are selected simultaneously, Mute always overrides Solo. For instance, if you have multiple percussion tracks soloed, you can mute one track or multiple tracks to hear individual volume levels in relation to each other. As you unmute each track, those percussion tracks are still soloed.

Solo Doesn't Affect Preview

If you solo a track, Preview still plays. This allows you to preview different drum loops with a soloed guitar, for example.

Using Undo in Soundtrack Loop Utility

When you choose Edit > Undo in Soundtrack Loop Utility, the text is removed from the current and previously selected text fields.

Splitting a Clip

To split a clip into segments, set the playhead at the point where you want to make the split and then choose Edit > Split, or press S. (The Soundtrack User's Manual on page 95 incorrectly says to press K.)

New Apple Applications Page for Pro Apps Developers

The Apple Developer Connection website has launched a new page, Apple Applications, that is a one-stop destination for developers creating content or extensions for Pro Applications such as Soundtrack. On this page, developers can find late-breaking news of interest and technical resources, including developer documentation, special articles, and SDKs. Developers can also sign up for a new Pro Apps Developer mailing list. The URL is http://developer.apple.com/appleapplications.

Published Date: Oct 11, 2016

Xserve RAID: Which Fibre Channel cables can I use?

Learn about the different types of Fibre Channel cables used with Xserve RAID.
This article has been archived and is no longer updated by Apple.
The first generation Xserve RAID has HSSDC2 connectors on the controller modules, while the second generation Xserve RAID has SFP connectors.

Since there are two different connectors available on the Xserve RAID controllers, SFP and HSSDC2, verify the connector type before ordering cables. If you need to order Apple Copper Fibre Channel cables with HSSDC2 to SFP connectors or cables with SFP to SFP connectors, they are both available from the Apple Store (http://www.apple.com/store/).

Note: The Apple Fibre Channel PCI card available from the Apple Store has SFP connectors. The card includes two 2.9m Apple Copper Fibre Channel Cables (SFP to SFP).

Related documents

86671: **Xserve RAID (SFP): Connecting a host computer using fiber optic cable**

86402: **"Xserve RAID: Connecting a host computer using fiber optic cable"**

Published Date: Oct 11, 2016

Power Mac G5: Issues after installing Mac OS X 10.3.2 and Firmware Update 5.1.4

Update to Mac OS X 10.3.3 or later if your Power Mac G5 computer experiences certain issues after installing Mac OS X 10.3.2 Update and Firmware Update 5.1.4.
This article has been archived and is no longer updated by Apple.
These issues may occur:

- Applications stop responding ("freeze") or won't open.
- The CD/DVD tray does not open when you press the Media Eject key but does if you click the eject button in the Finder.
- The computer stops responding ("hangs") when you turn it on, restart, or shut down.

The solution is to update to Mac OS X 10.3.3 or later.
Related documents

120287: Power Mac G5 Firmware Update V 5.1.4: Information and Download

Published Date: Oct 11, 2016

Xserve RAID (SFP): Troubleshooting a fiber optic cable connection

Learn to troubleshoot a fiber optic cabling issue.
This article has been archived and is no longer updated by Apple.

The Apple Copper Fibre Channel Cable (SFP-SFP) may have intermittent connection issues if it isn't installed correctly between the Fibre Channel switch and Apple Fibre Channel PCI card in the host computer.

This may happen when using:

- Xserve RAID (SFP)
- Apple Copper Fibre Channel Cable (SFP-SFP)
- Switches without passive SFP support

Try these steps if you have connection issues:

1. Verify that the speed and topology settings on the HBA match those of the switch port. Setting both for automatic negotiation produces the best result.
2. Check with the switch vendor to see if the switches work with passive SFP connectors.
3. Test with an optical LC-LC optical cable and SFP-LC transceivers.

Note: This issue can also occur using third-party Fibre Channel arrays.

Published Date: Oct 11, 2016

Shake 3.5 System Requirements

Before you install Shake 3.5, ensure your Macintosh system meets the following minimum requirements.

This article has been archived and is no longer updated by Apple.

Minimum Desktop Hardware and Software Configuration

- 800 Mhz PowerPC G4 Tower
- Mac OS X 10.3.2 (or later)
- 3-button mouse
- QuickTime 6.5 (or later)
- 1 GB local disk space for caching and temporary files
- 256 MB of RAM
- A video display card with 32 MB of VRAM and Open GL hardware acceleration, such as the NVIDIA 4 MX or ATI Radeon 7500
- 1280 x 1024 display with a required minimum of 24-bit color

Minimum PowerBook Hardware and Software Configuration

- 800 Mhz PowerPC G4 PowerBook
- Mac OS X 10.3.2 (or later)
- 3-button mouse
- QuickTime 6.5 (or later)
- 1 GB local disk space for caching and temporary files
- 256 MB of RAM
- A video display card with 32 MB of VRAM and Open GL hardware acceleration, such as the ATI Radeon 7500
- Optional external monitor with 1280 x 1024 display with a required minimum of 24-bit color

Minimum Server Hardware and Software Configuration

- 1 Ghz PowerPC G4 or higher XServe
- Mac OS X Server 10.3.2 (or later)
- 3-button mouse (optional for render station, required for compositing seat)
- QuickTime 6.5 (or later)
- 1 GB local disk space for caching and temporary files
- 256 MB of RAM
- A video display card with 32 MB of VRAM and Open GL hardware acceleration, such as the NVIDIA 4 MX or ATI Radeon 7500 (optional for render station, required for compositing seat)
- 1280 x 1024 display with a required minimum of 24-bit color (optional for render station, required for compositing seat)

Minimum Requirements for Render-Only Workstations

The Shake 3.5 render-only workstation requires the following minimum hardware and software configuration:

- 500 Mhz or higher PowerPC G4
  Note: PowerPC G4 refers to any Tower, PowerBook, iMac, eMac over 500 Mhz.
- 1 Ghz PowerPC G4 or higher XServe
- Mac OS X 10.3.2 (or later)
- QuickTime 6.5 (or later)
- 1 GB local disk space for caching and temporary files
- 256 MB of RAM

RAM Requirements

Playback performance is a function of RAM, processor, image size, clip length, and graphics card. In Shake, images are loaded into memory and then played back. Current systems cannot achieve real-time playback with 2K-resolution images. However, with sufficient RAM and a good graphics card, files of up to 1K resolution should play back in real time.

Use the following formula to determine the amount of required memory:

width * height * channels * bytes per channel * images = bytes

For example, a single 1024 x 768 RGB 8-bit (1 byte) per channel image is:

1024 * 768 * 3 * 1 = 2359296 bytes

Or, approximately 2.4 MB per frame.

Tip: To convert from bytes to megabytes (MB), divide by 1024 two times (1024 equals the number of bytes per kilobyte). Thankfully, all operating systems come with calculators. For a rough approximation, drop the last 6 digits.

Note: An 8-bit image is 1 byte, a 10 or 16-bit image is 2 bytes, and a float image is 4 bytes.

Published Date: Feb 20, 2012

ColorSync 20-inch Displays: Wave Patterns Across Picture

Vibrations from built-in (or external) audio devices can sometimes cause a wave-like shimmering to appear across the ColorSync 20-inch Display screen. This article addresses the causes and cures of this effect.

Note: The ColorSync 20-inch Display was formerly named the AppleVision 850 Display.
This article has been archived and is no longer updated by Apple.
In the AppleVision 850 AV Display (and other AV displays with built-in speakers), vibration from the built-in speakers may sometimes cause the aperture grill on the monitor to vibrate. Aperture grill vibration is visible as a wave-like shimmering on the monitor screen. At normal volumes, this effect should not occur, but at high volume levels it may be noticeable, especially with low-to-mid-range sounds (100-500 hz, most frequent when playing jazz, classical music, male vocalists).

This effect can also occur on the ColorSync 20-inch Display (formerly known as the AppleVision 850 Display) if external speakers are placed too close to the monitor and played at high volume. To eliminate this, move the external speakers further from the monitor and/or reduce the audio volume.

To eliminate the visual distortion in the AppleVision 850 AV Display, reduce the speaker volume. The audio circuitry monitor is high-powered in order to provide excellent sound quality, not loud volume. Reducing the volume setting will prevent the image from being affected by the sound.

To minimize the effect on either display at high volume, adjust the rotation of the screen image so that the picture is as level as possible. To adjust the rotation from a Mac OS computer:

1. Open the Monitors & Sound control panel, then click the Geometry button.
2. On the Geometry window, click the Rotate button.
3. Use the position buttons (icons) next to the picture of the monitor to fine-tune the rotation. When the rotation of the screen image is set properly, all four sides of the image are parallel to the edges of the screen and the image is rectangular.

If using the display with a DOS- or Windows-based computer:

1. Push any of the control buttons on the left side of the display's front bezel. A control panel will appear on screen.
2. Press the < or > control button until the Geometry menu is selected.
3. Press the V control button until Rotate is selected.
4. Press the - button to rotate the screen image counterclockwise or the + button to rotate it clockwise. When the rotation of the screen image is set properly, all four sides of the image are parallel to the edges of the screen and the image is rectangular.

Published Date: Feb 20, 2012

AppleVision, ColorSync 20-inch Displays: Multiple Monitor Support

I purchased two AppleVision Monitors and am trying to set them up, but my computer only has one ADB port on the back. I tried connecting the ADB cable from the first monitor to the side of the second monitor, but that did not work. Then I tried using a third party ADB splitter cable and the second monitor came up in 640x480 only. How do I set them up correctly?

Note: The ColorSync 20-inch Display was formerly named the AppleVision 850 Display. The "AV" suffix is appended to the monitor name as appropriate.
This article has been archived and is no longer updated by Apple.
To set up two AppleVision displays with a computer that has a single ADB port, be sure to use the recommended Apple shielded connector cable (ADB splitter cable), part number M5556LL/A. This is the only officially supported method of connecting two AppleVision Displays to a single Macintosh ADB port. Setup instructions are in the User Manual for the display.

When some third-party ADB splitter cables are used, AppleVision software may be unable to recognize one or both monitors as AppleVision displays. As a result, the screen resolution of the unrecognized monitor(s) will revert to 640x480, and the AppleVision control strip and control panel will not allow you to select any other resolution besides 640x480.

When you open the AppleVision Setup control panel, a dialog window appears on AppleVision Display #1. This is the display designated through the Monitors control panel as the startup display.

You are also able to adjust the bit depth and resolutions for both displays separately through the control strip at the bottom of the display. The displays appears as two separate sections with the name of the display at the top of these sections.

Example: AppleVision 1710/AV Display 1 and AppleVision 1710/AV Display 2

If two AppleVision 1710AV Displays are used you will only have microphone and speaker capabilities through one of these displays by connecting the sound and microphone connections to your Macintosh computer. There may be third-party solutions allowing you to connect two connections to both ports on the back of the computer.

Notes:

- Some NuBus or PCI video cards may only support one resolution; 640x480, when using any Multiple Scan Display.
- A limit of two AppleVision displays are supported simultaneously on one CPU.
- It is recommended you install the latest version of the Apple Display Software to prevent errors when the software loads. (Apple Display Software supercedes and replaces AppleVision software as of version 1.5.3 of AppleVision software.)

Published Date: Feb 20, 2012

AppleVision 1710, ColorSync 17-inch Displays: Screen flickers without ADB

Incorrect cable setup can cause the following symptoms on an AppleVision 1710, 1710AV displays and on ColorSync 17-inch Displays (AV model included) connected to a Power Macintosh 4400: If you turn on the computer first and then turn on the monitor, the screen may come up in 640-by-480 resolution and may flicker.

Note: The ColorSync 17-inch and 20-inch Displays were formerly named the AppleVision 750 and AppleVision 850 Displays, respectively. The "AV" suffix is appended to the monitor name as appropriate.

This article has been archived and is no longer updated by Apple.
If an AppleVision monitor's ADB cable is not connected to the computer, the monitor will default to 640-by-480 resolution and you will be unable to use AppleVision software to configure your monitor. In addition, if you are using the display with a Power Macintosh 4400, the screen may flicker if two conditions are met:
- the ADB cable is not connected AND
- you turned on the computer before turning on the monitor. (If you power on the monitor before you turn on the computer, the flickering will not occur.)

To correct this problem, shut down the computer and the monitor (use the monitor's on/off button), and check to be sure that:
- the monitor's ADB connector is securely plugged in to the Macintosh ADB connector.
- the monitor's video connector is securely attached to the Macintosh built-in video connector.
- the Macintosh keyboard cable is connected to the monitor's ADB port.
See your User's Manual for complete setup instructions.

After verifying that the cable setup is correct, power on the computer and display, and check to make sure that the screen is now normal.

Published Date: Feb 20, 2012

ColorSync 17-inch Display: Description

This article contains a description of the ColorSync 17-inch Display.

Note: The ColorSync 17-inch Display was formerly named the AppleVision 750 Display.
This article has been archived and is no longer updated by Apple.
The ColorSync 17-inch Display is a superior quality color display that's perfect for business tasks such as desktop publishing, working with spreadsheets, and creating presentations. It combines multiple scan capabilities with the next generation Trinitron tube, and offers a host of advanced Apple DigitalColor technology features setting a new standard in clarity, color accuracy, and viewing flexibility. And it is compatible with DOS and Windows software-based computers as well as Macintosh and Power Macintosh systems.

Everyone wants accurate color on their monitor, and the Apple Digital Color technology features of the ColorSync 17-inch Display let it offer truly unprecedented image quality. It includes internal self-calibration technology-- eliminating the need to spend time and money to maintain accurate calibration. In addition, the ColorSync 17-inch Display provides automatic screen-to-print matching using Apple's unparalleled ColorSync 2.0 technology. It can also be adjusted to compensate for many of the effects of ambient lighting and CRT phosphor aging. And its intuitive Macintosh software provides control over all screen functions, including geometry, brightness, contrast, and variable color temperature.

Sony Trinitron screens have long been known for their outstanding image quality, and the screen of the ColorSync 17-inch Display is no exception. In fact, it represents the next generation of Trinitron technology, featuring not only an incredibly vivid, sharp picture, but also a design that reflects the light in the room away from your eyes. And its multiple scan technology gives you the flexibility you need, letting you view more than two full pages of information at a time at an impressive 1,280 by 1,024 pixels.

Yet even with all of these features, the ColorSync 17-inch Display remains affordable, making it the perfect choice for anyone whose work requires a vivid, accurate, and flexible color viewing solution.

Features

Outstanding Image Quality

- Features next-generation Trinitron technology for clear, sharp pictures and vivid color
- Provides outstanding color matching and extremely accurate on-screen color representation
- Adjusts luminance and color temperature to provide outstanding image quality in any ambient light
- Keeps colors accurate and balanced over time, even as the CRT ages

Advanced Functionality

- Uses multiple-scan electronics that enable a high level of user flexibility
- Offers a range of resolution modes up to 1,280 by 1,024 pixels
- Features built-in intelligence, to ensure that your monitor remains calibrated
- Provides advanced but easy-to-use software control over all screen functions

Compatibility

- Works with MS-DOS and Windows software-based systems
- Works with Power Macintosh, Macintosh Quadra, Macintosh Centris, Macintosh II (with video card), and PowerBook computers*
- System software version 7.1 or later

* Not all models and configurations are capable of driving the monitor to the highest resolution it supports.

Ordering Information

ColorSync 17-inch Display, Order No. **M6159LL/A**

- ColorSync 17-inch Display
- AppleVision software
- PC adapter
- Integrated, attached video and Apple Desktop Bus cable
- Power jumper cable
- Ambient light wand
- User's guide
- Limited warranty

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.
Published Date: Feb 20, 2012

AppleVision 750 AV Display: Description

This article contains a description of the AppleVision 750 AV Display.
This article has been archived and is no longer updated by Apple.

Overview

The AppleVision 750 AV Display is an exceptional audiovisual display designed with the mainstream business user in mind but well-suited to a wide variety of tasks, including desktop publishing and work with multimedia. An appropriate choice for those who require flexibility in a display, it combines multiple-scan capabilities with the next-generation Trinitron tube, offers a host of advanced Apple DigitalColor technology features, and boasts built-in speakers and a microphone. And it is compatible with DOS and Windows software-based computers as well as Macintosh and Power Macintosh systems.

Image quality is the first concern of anyone buying a monitor, and the AppleVision 750 AV Display is outstanding in this area. It features internal self-calibration technology, eliminating the need to spend time and money to maintain accurate color calibration. The AppleVision 750 AV Display provides automatic screen-to-print matching using Apple's unparalleled ColorSync 2.0 technology. It can also be adjusted to compensate for many of the effects of ambient lighting and CRT aging. And its intuitive Macintosh software provides control over all screen functions, including geometry, brightness, contrast, and variable color temperature.

But beyond outstanding image quality, the AppleVision 750 AV Display has something unique to offer: integrated multimedia features that provide unprecedented performance and capabilities. Its built-in stereo speakers let you enjoy high-quality CD sound without having to give up any of your valuable desk space. And its directional microphone, capable of voice recognition, lets you annotate documents, as well as take full advantage of applications that utilize speech.

The AppleVision 750 AV Display is based on the next generation of Trinitron technology, which means that it offers an extremely vivid, sharp picture as well as being incredibly easy on the eyes. And its multiple-scan technology gives you the flexibility you need, letting you view more than two full pages of information at a time at an impressive 1,280 by 1,024 pixels.

Vivid, accurate color, outstanding multimedia capabilities, and flexibility -- the AppleVision 750 AV Display brings it all to your desktop, to put you in the vanguard of the multimedia revolution.

Features

Outstanding image quality

- Features next-generation Trinitron technology for clear, sharp pictures and vivid color
- Provides outstanding color matching and extremely accurate on-screen color representation
- Adjusts luminance and color temperature to provide outstanding image quality
- Keeps colors accurate and balanced over time, by compensating for ambient lighting and CRT phosphor aging

Advanced functionality

- Uses multiple-scan electronics that enable a high level of user flexibility
- Offers a range of resolution modes up to 1,280 by 1,024 pixels
- Features built-in intelligence, to ensure that your monitor remains calibrated
- Provides intuitive software control over all screen functions

Multimedia integration

- Provides high-quality stereo sound
- Includes a directional microphone capable of voice recognition
- Is completely integrated with all Macintosh computers that feature Apple AV Technologies, to provide a complete multimedia computing solution

Compatibility

- Works with MS-DOS and Windows software-based systems, as well as with the full line of Macintosh and Power Macintosh computers

Configuration and Ordering

AppleVision 750 AV Display, Order No. M5239LL/A

- AppleVision 750 AV Display
- AppleVision software
- PC adapter
- Integrated, attached video and Apple Desktop Bus (ADB) cable

- Integrated audio input/output cable
- Power jumper cable
- Ambient light wand
- Users Guide
- Limited warranty

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.
Published Date: Feb 20, 2012

iDVD 2.0: Obtaining Best Results when Exporting iMovies for iDVD

This document discusses how to obtain the best results when exporting iMovies for use with iDVD.
This article has been archived and is no longer updated by Apple.
To obtain the best results when exporting your iMovies to work with iDVD, upgrade your version of iMovie to version 2.0.3 or later. After upgrading to iMovie 2.0.3, re-export your movies.

In iMovie 2.0.3, choose Export Movie from the File menu and then choose For iDVD from the "Export to" pop-up menu.

This document contains information from Help Center, the help system included with your computer.
Published Date: Oct 11, 2016

iMac (Flat Panel): How to Connect USB Audio Equipment

This document explains how to connect audio equipment to the (iMac Flat Panel).

This article has been archived and is no longer updated by Apple.

You can use your iMac's built-in microphone to record sound or give spoken commands to your computer. You can also input sound into your computer from USB audio equipment, such as a USB microphone.

To connect USB audio equipment:

1 Turn the audio equipment on.
2 Lower the volume level on the audio equipment.
3 Connect a USB audio device to one of your computer's USB ports.
4 If necessary, select the device you want to record from in the Sound control panel.
5 Use your favorite sound-recording application to record.

For more information, see the documentation that came with the audio equipment and the sound-recording application.

See technical documents:
31379 "**Macintosh: How to Record Sounds Without a Sound Input Port**"
75218 "**Macintosh: How to Connect Audio Devices to Your Computer**"

Published Date: Feb 20, 2012

Macintosh Manager 2.1: How to Add Administrator Accounts

This document discusses adding administrator accounts.
This article has been archived and is no longer updated by Apple.
Administrator accounts define which users can manage your network and workgroups using Macintosh Manager. A Macintosh Manager administrator can adjust all settings throughout Macintosh Manager. A workgroup administrator can add or modify user accounts or workgroups within the limits set by a Macintosh Manager administrator.

To add an administrator account:

1. In Macintosh Manager, click the Users tab, then click the name of a user in the Imported Users list.
2. Choose Workgroup Administrator or Macintosh Manager Administrator from the User Type pop-up menu. Then click Save.

If you import a user who has server administrator privileges for the Mac OS X Server, you need to follow the procedure above to make the user a Macintosh Manager administrator.

Note: Mac OS X Server Administrator users will not be able to access their home directories while logged into Macintosh Manager clients. See technical document 60876: "**Macintosh Manager 2: Logging in As a Mac OS X Server Admin User**" for more information.
Published Date: Feb 20, 2012

Bluetooth: How to Connect to the Internet with a Bluetooth-Enabled Phone

This document discusses connecting to the internet with a Bluetooth-enabled phone.

This article has been archived and is no longer updated by Apple.

To set up your computer to connect to the Internet with a Bluetooth-enabled phone:

1. Choose your phone from the Bluetooth status menu in the menu bar.
2. Open the Network pane of System Preferences.
3. Choose "bluetooth modem" from the Show pop-up menu.

Note: Make sure the "bluetooth modem" port is turned on in the Network pane of System Preferences. To do this, choose Active Network Ports from the Show pop-up menu, then select "bluetooth modem."

4. Enter your ISP information in the TCP/IP and PPP tabs.
5. Choose the model of your phone from the Modem pop-up menu in the Modem tab.

To connect to the Internet:
1. Choose Open Internet Connect from the Bluetooth status menu in the menu bar.
2. Choose "bluetooth modem" from the Configuration pop-up menu.
3. Click Connect.

Published Date: Oct 11, 2016

LaserWriter 8500: Status Lights

The lights on the front panel of the printer indicate the printer's operating status.
This article has been archived and is no longer updated by Apple.
If the Paper Out and Paper Jam lights flash alternately, or all four lights stay on, the printer requires service. If you have just installed additional memory (RAM) in the printer, there may be a problem with the memory. Open the printer and make sure the SIMM is fully seated in the sockets and match one of the supported configurations.

Published Date: Feb 20, 2012

LaserWriter 8500: How to Check the Optional Duplex Printing Unit for Paper Jam

This document explains checking the optional duplex printing unit for a paper jam.
This article has been archived and is no longer updated by Apple.
1. Open the duplex printing unit's top door to see whether paper has jammed there. If so, gently pull out the jammed paper.

2. Open the duplex printing unit's lower back door to see whether the jam is around the paper guide for the duplex printing unit. If so, gently pull out the jammed paper.

Note: If you opened the duplex printing unit's top or back door, it is not necessary to open and close the top cover to reset the printer.
Published Date: Feb 20, 2012

LaserWriter 8500: Memory Requirements, Supported Paper Sizes for Duplex Printing and PhotoGrade

This document discusses the memory requirements and supported paper sizes for duplex printing and PhotoGrade.
This article has been archived and is no longer updated by Apple.
The following table lists the memory requirements and supported paper sizes for duplex printing and PhotoGrade:

Published Date: Feb 20, 2012

LaserWriter 8500: How to Install the Toner Cartridge

This document discusses installing the toner cartridge.
This article has been archived and is no longer updated by Apple.
The toner cartridge contains the dry powder that the printer uses instead of ink. Each cartridge lasts approximately 14,000 pages, depending on the kind of printing you do. If you use the printer to produce more graphic images than text, you may need to change cartridges more often.

WARNING: Use only toner cartridges designed for use with your printer. Other cartridges will not fit and may damage the printer.

1. Open the multipurpose tray and then the printer top cover.

If you're replacing a toner cartridge, remove the old cartridge.

To remove an old cartridge, grasp the orange handles on the cartridge and pull toward you.

2. Take the cartridge out of its packaging.

3. Distribute the toner powder by gently rocking the cartridge back and forth.

4. Firmly pull the tab directly away from the cartridge to remove the sealing tape.

WARNING: Pull the tab straight out of the cartridge. Don't pull too quickly or at an angle-either might damage the seals on the cartridge.

5. Align the rollers on the sides of the toner cartridge with the arrows inside the printer, then slide the cartridge into the printer. Make sure the toner cartridge is inserted all the way and properly seated inside the printer.

6. Close the printer. The top cover clicks into place.
Note: If the printer's top cover does not close properly, the toner cartridge is not installed correctly. Check to make sure the toner cartridge is properly inside the printer.
Published Date: Feb 20, 2012

DVD Studio Pro 1.5: How to Preview

This document discusses previewing.
This article has been archived and is no longer updated by Apple.
You can use Preview Mode to see, hear, and interact with your DVD before you spend time building it.

Preview does not work if any of the following are missing: assigned picture assets for the menus for all languages you've created; one basic asset assigned for each track and slideshow; the startup action for the disc.

1. Select an item to preview. You can select the disc, a track, angle, marker, story, menu, audio stream, video stream, or slideshow. Selecting the disc previews its startup behavior.
2. Choose Preview from the Item menu, or click the Preview button in the Graphical View.
3. Use the onscreen remote control to navigate through your project. The remote control keys (except for the Stop key) will do whatever actions you assigned to them in the Property Inspector.
4. When you're finished, click the Stop key on the remote control or the Esc key on the keyboard to return to the DVD Studio Pro workspace.

Depending on the speed of your processor, you may be able to preview only a limited number of angles.

Some set-top player models may be programmed slightly differently than Preview Mode and navigation may not work exactly the same way on those models.

(This document contains information from Help Center, the help system included with your computer.)
Published Date: Feb 20, 2012

DVD Studio Pro 1.5: How to Add Subtitles

This document discusses adding subtitles.
This article has been archived and is no longer updated by Apple.
DVD Studio Pro includes the Subtitle Editor that you can use to create and import subtitle streams. For detailed information on using this software, see the DVD Studio Pro User's Manual.

Once your subtitle streams have been created and imported into the Assets container in the Project View, you can add them to your project.

Click the subtitle icon on the track tile you want to add subtitles to. (The subtitle icon is next to the audio icon.)
Choose New Subtitle from the Item menu.
Name the subtitle in the Property Inspector, and choose an asset and language from the pop-up menus in the General area.

If you create subtitles in more than one language, you can switch between them using the Subtitle key on the remote control.

(This document contains information from Help Center, the help system included with your computer.)
Published Date: Feb 20, 2012

DVD Studio Pro 1.5: About DVD Studio Pro

This documents contains information about DVD Studio Pro.
This article has been archived and is no longer updated by Apple.
DVD Studio Pro is software for authoring DVD-Video discs. It works with video, audio, graphics, and text materials that you have already created and edited and orchestrates them into an interactive DVD, complete with menus, buttons, subtitles, and alternate languages or sound tracks. You can script buttons to perform actions, define links between parts of your material, and see a real-time preview of your DVD as you create it.

Before you use DVD Studio Pro you need to create, edit, and assemble your source material. The video and audio you use in your project then needs to be converted to DVD-compliant formats, a process called encoding.

When you're finished putting together your project, you can use DVD Studio Pro to build it. The finished product is either a DVD-Video on a DVD-R, DVD-RAM, DVD-RW, or DLT tape, or a folder on your hard disk called Video_TS that contains all the information needed to write a DVD. You can open and play the contents of this folder as if it were on a DVD using the Apple DVD Player.

(This document contains information from Help Center, the help system included with your computer.)
Published Date: Feb 20, 2012

DVD Studio Pro 1.5: How to Create a Motion Menu

This document discusses creating a motion menu.
This article has been archived and is no longer updated by Apple.
Menus are graphic or video backdrops for buttons. A menu that uses a video clip for the background is called a motion menu. Motion menus can also include composited video images on the clip so it appears that each button is playing its own small video clip.

Before you can create a menu, you need to add assets to the Assets container in the Project View.

1. Click the Add Menu button at the bottom of the Graphical View.
2. Drag a video asset from the Assets container to the menu tile, or select the menu tile and choose an asset from the Asset pop-up menu in the Picture area of the Property Inspector.
3. To set the video for a motion menu to repeat (loop) indefinitely, select the menu and choose On from the Loop pop-up menu in the Timeout area.

You cannot create a motion menu by dragging a video asset from the Assets container to the Graphical View. This creates a track instead of a menu.

(This document contains information from Help Center, the help system included with your computer.)
Published Date: Feb 20, 2012

DVD Studio Pro 1.5: How to Work with Buttons

This document discusses working with buttons.
This article has been archived and is no longer updated by Apple.
You use the menu editor to move and resize buttons, create additional buttons, and assign actions to buttons. When you open a new menu in the menu editor, one button is already created.

Double-click a menu's thumbnail area to open the menu editor.

To move a button, select it and drag it by its center.

To resize a button, select the button and move your pointer to the button's flashing border. When the pointer changes to a set of arrows, drag the border.

To create additional buttons, position the pointer where you want the top-left corner of the button to appear and drag to create a rectangle.

To assign an action to a button, select the button and choose an item from the "Jump when activated" pop-up menu in the Action area of the Property Inspector.

The button's rectangle represents its "hot area." When the viewer uses your DVD in a computer and clicks inside the hot area, the button is activated (that is, it changes color and the action assigned to it is carried out).

(This document contains information from Help Center, the help system included with your computer.)
Published Date: Feb 20, 2012

DVD Studio Pro 1.5: Using Photoshop Layers to Specify Button Appearances

This document discusses using Photoshop layers to specify button appearances.
This article has been archived and is no longer updated by Apple.
You can use the Photoshop Layer method to specify what the buttons on a still menu look like when they are selected and activated. ("Selected" means that if the viewer clicks the Enter or OK key on the remote control, that button will be activated and its action will be carried out.)

To use the Photoshop Layer method, you need a Photoshop file with at least one layer for the background and the normal state buttons, plus one additional layer for the selected and activated states of each button.

1. Make sure the Photoshop file is in the Assets container.
2. Select a menu. In the Picture area of the Property Inspector, choose a Photoshop file from the Asset pop-up menu.
3. In the Property Inspector, click "Layers (always visible)."
4. In the box that appears, select the layers to use for the normal state of the buttons.
5. In the menu editor, select a button, and choose which layers of the Photoshop file to reveal for each state of the button (in the Display area of the Property Inspector).
6. To check your work, choose Show Selected State and Show Activated State from the Buttons menu.

It's easiest to work with the Layer method if you organize the layers according to the button positions in the containers in the Project View. (First the layers for the background, then the layers for Button 1, then the layers for Button 2, and so on.) If you create empty layers beginning with a hyphen ("-") they appear as menu dividers in the Property Inspector's Layers menu.

If your DVD has multiple languages, you need a Photoshop file or layers for each language. If you use multiple Photoshop files for a single set of menus, the layers must be named and organized identically on all of them.

(This document contains information from Help Center, the help system included with your computer.)
Published Date: Feb 20, 2012

DVD Studio Pro 1.5: Using the Highlighting Method to Specify Button Appearances

This document discusses using the highlighting method to specify button appearances.
This article has been archived and is no longer updated by Apple.
You use the highlighting method to specify button appearances in motion menus. (You can also use this method in still menus. You cannot use the Photoshop Layer method in motion menus.)

There are two parts to using the highlighting method: If you want to use an overlay image that determines which parts of the button's active areas will change color, you first need to choose one in the Property Inspector. The overlay image can be in Photoshop or PICT format, and must be added to the Assets container. You then need to specify one or two color and transparency sets for selected and activated buttons and assign a set to each state of each button.

1. Open the menu you want to work with in the menu editor by double-clicking its thumbnail area.
2. If you're going to use an overlay image, choose the asset containing your overlay image from the Overlay Picture pop-up menu (in the Button Hilites area of the Property Inspector). If the overlay image is a Photoshop file, you also need to choose its layer.
3. To specify color and transparency sets, choose colors in the Selected Set and Activated Set pop-up menus and set the percentage of color to use for each state. 0% is completely transparent and 100% is completely opaque.
4. Select a button on the menu. In the Display area of the Property Inspector, choose a highlight set from the Use Hilite pop-up menu.
5. Repeat step 4 for each button on the menu.
6. To check your work, choose Show Selected Hilites and Show Activated Hilites from the Buttons menu.

If you want more control over the way your overlay works, choose No from the Use Simple Overlay pop-up menu (in the Button Hilites area of the Property Inspector). The advanced highlighting controls that appear let you specify the highlight color and transparency for each of four shades in an overlay image.

(This document contains information from Help Center, the help system included with your computer.)
Published Date: Feb 20, 2012

DVD Studio Pro 1.5: How to Create Interactive Markers

This document discusses creating interactive markers.
This article has been archived and is no longer updated by Apple.
You can place buttons on top of tracks (or parts of tracks) that are assigned a video stream. Buttons on tracks are called interactive markers.

Because the video stream won't usually include button graphics, you will probably need to apply an overlay image to define the shape and position of the interactive markers. The overlay image can be in Photoshop or PICT format, and must be added to the Assets container.

1. Open the marker editor by double-clicking the track's thumbnail area.
2. Select or create a marker at the point where the buttons will appear.
3. In the Buttons area of the Property Inspector, choose an item from the Overlay Picture pop-up menu. If you choose a Photoshop file, you must also choose its layers.
4. Specify the colors and transparency levels for the normal, selected, and activated states of your buttons.
5. Specify the Default Button (the one that is initially selected).
6. Create and position buttons over the button graphics.
7. Select each button and in the Property Inspector name it and assign actions to it.
8. Repeat the process for each marked segment of your track that you want to have buttons. If you want subsequent interactive markers to have the same properties as the ones you already created, choose the original interactive marker from the Use Buttons Of pop-up menu.

Interactive markers are created using the subtitle feature of DVD players, so you cannot combine subtitles and interactive markers within one track.

(This document contains information from Help Center, the help system included with your computer.)
Published Date: Feb 20, 2012

DVD Studio Pro 1.5: How to Create a DVD@CCESS Web Link

This document discusses creating a DVD@CCESS Web link.
This article has been archived and is no longer updated by Apple.
You can attach a DVD@CCESS Web link to a track, marker, slideshow, or menu. When that item plays, the Web browser opens and displays the Web page (or other URL).

1. Select a track, marker, slideshow, or menu.
2. In the Property Inspector, choose URL in the @ccess Type pop-up menu in the @ccess area.
3. Enter a name and URL for the link in the @ccess area. Be sure to include "http://" or another prefix. You can enter any valid URL, including "mailto" or "ftp." You can also create a URL that opens a file on the DVD by entering the file's path name.
4. To activate a link from a button, create a menu that has the link attached. Set the button to jump to that menu when activated.

If you create DVD@CCESS links in your DVD, installers for those links are included on the final disc when you build it. Depending on the kind of computer you are using to play your DVD, you may need to install the installers for the Web links to work.

(This document contains information from Help Center, the help system included with your computer.)
Published Date: Oct 11, 2016

LaserWriter 8500: Status Lights Flash Amber and Green

This document discusses when the Ready / In Use light flashes amber and green.
This article has been archived and is no longer updated by Apple.
The demonstration feature of the printer is enabled. To disable this feature, turn off the printer. Press the Ready/In Use light while turning on the printer.

Related Documents

24327 LaserWriter 8500: Blinking Ready Light
34752 LaserWriter 8500: Status Lights

Published Date: Feb 20, 2012

LaserWriter 8500: Printer is not Listed in the Chooser or the Desktop Printer Utility

This document discusses if the printer is not listed in the Chooser or the Desktop Printer Utility.
This article has been archived and is no longer updated by Apple.
If you've selected the LaserWriter 8 icon but your printer is not named in the list of printers, one of the following may be the cause.

The printer has been turned off. Make sure it is plugged in and turned on, and wait for the Ready light to turn on.

The communication settings are not set correctly. See "LaserWriter 8500: How to Adjust Communication Settings" and "LaserWriter 8500: How to View and Change Communication Port Settings". See also Appendix D for a list of acceptable values. To reset the communication settings to their factory default values, set the communication switch to the Reset (out) position. Turn the printer off and back on again. Set the communication switch to the Normal (in) position.

Someone may have renamed the printer. Check the startup page to see if the name has changed.

If you are using an AppleTalk network that contains zones, you may not have selected the correct zone for the printer.

There's a problem in the network cable system somewhere between your computer and the printer you want to use. Make sure that all the cables are properly connected. If you still can't resolve the problem, the printer's electronics or the network connector boxes may not be functioning properly. Call an your network administrator or an Apple-authorized dealer.

The printer has the same name as other printers on the network. If that's the case, the printer automatically appends a number to the end of its name when it's turned on. The number may change each time you turn on the printer. The printer administrator can change the name using the Apple Printer Utility for the Mac OS or the Apple LaserWriter Utility for Windows. You can identify your printer by looking for the printer with the same Ethernet address (use the Apple Printer Utility for the Mac OS or the Apple LaserWriter Utility for Windows) that is printed on the startup page.

Check the Network control panel to make sure the correct network is selected.

Related Documents:

34850: "**LaserWriter 8500: How to Adjust Communication Settings**"
34849: "**LaserWriter 8500: How to View and Change Communication Port Settings**"
Published Date: Feb 20, 2012

LaserWriter 8500: How to View and Change Communication Port Settings

This document discusses viewing or changing communication settings.
This article has been archived and is no longer updated by Apple.
The standard communication settings of the printer work for most environments. To make sure the printer is set up to use the standard settings, check that the communication switch on the left side of the printer is in the Normal (in) position. The switch is located below the interface connectors.

You can view and change the standard communication settings for the printer with the Apple Printer Utility for Mac OS or Apple LaserWriter Utility for Windows .

You make changes to the communication settings with the printer's communication switch set in the Normal (in) position. This makes all communication settings available for changes.

1. Choose Configure Port from the Utilities menu.

2. Choose the port settings you want.

- You can set the Parallel interface to PostScript mode, TBCP, or No Change.
- You can set the LocalTalk interface to PostScript mode or turn it off.
- You can set the EtherTalk interface to PostScript mode or turn it off.
- You can set the NetWare interface to PostScript mode or turn it off.
- You can set the TCP/IP interface to PostScript mode or turn it off.

3. Click Set Port.

Resetting the communication settings

1. To restore the communication settings to the factory defaults:

- Set the communication switch on the printer to the Reset (out) position.
- Turn the printer off and back on again.
- Set the communication switch on the printer to the Normal (in) position.

Communication settings

The following table shows the default communication settings. For information about using the communication switch to adjust communication settings, see "LaserWriter 8500: How to Adjust Communication Settings." To change or view the current communication settings, use the Apple Printer Utility for Mac OS computers or the Apple LaserWriter Utility for Windows.

Normal (in) switch position

These settings can be changed to the following modes:

Port	Protocol	Mode
LocalTalk	LocalTalk	PostScript, Off
Ethernet	EtherTalk NetWare TCP/IP	PostScript, Off
Parallel	TBCP	PostScript, Off

When the communication switch is in the Reset (out) position, the following values are used:

Port	Protocol	Mode
LocalTalk	LocalTalk	PostScript
Ethernet	EtherTalk NetWare TCP/IP	PostScript
Parallel	TBCP	PostScript

Note: When the communication switch is in the Reset (out) position, a startup page is printed each time the printer is turned on and the Extended Job Status settings are removed.

Related Documents

34850 LaserWriter 8500: How to Adjust Communication Settings

Published Date: Feb 20, 2012

LaserWriter 8500: How to Adjust Communication Settings

This document discusses adjusting communication settings.
This article has been archived and is no longer updated by Apple.
Though you can adjust many of the printer's communication settings, the normal settings work for most environments. To make sure the printer is set up to use the normal settings, check the communication switch on the left side of the printer to make sure it's in the Normal (in) position.

Why customize communication settings?

Though the standard communication settings work well for most environments, you might want to customize communication settings to turn off network interfaces you don't need. For example, if you know the printer will never receive a NetWare message over the network, you can turn off the interface and stop the printer from sending out unnecessary NetWare packets.

How to customize communication settings

To customize communication settings, use either of the following two programs:

- Apple Printer Utility for the Mac OS
- Apple LaserWriter Utility for Windows

What to do next

Finish preparing the printer and completing the network connections by reading one or more of the following chapters:

- Chapter 2 explains how to administer the printer on an AppleTalk or TCP/IP network and how to help Mac OS users start using the printer.
- Chapter 3 explains how to administer the printer on a Novell NetWare or TCP/IP network and how to help Windows and DOS users get started using the printer. It also explains how to set up a direct connection to an IBM PC or compatible computer.
- Chapter 4 explains how to set up the printer on a TCP/IP network and how to help UNIXÂ® users get started using the printer.

Related Document:

50128: "**LaserWriter Manuals"**

Published Date: Feb 20, 2012

eMac: How to Install the Optional Stand

This document explains installing the optional stand.

This article has been archived and is no longer updated by Apple.

Follow the instructions in this sheet carefully. Failure to follow these instructions could damage your equipment and void its warranty.

Note: Written and video instructions covering customer-installable parts are available at http://www.info.apple.com/installparts/.

Tools Required

The tool is supplied with the stand.

To install the stand:
1. Save open documents and quit all open applications.
2. Turn the computer off by choosing Shut Down from the Special menu.
3. Unplug all cables.
4. Place a soft towel or cloth on the desk or surface.
5. Turn the computer over onto the cloth.

6. The stand attaches to the locations circled below.

7. Remove the screw located between the computer's feet.

8. Position the stand on top of the screw holes.

9. **Note**: The stand slides back and forth. To attach the first screw, slide the stand toward the back of the computer.

10. Tighten the first screw.

11. Slide the stand forward to access the two rear screws.

12. Tighten the screw on the left.

13. Tighten the screw on the right.

14. Carefully turn the computer over. The computer now swivels horizontally and vertically.

Published Date: Oct 11, 2016

iPhoto 1.1.1: How to Move the iPhoto Library Folder to a New Location

This document discusses moving the iPhoto Library folder to a new location.
This article has been archived and is no longer updated by Apple.
The iPhoto Library folder, located in your Pictures folder, contains photos you have imported into your photo library and any albums you've created using iPhoto. If you want to move your iPhoto Library folder to a new location, you must create an alias for it in your Pictures folder.

IMPORTANT: If you move, delete, rename, or otherwise tamper with files or folders in the iPhoto Library folder, you may be unable to see your pictures in iPhoto.

To move the iPhoto Library folder to a new location:

1. Drag the folder to the new location.
2. Select the folder in the new location and choose Make Alias from the File menu.
3. Drag the iPhoto Library folder alias to the Pictures folder and name it iPhoto Library.

(This document contains information from Help Center, the help system included with your computer.)
Published Date: Feb 20, 2012

iSync 1.5: How to set up a USB Palm OS device to sync with your computer

This article has been archived and is no longer updated by Apple.

Note: This article applies to iSync 1.5 and Mac OS X 10.3.9 and earlier. If you are using iSync 2.x in Mac OS X 10.4 or later, see this article for instructions.

If you have a Palm OS-based device, you can use iSync to synchronize your computer's Address Book contacts and iCal calendar and To Do information with the contacts, calendar, and to do list on your Palm device through USB. Here's how to set this up.

If your Palm device uses Bluetooth, see this article for complete wireless syncing instructions.

Important: To avoid sync issues, you should only sync your Palm OS device with one computer. If you add the device to iSync on more than one computer, the information may not sync correctly.

Setting up your device to sync

To add your Palm OS device to iSync 1.5, follow these steps in this order:

1. Make sure that you have iCal 1.0.1 or later installed. You can download the latest iCal update from here.
2. Download and install Palm Desktop version 4.0 or later on your computer, which includes Palm HotSync software.

   Tip: After installing Palm Desktop, it's a good idea to sync your Palm OS device with HotSync at least once before adding your device to iSync. Why? Palm HotSync may need to install important updates and other items on your handheld device. You may also be asked to establish a user account to use with your Palm device, or relate to an existing one, the first time you sync.

3. Download and install iSync Palm Conduit for Palm HotSync.
4. Open HotSync Manager on your computer (find it in the Palm folder, which is probably in your Applications folder).
5. From the **HotSync** menu, choose **Conduit Settings**.
6. In the Conduit Settings window, double-click the iSync Conduit, then select the "Enable iSync for this Palm device" checkbox. This allows iSync to synchronize with your Palm Address Book, Date Book, and To Do information.
7. If you're using a Palm device that's localized for use with Japanese, select the "This is a Japanese Device" checkbox.
   Important: If you have a Japanese Palm OS device but do not select this checkbox, your information may become damaged or unusable.
8. Click OK, then quit HotSync.

The next time you open iSync, your Palm device should appear in the iSync window.

Syncing your device with iSync

To sync your Palm OS device with iSync, press the HotSync button on the Palm cradle, cable, or the device itself. Both HotSync and iSync should open during the synchronization.

Note: You *must* initiate the sync from the Palm device, or the device will be skipped during the iSync sync.

Tip: Some Sony Clié devices may require *Missing Sync*, a third-party application by Mark/Space, to work with HotSync. For more information, see the iSync Compatible Devices page.

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Published Date: Oct 11, 2016

iSync: Choosing What Information is Synchronized

You can choose what contact or calendar information is synchronized on your mobile phone, iPod, or Palm OS device. You may want to reduce the information synchronized to speed up the sync or to limit the memory used on your device.
This article has been archived and is no longer updated by Apple.
Select the device icon in the iSync window, then choose the information you want synchronized on that device.

If the device settings aren't visible, click the device icon again to expand the iSync window.

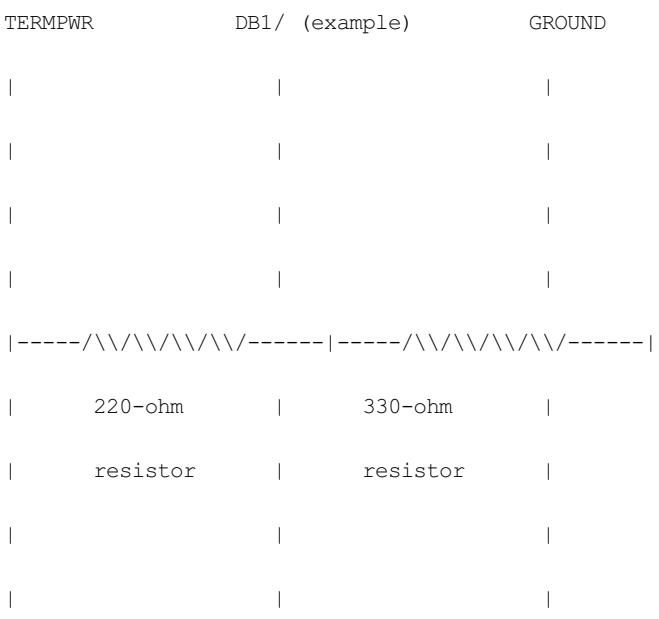
Published Date: Feb 20, 2012

25-Pin SCSI Terminator: How To Build

This article contains information for constructing a 25-pin terminator
This article has been archived and is no longer updated by Apple.
Pinouts for the SCSI port are as follows:

Pin No.	Signal Name	Description
1	REQ/	Request
2	MSG/	Message
3	I/O/	Input/Output
4	RESET/	Reset
5	ACK/	Acknowledge
6	BSY/	Busy
7	GROUND	Signal Ground
8	DB0/	Data Bit 0
9	GROUND	Signal Ground
10	DB3/	Data Bit 3
11	DB5/	Data Bit 5
12	DB6/	Data Bit 6
13	DB7/	Data Bit 7
14	GROUND	Signal Ground
15	C/D/	Control/Data
16	GROUND	Signal Ground
17	ATN/	Attention
18	GROUND	Signal Ground
19	SEL/	Select
20	DBP/	Data Parity
21	DB1/	Data Bit 1
22	DB2/	Data Bit 2
23	DB4/	Data Bit 4
24	GROUND	Signal Ground
25	TERMPWR	+5 volts

Inside the Apple SCSI Terminator each signal line (ends with "/") is connected to TERMPWR through a 220-ohm resistor and is also connected to GROUND through a 330-ohm resistor.



The obvious tradeoff here is cost versus time to build this terminator. It would seem that size is also an issue; this is a lot of resistors and solder

joints to deal with.

However, if someone needs it, and appearance is not an issue and energy is in abundance, this is a solution.
Published Date: Feb 20, 2012

Apple Discussions About QuickTime: Frequently Asked Questions

This article contains frequently asked questions (FAQ) regarding the Apple Discussions About QuickTime, in the Apple Discussions area at the Apple Support site. Each question is followed by one or more pointers to articles in the Knowledge Base, which provides answers, suggestions, or troubleshooting advice to help you deal with the issue.

If the questions below do not contain an answer to something you are looking for, you can continue to search for an answer by using the Search function here within the Knowledge Base or you can go to the **Apple Discussions About QuickTime** itself.

Take some time to look through the QuickTime discussion board, or use its search function. It is quite likely your question has come up before, even if it does not have the frequency of the ones listed below. If you find a previously posted question that matches yours, read the posted answers. If you still did not find an answer, please feel free to either post a new topic describing your issue, or add a reply to an existing topic that closely matches your issue.

This article has been archived and is no longer updated by Apple.

Questions answered in this article:

1. When using Netscape Navigator for Windows, I want the QuickTime 3 plug-in to open .MOV files, but prefer opening .MID, .WAV, and .AVI files using various other plug-ins.
2. I have installed QuickTime on my computer, and now I get a message saying "You may experience problems playing a video track in "xxxxxxxx.avi" because the required compressor could not be found."
3. I have installed QuickTime on my Windows-compatible computer and can no longer play movies. I have a broken QuickTime logo in Web pages.
4. I have installed QuickTime 3 on my computer, and now I am unable to save a movie that is shown in my web browser. Is there some way to do this?
5. How do I route QuickTime MIDI information to a MIDI sound module or MIDI keyboard? The QuickTime Settings control panel only lists choices for "QuickTime Music Synthesizer" and "(No Synthesizer)."
6. How do I add a new synthesizer configuration? How do I configure QuickTime to use my sound card for playing music and MIDI files, instead of using the QuickTime Music Synthiesizer?
7. While installing QuickTime. I get "An error occurred trying to download the file VISEData" or "The file "viseicat.idx" couldn't be downloaded."
8. When using my browser, I sometimes get the error message, "Could not load plug-in 'QuickTime' for the MIME type 'video/quicktime'".
9. Where can I get the QTVR Xtra 2.0 for Director?
10. Uninstalling QuickTime, I get an error message which says a file is in memory.

Question 1: When using Netscape Navigator for Windows, I want the QuickTime 3 plug-in to open .MOV files, but prefer opening .MID, .WAV, and .AVI files using various other plug-ins.

Answer: See article 30544: "**QuickTime 3 for Windows: Netscape Configuration Tips**"

Question 2: I have installed QuickTime on my computer, and now I get a message saying "You may experience problems playing a video track in "xxxxxxxx.avi" because the required compressor could not be found."

Answer: See article 30506: "**QuickTime : "Required compressor could not be found" Message**"

Question 3: I have installed QuickTime on my Windows-compatible computer and can no longer play movies. I have a broken QuickTime logo in Web pages.

Answer: See article 60884: **"Windows Internet Explorer 5.5 SP2 and 6.0: Broken QuickTime Graphic in Web Pages"**

Question 4: I have installed QuickTime 3 on my computer, and now I am unable to save a movie that is shown in my web browser. Is there some way to do this?

Answer: See article 30398: "**QuickTime 3: Saving From Plug-in**"

Question 5: How do I route QuickTime MIDI information to a MIDI sound module or MIDI keyboard? The QuickTime Settings control panel only lists choices for "QuickTime Music Synthesizer" and "(No Synthesizer)."

Answer: See article 22210: "**QuickTime 3: Routing MIDI Information**"

Question 6: How do I add a new synthesizer configuration? How do I configure Quicktime to use my sound card for playing music and MIDI files, instead of using the QuickTime Music Synthesizer?

Answer: See article 22210: "**QuickTime 3: Routing MIDI Information**"

Question 7: While installing QuickTime, I get "An error occurred trying to download the file VISEData" or "The file "viseicat.edx"couldn't be

downloaded".

Answer: See article 60388: "**QuickTime: "VISEData or "viseicat.idx" Alerts**"

Question 8: When using my browser, I sometimes get the error message, "Could not load plug-in 'QuickTime' for the MIME type 'video/quicktime'".

Answer: See article 21183: "**QuickTime For Windows: Frequently Asked Questions**"

Question 9: Where can I get the QTVR Xtra 2.0 for Director?

Answer: See article 24007: "**QTVR 1.0 to 2.0 Transition**"

Question 10: Uninstalling QuickTime, I get an error message which says a file is in memory.

Answer: To successfully remove QuickTime for Windows, whether you use the uninstall program or the Add/Remove Programs control panel, the Control Panels window needs to be closed. This is because both a QuickTime, and QuickTime 32 control panel is considered active by Windows, whenever the Control Panels window is open. Close the Control Panels window after opening the Add/Remove Programs control panel or before running the Uninstall QuickTime application.

Published Date: Feb 20, 2012

Final Cut Pro: Recommendations for Good Performance

This document contains recommendations for good performance.

This article has been archived and is no longer updated by Apple.

Recommendations for good performance

Follow these recommendations to help Final Cut Pro work smoothly on your system.

- Don't use your computer as a server. Using your system as a server can impede Final Cut Pro's performance, causing dropped frames and other problems.
- Leave the Processor Performance setting in System Preferences at Highest.
- Don't use Final Cut Pro while connected to the Internet via modem.
- Turn off AppleTalk when capturing or outputting to tape. Turn off AppleTalk when you're using the Log and Capture window or when outputting your program to tape to prevent the possibility of dropped frames. For more information, see Mac Help.
- Limit your use of third-party extensions. Some users prefer to install Final Cut Pro on a system that doesn't have third-party extensions for anything other than video editing. However, depending on how your system is set up, you may need other extensions, such as drivers for USB-to-serial adapters, USB-to-ADB adapters, and printers and third-party video capture cards. Avoid installing extensions for increasing memory or performance, customizing your pointer, or modifying the behavior of your screen or desktop. If you need memory, buy and install more RAM. If you need faster performance, consider a faster computer. If you must install third-party extensions that may interfere with the smooth operation of Final Cut Pro, set up extension sets to use for various purposes. Use the Extensions Manager control panel to create a set of extensions for use with Final Cut Pro that excludes unnecessary third-party extensions. When you use Final Cut Pro, you can start up your computer with the appropriate set of extensions. For more information, see Mac Help.

This document contains information from Help Center, the help system included with your computer.

Published Date: Feb 20, 2012

SCSI Troubleshooting: Hardware and Software Conflicts

A discussion of SCSI hardware and software conflicts and possible solutions.
This article has been archived and is no longer updated by Apple.
Connecting SCSI devices and installing associated drivers and INITs sometimes cause hardware and software issues.

Hardware issues

- Improper termination, typically the cause of hardware conflicts
- Not setting the SCSI priority number to a unique number
- Using a device that improperly "provides" built-in termination, or improperly powers the terminators.
- Damaged cables, terminators, or the terminator power source.
- Low system RAM. Configuring a startup disk with minimal drivers and INITs or adding more RAM may help in a low memory situation.

Software issues
Software conflicts typically result from INITs conflicting at startup. Often, you can isolate a conflicting INIT by removing all extraneous INITs, then systematically adding each one back into the System Folder, one at a time, until you can no longer start up or use a device.

Also, you can often eliminate the conflict by renaming the INIT (or files that contain INITs in their Resource Fork) so that they install in a different order. (INITs and drivers are installed alphabetically.) For example; you could rename the Apple Scanner INIT to "aScanner" to get it to load sooner.

Note: There are some INITs that won't work if renamed. If this is the case, and the INIT conflicts with some device, you may have to remove the INIT from the System Folder when using that device.
Published Date: Feb 20, 2012

Cinema Tools: An Introduction to Cinema Tools for Final Cut Pro

This document is an overview of Cinema Tools for Final Cut Pro.

This article has been archived and is no longer updated by Apple.

An Introduction to Cinema Tools for Final Cut Pro

In today's post-production environment, it's common for editors and filmmakers to find themselves faced with a confounding array of formats, frame rates, and workflows encompassing a single project. Projects are often shot, edited, and output using completely different formats at each step. For editors and filmmakers who specifically want to shoot and finish on film or 24P high definition video, Cinema Tools for Final Cut Pro becomes an essential part of the post-production process when editing with Final Cut Pro, because it allows you to convert between different formats.

For example, when working with film you need to be able to track the relationship between the original film frames and their video counterparts. Cinema Tools includes a sophisticated database feature that tracks this relationship regardless of the video standard you use, ensuring that the film can be conformed to match your Final Cut Pro edits. Cinema Tools also provides tools that enhance Final Cut Pro's ability to edit video at a 24 frames per second (fps) rate, such as the import and export of 24 fps Edit Decision Lists (EDLs).

Also provided is the ability to convert captured video clips to 24 fps video. For NTSC, this includes a Reverse Telecine feature that removes the extra frames added during the 3:2 pull-down process commonly used when transferring film to video or when downconverting 24P video.

Cinema Tools works with Final Cut Pro to provide tools designed to make both editing film digitally and working with the emerging 24P high definition video standard easier and more cost effective, providing functionality previously found only on high-end or very specialized editing systems.

Editing Film Digitally

Computer technology is changing the film-creation process. Most feature-length films are now edited digitally, using sophisticated and expensive nonlinear editors designed for that specific purpose. Until recently, this sort of tool has not been available to filmmakers on a limited budget.

Cinema Tools provides Final Cut Pro with the functionality of systems costing many times more at a price that all filmmakers can afford. For filmmakers shooting with 35mm or 16mm film who want to edit digitally and finish on film, Cinema Tools allows you to edit video transfers from your film using Final Cut Pro, then generate an accurate cut list that can be used to finish the film.

How Does Cinema Tools Help You Edit Your Film?

Editing film has traditionally involved the cutting and splicing together of a film workprint, a process that is time consuming and tends to discourage experimenting with alternate scene versions. Transferring the film to video makes it possible to use a nonlinear editor (NLE) to edit your project. The flexible nature of an NLE makes it easy to put together each scene and gives you the ability to try different edits. The final edited video is generally not used-the edit decisions you make are the real goal. They provide the information needed to cut and splice (conform) the original camera negative into the final movie. The challenge is in matching the timecode of the video edits with the key numbers of the film negative so that a negative cutter can accurately create a film-based version of the edit.

This is where Cinema Tools comes in. Cinema Tools tracks the relationship between the original camera negative and the video transfer. Once you are finished editing with Final Cut Pro, you can use Cinema Tools to generate a cut list based on the edits you made. Armed with this list, a negative cutter can transform the original camera negative into the final film.

Film Is Not Going Away

For many, film still provides the optimum medium for capturing images, and if your goal is a theatrical release or a showing at a film festival, you will need to provide the final movie on film. Using Final Cut Pro with Cinema Tools does not change the process of exposing the film in the camera or projecting the final movie in a theater-it's the part in between that takes advantage of the advances in technology.

What Cinema Tools Does

Cinema Tools tracks all of the elements that go into the making of the final film. It knows the relationship between the original camera negative, the transferred videotapes, and the captured video clips on the editing computer. It works with Final Cut Pro to store information on how the video clips are being used and generates the cut list required to transform the original camera negative into the final edited movie.

Cinema Tools also checks for problems that can arise while using Final Cut Pro, the most common one being duplicate uses of source material: using a shot (or a portion of it) more than once. Besides creating duplicate lists, you can use Cinema Tools to generate other lists, such as one dealing with opticals-the placement of transitions, motion effects (video at other than normal speed), and titles.

Cinema Tools can also work with the production sound, tracking the relationship between the audio used by Final Cut Pro and the original production sound sources. It is possible to use the edited audio from Final Cut Pro when creating an Edit Decision List (EDL) and process (or finish) the audio at a specialized audio post-production facility.

It's important to understand that you use Final Cut Pro only to make the edit decisions- the final edited video output is not typically used, since the video it is edited from generally is highly compressed and includes burned-in timecode (window burn) and film information. It is the edit-based cut list that you can generate with Cinema Tools that is the goal.

Why 24P Video?

The proliferation of high definition video standards and the desire for worldwide distribution has created a demand for a video standard that can be easily converted to all other standards. Additionally, a standard that translates well to film, providing an easy, high-quality method of originating and editing on video and finishing on film, is needed.

The 24P video standard provides all this. It uses the same 24 fps rate as film, making it possible to take advantage of existing conversion schemes to create NTSC and PAL versions of your project. It uses a progressive scanning scheme and a high definition image (1920 pixels per line, 1080 lines per frame) to create an output well suited to being projected on large screens and converted to film.

Additionally, the 24P standard makes it possible to produce high-quality 24 fps telecine transfers from film. These are very useful when you intend to broadcast the final product in multiple standards.

Working With 24P Sources

With the emergence of high definition 24P video recorders, there is a growing need for Final Cut Pro to support several aspects of editing at 24 fps. Using Cinema Tools with Final Cut Pro provides the following:

- the import and export of 24 fps EDLs
- the ability to convert NTSC 30 fps EDLs to 24 fps EDLs
- a Reverse Telecine feature to undo the 3:2 pull-down used when 24 fps film or video is converted to NTSC's 30 fps

Editing 24P Video

The excellent quality of 24P video presents a challenge when it comes to editing-the bandwidth and storage space it requires. Editing uncompressed 24P video directly in Final Cut Pro requires you to have a system with large, fast drives and specialized capture hardware. Even with a properly configured system, you will only be able to capture the video you actually intend to use, not the typical 20 to 100 hours you may have shot.

The typical approach is to edit in two steps: an offline session, using compressed and downconverted (to NTSC or PAL) clips, followed by an online session with recaptured uncompressed clips.

Even if your Final Cut Pro system is not configured to edit uncompressed 24P video, it can serve as an offline editor and export a 24 fps EDL to be used by a 24P online editing system. Even better, if your online 24P editing system uses Final Cut Pro, you can simply copy the project from the offline system, allowing you to preserve far more information about the edit than an EDL alone can provide.

TA25521_Cinema_Tools_An_Introduction_to_Cinema_Tools_for_Final_Cut_Pro.pdf

This document contains information from Cinema Tools Help.

Published Date: Feb 20, 2012

How to Install Cinema Tools for Final Cut Pro 3

This document describes how to install Cinema Tools for Final Cut Pro.

This article has been archived and is no longer updated by Apple.

Installing Cinema Tools for Final Cut Pro

Congratulations on your purchase of Cinema Tools for Final Cut Pro. The following information is intended to get you up and running as quickly as possible. Be sure to also read the "Before You Install" document (on the Cinema Tools for Final Cut Pro installation CD).

Using Cinema Tools With Final Cut Pro
Final Cut Pro version 3.0.2 for Mac OS X is the required companion product to Cinema Tools.
It is required for several Cinema Tools features:

- 24 frames per second (fps) Edit Decision List (EDL) Import and Export
- the direct export of film lists from an edited sequence

Installing Cinema Tools on Systems With Final Cut Pro
The Cinema Tools installation package contains plug-ins and Easy Setup files for Final Cut Pro. How these are handled during the installation depends on your situation:

- *If you are installing Cinema Tools on a system that already has Final Cut Pro 3.0.2 installed*, Final Cut Pro is configured to work with these files.
- *If you are installing Cinema Tools and Final Cut Pro at the same time*, install Final Cut Pro first. This ensures that Final Cut Pro will be properly configured to work with Cinema Tools.
- *If you install Final Cut Pro 3.0.2 sometime after you install Cinema Tools*, you will need to reinstall Cinema Tools to properly configure Final Cut Pro.

Installing Cinema Tools on systems with Final Cut Pro adds plug-ins and Easy Setups to Final Cut Pro. The plug-ins let you export film lists and audio EDLs, and provide 24 fps EDL Import and Export functionality. The Easy Setups support three DV configurations: 23.98 fps, 24 fps, and NTSC with non-drop frame timecode.

System Requirements
Before you install Cinema Tools, make sure that your system meets the minimum requirements.

Important Be sure your system also meets Final Cut Pro's needs when installing both applications, especially if you want to take advantage of Final Cut Pro's full feature set.

Hardware

- The following are the minimum recommended computer configurations:
- Power Macintosh G3/300 megahertz (MHz) or faster computer with built-in FireWire
- PowerBook G3/400 MHz or faster computer with built-in FireWire
- iMac 350 MHz or faster computer with built-in FireWire
- iBook (Dual USB) 500 MHz or faster computer with built-in FireWire

Your computer also needs the following:

- A CD or DVD drive
- 256 megabytes (MB) of random-access memory (RAM)
- 10 MB of disk space for the application
- If you will be storing media clips on the same computer, at least a 6 gigabyte (GB), Audio/Video rated disk drive (20 GB or greater recommended)

Software

- Mac OS X v10.1.3 or later
- QuickTime 5.0.4 or later (included with Mac OS X)
- Final Cut Pro 3.0.2 for Mac OS X is the required companion product to Cinema Tools.

Recommendations for Good Performance

TA25522_How_to_Install_Cinema_Tools_for_Final_Cut_Pro_.pdf

Follow these recommendations to help Cinema Tools work smoothly on your system.

- Don't use your computer as a server.
  Using your system as a server can impede the performance of Cinema Tools, causing dropped frames and other issues.
- Don't use Cinema Tools while connected to the Internet via a modem.

Installing and Registering Cinema Tools for Final Cut Pro
Note: Before you can install any software on computers with Mac OS X, you need to log in as the administrator using the administrator password.

1. Insert the Cinema Tools installation CD into your CD or DVD drive, then double-click the Cinema Tools Installer folder.
2. Double-click the Install Cinema Tools icon and follow the onscreen instructions.
Note: If multiple copies of Final Cut Pro 3.0.2 are detected, you will be asked to select the one to configure for Cinema Tools.
3. When a message appears stating that installation was successful, click Quit.
4. Double-click the Cinema Tools application icon to open Cinema Tools.
Important The Cinema Tools installation CD must be in the CD or DVD drive the first time you open Cinema Tools. It is no longer required after you have filled out the Registration dialog.
5. In the Cinema Tools Registration dialog, enter your first and last name.
Note: Entering a middle initial and organization is optional.
6. In the Serial Number field, enter the Cinema Tools serial number listed on the installation CD sleeve, then click OK.
Important The serial number is case-sensitive. Be sure to enter it exactly as shown on the label.

You are now ready to begin using Cinema Tools.

This document contains information from the Cinema Tools in-box materials and installation CD.

Note: Final Cut Pro 4 includes Cinema Tools 2. The Final Cut Pro 4 installer installs both programs.

Published Date: Feb 20, 2012

DVD Studio Pro: About DVD Copy Protection

This document describes the two types of copy protection currently supported by DVD Studio Pro.
This article has been archived and is no longer updated by Apple.
DVD Studio Pro supports both analog and digital forms of copy protection. When using either form, the DVD Studio Pro project must be taken to an authoring facility so the copy protection can be enabled during the replication process.

Analog -- Macrovision

DVD Studio Pro supports 3 types of Macrovision copy protection

- Type 1 (Automatic Gain Control only)
- Type 2 (Automatic Gain Control + 2-line colorstripe)
- Type 3 (Automatic Gain Control + 4-line colorstripe)

In each case Macrovision copy protection prevents the user from making a copy of the video to a device such as a VCR or other recording device via an analog signal such as an S-Video connection.

To enable Macrovision:

1. Click on a video track tile in the Graphical View.
2. Choose the type of Macrovision copy protection you would like to enable in the Property Inspector. See Figure 1. Each track needs to be set independently.

Figure 1 Choosing Macrovision copy protection

Digital -- CSS

DVD Studio Pro supports CSS or Content Scrambling System. This system prevents your DVD-Video from being copied to a hard drive or other media. CSS scrambles the video signal in a way which makes copies unusable.

To enable CSS:

1. Click in the grey area of the Graphical View to deselect all tiles.
2. Choose On from the CSS pop-up menu in the General area of the Property Inspector. See Figure 2. This setting is applied to the whole disc as opposed to MacroVision which must be applied to each track.

Figure 2 Choosing CSS copy protection

Published Date: Feb 20, 2012

Macintosh: Correct Way to Shut Down and Restart

Is it okay to shut down my Macintosh by switching off the power?
This article has been archived and is no longer updated by Apple.
The correct way to restart or shut down a Macintosh computer is to choose the Restart or Shut Down commands from the Special menu in the Finder. When the computer starts up, a flag is set on the startup disk to let the Mac OS know that the computer started up correctly. When the computer is restarted or shut down correctly this flag is cleared. If the computer was not restarted or shut down correctly this flag is not cleared, for example: the computer is turned off using the power switch, or reset using the reset button.

When a Macintosh computer starts up this flag is tested. If the flag is clear the computer starts up normally. If the flag is set, the Mac OS knows that the computer was not restarted or shut down correctly. In this case, the computer rebuilds the volume bitmap. On a large startup disk with many files, this operation may take several minutes. Depending on the version of Mac OS installed on the startup disk, Disk First Aid checks the hard disk and repairs any errors that are found.
Published Date: Feb 20, 2012

Apple Hardware: Importance of Proper Grounding

This article discusses the importance of proper grounding for all Apple equipment.
This article has been archived and is no longer updated by Apple.
From a user safety standpoint, when using electrical equipment, it is important to have the accessible portions of the device at a voltage potential that does not endanger the user. When electrical devices are not grounded there is the possibility that a charge may build up, either from environmental conditions, or from the voltages inside. If all electrical devices in use at a particular location are properly grounded there is a reduced possibility of shock. Many governments require grounding on certain types of electrical equipment.

Aside from the safety aspects, improper grounding can affect the operational reliability of a computer system. If a computer system and its peripherals are not properly grounded then excessive ground currents may be generated, which may cause erratic operation. If all the equipment is connected to a common ground then the chances for issues caused by ground loop currents are reduced.
Published Date: Feb 20, 2012

Apple Discussion About Power Macintosh Frequently Asked Questions

This article contains a number of frequently asked questions (FAQ) that have come up on the Apple Discussion About Power Macintosh in the Apple Discussion area at the Apple Support site. Each question is followed by one or more pointers to articles in the Apple Knowledge Base, which provide answers, suggestions, or troubleshooting advice to help you deal with the issue that creates the question.

Some of the answering articles have pointers to useful suggestions posted on the board by other users. These may or may not also have an official Apple answer, but this will be noted where applicable.

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Questions answered in this article:

1. I have a Power Macintosh G3 (Blue and White) computer. Are there any updates I need to install?
2. I have the Apple DVD-ROM and decoder card. I sometimes have difficulty playing movies. What can I do?
3. Does my computer support the master and slave IDE mode?
4. Audio CD-ROM discs appear to stop playing periodically. Why is this happening?
5. Sometimes the computer pauses for a few seconds before doing anything. It sounds like the CD-ROM drive is trying to start up when it happens. Is there anything I can do?
6. I have a Power Computing Corporation computer and I'm trying to get warranty support for it. Who do I contact for this?
7. I have an older Power Macintosh computer and the computer starts up, but I don't get any video. Sometimes if I turn it on and off it will work. What can I do?
8. My computer seems to freeze for no reason at all. What can I do to get it working or to find out what is causing the freeze?
9. I have a Power Macintosh G3 computer and I have difficulty using various sound applications.
10. I have a processor card I removed from a Power Macintosh 8600/250. Can I use that in my Power Macintosh 7600?
11. I purchased one of the build-to-order SCSI cards from Apple for my Power Macintosh G3 (Blue and White). I'm not sure which card I got or what I can connect to it.
12. I'm having difficulty with my Power Macintosh modem. Sometimes I can't connect at all or sometimes I get disconnected. Is there anything I can do?

Question 1: I have a Power Macintosh G3 (Blue and White) computer. Are there any updates I need to install?

Answer: Article 31002: "**Power Macintosh G3 (Blue and White): When to Install Available Updaters**"

Question 2: I have the Apple DVD-ROM and decoder card. I sometimes have difficulty playing movies. What can I do?

Answer:

- Article 58402: "**Power Macintosh G3: DVD Troubleshooting**"
- Article 58273:"**Power Macintosh G3 (Blue and White): Displaying DVD Video on Second Display**"

Question 3: Does my computer support the master and slave IDE mode?

Answer: Article 24342: "**Power Macintosh G3: IDE Master and Slave Support and Configuration**"

Question 4: Audio CD-ROM discs appear to stop playing periodically. Why is this happening?

Answer:

- Article 20287: "**Energy Saver: Causes CD-ROM Discs To Stop Playing**"

Question 5: Sometimes my Power Macintosh pauses for a few seconds before doing anything. It sounds like the CD-ROM drive is trying to start up when it happens. Is there anything I can do?

Answer: Article 30376: "**Power Macintosh: Pauses For Several Seconds**"

Question 6: I have a Power Computing Corporation computer and I'm trying to get warranty support for it. Who do I contact for this?

Answer: Article 24325: "**Power Computing Corporation: Support Information**"

Question 7: I have an older Power Macintosh computer and the computer starts up, but I don't get any video. Sometimes if I turn it on and off it will work. What can I do?

Answer:

- Article 20328: "**Macintosh Computers: Low Battery Can Cause No Video**"
- Article 11751: "**Macintosh Family: Batteries & Part Numbers**"

Question 8: My computer seems to freeze for no reason at all. What can I do to get it working or to find out what is causing the freeze?

Answer:

- Article 19468: "**Macintosh Computers & System 7.5: Freeze Troubleshooting**"
- The **Basic Troubleshooting** area of Tech Exchange may also help in troubleshooting this type of issue.

Question 9: I have a Power Macintosh G3 computer and I have difficulty using various sound applications.

Answer:

- Article 22146: "**Power Macintosh G3 Sound Input Settings**"
- Article 24290: "**Power Macintosh G3: No Internal Modem Sound**"
- Article 30517: "**AudioTuneUp 2.0 Update: Read Me**"
- Article 30307: "**Power Macintosh G3: Using PlainTalk Speech Recognition v1.5**"

Question 10: I have a processor card I removed from a Power Macintosh 8600/250. Can I use that in my Power Macintosh 7600?

Answer: Article 24801: **"Power Macintosh 8600, 9600: Processor Card Compatibility**"

Question 11: I purchased one of the build-to-order SCSI cards from Apple for my Power Macintosh G3 (Blue and White). I'm not sure which card I got or what I can connect to it.

Answer:

- Article 58204: **"Power Macintosh G3 (Blue and White): SCSI FAQ"**
- Article 58256: **"Power Macintosh G3 (Blue and White): Differentiating Between Available SCSI Cards"**

Question 12: I'm having difficulty with my modem. Sometimes I can't connect at all or sometimes I get disconnected. Is there anything I can do?

Answer:

- Article 30893: "**Remote Access: Modem Not Responding Alert**"
- Article 24803: "**Troubleshooting Unreliable Modem Connections**"

This article can help you locate the software update mentioned here:

- Article 14724: "**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.

Published Date: Feb 20, 2012

Final Cut Pro 3: Issues With Audio Quality

This document describes problems with audio quality that may occur with Final Cut Pro 3.

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You don't hear audio through your camcorder speakers.

- Make sure your cables are properly connected.
- If you are scrubbing audio in the Audio tab of the Viewer, increase the volume of the computer's audio output.

You don't hear audio on your computer's speakers when playing video from your camcorder or deck.

- Make sure the speaker's cables are properly connected.
- Make sure your audio cables are properly connected.
- If you're monitoring your audio from your computer, make sure that Mute is off, and that the computer's volume is adjusted to a reasonable level.
- When external video is set to all frames in order to monitor video using a camcorder, deck, or third-party capture card, both the video and audio are played through the external monitor and speakers that are connected to your camcorder, deck, or third-party capture card. The computer's speakers don't receive any audio. Make sure the external monitor and speakers are both on and make sure the speaker's volume level is turned up.
- Check your QuickTime audio settings in the Capture Presets tab in the Audio/Video Settings window. For details on audio sample and source settings, see About capture presets.

Captured audio sounds distorted and "crackly" during capture.

- During capture, make sure that you always set Final Cut Pro's sample rate to that of your recorded source material. Mismatched sample rates can result in pops and crackles in the audio, incorrect audio/video sync, and in generally diminished sound quality. These rates are
    - 32 kHz if you're capturing media from a DV camera that was set to 12-bit recording
    - 44.1 kHz if you're using your microphone input or other audio interface
    - 48 kHz if you're recording from a DV camera set to 16-bit recording, or if you're recording from an audio interface capable of this rate.

Captured audio sounds fine during capture and when played in the Viewer, but when you edit it into a sequence along with other audio clips, it sounds distorted.

- Make sure that the sample rates of the audio clips you're using match the sample rate set for your sequence. If they don't, Final Cut Pro will resample your audio during playback. Mixing 44.1 kHz audio and 48 kHz audio sounds acceptable, but audio will sound best with the audio rate of your edited sequence set to 48 kHz. Upsampling audio in Final Cut Pro sounds better than downsampling it.
  It's not recommended you mix 32 kHz audio (12-bit) and 48 kHz audio (16-bit) in the same sequence, as this may result in slight audio distortion.

Published Date: Feb 20, 2012

Macintosh: Foreign File Access Error Message

I received this message when starting a Macintosh with an attached CD-ROM drive:

"No File System Access Modules could be found in your System Folder. Therefore, the Foreign File Access Software was not installed."

Can you explain?
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You get this message when you have the Foreign File Access extension in your System Folder, but one or more of the access files are not installed.

In order to use the CD-ROM drive that came with your Macintosh computer, you need the following files in your extension folder; Apple CD/DVD Driver (or just Apple CD-ROM depending on the version of Mac OS you have installed); High Sierra File Access; Foreign File Access; ISO 9660 File Access; UDF Volume Access; and Audio CD Access.

If any of these files are moved or turned off using the Extension Manager, the Foreign File Access extension is not be able to locate them and displays the error message "No File System Access Modules could be found in your System Folder. Therefore, the Foreign File Access Software was not installed."
Published Date: Feb 20, 2012

Mac OS X: Kodak Photo CD Capabilities

Kodak Photo CDs work differently in Mac OS 9 and Mac OS X. Additional steps or third-party software may be necessary to open pictures on the CDs.
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Symptom

- The Kodak Photo CD appears on the desktop or in a Finder window, but the contents of the CD-ROM disc do not appear the same in Mac OS X as they do in Mac OS 9.
- Application programs that can open Photo CD files under Mac OS 9 cannot open them under Classic or Mac OS X.

Note: This document discusses Kodak Photo CD discs. Kodak Picture CD discs are different and can be used the same under Mac OS 9 and Mac OS X.

Solution

Option 1

Note: This option only works with iPhoto 1.1.1 or later.

1. Insert the Photo CD disc into the computer.
2. iPhoto should automatically start. If it does not, then launch iPhoto.
3. iPhoto should change to Import mode and the Photo CD should appear in the bottom left (Figure 1)

Figure 1 Photo CD icon

4. Click the Import button to import the photos from the Photo CD (Figure 2). Erasing after import is not an option because the CD is read only.
5. When the import is complete, eject the Photo CD.

Figure 2 Import button

Note: iPhoto imports Photo CD images at the highest resolution available on the disc (most commonly 3072x2048).

Option 2

1. Choose System Preferences from the Apple menu.
2. Choose Startup Disk from the View menu. The Startup Disk pane appears.
3. Click the Mac OS 9 System Folder to select it.
4. Click Restart, then Save and Restart when prompted. The computer restarts using Mac OS 9.
5. Insert the Photo CD.
6. Open the Photos folder Note: This folder does not appear in the Mac OS X Finder (Figure 3).

Figure 3 Photo CD window

7. Locate the picture size (resolution) you want to use and copy the entire folder or selected pictures within that folder to the desktop (Figure 4). Note that each folder contains the same pictures represented at different resolutions or sizes.

Figure 4 Resolution options

8. Open the Startup Disk control panel.
9. Select the Mac OS X System folder, and click Restart.
10. Locate the images in the Mac OS 9 Desktop Folder and open them in program of your choice.

Option 3

Note: This options works with Adobe Photoshop 6.0 or later running under Classic, or Graphic Converter 4.1.2 or later running under Mac OS X.

1. Insert the Kodak Photo CD.
2. Open Adobe Photoshop or Graphic Converter.
3. Choose Open from the File menu.
4. Navigate to the Photo CD and select the Images folder.
5. Click Open.
6. Select the picture you wish to open then click Open.

Other applications may be able to open the Kodak Photo CD ".PCD" file formats. Check with the application vendor or documentation for compatibility information.

Notes

1. See technical document 61215 "**Mac OS X: How to Open and Save Files on the Mac OS 9 Desktop**" if Mac OS X and Mac OS 9 are installed on the same volume.

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

The following document can help you search for a particular vendor's address and phone number:

Document 17159: "**Locating Vendor Information**"

Published Date: Feb 20, 2012

QuickTime Pro: About Types of QuickTime Tracks

This article has been archived and is no longer updated by Apple.

This document discusses the different types of track elements that can be in a QuickTime Movie.

Each element of a QuickTime movie is contained in a separate track. You make a QuickTime movie by adding tracks that point to the media you want to use. The media may be embedded in the movie itself, or reside on a server half a world away. This track architecture is powerful and flexible, providing you with the control and precision you need to create complex interactive movies.

Each track represents a unique aspect or ability that you can change over time. A single movie may have many different track types, including video, audio, text, sprite, Flash, HREF, hinting, QuickTime VR, and chapter divisions. Each track, in turn, may possess many modifiable properties.

Sample QuickTime movie properties

Track	Description
Movie Track	Contains movie title, description, copyright information, and other general information on the entire movie.
Video Track	Digitized video, rendered 3D animation, or any other compiled image sequence, with optional special effects.
Audio Track	CD-quality audio or other audio formats. For more information, go here.
Music Track	MIDI music with QuickTime instruments
Timecode Track	Contains the control information that allows QuickTime to interpret media samples within a movie. For more information, go here.
Quartz Composer Track	Used to create motion graphics animation based on OpenGL, Core Image, and Core Video technologies. These animations are called "Quartz Composer compositions" and are stored in ".qtz" files. For more information, go here.
Text Track	Text imported into QuickTime for titles, subtitles, credits, notes, and other uses. For more information, go here
Chapter Track	A type of text track that divides and index the movie into sections. For more information, go here.
HREF Track	Text track containing interactive or automatic URL lines. For more information, go here.

Sprite Track	Contains one or more small images with animatable, programmable behaviors; useful for signs, symbols, games, and effects. For more information, go here.
3D Track	Contains 3DMF (QuickDraw 3D metafile) objects.
Flash Track	Incorporates Adobe Flash (.swf) animation. For more information, go here.
QTVR or VR object track	QuickTime VR information for object movies.
QTVR panorama track	QuickTime VR information for panorama movies.
Streaming Track	Contains a reference to a live stream or a movie on a streaming server. For more information, go here.
Hint Track	Contains information that allows a streaming server to deliver a media track as a real-time stream. For more information, go here.

Related documents:

- 42594 "**QuickTime Pro: How to See Movie Tracks**"
- 42596 "**QuickTime Pro: How to Extract or Disable Tracks**"
- 42581 "**QuickTime Pro: How to Add Tracks to a Movie**"
- 42599 "**QuickTime Pro: How to Make a Video Track Transparent**"
- 42633 "**QuickTime Pro: How to Make Picture-in-Picture**"
- 42656 "**QuickTime Pro: How to Make a Reference Movie**"
- 42655 "**QuickTime Pro: How to Make Alternate Data Rate Movies**"

Published Date: Feb 20, 2012

QuickTime Pro: About Audio and Video Tracks

This document discusses audio and video tracks and compression options that can be used with each using QuickTime Pro.

This article has been archived and is no longer updated by Apple.

Video and audio tracks are the most common forms of QuickTime media tracks. Chances are you'll spend most of your time working with them.

Video tracks:
A QuickTime video track can be created from:

- Digital video (DV).
- Digitized analog video.
- A 2D or 3D animation program.
- Any other source capable of generating an image sequence in any of the many file formats importable into QuickTime.

Movies can have many video tracks, and the tracks can be edited, layered, and have effects and transitions applied to them. You have complete control over such properties as frame size, frame rate (frames per second), data rate, and video compression.

Video compression:
Video compression is necessary to make your movies play at full speed on most computers or to be small enough to view on the web. QuickTime supports a wide range of codecs (compressors-decompressors), both lossless (high quality, large files) and lossy (lower quality, small files).
To see your codec options:

1. Choose Export from the File menu.
2. Choose 'Movie to QuickTime Movie' from the Export pop-up menu.
3. Click Options
4. Click Settings under Video. The first pop-up menu under Compressor lists the codec options.

The Apple Sorenson codec is recommended as a high-quality lossy codec for video and rendered animation.

Special effects, transitions, and filters:
QuickTime includes fifteen video filters for such visual effects as blur, edge detection, emboss, film noise, HSL balance, RGB balance, and sharpen; thirteen basic video transitions, including cross-fade, explode, gradient wipe, implode, push, slide, and wipe, each with several variations, and ripple, fire, clouds, and glass effects. These are applied through the Fitlers Option to the selected range of frames. The QuickTime Effects Architecture is fully open and extensible, so that you can write your own filters.

Audio tracks:
A QuickTime audio track contains digitized sound samples. These can be an MP3, an audio CD track or sampled analog tape recording, or from any other audio source that can generate a sound file compatible with QuickTime (and most are). Audio quality ranges from high (16-bit, 44.1 kilohertz, uncompressed) to low (8-bit, 22 kilohertz, highly compressed). As with video tracks, you can edit audio tracks and layer one audio track on top of another to build a complex audio experience.

Music tracks:
QuickTime also supports a separate audio track type called a music track. This is actually a MIDI (Musical Instruments Digital Interface) track that contains, not digitized audio, but note information played with a virtual instrument. QuickTime includes its own selection of high-quality MIDI instruments. MIDI delivers long and complex pieces of music using small files and little bandwidth.

Audio compression:
QuickTime offers a variety of sound and music compressors. QDesign's Music Codec is recommended for its high quality and small-size files.

Published Date: Feb 20, 2012

QuickTime Pro: How to Make Picture-in-Picture

This document describes how to create the picture-in-picture effect in QuickTime Player with QuickTime Pro.
This article has been archived and is no longer updated by Apple.

You must have QuickTime Pro to work with movie tracks. To learn how to upgrade, see the QuickTime website.

Use the Movie Properties of QuickTime Player to inspect and change many video track properties, such as movie size and graphics mode. A basic compositing trick is to add a small picture-in-picture video to the corner of your movie. This requires two video tracks.

1. Open Movie 1, the one in which you will insert the smaller picture-in-picture video.
2. Import picture-in-picture movie:
    - If the picture-in-picture video is in a separate movie (Movie 2), open Movie 2, select the frames that will become the picture in picture, and copy them.
    - If the picture-in-picture video is in Movie 1, extract the video track. This will create a new movie with that video as the sole media track. Select the frames that will become the picture in picture, and copy them.
3. In Movie 1, select the frames where you want the picture-in-picture to appear.
4. Choose Add Scaled from the Edit menu to paste the picture-in-picture video onto the selected area of Movie 1. This adds a second video track to Movie 1.
5. To make the picture-in-picture video track smaller while keeping the same aspect ratio, choose Show Movie Properties from the Window menu, select Video Track 2, and modify the Size property from the right-hand Properties pop-up. Choose Select All, then Shift-drag one of the red corner handles

Related documents:

- 42631 "**QuickTime Pro: About Types of QuickTime Tracks**"
- 42594 "**QuickTime Pro: How to See Movie Tracks**"
- 42596 "**QuickTime Pro: How to Extract or Disable Tracks**"
- 42581 "**QuickTime Pro: How to Add Tracks to a Movie**"
- 42599 "**QuickTime Pro: How to Make a Video Track Transparent**"
- 42656 "**QuickTime Pro: How to Make a Reference Movie**"
- 42655 "**QuickTime Pro: How to Make Alternate Data Rate Movies**"

Published Date: Feb 20, 2012

QuickTime Pro: Capabilities of Sprite Tracks

This document discusses some of the capabilities of sprite tracks in a QuickTime movie using QuickTime Pro.

This article has been archived and is no longer updated by Apple.

Sprites are animations in which an image, a short image sequence, or a video clip is moved around in the frame along a vector path by the computer. Think of Pac-Man or the little critters in any older videogame and you've got the basic idea of a sprite (although sprites can be a lot more sophisticated than that). All you do as the sprite creator is create the image (such as a logo), specify the movement path (a spin motion, for example), and add other behaviors (play a logo sound) attached to it. The computer does the rest. The first frame of the animation contains the image data; the subsequent frames contain only a reference to the image and the behavior and new x and y coordinates where the image will be displayed. All the calculations are done on the viewer's computer, making sprites a very efficient, low-bandwidth way to create movement.

A sprite track in QuickTime contains sprite animation that you create in an authoring program such as LiveStage or LiveStage Pro, Adobe's GoLive, or Electrifier Pro, and then import into QuickTime. Sprites have several important properties:

- Sprites can change position, scale, and rotation according to values inserted into a transformation matrix.
- Sprites are automatically cropped as they cross the edges of the frame.
- Multiple sprites can exist in a sprite track, and they can pass in front of or behind each other (and change their depth order in the course of the movie)
- The source for a sprite can be a single bitmap, a bitmap image sequence, a vector image, a video track, a live stream, or even a source specified by an URL.
- All these properties, and others, can be combined, and modified as the movie plays, enabling the creation of very complex images and behaviors at virtually no cost in bandwidth.

Modifier and Tween Tracks

Importing a sprite to make a sprite track is just the beginning, however. QuickTime contains an invisible media type called a modifier track. The modifier track contains data that are used only to modify other tracks. Any media type, such as a video track, can be modified with an appropriate modifier track.

One use for a modifier track is to contain a series of coordinate numbers that change the position of a sprite. The most common way to do this is to use a type of modifier track called a tween track. The tween track generates a series of values from a specified starting point to a specified ending point over a given duration. For example, using a tween track, you can specify the movement of a sprite using just three sets of numbers: start position, end position, and duration. The tween track interpolates between the coordinates of the beginning and ending positions and automatically feeds the sprite a smoothly incrementing series of positions for the duration of the movement. The tween track always generates as many in-between values as possible, and the animation plays at the maximum frame rate the host computer can support, so the faster the host computer, the smoother the animation.

A tween track can generate many types of sprite data, such as:

- Position in the transformation matrix
- Layer depth
- Image source
- Index

Three tween tracks can send a sprite tumbling across the frame, in front of or behind other tweens, and load a repeating sequence of images for the sprite as it goes.

You can also apply tween tracks to other movie or track properties. For example, using LiveStage Pro you can fade video in and out by setting the blend value of a video track.

Actions and Events

The actions of a sprite can be driven by system events such as mouse actions or keystrokes. So you can use sprites to design custom movie controllers that your audience can click on. Another thing sprites can do is check their own position coordinates, layer number, and index, and change their behavior according to criteria you define. For example, a sprite can look to see if it reaches the edge of the frame and execute a "bounce" movement when it does. A sprite can also modify its behavior with the passage of time, either "movie" time (the duration in which the movie plays) or in real time. In fact, a sprite can continue to act even after the movie it is in is paused or stopped

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The following document can help you search for a particular vendor's address and phone number:

Document 17159: "**Locating Vendor Information**"

Published Date: Feb 20, 2012

QuickTime: About QuickTime VR

This document discusses the capabilities of QuickTime VR.
This article has been archived and is no longer updated by Apple.

QuickTime VR creates an immersive, photorealistic experience simulating actual or imagined three-dimensional objects and places. Unlike other virtual reality implementations, QuickTime VR does not require special goggles or gloves, and it doesn't need you to download a custom 3D plug-in to work with any application or web browser. All major applications that play QuickTime movies can also play QuickTime VR movies. There are two main types of QuickTime VR movies - QuickTime VR Panoramas and QuickTime VR Object Movies.

QuickTime VR Panoramas

QuickTime VR panoramas create the experience of standing in a space and looking in all directions--360 degrees side-to-side, even 120 degrees overhead and underfoot--with the view panning smoothly wherever you look. Panoramas are ideal for educational websites, architectural walkthroughs, real estate listings, and photoreal gaming environments.

A QuickTime VR panorama is actually a carefully calibrated series of photographs or 3D graphics images, stitched and blended together with QuickTime VR authoring software and mapped onto the inside of a virtual cylinder. You see part of the projection through the QuickTime VR window; you scroll to see other parts using the mouse.

QuickTime VR panoramas can be linked to create large immersive environments accessible from a series of viewpoints, or nodes. A linked series of nodes is called a multinode panorama. You move from node to node--from viewpoint to viewpoint--by clicking on hotspots (up to 255 per panorama). Authoring applications--such as Apple's QuickTime VR Authoring Studio--contain tools for embedding navigational controls and markers right in the environment, making it easy for your audience to find its way around.

QuickTime VR Object Movies

QuickTime VR object movies depict objects that can be "handled"--turned, tilted, and spun--so you can see them from every angle. Object movies are great for displaying retail items on the web or for allowing virtual manipulation and study of artworks, scientific and medical models, product parts, and other real objects.

Object movies are created by photographing or rendering a series of views of the object at carefully spaced angles of tilt and rotation and assembling the view images into a movie. Each view of the object doesn't have to be a still image; it can also be a video clip or animation. For example, the front view of a car could show the hood opening to reveal the engine.

Hotspots can also link to URLs or media files or even to QuickTime VR object movies, so that objects seen in panoramas can be picked up and handled.

Related documents

- 18227 "**QuickTime VR: Questions and Answers**"

Related links:

- **QuickTime VR Tools** (http://www.apple.com/quicktime/resources/tools/qtvr.html)

Published Date: Feb 20, 2012

QuickTime: About Streaming Movies

This document discusses the streaming process including advantages of streaming and types of streaming.

This article has been archived and is no longer updated by Apple.

Streaming is the process of sending media over a network for viewing in real time. Streams can originate from a live source, such as a video camera, a webcast, or an audio feed from a radio station, or the source can be a QuickTime movie stored on the server. In either case, you aren't downloading a file when you stream a movie. The data is simply being displayed as it arrives by the QuickTime plug-in and in QuickTime Player; no copy remains on the viewer's hard disk.

With true live events, the stream functions more or less as the web version of a TV or radio broadcast; users can turn it on or off and switch to another channel. When you are streaming a completed movie stored on a hard disk (sort of a video-on-demand arrangement), your audience has random access to the entire stream and can jump anywhere within it. Preparing media for streaming.

Streaming is accomplished within Mac OS X Server using QuickTime Streaming Server. You cannot run QuickTime Streaming Server from any version of Mac OS 9 or earlier.

Advantages of streaming.

There are many advantages to direct streaming, as opposed to simply posting a movie to your web site and having people download it.

Instant play
With streaming, people can see your media play right away--there are no lengthy downloads.

Live events
Streaming is the only way to distribute live events such as news coverage and sporting events over the web. More on live streaming.

Long-form media
Streaming media are not limited to file sizes that make a reasonable download. Long-form media such as feature films and concerts that would make multi-gigabyte downloads can stream effortlessly.

Multicasting
Many viewers can tune into one stream--a process called multicasting.

Random access
Viewers can pause, fast forward, or otherwise interact with prerecorded movies and play only the parts they want. (This is where chapter tracks really come into their own.)

Distribution control
Streaming allows you to maintain control over the distribution and copyright of your media. Anyone can download a movie, alter it, and redistribute it themselves, but it's much harder to redistribute the contents of a stream. When your audience saves your streaming movie, all it is saving is the URL of the stream and some user settings. The actual data is never copied.

- Streaming Types
  QuickTime currently supports several types of streaming.
- Unicast streams are simple one-to-one streams, like a phone call from the server to a single client computer. To reach many clients, the server must send many streams, which is a less efficient use of bandwidth. However, each viewer of a unicast stream can randomly access the movie, playing only the parts they want to see. Typically, unicast is used to stream prerecorded movies.
- Multicast streams are sent directly to a group address, such an IP multicast address, which in turn can be simultaneously accessed by many client computers. The viewer of a multicast has no control over what is presented. Multicasts are an efficient way to deliver the same material to a group of people over a LAN, as only one copy of the stream is sent over the network.
- Reflected multicast streams take live media from another source, such as a radio or TV broadcast, and stream it out to viewers as a series of unicasts. This is the approach taken by online news networks, such as CNN.com. Take a look at QuickTime TV for examples of live reflected multicast streams.

You can view streamed media by:

- Tuning in directly to a live or prerecorded broadcast using QuickTime Player
- Using QuickTime Player to view multimedia on demand
- Using a web browser to point to a web page that has streamed media embedded in the page

Published Date: Feb 20, 2012

QuickTime Pro: AppleScripts for Mac OS 10.1

This document lists and describes the scripts available from the AppleScript Web site for use with QuickTime 5 using Mac OS 10.1 or later and QuickTime Pro.
This article has been archived and is no longer updated by Apple.
QuickTime 5.0.2 offers dramatically increased AppleScript support in the QuickTime Player application. The QuickTime Player scripting dictionary contains exciting new commands and properties which can be used to automate many movie-editing and playback tasks performed by novices and professionals alike.

This collection of example scripts contains a variety of useful scripting tools, including script applets, droplets, and compiled scripts for use with the Script menu. These are briefly described below. All scripts are fully editable and many have properties whose values can be easily changed.

NOTE:

- These scripts are designed to work only with QuickTime 5.0.2. on Mac OS X 10.1 using QuickTime Pro. Many of the scripts will not work with earlier versions of QuickTime, including QuickTime 4.1.
- These scripts are not compatible with Mac OS X 10.0 - 10.0.4.

For more information concerning QuickTime Player scripting and AppleScript, visit the AppleScript website at:
(http://www.apple.com/applescript/)

Download the scripts from Apple Developer site

- **Applets-Droplets - (41 scripts)**

  Applets are AppleScript scripts saved as small self-running applications. Double-click them to start them as you would with any other application.

  Droplets are special AppleScript applications which respond to files and folders dragged onto their icon. All of the following droplets can be used to process or play QuickTime files. Each droplet will process the individual dragged-on files or folders containing files and sub-folders containing more files, which have been dragged onto its icon.

  Each droplet has properties or parameters which can be set by double-clicking the droplet and clicking the "Set Prefs" button in the main dialog.

  The following is a brief description of each applet or droplet and instructions for its use:

- **Add to Favorites** · Drag QuickTime files or folders of QuickTime files onto this droplet to have each file added to your favorites list.
- **All Annotations Droplet** · This droplet can be used to set the value of all or some of the available annotations for QuickTime files. If an annotation does not exist, the script will create it.

  To access the preferences dialog and set the value for specific annotations, double-click the droplet, and then click the "Set Prefs" button in the main dialog window.

  The following are the names of the available annotations: "Album", "Artist", "Author", "Comment", "Copyright", "Creation Date", "Description", "Director", "Disclaimer", "Full Name", "Host Computer", "Information", "Make", "Model", "Original Format", "Original Source", "Performers", "Producer", "Product", "Software", "Special Playback Requirements", "Warning", "Writer"

- **Annotations & Credits Droplet** · This droplet functions in the same manner as the Limited Annotations Droplet. In addition to setting the annotations of dragged-on movie files, it will also create scrolling credits based on the annotations and place them at the start of the movie.
- **Change to PictureViewer File** · Drag image files or folders of image files onto this droplet to change the creator type of every image file to "ogle", which is the creator code for the PictureViewer application.
- **Clear All Annotations Droplet** · This droplet will remove annotations from dragged-on movie files. Double-click the droplet to access the preferences for determining whether to retain the existing movie title.
- **Convert to DV Stream** · This droplet will convert movie files to DV format which can then be imported into iMovie. The original file will be replaced by the newly created file.
- **Convert to QuickTime Format** · This droplet will open files saved in supported formats and save them as QuickTime files with a file type of MooV and a creator type of TVOD. The original file will be replaced by the new file.
- **Create Slideshow From Folder** · Drag a folder of images onto this droplet to create a slideshow movie file. Options include: making the file self-presenting and self-closing, auto display of images (movie mode) or manual advancing (slideshow mode), seconds per image or images per second, and saving the file as a proxy linked to the images or as self-contained.
- **Display Folder as Slideshow** · Similar to the "Create Slideshow From Folder" droplet except there is no completion action and no file is saved. Great for a quick perusal of images.

- **Limited Annotations Droplet** · This droplet can be used to set the value of a small number of annotations for QuickTime files. If an annotation does not exist, the script will create it.

  To use, enter the name of the annotation in the comment field of the droplet followed by a colon and then the value for the indicated annotation. The comment field is in the Finder information window of the droplet (select the droplet and type command-I). Each paragraph in the comment field will be considered to be a separate annotation. For example:
  Copyright:Â©2000 Your Company
  Product:Your Video Product
  Author:Ordinary User
  Performers:Me, Myself, and I

  See the description of the "All Annotations Droplet" for a list of supported annotations.
- **Play Movies** · This droplet will play dropped-on movies in sequential order. Double-click the droplet to access the playback preferences.
- **Prep Camera Images for Web** · This droplet can be used to resize digital camera images and convert them to JPEG format for use on the Internet. Double-click the droplet to set the preferences for image width and height.
- **Present Movies** · This droplet will present dropped-on movies in sequential order. Double-click the droplet to access the playback preferences which include presentation size, looping, continuation query dialogs, and movie volume.
- **Present Neighbor Movies** · this script applet, when launched, will present any movie files which are located in the same folder as the droplet.
- **Sample Audio CD** · This applet will extract a sample of an indicated duration from each track of an audio CD and compress the result using a chosen QT compressor setting.
- **Save As Un-Editable** · This droplet will save a movie file so that it cannot be edited or saved. After setting the saveable property to false, the original movie file is exported as a self-contained movie. The original file is deleted, so use this droplet only on copies.
- **Save Copy as DV Stream** · This droplet will save copies movie files to DV format which can then be imported into iMovie.
- **Save Copy as Hinted** · This droplet will open files in QuickTime formats and export a copy to a indicated folder as hinted QuickTime files of file type of MooV and a creator type of TVOD. Double-click the droplet to access the hint settings preferences.
- **Save Copy in QT Format** · Same as the "Convert to QuickTime Format" droplet except the original file is not replaced and the user is prompted to locate a folder which will contain the duplicate files.
- **Send & Play Remote Movie** · When a single movie file is dragged onto this droplet, this script is designed to:

  1. Turn on file sharing on a specified remote computer
  2. File share the startup disk from the remote computer over TCP/IP
  3. Find/create a folder named "Movies" on the root level of the mounted volume
  4. Copy the movie file into the "Movies" folder replacing any existing copies
  5. unmount the shared volume and turn off file sharing on the remote computer
  6. Instruct the remote computer to play the newly copied movie file

  Complete instructions for setup and execution of this script are detailed in AppleScript Guidebook Module for Program Linking Over IP, available on the AppleScript Website: http://www.apple.com/macosx/features/applescript/l
- **Set Controller Type** · This droplet set the type of controller displayed for the movie. Double-click the droplet to access the preferences for controller type.
- **Set HREF Property** · Using this droplet you can assign a URL to a movie so that when the movie is clicked, another webpage or movie is opened. This property overrides any HREF's assigned to tracks within the movie.

  To set the target file or page to load within the same window as the linked movie, use this format for the URL:
  <file URL relative to this movie>T<myself> For example: <media/nextmovie.mov>T<myself>
- **Media Skin Droplet** · This droplet can be used to automate the creation of QuickTime movies which have custom media skin interfaces. This powerful script makes the multi-step process a breeze.
- **Streams Sampler** · This droplet can be used to monitor multiple streams. To use, drag a text file containing a return-delimited list of target stream URLs onto the droplet. The script will then perform the following steps:

  1. The droplet will read the text file, and direct the QT Player to connect to the first stream in the list
  2. Once connected, the script will save a frame from the stream every 10 seconds for three times.
  3. The stream will then be closed and the next stream in the list accessed.
  4. Once a "snapshot" has been taken of all the streams, the script will open each saved frame and resize it to indicated dimensions.
  5. Once all the images have been resized, the script will create an HTML file showing the images and the source link.
  6. The created HTML file will then be opened in the default browser set in the Internet Control Panel.

  Double-click the droplet to set the default dimensions to be used for the resized images, and the number of seconds between frame captures.
  Playback Properties Droplets

  QuickTime 5.0 has added support for special playback properties which control the manner in which a QuickTime file is played in the QuickTime Player. In addition to the existing "auto play" property, QT 5.0 now supports: quit when done, auto quit when done, close when done, auto close when done, and auto present. These properties are not accessible through the QuickTime Player interface and can only be set via AppleScript scripts.

- **Disable Presentation Mode** · This droplet sets the auto present property of dragged-on movies to false.
- **Display Playback Properties** · This droplet will display a dialog showing the current status of all the playback properties of a movie file.
- **Reset Playback Properties** · The droplet will set the status of the playback properties to either false or their default value.
- **Save As Presentation File** · This droplet will set the playback properties so that a movie file will self-present and close or quit when completed. Double-click the droplet to set the preferences for presentation size, display mode (movie or slideshow), and the completion action (none, auto close, auto quit).
- **Set Auto Close Property** · This droplet will save movie files so that they automatically close when finished playing.
- **Set Auto Play Property** · This droplet will save movie files so that they automatically play when opened.
- **Set Auto Quit Property** · This droplet will save movie files so that the QuickTime Player will automatically quit when the movie has finished playing.

Script Menu Scripts - (100 scripts)

The following scripts are installed in the Scripts folder in the System folder and are accessible via the OSA Script Menu. If you don't have the OSA Menu extension installed, the OSA Menu Lite 1.2.2 installer is included with the QuickTime scripts.

These scripts are meant to be copied, edited, and adapted for your requirements.

The following is a brief description of each script and instructions for its use:

Annotations

- **Set Name of Front Movie** · This script will allow the user to set the Full Name annotation of the front movie.

Chapters
Finally, an easy way to create and edit chapter tracks!

- **Add Chapter at Current Time** · This script will add a chapter at the current time of the front movie.
- **Chapter Summary** · This script displays a list containing the name, start, and duration of every chapter of the front movie.
- **Create Chapter Track** · This script will crate a chapter track for the front movie. Use the "Add Chapter at Current Time" script to add individual chapters once this script has created the chapter track.
- **Create Chapter Track From File** · Use this script to create a chapter track from an imported text file.
- **Delete Chapter** · Use this script to delete a chapter from the chapter track of the front movie.
- **Get Chapter Info** · This script will display all the information about a chosen chapter.
- **Play a Chosen Chapter** · Like the name says, this script will play a chapter selected from a list of chapters of the front movie.
- **Re-Name Chapter** · Use this script to change the name of an existing chapter in the front movie.

Edit
QuickTime 5.0 has added support for the QuickTime Player Pro editing commands: cut, copy, paste, trim, add, and add scaled.

- **Copy Selection to New Movie** · This script will copy the current selection from the front movie, open a new movie and paste the selection on the clipboard into the new movie.
- **Cut 1 Second Forward** · This script will cut the selection from the current play point of the front movie to one second ahead.
- **Cut from Beginning** · This script will select from the beginning of the front movie to the current play point and then cut that selection.
- **Cut Selection to New Movie** · This script will cut the current selection from the front movie, open a new movie and paste the selection on the clipboard into the new movie.
- **Cut to End** · This script will select from the current play point in the front movie to the end and then cut that selection.
- **Edit Frame in GraphicConverter** · This script will open the current frame in the GraphicConverter application from **Lemke Software**. Version 4.0 of this powerful image editing application has increased AppleScript support.
- **Merge Movie 1 into Movie 2** · This script will add a copy of the front movie to the movie behind it.
- **Scale Front Movie to x%** · This script will proportionally scale the front movie to the user supplied percentage.
- **Select from Beginning** · This script will select from the beginning of the front movie to the current play point.
- **Select to End** · This script will select from the current play point in the front movie to the end of the movie.
- **Select X Seconds** · This script will prompt the user for the number of seconds to select from the current play point of the front movie. It will then select the requested number of seconds from the current play point.
- **Set Dimensions of Front Movie** · This script will prompt for a width and height to be applied to the front movie and will scale it accordingly.
- **Start Movie 2 with Movie 1** · This script will place a copy of the front movie at the start of the movie behind it.
- **Zero Out Selection** · This script will set the select points of the front movie to 0.

Export

- **Export to DV Stream** · This script will export the front movie in DV format which can then be imported into iMovie.
- **Preview Frame w/2 Settings** · This script can be used to preview an export with any two QuickTime export settings. When run, the script will prompt the user to choose two export settings from the list of built-in standard settings. Next, it will prompt to locate a folder in which it can place the export temp files. The script will then extract the current frame and export a copy with each of the chosen settings applied. The script will then generate a SMIL file which will be opened to display the result side-by-side in a new movie window.
- **Save Current Frame as BMP** · This script saves the current frame on disk as BMP image.
- **Save Current Frame as JPEG** · This script saves the current frame on disk as JPEG image.
- **Save Current Frame as PICT** · This script saves the current frame on disk as PICT image.

Favorites

- **Create HTML Favs Summary** · This script will create an HTML page containing the name of every favorite and its URL. The page will be automatically opened in the default browser set in the Internet Control Panel.
- **Delete Specific Favorite(s)** · This allows the user to delete user-defined favorites chosen from a list of favorites.
- **Go To Favorite** · This script will present a list of all favorites by name from which the user can pick the one to be accessed.
- **List Favorite URLs** · This script will present a list of all favorites by URL from which the user can pick the one to be accessed.
- **Save Favorites Info** · This script will create a text file containing the name and URL of every favorite.

HTML

- **EMBED Tag Wizard** · This script will prompt the user to answer a series of questions in order to create the appropriate EMBED tag for displaying a QuickTime movie in a webpage. The derived HTML tags will be placed on the clipboard or written to a file on disk.

Info

- **Info for Front Movie** · This script will present a dialog containing information about the front movie including: natural dimensions, length, seconds elapsed, seconds remaining, file size, creation date, modification date, and creator code. There is an optional button which when pressed, will reveal the front movie file in the desktop.
- **QuickTime Settings** · This script will present a dialog containing information about the version of QuickTime installed, the current connection speed settings, and whether QuickTime Pro has been activated. There is an optional button which when pressed, will open the QuickTime Control Panel.
- **Source URLS of Front Movie** · This script will display a dialog showing the source URL of the current streaming movie. There is an optional button to place the URL on the clipboard.
- **Timecode of Front Movie** · This script will present the current timecode of the front movie in a dialog. There is an option to copy the timecode to the clipboard.

Misc

- **Create Thumbnail Link Movie** · This script will automate the process of creating a link movie placed in a webpage which when clicked will open another movie in the QuickTime player.

  When run the script prompts for either the width or height of the desired thumbnail movie. Once the desired dimensions have been entered by the user, the script will copy the current frame into a new movie and scale the image to the requested dimensions. The script will then generate the HTML embed tag for the thumbnail movie based on the new movie file and the front movie.
- **Place Text on Clipboard** · This script will present a dialog in which the user can enter text which will be placed on the clipboard.
- **Revert Front Movie** · This will close the front movie without saving any changes and reopen it into a new window.
- **Set Controller** · This script will prompt the user to choose a controller type from a displayed list of controller types.
- **Set Sound Volume** · This script will allow the user to set the volume of the front movie. A setting of 0 to 255 is in the normal range. A setting of 256 to 384 sets the sound to overdrive.

Navigation

- **Move to End of Front Movie** · This script will set the current play point to the end of the front movie.
- **Move to X in Front Movie** · This script will prompt the user to indicate a point in the movie and then will set the current play point to the indicated number. The time of the current play point is indicated as the default text in the input field.
- **Reset Front Movie** · This script will move the current play point of the front movie to the beginning. It will also set the selection pointers to 0.
- **Rewind Front Movie** · This script will move the current play point of the front movie to the beginning.

Play

- **Play Front Movie at X% Speed** · This script will prompt the user for a speed percentage at which to play the front movie. For example, an answer of 150 will play the front movie at one and one half the normal rate -- normal being expressed as 100.
- **Play Front Movie from Start** · This script will play the front movie from its beginning.
- **Step Thru Front Movie** · This script will move incrementally through the front movie with one second delays between each movement.
- **Present Front Movie** · This script will present the front movie at full screen.

Preview

The Preview of a movie is the small movie snippet displayed at the left of the open dialog when a movie file is accessed by using the "Open Movie in New Player" command in the QuickTime Player.

- **Play Preview** · This script will play the section of the front movie currently set as its preview.
- **Set Preview to Selection** · This script will assign the current selection of the front movie as its preview.

Properties

- **01-Playback Properties** · This script will present a dialog summary of the status of the playback properties of the front movie.
- **02-Auto Play** · This script will allow the user to set the value of the auto play property to true or false.
- **03-Close When Done** · This script will allow the user to set the value of the close when done property to true or false.
- **04-Auto Close When Done** · This script will allow the user to set the value of the auto close when done property to true or false.
- **05-Quit When Done** · This script will allow the user to set the value of the quit when done property to true or false.
- **06-Auto Quit When Done** · This script will allow the user to set the value of the auto quit when done property to true or false.
- **07-Auto Present** · This dialog will allow the user to set the value of the auto present property to true or false.
- **08-Presentation Mode** · This script will allow the user to set the value of the presentation mode property to either movie mode or slideshow mode.
- **09-Presentation Size** · This script will allow the user to set the value of the presentation size property to normal, double, half-size, or full screen.
- **10-Reset Playback Properties** · This script will set the value of the playback properties to false or their default values.
- **HREF of Front Movie** · Using this script, you can assign a URL to a movie so that when the movie is clicked, another webpage or movie is opened. This property overrides any HREF's assigned to tracks within the movie.

  To set the target file or page to load within the same window as the linked movie, use this format for the URL:
  <file URL relative to this movie>T<myself> For example: <media/nextmovie.mov>T<myself>
- **Path to Front Movie** · This script will display a dialog containing the path to the front movie file. There is an optional button to have the file displayed in the Finder.

SMIL

SMIL stands for Synchronized Multimedia Integration Language (pronounced "smile") and is an XML-based language developed by the World Wide Web Consortium as a way to standardize the control and display of media content. Support for SMIL was introduced in QuickTime 4.1 and has been enhanced in 5.0.

- **Image Overlay with Link** · This script will create a SMIL file which places an image over part of a background movie. For example, you can have a company logo display at the bottom right of a movie. When the overlay image is clicked, a new webpage will open displaying a target URL.
- **Movie Caption w/ Link & Slider** · This script will create a SMIL file which displays static text along the bottom of a movie.
- **Movie Caption with Link** · This script will create a SMIL file which displays static text along the bottom of a movie. Clicking the text will open a specific webpage or movie.
- **SMIL Sequence Wizard** · This script will create reference movies which play sequences of QuickTime movies composed of files or remote streams. The user answers a series of questions and the script generates the appropriate SMIL QuickTime movie.
- **SMIL Slideshow w/ Bckgnd Audio** · This script will create a SMIL slideshow with background audio. Run the script and select a folder containing JPEG, GIF, or PICT images and an audio file to be played in the background. NOTE: saving the audio file as a QuickTIme movie will ensure that it plays smoothly.

Text Tracks

- **Annotations to Rolling Credits** · this is a description of this script
- **HREF for Web Movie End** · This script will prompt the user for a target URL to assign to the end of the front movie. Successive dialogs will determine whether to navigate to the assigned URL automatically or by user click, and whether to do so in a new window or the current window.
- **HREF for Web Movie Selection** · This script will prompt the user for a target URL to assign to the selected area of the front movie. Successive dialogs will determine whether to navigate to the assigned URL automatically or by user click, and whether to do so in a new window or the current window.
- **Rolling Credits for Front Movie** · This script will create rolling credits for the front movie based on the Full Name annotation, entered or imported credits, and prompted copyright information. The new credits will be a newly created movie. You can import credits from a text

file with each paragraph considered a new credit.

Tracks

Undoubtably THE most powerful new feature of the QuickTime Player's enhanced scripting abilities is its support for the control of tracks.

- **Create Static Text Track** · This script will prompt the user to input text into a dialog. The text will then be imported into the front movie as a new text track. Next the script will provide the ability to position the text track anywhere in the front movie window by entering its {x,y} coordinates.

  Place QuickTime text tags in the input text for styling or to create links. For example, {HREF}http://www.apple.com{endHREF} will be displayed in the new text track as a clickable hyperlink.
- **Delete All Disabled Tracks** · This script will delete any disabled tracks within the front movie. Note that some tracks, such as chapter tracks, are disabled intentionally.
- **Export Text Track(s)** · This script will export the text to disk from text tracks chosen from a list of the text tracks contained in the front movie.
- **Extract All Tracks** · This script will extract every track from the front movie into individual movies.
- **Import & Position Image Track** · This script can be used to import and position images into the front movie. Great for adding a logo or button.
- **Rename Track(s)** · This script allows the user to rename any tracks contained in the front movie.
- **Set Dimensions of Track(s)** · This script will allow the user to resize any visible track contained in the front movie.
- **Set HREF of Track(s)** · Visible tracks can have URL's assigned to them so that when they are clicked by the user, another webpage or movie is opened. This script will allow the user to assign URL's to any visible track contained in the front movie.
- **Set Layer of Track(s)** · This script allows the user to set the layer of track(s) of the front movie.
- **Set Operation Color of Track(s)** · The operation color of track determines which color will be effected by the transfer mode property. For example, a white areas of a track could be set to become transparent. This script allows the user to set the operation color of track(s) to either black, white, or gray.
- **Set Position of Track(s)** · This script allows the user to position any visible track within the movie window area by entering the {x,y} coordinates of the top left of the track.
- **Set Start Time of Track(s)** · This allows for the setting of the start time of a track(s). For example, a track can be set to begin at 3 seconds of the beginning of a movie.
- **Set Transfer Mode of Track(s)** · This script allows the user to set the transfer mode of track(s). Blending and transparency are two example settings.
- **Tracks Info** · This script wills post a dialog summary of the values of various properties of chosen tracks.

Window

- **Set Position of Front Movie** · This script can be used to set the position of the front movie within the screen.

Published Date: Feb 20, 2012

QuickTime Pro: SMIL Extensions

This document lists and describes the SMIL extensions available with QuickTime Pro.

This article has been archived and is no longer updated by Apple.

SMIL is an extensible standard, and QuickTime provides several SMIL extensions. This allows you to add QuickTime specific attributes to your SMIL presentation. See technical document 42651 "**QuickTime Pro: About SMIL"** for additional information.

To use QuickTime extensions in your SMIL document, include the xmlns: parameter and the URL of the QuickTime extensions as part of the initial <smil> tag like this:
<smil xmlns:qt="http://www.apple.com/quicktime/resources/smilextensions">

QuickTime does not actually access the URL; it is used only to uniquely identify the QuickTime SMIL extensions.

In the examples that follow, the xmlns: parameter and the URL shown above have been omitted for readability, but they are a required part of the <smil> tag when any QuickTime extensions are used in a SMIL presentation.

autoplay

Specifies whether the presentation should play automatically. Legal values are true or false. The default is false.

Example:
```
<smil qt:autoplay="true">
```

bitrate

Specifies the bandwidth a media object needs in order to play back in real time. This is used to give QuickTime enough information to decide how far in advance to begin loading a media element to provide seamless playback. Possible values are positive integers, in bits per second.

Example:
```
<video src="stream56k.mov" qt:bitrate="56000" />
```

Note: Do not confuse qt:bitrate with system-bitrate. Use system-bitrate to select a media element based on the user's connection speed. Use qt:bitrate to help QuickTime determine when to start downloading a media element.

chapter

Specifies a chapter name for a media element. Valid values are any character string. Use this to create named points in your presentation that the viewer can jump to interactively. The chapter names appear as a pop-up list in the controller. This allows you to add a QuickTime chapter list to a SMIL presentation.

Example:
```
<seq>
<video src="Intro.mov" region="r1" qt:chapter="Introduction"/>
<video src="Chap1.mov" region="r1" qt:chapter="Overview" />
<video src="Chap2.mov" region="r1" qt:chapter="Under the Hood" />
</seq>
```

In the example above, the movie controller would have a pop-up menu with three choices: Introduction, Overview, and Under the Hood. The viewer could jump to the corresponding point in the SMIL presentation at any time.

chapter-mode

Specifies whether the Time slider represents the duration of the whole presentation or the duration of the current chapter. Legal values are all and clip. Specify all for the whole presentation, clip for chapter-at-a-time.

For Example:
```
<smil qt:chapter-mode="clip"/>
```

composite-mode

Specifies the graphics mode of a media element. This is used to create partial or complete transparency. The composite-mode attribute goes in any

of the media element tags: video, img, or animation. Possible modes are

- copy
- none
- direct.

These modes all specify no transparency, which is the default for most image formats.

Example:
```
<img qt:composit-mode="copy"/>
```

- blend;percent

Specifies a blend between the image and the background, with a required percent integer value specifying the blend weight<0% means complete transparency, 100% complete opacity.

Example:
```
<video qt:composite-mode="blend;50%"/>
```

- transparent-color;color

Specifies that all pixels of a particular color within the image should be treated as transparent. It accepts a second parameter, color, that specifies the color to be rendered as transparent. The color parameter may be any valid color specification supported by Cascading Style Sheets, level 2.

Example:
```
<animation qt:composite-mode="transparent-color;black"/>
```

- alpha
- straight-alpha
- premultiplied-white-alpha
- premultiplied-black-alpha

Specify that the image has an internal alpha channel that should be used when compositing. The alpha and straight-alpha modes refer to a separate alpha component; the premultiplied modes refer to an image that has been premultiplied with the alpha against a white or black background, respectively.

Example:
```
<video qt:composite-mode="straight-alpha;50%"/>
```

- straight-alpha-blend;percent

Specifies that the image has an internal alpha channel as a separate component, and that an additional level of transparency should be applied to the whole image.

Example:
```
<img qt:composite-mode="straight-alpha-blend;50%"/>
```

immediate-instantiation

When used in the <smil> tag, specifies whether all the media elements in the presentation should be downloaded (or streamed) immediately, or whether this should be deferred until each element is about to be played. Legal values are true and false. Default is false. Opening all the media elements at the beginning of the presentation can take considerable time and memory, so we recommend that it be done only for simple presentations with a few small media elements.
When used in an element tag, specifies that this particular element should be downloaded or streamed as soon as the presentation is opened. You might use this to preload an element to be sure it is already in memory when it needs to play.

Example: `<smil qt:immediate-instantiation="true">`
Example 2: `<img src="bgimg.png" qt:immediate-instantiation="true"/>`
Example 3: `<video src="bgimg.png" qt:immediate-instantiation="true"/>`
Example 4: `<text src="bgimg.png" qt:immediate-instantiation="true"/>`
Example 5: `<audio src="bgimg.png" qt:immediate-instantiation="true"/>`
Example 6: `<animation src="bgimg.png" qt:immediate-instantiation="true"/>`

next

Specifies a presentation to play when this presentation finishes. Legal value is the URL of something QuickTime can play: a media file, a movie, a stream, or a SMIL presentation. This is similar to the QuickTime plug-in's QTNEXT parameter.

Example: `<smil qt:next="nextpresentation.smi>`

system-mime-type-supported

Specifies the MIME type that needs to be supported in order to play a media element. This is normally used in conjunction with the <switch> tag to allow the player software to choose a media element that it can handle. Possible values are character strings matching a valid MIME type.

Example:

```
<switch>
<img src="qt.mov
" qt:system-mime-type-supported="video/quicktime"/><img src="someotherformat.suffix" qt:system-mime-type-supported= "other/mime-type"/>
</switch>
```

target

Specifies a target for a presentation specified by the href parameter in the anchor tag. Possible targets are an existing browser window, a browser frame, or quicktimeplayer. If the target string is none of these, a new browser window is created. Used in conjunction with show="new".

For example:

```
<a href="http://www.server.com/another.smi" show="new" qt:target="quicktimeplayer">
<img src="OpenNewSMIL.gif" region="r2" dur="5:00" />
```

time-slider

Specifies whether the movie controller should include a Time slider. During a SMIL presentation, QuickTime dynamically loads media elements as required, so the known duration of the overall presentation can change as a movie is played or navigated. When the known duration changes, the scale of the Time slider changes to reflect that. This can be confusing to the viewer. Because of this, QuickTime movies created from SMIL documents do not normally display a Time slider. Legal values are true and false. Default is false.

Note: If you want to import a SMIL presentation into QuickTime and edit it using QuickTime Players editing features to add a chapter list for example you must set time-slider="true". QuickTime Player©^s editing features rely on the Time slider.
For example: <smil qt:time-slider="true">

Published Date: Feb 20, 2012

QuickTime Pro: About Fast-Start Movies

This document discusses the fast-start capability of QuickTime Pro as one method to deliver QuickTime movies over the Web.

This article has been archived and is no longer updated by Apple.

With QuickTime, you can watch movies as they download using ordinary HTTP or FTP transfer protocols. This is not streaming, but a unique feature of QuickTime called fast-start or progressive download.

With fast-start, your audience downloads an entire QuickTime movie at the highest data rate their connections can support. As soon as the initial part of the movie has been downloaded, QuickTime Plug-in begins to play it back in the browser while it continues to download the rest. Your audience is left with a complete movie file that they can save and replay as often as they want. No special streaming software on the server is needed; all you have to do is create a fast-start movie (which you can do using QuickTime Player) and embed it in a Web page.

See technical document 42562 "**QuickTime Pro: How to Save a Fast-Start Movie**" for steps on how to create a fast-start movie using QuickTime Player.

A fast-start movie can start playing long before the whole file has downloaded--typically within a few seconds of starting the file transfer. If the Internet connection is faster than the movie's data rate, the movie plays smoothly as it arrives, with no waiting. It's an optimal experience for the audience.

A fast-start movie can also include pointers to data located in other files on the Web server, a local disk or CD, or any Web URL

Published Date: Feb 20, 2012

Remote Access: Modem Script Basics

This document details conventions used in creating or modifying a modem script for use with Remote Access under Mac OS 9 or Internet Connect under Mac OS X.

This article has been archived and is no longer updated by Apple.

This document explains the conventions your Apple Remote Access modem script must follow and describes the basic tasks it must perform. For detailed descriptions of the modem scripting commands, see technical document 42658 "CCL Command Glossary."

What is a modem script? A modem script is a set of instructions that tells a computer how to interact with a modem so that calls can be initiated and received. To establish a connection, a script typically configures and then connects the modem. To terminate a connection, the script disconnects the modem by hanging up and then restores the modem settings that were in effect before the call. Each type of modem used with Apple Remote Access or Internet Connect requires a modem script. Many scripts are provided with the software (see the Modem control panel or the Modem tab in the Network pane in System Preferences). If no script is provided for your modem, you must write or modify one using Communication Command Language (CCL), a programming language that configures and controls your modem. Existing scripts can be edited in most text editors. For Mac OS 9 and earlier the file type may need to be changed after modifying the document. The file type is "mlts" and can be changed with many disk utilities including ResEdit. This document describes the basic elements and structure of a CCL file.

Script conventions

The following sections describe CCL script conventions for

- Instructions
- Comments
- Capitalization
- Labels
- Script resources
- String formats
- Variable strings (varStrings)
- Match strings
- Script size

Instructions
Each line of CCL code consists of one instruction that is made up of a command and its parameters, if any. Modem commands are used as parameters of CCL commands. For example, the command `write "ATDT^1\\13"` includes the following:
`write` -a CCL command
`ATDT` -a modem command
`^1\\13` -a modem command parameter

This command tells the CCL interpreter to send to the modem the modem command ATDT followed by variable string 1, and a carriage return (ASCII code 13). The CCL interpreter reads scripts from left to right and from top to bottom. It reads straight through, from beginning to end, unless you tell it otherwise (for example, by using the JUMP command).

Comments
You can insert explanatory comments into your script. To enter a comment, start the line with an exclamation point (!).

```
!  This is a sample comment and would be ignored by the script.
!
```

You may also want to use a blank comment line to make your script more readable; to do so, type an exclamation point with no text and press Return.

Capitalization
The CCL interpreter is not case-sensitive. Therefore,

```
@LABEL 1
@Label 1
@label 1
@laBel 1
```

are all valid instructions.

Labels
Labels are used to mark locations in the script. Other script commands, such as JUMP, transfer control to locations in the script marked by the @LABEL command. For instance, JUMP 13 tells the CCL interpreter to jump to label 13 and start executing the commands after the @LABEL 13 command. A script may use up to 128 labels, numbered 1 to 128.

Script resources
A modem script may contain an optional mlts resource with resource ID 0. This resource contains data that tells the CCL interpreter the characteristics of the modem. An mlts resource contains five unsigned bytes indicating the modem's error correction and command string limitations.

Byte 1 Indicates the modem's error correction capability:

0 The modem has no built-in error correction.
1 The modem has at least one embedded standard error correction protocol, such as MNP or LAPM. (Do not set to this value if the modem has only proprietary protocols such as PEP or HST.)

Byte 2 Reserved by Apple.

Byte 3 Indicates the maximum length of the first dial string fragment (in varString7; for details, see "Variable Strings (varStrings)" later in this chapter) passed to the script by the CCL interpreter. Check your modem documentation to determine the maximum number of characters your modem can accept in an AT command.

Byte 4 Indicates the maximum length of the second dial string fragment (in varString8) passed to the script by the CCL interpreter.

Byte 5 Indicates the maximum length of the third dial string fragment (in varString9) passed to the script by the CCL interpreter. If your script has no mlts resource (for example, if it is an Apple Remote Access 1.0 script), the CCL interpreter assumes a maximum length of 30 characters for each of the dial string fragments, and it assumes that the modem cannot negotiate a reliable link.

To create a script resource, follow the instructions in 42661 "**How to Create an "mlts" Resource.**"

String formats
To delimit a string in CCL code, you can use single quotation marks (') or double quotation marks ("). If you do not start the string with a single or double quotation mark, any of the following characters determines the end of the string: space, return, tab, comma, or semicolon.

CCL strings may include references to variable strings (varStrings). See "Variable Strings (varStrings)" later in this document for details.

CCL strings may include nonprinting characters such as null, tab, and return. To specify one of these characters in a string, precede it by an escape character. The CCL interpreter recognizes two escape characters: the backslash (\\) and the caret (^).

The backslash is used to include a character by specifying the decimal representation of the ASCII character (decimal numbers 00 to 99 are valid), or to include the backslash or caret character in a string.

The caret is used to insert a variable string or an ASK string into another string. (For details, see "Variable Strings (varStrings)" later in this document.) Here are some examples of how the backslash and caret are used:

`\\13` inserts a carriage return (0x0D) into the string
`\\00` inserts the null character (0x00) into the string
`\\\\` inserts the backslash (\\) character (0x5C) into the string
`\\^` inserts the caret (^) character (0x5E) into the string
`^1` inserts variable string 1 into the string
`^*` inserts the ASK string into the string

Here are some string examples:
`'this is a test'` yields `this is a test`
`thisisatest` yields `thisisatest`
`"this is a test"` yields `this is a test`
`this is a test` yields `this`
`"this \\34\\73\\83\\34 a test"` yields `this "IS" a test`

If variable string 1 is 555-1212, then
`"ATDT^1"` yields `ATDT555-1212`

Variable strings (varStrings)
CCL strings may include references to variable strings (varStrings), which are strings passed to the script as parameters. VarStrings 1- 4 and 6 are defined by Remote Access or the Network panel VarStrings 7-9 are defined by the CCL interpreter based on varString1 and bytes 3-5 of the mlts resource. VarString5 is reserved for future use by Apple.

Apple Remote Access uses the following varStrings:

varString1 the complete dial string (the telephone number to dial, with the necessary prefixes and suffixes)

varString2 the modem speaker flag 0 speaker off 1 speaker on

varString3 the tone/pulse dialing selector T tone dialing P pulse dialing

varString4 the modem error correction flag 0 script should not try to use modem error correction 1 script should try to use modem error correction 2 script should try to establish MNP10 error correction

varString6 the dialing mode flag 0 normal dialing 1 blind dialing (that is, have the modem begin dialing without confirmation of dial tone detection) 2 manual dialing (that is, have the script assume that the user has already picked up the phone and dialed the remote number)

varStrings7-9 varStrings 7-9 break a long dial string into shorter strings for use with modems that can accept only a limited command string size. They are automatically generated by Apple Remote Access. varString7 contains the first characters of varString1. Its maximum length is defined by byte 3 of the mlts resource (see "Script Resources" earlier in this document). If varString7 contains all the characters included in varString1, varString8 contains a blank string (ASCII 20 hex). If varString1 includes more characters than can be contained in varString7, varString8 contains some or all of the additional characters. Its maximum length is defined by byte 4 of the mlts resource. If varString7 and varString8 contain all the characters included in varString1, varString9 contains a blank string. If varString1 includes more characters than can be contained in varString7 and varString8, varString9 contains some or all of the additional characters. Its maximum length is defined by byte 5 of the mlts resource. Note: If you do not create an mlts resource for your script (as described in "Creating an mlts Resource" in the Apple Remote Access Modem WorkShop User's Guide), the CCL interpreter assumes a maximum length of 30 characters for each of the dial string fragments.

All eight varStrings are passed to the script when it is running in originate mode. The modem speaker flag (varString2) and the error correction flag (varString4) are passed to the script when it is running in answer mode.

Match strings
The CCL interpreter has a buffer that can hold up to 32 strings loaded by the MATCHSTR command. The MATCHCLR command erases the contents of the buffer. The MATCHREAD command reads input from the serial driver and compares the input to the strings currently in the buffer. If a match is found in the specified time, execution continues at the label associated with that match string. A recommended strategy for sending commands to the modem is as follows:

- Use MATCHCLR to clear all match strings.
- Use MATCHSTR to load match strings with appropriate responses.
- Use WRITE to send commands to the modem.
- Use MATCHREAD to check for defined modem responses. If an appropriate response is received, branch as defined by the corresponding MATCHSTR command.
- Use SETTRIES, INCTRIES, and IFTRIES to loop a few times.
- If an appropriate response is not received, branch to exit or to alternate code as defined by the MATCHREAD command.

Script size
Scripts used in Modem WorkShop may be a maximum of 30 kilobytes. (You can write quite a detailed script in 30 kilobytes.) If your script is too large, you may be able to make it small enough by minimizing the number and length of comments.

Tasks your script must perform
A modem script executes in one of three possible modes, each with a separate entry point. The modes are as follows:
originate used when a call is initiated
answer used when call answering is enabled
hangup used to terminate every connection, whether in originate or answer mode, and whether or not the connection was successful

Figure 1 below provides an overview of the tasks your script must perform in each mode. The remainder of this document describes these tasks.

Figure 1 Script tasks for each mode

Initiating a call
When you signal the Apple Remote Access program to initiate a call, it plays the script starting at the @ORIGINATE entry point. The script must perform the following tasks to initiate a call:

1. Configure your computer's serial port. Use the SERRESET command to reset the serial port's communication parameters. Set the speed of the connection to the maximum speed of the modem. (You may change the serial port speed later in the script.) Set the number of bits to be used for stop, start, and parity. Use the HSRESET command to turn off the serial port's flow control options. (You will turn on the appropriate options later in the script.)

2. Configure the modem. Following is a list of standard steps for configuring a modem. Check the documentation that came with your modem to determine whether it requires different steps.
    1. Recall the factory default configuration settings.
    2. If your modem has a speed of 14,400 bit/s or higher, you need to set up the modem for CTS/RTS handshaking and an appropriate cable must be used, as described in technical document 42660 "Remote Access: Cable Requirements." Do not turn on hardware handshaking until the connection has been made.
    3. Configure the modem for DTR usage.
    4. Turn local echo off. When local echo is on, the modem sends commands it receives back to the computer.
    5. Set the modem to return detailed result codes including the speed of the connection and the results of error correction and data compression negotiation.
    6. If the modem can do error correction, set error correction according to varString4. If varString4 is set to 0, turn error correction off. If varString4 is set to 1, have the modem negotiate the best available error correction with the remote modem. If no error correction can be established, have the modems remain connected without error correction. If varString4 is set to 2, have the modem try to establish MNP10 error correction with the remote modem. If MNP10 negotiation fails, have the modems remain connected without error correction. **Note:** If the modem uses a proprietary error correction protocol, make sure that it will try to negotiate standard protocols if it is unable to negotiate the proprietary protocol. If not, disable error correction. Note: Do not disable Trellis error protocol, which is part of the V.32 standard.
    7. Apple Remote Access is generally more efficient than a modem at compressing data. If you believe you have a special situation in which modem data compression is preferable, have the script set up the modem to negotiate data compression.
    8. Turn the modem speaker on or off according to the value of varString2.

3. Dial the phone number.

    1. Have the script check whether the dial string extends into varString8 (then varString9) by using the IFSTR command to check for a blank string. If the entire dial string fits in varString7, have the script issue a single dial command. If the dial string is longer than varString7, have the script issue multiple modem dial commands referencing varStrings 7 and 8, and if necessary, varString9.

    2. Set tone or pulse dialing in the modem dial command according to the value of varString3.

    3. If varString6 is set to 1, have the modem begin dialing without confirmation of dial tone detection. This is useful when the phone system provides a nonstandard dial tone that can't be recognized by the modem's tone detection circuitry. If varString6 is set to 2, the user will already have dialed the remote number. Have the script cause the modem to retrain with the remote modem. This is useful when the dialing sequence is too complex or interactive for the modem script to navigate.

    4. Display the dialed phone number in the Apple Remote Access Status window and the Activity Log. Use varString1 in log messages rather than a concatenation of varStrings 7-9.

4. Wait for the modem response.

5. If the call fails, return an error result code indicating what happened. For example, use error result code -6022 if the line is busy. (See technical document 42659 "Remote Access: CCL Result Code Listing," for a complete list.)

6. If the call is successful, indicate that a connection has been established. Display a message such as "Communicating at 9600 bit/s" in the Apple Remote Access Status window. Also display messages indicating the results of error correction and data compression negotiation, if applicable. If you were successful in establishing modem error correction, issue USERHOOK 4 (for MNP10 error correction) or USERHOOK 2 (for all other error correction) to advise Apple Remote Access that a reliable link was established. If you were successful in establishing data compression, issue USERHOOK 3 to advise Apple Remote Access to turn off its built-in data compression.

7. Configure the serial port based on the modem speed and the connection. If your modem has a speed of 14,400 bit/s or higher and if you are

using a CTS/RTS handshaking cable (see technical document 42660 "Remote Access: Cable Requirements"), use the HSRESET command to set flow control for outputCTS. Use the COMMUNICATINGAT command to tell Apple Remote Access the connection speed so that it can set its timers appropriately. If your modem has a speed of 9600 bit/s or slower, use the SERRESET command to reset the serial port speed to the speed of the connection.

8. Exit the script so that the Apple Remote Access program can continue with its internal execution.

Answering a call

To answer a call, the Apple Remote Access program plays the script starting at the @ANSWER entry point. The script must perform the following tasks to answer a call:

1. Configure your computer's serial port. Use the SERRESET command to reset the serial port's communication parameters. Set the speed of the connection to the maximum speed of the modem. (You may change the serial port speed later in the script.) Set the number of bits to be used for stop, start, and parity. Use the HSRESET command to turn off the serial port's flow control options. (You will turn on the appropriate options later in the script.)
2. Configure the modem. It will require several modem commands to completely configure the modem. To prevent calls being answered before the configuration is complete, disable auto-answering in the first modem command the script issues. (You will enable it in step 3.) For additional details about configuring the modem, see step 2 of "Initiating a Call" earlier in this document.
    1. Recall the factory default configuration settings.
    2. If your modem has a speed of 14,400 bit/s or higher, set up the modem for CTS/RTS handshaking and use an appropriate cable, as described in technical document 42660 "Remote Access: Cable Requirements"
    3. Configure the modem for DTR usage.
    4. Turn local echo off.
    5. Set the modem to return detailed result codes including the speed of the connection and the results of error correction and data compression negotiation.
    6. If the modem can do error correction, set error correction according to varString4.
    7. Apple Remote Access is generally more efficient than a modem at compressing data. If you believe you have a special situation in which modem data compression is preferable, have the script set up the modem to negotiate data compression.
    8. Turn the modem speaker on or off according to the value of varString2.
3. Enable auto-answering and wait for the result. On an incoming call, the modem issues a RING result code.
4. If the call fails, return an error result code indicating what happened. For example, use error result code -6021 if the modem cannot detect a carrier signal on the phone line. (See technical document 42659 "Remote Access: CCL Result Code Listing" for a complete list.)
5. If the call is successful, indicate that a connection has been established. Display a message such as "Communicating at 9600 bit/s" in the Apple Remote Access Status window. Also display messages indicating the results of error correction and data compression negotiation, if applicable. If you were successful in establishing modem error correction, issue USERHOOK 4 (for MNP10 error correction) or USERHOOK 2 (for all other error correction) to advise Apple Remote Access that a reliable link was established. If you were successful in establishing data compression, issue USERHOOK 3 to advise Apple Remote Access to turn off its built-in data compression.
6. Configure the serial port based on the modem speed and the connection. Issue the USERHOOK 1 command. The USERHOOK 1 command informs Apple Remote Access that the serial port is busy answering a call, which prevents the serial port from being given up to another application. If your modem has a speed of 14,400 bit/s or higher and if you are using a CTS/RTS handshaking cable (as described in Appendix B, "Cable Requirements"), use the HSRESET command to set flow control for outputCTS. Use the COMMUNICATINGAT command to tell Apple Remote Access the connection speed so that it can set its timers appropriately. If your modem has a speed of 9600 bit/s or slower, use the SERRESET command to reset the serial port speed to the speed of the connection.
7. Exit the script so that the Apple Remote Access program can continue with its internal execution.

Terminating a call

To terminate a call, the Apple Remote Access program plays the script starting at the @HANGUP entry point. The hangup part of the script is played to terminate a connection whenever the @ORIGINATE or @ANSWER parts of the script have been played, regardless of the result. The hangup part of the script is also played when Apple Remote Access terminates answer mode because another application gains control of the serial driver or the system is shut down.

Note: Apple Remote Access has a callback feature (see the Apple Remote Access Personal Server User's Guide or the Apple Remote Access Client User's Guide for more information). For callback to work, the script must hang up the modem and prepare it for the return call within 15 seconds, which is the minimum time that the answering side will wait before issuing the callback. The maximum time the calling side (that is, your computer) will wait for a callback is 80 seconds. The script must perform the following tasks to terminate a call:

1. If hardware handshaking is used in the @ORIGINATE or @ANSWER part of the script, turn off hardware handshaking. Use the HSRESET command to turn off hardware handshaking.
2. If possible, cause the modem to enter command mode. Before you issue a hangup command, you may need to get the attention of the modem by, for example, issuing a short break, a long break, or the attention sequence "+++," or by toggling DTR. Consult your modem documentation for the appropriate method.

3. Issue a modem hangup command.
4. Recall the factory default configuration settings. Since you recalled the default settings at the beginning of the script, this is not necessary if the only communications application you use is Apple Remote Access; however, recalling the default settings at the end of your script is recommended in case the next communications application that you use does not take care of this itself.
5. Turn off auto-answering. This prevents the modem from answering the phone until call answering is enabled.
6. Exit with an appropriate message. If successful, return a result code of 0. If unsuccessful, return the appropriate error result code as listed in technical document 42659 "Remote Access: CCL Result Code Listing."

Related software downloads

30729 Apple Modem Script Generator 1.0a1 Document and Software

Published Date: Feb 20, 2012

Remote Access: CCL Command Glossary

This document describes the CCL commands interpreted by Remote Access or Internet Connect.

This article has been archived and is no longer updated by Apple.

This document describes the CCL commands interpreted by the Apple Remote Access program. The commands are presented in alphabetical order. Each command section contains a description of the command; the syntax of the command, including any parameters; and an example, if appropriate.

`! Comment`
To insert a comment or a blank line in the script, start the line with an exclamation point. Scripts used in Modem WorkShop may be a maximum of 30 kilobytes. If your script is too large, you may be able to make it small enough by minimizing the number and length of comments.
Syntax `! comment`
Examples `! Turn echo off !`

`@ANSWER`
@ANSWER marks the script entry point when the script plays in answer mode.
Syntax `@ANSWER`

`@HANGUP`
@HANGUP marks the script entry point when the script plays in hangup mode.
Syntax `@HANGUP`

`@LABEL`
@LABEL sets a numeric label in the script that can then be referenced from other script commands, such as JUMP, JSR, and IFTRIES. A script may include up to 128 labels, numbered 1 through 128. To make debugging easier, assign the labels in ascending sequence. They don't need to be consecutive.
Syntax `@LABEL labelnum`
Parameter `labelnum` -a value from 1 through 128 that specifies the label number
Example `@LABEL 30`

`@ORIGINATE`
@ORIGINATE marks the script entry point when the script plays in originate mode (that is, when initiating a call).
Syntax `@ORIGINATE`

`ASK`
ASK causes a dialog box to be displayed to obtain information from the user. The dialog box contains a prompt message, an optional data entry field, a Cancel button, and an OK button. You may need the ASK command if your telephone system uses special telecommunications equipment. This command is typically used in originate mode only. "String Formats" in Chapter 1 shows how to use the ASK string as part of another string. The ASK string is set if the user presses either the OK button or the Cancel button.

Syntax	`ASK maskflag " message" [jumpLabel]`	
Parameters	maskflag	0 to echo the user's input 1 to mask the user's input with bullets (····) 2 to not allow user input
	message	the string to display in the dialog box as a prompt for the use
	jumpLabel	if supplied, the label to jump to, where execution continues when the Cancel button is pressed; if not supplied, or if the OK button is pressed, then execution continues at the next CCL line
Examples	`ASK 1 "Enter your password to access the network."`	
	`ASK 2 "When the remote modem answers, click OK, otherwise click Cancel to stop Manual Dialing."`	

`CHRDELAY`
CHRDELAY allows you to specify a delay time between characters for all subsequent WRITE commands. This is useful for telecommunications equipment that requires data at a speed slower than the interface speed.
Syntax `CHRDELAY x`
Parameter `x` the delay time, in tenths of a second
Example `CHRDELAY 8`

COMMUNICATINGAT

For V.32bis modems with CTS/RTS hardware flow control cables (as described in Appendix B, "Cable Requirements") only: Use the COMMUNICATINGAT command to indicate the speed of the modem connection if the modem speed is different from the serial port speed. This is necessary because the Apple Remote Access application's internal timers are based on the modem speed.

Syntax `COMMUNICATINGAT x`

Parameter `x` the modem speed, in bits per second

Example `COMMUNICATINGAT 4800`

DECTRIES

DECTRIES decreases the variable tryCounter by one. The CCL interpreter maintains tryCounter, which you may set to a value and increase or decrease by one. See also the commands IFTRIES, INCTRIES, and SETTRIES.

Syntax `DECTRIES`

DTRCLEAR

DTRCLEAR clears (that is, deasserts) the Data Terminal Ready (DTR) signal on the RS-232 interface.

Syntax `DTRCLEAR`

DTRSET

DTRSET sets (that is, asserts) the Data Terminal Ready (DTR) signal on the RS-232 interface.

Syntax `DTRSET`

EXIT

EXIT terminates execution of the script and returns a result code along with an optional string.

- If the script executes successfully, have it return a result code of 0.
- If the script fails for any reason, have it return the appropriate error result code, as listed in technical document 42659 "**Remote Access: CCL Result Code Listing.**"
- To give the user a nonstandard error message, use result code -6002 and use the string parameter to pass the nonstandard error message.

Syntax	`EXIT result [" string"]`	
Parameters	result	One of the CCL result codes listed in technical document 42659 "**Remote Access: CCL Result Code Listing.**"
	string	The message displayed to the user when a connection attempt fails; if you include a string for one of the standard result codes, it overrides the one that CCL would normally display
Examples	EXIT -6022	
	EXIT -6002 "unable to communicate with PBX"	

FLUSH

FLUSH empties all characters from the serial driver input buffer.

Syntax `FLUSH`

HSRESET

HSRESET sets the serial port's flow control options. If you are using a standard modem cable, you will turn off flow control and leave it off. If you are using a CTS/RTS handshaking cable such as described in technical document 42660 "Remote Access: Modem Cable Requirements," you need only the outputCTS parameter. Turn all options off at hangup.

Syntax	`HSRESET outputXON/XOFF outputCTS XON XOFF inputXON/XOFF inputDTR`	
Parameters	outputXON/XOFF XON/XOFF	Handshaking for output. For Apple Remote Access, it must be off
	outputCTS	CTS hardware handshaking for output. For Apple Remote Access, if you are using a CTS/RTS handshaking cable, it should be on for originate and answer modes and off for hangup mode. For more information, see Inside Macintosh, volume 2 (no longer in print) or Inside Macintosh: Devices, available through the Apple Developer Catalog.

	XON	Specifies the XON character (DO NOT USE for Apple Remote Access)
	XOFF	Specifies the XOFF character (DO NOT USE for Apple Remote Access)
	inputXON/XOFF XON/XOFF	Handshaking for input. For Apple Remote Access, it must be off
	inputDTR	DTR hardware handshaking for input. For Apple Remote Access, it should be off. For more information, see Inside Macintosh, volume 4 (no longer in print) or Inside Macintosh: Devices, available through the Apple Developer Catalog.
Example	`HSRESET 0 1 0 0 0 0`	

`IFANSWER`
If the script is playing in answer mode, IFANSWER causes execution to continue at the specified label.
Syntax `IFANSWER jumpLabel`
Parameter `jumpLabel` the label to jump to, where execution continues
Example `IFANSWER 30`

`IFORIGINATE`
If the script is playing in originate mode, IFORIGINATE causes execution to continue at the specified label.
Syntax `IFORIGINATE jumpLabel`
Parameter `jumpLabel` the label to jump to, where execution continues
Example `IFORIGINATE 7`

`IFSTR`
IFSTR compares two strings: one of the variable strings (varStrings, described in "Variable Strings (varStrings)" in technical document 42657 "**Remote Access: Modem Script Basics"**) and one that you specify in the script. If the strings are equal, the script continues execution at the specified label.

Syntax	`IFSTR varStringIndex jumpLabel " compareString"`	
Parameters	varStringIndex	The number of the variable string to compare
	jumpLabel	The label to jump to, where execution continues
	compareString	The string to which the variable string is compared In the following example, if the modem speaker flag (varString 2) is on (1), execution jumps to label 55. Otherwise, the next command is executed.
Example	`IFSTR 2 55 "1"`	

`IFTRIES`
IFTRIES compares a parameter with the variable tryCounter. If the value of tryCounter is greater than or equal to the parameter, the script continues execution at the specified label. See also the commands DECTRIES, INCTRIES, and SETTRIES.

Syntax	`IFTRIES numTries jumpLabel`	
Parameters	numTries	The parameter to compare with the variable tryCounter
	jumpLabel	The label to jump to, where execution continues The following example checks to see if the value of tryCounter is greater than or equal to 3. If so, execution jumps to label 62 and continues.
Example	`IFTRIES 3 62`	

`INCTRIES`
INCTRIES increases the variable tryCounter by one. See also the commands DECTRIES, IFTRIES, and SETTRIES.
Syntax `INCTRIES`

`JSR`
JSR causes script execution to jump to the subroutine located at the specific label, saving the address of the line following the JSR command. When a RETURN command is encountered, execution resumes at the line following the JSR command. JSR commands can be nested up to 16 deep.
Syntax `JSR jumpLabel`
Parameter `jumpLabel` the label to jump to, where execution continues
Example `JSR 50`

JUMP

JUMP causes script execution to continue at the specified label.
Syntax `JUMP jumpLabel`
Parameter `jumpLabel` the label to jump to, where execution continues
Example `JUMP 59`

LBREAK

LBREAK generates a long break (3.5 seconds) on the transmission line.
Syntax `LBREAK`

MATCHCLR

The CCL interpreter has a buffer that holds up to 32 strings loaded by the MATCHSTR command. The MATCHCLR command erases all strings in the buffer. Use MATCHCLR before loading each new group of strings. See also the commands MATCHREAD and MATCHSTR.
Syntax `MATCHCLR`

MATCHREAD

The CCL interpreter has a buffer that holds up to 32 strings loaded by the MATCHSTR command. MATCHREAD reads input from the serial driver and compares the input to the strings currently in the buffer. If a match is found within the specified MATCHREAD time, execution continues at the label associated with that match string (as defined by the MATCHSTR command that loaded the string). See also the commands MATCHCLR and MATCHSTR.
Syntax `MATCHREAD time`
Parameter `time` the time allowed for a match, in tenths of a second The following example searches for a match within 3 seconds.
Example `MATCHREAD 30`

MATCHSTR

The CCL interpreter has a buffer that holds up to 32 strings. MATCHSTR loads a string to the buffer, so that incoming strings can be matched against it by a MATCHREAD command. If an incoming string matches the stored string, script execution continues at the label specified in the MATCHSTR command. See also the commands MATCHCLR and MATCHREAD.

Syntax	`MATCHSTR matchNum matchLabel " matchStr"`	
Parameters	matchNum	A value from 1 through 32 specifying which string in the buffer to replace
	matchLabel	The label to jump to, where execution continues when a MATCHREAD command detects a matching string matchStr a string (1-255 characters) to compare against The following example loads the string "OK\\13\\10" into the buffer as string 1. If a subsequent MATCHREAD reads a string that matches this one, then execution jumps to label 8.
Example	`MATCHSTR 1 8 "OK\\13\\10"`	

NOTE

The NOTE command displays status and log information, passing the message string as a parameter. Optionally, you can set the message level to specify where the message should appear. Note: While in answer mode, NOTE does not write to the Activity Log or to the status window.

Syntax	`NOTE msgStr [ msgLevel]`	
Parameters	msgStr	The message to display
	msgLevel	The message level 1, 2, or 3 (default is 3) 1 send the message to the Activity Log only 2 send the message to the Apple Remote Access Status window only 3 send the message to both the Activity Log and the Apple Remote Access Status window The following examples show important places in which you should use the NOTE command. In the first example, the script logs outgoing calls by displaying the dialed phone number in the Apple Remote Access Status window and the Activity Log. In the second example, the script displays the speed of the connection in the Apple Remote Access Status window.
Examples	`NOTE "DIALING ^1" 3 NOTE "Communicating at 9600 bps." 2`	

PAUSE

PAUSE causes script execution to halt for a specified period of time.
Syntax `PAUSE time`
Parameter `time` the time to pause, in tenths of a second The following example causes script execution to pause for 2 seconds.
Example `PAUSE 20`

`RETURN`
RETURN terminates a subroutine. Script execution continues with the line following the JSR command.
Syntax `RETURN`

`SBREAK`
SBREAK generates a short break (.5 seconds) on the transmission line.
Syntax `SBREAK`

`SERRESET`
SERRESET configures the serial port by passing values for baud rate, parity, data bits, and stop bits to the serial driver. Specifying a value other than the values listed below causes the default value to be used. The defaults for each parameter are listed below.

Syntax	`SERRESET baudRate, parity, dataBits, stopBits`	
Parameters	baudRate	300, 1200, 2400 (the default), 4800, 9600, 14,400, 19,200, 28,800, 38,400, or 57,600
	parity	1 for odd parity 2 for even parity 0 or 3 for no parity (the default)
	dataBits	5, 6, 7, or 8 (the default)
	stopBits	1 for 1 stop bit (the default) 2 for 2 stop bits 3 for 1.5 stop bits
Example	`SERRESET 9600, 0, 8, 1`	**Note:** Apple Remote Access requires no parity, 8 data bits, and 1 stop bit.

`SETSPEED`
SETSPEED sets the asynchronous serial interface speed to the specified speed. Use SETSPEED to set speeds other than those allowed in SERRESET.
Syntax `SETSPEED interfacespeed`
Parameter `interfacespeed` the serial interface speed
Example `SETSPEED 24000`

`SETTRIES`
SETTRIES initializes the tryCounter variable to the specified value. See also the commands DECTRIES, IFTRIES, and INCTRIES.
Syntax `SETTRIES tries`
Parameter `tries` the value to assign to the tryCounter variable
Example `SETTRIES 0`

`USERHOOK`
USERHOOK conveys information about the state of the modem to Apple Remote Access.

Syntax	`USERHOOK opcode`	
Parameter	opcode	1 to indicate that the script is answering a call and that a ring is indicated by the modem. This prevents other applications from using the serial port until after the call has terminated. 2 to report that the modem is doing error correction (other than MNP10, which is indicated by opcode 4). 3 to request that Apple Remote Access turn off its built-in data compression. 4 to report that the modem is doing MNP10 error correction.
Example	`USERHOOK 1`	

`WRITE`

WRITE writes the specified string to the serial driver.
Syntax `WRITE message`
Parameter `message` the message written to the serial driver
The following example sends to the serial driver the modem command ATDT followed by variable string 1 and a carriage return. (For more information, see "Variable Strings (varStrings)" in technical document 42657 "**Remote Access: Modem Script Basics."**
Example `WRITE "ATDT^1\\13"`

Published Date: Feb 20, 2012

Remote Access: CCL Result Code Listing

This document lists the result codes returned by the Communication Command Language (CCL) used in modem scripts for Remote Access and Internet Connect.

This article has been archived and is no longer updated by Apple.

This document lists the result codes returned by the Communication Command Language (CCL). Each result code is shown with a description of the error and the message, if any, that is displayed to the user. If the script executes successfully, have it exit with result code 0. If the script is unsuccessful for any reason, have it exit with one of the error result codes listed in this document. Note that result code -6002 allows you to pass a custom message to the user.

Result code	Description	Message displayed
-6002	Generic CCL error.	Supplied by the string parameter in the EXIT command.
-6003	Subroutine overflow.	The file for the modem you selected does not work properly. It may be damaged; try replacing the file in the Extensions folder.
-6004	The target label is undefined	The file for the modem you selected does not work properly. It may be damaged; try replacing the file in the Extensions folder.
-6005	Bad parameter error.	The file for the modem you selected does not work properly. It may be damaged; try replacing the file in the Extensions folder.
-6006	Duplicate label error.	The file for the modem you selected does not work properly. It may be damaged; try replacing the file in the Extensions folder.
-6007	Close error.	[No message is displayed.]
-6008	The script was canceled.	[No message is displayed.]
-6009	The script contains too many lines.	The file for the modem you selected does not work properly. It may be damaged; try replacing the file in the Extensions folder.
-6010	The script contains too many characters.	The file for the modem you selected does not work properly. It may be damaged; try replacing the file in the Extensions folder.
-6011	The CCL has not been initialized.	[No message is displayed.]
-6012	Cancel in progress.	[No message is displayed.]
-6013	Another script is in progress.	[No message is displayed.]
-6014	Exit with no error.	[No message is displayed.]
-6015	A label is out of range.	The file for the modem you selected does not work properly. It may be damaged; try replacing the file in the Extensions folder.
-6016	Bad command.	The file for the modem you selected does not work properly. It may be damaged; try replacing the file in the Extensions folder.
-6017	End of script reached; expected Exit.	The file for the modem you selected does not work properly. It may be damaged; try replacing the file in the Extensions folder.
-6018	The match string index is out of bounds.	The file for the modem you selected does not work properly. It may be damaged; try replacing the file in the Extensions folder.
-6019	Modem error; the modem is not responding.	Modem not responding. Reset modem, check connections, or check to see that the proper port and modem type were specified in the Remote Access Setup control panel.
-6020	No dial tone.	The modem cannot acquire a dial tone.
-6021	No carrier.	The modems could not connect. Try again.
-6022	The line is busy.	The phone number you are calling is busy.
-6023	No answer.	The phone number you are calling does not answer.
-6024	No @ORIGINATE command in the modem script.	The file for the modem you selected does not work properly. It may be damaged; try replacing the file in the Extensions folder.
-6025	No @ANSWER command in the modem script.	The file for the modem you selected does not work properly. It may be damaged; try replacing the file in the Extensions folder.
-6026	No @HANGUP command in the modem script.	The file for the modem you selected does not work properly. It may be damaged; try replacing the file in the Extensions folder.

Published Date: Feb 20, 2012

TA25544_Remote_Access_CCL_Result_Code_Listing.pdf

iDVD: Compatibility information for DVD-R playback devices

iDVD, iDVD 2, iDVD 3, and iDVD 4 can produce DVDs that can be played on:

- Most standard set-top DVD players
- Most computers with DVD Video drives

This article has been archived and is no longer updated by Apple.
DVD-R discs produced with Apple SuperDrives are compatible with a wide variety of DVD hardware. Check the documentation that came with your player or with the manufacturer to find out if it is compatible with DVD-R media.
Published Date: Oct 11, 2016

Maximizing Ethernet performance

This article has been archived and is no longer updated by Apple.

Learn how to maximize Ethernet performance on your Mac.

Connect to an auto-negotiated Ethernet port

For best networking results when using Ethernet, the Ethernet port which your Mac is connected to should be set to auto-negotiate. If you are not sure, ask your network administrator to verify this setting.

Important: Ethernet network connection issues may indicate that the network switch is not set to auto-negotiate. If a switch's port is not auto-negotiating, your computer detects the appropriate speed but defaults to half-duplex mode. If the switch's port at the other end of the link is configured for full-duplex, a large number of late events can occur on the link. If it isn't possible to set the switch to auto-negotiate, then set the switch's port to half-duplex. For more information, see the documentation that came with the Ethernet switch.

Disable spanning tree if directly connected to a switch

Note: If you connect your computer directly to a configurable Ethernet switch, have your network administrator disable spanning tree on that port. Otherwise your computer may duplicate the AppleTalk address of another computer on the same network and both network connections may become unreliable.

Related documents

- 106655 "**Ethernet: Speed of Ethernet Cabling**"
- 106749 "**Mac OS X: Troubleshooting a Cable Modem or DSL Internet Connection**"
- 43015 "**Mac OS: How to Connect Two Computers**"

Published Date: Feb 20, 2012

Power Mac G4 (QuickSilver 2002): About SCSI Devices

This document discusses the Ultra160 Dual Channel SCSI card that comes with some Power Mac G4 (QuickSilver 2002) configurations.
This article has been archived and is no longer updated by Apple.
Some Power Mac G4 computer configurations come with an Ultra160 Dual Channel SCSI card installed in a PCI slot with one or more internal SCSI hard disks connected to it. You
can install additional internal SCSI hard disk drives, up to a maximum of three drives. It's recommended that you only connect SCSI Ultra160 LVD hard disk drives to the internal port
of the Dual Channel SCSI card.

You can connect external SCSI devices, including older drives with slower data transfer rates, to the external port of the Ultra160 Dual Channel SCSI card.
Because the card has two channels, one connected to the internal port and another connected to the external port, connecting older devices to the external port doesn't slow down the transfer rate of the internal hard disk drives.

Apple recommends that you use only SCSI Ultra160 LVD devices as internal hard disk drives.

To connect older SCSI devices that use a 25-pin or a 50-pin connector-such as Zip drives, scanners, or DAT drives-you need to purchase SCSI adapters, or purchase and install an additional "legacy" SCSI PCI card (one that supports older devices). See document 42667 "**Power Mac G4 (QuickSilver 2002): About the Ultra SCSI PCI Card**" for information on the configure-to-order Ultra SCSI card Apple offers.

Published Date: Feb 20, 2012

Power Mac G4 (QuickSilver 2002): About the Ultra SCSI PCI Card

This document discusses the Ultra SCSI PCI card option available with the Power Mac G4 computers that allows connecting older legacy devices.

This article has been archived and is no longer updated by Apple.
The Ultra SCSI PCI card lets you use older external SCSI devices such as tape drives, scanners, and hard disks with your new Power Mac G4 or Macintosh Server G4. You can connect standard SCSI (SCSI-1), Fast SCSI (SCSI-2), and Ultra SCSI (also called Ultra Narrow SCSI) peripherals to the Ultra SCSI card. With the card installed, you can also start up your computer from externally connected drives.

This economical and convenient option lets you connect up to seven SCSI devices, as long as the total cable length measures no more than 6 meters, or about 18 feet. The card supports cable lengths of 1.5 meters when running in Ultra SCSI mode or 6 meters when running in SCSI-1 or SCSI-2 mode. Ultra SCSI mode supports transfer rates of up to 20 megabytes per second (MBps). SCSI-2 mode supports up to 10MBps, and SCSI-1 supports up to 5MBps. The Ultra SCSI card includes a 25- to 50-pin cable adapter.

SCSI Type	Speed	Connector	SCSI Ids
SCSI (SCSI-1) *	5MBps	25- and 50-pin	7
Fast SCSI (SCSI-2) *	10MBps	25- and 50-pin	7
Fast Wide SCSI	20MBps	50-pin	15
Ultra SCSI *	20MBps	50-pin	7
Ultra Wide SCSI	40MBps	68-pin	15
Ultra2 LVD SCSI	80MBps	68-pin	15
Ultra160 SCSI	160MBps	68-pin	15
* Works with Ultra SCSI card			

Note: Different types of SCSI devices connected to a SCSI channel operate only as fast as the slowest device on the chain. For example, a SCSI-2 (10MBps) tape drive and an Ultra160 SCSI (160MBps) hard disk on the same SCSI channel will both operate at 10MBps. However, with the dual-channel Ultra160 SCSI card, you can easily connect external SCSI devices on the second SCSI chain without affecting the performance of your internally connected Ultra160 SCSI drives.
Published Date: Feb 20, 2012

Power Mac G4 (QuickSilver 2002): How to Transfer Files

This document discusses ways to transfer files to the Power Mac G4 (QuickSilver 2002).
This article has been archived and is no longer updated by Apple.
If two Macintosh computers are not connected by a network, you can transfer information between them by connecting them with a standard category 5, 4 wire-pair (8 wires) Ethernet
cable (in effect creating a small network of just two computers), which you can buy from an Apple-authorized dealer. You connect the cable to each computer's Ethernet port and then turn on file sharing on both computers. You can also configure the Ethernet settings on two computers to create a small network. Technical document 43015 referenced below links to steps for file sharing using Mac OS X and Mac OS 9.

You can also connect two Macintosh computers using a FireWire cable. You can then use FireWire target disk mode to transfer files from one computer to another. For more information about using FireWire target disk mode, see "FireWire Target Disk Mode" on page 54 of the "Setting Up Your Power Mac G4" manual or see technical document 58583 referenced below.

If you have an Internet connection, you can also transfer files via the Internet to your iDisk storage area on .Mac, where you or another .Mac user can download them. For more information about .Mac, see technical document 72002 referenced below for how to setup and use an .Mac account.

Related documents

- 43015 "**Mac OS: How to Connect Two Computers**"
- 42669 "**Gigabit Ethernet: No Crossover Cable Required**"
- 58583 "**Macintosh: How to Use FireWire Target Disk Mode**"
- 72002 "**.Mac Services: General Questions FAQ (Part 1 of 5)**"

Published Date: Oct 11, 2016

Gigabit Ethernet: No Crossover Cable Required

This document discusses when an Ethernet crossover cable is necessary with gigabit Ethernet capable computers.

This article has been archived and is no longer updated by Apple.

Connecting a gigabit Ethernet capable computer to any other computer using Ethernet can be accomplished with a standard four pair category 5 or better Ethernet cable. No crossover cable is necessary.

Gigabit Ethernet capable computers include:

- Power Mac G4 (Gigabit Ethernet)
- Power Mac G4 (Digital Audio)
- Power Mac G4 (QuickSilver)
- Power Mac G4 (QuickSilver 2002)
- PowerBook G4 (Gigabit Ethernet)

Published Date: Feb 20, 2012

Power Mac G4 (QuickSilver 2002): How to Use FireWire Devices

This document discusses what types of devices can be connected to the FireWire ports and generic steps to use most devices.
This article has been archived and is no longer updated by Apple.
Your computer has two FireWire ports. FireWire is a high-speed data transfer system that lets you easily connect and disconnect external devices-such as digital video (DV) cameras, printers, scanners, and hard disks. You can connect and disconnect FireWire devices without restarting your computer.

These are some of the things you can do with FireWire:

- Connect a digital video camera and capture or transfer high-quality video directly to your computer. Then you can use video-editing software such as Apple's iMovie to edit the video.
- Connect an external FireWire hard disk drive and use it to back up data or transfer files. If you have installed software for your FireWire hard disk, the FireWire disk icon appears on your desktop after you connect the disk drive to your Power Mac G4. Some FireWire hard disks get their power through the FireWire cable, so you don't need to connect an external power supply.
- If you have a problem with your computer that prevents you from starting up or you want to transfer files, you can use FireWire to connect your Power Mac G4 to another computer so that your Power Mac G4 appears as an external hard disk on the other computer (a feature known as "FireWire target disk mode"). See technical document 58583 "**Macintosh: How to Use FireWire Target Disk Mode**" for more information.

To use a FireWire device with your computer, connect the device to the computer and install any software that came with the device. Your computer automatically senses when you attach a new device. To start up from a FireWire hard disk that has the Mac OS on it, choose System Preferences from the Apple (K) menu, click Startup Disk, then select the FireWire hard disk as the startup disk.

If your FireWire hard disk doesn't appear or can't be selected, consult the FireWire hard disk vendor for updated software drivers.

To disconnect your FireWire hard disk safely, drag its icon to the Trash before disconnecting the FireWire cable.

Published Date: Feb 20, 2012

Power Mac G4 (QuickSilver 2002): About Your Apple Pro Keyboard

This document discusses the Apple Pro Keyboard that comes with the Power Mac G4 (QuickSilver 2002) and its preset function keys.
This article has been archived and is no longer updated by Apple.
Your Apple Pro Keyboard comes with function keys preset for common tasks (Figure 1). Use the Media Eject key to eject optical disks. Press the Volume Up or Volume Down keys to adjust the sound level, or press the Mute key to turn sound off. You can also adjust some Apple display's level of brightness with the Brightness Up and Brightness Down keys.

Figure 1 Keyboard layout with presets

Note: If you're using a non-Apple keyboard with your computer, use the F12 key to eject optical disks. You will need to press and hold the key slightly longer than when pressing the Media Eject key.

Customizing Function Keys (Mac OS 9)

In Mac OS 9, you can set unassigned function keys (F1-F13) on your Apple Pro Keyboard to open applications such as your Web browser, email program, or frequently used documents. Once applications are open, you can use the customized function keys to switch quickly between them.

The first time you press an unassigned function key, a dialog box appears that lets you assign any of the function keys to an application or document. You can change the application assigned to a function key using the Keyboard control panel.

Note: You can't customize function keys in Mac OS X without the addition of third-party software. Search the Macintosh Products Guide for software options.

Published Date: Feb 20, 2012

Power Mac G4 (QuickSilver 2002): About the Apple Pro Mouse

This document discusses the Apple Pro Mouse that comes with the Power Mac G4 (QuickSilver 2002).
This article has been archived and is no longer updated by Apple.
To position the pointer using your mouse, move the mouse over any suitable surface such as your desktop, mouse pad, or other textured surface. (Some smooth, glassy surfaces provide less pointer control than others.) To click an object, press down once on the mouse body until you feel a click. To double-click an item, press down twice in quick succession.

If you run out of room and want to keep the mouse clicked while you lift it, click the mouse, then squeeze the sides with your thumb and fingers as you lift (Figure 1).

Figure 1 Click and lift the mouse

You can adjust the feel of your mouse by turning the dial underneath. Turning the dial one direction makes the feel of clicking the mouse stiffer; turning it the other way makes clicking the mouse easier.

Turn the ring on the bottom of the mouse to "+" for more tension, "O" for medium tension, and "-" for less tension (Figure 2).

Figure 2 Tension adjuster

Published Date: Feb 20, 2012

Power Mac G4 (QuickSilver 2002): How to Connect a Second Display

This document discusses how to connect a second display to the Power Mac G4 (QuickSilver 2002).

This article has been archived and is no longer updated by Apple.
You can connect two displays to your graphics card and use both displays at the same time. When a second display is connected, you can either have the same image appear on both displays (known as mirroring) or use the second display to extend the size of the Mac OS desktop (known as extended desktop mode).You need a video cable for each display you want to connect.

To use multiple displays:

1. Turn off the displays and shut down your computer.
2. Connect the video cable from each display to the appropriate port on the graphics card.
3. Turn on the displays and start up your computer.

To adjust the displays, choose System Preferences from the Apple Menu and choose Displays from the View menu. By default, your computer starts up in extended desktop mode. To work in video mirroring mode, turn Video Mirroring on with the Displays icon in the menu bar in Mac OS X. You can press the Command key and the F1 key to switch between video mirroring and extended desktop mode.

Important: For optimal mirroring performance, set both displays to the same resolution and color depth.

Published Date: Feb 20, 2012

Power Mac G4 (QuickSilver 2002): About USB Devices

This document discusses the USB ports on the Power Mac G4 (QuickSilver 2002) and what types of devices may be connected to them.

This article has been archived and is no longer updated by Apple.

Your Power Mac G4 comes with two USB ports (Figure 1) which you can use to connect many types of external devices, including printers, digital cameras, microphones, game pads, joysticks, keyboards, mouse devices, and storage devices. USB makes it easy to connect external equipment. Once you connect the device, it is ready to use. You don't need to restart your computer.

Figure 1 USB port location

To use a USB device with your computer, connect the device to the computer and install its software or configure your computer to work with the device. From then on, your computer automatically loads the correct software whenever you attach the device.

Note: Apple has already included software to work with many USB devices. In most cases you do not need to install the software that came with the device. If, when you connect a USB device, your Power Mac G4 cannot find the correct software, it may ask you to search the Internet to find it.

Connecting Multiple USB Devices

Your keyboard or monitor may also have an available USB port that you can use to connect devices. If you want to connect more devices, purchase a USB hub. The USB hub connects to an open port on your computer and provides additional USB ports (usually four or seven). Search the **Macintosh Products Guide** for hub options.

Published Date: Feb 20, 2012

Power Macintosh G4 (QuickSilver 2002): About CD-R/CD-RW Discs

This document describes how CD-R and CD-RW discs can be used and includes steps
This article has been archived and is no longer updated by Apple.
Your drive can record your favorite music, programs, and files on CD-R and CD-RW discs. You can create your own music CDs and play them on any standard audio player. You can also record computer files, such as applications, documents, or other digital files, on a recordable CD.

With a CD-R disc (CD-Recordable), you can record information on the disc once. Although you can't change the recorded information, you may be able to add more information until the disc is full, depending on the application you use. See the documentation that came with your application for specific information about recording on your CD-R disc. It is best to use CD-R discs for recording audio CDs, because most audio CD players cannot read CD-RW discs.

With a CD-RW disc (CD-Rewritable), you can save and change information on your CD multiple times. However, some software for recording media files on CDs, such as the iTunes Disc Burner feature, can record data on the disc only once. You can record music on CD-R or CD-RW discs right from your iTunes library.

For steps to burn a disc and information about choosing a disc format see technical document 58804 "**Macintosh: How to Burn a CD and Choose a Format**." For third-party CD-R burning utilities search the **Macintosh Product Guide**.

Published Date: Feb 20, 2012

Power Mac G4 (QuickSilver 2002): How to Connect to an Ethernet Network

This document describes how to connect a Power Mac G4 (QuickSilver 2002) to an Ethernet network.
This article has been archived and is no longer updated by Apple.

Connecting to an Ethernet Network

Your computer comes with built-in 10/100/1000 megabit per second (Mbps) twisted-pair Ethernet networking capability. Connecting to a network gives you access to other computers. You may be able to store and retrieve information; use network printers, modems, and electronic mail; or connect to the Internet. You can also use Ethernet to share files between two computers or set up a small network. If you're connecting to an existing network, you may be able to get information about the network and the network software you need from a network administrator who oversees its operation. Identify your organization's network administrator before you begin.

Follow these guidelines when selecting a cable for your network:

Type of twisted-pair Ethernet	Use twisted-pair cable types
10 Mbit	Category 3, 5, or 6
100/1000 Mbit	Category 5 or 6

Connecting to a Twisted-Pair Ethernet Network

You can connect directly to a 10/100/1000 twisted-pair Ethernet network.

Note: You can also connect your computer to an Ethernet network that uses thin coaxial cables. To do this, you need an RJ-45-to-Thin Coax adapter (available from other manufacturers). See your Apple-authorized reseller or search the Macintosh Product Guide for more information on Ethernet media adapters.

To connect your Macintosh to a centralized 10/100/1000 twisted-pair Ethernet network, follow these steps:

1. Plug one end of an RJ-45 twisted-pair cable into the Ethernet port on your Macintosh.
2. Plug the other end of the cord into an RJ-45 wall outlet or external hub that is connected to a twisted-pair Ethernet network (Figure 1). After you start up the computer, you need to configure the software for your network connection. Your network administrator can provide the necessary information. You can also get help configuring your network software using Mac Help (in the Help menu).

A basic twisted-pair network

To configure your network settings:

1. Choose **System Preferences** from the **Apple** menu, then choose **Network** from the **View** menu.
2. Show Built-in Ethernet.
3. Click the TCP/IP tab and enter information about your network. The default setting is Configure Using DHCP.
4. Click Apply Now.
5. Close System Preferences.

Published Date: Feb 20, 2012

QuickTime Pro: How to Import MP3 Files

This document discusses how to import MP3 files into a new movie using QuickTime Player with QuickTime Pro.

This article has been archived and is no longer updated by Apple.

If you have QuickTime Pro, you can use QuickTime Player to convert files from an MP3 music file into QuickTime movies.

In QuickTime Player:

1. Choose Import from the File menu. Locate and select the music file you would like to use then click Open. The music file will open in a new QuickTime Player window.

If you will be adding the music to an existing movie, continue with the following steps:

1. Choose Open Movie In New Player from the File menu. Locate the movie you want to add music to and click Open.
2. Click the music file window to make it active and choose Select All from the Edit menu.
3. Choose Copy from the Edit menu. This will copy the entire song into memory for adding to the existing movie.
4. Click to make your existing movie the active window.
5. Choose Add from the Edit menu. If you don't see Add under Edit, then hold the Option key (Mac) or Ctrl and Alt Keys (Windows) on the keyboard. While holding the keys, go to the Edit menu and choose the Add. (In the Edit menu, the item normally labeled Paste changes to Add when holding the Option or Ctrl and Alt key.)
6. Choose Save As from the File menu. A "Save" dialog box will appear. Enter a new name in the "New file name" box. Next, select the radio button labeled "Make movie self-contained" and then click the Save button.

Published Date: Feb 20, 2012

Power Mac G4 (QuickSilver 2002): How to Use Energy Saver

This document discusses how to use the power saving functions in Energy Saver for the Power Mac G4 (QuickSilver 2002).
This article has been archived and is no longer updated by Apple.
Power Mac G4 computers are set to go to sleep after a period of inactivity. Sleep is a state in which your computer uses very little power. You can also put the computer to sleep whenever you want.

Note: Power Mac G4 computers are automatically set to sleep after 20 minutes of inactivity. When the computer goes to sleep, it saves its state so that when you wake the computer, your programs, documents, and computer settings are exactly as you left them. To save more energy, shut down the computer or shut down and turn off the power strip when the computer is not in use.

To put your computer to sleep, you can do any of the following:

- Press the power button on the front of the computer.
- Choose Sleep from the Apple menu (Special menu in Mac OS 9).
- Set a sleep timer in your computer's sleep settings by choosing System Preferences from the Apple menu and choosing Energy Saver from the View menu (In Mac OS 9, choose Control Panels from the Apple menu and Energy Saver from the sub-menu).

When the computer is in sleep, the front panel power button light pulses. To wake the computer, press the power button on the front panel of the computer, or press a key on the keyboard. With some Apple monitors, you can also use the monitor's power button to put the computer to sleep and wake it.

Not all PCI cards or replacement AGP cards comply with the computer's power management standards. If you install a non-compliant card, the computer can still enter sleep mode, but it will not achieve maximum energy saving. You can use the Apple System Profiler to find out whether an installed card is compliant.

Related documents

- 12346 "**Energy Star: Description**"
- 4701 "**Computer Equipment: Turning It Off Versus Leaving It On**"

Published Date: Feb 20, 2012

Power Mac G4 (QuickSilver 2002): How to Configure Computer As a Server Without a Monitor

This document discusses how to configure a Power Mac G4 (QuickSilver 2002) as a server without a display (headless server).
This article has been archived and is no longer updated by Apple.
Using the Computer as a Server Without a Monitor

You can set up your computer to run as a server without an attached monitor. Follow these steps:

1. Set up your computer, including connecting a monitor, mouse, and keyboard as described in the "Setting Up Your Power Mac G4" manual.
2. Configure your server software as follows:
    - Configure network access.
    - Configure the security application so that the server can be controlled remotely.
    - Set passwords for access to the server.
    - Set network services to start up when the system starts up.
3. Be sure network services are operating properly.
4. Disconnect the monitor.

If you're using remote access software, follow the instructions that came with your software for logging into and controlling the server.

Published Date: Feb 20, 2012

Power Mac G4 (QuickSilver 2002): About Adding Memory

This document overviews the memory requirements for the Power Mac G4 (QuickSilver 2002) computers.
This article has been archived and is no longer updated by Apple.
Installing Memory

You can install additional dynamic random-access memory (DRAM) in packages called Dual Inline Memory Modules (DIMMs) in the three DRAM DIMM slots on your computer's main logic board. You can expand your computer's DRAM to a maximum of 1536 megabytes (1.5 gigabytes). To check the amounts of DRAM installed, use the Apple System Profiler (located in the Utilities folder, in your computer's Applications folder).

If you install 512 MB DIMMs, they must have 256 megabit (Mbit) devices. You can also install 256 MB DIMMs that have 256 Mbit or 128 Mbit devices. You can install different size DRAM DIMMs in any order in any DIMM slot. To search for compatible DIMMs, see the **Macintosh Products Guide**.

DIMMs must fit these specifications:

- "PC-133" Synchronous DRAM (SDRAM)
- 3.3 volt (V)
- 64-bit wide, 168-pin module
- Maximum number of memory devices on a DIMM is 16.
- Unbuffered; do not use registered or buffered SDRAM.
- Height must not exceed 2.0 inches.

Note: When purchasing DRAM for use in Macintosh computers, make sure that the memory vendor conforms to the JEDEC specification. Check with your memory vendor to ensure that the DRAM DIMM supports the correct timing modes and that the Serial Presence Detect (SPD) feature has been programmed properly, as described in the JEDEC specification. You can purchase Apple-branded memory online from the Apple Store: store.apple.com

Important: DIMMs from older Macintosh computers may not be compatible with your Power Mac G4. Only "PC-133" DIMMs are compatible. Do not use older DIMMs even if they fit into the DRAM DIMM slots.

Warning

Apple recommends that you have an Apple-certified technician install memory, PCI expansion cards, and internal storage devices. Consult the service and support information that came with your computer for instructions on how to contact an Apple authorized service provider or Apple for service. If you install these items yourself, you risk damaging your equipment, and such damage is not covered by the limited warranty on your computer. See an Apple authorized dealer or service provider for additional information about this or any other warranty question.

Published Date: Feb 20, 2012

Mac OS 9: Reinstalling Printer Drivers

This document talks about the need to reinstall some printer software following a clean installation and which current StyleWriter drivers to use for earlier StyleWriter printers.

This article has been archived and is no longer updated by Apple.

If an icon for your printer is not available in the Chooser after you have done a clean installation of Mac OS 9.2, you may need to reinstall the software that came with your printer.

- If you have a StyleWriter, StyleWriter II, or StyleWriter 1200, use the Color SW 1500 driver that comes with Mac OS 9.2 (instead of installing your original printer software).
- If you have a Color StyleWriter 2200 or 2400, install the Color StyleWriter 2500 driver that comes with Mac OS 9.2 (instead of installing your original printer software).
- If you have a Color StyleWriter 4000 Series printer, you can find the latest driver in the CD Extras folder on your system software CD.

You may also need to reinstall fonts that came with your printer software. Follow the instructions that came with your printer software.

Published Date: Feb 20, 2012

Mac OS 9: About FireWire Hard Drives

This document describes a new feature in the FireWire 2.8.2 software that is installed with Mac OS 9.2.

This article has been archived and is no longer updated by Apple.

FireWire 2.8.2 includes a new built-in driver for many FireWire hard disk drives. This driver will be used automatically if the disk vendor's driver extension cannot be found. You should still install the vendor's software to get maximum features from FireWire storage devices.

FireWire 2.8.2 is included with Mac OS 9.2.
FireWire 2.8.5 is included with Mac OS 9.2.2

Published Date: Feb 20, 2012

Power Mac G4 (QuickSilver 2002): Important Information About System Sleep

This document discusses important information about system sleep and your Power Mac G4 computer.
This article has been archived and is no longer updated by Apple.
Important information about system sleep

Certain system settings may prevent your computer from going to sleep. You may notice that the screen dims and the sleep indicator light pulses, but the internal fan still runs.

Many communications programs, such as PPP, Apple Remote Access, and other dialup programs, monitor the computer's modem port to check for incoming transmissions when set to auto-answer incoming calls. This may prevent the computer from going into sleep completely.

If the Configure pop-up menu in the TCP/IP control panel (Mac OS 9) is set to Using DHCP Server, your computer may not sleep when your Web browser or email application is open or a file server is mounted on your desktop. Quit these applications and unmount file servers when they are not being used.

The Palm Desktop HotSync function may prevent your computer from going to sleep. To turn off the HotSync function, open Palm Desktop and choose Setup from the HotSync menu. Then click the Disabled button and verify that the "Enable HotSync software at system startup" checkbox is not selected. Turn HotSync back on when you want to synchronize with your Palm-compatible device.

If you use fax software, such as FAXstf, and the software is set to auto-answer, your computer may not sleep completely. The screen will dim (instead of turn off). To allow your computer to sleep, disable auto-answering. To disable auto-answering in FAXstf, open FaxBrowser and choose Settings from the Edit menu. Then choose the FaxModem icon and choose Never from the Answer On pop-up menu.

Note: If you connect a USB device while the computer is in sleep, your computer wakes.

Published Date: Oct 11, 2016

Mac OS 9: About Easy Access and Virtual Memory

This document has important information about Easy Access and Mac OS 9.

This article has been archived and is no longer updated by Apple.

The Easy Access control panel doesn't work with virtual memory turned on.

Before using the Easy Access feature, open the Memory control panel and turn virtual memory off.

Published Date: Oct 11, 2016

Power Mac G4 (QuickSilver 2002): About Older Macintosh USB Keyboards

This document has information on using older Macintosh USB keyboards (with a power key) on the Power Mac G4 (QuickSilver 2002).
This article has been archived and is no longer updated by Apple.
You can use the Power button on older Apple USB keyboards to turn on your computer when it is connected to a USB port on your computer.

You cannot use the Power button to turn on your computer when the keyboard is connected to a USB hub or to a USB port on your monitor. You can also turn on the computer using the Power button on the computer. If you have an Apple Display with an ADC connector, you can also use the power button on the front of the display.

Published Date: Feb 20, 2012

Power Mac G4 (QuickSilver 2002): About Writing to CDs

This document has important information regarding the optical drive that came with your computer.

This article has been archived and is no longer updated by Apple.

Your optical drive supports both normal and "High-Speed" (greater than 4x) CD-R and CD-RW media with a 74-minute media capacity.

If you have a SuperDrive, it can read but cannot write to high-speed CD-RW media.

When handling discs, be careful not to leave fingerprints, place other materials on the discs, or add labels to the discs that may cause them to become unbalanced when spinning.

Use CD-R discs for recording audio CDs, because most audio CD players cannot read CD-RW discs.

Published Date: Feb 20, 2012

Power Mac G4 (QuickSilver 2002): About Apple DVD Player

This document has important information about the Apple DVD Player 2.7 available under Mac OS 9 on your computer.
This article has been archived and is no longer updated by Apple.
If your computer has an optical drive with DVD playback capability, use Apple's DVD Player application. For information on optimal system settings for DVD playback, see technical document 42705 "**About Apple DVD Player, Version 2.7.**"

If you use Mac OS 9 and Multiple Users is enabled in the Multiple Users control panel, Apple DVD Player will open automatically when you start up your computer. To prevent this, open the Extensions Manager control panel and turn off the DVD AutoLauncher extension. To play a DVD video, open Apple DVD Player (in the Apple menu).

Published Date: Feb 20, 2012

About Apple DVD Player, Version 1.3

This document contains important information about your Apple DVD software that's not included in the printed information you received with your DVD player or the Apple DVD Player Help.
This article has been archived and is no longer updated by Apple.
About Apple DVD Player, version 1.3

Note: Apple DVD Player 1.3 is only available with Mac OS 9.

This document contains important information about your Apple DVD software that's not included in the printed information you received with your DVD player or the Apple DVD Player Help. It includes information about compatibility with other products, tips for using the Apple DVD Player Controller, and troubleshooting.

Contents

- **Turning off virtual memory**
- **Using the Apple DVD Player Controller**
- **Parental control**
- **Continuing after the FBI warning appears**
- **Selecting language preferences**
- **Selecting disc menu options using the keyboard**
- **Viewing quality**
- **Using the entire display**
- **Connecting your computer to an additional monitor, television, or stereo receiver**
- **Apple DVD Player and Apple Video Player**
- **Using external speakers**
- **Receiving error messages while playing a disc**
- **Compatibility issues with the Arabic version of Mac OS 8.1**

Turning off virtual memory

For optimum performance when playing a DVD disc, you should turn off virtual memory. To turn off virtual memory, use the Memory control panel.

Using the Apple DVD Player Controller

While using the Controller, keep in mind the following:

- Some DVD discs may not use all the features available on the Controller.
- You can only use Next Chapter, Previous Chapter, Scan Forward, Scan Backward, Step, and Slow Motion buttons, and the Menu button while a disc is playing.
- You cannot navigate a disc while it is paused or stopped.
- You cannot eject a DVD disc from the Finder if the Apple DVD Player application is open. To eject the disc, quit the Apple DVD Player application or use the Eject button on the Controller.
- The DVD PC-Card should not be ejected while the Apple DVD Player application is open. If the card is ejected while the Apple DVD Player application is open, you must restart your computer and insert the card, then open the Apple DVD player application to begin playing your disc.
- To move the DVD Controller, you can drag any part of the Controller except a button.
- Parts of the Controller may sparkle if it is placed over the Viewer window. To prevent this effect, hide the Controller or move it out of the Viewer window.
- Some DVD discs include instructions for using standard controls to access additional features on the disc. Following these instructions using the Controller may not work. If clicking the Next or Previous buttons does not work, first click the Play button.
- Some DVD discs may contain on screen navigation menus that may respond slowly when using the arrow-keys on the keyboard.

Parental control

You can set parental controls to any Motion Picture Association of America (MPAA) rating: G, PG, PG-13, R, NC-17. To set the parental control preferences, choose Preferences from the Edit menu and click the Parental Control tab.

If a DVD disc supports parental control, the disc will not play if its MPAA rating is for a more mature audience than the rating you selected in the Preferences dialog box.

Not every DVD disc supports parental control. If a disc does not support parental control, it will play regardless of the rating you have selected.

If you have selected parental control, some DVD discs display a message to which you must respond to play the disc.

Some DVD discs may not play unless you set the preference to the MPAA rating of the disc. For example, a disc rated G may not play although you selected PG-13 for parental control. To play the disc, set the rating of the Parental Control preference to the rating of the disc.

Continuing after the FBI warning appears

Some DVD discs use a still picture for the FBI warning. If a disc appears to pause when the FBI warning appears, press the Return or Enter key to continue playing the disc.

Selecting language preferences

Many DVD discs provide the soundtrack and subtitles in several languages. You can select the default language for the soundtrack and subtitles by choosing Preferences from the Edit menu.

Your default language preferences for the soundtrack and subtitles become effective when you start playing the disc again or when you quit and open Apple DVD Player again.

Because the soundtrack and subtitle languages provided on DVD discs can vary, the default language you select may not be available on a specific disc. In this case, use the disc's interactive menus to select a soundtrack or subtitle language.

Selecting disc menu options using the keyboard

Some DVD discs do not support making selections in the disc's interactive menus using the mouse. Buttons in the disc's menus may not highlight when the mouse passes over them or they may not respond to mouse clicks. If you cannot use the mouse to make selections in a disc's menus, use the arrow keys to highlight a button, then press the Return or Enter key to select it.

Viewing quality

For the best viewing quality for your display, choose Normal Size from the Video menu. Choosing Fill Screen from the Video menu may give acceptable viewing quality as well.

With widescreen titles, the black bars above and below the image are normal even if you choose Fill Screen.

Viewing quality is optimized for screens that are 800 x 600 pixels or larger and display 256 or more colors. If you play a DVD disc on an external monitor and the video doesn't appear, use the Monitors & Sound control panel to reduce the number of colors to 256 colors.

For optimal display of video on a television connected to a Power Macintosh G3, or the Powerbook G3 series computer, choose the "Best for Video" option from the TV Mirroring portion of the Control Strip.

Using the entire display

If you have Mac OS 8.5 installed, the Control Strip may not disappear when you choose "Present Video on Screen" from the Video menu. To hide it, open the Control Strip control panel and select Hide Control Strip.

To use the entire display to view a DVD disc, choose "Present Video on Screen" from the Video menu, then choose Fill Screen.

Connecting your computer to an additional monitor, television, or stereo receiver

DVD discs are designed to play only on a computer display, television, or monitor attached to the video output port on the computer. If the Macintosh has either an RCA (composite) or S-Video output port, DVD discs can be displayed on an external monitor or television that has a composite or S-Video input port.

Note: The cables needed to connect the computer to an external monitor or television are not provided.

The optimum resolution for viewing DVD video on a television is 720 x 480 pixels for NTSC. For PAL, it is 720 X 576 pixels.

You cannot view a DVD disc both on your computer's monitor and an external monitor simultaneously.

If you are using a Power Macintosh G3, or the Powerbook G3 series computer with TV Mirroring enabled, choose the Overscan option from the TV Mirroring portion of the Control Strip to obtain the largest possible image on your television. Changing the TV resolution will turn off Overscan

mode.

Apple DVD Player and Apple Video Player

If the Apple Video Player application is open while the Apple DVD Player is playing a DVD disc and the computer goes to sleep, you will not hear the audio for the DVD disc when you wake up the computer. To hear the audio again, open the Sound portion of the Control Strip and select the DVD option.

Using external speakers

Because soundtracks for theatrical release movies are mixed for presentation in theaters, they have a wide dynamic range and the difference in volume between dialog and sound effects may be extreme. To fully appreciate the soundtrack of such a movie when viewing it on a DVD disc, you should use an external speaker system connected to the audio output port (stereo mini-jack) or, if available, the RCA audio ports on your computer.

Note: The cables needed to connect the computer to external speakers are not provided.

You can control the volume of the audio output port using the Controller or the Control Strip.

The RCA audio ports are for use with a stereo receiver or other audio device with its own volume control. You cannot control the volume of the RCA audio ports using the Controller or the Control Strip.

You may find that stereo headphones connected to the audio output port provide an acceptable listening experience.

The computer's audio output port (stereo mini jack) can be connected to a television or stereo receiver if it has audio input ports.

Receiving error messages while playing a disc

DVD discs are susceptible to problems due to scratches, dust, and imperfections in disc manufacture. In addition, differences in disc authoring can result in errors in disc navigation. If you see an error message when playing a disc or experimenting with the features of a particular DVD disc, make sure the disc is clean and free of scratches. If you continue to see the same message, use the disc's interactive menus to select options.

Some delay is normal when using dual layer DVD discs if the disc changes to a track on a different layer.

Compatibility issues with the Arabic version of Mac OS 8.1

Apple DVD Software version 1.2 is not compatible with the Arabic version of Mac OS 8.1. To use Apple DVD Software version 1.2, use the Arabic version of Mac OS 8.5 or later.

Mention of third-party products is for informational purposes only and constitutes neither an endorsement nor a recommendation. Apple assumes no responsibility with regard to the performance or use of these products.

Updated February 5, 1999
Published Date: Feb 20, 2012

About Apple DVD Player, Version 2.7

This document contains important late-breaking information about Apple DVD Player software.
This article has been archived and is no longer updated by Apple.
This document contains important late-breaking information about Apple DVD Player software. For more information, see Apple DVD Player Help. For the latest information about the Apple DVD Player software and answers to support questions, go to Apple's Support Web site at www.apple.com/support/

The following topics are covered in this document:

- About Apple DVD Player compatibility
- Disabling automatic play
- Optimizing DVD playback
- Using the Apple DVD Player Controller
- Setting parental controls
- Continuing after the FBI warning appears
- Selecting language preferences
- Selecting disc menu options using the keyboard
- About wide-screen titles
- Using the entire screen
- Using external speakers
- Increasing the volume
- Receiving error messages while playing a disc

About Apple DVD Player compatibility

- Apple DVD Player is a software-only DVD player. It is not compatible with the DVD hardware in the Power Macintosh G3, PowerBook G3, and Power Mac G4 (PCI graphics) series computers.
- Apple DVD Player is not compatible with the After Dark sleep function. Do not use the After Dark sleep function while a DVD movie is playing.
- DTS encoded discs are not supported.

Disabling automatic play

Apple DVD Player opens by default when you insert a DVD-Video disc in the DVD drive. If you don't want Apple DVD Player to open automatically when a DVD-Video disc is inserted in the DVD drive, you can use the Extensions Manager to turn off the DVD AutoLauncher extension. To do this, choose Control Panels from the Apple menu, then choose Extensions Manager from the submenu. In the Extensions list, make sure there is no X in the box next to DVD Autolauncher, then click Restart.

Optimizing DVD playback

If the audio or video playback seems to periodically stutter or pause, make sure that you quit all applications other than Apple DVD Player. It is normal for playback to pause when you use other applications and control panels, when you open menus or control strip modules, or if the Finder is busy with a task.

For optimum performance do the following:

- In the Energy Saver control panel, set the system, hard drive, and display to never go to sleep.
- In the AppleTalk control panel, open the Edit menu and select User Mode, then click Advanced. Then click the Options button and set AppleTalk to inactive.
- Disconnect your computer from the network by removing the Ethernet or other networking cable.
- If your computer has Airport, use the Airport application or control strip module to turn off Airport networking.
- Turn off Find by Content indexing. In Sherlock, open the Find menu and choose Index Volumes. Then remove the mark from the Use Schedule checkbox for all of the volumes listed.

Using the Apple DVD Player Controller

While using the Controller, keep in mind the following:

- Some DVD discs do not use all the features available on the Controller.

- You cannot navigate a disc while it is paused.
- Next Chapter, Previous Chapter, Scan Forward, Scan Backward, and the Menu button can only be used while a disc is playing.
- To move the DVD Controller, drag any area of the Controller except a button.
- Some areas of the Controller could sparkle if they are placed over the Viewer window. To prevent this, hide the Controller, move the Controller off the Viewer window, or set the color depth to thousands or millions of colors in the Monitors control panel.
- Some DVD discs contain onscreen navigation menus that respond slowly when you use the arrow keys on your keyboard.
- You cannot eject a DVD disc from the Finder if the Apple DVD Player application is open. To eject the disc, quit Apple DVD Player or click the Eject button on the Controller.

Setting parental controls

- You can set parental controls to any Motion Picture Association of America (MPAA) rating: G, PG, PG-13, R, NC-17. To set the parental control preferences, choose Preferences from the Edit menu, then click the Parental Control tab.
- If a DVD disc supports parental control, the disc will not play if its MPAA rating is for a more mature audience than the rating you selected in the Preferences dialog box.
- Not every DVD disc supports parental control. If a disc does not support parental control, it will play regardless of the rating you have selected.
- If you have selected parental control, some DVD discs display a message. You must respond to the onscreen message before the disc will play.
- Some DVD discs do not play unless you set the preference to the MPAA rating of the disc. For example, a disc rated G might not play if you select PG-13 for parental control. To play the disc, set the parental control preference to the rating of the disc.

Continuing after the FBI warning appears

If a disc appears to pause when the FBI warning appears, press the Return or Enter key to continue playing the disc.

Selecting language preferences

- Many DVD discs provide the soundtrack and subtitles in several languages. You can select the default language for the soundtrack and subtitles by choosing Preferences from the Edit menu.
- Your default language preferences for the soundtrack and subtitles become effective when you start playing the disc again or when you quit and open Apple DVD Player again.
- The default language you select might not be available on some discs. Use the disc's interactive menus to select a soundtrack or subtitle language.

Selecting disc menu options using the keyboard

With some DVD discs, you can't choose options in the disc's interactive menus using the mouse. If you cannot use the mouse to make selections in a disc's menus, use the arrow keys on your keyboard to highlight an option, then press the Return or Enter key to select it.

About wide-screen titles

With wide-screen titles, the black bars above and below the image appear even if you choose Fill Screen.

Using the entire screen

To view a movie on the entire screen, choose "Present Video on Screen" from the Video menu.

Using external speakers

- Soundtracks for theatrical release movies are mixed for presentation in theaters, so they have a wide dynamic range. The difference in volume between dialog and sound effects could be extreme. To fully appreciate the soundtrack of these movies, connect external speakers to the sound output port on your computer. For more information, see the documentation that came with your computer and the external speakers.
- You can control the volume of sound from the external speakers using the Controller or the Control Strip.
- If you like, you can also connect stereo headphones to the sound output port on your computer.
- You can listen to the audio on your television or stereo receiver. To do this, connect one end of a standard audio cable (with a stereo miniplug connector) to your computer's sound output port, then connect the other end of the cable to the audio input port(s) on the television or stereo receiver. For more information, see the documentation that came with your computer and television or stereo receiver.

Increasing the volume

To maximize volume while playing a movie, increase both the Controller volume and the Control Strip volume to the highest level. Make sure the Enable Line Mode option in the Preferences window is not selected (there is no checkmark in the checkbox).

Receiving error messages while playing a disc

- DVD discs might have problems caused by scratches, dust, and imperfections in disc manufacture. Differences in disc authoring can also cause errors in disc navigation. If you see an error message when playing a disc or experimenting with the features of a particular DVD disc, remove the disc and make sure the disc is clean and free of scratches.
- A delay is normal when changing to a track on a different layer of a dual-layer disc.

Published Date: Feb 20, 2012

SuperDrive: Available Space Requirements for DVD-R Data

This document discusses the space requirements on the hard disk when burning a DVD-R data disc in the Mac OS X Finder.
This article has been archived and is no longer updated by Apple.
Your hard disk sets aside a temporary copy of the data in the DVD desktop image before you burn the DVD. You must have enough available space on your hard disk and on the DVD-R disc for the data you want to burn. To determine space available, select your hard disk or DVD-R disc image, then choose Show Info or Get Info from the File menu.
Note: Your computer may have either Show Info or Get Info, depending on which version of Mac OS X you are using.

Use DVD-R General media with a 4.7 GB media capacity.

When handling discs, be careful not to leave fingerprints, place other materials on the discs, or add labels to the discs that may cause them to become unbalanced when spinning.

Published Date: Oct 11, 2016

Power Mac G4 (QuickSilver 2002): How to Replace The Battery

This document lists the steps for replacing the battery in the Power Macintosh G4 (QuickSilver 2002).
This article has been archived and is no longer updated by Apple.

Warning
Apple recommends that you have an Apple-certified technician install memory, PCI expansion cards, and internal storage devices. Consult the service and support information that came with your computer for instructions on how to contact an Apple authorized service provider or Apple for service. If you install these items yourself, you risk damaging your equipment, and such damage is not covered by the limited warranty on your computer. See an Apple authorized dealer or service provider for additional information about this or any other warranty question.

Replacing the Battery

Your computer has a 3.6 V lithium battery installed on the main logic board. Some signs that you need to replace the battery are intermittent problems starting up the computer and random changes in its date and time settings. You can purchase a replacement battery from an Apple-authorized dealer.

1. Open the computer. See technical document 42687 "**Power Mac G4 (QuickSilver 2002): How to Open the Computer**" for steps to open the computer.

2. Remove the battery from its holder, noting the orientation of the battery's positive end. (A plus sign is marked on and near the battery holder). See Figure 1.

   - Remove the battery by pulling it up and out of its holder. You may need to spread these two tabs slightly apart to release the battery. Spread the tabs gently so they don't break.
   - **Important**: Batteries contain chemicals, some of which may be harmful to the environment. Please dispose of used batteries according to your local environmental laws and guidelines.

3. Insert the new battery in the holder, making sure the battery's positive symbol aligns with the positive symbol on or near the holder.
   - **Warning:** Installing the battery incorrectly may cause an explosion. Be sure the battery's positive and negative poles are correctly oriented in the holder. Use only the same type of battery or an equivalent recommended by the manufacturer of the original.

4. Close the computer

Warning: Never turn on your computer unless all of its internal and external parts are in place and it is closed. Operating the computer when it is open or missing parts can damage your computer or cause injury.

Figure 1 Removing battery

Published Date: Feb 20, 2012

Mac OS 9: About PPP Over Ethernet

This document discusses what is necessary to use PPP over Ethernet (PPPoE) with Mac OS 9.

This article has been archived and is no longer updated by Apple.

Mac OS X has PPP over Ethernet (PPPoE) capabilities built-in. If you startup the computer using Mac OS 9 and want to connect to the Internet and your ISP requires PPPoE, then you will need to obtain PPPoE software from your ISP. One example of PPPoE software is discussed in technical document 60645 "**Mac OS 9: Is Compatible With MacPoET 1.1**."

If you are unable to acquire the PPPoE software and have an AirPort Base Station, then you may still be able to connect under Mac OS 9. AirPort 1.3 and later does support PPPoE. However, if you do not have the Mac OS 9 PPPoE software then the AirPort Base Station must be configured under Mac OS X first.

Published Date: Feb 20, 2012

How to connect to MSN

This article has been archived and is no longer updated by Apple.

See MSN for Mac OS X on the Microsoft website.

Third-party URLs are subject to change. If the article named above has been relocated, go to the Microsoft Knowledge Base and perform a new search.

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Published Date: Oct 11, 2016

SuperDrive: About rewriteable DVD discs

This article has been archived and is no longer updated by Apple.

There are three formats for rewritable DVD discs: DVD-R/DVD-RW, DVD+RW, and DVD-RAM.

DVD-R and DVD-RW

DVD-R is a single-writeable format (similar in nature to CD-R). DVD-RW is a rewriteable format (similar in nature to CD-RW). DVD-RW has a read-write capacity of 4.7 gigabytes per side. It can be rewritten up to about 1000 times. Both DVD-R and DVD-RW were developed and approved by the DVD Forum (http://www.dvdforum.org), of which Apple is a member.

The SuperDrive can use both DVD-R and DVD-RW discs. Mac OS X can write to DVD-R General Media discs, which are not rewriteable. Roxio's Toast 5 Titanium and Charismac's Discribe 5 can write to DVD-RW discs. Contact Roxio and Charismac for additional information.

Once written, DVD-R and DVD-RW discs can be used in many different drives and players. DVD-R media burned with Apple SuperDrives are compatible with a wide variety of DVD players. Check with the manufacturer of, or consult the documentation which came with, your player to find out if it is compatible with DVD-R media.

DVD+RW

DVD+RW is a rewriteable format of similar capacity to DVD-RW, but was developed separately by the DVD+RW Alliance (http://www.dvdrw.com/).

Note: Some earlier Apple SuperDrives cannot write to DVD+RW discs. To find out what kinds of discs your drive can burn to, use System Profiler--for Mac OS X 10.3.x steps click here, for Mac OS X 10.4.x steps, click here.

System Profiler in Mac OS X 10.4 displays an Apple SuperDrive capable of burning to DVD+RW

DVD-RAM

DVD-RAM can be thought of as a large capacity floppy or Zip disk as it is has random read-write access. The disc is part of a cartridge and is available in 2.6 GB and 4.7 GB single-sided and 5.2 GB and 9.4 GB double-sided capacities. It can be rewritten more than one hundred thousand times. DVD-RAM was developed by the DVD Forum separately from the release of DVD-R and DVD-RW. Prior to the release of the SuperDrive, some Power Mac G4 computers shipped with a DVD-RAM drive.

While some DVD-RAM discs can be removed from the cartridge, those discs cannot be read by or written to using the SuperDrive.

Related documents

58770 "**CD-RW and SuperDrive: Specifications and Usage Information**"
24451 "**DVD Technology: Overview**"
60796 "**Power Mac G4: SuperDrive Ejects DVD-RAM Discs**"
60793 "**DVD-R for Authoring Versus DVD-R for General Media**"

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Published Date: Oct 11, 2016

Mac OS X Server: Share Points in the Administrator‘s Desktop Folder are Not Accessible by FTP or SMB Clients

Share points created in the administrator's Desktop Folder are not accessible by FTP or SMB clients.
This article has been archived and is no longer updated by Apple.

Symptom

When an administrator creates a share point in the Desktop Folder, an FTP or SMB client cannot access it. FTP clients will see a "Permission denied" alert message when trying to access it. Microsoft Windows users will see a message indicating that the network name cannot be found.

Note: Users accessing the same share point over AFP are not affected.

Solution

Move the share point into the Shared Items folder located at the top (root) level of the startup disk.

To move the share point, follow these steps:

1. Deselect the "Share this item and its contents" option in the Sharing pane in the Mac OS X Server Admin application and save your settings.
2. Drag the share point to the Shared Items folder
3. In the Sharing pane, select the "Share this item and its contents" option and save your settings.

For more information on creating a share point, see page 36 of the Mac OS X Server Admin Guide.
Published Date: Feb 20, 2012

Mac OS 9: Network Services Location Manager Admin Guide

This document describes the Network Services Location Manager and tells you how to set up your network to take advantage of it.
This article has been archived and is no longer updated by Apple.
Network Services Location Manager Network administrator's guide

This document describes the Network Services Location Manager and tells you how to set up your network to take advantage of it. You should read this document if you are a network administrator or are responsible for setting up or managing network services.

What Is the NSL Manager?
The Network Services Location (NSL) Manager is software that allows applications to advertise and search for network services. In the past, there was no easy way to □nd services on a TCP/IP network unless the network administrator identi□ed or listed those services in some way. For example, an administrator might put links to public Web sites on a home page, or let users know about private servers by word of mouth.

The NSL Manager now provides both a way for network services to advertise themselves and a way for applications that require network services to find them automatically. When asked to locate network services by an application, the NSL Manager can use several different protocols to quickly search for and provide a list of available services. The search takes place with a minimum of network traffic. Located services are grouped into network "neighborhoods" based on the network segment in which the services are found and the service location protocols operating in that segment, as represented by NSL plug-ins.

What Computers Have the NSL Manager?
The NSL Manager is available on all computers with a PowerPCTM microprocessor and Mac OS 8.5 (or later) installed. To make sure all the computers on your network can take advantage of the NSL Manager's service advertising and search capabilities, see the section "Setting Up Your Network to Work With the NSL Manager," later in this document.

About NSL Plug-Ins
When the NSL Manager receives a request to advertise or locate a network service, it passes it on to an NSL plug-in that performs the actual registration or search. An NSL plug-in is an extension that makes itself available to the NSL Manager when the NSL Manager is initialized, but resides in memory only when it is responding to a request. You can use the Extensions Manager to enable and disable individual NSL plug-ins.

When the NSL Manager is initialized, each NSL plug-in provides it with the following information: the types of services the plug-in can search for, such as HTTP and FTP; and the protocol the plug-in uses to conduct searches, such as DNS or LDAP.

With Mac OS 9, NSL Manager version 1.1 is accompanied by four plug-ins: Domain Name Service (DNS), Service Location Protocol (SLP), Lightweight Directory Access Protocol (LDAP), and Name Binding Protocol (NBP). Additional NSL plug-ins may become available from Apple Computer, Inc. or third-party developers.

Setting Up Your Network to Work With the NSL Manager
The way you set up your network can affect which services the NSL plug-ins can locate, so you may need to make adjustments to allow hosts to find specific network services. Read the following sections for more information.

Setting Up for DNS Searches
In order for the DNS plug-in to access information about network services, your DNS server must be configured to allow anyone to request and receive zone transfers.

To make network services available to the NSL Manager through the DNS plug-in, you need to manually add text records for network services to the DNS server. The format of the records is as follows:

```
<hostname> <TTL> TXT <URL>
```

The following table explains each element of the record.

Field	Contents
<hostname>	The name of the host being referenced
<TTL>	The time-to-live for this information
<URL>	The complete URL for this host (for example, http://www.apple.com/)

If you use more than one DNS server, make sure you add records for a particular host name to the server responsible for that host and add the names of these servers to the search domain lists in clients' TCP/IP configurations.

Setting Up for SLP Searches and Registrations
The NSL Manager uses the SLP plug-in to find and advertise network services using the Service Location Protocol.

Network services running on the Mac OS can use the NSL SLP plug-in to advertise their availability. (File sharing and Personal Web Sharing, for

example, use SLP registration.) SLP service agents are created on the host computer by the SLP plug-in, then these service agents listen for NSL search requests and respond appropriately. On networks that include an SLP Directory Agent (DA) server, the SLP service agents register their services with the DA. NSL search requests are then made directly to the DA, thereby reducing network traffic. (Most of this traffic is on the local subnet.)

For SLP registration and discovery to take place, the advertising and searching hosts must be running the same version of the SLP plug-in. Services advertised by version 1.0 of the plug-in cannot be found by hosts running version 1.1. Similarly, services advertised by version 1.1 of the plug-in cannot be found by hosts running version 1.0.

To register or discover services outside the local subnet, IP Multicast Router capability must be enabled. Note that MacIP does not support multicasting. When advertising a service, the SLP plug-in follows these steps to decide which network neighborhood (SLP scope) to register the service in:

- If the registering application or service specifies a network neighborhood, the SLP plug-in registers the service in that neighborhood.
- If no neighborhood is provided by the registering application or service, the SLP plug-in registers the service in the first domain listed in the Search Domains list of the host's TCP/ IP settings.
- If no search domain is specified in the host's TCP/IP settings, the plug-in tries to derive a neighborhood from the domain of the service's URL. For example, a service with the URL http://me.mydomain.com would be registered in the neighborhood mydomain.com and http://me.sub.mydomain.com would be registered under sub.mydomain.com.
- If none of these steps yields a neighborhood, the plug-in registers the service in the "default" SLP scope, which is listed as the "Local Services" neighborhood (or the localized equivalent).

Setting Up for LDAP Searches
The LDAP plug-in always searches the LDAP server and associated searchbase specified in the LDAP Services fields in the Hosts settings on the Advanced tab of the Internet control panel. Services discovered in this default directory are listed in a neighborhood that has the same name as the LDAP server.

Applications and users can request the plug-in to search additional LDAP directories. Using the Network Browser, for example, a user can browse an LDAP directory by adding a neighborhood that has the same name as the server, in this form:
`<servername>%2f<searchbase> (ldap.domain.com%2fc=us, for example)`

Note: Choosing an item from the Favorites list in the Network Browser causes all active NSL plug-ins to perform a search. So, when a user chooses an LDAP server from the Favorites list, the DNS plug-in might also respond, generating a "nameserver not responding" message. If DNS browsing is not needed, the user can disable the DNS plug-in using the Extensions Manager control panel.

If a user adds an LDAP neighborhood without including a searchbase in the name, the LDAP plug-in makes two attempts to get data from the server. First, it tries to access the directory without specifying a searchbase. (Version 3 LDAP servers can return data when no searchbase is provided.) If that fails, the plug-in tries again using a searchbase of c=us. For example, if a user adds a neighborhood named ldap.mydomain.com, the plug-in tries these searches:

- ldap://ldap.mydomain.com
- ldap://ldap.mydomain.com/c=us

When you set up an LDAP directory to advertise services to NSL, keep these points in mind:

- The plug-in looks for service URLs (afp://asip.mydomain.com, or http://www.mydomain.com, for example) in both `labeleduri` and `url` attributes. For best results, use the `labeleduri` attribute. See RFC 2079 for more information.
- The directory tree is displayed using distinguished names. When possible, use attributes and names that are easy for a user to interpret, like `cn=Joe Smith`, rather than less revealing names like `userID=123456789`.
- If practical, you can improve performance and readability by organizing the directory tree so that service lists contain fewer than 200 entries. The searchbase
  ```
  ou=printers, o=school
  ```
  can, for example, be restructured as
  ```
  service=printers, ou=HumanitiesBldg, o=school
  service=printers, ou=ScienceBldg, o=school
  service=printers, ou=AdminBldg, o=school
  ```
- You can create a separate branch in the directory specifically for NSL browsing (for example, `ldap.mydomain.com/ou=nsl,c=us`).

Setting Up for NBP Searches
If AppleTalk is active on a host, AppleTalk zones and AppleShare servers on the network are listed in the neighborhood named "AppleTalk." Security Issues The NSL Manager makes network services that were once difficult to find more readily available to network users. It does not, however, make sites less secure; it just makes it easier for clients to find services that were already available.

If you use DNS to list your intranet's services, you control which services clients can discover through NSL searches. However, any network services that utilize SLP registration are discoverable by the NSL Manager.

For More Information
For more information, see the following sources:
Request for Comments (RFC) Documents Service Location Protocol, RFC #2165
Service Location Protocol, Version 2, RFC #2608
Lightweight Directory Access Protocol, RFC #1777

You can find RFC documents at the following Web address:

- http://www.rfc-editor.org

Books and Articles
DNS and Bind by Paul Albitz and Cricket Liu, O'Reilly & Associates, Inc. 1994
Inside Macintosh: Networking, Chapter 3, "Name Binding Protocol," viewable at
http://developer.apple.com/techpubs/mac/Networking/Networking-61.html
SLP White Paper, at http://playground.sun.com/srvloc/slp_white_paper.html

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Published Date: Feb 20, 2012

Apple DVD Player requires an internal DVD drive

Apple DVD Player works with the internal factory-installed DVD drive but will not work with external DVD drives.

This article has been archived and is no longer updated by Apple.

To view movies on a DVD-Video using Apple DVD Player (Mac OS 9) or DVD Player 3.x (Mac OS X) you must have an internal DVD drive. Licensing restrictions of the DVD decoding technology prevent its use with computers that do not come with an internal DVD drive.

Computers that come with an internal CD-ROM or CD-RW drive and are not able to read DVD discs are restricted from viewing movies on DVD-Video discs using Apple DVD player. A "-70012" alert may appear if you try to play a DVD movie disc with an external player.

Adding an external DVD drive allows a computer to use DVD-ROM discs, but the Apple DVD Player application is still restricted from playing DVD-Video discs.

See "DVD Player 3.0.1: Compatible Computers" for information on the computers compatible with DVD Player 3 for Mac OS X.

Published Date: Feb 20, 2012

Mac OS X Server 10.0 and Later: How to Change New User‘s Home Folder Contents

This document describes how to change the template that is used when creating a user's home folder and its contents in Mac OS X Server 10.0 and later.
This article has been archived and is no longer updated by Apple.
In Mac OS X Server, a user's home folder is created with the following default folders:

- Desktop
- Documents
- Library
- Movies
- Music
- Pictures
- Public
- Sites

Not all users require these folders. You may want to change the template to reduce the amount of unnecessary folders and files, or to add custom applications and files.

The following steps explain how to edit the UserTemplate folder for each new home folder created. Please note that this procedure affects Mac OS X users only. Computers that use Mac OS 9 or Macintosh Manager will not behave the same as computers with Mac OS X.

1. Log in as the root user.
At the login screen, log in as the user 'root' with your Admin user password.

2. Go to /System/Library/UserTemplate.
Choose Go to folder from the Go menu then type "/System/Library/UserTemplate/" and click Go.

3. Open the localized folder for your location.
For English, double-click the file name "English.lproj" to open up the user's Home folder template for English home folders.

4. Edit the template folder to meet your needs.

- If you want to streamline the user's Home folders, you can delete folders that you don't need. Deleting certain folders may reduce Mac OS X's features. For example, deleting the Sites folder means users will not have a Web site in their home folder unless they create one.
- If you want to add folders, files or applications, you can create the files and folders appropriately. Note that items you add here will be duplicated in every new user's home folder, so if you add many files or applications or even a few large files or applications, you may need to expand the server's storage capacity.
- If you want to edit the default Web site for new users, create your default Web site and place it in the Sites folder. Make sure the index file is named 'index.html' so Apache will find it.

5. Create a new user and test.
Create a new user then look in their home folder. The contents should be an exact copy of the template. If it is not, make sure you edited the correct localized version of your UserTemplates folder.

Related documents

106290: "**Mac OS X: About the root user and How to Enable It**"
Published Date: Feb 20, 2012

Mac OS X: When Services Are Available

This document discusses when items in the Services submenu under the Application menu may be available.
This article has been archived and is no longer updated by Apple.
In Mac OS X, some applications provide "services" that let you quickly use content from one application with another application. The content may include text, graphics, pictures, or movies.

The services appear under the Application menu in the Services submenu. (See Figure 1.) The Application menu assumes the name of the current application.

Figure 1 Application and Services menus for Stickies

In some cases, the active application may not work with all or some services.

For example: The services for Grab are available in Stickies and TextEdit but are dimmed for Terminal because Terminal is not able to accept the graphic data from Grab.

In other cases, specific services may appear dimmed or not available. For example, TextEdit will be dimmed when in Stickies if there is no text selected. A particular service may also be dimmed if you have selected content that doesn't work with the service.
Published Date: Feb 20, 2012

iBook: DVD Player Shows No Video if VGA Display Adapter Is Plugged in and No External Display Is Connected

DVD Player may have no video if the VGA Display Adapter is plugged into the RGB video port and there is no external display connected.
This article has been archived and is no longer updated by Apple.

Symptom

DVD Player plays audio, but does not display any video.

Solution

- Connect a monitor to the VGA port on the adapter.

or

- Disconnect the adapter from the computer.

Published Date: Oct 11, 2016

Mac OS X Server 10.1: How to Enable CGI Scripts for Individual User Sites

This document discusses how to enable Common Gateway Interface (CGI) scripts for individual user Web sites located in the user's Home directory using Mac OS X Server 10.1 or later.
This article has been archived and is no longer updated by Apple.
1. Log in to the server as root or sudo to root in the terminal if you prefer to use a command line editor.

2. Using TextEdit (or terminal based text editor such as vi) open /etc/httpd/httpd.conf

Note: You can return to the original httpd.conf file if necessary by duplicating and renaming either the httpd.default or httpd.bak file located in the same directory.

3. Edit the line that reads
"AllowOverride None"
to read
"AllowOverride Options"
This line is about 1/4 of the way through the document. See Figure 1 below for a sample. Save the changes.

Figure 1 Editing httpd.conf file

4. Create a new file in the text editor.
Type: Options +ExecCGI
Save the file in the top level of the user's Sites folder.
Name the file:
.htaccess
(You must include the period as the first part of the file name.) The relative pathname should be: user/Sites/.htaccess

5. Copy and rename the test-cgi file from
/Library/WebServer/CGI-Executables/
to
/Users/user/Sites/test-cgi.cgi

Note: In order for CGI scripts outside of the CGI-Executables directory to run, they need to have the .cgi filename extension. The test-cgi provided does not have the execute bit set. You will also need to set the execute bit for the script to actually run. See technical document 106519 "**Mac OS X: How to Troubleshoot Errors When Running CGIs**" for additional information.

6. Test the script by pointing a browser to http://server.name.com/~user/test-cgi.cgi

This document is intended to supplement the Server Admin Guide. Please direct all questions regarding this article to the developer site at http://developer.apple.com or the discussion boards.

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Published Date: Oct 11, 2016

FireWire Target Disk Mode: Target Computer Shuts Down at Startup

FireWire target disk mode requires the target computer to have an ATA hard drive at ATA bus 0.

This article has been archived and is no longer updated by Apple.

Symptom

When you try to start up the target computer, it makes its startup sound, but then shuts down. No video appears on the screen, nor does the FireWire icon. The computer starts up normally without the T key held down.

Solution

Make sure the target computer has an ATA hard drive on ATA bus 0. It is normal for a target computer to shut down if it does not detect an ATA hard drive on ATA bus 0.

All later Macintosh computers come with an ATA hard drive at ATA Bus 0 in their default configurations. However, it is possible to custom order (CTO) a Macintosh that does not.

Related documents

58583: "**Macintosh: How to Use FireWire Target Disk Mode**"

Published Date: Feb 20, 2012

Power Mac G4: How to Differentiate Between Models, Part 2

This document compares features of and helps identify the Power Mac G4 computers introduced after July 2001 including the Power Mac G4 (QuickSilver, QuickSilver 2002, Mirrored Drive Doors, and FW 800).
This article has been archived and is no longer updated by Apple.
This document compares features of the Power Mac G4 computers introduced after July 2001. For earlier Power Mac G4 computers see technical document 58418 "**Power Mac G4: How to Differentiate Between Models**"

Feature	Power Mac G4 (QuickSilver)	Power Mac G4 (QuickSilver 2002)	Power Mac G4 (Mirrored Drive Doors)	Power Mac G4 (FW 800)	Power Mac G4 (Mirrored Drive Doors 2003)
Graphics Card	NVIDIA GeForce2 MX NVIDIA GeForce3	RADEON 7500 NVIDIA GeForce4 MX NVIDIA GeForce4 Titanium	NVIDIA GeForce4 MX RADEON 9000 Pro NVIDIA GeForce4 Titanium	NVIDIA GeForce4 MX RADEON 9000 Pro NVIDIA GeForce4 Titanium ATI Radeon 9700 Pro	RADEON 9000 Pro NVIDIA GeForce4 Titanium
Wireless Networking	Yes (note 3)	Yes (note 3)	Yes (note 3)	Yes (note 3, 4)	Yes (note 3)
Video Connector	ADC and VGA	ADC and VGA (dual display capable)	ADC and DVI (dual display capable) DVI to VGA adapter included (See Note 5)	ADC and DVI (dual display capable) DVI to VGA adapter included (see Note 5)	ADC and DVI (dual display capable) DVI to VGA adapter included (see Note 5)
Optical Drive Type	Tray Loading	Tray Loading	Tray Loading	Tray Loading	Tray Loading
DVD Decoding	Software	Software	Software	Software	Software
Bluetooth ready	With optional USB adapter	With optional USB adapter	With optional USB adapter	With Optional Internal card	With optional USB adapter
FireWire ports	Two FireWire 400	Two FireWire 400	Two FireWire 400	One FireWire 800 Two FireWire 400	Two FireWire 400
Modem	v.90 Unique to Power Mac G4 (QuickSilver) - (see Note 6)	v.90 Unique to Power Mac G4 (QuickSilver 2002) - (see Note 6)	v.92 Unique to Power Mac G4 (Mirrored Drive Door) - (see Note 6)	v.92 (see Note 6)	v.92 (see Note 6)
Model Numbers	M8493	M8493	M8570	M8570	M9145, M9309

The simplest way to differentiate the Power Mac G4 (Mirrored Drive Doors) and the Power Mac G4 (FW 800) is by looking at the FireWire ports. The FW 800 will have three FireWire ports while the Mirrored Drive Doors model will have two (see Figure 1).

Figure 1 Rear ports of Power Mac G4 (FW 800)

Technical Features Differences

The following table compares the Power Mac G4 models.

Feature	Power Mac G4 (QuickSilver)	Power Mac G4 (QuickSilver 2002)	Power Mac G4 (Mirrored Drive Doors)	Power Mac G4 (FW 800)	Power Mac G4 (Mirrored Drive Doors 2003)
Microprocessor(s)	PowerPC G4	PowerPC G4	Dual PowerPC G4	PowerPC G4	PowerPC G4
Microprocessor Speed (MHz)	733, 867, Dual 800MHz	800, 933 MHz, Dual 1 GHz	867 MHz, 1 GHz, 1.25 GHz	1 GHz, Dual 1.25 GHz, Dual 1.42 GHz	1.25 GHz, Dual 1.25 GHz
L2 Cache	256K (See Note 1)	256K (See Note 1)	256K (See Note 1)	256K (See Note 1)	256K (See Note 1)

L3 Cache	2 MB (867, 800) (See Note 1)	2 MB DDR RAM (933, 1 GHz) (See Note 1)	1 MB DDR SRAM (867 & 1 GHz), 2 MB DDR SRAM (1.25 GHz) (See Note 1)	1 MB DDR SRAM (1 GHz and Dual 1.25 GHz), 2 MB DDR SRAM (1.42 GHz) (See Note 1)	1 MB DDR SRAM (See Note 1)
Bus speed (MHz)	133	133	133 (867 MHz), 167 (1 GHz and 1.25 GHz)	133 (1 GHz), 167 (Dual 1.25 GHz and Dual 1.42 GHz)	167
Memory	PC 133 SDRAM up to 1.5 GB	PC 133 SDRAM up to 1.5GB	PC2100 (867 MHz), PC2700 (1 GHz and 1.25 GHz)	PC2100 (1 GHz), PC2700 (Dual 1.25 GHz and Dual 1.42 GHz)	PC2700
Video	NVIDIA GeForce2 MX NVIDIA GeForce3	RADEON 7500 NVIDIA GeForce4 MX NVIDIA GeForce4 Ti	NVIDIA GeForce4 MX RADEON 9000 Pro NVIDIA GeForce4 Titanium	NVIDIA GeForce4 MX RADEON 9000 Pro NVIDIA GeForce4 Titanium ATI Radeon 9700 Pro	RADEON 9000 Pro NVIDIA GeForce4 Titanium
AirPort	Optional (see Note 3)	Optional (see Note 3)	Optional (see Note 3)	Optional (see Notes 3, 4)	Optional (see Note 3)
USB Controller	Dual Independent (two controllers)	Dual Independent (two controllers)	Dual Independent (two controllers)	Dual Independent (two controllers)	Dual Independent (two controllers)
FireWire Controller	Built into logic board	Built into logic board	Built into logic board	Built into logic board	Built into logic board
PCI Slots	One AGP and four PCI slots	One AGP and four PCI slots	One AGP and four PCI slots	One AGP and four PCI slots	One AGP and four PCI slots
Hard Drive bus	Ultra ATA/66	Ultra ATA/66	1 Ultra ATA/100, 1 Ultra ATA/66 (with 4 drive bays)	1 Ultra ATA/100, 1 Ultra ATA/66 (with 4 drive bays)	1 Ultra ATA/100, 1 Ultra ATA/66 (with 4 drive bays)
CD/DVD Drive	CD-RW, DVD-R (2x DVD-R write)	CD-RW, DVD-R (2x DVD-R write)	DVD-ROM/CD-RW, DVD-R (2x DVD-R write), bay for second CD/DVD drive	DVD-ROM/CD-RW, DVD-R (4x DVD-R write), bay for second CD/DVD drive	DVD-ROM/CD-RW, DVD-R (2x DVD-R write), bay for second CD/DVD drive
DVD-Video	Software decoder	Software decoder	Software decoder	Software decoder	Software decoder
Power Management	Low-power sleep	Low-power sleep	Low-power sleep	Low-power sleep	Low-power sleep
Sound Input Ports	USB (with 3rd party adapter)	USB (with 3rd party adapter)	line-in, USB (with 3rd party adapter)	line-in, USB (with 3rd party adapter)	line-in, USB (with 3rd party adapter)
Sound Output Ports	2.5 mm Apple Speaker port, 3.5 mm stereo	2.5 mm Apple Speaker port, 3.5 mm stereo	2.5 mm Apple Speaker port, 3.5 mm stereo, front headphone minijack	2.5 mm Apple Speaker port, 3.5 mm stereo, front headphone minijack	2.5 mm Apple Speaker port, 3.5 mm stereo, front headphone minijack

Notes

1. L2 or L3 cache levels stated are per processor on dual processor configurations.

2. The system software CDs are specific to each model computer. You should use the system software CD that came with your computer to make sure the appropriate software is installed.

3. Wireless Internet access requires an AirPort Card, AirPort Base Station, and an Internet service provider, for which fees may apply. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**."

4. Power Mac G4 (FW 800) computers require the AirPort Extreme card, but can connect to a standard AirPort or AirPort Extreme Base Station (see technical document 107372 "**AirPort Extreme: Compatibility With Earlier AirPort and Third-Party 802.11b Wireless Products**"

5. Second Apple flat-panel display requires Apple DVI to ADC Adapter, sold separately.

6. Appropriate ISP and telephone services required. Your ISP may not support all V.92 features. Modem will function according to V.90 standards if V.92 services are not available. Actual modem speeds lower.

Related documents

25517: "**Mac OS: Versions, Builds Included With Computers Since 1998**"

Published Date: Oct 11, 2016

Mac OS X Mail: About Secure Email Communications (SSL)

Security of the Mail application in Mac OS X may be enhanced by enabling Secure Socket Layer (SSL) mail, which gives additional security to email communications.
This article has been archived and is no longer updated by Apple.
Securing Email Communications with Mac OS X Mail

This document explains how you can better secure your email communications between the mail server and your computer.

Why Should I Use SSL with Mail?

With enough time and effort, any person monitoring your network could capture "cleartext" (unencrypted data) traveling out of it. While there are programs like PGP that encrypt the body of an email message, your email server authentication data (including the login and password) are not encrypted by these tools. Given the amount of authentication-related information likely to be traveling over your network in cleartext at any one time, turning as much information from cleartext into "ciphertext" (encrypted data) is often preferred.

There are many ways to prevent cleartext throughout your network, and with the expanded capabilities of Mac OS X Mail application (Mac OS 10.1.3 and later)- you have an additional option. If your mail server or Internet service provider (ISP) is compatible with it, the option exists to encrypt the email traffic (including authentication data) between your computer and the mail server using SSL.

SSL has components to it called POPS and IMAPS, which correspond to the POP and IMAP protocols for receiving mail. POPS and IMAPS are similar in their nature to HTTPS, commonly seen in securing Web pages. The additional "S" at the end corresponds to "secure." Using SSL helps prevent unauthorized access to your administrative and user data.

Who Uses It?

- Organizations who have networks that are fairly open, due to the nature of the organization- like college campuses, for example, often use Mail with SSL.
- Any users who have sensitive data or are concerned about unauthorized access to their mail or other accounts are also likely to use SSL in the Mail application.

ISP Mail Server Setup
Before setting up Mail to work with SSL, make sure your mail server has the ability to do this. Many ISPs will often have this option available to you. You should contact your ISP to find out if SSL mail (POPS/IMAPS) is an option, and if so, which port should be used.

The default SSL ports for POPS and IMAPS are:
POP: 995
IMAP: 993

The default non- SSL ports for POP and IMAP are:
POP: 110
IMAP: 143

Setting up Mail for SSL

Important: These steps require Mac OS X 10.1.3 or later.

1. Open the Mail application.
2. Choose Preferences from the Mail application menu.
3. Click Accounts.
4. Select an account name, and click Edit.
5. Click the Account Options tab.
6. Click the Use SSL checkbox to enable this option.

Selecting the checkbox will auto-populate the default port numbers. If there is a non-default port number already present, it will not change. You can manually enter a number if your ISP gave you a different port number. Be sure you enter the correct port for your mail server here when selecting SSL, even if it auto-populates a default number.

Note: If SSL is accidentally set up when it should not be, or is configured using the incorrect port for your mail server, an alert box with a message similar to this may appear:

> "Fetch Error: Couldn't connect to a POP host name mail.apple.com."

Security Enhancements with Mac OS X 10.1.5

Mac OS X Update 10.1.5 adds extra security when using SSL with Mail. If Mail is configured to attempt to use SSL with a mail server that does not offer a secure connection, the account will go offline after attempting to connect. Uncheck the SSL option to use the account.

If you are not using Mac OS X 10.1.5, please see technical document 106704, "**Mac OS X: How to Update Your Software**".
Published Date: Oct 11, 2016

Power Mac G4 (Mirrored Drive Doors): Must Use Line-Level Audio Input

You can input sound into your computer from audio equipment, including line-level devices such as an amplified or self-powered microphone.
This article has been archived and is no longer updated by Apple.
The Power Mac G4 (Mirrored Drive Doors) computer has a line-in stereo sound input port on the back panel. The audio inputs are designed to accept high-level audio signals: 2 Vrms or +8 dbu, which is the standard output level from CD and DVD players. Low level consumer products operating below -10 dbu require a pre-amplifier. The output level of some consumer audio devices is lower, often 0.1 Vrms or -10 dbu. Sound recordings made on the Power Mac G4 with such low-level devices have more noise than those made with high-level devices.

Examples of devices that provide line-level input include:

- CD players
- tape decks
- self-powered microphones
- DVD players

Note: While the Apple PlainTalk mic included with earlier Power Macintosh computers does provide line-level input, it does not use a standard 3.5 mm stereo miniplug, and cannot be used with the Power Mac G4 (Mirrored Drive Doors) audio line-in port.

The earlier Apple Omnidirectional microphone will also not work, because it provides mic-level input instead of the required line-level input.

Check the specifications of the sound input device you are connecting to determine if it provides the proper line-level input.

Griffin Technology's iMic adapter allows the use of most mic-level sound input devices. Contact Griffin for additional compatibility information.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.

Related documents

75218 "**Macintosh: How to Connect Audio Devices to Your Computer**"

Published Date: Feb 20, 2012

Power Macintosh G3: Finder Does Not Open After Starting up in Verbose Mode

The Finder will not open ("load") if you start up the computer in verbose or single-user mode with Mac OS X 10.2.2.

This article has been archived and is no longer updated by Apple.

Symptom

If you start up the computer in verbose mode, or if you start up the computer in single-user mode and type "exit" at the command line, the Finder will not open. Instead, a gray screen appears after all of the "verbose" startup messages have finished scrolling.

Solution

Update the computer to Mac OS X 10.2.3.

Published Date: Feb 20, 2012

Mac OS X: Numeric Keypad Does Not Respond

This document describes a situation where the numeric keypad does not respond in Mac OS X applications.
This article has been archived and is no longer updated by Apple.

Symptom

Typing numbers using the numeric keypad does not work, but the Key Caps utility indicates that the keys are being pressed. Holding down the Shift key allows the numeric keypad to work correctly.

Solution

1. Choose System Preferences from the Apple menu.
2. Choose Universal Access from the View menu.
3. Click the Mouse tab.
4. Turn off "Mouse Keys". If Mouse Keys is already off, turn it on and off again.

Note: Mouse Keys could be turned on inadvertently if certain programs (most notably games) make use of the Option key. Pressing Option five times in a row is the keyboard shortcut for turning on Mouse Keys. You can avoid this by deselecting the "Allow Universal Access Shortcuts" checkbox at the bottom of the Universal Access pane.
Published Date: Feb 20, 2012

Power Mac G4: Some Programs May Need to Be Updated to Work With More Than 1.5 GB of RAM

Unexpected results may occur with some applications on a Power Mac G4 computer that has more than 1.5 GB of installed random-access memory (RAM). Updating the software or reducing the amount of RAM to 1.5 GB or less should resolve the symptoms.
This article has been archived and is no longer updated by Apple.

Symptom

Application programs may not recognize the installed memory correctly and may report that more memory is required. One example alert is "This system does not have enough memory." Applications may quit unexpectedly or produce other errors that are resolved if you reduce the amount of installed memory to 1.5 GB or less.

Solution

Mac OS X allows Macintosh computers with four memory card (DIMM) slots that can accommodate 512 MB DIMMs to utilize more than 1.5 GB of memory. Some software, including both applications and installers, may not be able to recognize the additional memory, or incorrectly report that only a minimal amount of memory is installed.

The computer and Mac OS X are operating correctly. A change in Mac OS X to attempt to correct this would likely cause applications that are working correctly to behave in unexpected ways.

Possible steps to resolve the issue:

- Contact the software developer to see if there is an updated version of the software available or get other recommendations.
- For installers, some may have only a Quit option while others may also include an option to "Install anyway." Try choosing "Install anyway" if it is an available option.
- Some software may come with an installer that works in Mac OS 9 and Mac OS X. If this is the case, and it's the installer that is producing the alert, try installing while the computer is started up with Mac OS 9. Depending on the software, you may be able to use the software in Mac OS 9 and Mac OS X.
- While waiting for a software update to be available, temporarily removing a DIMM may be necessary to use or install the software.
- If the software can also work in Mac OS 9, then it may work when started in Mac OS 9 or possibly as a Classic application (if the Get Info window has a checkbox to "Open in the Classic environment").

Published Date: Feb 20, 2012

Mac OS X 10.2: Mail - How to Import Mail From a Backup

This document explains how to import mail that has been backed up using Mac OS X 10.2 or later.
This article has been archived and is no longer updated by Apple.
If you backed up your mailboxes using Mac OS X 10.2 or later, you can import your mailboxes into Mail via one of two methods:

Method 1

1. Open the Mail application.
2. Choose Import Mailboxes from the File menu.
3. Choose either Mail for Mac OS X or Standard mbox files depending on the method you used to back up (Figure 1)
4. Navigate to the location of your backed up mailboxes and select the folder where the backup of your mailbox is located.
5. Mail will list all of the available mailboxes that can be imported from the selected directory. Check the mailboxes to import, and click the forward button to import the mailboxes.

Figure 1 Choose Mail for Mac OS X or Standard mbox files

Method 2

Note: This method can only be done if you have reinstalled Mac OS X 10.2 and have not configured Mail.

1. Drag the backup mailboxes to the Users home mail folder (~/Library/Mail).
2. Drag your old Mail preferences file "com.apple.mail.plist" that was part of your backup, into the Users preferences folder (~/Library/Preferences).

Published Date: Feb 20, 2012

Power Mac G4 (Mirrored Drive Doors): Increased Noise Levels Expected

Increased noise levels are expected with dual processor computers.
This article has been archived and is no longer updated by Apple.
The sound generated by Power Mac G4 (Mirrored Drive Doors) computers is approximately equivalent to previous dual processor computers. Users who upgrade from earlier, single processor computers might notice that the computer is louder. This is because there are more parts to cool--multiple processors and additional expansion capabilities--within the same form factor.

However, Apple has found that there are some situations that may lead to increased sound levels beyond what is expected.

One is addressed with the 4.4.8 version of the firmware (BootROM) for your computer. See software download document 120171 "**Power Mac G4 Firmware Update: Information and Download**" if you have an earlier version. You can tell which version of firmware your computer has by using Apple System Profiler.

Other situations include the processor fan constantly spinning at high speed, and a clicking sound that comes from the computer's power supply. In both of these cases, contact an Apple Authorized Service Provider (AASP) to determine if your computer is affected by either of these symptoms. Apple has directed AASPs on how to address affected computers.
Published Date: Oct 11, 2016

Final Cut Pro 3: About Sync Adjust and Irregular Audio Rates in DV Clips

This document discusses why a DV clip may have an audio sample rate that differs slightly from the rate specified in Capture Settings.

This article has been archived and is no longer updated by Apple.

Many DV camcorders and decks record audio at sample rates other than the true sample rates of 32 kHz or 48 kHz. Variations in equipment from different manufacturers result in slight, but significant variances from these standard sample rates.

QuickTime expects the sample rate of incoming audio to be exactly 32 kHz or 48 kHz. The discrepancy between the sample rate used by your DV video equipment and the expected sample rate in QuickTime may cause a drift in audio and video sync in your captured clips over many minutes of playback. How noticeable this drift is depends on the DV camcorder or deck you're using.

To avoid this issue in Final Cut Pro and to ensure you have accurate sync in all captured DV clips, make sure you turn on the Sync Adjust Movies Over _ Minutes option in Preferences. When turned on, this option forces Final Cut Pro to count the samples of the audio tracks of all DV clips after they've been captured to determine the sample rate at which they were originally recorded. With the original sample rate determined, Final Cut Pro can then ensure accurate sync no matter how long your captured clip.

Since drifts in sync typically occur in clips with a long duration, you can specify the number of minutes in a clip when this feature should be used. The default value of five minutes is adequate in most cases. When this feature is used by Final Cut Pro, the new sample rate information for your clip is stored in your Final Cut Pro project file, not in the source QuickTime file for this clip on disk. It does not alter the source file in any way. When looking at your clips in the Browser, you can tell if this feature has been used if the Aud Rate column displays an uneven value for your clip. For example, instead of displaying a sample rate of 48.0 kHz for your clip, a sample rate of 48.0258 appears.

Note: There are two types of items with which you shouldn't use the Sync Adjust Movies setting: non-DV clips and clips with timecode breaks.

- Non-DV clips: Clips that you capture from non-DV sources, such as analog tape or from digital sources via SDI, don't have varying sample rates. However, because lost A/V sync due to timecode breaks is still a risk, you should disable the Sync Adjust feature if you're not capturing from a DV source.
- Clips with timecode breaks: Any timecode break, or gap, in the signal recorded to tape results in an invalid sample count if the Sync Adjust feature is enabled. As a result, the A/V sync of this type of clip is lost. The only way to restore sync is to record the clips that come before and after a timecode break separately.

Related Documents

58640 Final Cut Pro: Dropped Frames and Loss of Audio Sync

Published Date: Feb 20, 2012

Mac OS X 10.2 - 10.2.8: How to print your addresses from Address Book

This article has been archived and is no longer updated by Apple.

This document describes how to print data contained in the Address Book application that comes with Mac OS X 10.2.x. For Mac OS X 10.3 or later, see the following documents:

- Address Book 3.1.1 Help: Printing address labels and lists
- AddressBook 4.0 Help: Printing lists

The Print dialog for Address Book has two application specific options available for printing: Phone list and Email list.

Phone list will print the names and phone numbers of the selected records. Email list will print the names and email addresses of the selected records.

To access these options follow these steps:

1. Open the Address Book application.
2. Choose **File** > **Print**.
3. Choose **Address Book** from the **option categories** pop-up menu.
4. Choose either **Phone list** or **Email list** from the **Print** pop-up menu.

If you need to print a complete record of the Address Book data, then follow one of these three methods:

Method 1

1. Open Address Book.
2. Choose **View** > **Card and Columns**.
3. Select any name. **Note:** You can narrow the names printed by creating a group first, then selecting the group and then a name in the group.
4. Choose **Edit** > **Select All**.
5. Choose **File** > **Export vCards**.
6. Type a name for the file in the Save field, navigate to the place you want to save the file to and click Save.
7. Open TextEdit and choose **FIle** > **Open**.
8. Locate the file you saved in step 5 and click Open.
9. Choose **File** > **Print**.

Method 2

- If you already have a program that accepts vCard input, do steps 1-5 in Method 1 and then follow the program's instructions on how to import vCard data.

Method 3

- A third-party utility called iDress is available from Incarna **http://www.incarna.com/**. iDress provides a variety of printing templates for Address Book.

Published Date: Feb 20, 2012

Mac OS X: Disk Whose Name Begins With a Period Is Not Available in Finder

A disk or volume whose name begins with a period is not available in the Finder.
This article has been archived and is no longer updated by Apple.

Symptom

A disk or volume whose name begins with a period is not available in the Finder. The computer starts up normally, but the disk (even if it is the startup disk) does not appear in Finder windows or on the desktop.

Solution

Mac OS X reserves names beginning with a period for system software items that are not intended to be visible in the Finder. Normally, an alert box with this message appears when you try to name a folder or file with a period as the first character:

> "You cannot use a name that begins with a dot ".", because these names are reserved for the system. Please choose another name."

If you name a disk with a period as the first character, its contents remain where you saved them, but you will not be able to see the disk in the Finder. You can remedy this by renaming the disk.

Start up in Mac OS 9

If your computer is able to start up with Mac OS 9, then follow these steps to rename the disk.

1. Choose Apple menu > System Preferences.
2. Choose View > Startup Disk.
3. Select a Mac OS 9 startup volume and click Restart. **Note:** If you no longer have Mac OS 9 installed on a hard disk, then use a Mac OS 9 startup CD-ROM disc if one came with the computer.
4. After Mac OS 9 has started, rename the volume so the period is no longer the first character. See technical document 50444 "**Mac OS 9: How to Change the Name of a Disk**" if you are unsure how to rename a disk.
5. Open the Startup Disk control panel.
6. Select the Mac OS X volume and click Restart.

If you are not able to start up in Mac OS 9

If the drive is removable (FireWire or USB or cartridge drive) and you have access to a different computer that uses Mac OS 9, connect the drive to the other computer and rename it. Otherwise, follow these steps:

If only Mac OS X is available, determine if the disk is the startup disk (the one containing the active system software used to start the computer) or another disk.

Disk is startup disk

1. Open /Applications/Utilities/Terminal
2. Type: `disktool -l`
3. Press Return.
4. You will see a list of available disks. You may see a line that looks like this for each volume:
***Disk Appeared ('disk0s10',Mountpoint = '/', fsType = 'hfs', volName= '.Macintosh HD')

5. Type the following: `disktool -n <volume> "<newname>"`
Note: Substitute the logical volume descriptor for <volume> and the name you want to use without a period as the <newname>. For example, to remove the period from the disk in the example above, the command would be: `disktool -n disk0s10 "Macintosh HD"`
6. Press Return
7. Choose Apple menu > Log Out.
8. Log in. The volume should now be visible

For more information about the disktool command, type "disktool" in Terminal and press Return.

Disk is not startup disk

First, you must know the pathname of the disk. You can learn how to read and write a pathname in technical document 106419: "**Mac OS: About Folders, Directories, and Pathnames**".

All disks and volumes other than the startup disk are located inside a directory called volumes at the root level of the hard disk. If the name of the disk were ".Macintosh HD", then the pathname to this disk would be:

/volumes/.Macintosh HD

Revealing the invisible folder in the Finder

You can reveal an invisible disk in the Finder by using the pathname along with the Go to Folder command.

1. Click the Finder icon in the Dock.
2. Choose Go > Go to Folder.
3. Type: `/volumes`
4. Click Go.
5. Choose View > As Columns. You should now see the formerly invisible folder in the Finder window.
6. Select the disk.
7. Choose File > Get Info (or Show Info).
8. Choose Names & Extension from the pop-up menu in the Info window.
9. In the "File system name" field, type a new name that does not begin with a period.
10. Press Return and close the Info window.
11. If the folder does not appear immediately, choose Apple menu > Log Out, and then log back in.

Related Documents

106849 Mac OS: Disk Is Available in Mac OS X But Not in Mac OS 9

106589 Mac OS X: Folders With Names That Begin With a Dot Disappear From Finder

Published Date: Feb 20, 2012

How many iChat buddies can I have on my Buddy List?

Learn the number of buddies allowed in an iChat Buddy List and what can happen if you go over the limit.

This article has been archived and is no longer updated by Apple.

If too many people are in your list and you try to add another, the Buddy's status is incorrect or not listed. If you quit and reopen iChat, the Buddy no longer appears in the Buddy List.

This can happen when you have more Buddies in your list than the AOL Instant Messenger network allows. The current limit for the number of Buddies in a Buddy List is 200. However, you may need over 190 Buddies before this issue occurs.

If you're at or close to the limit, delete people from your list before you add more.

Published Date: Oct 11, 2016

DVD Studio Pro: Select the Recording Device When Doing Build & Format Disc

If you do not specifically select the device in the Format Disc dialog, the build process may continue without actually burning the disc.

This article has been archived and is no longer updated by Apple.

To burn a disc, follow these steps:

1. Choose File > Build & Format Disc.
2. Select a destination for the image (if you decide to Save As Image File)
3. Click the "Record to Device" radio button
4. Select a device in the list to see. You can then set options for simulation mode, and Lossless Linking (buffer underrun protection).
5. Click OK.

Selecting a device makes the simulation mode and Lossless Linking options available

Published Date: Feb 20, 2012

iMovie: "Disk Responded Slowly" Alert

When recording a voiceover using iMovie an alert with the message "disk responded slowly" may appear.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to record a voiceover using the audio recording feature an alert with this message appears:

> "The disk responded slowly. It may have been interrupted by something, or it may not be fast enough for your movie. If you have a lot of audio clips, you might try muting the audio tracks to see if helps playback speed."

Solution

Quit other applications before recording audio in iMovie. Do not try to switch to another application while iMovie is recording audio.

Your computer may also have a fragmented hard disk. Frequent creation and deletion of files can cause disk fragmentation. This means that available disk space is not found in contiguous blocks. Although it's not a serious issue, it causes the disk to respond more slowly while you are importing media.

If you see this alert, copy the project to another disk, or consider using a disk defragmentation utility to defragment the disk where the project is located. See technical document 17933 "**Macintosh: About Defragmenting Your Computer's Hard Disk**" for additional information on disk fragmentation.

Related documents

93460: "iMovie: Using FileVault Can Affect Performance"
Published Date: Oct 11, 2016

Keynote: Changes to Themes Don‘t Appear to Be Saved

Changes to Keynote themes are not saved unless the changes are made to the theme's master slide.
This article has been archived and is no longer updated by Apple.

Symptom

After opening a theme, making changes, and saving as a new theme, the changes do not appear to be saved. The new theme still contains the previous theme's settings.

Solution

Keynote themes are based on master slides, which contain the background and layout elements used in all new slides created with that theme.

If you open a new Keynote document using the gradient background theme, and change only the document's slide backgrounds and don't edit the master slides, the new theme you save will still have the gradient background.

To edit a master slide, you must be in the master slide organizer.

- Choose View > Show Master Slides to open the master slide organizer (or click View in the toolbar and choose Show Master Slides).

Published Date: Feb 20, 2012

AppleWorks 6.2 for Windows: Unable to Select Starting Points Tabs

Installing QuickTime 6 may prevent you from changing tabs in the Starting Points window when using AppleWorks 6.2 for Windows.

This article has been archived and is no longer updated by Apple.

Symptom

Clicking the tabs at the bottom of the Starting Points window does not change tabs as expected.

Solution

This issue occurs after installing QuickTime 6 for Windows. There are three methods to work around this issue:

Method 1
If you are using Windows 98 or later, update to QuickTime 6.4 or later (http://www.apple.com/quicktime/download).

Method 2
If you are using Windows 95, uninstall QuickTime 6 and reinstall QuickTime 5.

Method 3
If you are using Windows 95 and do not want to reinstall QuickTime 5, right-click on the Starting Points window (not the tabs, but the window itself) to be able to select the different starting points panes using the "Switch To" shortcut menu.

Related documents

120133	QuickTime 5 for Windows : Information and Download
60342	QuickTime: How to Uninstall QuickTime on a Windows-Compatible Computer

Published Date: Feb 20, 2012

QuickTime Broadcaster 1.0: Audio Dropouts While Receiving a Live Broadcast

When using QuickTime Broadcaster 1.0 to send a live stream, you may experience audio dropouts while receiving the broadcast with QuickTime Player.
This article has been archived and is no longer updated by Apple.

Symptom

QuickTime Player clients experience audio dropouts or breakups when receiving a live stream that is broadcast with QuickTime Broadcaster 1.0.

Solution

The default audio packet size setting in QuickTime Broadcaster 1.0 works for most networks. However, some networks are configured to drop packets over a given size. This can result in audio breakups or dropouts. Check with your network administrator for information about your network.

If you experience audio dropouts frequently, download and install QuickTime Broadcaster 1.0.1. If you already have QuickTime Broadcaster 1.0 installed on your computer, you can get version 1.0.1 using the Software Update pane in System Preferences. Alternatively, you can download it from the QuickTime website (http://www.apple.com/support/downloads/quicktimebroadcaster.html).

If you continue to experience audio dropouts while receiving a broadcast with QuickTime Player, lower the audio packet size in QuickTime Broadcaster. Follow these steps:

1. If you have not already done so, click Show Details in the QuickTime Broadcaster window.
2. Make sure you have selected the "Enable Audio Stream" option (see Figure 1).

Figure 1 Enable Audio Stream selected

3. Click Packetizer.
4. In the dialog that appears, you will see a "Packet size limit" field. You can lower the packet size by choosing one of the defaults or by entering a custom value. (See Figure 2.) **Note:** Lowering the packet size may reduce your output data rate.

Figure 2 Configuring packet size limit

Published Date: Oct 11, 2016

iMovie: Improving audio and video synchronization

Learn steps to take if you export to QuickTime or iDVD from iMovie and the audio and video are out of sync. (The sound you hear does not match the video you see.)
This article has been archived and is no longer updated by Apple.
If your audio and video do not play in sync when exported to QuickTime or iDVD, check the following:

1. Make sure the DV camera you used to record or capture the footage was set to 16-bit at the time of recording (not 12-bit).
2. Make sure your QuickTime software is up to date.
3. If you are using iMovie 3, make sure you have updated to iMovie 3.0.3 or later.
4. You may be able to resolve audio synchronization issues by extracting the audio from the video clips in the iMovie project to a separate audio track:
    1. Select all video clips in the timeline (from the **Edit** menu, choose **Select All**).
    2. Extract audio to a separate track (from the **Advanced** menu, choose **Extract Audio**).

Export this project to QuickTime and see if your audio remains in sync when the resulting file is viewed in QuickTime Player.

Related documents
61636: "iMovie: Use 16-bit audio for best results"
Published Date: Oct 11, 2016

iMovie: "Something is Wrong With the Plugin Localized.rsrc" Alert

This article has been archived and is no longer updated by Apple.

If incompatible plug-ins are installed, an alert with the message "Something is wrong with the plugin Localized.rsrc" appears when you open iMovie.

Symptom

When you open iMovie, an alert with this message appears:

> "Something is wrong with the plugin Localized.rsrc"

After dismissing the alert, iMovie appears to work normally.

Products affected

- iMovie

Solution

It is likely that there is an outdated version of the Toast Video CD Export plug-in installed.

1. Locate the iMovie application icon in the Finder. It should be in the Applications folder.
2. Click the application icon to select it.
3. Choose **File > Get Info**.
4. In the Get Info window that appears, select the Plug-ins pane as indicated:
    - For Mac OS 10.1 through 10.1.5, choose Plug-ins from the pop-up menu.
    - For Mac OS 10.2 or later, click the disclosure triangle next to Plug-ins.
5. Scroll through the list of plug-ins and deselect the Toast Video CD Export.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information. Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.

Published Date: Feb 20, 2012

iMovie: Audio is distorted in projects with video imported from an analog to DV converter

Using video imported from some analog to DV converters may introduce audio distortion in iMovie 3.
This article has been archived and is no longer updated by Apple.

Symptom

- The audio is distorted in fresh video you import from an analog to DV converter
- The audio is distorted in an iMovie 2 project imported to iMovie 3. The project includes video that was captured by an analog to DV converter

Solution

1. Select the affected clip in the timeline.
2. From the **Advanced** menu, choose **Extract Audio** to extract the audio from the clip.

Depending on the device, a firmware or software update may be available which could correct the issue when importing new footage. Check with the converter manufacturer for additional information.

Related links

- Formac Support

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please **contact the vendor** for additional information.
Published Date: Oct 11, 2016

iMovie 3: How to Turn Off Zoom For Imported Photos

This article has been archived and is no longer updated by Apple.

This document explains how to turn off the zoom feature, also known as the Ken Burns effect, for photos imported into iMovie 3.

To import a photo without adding motion:

1. Update to iMovie 3.0.3 or later.
2. Navigate to the Photos pane in iMovie by clicking the Photos button.
3. Deselect the Ken Burns checkbox in the photos pane.
4. Select the photo in the Photos pane.
5. Click Apply, or drag the photo to the timeline.

To change a photo you've already imported to a motionless still image:

1. Update to iMovie 3.0.3 or later.
2. Navigate to the Photos pane in iMovie by clicking the Photos button.
3. Select the photo in the timeline.
4. Deselect the Ken Burns checkbox in the photos pane.
5. Click Apply.

See the AppleCare support downloads website (http://www.apple.com/support/downloads/) for iMovie updates.

For steps using iMovie 6, see this document.

Published Date: Oct 11, 2016

QuickTime for Windows: About the QuickTime 6.1 Update

The QuickTime 6.1 Update addresses certain issues, and updates QuickTime for Windows software.

This article has been archived and is no longer updated by Apple.

This software updates QuickTime 6.0, 6.0.1, or 6.0.2 to QuickTime 6.1

System Requirements

To use QuickTime 6.1, your computer should meet these system requirements.

Windows

- Intel Pentium or compatible microprocessor
- Windows 98
- Windows Millennium Edition (Me)
- Windows NT
- Windows 2000
- Windows XP
- A minimum of 64 MB of memory (RAM)

Automated Software Update Installation

1. Open the QuickTime folder.
2. Open the QuickTime Updater application program. It automatically checks the server, then downloads, and installs the update.

Alternatively, open the QuickTime Player application, and choose "Check for QuickTime Updates" from the Help menu. Make sure you have an active Internet connection before you check for updates.

Standalone Installer

A standalone installer is available from the QuickTime website (http://www.apple.com/quicktime/).

About QuickTime 6.1

QuickTime is Apple's award-winning, industry-leading software architecture for creating, playing, and streaming digital media for Mac OS and Windows. With the introduction of QuickTime 6.1, Apple builds on its tradition of leading the industry in the adoption of revolutionary worldwide standards.

- MPEG-4 ISO compliant file creation
- MPEG-4 video codec
- AAC audio codec
- Instant-On streaming
- Macromedia Flash 5
- Enhanced QuickTime Player interface
- QuickTime Picks, bringing you the best, up-to-date content

Included in QuickTime 6.1

A true all-in-one, standards-based, cross-platform media tool, QuickTime 6.1 delivers a host of features that includes the following:

- Enhanced MPEG-4 video quality
- New encoding options in AAC audio
- Significant performance improvements in DV.
- Full screen enhancements for QuickTime Pro users.

For more information, see the QuickTime website at (http://www.apple.com/quicktime/). The QuickTime website also provides many links to cool QuickTime content and to other Internet sites that showcase QuickTime.

Published Date: Feb 20, 2012

iPhoto: Duplicate Photos Not Detected During Import

Duplicate pictures appear as you import them, and iPhoto does not alert you to this fact.
This article has been archived and is no longer updated by Apple.

Symptom

There are duplicate pictures in the iPhoto Library.

Solution

Make sure the date and time settings on the camera used to shoot the pictures are correct. See your camera's documentation for information on how to set the date and time.

iPhoto saves pictures to the iPhoto Library in files and folders based on the date and time each file was created. iPhoto alerts you to possible duplicate files if it tries to copy a picture into a library folder that contains a photo with the same file name.

If the date and time settings on the camera used to shoot the pictures are incorrect, iPhoto may use the date when you import the pictures, which may result in duplicate pictures.

Published Date: Oct 11, 2016

USB: Descriptions of Ports, Connectors, and Cables

Descriptions and illustrations of USB ports, connectors, and cables.
This article has been archived and is no longer updated by Apple.

USB Ports and Connectors
There are two types of USB ports and connectors, Type A and Type B.

Type A
Type A ports and connectors are small and rectangular and are typically used to plug a device into a Type A USB port on a computer or a hub. Type A ports and connectors are sometimes referred to as "upstream".

Figure 1 USB Type A port and connector

Type B
Type B ports and connectors are small and square and are used to attach a USB cable to a USB device. Type B ports and connectors are sometimes referred to as "downstream".

Figure 2 USB Type B port and connector

Note: Many devices have a "captive," or attached, cable that includes a built-in USB connector.

USB ports on the computer
Your computer has two USB Type A ports; the top port is numbered 1 and the bottom port is numbered 2.

Note: You should plug the Apple USB Mouse into a port on the Apple USB Keyboard, then plug the keyboard into a USB port on your computer. This leaves one open USB port on your computer to which you can connect another device, such as a printer.

USB ports on the Apple USB Keyboard
The keyboard has two USB ports, one on either side. You can plug the Apple USB Mouse into one port, leaving the other port open to connect another USB device, such as an external storage device.

USB Cables
Many USB devices have a captive, or attached, USB cable, such as the Apple USB Keyboard. Other devices come with a standard USB cable that has a Type A connector on one end and a Type B connector on the other end.

Some devices may come with an adapter or adapter cable. Third-party manufacturers may also sell adapters. See an Apple Reseller for more information.

If you're using an adapter or adapter cable to connect a USB device, follow these steps:

1. Plug the adapter or adapter cable into the existing cable from the device.

2. Do one of the following:

    - If you're using an adapter cable, plug that cable directly into a USB port on the computer, the Apple USB Keyboard, or another USB device.
    - If you're using an adapter, plug a standard USB cable into one end of the adapter, then plug the other end of the USB cable into a USB port on the computer, the Apple USB Keyboard, or another USB device.

Published Date: Feb 20, 2012

USB: Hub Description

This article describes what a USB Hub is, and the two kinds of USB based hubs: self-powered and bus-powered.
This article has been archived and is no longer updated by Apple.

What is a USB Hub?

Since USB (Universal Serial Bus) can work with simultaneous connection of up to 127 devices, hubs are used to attach additional USB peripherals. When a computer's USB ports fill up, simply attach a device called a hub, which provides additional ports (usually four or seven), and keep on plugging in more peripherals-and hubs-as needed.

Self-powered hubs

This type of hub has an AC adapter that provides external power to the hub. To use the hub, you need to plug the adapter cord into an electrical outlet or power strip. Since this hub supplies its own power, you can often connect several devices to it. Typical self-powered hubs have four USB ports.

Bus-powered hubs

This type of hub gets power from another source, such as a computer. You can plug other devices into a bus-powered hub. The Apple USB keyboard acts as a bus-powered hub. However, if a device requires high power, such as a printer, a bus-powered hub will not be able to supply enough power.

Note: You should use self-powered hubs versus bus-powered hubs for best capability and performance.

Important: Under the USB Specification you cannot connect two bus-powered hubs together because there won't be enough power for the second hub. To connect two hubs together, at least one hub must be self-powered. For this reason, you cannot connect an Apple USB keyboard to the USB port on another Apple USB keyboard. If you want to use two bus-powered hubs with your computer, connect each to a USB port on the computer.

For a partial list of USB Hubs, please visit the USB Peripherals web page at http://www.apple.com/usb/

Published Date: Feb 20, 2012

Mac OS: How to Connect Two Computers

This document provides links to information used for connecting two or more Macintosh computers together and for setting up File Sharing.
This article has been archived and is no longer updated by Apple.

Connecting two computers

Two connected computers constitute a network. For information on creating a network, see technical document 106658: "**Creating a Small Ethernet Network**."

Sharing files

After you have created a network, you may wish to share files. See technical documents:

106461: "**Mac OS X: File Sharing**"
106657: "**Mac OS 8, Mac OS 9: File Sharing**"
Published Date: Feb 20, 2012

iMac: Attaching an External Display

This article discusses support for an external display on iMac.
This article has been archived and is no longer updated by Apple.
The original iMac was not designed to support an external display. The iMac (Slot Loading) DV models, and those introduced after it, do support video mirroring through the built-in VGA port. Refer to your owners documentation to determine if your iMac model supports an external display.

Refer to article 58467: "**iMac (Slot Loading): Connecting External Display to VGA Port**" for additional information.

Apple designed the iMac with a very sharp, 15-inch internal display but did not include a video-out port for connecting a second display. iMac is designed for the consumer market, and one of the themes incorporated in iMac was simplicity.

Note: The information in this article also appears in the following Knowledge Base articles:

- article 30648: **iMac: Frequently Asked Questions (1 of 2)**
- article 30649: **iMac: Frequently Asked Questions (2 of 2)**

Published Date: Feb 20, 2012

USB: Troubleshooting Error Messages

This document lists USB device error messages you might see.
This article has been archived and is no longer updated by Apple.
If you encounter any difficulties with USB devices, they are generally easily resolved. Basically, there are four kinds of error messages or alerts the Mac OS may use for a USB issue. These include:

- Not Enough Power to Function
- Not Enough Power for All Functions
- The USB driver needs to be updated. Would you like to search for the update on the internet?
- No Driver Found

No error message at all - device simply stops functioning

The Mac OS will not generate an error message at all in some cases, for the same reasons as the "Not Enough Power to Function" message. In these cases it is often necessary to do both of the following actions:

- Plug devices that draw a high amount of power directly into the computer's USB port, or connect it to its power supply if it has one.
- Unplug and replug the chain of USB devices if a high-draw device was connected to it. Connecting a high-draw device can potentially make the computer "deaf" to the entire chain of devices.

Not Enough Power to Function

The Mac OS will generate a "Not Enough Power to Function" message if:

- A device tries to draw too much power from the USB bus.
- One or more devices plugged into a hub requires more power than is available.
- You have attached a self-powered device (like a printer or floppy drive) and forgot to plug it into an electrical outlet.

Solution
If you're using a self-powered device, make sure it is plugged into a working electrical outlet. If not, try connecting the device directly to your computer or to a port on a powered hub. If you're connecting the USB device to a powered hub, make sure the hub is plugged into a working electrical outlet.

Not Enough Power For All Functions

The Mac OS will generate a "Not Enough Power for All Functions" message if there is enough power to supply some but not all of the functions the device is designed to provide.

Solution
As above, you'll need to see if the USB device has its own power cord and, if it does, you'll need to plug it into a working electrical outlet. Also, try plugging the cable for the USB device directly into to your computer or to an available port on a powered hub. If you're connecting the USB device to a powered hub, make sure the hub is plugged into a working electrical outlet.

The USB driver needs to be updated. Would you like to search for the update on the internet?

The Mac OS will generate this error message if it detects an out-of-date driver.

Solution
You can elect to download the driver from the Internet if you have a connection.

No Driver Found

The Mac OS will generate a "No Driver Found" message if a driver for the USB device is not found.

If you see this message, you might have forgotten to install the device driver, or you may have incorrectly installed the device driver.

Solution

Reinstall the software driver that came with the product, check the Extensions Manager control panel to see if it is disabled, or download and install the driver from the product vendor's website.

Other USB FAQs can be found in the following documents:

- 30650: "**USB FAQ (1 of 4)**"
- 30651: "**USB FAQ (2 of 4)**"
- 30652: "**USB FAQ (3 of 4)**"
- 30653: "**USB FAQ (4 of 4)**"

Related documents

61237: "**Mac OS X: How to Troubleshoot a USB Device That Isn't Working**"
58033: "**USB: Device Troubleshooting**"

Published Date: Feb 20, 2012

Can I run Windows on a Mac?

Using Virtual PC for Mac from Microsoft, you can run Windows and many Windows applications on your Mac.
This article has been archived and is no longer updated by Apple.
For additional information, see Microsoft's Mactopia website.

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Published Date: Feb 20, 2012

USB Macintosh: Legacy Joystick and ADB Device Support

Is it possible to use an older ADB (Apple Desktop Bus) joystick on my USB Macintosh?
This article has been archived and is no longer updated by Apple.
Joysticks and other devices that plugged into the ADB ports on your older Macintosh or keyboard are not directly compatible with current Apple products with USB ports.

A number of manufacturers have made USB to ADB adapters available. Check the Apple USB page referred to below for more information on adapters.

Here are some related articles on connecting older peripherals to Apple products with USB ports:

- Article 43028: **iMac: Where Can I Get a Floppy Drive?**
- Article 43027: **iMac: Can I Connect My Serial Printer? Zip Drive? Jaz Drive?**
- Article 43026: **iMac: Can I Use My External SCSI Hard Disk?**

For further information on USB in Apple products, visit **http://www.apple.com/usb/**
Published Date: Feb 20, 2012

iMac and iBook: How to Utilize External SCSI Peripherals

This article discusses the connection of external SCSI (Small Computer Systems Interface) devices to iMac and iBook computers.
This article has been archived and is no longer updated by Apple.
Apple does not support the connection of SCSI hard disk drives and other SCSI devices such as scanners, Zip drives, or JAZ drives to iMac and iBook computers. Apple does not intend to develop an adapter or cable that would translate SCSI signals to USB or vice-versa, although a number of third-party companies have developed such an adapter.

Related Articles on Connecting Older Peripherals to iMac computers:

- article 43028: **iMac: Where Can I Get a Floppy Drive?**
- article 43027: **iMac: Can I Connect My Serial Printer?**
- article 43025: **iMac: Can I Use My Old Joystick?**

For further information on USB in Apple products, visit Apple's USB site:
http://www.apple.com/usb/

To find USB products for your Macintosh, visit the USB area of the Macintosh Products Guide: http://guide.apple.com/uscategories/usb.html

Published Date: Feb 20, 2012

USB Capable Macintosh: Connecting Serial, LocalTalk, or Parallel Devices

This article explains how to connect serial, parallel, or LocalTalk peripheral devices to iMac, Power Macintosh, PowerBook, and iBook computers with a Universal Serial Bus (USB) or Ethernet port.
This article has been archived and is no longer updated by Apple.
With the proper adapter, a serial, parallel, or LocalTalk printer can be connected to your computer's USB or Ethernet port. Sometimes, a new printer driver is required. Check with the adapter's vendor for compatibility information.

To determine how your printer was designed to communicate with your computer, refer to its owners guide. Once you know whether the printer is serial, parallel, or LocalTalk, refer to the proper section below for adapter information.

Popular Ink Jet Printer Adapters

For connecting some of the more popular ink jet printers via USB.

- The Epson Stylus Color 740 has built-in USB support. Epson offers a USB/Parallel Printer Adapter Kit for use with many of their other printers. Further information is available at: http://www.epson.com/northamerica.html
- The Hewlett Packard (HP) Printer Cable Kit, which allows HP's Deskjet 670C, 672C, 690C, 692C and 694C printers and others to connect to the USB port. Further information is available at: http://www.hp.com

USB to Parallel Adapters

For connecting printers with a parallel port to the USB port.

- USB Parallel Adaptor by Belkin: http://www.belkin.com
- Strydent Software offers PowerPrint USB, which enables you to print from many common ink jet printers. http://www.strydent.com/

USB to Serial Adapters

For connecting printers with a serial port to the USB port.

- USB Serial Adaptor by Belkin: http://www.belkin.com
- Keyspan USB Serial Adapter by Keyspan: http://www.keyspan.com/
- Stealth Serial Port by GeeThree: http://www.geethree.com/stealth/index.html

Ethernet to LocalTalk Adapters

For connecting a LocalTalk device via the Ethernet port.

Check the following web sites for additional information on Ethernet to LocalTalk Adapters:

- Asante: http://www.asante.com/

Important: Mention of third-party websites and products is for informational purposes only and constitutes neither an endorsement nor a recommendation. Apple assumes no responsibility with regard to the selection, performance or use of information or products found at third-party websites. Apple provides this only as a convenience to our users. Apple has not tested the information found on these sites and makes no representations regarding its accuracy or reliability. There are dangers inherent in the use of any information or products found on the Internet, and Apple assumes no responsibility in this regard. Please understand that a third-party site is independent from Apple and that Apple has no control over the content on that website.

Related Articles on Connecting Older Peripherals to iMac:

- article 43028: **iMac: Where Can I Get a Floppy Drive?**
- article 43025: **iMac: Can I Use My Old Joystick?**
- article 43026: **iMac: Can I Use My External SCSI Hard Disk?**

- For further information about USB peripherals, visit http://guide.apple.com/uscategories/usb.html
- For further information on USB in Apple products, visit http://www.apple.com/usb/

Published Date: Feb 20, 2012

Alternatives to a Floppy Drive

Since recent Apple computers do not come with a floppy disk drive built-in, what options are available?
This article has been archived and is no longer updated by Apple.
There are a number of third-party companies providing low cost floppy drives, removable media drives, and external hard disk drives for use with recent Macintosh computers such as the Power Mac G4, iMac, or iBook.

All of these products will connect to your computer via Universal Serial Bus (USB) or FireWire. USB is a peripheral bus standard that allows you to connect a variety of peripheral devices to your computer. FireWire is a peripheral bus as well but much faster. Until the introduction of the iMac, Macintosh computers used Small Computer Standard Interface (SCSI), Apple Desktop Bus (ADB), and serial connections to connect peripheral devices. USB and FireWire has virtually replaced these standards.

Here are a few of the products already announced:

The Imation SuperDisk USB Drive, which reads both 1.44 MB and 120 MB disks. Further information is available at:
http://www.imation.com/

The Iomega 100 MB Zip Drive. Further information is available at: **http://www.iomega.com/**

LaCie external 2, 4 and 8 Gigabyte hard disk drives and an external DVD-ROM drive. Further information is available at: **http://www.lacie.com/**

VST Technologies FireWire Full Height Zip250 Drive, FireWire Zip100. Further information is available at:
http://www.vsttech.com

For further information, please refer to the following Knowledge Base articles which address many frequently asked questions pertaining to USB or FireWire, or visit Apple's USB or FireWire pages at: **http://www.apple.com/usb/**, **http://www.apple.com/firewire**.

Related articles on connecting older peripherals to iMacs:

- article 43027: **iMac: Can I Connect My Serial Printer?**
- article 43025: **iMac: Can I Use My Old Joystick?**
- article 43026: **iMac: Can I Use My External SCSI Hard Disk?**

Additional information on USB:
USB is a multi-platform standard. You can use any USB device that is developed for use with the Mac OS. Check for the Mac OS logo on the USB product packaging, which tells you that the USB product will work with Macintosh computers.

Manufacturers of USB devices for personal computers that do not use the Mac OS may offer software you can install on your computer so that you can use their USB device with your Mac OS computer. For more information, contact the device's manufacturer. For the latest information on USB in Apple products, visit: **http://www.apple.com/usb/**
Published Date: Feb 20, 2012

iMac: Can I Use My Older Software?

I would like to use some of my older applications with my iMac. Is this possible?
This article has been archived and is no longer updated by Apple.
If you have a Power Macintosh (or Performa model with 4 numeral name, such as 6110) most of your software should be compatible. However, please use the following guidelines:

- • Refer to the list of bundled software which comes with your iMac (shown below) and see if any of your older applications are in the list. If so, use the version which comes with your iMac.
- If the older software were provided to you on a CD-ROM, use that original CD-ROM to install the software, rather than connecting the older Macintosh with your iMac and transferring the files over.
- Contact the software manufacturer regarding more recent application updates and compatibility information.
- The files you'll probably want the most are data files, such as databases, spreadsheets, letters written in a word processor and other such items. Consider transferring those files and using some of the bundled application software.

If you need assistance in determining how to connect your older Macintosh with your iMac, visit the **iMac Connectivity Page** for advice

Bundled Software
Below we've included a partial list of bundled software that shipped on the original iMac computer. In the U.S., the iMac shipped with Mac OS 8.1. It will also include QuickTime 3.0 Standard Edition and the following Apple and third-party applications:

Productivity Software:

- ClarisWorks 5.0v1
- Quicken Deluxe 98 for Macintosh (CD)

Connectivity/Communications Software:

- Total Access 2.01 (EarthLink)
- FAXstf 5.0
- Internet Explorer 4.01 (Part of Mac OS 8.1)
- Netscape Navigator 4.0.5 (Part of Mac OS 8.1)
- Outlook Express 4.01 (Part of Mac OS 8.1)
- America Online 4.0

Personal Development Software ('fun stuff"):

- MDK (CD, not preinstalled)
- Nanosaur
- Kai's Photo Soap SE 1.0 (CD, not preinstalled)
- Williams-Sonoma Guide to Good Cooking (CD)

Published Date: Feb 20, 2012

Hard Drive: Options for Backing Up Contents

Suggestions on how to back up your hard disk.
This article has been archived and is no longer updated by Apple.
There are three options for performing a back up of your hard disk: a locally connected USB or FireWire storage device, a network backup server or storage device, or an Internet based back up service.

Locally Connected Storage Device
Recent desktop and portable computers from Apple feature Universal Serial Bus (USB) and FireWire ports that make it easy to attach high capacity mass-storage devices that are ideal for backing up the larger hard disk installed.

As an alternative to backing up to floppy disks, the following USB options are available:

- the USB SyQuest SparQ disk holds up to 1 GB
- the USB Imation SuperDisk holds up to 120 MB
- the USB Iomega Zip disks holds up to 250 MB
- the FireWire VST Technologies hard drive has capacities starting at 10 GB

To see some of the USB storage devices, and other USB devices, refer to: **http://www.apple.com/usb**

Network Backup Server
If you're connected to a network, you can use products such as Retrospect from Dantz Development to back up your files to a large volume on the network, a DAT drive, or some other media. To read about Retrospect : **http://www.dantz.com**

Internet Back Up Service
There are several back up resources on the Internet, including Apple's iDisk, that you can use to back up files on your hard drive.

Note: Some Internet backup solutions have less disk space than the removable media mentioned earlier in the article. .Mac members get 10 GB total storage for iDisk and .Mac Mail with the option to purchase up to 30 GB, so check with the back up solution vendor for space limitations and select the one that matches your data back up needs.

- iDisk: **http://www.apple.com/.Mac/**
- BackJack Internet Backup Service: **http://www.backjack.com**

Published Date: Feb 20, 2012

PC Compatibility Overview

This article gives an overview of PC compatibility for Macintosh users. It was written in September, 1998.
This article has been archived and is no longer updated by Apple.
Occasionally, Macintosh users might need to work with Windows documents, run Windows applications and print or share files over a network. If you find yourself in that situation, you'll be pleased to know that there are time-tested solutions that enable Macs to easily integrate with PCs. You'll find an overview of the wide range of PC compatibility solutions below.

ACCESSING WINDOWS DATA

There are hundreds of leading applications that have native versions for both Macintosh and Windows. Microsoft Office is an excellent example of an application with full file format compatibility between the two versions. For a comprehensive list of cross platform and Mac only applications, visit **http://www.macsoftware.apple.com**.

Apple's SuperDrive provides Macintosh systems (that have floppy drives) the ability to access and understand PC content. The SuperDrive can format, read, and write to 3.5-inch disks in the following formats:

- Macintosh: single-sided (400K), double-sided (800K), high-density (1.4MB)
- Apple II ProDOS: 800K
- MS-DOS: 720K, 1.44MB.

Easy Open and PC Exchange are Mac OS features that work in tandem to enable a Mac to open and edit ProDOS, MS-DOS, Windows and OS/2 files with compatible Macintosh applications. PC Exchange lets you insert a DOS-formatted floppy disk into a SuperDrive and view the disk's contents from the Macintosh desktop just as if the floppy came from another Macintosh. When you double-click on a DOS or Windows file to open it, Easy Open automatically searches for applications and file translators that are capable of opening it and lists the applications for you. Once an application is selected, Easy Open manages the translation and opening of the file.

When no application is available for directly opening a PC file, an extensive suite of translators from Data Viz, called MacLink Plus, can be used to convert the file to a format compatible with a corresponding Macintosh application.

RUNNING WINDOWS APPLICATIONS

There are three ways to run Windows applications on a Macintosh - via software emulation, PC compatibility cards and thin-client/server computing.

Today, the most common method of running a DOS or Windows application on a Macintosh is software emulation. The speed of the Power Macintosh systems makes emulation viable and affordable. There are several software emulation products to choose from. For example, Insignia's RealPC, SoftWindows 95 and SoftWindows 98 products allow you to run DOS, Windows 95 and Windows 98 applications. Connectix's Virtual PC allows you to run DOS, Windows 95/98, or Windows NT applications.

When you need a higher level of performance from a Windows application, consider adding a PC compatibility card. Orange Micro's OrangePC Windows Compatibility Card is a PC computer on a card that allows users to run Windows 95/98 and Windows NT.

The latest strategy is thin-client/server computing where an NT Server runs Windows applications over a network. The clients (personal computers) don't need to have these applications on their hard drive nor do they need to have much more than a fast LAN network connection. Client/server solutions work equally on Windows systems, Macintosh systems, UNIX workstations, and in some cases, PDAs. Citrix System's WinFrame and Microsoft's Windows Terminal Server are key solutions in this area.

USING NETWORK RESOURCES

Many companies with a mixed environment of Macs and PCs use Novell's NetWare or Microsoft's NT Server for access to files and printers over a network. Macintosh users enjoy robust access to both server environments.

Macintosh clients for Novell networks are currently available for both intraNetware and NetWare version 4.11. In 1999, a new Macintosh client will be available for NetWare 5.

There are three ways to connect a Macintosh to a Windows network. The most common way is for the network administrator to turn on AppleTalk Services ... then, it just works! There are also solutions that let the Macintosh share files and printers on a PC network without any involvement from the network administrator. You can extend the Windows server to support the Macintosh protocol or extend the Mac OS to support the Windows protocols. On the personal computer side, Thursby Software's DAVE product adds full SMB support to the Mac OS. For NT Servers, you can investigate Microsoft's Services For Macintosh and Miramar Software's MacLan Connect.

A Macintosh server installed with AppleShare IP 6.0, Apple's award-winning Mac OS server software, provides cross-platform support for use in mixed computing environments. New file sharing support for Windows clients allows Windows 95/98 and Windows NT clients to natively access AppleShare IP 6.0 servers. AppleShare IP 6.0 can also register with a WINS server for inclusion on a Windows NT Intranet.

SUMMARY

We encourage you to learn more by visiting the Web sites of the vendors mentioned above and find out more about the PC compatibility solutions.

SoftWindows: **http://www.fwb.com/**

Virtual PC: **http://www.connectix.com/**

OrangePC card: **http://www.orangemicro.com/**

MacLink Plu: **http://www.dataviz.com/**

Citrix: **http://www.citrix.com/**

Microsoft: **http://www.microsoft.com/**

Novell: **http://www.novell.com/**

DAVE: **http://www.thursby.com/**

MacLan Connect: **http://www.miramarsys.com/**

Published Date: Feb 20, 2012

Modem: Troubleshooting References

Use the following steps to help in troubleshooting a dialup modem. Pick the problem statement which best describes the difficulty you are encountering, and click on the URL link for further information.
This article has been archived and is no longer updated by Apple.
Content found in this document has been replaced by these two documents:

106877: "**Mac OS 9: Internet and Network Topics (Getting Connected, Troubleshooting)**"

106796: "**Mac OS X: Internet and Network Topics (Getting Connected, Troubleshooting)**"

Published Date: Feb 20, 2012

Knowledge Archive: Contents

The **Knowledge Archive** contains articles on products and technologies and topics that have been discontinued and are no longer officially supported by Apple, Inc.
This article has been archived and is no longer updated by Apple.
Generally, these products are seven or more years old.

Here's a list of products covered in the Archive:

Computers:

Apple II
Apple II+
Apple IIe
Apple IIc
Apple IIc Plus
Apple IIGS
Macintosh (128k)
Macintosh 512k (fat Mac)
Macintosh 512ke (with 800 K disk drive)
Macintosh Plus
Macintosh SE
Macintosh II
Macintosh IIx
Macintosh IIcx
Macintosh IIci
Macintosh IIfx
Macintosh IIsi
Macintosh Classic, Classic II, Color Classic
Macintosh LC
Macintosh LC II
Macintosh LC III
All Macintosh LC Series Computers
Macintosh Portable
All Performa Series Computers
Quadra 605
Centris/Quadra 610
Centris/Quadra 650
Quadra 800
Macintosh TV
Workgroup Server 60
Workgroup Server 80
All PowerBook 100, 200, 500 Series Computers
All PowerBook 1400, 2400, 5300 Series Computers
PowerBook Duo 200 series

Operating System Software:

AIX
Apple IIGS System 5.0 (also called GS/OS)
Apple IIGS System 6.0 (also called GS/OS)
A/UX 1.0, 1.1, 2.0, 2.0.1
DOS 1.4
DOS 3.3
ProDOS 8
ProDOS 16
System 4.2
System 5.0
System 6 (6.0, 6.0.2, 6.0.3, 6.0.4, 6.0.5, 6.0.7)
System 7 (7.0, 7.0.1, 7.0.2, 7.0.3)

Application/Networking Software:

Apple Access III
Apple Backup
Apple Internet Connection Kit
Apple Media Tool
Apple Personal Diagnostics
Apple Remote Access 1.x, 2.x
Apple Terminal Server
Apple Video Player
ApplePhone
AppleScript (versions prior to 1.3.1)
AppleSoft Basic
AppleSearch 1.0, 1.5
AppleShare 1.0, 1.1, 2.0, 2.0.1
AppleShare PC
AppleSoft Basic
AppleTalk
AppleTalk for VMS
AppleWorks (for the Apple II)
At Ease 2.x, 3.x, 4.x
Avid Cinema
Backup II
Claris CAD
Claris Emailer 1.0, 1.1, 2.0
Claris Resolve
DAL (Data Access Language)
Desk Accessories
HDSC Setup
Educational Software Bundles
Fonts
HyperCard
GS Basic (also known as Apple IIGS Basic)
PC Exchange
Performa Software
MacAPPC
MacCheck
MacDFT
MacDraw II
MacDraw Pro
MacPaint
MacTerminal 2.0, 2.1, 2.2, 3.0
MacWorkstation 3.0
MacWrite 4.5, 4.6, 5.0
MacWrite II 1.0, 1.1, 1.5, 1.5v2
MacX
MousePaint
PATHWORKS (for Macintosh)
QuickDraw GX
QuickTime 1.x, 2.x
WiggleWorks

Printers:

Apple Daisy Wheel Printer
ImageWriter I
ImageWriter II
ImageWriter LQ
LaserWriter
LaserWriter Plus
LaserWriter II (SC, NT, NTX)
LaserWriter IIf
LaserWriter IIg
LaserWriter Pro 600
LaserWriter Pro 630
LaserWriter Pro 810
Personal LaserWriter LS

Personal LaserWriter NT
Personal LaserWriter NTR
Personal LaserWriter SC
StyleWriter
StyleWriter II

Other Peripherals:

Apple 300/1200 Modem
Apple II Memory Card
Apple II Language Card
Apple II Video Overlay Card
Apple IIe Card
Apple IIe SCSI Card
AppleCD products
Apple Design Powered Speakers (I and II)
Apple Ethernet LC Card
Apple Serial NB Card (NB stands for NuBus)
Apple Token Ring Card 4/16
EtherTalk NB Card (NB stands for NuBus)
LocalTalk PC Card
Multimedia products
Macintosh Display Card 4*8, 8*24, 8*24GC
Macintosh II Video Card
Macintosh II High-Resolution Video Card
Super Serial Card
Published Date: Feb 20, 2012

Mac OS X: Third-Party Reference Books

A growing number of Mac OS X reference books are available for sale at many book sellers. This document contains a list of titles and links to online book sellers where you can purchase them.
This article has been archived and is no longer updated by Apple.
For information beyond the scope of Apple's documentation, Mac Help, or Knowledge Base documents, please look into the titles listed below. More titles may be available. You can find these titles and more by clicking on the links of booksellers below.

Books about Mac OS X

- Mac OS X: the Missing Manual by David Pogue. Published by O'Reilly & Associates.
- Mac OS X for Dummies by Bob LeVitus, Shelley Brisbin. Published by Hungry Minds, Inc.
- Mac OS X: Little Black Book by Gene Steinberg. Published by the Coriolis Group.
- Mac OS X: The Complete Reference by Jesse Feiler. Published by McGraw-Hill Professional.
- The Litle Mac OS X Book by Robin Williams. Published by Peachpit Press.
- Mac OS X Unleashed By John Ray, William Ray. Published by Sams.
- Mac OS X Server Administrator's Guide by Apple, Inc. Published by Fatbrain.
- Inside Mac OS X: System Overview by Apple, Inc. Published by Fatbrain.
- Mastering Mac OS X by Todd Stauffer. Published by Sybex.

Online book sellers

Titles available at **amazon.com** (http://www.amazon.com/)
Titles available at **Barnes & Noble** (http://www.bn.com/)
Titles available at **Chapters** (http://www.chapters.ca/)

Apple makes no endorsement, either expressed or implied, for any third-party products mentioned in this document. Apple offers these simply as additional resources for its customers.
Published Date: Feb 20, 2012

Useful Mac OS X Terms: What is a Bundle?

Bundles are a new way of packaging applications in Mac OS X.

This article has been archived and is no longer updated by Apple.

In Mac OS 9, an application often resided in several folders, such as shared libraries in the Extensions folder, and the executable application in some arbitrary folder. In addition, an application itself was comprised of two "forks" within a single file: a data fork (which in the case of PowerPC code contained the program's executable code), and a resource fork. The resource fork contained templates for various elements of the user interface, such as the names of menus, menu items, dialogs, window types, the icon the Finder should display, and so forth.

In Mac OS X, this has changed. A bundle is a collection of these various data elements (executable code, resource information), each of which is a single file. These files are gathered together in a folder or "directory" and then presented to the user as a single, double-clickable file. In Mac OS X, applications are bundles.

Tip: Icons have an .icns suffix. You can edit them with Icon Composer or Pixie, two utilities that are available from the Apple Developer Connection (http://www.apple.com/developer/).

Tip: A bundle may be opened so you can see the individual components of the directory. Press Control then click its icon and choose Show Package Contents from the contextual menu.

Tip: Bundles are sometimes called "packages."

For further information, please visit Apple's Developer Connection at: http://www.apple.com/developer/ or you can view the specific Bundle information at:

http://developer.apple.com/techpubs/macosx/Essentials/SystemOverview/Bundles/

Published Date: Feb 20, 2012

Useful Mac OS X Terms: What are Frameworks?

This document explains what frameworks are.
This article has been archived and is no longer updated by Apple.

Frameworks

A framework is a dynamic (loaded only when used) shared library along with its associated resource information. This information is packaged as a bundle. This is analogous to the shared libraries, which are placed in the Extensions folder in Mac OS 9.

Shared libraries contain code that can be shared by multiple applications. For instance, if a manufacturer produces a suite of productivity software, odds are there is going to be a great deal of similarity within their code. Therefore, from a development and deployment perspective, it makes sense to allow the applications to share common code.

Umbrella Frameworks

Umbrella frameworks are generally system software-level functions. This concept refers to a framework which itself contains two or more subframeworks. Generally this shouldn't come up in support.

Additional information

Frameworks are covered in depth at the Apple Developer Connection at:

http://developer.apple.com/techpubs/macosx/Essentials/SystemOverview/Frameworks/Frameworks.html

Published Date: Feb 20, 2012

Useful Mac OS X Terms: What is Mach?

This document explains what Mach is.
This article has been archived and is no longer updated by Apple.
Mach is part of the underlying technology of Mac OS X. It is a UNIX technology developed at Carnegie-Mellon University in the late 1980s and 1990s. It is a robust, "open source" operating system, which is used to provide memory and task implementation services. Darwin uses Mach 3.0. Mach provides memory management, memory protection, process scheduling and interprocess communication services.

Mach, together with BSD, forms the heart of Mac OS X, known as Darwin.

- For a brief overview of Mach, see technical document 43137: **Useful Mac OS X Terms: What is Mach?**
- For a brief overview of BSD, technical document 43139: **Useful Mac OS X Terms: What is BSD?**
- For a brief overview of Darwin, see technical document 43140: **Useful Mac OS X Terms: What is Darwin?**
- For in-depth information on Mach, BSD and Darwin, see the Apple Developer Connection site:

http://developer.apple.com/unix/index.html
Published Date: Oct 11, 2016

Mac OS X: What is BSD?

Learn what BSD is.
This article has been archived and is no longer updated by Apple.

BSD is the Berkeley Standard Distribution. In the early 1980s, the University of California at Berkeley was a major center of focus of UNIX activity. They adapted AT&T's System III and provided more sophisticated process management and network functionality. They distributed their version of UNIX, called the Berkeley Standard Distribution, for what amounted to the cost of goods. This, in turn, was widely adapted by academia and turned into the source material for further innovations by companies such as Sun Microsystems. Darwin incorporates elements of the BSD 4.4 distribution, which provide file system support, network services, symmetric multiprocessing support, and multi-threading facilities.

BSD also provides support for the "shell" environment. Simply put, a shell is an interactive, command-line interface that allows the user to control the operating system and accomplish tasks. UNIX is often confused with its shell interface. However, the best way to view the shell is as one of many possible ways to manipulate the core services.

For three decades, the easiest way to do this was via command-line interfaces, such as the Bourne shell (sh), the C-shell (csh), the Korn shell (ksh), tcsh, bash, and many others. However, starting in the 1980s, manufacturers started to experiment with many different ways to provide similar control via graphical interfaces, such as SunView, Motif, XWindows, and others. None of these graphical approaches has reached the level of integration that Mac OS X provides.

The shell environment is completely optional for most users. It provides maximum control over the operating system. It will appeal mainly to advanced system administrators, computer science students and experienced UNIX users. The only way to get to the shell in Mac OS X is for the user to locate the Terminal application and open it.

- For a brief overview of Mach, see technical document 43137:
  Useful Mac OS X Terms: What is Mach?
- For a brief overview of BSD, see technical document 43139:
  Useful Mac OS X Terms: What is BSD?
- For a brief overview of Darwin, see technical document 43140:
  Useful Mac OS X Terms: What is Darwin?
- For in-depth information on Mach, BSD and Darwin, see the Apple Developer Connection site:
  http://developer.apple.com/unix/index.html

Published Date: Oct 11, 2016

Useful Mac OS X Terms: What is Darwin?

This document explains what Darwin is.
This article has been archived and is no longer updated by Apple.
Beneath the appealing, easy-to-use interface of Mac OS X is a rock-solid foundation that is engineered for stability, reliability, and performance. This foundation is a core operating system commonly known as Darwin. Darwin integrates a number of technologies, most importantly Mach 3.0, operating-system services based on 4.4 BSD (Berkeley Software Distribution), high-performance networking facilities, and support for multiple integrated file systems.

Darwin 1.4.1 is the UNIX-based, open-source foundation of Mac OS X. It is based on FreeBSD and Mach 3.0 technologies and provides protected memory and pre-emptive multitasking. This release corresponds to the release of Mac OS X 10.1.

- For a brief overview of Mach, see technical document 43137: Useful Mac OS X Terms: What is Mach?
- For a brief overview of BSD, see technical document 43139: Useful Mac OS X Terms: What is BSD?
- For a brief overview of Darwin, see technical document 43140: Useful Mac OS X Terms: What is Darwin?
- For in-depth information on Mach, BSD and Darwin, see the Apple Developer Connection site:

http://developer.apple.com/unix/index.html

Published Date: Oct 11, 2016

Useful Mac OS X Terms: What is Quartz?

Quartz is the one of the graphics services in Mac OS X, the others are OpenGL and QuickTime.
This article has been archived and is no longer updated by Apple.
Quartz is the two dimensional graphics service in Mac OS X. It is the modern heart of the Mac OS X user experience, superseding QuickDraw and related managers. Quartz directly supports the Aqua user experience by displaying crisp two-dimensional graphics to create the user interface, including on-the-fly rendering and anti-aliasing. Quartz is based on the Adobe Portable Document Format (PDF). PDF is the standard for electronic document distribution worldwide. PDF is a universal file format that preserves all of the fonts, formatting, colors and graphics of any source document--regardless of the application and platform used to create it.

- For a brief explanation of OpenGL, see technical document 43142: **Useful Mac OS X Terms: What is OpenGL?**
- For in depth information on Quartz, please visit the Apple Developer Connection web site at: http://developer.apple.com/quartz/index.html
- For in-depth information on OpenGL, please visit the Apple Developer Connection web site at: http://developer.apple.com/opengl/index.html

Published Date: Feb 20, 2012

Mac OS X: What is OpenGL?

This article has been archived and is no longer updated by Apple.

OpenGL is the one of the graphics services in Mac OS X, others include Quartz and QuickTime.

OpenGL is a sophisticated open-standard, three-dimensional rendering system. Developed as an open source project (OPEN Graphics Library) by Silicon Graphics in the 1990s, OpenGL supports advanced 3D rendering. It is of primary interest to game and multimedia developers. It also has a role in scientific visualization. OpenGL replaces QuickDraw 3D.

For a brief explanation of Quartz, see technical document 43141: "**Useful Mac OS X Terms: What is Quartz?**"

For in depth information on Quartz, please visit the Apple Developer Connection Web site (http://developer.apple.com/quartz/index.html).

For in-depth information on OpenGL, please visit the Apple Developer Connection Web site (http://developer.apple.com/opengl/index.html).

Published Date: Feb 20, 2012

Mac OS 9 and earlier: System Stops Responding and Basic Troubleshooting

This article provides troubleshooting assistance and issue resolution for Macintosh computers with Mac OS 9.x or earlier.

This article has been archived and is no longer updated by Apple.

How to Start Troubleshooting

The most useful thing you can do is to set up a fault log in which you record exactly what was going on when the condition occurred. The format below should help:

- Which version of system software is being used
- Program name (include version number)
- Other Applications open at the time
- List all Extensions and Control Panels
- What were you doing when the issue occurred (be **exact**)
- What was the result (error message, computer stopped responding)
- What you tried to do to get out of it and with what results
- Did you have to restart the computer?
- Did things work okay after restarting the computer

If the computer repeatedly stops responding, begin the troubleshooting cycle below. Make notes of what you do and the results .

If it becomes necessary for you to take your computer to your apple service provider to assist you with the troubleshooting, this information will be helpful for explaining the computer's condition.

What Causes a Program to no Longer Open or unexpectedly Quit?

There are many causes for issues of this nature, leading among them:

System Software

A previous system error could make your application or system software unusable to some degree. The solution is to reinstall system software and the application. It is usually wise to keep a copy of system software nearby so that you can reinstall after any serious issue. An incompatible extension or Control Panel after being used, even if removed, may leave "bits and pieces" of itself behind. Performing a clean installation of the system software should correct this problem.

System and Application Version Incompatibility

Not all versions of system software and application software are compatible. Most applications clearly indicate what version of system software is required to permit the program to operate correctly. If you are using an older version of system software, you may have issues. If you are using the current system software, but using an old version of application software you may run into issues. Occasionally, when system software is updated, some earlier functioning applications may fail to perform reliably. This is a compatibility issue, you have only two alternatives: revert to an older version of system software under which the application operated properly, or contact the software vendor and inquire about the availability of a "patch" or upgrade.

Out of Memory condition

Some programs require a lot of memory. You may discover you do not have enough memory to open the application and have all the features work correctly. Some programs will fail to open at all, while others open and operate for a while until you try to perform some function requiring additional memory. You can close the other applications you have opened or obtain more memory.

In some cases, the "out of memory" condition may not accurately reflect the issue. This situation may exist when a program requires that you have a certain amount of "contiguous" memory available. While the computer may display it has 1MB of RAM available, and the program only needs 267 K, you may not have 267 K of memory all in one "chunk". Close the other applications you have opened, then open the application which would not previously open.

Sometimes completely restarting the computer is necessary. In some situations, your application may not have enough memory allocated to it to permit it to run correctly: this includes the Finder. Select the application, then choose Get Info from the File menu (or Command-I). If you do not have as much memory allocated as recommended, increase to the recommended amount. If you have the correct allocation, try increasing the amount of memory allocated to it (double the amount).

Extension or Control Panel Compatibility Issue

Some add on software, such as extensions, control panels, and apple menu items might not have been written to permit them to be compatible with

some versions of system software. This is a situation that you can usually identify quickly. Usually, symptoms develop shortly after installing some new add on software, or after you install a new version of system software. Your only recourse is to remove the offending add on software and pursue a long-term solution with the software vendor or author.

Desktop Manager "Confusion"

The most telling sign to this issue is when you try to open an application by double-clicking on one of its documents, or in trying to print one of its documents from the desktop and you receive the message "application is busy or missing." If this is the case, either your application is busy (for instance, you are trying to run a single user program on a network when someone else is already running it); it is missing (it is unusable or it has been deleted inadvertently); or the desktop manager cannot locate the application.

Step 1
Check and confirm that the application is on the hard drive.

Step 2
Launch the application and verify that it is functioning correctly.

Step 3
Rebuild your desktop file by restarting your computer while holding down the Option and Command keys.
Note: A dialog box will inform you that rebuilding your desktop will take a few minutes. You are no longer required to hold down the two keys.

Step 4
Click OK.

Your desktop will be rebuilt, and you should be able to continue without any issues. For best performance, rebuild the desktop periodically.

Related Knowledge Base Articles

Related Articles	
4299	Application Issues and Basic Troubleshooting
16473	Mac OS: Troubleshooting Startup Issues
14438	Macintosh: Unexpected Sound ("Breaking Glass" or "Musical Beeps") Heard When You Turn on Computer

Published Date: Feb 20, 2012

iMac: Third Party Updates

iMac third party websites for updating hardware and software.

These updates are not supported or necessarily recommended by Apple, this is merely an information service for iMac customers.

For more information on available USB products please visit the apple.com website "USB Products" at:
http://guide.apple.com/uscategories/usb.html

(Third party Information below is valid as of April 10, 2000.)
This article has been archived and is no longer updated by Apple.

Logitech

- **QuickCam Drivers**

Epson

- **Epson Color Stylus Drivers**

Kodak

- **Kodak USB Drivers**

Pangea

- **Nanosaur**
- **Bugdom**

STF Technologies

- **FAXstf 5.0**

UMAX

- **Astra 1220U iMac Drivers**

Related Articles on Third Party Peripherals and iMacs:

- article 43028: **iMac: Where Can I Get a Floppy Drive?**
- article 43027: **iMac: Can I Connect My Serial Printer?**
- article 43025: **iMac: Can I Use My Old Joystick?**
- article 43026: **iMac: Can I Use My External SCSI Hard Disk?**

For further information on USB in Apple products, visit **http://www.apple.com/usb/**
Published Date: Feb 20, 2012

iMac: iMac Update 1.0 Software

iMac Update Version 1.0 was released September 2, 1998 and is only for installation on the original Bondi blue iMac, and only if it is running Mac OS 8.1.

Hardware Required: Original iMac (Revision A)
This article has been archived and is no longer updated by Apple.
Note: The iMac Update 1.0 is no longer available from Apple Software Updates sites.

Important: iMac customers who are using Mac OS 8.5 or later should not install this update and should review article 58174: "**iMac: When to Install Available Updaters**" to determine if they should install iMac Update 1.1.

Published Date: Feb 20, 2012

Microsoft Technical Support

Microsoft Technical Support
This article has been archived and is no longer updated by Apple.

Telephone Support

Microsoft provides several fee-based telephone support options for its customers. Please consult the Microsoft web site for more details: http://support.microsoft.com/directory/ .

Microsoft Download Library (MSDL): Download hundreds of software add-ons, bug fixes, peripheral drivers, software updates, and programming aids-all at no cost on the Web at: http://www.microsoft.com/downloads/ .

Direct modem access to MSDL is available 24 hours a day, 365 days a year, by dialing:

In the United States: + 1 425 936 6735
Connect information: 1200 to 14400 baud, no parity, 8 data bits, and 1 stop bit

In Canada: + 1 905 507 3022
Connect information: 1200 to 28800 baud, no parity, 8 data bits, and 1 stop bit

Online Support

Microsoft provides technical information from the Microsoft Software Library and Microsoft Knowledge Base via the Internet at: http://support.microsoft.com/directory/ .
Published Date: Feb 20, 2012

AppleShare IP 5.0: FTP Service (FAQ)

This article contains frequently asked questions (FAQ) regarding AppleShare IP 5.0 FTP Service, with answers to those questions. Additional AppleShare IP FAQ's are listed at the bottom of this article.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. How are 'put' files stored on the server?
2. Are files uploaded to the FTP server automatically binhexed?
3. Are they also compressed?
4. Are files downloaded from the FTP Server automatically decoded?
5. How do I FTP from Netscape Navigator or Internet Explorer if a name and password are required?
6. When I log on to an AppleShare IP 5.0 Server using AppleTalk and the Chooser, I can 'upload' files in a drop folder. However, when I log on using FTP, the FTP application says "Access Denied" when 'putting' files in the same drop folder.
7. Why can't I put files in a folder with "Drop Box" permissions?
8. Why don't aliases resolve that reside on the FTP server?
9. Why can't I use "mget" to get a list of files?

Question 1: How are 'put' files stored on the server?

Answer: Files are stored in their original format.

Question 2: Are files uploaded to the FTP server automatically binhexed?

Answer: The encoding of a file in any format is specific to the client used. The most common formats are MacBinary and Binhex. Many Macintosh FTP clients will automatically encode the file before posting it to the server in the format selected by their preference setting.

When a file is received by the AppleShare IP server, it automatically decodes any file in the MacBinary or Binhex format.

Question 3: Are they also compressed?

Answer: The compression of a file is again entirely dependent on the FTP client being used. Some Macintosh FTP clients have the ability to compress a file before sending it to the server if that function is enabled by their preference setting.

The AppleShare IP FTP is not capable of decompressing files.

Question 4: Are files downloaded from the FTP Server automatically decoded?

Answer: Not all transmitted files are encoded, so sometimes decoding is not necessary. If decoding is necessary, most of the FTP clients for Mac OS are capable of decoding automatically. The behavior in this matter is entirely dependent on the FTP client.

Here is what the FTP server uses to determine what type of encoding is necessary:

- If the transfer mode is "text" (ASCII), and the target file is a text file, then it is encoded in the text format.
- If the transfer mode is "text" (ASCII), and the target file is NOT a text file, then it is encoded in the Binhex format.
- If the transfer mode is "binary" (Image), then just the data fork of the file is transferred with NO encoding.
- If the transfer mode is "binary" (Image) and a "MACB E" command has been issued, then the file is encoded in MacBinary format.

Fetch (3.0.2 and greater) has been modified to be AppleShare IP friendly. It will automatically take care of all encoding/decoding needs if left in the "Automatic" mode.

Question 5: How do I FTP from Netscape Navigator or Internet Explorer if a name and password are required?

Answer: Use this URL format: ftp://username:password@ftp.site.com/

Question 6: When I log on to an AppleShare IP 5.0 Server using AppleTalk and the Chooser, I can 'upload' files in a drop folder. However, when I log on using FTP, the FTP application says "Access Denied" when 'putting' files in the same drop folder.

Answer: In order to use a common AppleShare IP 5.0 dropbox, the FTP client needs to have the "store unique" option available. Currently, Fetch does not support this feature. Most Unix clients will support this "store unique" option.

Question 7: Why can't I put files in a folder with "Drop Box" permissions?

Answer: In order to maintain security and a consistent user experience across all services, the FTP client must use the "Store Unique" option in order to put files in a "Drop Box" folder. While most Mac OS clients currently do not support this feature, many Unix FTP clients do.

Question 8: Why don't aliases resolve that reside on the FTP server?

Answer: Aliases do not resolve to ensure server security.

Question 9: Why can't I use "mget" to get a list of files?

Answer: You can use the "mget" command on some FTP clients to retrieve a list of files rather than one at a time. However, the list must consist of full filenames. Using wildcards in filenames (examples: *.gif, *.jpg) is not supported in this release of the FTP server.

Related Articles

45036 AppleShare IP 5.0: Administration (FAQ)
45037 AppleShare IP 5.0: AppleShare Client (FAQ)
45038 AppleShare IP 5.0: File Service (FAQ)
45039 AppleShare IP 5.0: MacDNS (FAQ)
45040 AppleShare IP 5.0: Mail Service (FAQ)
45041 AppleShare IP 5.0: Print Service (FAQ)
45042 AppleShare IP 5.0: Web Service (FAQ)

Published Date: Feb 20, 2012

AppleShare IP 5.0: Administration (FAQ)

This article contains frequently asked questions (FAQ) regarding AppleShare IP 5.0 Administration, with answers to those questions. Additional AppleShare IP FAQ's are listed at the bottom of this article.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. What can I do if I forget my AppleShare IP Admin password?
2. Are volume access privileges still stored in the AppleShare PDS file?
3. Is the Users & Groups Data File shared by all of the AppleShare IP services?
4. What information is stored in the AppleShare IP 5.0 preference files?
5. Is the "copy volume" command still available?
6. Can I still compact access privileges?
7. What AppleShare IP services can I move to different servers?
8. What is the Users & Groups Data File backup?
9. Where is serial number stored?
10. Can I move my Users & Groups data file to a new System folder after I do a Clean Install or move the server to a different computer?
11. How can I delete an entire group of users, that is the Class of '98 group and all of its users?
12. In the ANAT (Apple Network Administrator Toolkit) Users and Groups Manager you can import groups, but you cannot turn on mail. In AppleShare IP users and groups you can turn on mail, but you cannot import groups. Any suggestions for doing both? Will the Santorini Server Manager do this?

Question 1: What can I do if I forget my AppleShare IP Admin password?

Answer: Follow these steps:

1. Restart the server with the Appleshare IP extensions turned off in the Extension Manager control panel.
2. Change the Owner information in the Sharing Setup control panel.
3. Go back to Extensions Manager control panel and turn on the Appleshare IP extensions.
4. Restart the server with the Extensions Manager's Restart button.

Question 2: Are volume access privileges still stored in the AppleShare PDS file?

Answer: Yes. Each volume still contains an invisible AppleShare PDS file on the root level of its directory. You will need to make it visible with a utility like Norton Disk Editor, or ResEdit in order to throw it away. This is normally done when the privileges are corrupt and changes cannot be made t the privileges.

Question 3: Is the Users & Groups Data File shared by all of the AppleShare IP services?

Answer: The Datafile is shared by the AppleShare, Web, Mail, and FTP servers. It is best to keep those services on one server. The Print server does not use the Users & Group data file and can be placed on another server to balance traffic loads.

Question 4: What information is stored in the AppleShare IP 5.0 preference files?
Answer: AppleShare IP 5.0 AppleShare/Web/FTP Server Attributes

General Information
version number for this record
version# for file server
user activity limit in %
maximum client connections
maximum number of guest and anonymous logins
minutes until shutdown

Connect Info & Login Greeting
version number for this record
login greeting

Additional Cache Information
version number for this record
memory to be reserved for other applications

Idle User Information
version number for this record
max # of minute for idle users
disconnect message

Serial Number Information
version number for this record
number of serial numbers in struct
serial number

Serial Miscelleneous Information
version number for this record
name & phone
organization

HTTP Information
version number for this record
Enable HTTP, 1-enable, 0-not enable
Enable HTTP Log, 1-enable, 0-not enable
HTTP maximum client connections
Whether guest allowed for HTTP
HTML folder path vRefNum
HTML folder path volume name
HTML folder path volume creation date
HTML folder path DirID
partial path to HTML file starting from the Web folder

FTP Information
version number for this record
Enable FTP, 1-enable, 0-not enable
Enable Anonymous Login, 1-enable, 0-not enable

AFP Information
version number for this record
Enable AFP over TCPIP, 1-enable, 0-not enable
Enable AFP over AppleTalk, 1-enable, 0-not enable

MIME type changes - Notify server SrvrMimeTypePrefs has changed
version number for this record
no meaning, just for notification

IPFilter Options - Advanced option for filtering IP
version number for this record
numberOfIPFilters

A place to store data that will not be used in the future, but is needed to maintain backward compatibility.
version number for this record
Location of server Volume Information window
Show Volume Information window, 1 - show, 0 - hide */
Location of server User Information window
Show User Information window, 1 - show, 0 - hide
Storage for the Admin password

AppleShare IP 5.0 Print Server Attributes
Starting up, Running, Shutting down
Autolaunch print server

AppleShare IP 5.0 Mail Server Attributes

General Information
Minimum Free Space for Mail File
Maximum ServerLog File Size
Maximum Error Log File Size

Message for Delivery Expiration Hours
Maximum Message Size
Mail Store Volume Name
Bounce Server Name
Bounce Zone Name
Bounce DNS Name

Attribute in each user record
AppleTalk Forward Name
AppleTalk Forward Server
AppleTalk Forward Zone
Smtp ForwardFingerprint Length
MU Attributes - only mail server fills in this field

Question 5: Is the "copy volume" command still available?

Answer: Yes. It is now the "Duplicate Folder" command.

Question 6: Can I still compact access privileges?

Answer: No. It is not necessary. It is done automatically by the server software.

Question 7: What AppleShare IP services can I move to different servers?

Answer: All AppleShare IP services have to be installed on Apple Power Macintosh computers.

In addition, Web/File/FTP services use the same the Users & Groups datafile. To make updating Users & Groups easier, you should keep them on the same computer. But, if you have Apple Network Administrator's User & Group Manager - it can be used to keep multiple AppleShare IP server's User & Group datafiles current with the same information.

Print and Mail services can be installed on separate servers.

Question 8: What is the Users & Groups Data File backup?

Answer: It gets created when you launch Web/File server admin. This file is created the first time you launch Web/file server items, and is intended as a backup of Users & Groups data in case you want to go back to earlier versions of AppleShare. It does not get updated beyond creation, and it is documented in readme file.

Question 9: Where is serial number stored?

Answer: It is stored in the Users & Group data file.

Question 10: Can I move my Users & Groups data file to a new System folder after I do a Clean Install or move the server to a different computer?

Answer: Yes, you can move the data file. See the AppleShare IP 5.0 Admin Manual section Appendix D - Changing the Startup Disk for additional information.

Question 11: How can I delete an entire group of users, that is the Class of '98 group and all of its users?

Answer: There is no easy way to do this. The group can be eliminated simply enough but the flexibility of users belonging potentially to different groups makes it difficult to do batch user deletions. There are some workarounds described in the manual starting on page 100.

Question 12: In the ANAT (Apple Network Administrator Toolkit) Users and Groups Manager you can import groups, but you cannot turn on mail. In AppleShare IP users and groups you can turn on mail, but you cannot import groups. Any suggestions for doing both? Will the Santorini Server Manager do this?

Answer: Santorini's Server Manager does allow the importing of users and groups from text files. In addition, you can enable mail for these users after they have been imported.

Other AppleShare IP 5.0 FAQ's can be found in the following articles:

- Article 45035: **AppleShare IP 5.0: FTP Service (FAQ)**
- Article 45037: **AppleShare IP 5.0: AppleShare Client (FAQ)**
- Article 45038: **AppleShare IP 5.0: File Service (FAQ)**
- Article 45039: **AppleShare IP 5.0: MacDNS (FAQ)**
- Article 45040: **AppleShare IP 5.0: Mail Service (FAQ)**
- Article 45041: **AppleShare IP 5.0: Print Service (FAQ)**

TA25642_AppleShare_IP_Administration_FAQ.pdf

- Article 45042: **AppleShare IP 5.0: Web Service (FAQ)**

Published Date: Feb 20, 2012

AppleShare IP 5.0: AppleShare Client (FAQ)

This article contains frequently asked questions (FAQ) regarding AppleShare Client for AppleShare IP 5.0, with answers to those questions. Additional AppleShare IP FAQ's are listed at the bottom of this article.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. Is Open Transport required on the Macintosh client?
2. Can I force an AppleTalk connection to an AppleShare IP 5.0 server?
3. Does the AppleShare Client v3.7 resolve the performance problem of earlier clients such as System Software v.7.5.3 Finder's asynchronous calls?
4. Is there a Windows AppleTalk client included with AppleShare IP 5.0?
5. Can I use a remote server alias from a Mac OS client to connect to my AppleShare IP 5.0 server?

Question 1: Is Open Transport required on the Macintosh client?

Answer: Yes. Open Transport 1.1.2 is required.

Question 2: Can I force an AppleTalk connection to an AppleShare IP 5.0 server?

Answer: Yes. Hold down the "option" key as you select the server name in the Chooser window.

Question 3: Does the AppleShare Client v3.7 resolve the performance problem of earlier clients such as System Software v.7.5.3 Finder's asynchronous calls?

Answer: Yes. The ReadMe file for AppleShare Client v3.7 details all such software improvements.

Question 4: Is there a Windows AppleTalk client included with AppleShare IP 5.0?

Answer: Yes. AppleShare Client for Windows 3.x and COPSTalk for Windows 95 are included on the Companion CD.

Question 5: Can I use a remote server alias from a Mac OS client to connect to my AppleShare IP 5.0 server?

Answer: Yes. However, the following suggestions may help ensure that the connection works properly.

- Lock the remote server's alias using the Get Info window. This ensures that the connection information is stored correctly for dial-up procedure. If you don't do this, you may lose this information and may not be able to access the remote server properly.
- Make sure that the remote server connection is not timing out before it mounts on the computer desktop. You can change the timeout length by editing the 'DATB' 1410 resource in the AppleShare file located in the Extensions folder. Apple's ping timeout has been set to 20 seconds. The timeout is measured in ticks and currently set to 1200 ticks. 60 ticks = 1 second.

Note: You assume all risks involved in editing Mac OS resources. Apple, Inc. is not responsible for any problems that can occur.

Other AppleShare IP 5.0 FAQ's can be found in the following articles:

- Article 45035: **AppleShare IP 5.0: FTP Service (FAQ)**
- Article 45036: **AppleShare IP 5.0: Administration (FAQ)**
- Article 45038: **AppleShare IP 5.0: File Service (FAQ)**
- Article 45039: **AppleShare IP 5.0: MacDNS (FAQ)**
- Article 45040: **AppleShare IP 5.0: Mail Service (FAQ)**
- Article 45041: **AppleShare IP 5.0: Print Service (FAQ)**
- Article 45042: **AppleShare IP 5.0: Web Service (FAQ)**

Published Date: Feb 20, 2012

AppleShare IP 5.0: File Service (FAQ)

This article contains frequently asked questions (FAQ) regarding AppleShare IP 5.0 File Service, with answers to those questions. Additional AppleShare IP FAQ's are listed at the bottom of this article.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. Will the fastest network connection be selected between the client and AppleShare IP 5.0 server? Or will it always try TCP/IP when both TCP/IP and AppleTalk are available?
2. How does the AppleShare client know how to connect to the server using IP?
3. Does AppleShare IP 5.0 now support sharing volumes larger than 4GB?
4. Can I change the AppleShare server's port? I changed the PORT resources to a range of ports made available to me by the network administrator. When I try to log into the AppleShare server via the Chooser, a 'server not responding' message is displayed.
5. Will my Windows clients be able to use AFP over IP as well?

Question 1: Will the fastest network connection be selected between the client and AppleShare IP 5.0 server? Or will it always try TCP/IP when both TCP/IP and AppleTalk are available?

Answer: The AppleShare IP 5.0 file server will default to an AFP over TCP/IP connection unless not available. This is considered the fastest connection. The client can force an AppleTalk connection by using the method described in the AppleShare IP 5.0 AppleShare Client FAQ .

Question 2: How does the AppleShare client know how to connect to the server using IP?

Answer: The AppleShare IP 5.0 server sends its IP address to the client in an Appletalk packet when it's selected in the client's Chooser. The AppleShare client then knows to select the TCP/IP protocol for connection.

Question 3: Does AppleShare IP 5.0 now support sharing volumes larger than 4GB?

Answer: Yes. When used in conjunction with AppleShare Client v3.7 from the Mac OS client, server volume sizes are read correctly up to 4 GB. If the volume is actually larger than 4 GB, the volume size information shown will reflect the remaining available disk space.

For example, if the volume is 9GB and 5.5GB of disk space is used - the Mac OS client will see 3.5GB as available. In turn, if the volume is 10GB and 5.5GB of disk space is used - the Mac OS client will only see 4GB as available.

AppleShare Client prior to version 3.7 can only read up to 2GB for volume size. Same rule above applies for reading volume sizes.

Question 4: Can I change the AppleShare server's port? I changed the PORT resources to a range of ports made available to me by the network administrator. When I try to log into the AppleShare server via the Chooser, a 'server not responding' message is displayed.

Answer: The AppleShare client looks for the AppleTalk over TCP/IP port number to be 548. The AppleShare client won't be able to connect to the server if this is changed. There are two ways you can connect to an AppleShare server whose PORT resource has been changed.

1. Use the Chooser's "Server IP Address..." button to manually specify the IP address of the server, followed by a colon and the new port number. For example: www.yourdomain.com:xxxx

2. Change the default AppleShare port number from the Mac OS client by altering the 'DATB' resource (ID=1407) to match that of the server's new AFP port number.

Note: The client won't be able to connect to another AppleShare IP 5.0 server whose port number has not been altered, unless you manually connect using the Chooser's "Server IP Address..." button and explicitly specify the port number after the "colon" notation.

Question 5: Will my Windows clients be able to use AFP over IP as well?

Answer: Cooperative Printing Solutions (makers of COPSTalk) and Miramar have announced products update that will include support for AFP over TCP . Please contact the vendors for more information.

Other AppleShare IP 5.0 FAQ's can be found in the following articles:

- Article 45035: **AppleShare IP 5.0: FTP Service (FAQ)**
- Article 45036: **AppleShare IP 5.0: Administration (FAQ)**
- Article 45037: **AppleShare IP 5.0: AppleShare Client (FAQ)**
- Article 45039: **AppleShare IP 5.0: MacDNS (FAQ)**
- Article 45040: **AppleShare IP 5.0: Mail Service (FAQ)**
- Article 45041: **AppleShare IP 5.0: Print Service (FAQ)**
- Article 45042: **AppleShare IP 5.0: Web Service (FAQ)**

TA25644_AppleShare_IP_File_Service_FAQ.pdf

Published Date: Feb 20, 2012

AppleShare IP 5.0: MacDNS (FAQ)

This article contains frequently asked questions (FAQ) regarding MacDNS for AppleShare IP 5.0, with answers to those questions. Additional AppleShare IP FAQ's are listed at the bottom of this article.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

MacDNS

1. Should I set up my MacDNS server to point to itself for domain name services?
2. I want to set up an Intranet which will not have access to the Internet. Can this be done with MacDNS?
3. How do I set up an mx-record?

Miscellaneous

1. Can I still use ARA MultiPort Server on my AppleShare IP file server?
2. Can I use ARA Personal Server on my AppleShare IP 5.0 server?
3. What are the port numbers used by the various AppleShare IP services?
4. What is Multi-homing? Does it mean I can route different network segments through my AppleShare IP server?

MacDNS

Question 1: Should I set up my MacDNS server to point to itself for domain name services?

Answer: Yes. You should list the server's domain name in the Name Server Address field of the TCP/IP control panel. You can also include a second DNS server, such as your ISP's.

Question 2: I want to set up an Intranet which will not have access to the Internet. Can this be done with MacDNS?

Answer: Yes. Please see article 32004: **MacDNS Frequently Asked Questions (FAQ)** for details.

Question 3: How do I set up an mx-record?

Answer: Please see article 32004: **MacDNS Frequently Asked Questions (FAQ)** for details.

Miscellaneous

Question 1: Can I still use ARA MultiPort Server on my AppleShare IP file server?

Answer: If ARA MultiPort Server is installed on the server prior to installing AppleShare IP 5.0, Users who were configured properly can continue to call in; however, you can't change their access information, since these options are not in Users & Group data.

Question 2: Can I use ARA Personal Server on my AppleShare IP 5.0 server?

Answer: Yes. However, you must first install ARA Personal Server, set up your users for dial-in access through the Users & Groups control panel, and then install AppleShare IP. Once AppleShare IP is installed you cannot make additional changes to the User's dial-in access. An unsupported Apple utility is being developed to administer the user's ARA options after AppleShare IP 5.0 is installed.

Question 3: What are the port numbers used by the various AppleShare IP services?

Answer:

- AFP over TCP 548
- FTP 21
- HTTP 80
- POP3 110
- SMTP 25
- Domain Name Server 53

Question 4: What is Multi-homing? Does it mean I can route different network segments through my AppleShare IP server?

Answer: Multi-homing is the ability for one computer to be connected to up to 4 different and unique AppleTalk network segments. This is done by connecting to multiple network ports through built-in and expansion cards. It does not bridge or route those network segments into a Local Area Network (LAN). The network segments will not see each other by being connected to this one computer. The AppleShare IP AppleShare file server can use this feature.

Other AppleShare IP 5.0 FAQ's can be found in the following articles:

- Article 45035: **AppleShare IP 5.0: FTP Service (FAQ)**

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- Article 45036: **AppleShare IP 5.0: Administration (FAQ)**
- Article 45037: **AppleShare IP 5.0: AppleShare Client (FAQ)**
- Article 45038: **AppleShare IP 5.0: File Service (FAQ)**
- Article 45040: **AppleShare IP 5.0: Mail Service (FAQ)**
- Article 45041: **AppleShare IP 5.0: Print Service (FAQ)**
- Article 45042: **AppleShare IP 5.0: Web Service (FAQ)**

Published Date: Feb 20, 2012

AppleShare IP 5.0: Mail Service (FAQ)

This article contains frequently asked questions (FAQ) regarding Mail Service for AppleShare IP 5.0, with answers to those questions. Additional AppleShare IP FAQ's are listed at the bottom of this article.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. Can mail clients have accounts on the Mail server if the available network only supports AppleTalk?
2. Can the Mail Server support TCP/IP and AppleTalk clients simultaneously?
3. How can I troubleshoot mail delivery problems?
4. How can I adjust the number of days the mail server will attempt to deliver mail before returning it to sender?
5. Can a default SMTP mail server be set for mail forwarding instead of all hosts?
6. What is the size limit of enclosures the mail server can handle?
7. What do SMTP and POP connections mean?
8. How can I activate email for an entire group during the import, but keep the user name as the email address?
9. How do I set up an AppleShare IP mail server on separate Workgroup Servers using only one AppleShare IP serial number.
10. Does installing the mail portion of AppleShare IP on a separate computer turn off Mac OS File Sharing?

Question 1: Can mail clients have accounts on the Mail server if the available network only supports AppleTalk?

Answer: Yes. The bundled mail server can support AppleTalk clients. The Claris Emailer application has to be set for ClarisOffice service. The client will then select the Mail Server over AppleTalk.

Question 2: Can the Mail Server support TCP/IP and AppleTalk clients simultaneously?

Answer: Yes. The client software will have to be set up according to the protocol used. Claris Emailer from the client side can be used for AppleTalk access through the ClarisOffice service.

Question 3: How can I troubleshoot mail delivery problems?

Answer: Check the suggestions below.

- Confirm that your network's router or Internet gateway allows incoming and/or outgoing SMTP mail delivery.
- Confirm that you are setting up your mx record for recipient host correctly.
- Confirm that port 25 for SMTP connections is enabled on the receiving mail server.

Question 4: How can I adjust the number of days the mail server will attempt to deliver mail before returning it to sender?

Answer: You can change the number of hours after which the Mail Server stops trying to deliver a mail message by following the steps below. By default it is set to 72 hours.

1. Open the Mail Admin program.
2. Choose Mail Server Settings from the Mail Admin program's Server menu
3. Choose Mail Routing from the pop-up menu.
4. Type a new number in the Current text box.
5. Click Save.

Question 5: Can a default SMTP mail server be set for mail forwarding instead of all hosts?

Answer: Mail forwarding can be set for either a single User or an unknown mail server outside your network.

Question 6: What is the size limit of enclosures the mail server can handle?

Answer: The AppleShare IP 5.0 mail server does not limit the file size it sends or receives. The mail administrator can set the amount of hard disk space used by the mail database.

Question 7: What do SMTP and POP connections mean?

Answer:

- SMTP (Simple Mail Transfer Protocol) is used by the mail client to send messages to a SMTP server as well as from one SMTP server to another SMTP server.
- POP3 (Post Office Protocol) is used from a client to receive mail on the mail server.

Question 8: How can I activate email for an entire group during the import, but keep the user name as the email address?

Answer: Use a valid Internet name as the user account name. The Internet field can by left blank if the user name is a valid Internet name, that is, no spaces between first and last name. Use underlines or dots instead of spaces. The manual does not clearly indicate this, but it does list valid Internet alias characters, see page 87. Some email clients will allow spaces but you have to put quotes around the name, other email clients will not allow this.

Question 9: How do I set up an AppleShare IP mail server on separate Workgroup Servers using only one AppleShare IP serial number.

Answer: Please refer to article 22081: "**AppleShare IP 5.0 and Mail Forwarding"** for information on this question.

Question 10: Does installing the mail portion of AppleShare IP on a separate computer turn off Mac OS File Sharing?

Answer: The separate mail server has to use the AppleShare IP Users & Groups file and registry. These items are not compatible with Personal File Sharing. Therefore, you cannot use Personal File Sharing on a standalone AppleShare IP Mail server.

Other AppleShare IP 5.0 FAQ's can be found in the following articles:

- Article 45035: **AppleShare IP 5.0: FTP Service (FAQ)**
- Article 45036: **AppleShare IP 5.0: Administration (FAQ)**
- Article 45037: **AppleShare IP 5.0: AppleShare Client (FAQ)**
- Article 45038: **AppleShare IP 5.0: File Service (FAQ)**
- Article 45039: **AppleShare IP 5.0: MacDNS (FAQ)**
- Article 45041: **AppleShare IP 5.0: Print Service (FAQ)**
- Article 45042: **AppleShare IP 5.0: Web Service (FAQ)**

Published Date: Feb 20, 2012

AppleShare IP 5.0: Web Service (FAQ)

This article contains frequently asked questions (FAQ) regarding Web Service for AppleShare IP 5.0, with answers to those questions. Additional AppleShare IP FAQ's are listed at the bottom of this article.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. Are there any common CGI's that are not compatible with ASIP?
2. Does the AppleShare IP 5.0 web server have Web* API plug-in support?
3. How many simultaneous connections can this Web server handle?
4. Does guest access need to be on to allow Web Access (if you want access to a public area of the Web folder)?

Question 1: Are there any common CGI's that are not compatible with ASIP?

Answer: Due to the huge number of publicly available CGI's, Apple cannot test them for compatibility. Please contact CGIdeveloper's for this information. If they are written to the Web* CGI API, they should be compatible.

Question 2: Does the AppleShare IP 5.0 web server have Web* API plug-in support?

Answer: No, AppleShare IP 5.0 does not currently have Web*API support.

Question 3: How many simultaneous connections can this Web server handle?

Answer: The number of simultaneous connections are limited by your physical network connection and amount of RAM installed on your AppleShare IP 5.0 server.

Question 4: Does guest access need to be on to allow Web Access (if you want access to a public area of the Web folder)?

Answer: No. But if guest access is not enabled, you will need to provide at least one valid AppleShare IP account that has privileges to the Web folder. See page 95 in the manual for more detail.

Other AppleShare IP 5.0 FAQ's can be found in the following articles:

- Article 45035: **AppleShare IP 5.0: FTP Service (FAQ)**
- Article 45036: **AppleShare IP 5.0: Administration (FAQ)**
- Article 45037: **AppleShare IP 5.0: AppleShare Client (FAQ)**
- Article 45038: **AppleShare IP 5.0: File Service (FAQ)**
- Article 45039: **AppleShare IP 5.0: MacDNS (FAQ)**
- Article 45040: **AppleShare IP 5.0: Mail Service (FAQ)**
- Article 45041: **AppleShare IP 5.0: Print Service (FAQ)**

Published Date: Feb 20, 2012

AppleShare IP 5.0: Tips Using the Web Server Automatic Directory Listing

This article contains tips and additional information about using the Automatic Directory Listing feature in the AppleShare IP 5.0 Web Server.
This article has been archived and is no longer updated by Apple.
The Web Server supports Automatic Directory Listing. With Automatic Directory Listing, if you browse a URL that is a folder, the Web & File Server automatically produces a clickable directory listing of the contents of the folder. However you must have the appropriate access privileges.

You can override the automatic directory listing by placing a file named *index.html* in the folder. If a file named *index.html* resides in the folder when a URL for that folder is specified, the Web & File Server displays the contents of *index.html* instead of the clickable directory listing.

There is no way to specify another default document named something else, such as default.html, instead of index.html.

Accessing a Folder on the Sever that is not the Specified Web Folder

The information in this section pertains to accessing a folder that is not the specified Web Folder, such as a folder within the Web Folder.

- If the *index.html* file, or the file specified as the default home page, is removed from the Web Folder or renamed, then an error stating "-404 error File Not Found" appears. The AppleShare Web Server does not provide an Automatic Directory Listing of the selected Web Folder, only other folders.

- If you choose another folder to be the Web Folder, you have to choose another file to be the default home page; the AppleShare Web Server will not let you change the web folder without changing the home page file.

- Folders in the Web Folder that are accessed using the *index.html* listing should not contain spaces. However, when using the Web Server Automatic Directory Listing, non-standard HTML characters are translated into proper links, which can be clicked on.

- Administrators can see the Short Name that Microsoft Window users will see when they connect to the server, standard MS Windows 8.3 file names, by choosing Disks & Share Points from the Server menu then selecting one of the disks/folders/files or share point and choosing Short Name from the Server menu. When a file is copied to a Windows client, the server changes the name to the name shown by Short Name.

Published Date: Feb 20, 2012

Mac OS 8 and 9: Personal File Sharing User Limits

This article describes limitations of Personal File Sharing for Mac OS 8 and Mac OS 9.
This article has been archived and is no longer updated by Apple.
In Mac OS 8 and Mac OS 9, personal file sharing does not have a fixed user limit. Available memory and hard drive space are the only functional restrictions. Thousands of different users can be created using the Users & Groups control panel in Mac OS 8 and Mac OS 9.

However, there are certain other restrictions on personal file sharing.

Personal File Sharing Restrictions

- No more than 10 users at one time can be connected.
- No more than 10 volumes can be shared.
- No more than 10 folders can be shared.
- Cannot transfer a file that is larger than 2 GB.

If Mac OS 8 or Mac OS 9 personal file sharing does not fit your file sharing requirements, look at a dedicated solution such as Mac OS X Server.

Mac OS X client (all versions) can transfer files larger than 2 GB when connected to a server that supports version 3.0 of the AppleTalk Filing Protocol (AFP), such as Mac OS X Server 10.1.

Published Date: Feb 20, 2012

PowerBook: Proper Method for Exchanging Expansion Bay Modules

This article provides information on how to properly exchange expansion bay devices in various PowerBook models.
This article has been archived and is no longer updated by Apple.
In all PowerBook models that have expansion bay capability, you need to first unmount and remove any media inserted into the expansion bay module. Failure to do so could cause loss of data. You should not remove the expansion bay module while the in-use light for the device is on or flashing.

So for example, with a floppy module you would need to quit all applications and close all files that are located on the floppy disk. Then eject the floppy disk and then proceed with removing the expansion module.

PowerBook 5300 series and 190 series

Apple suggests that the computer be turned off before removing an expansion bay module, although no damage should occur if the computer is asleep and the module follows Apple specification guidelines.

PowerBook 1400 series
Modules can be switched or removed while the PowerBook is turned off or in sleep mode.

Note: The PowerBook 1400 expansion bay modules are not interchangeable with other PowerBook computers.

PowerBook 3400 series
Modules can be switched or removed while the PowerBook is turned on, in sleep, or shut down. Do not switch modules while the computer is starting up, this could cause lost of data and may have unexpected results.

PowerBook G3

Modules can be switched or removed while the PowerBook is turned on, asleep, or shut down. Do not switch modules while the computer is starting up; this could cause loss of data and may have unexpected results.

PowerBook G3 Series

Storage devices for the expansion bays are hot-swappable. There is no need to turn the system off or put it into sleep mode to exchange storage devices such as CD-ROM, DVD-ROM, Zip, or floppy disk drives. However, you must unmount any media from the storage device before commencing a hot swap.

PowerBook G3 Series (Bronze keyboard)

Storage devices for the expansion bays are hot-swappable. There is no need to turn the system off or put it into sleep mode to exchange storage devices such as CD-ROM, DVD-ROM, Zip, or floppy disk drives. However, you must unmount any media from the storage device before commencing a hot swap.

PowerBook G3 Series expansion bay devices are not compatible with the PowerBook G3 Series (Bronze keyboard) as the expansion bay has a different height specification.

PowerBook (FireWire)

Storage devices for the expansion bays are hot-swappable. There is no need to turn the system off or put it into sleep mode to exchange storage devices such as CD-ROM, DVD-ROM, Zip, or floppy disk drives. However, you must unmount any media from the storage device before commencing a hot swap.

Some PowerBook G3 Series (Bronze keyboard) expansion bay modules may not be compatible with the PowerBook (FireWire) although they may physically fit. Check with the vendor of the device for compatibility.

Non-Apple Expansion Modules

For third-party, non-Apple branded, expansion modules check with the vendor of the module to see if any special precautions should be followed.

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, read article 24604: "**PowerBook G3, G3 Series: Identifying Different Versions**"

Published Date: Feb 20, 2012

QuickTime 3: Product Description and Specifications

This article contains the Quicktime 3 product description and specifications
This article has been archived and is no longer updated by Apple.

Features

- Pervasive playback standard for CD-ROM and Internet content. With more than 2,500 leading title developers already licensing QuickTime, and over 100 new QuickTime enhanced titles introduced each month, QuickTime remains as the standard format for CD-ROM and Internet content delivery.
- Support for multiple data types. QuickTime enables developers to provide customers such unique features as multiple-language text tracks. Data types supported include video, sound, graphics, animation, text, music/MIDI, MPEG, sprite, 3D, and VR.
- Multiplatform playback. Develop once and deliver on many platforms. Avoid time-consuming platform conversion tasks and reach millions of Macintosh and Windows users. Multiplatform media file format allows easy production of "hybrid" disks.
- Built-in synchronization. QuickTime makes it easy to synchronize sound, video, music, and other data tracks to a common time base.

Description

QuickTime is Apple Computer's industry standard software architecture for creating, editing, and publishing digital media. QuickTime is at the foundation of some of the industry's most respected digital media software tools, including Adobe After Effects, Avid Cinema, Adobe Premiere, Radius Edit, and Macromedia's much-anticipated Final Cut.

QuickTime also provides the most reliable way to deliver digital media to a variety of computer platforms. That's why top computer entertainment companies like Broderbund, Voyager, Cyan, Macromedia, Pixar, Microsoft, Disney, and CNN all use QuickTime to deliver digital video. QuickTime provides the high level of performance, compatibility, and quality that these companies demand to deliver their products.

The QuickTime movie file format enables seamless exchange of digital media between nearly all digital media tools. QuickTime movie files are used in a wide range of situations ranging from professional video editing stations from Scitex and Media 100 to over half of the video found on the internet.

For the first time with QuickTime 3, the full range of QuickTime media creation, editing, and publishing functionality is now available on the Windows 95 and Windows NT platforms, in addition to Mac OS. QuickTime 3 now provides unprecedented power and flexibility for QuickTime customers on all the major desktop computer platforms.

QuickTime 3 contains literally dozens of significant new capabilities to assist media authors and application developers to work more effectively with QuickTime.

QuickTime features major enhancements to its media interchange architecture to support full interoperability with a wider range of professional media file formats, including the AVI, OpenDML, OMF, and DVCam formats.

QuickTime 3 introduces rich support for DVCam media streams to the base architecture. The release provides software-only or hardware-accelerated playback, editing, and creation of DVCam streams in any QuickTime application.

QuickTime also integrates flexible real-time effects and transitions capabilities. QuickTime now standardizes access to software-based and hardware-accelerated effects features within an open, scalable, and extensible architecture. Read on for more information on how the advanced architecture and rich feature set QuickTime 3 offers benefit both media content authors and application developers.

Component Architecture

QuickTime isn't just one single piece of software, QuickTime is a collection of over 175 different software components that work seamlessly. These software components are divided into over 20 different categories, with each one providing a particular service. This component architecture allows QuickTime to be continuously updated to support new technologies by adding new components or enhancing existing ones. Developers, too can add their own software components, allowing their technology to take advantage of all the benefits of QuickTime integration.

Hardware

One of the key features of the QuickTime software architecture is that it provides an abstraction layer that enables applications to be created with no dependencies on the underlying media hardware. Because computing power increases so rapidly, a decompression algorithm that required an add-in hardware board to provide full motion playback two years ago can now be completely implemented in software. Without QuickTime, applications would ordinarily interact directly with the media hardware, resulting in less robust, less compatible application behavior.

Because QuickTime provides a well defined hardware abstraction layer, applications are isolated from the underlying media technologies. This abstraction means that applications are always ready to take advantage of the latest hardware technology advances such as MMX and multiprocessing.

Platforms

Digital media is created on a variety of computing platforms for delivery on an even wider variety of platforms. QuickTime has long supported the

ability to deliver digital media to a range of computing platforms. QuickTime 3 adds the ability to capture, edit, and compress digital media on the same range of platforms. This strong multi-platform support gives developers and customers a choice in both their development and delivery platforms, while maintaining the consistent and reliable results that QuickTime has always provided.

Media Types

While most digital media content creation focuses on sound and video, there are many other kinds of media that are used on a daily basis. The QuickTime architecture is capable of handling any time based media, going well beyond just sound and video. By providing a unified architecture for working with all time based media, QuickTime simplifies the creation and delivery of all kinds of media. By standardizing how important media types such as text, time code, MIDI, and 3D are combined with video and sound, QuickTime enables applications easily integrate all kinds of media to create compelling media presentations.

Digital Capture Media Types

In addition to the ability to play-back and edit digital media, QuickTime contains a complete architecture for digital media capture. Beyond providing services for the synchronized streaming capture of digital video and audio in a variety of formats from a wide range of sources, QuickTime also provides standard user interface elements which enable applications to easily integrate capture support. QuickTime's digital capture solutions are flexible enough to be used both to capture broadcast quality video and for video conferencing applications. And QuickTime supports a variety of media types for capture including MIDI and text, making it easy to synchronize the acquisition of almost any kind of media.

Digital Media File Formats

Professionals who create digital media every day work with a variety of media file formats. Different kinds of media are stored in different kinds of files. QuickTime provides a solution to this mixed media chaos in two ways. First, the QuickTime software architecture enables QuickTime based applications to easily work with a wide variety of industry standard media file formats. Second, the QuickTime movie file format provides a powerful container with the ability to contain nearly any kind of digital media. The QuickTime movie file format is so well suited to professional media storage, that Silicon Graphics has announced their intention to standardize on QuickTime movie files for all their sound and video storage.

In addition to complete support for the QuickTime Movie format, QuickTime supports a long list of digital media file formats. The QuickTime software architecture allows support for new file formats and these may be plugged in at any time as they emerge.

Compressed Data Formats

In the digital video and audio markets, a variety of different compression technologies are used. Each technology was created to meet the need of a particular market. For example, Cinepak was created to deliver video from CD-ROMs, Motion JPEG Format A to edit broadcast quality video, and ClearVideo to deliver video on the internet. During the course of creating and delivering a digital media production, several different formats may be used.

The QuickTime software architecture enables almost any compression technology to be integrated with QuickTime. Creators of digital media content have the freedom to choose the best compression format for the job.

Export Formats

Just as it is important to be able to bring any digital media file formats into QuickTime, it is also important to be able to easily put media from QuickTime movie files into other standard media formats. QuickTime provides the basis for a great system for creating, editing, and delivering digital media. In some cases, the delivery platform for the digital content may not support QuickTime movie files directly, for example a DVCam video tape. In this case, it is necessary to be able to easily encode a QuickTime movie into the DVCam format. QuickTime has the built-in ability to export to a variety of standard digital media formats, and the extensibility to add support for other digital media formats as needed.

Component Architecture

- Image Decompressor
- Data Decompressor*
- Image Compressor
- Capture Channel
- Sound Decompressor
- Capture Interface Panel
- Sound Compressor
- Graphics Format Importer
- Data Handler
- File Previewer
- Media Handler
- Musical Instrument Provider
- Clock
- Software Music Synthesizer
- Image Transcoder
- Sound Mixer
- Movie Controller

- Interpolator
- Movie Importer
- Video Digitizer
- Movie Exporter
- Audio Digitizer

Hardware Abstraction

- Clock/Timers
- Sound Mixing
- Sound Output
- Digital Media Capture
- Image Compression
- Media Storage
- Image Compositing
- MIDI Synthesis
- Sound Compression
- 3D Rendering

Media Types

- Video
- MIDI
- Sound
- Sprite/Animation
- Text
- Tween
- Timecode
- MPEG
- 3D
- VR

Compressed Data Formats

Video Formats

- JPEG
- Animation
- Motion JPEG Format A
- Apple Graphics
- Motion JPEG Format B
- Cinepak
- AVR (Avid Video Resolution)*
- Windows RLE*
- OpenDML Motion JPEG*
- GIF
- YUV 4:2:2
- Photoshop
- YUV 4:1:1
- Vector Animation*
- RGB
- DVCam*
- ARGB
- H.263*
- Windows Uncompressed*
- MPEG
- Apple Video
- CCIR 601

Supported through additional third party extensions:

- ClearVideo*
- Indeo Video Interactive *
- TrueMotion
- H.261*
- Indeo 3.2

Audio Formats

- PCM
- 32-bit IEEE Floating Point*
- 64-bit IEEE Floating Point*
- IMA ADPCM
- MACE 3:1
- uLaw
- MACE 6:1
- DVCam*

Supported through additional third party extensions:

- G.723*
- GSM*
- G.728*

Digital Media File Formats

Digital Video

- AVI*
- MPEG
- OpenDML*
- DVCam*
- OMF*

Digital Audio

- AIFF/AIFC
- AU
- Wave
- MPEG Layer 2
- Sound Designer II*

Still Image

- QuickTime Image File
- JPEG/JFIF
- Photoshop
- SGI
- QuickDraw Picture
- MacPaint
- BMP*
- PNG*
- GIF

Animation

- FLC/FLI*
- 3DMF
- PICS

MIDI

- General MIDI
- Karaoke MIDI

Digital Capture Media Types

- Video
- Sound
- DVCam*
- MIDI
- Text
- Timecode

Export File Formats

- AIFF/AIFC
- Picture
- Wave
- Text
- MIDI
- DVCam*
- QuickDraw

Platforms

- Mac OS System 7
- Mac OS System 8
- Windows 95
- Windows NT 4.0*

Note: * New in QuickTime 3

Availability

For information on licensing QuickTime for use in your products, please contact Apple Software Licensing at 1-512-919-2645, or e-mail: sw.license@apple.com.

For additional information and late-breaking news, visit our website at:

http://quicktime.apple.com

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Published Date: Feb 20, 2012

Connect To: How to Change the Default URL

This article tells how to change the default URL used by the Connect To applet, and how to create your own Connect To applet using AppleScript.

This article has been archived and is no longer updated by Apple.
Connect To is an AppleScript applet that has a custom icon and whose file type and creator codes have been changed. If you want Connect To to use a different default URL, you can modify the applet or create your own applet. Each is explained below.

Creating Your Own Applet

The functionality of Connect To has been integrated into the Network Browser application program included with Mac OS 9. If you do not currently have Mac OS 9, or would simply like to create your own Connect To applet, please see article 60599: "**Mac OS 9: Where is 'Connect To...'**"

Modifying the Connect To Applet

You can modify the Connect To applet by first setting its file type and creator codes to match those of a standard AppleScript applet, and then modifying the applet with an AppleScript editor. Here is the procedure:

1. Make a copy of the Connect To applet.

2. Using a resource editor, change the file type and creator codes to 'APPL' and 'aplt', respectively. If you wish to restore these original values later, record them now. Changing the codes does not alter the applet's functionality; it merely makes the applet editable by an AppleScript editor.

3. Drop the resulting file onto the Script Editor application for editing. (Mac OS 8 and 9 install the Script Editor by default in the Apple Extras folder.)

4. Substitute another URL for the one shown in the line "set defaultURL to 'http://www.apple.com'."

5. Save the new file using Save As. The resulting applet does not have a custom icon, but this does not affect its operation.

The original file type and creator codes can be restored to their previous values, though it is not necessary to do so.

Note: Apple does not provide technical assistance in the use of ResEdit or other such resource editing utilities.

You can make as many modified copies of Connect To as you like, but this is not the most efficient way to open frequently used URLs. Most Web browsers and ftp utilities allow you to save bookmark files to any location on your hard disk. Bookmark files are typically smaller, easier to change, and take you directly to the desired Internet location.

Published Date: Feb 20, 2012

Computer Equipment: Turning It Off Versus Leaving It On

This document raises points to consider when deciding if you should leave computer equipment on or turn it off when it is not in use. Generally, you should turn off equipment if it is going to be idle for eight hours or more. For idle periods of less than eight hours, use Energy Saver software to optimize energy use.
This article has been archived and is no longer updated by Apple.
Here are three major points in the discussion regarding whether to leave computer equipment running continuously, followed by a conclusion.

Energy Usage

Equipment that is left running continuously uses a certain amount of energy, which is a concern for some people. The Energy Star program, along with Apple's energy-saving software, addresses this issue.

The United States Environmental Protection Agency (EPA) and Natural Resources Canada Energy StarÂ® program is a voluntary partnership with office product equipment manufacturers to promote products that exceed guidelines for energy efficiency. Reducing energy consumption of office products saves money and reduces pollution by eliminating wasted energy. As an Energy Star partner, Apple is committed to the development of energy efficient products and many Apple products meet Energy Star guidelines.

In addition to products that are Energy Star compliant, Mac OS includes software that you can use to further cut down on energy usage, including the Energy Saver control panel (Mac OS 8 and 9) and the Energy Saver pane of System Preferences (Mac OS X).

Stress on Equipment

Some people believe that turning equipment on and off (for example, once each day) can, over a long period, put stress on equipment. Therefore, they argue that equipment should be left on, whether in energy-saving sleep mode or not. Others believe that leaving equipment turned on makes it more vulnerable to power fluctuations, which could put stress on equipment. Therefore, they believe that equipment should be turned off when not in use.

Lightning, Spikes, and Surges

Some people feel that the risk of damage to equipment from lightning strikes, power spikes, and power surges is great enough to warrant turning off equipment whenever it is not in use. Others, who may rarely (or never) experience such phenomena, give more weight to the benefits of leaving equipment turned on.

Conclusion

With equipment that is Energy Star compliant and in areas where there are no issues with the quality or dependability of power, you may want to consider turning off equipment if it is going to be idle for eight hours or more. For idle periods of less than eight hours, use Energy Saver software to optimize energy usage.

For more information on energy saving and the Energy Star program, refer to the following documents:

Document 12346: "**Energy Star: Description**"
Document 12345: "**Energy Star: Registered Apple Products**"
Document 18127: "**Energy Saving Control Panels: Description & Compatibility**"

Published Date: Feb 20, 2012

AppleShare IP Third Party Server Management Products

This article provides information about software and hardware products that work with AppleShare IP to provide enhanced or additional capabilities.
This article has been archived and is no longer updated by Apple.

AppleShare File Server (AFP) Server Management

AFP Logger is an application which works with your AppleShare IP file server to log accesses to that server. Items logged include the name and address of users logging into the file server, bytes transferred, time connected, and files opened and deleted by those users. AFP Logger also provides a real-time display summarizing overall access to the file server. Open Door Networks, Inc.

Assimilator is a powerful Macintosh lab management tool designed for situations where you wish to make a large number of Macintoshes look virtually identical. Assimilator periodically restores the content of the local hard disks from a source image on an AppleShare file server. Stairways Software.

Disk Quota For years, AppleShare administrators have yearned for a system of automatically enforcing limits on the amount of disk space users can have on a server. Now, with Disk Quota, an administrator can easily set up such limits for each user on each AppleShare server, without having to continually monitor disk usage and notify users when they have exceeded their limits. Santorini consulting & design, inc.

IPNetMonitor provides a set of ten integrated Internet tools which allow Macintosh users to monitor their connection to the Internet. With IPNetMonitor, you can see how the Internet is working, monitor the flow of data to and from your computer, and trace the route by which the data is flowing. This gives the user the information to both optimize internet service and diagnose problems. The tools include Test Connectivity, Trace Route, Name Server Lookup, Who Is, Finger, Monitor, TCP Info, Connection List, Address Scan, and Subnet Calculator. Check the Sustainable Softworks web site for more information or to download an evaluation copy.

John's Lab Pak is a collection of small applications written by John Ostrowick, to provide a complete mac lab solution. Includes tools for remote manipulation of macs, the addition and removal of users, plus a login system. Freeware, Labtools. Some parts still under development.

MacAdministrator works on your network to provide a raft of administration, auditing and control features including logon, protection, printing control and software distribution.Hi Resolution

OT Advanced Tuner allows you to optimize TCP/IP network performance under Macintosh Open Transport by tuning internal TCP/IP parameters to match your network environment. The Tuner supports over 30 adjustable parameters including the TCP Window Size, Time Out intervals, Maximum Segment Size, and MTU. Check the Sustainable Softworks web site for more information or to download an evaluation copy.

OTSessionWatcher is a TCP network and application debugging tool. It allows you to examine the data transmitted through Open Transport TCP streams such as those used in AppleShare IP connections as well as those used by web browsers and FTP clients. Stairways Software.

PageSentry is the "virtual assistant" that constantly watches all of your servers and lets you know if any critical service fails. Use PageSentry to monitor all types of servers, including AppleShare, Web, Mail, FTP and DNS. The key to PageSentry's reliability is that it tests your servers by making actual client requests of the server. Visit the Maxum Development Web site for more information and a free demo copy. Maxum Development Corporation

Server Manager is comprehensive management software for AppleShare servers. With Server Manager you can manage your servers remotely, from any Macintosh, anywhere, manage multiple servers simultaneously, share data between them, build related server reports and restrict server access and disconnect idle users. Santorini consulting &design, inc.

Server Tools is a comprehensive suite of ten utilities that allows you to more effectively and efficiently manage your servers, including AppleShare servers, mail servers, database servers, or any other type of server. With Server Tools, you can detect and avert problems, improve security, manage disk space, and maintain audit trails. Santorini consulting & design, inc.

Server Tracker is the only product that allows you to track changes to your AppleShare servers' folders and files. Server Tracker records which users open, delete, rename or move folders and files, along with the time at which these events occurred. Santorini consulting &design, inc.

Published Date: Feb 20, 2012

AppleShare IP Third Party TCP/IP Router Products

This article provides information about software and hardware products that work with AppleShare IP to provide enhanced or additional capabilities.
This article has been archived and is no longer updated by Apple.

TCP/IP Routers

IPNetRouter provides IP multihoming and routing under Macintosh Open Transport. With IPNetRouter, you can use multiple IP interfaces at the same time (such as Ethernet and OT/PPP for example), and specify additional routes for communicating with more than one IP gateway. The built-in IP Masquerading feature allows an entire network to simultaneously share a single Internet connection and end user account. IPNetRouter's OT native design offers superior performance with greatly reduced cost and complexity. Check the Sustainable Softworks web site for more information or to download an evaluation copy.

The Vicomsoft Internet Gateway allows an entire network of users to simultaneously share Internet access via one Internet account, one access device (including modem/ ISDN/ cable-modem/ ADSL/ T1/ existing router) and one phone or ISDN line.

The Internet Gateway is a flexible, fully featured, easy to configure TCP/IP software router that incorporates a DHCP server for easy client set-up, a full PPP server for dial-in access with support for multiple users, and a firewall to protect your LAN from the Internet. CyberNot filter support can prevent access to inappropriate sites, and protocol blocking enables restrictions to be made on the type of Internet traffic allowable. Can be used to interconnect different TCP/IP networks, both local area and wide area--such as head and branch offices--with full support for dial-on-demand and leased line networking, and now supports Vicomsoft Multihosting. Check the Vicomsoft web site for an evaluation copy. copy.Vicomsoft

Vicomsoft SoftRouter is a fully featured, easy to set up TCP/IP software router. It routes traffic between ethernet, token ring, MacIP, leased line and dial-up TCP/IP networks, with the added feature of true IP Multi-hosting.

Vicomsoft Multi-hosting allows Web Masters to run multiple Web servers (domain names) on a single Mac OS computer. SoftRouter works with any Web server and is transparent to all web browsers. SoftRouter can be used to interconnect different TCP/IP networks, both local area and wide area, with full support for dial-on-demand networking. A full PPP Server is incorporated supporting dial-in users. Check here for a live example of Multi-hosting. Check the Vicomsoft web site for an evaluation copy of SoftRouter.Vicomsoft

Published Date: Oct 7, 2016

Apple Hardware Test for iBook version 1.2.1, Read Me

Apple Hardware Test for iBook version 1.2.1 is distributed only with the Apple iBook, September, 2001; it will not work with any other computer.

This article has been archived and is no longer updated by Apple.

About Apple Hardware Test

Apple Hardware Test is a diagnostic tool for detecting problems with your computer's internal hardware components such as the logic board, memory, modem, video RAM, and Apple's AirPort card. It does not check externally connected hardware components such as USB drives or FireWire devices; it does not check non-Apple devices such as PCI cards from other vendors.

Before using Apple Hardware Test, disconnect external devices (excluding Apple keyboard, mouse, display, and speakers), and remove any non-Apple cards that were not included in the original shipping configuration of your system.

Apple Hardware Test does not check your computer for problems with the Operating System (OS) or other software related problems such as application or extension conflicts.

To use the Apple Hardware Test CD, restart your computer while holding down the C key until the "Loading..." icon appears, then you may release the C key. Loading will take approximately 45 seconds. Apple Hardware Test's main screen will appear. Follow the on-screen instructions and recommendations.

Apple Hardware Test for iBook version 1.2.1 is distributed only with the Apple iBook; and will not work with any other computer.

If you suspect your computer has a hardware problem, the information provided by Apple Hardware Test can help identify the problem. If Apple Hardware Test detects a problem, an error code will be displayed. Please make a note of the error code before pursuing support options. If no hardware failure is detected, the problem may be software relate

Known issues

Apple Hardware Test can not be used when a mouse is directly connected to the USB port on the iBook. Please connect the mouse to a USB keyboard if available, or use the trackpad instead.

AppleCare Recommendations

Apple Hardware Test is one of several tools and procedures you can use when your Macintosh is having trouble. Here are some steps you can follow to help resolve problems. Please back up your data before performing any of these steps.

1. Turn the computer off and on.
You can often eliminate problems by selecting the "Shut Down" option from the Special menu to fully shut down the CPU, then restarting your system.

2. Check cables, peripherals, and user controls.
Shut down your computer. Then disconnect and reconnect all cables. Disconnect all peripherals (such as printers, scanners, cameras and external mass storage devices) to see if they are causing conflicts with your system. Adjust user controls on your monitors and other peripherals to see if this helps.

3. Start up using Mac OS 9 rather than Mac OS X.
If you have been using Mac OS X at the time of trouble, and Mac OS 9 is also installed on the computer, select the "System Preferences..." option from the Apple menu, and use the Startup Disk preference panel to select starting up from a Mac OS 9 System folder. Then select the "Restart" option from the Apple menu. After following the steps below to solve the problem, you may later wish to use the "Startup Disk" control panel from Mac OS 9, to reselect starting from Mac OS X.

4. Turn off system extensions.
Restart your system while holding down the Shift key until the following message appears: "Extensions disabled." Then release the key. This turns off system extensions that often cause conflicts. If this solves your problem, use the Extensions Manager to turn off extensions that may be causing the problem.

5. Rebuild the desktop.
Restart your system while holding down the Option and Command keys. Click OK when asked if you want to rebuild the desktop.

6. Start up from the system CD that shipped with your computer.
Start your system from the system CD by holding down the C key until you see the smiling Mac face. If the system works properly when started (booted) from the system CD, you can generally assume that the problem relates to the software which is installed on your computer.

7. Start up from the Apple Hardware Test CD, and run the Quick and Extended Tests.
If the system does not work properly when started (booted) from a known-good system CD (Step 6), you can generally assume that the problem relates to your computer's hardware components. The Apple Hardware Test CD can often be used to start up your computer even if it will not boot into the Mac OS. If Apple Hardware Test passes both the Quick Test and the Extended Test, the problem may be software related. If Apple Hardware Test detects a problem, make a note of the error code and contact Apple (Step 10).

8. Refer to Mac OS Help Center and the Internet for assistance.
The Mac OS help system under the Help menu in the Finder includes a wealth of technical information. Apple's Knowledge Base, and other resources for technical help and support are available 24 hours a day at www.apple.com/support.

9. Re-install Mac OS.
In many cases, a clean installation of the Mac OS will fix recurring problems. Back up any data before reinstalling. Please follow the instructions in your user manual or on your Restore CD to reinstall the Mac OS.

10. Contact Apple Service and Support for assistance.
If these steps don't help resolve the problem, please review the service and support material that accompanied your computer for information on how to contact AppleCare for further assistance. Apple reserves the right to change telephone hours at any time.

Published Date: Feb 20, 2012

iDVD: Can I Make Changes to a DVD-R Disc?

This article explains how you cannot make changes to a DVD-R disc.
This article has been archived and is no longer updated by Apple.
Note: This document comes from the Mac Online Help document. It and many other helpful tips are available on your computer by choosing Mac Online Help from the Help menu.

When you are finished with your iDVD project, you can write it to a blank DVD-R disc.

Only write a disc when you are sure that you are finished with your project.

Once you write to a DVD-R disc, it cannot be overwritten. If you change anything in your iDVD project, you have to write it to a new, blank DVD-R disc.

To see motion menus and buttons in your finished discs, click the Motion button.

Click the Burn button twice. When prompted, insert a blank disc into the drive.

The time that it takes for the disc to be created depends on the amount of video on the disc and the type of computer. On average, it takes two to three minutes to encode and write one minute of video to the disc.

Published Date: Feb 20, 2012

iDVD: How to Determine TV Safe Area

This article discusses how to determine TV safe areas on iDVD.
This article has been archived and is no longer updated by Apple.
Note: This document comes from the Mac Online Help document. It and many other helpful tips are available on your computer by choosing Mac Online Help from the Help menu.

The outer edge of your DVD menus and movies may not be visible on certain television sets.

For this reason, iDVD places buttons inside this outer edge (an area known as the "TV safe area").

To see the TV safe area for your project, choose Show TV safe area from the Advanced menu. A shaded area appears on the screen. The area that is not shaded is the TV safe area.

The TV safe area varies from television to television. The TV safe area displayed in the iDVD window is only an approximation.

Published Date: Feb 20, 2012

iDVD: How to Create NTSC and PAL format DVD discs

This article explains how to Create NTSC and PAL format DVD discs.
This article has been archived and is no longer updated by Apple.
Note: This document comes from the Mac Online Help document. It and many other helpful tips are available on your computer by choosing Mac Online Help from the Help menu.

You use iDVD to create DVD discs with video that is in either NTSC or PAL format. You cannot create a disc that has both formats.

NTSC format (29.97 frames per second) is used in the United States, Canada and Japan.

PAL format (25 frames per second) is used in most European countries.

By default, iDVD is set to the correct format for your region.

To change the video format for a new iDVD project:

Choose Preferences from the iDVD application menu and select NTSC or PAL.

You cannot convert an iDVD project from one format to another. For example, if you want to make a copy of a disc you created in the United States (using NTSC video) and send it to relatives in Europe, you must export all of the movies from iMovie or Final Cut Pro in PAL format. Then you must set iDVD to PAL and create a new project.

Published Date: Feb 20, 2012

AppleWorks 6: How to Create Charts

This article explains how to create charts.

This article has been archived and is no longer updated by Apple.

You can turn the data in a spreadsheet into a chart. Charts (also called graphs) can visually reveal trends or relationships that aren't as apparent when you view the data in rows and columns.

A chart is linked to the spreadsheet it's based on. If you change the data in the spreadsheet, the chart updates automatically.

You can create a chart using part or all of the data in a spreadsheet, and you can create various types of charts from the same data.

A chart comprises several parts:
· Title (optional): Explains the contents of the chart.
· Data series and divisions: Each set of values in a chart is a data series. In a bar chart, for example, the bars represent the data series.

Series can be broken into divisions such as intervals or categories.
· Legend (optional): Identifies what the series represent.
· Series box (optional): Used in the legend to show a sample of the color or symbol that represents each series.
· Axes: Perpendicular lines used to plot data. Tick marks and grid lines show intervals. (Pie charts don't have axes.)

You can also turn the data in a spreadsheet frame into a chart.

This document contains information from Help Center, the help system included with your computer.

Published Date: Feb 20, 2012

AppleWorks 6: How to Set Image Resolution and Color Depth

This article explains how to set image resolution and color depth.

This article has been archived and is no longer updated by Apple.

Resolution refers to the sharpness of the images in painting documents, and is measured in dots per inch (dpi). The default resolution for a new paint document is 72 dpi.

Color depth refers to the number and range of colors displayed in the pen and fill color palettes. The maximum color depth of your monitor and video card determines the maximum color depth you can achieve.

Tip: For best results, set the image resolution and color depth before you begin painting.

To change image resolution or color depth for a painting document or frame:
Choose Resolution & Depth from the Format menu.
Select a value for resolution.

Note: Increasing the resolution decreases the painting area and the dimensions of images you see onscreen. You can compensate for the reduced painting area by increasing the length or width of your document. You can compensate for the reduced image dimensions by zooming in.

Tip: To take full advantage of your printer's capabilities, select the same resolution as your printer. If your painting document will be viewed only onscreen, leave the resolution at 72 dpi.

Select a color depth setting.
Note: More colors require more memory. You can increase the memory available to AppleWorks if necessary.

This document contains information from Help Center, the help system included with your computer.

Published Date: Feb 20, 2012

AppleWorks 6: About Spreadsheets

This article explains about spreadsheets.

This article has been archived and is no longer updated by Apple.

A spreadsheet document or frame is a grid of rows, designated by numbers, and columns, designated by letters. The intersection of a row and a column is called a cell. Each cell has a unique address which consists of the column letter and the row number, for example, D3.

Note: Spreadsheet documents and frames are especially suited to working with calculations that involve numbers, dates, or times and for data that you want to sort. You can also use an AppleWorks chart (graph) to plot data in a spreadsheet. If you simply want to align text into rows and columns, use a table frame.

Row heading
Active cell address
Column heading
Active cell
Entry bar

You enter data in cells using the entry bar. You can enter text, numbers, or formulas into cells.

A block of adjacent cells is called a cell range. You identify a cell range by the addresses of the upper-left and lower-right cells in the block, for example, B2..D3.

If you don't see all the cells in your spreadsheet:
You might have a print range specified and Page View turned on. To see all the cells, turn Page View off by choosing Page View from the Window menu (only if it's already marked with a checkmark).

Note: Spreadsheet frames are created 50 rows by 20 columns in size. When working with a spreadsheet frame, you see only part of the available work area. You can open the frame as a separate window to make more room, or shift the content view (origin) to make specific cells visible.

This document contains information from Help Center, the help system included with your computer.

Published Date: Feb 20, 2012

AppleWorks 6: How to Format Text and Numbers in Spreadsheet Cells

This article explains how to format text and numbers in spreadsheet cells.

This article has been archived and is no longer updated by Apple.

Specifying a default font and font size

You can specify a default font and font size for data in a spreadsheet document or frame. Specifying a default affects the formatting of existing cells.

To set default font characteristics:
Choose Default Font from the Options menu.
Specify a font and font size.

Formatting text and numbers in cells

To change the appearance of text and numbers in cells:
Select the cells you want to change.
Choose Font, Size, Style, or Text Color from the Format menu, then make your choice from the submenu.

Making overflow text appear within a cell

When a cell's contents are longer than the cell width can accommodate, the overflow text appears in the next cell to the right (if that cell is empty) or is hidden (if that cell contains data). To have AppleWorks wrap the overflow text to another line, turn on word wrap.

To turn on word wrap:
Select the cells in which you want text to wrap.
Choose Alignment from the Format menu, then choose Wrap from the submenu.

Note: A long entry might wrap below the border of the cell. To view the entire entry, resize the row.

Specifying formats for numbers, dates, or times

To specify formats for numbers, dates, or times:
Select the cells you want to format.
Choose Number from the Format menu.

Tip: For a single cell, double-click the cell.

Click Number, Date, or Time, then choose a format from the pop-up menu. For an explanation of the number formats, see the table below.
Note: The way AppleWorks displays dates and times is also determined by settings in the Date & Time control panel (in the Apple menu).

If you selected a number format, choose any additional options you want:
·To use separators in numbers greater than 999, click Show Separators for Thousands.
·To show negative numbers in parentheses rather than with a minus sign, click Show Negatives in Parentheses.
·To change the decimal precision (the number of digits that appear to the right of a decimal separator), type a new value. (The precision setting has no effect on numbers displayed in the General format.)
Note: The precision you specify affects only how many decimal digits are displayed. AppleWorks can display as many as 11 significant digits.

Note: If a number is too long to fit in a cell, AppleWorks first attempts to display it in scientific notation. If it still won't fit, AppleWorks displays a string of number signs (#). AppleWorks also displays number signs if a date or time is too long to fit in a cell. To see the data, resize the column.

The following table explains the numeric formats and shows how the number 43.666600 is displayed in each format, assuming a precision setting of 2.

Numeric format Description
General (43.6666) Displays up to 11 digits of the number as typed. Drops trailing zeros to the right of the decimal point and rounds numbers with more than 11 digits. Numbers with more than 11 digits to the left of the decimal point are displayed in scientific format.

Currency ($43.67) Inserts the currency symbol specified in the Numbers control panel (in the Apple menu).

Percent (4366.66%) Multiplies the number by 100 and inserts the percent symbol. (The number 5 is displayed as 500%, and the number .05 as 5%.)

Scientific (4.36e+1) Displays numbers as an exponential power of ten. (The number 1,000,000 is displayed as 1.00e+6, or 1.00 multiplied by 10 to the sixth power.)

Fixed (43.67) Rounds numeric entries to a fixed number of decimal points.

This document contains information from Help Center, the help system included with your computer.

Published Date: Feb 20, 2012

AppleWorks 6: Types of Spreadsheet Data

This article describes the types of spreadsheet data.
This article has been archived and is no longer updated by Apple.
You can enter numbers (including dates and times), text, or formulas into spreadsheet cells. You can enter up to 255 characters in a cell.

The numbers 0 through 9. To enter a negative number, type a minus sign (hyphen) before the number. AppleWorks displays and stores a maximum of 11 significant digits. You can sort numeric data and use it to perform calculations or produce charts.

Tip: To enter numbers with leading zeros, type an equal sign (=) and quotes around the number, for example, ="001".

Date and time Dates and times entered as numbers (for example, 8/12/00, 17:20, or 5:20 PM). You can sort dates and times and use them to perform calculations or produce charts.

Text All letters, numbers, and symbols.
If you enter letters or symbols with numbers into a cell, AppleWorks treats the cell contents as text.

Formula A set of instructions for calculating a value in a spreadsheet cell. You enter the formula in the entry bar, and the result appears in the spreadsheet cell.

This document contains information from Help Center, the help system included with your computer.

Published Date: Feb 20, 2012

AppleWorks 6: How to Move or Copy Spreadsheet Data

This article explains how to move or copy spreadsheet data.

This article has been archived and is no longer updated by Apple.

You can move data, or a copy of it, to another location. When you use the Cut or Copy command, the selected data is placed in a holding area called the Clipboard, where the text remains until you choose Cut or Copy again or you turn off your computer. The Clipboard holds the contents of only one Cut or Copy operation at a time.

When you use the Move command, you bypass the Clipboard.

Note: With cells that contain cell references, cutting or copying and then pasting cells has a different result from moving them with the Move command.

Moving or copying data via the Clipboard

To move or copy data and formulas from one location to another:
Select the cells.
Choose Cut or Copy from the Edit menu.

· Choose Cut if you want to move the selected cells.
· Choose Copy if you want to leave the selected cells in place.

Select the cell where you want to move the data. (For a range of cells, select the upper-left cell of the new location.)

Choose Paste from the Edit menu.
When you paste cells that contain relative cell references, AppleWorks updates the references.

Note: To paste the value of a cell but not the formula it contains, choose Paste Special from the Edit menu. Select Paste Values Only, then click OK.

Tip: To move selected cells quickly without using the Clipboard, drag the cells to a new location. To copy selected cells, press Option while you drag.

Moving data without using the Clipboard

To move data and formulas without using the Clipboard:
Select the cells.
Choose Move from the Calculate menu.
Type the cell address of the cell where you want to move the data. (For a range of cells, type the address of the upper-left cell of the new location.)

Tip: To quickly fill adjacent cells with the same data, or a series or pattern of data, use one of the fill commands (in the Calculate menu).

This document contains information from Help Center, the help system included with your computer.

Published Date: Feb 20, 2012

AppleWorks 6: How to Set Spreadsheet Display Options

This article explains how to set spreadsheet display options.

This article has been archived and is no longer updated by Apple.

To set spreadsheet display options:
Choose Display from the Options menu.
Select options:

· Cell Grid displays dotted lines between columns and rows.
If you want the grid lines to be solid, also select Solid Lines.
· Formulas displays formulas in cells that have them, rather than the results.
· Column Headings and Row Headings display the letter and number labels for columns and rows.
· Mark Circular Refs displays heavy dots before and after the content of any cell containing a circular reference (when formulas in two or more cells refer to each other or a cell refers to itself).AppleWorks also displays the following display options for spreadsheet frames:
· Origin specifies which cell appears in the upper-left corner of the frame.
· Name specifies the name of the spreadsheet frame. You name a spreadsheet frame when you want to reference cells in it in another spreadsheet frame or document.

Note: Changes you make to the Cell Grid, Column Headings, and Row Headings options in the Display dialog box affect the settings for the similar printing options in the Print dialog box. But you can change the printing option settings without affecting your display options.

This document contains information from Help Center, the help system included with your computer.

Published Date: Feb 20, 2012

AppleWorks 6: How to Enter Spreadsheet Formulas and Functions

This article explains how to enter spreadsheet formulas and functions.

This article has been archived and is no longer updated by Apple.

Entering a simple arithmetic formula

To enter a simple arithmetic formula:
Select the cell that will contain the formula.
Type an equal sign (=).
Type the numbers and arithmetic operators needed for your calculation. For example:

· =3+4 returns a value of 7
· =22-8 returns a value of 14
· =8*5 returns a value of 40
· =72/6 returns a value of 12For complex calculations, use parentheses to indicate the order in which subcalculations should be performed.

Confirm your entry.

Including a function in a formula

To enter a function in a formula:
Click in the entry bar where you want to insert a function.
Choose Insert Function from the Edit menu, or click the Function button, to the left of the entry bar.
Select a function, then click Insert.
Replace the argument names with values, cell references, or references to named cells or cell ranges.
Confirm your entry.

If AppleWorks displays a message telling you that the formula is incorrect:
Make sure you've deleted any ellipses (...), which indicate optional additional function arguments.

If you see heavy dots on either side of a cell value:
AppleWorks is indicating that the cell contains a circular reference (when formulas in two or more cells refer to each other or a cell refers to itself).
Either correct the circular reference or turn off the Mark Circular References display option.

Controlling when AppleWorks performs calculations

When you enter a formula in a spreadsheet cell, AppleWorks calculates the result. As you work, calculated values are automatically updated whenever you make a change that affects the formula result.

In large or complex spreadsheets, you can speed up your work by turning off this automatic calculation feature.

To turn off automatic calculation:
· Make sure Auto-Calculate is deselected in the Calculate menu.

To calculate values when automatic calculation is turned off:
· Choose Calculate Now from the Calculate menu.

This document contains information from Help Center, the help system included with your computer.

Published Date: Feb 20, 2012

AppleWorks 6: How to Enter Spreadsheet Data

This article explains how to enter spreadsheet data.

This article has been archived and is no longer updated by Apple.

To enter data in a cell:
Click the cell.
Type the data or formula.

As you type, the data appears in the entry bar, just below the document window title bar. The data scrolls to the left if you type more than can fit in the entry bar.

IMPORTANT: To avoid confusion when entering dates, always use 4-digit years. In order for AppleWorks to interpret 4-digit years properly, click "Show century" in the Date Formats dialog box of the Date & Time control panel (in the Apple menu).

Confirm your entry with one of the following methods:

Press the Enter key. (The next cell selected depends on your spreadsheet preferences.)
To remain in the same cell, click the Accept button, to the left of the entry bar.

· To move to the cell below, press Return.
· To move to the cell to the right, press Tab.
· To move to the cell above, press Shift-Return.
· To move to the cell to the left, press Shift-Tab.

Tip: Depending on your spreadsheet preferences, you can also use the arrow keys to move to other cells.To cancel what you typed and restore the previous contents of the cell, click the Cancel button, to the left of the entry bar, before confirming your entry.
Or press the Esc (Escape) key.

Tip: If you select a cell range, you can press Tab, Return, or any of the arrow keys to move just within the selected cells.

If you can't edit a cell:
The cell might be locked. Unlock the cell to edit it.

If the text data in a cell is truncated:
The cell width is too narrow to accommodate it. Either resize the column or turn on word wrap.

If you see number signs (#) in a cell:
The cell width is too narrow to accommodate the number, date, or time in it. Resize the column to see all the data.

If numeric data is displayed in scientific notation:
Either the cell width is too narrow to accommodate the data in it (resize the column) or the number is too large for AppleWorks to display in any other format (AppleWorks displays a maximum of 11 digits in cells).

This document contains information from Help Center, the help system included with your computer.

Published Date: Feb 20, 2012

AppleShare IP Third Party AFP Client Products

This article provides information about software and hardware products that work with AppleShare IP to provide enhanced or additional capabilities.
This article has been archived and is no longer updated by Apple.

AFP Clients

AFP Engage! URL Processor works with Web browsers, email readers and most other Internet applications to enable those applications to process AFP (AppleShare) URLs. With the AFP Engage! URL Processor, you can publish URLs to your AppleShare server on Web pages and send them in email messages. Works with URLs over both IP and AppleTalk.
Open Door Networks, Inc.

MountIP is an OSAX (AppleScript extension) that adds a new command to the AppleScript language, enabling users to write scripts that can mount AppleShare IP-based servers. It supports both anonymous as well as authenticated logins via the standard afp URL syntax. MountIP is FREEWARE, so use it and enjoy.

PC MACLAN Pro for Windows 95 is the only software suite to combine IP (Internet Protocol), LAN and remote access technology into one package for file and printer sharing between PCs and Macs. This powerful networking suite is the ideal cross-platform integration tool for applications in pre-press, content development, education and other Apple-dominated markets. Miramar's IP (Internet Protocol) Client technology lets users expand their networking capabilities by accessing any AppleShare IP server, whether located locally, at a branch office on the company WAN, or across the globe over the internet. Miramar Systems.

Unmounter is a shareware application that automatically unmounts unused shared disks and allows the user to remount them easily from the desktop. Unmounter is especially useful in remote access and dial-on-demand environments, where phone and ISDN lines stay open while AFP sessions are active. DouWere.

Vicomsoft SurfDoubler allows two computers to share Internet access via one connection device (including modem/cable modem/ISDN/ADSL) and one ISP account at the same time. An Automatic Set-up Wizard makes configuration simple for even the non-technical! More information and a free evaluation copy can be found at the Vicomsoft web site.Vicomsoft

Web Engage! enables the Web and FTP components of your AppleShare IP server to be easily found and accessed using the Chooser. The Web Engage! plug-in registers these services on AppleTalk, and the Web Engage! and FTP Engage! Chooser extensions let you browse for these services by zone and initiate access to the services through the Chooser--just the way you'd expect on a Macintosh! Open Door Networks, Inc.

Published Date: Feb 20, 2012

AppleShare IP Third Party Publishing and Web Site Creation Products

This article provides information about software and hardware products that work with AppleShare IP to provide enhanced or additional capabilities.
This article has been archived and is no longer updated by Apple.
Publishing and Web Site Creation

ChoosePage is a plug-in that allows you to put a pop-up dialog on a web page. When someone clicks the submit button, they are redirected to the location specified in the pop-up. An example of this technology in use is at the bottom of the pages on the ClearInk website. Clear Ink

DynaMorph is a cross platform server side scripting engine and integrated database that enables web site developers to easily construct and maintain large or dynamic web sites. DynaMorph supports the following platforms and web servers: Macintosh, UNIX, and Windows NT/96. DynaMorph's intelligent document caching system provides peak performance and keeps your site up-to-date as you make changes. Morph Technologies, Inc.

NetCloak, the 1996 winner of MacUser Magazine's "Eddy" award for "Best New Internet Server Application," gives you dozens of HTML extension commands that make it easy to build dynamic, compelling Web pages. Add dynamic information like date and time to your pages, as well as headers, footers, counters, and more. All with no programming required! Visit the Maxum Development Web site for more information and a free demo copy. Maxum Development Corporation

NetForms makes it easy to create interactive Web sites. NetForms makes your users an active part of your Web site, but keeps you in complete control. With NetForms on your Web server, you can turn data from HTML forms into text files, e-mail messages, even new Web pages. Create mailing list maintenance pages, guestbooks, surveys and online discussion forums with no programming required! Visit the Maxum Development Web site for more information and a free demo copy. control.Maxum Development Corporation

PICT FM is the first web server picture add-on product for FileMakerÂ® Pro for Macintosh. PICT FM enables on-the-fly PICT to JPEG conversion of graphic images stored or referenced in FileMaker Pro container fields. Web Broadcasting

SiteCam adds a full-featured webcam to your Macintosh! Stream live video and/or automatically captures JPEG, PICT, GIF images and QuickTime movies. Visit Rearden Technology to see it in action and purchase it on-line.
Rearden Technology

SMTPMailIT is an AppleScriptable, lean, mean, multi-threaded, asynchronous, fat, Open Transport aware SMTP Mail sending application. It's a great solution for Web servers, monitoring applications, debugging, 'back-ending' and more. Hi Resolution.

WEB FM enables FileMaker Pro developers to quickly and easily build wicked fast, truly dynamic and interactive online database applications for the World Wide Web or a corporate Intranet. The feature list mirrors that of FileMaker Pro with support for relational and portal fields; browsing, sorting, creating and editing database records; even running ScriptMaker scripts. Web Broadcasting

Published Date: Feb 20, 2012

AppleShare IP 6.3.3 Features

This article describes the latest features of AppleShare Ip 6.3.3

This article has been archived and is no longer updated by Apple.

Powerful file transfer capabilities
Share files between Macs and Windows clients
Provide files services for up to 500 simultaneous users
Transfer files extremely fast over TCP/IP
Index server volumes with Sherlock
Automatically create personal home folders
Provide FTP services

Efficient remote administration
Manage AppleShare servers from anywhere
Administer multiple servers at once
Use the Mac OS Admin application from a Macintosh workstation or use any web browser to control your server

Ready-to-use web server
Host up to 50 unique web sites
Index sites with the Sherlock web server plug-in
Search hosted sites from any type of client
Serve nearly 50 million hits per day
Use HTTP as another method to share files
Extend services with a wide array of third-party plug-ins

Easy Access
Use Mac OS 9 clients to browse for File, FTP, and Web services over TCP/IP
Access the file and printer server through the Chooser
Define URLs to provide simple pointers to AppleShare services
Access services from Windows clients using their Network Neighborhood
Automate access from Mac OS clients using the Keychain

Flexible print services
Distribute print jobs across up to 10 printers
Host up to 10 print queues
Print over TCP/IP and AppleTalk
Print from Mac, Windows and AppleTalk clients
Control access to printers with a password

Versatile e-mail support
Provide standard POP and IMAP mail services
Support more than a thousand mail clients per server
Support up to 10,000 users with multiple servers
Manage all user mail from any IMAP client
Send e-mail using built-in group mailing lists and forwarding
Protect mail clients from spam

Users and Groups support
Centrally administer user information on one server
Share users and groups between multiple AppleShare IP servers
Create up to 10,000 unique users in the user database
Apply access privileges across all key services
Simplify access assignments using group memberships

Security
Control access to materials with user's name and password
Password protect entire web sites
Use built-in firewall to further limit risk
Restrict e-mail traffic with a definable mail host list
Disable accounts after multiple failed login attempts

Published Date: Feb 20, 2012

How to connect and disconnect FireWire devices

Learn how to connect and disconnect FireWire devices.

This article has been archived and is no longer updated by Apple.

You can connect as many as 63 FireWire devices (including computers) together. There are multiple ways to connect FireWire devices to your computer:

- For up to 16 devices, use a chain to connect devices together.
- For 17 or more devices, set up the devices in a hierarchy, or tree arrangement.

You can also use a FireWire hub to connect multiple FireWire devices to your computer.

Connecting a FireWire device

If the device came with software, install this software on your computer.
For more information, see the documentation that came with the device or contact the device manufacturer.

If necessary, connect the FireWire device to a power source.

If your FireWire device does not have an attached FireWire cable, connect one end of a FireWire cable to the FireWire port on the device.

Connect the other end of the cable to the FireWire port on your computer.
6-pin FireWire port and connector

Tip: Some FireWire cables use latching connectors you must pinch when unplugging the connector. If a latching connector does not fit into a port, replace that cable with one that doesn't have a latching connector.

Turn on the device. For more information, see the documentation that came with the device.

You should now be able to use the FireWire device with your computer.

Many devices have a power-on indicator light which lights up to show that the device is properly connected and receiving power.

Disconnecting a FireWire device

Important: Don't disconnect a FireWire device while the device is being used by an application or you may damage the files on it and other FireWire devices.

To disconnect FireWire devices from your computer and from each other:

1. If you're using files and applications on a FireWire device, save and close the files, then quit all open applications. If you don't do this before you disconnect the device, you may damage the files on that device.
2. Drag the device's icon to the Trash. If you don't do this before you disconnect the device, you may damage the files on that device.
3. Unplug the connector from the FireWire port. Pull the connector, not the cable.

This document contains information from the Mac OS 9 Help Center.

Published Date: Oct 7, 2016

Types of USB Hubs

This article has been archived and is no longer updated by Apple.

A USB hub is a device that can have other USB devices plugged into it. You use a USB hub when you want to connect more devices to your computer simultaneously and when you want to increase the distance between the devices and the computer. You can extend the number of available USB ports by plugging hubs together to form a large hierarchy of USB devices. You can also use a USB hub to extend the distance of an attached device.

There are two types of USB hubs: self-powered and bus-powered.

Self-powered hubs

A self-powered hub has an AC adapter that provides external power to the hub. Your computer is a self-powered hub. To use the hub, you need to plug the adapter cord into an electrical outlet or power strip. The hub supplies its own power, so you can connect most USB devices to it. Typical self-powered hubs have four or seven USB ports.

Note: Apple recommends that you use self-powered hubs instead of bus-powered hubs for best performance.

Bus-powered hubs

A bus-powered hub receives power from the computer or from another self-powered hub, so you don't need to plug it into an AC outlet. You can plug low-powered USB devices, such as a mouse or joystick, into a bus-powered hub. The Apple USB keyboard contains a bus-powered hub.

IMPORTANT: You cannot connect two bus-powered hubs together because there's not enough power for both hubs or devices attached to them. To connect two hubs together, at least one hub must be self-powered. For this reason, you cannot connect an Apple USB keyboard to the USB port on another Apple USB keyboard. If you want to use two bus-powered hubs with your computer, connect each to a USB port on the computer or to a self-powered hub. If you use three or more hubs connected to one another, set them up so the chain alternates between the two kinds.

Published Date: Feb 20, 2012

Troubleshooting portables that won‘t turn on or start up

Learn how to troubleshoot a PowerBook G4, iBook, or iBook G4 that won't turn on or start up.

This article has been archived and is no longer updated by Apple.

1. Unplug the power adapter from the electrical outlet. Plug it back in. Make sure the electrical outlet is working by plugging in another device (such as a lamp).

2. Unplug the power adapter from the computer, then plug it back in.

3. Make sure you are using the adapter that was designed for your computer. If you aren't sure or if you need a new adapter, learn which adapter is appropriate for your computer.

4. Your computer's battery may need to be recharged. Press the small button on the battery. You should see one to four lights indicating the battery's level of charge. If you see just one light blinking, the battery needs to be recharged.

5. Disconnect any devices connected to the computer including printers, hubs, third-party keyboards, or mice.

6. Press the control key, the command key, and the power button simultaneously. If this has any effect, the computer will start up.

7. Reset the PRAM.

8. Reset the Power Manager. When you do this, you may need to reset the date and time in Date & Time preferences (Mac OS X) or the Date & Time control panel (Mac OS 9).

9. If you recently installed additional memory, make sure it is correctly installed and is compatible with your computer.

10. Remove the new memory to see if the computer starts up properly.

11. If you are still unable to start up your computer after trying each of these steps, you may need to take the computer to an Apple Authorized Service Provider for more assistance.

Published Date: Feb 20, 2012

WebObjects 5.2: How to Access the WOStats Page

This document describes how to Access the WOStats Page.
This article has been archived and is no longer updated by Apple.
For each instance of your application, there is a statistics (WOStats) page that displays information such as the application's running time and memory usage. Before accessing the WOStats page, though, you have to set a password.

There are three ways to set the password:

1. Use the command line.
Set the password by using the command line argument:

```
-WOStatisticsPassword password
```

2. Use Project Builder.
Add the WOStatisticsPassword to the list of Launch Arguments before opening and running your application.

3. Use JavaMonitor.
The password can be set from the JavaMonitor tool.

    1. Click the Applications tab.

    2. Click Config.
    The instance Settings page appears.

    3. Add `-WOStatisticsPassword password` to Additional Arguments.

Before viewing the instance statistics (WOStats) page, you have to type the password. However, the user name can be left alone.

After setting a password, you can access the instance statistics (WOStats) page of an instance through JavaMonitor, or directly through a Web browser.

Using JavaMonitor to View WOStats

1. Open the Application detail page.

2. Click WOStats for the instance statistics you want to view.

Using a Web Browser to View WOStats

1. Open a Web browser.

2. Enter the WOStats address:

http://myhost/cgi-bin/WebObjects/MyApp.woa/wa/WOStats

Note: if there are multiple instances, you must also specify the instance number.

http://myhost/cgi-bin/WebObjects/MyApp.woa/1/wa/WOStats

Published Date: Feb 20, 2012

Macintosh: Korean-Language Word Processors

Do you know of a Korean-language word processor?
This article has been archived and is no longer updated by Apple.
The Apple distributor in Korea, Elex Computer, has developed the HangulTalk 6.0.2 with Apple Far East. It has full Korean-language support and Hangul PostScript printing.

For word processing, Elex Computer has worked with Paragon Concepts to localize the Nisus word processor. The Korean version has full script-manager support plus in-line Hangul input. Besides Nisus, a Korean version of Quark XPress is also available.

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.
Published Date: Feb 20, 2012

Naming files and folders on your iDisk

You can usually name files on your iDisk whatever you want, but there are a few exceptions.

This article has been archived and is no longer updated by Apple.

.Mac explains how to name files you share on file sharing webpages you make with HomePage. The same rules apply to files you save on your iDisk.

One very important tip you shouldn't overlook is to only use a period (.) to separate a filename extension from the rest of the name. Don't begin a filename with a period. In many UNIX-style operating systems, a file whose name begins with a period is "hidden". Although the file may be visible on your desktop in Mac OS 9, it will become invisible or hidden once you copy it to your iDisk. Since the file is actually on the disk, it will take up a portion of your allotted space.

Example

- Valid filename: image.jpg (note the period within the filename, but not at the beginning)
- Invalid filename: .image.jpg (note the period at the beginning of the filename)

Published Date: Feb 20, 2012

Mac OS: File Type and Creator Codes, and File Formats

Files stored by Mac OS 9 and earlier contain 4-character file type and creator codes, which are used by the Finder and applications. This article describes Mac OS file type and creator codes, and includes a short section on the concept of file formats.

This article has been archived and is no longer updated by Apple.
The native file system used by Mac OS 9 and earlier includes a provision for each file to contain a file type and creator code. FIle types and creator codes are 4-character text strings embedded within the file along with other information about the file (for example, the file's name, its creation and modification dates, and so forth). Through the use of type and creator codes, the Finder can determine which application(s) can open a particular file.

File Type Codes

The desktop database keeps track of the file type of every file. Here are examples of some common 4-character file type codes, followed by descriptions:

- CWWP (AppleWorks word processing)
- MooV (QuickTime movie)
- TEXT (plain text file)
- PICT (picture file)
- GIFf (GIF image)

When you open a file from within an application, the application looks at each file's 4-character file type code to see if it can be opened. Some applications can open a variety of file types.

Creator Codes

The desktop database also keeps track of the creators of files. As you might guess, this is a 4-character code that identifies which program actually created the file. Here are examples of some common 4-character creator codes, followed by descriptions:

- BOBO (AppleWorks)
- TVOD (QuickTime)
- ttxt (SimpleText)
- Hway (iMovie)

For example, a text file saved with SimpleText has a file type of TEXT and a creator of ttxt.

You can find out the type and creator of a file using a utility such as ResEdit, or by dragging a file onto the Custom Search Options window in Sherlock, or through the use of an AppleScript application/droplet.

File Formats

A file format is a set of rules and instructions that are used to read and write files. Some file formats are publicly known, while others are proprietary. Examples of publicly known file formats:

- text
- Rich Text Format (RTF)
- binhex

Examples of proprietary file formats:

- AppleWorks word processing document
- FileMaker database

When an application reads in a file it expects certain information, in a certain order. Usually there is a header, where global information about the particular file is kept. Then there might be a database of objects if it is a drawing program, or some text if it is a word processor.

File formats used by various applications are never needed by the ordinary user, but may be needed by developers who are writing translators or other utilities.

Published Date: Feb 20, 2012

Information on Double-byte Script Systems (Japanese and Chinese Language Kits) and Claris Applications

Double-byte script (Japanese and Chinese Language Kits for Macintosh system software) information and incompatibility with Claris applications.

This information was provided by Claris Corporation on 16 March 1998, and incorporated into Apple Computer's Tech Info Library.

This article has been archived and is no longer updated by Apple.
The Japanese and Chinese Language Kits are packages that add double-byte script capabilities to any System 7.1 Macintosh System. The core of the package is fonts, an input method, script resources and WorldScript II. Some extensions and a utility add additional functionality. An installer script and user documentation complete the package. The following information uses the Japanese Language Kit as an example, because Claris currently sells the most 2-byte-compatible products for Japan. The Chinese Language Kit is different in that it contains two different kits, one for Traditional (Taiwan and Hong Kong) Chinese and one for Simplified (Mainland China) Chinese. The way they work is the same. Also, more than one Language Kit may be installed at a time, as long as the Japanese Language Kit is installed before the Chinese Language Kit in a fresh System 7.1.

The Japanese Language Kit contains the system extensions and fonts necessary to support Japanese text on any localized 7.1 System (eg. English, French, Korean). The Japanese Language Kit will be available outside the US and is being tested with most of Apple's localized non-Roman system software. This product requires System 7.1 - any localized version. If you have already installed earlier script system resources, please remove them because they may

confuse the installer. The Language Kit extension enables compatibility with applications that have menus and dialogs not compatible with the current Primary script. For example, on the US System, this means that even though the primary script is Roman (Dialog boxes and the Finder all display text in Chicago font), if you launch a Japanese localized application, the 'primary' script changes to Japanese automatically on the fly, and the menus and dialogs that appear while that application is the frontmost application will display in Osaka font, the Japanese system font. If you switch back to the Finder, all of its menus and dialogs are still displayed in Chicago, because the real primary script is Roman for the System and Finder. The effect is like having two different 'primary scripts, each activated depending on the application currently running.

Claris applications not localized for Japan will run on the Japanese Language Kit, but will not gain any Japanese functionality. They will only be able to handle single-byte Roman characters, just as if they were running on a normal System with no Language Kit installed. An exception to this rule is Claris Impact, which has nominal Japanese character compatibility, but cannot perform all of the required line-breaking and formatting features normally included in a

Japanese localized version. For complete Japanese text functionality, you must use the localized Japanese version of the products.

Here is a an update of the localized versions for Japan currently on sale:
MacPaint-J 2.0
MacProject II-J 2.1v3
MacDraw II-J 1.1v2
MacDraw Pro-J 1.5v1
MacWrite II-J 1.5v2
FileMaker Pro-J 1.0v5 Mac
ClarisWorks-J 1.0v4 Mac

For Traditional Chinese:
FileMaker Pro-TA 1.0v1 Mac
ClarisWorks-TA 1.0v1 Mac

For Simplified Chinese:
ClarisWorks-CH 1.0v1 Mac

For Korea:
ClarisWorks-KH 1.0v3

FileMaker Pro Note: The double-byte (Chinese and Japanese) localization of FileMaker Pro are version 1.0-based. They include changes to the file format for extra index settings, and are therefore NOT compatible with FileMaker Pro U.S. However, FileMaker Pro 1.0 US files can be imported directly into FileMaker Pro-J and irreversibly converted. The reverse is not possible. Note also that there are no Windows products available for double-byte markets.

Published Date: Feb 20, 2012

Mac OS: Troubleshooting Out of Memory Errors

How can I resolve out of memory errors?
This article has been archived and is no longer updated by Apple.
An " Out of Memory" or" Not Enough Memory to Perform Operation" while you are working in an application, doesn't mean you don't have enough computer memory. When you launch a Macintosh application, it requests the amount of memory set in it's Get Info window. There may be times when you are working with a very large data file and there is not enough memory allocated to the application to work properly.

To increase an application's memory allocation:

1. Quit the Application and return to the Finder.

2. Go to the actual application program icon (not a document created in the application or an alias to the application) and click once to select it.

3. From the File menu, select Get Info.

4. In the Get Info window, again verify that Application is listed after Kind:

5. Increase the memory in the Application Memory Size box at the bottom of the Get Info window. If you are using System 7.0, increase the Current Size. If you are using System 7.1 or greater, increase the Preferred Size. Later versions of the Mac OS have a pop up menu in the Get Info box where you select Memory. Increasing memory by 500K to 1000K should be enough in most cases.

If the program still will not open, try restarting the computer. Additional memory may be the only option of the application or file you are trying to open is fairly large. You can try using virtual memory as a temporary workaround. If you find that to solve the problem, additional memory should be installed.

Published Date: Feb 20, 2012

ClarisWorks: Transfer (Import) Data from FileMaker Pro for Mail Merge

A step-by-step guide to exporting your FileMaker Pro data to a ClarisWorks database for a mail merge

This information was provided by Claris Corporation on 16 March 1998, and incorporated into Apple Computer's Knowledge Base.
This article has been archived and is no longer updated by Apple.
ClarisWorks 4 and ClarisWorks 5 include an AppleScript application, called Mail Merge, located in the ClarisWorks Scripts folder. Mail Merge automates moving names from a FileMaker database into ClarisWorks for merging into form letters.

ClarisWorks 4 Mail Merge applescript works with FileMaker Pro version 2. ClarisWorks 5 Mail Merge AppleScript works with FileMaker Pro 3 and 4.

Below are ClarisWorks versions 1 - 3 instructions for manually moving data from a FileMaker Pro database to a ClarisWorks database. Once moved, the data, such as names and addresses, can be used in a Mail Merge to print form letters.

Instructions:
A. Export from FileMaker Pro.

1. With your FileMaker Pro database on the screen, select Export from the File menu. Select "DIF" as the file type from the pop up menu.
2. Enter a file name. It may be helpful to place the suffix .DIF after the name. (For example: MyNames.DIF)
3. If you are using System 7 (or later), click the Desktop button. Click on "OK".
4. Quit FileMaker Pro

B. Convert the data to ClarisWorks.

1. Launch ClarisWorks. Since you do not need a new document here, click Cancel.
2. Choose Open from the File menu.
   - If you are using ClarisWorks 1.0, click on the Import Options flag and select database. With all other versions of ClarisWorks, select Database in the Document Type pop-down menu.
   - If using System 7, click the Desktop button. If not, navigate through your hard disk until you find the DIF file you just created.
3. Double-click on the file or select Open. The DIF file will be converted to a ClarisWorks database in a standard list style format. (The layout structures are not retained.)

C. Setting up the Mail Merge.
Complete instructions for mail merge can be found in the onscreen help. Here's a summary of the steps.

1. Open your ClarisWorks word processing (or other) document.
2. Click within your document where you want the merged data to begin and choose Mail Merge from the File menu.
3. After selecting the name of the open database, you are presented with the Mail Merge window. You can alternate between inserting fields and typing into your document. Figure 1 shows a sample form letter with the Mail Merge palette window.
4. When you're done, press the Print Merge button to print a copy of each record currently visible in the database merged into your current document.

When printing, ClarisWorks will remove lines that are completely blank and slide the rest of your data upwards. Although merged data will be visible only on the printout, use of a third-party utility like ClickBook, Print Previewer, etc., or a Hewlett-Packard Printer will allow you to preview the print image on the screen.

Figure 1, Mail Merge window.

Published Date: Feb 20, 2012

ClarisWorks: Using Shortcuts

Create the shortest "distance" between two tasks with ClarisWorks Shortcuts.

This information was provided by Claris Corporation on 16 March 1998, and incorporated into Apple Computer's Tech Info Library.
This article has been archived and is no longer updated by Apple.
Many tasks we perform daily with our computers are often simple ones, but they can also be redundant. Think carefully for a moment about what it is you do with ClarisWorks every time you use the program. The odds are, some of the tasks you perform are repetitious -- out of necessity or out of well-established habit.

While there is nothing wrong with any of this, a little-used ClarisWorks feature, Shortcuts, can help save you time when performing redundant although necessary tasks. This includes such things as changing margins, changing page orientation (for printing letters versus envelopes), changing settings in Page Setup, signing your name at the end of letters, and so on.

ClarisWorks Shortcuts

ClarisWorks Shortcuts are commands you can access by clicking on a single button. ClarisWorks comes with many "ready-made" Shortcuts you can display through the Shortcuts Palette by selecting the File menu and choosing Show Shortcuts under the Shortcuts menu. You can also customize the view in Preferences under the Edit menu.

One thing that is great about Shortcuts is that you can create your own Shortcuts and add your creations to this list. First, you create a macro. Macros are recordings you create of mouse movements and key strokes. These recordings can be played back at a key stroke or mouse click. Because the macros play back at a speed that's much faster than when performed manually, they really save you time. There is virtually no limit to the macros you can record, so you'll want to experiment with key combinations and mouse movements to get a feel for what macros and Shortcuts can do for you.

Where to Begin

If you have never used ClarisWorks Shortcuts before, it may not be obvious where and how they can help you. Having the power of ClarisWorks Shortcuts at your fingertips is like having the ability to add to the ClarisWorks functionality in any environment. But where do you start?

The easiest way to determine where and how you can use ClarisWorks Shortcuts is by keeping a daily log of your computing activities for a week or two. Unless you can readily identify areas in your work pattern where Shortcuts can help, keeping a log will let you make careful observations about what you do with ClarisWorks. After keeping this log, it will be very easy to map out activities that can become useful Shortcuts.

When I was researching this article, I started keeping my own log of ClarisWorks use for a period of two weeks. When I looked at my entries, I noticed that several of the tasks I performed routinely in ClarisWorks were perfect candidates for Shortcuts. For example, I write to people all over the world (literally!), and I find I am constantly sending the same kinds of letters to certain groups of people. In particular, I noticed I write five types of letters, with different stationery designs and letterheads. Some of the styles are very formal, others informal. I noticed I was using six different kinds of closing remarks that varied by style and statement. A phrase I used repeatedly to end one type of letter was:

"Thank you for your time and consideration of this matter. I look forward to hearing from you soon.

Sincerely yours,
Name"

Being an eleven-year Macintosh computer user who has been writing to people around the world for a long time, I assure you that I have typed the above closing statement a ridiculous number of times. Over the years, this activity has surely cost me a great deal of time. However, with ClarisWorks to help me write my letters, I now have a Shortcut for appending this ending to any letter I create.

Once you have taken a look at your usage patterns, you may discover many actions that deserve to become Shortcuts.

Creating Shortcuts

Making a shortcut in ClarisWorks is very simple.

1. First you go to the File menu and select the Shortcuts menu, then choose Record Macro... from the Shortcuts sub-menu. You can also display the Record Macro dialog by typing Shift-Command-J.
2. Name your macro and assign it a keystroke. Be careful that you don't give it a keystroke reserved by the application (such as Command-Q or Command-S). Click on the Function Key option only if you use an extended keyboard with F keys along the top. Many extended keyboards come with a plastic template that you overlay on the F keys, so that you can write yourself a note regarding what they mean.

Record your macro

When recording a macro, it's generally a good idea to think ahead of time of what it is you want it to do. Also, practicing in advance before recording your macro is a good idea as well. The reason for practice is this, recording a macro is like recording a scene in a Hollywood movie. It may require several "takes" to get things right.

For example, let's say that you record a macro which involves a paragraph of text that you have typed. What if half way through typing this block of text you make a typo but don't notice it until after you have typed a few more words? If you go back and backspace or correct the typo, the Shortcut will record this. This means that when you play it back, both the typo and the corrections you made will appear on the screen. It's a good idea to record your macro as cleanly as possible, because that's the one that plays back the fastest.

Adding Shortcut to the palette

After working with and recording your various macros, don't forget you can make a palette containing them for handy use. The options I selected for the recording of that macro are Has Shortcut and In Shortcuts Palette. I also created my own custom icon, by clicking on the gray button and making a small drawing.

Palettes are convenient because you can move them around on your screen and customize them for maximum efficiency. You can control the appearance of your palette via icons that you can design to look as good as you want. You can also display the Shortcuts Palette itself in several ways. Go to Preferences under the Edit menu to customize the view.

Published Date: Feb 20, 2012

Arabic Language Kit: Description and Specifications

The Arabic Language Kit allows users to display, input, edit and print Arabic or Persian documents on their Mac OS computer. The software is intended for educators and students, multinational businesses, and bilingual home users.

The following article contains a description of the Arabic Language Kit and lists its hardware and software requirement specifications.
This article has been archived and is no longer updated by Apple.

Overview

Apple's Arabic Language Kit is the easiest, most affordable way to add Arabic and Persian text to your documents.

After the simple installation process, you can switch effortlessly between the computer's main language and Arabic or Persian. The kit lets you enter, edit, and print Arabic and Persian text, and mix either language with left-to-right languages in the same document, even in the same sentence. The kit comes with a selection of keyboard layouts optimized for both native speakers and students, accompanied by transparent labels for customizing your keyboard.

The Arabic Language Kit can be used with most Mac OS?compatible applications that support right-to-left text entry (including multilingual applications), or that have been localized for Arabic or Persian. The kit works with the built-in multilingual capabilities of the Mac OS, so you can copy and paste or drag and drop text between applications. And you can work with documents created by colleagues in the Arab world who use the Arabic or Persian version of the Mac OS.

The kit includes a selection of Apple TrueType fonts to ensure high-quality on-screen and printed characters at any size. These fonts incorporate exciting new typographic features based on Apple's QuickDraw GX technology. Most of the kit's fonts are also provided in PostScript versions.

The Arabic Language Kit is part of a family of Apple language solutions, which offer an affordable way to internationalize your Macintosh system. You can install as many different Apple Language Kits as you need on a single computer. Apple's other multilingual products include the Chinese Language Kit, the Chinese Dictation Kit, the Cyrillic Language Kit, the Hebrew Language Kit, the Japanese Language Kit, and others.

Technical Specifications

Usage Requirements

- A Macintosh or PowerBook computer with a 68020 or later processor and 4MB of RAM -OR-
- A Power Macintosh computer with 8MB of RAM
- An Apple SuperDrive floppy disk drive or a CD-ROM drive
- An application that has been localized for the target language or that supports right-to-left text

System Software Requirements
Macintosh System 7.1 or later (System 7.5 or later required to take advantage of QuickDraw GX features)

Included fonts
Arabic fonts

- - AlBayan (TrueType and Postscript)
- - Baghdad (TrueType and Postscript)
- - Cairo (bitmap)
- - Geeza (TrueType and Postscript)
- - Kufi (TrueType and Postscript)
- - Nadeem (TrueType and Postscript)
- - Thuluth (Postscript)

Persian fonts

- - Amir (TrueType and Postscript)
- - Ashfahan (TrueType and Postscript)
- - Kamran (TrueType and Postscript)
- - Mashad (TrueType and Postscript)
- - NadeemFarsi (TrueType and Postscript)
- - Tehran (bitmap)

Compatible applications
The Arabic Language Kit is based on Apple's WorldScript I technology, and is compatible with applications that take advantage of WorldScript I. The applications listed below are multilingual and/or Arabic-localized products that have been tested with this kit; check with the software

publisher for compatibility information on other applications.

- PageMaker ME from Adobe Systems (distributed by WinSoft S.A.)
- HyperCard from Apple Computer, Inc.
- SimpleText from Apple Computer, Inc.
- ClarisWorks Arabic from Claris Corporation
- FileMaker Arabic from Claris Corporation
- El Nashir El Sahafi from Diwan
- Nisus Writer from Nisus Software Inc.
- WinText from WinSoft S.A.
- WorldWrite from World Software Corporation

Applications that support QuickDraw GX technology and the Arabic Language Kit include:

- Ready, Set, Go! GX International from Manhattan Graphics Corp.
- LightningDraw GX from Lari Software, Inc.

Features
Versatile multilingual capabilities

- Switch between languages easily
- Combine different languages in the same document
- Install as many language kits as needed on a single Macintosh system

High-quality fonts

- Seven Arabic fonts and six Persian fonts
- Apple TrueType format for high-quality on-screen and printed characters
- Support for PostScript printers
- QuickDraw GX features for state-of-the-art typography

Note: QuickDraw GX font features require System 7.5 or later, QuickDraw GX software, and a QuickDraw GX compatible application.

Ease of use

- Simple, flexible installation process
- Informative installation and user's guide (in English and French)
- Transparent labels for different keyboard layouts
- Keyboard quick-reference card

Compatibility

- Works with System 7.1 and all subsequent versions of the Mac OS
- Compatible with any localized version of the Mac OS and with other Apple Language Kits
- Supports QuickDraw GX in System 7.5
- Runs in native mode on Power Macintosh computers

Ordering Information
Arabic Language Kit
Order No. M4454Z/A

- Five 1.4MB floppy disks and one CD-ROM containing:
- - Arabic Language Kit
- - Standard Arabic and Persian keyboard layouts
- - Transliterated QWERTY and AZERTY keyboard layouts
- - SimpleText Arabic, a basic text-processing application
- - Demonstration versions of compatible applications and utilities
- Arabic Installation and User's Guide (in English and French)
- Transparent keyboard labels with Arabic and Persian characters

Published Date: Feb 20, 2012

Cyrillic Language Kit: Description and Specifications

The Cyrillic Language Kit allows users to display, input, edit and print documents in Bulgarian, Russian, Ukrainian, Belorussian, Macedonian, Serbian, or any other language based on the Cyrillic writing system on their Mac OS computer. The software is intended for educators and students, multinational businesses, and bilingual home users.

The following article contains a description of the Cyrillic Language Kit and lists its hardware and software requirement specifications.
This article has been archived and is no longer updated by Apple.

Overview

Apple's Cyrillic Language Kit makes it easy to create documents in any Cyrillic based language.

This affordable, easy-to-install kit lets you switch effortlessly between the computer's main language and Bulgarian, Russian, or Ukrainian. You can also work in Belorussian, Macedonian, Serbian, or any other language based on the Cyrillic writing system. Cyrillic text can be mixed with other languages that your computer supports-including right-to-left and Asian languages-in the same document. The kit comes with a selection of keyboard layouts optimized for both native speakers and students, accompanied by transparent labels for customizing your keyboard.

The Cyrillic Language Kit works with almost any Mac OS compatible application, including those that have been localized for Bulgarian, Russian, or Ukrainian. Because the kit builds on the inherent multilingual capabilities of the Mac OS, text created in one application can be copied and pasted or dragged and dropped into another application. With the kit, you can work with documents created by colleagues in Eastern Europe who use the Bulgarian, Russian, or Ukrainian version of the Mac OS. You can also display Cyrillic based World Wide Web servers.

The Cyrillic Language Kit includes a selection of Apple TrueType fonts, which ensure high-quality on-screen and printed characters at any size and feature exciting new QuickDraw GX typographic capabilities. The fonts provided in TrueType format are also supplied in PostScript versions.

This product is part of a family of Apple language solutions, which offer an affordable way to internationalize your Macintosh system. You can install as many different Apple Language Kits as you need on a single computer. Apple also offers the Arabic Language Kit, the Chinese Language Kit, the Chinese Dictation Kit, the Hebrew Language Kit, the Japanese Language Kit, and others.

Technical Specifications

Usage Requirements

- A Macintosh or PowerBook computer with a 68020 or later processor and 4MB of RAM -OR-
- A Power Macintosh computer with 8MB of RAM
- An Apple SuperDrive floppy disk drive or a CD-ROM drive
- An application that has been localized for the target language or that supports right-to-left text

System Software Requirements

- * Macintosh System 7.1 or later (System 7.5 or later required to take advantage of QuickDraw GX features)

Included fonts

- APC Courier (TrueType and Postscript)
- Bastion (TrueType and Postscript)
- Latinski (TrueType and Postscript)
- Sistemny (bitmap)
- Pryamoy Prop (bitmap)
- Pryamoy (bitmap)

Compatible Applications

The Cyrillic Language Kit can be used with almost every Macintosh application. However, the best results will be achieved with applications that have been developed specifically to support multiple languages, including:

- HyperCard from Apple Computer, Inc.
- SimpleText from Apple Computer, Inc.
- ClarisWorks from Claris Corporation
- Nisus Writer from Nisus Software Inc.
- WinText from WinSoft S.A.
- WordPerfect from Novell, Inc.
- WorldWrite from World Software Corporation

Applications that support QuickDraw GX technology and the Cyrillic Language Kit include:

- Ready, Set, Go! GX International from Manhattan Graphics Corp.
- LightningDraw GX from Lari Software, Inc.

Features

- Versatile multilingual capabilities
- Switch between languages easily
- Combine different languages in the same document
- Install as many language kits as needed on a single Macintosh system

Ease of use

- Simple, flexible installation process
- Informative installation and user's guide (in English and French)
- Transparent labels for different keyboard layouts
- Keyboard quick-reference card

High-quality fonts

- Six Cyrillic fonts
- Apple TrueType format for high-quality on-screen and printed characters
- Support for PostScript printers
- QuickDraw GX features for state-of-the-art typography

Note: QuickDraw GX font features require System 7.5 or later, QuickDraw GX software, and a QuickDraw GX compatible application.

Compatibility

- Works with System 7.1 and all subsequent versions of the Mac OS
- Compatible with any localized version of the Mac OS and with other Apple Language Kits
- Supports QuickDraw GX in System 7.5
- Runs in native mode on Power Macintosh computers

Ordering Information

Cyrillic Language Kit
Order No. M4455Z/A

- Four 1.4MB floppy disks and one CD-ROM containing:
- - Cyrillic Language Kit
- - Standard Bulgarian, Russian, and Ukrainian keyboard layouts
- - Transliterated QWERTY, AZERTY, and QWERTZ keyboard layouts
- - SimpleText Bulgarian, SimpleText Russian, and SimpleText Ukrainian, basic text-processing applications
- - Demonstration versions of compatible applications and utilities
- Cyrillic Installation and User's Guide (in English and French)
- Transparent keyboard labels with Russian, Bulgarian, and Ukrainian characters

Published Date: Feb 20, 2012

Hebrew Language Kit: Description and Specifications

The Hebrew Language Kit allows users to display, input, edit and print Hebrew documents on their Mac OS computer. The software is intended for educators and students, multinational businesses, and bilingual home users.

The following article contains a description of the Hebrew Language Kit and lists its hardware and software requirement specifications.
This article has been archived and is no longer updated by Apple.

Overview

With Apple's Hebrew Language Kit, adding Hebrew and Yiddish text to your documents is both easy and affordable.

This easy-to-install, easy-to-use kit lets you enter, edit, and print Hebrew and Yiddish text. You can switch effortlessly between these languages and the computer's main language. Hebrew and Yiddish can be mixed with left-to-right languages in the same document-even in the same sentence. The kit features a selection of keyboard layouts optimized for both native speakers and students, along with transparent labels for customizing your keyboard.

The Hebrew Language Kit works with most Mac OS compatible applications that support right-to-left text entry, including multilingual and Hebrew-localized applications. Because the kit builds on the inherent multilingual capabilities of the Mac OS, text created in one application is transportable to another. You can copy and paste or drag and drop between applications, and work with documents created by colleagues in Israel who use the Hebrew version of the Mac OS.

The Hebrew Language Kit includes a selection of Apple TrueType fonts enhanced with exciting new QuickDraw GX typographic features. TrueType font technology ensures high-quality on-screen and printed characters at any size.

This product is part of a family of Apple language solutions, which offer an affordable way to internationalize your Macintosh system. You can install as many different Apple Language Kits as you need on a single computer. Apple's multilingual product offerings include the Arabic Language Kit, the Chinese Language Kit, the Chinese Dictation Kit, the Cyrillic Language Kit, the Japanese Language Kit, and others.

Technical Specifications

Usage Requirements

- A Macintosh or PowerBook computer with a 68020 or later processor and 4MB of RAM -OR-
- A Power Macintosh computer with 8MB of RAM
- An Apple SuperDrive floppy disk drive or a CD-ROM drive
- An application that has been localized for the target language or that supports right-to-left text

System Software Requirements

- Macintosh System 7.1 or later (System 7.5 or later required to take advantage of QuickDraw GX features)

Included fonts

- Arial (TrueType)
- Corsiva (TrueType)
- Eilat (bitmap)
- Hermon (bitmap)
- New Peninim (TrueType)
- Raanana (TrueType)

Compatible Applications

The Hebrew Language Kit is based on Apple's WorldScript I technology, and is compatible with all applications that take advantage of WorldScript I. The applications listed below are multilingual and/or Hebrew-localized products that have been tested with this kit; check with the software publisher for compatibility information on other applications.

- PageMaker ME from Adobe Systems (distributed by WinSoft S.A.)
- HyperCard from Apple Computer, Inc.
- SimpleText from Apple Computer, Inc.
- ClarisWorks HB from Claris Corporation
- FileMaker HB from Claris Corporation
- Nisus Writer from Nisus Software Inc.
- WinText from WinSoft S.A.
- WorldWrite from World Software Corporation

Applications that support QuickDraw GX technology and the Hebrew Language Kit include:

- Ready, Set, Go! GX International from Manhattan Graphics Corp.
- LightningDraw GX from Lari Software, Inc.

Features

Capabilities

- Switch between languages easily
- Combine different languages in the same document
- Install as many language kits as needed on a single Macintosh system

Ease of use

- Simple, flexible installation process
- Informative installation and user's guide (in English and French)
- Transparent labels for different keyboard layouts
- Keyboard quick-reference card

High-Quality Fonts

- Six Hebrew fonts, including Yiddish characters
- Apple TrueType format for high-quality on-screen and printed characters
- QuickDraw GX features for state-of-the-art typography
  Note: QuickDraw GX font features require System 7.5 or later, QuickDraw GX software, and a QuickDraw GX compatible application.

Compatibility

- Works with System 7.1 and all subsequent versions of the Mac OS
- Compatible with any localized version of the Mac OS and with other Apple Language Kits
- Supports QuickDraw GX in System 7.5
- Runs in native mode on Power Macintosh computers

Ordering Information

Hebrew Language Kit
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- Four 1.4MB floppy disks and one CD-ROM containing:
- - Hebrew Language Kit
- - Standard Hebrew keyboard layout
- - Transliterated QWERTY and AZERTY keyboard layouts
- - SimpleText Hebrew, a basic text-processing application
- - Demonstration versions of compatible applications and utilities
- Hebrew Installation and User's Guide (in English and French)
- Transparent keyboard labels with Hebrew characters

Published Date: Feb 20, 2012

What is POP3 and SMTP?

Explanation of POP3 (Post Office Protocol version 3) and SMTP (Simple Mail Transfer Protocol).

This information was provided by Claris Corporation on 16 March 1998, and incorporated into Apple Computer's Tech Info Library.

This article has been archived and is no longer updated by Apple.

POP3 Server Description

The POP3 (Post Office Protocol version 3) server component allows e-mail messages to be stored on the server and retrieved by e-mail client software. A POP3 server performs user authentication (checking user name and password) to prevent unauthorized access to users' mail. Each user has a unique name and password. Basically, POP3 handles only incoming mail.

For more information on the POP3 specification, see RFC 1725 available on the Internet.

SMTP Server Description

The SMTP (Simple Mail Transfer Protocol) server component handles outgoing mail requests. SMTP servers do not perform any type of user authentication, so there is no way to prevent unwanted use of an SMTP server except through the implementation of firewalls. Although this means that any user can send mail through any SMTP server, it does not mean that they can retrieve e-mail or access other users' messages. This is a limitation of the SMTP specification, not of the AppleShare IP Mail Server.

For more information on the SMTP specification, see RFC 821 available on the Internet.

Published Date: Feb 20, 2012

ClarisWorks 5.0 for Macintosh Translator List

This information was provided by Claris Corporation on 16 March 1998, and incorporated into Apple Computer's Tech Info Library.
This article has been archived and is no longer updated by Apple.
ClarisWorks 5.0 for Macintosh includes translators (filters) for the following types of files:

XTND Translators:

AppleWorks
AppleWorks DB/SS
AppleWorks GS
ASCII
BMP
ClarisWorks 1.0 Text
DBF
DIF
Dyno NotePad & Acta 3.0
EPSF PFLT
GIF
HTML
JPEG
MacPaint 2.0
MacWrite 5.0
MacWrite II
MacWrite Pro 1.x
Microsoft Excel 3-4
Microsoft Word 3.0
Microsoft Word 4-5
Microsoft Word PC
Microsoft Works 1.1
Microsoft Works 2.0
Microsoft Works DB/SS
Movie
PICT
RTF
SYLK
Text
TIFF
WinWord
WordPerfect 1.0.x
WordPerfect 2.x
WordPerfectÊMacÊ3.1
WordPerfect PC 4.2
WordPerfect PC 5.0
WriteNow
WriteNow NeXT

DataViz MacLink Plus Translators:

ClarisWorks DB 4.0
ClarisWorks SS 4.0
ClarisWorks WP 4.0
Excel 4.0
Excel 5.0
MS Works DB 3.0 Mac
MS Works DB 4.0 Mac
MS Works SS 2.0,3.0 Mac
MS Works SS 4.0 Mac
MS Works WP 3.0 Mac
MS Works WP 4.0 Mac
PICT to WMF
WMF to PICT
Word 6.0 Mac-Win
WordPfct Mac 3.0,3.1,3.5

TA25708_ClarisWorks_for_Macintosh_Translator_List.pdf

(Note: all MacLink Plus translators are the 68K version, even when installed on a PowerMacintosh computer.)

Published Date: Feb 20, 2012

ClarisWorks 5.0 Links Ã As Easy as 1 - 2 - 3 - 4 - 5

This information was provided by Claris Corporation on 16 March 1998, and incorporated into Apple Computer's Tech Info Library.
This article has been archived and is no longer updated by Apple.

1. A Powerful New Feature

The pervasive use of the Internet has changed the way that we think about information. The World Wide Web encourages us to jump from place to place and document to document in order to access just the information we need at any given time.

ClarisWorks 5.0 brings that same ability to the office software you use everyday with its powerful new Links features. Instead of working on a single document, you can create systems of multiple documents linked together, or linked to information on the Internet. Using live links, one click will bring you to another part of your document, open another ClarisWorks document and jump to a specific location, or even launch your Web browser and bring up your favorite URL. And like other ClarisWorks features, links are simple to create, yet powerful to use.

2. Easy Tools for Creating and Using Links

Because people work in different ways, ClarisWorks provides two sets of tools to create and manage your Links. The first tool is the Links Palette, displayed by choosing Show Links Palette under the Window menu. This palette brings together all links' functionality. You can create, edit and delete links, change between Bookmarks, Document Links and URL Links, organize your Bookmarks into folders, and sort your links by name or position, all in the same place. From the Links Palette you can even turn live links off temporarily while you edit a linked object.

The second tool is the Internet Button Bar, which provides a subset of the most commonly used functionality in the Links Palette. By default, the Internet Button Bar includes buttons to create Bookmarks, Document Links and URL Links, as well as a button to toggle live links on and off. And because you can customize any button bar to suit your individual needs, you can add the links buttons to the button bar you use the most.

3. Kinds of Links to Meet Your Needs

Bookmarks identify specific locations in a document. Clicking a Bookmark in the Links palette will jump directly to the specified ClarisWorks text or object. Better yet, you can use Bookmarks in conjunction with Document Links to link two objects within the same or different ClarisWorks documents. And for clarity, you can create folders in the Links Palette to group your Bookmarks.

Document Links provide three ways to connect ClarisWorks files. First, a Document link can open one ClarisWorks file from within another. Additionally, a Document link can jump directly to a Bookmark in a second file so that you can send a reader right to the relevant information. Finally, a Document link can jump to a Bookmark in the same file as the Document link. Like anchors on a Web page, Document links within a file allow directed navigation from location to location.

URL Links store the Internet address of a Web page. Clicking on a live URL Link will launch your default browser and open the specified Web page. Because the URL is stored in the Links palette, you can hide complex Web addresses behind simple graphics or text.

4. Simple Examples of Links in Action

Offices, schools and homes often store related information in different places and different forms. One example is a company's personnel department which needs to distribute policies and procedures to every employee. The centerpiece of this effort is an annual Personnel Manual, but there are also additional documents that can change throughout the year and other information stored on the corporate intranet that was not available when the handbook was completed. The four examples below show how links in ClarisWorks can help unite all of that information to be accessed through a single file.

A. Bookmarks can tag the beginning of each section of the personnel manual for ease of navigation. Before creating Bookmarks, it is useful to create folders to group your Bookmarks together. To do this, show the Links palette and choose New folder in the Special Menu. Create a folder named Corporate Policies and hit OK. Use the same steps to create a folder called Benefits.

Now you are ready to create the links themselves. First select the text you want to bookmark, in this case the heading of the section called Your Health Insurance Options. In the Links menu in the Links Palette, choose New Bookmark. Name the Bookmark (ClarisWorks suggests using the selected text 'Your Health Insurance Options' but you can change the name if you wish), choose the Benefits folder and hit OK. Repeat these steps for each section of the manual.

B. Internal Document Links provide a handy tool for creating an interactive table of contents. The first page of your personnel manual contains an index of the different sections of the document, the same sections which you bookmarked above. In the index, highlight the phrase Health Insurance. In the pop-up menu in the Links Palette, switch from Bookmarks to Document Links. Under the Links menu, in the palette, choose New Document Link. The suggested name is Health Insurance and the document is <current document>. All you need to do is choose the Your Health Insurance Options Bookmark and hit OK. Once you have done this for each section, you can jump directly from the index to the specified section.

C. External document links allow you to open other ClarisWorks documents by clicking on text or an object. Instead of duplicating information and maintaining two copies, you can access the same information from multiple locations. In the Personnel Manual example, this company

maintains a Corporate Backgrounder file that gets updated throughout the year as changes occur. To create this link, select the text Corporate Backgrounder from the index section of the Personnel Manual. Switch to the Internet button bar. Click on the New Document Link button (graphic here), hit the choose document button and navigate to the file named Corporate Backgrounder.cwk.

Hint: ClarisWorks will try to find the path to the original document. If that path is not available, place the target document (Corporate Backgrounder.cwk) in the same directory as the source document (Personnel Manual.cwk).

D. URL links extend the reach of your ClarisWorks documents to the World Wide Web. For up to the minute accuracy, the corporate phone book is stored in a database and accessed off of a Web page. Once again, the personnel manual contains only a reference to the Phone Book in the index with a picture of a telephone next to it. To create a URL link, select the telephone graphic and choose the New URL Link button (graphic here) in the Internet button bar. Type in the URL of the phonebook on your intranet and hit OK. With one click on the telephone icon, ClarisWorks will launch your default browser and bring your phone book to the screen.

5. That's ClarisWorks 5.0

This provides only a few simple examples of the powers that links add to your ClarisWorks documents. As you begin to work with links, you can build incredible connections between the different kinds of information stored around your company.

For further information about creating links, see the New Features in ClarisWorks 5.0 section of the online help. For additional examples of links, check out the many Stationery Index documents located in the ClarisWorks Stationery folder in your ClarisWorks 5.0 folder.

Published Date: Feb 20, 2012

AppleScript zoom command will force quit ClarisWorks 5.0.

The AppleScript command that should zoom a window in ClarisWorks 5.0 does not work. It causes ClarisWorks to quit without warning.

This information was provided by Claris Corporation on 16 March 1998, and incorporated into Apple Computer's Tech Info Library.

This article has been archived and is no longer updated by Apple.
The AppleScript command that should zoom a window in ClarisWorks 5.0 does not work. It causes ClarisWorks to quit without warning. Any attempt to launch ClarisWorks will cause the computer to lock up. The computer must be restarted before ClarisWorks can be launched.

Testing was done on a PowerMac with System 8.0. The issue has not been verified on a standard Mac or under other versions of the operating system.
Published Date: Feb 20, 2012

Applescript Commands in ClarisWorks 5.0 Macintosh

This information was provided by Claris Corporation on 16 March 1998, and incorporated into Apple Computer's Tech Info Library.
This article has been archived and is no longer updated by Apple.
This is the list of AppleScript commands in ClarisWorks Office (5.0) for Macintosh. You can see this information by dragging the ClarisWorks 5.0 application icon onto Script Editor.

Standard Suite: Common terms for most applications

class info: Get information about an object class
class info type class -- the object class about which information is requested
[Result: type class info] -- a record containing the object's properties and elements

close: Close an object
close reference -- the object to close
[saving 'savo'] -- specifies whether or not changes should be saved before closing
[saving in alias] -- the file in which to save the object
[as file type type class] -- the type of file in which to save the document
[using translator string] -- the name of the XTND translator to use to save the document

count: Return the number of elements of a particular class within an object
count reference -- the object whose elements are to be counted
each type class -- the class of the elements to be counted.
Result: integer -- the number of elements

data size: Return the size in bytes of an object
data size reference -- the object whose data size is to be returned
[as type class] -- the data type for which the size is calculated
Result: integer -- the size of the object in bytes

delete: Delete an element from an object
delete reference -- the element to delete

duplicate: Duplicate object(s)
duplicate reference -- the object(s) to duplicate
[to location reference] -- the new location for the object(s)
Result: reference -- to the duplicated object(s)

exists: Verify if an object exists
exists reference -- the object in question
Result: boolean -- true if it exists, false if not

make: Make a new element
make
new type class -- the class of the new element.
at location reference -- the location at which to insert the element
[with data anything] -- the initial data for the element
[with properties record] -- the initial values for the properties of the element
Result: reference -- to the new object(s)

move: Move object(s) to a new location
move reference -- the object(s) to move
to location reference -- the new location for the object(s)
Result: reference -- to the object(s) after they have been moved

open: Open the specified object(s)
open alias -- list of objects to open
[using translator string] -- the name of the XTND translator to use to open the file
[as document type DR/WP/SS/DB/PT/CM] -- the type of ClarisWorks document as which to open the file
[with password plain text] -- the password to use

print: Print the specified object(s)
print alias -- list of objects to print
[merge alias] -- list of database files to merge

[one copy boolean] -- print one copy without displaying the print dialog?

quit: Quit an application program
quit
[saving 'savo'] -- specifies whether to save currently open documents

save: Save a document
save document -- the document to save
[in alias] -- the file in which to save the document
[as file type type class] -- the type of file in which to save the document (e.g., PICT, TEXT, MW2D)
[using translator string] -- the name of the XTND translator to use to save the document
[stationery boolean] -- save the document as stationery?
[backup boolean] -- save a copy of the document in the new location?

Class application: An application program
Plural form:
applications
Elements:
document by numeric index, by name, as a range of elements, satisfying a test
window by numeric index, by name, as a range of elements, satisfying a test
palette by numeric index, by name, as a range of elements, satisfying a test
menu by numeric index, by name, by ID
library by numeric index, by name
slide by numeric index
Properties:
frontmost boolean [r/o] -- Is this the frontmost application?
name string [r/o] -- the name
selection selection object -- the selection visible to the user
version version [r/o] -- the version of the application
user name string [r/o] -- the name of the user to whom the application is registered
company name string [r/o] -- the name of the company to which the application is registered
registration number string [r/o] -- the registration number of this copy of the application
XTND translators a list of XTND translator [r/o] -- *** BOGUS (DataViz!) list of XTND translators available to the application
current slide slide -- the current slide being displayed in a slide show
editing styles boolean -- true if application is currently editing a style
clipboard anything [r/o] -- the clipboard
preferences application preferences -- application preferences
default document preferences document preferences -- application preferences
name string [r/o] -- the application's name

Class character: A character
Plural form:
characters
Elements:
character by numeric index, as a range of elements
text as a range of elements
Properties:
color RGB color -- the color
font text -- the name of the font of the character
size real -- the size in points of the character
writing code writing code [r/o] -- the script system and language of the character
style text style info -- the text style of the character
uniform styles text style info [r/o] -- the text styles which are uniform throughout the specified text
user style record -- the user style (and incremental attributes) defining the character's appearance
merge field boolean [r/o] -- is this characters a merge field placeholder?
merge field name string -- the name of the database field to be merged at this point in the text
merge field data string [r/o] -- the contents of the database field to be merged at this point in the text for the current record; undefined if not merging
drawing area drawing area [r/o] -- the character's drawing area (only for embedded graphics)
<Inheritance> text [r/o] -- subclass of text

Class document: an open document
Plural form:
documents
Elements:

window by numeric index, by name, as a range of elements, satisfying a test
page by numeric index, as a range of elements, satisfying a test
header
footer
pattern by numeric index
texture by numeric index
gradient by numeric index
Properties:
text body text [r/o] -- the document's text
drawing area drawing area [r/o] -- the document's drawing area
painting painting [r/o] -- the document's painting
spreadsheet spreadsheet [r/o] -- the document's spreadsheet
database database [r/o] -- the document's database
connection connection -- the document's connection
terminal terminal -- the document's terminal
file transfer file transfer -- the document's file transfer
stylesheet stylesheet [r/o] -- the document's stylesheet
preferences document preferences -- document preferences
modified boolean -- has the document been modified since the last save?
page setup print record -- the document's page setup
margins rectangle -- the document's margins
name string [r/o] -- the name of the document
index integer [r/o] -- the document number
document kind DR/WP/SS/DB/PT/CM [r/o] -- the document kind
file alias [r/o] -- the document's file
title plain text -- the title of the document
author plain text -- the author of the document
version plain text -- the version of the document
keywords plain text -- the keywords of the document
category plain text -- the category of the document
description plain text -- the description of the document
selection selection object -- the current user selection or insertion point for the document
merge file alias -- the database file with which to merge
merge record small integer -- the record index of the database record currently being merged
merge boolean -- is merge field data currently being shown?
autohyphenate boolean -- automatically hyphenate as you edit and type new text?
date format numeric date/short abbreviated date/short date/long abbreviated date/long date -- format to use when displaying dates
fractional character widths boolean -- use fractional character widths when drawing text?
smart quotes boolean -- use smart quotes?
side handles boolean -- use side handles (for a total of 8) when displaying object selection?
polygon autoclose boolean -- automatically close polygons?
show invisibles boolean -- show invisible characters in text?
color palette size 256 colors/81 colors -- type of palette to use to display color choices
autosmooth boolean -- automatically smooth freehand?
gradient drawing faster/better -- method to use for displaying gradients
shift constraint integer -- the angle at which the shift key constrains the mouse
character delay integer -- the number of 60ths of a second to delay per character when pasting text to a connection
line delay integer -- the number of 60ths of a second to delay per line when pasting text to a connection
save screen boolean -- save the screen to the scrollback before clearing?
capture type port/screen -- location from which to capture text
scrollback limit boolean -- limit the scrollback to a maximum size?
scrollback maximum integer -- maximum size of the scrollback (units are specified by scrollback type)
scrollback type lines/bytes/screens -- units for the maximum scrollback size
open option open connection/wait for connection/do nothing -- action to perform when opening the communications document
transfer folder alias -- the default folder for received files
name string [r/o] -- the document's name

Class file: A file
Plural form:
files
Properties:
stationery boolean [r/o] -- Is the file a stationery file?

Class selection object: the selection visible to the user
Properties:

contents type class [r/o] -- the contents of the selection

Class text: text
Elements:
text as a range of elements
character by numeric index, as a range of elements
footnote by numeric index, as a range of elements
section by numeric index, as a range of elements
paragraph by numeric index, as a range of elements
word by numeric index, as a range of elements
Properties:
font text -- the name of the font of the first character
style text style info -- the text style of the first character
user style record -- the user style (and incremental attributes) defining the first character's appearance
size real -- the size in points of the first character
writing code writing code [r/o] -- the script system and language of the first character
uniform styles text style info [r/o] -- the text styles which are uniform throughout the specified text
length integer [r/o] -- length of the text
offset integer [r/o] -- offset of the text from the beginning of the enclosing text object
<Inheritance> item [r/o] -- subclass of item

Class text style info: On and Off styles of text run
Plural form:
text style infos
Properties:
on styles a list of plain/bold/italic/outline/shadow/underline/double underline/superscript/subscript/strikethru/condense/extend/superior/inferior [r/o] -- the styles that are on for the text
off styles a list of plain/bold/italic/outline/shadow/underline/double underline/superscript/subscript/strikethru/condense/extend/superior/inferior [r/o] -- the styles that are off for the text

Class window: a document window
Plural form:
windows
Elements:
split by numeric index, as a range of elements, satisfying a test
pane by numeric index, as a range of elements, satisfying a test
'cBln' by numeric index
Properties:
name string [r/o] -- the window's name
document document [r/o] -- the document associated with the window
bounds bounding rectangle -- the boundary rectangle for the window
zoomed boolean -- Is the window zoomed?
position point -- upper left coordinates of the window
scale real -- the viewing scale (zoom percentage)
ruler ruler -- the ruler for this window
tools boolean -- is the tool panel for this window visible?
page view boolean -- is the window in page view?
database view browse view/find view/layout view/list view -- (for databases only) the view type for the database

Class insertion point: An insertion location between two objects
Plural form:
insertion points

ClarisWorks Suite: General terms for use with ClarisWorks

apply: Apply a user style to an object
apply reference -- the user style to apply
to reference -- the object to which to apply the style

arrange windows: Arrange windows, tiling or stacking them
arrange windows
by tiling/stacking -- how to arrange the windows
[direction horizontal/vertical] -- direction to tile windows

check spelling: Check the spelling of the of the specified text or object
check spelling
[of reference] -- the object or text to spell-check
[dialog boolean] -- display a dialog showing the misspelled words?
[Result: list] -- list of misspelled words

copy to clipboard: Copy the current selection to the clipboard
copy to clipboard

cut: Cut the current selection to the clipboard
cut

go to: Go to a specific slide
go to slide -- the slide to be displayed
[fade boolean] -- Specifies whether or not to fade when switching to the specified slide
[scaling boolean] -- Specifies whether to scale the slide to fit the screen
[center slide boolean] -- Specifies whether to center the slide on the screen
[cursor boolean] -- Specifies whether to make the cursor visible
[play movies boolean] -- Specifies whether to automatically play movies on the slide
[simultaneous boolean] -- Specifies whether to play movies simultaneously when automatically playing
[background RGB color] -- Specifies the color to use for the background of the slide
[border RGB color] -- Specifies the color to use for the border surrounding the slide

do script: Run the specified macro
do script plain text -- the name of the macro to run

find synonyms: Look up synonyms for the specified word in the thesaurus
find synonyms
for word -- the word to look up
[dialog boolean] -- display a dialog listing the synonyms?
[Result: synonym list] -- synonyms for the specified word

help: Display ClarisWorks' onscreen help
help integer -- topic number

insert: Insert a file into a document
insert alias -- the file to insert
[at location reference] -- the location at which to insert the file
[using translator string] -- the name of the XTND translator to use to import the document
[with fields plain text] -- the field order to use when inserting into a database (use "" to skip a field)

invoke assistant: Start an interactive session with a ClarisWorks assistant
invoke assistant plain text -- the name of the assistant to invoke

paste: Paste from the clipboard to the current selection
paste values/formulas/formats -- special things that can be pasted
[transpose boolean] -- transpose the data diagonally?

play: Start playing the specified object
play reference -- the object to play

reveal: Make the requested objects visible
reveal reference -- the object(s) to make visible
[in window reference] -- the window in which to display the objects

revert: revert to the last saved version of a document
revert document -- the document to be reverted

select: Select the specified object
select reference -- the object to be selected

sort: Sort an object by one or more of its elements. (Database or Spreadsheet)
sort reference -- the object to sort
[with key reference] -- the key element(s) on which to sort

[direction ascending/descending] -- the direction in which to sort

speak: Use PlainTalk to speak some text
speak plain text -- the text to speak
[using voice string] -- the name of the PlainTalk voice to use

start slides: Start the slideshow for the current document
start slides

stop: Stop playing the specified object
stop reference -- the object to stop playing

stop slides: Stop the slideshow, returning to the normal application state
stop slides

remove: Unapply a user style to an object
remove reference -- the user style to apply
from reference -- the object from which to remove the style

Class application preferences: preferences which apply globally throughout the application
Properties:
terminal speech boolean -- speak text in communication documents?
WYSIWYG fonts boolean -- display WYSIWYG font menu?
arrow Keys move caret/change cells -- action to take in spreadsheet entry bar when arrow keys are pressed
enter mode enter mode/return mode/tab mode -- action to take in spreadsheet when Enter is pressed
old version warning boolean -- display warning alert when opening a document created by an older version?
locked file warning boolean -- display warning alert when opening a locked document?
paint reduction warning boolean -- display warning alert when size of new paint document is reduced due to memory constraints?
converted file suffix boolean -- append "[v4.0]" to documents converted from older formats?
preview boolean -- create a preview for saved documents?
custom icon boolean -- create a custom icon for saved documents?
startup option do nothing/show new/show open -- action to take when launched
default font text -- the name of the default font
remember translator boolean -- when saving, set the default export translator to be the same as the import translator?
mail quote type at bottom/at top -- when quoting mail in a reply, the quoting etiquette to use
word services boolean -- enable word services in the Writing Tools menu?
quote indent plain text -- when quoting mail, the text with which to indent each paragraph
connection tools a list of string [r/o] -- connection tools available to the application
terminal tools a list of string [r/o] -- terminal tools available to the application
file transfer tools a list of string [r/o] -- file transfer tools available to the application
default connection connection -- default connection to use in new communication documents
default terminal terminal -- default terminal to use in new communication documents
default file transfer file transfer -- default file transfer to use in new communication documents

Class document preferences: preferences which apply to individual documents
Properties:
date format numeric date/short abbreviated date/short date/long abbreviated date/long date -- format to use when displaying dates (default for new documents)
fractional character widths boolean -- use fractional character widths when drawing text? (default for new documents)
smart quotes boolean -- use smart quotes? (default for new documents)
side handles boolean -- use side handles (for a total of 8) when displaying object selection? (default for new documents)
polygon autoclose boolean -- automatically close polygons? (default for new documents)
show invisibles boolean -- show invisible characters in text? (default for new documents)
color palette size 256 colors/81 colors -- type of palette to use to display color choices (default for new documents)
autosmooth boolean -- automatically smooth freehand? (default for new documents)
gradient drawing faster/better -- method to use for displaying gradients (default for new documents)
shift constraint integer -- the angle at which the shift key constrains the mouse (default for new documents)
character delay integer -- the number of 60ths of a second to delay per character when pasting text to a connection (default for new documents)
line delay integer -- the number of 60ths of a second to delay per line when pasting text to a connection (default for new documents)
save screen boolean -- save the screen to the scrollback before clearing? (default for new documents)
capture type port/screen -- location from which to capture text (default for new documents)
scrollback limit boolean -- limit the scrollback to a maximum size? (default for new documents)
scrollback maximum integer -- maximum size of the scrollback (units are specified by scrollback type) (default for new documents)
scrollback type lines/bytes/screens -- units for the maximum scrollback size (default for new documents)
open option open connection/wait for connection/do nothing -- action to perform when opening the communications document (default for new

documents)
transfer folder alias -- the default folder for received files (default for new documents)

Class footer: the document's footer
Plural form:
footers
Properties:
orientation left pages/right pages/all pages -- the orientation of the footer
<Inheritance> text [r/o] -- subclass of text

Class header: the document's header
Plural form:
headers
Properties:
orientation left pages/right pages/all pages -- the orientation of the header
<Inheritance> text [r/o] -- subclass of text

Class library: a library of graphic objects
Plural form:
libraries
Elements:
graphic object by numeric index, by name
Properties:
name string [r/o] -- the name of the library
file alias [r/o] -- the library's file
palette palette [r/o] -- the library's floating palette
<Inheritance> item [r/o] -- subclass of item

Class menu: A menu
Plural form:
menus
Elements:
menu item by numeric index, by name, as a range of elements
Properties:
name string [r/o] -- the name of the menu
id small integer [r/o] -- the menu id
<Inheritance> item [r/o] -- subclass of item

Class menu item: A menu item. Use "select" to perform a menu item action.
Plural form:
menu items
Properties:
name string [r/o] -- the name of the menu
index integer [r/o] -- the menu item number
enabled boolean [r/o] -- is the menu item enabled?
checked boolean [r/o] -- is the menu item checked?
check character plain text [r/o] -- the character used to check this menu item
<Inheritance> item [r/o] -- subclass of item

Class page: A page
Plural form:
pages
Properties:
index integer [r/o] -- the page number
<Inheritance> item [r/o] -- subclass of item

Class palette: A floating palette window
Plural form:
palettes
Properties:
bounds bounding rectangle -- the boundary rectangle for the window
closeable boolean [r/o] -- Does the window have a close box?
titled boolean [r/o] -- Does the window have a title bar?
index integer -- the number of the window
floating boolean [r/o] -- Does the window float?

modal boolean [r/o] -- Is the window modal?
resizable boolean [r/o] -- Is the window resizable?
zoomable boolean [r/o] -- Is the window zoomable?
zoomed boolean -- Is the window zoomed?
visible boolean -- Is the window visible?
position point -- upper left coordinates of the window
name string [r/o] -- the palette's name
<Inheritance> item [r/o] -- subclass of item

Class pane: A window pane
Plural form:
panes
Properties:
bounds bounding rectangle -- the bounds of the pane
<Inheritance> item [r/o] -- subclass of item

Class pattern: a pattern
Plural form:
patterns

Class print record: Printer-specific page setup information
Plural form:
print records
Properties:
<Inheritance> item [r/o] -- subclass of item

Class ruler: a ruler
Plural form:
rulers
Properties:
visible boolean [r/o] -- is the ruler visible?
ruler kind graphics ruler/text ruler [r/o] -- the type of ruler
unit lines/inches/millimeters/centimeters/picas/points [r/o] -- the unit of measurement of the ruler
divisions small integer -- the number of divisions per unit in this document's rulers
<Inheritance> item [r/o] -- subclass of item

Class ruler measurement info: a fixed value and its unit of measurement
Properties:
value real [r/o] -- the amount
unit lines/inches/millimeters/centimeters/picas/points [r/o] -- the unit of measurement applied to the value
<Inheritance> item [r/o] -- subclass of item

Class slide: A slide which may be displayed in the slide show
Plural form:
slides
Properties:
index integer -- the number of the slide
transition mode opaque/transparent/hidden [r/o] -- the way the slide is displayed relative to previous slides
<Inheritance> item [r/o] -- subclass of item

Class split: A split bar dividing two panes
Plural form:
splits
Properties:
position small integer -- the position of the split bar in the window
orientation horizontal/vertical [r/o] -- the orientation of the split bar
<Inheritance> item [r/o] -- subclass of item

Class style attribute: an attribute of a user style
Plural form:
style attributes
Properties:
class type class [r/o] -- the attribute's class
<Inheritance> record [r/o] -- subclass of record

Class stylesheet: stylesheet
Plural form:
stylesheets
Elements:
user style by numeric index, by name
Properties:
<Inheritance> item [r/o] -- subclass of item

Class synonym list: a list of synonyms
Plural form:
synonym lists
Elements:
list
Properties:
speech part noun/verb/adjective/adverb/pronoun [r/o] -- the type of word

Class tab stop: a tab stop
Plural form:
tab stops
Properties:
tab type left/right/center/align on -- the tab's alignment type
position real -- the tab's position in the ruler
alignment character plain text -- (for align-on tabs) the character on which to align
fill character plain text -- the character with which to fill the tab space
<Inheritance> item [r/o] -- subclass of item

Class texture: a texture
Plural form:
textures

Class user style: user-defined style
Plural form:
user styles
Elements:
style attribute by numeric index
Properties:
name string -- the name of the user style
style type basic style/paragraph style/outline style/table style [r/o] -- the style type
base style user style -- the user style this one is based on
incremental styles a list of style attribute -- attributes applied to an object in addition to the user style

Class XTND translator: an XTND file translator
Plural form:
XTND translator
Properties:
name string [r/o] -- the name of the translator
translator type text translator/graphic translator/spreadsheet translator/database translator/spreadsheet or database translator [r/o] -- the translator type
translation import only translation/export only translation/import and export translation [r/o] -- the translations supported
<Inheritance> item [r/o] -- subclass of item

ClarisWorks Text Suite: Terms for use with word processing

Class footnote: a footnote
Plural form:
footnotes
Properties:
label plain text -- the label associated with this footnote
index integer [r/o] -- the index of this footnote in the text
<Inheritance> text [r/o] -- subclass of text

Class paragraph: a paragraph
Plural form:

paragraphs
Elements:
character by numeric index, as a range of elements
footnote by numeric index
tab stop by numeric index
text as a range of elements
Properties:
index integer [r/o] -- the index of this paragraph in the text
level integer -- the outline level
left indent ruler measurement info -- the left indentation
right indent ruler measurement info -- the right indentation
first line indent ruler measurement info -- the initial indentation of the first line
line spacing ruler measurement info -- the space between the lines of a paragraph
space before ruler measurement info -- the space before a paragraph
space after ruler measurement info -- the space after a paragraph
label none/diamond label/bullet label/checkbox label/Harvard label/leader label/legal label/letter label/letter caps label/numeric label/Roman label/Roman caps label -- the outlining label type associated with a paragraph
justification left/right/center/full -- Justification of the text
<Inheritance> text [r/o] -- subclass of text

Class section: a section
Plural form:
sections
Elements:
character by numeric index, as a range of elements
footnote by numeric index
tab stop by numeric index
text as a range of elements
'cTxC'
Properties:
index integer [r/o] -- the index of this section in the text
<Inheritance> text [r/o] -- subclass of text

Class word: A word
Plural form:
words
Elements:
character by numeric index, as a range of elements
text as a range of elements
Properties:
index integer [r/o] -- the index of this word in the text
<Inheritance> text [r/o] -- subclass of text

ClarisWorks Database Suite: Terms for use with databases

hide: Hide a set of database records
hide reference -- the records to hide

search: search for a set of records, showing or hiding them
search database -- the database to search
[looking for record] -- records containing the search criteria
[omitting record] -- records containing the omission criteria
[matching plain text] -- a ClarisWorks formula specifying the records to be shown
[from all records/visible records] -- the set of records to search
Result: integer -- the number of records found

show: show a set of database records
show reference -- the records to show

Class database: a database
Plural form:
databases
Elements:

layout by name, by numeric index
field by name, by numeric index
record by numeric index, as a range of elements, satisfying a test
report by name, by numeric index
db search by name, by numeric index
db sort by name, by numeric index
request by numeric index, as a range of elements
Properties:
current record integer -- the current record
<Inheritance> item [r/o] -- subclass of item

Class db search: a canned database search
Plural form:
db searches
Properties:
name string [r/o] -- the name of the search
<Inheritance> item [r/o] -- subclass of item

Class db sort: a canned database sort
Plural form:
db sorts
Properties:
name string [r/o] -- the name of the sort
<Inheritance> item [r/o] -- subclass of item

Class field: a database field
Plural form:
fields
Properties:
name string [r/o] -- the name of the field
index integer [r/o] -- the index of the field
<Inheritance> item [r/o] -- subclass of item

Class layout: a database layout
Plural form:
layouts
Properties:
name string -- the name of the layout
show multiple boolean -- show multiple records at a time?
index integer [r/o] -- the record number
drawing area drawing area [r/o] -- the character's drawing area (only for embedded graphics)
<Inheritance> item [r/o] -- subclass of item

Class record: a database record
Plural form:
records
Elements:
field by name, by numeric index
Properties:
visible boolean [r/o] -- is the record visible?
index integer [r/o] -- the record number
id small integer [r/o] -- the record id
creation date date [r/o] -- the date/time the record was created
modification date date [r/o] -- the date/time the record was last modified
<Inheritance> item [r/o] -- subclass of item

Class report: a database report
Plural form:
reports
Properties:
name string [r/o] -- the name of the report
<Inheritance> item [r/o] -- subclass of item

Class request: a database request record
Plural form:

requests
Elements:
field by name, by numeric index
Properties:
index integer [r/o] -- the request number
<Inheritance> item [r/o] -- subclass of item

ClarisWorks Spreadsheet Suite: Terms for use with spreadsheets

recalculate: Recalculate a spreadsheet
recalculate spreadsheet -- the spreadsheet to recalculate

Class axis: axis
Plural form:
axes

Class cell: A cell
Plural form:
cells
Elements:
cell by numeric index, as a range of elements
row by numeric index, as a range of elements
column by numeric index, as a range of elements
Properties:
formula text -- the formula of the cell
format general/currency/percent/scientific notation/fixed/numeric date/short abbreviated date/short date/long abbreviated date/long date/short time/long time/short military time/long military time -- the cell format
lock read only/read write -- Indicates whether value or formula in the cell can be changed
name plain text -- the name of the cell (e.g., "A1")
color RGB color -- the cell's text color
font text -- the name of the font of the cell
size real -- the size in points of the cell text
writing code writing code [r/o] -- the script system and language of the cell text
style text style info -- the text style of the cell
fill color RGB color -- the fill color
fill pattern integer -- the fill pattern
alignment general/left/right/center -- justification of the text
decimal places integer -- digits of precision
commas boolean -- display numbers with thousands separators?
parentheses boolean -- display negative numbers in parentheses?
wrap boolean -- wrap text within a cell?
left border boolean -- draw a border on the left side of the cell?
top border boolean -- draw a border on the top of the cell?
right border boolean -- draw a border on the right side of the cell?
bottom border boolean -- draw a border on the bottom of the cell?
outline border boolean -- draw a border framing the range of cells?
user style record -- the user style (and incremental attributes) defining the cell's appearance
<Inheritance> item [r/o] -- subclass of item

Class chart: a graphic chart of spreadsheet data
Plural form:
charts
Elements:
axis
series
Properties:
range reference -- the spreadsheet range which is charted
chart kind bar chart/area chart/line chart/scatter chart/pie chart/pictogram chart/stacked bar chart/stacked area chart/XY line chart/XY scatter chart/high low chart/stacked pictogram chart -- the type of chart
title 'cChT' -- the title of the chart
legend 'cChL' -- the legend of the chart
in color boolean -- is the chart in color?
is shadowed boolean -- does the chart have a drop shadow?

three dimensional boolean -- are the chart bars three dimensional?
tilted boolean -- are the pies displayed tilted?
scale multiple boolean -- are multiple pies scaled based on their total data size?
square grid boolean -- does the X/Y grid have a square aspect?
series arrangement type class -- the arrangement of data within the spreadsheet for series (rows or columns)
row label boolean -- use numbers as labels in the first row?
column label boolean -- use numbers as labels in the first column?
<Inheritance> graphic object [r/o] -- subclass of graphic object

Class chart title: a chart's title
Properties:
position top left/top center/top right/center left/center center/center right/bottom left/bottom center/bottom right -- the position of the title relative to the chart
orientation horizontal/vertical [r/o] -- the orientation of the title
is shadowed boolean -- does the title have a drop shadow?

Class chart legend: a chart's legend
Properties:
position top left/top center/top right/center left/center center/center right/bottom left/bottom center/bottom right -- the position of the legend relative to the chart
orientation horizontal/vertical [r/o] -- the orientation of the legend
is shadowed boolean -- does the legend have a drop shadow?
use symbol boolean -- should the legend display the series symbol?

Class column: A column
Plural form:
columns
Elements:
cell by numeric index, as a range of elements
row by numeric index, as a range of elements
column by numeric index, as a range of elements
Properties:
name plain text -- the name of the column
index integer [r/o] -- the column number
width integer -- the width of the column in pixels
<Inheritance> item [r/o] -- subclass of item

Class named range: a user-defined range of cells
Plural form:
named ranges
Elements:
cell by numeric index
Properties:
name string -- the name of the range
<Inheritance> item [r/o] -- subclass of item

Class row: A row
Plural form:
rows
Elements:
cell by numeric index, as a range of elements
row by numeric index, as a range of elements
column by numeric index, as a range of elements
Properties:
index integer [r/o] -- the row number
height integer -- the height of the row in pixels
<Inheritance> item [r/o] -- subclass of item

Class series: series
Properties:
picture picture -- the pictogram picture
repeating boolean -- does the pictogram repeat?
percent overlap small integer -- if the pictogram repeats, the percentage of it which overlaps
label data boolean -- should the series be directly labeled
position top left/top center/top right/center left/center center/center right/bottom left/bottom center/bottom right -- if the series is labeled, the

position of the label relative to the series
chart kind bar chart/area chart/line chart/scatter chart/pie chart/pictogram chart/stacked bar chart/stacked area chart/XY line chart/XY scatter chart/high low chart/stacked pictogram chart -- the type of chart

Class spreadsheet: A spreadsheet
Plural form:
spreadsheet
Elements:
row by numeric index, as a range of elements
column by name, by numeric index, as a range of elements
cell by name, by numeric index, as a range of elements
chart by numeric index
named range by name, by numeric index
Properties:
data bounds named range [r/o] -- the range that data occupies in the spreadsheet
<Inheritance> item [r/o] -- subclass of item

ClarisWorks Graphics Suite: Terms for use with graphics

Class arc: An arc
Plural form:
arcs
Properties:
arc angle small integer -- Angle of the arc in degrees
start angle small integer -- the angle that defines the start of the arc, in degrees
<Inheritance> graphic object [r/o] -- subclass of graphic object

Class drawing area: Container for graphics and supporting information
Plural form:
drawing areas
Elements:
graphic object
Properties:
<Inheritance> item [r/o] -- subclass of item

Class gradient: a gradient
Properties:
gradient kind linear/circular/burst [r/o] -- the type of gradient
colors a list of RGB color -- the reference colors of the gradient (1 - 4)
angle integer -- the angle for linear or circular gradients
offset real -- flip position for linear gradients; 0.0 = center, 1.0 = edge
bounds bounding rectangle -- the center for burst or circular gradients, relative to {0, 0, 100, 100}
<Inheritance> item [r/o] -- subclass of item

Class group: Group of graphics
Plural form:
groups
Properties:
drawing area drawing area [r/o] -- the character's drawing area (only for embedded graphics)
<Inheritance> graphic object [r/o] -- subclass of graphic object

Class graphic object: two-dimensional objects
Plural form:
graphic objects
Properties:
bounds bounding rectangle -- the smallest rectangle that contains the entire graphic object
fill color RGB color -- the fill color
fill pattern integer -- the fill pattern
fill gradient integer -- the fill gradient
fill texture integer -- the fill texture
pen color RGB color -- the pen color
pen pattern integer -- the pen pattern
pen width real -- the pen width

rotation integer -- the rotation of this object in degrees from horizontal
definition rectangle bounding rectangle -- the rectangle used to define the object; this is usually the same as the bounds except when the object is rotated
text wrap no wrap/regular wrap/irregular wrap -- the way in which text should wrap around an object
wrap gutter ruler measurement info -- the amount of space to allow between an object and the text wrapping around it
lock read only/read write -- indicates whether or not the object may be moved, deleted, or modified
user style record -- the user style (and incremental attributes) defining the object's appearance
<Inheritance> item [r/o] -- subclass of item

Class line:
Plural form:
lines
Properties:
end point point -- the ending point of the line
arrow style no arrow/arrow at start/arrow at end/arrow at both ends -- the arrow style
start point point -- the starting point of the line
<Inheritance> graphic object [r/o] -- subclass of graphic object

Class movie: a QuickTime movie
Plural form:
movies
Properties:
original bounds bounding rectangle -- the rectangle that bounds the object at normal size
loop none/forward/back and forth -- how the movie should loop while playing
playing boolean [r/o] -- is the movie currently playing?
rate real -- the rate at which the movie plays
direction forward/backward -- the direction the movie plays
duration real [r/o] -- the duration of the movie (at a rate of 1.0)
current time real -- the current time position within the movie
volume real -- the sound volume of the movie when playing
modified boolean -- has the movie been modified since the document was last saved?
<Inheritance> graphic object [r/o] -- subclass of graphic object

Class oval:
Plural form:
ovals
Properties:
<Inheritance> graphic object [r/o] -- subclass of graphic object

Class paint frame: a pixel map within a drawing area
Plural form:
paint frames
Properties:
painting painting [r/o] -- the object's painting
<Inheritance> graphic object [r/o] -- subclass of graphic object

Class picture: a QuickDraw picture
Plural form:
pictures
Properties:
original bounds bounding rectangle -- the rectangle that bounds the object at normal size
<Inheritance> graphic object [r/o] -- subclass of graphic object

Class pixel: A pixel
Plural form:
pixels
Properties:
color RGB color -- the color

Class painting: A painting pixel map
Plural form:
paintings
Elements:
pixel by numeric index, as a range of elements
Properties:

<Inheritance> item [r/o] -- subclass of item

Class polygon: A polygon
Plural form:
polygons
Elements:
vertex by numeric index
Properties:
<Inheritance> graphic object [r/o] -- subclass of graphic object

Class rectangle: A rectangle
Plural form:
rectangles
Properties:
<Inheritance> graphic object [r/o] -- subclass of graphic object

Class rounded rectangle: A rounded rectangle
Plural form:
rounded rectangles
Properties:
corner radius small integer -- the radius of the arcs used to draw the corners
round ends boolean -- should the shorter sides of the object be drawn by a half circle? (overrides corner radius)
<Inheritance> graphic object [r/o] -- subclass of graphic object

Class spreadsheet frame: a spreadsheet within a drawing area
Plural form:
spreadsheet frames
Properties:
spreadsheet spreadsheet [r/o] -- the object's spreadsheet
<Inheritance> graphic object [r/o] -- subclass of graphic object

Class text frame: a text object within a drawing area
Plural form:
text frames
Properties:
text body text [r/o] -- the object's text
<Inheritance> graphic object [r/o] -- subclass of graphic object

Class vertex: a vertex of a polygon
Plural form:
vertices
Properties:
vertex location point -- location of the vertex
control point 1 point -- location of first control point
control point 2 point -- location of second control point
smooth boolean -- true if control points are tied together
autosmooth boolean -- true if control points are auto-generated

ClarisWorks Communications Suite: Terms for use with communications

match: Match a string or idle time in a communications document
match connection -- the connection on which to match
with condition record -- list of conditions to match
Result: integer -- result code designating the condition matched

receive: Receive a file
receive alias -- the location for the to be received
via file transfer -- the file transfer to use to receive the file(s)

send: Send a file or text using the specified communications document. In order to send a list of files, the document's file transfer must support batch transfers.
send anything -- the file(s) or text to send
via document -- the communications document to use to send the text or file(s)

Class condition record: a result code and a match condition: either a timeout or text
Plural form:
condition records
Properties:
result code integer [r/o] -- the result code returned upon successfully matching this condition
timeout integer [r/o] -- the number of seconds of idle time to match
match text plain text [r/o] -- the text to match
<Inheritance> item [r/o] -- subclass of item

Class connection: a communications toolbox connection
Properties:
status disconnected/connected/connecting/disconnecting/waiting/answering [r/o] -- the connection's status
name string [r/o] -- the tool's name
configuration string -- the tool's configuration
version version [r/o] -- the tool's version number
<Inheritance> item [r/o] -- subclass of item

Class file transfer: a communications toolbox file transfer
Properties:
status idle/sending/receiving [r/o] -- the file transfer's status
name string [r/o] -- the tool's name
configuration string -- the tool's configuration
version version [r/o] -- the tool's version number
batch boolean [r/o] -- can this tool send multiple files?
<Inheritance> item [r/o] -- subclass of item

Class terminal: a communications toolbox terminal
Properties:
text body text [r/o] -- the terminal's text
scrollback text [r/o] -- the terminal's scrollback text
name string [r/o] -- the tool's name
configuration string -- the tool's configuration
version version [r/o] -- the tool's version number
<Inheritance> item [r/o] -- subclass of item
Published Date: Feb 20, 2012

Disk Copy 6.3: -50 Error When Making Image

When creating a disk image of a compact disc (CD) or hard drive, Disk Copy 6.3 reports it could not complete the operation due to a -50 error.
This article has been archived and is no longer updated by Apple.
This is a known issue with Disk Copy 6.3 only. When making an image from a volume that has data stored at the end of the volume, Disk Copy 6.3 will not complete the image operation and report a -50 error.

Workarounds:
1) Media that is not read-only can be optimized so that all free space is at the end blocks of the volume.
2) When saving a volume as a disk image, change the size of the image so that it is slightly larger.

This issue has been addressed in the latest version of Disk Copy 6.x, which can be downloaded from the Apple Software Updates Web site at http://www.apple.com/swupdates.
Published Date: Feb 20, 2012

iMac: Infrared Communications

Does iMac support infrared communications? How does it work?
This article has been archived and is no longer updated by Apple.
Note: The infrared port was removed from the iMac beginning with the multi-colored versions introduced in January, 1999.

The iMac does support infrared communications via the Infrared (or IR) transmitter/receiver located behind a dark plastic cover next to the left speaker.

The infrared lens transmits infrared light in a 30-degree radius, pointing outward from the computer. The recommended minimum distance between devices is 1 meter.

The iMac transmits files using the IrDA protocol, which transmits data up to 4 megabits per second and is capable of using AppleTalk and TCP/IP protocols. The iMac infrared port is compatible with some PowerBook computers including the PowerBook 2400, 3400, G3 and PowerBook G3 Series computers. Other infrared capable Apple products are not compatible because they use a different infrared lens and transmitter.

For infrared to function properly with the iMac, the following items must be installed:

- Infrared Control Panel
- IrDALib Extension
- IrLanScanner/PPC Extension

Infrared Control Panel
The Infrared Control Panel provides information about an active Infrared connection as well as infrared type.

Note: The Infrared Control Panel will not open if one of the following conditions occur:

-IrDALib Extension, InLanScanner/PPC Extension, or Infrared Control Panel are missing, disabled, or corrupted
-The Infrared controller board is defective
-The iMac does not recognize the controller board

Additional information on IrDA compatibility can be found in the following Knowledge Base article:
Article 20928: **Macintosh Infrared: Is It IrDA Compatible?**
Published Date: Feb 20, 2012

Apple USB Mouse and Keyboard

This article discusses the Apple USB keyboard and mouse shipped with the iMac, Power Macintosh G3 (Blue and White) and Power Mac G4.

This article has been archived and is no longer updated by Apple.

Apple USB Keyboard

The Apple USB Keyboard and Mouse introduced with the original iMac were Apple's first USB devices. The USB Keyboard provides the functionality of past keyboards, while keeping pace with and following USB standards. Two USB sockets are located on each side of the upper half of the keyboard. These sockets allow the connection of other USB devices. Note: Any USB device connected to the Apple USB Keyboard must be either a self-powered device (a USB device with its own AC power supply), or a low-power device (a device that does not need a large amount of voltage to operate).

The Apple USB Keyboard has a soft power on/off button on the upper right half of the keyboard. Unlike the iMac Power On/Off button, the Apple USB Keyboard power on/off button does NOT light up when the iMac is powered on.

Apple USB Mouse

The Apple USB Mouse offers a radical new design. Unlike older Apple mice, the iMac mouse is a USB device. Physically, the Apple USB mouse is round, smaller than previous Apple mice, and sleek with a lower profile. The mouse ball is two-toned in color and heavier in weight.

The Apple iMac USB Mouse can be hot plugged into:

- USB ports on the Apple USB Keyboard
- USB ports on the iMac
- Any available Type A socket on other USB devices

Locking the Apple USB Mouse

To prevent the Apple USB Mouse ball from being removed, you can lock the mouse as described below:

1. Insert a straightened paper clip into the hole on the inner plastic ring.
2. Press down on the paper clip and turn the ring clockwise until it stops and clicks into position (usually at a slight angle to the rest of the mouse).
3. The mouse ring is locked when the ring clicks into a position at a slight angle to the rest of the mouse.
4. To unlock the mouse, reverse the process.

Published Date: Feb 20, 2012

iMac: Sound Recording Options

iMac has the following sound recording options.
This article has been archived and is no longer updated by Apple.
The iMac has three different sound-in sources:

- the built-in microphone
- the microphone jack
- the CD-ROM drive

Audio output can be provided by three different methods:

- internal stereo speakers
- headphones or external speakers in the headphone jacks on the front of the iMac
- headphones external speakers connected to the Line output jack in the side panel of the iMac

Line output is a sound-out port that does not amplify the sound. If you compare the line-output port and the headphone port, the line-output port will have lower volume levels.

Recording Sounds - The Equipment Needed

The iMac can use a number of sources to record sound. The table shown below identifies the sound source, microphone compatibility, OS recording capability, and the connection type.

Sound-in Source	PlainTalk Microphone Compatible?	Omnidirectional Microphone Compatible?	Can OS Record From?	Connection Type
Built-In Microphone	Yes	No	Yes	Built-In
External Microphone	Yes	No	Yes	Headphone Plug
CD-ROM Audio	No	No	Yes	CD Audio Cable

CD-ROM Audio is the analog audio signal that is provided by CD audio disks, NOT sounds that may be part of CD-ROM titles.

The side microphone jack can use either a third-party microphone or an Apple PlainTalk microphone. There is a difference between a PlainTalk microphone and third-party microphones. PlainTalk microphones are amplified by the computer. They receive power for amplification from an 1/8 inch plug extension that makes contact with specific connections in the microphone port. That's why the plug on the PlainTalk microphone is longer than other external computer microphones. Remember that both types of plugs may be used in the side microphone jack.

The iMac has the ability to record sounds within a bandwidth of 44.100 KHz; it will not record sounds at 11 or 22 KHz bandwidths.

Note: iMac will support Apple Speech Recognition with version 1.5.4 of the English Speech Recognition software available from the Apple Software Updates web site at **http://www.apple.com/swupdates**.

Sound-Out Source	Amplified Signal?	Analog or Digital	Built-in Speakers Muted When Using...	Muted with Headphones?	Uses SRS?	Connection Type
Built-in Speakers	Yes	Analog	n/a	Yes	Yes	Internal Connection
Line-out Jack	No	Analog	yes	Yes	Yes	Headphone Plug
Headphone Jacks	Yes	Analog	yes	No	Yes	Headphone Plug

The Monitors and Sound control panel lets you select the source that you want to record from. The control panel displays the current recording quality, output port, and whether or not SRS 3D stereo sound is active. As shown above, SRS 3D sound works with any of the output sources.

Published Date: Feb 20, 2012

iMac: System Software Reinstall Options

This article describes the options for reinstalling iMac system software.
This article has been archived and is no longer updated by Apple.
The iMac comes with two CDs that allow you to reinstall system software, the iMac System Software CD and the iMac Restore CD. Each CD is bootable.

iMac System Software CD - This CD contains installation files that will reinstall the iMac version of the Mac OS. To reinstall the system software, use the Installer application and follow the standard Mac OS 8.1 installer procedures. Installers for utilities and bundled applications are also present on this CD.

iMac Restore CD - The Restore CD contains an image of the iMac hard disk as it was shipped to you. A utility called Apple Software Restore allows you to restore the hard disk to that configuration. The Restore utility has a number of options to control formatting of the hard disk or saving of data and applications before using the Restore utility. Read the Restoring iMac Software text file to understand how to prevent accidental data loss.

To restore the iMac hard disk
If your computer came with both Mac OS 9.1 and Mac OS X installed on the hard disk, you should follow the restore procedure outlined in Article 60847 "**Apple Software Restore: How to Perform a Multiple Disc Restoration**"

Start the system with the Restore CD in the CD drive while pressing and holding down the C key. This action causes the computer to boot from the software on the CD-ROM instead of the hard disk. You will see that the CD icon in the Finder is then located above the hard disk icon on the desktop. Double-click on the CD icon and double click on the Apple Software Restore icon. After launching Apple Software Restore, you should see the following splash screen. Click the OK button to continue.

Apple Software Restore Options

Restore in Place
Click the Restore button to restore the configuration "Mac Restore CD" onto "Macintosh HD," Overlapping files on "Macintosh HD" will be replaced by the corresponding files in "Mac OS.img."

Erase Macintosh HD before restoring
Click the Restore button to restore the configuration "Mac Restore CD" onto "Macintosh HD," using Macintosh Extended volume format. "Macintosh HD" will be usable as a startup volume only on PowerPC computers. The contents of "Macintosh HD" will be erased before restoring

Default setting: If neither Restore in Place or Erase "Macintosh HD" is checked, you can use the Volume Format menu to choose Standard or Extended format. You will see this information in the "Descriptions" window:

Click the Restore button to restore the configuration "Mac Restore CD" onto "Macintosh HD," The existing contents of "Macintosh HD," will be moved to a folder named "Original Items."

The iMac Restore CD also contains a utilities folder that allows you to perform checks on the hard disk. The utilities folder contains a set of standard Apple troubleshooting tools and utilities.

Finally, there is a folder on the Restore CD called Configurations. This folder contains a disk image file which includes all the iMac's software that the Apple Software Restore utility copies to the hard disk during restoration.
Published Date: Feb 20, 2012

iMac: How Printers Show Up In Chooser With USB Adapter

Since none of Apple's previous printers supported USB, will they work if I purchase a serial to USB adapter? What will the Chooser show when I select the driver for my printer?
This article has been archived and is no longer updated by Apple.
Some of Apple printer drivers may not recognize the absence of the serial ports on the iMac.

The following list identifies Apple printer drivers that will show the standard printer port and modem port, and those that will show <No Printer Port> and <No Modem Port>.

Serial Printer Driver
What the Chooser Shows

Color StyleWriter 1500
<No Printer Port>
<No Modem Port>

Color StyleWriter 2500
<No Printer Port>
<No Modem Port>

Color StyleWriter Pro
<Serial Port>
<Serial Port>

LaserWriter 300/LS
<Serial Port>
<Serial Port>

ImageWriter
<Serial Port>
<Serial Port>

StyleWriter 1200
<No Printer Port>
<No Modem Port>

Note: The Color StyleWriter 1500, 2500, and the StyleWriter 1200 are all recent drivers that recognize the absence of serial ports on the iMac. The Color StyleWriter Pro, LaserWriter 300/LS, and ImageWriter drivers cannot sense the absence of the serial ports and will still display a choice of connection ports. If users try to print with any of these printer drivers, the print job will spool and then give the error message that the printer cannot be found.

If you have installed a third-party USB-to-serial adapter, the behavior of these drivers may vary. Refer to the serial adapter documentation for more information.
Published Date: Feb 20, 2012

USB: Basic USB Printer Troubleshooting

This article explains how to test the basic functionality of a USB printer.
This article has been archived and is no longer updated by Apple.
The following steps will verify the basic functionality of a USB printer connected to a USB capable Macintosh computer.

Before performing the troubleshooting steps, make sure of the following:

- Plug the printer into a USB port on the computer.
- Confirm that the USB printer is powered on.
- Confirm that the USB printer is selected in the Chooser.
- Close and reopen the Chooser and confirm that the USB printer is still selected.
- Verify that there are no extra blank selectable lines in the Chooser "Connect To" window. (Clicking on the blank area below the printer and modem ports should deselect what is active.)

Note: Successfully completing any THREE of the following procedures will show that the USB printer is working correctly. A number of procedures are offered to account for differences in setup, software, and available printer options.

- Print a one-page document which includes text and graphics from a word processor such as AppleWorks or Microsoft Word.
- Print a five-page document which includes multiple fonts and font sizes using either SimpleText or AppleWorks.
- Print test documents from your word processor using different printing options (odd/even pages, from/to pages, etc.).
- Print the Desktop.
- Print in grayscale.

If a known-good USB printer does not print, try the following steps:

1. Verify computer has correct driver installed. Check vendor's web site to download current driver.
2. Reset PRAM.
3. Verify printer is selected in the Chooser.
4. Run Apple System Profiler to see if it recognizes the USB printer is connected. If it does, it is a software issue.
5. Try another USB port. Make sure the printer is connected directly to the computer.
6. Check cables.

Published Date: Feb 20, 2012

Mac OS 8, 9: Startup key combinations for troubleshooting

This article has been archived and is no longer updated by Apple.

Learn standard startup key combinations used for troubleshooting most Macintosh computers in Mac OS 8 and 9. Some functions may not be applicable for every Macintosh computer.

Reset the PRAM
Hold down the Command+Option+P+R keys during the restart sequence. The computer will beep for a normal startup and will beep again. When you hear the second beep, release the keys.

Turn Off Extensions
Hold down the Shift key at startup until you see the Welcome to Macintosh screen.

Rebuild the Desktop
Start or restart the computer while holding down the Command-Option keys.

Disable Virtual Memory
Hold down the Command key at startup. Do not release the key until startup is complete.

Extension Manager
Bring up the Extension Manager at startup by holding down the Space Bar.

Force Reboot
Force reboot by holding the Command + Control + Power key.

Startup From Bootable CD-ROM
Hold down the letter c key upon boot (lower-case only).

Eject floppy or other removable media
Hold down the mouse button on boot.

Published Date: Feb 20, 2012

Power Macintosh G3: Tips for Downloading Images from Olympus Cameras

I have an Olympus digital camera and it seems to have difficulty establishing communications with my Power Macintosh G3 computer. Because of this I cannot download images to my computer.
This article has been archived and is no longer updated by Apple.
There are a number of methods to enhance the digital camera's ability to establish communications with the Power Macintosh, the main issue is related to high power consumption when making the initial connection.

Don't use alkaline batteries. They lose power very quickly when taking pictures and downloading images requires even more power. Batteries that are reported to be dead by the camera may show power when checked with a battery tester. The camera places high loads on the batteries and the internal battery circuitry will report a low or dead battery when it reaches a level which cannot support the camera. The batteries may be usable in other devices such as a flashlight or radio.

What to use instead of alkaline batteries? Get an AC adapter and use it whenever you download images. The adapter will supply sufficient power to the camera for downloading images without running the batteries down.

Use Nickel Metal Hydride (NiMH) rechargeable batteries as another alternative to alkaline batteries. The NiMH chemistry works well in high power devices such as portable computers and digital cameras.

Olympus technical support offers the following advice for downloading images to your Macintosh:

1. Boot the system up using the base extensions

2. Turn AppleTalk off via the AppleTalk control panel regardless of whether or not you attach the camera to the serial port that is assigned as the AppleTalk port. To disable AppleTalk from the AppleTalk control panel you must set your user mode to Advanced, then click the Options button.

   From the AppleTalk control panel, select the "Connect via" option to be something other than the port connected to the camera (that is, if you connect the camera to the printer port, select modem port).

3. Allocate as much memory as you can to the application.

4. With the camera off, initiate a download request from the software. Wait 2 seconds and then turn on the camera, this creates a surge of power which is necessary to initiate the connection with the Macintosh.

An alternate to the Olympus software is a shareware package called CamerAid which can be downloaded from the internet.

These are only suggestions, if further assistance is required contact Olympus tech support at 1-888-55-DIGITAL (1-888-553-4448).

Note: This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content and mention of this product should not be interpreted as a recommendation by Apple. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

iMac: Changing Internet Settings and Applications

I went through Internet Setup Assistant and entered all my information. I can connect to the internet just fine, but I would like to use Netscape Navigator rather than Microsoft Internet Explorer as my default browser.
This article has been archived and is no longer updated by Apple.
There are two applications that determine the way your computer accesses the internet, Internet Setup Assistant and Internet Config.

Internet Setup Assistant
If you need to change your internet service provider (ISP) configuration details, you can use the Internet Setup Assistant located under the Apple Menu in the Internet sub-menu. This application automates the process of entering details such as: connection protocol, service name, domain name server address, router (gateway) address and other details.

Most of this information is stored in the TCP/IP control panel preferences as configuration information. You can make a backup of your configuration by opening the TCP/IP control panel, choosing the Configurations option under the File menu, selecting your active configuration and clicking the "export" button. This will save your configuration to a file that can later be imported, without the need to re-enter all your information.

Internet Config
General internet configuration information, such as the default browser, default homepage, helper applications and other settings may be changed using Internet Config application. Internet Config is located in the path: Macintosh HD: Internet: Internet Utilities: Internet Config.

The iMac uses Microsoft Internet Explorer as the default browser, but this setting may be changed using Internet Config. Other settings that determine how your computer routes information may also be changed in Internet Config. Some of the more common settings are:

- Email - email Address, email Account, email Password, SMTP Host, email Headers
- File Mappings - Extension (i.e. .html) to Application
- Helpers - Document type (i.e. sound file) to Application
- News - NNTP Host, News Username, News Password
- World Wide Web - Home Page

You can make a backup of these settings using the "Save As" option under the Internet Config File Menu. This backup of your Internet Preferences can later be retrieved without the need to re-enter all your information.
Published Date: Feb 20, 2012

iMac and Mac OS 9: No Sound or Startup Chime Heard

This article describes a situation where no audio is heard from an iMac. Nothing is plugged into the sound out ports.
This article has been archived and is no longer updated by Apple.

Symptom:

At startup, no chime is heard, nor are any beep sounds or other audio sources.

Products affected:

iMac, Mac OS 9

Solution:

- Verify the system volume setting in the Sound portion of the Monitors & Sound control panel is not muted. The start-up chime on the iMac is controlled through software sound controls, allowing the volume of the startup chime to be adjusted.
- Verify the audio cable is properly connected if a RAM upgrade was recently performed. Following the RAM install directions in the Mac OS Info Center, look at Step 10 for a diagram depicting the audio cable.
- If the cable is connected correctly, you may consider having the computer inspected by an Apple-authorized service provider.

Published Date: Feb 20, 2012

Mac OS: Help Center Missing From Help Menu

The Help Center and Mac Help may not appear in the Help menu if the Apple Guide extension is not installed or turned off, or if there is not enough memory installed in the computer.
This article has been archived and is no longer updated by Apple.

Symptom

Help Center and Mac Help are not available from the Help menu.

Solution

1. Make sure the Apple Guide extension is installed in the Extensions folder, or is turned on in the Extensions Manager control panel.
2. Make sure the computer has enough memory to load the Apple Guide extension. Even if the Apple Guide extension is installed it may not load if there is not enough memory installed in the computer. This may be the case if you start up the computer from a CD-ROM disc with virtual memory turned off.

Published Date: Feb 20, 2012

iMac: Hole in I/O Door Not For Cables

I routed all of my cables through the hole in the I/O door on my iMac, but it is hard to open because there is not enough room for my finger. Should the cables not be routed through the hole?

This article has been archived and is no longer updated by Apple.

As pictured in step 5 of the tri-fold "Welcome to your iMac" pamphlet, the cables should be routed through the large gaps at the bottom of the I/O door. The large hole provides the only convenient means of opening the I/O door. Routing cables through the hole may also cause them to become disconnected when the I/O door is opened.

The iMac (Slot Loading) does not have a door over the I/O ports so this is not an issue.

Published Date: Feb 20, 2012

Mac OS Setup Assistant: Desired Printer Not Displayed in List

I am using the Mac OS Setup Assistant to configure Mac OS for a network printer but it does not see the printer. The printer is in a different zone than my computer.

This article has been archived and is no longer updated by Apple.

Mac OS Setup Assistant which shipped with Mac OS 8.5, 8.5.1, and 8.6 may not list or allow you to select and configure the network printer you expected or have previously used. The Mac OS Setup Assistant only lists those network printers that reside in the same zone that your Macintosh resides in. If you wish to select a printer other than what is listed by Mac OS Setup Assistant you can:

1. Select one of the other printers as a temporary measure via the Mac OS Setup Assistant, then select your printer of choice in the zone of choice through the Chooser once you have completed the Setup Assistant. You may also select the printer with the Desktop Printer Utility that ships with Mac OS 8.5.

- **Note:** The Desktop Printer Utility, v1.0, that shipped with LaserWriter 8.5.1 only allowed you to choose a printer that resides in the same zone as does your Macintosh.

2. Quit Mac OS Setup Assistant, change the zone your Macintosh resides in, restart Mac OS Setup Assistant, then respond to the Mac OS Setup Assistant's questions including selecting the printer of choice.

- This assumes that you have different zones available to register in on the network cable segment your Macintosh is connected to (this is a different concept that zones listed in the Chooser).

- To view the different zones your Macintosh can register in, open the AppleTalk Control Panel. The available zones you may register your Macintosh in will display in the "Current zone" scroll bar.

Published Date: Feb 20, 2012

Mac OS Help: Required Extensions

When trying to run Mac OS Help, I have gotten the following error messages at different times:

"Help Viewer requires QuickTime 3.0 in order to run."

- and -

"Help Viewer requires AppleScript in order to run."

I have also found that Help Center and Mac OS Help are not available from the help menu.
This article has been archived and is no longer updated by Apple.
The Help Viewer application uses both AppleScript and QuickTime and will not launch if those technologies are not installed or functioning. Both the QuickTime extension and the QuickTime Power Plug extension are required for QuickTime to work. Both the AppleScript extension and the AppleScriptLib extension are required for AppleScript to work.

If the Apple Guide extension does not load, there will be no option for "Help Center" or "Mac OS Help" under the Help menu.

Extensions can fail to load if they're missing, damaged or if there is insufficient memory available to the system software. If you use the Mac OS 8.5 CD to start up a Power Macintosh with less than 24 MB of physical RAM, there is not enough RAM to for Apple Guide to load.
Published Date: Feb 20, 2012

Mac OS: Application Switcher Overview

This article discusses the Application Switcher, available with Mac OS 8.5 and Mac OS 9.

This article has been archived and is no longer updated by Apple.
The Application Switcher displays a list of running applications in a floating palette window called a miniwindow, similar to the application menu shown in the top right corner of the menu bar prior to Mac OS 8.5.

To open the Application Switcher miniwindow, drag all the way to the bottom of the Application menu, then drag beyond the menu. When the outline of a window appears, release the mouse button. The Application Switcher is now running. Click an icon in the Application Switcher miniwindow to bring that application to the foreground.

You can also use the Application Switcher to open documents by dragging a document icon onto the icon of an application in the Application Switcher miniwindow.

Application Switcher supports AppleScript to configure its appearance.

The Application Switcher can be anchored to a corner of your screen, show large or small icons, hide or show the application name, have a horizontal or vertical orientation, as well as other controls.

For a complete description of using the Application Switcher, see the Mac OS Help.

Published Date: Feb 20, 2012

Mac OS 8.5: What's New?

What are the major changes in Mac OS 8.5?

This article has been archived and is no longer updated by Apple.

IMPROVED PERFORMANCE AND STABILITY

Faster copying over the network and to disks

Improved copying performance now lets you copy files over a network faster than ever. Copying to hard disks and removable disks such as Zip disks and CDs is also improved.

AppleScript improvements

With improvements in AppleScript, scripts can run up to three to five times faster. More control panels and tasks are scriptable; for example, you can now automate networking tasks.

You can also attach a script to a folder and launch the script by performing actions such as opening the folder or copying a file to it.

QuickDraw improvements

Improvements in QuickDraw graphics and text reduce the time it takes to display images on your screen and let you scroll faster.

Disk protection

You can now test and repair your startup disk or volume using Disk First Aid. If your computer is shut down improperly, Disk First Aid automatically checks your startup disk for problems when you restart.

INCREASED INTERNET INTEGRATION

Easy browsing of file servers

The new Network Browser lets you easily find and connect to AppleShare servers on a network. You can also use the Network Browser to create a list of favorite servers and quickly connect to these servers.

Quick Internet searches

The Search Internet section of the Find program now lets you quickly search the Internet using your choice of search engines. Each item in your search results is ranked by relevance and includes the item's URL and a summary. You can also link to the item directly from the search results window.

New multilingual capabilities

You can now display multilingual content in browsers and other Internet applications. This means you can view international Web sites using either Microsoft Internet Explorer or Netscape NavigatorTM.

Access to network time servers

The Date & Time control panel now lets you connect to a network time server so that your files always bear an accurate date and time. You can also have daylight-saving time set for you automatically. To get ready for the year 2000, set the date format to show the century.

Easy ways to manage Internet settings

The new Internet control panel lets you enter Internet preferences, such as your e-mail address, your default news server, the address of your default home page, and your default Web browser, in one central location that can be accessed by all your Internet-based applications. It also lets you create groups of Internet settings and quickly switch between them.

Internet location files

You can create files that point to locations on the Internet or on local area networks. For example, you can create a file that points to a web site, an AppleShare server, or an e-mail address. When you double-click an Internet location file, your favorite networking application takes you to a location on the Internet or local network, or opens a new e-mail message.

You create an Internet location file by dragging text that contains an Internet address (such as http://www.apple.com) into a Finder window or onto the desktop.

IMPROVED WINDOW NAVIGATION AND MANAGEMENT

New appearance features

- Title bar icon Resize columns
- Proportional scroll boxes Double scroll arrows

With new appearance features, you can

- use icons in the title bar of a folder or volume window to move or copy the folder or volume and all its contents
- change the width and order of columns
- tell how much of a window's content is visible by looking at proportional scroll boxes (The more space the scroll box fills in the scroll bar, the more content is visible.)
- scroll the contents of a window more easily using double scroll arrows
- smooth the appearance of text by turning on anti-aliasing

All the settings for customizing the look and feel of your computer's desktop are now located in the Appearance control panel. You use this control panel to set all system fonts, the background pattern or picture, and the new scrolling and anti-aliasing options. After you select your favorite settings, you can save them as a group of appearance settings.

Standard view options

In the Views section of the Finder Preferences window, you can specify a standard set of options for list, button, or icon views. The standard view options are automatically applied to every window, unless you've customized the window's view options.

New icon features

The icons of files (including applications, disks, and folders) now change appearance when you alter the files in certain ways.

Improved File and Program Management

New content searching for files

The "Find by Content" section of the Find program now lets you search the contents of files for one or more words. Before you can search the contents of a disk's files, you must create an index of the disk. If you have modified files on a disk since it was last indexed and you want to search the modified content, you need to update the index. It can take a while to create an index, so you may want to schedule a time when you're away from your computer to automatically create and update indexes.

New ways to switch between programs

You can "tear off" the Application menu and display it as a small window (called the "Application Switcher"). You can display the contents of the Application Switcher window in list view or icon view. You can use the Application Switcher to easily switch between open programs.

To display the Application Switcher drag all the way to the bottom of the Application menu, then drag beyond the menu. When an outline of a window appears, release the mouse button.

New ways to open and save files

Many application programs now provide Open and Save dialog boxes that give you more options when you're opening and saving documents. These dialog boxes let you

- open several files at once by holding down the Shift key as you select the files
- open and save documents on AppleShare servers on your network using the Shortcuts button
- connect to unmounted AppleShare servers using the Shortcuts button
- add the names of zones, servers, volumes, and folders that you use frequently to a list of favorite items using the Favorites button
- choose from a list of recently opened or saved documents using the Recent button

Easy access to favorite items

The Favorites folder in the Apple menu gives you convenient access to the documents, applications, zones, servers, volumes, and Internet locations you use most frequently. Favorite items are also available in the Network Browser and in the new Open, Save, and Choose dialog boxes.

The Favorites folder is marked with a red ribbon.

Intelligent onscreen help

Apple Help, the new onscreen help system you're using now, lets you search for and display information, connect to help sites on the Internet, and click links that automatically open files and do tasks.

Enhanced Info windows

Info windows for files now include pop-up menus that let you

- adjust the amount of memory assigned to an application program or desktop printer
- set file sharing options for an application, folder, or volume
- see if a printer is busy and how the printer is configured
- see which fonts are available for use with a printer

Media Integration

QuickTime capabilities

Apple's QuickTime technology lets you work with files in a variety of multimedia formats. QuickTime 3.0 offers the best in video, music, and voice compression technologies and lets you use your Web browser to automatically play movies at the highest quality setting possible for your computer and your Internet connection.

QuickTime VR lets you work with "virtual reality" movies. You can rotate objects, zoom in or out, look in any direction, and navigate from one scene to another. QuickDraw 3D allows you to manipulate three-dimensional graphics.

Built-in document translation

You can open most files on your computer by double-clicking their icons. When you try to open a document that was created in an application you don't have, your computer automatically identifies the file type of the document and tries to open it in an application you do have. Your computer also recognizes the most common types of DOS and Windows files and uses preassigned applications to open the files.

You can change the assigned applications or add new ones using the File Exchange control panel.

Better color matching

ColorSync is a color management system that ensures the colors you see on your monitor closely match the colors you print or scan. In Mac OS 8.5, you use the Monitor Calibration Assistant in the Monitors & Sound control panel to adjust your system for accurate color reproduction.

Text-to-speech capabilities

You can have your computer speak the alert messages that appear on the screen. You set your computer to speak alert messages using the Talking Alerts section of the Speech control panel by checking the "Speak the alert text" checkbox. Mac OS 8.5 by default has Speak the Alert Text set to on. In some application programs that support this feature, your computer can also read text contained in documents aloud.

Published Date: Feb 20, 2012

Mac OS 8.5: Starting Up From Mac OS 8.5 CD

How do I start up my Power Macintosh from the Mac OS 8.5 CD?
This article has been archived and is no longer updated by Apple.
Before installing Mac OS 8.5, you should start up your computer using the Mac OS 8.5 CD. This ensures that any incompatible extensions on your computer will not cause issues during installation. To start up your computer from the CD:

1. Insert the Mac OS 8.5 CD into the CD-ROM drive.
2. Shut down your computer.
3. Hold down the C key on your keyboard while turning on your computer. Keep holding the C key until you see the "Welcome to Mac OS" message.

Note: PowerBook 1400 systems require that you hold down the Command-Option-Shift-Delete keys together to boot from a CD.
Published Date: Feb 20, 2012

Mac OS 8.5: System Requirements for Install and Use

What are the system requirements of Mac OS 8.5?
This article has been archived and is no longer updated by Apple.
In order to install and run Mac OS 8.5, you will need the following system configuration:

- One of the following Mac OS-based Apple computers with a PowerPC processor:
- iMac
- Power Macintosh G3
- Any Power Macintosh, PowerBook, or Workgroup Server computer with a 4-digit model number.
    - Mac OS 8.5 may not function with a Mac OS 8.5 compatible Apple Power Macintosh computer that has been upgraded with a non-Apple processor upgrade card. Please check with the card's manufacturer for compatibility information.
    - Computers upgraded with Apple's Power Macintosh 233-MHz Processor Upgrade Kit are supported.
    - The Power Macintosh Upgrade Card (supported in the Quadra 700), the Macintosh Processor Upgrade (supported in the 575), and all 680X0 processors are NOT supported with Mac OS 8.5.
- 150 MB to 250 MB of free disk space
- 16 MB of physical RAM, with virtual memory (VM) set to at least 24 MB
- The minimum amount of RAM will let the computer perform only at minimum performance. Installing additional RAM will increase the system performance.

With VM turned off there may be up to a 10 MB difference in RAM usage. This difference is normal and due to the decreased RAM requirements of the system software when VM is on (due to code-mapping).
Published Date: Feb 20, 2012

Mac OS 8.5: Function of Installer

What are the functions of the Mac OS Installer?
This article has been archived and is no longer updated by Apple.
The Mac OS Install application, located on the software install CD, lets you install Mac OS 8.5 (or specific components) on your computer. It offers better installation performance with the ability to combine multiple software installations together into a single install process. Additionally, you can specify custom install options (at the beginning of the install process) within a single install. Customized removal of software can also be performed with the Install application.

You can save and load software installation sets, test and repair hard disk directory damage, update Apple hard disk drivers, and create an install report log listing the date, time, name, and location of all software installed.
Published Date: Feb 20, 2012

Mac OS 8.5: What is Automatic Disk Repair?

This article discusses automatic disk repair.
This article has been archived and is no longer updated by Apple.
When the computer crashes or is shut down improperly, data corruption or disk directory errors may occur. The General Controls control panel option to warn when an improper shutdown has occurred will now test and repair startup volume disk directory automatically on restart from a crash or improper shutdown. To enable this feature, select the checkbox "Warn me if computer was shut down improperly" in the General Controls control panel.

On startup after a crash or improper shutdown, a message appears indicating that the startup disk is being checked by Disk First Aid. A progress bar will show the status of the disk directory repair, and when finished, display the results.

Automatic disk directory repair only repairs the startup volume. Additional disk volumes are not tested and repaired automatically. To test and/or repair these volumes, use the Disk First Aid utility located in the Utilities folder.

Published Date: Feb 20, 2012

Mac OS 8.5: Find By Content Pre-Requisites

What has to be done before Find by Content can be used for the first time?
This article has been archived and is no longer updated by Apple.
The Find by Content section of Sherlock lets you search the contents of files on your local volumes for one or more key words. Find By Content works by searching for key words contained within the text of each of the files. After indexing your files, you can search for information contained within the file without first having to open the file. This makes finding information contained within multiple files quick and easy.

Note: Find by Content and Search Internet requires QuickTime 3.

To access Find By Content, click its tab in the Sherlock window. You must index your hard disk volumes before you can search the contents of the files. Server volumes cannot be indexed. The Find button will remain disabled (gray) until indexing has been completed.

To begin indexing your volumes, click the Index Volumes button, select its name in the Index Volumes window, then click the Create Index button.

Click the Create button to begin indexing the volume. An Indexing Progress window will show the current status of the indexing. Depending on the number of files contained on the volume, indexing may take a significant amount of time to complete. Note that, for optimum performance and disk space usage, only the first 2000 unique terms of each document are indexed.

You can specify a schedule to be used for indexing volumes at a later time when you're away from your computer. The schedule also allows for periodic indexing to keep the index up to date. To set the indexing schedule, click the Schedule button

Select start time and the days of the week to perform automatic indexing, then click the OK button.

NOTE: You will need to select the "Use Schedule" check box for each volume you want to use automatic indexing.

After indexing is complete, you can enter keywords for information you want to find within the contents of files in the Find by Content window, then click the Find button. For example, typing the key word "Macintosh" might display a list of the following files that contain this word:

Search results are sorted by relevancy and can be sorted by name, kind, or size by clicking the column heading name. To open a file, double-click its name in the list.

To find files that are similar in content to a file in the search results list, first select the file, then click the Find Similar Files button. The contents of the file you selected will be used to search for other files with similar contents.

To summarize the contents of a file to the clipboard, hold down the Control key while clicking on the file name in the search results list. Select Summarize to Clipboard from the contextual menu that appears. The contents of the file will be summarized and displayed in the Finder's clipboard window:

Note: The Summarize to Clipboard feature works only on files whose type is TEXT.
Published Date: Feb 20, 2012

Mac OS 8.5: How Search the Internet Saves Time

How does Search the Internet save time when searching web servers?
This article has been archived and is no longer updated by Apple.
The Search Internet section of Sherlock provides the ability to quickly search the Internet using your choice of popular search engines. Additional Internet search sites can be easily added by dropping their files onto the System Folder. Search site files go into the Internet Search Sites folder.

Find by Content and Search Internet requires QuickTime 3.

The Search Internet feature is the fastest and easiest way to search Internet search engines since you search multiple sites with a single search.

To access the Search Internet section, click its tab in the Sherlock window. To perform an Internet search, type the keywords for the information you want in the Words field. Select the checkbox for each Internet search engines to use for the search, then click the Search button. For example, typing "PowerBook 1400 and memory" would perform a search on the selected Internet search sites for these keywords. The results of the search are presented in a window, ranked by relevance:

To sort the search results by Name or by Site, click the column heading. To view a summary of a link in the list, click its name. A short summary of the link is presented in the window below the search results. To open the link with your web browser software, click the link name in the summary window.

Internet search site files may be periodically updated for changes in search engines or to take advantage of newer features. When performing an Internet search with a search source file, an automatic check is performed to determine if an updated search source is available. If such an update is available, a window will appear:

To accept the update, click the Update button. You can also manually check for updates by selecting the Update Search Sites command in the Find menu.
Published Date: Feb 20, 2012

Mac OS 8.5: What is Contained in Internet Control Panel?

What kinds of information goes into the Internet control panel?
This article has been archived and is no longer updated by Apple.
The new Internet control panel lets you enter Internet preferences, such as your e-mail address, your default news server, the address of your default home page, and your default Web browser, in one central location that can be accessed by all your Internet-based applications. It also lets you create groups of Internet settings that can be quickly switched between.

Settings in the Internet Control Panel are only functional for third-party applications that are designed to support Internet Config. Changing information in the Internet Control Panel may change similar information in one or more applications. Not all applications will use all of the information settings. See the documentation for each application for details.
Published Date: Feb 20, 2012

Mac OS 8.5: What Email Information is Contained in Internet Control Panel?

What kinds of e-mail related information goes into the Internet control panel?
This article has been archived and is no longer updated by Apple.
The E-mail section is where your user name, password, mail servers and some common e-mail application settings are entered.

All information except the application settings must come from your Internet Service Provider (ISP) or your network administrator such as your account ID, Incoming Mail Server, password, Outgoing Mail Server, how you wish to be alerted to an incoming email, and your default email application.
Published Date: Feb 20, 2012

Mac OS 8.5: No Disk Tools Diskette Included

Is there a Disk Tools disk available with Mac OS 8.5? If so, where?

This article has been archived and is no longer updated by Apple.
A Disk Tools disk is a floppy disk with a minimal system folder, Disk First Aid and Drive Setup. If your hard drive and CD drive aren't working, you can start up your computer with this disk to troubleshoot further. Also, some third-party disk-repair utilities or virus-protection programs may ask you to modify a copy of your disk tools disk to use their software.

No physical Disk Tools diskette is included with Mac OS 8.5, if you need one however, you can make one from the image included with Mac OS 8.5. To make a disk tools disk, double-click on the "Make Disk Tools floppies" DiskScript. It will walk you through making a Disk Tools disk from a blank, high-density floppy disk:

The Disk Tools floppy you make can serve as an emergency startup and utility disk, should you be unable to start up from the Mac OS 8.5 CD. The Disk Tools disk contains Drive Setup and Disk First Aid to aid you in your troubleshooting and disk formatting needs.
Published Date: Feb 20, 2012

Mac OS 8.5: New Finder Window Features

Are there any new Finder window features in Mac OS 8.5?
This article has been archived and is no longer updated by Apple.
The Finder in Mac OS 8.5 has a number of enhanced features and performance improvements. The following list highlights many of these improvements:

List View

- Resizable and reorderable list views
- List views for each window are resizable. To resize a list column, place the mouse pointer in between the column headings until it changes to the resize cursor, then click and drag the column to the desired size.
- List view column headings can be reordered for each window. To reorder the column headings, click and drag the column heading to the left or right of another heading, then release the mouse button (NOTE: The name column cannot be reordered).
- New option in the Appearance control panel for "smart scrolling" adds proportional scroll boxes and double scroll arrows.

Icon View

- For a window with active scroll bars, doing a Command-Drag by clicking on any background area of the window allows the window to be scrolled in either direction. Scrolling in both the horizontal and vertical directions can be done simultaneously this way.

Published Date: Feb 20, 2012

Mac OS 8.5: Function of Tabs in Preferences

What are the functions of the tabs in the Preferences window of the Finder's Edit menu?
This article has been archived and is no longer updated by Apple.
The Finder Preferences panel, located in the Finder's Edit Menu, consolidates many global Finder settings into a single interface. To access each group of settings, click its tab in the window.

General - Provides settings for enabling Simple Finder menus and commands, spring-loaded folders, and grid spacing.

Views - Provides global settings for each window view type (List, Icons, and Buttons).

Labels - Allows you to specify the color and name of each label that can be assigned to files and folders.
Published Date: Feb 20, 2012

Mac OS 8.5: Title Bar Icon Features

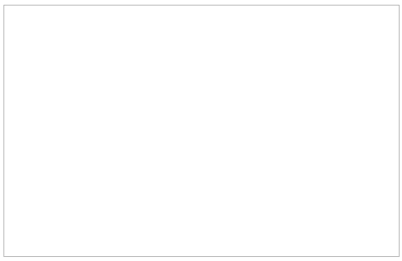
What are the features of the title bar icons in the Finder?
This article has been archived and is no longer updated by Apple.
The window title bar now includes the folder icon next to its name. This icon can be used just as any folder icon can be used, without having to first switch to an icon view setting. For example, to create an alias of a folder, click on the folder icon and drag it to the desktop while pressing the Option and Command keys.

You can also copy folders between volumes, duplicate folders, and move folders between folders by using the title bar icon. The title bar icon can also be useful for quickly identifying the folder you are working with.
Published Date: Feb 20, 2012

Mac OS 8.5: What are Badged Icons?

What are badged icons? What are the four possible icon badges?

This article has been archived and is no longer updated by Apple.
File icons including applications, disks, and folders now change appearance when you alter the files in certain ways. The list below shows the new icons and the type of files they indicate:



Published Date: Feb 20, 2012

Mac OS 8.5: How to Fix Broken Aliases

This article discusses how to repair broken aliases.

This article has been archived and is no longer updated by Apple.
A new feature in Mac OS 8.5 lets you locate the file when an alias to it can no longer find the file. When opening an alias to a file that cannot be located, a message now appears with options:

Clicking OK will dismiss the message and leave the alias file as is.

Clicking the Delete Alias button will move the alias file to the Trash.

Clicking Fix Alias button opens a dialog box which allows you to locate the file and select it for use by the alias file. Once you have located the file, click the Choose button:

An alternate method to repair a broken alias is to select Get Info from the File menu and choose "Select New Original" from the General Information pane (see enhanced Get Info windows below).

Published Date: Feb 20, 2012

Mac OS 8.5: Enhanced Finder Info Windows

This article discusses the enhanced Finder Info windows.
This article has been archived and is no longer updated by Apple.
The Get Info option in the File menu now combines sharing and general information regarding the file, folder, or volume you are viewing as well as the ability to select a label:

Figure 1 Apple Extras Info window

To view file size, kind, created and modified dates, comments, and label, select General Information from the Show pull down menu. To select a Label for the file, select the label color from the Label pulldown menu.

When viewing General information on an Application, the Show menu provides a Memory selection that allows you to adjust the application's memory settings.

Figure 2 SimpleText Info window

To view details on file sharing settings, select Sharing from the Show pull down menu:

Figure 3 Apple Extras Info window

The Sharing Command previously found in the File Menu now appears under the Get Info command in this menu.

Published Date: Feb 20, 2012

Mac OS 8.5: Components and Features of Navigation Services Window

What are the components and features of a Navigation Services window?
This article has been archived and is no longer updated by Apple.
Mac OS 8.5 offers a new Navigation Services capability to the Finder and other applications. These services provide enhanced open and save dialog boxes that give you more options when opening and saving documents:

Original Open File Dialog Box:

Figure 1 Original Open File Dialog Box

New Navigation Services Open File Dialog Box:

Figure 2 New Navigation Services Open File Dialog Box

The Navigation Service file dialogs are NOT automatically used in all applications. Applications must be first rewritten to use the Navigation Services. Customers desiring Navigation Services in a third-party application should contact its developer to request this feature.

Mac OS 8.5 makes use of Navigation Services in the Network Browser, the Appearance and File Exchange control panels, and to fix broken aliases.

These new dialog boxes allow you to:

- View files in the dialog box similar to the Finder with disclosure triangles, sorting by name or by date, and in ascending or descending order.
- Display a file preview or thumbnail image.
- Depending on the application, you can switch to other applications while the dialog box is open.
- Resize the dialog box
- Open several files at once by holding down the Shift key as you select files. You can also select multiple files by holding down the Command key as you click. Note that some applications may only allow you to select one file at a time.
- You can drag and drop items into the dialog box. For example, in the Desktop Pictures open/save dialog box, dragging a folder to the dialog box will make that folder's contents appear in the dialog window. New Shortcuts, Favorites, and Recent Items buttons.
- Connect to unmounted AppleShare servers and open and save documents using the Shortcuts button.
  Note: The Connect to Server option mounts only AppleShare IP File Servers with a TCP/IP connection.
- Add the names of zones, servers, volumes, and folders that you use frequently to a list of favorite items using the Favorites button.
- Choose from a list of recently opened or saved documents using the Recent button.

For more information on the Shortcuts, Favorites, and Recent buttons, select Balloon Help from the Help menu and move the mouse pointer to each button.

Published Date: Feb 20, 2012

Mac OS 8.5: Appearance Control Panel Settings

What settings are available in the Appearance control panel?
This article has been archived and is no longer updated by Apple.
The Appearance control panel has been updated to provide additional features and controls for Appearance Manager 1.1. Each feature is accessible through one of six tabs in the Appearance window: Themes, Appearance, Fonts, Desktop, Sound, and Options.

Themes - the Themes tab provides the ability to configure the desktop appearance as a group of settings called a Theme. Selecting a theme will automatically adjust your system font, appearance, sound, desktop pictures and patterns, and options to the specified settings.

You can use the predefined Themes included with Mac OS 8.5, or create a custom Theme. To create a custom Theme, after selecting your appearance settings, click the Save Theme button. A window appears allowing you to name the Theme. After saving the Theme, to use its Appearance settings, click on your Theme in the Themes section of the Appearance control panel.

Appearance - the Appearance tab allows you to select a set of Appearance settings and specify highlight colors and color variations for menus and controls.

Appearance - this provides the overall look of menus, icons, windows, and controls. Use the Appearance pop-up menu to select an Appearance type. Mac OS 8.5 includes "Apple platinum" appearance. In the future, other appearances from Apple and other companies can be added by dropping its Appearance file into the System Folder.

Highlight Color - use this pop-up menu to select a color to be used when highlighting text.

Variation - use this pop-up menu to select color variations to be used when displaying menus and controls.

Fonts - the Fonts tab allows you to choose a font to be used for System menus, headings, text, labels, lists, and icons.

Large System Font - use this pop-up menu to select a font to be used when displaying system menus and headings. Mac OS 8.5 includes seven fonts to choose from: Charcoal, Chicago, Chisel, Textile, Techno, Capitals, and Sand. Additional fonts added to the Fonts folder in the System Folder are not available in this selection.

Small System Font - use this pop-up menu to select a font to be used when displaying explanatory text and labels. Mac OS 8.5 currently allows only the Geneva font to be selected.

Views Font - use this pop-up menu to select a font to be used with lists and Finder icons. Any font installed in the Fonts folder of the System Folder can be selected. Select the font point size to use through the size pop-up menu or type the size in the window.

NOTE: 9 point is the minimum that can be selected.

Smooth all fonts on screen - selecting this option enables anti-aliasing for all fonts displayed on the screen. Select the font smoothing minimum size through the Size pop-up menu or type the size in the window (NOTE: 12 point is the minimum that can be selected).

Desktop - the Desktop tab allows you to select a pattern or picture to be displayed on the Finder desktop.
Patterns - To select a pattern, click a pattern name in the window, then click Set Desktop.

Many patterns available in the Desktop section will not display correctly at monitor bit depths of 256 colors or less. In order to view the full effect of a pattern, select thousands or millions of colors.

If a desktop picture has already been selected, it will cover the pattern in the preview panel and the message "The pattern may be covered by the picture" is displayed. Click the Remove Picture button first, then the Set Desktop button to display the pattern.

Pictures - To select a Desktop picture, click the Place Picture button. You can select a picture file in graphics formats such as PICT, GIF, and JPEG. Click the Show Preview button to see a smaller (thumbnail) image of the selected file. Select the picture file you wish to use, then click the Open button. Once you have selected a picture, click the Set Desktop button.

Sound - the Sound tab allows you to select a set of sound effects to be used when actions take place.
Sound Track - choose a Sound track from the Sound track pop-up menu. Mac OS 8.5 includes the "Platinum Sounds" sound track.

Play sound effects for - select which sets of actions you wish to have sound effects. To enable or disable an action, click its checkbox.

Options - the Options tab allows you to specify settings for scroll arrows, scroll boxes, and window collapse.

Smart Scrolling - selecting this option will place two arrows on either end of a scroll bar and adds proportional scroll bar thumbs.

TA25751_Mac_OS_Appearance_Control_Panel_Settings.pdf

Double-click title bar to collapse windows - selecting this option will allow you to collapse windows by double-clicking the title bar of the window, similarly to clicking the collapse window icon.

Published Date: Feb 20, 2012

Mac OS: Key Commands for Application Switcher

This article describes the key commands for manipulating the Application Switcher, accessible through the application menu in the upper right-hand corner of the menu bar. Application Switcher is available with Mac OS 8.5, 8.6, and Mac OS 9.
This article has been archived and is no longer updated by Apple.
The Application menu, available in Mac OS 8.5, 8.6, and 9, can be viewed in a number of different formats. The name of the active application now appears next to its icon in the menu making it easy to determine which application is currently active. In addition, the application menu can be "torn off" and appear on the desktop as a floating window (miniwindow) displaying all applications running on the system:

- The Application Switcher miniwindow can be used to select or activate any program running on the system by simply clicking its name or icon in the Application Switcher miniwindow. You can also use the keyboard shortcut Command-Tab to switch between programs or use Command-Shift-Tab to switch between programs in reverse order. To change the keys used for this shortcut, see the link "Help me modify the keyboard shortcuts" in the Switching between open programs section in Mac OS Help.

  Options for the Application Switcher can be accessed by using the keyboard and mouse. Additionally, many functions can be scripted using AppleScript:

- **Hide Application** To hide an application, hold down the Option Key while clicking on a different application in the miniwindow.
- **Collapse the miniwindow** Click the collapse box in the upper right corner of the miniwindow (Note: available only while displaying in vertical orientation).
- **Resize the Application Switcher miniwindow** To resize the miniwindow, move the pointer to the edge of the right side of the miniwindow until the pointer changes, then click and drag the miniwindow to the desired size.
- **Open document** Drag and drop the document onto the compatible application name in the Application Switcher miniwindow.
- **Hide/Show application name** Click the zoom box to hide and show the application names.
- **Toggle between small and large icons** Hold down the Option Key while clicking the zoom box.
- **Toggle between vertical and horizontal orientation** Hold the Option and Shift keys down together while clicking the zoom box.

Note: Some features of the Application Switcher are available only via AppleScript. See Mac OS Help for more details on using AppleScripts with Application Switcher.
Published Date: Feb 20, 2012

Mac OS 8.5: Date and Time Control Panel Features

This article has been archived and is no longer updated by Apple.

What are the features of the Date and Time control panel?

The Date & Time 8.1 control panel now provides an option for automatic Daylight Saving Time switching as well as the ability to use a network time server to synchronize the Macintosh clock.

Select Show Balloons in the Help menu to get more information about each section of the Date & Time control panel.

Automatic Daylight-Saving Time
Click the Set Time Zone button to choose the nearest city in your time zone.
Enter the current date and time in the Current Date and Current Time windows.
Click the Set Daylight Saving Time Automatically checkbox in the Date & Time control panel. The Macintosh clock will automatically be adjusted for Daylight Saving Time.

Network Time Server
Check the Use a Network Time Server checkbox.
Click the Server Options button.
Select a Network Time Server from the pop-up menu.

Select an option for automatic, timed, or manual time updating. Note that if you select manual, you will not receive a notification that the connection was successful until you click OK and note the last synchronization time in the window.

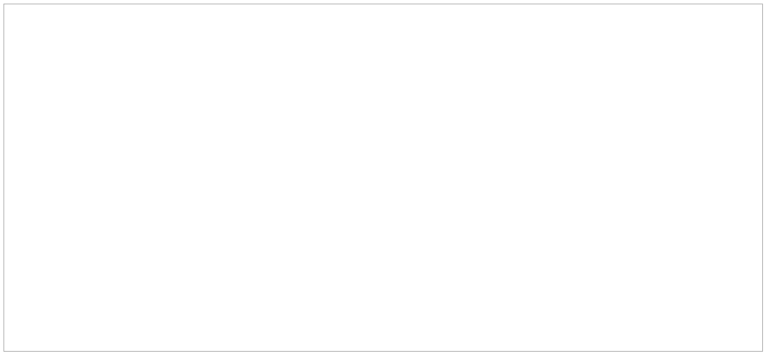
Click the Set Time Now button to connect to the Network Time Server and set the Macintosh clock. You must have an active TCP/IP connection to the Internet to in order to connect to a network time server. If you are not connected to the Internet, the error message "Unable to set the time. Make sure TCP/IP is set up correctly and try again" will appear when attempting to set the time. Note that the error message can be misleading. If your computer is not connected to the Internet, the problem is that you cannot connect to a Network Time Server when not connected to the Internet.

For additional information on how to use this feature, click the Help button or open the Help Center (from the help menu) and type the name of the feature. Balloon Help can also answer questions about window contents, window controls and menu items in the Finder, Control Panels and Applications, where supported. To turn on Balloon Help, choose "Balloon Help" from the Help menu in the Finder.

Published Date: Feb 20, 2012

Mac OS 8.5: Energy Saver Control Panel Features

What are the features of the Energy Saver control panel?
This article has been archived and is no longer updated by Apple.
The Energy Saver 2.1 control panel now consolidates the functionality of the PowerBook, PowerBook Setup, and Auto Remounter control panels into the Energy Saver control panel. When opening the Energy Saver control for the first time, the following message is displayed:



This message will be displayed each time the Energy Saver control panel is opened until you specify settings. To change the Energy Saver settings, click the Specify Settings button. The Energy Saver settings window opens with a different interface depending if you are using a Desktop computer or a PowerBook computer.

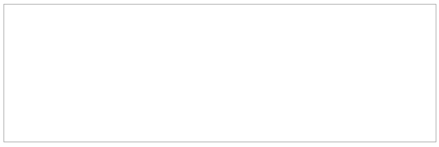
Desktop computer

PowerBook computer - Idle Sleep settings

PowerBook computer - Advanced Settings

NOTE: The Reduce processor speed option shown above is available for PowerBook G3 computers only.

The Energy Saver control strip module (PowerBook computers only) allows you to quickly switch between better conservation and performance settings, put the PowerBook into sleep mode, and open the Energy Saver control panel:



NOTE: Energy Saver is not compatible with or installed on NuBus-based Power Macintosh computers, such as the Power Mac 5200, 5300, 6100, 6200, 6300, 7100, or 8100.

For additional information on how to use this feature, click the Help button or open the Help Center (from the help menu) and type the name of the feature. Balloon Help can also answer questions about window contents, window controls and menu items in the Finder, Control Panels and Applications, where supported. To turn on Balloon Help, choose "Balloon Help" from the Help menu in the Finder.

Published Date: Feb 20, 2012

Mac OS: File Exchange Control Panel Features

This article describes the features of the File Exchange control panel, which was introduced with Mac OS 8.5.
This article has been archived and is no longer updated by Apple.
The File Exchange 3.0 control panel unites Mac OS Easy Open and PC Exchange capabilities into a single control panel. The control panel is divided into two sections: PC Exchange and File Translation. To access each section, click its tab in the File Exchange control panel.

Choose Show Balloons in the Help menu to get more information about each section of the File Exchange control panel.

- PC Exchange - the PC Exchange section provides the ability to open files from PC DOS disks with Macintosh applications, as shown below:

- Map PC Extension to Mac OS file types on PC disks - turn on this option to automatically map PC files to Mac OS file types based on its PC extension. If this option is not turned on, PC files will be treated as generic text files.
- Open unmapped files on any disk using mappings below - turn on this option to open unmapped files on any disk with the file mappings listed in the window (NOTE: QuickTime Exchange, located in the QuickTime Settings, maps media files before this option takes effect).
- PC SCSI Disks - turn on this option to automatically mount a PC SCSI disk when you start up the computer. If this option is turned off, you can click the Mount Now button to mount the PC SCSI disk after startup.
- Mappings - to add a PC file mapping, click the Add button. The Add Mapping window opens:

Type the .extension type in the Extension field, then select an application to map the file to. If you can't find the application in the application list, click the Select button to choose an application. Use the File Type pop-up menu to select the file type. To view the advanced options, click Show Advanced Options. When you have entered all of the information, click Add.

To remove a file mapping, select the mapping in the window, then click Remove. To edit a file mapping's settings, select it in the window, then click Change.
The PC Exchange section for File Exchange 3.0 cannot be used to identify SCSI ID numbers or drive ROMs and firmware revisions, as was available in previous versions of PC Exchange. This information is now available in Apple System Profiler 2.1.

- File Translation - the File Translation section of File Exchange allows you to specify settings for translating files from one file type to another.

NOTE: Previous versions of Mac OS included MacLinkPlus translation software from DataViz. This software provided software translation capabilities similar to File Exchanage and is no longer included with Mac OS 8.5.

- Translate documents automatically - turn on this option to enable automatic translation of documents when opened from the Finder or from dialog boxes.
- Always show choices when translating files - turn on this option to show the available choices when translating files instead of using the default translations.
- Don't show choices if there's only one - turn on this option to limit showing of available choices to more than one.
- Include applications on servers in translation choices - turn on this option to search connected server volumes for application choices. NOTE: selecting this option delays the display of translation choices.
- Translation Preferences - the file type and application to be translated to is shown in this window (see below). To add a translation preference, click Add:

Select the file type that you want to add a translation for, then click Continue . A list of available applications to translate the file to is displayed. Select the application you want to translate the file to, then click OK. To remove a translation preference setting, select it in the window, then click Remove.

For additional information on how to use this feature, click Help or open the Help Center (from the Help menu) and type the name of the feature. Balloon Help can also answer questions about window contents, window controls and menu items in the Finder, control panels and applications, where supported. To turn on Balloon Help, choose "Balloon Help" from the Help menu in the Finder.
Published Date: Feb 20, 2012

Mac OS 8.5: Sherlock Features

What are the features of the Sherlock application?
This article has been archived and is no longer updated by Apple.

The Find File application, previously located in the Apple menu, has been expanded and renamed Sherlock in Mac OS 8.5. It includes two additional features: Find By Content and Search Internet. In addition, Sherlock allows you to save search settings into a settings file which can be used to quickly perform searches.

Find File - The Find File section lets you search local disks and connected file server volumes for files by file name or by many other file attributes:

Figure 1, Sherlock Find File feature

To select the volume to be searched, use the Find Items pulldown menu. Use the pulldown menus to select volume to be searched, the file attribute type and search arguments. For additional search options, click the More Choices button. After specifying your search criteria, click the Find button. The results of the search are shown in a separate window. Click the name of the file to view the location on the volume in the window below the search results.

Double-click on a file name to open it. To move or copy the file, click and drag its icon from the search results window to the Finder desktop, volume, or folder location, and release the mouse button.

Find By Content - The Find by Content section of Sherlock lets you search the contents of files on your local volumes for one or more key words. Find By Content works by searching for key words contained within the text of each of the files. After indexing your files, you can search for information contained within the file without first having to open the file. This makes finding information contained within multiple files quick and easy.

Find by Content and Search Internet requires QuickTime 3.

To access Find By Content, click its tab in the Sherlock window:

Figure 2, Sherlock Find by Content feature

You must index your hard disk volumes before you can search the contents of the files. Server volumes cannot be indexed. The Find button will remain disabled (gray) until indexing has been completed. Depending on the number of files contained on the volume, indexing may take a significant amount of time to complete. Note that, for optimum performance and disk space usage, only the first 2000 unique terms of each document are indexed. To learn more about that limit, see technical document 106986, "**Mac OS: Find By Content Index Limited to 2000 Unique Terms**".

After indexing is complete, you can enter keywords for information you want to find within the contents of files in the Find by Content window, then click the Find button. Search results are sorted by relevancy and can be sorted by name, kind, or size by clicking the column heading name. To open a file, double-click its name in the list.

To find files that are similar in content to a file in the search results list, first select the file, then click the Find Similar Files button. The contents of the file you selected will be used to search for other files with similar contents.

To summarize the contents of a file to the clipboard, hold down the Control key while clicking on the file name in the search results list. Select Summarize to Clipboard from the contextual menu that appears. The contents of the file will be summarized and displayed in the Finder's clipboard window:

Note: The Summarize to Clipboard feature works only on files whose type is TEXT.

Search Internet - the Search Internet section of Sherlock provides the ability to quickly search the Internet using your choice of popular search engines. Additional Internet search sites can be easily added by dropping their files onto the System Folder. Search site files go into the Internet Search Sites folder.

Find by Content and Search Internet requires QuickTime 3.

The Search Internet feature is the fastest and easiest way to search Internet search engines since you search multiple sites with a single search.

To access the Search Internet section, click its tab in the Sherlock window:

Figure 3, Sherlock Search Internet feature

To perform an Internet search, type the keywords for the information you want in the Words field. Select the checkbox for each Internet search engines to use for the search, then click the Search button. For example, typing "PowerBook 1400 and memory" would perform a search on the selected Internet search sites for these keywords. The results of the search are presented in a window, ranked by relevance.

To sort the search results by Name or by Site, click the column heading.

To view a summary of a link in the list, click its name. A short summary of the link is presented in the window below the search results.

To open the link with your web browser software, click the link name in the summary window.

Internet search site files may be periodically updated for changes in search engines or to take advantage of newer features. When performing an Internet search with a search source file, an automatic check is performed to determine if an updated search source is available. If such an update is available, a window will appear:

Figure 4, Updated Search Sites Available window.

To accept the update, click the Update button. You can also manually check for updates by selecting the Update Search Sites command in the Find menu.

Save Search Criteria - After you have specified the search criteria for Find File, Find by Content, or Search Internet, you can save the search as a file. This file can be opened later to automatically perform the search. To save search criteria, select Save Search Criteria in the File menu. Enter the name and location to save the search criteria, then click the Save button. The search criteria is saved in a file and appears in the location you specified.

Sherlock Preferences - The Preferences allows you specify options to be used with the Sherlock application. The access the Preferences, select Preferences from the Edit menu:

Figure 5, Sherlock Preferences

Show current search status for Find File - selecting this option provides the search status in the Find File window.

Indexing options - select the Don't index items with this label to have the index ignore all folders and files using that label. NOTE: Be certain that all items you wish to have indexed on the hard disk are set to use a label other than the one you select.

System Responsiveness while indexing - if you choose to work with the computer while indexing files, you may find the system performance to be slow. In this case, adjust this setting to the More Responsive setting to help improve system performance.

For additional information on how to use this feature, click the Help button or open the Help Center (from the help menu) and type the name of the feature. Balloon Help can also answer questions about window contents, window controls and menu items in the Finder, Control Panels and Applications, where supported. To turn on Balloon Help, choose "Balloon Help" from the Help menu in the Finder.

Published Date: Feb 20, 2012

Mac OS 8.5: Internet Control Panel Features

This article explains the features of the Internet control panel.
This article has been archived and is no longer updated by Apple.
The new Internet control panel lets you enter Internet preferences, such as your e-mail address, your default news server, the address of your default home page, and your default Web browser, in one central location that can be accessed by all your Internet-based applications. It also lets you create groups of Internet settings that can be quickly switched between.

Settings in the Internet Control Panel are only functional for third-party applications that are designed to support Internet Config. Changing information in the Internet Control Panel may change similar information in one or more applications. Not all applications will use all of the information settings. See the documentation for each application for details.

To access the Internet control panel, select Internet in the Control Panels folder. When first using the Internet control panel, the default Internet setting is named "untitled". To rename this set, select Rename Set from the File menu:

Figure 1, Rename Set window.

Type a new name for the set and click the Rename button.

To add a new set, select New Set from the File menu. Type the name for the set, then click the Save button.

To switch between active sets, select the set from the pull-down menu:

Figure 2, My Settings pull-down menu of Internet control panel.

There are five sections of settings within a set: Personal, E-Mail, Web, News, and Advanced. To begin editing these settings, click the disclosure triangle next to Edit Sets:

Figure 3, Personal settings.

For help with editing information, select Balloon Help from the Help menu. Move the mouse pointer to each section for an explanation of the type of information you can enter or edit.

Personal - The personal section is where you enter information about yourself that will be used by Internet applications to identify you to other users. When you click the Edit Sets disclosure triangle, the following window is displayed:

E-mail - The E-mail section is where your user name, password, mail servers and some common e-mail application settings are entered. All information except the application settings must come from your Internet Service Provider (ISP) or your network administrator:

Figure 4, Email settings.

Web - The Web section is where you enter some common web browser settings:

Figure 5, Web settings.

News - The News section is where you enter information used to access a news server. This information is used by your news reader application to retrieve news groups and postings:

Figure 6, News settings.

Advanced - The Advanced section allows you to enter more advanced settings. To access the Advanced settings, select User Mode from the Edit menu, then selected the Advanced setting. The Advanced section tab appears:

Figure 7, Advanced settings.

The Advanced section contains settings for File Transfer (FTP), Helper Apps, Fonts, File Mapping, Firewalls, Messages, and Hosts. For help with changing the Advanced settings, select Balloon Help from the Help menu and move the mouse pointer over each section.

After you have completed editing settings for a set, select Save Settings from the File menu.

For additional information on how to use this feature, click the Help button or open the Help Center (from the help menu) and type the name of the feature. Balloon Help can also answer questions about window contents, window controls and menu items in the Finder, Control Panels and Applications, where supported. To turn on Balloon Help, choose "Balloon Help" from the Help menu in the Finder.

Published Date: Feb 20, 2012

Apple Help Features

What are the features of Apple Help? How do you navigate in Apple Help?
This article has been archived and is no longer updated by Apple.
Apple Help, new with Mac OS 8.5, is an on-screen help system that lets you search for and display information about Mac OS and its associated technologies like AppleScript. Apple Help includes the Help Viewer application which reads HTML-based help files, connects to other help sites on the Internet, and provides links that automatically open files and perform tasks. Apple Help can be enhanced with custom help files and, since it's searchable and its files are stored on the hard disk, it's the fastest and easiest way to locate information about Mac OS.

Apple Help requires QuickTime 3.

To open Apple Help, select Help Center from the Help menu. The following window opens:

You can quickly access Apple Help for specific topic by using an item's contextual menu. To do this, hold down the Control key while clicking on the item, and select Help from the contextual menu that appears.

The Help Center window displays the available help files. Mac OS 8.5 includes AppleScript Help and Mac OS Help. To view Mac OS Help, click its link in the Help Center window:

To view information about a topic, click its name in the left column. Additional information about that topic appears in the right column of the window. Click the information you want to view and it appears within the Help Viewer window.

The Previous and Next page buttons at the top left side of the window allow you to navigate the help viewer information. Clicking the Home button opens the Help Center and displays the available help information.

To search for a particular topic, type the topic or keywords in the search field at the top of the window. For example, if you wanted to get more information about accessing the Internet, you could type "How do I access the Internet?" and click the Search button. After a few moments, a list of search results appears sorted by relevancy:

Apple Help can assist you in performing the tasks described in the topic information. Where you see the words "Open the <item> for me," you can click the link to have Apple Help open the file. Likewise, where you see the words "Help me...", you can click the link to have Apple Help assist you step-by-step through the task described. For example, clicking the link "Show me how to configure my TCP/IP settings" opens the Apple Guide with instructions on how to perform the task:

Published Date: Feb 20, 2012

Mac OS 8.5: Network Browser Features

What are the features of the Network Browser application?
This article has been archived and is no longer updated by Apple.
The new Network Browser lets you easily find and connect to AppleShare servers on an AppleTalk network. You can also use the Network Browser to create a list of favorite servers and quickly connect to these servers.

To open the Network Browser, select Network Browser from the Apple menu. The Network Browser window opens showing a list of the network zones available:

Figure 1, Network Browser window.

Depending on the network you are connected to, the lists of available zones may not appear as shown. If you are connected to a network that does not have a network router, you may not see any zones listed. You will only see the devices connected to your computer's AppleTalk connection.

To access file servers in the Network Browser, double-click on the zone icon or click the zone's disclosure triangle. Click the disclosure triangle for the file server you want to see a list of volumes available. The file server's sign-in dialog appears allowing you to connect to the server. Then click the volume icon that you wish to open from the list:

Figure 2, Selecting a volume icon.

The Network Browser window has five buttons at the top part of the window: Shortcuts, Favorites, Recent, Previous, and Next:

Figure 3, Network Browser window buttons

Shortcuts - Connect to your AppleTalk network or to an AppleShare IP file server:

Figure 4, Network Browser shortcuts options

Selecting Connect to Server opens a window allowing you to specify the address of the AppleShare IP file server.

Favorites - Add the names of zones, servers, and volumes that you use frequently to a list of favorite items using the Favorites button:

Figure 5, Network Browser Favorites options

Recent - Choose from a list of AppleShare volumes you have recently visited:

Figure 6, Network Browser Recent options

For additional information on how to use this feature, click the Help button or open the Help Center (from the help menu) and type the name of the feature. Balloon Help can also answer questions about window contents, window controls and menu items in the Finder, Control Panels and Applications, where supported. To turn on Balloon Help, choose "Balloon Help" from the Help menu in the Finder.

Published Date: Feb 20, 2012

Mac OS 8.5: Memory Control Panel Features

What is new about the memory control panel?
This article has been archived and is no longer updated by Apple.
Memory control panel

Select Show Balloons in the Help menu to get more information about each section of the Memory control panel.

Disk Cache - in the default setting, disk cache memory is calculated automatically when the computer starts up to provide optimum application performance. The Disk Cache size changes depending on the amount of RAM installed in the computer and allocated to a RAM disk, if any.

You can use a custom disk cache setting when your computer task requires a finely tuned Disk Cache setting. To select a custom disk cache setting, click the Custom setting button. The following message is displayed:

Raising the disk cache setting above the optimum level may decrease system performance. In most cases, this setting will not need to be changed and should only be changed when specific recommendations have been given by the software or hardware product developer. Apple does not have specific recommendations about custom settings.

Click the Custom button to proceed. Be certain that any Disk Cache setting you choose is appropriate for the amount of memory installed in your computer. If you find that you do not have enough memory to launch applications, you may need to lower this setting. After entering the custom Disk Cache settings, you will need to restart the computer for the new settings to take effect.

Startup Memory Tests - In cases where there is a significant delay in starting up the computer, disabling the startup memory tests may help.

NOTE: This option is normally hidden until you press and hold the Command and Option keys while opening the Memory control panel. The startup memory tests are designed to ensure that the memory is fully functional in the computer. You should disable the startup memory tests only if you are experiencing a long delay in starting up the computer.

Published Date: Feb 20, 2012

Mac OS 8.5: Multilingual Internet Access Features

What does are the features of Multilingual Internet Access?
This article has been archived and is no longer updated by Apple.
Multilingual Internet Access provides the software you need in Mac OS 8.5 to display text from one or more of the following language families: Roman, Arabic, Devanagari, Gujarati, Gurmukhi, Hebrew, Japanese, Korean, Simplified Chinese, and Traditional Chinese, using any WorldScriptTM-aware application. Multilingual Internet Access also allows text editing for the following language families: Roman, Arabic, Devanagari, Gujarati, Gurmukhi, and Hebrew.

Installing Multilingual Internet Access

You can only install Multilingual Internet Access on Mac OS 8.5. You may add Multilingual Internet Access to a clean install by clicking Customize in the Mac OS 8.5 installer and selecting the desired options, or you may add Multilingual Internet Access to an existing Mac OS 8.5 system.

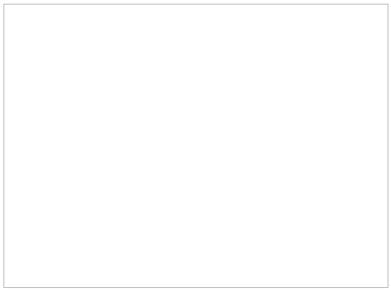
The Customized Installation option for Multilingual Internet Access offers five more language packages than the Recommended Installation option, and you may install the language packages of your choice. However, you will not be offered a language package that is the same as the primary language of your Mac OS system.

Recommended Installation - The Recommended Installation will install the software needed to display text in Japanese, Korean, Simplified Chinese, and Traditional Chinese.

Customized Removal - The Customized Removal allows you to remove language support individually. For the language support you wish to remove, it deletes the related fonts from the Fonts folder. However, it will not remove WorldScript I or WorldScript II, nor will it remove script resources. If you use applications that are not compatible with WorldScript, you might want to temporarily disable the WorldScript extensions by using Extensions Manager or by manually removing them from the Extensions folder and restarting your computer.

The Keyboard Menu

After installing Multilingual Internet Access, you will see the Keyboard Menu next to the Application menu:



The Keyboard Menu allows you to switch from one keyboard language to another. Select the language that corresponds to the language of the keyboard you are using. Select Customize Menu to open the Keyboard control panel.

Browsing Web Sites

Using your web browser, you can view web sites in different language encodings:

NOTE - The title bar does not display readable characters unless you have the appropriate language kit installed. This is normal.

To switch between different language character sets, select the language through the browser's menu:

For additional information on how to use this feature, click the Help button or open the Help Center (from the help menu) and type the name of the feature. Balloon Help can also answer questions about window contents, window controls and menu items in the Finder, Control Panels and Applications, where supported. To turn on Balloon Help, choose "Balloon Help" from the Help menu in the Finder.

Published Date: Feb 20, 2012

Mac OS 8.5: Unicode Support

What parts of Mac OS 8.5 include Unicode support?

This article has been archived and is no longer updated by Apple.
Unicode is an international industry standard used to encode written characters. It's a double byte universal character coding scheme that supports all modern day writing systems and has been accepted as an ISO standard. This standard makes it possible to encode all of the characters used for written languages throughout the world in one table.

Mac OS 8.5 better supports Unicode keyboard and text services with the following enhancements:

KeyCaps 8.0.2

- Modification of the Key Caps Application to Support Unicode Keyboard Layouts

Keyboard 8.1

- Provides support for a change to Font and Keyboard Script Synchronization. Keyboard Control Panel version 8.1 will also provide support for Unicode.

QuickDrawText/Font Manager

- Add anti-aliased (smooth) text
- Fixed bugs and thus improved stability
- Improve performance, especially for 2-byte fonts. 2-byte fonts are character fonts such as Chinese, Japanese, Korean, Hebrew, and Arabic fonts.
- Moved WorldScript II patch into system to improve stability, performance, and memory requirements of 2-byte systems.
- Now possible to draw double-byte text without WorldScript II, so CJK systems work when booted with extensions off.

Text Services Manager 1.5

- Support for one-byte scripts used in emerging markets such as Thailand and India. Input methods for languages other than Japanese, Korean, and Chinese can now be added.
- Support for Unicode input including Unicode keyboard layouts and Unicode input methods. Enabling Unicode input support is a key requirement for ATSUI.
- Addition of event protocol support requested by AppleTech for the Kotoeri input method and by other developers. This protocol will pave the way for text services such as spell checkers, tokenizers and stemmers, which need to analyze words contextually.
- Integration of inline support, which is currently provided by a collection of software patches. This will improve reliability.
- These features will provide significant user experience improvements for the markets which require single-byte input methods and will add value specifically for publishing because it will support text entry in Thai, Indic languages, etc.

Apple Type Solution for Unicode Imaging (ATSUI)

- ATSUI is a new application programming interface (API) that lets applications draw Unicode text and provides advanced typography in a QuickDraw graphics environment. ATSUI will also provide DataFork Font Support.

Published Date: Feb 20, 2012

Mac OS 8.5: AppleScript 1.3 Features

What are the features of AppleScript 1.3? Where in the Mac OS is there more info about AppleScript?
This article has been archived and is no longer updated by Apple.
AppleScript 1.3 provides the following improved performance and usability features:

Performance and Usability

- Native PowerPC code - AppleScript has been completely rewritten in native PowerPC code. As a result, scripts can now run as much as five times faster (depending on the task being scripted).
- Dictionaries - The dictionaries for the Finder, many other system software components, and the Mac OS scripting additions (Standard Additions file) have been consolidated, cleaned up and organized. Items have been organized by functional groups, making it easier to understand a component's scriptable functionality.
- Scripts folder - The new Scripts folder inside the System Folder provides a central, stable location for your scripts. AppleScripts dropped onto the System Folder are automatically placed in this folder:

- The Folder Action Scripts folder inside the Scripts folder contains the folder actions scripts included with the Mac OS.

New scriptable system software components - The following system software components are now scriptable:

- Control panels - Appearance, Apple Menu Options, File Exchange, Location Manager
- Extensions - Application Switcher, ColorSync Extension
- Applications - Apple Help Viewer, Apple System Profiler, Desktop Printer Manager, Disk First Aid, Find, Network Setup Scripting

New scripting additions and features - Most Apple-supplied scripting additions (file type "osax") are now unified into one file, the Standard Additions file. Scripting additions expand the capabilities of AppleScript, providing additional commands that you can use in your scripts. The Standard Additions file includes these new features: Using the Clipboard, Pausing a script, Displaying lists, Mounting remote volumes, Speaking text, Summarizing text, and Timed dialog boxes.

Unit types - You can now convert data expressed as units of measure - including length, weight, volume, area, and temperature - between different measurement systems.

Internet suite - For advanced scripters, AppleScript 1.3 includes standard-event terminology for processing Common Gateway Interface (CGI) requests from an HTML form. (A CGI is a helper application for server software that processes the information sent from an HTML form.) Previously, the only way to write AppleScript CGIs scripts was to use the raw Apple event codes. The new suite provides the appropriate terminology.

Folder Actions - Folder actions allow you to run AppleScripts when you interact with a folder in any of the following ways: Open a folder, Close a folder, Add items to an open folder, Remove items from an open folder, and Move or resize a folder window.

By using folder actions, you can make tasks you do frequently take place automatically. For example, you can specify that when a file is placed in a folder, it's always copied into another folder as well. If a folder has folder actions attached to it, the folder's icon displays a small script icon badge:

To assign a folder action to a folder, press and hold the control key while clicking on the folder. Select Attach a Folder Script from the contextual menu that appears.

Published Date: Feb 20, 2012

Mac OS 8.5: Remote Access 3.1 Features

What are the features of Remote Access 3.1?
This article has been archived and is no longer updated by Apple.
Apple Remote Access 3.1 client software replaces Open Transport PPP in Mac OS 8.5. Note that the Open Transport PPP control panel and extensions will be removed upon installing Mac OS 8.5. The capabilities provided through the PPP Control Panel are now provided through the Remote Access control panel.

In addition, Apple Remote Access 3.1 includes Remote Access Status, available in the Apple menu. Remote Access Status allows you to access the connection settings established in the Remote Access control panel, as well as view the current status of the connection. For more details on Apple Remote Access 3.1, see the Apple Remote Access 3.1 Read Me.

For additional information on how to use this feature, click the Help button or open the Help Center (from the help menu) and type the name of the feature. Balloon Help can also answer questions about window contents, window controls and menu items in the Finder, Control Panels and Applications, where supported. To turn on Balloon Help, choose "Balloon Help" from the Help menu in the Finder.

Published Date: Feb 20, 2012

Mac OS 8.5: Open Transport 2.0 Features

What are the features of Open Transport 2.0?
This article has been archived and is no longer updated by Apple.
The new features of Open Transport include:

- Implementation of the Dynamic Host Configuration Protocol (DHCP) will be improved to support a number of requested features, including Client Identification, retention of the lease on a given IP address across boots, improvement of user feedback in the event that the DHCP server is unavailable, display of the time remaining on a lease, allowing the user to "re-lease" an address, support of RFC 2131, and provision of an API to allow third-party-developers to access DHCP fields unused by Open Transport.
- Support for the Simple Network Management Protocol (SNMP). SNMP allows network managers to administer services, configure devices, and monitor usage on complex, multivendor networks. Apple has selected the Simple Network Management Protocol (SNMP) to meet this customer requirement. SNMP is an industry-standard protocol for network management defined by the Internet Engineering Task Force (IETF).
- Program-to-Program Communications, and particularly AppleEvents, which to date have been available only over AppleTalk protocols, supported over TCP/IP.
- Multilink multihoming, the capability of running several network interfaces simultaneously with potentially several network addresses on each interface, is implemented for TCP/IP protocols. Note that this capability requires software to take advantage of it (such as a web server or other server software).
- Apple Remote Access 3.1 replaces OT/PPP as part of the system release.

For additional information on how to use this feature, click the Help button or open the Help Center (from the help menu) and type the name of the feature. Balloon Help can also answer questions about window contents, window controls and menu items in the Finder, Control Panels and Applications, where supported. To turn on Balloon Help, choose "Balloon Help" from the Help menu in the Finder.

Published Date: Feb 20, 2012

Mac OS 8.5: PlainTalk 1.5.3 Features

What are the features of PlainTalk 1.5.3?
This article has been archived and is no longer updated by Apple.
PlainTalk is a collection of software components that enables Macintosh computers to respond to spoken commands and speak written text. PlainTalk makes use of two enabling technologies: Speech Recognition and Text to Speech.

Speech Recognition
The Speech Recognition (SR) aspect of PlainTalk is a continuous-speech system that allows you to simply speak commands to the computer without exaggerated diction or volume. Those commands are executed as if you had used the mouse or keyboard for input. PlainTalk SR is dialect independent, requiring no adjustment for changes from user to user.

Speech Recognition gives you the ability to streamline operations by simply invoking commands by speaking their names. Writing speech commands is accomplished through two different methods:

AppleEvent enabled applications can use commands written with AppleScript. Non-AppleEvent enabled applications can use commands built by using a macro utility like QuickKeys from CE Software.

Text to Speech
The Text to Speech (TTS) aspect of PlainTalk gives the computer the ability to read text-based information aloud via speech synthesis through the computer's speaker. Multiple voices at various sound quality levels are supported through the use of Macintalk system extensions.

Text to Speech enables new capabilities such as audible proofreading or, in combination with the telephony capabilities that GeoPort provides, listening to computer recitation of your E-mail messages from remote locations.

For additional information on how to use this feature, click the Help button or open the Help Center (from the help menu) and type the name of the feature. Balloon Help can also answer questions about window contents, window controls and menu items in the Finder, Control Panels and Applications, where supported. To turn on Balloon Help, choose "Balloon Help" from the Help menu in the Finder.
Published Date: Feb 20, 2012

Mac OS 8.5: Disk First Aid Features

What are the features of Disk First Aid 8.5.1?
This article has been archived and is no longer updated by Apple.
You can now test and repair your startup disk or volume using Disk First Aid 8.5.1 without first starting up from a different volume. In addition, Disk First Aid 8.5.1 provides the following enhancements:

- Automatically tests and repairs the startup volume on startup after an improper shutdown or crash occurs.
- Verifies and repairs many kinds of damage caused by use of older disk utilities that are not compatible with Mac OS Extended (HFS Plus) volumes.
- Supports AppleScript for verify and/or repair a volume.

For additional information on how to use this feature, click the Help button or open the Help Center (from the help menu) and type the name of the feature. Balloon Help can also answer questions about window contents, window controls and menu items in the Finder, Control Panels and Applications, where supported. To turn on Balloon Help, choose "Balloon Help" from the Help menu in the Finder.

Published Date: Feb 20, 2012

Mac OS 8.5: Drive Setup 1.6 Features

What are the features of Drive Setup 1.6?
This article has been archived and is no longer updated by Apple.
The Drive Setup utility provides drive initialization, driver update, and testing services for Apple hard drives. Drive Setup 1.6 provides the following enhancements:

- Drive Setup can now reinitialize a drive maintaining the former partition scheme and formats
- Warns the user before updating a newer driver with an older driver.

For additional information on how to use this feature, click the Help button or open the Help Center (from the help menu) and type the name of the feature. Balloon Help can also answer questions about window contents, window controls and menu items in the Finder, Control Panels and Applications, where supported. To turn on Balloon Help, choose "Balloon Help" from the Help menu in the Finder.
Published Date: Feb 20, 2012

Network Assistant 4.0: Error Loading the ACD1.DRVR Driver with FaxSTF Installed

I was installing the Apple Network Administrator Toolkit on an iMac and I got the following error message upon restart:

"The STFInit system extension had an error loading the ACD1.DRVR driver file. Please make sure it is in the Drivers folder of your STF folder."

Can you help?
This article has been archived and is no longer updated by Apple.
There appears to be a conflict between Apple Network Administrator Toolkit or Apple Network Assistant and the FaxSTF software.

To resolve the situation, follow these steps to move the Network Assistant Startup extension from the Extensions folder to the root level of the System Folder:

1. Open the System Folder.
2. Open the Extensions folder. Both folders should now be open and their windows visible.
3. Drag the file named "Network Assistant Startup" from the Extensions folder to the System Folder's opened window.
4. Restart your computer.

The error message should be gone and Network Assistant will continue to function normally.
Published Date: Feb 20, 2012

iMac: Changing Default Home Page Using Internet Config

When I launch my web browser, it tries to open a web page which is no longer available. How can I change the default page which my browser accesses?

This article has been archived and is no longer updated by Apple.

The iMac comes preconfigured to use Internet Config which contains default settings for the internet applications pre-installed on your iMac. To modify the default home page for your browser, open Internet Config and select World Wide Web. You can then change the default home page to the page of your choice.

Also, you can change the default home page from within your browser application by unchecking "Use Internet Config" in the Preferences section.

Published Date: Feb 20, 2012

iMac: Modifying Logic Board Voids Warranty

Various iMac web pages refer to or describe modifications to the iMac logic board to support an external display or other non-iMac compatible external peripherals. What impact would these modifications have on my warranty?
This article has been archived and is no longer updated by Apple.
Apple, Inc. does not support modification to the iMac logic board other than for approved upgrades such as memory.

Modification of your iMac logic board, or any other Apple board, voids the Apple Limited Product Warranty for that board. Accordingly, you can expect your service provider to charge you for service to that board, if it requires service after modification.
Published Date: Feb 20, 2012

Mac OS 8.5: What Is SNMP?

I notice that Mac OS 8.5 includes a component called SNMP. What is it, and what can I do with it?
This article has been archived and is no longer updated by Apple.
This article discusses the following questions about OT/SNMP:

- What is SNMP?
- How would I use SNMP?
- What do I need to get started with SNMP? (system requirements; third-party software needed)
- Known issues
- Where can I get more information?

What is SNMP?

SNMP (Simple Network Management Protocol) was originally developed by the Internet Engineering Task Force to manage large TCP/IP networks containing hardware from different vendors. SNMP has since been broadened to run independently of any network protocol, and is now a standard for managing devices on a multi-vendor network.
SNMP is a network management system that consists of SNMP management software running on a computer called a **console**, and SNMP **agent** software installed on each network computer. The agents installed on a networked computer collect management information-called **variables** -from the computer and relay this information to the management console.

The variables that can be managed by an SNMP agent are defined in a database called a **MIB** (Management Information Base). A MIB specifies what each variable does and whether it can be modified. Within a MIB, variables may be organized into **tables** (collections of variables) and groups. For example, a hardware group describes the physical parts of the computer, such as the expansion cards in the computer and the type of SCSI (Small Computer System Interface) devices connected to the computer. An interface table (iftable) group would contain information about the network interfaces on a machine, hardware addresses (when applicable), network speed, and status.

The administrative relationship between a console and one or more networked computers is called a **community**. A community is identified by a unique name, which authenticates a console as a valid member of the community. Once a console is authenticated, each managed computer must then determine the type of **access privileges** (read/write, read only, or no access) the console has to the variables on that computer. This collection of variable access privileges is called the **community view**.

Mac OS 8.5 includes the agent side of SNMP network management system (custom install required), allowing the Macintosh computers to be managed by a third-party console. Included with the Mac OS 8.5 customer install is the SNMP Administrator, which runs on each networked Macintosh, and collects a variety of information from the individual SNMP agents and relays this information to the console.

The SNMP Administrator program can be used to import or export a community, and to change access privileges to the data in the MIBs being collected.

How would I use SNMP?
SNMP is often used to manage large, multi-vendor environments. Data from network entities can be collected and analyzed to provide insight for troubleshooting and network management. A network administrator might use SNMP to gather routing tables and traffic statistics on routers or bridges. They could also set up traps, i.e., configure the console so that a specific event (such as a server going down) would set off an alarm (alerts sound, e-mail, a page).

From a Macintosh agent, the network administrator could gather information about the system software, the hardware, the TCP/IP connections, and the AppleTalk connections. SNMP is a very powerful tool, but it would require a good deal of knowledge about networking to be able to interpret some of the information it returns.

What do I need to get started with SNMP?
To use SNMP on your network, you would need SNMP agent software on your workstations (OT/SNMP for your Macs), a third-party SNMP console, and network connectivity between them.

Installing OT/SNMP
Included with Mac OS 8.5 is the installer for the SNMP Agent software, which includes some extensions and the SNMP Administrator application. This software can be installed by doing a custom install, selecting the Mac OS component to custom install, and then again doing a custom install (rather than the default "recommended installation") of the Mac OS. When you select a custom install of the Mac OS, go under "Networking" and select SNMP.

Additional note: When using OT/SNMP, you must set TCP/IP to initialize at system startup time. To do so, go into the TCP/IP control panel, go into "Advanced" mode (Command-U), select "Options" and Deselect "Load only when needed." Then restart the workstation.

System Requirements:
The OT/SNMP software requires:

- Mac OS version 7.5.5 or greater
- OT 1.1.1 or greater; OT 2.0 or newer required for AppleTalk MIB II access
- A minimum of 16 MB of RAM
- 8 MB of available disk space.
- 68030 or greater
- CFM 68K required on 680x0 computers

SNMP Console
You'll also need some sort of console--SNMP Management software--that will collect, display and help you analyze the data that are collected. SNMP Management Software can run on a variety of platforms, but there are a few available for the Macintosh.

Dartware, LLC has a demo version of its InterMapper SNMP console that monitors network equipment and alerts managers to problems on the product's web site: http://www.dartware.com/intermapper/

Dartware also has a SNMP query tool called SNMP Watcher posted at their web site: http://www.dartware.com/snmpwatcher/

Neon Software also offers a product called LANsurveyor and has a demo version available on their web site:
http://www.neon.com/

To locate other third-party software developers who offer SNMP Management Software do an Internet search or search the Macintosh Products Guide at http://guide.apple.com/ .

Known Issues
The TCP/IP stack must be initialized at system startup time for the SNMP agent software to load on a computer. Use the "Options" button in the TCP/IP control panel (visible when in "Advanced" mode) to Deselect the "Load only when needed" option.

OT/SNMP replaces earlier versions of SNMP agent software for the Mac, called MacSNMP, which shipped as a component of "AppleTalk Connection Kit for the Macintosh" and "TCP/IP Connection Kit for the Macintosh." Extensions and applications using the MacSNMP APIs are not supported and must be revised to use OT/SNMP APIs.

Where Can I Get More Information?
Details about the SNMP specification and the MIB's are found in RFC's (Request for Comments).
Some RFC's related to SNMP include:

- RFC 1213, "Management Information Base for Network Management of TCP/IP-based internets: MIB-II"
- RFC 1243, "AppleTalk Management Information Base"
- RFC 1643, "Definitions of Managed Objects for the Ethernet-like Interface Types"
- SNMP Version 1 Specification
- RFC 1155, "Structure and Identification of Management Information for TCP/IP-based Internets"
- RFC 1157, "A Simple Network Management Protocol (SNMP)", RFC 1157.

See the following article for additional 3rd party SNMP software:
Tech Info Library Article 9780: "**Neon Software, Inc.**"

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following Tech Info Library article can help you search for a particular vendor's address and phone number:
Article 17159: "**Locating Vendor Information**"
Published Date: Feb 20, 2012

Mac OS 8.5: About Mac OS 8.5 Read Me

The following is the About Mac OS 8.5 Read Me:

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-
- Creating Desktop printers for Non-AppleTalk Printers
-
- Monitor Resolution changes after Mac OS 8.5 install
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- Slow screen redrawing
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- America Online (AOL) Customers
- Anti-Aliased Text and Mac OS 8.5
- Apple CD-ROM extension and non-Apple CD-ROM incompatibilities
- Apple HD SC Setup program
- Apple language kits and Mac OS 8.5
- Applications that install QuickTime
- At Ease and Mac OS 8.5
- Command-Tab shortcut and Third Party Applications
- Connectix Virtual PC and Mac OS 8.5
- Desktop Printer Extension and Mac OS 8.5
- Dr. Solomon's Virex and Mac OS 8.5
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- Drive Setup and Energy Saver
- QuickTake 150 software installs old version of QuickTime PowerPlug extension
- QuickTake Image Access
- Using Acrobat PDF documents
- Using Monitors & Sound with add-on devices

This article has been archived and is no longer updated by Apple.

About Mac OS 8.5

This document provides information about Mac OS 8.5 that supplements the information in your installation manual and on-line help. For up-to-date news and compatibility information, please see the Mac OS Late-Breaking News web site at **http://www.apple.com/macos/latebreaking/**

Notes About Mac OS 8.5

*** AppleScript and Mac OS 8.5**

Mac OS 8.5 incorporates many new scriptable features and changes the behavior of some existing features. These changes may require some scripts to be updated.

*** Creating Desktop printers for Non-AppleTalk Printers**

Use the Desktop Printer Utility to create Desktop printers for non-AppleTalk Printer such as Infrared and LPR (TCP/IP). Double click on the utility, select the printer type and the correct PPD file for the printer by clicking on the change button. For LPR printers, you need to provide the Domain name or IP address as well as the Queue name of the printer or server. Close the dialog to save and create the desktop printer.

*** Monitor Resolution changes after Mac OS 8.5 install**

After performing a clean install of Mac OS 8.5, your monitor resolution may have changed from its previous settings. You can change your monitor resolution back by using the Monitors & Sound control panel.

*** Slow screen redrawing**
If a desktop picture is redrawn slowly after closing a window, your computer might be running low on memory. Set the Appearance control panel to display a pattern, instead of a picture, to speed up the redrawing process.

*** Unusual or inconsistent appearance**
Some applications may exhibit unusual or inconsistent cosmetic anomalies when used with Mac OS 8.5. These should not impact the performance of the application. Contact the manufacturer of the program to see if an updated version of the program is available.

Notes About Compatibility

*** America Online (AOL) Customers**
To enjoy QuickTime content on the web while using America Online, simply drag a copy of the file "QuickTime plugin" into the AOL Plug-ins folder (located in the same folder as the AOL application) and relaunch AOL.

*** Anti-Aliased Text and Mac OS 8.5**
If you turn on "Smooth all fonts on screen" in the Appearance control panel, you may notice some visual anomalies in some applications. This might include problems in the appearance of highlighted text (particularly when your highlight color is black), text that switches back and forth between smoothed and unsmoothed, or text that is not drawn correctly in front of a colored background. Contact your application vendor for updates to address these problems. You can reduce the anomalies in highlighting by choosing a light highlight color.
The width of text on the screen may be different when smoothing is turned on, which may cause line breaks in your documents to change.

*** Apple CD-ROM extension and non-Apple CD-ROM incompatibilities**
If your computer or CD-ROM drive is not manufactured by Apple, or you have an Apple CD-ROM drive and you use a non-Apple driver, incompatibilities may result. For your CD-ROM drive to function correctly, remove the file named *Apple CD / DVD* from the Extensions folder, and reinstall the third party software which supports your CD-ROM drive. Please contact the developer of the third party software to see if you have the latest version.

*** Apple HD SC Setup program**
After you install Mac OS 8.5, you cannot use the obsolete Apple HD SC Setup program to initialize your Apple hard drive. Use the Drive Setup program supplied with Mac OS 8.5 instead.

*** Apple language kits and Mac OS 8.5**
Apple's language kits require an updater for full functionality with Mac OS 8.5. If you have language kits installed on an older system you are updating, or if you install a language kit after installing Mac OS 8.5, be sure to run the Language Kit Updater, located in the CD Extras folder.

*** Applications that install QuickTime**
Some applications replace the version of QuickTime installed by Mac OS 8.5 with an earlier version when they are installed. This will cause problems with other parts of the system that require features of the newer version of QuickTime. If this occurs, you will need to re-install QuickTime from the Mac OS 8.5 CD by selecting "Add/Replace" in the installer, and then doing a custom install.

*** At Ease and Mac OS 8.5**
Some of the Mac OS 8.5 control panels can't be enabled for At Ease users and won't appear in At Ease Setup. You should use these control panels in the Finder before running At Ease. Also, note that At Ease does not support file sharing. Do not turn on file sharing when using At Ease or your computer may freeze.

*** Command-Tab shortcut and Third Party Applications**
The keyboard shortcuts to switch back and forth between applications are Command-Tab and Command-Shift-Tab. These shortcuts may conflict with some third party applications. An assistant for changing this keyboard shortcut can be found in the on-line Mac OS Help within the "Files and Programs" chapter, under "Switching between open programs."

*** Connectix Virtual PC and Mac OS 8.5**
Connectix Virtual PC 2.0 and 2.0.1 are not compatible with Mac OS 8.5 and users should update to version 2.1 or later. The 2.1 updater is available as a free download for all Virtual PC 2.0 owners on the Connectix web site: **http://www.connectix.com/html/updates.html**.
Connectix Virtual PC 1.x users should upgrade to version 2.1 or later for Mac OS 8.5 compatibility.

*** Desktop Printer Extension and Mac OS 8.5**
The Desktop Printer Extension file is incompatible with Mac OS 8.5. It may cause your computer to freeze when starting up. Restart with the shift key held down and remove the file from the Extensions folder, then restart. See Figure 1.

Figure 1 Desktop Printer Extension file.

*** Dr. Solomon's Virex and Mac OS 8.5**
Dr. Solomon's Virex versions 5.8.1 and earlier are not compatible with Mac OS 8.5 if the Virex "Scan Files When Opened" option is turned on.

For more information on upgrading to Virex 5.9, contact McAfee, the publisher of the software at http://software.mcafee.com/

*** Iomega 6.0.1 driver and Virtual Memory**
Mac OS 8.5 includes support for the use of removable media (like the Iomega Jaz drive) for Virtual Memory; however, the currently shipping version of the Iomega driver included with this release does not support the use of an Iomega drive for Virtual Memory. A new driver, Iomega driver version 6.0.2, is under development and will support this new feature. The 6.0.2 driver should be available for free download at **http://www.iomega.com** in September 1998.

If you wish to install Mac OS 8.5 onto a Zip or Jaz disk, you should change the backing volume used by Virtual Memory to a non-removeable volume. To do this, disable extensions while restarting the first time by holding down the shift key. Open the Memory control panel and turn on Virtual Memory. The Memory control panel will let you set the VM backing volume to a volume that is compatible with VM.

*** FM Radio application and Appearance sounds**
You may find that launching the FM Radio application after turning on Appearance Sounds disables sound. This can be remedied by turning off Appearance Sounds before launching the FM Radio application and turning them back on after the application is running.

***Some programs refuse to open**
A small number of application programs will not open if the system font is not set to Chicago. Use the Appearance control panel and change the large system font to Chicago then open the program again. Contact the manufacturer of the program to see if an updated version is available.

Some programs may require additional memory when used with Mac OS 8.5. If a program will not open, select the program's icon, choose Get Info from the File menu and increase its minimum memory allocation by 300K. See the Memory topic in Mac OS Help for more information.

Notes About Internet Access

*** International Internet access**
If you don't already have an account with an Internet service provider, you can obtain one using the Internet Setup Assistant, or you can choose one from the list in the International Internet Access file in the Internet Extras folder on the Mac OS 8.5 CD. Read this information before using the Internet Setup Assistant.

Notes About PowerBook Computers

*** Password Security protects one partition only**
The Password Security control panel asks for a password in order to start up the computer. If you have formatted your internal hard disk so it has more than one partition, only the startup partition will be password-protected. Additionally, if more than one partition has a System Folder, the PowerBook may start up from a non-protected partition.

*** PowerBook 3400/G3 Modem**
To function properly, ethernet on the PowerBook 3400 and PowerBook G3 (but not the G3 Series), requires the PowerBook 3400/G3 Modem extension.This extension is installed by the Mac OS 8.5 installer and should not be removed, even if other modem software is installed. Removing this extension will prevent you from making ethernet connections.

Notes About Printing

*** Reinstalling printer drivers**
If you perform a clean installation of Mac OS 8.5, and an icon for your printer is not available in the Chooser, you may need to reinstall the software that came with your printer. If you have a StyleWriter, StyleWriter II, or StyleWriter 1200, you can use the StyleWriter 1500 driver that comes with Mac OS 8.5 instead of installing your original printer software. If you have a Color StyleWriter 2200 or Color StyleWriter 2400, you can use the Color StyleWriter 2500 driver instead. After performing a clean install of Mac OS 8.5, you will need to re-install fonts and ink jet watermarks.

*** Switching between a LocalTalk network and a serial printer**
If you use the same port to alternately connect to a LocalTalk network and a serial printer, the port is not always correctly released after you turn off AppleTalk to use the printer. If you have trouble printing after turning AppleTalk off, restart the computer.

Miscellaneous Notes

*** Drive Setup and Energy Saver**
When using Drive Setup to perform an extended operation, such as testing the disk, initializing the disk with a low level format, or zeroing all data, use the Energy Saver control panel to set the hard drive sleep setting to *Never*. This will prevent errors caused by the hard drive spinning down before Drive Setup completes the operation.

*** QuickTake 150 software installs old version of QuickTime PowerPlug extension**
Mac OS 8.5 includes a new version of the QuickTime PowerPlug for computers with PowerPC microprocessors. The QuickTake 150 Installer replaces it with an older version (version 2.0). To install the QuickTake 150 software, first remove the newer version of the QuickTime PowerPlug

extension from the Extensions folder (within the System Folder) then install the QuickTake 150 software. After installation is finished, drag the PowerPlug file back to the Extensions folder replacing the older one.

*** QuickTake Image Access**
When you are copying pictures from a QuickTake 100 or QuickTake 150 camera to your computer, make sure all the pictures you want have finished copying before you erase the contents of the camera. Previously, you couldn't erase the camera until copying was completed. Mac OS 8.5 can perform other tasks while copying files so it's possible to accidentally erase the pictures before they have been copied from the camera. You cannot recover a picture once it is erased from the camera.

*** Using Acrobat PDF documents**
Some of the manuals included with Mac OS 8.5 are in Adobe Acrobat format. These files have *pdf* at the end of their names. To view or print these documents you must install Adobe Acrobat Reader, located in the Adobe software folder on the Mac OS 8.5 CD.

*** Using Monitors & Sound with add-on devices**
If you have a video or sound device that cannot be accessed using the Monitors & Sound control panel, use the Monitors control panel, or the Sound control panel, installed in the Apple Extras folder. Unless you specifically need to use these, the unified Monitors & Sound control panel should be used instead.

Updated August 29, 1998

Published Date: Feb 20, 2012

Mac OS 8.5: International Internet Access Read Me

The following is the International Internet Access Read Me document.
This article has been archived and is no longer updated by Apple.

Internet Setup Assistant

The Internet Setup Assistant can help you configure your computer to access the Internet through an Internet service provider (ISP) or through a network with an Internet connection.

If you already have an account with an ISP or you are accessing through a network:

1. Double-click the Internet Setup Assistant icon located in your Internet folder.
2. Click Yes to the question "Would you like to set up your computer to use the Internet?"
3. Click Yes to the question "Do you already have an Internet Account?"
4. Enter the information from your ISP or network administrator.

If you need to set up a new account with an ISP:

1. Contact an ISP in your region. A list containing some of the available ISPs is below.
2. Identify yourself as a Mac OS 8.5 customer.
3. Double-click the Internet Setup Assistant icon located in your Internet folder.
4. Click Yes to the question "Would you like to set up your computer to use the Internet?"
5. Click No to the question "Do you already have an Internet Account?"
6. Enter the information from the ISP. A summary of the information needed is below.

ISP Information

Ask the ISP for the following information to set up an Internet configuration. This information is also contained in the ISP Information Form located in the Internet Extras folder on the Mac OS 8.5 CD. You may want to fax this form directly to the ISP.

ISP local phone number (also known as the local point of presence, or POP)
account name (also known as login name or user id)
account password
DNS address (such as 12.222.6.78)
Domain name (such as isp.com) [optional]
e-mail address (such as name@isp.com)
e-mail password
e-mail account (such as name@pop.isp.com)
e-mail host computer (such as smtp.isp.com)
newsgroup host computer (such as news.isp.com) [optional]

Available ISPs

The following is a partial list of ISPs with Mac OS experience. Although many ISPs provide their own software for Internet access, Apple recommends that you use the Internet software included with Mac OS 8.5. Inclusion of an ISP on this list does not imply endorsement by Apple, Inc. or its subsidiaries.

Country	ISP	Phone
Colombia	Openway	(571) 629 0811
	Latinonet	(571) 312 2682
	Internet de Colombia	(571) 635 3088
	Colomsat	(571) 312 7288
Costa Rica	Inter@merica	(506) 256-5811
	Info@merica	(506) 257-7828
	Radiografica Costarricense S.A. (RACSA)	(506) 287-0087
Ecuador	Access Internet	593 2 674116
Indonesia	Meganet	(62) 21-521-2928
Malaysia	TMnet	(60) 3-733-1515
	JARING	(60) 3-966-5000
Mexico	Compuserve	(5) 629-8199
	INFOSEL	(5) 726-0070

	Internet Directo	(5) 241-2222 Ã³ sin costo 91-800-77634
	Mexico en red	(5) 639-3060
	MPSNet	(5) 639-6075
Peru	RCP	(511) 241-0308
Philippines	Mozcom	(63) 810-1760
Puerto Rico	Datacom Caribe	(787) 753-1771
	Caribban Internet	(787) 728-0905
	Ice Networks	(787) 764-1234
Thailand	Loxinfo	(662) 679-7890 ext.444

Published Date: Feb 20, 2012

Mac OS 8.5: Using English Text-to-Speech Read Me

The following is the Using the English Text-to-Speech Software Read Me.
This article has been archived and is no longer updated by Apple.
Using the English Text-to-Speech Software Version 1.5.3

With the English text-to-speech software installed, many Macintosh programs including SimpleText can read English text and the contents of many alert dialog boxes out loud. SimpleText comes with this computer and is already installed on your hard disk. (You are probably reading this document using the SimpleText program.)

The instructions in this document tell you:

- what you need to use this software

- how to install the software

- how to try out the software using SimpleText

- how to choose the default voice

- how to annotate text to improve intelligibility or add emotion

- some technical details, including what Text-to-Speech software is installed

- how to solve common problems

What you need to use the English Text-to-Speech 1.5.3 software.

To use this software, you need the following software and hardware.

- a Power Macintosh computer

- Mac OS 8.5

- at least 300 kilobytes of RAM in addition to what the rest of your system software takes

- at least 12 megabytes of available space on your hard disk

Installing the software.

To install the English text-to-speech software, follow these steps.

1. Print these instructions before you start. You will not be able to view them on screen during the installation.

2. If you have been using an earlier version of text-to-speech software, see the note at the end of this section.

3. Double-click the Installer that's in the same folder as this document.

4. Click "Continue", then click "Install". The installation takes a few minutes.

5. When you see a message reporting that the installation was successful, click Restart.

After the computer restarts, you can start using the text-to-speech software.

Note for users of older English text-to-speech software. Installing English Text-to-Speech software version 1.5.3 may remove some or all of your older English Text-to-Speech voices. You can restore those voices by downloading the older version of the English Text-to-Speech software from http://www.apple.com/speech, but only the text-to-speech software that came with Mac OS 8.5 has been tested by Apple to run on this version of the operating system. MacinTalk 2 and its associated voices (Ben, Boris, Brenda, Mariel, Marvin, Mr Hughes, Otis, Robovox, Votron, and Xero) are no longer supported. For a corresponding but more intelligible sound, we recommend trying Trinoids or Zarvox.

Trying out the Text-to-Speech software.

Follow these steps to try out text-to-speech software:

1. Open any SimpleText document. (This document will work well.)

2. Click anywhere in the text to make sure nothing is selected.

3. Choose "Speak All" from the Sound menu. (If you cannot hear anything, you may have the sound turned all the way off. Check in the Monitors and Sound control panel.)

4. If you want the computer to stop reading, choose Stop Speaking from the Sound menu.

You can also try the following:

- To read a portion of the file, select the words you want to read, then choose Speak Selection from the Sound menu.

- To have the computer speak in a different voice, select a voice from the Voices sub-menu in the Sound menu, then choose the Speak All or Speak Selection command from the Sound menu.

- To use the text-to-speech features of other programs, see the instructions that came with those programs.

Choosing the default voice.

You can use the Speech control panel to use your favorite voice as the default voice for all your programs. To set the default voice, follow these steps.

1. Open the Apple menu and choose Control Panels.

2. Open the Speech control panel by double-clicking its icon in the Control Panels window.

3. Open the Options pop-up menu at the top of the Speech control panel and choose Voice.

4. To change the default voice, choose the voice you want from the Voice pop-up menu. To hear what the voice you chose sounds like, click the speaker button.

5. To change the rate at which the default voice speaks, move the Rate slider.

6. Close the control panel.

Memory Constraints

If there is not enough memory available to hold a voice, then this software will not speak. The voices with "high quality" in their names have the most natural and intelligible sound, but take up the most memory. To see the memory requirements of the voices, view their sizes in the Voices folder, which is in the Extensions folder. To see how much memory you have available, click the desktop and then select "About This Computer" in the Apple menu.

Turning Talking Alerts on or off.

You can use the Speech control panel to turn Talking Alerts on or off. When this feature is on, your computer will read aloud the contents of alerts. (An alert appears, for example, when your printer runs out of paper.) To turn on the Talking Alerts feature, follow these steps.

1. Open the Apple menu and choose Control Panels.

2. Open the Speech control panel by double-clicking its icon in the Control Panels window.

3. Open the Options pop-up menu at the top of the Speech control panel and choose Talking Alerts.

4. To have your Macintosh speak a phrase like "Alert!" or "Hey!" when an alert appears, click the "Speak the phrase" check box to select it, and choose the phrase you want to be spoken from the adjacent popup menu.

5. To have your Macintosh speak the content of an alert when one appears, click the "Speak the alert text" check box to select it.

6. To adjust how long your Macintosh waits after an alert appears before speaking the alert text, adjust the slider beneath the "Speak the alert text" check box.

7. To test how Talking Alerts will behave with your chosen settings, click the speaker icon to the right of the slider.

To interrupt and cancel the computer's speaking, click the mouse or type a key.

Tip: You can edit or add to the phrases spoken when alerts appear. To do this, select "Edit Phrase List in the popup menu adjacent to "Speak the phrase:" And for extra interest, if you select "Next in the list" (in the same popup menu), then each time an alert appears a different phrase from the list will be spoken. You can make sequences of phrases which work together, such as following "It's not my fault" with "It's still not my fault".

How to annotate texts to improve intelligibility or add emotion

You can use punctuation and embedded commands to improve how the synthesizer speaks text. For example, select the following two texts and compare how they are spoken by the "Victoria, high quality" voice. We recommend that you turn up your volume and close your eyes to make this comparison.

There are big computers that are difficult to use there are small computers that are difficult to use And then there's Macintosh.

There are [[emph +]] big computers that are difficult to use, there are [[emph +]] small computers that are difficult to use. And then [[emph -]] there's: Macintosh!

For more details about how to use these commands, search for "Speech" in Apple Help.

Technical details.

The software that enables your computer to speak has these components:

- Speech Manager, a system extension

- one or both of these English speech synthesizers, which are system extensions that convert text to speech

- MacinTalk 3 for standard speech

- MacinTalk Pro for high-quality speech

- several voice files, each identified with one particular synthesizer

in the Voices folder in the Extensions folder

- the Speech control panel

- Speech Preferences, in the Preferences folder

The Installer removes older versions of Apple's Text-to-Speech software that won't run properly under Mac OS 8.5.

Troubleshooting (problems and solutions).

- My Macintosh won't speak.

- Turn up the speaker volume in the Monitors and Sound control panel.

- If this doesn't work you may not have enough memory for the voice you have selected. Use the Speech control panel to select "Fred", which is the smallest voice, then click the speaker button. If you hear speech, you did not have enough memory available. Try closing some applications or windows, or selecting a different voice.

- The Installer program says there's a problem with the hard disk.

- Re-install your system software, then try installing the English Text-to-Speech software again.

- The Installer program displays other error messages.

- Make sure you restart the computer with the Mac OS 8.5 CD as the startup disk.

- I had an older version of text-to-speech software, then did a custom installation of the new software, but some of my older voices disappeared.

- The custom installation you chose erased the older version of the software that can use MacinTalk 2 voices. You can re-install that old software by doing a custom installation from the English Text-to-Speech 1.4.1 installer.

Last update: 16th July, 1998.

Speech (n): Vocal articulation of thoughts and ideas.

Published Date: Feb 20, 2012

Apple: What a User Group Can Do For You

This article describes how an Apple user group can be of benefit.
This article has been archived and is no longer updated by Apple.
What a User Group can do for you.

Looking for assistance with your computer or software? Wondering how to connect with other Mac users in your neighborhood?

Find a Mac User Group near you! User Groups are your connection to the Apple community around the world. Joining an Apple user group puts you in touch with a network of Apple users in your neighborhood and gives you access to important information and support resources.

Whether you're a beginner learning how to customize your desktop or a pro working on a killer application, chances are there's a user group near you that can help. So go ahead! Make the connection and join a local user group for their next meeting.

To find a User Group in your area, visit the User Group Locator at **http://www.apple.com/usergroups/**.

Published Date: Feb 20, 2012

Mac OS 8.5: Open Transport 2.0 Read Me - Part 1

This document contains the Open Transport 2.0 Read Me part 1.

For part two of this read me, refer to article 58136: "**Mac OS 8.5: Open Transport 2.0 Read Me - Part 2**".
This article has been archived and is no longer updated by Apple.

Introduction

This Read Me document contains late-breaking information about Open Transport compatibility, add-on software, and solutions to known problems with third-party software. For instructions about how to use the Open Transport control panels (AppleTalk and TCP/IP), use the Help Center, or open one of the Open Transport control panels and click on the help icon. For additional technical information about Open Transport, see the "Open Transport 2.0 Technical Info" file that came with Open Transport.

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What's new in Open Transport 2.0 - general

* Open Transport 2.0 now supports AppleScript. Through the use of Network Setup Scripting (NSS) Macintosh owners can use AppleScript to configure all of the features of network communications currently available in the AppleTalk, Infrared, Modem, Remote Access, and TCP/IP control panels. These control panels continue to operate, with updates in this release. NSS will operate locally and remotely, offering powerful automation capabilities to end users and network administrators.

* Open Transport's implementation of the Dynamic Host Configuration Protocol (DHCP) has been Improved to support a number of requested features:

Client Identification.

Retention of the lease on a given IP address across reboots.

These changes address concerns about OT's DHCP compatibility with Windows NT DHCP servers.

The Open Transport DHCP implementation has been enhanced to now support RFC 2131.

Temporary generation of an IP address when no DHCP server is available (See OT 2.0 technical info document for more information).

* When using the new DHCP Client ID feature, the Client ID is entered into a new field in the TCP/IP control panel.

* Support for the Simple Network Management Protocol (SNMP) is available for Open Transport. Support for the version 2 Management Information Base (MIB II), instrumentation for AppleTalk and TCP/IP protocols and transports, administrative tools, and system agent support for the PCI bus is now provided. See the Open Transport SNMP Read Me on your Mac OS 8.5 CD for additional information.

* In the 2.0 release of the TCP/IP control panel, a feature has been added to simplify inputting the IP address and subnet mask for static IP addressing. Users can enter an IP address in standard "dot" notation in the "IP Address" text box, and immediately follow it with a slash ("/") and a number ranging from 1 to 32 indicating the number of contiguous one bits in the subnet mask, counted from the high-order bit. For example, if a user's IP address was "198.162.22.10", and the appropriate subnet mask was "255.255.255.252", the user could enter "198.162.22.10/30" in the "IP Address" text box. Once the box was tabbed past, the corresponding values would be entered into the "IP Address" and "Subnet Mask" text boxes. (This form of notation is supported in IPv6).

Bugs Addressed

* Open Transport 2.0 addresses an issue in which copying a large number of files from a mounted server could cause the server connection to time out and the client system to crash.

* This release fixes a problem where incorrect DNS lookups could crash OT DNR.

* A bug in which rejected TCP connections could induce a relatively lengthy delay on the system initiating the connection has been fixed.

* Open Transport 2.0 now fixes several problems with the OT Printer Access Protocol (PAP) Server:

OT PAP server would only allow 31 connections.

OT crashes after PAP spooler closed, after statechange error occurs.

Crash when trying to print more than one document on LaserWriter software version 8.0

PAP server written to handle multiple connections will stop processing incoming data under some circumstances when there are multiple simultaneous connections.

* This version of Open Transport addresses cases where sleep could cause a crash or unexpected system behavior.

* Open Transport 2.0 has improved support for third party LocalTalk devices.

* This release includes multiple fixes to improve compatibility, performance and stability on servers using AppleShare IP 5.0.2 and beyond.

* Additional bug fixes are included to the Open Transport to address problems with DHCP functionality, SNMP functionality, and to increase overall performance.

Network interface options

Open Transport supports PCI bus, NuBus, communications slot, and PC Card network interface cards, as well as built-in LocalTalk, Ethernet, and Token Ring network adapters. For supported computers without expansion options, Open Transport 2.0 also supports a SCSI-attached network adapter. Third party network interface options available for Open Transport include Fast Ethernet, ATM, and FDDI.

General compatibility

Open Transport is compatible with:

- existing applications that use AppleTalk as specified by Apple, Inc.
- existing applications that use MacTCP as specified by Apple, Inc.
- existing devices (such as printers) that you select in the Chooser
- existing NuBus network interface cards for the Mac OS

Computers running Open Transport can be added to an existing AppleTalk or TCP/IP network without upgrading other computers on the network.

Apple product compatibility update

* At Ease version 2.x or 3.x may encounter problems when starting up with Open Transport. At Ease Update 1.0 will update non-Workgroup versions of At Ease 2.x or 3.x to include Open Transport compatibility. If you are using At Ease for Workgroups, you should upgrade to version 3.0.2 or later. Both can be found on Apple Software Update sites on the Internet and selected online services.

* Apple has exited the market as a vendor for Token Ring products. Apple has no plans for any new Apple-branded Token Ring products for Mac OS. The company also does not plan to offer any additional driver updates or hardware/software fixes for Apple's NuBus or PCI Token Ring cards. We will not be testing or shipping legacy Token Ring software in our new releases of Mac OS.

Even though no further products, updates, or fixes are planned, Apple continues to recognize that selected Mac OS users have an ongoing requirement for Token Ring products. Towards this end, Apple has been closely working with Madge to ensure the availability of 3rd party Token Ring products that are compatible with the latest Apple hardware and the Mac OS operating system. Madge Token Ring products are available through authorized Madge resellers. Visit their web site at **http://www.madge.com** for more information.

* Apple LocalTalk Bridge 2.1 is compatible with Open Transport. (See known incompatibilities for more information)

* Apple Remote Access (ARA) Multiport Server 2.1, ARA Client 2.0.1 and later, and ARA Personal Server 2.0.1 and later are compatible with Open Transport 1.1 and later.

* Apple PCI-based Workgroup servers (Application, AppleShare, and Internet) are compatible with Open Transport 1.1 or later.

* Computers running the current versions of Apple IP Gateway and AppleTalk Internet Router must not be updated to Open Transport; these products are based on classic networking. These products do, however, interoperate with computers using either classic or Open Transport networking. Apple has not yet announced plans regarding future versions of these products.

* Apple's MacTCP Ping is not fully compatible with Open Transport; no update is planned.

* ZapTCP is a classic networking tool and is neither compatible nor needed with Open Transport. Functionality similar to ZapTCP is built into Open Transport.

Dialup network connectivity - AppleTalk

For dialup connectivity to AppleTalk networks, Open Transport supports Apple Remote Access version 2.0.1 or later.

Dialup network connectivity - TCP/IP

For dialup connectivity to TCP/IP networks (including the Internet) Open Transport supports third-party extensions known as "MDEVs." Serial Line Interface Protocol (SLIP) and Point to Point Protocol (PPP) connectivity are provided in this manner. Not all versions of all MDEVs are compatible with Open Transport 1.1 and later.

Open Transport 1.1 and later recognizes and is compatible with the following MDEVs. When properly installed they appear in the "Connect via" pop-up menu in the TCP/IP control panel.

* FreePPP - version 1.0.5 or later

FreePPP is shareware and can be found on the Internet, typically at "info-mac" mirror sites in the comm/tcp/conn directory.

FreePPP versions prior to 2.5 may experience problems when running with virtual memory turned on (including RAM Doubler). If you have problems using FreePPP with VM, either update to FreePPP 2.5, or temporarily turn VM off. The current version of FreePPP is 2.6.

* MacPPP - version 2.1.4 or later (MacPPP 2.5 or later is recommended)

MacPPP versions prior to 2.5 may experience problems when running with virtual memory turned on (including RAM Doubler). If you have problems using MacPPP with VM, either update to MacPPP 2.5, or temporarily turn VM off. An Open Transport-compatible version of MacPPP (MacPPP 2.5) is included in the Open Transport Extras folder. For more information, please refer to the MacPPP Read Me document.

* InterPPP II - version 1.1 or later

InterPPP II is a commercial software product. It has been replaced by CONNECT4ppp which is part of tcpCONNECT4. tcpCONNECT4 can be purchased from VisionSource at 800.326.7427.

* MacSLIP - version 3.0.4 or later

MacSLIP is commercial software developed by Hyde Park Software. For availability and ordering information in the U.S., contact TriSoft at 800-531-5170 or 512-472-0744.

* Sonic PPP - version 1.0.2 or later

SonicPPP is commercial software developed by Sonic Systems, Inc. For availability and ordering information in the U.S., contact Sonic Systems at 408-736-1900 (voice) 408-736-7228 (fax). For more details see the Sonic Systems Web page at <http//www.sonicsys.com/>.

* NTS PPP - 2.0 or later

NTS PPP is commercial software developed by Network Telesystems, Inc. For availability and ordering information in the U.S., contact Network Telesystems at 408-523-8100 (voice) 408-523-8818 (fax).

* LAN TunnelBuilder is a Virtual Private Network technology from NetworkTelesystems, Inc.

* SAT/SAGEM PPP - 1.02b1 or later

SAT/SAGEM PPP is commercial software developed by SAT/SAGEM. For availability and ordering information in the US, contact SAT/SAGEM at 408-446-8690 (voice) 408-446-9766 (fax).

* LeoTCP - 2.0.1 or later

LeoTCP is commercial software developed by Hermstedt GmbH. For availability and ordering information in the U.S., contact Hermstedt USA at 1-800-828-5522 (voice). In Europe contact Hermstedt GmbH at +49 621-76500 (voice) +49 621-7650100 (fax).

* T-Online CSLIP - version 1.0.3 or later

T-Online CSLIP is commercial software developed by Computer Consulting GbR. For availability and ordering information in Europe, contact

format network & communication at 49-2206-95840. For more details, contact format network & communication at info@format.de.

* University of Michigan ISDN - 2.0.6 or later

In addition to these, there are a number of other MDEVs (examples include those from Pacer, FCR, and Tribe) which are indistinguishable from one another to Open Transport. When installed, these appear in the "Connect via" pop-up menu as "TCP/IP PPP."

* AOL Link

AOL Link is commercial software developed by America OnLine. It is part of the America OnLine client software that is available from AOL's ftp site and allows use of MacTCP or Open Transport compatible TCP/IP applications while connected to AOL. The latest version of the AOL client is on the AOL ftp site at **ftp://ftp.aol.com/**.

* CompuServe PPP is a commercial PPP implementation specifically designed for connecting to CompuServe. You can obtain it from the CompuServe web site at **http://www.compuserve.com/**.

Native dialup network connectivity - AppleTalk

* Apple Remote Access - version 3.0 or greater

Open Transport supports extensions that use the STREAMS architecture. Apple Remote Access 3.0 takes advantage of these capabilities. ARA 3.0 is available in retail packages in a Client and Personal Server version. ARA 3.0 supports AppleTalk and TCP/IP protocols concurrently over a PPP connection and is also compatible with ARA 2.x family clients and servers.

Native dialup network connectivity - TCP/IP

* Apple Remote Access - version 3.1

ARA 3.1 offers the same features as OT/PPP for dialup access to a TCP/IP network.

* OT/PPP - version 1.0 or later

Open Transport supports extensions that use the STREAMS architecture. OT/PPP is available on the Apple Software Update sites on the Internet and requires Open Transport 1.1.1 or later.

Updated July 24, 1998

Published Date: Feb 20, 2012

Mac OS 8.5: Open Transport 2.0 Read Me - Part 2

This article contains the Open Transport 2.0 Read Me part 2.
For part one of this read me, refer to article 58135: "**Mac OS 8.5: Open Transport 2.0 Read Me - Part 2**".
This article has been archived and is no longer updated by Apple.

Tips for SLIP and PPP configurations

* Some MDEVs are known to be incompatible with other MDEVs. If you experience problems, remove unused MDEVs so that only the MDEVs you need are installed on your computer at a given time. If you still encounter problems, you may have to reduce the number of MDEVs installed to one to prevent conflicts.

* Users who dial into a TCP/IP network or Internet Service Provider (ISP) may have been assigned a router (gateway) address that is not a part of their local subnet. This was an accepted but technically invalid configuration for MacTCP. Open Transport users should not enter a value for the router address or subnet mask; Open Transport/TCP generates correct values for these fields automatically. In unusual circumstances, these supplied values can be overridden using the Administration mode of the TCP/IP control panel.

* If BootP is used over SLIP or PPP for interface configuration, and if BootP returns additional default router addresses, Open Transport will automatically add those addresses to the list of default routers.

* When Open Transport is installed on a computer that previously had MacTCP configured for a server configuration, the initial configuration method-the selection in the "Configure" pop-up menu in the TCP/IP control panel-is set for the use of a BootP server. This default may not be the appropriate choice for you; please verify.

If your computer was previously configured for MacTCP "server" addressing and you experience connection difficulties using PPP or SLIP after installing Open Transport, follow these steps:

1. Open the TCP/IP control panel.

2. Choose Using PPP Server or Using SLIP from the Configure pop-up menu.

3. Close the TCP/IP control panel, and save changes when prompted.

4. Try connecting again.

If your computer was previously configured for MacTCP "manual" addressing and you experience connection difficulties using PPP or SLIP after installing Open Transport, follow these steps:

1. Open the TCP/IP control panel.

2. Choose Manual from the Configure pop-up menu.

3. Verify that the correct IP address is entered in the Address field.

4. Close the TCP/IP control panel, and save changes when prompted.

5. Open the configuration utility supplied with your SLIP or PPP software, and verify that it also reflects the correct IP address in the appropriate location. Refer to the documentation supplied with your SLIP or PPP software for further information on how to enter an IP address, and how to save an updated configuration.

6. Try connecting again.

Note: In MacPPP's ConfigPPP control panel, this setting is entered in the IPCP dialog box. Refer to the documentation that came with MacPPP or FreePPP for additional information.

Known limitations and other issues

* Open Transport 2.0 has been qualified with Mac OS 8.5 only, using Open Transport 2.0 with any other version of the Mac OS may result in anomalous behavior.

* When TCP/IP is set to "Load only when needed" (in the control panel's Options window), "pinging" an Open Transport workstation will fail if a TCP/IP application is not currently being used. To make sure your computer is "pingable" at all times, turn off the "Load only when needed" option (open the TCP/IP control panel and click the Options button, then click the "Load only when needed" checkbox to remove the X) and restart your computer. The Options button is available in Advanced and Administrator user modes.

* When TCP/IP is set to "Load only when needed" (in the control panel's Options window), the first TCP/IP application opened will cause Open Transport to load into memory. Some older applications don't cause Open Transport to load, and then report errors similar to those encountered when MacTCP is not installed. If this is a problem, turn off the "Load only when needed" option (open the TCP/IP control panel and click the Options button, then click the "Load only when needed" checkbox to remove the X) and restart your computer.

* Generally, you should turn on the "Load only when needed" option in the TCP/IP control panel when using a modem. If TCP/IP is always loaded ("Load only when needed" is not checked), your modem may attempt to initiate a dialup connection at startup. Some MDEVs require more system heap memory than is available at startup, which may cause the computer to hang. Also, some Internet service providers charge by connect time, so you may be charged for the connection, even if you weren't using it.

* The preferred method to make AppleTalk active or inactive is to use the AppleTalk control panel. Using the Chooser or control strip to make AppleTalk inactive may not completely deactivate AppleTalk.

* The TCP/IP control panel is able to obtain and utilize multiple gateway and name server addresses from DHCP and BootP servers. However, it will currently display only the first one, and then only in Basic user mode. This should be addressed in a future release.

* If you use MacSLIP, you should likewise not configure the MacSLIP control panel to initialize MacSLIP at system startup time. As stated above, this may require more system heap memory than is available at startup, which may cause the computer to hang.

* If you are experiencing problems when using MacSLIP with virtual memory on, increasing your virtual memory size may give you better results. (Use the Memory control panel to increase virtual memory.)

* Some MacTCP-based applications will not function correctly unless the MacTCP DNR file is in its original location at the root level of the System Folder.

* You should only specify use of 802.3 framing in the TCP/IP control panel if you have been directed to do so by your network manager, or if you are sure that all other stations on your network segment, including your IP router(s), are also configured to use 802.3 and not Ethernet version 2.0 framing.

* Claris Emailer version 1.1 v3 or later and Claris Emailer Lite version 1.1 v4 or later is compatible with Open Transport 1.1.2 and later. Earlier versions of Claris Emailer may not be compatible with Open Transport's "Load only when needed" configuration option. If you experience a system crash 2-3 minutes after quitting Emailer, turn off the "Load only when needed" option. (Open the TCP/IP control panel and click the Options button, then click the "Load only when needed" checkbox to remove the X.)

* MacTraceRoute Ethenet LAP does not work on computers running Open Transport. There are a number of Open Transport native traceroute programs, including:

IPNetMonitor **http://www.sustworks.com/**,

WhatRoute **http://crash.ihug.co.nz/~bryanc/**,

and Mac TCP Watcher **http://www.stairways.com/**

* NFS/Share versions 1.4.4 or later are compatible with Open Transport. NFS/Share is now part of Intragy Access from Ascend **http://www.ascend.com/**.

* When using Netware Client version 5.11 configured for NetwareIP service, the first login may yield a Netware Configuration error message. To avoid this error, open the NetwareIP control panel and change the value under Domain SAP Server (DSS) Retry Attempts from 1 to 2. You can also change Open Transport TCP/IP control panel to always load TCP/IP into memory (open the TCP/IP control panel, click the Options button, and click the "Load only when needed" box to remove the X).

* eXodus 5.2.2 and later versions are compatible with Open Transport.

* Versions of Anarchie prior to 1.6 have a data corruption problem when used with Open Transport. Make sure you are using Anarchie 1.6 or later.

* If an Apple Remote Access (ARA) user is on a non-routed, extended (Ethernet) network, and there are devices on the local network with the same network number as devices on the remote network, the user won't be able to see the local devices. This problem can be fixed by installing a router. Another work around is to clear the PRAM on the ARA computer. (Hold down the Command, Option, and PR keys simultaneously while starting up the computer). Clearing PRAM causes the computer to start up with a new network number, which should not conflict with the remote network number.

* Daemon 1.0.0 & Daemon Killer 1.0 are not compatible with Open Transport.

* MudDweller 1.2 is not completely compatible with Open Transport. You can open new connections, but the "reconnect" choice does not work correctly.

* The system will crash during launch of NetPresenz if Open Transport TCP/IP is configured to use MacIP and the selected zone has no MacIP server.

* Current versions of VersaTerm SLIP are not compatible with Open Transport.
* Problems can occur with old versions of the KeyServer package from Sassafras Software when TCP/IP is configured to"Load only when needed" (in the control panel's Options window). Contact Sassafras for the latest revisions at **http://www.sassafras.com**.

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* To use the CSI Hurdler serial card with Open Transport, contact CSI to get a copy of their preference file patch. This will enable the card to be compatible with Open Transport 1.1.2 or later.

Updated July 24, 1998

Published Date: Feb 20, 2012

Open Transport 2.0 Technical Information - Part 1

This article comprises the Read Me for Open Transport 2.0 Technical Information, part of Open Transport Extras version 2.0.3. This software was released by Apple 10 May 1999 and is available for downloading from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Requires Mac OS 8.6 (English-North American).

This article has been archived and is no longer updated by Apple.
This document contains technical information about Open Transport that may be useful to network managers and administrators. You do not need to read this document in order to use Open Transport.

Refer to article 60355: "**Open Transport 2.0 Technical Information - Part 2.**" for the second part of this article.

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Introduction

Open Transport is modern networking and communications system software for the Mac OS. It is based on industry standards and brings a new level of networking connectivity, control, and compatibility to Mac OS computers, while preserving built-in support for easy-to-use networking. Open Transport 2.0 is supported on system software version 8.5 or later. No other system software versions are supported.

For more important information about system requirements, compatibility, and known incompatibilities and limitations, read the "Open Transport 2.0 Read Me Parts 1 &2" documents.

Files added by the Open Transport installer

Open Transport installs the AppleTalk and TCP/IP control panels into the Control Panels folder inside the System Folder of your startup disk. The Open Transport Installer also adds the following files to the Extensions folder inside the System Folder:

Shared Library Manager

Shared Library Manager PPC

These extensions implement a shared library mechanism on 68K and PowerPC Mac OS computers, respectively. Both extensions are required on PowerPC-based computers in order to support both emulated and native shared libraries.

OpenTransportLib

Open Transport Library

These shared libraries implement core Open Transport services on both 68K and PowerPC-based computers. The first library contains the PowerPC implementation and an interface for native PPC applications. The second library contains the built-in Open Transport modules and an interface for emulated 68K applications.

OpenTptAppleTalkLib

Open Tpt AppleTalk Library

These shared libraries implement Open Transport AppleTalk services on both 68K and PowerPC-based computers. The first library contains the PowerPC implementation and an interface for native PPC applications. The second library contains the built-in Open Transport modules and an interface for emulated 68K applications.

OpenTptInternetLib

Open Tpt Internet Library

These shared libraries implement Open Transport TCP/IP services on both 68K and PowerPC-based computers. The first library contains the PowerPC implementation and an interface for native PPC applications. The second library contains the built-in Open Transport modules and an interface for emulated 68K applications.

CFM 68k Support File Name

This file adds support for CFM 68k. It is not installed by Mac OS 8.5 or on PowerPC-based computers.

Network Setup Scripting

Network Setup Scripting (NSS) is a faceless background application that receives and processes AppleEvents that can change or report network configuration parameters.

Network Setup Extension

This is the shared library that implements a database of network configuration data. The same data that is available in the AppleTalk, Modem, Infrared, Remote Access, and TCP/IP Preferences

files (Prefs) is available via NSE.

SNMP File name

This extension implements SNMP for Open Transport. SNMP can be configured using the SNMP Administrator Application. SNMP can be disabled by deleting this extension or disabling it using the Extensions Manager control panel.

Open Transport AppleTalk Features

Static and dynamic AppleTalk address allocation

Open Transport AppleTalk supports static assigned (manually administered) protocol addresses as well as the dynamic addressing provided by AppleTalk Address Resolution Protocol (AARP). Static addressing allows AppleTalk nodes to be managed using the protocol address as a unique and stable identifier.

It is important that all nodes on each individual AppleTalk subnet (a given cable segment assigned a unique network number or network number range) be administered consistently-either all with dynamic addressing or all with preassigned static addresses. This avoids a potential conflict when a new dynamic node acquires an address assigned to manually-addressed node that is not connected or is off line. Administrators can enforce the addressing policy for a subnet by locking the addressing mode. As a precaution, Open Transport AppleTalk checks for duplicate protocol addresses on the LAN even when static addressing is configured.

Use of parameter RAM

Under classic AppleTalk, AppleTalk's on/off state, the selected network interface, the previous network (protocol) address, and the previous AppleTalk zone name are saved in persistent memory (parameter RAM) for reuse at startup. To ensure backward compatibility, this information is

still stored and retrieved on systems using Open Transport AppleTalk. However, the following differences are found with Open Transport:

* At startup, Open Transport reads the current AppleTalk configuration file to determine if AppleTalk should be turned on or off. This value overrides the value saved in parameter RAM. The user is not explicitly notified when this occurs.

* If the network interface specified in the current AppleTalk configuration file is locked and the specified port is not available or cannot be initialized, Open Transport will not automatically switch the port back to LocalTalk. Instead, AppleTalk will remain off. The user sees a dialog box with this information.

Open Transport TCP/IP features

Open Transport brings a workstation-class implementation of TCP/IP protocols to Mac OS. As with MacTCP, Open Transport TCP/IP is a full 32-bit stack. Open Transport TCP/IP adds support for:

- Dynamic path MTU discovery, for more efficient network use in heterogeneous network topologies.
- Dynamic Host Configuration Protocol (DHCP), for centralized IP address configuration management.

DHCP is an Internet Engineering Task Force (IETF) standards-track protocol. (RFC 2131)

- IP multicast, for participation as an MBone client for applications written to the native Open Transport API.
- Simultaneous TCP connections for applications written to the native Open Transport API are limited only by installed memory and processor power, for increased functionality as an Internet or other TCP/IP network server.
- A new, more robust and standards-compliant domain name resolver (a caching stub DNR).
- Support for developer access to raw IP services, as well as TCP and UDP.
- Ethernet Version 2.0 and IEEE 802.3 framing, for better interoperability with a wider range of TCP/IP hosts.
- Implicit and explicit domain name search paths, for increased control of domain name resolution.
- Use of multiple IP routers with fail-over, for increased robustness in mission-critical applications.
- TCP wildcard source port assignments start at 2048, increasing from that point.

DHCP server support

Apple's implementation of DHCP conforms to RFC 2131. To date, Open Transport TCP/IP has been tested with the following DHCP server implementations:

- Competitive Automation (**http://www.join.com**)
- FTP Software (**http://www.ftp.com**)
- Hewlett Packard HP-UX (**http://www.hp.com**)
- Microsoft Windows NT Advanced Server (**http://www.microsoft.com**)
- Silicon Graphics (**http://www.sgi.com**)
- Sun Solaris and SunOS (**http://www.sun.com**)
- TGV (**http://www.tgv.com**)

DHCP address lease support

Open Transport TCP/IP supports DHCP address leases. Open Transport TCP/IP automatically attempts to renew any address lease that reaches its renewal interval (by default, the renewal interval is reached when the lease is halfway completed). The renewal interval may be configured to a different value by making changes to the configuring DHCP server. Renewal is attempted regardless of how many times the lease has already been renewed. Lease rebinding is also supported. Should an interface's IP address lease expire, the interface is closed down.

Open Transport TCP/IP now supports the DHCP Client ID option, and now will use the remainder of a previous but unexpired lease on a given IP address across reboots. There has been an improvement in the user feedback in the event that a DHCP server is not available. There have been improvements to the DHCP functionality to offer better support of Windows NT DHCP servers.

Self-assigned DHCP Addresses

A new feature has been added to the Open Transport TCP/IP DCHP implementation.

In Open Transport 1.3.1 and earlier, when a client first opened a TCP/IP endpoint in DHCP mode DHCP sent out a DHCPDISCOVER broadcast packet looking for any DHCP server on its local network, or accessible to its local network via a DHCP/BootP relay agent. If a DHCP server was not available the TCP/IP stack unloaded and the client endpoint failed to open, returning an error message to the client.

The new behavior with Open Transport 2.0 and later is that if a DHCP server is not available, after about a 16-20 second wait, DHCP will generate a temporary configuration and use it to configure the TCP/IP stack.This temporary configuration consists of an IP address randomly chosen in the range 169.254.0.0 to 169.254.254.255 inclusive and a subnet mask of 255.255.0.0. (i.e. one of 65,535 possible IP addresses are

chosen at random to minimize address collision.) There will be no DNS server or gateway address included with the temporary configuration.

The above configuration is given a total lease time of 10 minutes and a renewal time of 5 minutes. When the renewal time of 5 minutes expires, the DHCP module has been changed to try to again find a DHCP server and if it does find one it will reconfigure TCP/IP to use the new configuration. If it fails to find a server it again sets its renewal timer for another 5 minutes and will continue to use the same temporary IP address.

It should be noted that the first DHCP server the client will send the DHCPRequest broadcast packet to is the server which provided the last configuration. If the server which provided the last configuration fails to answer, the client will resort to broadcasting DCHPDISCOVER, looking for a DHCP server. If it fails to find a server, the client will then auto configure itself with a temporary IP address.

In most cases there's either a DHCP server available when a machine starts or there is never one available. The above strategy allows users to use auto configured IP addresses on private

networks where there is never a DHCP server. This means the ability to use services like AppleShare/IP out of a box without configuring anything. It however does not address how one finds or browses for services by name as with a DNS server provided functionality. (This feature is included in Windows 98)

Windows NT advanced server support

With Open Transport 1.1 and later, Mac OS clients are interoperable with the Windows NTAS DHCP server on LAN links. However, Mac OS clients cannot acquire configuration information from an NT DHCP server across a dialup (PPP) link because there is not yet an accepted industry standard for DHCP over dialup. The NT implementation is based on proprietary Microsoft extensions. Mac OS clients cannot acquire configuration information nor register with a Microsoft WINS server. WINS is also dependent on Microsoft extensions to TCP/IP (requiring NetBIOS support).

Apple has implemented a protocol independent API for locating services on networks, known as Network Service Location (NSL). This API is included as part of Mac OS 8.5. NSL is based around a plug-in architecture and one of the bundled plug-ins implements Service Location Protocol (RFC 2165), which allows for cross-platform dynamic registration and look-up of names on an IP network.

BootP support

Open Transport 1.1 and later fully supports Bootstrap Protocol (BootP). Versions of Open Transport prior to 1.1 failed to accept a BootP Reply sent to the unicast (subnet broadcast) address, (for example, xxx.xxx.xxx.255. Replies sent to the all-nets broadcast address (for example, 255.255.255.255) were handled properly.

Local Hosts file support

Open Transport TCP/IP supports a Hosts file that may be used to supplement and/or customize the Domain Name Resolver's initial cache of information. The Hosts file is normally stored in the Preferences folder in the active System Folder. When Open Transport TCP/IP is initialized, it reads the Hosts file (if any). As in MacTCP, the supported Hosts file features follow a subset of the Domain Name System Master File Format (RFC 1035).

Open Transport TCP/IP is more stringent regarding the content and format of the Hosts file than was MacTCP, which permitted violation of the FQDN requirement for <domain-name>. For instance, the format:

charlie A 128.1.1.1

which was acceptable to the MacTCP DNR, is no longer permitted because of the use of domain search lists in Open Transport/TCP ("charlie" could potentially exist in any or all of the configured domains). To accomplish the same effect, use this format instead:

charlie CNAME myhost.mydomain.edu

myhost.mydomain.edu A 128.1.1.1

This associates the local alias charlie with the fully qualified domain name myhost.mydomain.edu, and resolves it to the address 128.1.1.1. Use of local aliases is limited to CNAME entries; NS and A entries must use fully qualified domain names.

You can create a Hosts file with any text editor or word processor (the Hosts file must be stored in text format). If you use a Hosts file, keep it as short as possible, and include only entries that will be accessed frequently. This reduces the memory required to cache the DNS information and minimizes the need to maintain and update Hosts files as system information changes.

Open Transport TCP/IP automatically uses a Hosts file stored the Preferences folder of the active System Folder. If no Hosts file is found in the Preferences folder, Open Transport TCP/IP searches the active System Folder for a Hosts file. You can specify a particular Hosts file to use with a specific configuration. For example, one Hosts file might be set up for a user connecting via Ethernet, and another set up for when that user connects via modem.

Single Link Multi-homing System Setup

Open Transport 1.3 introduced Single Link Multi-homing, a mechanism by which Open Transport can support multiple IP addresses on the same

hardware interface. Synonyms for this feature include IP Aliasing, Secondary IP address Support, IP Masquerading, "Multihoming", IP Multinode support. This is useful for sites like Internet Service Providers (ISPs), that want to give each of their clients a distinct IP address, without requiring separate computers for each address. Web server software packages, or server plug-ins that utilize this feature can offer virtual domain support that supports all web browsers. You will need to contact your application developer to see if they are supporting this new feature of Open Transport. This feature is only available with Open Transport 1.3 and later.

You configure a system to use multiple IP addresses as follows:

1. The TCP/IP Control Panel must be set for manual addressing.

2. You create a text file with the required name "IP Secondary Addresses" and put it into the Preferences folder in the System Folder.

Each line of the IP Secondary Addresses file contains a secondary IP address to be used by the system, and an optional subnet mask and router address for the secondary IP address. If there is no subnet mask entry, then a default subnet mask for the IP address class will be used. If there is no router address entry, then the default router associated with the primary address will be used.

Each secondary address entry must be prefixed by "ip=". Each subnet mask entry must be prefixed by "sm=". Each router address entry must be prefixed by "rt=". Lines proceeded by a ; are ignored. An example of the contents of the IP Secondary Addresses file follows.

'ip=' for ip address, 'sm=' subnet mask, 'rt=' router address. There should be no commas in this line as shown between entries.

Note: No space in 'ip=192.168.22.200'

IP address Subnet Mask router addresses

---------- ---------- ----------

ip=192.168.22.200 sm=255.255.255.0 rt=192.168.20.1

ip=192.168.22.201 rt=192.168.20.1

ip=192.168.22.202

The order of the entries is important. The "rt=" entry must follow the "sm=" entry if used.

When Open Transport activates TCP/IP, the primary address will be obtained from the TCP/IP Control Panel setting. Open Transport then looks for the IP Secondary Addresses file in the Preferences folder to determine if additional addresses should also be configured. If there are duplicate IP address entries in the IP Secondary Addresses file, the duplicate addresses will be ignored. When Open Transport binds a TCP/IP connection, if there is an address conflict with either the primary or any secondary addresses with another host, Open Transport will present an error message using a dialog box and unload Open Transport/TCP from memory. The error dialog will display the conflicting IP address, the hardware address of the conflicting machine and note that your TCP/IP network interface has been shut down.

To resolve the conflict, quit all of the TCP/IP applications on both conflicting machines, reconfigure TCP/IP on one of the machines so there is no longer an address conflict, then relaunch your TCP/IP applications.

MacTCP "server" addressing support

Open Transport TCP/IP supports both Bootstrap Protocol (BootP) and Reverse Address Resolution Protocol (RARP) configuration methods. MacTCP Server mode addressing was a combination of BootP and RARP. When Server mode was selected, MacTCP used BootP to attempt to acquire an IP address. If that failed, MacTCP tried RARP. Whichever protocol was successful was stored as a preference, and was used first the next time the computer started up. In Open Transport, you must choose BootP or RARP explicitly.

MacTCP "dynamic" addressing

Open Transport does not support MacTCP "dynamic" addressing. MacTCP dynamic mode addressing was based on an Apple-proprietary extension to TCP/IP protocols. It applied the address negotiation and assignment rules used by the AppleTalk protocols to TCP/IP networks, making it very easy to set up a Macintosh-only standalone TCP/IP network. Use of this dynamic addressing method in other scenarios, however, could create additional work for a network administrator.

The Internet community (IETF) has since developed a multivendor standard for the dynamic assignment of IP addresses, known as Dynamic Host Configuration Protocol (DHCP). Open Transport TCP/IP supports the industry standard DHCP.

MacIP support

MacIP is a protocol specification developed for carrying TCP/IP traffic on AppleTalk-only networks, originally LocalTalk networks. MacIP is today frequently used with AppleTalk Remote Access Protocol (ARAP) to provide mobile users access to TCP/IP network services.

Use of MacIP typically requires a gateway, which strips off the AppleTalk encapsulation and places the IP packet on the TCP/IP LAN. When packets are sent back to the MacIP end-node, the gateway replaces the AppleTalk encapsulation. MacIP gateway support is most frequently offered as an integrated service within a multiprotocol router. The gateway (router) attaches to both an AppleTalk and a TCP/IP network.

Open Transport supports MacIP in the TCP/IP control panel. Once selected, TCP/IP data is encapsulated in AppleTalk packets, and is sent through the selected network interface.

PPP connectivity

PPP (Point to Point Protocol) connectivity for Open Transport is currently based STREAMs modules or on the use of third-party software extensions known as "MDEVs." Early versions of some MDEVs may not be compatible with Open Transport. For information about MDEV compatibility, see both parts of the "Open Transport 2.0 Read Me" document.

STREAMs based PPP solutions are available from Apple and selected 3rd parties. Open Transport/PPP and Apple Remote Access 3.0 both use STREAMs. For more information about PPP see both parts of the "Open Transport 2.0 Read Me" document.

Memory requirements

The actual memory requirements of Open Transport vary depending upon the networking services in use at a given time. Factors contributing to differences in memory requirements include:

- Open Transport provides "mixed-mode" applications support, making it possible for both PowerPC native and 680x0 applications to use native networking on PowerPC-based computers.
- Open Transport includes both the new implementations of networking and the libraries required to provide backward compatibility support for the older AppleTalk and MacTCP programming interfaces.
- Open Transport requires less memory on systems with virtual memory enabled.

Application compatibility guidelines

Apple has defined three levels of interoperability with Open Transport. The first, "Open Transport Compatible," is used to describe network applications originally developed for classic AppleTalk or MacTCP programming interfaces that now take advantage of Open Transport Compatibility Services. These applications automatically gain the benefits associated with the Open Transport control panels. However, they will not realize a significant performance increase on Power Macintosh systems, nor can they take advantage of Open Transport's transport-independence capabilities.

Open Transport Ready applications have adopted the new Open Transport APIs. They are PowerPC native, in addition to running on 680x0-based Macintosh systems. Open Transport-ready applications benefit from the new control panels and may also realize a significant performance boost when running on PowerPC-based computers.

The highest category of interoperability is Open Transport Enhanced. In addition to adopting the new Open Transport APIs and being Power PC native, these applications can be dynamically configured to support AppleTalk, TCP/IP, or serial communication.

Applications that rely on undocumented APIs or examine private data structures in AppleTalk or MacTCP may not be fully compatible with Open Transport. Updated versions of these software products will be required for full compatibility.

Performance

Open Transport is designed to take advantage of the PowerPC processor. For maximum performance, however, networking applications must also take advantage of the PowerPC processor, and should adopt the new Open Transport programming interfaces.

Some Mac OS networking applications use the classic networking programming interfaces. These applications can still be used with Open Transport, and may perform somewhat better. Networking applications that are PowerPC-native but not Open Transport-ready may yield better performance, but still fall short of the maximum potential performance because they make use of Open Transport backward compatibility rather than its full capabilities.

Performance improvements will be greater with protocols that use larger datagram sizes. For example, TCP/IP users will see greater improvements than AppleTalk users, because AppleTalk has a fixed and limited datagram size. On high-speed datalinks such as fast Ethernet, FDDI, and ATM, the performance of the network interface card (NIC) driver code is also a significant factor.

Overall performance also depends on the amount of RAM available. Larger packet sizes and higher throughput place increased demand on the buffering system of Open Transport. If Open Transport becomes low on memory, throughput decreases to accommodate the limitation.

Updated July 24, 1998

Published Date: Feb 20, 2012

Mac OS 8.5: Printing PDF Files in the Background

I have noticed .PDF files print in the foreground. Installed on my Macintosh are Mac OS 8.5, LaserWriter 8.6, and Adobe Acrobat Reader 3.0 (3.01).
This article has been archived and is no longer updated by Apple.
Printing .PDF files in the background from Adobe Acrobat Reader and LaserWriter 8.6 is possible after installing and enabling Adobe Type Manager (ATM), in the Control Panels folder.

Although ATM ships with Acrobat Reader, it does not get installed automatically. Therefore, locate ATM in your Adobe Acrobat 3.0 folder and either drag it on top of the System Folder or directly into the Control Panels folder, then reboot your Macintosh. Note the default setting for ATM is active; however, if ATM is set to off, you will not be able to print in the background until you open the ATM Control Panel and set it to on.

If you need a current copy of Acrobat Reader and ATM, they are on the Mac OS 8.5 CD (CD Extras: Acrobat Reader).
Published Date: Feb 20, 2012

iMac: CD Firmware Update Disables CD Access Light

Installing the iMac CD Firdware Update will disable the CD-ROM drive access light.
This article has been archived and is no longer updated by Apple.
When Apple began shipping iMac computers, the amber activity light on the iMac CD-ROM drive was enabled. Initial customer feedback showed that this light was not necessary and detracted from the iMac cosmetically.

When the iMac CD Firmware Update was developed, this light was intentionally disabled via the new firmware to prevent this light from shining through the translucent plastics of the iMac. This was a cosmetic consideration and will not affect any functionality of the CD-ROM drive.

You should only use this update if you are experiencing loud vibrations from a BADLY unbalanced disc. If this behavior is not occurring, then this update is not needed. This application is not required for any other Macintosh systems or CD-ROM drives.
Published Date: Feb 20, 2012

Mac OS: Cannot Disable RAM Disk

I am trying to disable a RAM disk in the Memory control panel but the On/Off radio buttons are dimmed.
This article has been archived and is no longer updated by Apple.
You can not turn off a RAM Disk when File Sharing is enabled because the disk is shared. Your Memory control panel will show the On/Off selection grayed out as shown below in Figure 1. Follow these steps to discard/disable your RAM disk:

1. Check to see if File Sharing is turned on. If so, turn it off.
2. Make sure the RAM Disk is empty by dragging any items in it to the Trash and emptying the Trash.
3. Turn off the RAM Disk in the Memory Control Panel.

Figure 1: Memory control panel.

For additional RAM Disk information, see the following articles:

Related Articles

16809 RAM Disk: Description, Setup, and Use
16810 RAM Disk: Resizing or Deleting
11136 Mac OS: Minimum and Maximum RAM Disk Size
17699 RAM Disk: Resetting the PRAM Causes Loss of RAM Disk Contents

Published Date: Feb 20, 2012

Apple Products: Repair, Upgrade, or Replace?

Many times the expense of upgrading or repairing an older product approaches or exceeds the purchase of a new product. The categories below provide alternatives to upgrades or repairs on older products.
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Be aware that the list of products below can change at any time. Refer to the Apple Store at **http://www.apple.com/store** for current product listings.

Desktop computers

- iMac
- Power Mac G4

Monitors

- Apple Studio Displays
- Apple Cinema Display

Portable computers

- PowerBook
- iBook

Published Date: Feb 20, 2012

Apple DVD Software 1.1 Read Me

Important Information About Apple DVD Software 1.1

This document contains important information about your Apple DVD software not included in the printed information you received with your DVD player or the Apple DVD Player Help. This includes information about compatibility with other products, tips for using the Apple DVD Player Controller, and troubleshooting.
This article has been archived and is no longer updated by Apple.

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Turning off virtual memory

DVD discs play better with virtual memory turned off. If you have problems playing a DVD disc, try turning off virtual memory. To turn off virtual memory, use the Memory control panel.

Using the Apple DVD Player Controller

If a button on the Apple DVD Player Controller is not working as you expected, keep these points in mind:

- The Controller provides some features that DVD discs may not use.
- You can only use the Next Chapter, Previous Chapter, Scan Forward, Scan Backward, Step, and Slow Motion buttons while a disc is playing.
- You cannot navigate a disc while it is paused or stopped.

To move the DVD Controller, you can drag any part of the Controller except a button.

Delays starting a DVD disc

You may notice a short delay when you start playing a DVD disc because the drive is spinning up the disc.

Using parental control

Using the Preferences dialog box, you can set the Parental Control preference to any Motion Picture Association of America (MPAA) rating: G, PG, PG-13, R, NC-17. If a DVD disc supports the parental control feature, you cannot play the disc if its MPAA rating is for a more mature audience than the rating you selected in the Preferences dialog box.

If parental control is turned on, some DVD discs display a message to which you must respond to play the disc.

Some DVD discs may not play unless you set the Parental Control preference to the MPAA rating of the disc. For example, a G-rated disc may not play even though the Parental Control preference is set to PG-13. To play the disc, set the Parental Control preference to the rating of the DVD disc.

Continuing after the FBI warning appears

Some DVD discs use a still picture for the FBI warning. If a disc appears to pause when the FBI warning appears, press the Return or Enter key to continue playing the disc.

Selecting language preferences

Many DVD discs provide the soundtrack and subtitles in several languages. You can select the default language for the soundtrack and subtitles by choosing Preferences from the Edit menu.

Your default language preferences for the soundtrack and subtitles become effective when you start playing the disc again or when you quit and open Apple DVD Player again.

Because the soundtrack and subtitle languages provided on DVD discs can vary, the default language you select may not be available on a specific disc. In this case, use the disc's interactive menus to select a soundtrack or subtitle language.

Leaving the DVD disc menus showing

If you leave the interactive menus of a DVD disc showing for more than 10 minutes, you may need to start the disc again.

Selecting disc menu options using the keyboard

Some DVD discs do not support making selections in the disc's interactive menus using the mouse. Buttons in the disc's menus may not highlight when the mouse passes over them or they may not respond to mouse clicks. If you cannot use the mouse to make selections in a disc's menus, use the arrow keys to highlight a button, then press the Return or Enter key to select it.

Opening Apple DVD Player Help

If you have 32 megabytes (MB) of random-access memory (RAM) installed in your computer, you may need to turn on virtual memory to open the Apple DVD Player Help. To turn on virtual memory, use the Memory control panel.

Improving viewing quality

For the best viewing quality for your display, choose Normal Size from the Video menu.

If you choose Fill Screen from the Video menu, you may have acceptable viewing quality as well.

With widescreen titles, the black bars above and below the image are normal, even if you choose Fill Screen.

Viewing quality is optimized for screens that are 800 x 600 pixels or larger and display 256 or more colors.

If you are using a Power Macintosh G3 computer, choose the "Best for Video" option from the TV Mirroring portion of the Control Strip for the best display of DVD video on a television.

Using the entire display

To use the entire display to view a DVD disc, choose "Present Video on Screen" from the Video menu then choose Fill Screen.

If you are using a Power Macintosh G3 computer, choose the Overscan option from the TV Mirroring portion of the Control Strip to obtain the largest possible image on your television.

Connecting your computer to another monitor, television, or stereo receiver

DVD discs are designed to work only on your computer's display, or a television or NTSC monitor attached to the video output port on your computer. If your Macintosh has either an RCA (composite) or S-Video NTSC output port, you can display DVD discs on an external monitor or television that has a composite or S-Video input port.

Note: You need to provide the necessary cables to connect your computer to an external monitor or television.

The optimum resolution for viewing DVD video on a television is 720 x 480 pixels.

If you are using an external monitor, you cannot view the disc on both the primary and the external monitor at the same time.

Using external speakers

Because soundtracks for theatrical release movies are mixed for presentation in theaters, they have a wide dynamic range and the difference in volume between dialog and sound effects may be extreme. To fully appreciate the soundtrack of such a movie when viewing it on a DVD disc, you should use an external speaker system connected to the audio output port (stereo mini-jack) or, if available, the RCA audio jacks on your computer.

Note: You need to provide the necessary cables to connect your computer to external speakers or a stereo system.

You can control the volume of the audio output port using the DVD Controller or the Control Strip.

The RCA audio outputs are for use with a stereo receiver or other audio device with its own volume control. You cannot control the volume of the RCA audio outputs using the DVD Controller or the Control Strip.

You may find that stereo headphones connected to the audio output port provide an acceptable listening experience.

The audio output port (stereo mini jack) of the Macintosh can be connected to your TV or stereo receiver if it has audio input jacks.

Turning off sleep

If your computer goes to sleep while playing a DVD disc, the Apple DVD Player will quit when you wake up your computer. You must open the application again and start playing the disc from the beginning, not from where you left off when the computer went to sleep.

To prevent this, you may want to turn off sleep. To turn off sleep, open the Energy Saver control panel and move the option labeled "Put the system to sleep after it has been idle for" to Never.

Receiving error messages while playing a disc

DVD discs are susceptible to problems due to scratches, dust, and imperfections in disc manufacture. In addition, differences in disc authoring can result in errors in disc navigation. If you see an error message when playing a disc or experimenting with the features of a particular DVD disc, make sure the disc is clean and free of scratches. If you continue to see the same message, use the disc's interactive menus to select options.

In addition, some delay is normal when playing dual layer DVD discs if the disc changes to a track on a different layer.

Compatibility issues for Power Macintosh G3 users

If you are using a Power Macintosh G3 computer, you may experience compatibility problems between the Apple DVD-Video and Audio/Video Card and other hardware and software installed in your computer.

Apple Remote Access 2.1 software

Apple/Global Village modems can be slow to shut down with the Apple Remote Access 2.1 software. If the software is set to answer calls on a Apple/GV 56k modem, up to twenty seconds may be added to the time of a shutdown command. That delay goes up to over a minute if the modem is not installed.

Apple Telecom software

Installing Apple Telecom software for GeoPort/Express modems will remove the Internal Modem sound source option from the Control Strip. Removing the Apple Telecom software will not restore this option.

PlainTalk software

Apple's PlainTalk speech recognition software is not compatible with the Apple DVD-Video and Audio/Video Card.

Mention of third-party products is for informational purposes only and constitutes neither an endorsement nor a recommendation. Apple assumes no responsibility with regard to the performance or use of these products.

Published Date: Feb 20, 2012

USB Printers: Serial Port in Use or -192 Error

After installing the printer software for a USB printer;

- An alert may occur during startup stating that the software needed to use the device could not be found
- An alert that AppleTalk is active and the serial port is in use may occur after selecting the printer icon in the Chooser
- A -192 error (resource not found) may occur when trying to print

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These symptoms are common when attempting to use serial printer software with a USB printer.

Manufacturers, such as Epson America, frequently provide both kinds of software for their USB printers that support both kinds of connections.

Though Macintosh computers with USB ports, such as the iMac and Power Macintosh G3 (Blue and White), do not have serial ports, serial printer software can nevertheless be installed.

Users are advised to carefully examine the instructions accompanying their printer software to ensure that it is appropriate for a USB printer connection, not a serial one. If in doubt, contact the manufacturer, who will typically make both types of printer software available on the Internet. Be careful to download only the USB version, not the serial version that may be listed adjacent to it.

Important: The serial port in use alert is a very good sign that the wrong type of printer software is in use, but the other alerts may also stem from other causes, such as damaged, missing, or partially installed printer software.
Published Date: Feb 20, 2012

iMac: Warranty Implications of Expansion Card Installation

What is Apple's policy on the installation of expansion cards into iMac?
This article has been archived and is no longer updated by Apple.
Several third-party developers have recently introduced iMac expansion cards. This has prompted questions about Apple's policy regarding the installation of cards into iMac, and if the use of these cards might void the customer warranty.

Apple will not provide repairs under warranty to iMacs that have been damaged due to the installation of any expansion card (including SDRAM and SGRAM cards), whether the card was installed by an authorized service technician or the customer.

Currently, the only cards that may be installed in iMac are SDRAM memory and SGRAM video memory cards in the iMac memory slots. Besides these two slots, there is an additional slot that was used by Apple during iMac development (often referred to as the mezzanine slot). This slot is for Apple use only. Apple has not published the specifications for this slot and is not recommending that any company develop products that rely on it.
Published Date: Feb 20, 2012

Mac OS 8.5: Sherlock Error Accessing Browser

When using Sherlock to find information on the internet, I get an error when I click on any of the returned web links. The error states: An unexpected error occurred attempting to access your browser.

My browser works fine if I use it separately. What could be causing this error?

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There are a few possibilities for the root cause of the error. Before trying the following steps, ensure that the Internet Config 2.0 extension is installed in your Extensions folder. Then verify that you have selected the appropriate browser in the Internet control panel under the Web tab. If those two items are verified, then follow these troubleshooting steps:

1. Boot using your Mac OS 8.5 CD.

2. Delete the Find preferences in the Preferences folder inside your system folder.

3. Reboot from the hard drive and retry a Sherlock search. If the problem persists, continue on.

4. Reboot from the Mac OS 8.5 CD and do a custom install of Sherlock.

5. Reboot from the hard drive and retry a Sherlock search. If the problem persists, continue on.

6. Reboot from the CD, delete the Internet preferences from the Preferences folder inside your system folder and reboot. By deleting the Internet preferences, you will have to reconfigure some basic internet preferences such as your default browser, signature files, etc. As such, this should be your last step.

Published Date: Feb 20, 2012

iMac, Cube, G4: Restarts Instead of Shutting Down

This article describes conditions that may cause an iMac, Power Mac G4 Cube or Power Mac G4 computer to restart instead of shutting down.
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Symptom

The iMac, Power Mac G4 Cube or Power Mac G4 computer may restart instead of shutting down.

Solution

This could be caused by a USB device attached to the computer, an extension conflict, or an item in either the Startup Items or Shutdown Items folder.

Follow these steps to verify:

Disconnect all USB devices (including keyboard and mouse and any USB hubs) and power down the computer as follows:

- iMac - use the front power on/off button to power down.
- Power Mac Cube - hold down the power button for about 5 seconds to power down.
- Power Mac G4 - remove the keyboard and connect a known good Apple Pro Mouse and shutdown the computer via the special menu.

- If the computer shuts down without restarting, it is likely the fault of one of the USB devices. Connect each USB device one by one and repeat the shutdown process until you identify which USB device is causing the fault. After identifying the suspect USB device, contact the vendor of the USB device for further instructions on resolving the issue.

-If the computer continues to restart even after disconnecting all USB devices, then it could be caused by an extension/control panel conflict, or an alias in the Startup Items or Shutdown Items folder. Remove any items in the Startup Items or Shutdown Items folder. Restart the computer and shutdown to see if this was the issue. if the computer continues to restart then make sure the issue is not caused by and extensions conflict.

See article 30929: "**Mac OS: Extension Conflict Troubleshooting/Extensions Manager Features**"

- If the computer continues to restart, then it could be related to the computer. In this case, start up from the Software Install CD included with your computer. Once your computer has finished starting up, shutdown the computer.

If the issue goes away, reinstall your system software. If the issue continues, reset the PRAM by holding "Command-Option-P-R" on startup. For additional information on resetting the PRAM, see article 2238: "**How to Reset PRAM and NVRAM**".

If you are still unable to resolve the issue, contact Apple or an Apple Authorized Service Provider for additional assistance.

Published Date: Feb 20, 2012

iMac: CD Firmware Update Required For Some M6709LL/B Models

The CD Firmware Update is still required for some early M6709LL/B (Rev. B) iMac.
This article has been archived and is no longer updated by Apple.
If you are experiencing loud vibrations from the internal CD-ROM Drive when using certain CD titles, only then should you should install the update. After you run the update, the amber drive activity light will be disabled.

This update is available online from the Apple Software Updates Web site at http://www.apple.com/swupdates.
Published Date: Feb 20, 2012

Apple Modem Updater 2.0: Confirming Installation

This article explains how to verify that the Apple Modem Update 2.0 was installed properly.
This article has been archived and is no longer updated by Apple.
The instructions in this article can be used to confirm the installation of the Apple Modem Update for all iMac, PowerBook G3 Series or later, and Power Macintosh G3 (Blue and White) or later computers.

There are three methods for verifying the update was installed.

Method 1

1. Open the Apple Modem Updater application program again.

2. If the modem ROM was updated, it returns the following message in the status window: "This updater contains the same firmware as the modem. Check www.apple.com/support for a more current version of Apple Modem Updater.

Method 2

1. Open Apple System Profiler.

2. The System Profile tab contains an item named Network Overview. Click the Network Overview disclosure triangle to reveal the modem information.

3. If the Apple Modem Update has been successfully installed the modem version information should show "V2.300-V90."

Method 3

Using a terminal program, enter the following command and press the Return key.

```
ati3
```

If the modem's firmware has been updated, the following information is returned:

```
V2.300-V90_2M_DLS

OK
```

If the modem firmware has not been updated, the following is returned:

```
V2.100-V90_2M_DLS

OK
```

or

```
V2.200-V90_2M_DLS

OK
```

Note: Apple Remote Access is included with Mac OS and can be used if you do not have a terminal program. For information on using Apple Remote Access for this purpose, please see article 24775: "**Remote Access: Using the Terminal Window to Send AT Commands**"

Published Date: Feb 20, 2012

About iMac Firmware Update 1.1

This article contains the Read Me for the iMac Firmware Update 1.1, as well as other relevant information. This software was released by Apple on 18 December, 1998 and is available for downloading from the Apple Software Update web site at **http://www.apple.com/swupdates**.
This article has been archived and is no longer updated by Apple.

What is iMac Firmware Update?

iMac Firmware Update is based on customer feedback, and increases the reliability of iMac booting. It is being provided to every iMac customer as preventive maintenance. The iMac Firmware update upgrades the Open Firmware boot ROM code using a simple application downloadable from Apple's web site.

Who needs the iMac Firmware Update?
Every iMac customer should install this update. This update will only install on iMac computers.

What are the requirements for installing iMac Firmware Update?
This update can be installed on any iMac worldwide. Currently, the instructions for installing are available only in U.S. English but localized installers will be available soon for other languages, including International English, Spanish, German, French, Swedish, Italian, Japanese. Steps were taken to make this update as simple as possible so that most iMac customers worldwide could download and install this version.

What specifically does iMac Firmware address?
The update provides three enhancements:

1. Enhanced file system support
The new firmware supports all of the extent and extent overflow fields of the HFS/HFS+ file structure. Without this, it was possible for the Mac OS ROM file to stored in the extent and extent overflow fields of the HFS/HFS+ file structure which would prevent the iMac from starting up. In cases where this occurs, all of the data on the hard disk is still preserved, but the iMac won't be able start up from the hard disk until the iMac Firmware updater is run. This issue is extremely rare, but certainly important to address.

2. Dual-image boot ROM
The iMac Firmware update installs a second boot ROM image within the flashable ROM. Should there ever be a future firmware update, the second image serves as a backup should the firmware update fail. Although a firmware update failure is highly unlikely, providing the second image would allow the iMac to start up.

3. Hardware protection
After installing the iMac Firmware Update, Rev/A iMac computers will be hardware protected against unintentional firmware updates. Like iMac Rev/B units, the NMI Programmer button or Interrupt button will need to be depressed (using a paperclip) prior to starting up iMac to enable the firmware to be updated. This prevents a firmware update from occurring unintentionally.

How do I obtain the iMac Firmware Update?
Apple is providing iMac Firmware Update at no charge through the Internet. It can be downloaded from the Apple Software Update web site at **http://www.apple.com/swupdates**.

Will Apple be delivering iMac Firmware Update on CD-ROM?

No. Customers should obtain the update through Apple's Software Updates web site.

How large is the downloadable iMac Firmware Update file?
The update is provided in compressed format and incorporates a self-check mechanism to verify that the file has been downloaded completely and without error. The compressed downloadable file is about 1 MB in size.

How to Install the Firmware Update

The following instructions are included in the Read Me file for the Firmware Update. Depending upon if you have a /A or /B iMac, there is one key difference in how you install the update: /B iMac customers must use a paper clip to depress the iMac Programmer's button for approximately five seconds after restart. A long tone will sound at which time the Programmers button may be released.

Note: After you upgrade the firmware, the PRAM will be reset which may require you to reset some iMac preferences. Refer to the Mac OS Help for details about what items will need to be reset. For example, you need to open the Startup Disk control panel and reselect your hard disk.

1. Double-click the iMac Firmware Updater icon to start the update.

2. Read the onscreen instructions and follow them carefully.

3a. On a /A configuration, a message will appear explaining that your iMac's firmware needs to be updated. Click the Update button and follow any further on-screen instructions.

Figure 1, Update message for /A configuration

3b. On a /B configuration, a message will appear saying you need to shut down your computer and insert the end of a straightened paper clip into the Programmer's button hole, follow steps 4-8 to complete the update process.

Figure 2, Update message for /B configuration

4. Click Shut Down in the dialog box to shut down your computer.

5. Open the port cover door on the right side of your iMac and insert the end of a straightened paper clip into the Programmer's button hole, the lower of the two small button holes.

Figure 3, Location of Programmer's button hole

6. Continue to hold the paper clip in the hole and press the Power button on your iMac, or on the Apple USB keyboard to start up your iMac.

7. When you hear a long tone, remove the paper clip. A progress bar will appear at the bottom of the screen as the update takes place.

8. After successfully applying the firmware update the iMac will, upon restart, momentarily display a flashing question mark transposed on a folder icon. Once the iMac has fully restarted, use the Startup Disk control panel to set the internal hard drive as the startup disk. This action is necessary to prevent delays during the startup process.

Error Checking Prior to the Installation

A number of conditions are required before the update will be performed. Failure to meet these conditions will result in an error condition indicated by on screen dialog boxes. Conditions which will prevent successful installation of the update are:

- If the updater file has been moved outside of the folder containing the update installer
- If the updater is used on a computer other than an iMac
- If a Mac OS error #123 occurs
- If the volume is locked
- If the firmware is not recognized
- If the hard drive has less than 2.5 MB of free space

Any of these conditions will generate an error dialog box which offers the user the appropriate option to recover from the condition.

Conditions that May Cause the iMac Firmware Updater to Fail

There are other conditions that may cause the updater to fail.

- If power is removed during the update, the Boot ROM may become corrupted and not retrievable. The processor board will have to be replaced.
- If a /A configuration is restarted using the paper clip by mistake, the update will not complete. Power must be pulled for 15 seconds and the update attempted again.

Note: The open firmware command line is not used in this firmware update process. Any attempts to update iMac's firmware using the command line mode may lead to BOOT ROM corruption and require that the processor board be replaced. Modifications of the iMac open firmware using the command line mode is not supported and any resulting damage to the processor board may not be covered under warranty.

How to Determine If a System Has Already Been Updated

The Firmware Update installer will verify that the update is required before installing it and will display a dialog if the update is not required. If you are unsure if your systems have been updated, simply run the Update installer.

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Isochronous Protocol Support on USB?

What is Isochronous protocol and does Power Macintosh G3 support it on the USB bus? What are the differences between iMac USB support and that of Power Macintosh G3?
This article has been archived and is no longer updated by Apple.
Power Macintosh G3 will not initially support isochronous transfers, though it is possible in the future.

Pronounced eye-sock-ra-nuss, it refers to processes where data must be delivered within certain time constraints. For example, multimedia streams require an isochronous transport mechanism to ensure that data is delivered as fast as it is displayed and to ensure that the audio is synchronized with the video.
Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Video Adapter Necessary for Headless Operation

This article discusses headless operation of a Power Macintosh G3 (Blue and White).
This article has been archived and is no longer updated by Apple.
If you are planning to run your Power Macintosh G3 headless, you should use the video adapter, part number 590-1120-A, which was included in your accessory kit. This spoofs the video card into thinking a video display is attached. When the time comes to connect a display, simply connect it to the adapter, or remove the adapter and connect the display directly to the card, as appropriate.

Be aware that if your display requires an ADB connection for full functionality, you must shut down the computer, connect the display and ADB cables, then restart the computer. A display which uses USB likely does not require a restart because USB is a hot-swappable technology.
Published Date: Feb 20, 2012

Power Macintosh: Differences Between DVD-ROM, DVD-RAM, and DVD-RW

This article explains the differences between DVD-ROM, DVD-RAM, and DVD-RW.
This article has been archived and is no longer updated by Apple.
DVD-ROM, as its name implies, is a "read-only memory" format. Your computer can read a disc's contents, but it cannot save data to one.

DVD-RAM (DVD random-access memory) and DVD-RW (DVD rewritable) are both rewritable mediums. Both DVD-RW and DVD-RAM are rewritable DVD standards that have been published by the DVD Forum, a group of more than 200 industry-leading corporations (http://www.dvdforum.org/).

See technical document 42718 "**SuperDrive: About Rewriteable DVD Discs**" for additional discussion of DVD-R, DVD-RW, DVD-RAM, and DVD+RW.

Published Date: Feb 20, 2012

Obtaining Ethernet Status With Apple System Profiler

You can use Apple System Profiler to determine the status of your computer's Ethernet connection.

This article has been archived and is no longer updated by Apple.
Apple System Profiler version 2.1.2 (and later) has the ability to indicate Link up or down, Half or Full duplex, as well as 10 megabit or 100 megabit connection speed.

The Network overview section in the main Apple System Profiler window has a field labeled Link that gives this information.

Note: If the Ethernet port is not connected to a live Ethernet connection, Apple System Profiler indicates Link down, and all other options are indicated as n/a.

Related documents

106772: "**Mac OS X: Network 'Up' Flag Does Not Accurately Indicate Working Connection**"

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Storage Options and Support

This article discusses the options and specifications for storage devices in Power Macintosh G3 and Power Macintosh G3 (Blue and White) computers.
This article has been archived and is no longer updated by Apple.
The Power Macintosh G3 has a total of 5 locations, or bays, for storage devices. The two externally accessible bays in the front panel are designed for a ZIP drive and a CD-ROM drive. There are three internal locations on the bottom of the enclosure for hard drives. Power is supplied for all three drive bays, but only the startup drive has a data cable supplied.

The Power Macintosh G3 computer does not include a floppy drive.

Logic Board Drive Connectors
There is an Ultra DMA/33 (ATA-4) interface to support the startup drive only, and an ATA-3 interface for CD-ROM and Zip drives. The enclosure includes data and power connectors for the Ultra DMA/33 (ATA-4) startup drive, an optional internal ATAPI CD-ROM, or DVD-ROM drive, and an optional internal ATAPI ZIP drive.

Later revisions of the Power Macintosh G3 (Blue and White) provide support for dual IDE drives. They can be identified by the presence of a U bracket installed in the rear most drive bay which allows two hard drives to be mounted in that single bay.

The ATA-3 channel supports two ATA devices. The devices are configured in a ATA Device 0/1 configuration. The ATAPI CD or DVD-ROM, and Zip drive, when installed, occupy both device locations on the ATA-3 channel. The ATAPI CD or DVD-ROM, depending on which is installed, is Device 0 (master), and the Zip drive is Device 1 (slave).

The Ultra DMA/33 bus supports PIO Mode 4, DMA Mode 2, and Ultra DMA Mode 2 data transfers. The ATA-3 bus supports PIO Mode 4 and DMA Mode 2 data transfers.

Ultra DMA/33 Hard Drive
The logic board supports an internal hard drive that uses the standard Ultra DMA/33 (ATA-4) interface. The internal hard drive has a 40-pin connector and a separate 4-pin power connector. An 80-conductor high-density cable with a 40-pin connector is attached to the main logic board. A separate ground is provided on the 80-conductor cable for each of the signals on the 40 pin connector to provide improved signal quality. The power cable is attached directly to the power supply.

ATAPI CD-ROM Drive
The Power Macintosh G3 computer has a 24X-speed internal ATAPI CD-ROM drive. The CD-ROM drive supports the worldwide standards and specifications for CD-ROM and CD-digital audio discs described in the Sony/Philips Yellow Book and Red Book. The drive can read CD-ROM, CD-ROM XA, CD-I, and PhotoCD discs as well as play standard audio discs.

The CD-ROM drive has a sliding tray to hold the disc. The drive features a mechanism that supports 4X, 8X, 12X, and 24X data transfer rates and a data buffer that further enhances performance. The CD is configured as device 0 in an ATA Device 0/1 configuration.

Optional ATAPI Zip Drive
The Zip drive is an ATAPI drive and is connected as device 1 in an ATA Device 0/1 configuration on the ATA-3 channel of the main logic board.

Optional DVD-ROM Drive
The optional DVD-ROM drive is fully compatible with existing CD-ROM media. The drive supports CD-ROM at 32x speed maximum and DVD at 5x constant linear velocity (CLV). The DVD-ROM drive supports the following disc formats:

* DVD-ROM (One- or two-layer, one- or two-sided)
* CD-ROM (Modes 1 and 2), CD-ROM XA (Mode 2, Forms 1 and 2), CD-Audio, Photo CD, CD-RW, CD-R, CD-Extra
* CD-I (Mode 2, Forms 1 and 2), CD-I Ready, CD-I Bridge
* Video CD

Optional Ultra2 SCSI (LVD) Drive
An Ultra2 SCSI low-voltage differential (LVD) drive and Ultra2 SCSI PCI controller card are available as a configuration option. The Ultra2 SCSI interface provides data transfer rates of up to 80 MB per second.

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White) Expansion Ports: Description

What external expansion ports are available on the Power Macintosh G3?
This article has been archived and is no longer updated by Apple.

Figure 1: Power Macintosh G3 (Blue and White) ports.

Line Voltage
The power supply is not self-configuring for different input voltages. The voltage switch is delivered preconfigured for the input voltage of the region in which the unit is originally purchased. If the computer is moved to another location where the input voltage is different, the voltage switch must be adjusted to accommodate the voltage change. The switch has two positions that support voltage ranges of 100 to 130 V or 220 to 270 V.

Monitor Power
The monitor power socket is not switched. Any time power is connected to the power supply, power is available on the monitor power socket. A monitor that does not support energy saving features that is connected to the monitor power socket will not power off when the computer is shut down. Monitors that do not support energy saving features have to be switched manually.

10/100 Ethernet

Figure 2: 10/100 Ethernet marking

The Power Macintosh G3 computer has an auto-switching 10 or 100 Megabit Ethernet. This port only accepts twisted pair Ethernet cables (also called 10 Base-T).

USB Ports and Devices

Figure 3: USB Ports and Devices marking

The USB ports take the place of the serial I/O ports found on earlier Macintosh computers. Software shims have been implemented in the system software to allow existing applications that use ADB devices to work with USB devices. The Power Macintosh G3 computer uses a USB keyboard and mouse similar to the USB keyboard and mouse introduced with the iMac computer. USB game controllers are supported by the InputSprocket component of the Apple Game Sprockets software architecture. InputSprocket software and information about the InputSprocket APIs can be found at: http://developer.apple.com/dev/games/

FireWire

Figure 4: FireWire marking

The Power Macintosh G3 has two FireWire ports for connecting high speed peripherals such as cameras, scanners, disk drives, or home entertainment systems. At 200 Mbps, it is up to 20 times faster than an Ethernet network connection. Here are some other benefits:

- Ability to daisy chain up to 63 devices to your Mac or PC (with connecting cable lengths of up to 14 feet).
- Hot-pluggable so you do not have to turn off a scanner or CD drive to connect or disconnect it, and you do not need to restart your computer once you have made the connection.
- FireWire devices are easy to connect (you do not need device IDs, jumpers, dip switches, screws, latches or terminators).

Apple Desktop Bus (ADB)
One ADB port is included, for attaching ADB devices such as keyboards and mice.

Sound In/Sound Out
There is a sound in port and a sound out port. These ports can be used to connect with external microphones and speakers.

No SCSI Ports
The Power Macintosh G3 computer does not include built-in internal or external SCSI device connectors. Adding an internal or external SCSI device requires the use of a SCSI PCI card. Ultra2 SCSI (LVD) devices and PCI controller cards will be available as options at the time of purchase.

No LocalTalk Serial Ports
The Power Macintosh G3 computer does not include RS-422 serial ports found on earlier Macintosh models. I/O for external devices is provided by two USB ports. USB adapters are available from third parties to support Macintosh compatible legacy serial devices.
Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Sound Capabilities

This article discusses the sound capabilities of the Power Macintosh G3.

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The Power Macintosh G3 is not configured as a typical AV style Power Macintosh in that it does not have RCA jacks for sound in and out, nor additional video in and out ports. Instead, it relies on external FireWire devices for providing advanced audio/video capabilites.

Here are the details relating to the sound capabilities of the Power Macintosh G3 logic board:

Sound System
The sound system for the Power Macintosh G3 computer supports 44.1 kHz 16-bit stereo sound output and input, available simultaneously.

Like other AV class Macintosh computers, the sound circuitry and system software can create sounds digitally and either play the sounds through the speaker inside the enclosure or send the sound signals out through the sound output jack. The Power Macintosh G3 computer also records sound from several sources: an analog sound source connected to the line-level sound input jack, analog sound from the modem card connected to the internal modem connector, or a compact disc in the CD-ROM player. With each sound input source, sound playthrough can be enabled or disabled.

Sound Output
The Power Macintosh G3 computer provides one 3.5-mm mini jack for sound output on the back of the enclosure. The output jack is connected to the sound amplifier; the mini jack is intended for connecting a pair of headphones or amplified external speakers. Inserting a plug into the sound output mini jack disconnects the internal speaker. The enclosure has one built-in speaker.

The Burgundy IC provides the stereo sound output to both the internal speakers and the sound output jack. The sound output jack has the following electrical characteristics:
* output sound signal to noise ratio (SNR) <90 dB unweighted (typical) when sound playback is from system hard disk or main memory .
* output sound SNR <80 dB unweighted (nominal) when playback is from CD .
* overall output sound SNR <90 dB unweighted (typical).

Sound Input
The Power Macintosh G3 computer provides a stereo sound input jack on the back of the enclosure for connecting an external PlainTalk microphone or other sound source. The sound input jack accepts a standard 3.5-mm stereophonic phone plug (two signals plus ground).

Note: The Apple PlainTalk microphone requires power from the main computer, which it obtains by way of an extra-long, 4-conductor plug that makes contact with a 5-volt pin inside the sound input jack.

The sound input jack has the following electrical characteristics:
* input impedance: 20 kW
* maximum input level without distortion: 2.5 V peak to peak (Vpp) maximum
* line-level microphone voltage range of 0.28 V to 2.1 V peak to peak
* input SNR <90 dB unweighted (typical) for recording to system hard disk drive or system main memory

Digitizing Sound
The sound circuitry digitizes and records sound as 44.1 kHz 16-bit samples. If a sound sampled at a lower rate on another computer is played as output, the Sound Manager transparently upsamples the sound to 44.1 kHz prior to outputting the audio to the Burgundy sound IC.

The preferred sound sampling rate for output is specified in the Monitors and Sound control panel when the sound input is not in use. The preferred output sampling rate is overridden by the setting of the input sampling rate, because the input and output sampling rates are physically locked together. The sound output sampling rate is always 44.1 kHz.

When recording sound from a microphone, applications that are concerned about feedback should disable sound playthrough by calling the Sound Manager APIs.

The Burgundy IC provides separate sound buffers for input and for stereo output so that the computer can record and send digitized sound to the sound outputs simultaneously.

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Power Remains On When Case Is Open

You can access the logic board of Power Macintosh G3 and Power Macintosh G3 (Blue and White) computers without unplugging the power cord. It is possible for the computer to stay powered on when the case is open.

This article has been archived and is no longer updated by Apple.
If the computer is in a powered on state and the side panel is opened to access the logic board, the computer remains powered on.

You are strongly discouraged opening the case with the computer powered on. If this is unavoidable, then it should not be operated in that state for extended periods. With the case open, there is not sufficient airflow over the G3 processor and the computer could enter a thermal shutdown. Any data not saved would be lost.

Do **NOT** perform any upgrades to the Power Macintosh G3 with the power on. Make sure the computer is powered off and the power cord disconnected before performing any upgrade to the logic board of your computer.
Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White) and G4: No Support For Hard Drive in Zip Drive Expansion Bay

The Zip drive bay in a Power Macintosh G3, Power Macintosh G3 (Blue and White), or Power Mac G4 computer is not designed to accommodate a hard drive or optical drive.
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Products affected

- Power Mac G3 (Blue & White)
- Power Mac G4 (PCI)
- Power Mac G4 (AGP)
- Power Mac G4 (Gigabit Ethernet)
- Power Mac G4 (Digital Audio)
- Power Mac G4 (QuickSilver)
- Power Mac G4 (QuickSilver 2002)

The drive bay is reserved exclusively for a Zip drive. A hard drive generates additional heat and has not been certified for use in the Zip drive bay. Other 3.5-inch height removable ATA-3 drives may be compatible. Check with the vendor of the drive for compatibility information and technical support.

Optical drives (CD-ROM, DVD-ROM, DVD-RAM, DVD-R, CD-RW) are 5.25-inch devices and cannot physically fit in the 3.5-inch Zip drive bay and are also not supported.

Additional hard drives are intended to be mounted on the bottom of the case and require a SCSI card. Only Power Macintosh G3 (Blue and White) and Power Mac G4 computers with the U bracket in the hard drive expansion bay and a dual connector IDE cable can support two IDE drives in master and slave configuration. If the computer did not come with the dual connector IDE cable and U bracket, then additional hard drives are intended to be mounted on the bottom of the case and require a SCSI card.

For further information, refer to article 58193: "**Power Macintosh G3 (Blue and White): Additional Hard Drive Installation Options**".

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): How to Differentiate From Other Power Macintosh G3 Models

This article tells how to differentiate between the various Power Macintosh G3 computers.

This article has been archived and is no longer updated by Apple.
Before January of 1999, there were three Power Macintosh G3 form factors useful for visual identification; Desktop, Minitower, and All-in-one. At the MacWorld Exposition in January, 1999, Apple introduced a Power Macintosh G3 model which does not fit into any of the previous categories.

While it is a tower design, Apple has elected not to refer to it as such. For the purpose of identification, Knowledge Base articles will refer to this design by its colors (blue and white) rather than form factor.

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Which SCSI Card to Use with Slower SCSI Devices

This article recommends which Apple SCSI card to use with SCSI peripherals of various speeds.

This article has been archived and is no longer updated by Apple.
The Apple Ultra SCSI PCI Card, available as a Build to Order option, is best suited for using older and slower external SCSI devices such as tape drives, scanners, and hard disks with your Power Macintosh G3 computer or Macintosh Server G3. You can also connect standard SCSI (SCSI-1), Fast SCSI (SCSI-2), and Ultra SCSI (also called Ultra Narrow SCSI) peripherals to the Apple Ultra SCSI PCI card. With the card installed in your computer, you can also start up the computer from externally connected drives. The Apple Ultra SCSI PCI Card includes a 50- to 25-pin cable adapter.

This economical and convenient option lets you connect up to seven SCSI devices, as long as the total cable length measures no more than 6 meters, or about 18 feet. The card supports cable lengths of 1.5 meters when running in Ultra SCSI mode or 6 meters when running in SCSI-1 or SCSI-2 mode.

Here is a list of applicable transfer rates for the various SCSI modes.

SCSI Mode	**Speed**	**Connector**
SCSI (SCSI-1)*	5MBps	25- and 50-pin
Fast SCSI (SCSI-2)*	10MBps	25- and 50-pin
Fast Wide SCSI	20MBps	50-pin
Ultra SCSI*	20MBps	50-pin
Ultra Wide SCSI	40MBps	68-pin
Ultra2 LVD SCSI	80MBps	68-pin
*Supported by the Apple Ultra SCSI PCI Card.		

Different types of SCSI devices connected to a SCSI channel operate only as fast as the slowest device on the chain. For example, a SCSI-2 (10MBps) tape drive and a SCSI-1 (5MBps) hard disk on the same SCSI channel will both operate at 5MBps.

The Apple Ultra SCSI PCI Card is functionally equivalent to the Adaptec Power Domain 2930 Ultra SCSI card.

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): PCI Expansion Slot Specifications

This article provides information on the four PCI expansion slots contained within the Power Macintosh G3.
This article has been archived and is no longer updated by Apple.
The Power Macintosh G3 has four PCI slots. There are actually two different PCI busses on the computer; they are:

1 - 66 MHz PCI Bus with one PCI Slot which accepts a 66 MHz 32-bit PCI card.
1 - 33 MHz PCI Bus with three PCI Slots which accept 33 MHz 32-bit or 64-bit cards.

The 66 Mhz PCI bus includes slot #1, which accommodates only 66 MHz 32-bit PCI cards. However, this slot is always configured from Apple with an Apple 2D/3D accelerated graphics card.

The 33 MHz PCI bus includes slots #2, #3, and #4, which accommodate both 32-bit and 64-bit 33 MHz PCI cards. These slots accept standard 7-inch and 12-inch PCI cards.

Some rules to remember about these slots:

- The 66 MHz PCI slot accepts only 66 MHz cards. The slot is keyed differently than 33 MHz cards and does not have the extra long slot for 64-bit cards.
- The 33 MHz PCI slots (3 of them) accepts only 33 MHz cards (not 66). These slots are longer than previous PCI slots to accommodate 64-bit cards. Older PCI cards work in these slots even though the extra section of the slot is not used.
- You can use the three 33 MHz expansion slots to install:
  three 15 W cards
  one 15 W or 25 W card
  two 15 W or 25 W cards
  one 15 W card and one 25 W card

  The illustration below shows the card differences between these slots. Note that key for the 66 MHz slot is located in a different place than other slots. The key is the slot which is cut into a PCI card. The key is shown below as the white gap between the gray parallel lines. The leading edge of slot is where the end of the card would be, facing the rear of the computer.

Figure 1, Differences between PCI slots.

Published Date: Feb 20, 2012

iMac 266: Why No IrDA?

I noticed that the new iMac 266 no longer has IrDA support. Why was this removed?
This article has been archived and is no longer updated by Apple.
Based on the success of USB, Apple has decided that for desktop computers, such as iMac, we will focus on USB as the way devices connect.
Published Date: Feb 20, 2012

iMac 266: No Mezzanine Connector

Some third party companies have been advertising iMac expansion cards for the Mezzanine connector. Will these cards function in the iMac 266?
This article has been archived and is no longer updated by Apple.
The Mezzanine connector was used during the development and manufacture of iMac. It is no longer needed and therefore has been removed from the iMac 266 logic board. Apple has never spoken of any product plans in conjunction with this connector and discouraged any developer planning to take advantage of it.
Published Date: Feb 20, 2012

Apple Studio Display 21: Connecting to PCI Video Card Having Two Connectors

Some earlier Macintosh video cards contain both a VGA and DB-15 Macintosh type video connector. If your video card contains both types of connectors then you should connect your Studio Display 21 to the Macintosh style DB-15 video connector using a VGA adapter.
This article has been archived and is no longer updated by Apple.
The Studio Display 21 should work with most Macintosh video cards that are DDC compliant and which support the resolutions and frequencies highlighted on the monitor's specification sheet. Connecting to the VGA connector when two connectors are present may cause display difficulties.

The Apple VGA adapter (see Figure 1) has an Apple service part number of 922-3769 and can be ordered by Apple Authorized Service Providers. The adapter has a part number of 513-0091-A molded into the grey plastic housing, and was provided with some of the early Studio Display 21 monitors.

Figure 1: VGA Adapter

As specified in the Studio Display 21 data sheet, a built-in USB port is required to use and adjust the display. The Apple display software uses the USB communication link to perform the color calibration and display adjustments.
Published Date: Feb 20, 2012

Apple Studio Display 21 and 17: Compatibility with Other Macintosh Models

This article provides Power Macintosh compatibility information for the Apple Studio Display 21 and Apple Studio Display 17.
This article has been archived and is no longer updated by Apple.

Apple Studio Display 21

Due to the requirement of on-board USB, the Apple Studio Display 21 can be connected only to USB based computers. An earlier Power Macintosh with a USB card installed does not work with this monitor.

Apple Studio Display 17

The Apple Studio Display 17 works with all Power Macintosh desktop computers, and all PowerPC based PowerBook computers with the exception of the PowerBook Duo 2300 and PowerBook 500 series with the PowerPC upgrade card.

For additional information on connecting the Studio Display 17 to older computers, refer to article 58271: "**Apple Studio Display 17: Using With Older Power Macintosh Computers**".

The viewable image size of the Apple Studio Display 21 is 19.8 inches, the Apple Studio Display 17 has a viewable image size of 16.0 inches.

Published Date: Feb 20, 2012

Apple Studio Display 21: Do Not Daisy Chain Multiple Displays Together

If you daisy chain multiple Apple Studio Display 21-inch displays together, the Power Macintosh G3 (Blue and White) may restart itself approximately 3-5 seconds after you shut down.
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If this occurs, reconnect the additional displays directly to your Power Macintosh G3 (Blue and White).

Alternatively, you can use a USB hub. Although the Apple Studio Display 21"-inch is a USB hub, the four ports on the side should be used for connecting other USB devices.

The viewable image size of the Apple Studio Display 21-inch is 19.8 inches.

Published Date: Feb 20, 2012

Apple Studio Display 17: Noise or Shimmer at Startup is Normal

When starting up, an Apple Studio Display 17 may make a noise and the image may shimmer a bit before it settles down.

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The display is behaving normally and does not require service. What is happening is called Degaussing. Degaussing is the process of stabilizing the magnetic field of the CRT. It is a normal function of every display and does not indicate a need for service.

Waking the display from sleep or initiating a degauss from the on-screen display can also cause the same noise to be generated.

The viewable image size of the Apple Studio Display 17 is 16.0 inches.

Published Date: Feb 20, 2012

Apple Studio Display 21/Apple Studio Display 17: Tripod Stand Safety Tips

This article provides specific safety tips relating to the new tripod stand used on the Apple Studio Display 21-inch and Apple Studio Display 17-inch displays.

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- Lift the display by the indentations on the under-sides near the front of the display. Never lift the display by the tripod stand.
- Likewise, do not adjust the position of the monitor by pulling the stand legs. The tripod stand is subject to damage if mishandled.
- When placing the monitor on a table surface, ensure that all three legs on the tripod stand contact a solid surface. If one of the legs is too close to the table edge, the weight of the monitor could cause the display to fall off the edge.

The viewable image size of the Apple Studio Display 21-inch is 19.8 inches, the Apple Studio Display 17-inch has a viewable image size of 16.0 inches.

Published Date: Feb 20, 2012

Apple Studio Display 17: Serial Number Placement

This article provides the location of the serial number on the Apple Studio Display 17.
This article has been archived and is no longer updated by Apple.
The serial number label is under the rear of the display, on the tripod stand.

The viewable image size of the Apple Studio Display 17 is 16.0 inches.

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Modem Alert During Initial Setup

During initial setup of a Power Macintosh G3, after selecting a country a dialog box may appear informing you to call Apple regarding the modem even though the computer does not have a modem.
This article has been archived and is no longer updated by Apple.
The dialog box shown below is generated during the initial setup of Mac OS where it would normally set the country code for the modem. This issue affects only the first production run of Power Macintosh G3 computers **without** modems, and is not an indicator of any flaw with your computer.

Simply click OK and proceed; you do not need to contact Apple support for assistance.

Figure 1, Modem problem dialog box

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): What is in the Box?

This article lists what is included in the accessory kit of the Power Macintosh G3 (Blue and White).
This article has been archived and is no longer updated by Apple.
Included are the following:

- Apple USB Keyboard

- Apple USB Mouse

- PlainTalk Microphone

- USB Keyboard Extension Cable

- Mac to VGA Video Adapter

- Power Macintosh G3 Mac OS CD

- Setting Up Your Power Macintosh G3 manual

- Troubleshooting Handbook

- Software Proof of Purchase Coupons

- Apple Stickers

- Registration Card

- Apple Service and Support Guide

- Software License Agreement

- Apple Warranty sheet

- Adobe Systems License Agreement

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Description

This article provides a description of the Power Macintosh G3 introduced at MacWorld San Francisco 1999.

This article has been archived and is no longer updated by Apple.
Fast enough to handle the toughest video and publishing applications with ease. Smart enough to grow with your needs for years to come. Stylish enough to make your computer time more enjoyable than ever. With the new Power Macintosh G3 computer, all these incredible features are yours in one great system, at one remarkably low price.

Whether you are a design professional who appreciates the marriage of beauty and power, an educator who needs performance and flexibility in a system that provides a solid investment for the future, or a home user whose family wants to run business applications, Internet programs, and games, the new Power Macintosh G3 computer is a superb choice.

At the foundation of these computers is their amazing responsiveness. With processor speeds of up to 400 megahertz, they can handle video and high-resolution graphics at lightning speed. Performance is further enhanced by a superfast system bus and a backside cache of up to 1 megabyte. And if you are a design professional or you just like games, you will love the built-in high-performance ATI RAGE 128 graphics card.

The innovative design of the Power Macintosh G3 does much more than simply make it look great. Just flip the computer open for fast access to ever ything inside. The easy-open (but lockable) enclosure lets you easily add memory, storage, or PCI cards. Built-in handles simplify moving the computer from room to room.

Speaking of expansion, the Power Macintosh G3 is one incredibly versatile computer. It comes with three available PCI slots and two Universal Serial Bus (USB) ports that support a wide variety of cards and accessories. And it features a fast FireWire bus designed especially for connecting digital cameras and other high-speed devices.

Do not forget to complement your new Power Macintosh G3 computer with a matching monitor from the Apple Studio Display series. Like the computer, these displays give you both power and style at an excellent price.

The Power Macintosh G3: Performance, capabilities, and style that will dazzle you every day you use it.

Features

Incredible performance

- PowerPC G3 processor running at 350, 400, or 450 MHz
- Support for up to 1GB of high-performance PC100 SDRAM
- 1MB of performance-boosting backside cache running at up to 225 MHz
- Support for hard disk storage up to 100GB
- Built-in 10/100BASE-T Ethernet networking
- ATI RAGE 128 graphics card with 16MB of graphics memory

Amazing capabilities

- Two high-speed FireWire ports for digital video and still cameras, printers, scanners, and other multimedia peripherals
- Two USB ports for keyboards, mice, printers, and much more
- Four PCI slots, including one dedicated graphics PCI slot with ATI RAGE 128 graphics card

Stunning design

- Elegant translucent case that matches Apple's latest displays
- Outstanding accessibility for installing cards, drives, and memory
- Attractive, convenient handles for easy carrying

Related Products

- Apple displays

-Apple Studio Display (15-inch); order no. M6356

-Apple Studio Display (17-inch); order no. M6221

-Apple Studio Display (21-inch); order no. M6204

- Apple 56K V.90 Internal Modem; order no. M7405

- Third-party USB peripherals

-Imation SuperDisk floppy disk drive

-Farallon iPrint LT Adapter

-Kodak DC220 and DC260 digital cameras

For a list of compatible third-party USB products, visit Apple's Product Web Site, Universal Serial Bus Web Page: **http://www.apple.com/usb/** .

All models also include:

- 10/100BASE-T Ethernet
- Four PCI slots, one containing ATI RAGE 128 card with 16MB of graphics memory
- Two FireWire ports
- Two USB ports
- Apple USB Keyboard and Mouse
- Macintosh-to-VGA monitor adapter
- Mac OS 8.6
- Microsoft Internet Explorer
- Netscape Navigator
- Complete setup, learning, and reference documentation
- Limited warranty

Preinstalled software contains electronic documentation. Backup software provided on CD-ROM.

Build-to-order (BTO) options

In addition to choosing from among Apple's prebuilt systems, you can order a custom-configured computer from your local reseller or the online Apple Store. This allows you to select from among the options listed below. For up-to-date information about options and availability, visit **http://www.apple.com/store**.

- Processor: PowerPC G3 running at 350, 400, or 450 MHz
- Memory: 64MB, 128MB, 256MB, 384MB, 512MB, 768MB, or 1GB
- Hard disk drive: 6GB or 12GB Ultra ATA; 9GB 7,200- rpm Ultra2 LVD SCSI with single- or dual-channel SCSI card; two 9GB 10,000-rpm Ultra2 LVD SCSI with single- or dual-channel SCSI card; or up to 36GB 7,200 rpm Ultra2 LVD SCSI with single- or dual-channel SCSI card
- Zip drive
- CD-ROM drive, or DVD-ROM drive with DVD-Video playback
- SCSI card with cable that supports standard SCSI, Fast Wide SCSI, and Ultra Wide SCSI (25- or 50-pin devices)
- 56K modem

For More Information

For more information about this product, or to find out where to buy Apple products, visit **http://www.apple.com** on the World Wide Web or call 1-800-538-9696. To purchase this product from the Apple Store, go to **http://www.apple.com/store**.

Apple stands behind its products with world-class service and support. Offering quality parts, extended hardware service options, phone support, and support via the Internet, we provide you with support choices that meet your needs. For more information, visit **http://www.apple.com/support**.

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Frequently Asked Questions

This article contains frequently asked questions (FAQ) regarding the Power Macintosh G3 (Blue and White), with answers to those questions.

This article has been archived and is no longer updated by Apple.

Questions answered in this article:

1. What type of memory does the Power Macintosh G3 (Blue and White) use? Is the memory the same as in other Power Macintosh G3 systems?
2. What is the maximum amount of memory that can be installed in the Power Macintosh G3 (Blue and White)?
3. What is FireWire?
4. What is USB? Is it the same technology used in iMac?
5. What graphics accelerator does the Power Macintosh G3 (Blue and White) use? Can you tell me more about the 66-MHz PCI slot? Are the other three slots standard PCI slots?
6. Does the Power Macintosh G3 (Blue and White) have a floppy disk drive or serial port?
7. What kinds of hard disk drives does the Power Macintosh G3 (Blue and White) support? How many devices does it support? How do I connect my older I/O devices?
8. Does the Power Macintosh G3 (Blue and White) come with a modem?
9. What version of the Mac OS does the Power Macintosh G3 (Blue and White) include?
10. Is it possible to start up from a FireWire hard drive?

Question 1: What type of memory does the Power Macintosh G3 (Blue and White) use? Is the memory the same as in other Power Macintosh G3 systems?

Answer: The Power Macintosh G3 (Blue and White) requires PC100-compliant SDRAM. The memory must be 3.3-volt, unbuffered, 168-pin. If an SDRAM DIMM is sold or marketed as "PC100," this helps ensure that it functions correctly and optimally in your system. Please check with the manufacturer before purchasing. Memory from prior Power Macintosh (EDO or FPM RAM) computers cannot be used in this system.

Question 2: What is the maximum amount of memory that can be installed in the Power Macintosh G3 (Blue and White)?

Answer: The Power Macintosh G3 (Blue and White) has four DIMM slots that can accommodate up to 256MB DIMMs each, for a total of 1,024MB (1 gigabyte) of memory. When using 256MB DIMMs, use 128Mbit-device technology, not 64Mbit or 256Mbit. The 256MB DIMMs are available from the Apple Store.

Question 3: What is FireWire?

Answer: FireWire, also known as IEEE 1394, is an industry-standard, high-speed input/output (I/O) technology that can support multimedia and high-bandwidth devices like printers, digital cameras, and FireWire hard disk drives. Apple has even included 15 watts of bus power that will spawn a whole new class of easy-to-use self powered devices such as hard drives and cameras. FireWire is perfect for digital-video editing. The two FireWire ports on the Power Macintosh G3 (Blue and White) system support transfer speeds of up to 400 megabits-per-second (Mbps). FireWire lets you plug in and unplug devices without restarting the system. There are no device ID numbers to track, and the cables are long (14 feet) and easy to snap in. FireWire supports up to 63 devices. Information about FireWire technology can be found at:**http://www.apple.com/firewire**.

Question 4: What is USB? Is it the same technology used in iMac?

Answer: The USB (Universal Serial Bus) implementation in the Power Macintosh G3 (Blue and White) is the same as iMac. USB is a standard for attaching peripheral devices to a personal computer, delivering higher performance (up to 12 megabits-per-second) than previous serial port connection methods. USB is used to connect devices such as keyboards, mice, trackballs, modems, printers, scanners, and joysticks. You can plug in and unplug USB devices without restarting the system. Maximum cable length is 5 meters. Up to 127 USB devices can be attached to the computer simultaneously.The Power Macintosh G3 system ships with two USB ports. Apple also provides a USB keyboard and USB mouse with each system. The Apple USB Keyboard includes a built-in, bus-powered hub with two additional USB ports. The Power Macintosh G3 (Blue and White) also includes an Apple keyboard extender cable that increases the length of the Apple USB Keyboard cable and gives you the option to place the system either on the desktop or on the floor. Information about USB technology can be found at: **http://www.apple.com/usb**.

Question 5: What graphics accelerator does the Power Macintosh G3 (Blue and White) use? Can you tell me more about the 66-MHz PCI slot? Are the other three slots standard PCI slots?

Answer: All Power Macintosh systems come standard with the latest graphics accelerator chip from ATi, the RAGE 128. It includes 16MB of SDRAM graphics memory that provide extraordinary multitexturing valued by games developers. This speedy graphics card provides stellar 2D performance to support large displays and great 3D performance for professional 3D applications and games. The RAGE 128 card has an industry-standard VGA video connector. For customers who want to connect the Power Macintosh to older Macintosh-type (DB-15 pin) connectors, Apple supplies a VGA-to-Macintosh connector in the accessory kit. The three 33-MHz, 64-bit PCI slots are PCI 2.1-compliant slots and can also accommodate 33-MHz, 32-bit cards. You can add many different types of cards, including graphics, networking, or cards that support storage devices.

Question 6: Does the Power Macintosh G3 (Blue and White) have a floppy disk drive or serial port?

Answer: Like iMac, this system does not have a floppy disk drive. If you need to use a floppy disk drive, there are several third-party solutions available on the market. If you need to support serial devices, you can purchase third-party adapters or PCI cards. There is no serial port in the system. If you need to support SCSI devices, you can use third-party adapters or PCI cards. Apple is aggressively embracing I/O technologies such as FireWire and USB that allow you to attach devices directly to the system. There are several other options for getting information in or out of the system, including Internet access, optional internal Zip drives, LAN, and other mass-storage devices.

Question 7: What kinds of hard disk drives does the Power Macintosh G3 (Blue and White) support? How many devices does it support? How do I connect my older I/O devices?

Answer: The Power Macintosh G3 (Blue and White) system comes with an Ultra ATA hard disk drive or Ultra2 Low Voltage Differential (LVD) SCSI hard disk drive. Ultra2 SCSI is the next generation of SCSI. The Ultra2 LVD option includes a SCSI hard disk and a SCSI PCI card in one of the PCI slots. It doubles the data burst rate, up to 80 megabytes-per-second, providing greater system throughput. The maximum cable length is 12 meters, increasing flexibility in adding external storage devices. Ultra2 LVD SCSI supports up to 15 SCSI drive IDs. Customers who want to attach standard, Fast, or Fast Wide SCSI devices to the system along with Ultra2 LVD can add a PCI card offered by third-party vendors, but in that configuration the bus speed is slower.

Question 8: Does the Power Macintosh G3 (Blue and White) come with a modem?

Answer: The new Power Macintosh G3 comes standard with a built-in slot to accommodate a 56K modem that supports both the K56flex and V.90 standards. The modem is available as a build-to-order option through the Apple Store. Customers can also purchase external modems from third-party vendors.

Question 9: What version of the Mac OS does the Power Macintosh G3 (Blue and White) include?

Answer: The Power Macintosh G3 series ships with Mac OS 9.0. This version has lots of great new features and functionality. One of the highlights is Sherlock, your own private search detective. Sherlock is a powerful technology that lets you easily and quickly find information on local hard disk drives and the Internet.

Question 10: Is it possible to start up from a FireWire hard drive?

Answer: No, the Power Macintosh G3 (Blue and White) boot ROM cannot currently support starting up from FireWire-based storage devices.

Published Date: Feb 20, 2012

iMac: Sharing Files Via IrDA

This article describes how to set up an infrared capable iMac to communicate via infrared to another Macintosh computer.
This article has been archived and is no longer updated by Apple.
First verify your computer supports IrDA by reviewing Article 20928: **"Macintosh Infrared: Is It IrDA Compatible?"**.

If your computer is equipped with infrared technology that uses the IrDA protocol, you can establish a wireless TCP/IP or AppleTalk connection to a network using an IrDA network access device, or exchange files with another IrDA equipped computer.

Depending on the type of network protocol that you are going to use, choose Infrared Port (IrDA) from the "Connect via" pop-up menu in either the AppleTalk control panel or TCP/IP control panel.

AppleTalk Setup

In the AppleTalk control panel, set the Connect via option to Infrared Port (IrDA) as shown in Figure 1. Close the window and save changes.

Figure 1 AppleTalk control panel

TCP/IP Setup

Open the TCP/IP control panel, shown in Figure 2.

Figure 2 TCP/IP control panel

Create an infrared configuration by selecting the Configurations option under the File menu, or press Command-K. Create a new set by selecting an existing set, duplicating it, and renaming it Infrared. Click Make Active. This step will make it easier to switch between IR, Ethernet, or other configurations later.

Select Connect via option "Infrared Port (IrDA)."

Enter an IP address and a default Subnet mask value as described in Article 30821: **"TCP/IP: Setting up a Private Network"**. If you are switching the connection from an existing Ethernet network you can use the previous network values.

Example:

Computer 1:

- IP addr10.0.0.1

- subnet mask 255.0.0.0

Computer 2:

- IP addr10.0.0.2

- subnet mask 255.0.0.0

Close the window and save changes.

Establishing an IrDA Connection

To establish an IrDA connection, position your computer within three feet of the other computer or infrared network access device. IrDA devices that are in range will appear in the Infrared control panel.

Verify File Sharing is turned on and the appropriate volume is being shared. Review the setup in the Mac OS Help under "Sharing files with others on the network." You may now open your Chooser, select AppleShare and select the file server you wish to connect to.

Troubleshooting

If you are unable to enable IrDA, verify the following extensions and control panels are active by viewing them in the Extensions Manager control panel. If they are inactive, make them active and restart your computer. If they are missing, you will need to reinstall those components from your original system software CD.

Extensions:

IrDALib Extension

InLanScanner/PPC Extension

Control panels:

Infrared Control Panel

If the Infrared Port (IrDA) choice is not available

For PowerBook computers, make sure that IrDA is selected in the Options section of the Infrared control panel, shown in Figure 3. The iMac will not have this choice, it will display Infrared built-in.

Figure 3 PowerBook Infrared control panel

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Use Keyboard That Came With Computer

I would like to use one of the new colorful iMac keyboards on my Power Macintosh G3 (Blue and White), is there any reason not to do this?
This article has been archived and is no longer updated by Apple.
Apple has made slight modifications to the Blueberry version specifically for the Power Macintosh G3 (Blue and White). As such, to avoid any possible issues with earlier keyboards, you should only use the Blueberry keyboard which shipped with your Power Macintosh G3.

Documented below are three revisions to the USB keyboard which Apple has shipped to date:

- The first keyboard was the original Bondi Blue keyboard which shipped with iMac. It should only be used on the original iMac.
- The second revision includes four of the five keyboards shipping with the new iMac 266; Strawberry, Tangerine, Lime, and Grape. These keyboards should be used only with iMac.
- The third revision is the Blueberry keyboard which ships with both the iMac 266, and the Power Macintosh G3 (Blue and White). It can be used on any iMac or Power Macintosh G3 (Blue and White).

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Error When Opening AOL Without Modem Installed

If the computer does not have a modem and you open the AOL (America Online) program, it is normal to receive error messages warning that AOL is running low on memory or is not installed correctly.

This article has been archived and is no longer updated by Apple.

These messages are generated because the AOL software does not detect a modem. No further troubleshooting is necessary; simply quit AOL.

Published Date: Feb 20, 2012

About Your Ultra SCSI PCI Card

This article describes and explains how to use the Apple Ultra SCSI PCI Card for Power Macintosh G3 (Blue and White) and Power Mac G4 computers. It is available as an option from The Apple Store at http://www.apple.com/ .

This article has been archived and is no longer updated by Apple.
The Apple Ultra SCSI PCI Card is a peripheral component interconnect (PCI) expansion card that allows you to connect devices through a Small Computer System Interface (SCSI, pronounced "skuh-zee"). SCSI is a standard method for connecting disk and cartridge drives, CD-ROM drives, scanners, and other devices. The SCSI port permits high-speed communication between the computer and SCSI devices.

Installing the Card

To install the card, you must open your computer, install the card, then close the computer. For detailed instructions on installing PCI expansion cards, please refer to the documentation that came with your computer.

About SCSI Devices

Once you have installed the card and closed your computer, you can connect and use up to seven external SCSI devices with your computer. You connect external SCSI devices in a chain to the SCSI port on the card. The first device in the chain plugs into the SCSI port; the second device plugs into the first device, and so on.

Figure 1, 50-pin Narrow Ultra SCSI connector

Before You Connect a SCSI Device

Before you connect a SCSI device to your computer, follow the instructions in this section.

IMPORTANT This section contains general instructions for attaching SCSI devices to your computer. Also, follow the specific instructions that came with your SCSI device that tell how to change a device's ID number and attach a SCSI cable or terminator to the device.

Make Sure Each Device Has a Unique ID Number

Each external SCSI device connected to your computer must have its own unique ID number from 0 to 6. The SCSI ID number helps the computer keep track of the devices when several devices in the SCSI chain are communicating with the computer simultaneously.

The SCSI devices can be in any physical order in the chain; it is not necessary to arrange them in numerical order. See the instructions that came with each SCSI device for information on checking and setting its SCSI ID number.

IMPORTANT If you use two or more devices attached to the SCSI interface with the same ID number, your computer will not start up properly, your equipment may malfunction, and you may lose data as a result.

Use the Right Type and Length of Cable

To attach a SCSI device to your computer or to another device in the chain, always use SCSI cables that are double-shielded, such as Apple SCSI cables. Never use printer-type RS-232 cables (commonly used with DOS and Windows computers). Poor-quality SCSI cables are often the cause of SCSI difficulties. Avoid mixing brands and types of SCSI cables.

If the device is the first or only one you're connecting, use a SCSI system cable to connect it to the computer's SCSI port. If the device is not the first one, use a SCSI peripheral interface cable to connect it to the last device in the chain.

Figure 2, SCSI system cable (left) SCSI peripheral Interface cable (right)

Keep the cables between SCSI devices as short as possible. Cables 18 to 24 inches long are best. PowerBooks and some SCSI devices (particularly scanners) may not be able to handle cables longer than 24 inches.

IMPORTANT The total length of the cables in a SCSI chain should not exceed 6 meters (about 20 feet). SCSI cables must have a 110-ohm impedance.

Terminate the SCSI Chain Properly

To ensure accurate transmission of information, a terminator must be present at each end of a SCSI chain. One terminator, at the beginning of the SCSI chain, is inside your computer. When you connect external SCSI devices, make sure that only the last external device in the chain has a

terminator.

IMPORTANT In almost all cases, only the first and last devices in the SCSI chain should be terminated, with one exception noted later in this section. Make sure that no external SCSI device but the last one has a terminator.

To terminate the last device in the chain, do one of the following:

- Use a device that has a built-in terminator as the last device in the chain. If you wish to attach two or more SCSI devices that have built-in terminators, an Apple-authorized service provider can remove the extra built-in terminators.
- If the device at the end of the SCSI chain does not have a built-in terminator, attach an external terminator. You can attach or remove external terminators yourself. (Do not use a black terminator; the black terminators are for Macintosh IIfx computers and certain LaserWriter printers only.) Terminators are available at authorized Apple dealers.

Figure 3, External SCSI terminator

IMPORTANT Do not attach a terminator to a device that already has a built-in terminator. If you do, your computer may not start up properly.

Exception to the "first and last" rule: If the total cable length in the chain is greater than 10 feet, the chain may need a third terminator at the 10-foot point. Do not add the third terminator unless you are experiencing a SCSI issue, and check all other possible causes of the situation before adding the third terminator.

Connecting a SCSI Device

After you read the earlier section, "Before You Connect a SCSI Device," follow the instructions below. Use these general instructions in conjunction with the more specific instructions that came with your SCSI device.

1. Shut down your computer and make sure the SCSI device is turned off.

2. Connect one end of a SCSI cable to the SCSI port on your SCSI device.

3. Connect the SCSI adapter that came with your computer, shown below, to the other end of the SCSI cable.

Figure 4, SCSI 50-pin to 25-pin adapter

4. Connect the SCSI cable with the adapter attached to the computer's SCSI port or to the last SCSI device already in the chain.
IMPORTANT Make sure the last device in the SCSI chain is terminated properly.

5. Turn on all devices in your SCSI chain. Then turn on your computer.
IMPORTANT Always turn on all external SCSI devices connected to your computer before turning on the computer itself. Otherwise, your computer won't recognize that the SCSI devices are connected to it and your computer may not be able to start up.

6. Install any necessary device drivers (software that makes a device work with your computer).

Drivers needed for a SCSI device usually come on a floppy disk with the device. Some older SCSI devices may require updated drivers to work with your computer. For more information about drivers, contact the manufacturer of your SCSI device.

Note: If you experience difficulties after connecting a SCSI device, see the troubleshooting documentation that came with your computer or Mac OS Help for solutions.

Keep in mind:

- If you use different types of SCSI devices (such as SCSI-2 and Ultra SCSI) in the same SCSI chain, all devices will perform at the level of the slowest connected SCSI device.

Technical Specifications

- Operating system: Mac OS 8.5 or later
- System requirements: Power Macintosh G3 (Blue and White), Power Mac G4, and Macintosh G3 servers
- Interface: One external, 50-pin Ultra Narrow SCSI connector
- Maximum data transfer rate: Up to 20 megabytes per second

- Supports up to 7 SCSI external devices of the following types: SCSI-1, SCSI-2, Fast SCSI, Ultra SCSI
- SCSI ID number: Card uses SCSI ID 7

Note: While the Apple Ultra SCSI PCI Card is functionally equivalent to the Adaptec 2930 card, Apple has only tested, and therefore only supports the card using the external connector.

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Certain Keyboards Disallow Open Firmware Startup

Some ADB AppleDesign keyboards cannot start up a Power Macintosh G3 (Blue and White) into Open Firmware.
This article has been archived and is no longer updated by Apple.

Symptom:

Some ADB AppleDesign keyboards do not properly signal the Power Macintosh G3 (Blue and White) to enter Open Firmware during startup.

Products affected:

AppleDesign keyboards identifiable by the ADB cable hardwired to the keyboard, have a stepped Caps Lock key, and say "AppleDesign" on the underside of the keyboard.

Solution:

Use the USB keyboard which came with your computer, or a different ADB keyboard.

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Keyboard or Pointer Are Unresponsive

A limited number of USB Keyboard Extender Cables included in the accessory kit of Power Macintosh G3 (Blue and White) computers may not work correctly. This cable is used to extend the distance between the computer and keyboard.

This article has been archived and is no longer updated by Apple.

Symptom

The mouse pointer and keyboard may become unresponsive when used with the USB Keyboard Extender Cable. The computer operates normally without the extender cable.

Solution

Verify the symptom by removing the extender cable. If your computer operates normally with the extender cable removed, bring the cable to an Apple Authorized Service Provider to exchange it according to the terms of the Limited One-Year Hardware Warranty.

Removing the extender cable from the USB device returns the computer to normal operation if a replacement cable is not immediately available.

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Imation SuperDisk Driver Compatibility

After installing the Imation SuperDisk drivers that are pre-installed on the drive on a Power Macintosh G3 (Blue and White), the drive may still not respond.

This article has been archived and is no longer updated by Apple.
Version 1.10 or later of the Imation SuperDisk drivers are needed for use with the Power Macintosh G3 (Blue and White) computer. Make sure you are not using a previous version. The proper drivers are in the CD Extras folder on the CD that ships with your computer .
Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Cannot Boot from a RAID Striped Volume

My Power Macintosh G3 Blue & White computer has two 9 GB Ultra2 SCSI (LVD) hard drives. I'm using SoftRAID 2.1.5 to create one large striped (RAID 0) volume. After installing system software on this volume and restarting, I boot to a folder with a flashing question mark.

Why is this happening?
This article has been archived and is no longer updated by Apple.
This behavior is documented in the "About your Power Macintosh G3" Read Me preinstalled on the hard drive of the Power Macintosh G3 (Blue and White) computers. With the release of the iMac and later computers, Apple moved to a new Mac OS ROM architecture. This new architecture does not recognize multiple striped devices as a valid startup disk.

Workaround
Create 2 different volumes where one is either standard or mirrored (the startup volume) and the other is striped (the storage volume).

One would do this as follows:

- From within SoftRAID create a small Standard or Mirrored volume (big enough to store a System Folder as your startup volume).

Note: This volume CANNOT be a Striped volume. For example, create a mirrored 200 MB volume using both drives.

- Next, allocate the remainder of the space as a striped storage volume. Install the system software onto the smaller, non-striped volume and set the Startup Disk control panel to boot from this volume.
- After restarting, the computer should now boot from the smaller mirrored volume.

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Read Me

This article contains the Read Me document for the Power Macintosh G3 (Blue and White).
This article has been archived and is no longer updated by Apple.
Important Information About Your Power Macintosh G3

This document contains important late-breaking information about your Power Macintosh G3 computer, including:

Using Your Power Macintosh G3

- Starting up: the Mac OS ROM file
- Using the correct disk as a startup disk
- Restarting your computer
- Adjusting the volume for audio CDs and CDs with audio
- Using the Power Mac G3 modem
- Working with a RAM disk
- Connecting to a 10Base-T or 100Base-T network
- Performance problems using Ethernet
- Turning Virtual Memory off when installing third-party applications
- Allocating memory for third-party applications
- Customizing appearance and reinstalling system software
- Performing a clean installation of software
- About PlainTalk Speech Recognition 1.5.3

Third-party Software Issues

- Using up-to-date Internet browsers
- Reinstalling Internet Explorer and Netscape Navigator
- Installing third-party applications that install QuickTime
- Using FreePPP
- Using Norton Utilities
- Using two Ultra-SCSI disks striped with SoftRAID 2.1 or Remus 1.5
- Using a startup disk formatted with third-party formatting software
- Trouble with startup using a Zip cartridge formatted with Iomega driver version 6.0.1

Third-Party Hardware Issues

- Using Universal Serial Bus (USB) devices with your computer
- Using ADB dongles
- Connecting your computer directly to an Ethernet switch
- Using third-party PCI cards in your computer

For more information For additional information, see Mac OS Help and the online documentation that came with your computer. Apple provides substantial information online. If you have access to the World Wide Web (WWW), you can check the latest information about the Power Macintosh G3 in the support area at the following URL: **http://www.apple.com/support/**

Using Your Power Macintosh G3

Starting up: the Mac OS ROM file

The System Folder contains an important file-Mac OS ROM. This file is required for your computer to properly start up. If you delete this file or move it to another folder, your computer will not successfully start up.

Using the correct disk as the startup disk

If you selected a CD as the startup disk in the Startup Disk control panel, and you start up your computer without a CD or with a CD other than the software install or software restore CD that came with your computer, a single folder with a reappearing question mark appears on the screen. The computer will then search for any available System Folder and start up. If no System Folder is available, you must insert the software install or software restore CD that came with your computer and restart your computer. If you don't want to start up from a CD, make sure you select the hard disk as the startup disk in the Startup Disk control panel.

Restarting your computer

If you're having problems with your computer, you can often eliminate the problem by restarting your computer, which clears the computer's

memory. A restart allows you to save changes to any open documents and will close any open applications. To restart your computer, go to the Finder, open the Special menu and choose Restart, or press the Power button on your Apple USB keyboard. A dialog box appears. Click Restart.

If your computer freezes while you're working, try pressing the Power button on the front of the computer to shut down the computer. Then after the computer shuts down, press the Power button on the Apple USB keyboard or on the front of the computer to start up the computer. (The Control/Command/Power key combination used in earlier Macintosh computers is not available.) If that doesn't work, press the Reset button on the front of the computer. Your computer should restart. For more information, see the Troubleshooting Handbook that came with your computer.

Adjusting the volume for audio CDs and CDs with audio

If you can't hear an audio CD or audio portions of a CD, check the volume level in the AppleCD Audio Player and set it to a higher level, if necessary. If you started up your computer from a bootable CD, the volume for the AppleCD Audio Player may be set to zero.

Using the Power Mac G3 modem

Trouble connecting in V.90 mode

The modem used in the Power Macintosh G3 is a 56K modem based on the new V.90 specification. Any time a new modem standard is introduced there is a period of adjustment while various Internet Service Providers (ISPs) work to ensure that their POP (Point-of-Presence) servers are compatible with the new specification.

If you're having problems connecting in V.90 mode-if the modem won't connect at all, or the connection is dropped after a few minutes-it may be because the phone lines are too noisy or there's too much interference to sustain a connection of speeds above 33.6 kilobits/second (Kbps). Contact your ISP to ensure they are currently using V.90 compliant modems, or have plans to update to them in the near future. Use the PowerMac G3 Int 56K (V.34 Only) modem script, which forces the modem to connect at 33.6 Kbps or lower speeds. This type of connection is more reliable in situations where the phone line quality is questionable.

To use the Power Mac G3 Int 56K (V.34 Only) option, follow these steps:

1. Open the Modem control panel, in the Apple menu.
2. Make sure the "Connect via" pop-up menu is set to Internal Modem.
3. Open the Modem pop-up menu and choose PowerMac G3 Int 56K (V.34 Only).
4. If necessary, set the Sound and Dialing options.
5. Close the control panel. A message asks if you want to save the changes to the current configuration.
6. Click Save. Note: You do not have to restart your computer in order to use the new modem software.

Using FAXstf with your modem

To quick fax from a third-party application other than the Fax application, a printer must be designated using the Chooser (from the Apple menu, select Chooser). After selecting a printer, hold down the FAXstf "activation keys" to change the Print command to the Fax command.

Working with a RAM disk

The RAM disk cannot be used as a startup disk. If you create a RAM disk, its icon will not be displayed in the Startup Disk control panel.

The contents of a RAM disk are saved to the startup drive when you restart your computer. The contents are restored, once the computer restarts. Large RAM disks may add additional time to shutting down and restarting the computer.

WARNING The contents of the RAM disk can be lost if:

- the startup drive is read-only, such as a CD-ROM disc
- the startup drive does not have sufficient space to store the contents of the RAM disk
- the startup drive does not have a valid System Folder
- the computer loses power

IMPORTANT It is highly recommended that you periodically back up the data on your hard disk to an external storage device or network file server.

Connecting to a 10Base-T or 100Base-T network

When you connect your Power Macintosh G3 to an Ethernet network, the computer automatically senses whether it is connected to a 10Base-T

network or to a 100Base-T network. Some (possibly all) ports on some network hubs support both speeds. If you're using this type of hub, there may be a delay in establishing a network link. The delay may last for several seconds after you start or restart the Power Macintosh G3 and a message may appear saying the network is not available or that the network has only just become available. If you don't want a delay, connect your computer to an Ethernet network port that is not auto-sensing (10 or 100 megabits per second (Mbps) only). For more information, contact the manufacturer of the Ethernet hub or your network administrator.

Performance problems using Ethernet

If you experience performance problems on your Ethernet network, check with your network administrator. Your computer performs best when the Ethernet port is set to auto-negotiate.

IMPORTANT The duplex mode of an Ethernet link to a hub is not detected if the hub's port is not auto-negotiating. If the hub's port is not auto-negotiating, your computer will detect the appropriate speed but default to half duplex. If the hub's port at the other end of the link is configured for full duplex, a large number of late events can occur on the link. Set the hub's port to auto-negotiate where possible. If this isn't possible, then set the hub's port to half duplex. For more information, see the documentation that came with the Ethernet hub.

Turning Virtual Memory off when installing third-party applications

Some third-party applications may need virtual memory turned off in order to install the application properly. You can turn virtual memory back on after installation. For information on turning virtual memory off and on, see Mac OS Help.

Allocating memory for third-party applications

Some third-party applications may need to have more memory allocated to them in order for them to run or print properly. For information on increasing the amount of memory for an application, see Mac OS Help.

Customizing appearance and reinstalling system software

You can customize the appearance of certain things, such as the desktop pattern or font, using the Appearance control panel. The Power Macintosh G3 has its own default appearance, or theme. If you change this, or any other theme in the Appearance control panel (for example, to choose a different font) and save your settings as a custom theme, when you reinstall system software, the changes you made will remain and not be overwritten. However, if you make changes in a theme and do not save them as a custom theme, when you reinstall your system software, the settings return to the Power Macintosh G3 default theme.

Performing a clean installation of software

Before you do a clean install of your system software, turn File Sharing off in the File Sharing control panel.

About PlainTalk Speech Recognition 1.5.3

PlainTalk Speech Recognition 1.5.3 was originally engineered for 22.05 kilohertz (kHz) sound input. Your Power Macintosh G3 supports only a higher quality 44.1 kHz sound input. Because of this, the current version of speech recognition is not included on your software install CD. Apple is working on a new version of speech recognition software that will work with the Power Macintosh G3. If you have access to the World Wide Web, you can check the latest information at the following URL: **http://www.apple.com/speech**

Third-party Software Issues

Using up-to-date Internet browsers

Apple recommends that you use Netscape 4.0.5 or later, or Microsoft Internet Explorer 4.0.1 or later; both are included with your computer. If you use earlier versions, you may experience problems.

Reinstalling Internet Explorer and Netscape Navigator

If you inadvertently delete the Internet Explorer or Netscape Navigator applications, you can reinstall the applications using the software install CD that came with your Power Macintosh G3.

Note: Before you reinstall Internet Explorer or Netscape Navigator, you must move the file that contains your Internet sites list to a different location, such as the desktop. In Internet Explorer, this file is Favorites.html; in Netscape Navigator, the file is Bookmarks.html. If you reinstall Internet Explorer or Netscape Navigator, you will overwrite these files and any locations or bookmarks you have added or that were preinstalled will no longer be available. The Favorites.html file is located in the Explorer folder, within the Preferences folder, in the System Folder. The Bookmarks.html file is located in your profile folder, in the Netscape Users folder, in the Preferences folder, within the System Folder. (When you first opened Netscape Navigator, you were asked to enter a profile name. The Bookmarks.html file is in the folder with your specified profile name.)

To reinstall Internet Explorer or Netscape Navigator, you must do a custom installation of the Internet Access software component. To do this, follow these steps:

1. If necessary, move the Favorites.html or Bookmarks.html files to a different location. (See the Note above.)

2. In the pop-up menu next to the Internet Access software component, choose Customized Installation.

3. In the window that appears, choose the desired option: - To install Internet Explorer, click the arrow next to Microsoft, then click in the checkbox next to Internet Explorer. - To install Netscape Navigator, click in the checkbox next to Netscape Navigator.

4. Click OK, then click Start. The selected software is installed.

5. If necessary, move the Favorites.html file back into the Explorer folder, within the Preferences folder of the System Folder.

6. If necessary, move the Bookmarks.html file back into your Netscape Navigator profile folder.

For more information on reinstalling software, see the Troubleshooting Handbook that came with your Power Macintosh G3

Installing third-party applications that install QuickTime

QuickTime 3.0.2 is currently installed on your computer. Some third-party applications install QuickTime as part of their installation process. If an application installs a version of QuickTime earlier than QuickTime 3.0.2, make sure you do a custom install of the third-party application so you don't install an earlier version of QuickTime. If an earlier version of QuickTime is inadvertently installed on your computer, you can replace it by doing a custom installation of system software. See the Troubleshooting Handbook that came with your Power Macintosh G3 and follow the instructions on reinstalling system software. To reinstall QuickTime, you must do a custom installation of the Mac OS 8.5 software component. In the pop-up menu next to the Mac OS 8.5 software component, choose Customized Installation. Click the arrow next to Multimedia and in the list that appears, click in the checkbox next to QuickTime, then click OK. When you're ready to install the software, click Start.

Using FreePPP

If your Internet Service Provider (ISP) requires that TCP/IP be configured for FreePPP, FreePPP starts and tries to connect when attempting to access a server via the Chooser. If this happens, you need to reconfigure the TCP/IP control panel. In the "Connect via" pop-up menu, choose AppleTalk (MacIP) or Ethernet built-in.

Using Norton Utilities

Norton Utilities 3.5.3 or earlier is not compatible with the new Mac OS Extended format of hard drives, also known as HFS+. Apple recommends using Disk First Aid 8.2 or later if you need to test and repair your hard disk. For more information, see the Troubleshooting Handbook that came with your computer.

Using two Ultra-SCSI disks striped with SoftRAID 2.1 or Remus 1.5

You cannot start up your Power Macintosh G3 from a hard disk volume made by striping two Ultra-SCSI disks.

Using a startup disk formatted with third-party formatting software

You can use third party software such as Anubis or FWB to format and partition a hard disk in your Power Macintosh G3. However, if you install a system folder on one of these partitions and select it as your startup disk in the Startup Disk control panel, the computer will not use the Startup Disk volume selected.

Trouble with startup using a Zip cartridge formatted with Iomega driver version 6.0.1

You cannot start up your Power Macintosh G3 with a Zip cartridge that has been preformatted by Iomega with the driver version 6.0.1. To use the cartridge as a start up disk, you need to reinitialize it using the Erase Disk command under the Special menu in the Finder.

Third-Party Hardware Issues

Using Universal Serial Bus (USB) devices with your computer

About drivers for USB input devices

To run a USB device on a Mac OS-based computer, the device needs a software program called a "driver," available from the manufacturer of the device. Drivers appear as "extension" files that are stored in the Extensions folder within the System Folder. Apple already includes drivers in the Mac OS for USB mice, keyboards, hubs, and Imation's USB SuperDisk drive. Drivers for other devices, such as USB game devices, Epson and Hewlett-Packard printers, are included on the software install CD that came with your computer. These drivers can be found in the CD Extras folder, within the USB Device Drivers folder.

To install these drivers, double-click the appropriate folder to open it, then click the Installer icon and follow the onscreen directions. After you install the driver software, you should be able to use the device. If you have problems, please contact the manufacturer of the device. From time to time, new versions of USB drivers become available. For up-to-date information on driver software, contact the manufacturer of the device.

Some USB devices may not work with Mac OS until Mac OS drivers are made available. For information about the compatibility of a USB

device with Mac OS, contact the manufacturer of the device.

Some applications don't recognize USB devices if the devices are plugged in while the application is running. To use the USB device with that application, quit the application, make sure the device is properly plugged in, then start the application again.

Using ADB dongles

Some applications require the use of an ADB (Apple Desktop Bus) dongle for security purposes to prevent software piracy. The Power Macintosh G3 uses Universal Serial Bus (USB) technology. You may be able to use a USB dongle with these applications. For more information, contact the software manufacturer.

Connecting your computer directly to an Ethernet switch

If you connect your Power Macintosh G3 computer directly to an Ethernet switch, you will need to disable spanning tree on that port. If you do not disable spanning tree, your computer could duplicate the AppleTalk address of another computer on the same network which would result in both network connections becoming unreliable.

Using third-party PCI cards in your computer

Some third-party PCI cards will not work on your Power Macintosh G3, and may prevent the computer from starting up. Usually this can be fixed with a firmware upgrade for the PCI card. If you suspect you have a problem with a PCI card, shut down your computer, remove the card, and restart. Contact the card's manufacturer for a firmware upgrade.

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Published Date: Feb 20, 2012

Macintosh Server G3 (Blue and White): Read Me

This article contains the Read Me for the Macintosh Server G3 based on the Blue and White Power Macintosh G3.
This article has been archived and is no longer updated by Apple.
Important Information for Your Macintosh Server G3

This document provides information about your Macintosh Server G3 that supplements the information in the manual Setting Up Your Power Mac G3 and the Troubleshooting Handbook. Read this document for information about issues discovered after the manuals were completed and possible solutions. For up-to-date news and compatibility information, please see the Hot News Headlines on the Apple Support web site: **http://www.apple.com/support**

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Macintosh Server G3 Custom Mac OS Information

Your server comes with Mac OS 8.5.1, tuned for the Macintosh Server G3 with the addition of software extensions that enhance the performance of your server:

- Macintosh Server G3 Bundled Apple and Third-Party Software Information
- Mac OS 8.5.1 for the Macintosh Server G3
- AppleShare IP 6.1
- Network Assistant 3.5
- SoftRAID 2.1.5

AppleShare IP Web & File Update 1

AppleShare IP Web & File Update 1 is an extension that protects AppleShare IP Web & File servers (versions 6.0 and 6.1) from the denial-of-service attack known as Winnuke. This patch protects all services in the Web & File server. Such attacks are most common on Windows file sharing.

The likelihood of experiencing a Winnuke attack is small - it requires a deliberate malicious action, and the attacker has to have some knowledge of your system.

Background on the Winnuke Attack

A Winnuke attack is a malicious attempt to crash a server by sending it data that it cannot handle. Specifically, a high-priority message (also called an "out of band message") is sent over TCP/IP to the Windows file sharing port. Since priority messages are not a normal part of the Windows file sharing protocol (SMB), there is no established way to handle such messages, and the server considers this to be a fatal error.

This update instructs the server ignore all out of band messages. This does not affect the server's ordinary operation.

The AppleShare IP Web & File Update 1 Extension is installed in the System Folder of the Macintosh Server G3.

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Software License Info

The version of AppleShare IP 6.1 included with your server has an unlimited user license. The AppleShare IP 6.1 license agreement allows you to install and use the server software (or the individual components thereof) on a single computer. This agreement allows you to install the individual server programs on different computers; it does not allow you to install the same server software on more than one computer at a time. To install the server software on more than one computer, you need to purchase additional copies of the software. For more information, see the license agreement that appears when you install the AppleShare IP 6.1 software.

Network Assistant 3.5 has a license for 10 computers, whether clients or servers.

The license for Mac OS 8.5 and SoftRAID is for one machine.

Late-Breaking Issues and Known Problems

Starting Up from SoftRAID Formatted Volumes

When you create HFS or mirrored volumes on your server using SoftRAID, only the first partition can be used as the startup volume. (You set the startup volume in the Startup Disk control panel.) You can determine the first partition using the SoftRAID application.

Using striped SCSI disks

You cannot start up your Power Macintosh G3 from a striped volume, only from HFS and mirrored volumes.

SoftRAID and Drive Setup

After installing SoftRAID drivers onto your disk drives and creating volumes, you should restart your computer to remove the Drive Setup drivers. Otherwise a situation could occur in which a volume seems to be mounted twice.

SoftRAID Striped Disks and Virtual Memory

The Macintosh Server G3 has a limit for the minimum stripe unit block size when Virtual Memory is enabled. This limit is 8 blocks. Setting the stripe unit block size below 8 blocks with Virtual Memory ON will cause the machine to freeze. If you need to run with a stripe unit size of less than 8 blocks, turn off Virtual Memory.

Disk Drives Compatible with SoftRAID

For information about disk drives that are compatible with SoftRAID, check the Apple Support web site: **http://www.apple.com/support** You can contact SoftRAID at: **http://www.softraid.com/**

Unavailable Ethernet Port

If AppleTalk is configured to use an Ethernet port that's no longer available (for example, if an extension needed by a PCI networking card is disabled), you will see a message that the system will use the built-in LocalTalk port. However, the Macintosh Server G3 does not have a LocalTalk port, so AppleTalk is turned off in this situation. If you open the AppleTalk control panel, this message appears: "Ethernet slot J9 is no longer available. Ethernet has been selected instead." You will then see another message asking whether to turn on AppleTalk.

Duplicate AppleShare IP Web and File Serial Number

It is not possible to use a single serial number to run AppleShare IP Web and File services on two servers. If this situation occurs, this message appears: "AppleShare Web & File server needs your attention. Please select it from the application menu." The number 3003 appears in the lower left corner. The server software may crash in this situation.

AppleShare IP 6.1 Installer Partition Size Limit

ASIP 6.1 Installer does not work with partitions of 21,504MB or larger.

Virtual Memory Limitations

Your Macintosh Server G3 ships with virtual memory turned off. You should make sure virtual memory is turned off when using RAID software, including SoftRAID. You can run AppleShare IP with a light to moderate load with virtual memory turned on, but for the best performance and stability, you should keep virtual memory turned off, especially when your server is handling a large number of connections. For increased stability in heavy load conditions, install additional memory.

Loss of Ethernet after Installing New Software

Some software installers may replace certain extensions, such as the "Ethernet (built-in)" extension, with older versions that are not compatible with the Macintosh Server G3. If Ethernet is unavailable after installing software, make sure that the "Ethernet (built-in)" extension is version 2.2 or later. If not, reinstall system software using the system software CD that came with your server.

Loss of Open Transport Networking after Installing New Software

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The Macintosh Server G3 ships with Mac OS 8.5, which contains version 2.0.2 of Open Transport. Some network software installers may replace this version with an older version that is not compatible with the Macintosh Server G3. If networking is unavailable after installing software, make sure that Open Transport is version 2.0.2 or later. If not, reinstall system software using the system software CD that came with your server.

Headless Server Support

The Macintosh Server G3 can be configured to function without a monitor attached. The provided video adapter, part number 590-1120-A, must be installed.

Mac OS Extended Format

Macintosh Server G3 hard disk drives are set up with Mac OS Extended format (HFS+). Mac OS Extended format optimizes the storage capacity of large disk drives by reducing the minimum size of a single file. For more information, see the document About Mac OS Extended Format in the Mac OS Read Me Files folder.

Mac OS 8.5 also supports hard drives with Mac OS Standard format. To find out the format of a drive, select the drive and choose Get Info from the File menu.

Date and Time Handling in Mac OS Extended Format

When you change time zones in the Date & Time control Panel, the creation and modification times of files on a Mac OS Extended format volume change. If you change the time using the clock, the times do not change. Times on Mac OS Standard format volumes don't change.

Mac OS Extended format stores files' creation and modification times in Greenwich Mean Time (GMT) and stores the offset from GMT in Parameter RAM (PRAM). The system adds the offset to the GMT to determine a file's creation or modification time.

Aliases may not work properly when you change Daylight Saving Time or time zone. Incremental backups also may not work, since every file appears to have been modified.

Disk Recovery Utilities and Mac OS 8.5

Many older versions of disk recovery utilities are not compatible with Mac OS 8.5. Make sure you have recent versions of disk recovery utilities that are compatible with Mac OS 8.5 and Mac OS Extended format.

Installing Acrobat Reader Software from the System Software CD

To install Acrobat Reader software on your server, make sure that Server HD is selected as the startup disk. Then insert the Server System Software CD into your CD-ROM drive. Open the Adobe Software folder on the CD. Open the Acrobat Reader 3.0 folder on the CD and follow the installation instructions. See the onscreen help for instructions on how to change the startup disk.

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Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Graphics Accelerator Shows Red "X" on Startup

If the Extensions Manager is set to "Mac OS 8.5 All", or the set of extensions that loads at startup are otherwise customized, it is possible that an icon with a red "X" appears as the video driver extension(s) are loaded.
This article has been archived and is no longer updated by Apple.
If the necessary support files an extension needs to load have been disabled, a red X will appear over its icon during startup, indicating the extension did not load properly.

In Power Macintosh G3 (Blue and White) computers that ship with Mac OS 8.5.1, some of the ATI video driver extensions are part of the Mac OS 8.5 package, and some are part of the Power Macintosh G3 2.0 package. When selecting Mac OS 8.5 All, extensions that are not part of this set do not load, including the ATI Resource Manager extension. As a result, the ATI Graphics Accelerator do not load on the next restart and show an icon with the red X through it.

Before using the following workaround, create a duplicate Mac OS 8.5 set using the Duplicate button in the lower right corner of the window. This must be done because you cannot modify the default extension set. Name the set anything you like, then continue with the following steps.

1. In the Extensions Manager and choose View as Packages from the View menu.
2. Choose Mac OS 8.5 All from the Selected Set popup menu.
3. Check the checkbox next to the Power Macintosh G3 2.0 package to ensure all ATI extensions are enabled. (Make sure the checkbox has an "x" in it, not just a "-".)
4. Restart the computer.

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Ghost Monitor When Using PCI Video Cards

A PCI video capture card that works with some PCI-based computers may not work with the Power Macintosh G3 (Blue and White) computer. In those cases, a blank desktop appears after the Power Macintosh G3 (Blue and White) starts up.
This article has been archived and is no longer updated by Apple.
The PCI and video architectures are such that the computer thinks a monitor is connected to any PCI card, except for the ATI RAGE 128 card in the 32 bit, 66 MHz PCI slot. This is normally not an issue since you would plan to use a video card you installed. However, some video capture cards also provide VRAM and a connector for external monitors. If you are using the card for capture but are not connecting a monitor to it, the computer still thinks that there is a monitor connected to that card.

The computer initially numbers the external monitors starting from the top-most PCI slot and ending with the 32-bit, 66-MHz PCI slot. Because of this, if you have a monitor connected to the ATI RAGE 128 card but not to the PCI video card, the computer starts up to a blank desktop. This is because the primary monitor with the menu bar is assumed to be connected to the PCI video card. To solve this issue, follow these steps:

1. Shut down the computer and connect the monitor to the PCI video card.
2. Connect the VGA adapter that comes with your computer to the ATI RAGE 128 card. This tricks the computer into thinking there is a monitor connected to the card.
3. Start up the computer. You should now see the menu bar and hard disk.
4. Open the Monitors & Sound control panel. Check the "Identify the startup screen" box. Drag the Happy Mac icon from the first monitor icon to the second. Then drag the menu bar from the first monitor icon to the second. At this point the menu bar moves to the invisible monitor.
5. Close the Monitors & Sound window.
6. Press the power button on the keyboard. The computer beeps and the shutdown/restart dialog appears, but you won't be able to see it because it's on the invisible monitor. Press the Return key and the computer shuts down.
7. Remove the VGA adapter and connect the monitor to the ATI RAGE 128 card.
8. Start up the computer.
9. Open the Monitors & Sound control panel and arrange the monitors so that only the corners are touching. This keeps you from accidentally moving on to the "ghost" monitor while working.

Since these settings are stored in both NVRAM and the Monitors & Sound preferences, you should not encounter this situation again.

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Connection Issues with FireWire DV Devices

This article discusses potential connection issue with some DV products when used with the FireWire DV implementation on the Power Macintosh G3 (Blue and White).
This article has been archived and is no longer updated by Apple.
The issue typically manifests itself when the FireWire application generates an error or simply doesn't see the device. If a DV device is transmitting DV (either in camera mode or playing back a tape) when it is plugged into the computer, the device may not be seen by the computer.

If this happens try powering the DV device off and back on. If the device still is not recognized, turn the device off, restart the Macintosh, then turn the device on.

If the camcorder or deck remains unrecognized by the Macintosh, ensure the device is powered off before connecting it to the computer.

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Switching Resolutions Yields Blank Gray Screen

If the Extensions Manager is set to "Mac OS 8.5 All", or the set of extensions that loads at startup are otherwise customized, it is possible that switching the monitor's resolution yields a blank gray screen and the mouse pointer seems to disappear.

This article has been archived and is no longer updated by Apple.
If the necessary support files an extension needs to load have been disabled, a red X will appear over its icon during startup, indicating the extension did not load properly.

In Power Macintosh G3 (Blue and White) computers that ship with Mac OS 8.5.1, some of the ATI video driver extensions are part of the Mac OS 8.5 package, and some are part of the Power Macintosh G3 2.0 package. When selecting Mac OS 8.5 All, extensions that are not part of this set do not load, including the ATI Resource Manager extension. As a result, the ATI software will not completely load, and you may see a blank gray screen after switching resolutions.

If this situation occurs, you may need to restart the computer using the reset button (with the triangle symbol) on the front of the computer. Video is restored after restart.

To resolve the situation, enable all of the ATI extensions using the following steps:

1. In the Extensions Manager and choose View as Packages from the View menu.
2. Choose Mac OS 8.5 All from the Selected Set popup menu.
3. Check the checkbox next to the Power Macintosh G3 2.0 package to ensure all ATI extensions are enabled. (Make sure the checkbox has an "x" in it, not just a "-".)
4. Restart the computer.

Published Date: Feb 20, 2012

Removing Dust Accumulation From Inside the Computer

This article discusses dust accumulation within a computer and how to safely remove it.
This article has been archived and is no longer updated by Apple.
In general, dust accumulation is not harmful to the operation of the computer. An excessive accumulation can cause heat concerns since airflow over the various components is diminished.

The optimal method for removing excessive accumulations of dust is by vacuuming it up with a static protected vacuum designed for use with sensitive electronic components. An alternate method is compressed air such as that available in small aerosol cans at electronics retailers.

When using compressed air to remove dust, it is important to follow the instructions accompanying the product. Special care should be taken to always hold the can upright and not to shake the contents while spraying. Condensation and possible component damage may occur should these products be misused.

A gentle stream of air delivered in a series of short bursts should be all that is necessary to remove the majority of any accumulation, it is not necessary to remove all of the accumulation. Direct the stream of air away from mechanical components such as disk drives, power supplies, and expansion slots to prolong their life.

Published Date: Feb 20, 2012

Apple Studio Display 17: How to Set up for Use With Earlier Power Macintosh Computers

This document describes how to set up your Apple Studio Display 17 display to make the maximum number of resolutions available for use with earlier Power Macintosh computers.
This article has been archived and is no longer updated by Apple.
If you are using any of the following computer models or graphics cards, you must turn off the DDC (Data Display Channel) control to make the maximum number of resolutions available:

- Power Macintosh 6100, 7100, and 8100 series
- PowerBook 1400 and 5300
- Power Macintosh 9500, 6200, 6300, and 6400 series
- some third-party video cards

For example, if you are using any of the above computer models, or a third-party video card, and you are able to access only the 640- by 480-pixel resolution setting, you must turn off the DDC control to access the rest of the resolution settings.

Turning off the DDC control

1. Press the OSD Enter button on the left of the monitor. The main menu of the on-screen display (OSD), the Basic Adjustments screen, appears. This menu contains the seven main control icons of the OSD: Basic Adjustments, Geometry, Image, Color, OSD Adjust, Language, and ETC. These icons represent controls that you use to adjust the picture and the on-screen display window.

Figure 1 On-screen display (OSD) menu

Figure 2 Basic adjustments screen

2. Use the left or right arrow buttons to highlight the ETC icon and press the Enter button. Select Off to disable DDC. More resolutions should now be available.

Figure 3 Image screen

3. Press the OSD Exit button to leave the OSD function.

Figure 4 ETC screen icons
Published Date: Feb 20, 2012

Apple Studio Display 17: Removing Vertical Lines from Display

Upon setting up my Apple Studio Display 17, you may notice a number of thin vertical lines.

This article has been archived and is no longer updated by Apple.
The Diamondtron CRT used in the 17-inch Studio Display incorporates an aperture grid of very fine, vertical wires to enhance the sharpness of the image. Exposure to cold and or vibration can cause these fine wires to temporarily adhere to each other.

Note: Be careful not to confuse a vertical line with the horizontal stabilizing grid wires described in Article 11497 "**Apple Color Monitors: Cause of Thin Horizontal Line(s)**" . The horizontal wires are completely normal.

The vertical line anomaly is inherent to this type of display when exposed to lower temperatures and is not indicative of the need for a service call.

If your display is exhibiting visible thin vertical lines, you can most often break the adhesion between the grid wires by using the heel of your hand to moderately impact the side of your display under the Apple logo on the right, then left side. Using moderate force does not damage your display.

To avoid scratching or marring the external plastics, remove any jewelry or watches before you tap the display.

If the lines persist after a few attempts to break the adhesion of the wires, you should take the display to an Apple Authorized Service Provider for additional troubleshooting.

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Displaying DVD Video on Second Display

DVD movies are shown only if a display is connected to the factory-installed video card. If a second video card is installed in the computer, and a display is attached to that card, movies will not appear on that screen.

This article has been archived and is no longer updated by Apple.
With a display connected to a separate video card and none connected to the pre-installed ATI video card, the DVD video software opens and presents a video window. However, when a DVD disc is inserted, the window disappears. The application is still running but it is routing the video signal to the ATI card.

The only way to view a movie is to use the pre-installed ATI card. Because the DVD decoder is a daughter card attached directly to the ATI 128 Graphics accelerator card, it does not allow the video window to be moved to a second display or extended desktop.

This issue may also affect Power Macintosh G4 computers with additional video cards installed. The error message may indicate a software failure, but you should verify that the menu bar is on the built in factory card and that the video is being directed to that card instead of the additional video card.

Article 30887, "**Power Macintosh G3 (Blue and White): Apple DVD Player Cannot Open**" contains information on other DVD error messages.

Published Date: Feb 20, 2012

About Your Dual Channel Ultra2 LVD SCSI Card

This article contains the information included with the Dual Channel Ultra2 LVD SCSI card available as a Build To Order option for the Power Macintosh G3 (Blue and White).

Note: A second Dual Channel card has been created for the Power Mac G4 (AGP Graphics). The card described in this article is equivalent to the Adaptec 3950U2B card and is not supported on the Power Mac G4.

This article has been archived and is no longer updated by Apple.

About Your Dual Channel Ultra2 LVD SCSI card

Your computer has a Dual Channel Ultra2 LVD SCSI card. This peripheral component interconnect (PCI) card allows you to connect devices that use the Small Computer System Interface (SCSI). SCSI is a standard method for connecting disk and cartridge drives, CD-ROM drives, scanners, and other devices. A SCSI port permits high-speed communication between the computer and the device.

You can connect internal and external SCSI devices to the card using SCSI cables. You can purchase SCSI cables from an Apple-authorized dealer or retailer.

Advantages of Your Dual Channel Ultra2 LVD SCSI card

Your Wide Ultra2 Dual Channel SCSI Card has two data channels and uses Low Voltage Differential (LVD) technology.

This technology provides the following benefits:

- High data transfer rates: Your card can transfer information over a single channel at up to 80 megabytes (MB) per second, twice as fast as Ultra SCSI devices. When the card's two channels are in use at once, the card can transfer information at up to 160 MB per second.
- Connect more devices: You can connect up to a total of 30 SCSI devices to the card (15 per channel) internally and externally (limited by the number of internal devices your computer is designed to hold).
- Use of longer cable lengths: The cables used to connect a chain of Ultra2 SCSI devices can be up to 12 meters (about 39 feet) long facilitating easy positioning of external devices.
- Compatible with older SCSI devices: You can connect other SCSI devices that are not as fast as the Ultra2 SCSI, such as Ultra Wide, Ultra Narrow, Fast, and Standard SCSI devices.

Note: Older SCSI devices must use SCSI Manager 4.3 compliant drivers. To determine if your device works with SCSI Manager 4.3, see your SCSI device documentation.

You can connect two chains of SCSI devices to your card, one chain to each channel. You can arrange devices so that Ultra2 SCSI devices can perform at their optimum transfer rate on one channel, while older devices that perform at slower rates can be assigned to a second channel.

Important: If you mix different kinds of SCSI devices that run at different speeds on one channel (internal or external), the channel will operate in single-ended mode for older SCSI devices with a top transfer rate of 40 MB per second.

Note: Make sure you use a SCSI cable compatible for use with Ultra2 devices that have Low Voltage Differential (LVD) technology.

About Connecting SCSI Storage Devices

You can connect SCSI devices in a chain. The first device connects to one of the SCSI card's connectors, the next device connects via a cable to the first SCSI device, and so on. The card has an external cable connector for external SCSI devices and three internal connectors for internal devices.

Channel A serves the external cable connector and one 68-pin internal connector. Channel B serves the other 68-pin internal connector and a 50-pin connector for connecting older internal SCSI devices (although it is not recommended that you install older narrow SCSI devices internally).

All devices connected to channel A connectors are part of a single SCSI chain. Likewise, all devices connected to channel B connectors are part of another SCSI chain. You can connect up to 15 total devices to each channel for a total of 30 devices (although your computer may not be able to house this many devices internally.) The Apple Power Macintosh G3 (Blue and White) is designed to house three internal SCSI devices.

About Channel Data Transfer Rates

The SCSI transfers information in one of two modes: Ultra2-LVD mode or single-ended mode.

In Ultra2-LVD mode, a chain of Ultra2 SCSI devices can transfer data at their fastest speed, 80 MB per second. However, if you connect a slower SCSI device to the chain, the channel defaults to a slower single-ended data transfer mode.

In single-ended mode, a channel can support different data transfer rates from each device up to a top rate of 40MB per second. For example, if you connect mixed SCSI devices that have different transfer rates, each device transfers data at its own speed without affecting the transfer rate of other devices on the channel. An Ultra SCSI device can transfer data at 40MB per second, the top speed for the channel, and another slower device transfer data at a slower rate. In single-ended mode, however, Ultra2 SCSI devices can only transfer data at 40 MB per second, half their potential rate.

When you plan your chain of SCSI devices, take into account whether you want the chain to operate in Ultra2-LVD mode or single-ended mode.

Make Sure Each Device In a Chain Has a Unique ID Number

Each SCSI device in a chain connected to your card must have its own unique ID number from 0 to 15 per channel. (The number 7 is assigned to the card.) You can assign ID's from 0-6 and 8-15. The SCSI ID number helps the computer keep track of the devices when several devices in the SCSI chain are communicating with the computer simultaneously.

The SCSI devices can be in any physical order in the chain; it is not necessary to arrange them in numerical order. See the instructions that came with each SCSI device for information on checking and setting its SCSI ID number.

Important: If two or more devices in a chain have the same ID number, your computer may not start up properly, your equipment may malfunction, and you may lose data as a result.

Use the Right Type and Length of Cable

Your computer includes a cable for connecting up to three internal SCSI devices.

To attach an external SCSI device to your computer or to another external device, always use SCSI cables that are double-shielded, such as Apple SCSI cables. Never use printer-type RS-232 cables. Poor-quality SCSI cables are often the cause of SCSI problems. Avoid mixing brands and types of SCSI cables.

Keep the cables between SCSI devices as short as possible.

Important: The maximum cable length that you can use depends on the types of devices in the chain. See the information below about maximum cable lengths:

SCSI device	Maximum cable length
Wide Ultra2	12 meters (about 39 feet)
Ultra	1.5 meters (about 5 feet)
SCSI-1, SCSI-2	3 meters (about 10 feet)

Note: The internal cable connected to the card represents one meter of cable length. For example, when you connect Ultra external devices, the internal cable takes up one meter of the 1.5 meter maximum length, leaving .5 meters of cable length for connecting devices.

Terminate the SCSI Chain Properly

To ensure accurate transmission of information, a terminator must be present at each end of a SCSI chain. When you connect SCSI devices, make sure that only the last external device in the chain has a terminator. (The second terminator at the beginning of the SCSI chain is inside your computer.)

The cable supplied for internal SCSI devices within your computer is already correctly terminated.

To terminate the last device in an external chain, do one of the following:

- Use a device that has a built-in terminator as the last device in the chain.

  If you wish to attach two or more SCSI devices that have built-in terminators, an Apple-authorized service provider can remove the extra built-in terminators.

- If the device at the end of the SCSI chain does not have a built-in terminator, attach an external terminator. You can attach or remove external terminators yourself. Terminators are available at authorized Apple dealers.

Important: Do not attach a terminator to a device that already has a built-in terminator. If you do, your computer may not start up properly.

Connecting an Internal SCSI Storage Device

To install an internal SCSI device, see the setup manual that came with your computer. It's recommended that you connect internal SCSI devices to channel B.

Connecting an External SCSI Device

TA25845_About_Your_Dual_Channel_Ultra_LVD_SCSI_Card.pdf

To connect an external SCSI device to your card, follow the instructions below. Use these general instructions in conjunction with the more specific instructions that came with your external SCSI device.

1. Shut down your computer and make sure the SCSI device is switched off.

2. Use a SCSI cable to connect the device either to the card's external SCSI connector or to the last SCSI device already in the chain.

Use a SCSI cable that is compatible with the SCSI device. For more information, see the documentation that came with the SCSI device.

Use the thumbscrews on the connectors to make a tight, reliable connection. Do not overtighten the thumbscrews.

3. Turn on all devices in your SCSI chain.

Important: Always turn on all external SCSI devices connected to your computer before turning on the computer itself. Otherwise, your computer won't recognize that the SCSI devices are connected to it and your computer may not be able to start up.

4. Turn on your computer.

Icons appear for all SCSI devices connected.

Note: If you do not see an icon for a device, you may need to use drive formatting software, such as Drive Setup, to mount the device and make it available for use.

5. Install any necessary device drivers (software that makes a device work with your computer).

Drivers needed for a SCSI device usually come on a disk or CD with the device. (If no drivers come with the device, contact the deviceís manufacturer.) Some older SCSI devices may require updated drivers to work with your computer.

Note: If you experience problems after connecting a SCSI device, see the troubleshooting documentation that came with your computer for possible solutions.

Technical Specifications

- Supports 8-bit and 16-bit Ultra2, Ultra Wide, Ultra Narrow, Fast, and Standard SCSI devices
- Supports up to a total of 30 SCSI devices internally and externally (15 per channel, limited by the number of internal devices your computer is designed to house)
- Transfers data at up to 80 Megabytes per second (MB/sec) on each channel
- Supports SCSI Manager 4.3 compliant drivers only

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Error When Installing Imation Superdisk 1.2 Driver

The install CD included with the Imation Superdrives will not install on a Power Macintosh G3 (Blue and White).
This article has been archived and is no longer updated by Apple.
Attempting to install the Imation Superdisk drivers from the included CD will generate a dialog box stating "This program cannot run on your computer. See the documentation for more details."

The version of the driver on the CD works fine on the iMac but will not install on the Power Macintosh G3 (Blue and White). Imation has posted an updated driver which can be downloaded from their web site at **http://imation.com/support/products/superdisk_drivers.html**

Note: The Power Macintosh G3 (Blue and White) is shipped with the Imation drivers pre-installed so there is no need to run the install program prior to use. If you need to reinstall the drivers, download the latest version from Imation.
Published Date: Feb 20, 2012

Apple Displays: DPMS Mode Support

This article details the Display Power Management Signaling (DPMS) standard and how it is implemented with Apple displays.
This article has been archived and is no longer updated by Apple.
DPMS (Display Power Management Signaling) is a standard developed to save energy and maximize the useful life of computer displays. By switching the horizontal and vertical sync lines on or off, a DPMS compliant video card provides the capability to place the monitor into one of four modes (Normal, Standby, Suspend, Off).

Each mode puts the display into a different powered state from fully powered up, to the Off mode. In the Off mode, only a small auxilliary circuit is running which monitors the horizontal and vertical signals to wake up the monitor.

Mode	H/V Sync	Power Consumption*	LED	Notes
Normal (On)	On/On	Less than 150 watts	Green	Display operating
Standby	Off/On	Less than 15 watts	Amber	Guns off, power supply on
Suspend	On/Off	Less than 15 watts	Amber	Guns off, power supply off
Off	Off/Off	Less than 5 watts	Amber	All off except aux circuit

Standby is the mode typically set by screen savers when they blank the screen rather than displaying a pattern. The tube filaments are left on to allow a faster recovery when the display is needed again. The Off mode (Energy saver mode) is set when the Macintosh is put in the sleep mode or by using the Energy Saver control panel to put the display to sleep. In this mode the horizontal and vertical sync signals from the Macintosh video output are turned off as well as the tube filaments in the CRT. Waking up from this mode takes a few seconds longer because the tube filaments must warm up.

Note: The power consumption values provided above are valid only for the Apple Studio Display 17. The actual values may vary depending on which display is being used, and whether DPMS support is enabled.

Published Date: Feb 20, 2012

About Your Apple Gigabit Ethernet PCI Card

This article comprises the About document for the fiber optic Gigabit Ethernet PCI card originally made available for the Power Macintosh G3. This article has been archived and is no longer updated by Apple.

About Your Apple Gigabit Ethernet PCI Card

Your computer has a Gigabit Ethernet PCI Card installed. With this peripheral component interconnect (PCI) card, you can connect your computer to a 1000Base-SX Ethernet fiber optic network and transfer information at up to one gigabit per second, ten times faster than data transfer rates for 100Base-TX networks.

Your card works with Ethernet equipment that supports standard Ethernet maximum and minimum frame size, frame format, and protocols. For a list of the supported standards and protocols, see *Standards and Protocols Supported* at the end of this document.

Connecting to Your Ethernet Network

Use a 62.5 micron Multi-Mode fiber (MMF) or 50 micron MMF fiber optic cable with 850 nanometer (nm) SC connectors to connect your card to a fiber optic network.

Note: The cable length from your Ethernet port to a network hub should not exceed 260 meters for 62.5 Micron Multi-Mode fiber (MMF), or 550 meters for 50 Micron MMF fiber. Check with your network administrator if you have a questions about the cable length.

To connect your Gigabit Ethernet PCI Card to your network, follow these steps:

1. Turn your computer off.

2. Insert the SC connector from your cable into your card's SC connector ports.

3. Insert the other end of your cable into a connector or hub connected to your network.

Installing the Gigabit Ethernet PCI Card Software

If your computer uses Mac OS X Server, the required Ethernet software is already installed on your computer. No further installation is necessary.

If your computer uses Mac OS, you must install two system extensions in your System Extensions folder. These extensions are on the Gigabit Ethernet CD.

To install the Gigabit Ethernet PCI Card software:

1. Turn on your computer.

2. Insert the Gigabit Ethernet CD in your CD ROM drive.

3. Double-click the CD icon to open it.

4. Locate the extensions, Apple Gigabit Enet I and Apple Gigabit Enet II, and drag them onto your closed System Folder.

A message asks if you want to install these files into the Extensions folder.

5. Click OK.

6. After installing the software, restart your computer.

Configuring Your Computer

After you start up the computer, you may need to further configure your computer for a network connection. Your network administrator can provide the necessary information. You can also find help for configuring your network software in the manual and onscreen help that came with your computer.

Technical Specifications

Features

- 1000Base-SX card compliant with IEEE 802.3z
- One gigabit per second data transfer rate, 850 nm (full duplex)
- Single 1000Base-SX (GBE) port
- Full-duplex gigabit Ethernet interface

- Dual DMA channels
- Supports full flow control
- 33/66 MHz, 32 or 64-bit bus master
- PCI local bus rev. 2.1 compliant
- Duplex SC fiber connector
- SC connector characteristics: operating range at 62.5 micron MMF up to 260 meters, at 50 Micron MMF up to 550 meters
- 10 watts maximum power consumption
- 3.5 V and 5 V voltage

Standards and Protocols Supported

- Logical Link Control (IEEE 802.2)
- SNMP (limited MIB)
- Ethernet (IEEE 802.3z)
- Media Access Control (IEEE 802.3u)
- Flow Control (IEEE 802.3x)

Published Date: Feb 20, 2012

AppleWorks: Justified Text Prints Beyond Margin

Text may print beyond a document's margins, especially if it is fully justified.

This article has been archived and is no longer updated by Apple.

Symptom

Text prints beyond a document's margins, especially if it is fully justified, but also if it is right aligned, or center aligned. Text that is left aligned prints correctly.

Solution

- Print to a different printer.
- Create a PDF version of the document and print the PDF version.

Creating and Printing PDF Documents

You can use PrintToPDF or Adobe's PDFWriter-among other software-to create a PDF document. You can use Adobe Acrobat Reader to open and print the PDF file you create.

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following article can help you search for a particular vendor's address and phone number:

- Article 17159: "**Locating Vendor Information**"

Published Date: Feb 20, 2012

Dutch iMac Restore CD: Error When Trying to Restore

When using the Dutch iMac Rev. B restore CD (N691-2090) on a Rev. B iMac (M6709N/B), the erase process does NOT function correctly if the Erase Before Restore check box is selected.

Note: This does not affect any iMac other than those which use the Dutch restore CD noted above.
This article has been archived and is no longer updated by Apple.
Attempting to do so will result in the Apple Software Restore application returning the dialog "De volume informatie kon niet worden gekopieerd. -46". After you press OK you then get the following message "Het terugzetten van bestanden is mislukt. Het volume Macintosh HD is wellicht onbruikbaar."

Disk First Aid will also report problems with the hard disk that it cannot repair.

Recommendations:

The work-around is to use Drive Setup to initialize the Hard Drive prior to installing or restoring without the erase before restore option selected.

Published Date: Feb 20, 2012

ColorSync 2.6: Issue with ICC Profiles

This article describes an issue with some ColorSync profiles which may not appear in the ColorSync Control Panel. This error can occur even if the profile is properly installed. The solution is to use the ColorSync Profile First Aid 2.6 utility posted to Apple Software Updates.
This article has been archived and is no longer updated by Apple.

Overview

ColorSync 2.6 is the first release of the software which implements full support for Unicode information which is stored in the desc tag of the Profile. Supporting this allows it to work with Unicode based Operating Systems.

If a profile is no longer showing up in the Control Panel after installing ColorSync 2.6, you should contact the developer who created the Profile or download the Profile First Aid utility from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Details

The desc tag of a profile, as defined by the ICC (International Color Consortium, http://www.color.org), contains up to three strings. The first is a required 7-bit roman ASCII string. The second is an optional localized Unicode string. The third, also optional, is a localized string in Mac script-code format. Applications typically use one of the available strings to show the name of profiles in a list or pop-up menu. The ICC definition of the 'desc' tag requires that all three strings must be null terminated and that all three strings are preceded by a character count that includes the null terminator. It also worth noting that for the Unicode string, the character count must not be confused with a byte count because each Unicode character requires two bytes.

Previous releases of ColorSync only made partial use of this tag. ColorSync 2.6 is the first release of the technology that was designed to run both on Mac OS and Windows. Since Mac script-code format strings are not usable on Windows, ColorSync clients need to have access to the localized Unicode string.

The remedy for Profiles created without a Unicode tag is to repair the affected profiles.

Published Date: Feb 20, 2012

Apple Modem Updater 1.3.5: Read Me

This article comprises the Read Me for the Apple Modem Updater version 1.3.5. This software was released by Apple on March 29, 1999 and is available for downloading from the Apple Software Updates Web site at http://www.apple.com/swupdates.

If you have questions as to when to install available updaters, refer to Knowledge Base article 58174: "**iMac: When to Install Available Updaters**".

To search for other software updates specifically related to the iMac please refer to the **Apple Downloads** page.

Description:
The Apple Modem Updater will update all modems in the iMac and the PowerBook G3 Series computers (both the K56flex only modem shipping in earlier PowerBook G3 Series and the V.90 compliant modem currently shipping in the PowerBook G3 Series).

Note: The PowerBook G3 Series (Bronze keyboard) does not need this update because it is already installed in these computers from the factory.
This article has been archived and is no longer updated by Apple.
The updater installs version 2.2 of the Rockwell firmware which contains the most recent versions of both the V.90 and the K56flex protocols. The modems can use either the K56flex or V.90 protocols and will automatically negotiate with the service provider to use the appropriate one. The modem scripts have been revised to properly reflect the new V.90 connection speeds, and to resolve a European blind dialing issue.

This software bundle contains:

- New modem firmware for the internal 56K modem
- New modem scripts (CCL's)
- New PowerBook G3 Series Modem extension.

The new PowerBook G3 Series Modem extension resolves several known issues. These include:

- Modem power-off issue: Resolves a modem power down issue (resulting in battery drain during PowerBook G3 sleep), if the PowerBook G3 Series computer is manually put to sleep before the modem has been shut down for 30 seconds.
- Modem popping sound: Resolves an audible pop when the modem is being powered on or off.

Important Information About the Apple Modem Updater and New Modem Software

This updater supports the internal modem which came with your PowerBook G3 Series or iMac computer.

This software bundle contains:

- new modem firmware for the internal 56K modem
- new modem scripts (CCL's)
- new PowerBook G3 Series Modem extension

Your existing modem was originally shipped with the latest firmware available, however, 56K modems are still in their infancy and will be undergoing changes over the next several months. The Apple Modem Updater installs the most recent Rockwell firmware, based on version 2.2.

The modem scripts have been revised to properly reflect the new V.90 connection speeds, and to resolve a European blind dialing issue.

The new PowerBook G3 Series Modem extension resolves several known issues. These include:

Modem power-off issue: Resolves a modem power down issue (resulting in battery drain during PowerBook G3 sleep), if the PowerBook G3 Series computer is manually put to sleep before the modem has been shut down for 30 seconds.

Modem 'popping' sound: Resolves an audible pop when the modem is being powered on or off.

This document also contains several references to articles in the Knowledge Base that discuss modem connectivity issues. These articles are recommended reading for better a understanding of 56K modem technology.

What The Apple Modem Updater Does

The Apple Modem Updater will update all modems in the iMac and the PowerBook G3 Series computers (both the K56flex only modem shipping in earlier PowerBook G3 Series and the V.90 compliant modem currently shipping in the PowerBook G3 Series). The updater installs version 2.2 of the Rockwell firmware which contains the most recent versions of both the V.90 and the K56flex protocols. The modems can use either the K56flex or V.90 protocols and will automatically negotiate with the service provider to use the appropriate one.

After you have updated the modem you may notice that the connection speed that is reported when you first establish a connection may be lower than it was prior to the upgrade, however the modem throughput will be at least as good and often better than before the upgrade. Throughput is the measure of how quickly a certain amount of data is transferred from one modem to another. It is important to remember that the connection speed that is reported is only the initial connection speed. The modems will adjust their communications speed as line conditions require. A faster connection speed does not necessarily indicate a higher throughput, factors like resending data due to noise on the phone lines will lower overall throughput.

This is discussed in more detail in:

- article 30734, "**V.90 Protocol: Connectivity Discussion**"
- article 24482, "**56Kbps Modems: Getting The Fastest Connection**"

Updating The Modem

Before updating your modem, make sure the modem and modem port are not in use. Turn answering off in fax or other communications programs. Log off any open Internet/modem connections. (Disconnecting the phone line will force any active modem connections to be closed.)

Important: If you are updating a modem in a PowerBook, connect the PowerBook to the AC adapter to guarantee an uninterrupted supply of power to the computer.

Important: Do not cancel the installation process once you start updating; canceling the upgrade process will damage the modem. This modem updater may take up to five minutes to complete.

To update your modem:

1. Double click on the Apple Modem Updater icon.

2. Click Start.

Status messages appear as the updater locates the modem and checks for the current firmware version and type of modem.

3. Click Done when the update is complete.

4. For PowerBook G3 Series users:

- Open the folder For PowerBook G3 Users
- Drag copy the files PowerBook G3 Internal 56K and PowerBook G3 Int56K (v.34 Only) into the Modem Scripts folder, located in the Extensions folder within the System Folder.
- Click OK to replace any existing files.
- Open the Modem control panel and select: PowerBook G3 Internal 56K
- Drag copy the file PowerBook G3 Series Modem into the Extensions folder within the System Folder.
- Click OK to replace any existing file.

For iMac users:

- Open the folder For iMac Users
- Drag copy the files iMac Internal 56K and iMac Internal 56K (V.34 Only) into the Modem Scripts folder, located in the Extensions folder within the System Folder.
- Click OK to replace any existing files.
- Open the Modem control panel and select: iMac Internal 56K

PowerBook G3 Series users will need to restart their system after installing the PowerBook G3 Series Modem extension. It is not necessary for iMac users to restart their system.

5. If you have previously installed a V.34 modem script, open the Modem control panel and select:

PowerBook G3 Internal 56K (for PowerBook G3 Series users)

iMac Internal 56K (for iMac users)

Note: The V.34 script forces the V.90 modem to connect at V.34 speeds and was recommended if you had problems connecting in V.90 modem. If V.90 connection reliability issues still exist after updating the modem, reselect the V.34 modem script. Refer to article 22234, "**iMac: V.34 Modem Script**" for complete details.

If you experience a problem with the Apple Modem Updater, shut down your computer for 40 seconds to reset the modem. Restarting the computer will not reset the modem. Then begin the modem firmware upgrade process again.

TA25853_Apple_Modem_Updater_Read_Me.pdf

Future Modem Software

New firmware updates, modem scripts, and modem drivers may be released for 56K modems until the technology stabilizes. For more information on V.90 modem upgrade information, see Apple's support web site: **http://www.apple.com/support**.

Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White) AV Bundle: Read Me

This article comprises the Read Me for the Power Macintosh G3 (Blue and White) AV Bundle.
This article has been archived and is no longer updated by Apple.

Read This First

Getting Started With Your Power Macintosh G3

Your Power Macintosh G3 has an ATI Xclaim VR graphics card you can use to create and edit video movies, put on presentations, and display graphics on your computer display or other large-screen monitor or TV.

Included are:

- a Power Macintosh G3 computer and accessory kit
- an Apple Studio Display 17 and display software
- an ATI Xclaim VR graphics card (installed in your computer) and adapter cable
- an Avid Cinema CD for installing the Avid Cinema video editing software and ATI Xclaim VR graphics card software

Setting Up Your Power Macintosh G3

Set up your computer in the following order:

1. Set up your Power Macintosh G3, following the instructions in the Setting Up Your Power Macintosh G3 manual.

Note: The ATI Xclaim VR graphics card installed in your computer replaces the standard graphics card installed in a Power Macintosh G3. The connectors on your graphics card look different from illustrations shown in the Setting Up Your Power Macintosh G3 manual. See this booklet for information about connecting cables to your graphics card.

2. Set up your Apple Studio Display 17, following the instructions in Setting Up Your Apple Studio Display. The ATI Xclaim VR graphics card is already installed in your computer. Connect the display cable to it.

Note: When connecting your display to the graphics card, be sure to use the VGA-to-Macintosh adapter included with the display. Instructions for connecting the adapter are in the display box.

3. Install the graphics card software and video editing software located on the Avid Cinema CD. To install your software, follow the instructions provided in this booklet.

About Your Avid Cinema and Graphics Card Software

When you install your Avid Cinema video editing software, the documentation for the software is installed on your hard disk as an Adobe Acrobat file. The installation also installs the software required to use the ATI Xclaim VR graphics card. For information about using your video editing software, see the file Making Movies.pdf, located in the Avid Cinema folder on your hard disk. For instructions about setting up your ATI Xclaim VR graphics card, see the Read Me file in the Avid Cinema folder.

Installing the Software

After you have set up your Power Macintosh G3 and Apple Studio Display 17, install the video editing and graphics card software.

1. Place the Avid Cinema CD in your CD drive.

2. Open the disk icon, if necessary. Three folders appear that identify three steps for installation.

3. Open the folder Step 1 Install ATI Xclaim, and double-click the Installer icon to begin installation.

4. Follow the directions on the screen. After installing the ATI Xclaim VR software, restart your computer.

5. Open the folder Step 2 Install Avid Cinema, and double-click the Installer icon to begin installation.

6. Follow the directions on the screen.

7. Open the folder Step 3 Copy Example Media, and copy the files you want to your hard disk.

8. After the software is installed, open the Read Me file located in the Avid Cinema folder on your hard disk and follow the directions for setting up your ATI Xclaim VR card.

Note: During installation, a copy of the ATI Xclaim VR graphics card documentation is placed on your hard disk as an Acrobat Reader file. The manual is called Xclaim VR Manual.pdf. You can refer to this manual for general information about your graphics card. Disregard the hardware and software installation instructions in chapters 2 and 3, as well as information about the Control Strip on page 39 that mentions features not

supported by your software.

Connecting Cables to Your Graphics Card

Most VCRs, camcorders, and other video devices use two types of cable connectors: S-video and Composite style (also known as RCA style) cables. See your video device documentation to determine the type of cable to use. Most video devices come equipped with these cables. For more general information about video cables and connecting a device to your computer, also see the Making Movies.pdf file on your hard disk.

Figure 1, S-video and RCA-style connectors

You can connect your graphics card to a VCR, camcorder, or other device, such as a laserdisc player, to capture video for editing. You can also connect your graphic card to another video device, such as a VCR, to record edited video on tape or display it on another monitor or TV. You must connect your computer's sound input and output ports to your video device if you want to transfer or work with sound.

Note: Although your computer has a FireWire port for transferring digital video, the Avid Cinema software does not support this video format and you cannot use this port.

Capturing Video from Your VCR, Camcorder, or Other Device

Your card has four connectors: a monitor port, a TV Out port, an S-video in port (S VID IN), and a Composite video in port (VID IN).

Figure 2, Locations of ports on the ATI Xclaim VR graphics card

Transferring Video to Your VCR, Camcorder, or Other Device

To transfer video, such as a movie that you've created, from your computer to another device, you use the TV Out port. Connect the video output adapter to the TV Out port. This adapter splits into two connectors, one for an S-video and one for a Composite video cable. Connect the cable from your video device to the appropriate connector.

Figure 3, Connecting a videio output adapter

For information about which input connector on your video device to use, see your video device documentation.

For information about using the video editing software to transfer your movies or graphics to another video or display device, see the AvidCinemafile.pdf file on your hard disk.

Recording and Transferring Sound

To record or output sound with your video, you must connect your computer's sound input and output ports to the appropriate sound connectors on your VCR, camcorder, or other device.

The sound ports on your computer require stereo mini-plug connectors. Check the type of audio connectors that your VCR, camcorder, or other video device requires. You can purchase sound cables from your Apple-authorized dealer.

For more information about connecting the sound cables to your computer, choose About Your Macintosh from the Help menu on your computer. For more information about connecting sound cables to your video device, see the video device documentation.

Figure 4, Types of sound cables

Upgrading Your Card's Memory

Your ATI Xclaim VR card comes with 4 megabytes (MB) of synchronous graphic random-access memory (SGRAM) installed. You can upgrade the card by adding a 4 MB SGRAM memory module in the video memory slot. Adding more memory allows the graphics card and display to use higher resolutions than 1024 X 1248 dpi. For more information about upgrading your ATI Xclaim VR card, contact ATI Technologies (**http://www.atitech.com**) or your Apple-authorized dealer.

Figure 5, Location of video memory slot on ATI Xclaim VR graphics card

Support Contact Information

Support for Avid Cinema software:

World Wide Web: **http://www.avidcinema.com**

E-mail: Technical Support at support@avidcinema.com

Telephone: Avid Cinema Technical Support at 1-800-800-AVID

Support for your Apple Power Macintosh G3 computer, Apple Studio Display 17, ATI XClaim VR graphics card, and ATI XClaim VR graphics card software:

World Wide Web: **http://www.apple.com/support/**

Telephone: Apple Computer Telephone Support at 1-800-APL-CARE (1-800-275-2273)

Published Date: Feb 20, 2012

QuickTime: Embedding and Serving Movies with Mac OS X Server

This article lists the steps you must go through to create movies using Final Cut Pro and embed them into a Web page being served by Mac OS X Server. Below is a summary of the overall process, followed by step-by-step instructions.
This article has been archived and is no longer updated by Apple.
How to serve embedded QuickTime Streaming Movies using QuickTime Streaming Server (QTSS) and Mac OS X Server.

How QuickTime Streaming Works

When a client uses a web browser such as Navigator or Internet Explorer to view a web page that contains streaming movies, a whole chain of events occurs which makes it possible for the user to actually see the movies. A brief understanding of these events should make it clearer why the steps we follow in this article are necessary.

1. A user clicks on a link to your Web page. An HTTP command is sent to the Mac OS X Server hosting your page.

2. The Apache server software running in the background on the Mac OS X Server intercepts the HTTP command and returns to the user a web page with a Referencing Movie embedded in it.

3. The Referencing Movie contains an RSTP command, which in turn is sent to the QuickTime Streaming Server software, also running in the background on the same Mac OS X Server.

4. The QTSS software intercepts the RTSP command, substitutes the Referencing Movie with the requested streaming movie, and sends it to the user.

An Overview of Setting Up Your Movies for Streaming

This article covers, in brief, how to create movies for QTSS streaming, (using Final Cut Pro as an example) and then shows into which directories they'll be placed on your Mac OS X server in order to make them accessible. Before moving on to the actual step by step details, here is an overview of the process as presented in this document.

1. On your video editing workstation, edit your video clip using an application such as Final Cut Pro (FCP). After editing, export a self-contained movie that has been both compressed and hinted (explanation below) using either FCP or the Quicktime Player.

2. Make sure the QuickTime Streaming Server software is installed on the Mac OS X server you'll be using as your HTML server. SeeVerifying Installation.

3. Place your compressed and hinted movies into the Media Directory (default is /Local/Library/QuickTimeStreaming/Movies) of your Mac OS X Server. This directory is specified by the QuickTimeStreamingAdministration application, and can differ from the default directory presented above.

4. Using the methods outlined below, create referencing movies from the streaming movies you just placed into the Media Directory.

5. Use standard HTML Quicktime embed tags to link the referencing movies you just created to your web pages. Place both the HTML pages and the referencing movies into the Webserver/Documents directory (default is /Local/Library/WebServer/Documents).

Make the Movies (Using Final Cut Pro):

1. Edit your movies in Final Cut Pro.

2. Once you're finished editing your final sequence, select it and choose Export Quicktime Movie from the File menu. The following dialog box appears:

Figure 1, Export Quicktime Movie dialog box

3. Click the Options button and the following dialog box appears. The compression settings shown in this document are for example purposes only. You are encouraged to experiment on your own to find the optimal settings for your application.

Figure 2, Movie Settings dialog box

- In Video Settings, you can pick Sorensen or Cinepak. 12fps is a common frame rate for compressed movies playing over high-speed lines. The target data rate is up to you, but 90-40 Kbs or smaller is recommended for movies compressed with the Sorensen codec. This number varies depending on what kind of Internet connection your target audience has.
- Leave Filter unchanged.
- Set your Frame Size to be 320x240 or smaller (256 x192 is popular).
- In Sound Settings, use the Qdesign Music 2 codec, with the Sample rate set to 22.050 kHz, and the Sample size set to16 bit.
- Finally, in the "Prepare for Internet Streaming" section, choose Hinted Streaming from the default menus.

4. Click OK, then Save. The final movie renders and you have a movie that's ready to be served.

Locating Your Movies and Pages on the Server:

1. Once your movies are finished, use your favorite Web page design tool to create the Web pages your movies will live in. Use the embed tags to actually place the movies on the page. See Embedding QuickTime.

2. Now you're ready to copy the appropriate files into the appropriate places.

Note: All the HTML pages you create refer to the location of both graphics files and movie files by relative pathnames. This is a UNIX convention, and works the same way as putting graphics files into a Web page.

For example, when creating pages, use one folder to hold all the documents you'll be linking together for your web site. We'll call this folder "WorkDirectory." Directly inside this folder will be your index.html page, (this is the first page that will load when someone accesses your Web site) and then that page links to other pages and files either in this folder or inside of other folders located inside of WorkDirectory. It is a good idea to keep all your streaming movies together inside their own folder. We'll call this folder "myMovieFiles," and it also is located inside of WorkDirectory.

When you use the Quicktime embed tags to place a streaming movie directly into a page, it looks something like this:

```
<p><embed src="myMovieFiles/pq_hinted.mov" autoplay="false" controller="true"
cache="true" width="256" height="192"></center><p>
```

Where the text myMovieFiles/pg_hinted.mov is a path name that specifies that the embedded movie is located in the folder (or directory, in Mac OS X speak) myMovieFiles, which is inside the current directory. This means when you copy the nested set of files and folders from your WorkDirectory folder onto the server, as long as you don't change any file or directory names, all the HTML code works unaltered.

Here's another example path:

```
folder1/folder2/fileName.mov
```

Which is the same as saying that fileName.mov is inside of folder2, which in turn is inside of folder1.

3. In order for the server to be able to serve your pages properly, you must have all your files in the right places. All HTML pages, your index.html page and other directories containing pages, images, and movies linked to your index.html page, all get copied into the directory on the Mac OS X Server partition called:

```
/Local/Library/WebServer/Documents
```

Note: Mac OS X Server is case sensitive, so directory and file names must be typed exactly as they appear. It's also very important not to change the names of any of the files or directories that you copy onto the server, or otherwise change the way things are organized by moving files from one directory to another. (There is one exception, noted below.) If you do, you're going to have to edit the pages manually on the server using a text editor, renaming all the paths to reflect the changes in name and location that you made.

4. There's one important exception to the above. All the hinted QuickTime movies you embedded in your web page, (which you put inside the myMovieFiles folder on your authoring computer) go inside the media folder you specified when you configured the QuickTime Server software. The default directory for the Quicktime Streaming Server software is:

```
/Local/Library/QuickTimeStreaming/Movies
```

If you don't put your hinted movies into this directory, they won't stream. In order for your web pages to still have these movies embedded, however, you'll need to place referencing movies into the myMovieFiles directory now located in the WebServer/Documents directory. These referencing movies point to the movies now located in the QuickTimeStreaming/Movies directory, enabling everything to work the way it should.

5. Make your referencing movies.

A referencing movie is a movie that selects another movie to play in its place. Referencing movies are very small, consisting only of an instruction which points to the original movie file located in `/Local/Library/QuickTimeStreaming/Movies`.

You create a referencing movie by following these steps:

1. Ensure your hinted movie into the QTSS Media Folder on the server.

2. From a remote computer, open the Quicktime Player, choose Open URL from the File menu, and type `rtsp://server.com/myMovie.mov` in the resulting dialog box, where `myMovie.mov` is the name of the served movie you want to make a referencing movie of.

3. The Quicktime Player informs you that it is connecting, buffering, and negotiating. Then, when the movie starts to play, choose Save As from the File menu and click Self Contained Movie.

4. The resulting Quicktime movie is the referencing movie, and it should be copied back into the directory that you originally placed all the hinted movies, myMovieFiles.

With these steps completed, the final test is to load the page using a browser on a remote computer and see if the movie loads properly.

Related Documents

31016 QuickTime Streaming Server: Verifying Installation

61011 QuickTime: Embedding QuickTime for Web Delivery

Published Date: Feb 20, 2012

iMac 333: Technical Specifications

This article contains the technical specifications for the iMac 333 announced on April 14, 1999. For a full description of this iMac please see article 58319: **iMac 333: Description**.
This article has been archived and is no longer updated by Apple.

Technical Specifications

Processor and memory

333-MHz PowerPC G3 processor

512K backside level 2 cache on processor module; 133-MHz dedicated 64-bit backside bus

66-MHz system bus Integrated floating-point unit and 64K on-chip level 1 cache (32K data and 32K instruction)

32MB of SDRAM (3.3-volt, unbuffered, 64-bit wide, 144-pin, 10-nanosecond cycle time); two SO-DIMM slots support up to 256MB

64-bit memory bus

Storage

Internal 6GB IDE hard disk drive

Internal 24x-speed (maximum) CD-ROM drive

Interfaces

Connectivity

-Two high-speed Universal Serial Bus (USB) ports (12 Mbps), which support USB devices such as keyboard, mouse, printer, storage devices, and USB hubs

Communications

-Built-in 10/100BASE-T Ethernet connector (RJ-45)

-Built-in 56K modem supports K56flex and V.90 standards (RJ-11 connector)***

Display

Multiple-scan, tiltable shadow mask color display: 15-inch (13.8-inch diagonal viewable image size), .28-mm dot pitch

Refresh rate of up to 117 Hz

Graphics support

Built-in 2D/3D graphics acceleration through an integrated ATI RAGE Pro Turbo graphics controller 6MB of SGRAM video memory

Supports millions of colors at up to 1,024- by 768- pixel resolution (24-bit)

Sound

Two built-in stereo speakers with SRS surround sound

Built-in microphone

Two front headphone jacks

Minijacks for 16-bit CD-quality stereo input/output; 44.1-kHz sampling rate

Keyboard and mouse

Apple USB Keyboard

-Two-position adjustable slope (0° and 6°)

-Serves as USB hub with two USB ports

-Power consumption 100 mA maximum

Apple USB Mouse

-Power consumption 100 mA maximum

Electrical requirements and agency approvals

Line voltage: 100V to 240V AC

Frequency: 50 to 60 Hz, single phase

Power: 200W maximum, continuous

EPA ENERGY STAR compliant

Environmental requirements

Operating temperature: 50° to 104° F (10° to 40° C)

Storage temperature: -40° to 149° F (-40° to 65° C)

Relative humidity: 20% to 90% noncondensing

Maximum altitude: 10,000 feet (3,048 m)

Size and weight

Height: 15.8 inches (39.5 cm) with foot extended Width: 15.2 inches (38.0 cm)

Depth: 17.6 inches (44.0 cm)

Weight: 38.1 pounds (17.3 kg)

*** Data speeds up to 56 Kbps, fax speeds up to 14.4 Kbps. Download speeds vary with line conditions and your ISP's modem capabilities. FCC regulations limit ISP transmission speeds to 53 Kbps in the U.S.

Published Date: Feb 20, 2012

iMac 333: Description

This article contains a description of the iMac 333 introduced on April 14, 1999. For a full list of Technical Specifications refer to article number 58317: **iMac 333: Technical Specifications**.
This article has been archived and is no longer updated by Apple.
iMac is, quite simply, an outrageously attractive, surprisingly affordable, and extraordinarily easy-to-set-up-and-use system. It comes fully loaded, but brings along none of the hassle you might associate with the word computer. Get ready for the excitement of swift, simple Internet access-your passport to a world of information. And the thrill of playing a game so richly detailed you actually feel like you're in another world. Then consider the fact that iMac delivers significantly more power than you'd expect from a computer at such a great price.

Just looking at iMac tells you this is a different kind of computer. Apple's attention to detail is clearly demonstrated in every aspect of its product design-from the built-in monitor with crystal-clear focus, to the translucent mouse that responds to the slightest touch, to the integrated stereo speakers. And iMac is now available in five dazzling colors-blueberry, strawberry, tangerine, lime, and grape-that will dress up your home office, add a tasteful touch to your kitchen, or class up your college kid's dorm room.

But its award-winning design isn't all that makes iMac a best-seller. Beneath its jaw-dropping exterior, iMac is a rocket of a computer. Its PowerPC G3 processor, integrated 3D graphics accelerator, and 6MB of video memory make it lightning fast. It features USB, the new high-speed connection standard that lets you easily attach peripherals such as printers, digital cameras, game pads, joysticks, or storage devices-without shutting down and restarting your computer. To handle all your communications needs, iMac comes with a speedy 56K internal modem for dial-up connections and quick, easy Internet access. *** It also includes built-in high-speed Ethernet, which not only provides efficient L AN connections, but makes iMac ready to handle even faster communications technologies in your home, such as DSL and cable modems.

Whether you're a first-time computer user or a highly experienced one, iMac-with its powerful, state-of-the-art (and beyond) features and simplicity of setup and operation-is the ideal choice. It will let you do the things you want to do with a computer, and many things you may only have dreamed about.

Features

Affordable high performance

- Features the advanced PowerPC G3 processor with performance-boosting backside level 2 cache
- Provides state-of-the-art Universal Serial Bus (USB) plug-and-play peripheral connectivity
- Delivers high-speed networking for LAN or Internet use
- Includes the accelerated ATI RAGE Pro Turbo graphics controller and 6MB of video memory, which provides rich 3D texture rendering for the latest games

Advanced styling and remarkable attention to detail

- Features a stunning overall product design
- Offers you a choice of five dazzling colors
- Incorporates a high-quality monitor with minimal flicker and crystal-clear focus
- Comes with a height-adjustable, space-efficient USB keyboard and a sleek, round USB mouse
- Elegantly routes cables to avoid clutter and confusion
- Is amazingly compact, with an integrated handle that makes it easy to transport

Simple to set up and simple to use

- Provides striking simplicity of setup and use through integrated system elements such as a built-in monitor, stereo speakers, and a modem
- Puts you on the Internet quickly and easily
- Includes the Mac OS-the world's easiest-to-use system software-and runs the thousands of Mac-compatible programs available today
- Comes with a number of applications, including AppleWorks, Microsoft Internet Explorer and Outlook Express, Netscape Navigator, EarthLink TotalAccess,* FAXstf, Quicken for Macintosh Deluxe 98, Nanosaur, Williams-Sonoma Guide to Good Cooking, World Book Macintosh Edition, EdView Internet Safety Kit Family Edition, Adobe PageMill, and Kai's Photo Soap SE**

Ordering Information
M7441LL/A iMac-Strawberry
M7444LL/A iMac-Lime
M7443LL/A iMac-Tangerine
M7442LL/A iMac-Grape
M7740LL/A iMac-Blueberry

All models include:
Apple USB Keyboard

Apple USB Mouse
Mac OS preinstalled
The following software applications:**
-AppleWorks
-Microsoft Internet Explorer
-Microsoft Outlook Express
-Netscape Navigator
-Adobe PageMill
-EarthLink TotalAccess*
-EdView Internet Safety Kit, Family Edition
-FAXstf
-Quicken for Macintosh Deluxe 98
-Kai's Photo Soap SE
-World Book Macintosh Edition
-Nanosaur
-Williams-Sonoma Guide to Good Cooking

* TotalAccess software includes EarthLink 30-day free trial offer; setup fee is waived. Internet access requires an Internet service account.
** Most applications are preinstalled. Some applications require use of included CD-ROM. Product contains electronic documentation. Backup software provided on CD-ROM.
*** Data speeds up to 56 Kbps, fax speeds up to 14.4 Kbps. Download speeds vary with line conditions and your ISP's modem capabilities. FCC regulations limit ISP transmission speeds to 53 Kbps in the U.S.

Published Date: Feb 20, 2012

PowerBook: Uses Manual Eject PC Card Mechanism

The PowerBook G3 Series (Bronze keyboard), PowerBook (FireWire), and PowerBook G4 use a manual eject PC card mechanism that has different operating characteristics than the auto eject mechanism used in other PowerBook computers.
This article has been archived and is no longer updated by Apple.
The PC card eject procedure is slightly different from other PowerBook computers. The card does not automatically eject when you drag its icon from the desktop to the Trash. Do not eject a PC Card when the computer is asleep. If you do, you'll see a message to reinsert the card when you wake the PowerBook.

To eject a PC card:
1. Drag the card's icon to the Trash.
2. Depress the small button on the rear edge of the PC card slot once to release the eject arm.

Figure 1 Releasing the eject arm.

3. Push the eject arm a second time to eject the PC card .

Figure 2 Ejecting the PC card.

4. Remove the card from the PowerBook .

Note: Before inserting a PC card into the PowerBook, ensure the eject arm is not released. If it is, simply press it back in prior to inserting the PC card.

If a message states that the PC Card is in use:

1. Quit all applications to make sure that the PC Card is not being used.
2. Drag the card's icon to the Trash again.
3. Make sure the AppleTalk control panel is not set to use the card.
4. Attempt to eject the card again.

Published Date: Feb 20, 2012

PowerBook G3 Series (Bronze Keyboard): Upgrading Memory

Memory upgrade information for the PowerBook G3 Series (Bronze keyboard) computer.
This article has been archived and is no longer updated by Apple.
Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, please see the following article:

Article 24604: "**PowerBook G3 & G3 Series: Identifying Different Models**"

For information on upgrading memory in a PowerBook G3 Series computer, see the following article:

Article 25002: "**PowerBook G3 Series: Upgrading Memory**"

The PowerBook G3 Series (Bronze keyboard) uses the same memory as the PowerBook G3 Series and iMac, with a maximum of 384 MB supported. There are two available slots for memory upgrades - instructions for installing memory in the upper slot are outlined in this document. The lower slot can be upgraded by a service provider only. The 128 MB configuration from Apple may use one-128 MB module or two-64 MB modules. Before ordering memory, ensure you have an available memory slot.

To verify your current memory configuration, open Apple System Profiler and click the System Profile tab. In the Memory Overview under the Built-in memory arrow it will describe how the Bottom and Top memory banks are configured.
Note: These directions are also available under the Help menu in the Help Center. Select the About Your PowerBook guide and refer to the Installing Memory section.

To upgrade the memory in your computer, follow these steps:

1. Remove AC power and the main battery.

2. Remove keyboard by first releasing the screw behind the port access door on the back of the computer (see Figure 1). Turn the screw 7 to 8 times counter-clockwise to release it.

Note: Apple does not ship the PowerBook with the keyboard locking screw engaged. As such, it may or may not need to be released prior to keyboard removal.

The screw will not come out of the computer. Once the screw is released, slide the two release latches along the function key row towards the front of the computer to release the keyboard (see Figure 2). Roll the keyboard towards you and rest it over the trackpad (see Figure 3).

Figure 1: Keyboard locking screw

Figure 2: Keyboard release latches

Figure 3: Keyboard removal

3. Remove the three screws holding the heatsink to the processor (see Figure 4). Use caution when removing the heatsink as the material on the processor may stick to the heatsink. Lift the front edge of the heatsink first, then remove it completely from the computer.

Figure 4: Heatsink removal

4. Install the memory card. When installing the memory, start at a 30 degree position and then push the memory card in and down slightly. You will feel a slight snap as the card locks into position. See Figure 6.

Figure 5: Memory card slot

Figure 6: Memory card installation

5. Reinstall the heatsink being careful not to damage clip holding the RAM card to the processor card. Refer to article 58405: "**PowerBook G3 Series (Bronze keyboard): Heatsink Reinstallation Tip**" for additional information on reinstalling the processor heatsink.

6. Reinstall the keyboard, again sliding the release latches back to allow the keyboard to be secured to the computer. Retighten the keyboard locking screw to secure the keyboard to the computer.

Note: When reinstalling the keyboard, make sure all the tabs on the leading edge are fully inserted into the corresponding slot (see Figure 7). Failure to do so may cause the keyboard tab to put pressure on the CD-ROM drive possibly causing a grinding noise when resting your hand on the palmrest when a CD is inserted.

Figure 7: Keyboard reinstallation

7. Turn the computer on and choose About This Computer from the Apple menu to ensure the memory is recognized.

Note: Care should be exercised when installing memory as this exposes components that are static sensitive. Use a grounded work area to discharge any static electricity on your body before handling memory. Damage caused by static electricity will not be covered by the Apple Limited Product Warranty.

Published Date: Feb 20, 2012

PowerBook: Adjusting Volume, Brightness, Mute

The controls for screen brightness, volume, and muting have been moved to the function keys on the PowerBook G3 Series (Bronze keyboard), PowerBook (FireWire), and PowerBook G4. By depressing the appropriate function key, you can adjust each setting.

This article has been archived and is no longer updated by Apple.
If you find that the keyboard commands are not working, open the Keyboard control panel, click Options, and deselect the "Make F1 through F12 the primary function keys" setting, or press the fn key on the keyboard while pressing the keyboard command.

Figure 1, Options dialog box

For more specific information on adjusting brightness, volume, and muting, see article number 58327: "**PowerBook: Using the Multi-function Keyboard**".

Published Date: Feb 20, 2012

PowerBook: Using the Multi-function Keyboard

The PowerBook G3 Series (Bronze keyboard), PowerBook (FireWire) and PowerBook G4 have a multi-function keyboard. This article describes the different functions of the keyboard and how to utilize them.
This article has been archived and is no longer updated by Apple.
Your PowerBook comes with a built-in keyboard and trackpad. The keyboard includes:

- a numeric keypad incorporated in the PowerBook keyboard .
- controls to adjust the brightness of the display, and the volume of the PowerBook speakers and external audio port.

Using the Numeric Keypad

Your PowerBook keyboard has a built-in numeric keypad.

Figure 1 Numeric keypad and Num Lock key locations

To activate the numeric keypad:

Press the Num Lock key. When the keypad is active, the green light next to the key is on.

Using the Keyboard Control Panel

Mac OS 8.x or earlier

You can set up the keyboard in the Mac OS 8.x (using the Keyboard control panel) so the function keys are primary and the brightness, volume, and other controls are not active until you press the Fn key.

To do this, open the Keyboard control panel (Figure 2) and click the Options button. This will open the Options window (See figure 3).

Figure 2 Keyboard control panel

Figure 3 Keyboard control panel Options dialog box

By selecting the Function Keys checkbox, F1 through F12 become the primary function keys.

Example:

- With this button checked - you will have to hold down the Fn key while selecting the brightness up for it to work.
- With this button unchecked - you just press the brightness key and it will work.

Note: When the built-in keypad is activated, only keys used for the keypad are enabled. Keys not used in the numeric keypad and keyboard equivalents for menu commands are disabled.

Note: Using the key caps Desk Accessory is a great way to determine which mode the keyboard is in and which keys are active.

To turn off the numeric keypad: Press the Num Lock key.

Mac OS 9.x

You can set up the keyboard in the Mac OS 9.x (using the Keyboard control panel) so the function keys are primary and any programmed functions keys are not active until you press the Fn key.

To do this, open the Keyboard control panel (figure 4) and click the Function Keys button. This will open the Hot Function Keys window (See figure 5).

Note: If you have Mac OS 9.x installed on your computer and your control panel does not have the Function Key button, see article 60530: Mac OS 9: "**Using Programmable Keyboard Function Keys**" .

Figure 4 Keyboard control panel

Figure 5 Hot Function Keys window

By selecting the Hot Function Keys checkbox, F1 through F12 become the primary function keys.

Example:

- With this button checked - you just press the Eject CD key and it will work.
- With this button unchecked - you will have to hold down the Fn key while selecting the Eject CD key for it to work.

Also, you can program the function keys to help simplify common, everyday tasks performed on the computer. You can use these keys to open a browser, an email application, or any other frequently used application or server by pressing a single key.

To do this, open the Keyboard control panel (figure 4) and click the Function Keys button. This will open the Hot Function Keys window (See figure 5). Then just follow the instructions in the Hot Function Key Assignment section.

Note: The function keys F1 through F12 can be easily reset to have primary functionality. Simply open the Keyboard control panel and select Function Keys. Then deselect the box that says "Use F1 through F12 as Hot Function keys."

Note: Programmable function keys are not a feature of Mac OS X 10.0

Using the Keyboard Control Panel

Adjusting the volume

You can adjust the volume of the internal speakers by using the volume and mute keys on the PowerBook keyboard.

Figure 6 Volume keys on PowerBook keyboard

The volume control keys, along with the brightness and other keys, can also be used as function keys (F1 - F12). To use the keys as function keys, press the function (Fn) key.

Adjusting the brightness of the internal display

You can adjust the brightness of the internal display with the brightness keys on the PowerBook keyboard.

Brightness controls

Figure 7 Brightness control keys

The brightness control keys, along with the volume and other keys, can also be used as function keys (F1 - F12). To use the keys as function keys, press the function (Fn) key.

Locking your keyboard

To protect the internal components of your PowerBook G3 Series (Bronze keyboard), such as the memory module and hard disk, you can lock the PowerBook keyboard.

To lock the keyboard, use a flathead screwdriver to turn the keyboard locking screw clockwise 5 turns.

Figure 8 Keyboard locking screw on PowerBook G3 Series (Bronze keyboard)

Note: PowerBook (FireWire) keyboards have a locking screw located between the F4 and F5 keys. Turn the screw one half turn to lock or unlock the keyboard.

TA25862_PowerBook_Using_the_Multifunction_Keyboard.pdf

Published Date: Feb 20, 2012

PowerBook G3 Series (Bronze keyboard): How to Differentiate From Other PowerBook G3 Series Computers

This article describes the differences between the PowerBook G3 Series (Bronze keyboard) introduced in May, 1999, and earlier PowerBook G3 Series computers.
This article has been archived and is no longer updated by Apple.
There are a number of visual cues for distinguishing the new PowerBook G3 Series. They are:

- The keyboard and trackpad button have a bronze or mocha color.
- The inside display bezel has a white Apple logo at the top.
- The rear ports are all enclosed by the I/O door and the modem port is now in the rear of the unit.
- There are two USB ports.
- It has a single, manual eject PC card slot which supports Type I and II PC cards.
- The display clamshell latch mechanism release is on the base of the PowerBook instead of the clamshell.

Published Date: Feb 20, 2012

PowerBook (Bronze keyboard, FireWire and G4): LCD Functional When External Display Connected

The built-in display does function when an external display is connected to the PowerBook G3 Series (Bronze keyboard), PowerBook (FireWire) or PowerBook G4.
This article has been archived and is no longer updated by Apple.
The PowerBook G3 Series (Bronze keyboard), PowerBook (FireWire) or PowerBook G4 provide an image on both the built-in display and an external display connected to the VGA connector. The desktop is extended across both displays.

You can also mirror the image so both displays show the same information. This is useful when giving a presentation, for example. This capability is also available when using a television or other composite signal monitor connected to the S-video port.

Using an external display and/or TV out

To use an external display and/or TV out follow the following steps with the computer shut down or in sleep.

To connect an external monitor or other video device:

1. With the PowerBook shut down or in sleep, attach the end of the monitor cable to the video out port on the back of the PowerBook.

Figure 1, Video out port and icon

2. If you are connecting an older Macintosh-compatible monitor that does not have a VGA cable, attach the monitor adapter to the end of the external monitor's cable and plug the VGA-to-Macintosh adapter into the port as shown in the following illustration.

Monitor cable Monitor adapter

Figure 2, Attaching cable with monitor adapter

3. Turn on the external monitor and then press the Power button to turn on or wake your computer.

When you are finished using the external monitor, shut down your PowerBook or put it in sleep and turn off the monitor. Then disconnect the external monitor.

Switching to video mirroring

By default, your PowerBook starts up in dual display mode. You can use the Video Mirroring portion of the Control Strip to make the images on the PowerBook display and the external monitor the same.

Video Mirroring

Figure 3, Video Mirroring portion of the Control Strip

Displaying images on a television, VCR, or other device

The following steps must be done with the computer shut down or in sleep.

To connect a television to the computer:

1. With your PowerBook in sleep or shut down, attach one end of a S-video or composite video cable (not included with your computer) to the video-in port on the television.

2. Plug the S-video cable or composite video cable (attached to the composite to S-Video adapter included with your computer) to the TV out port on your computer.

Figure 4, TV out port and icon

3. Turn on the television and then press the Power button to turn on or wake your computer. TV Mirroring should turn on automatically after you wake or start up the computer. When you are finished using the television, shut down or put the computer in sleep and disconnect the cable.

Published Date: Feb 20, 2012

PowerBook G3 Series (Bronze keyboard): No Sleep When IrDA Selected

A PowerBook G3 Series (Bronze keyboard) does not go into sleep mode when IrDA is selected in the AppleTalk control panel.
This article has been archived and is no longer updated by Apple.
This is normal operation when IrDA is selected. The computer must be awake to monitor the infrared port for incoming data, similar to telling the modem to wait for an incoming call.

You can force the computer to enter sleep mode through the Special menu or by pressing the Power key and selecting Sleep from the dialog box presented.

Published Date: Feb 20, 2012

PowerBook G3 Series (Bronze keyboard): Target Disk Mode Requires System Folder on Internal Drive

The PowerBook G3 Series (Bronze keyboard) is capable of functioning in Target Disk Mode.

This article has been archived and is no longer updated by Apple.
Target Disk Mode works as long as a valid System Folder is installed on the internal hard disk. You can access Target Disk Mode through the PowerBook SCSI Setup control panel.

Published Date: Feb 20, 2012

PowerBook G3 Series (Bronze keyboard): What‘s New and Different

This article tells what is new and different about the PowerBook G3 Series (Bronze keyboard).

This article has been archived and is no longer updated by Apple.
Here are brief descriptions of the new and unique features of the PowerBook G3 Series (Bronze keyboard).

Built-in Universal Serial Bus (USB)

Connect keyboards, mice, joysticks, speakers, modems, and other external peripherals to your PowerBook G3 Series (Bronze keyboard) through the two built-in USB ports.

ROM-in-RAM

Enables Apple to update the Mac OS ROM via software downloads.

Built-in DVD decoding available

With the DVD-ROM drive and decoder, you can watch DVD movies on your PowerBook.

Note: Because the DVD decoder is installed on the logic board, DVD capability is only available only at time of order, no upgrade to DVD functionality is available.

10/100 base-T Ethernet

Using Cat5 cabling and the appropriate hub or network card, connect to a network or other 100 base-T computer at maximum speed.

Able to operate with the clamshell closed

With an external USB keyboard and mouse, and an external display connected, you don't have to use your PowerBook's built-in display.

Revised clamshell latch

To avoid accidentally opening the clamshell of your PowerBook, the release mechanism is now on the base of the PowerBook rather than on the display.

Revised expansion bay latches

To avoid accidentally ejecting an expansion bay device, the latch now releases near the end of its travel rather than at the beginning.

Faster processors

Available PowerPC G3 processors up to 400 MHz.

Miscellaneous

Comes with Mac OS 8.6.

Bigger hard disk drives.

Single manual eject PC card slot supporting Type I and Type II PC cards.

8 MB VRAM enables video support for external displays at more resolutions, and simultaneous use of built-in and external displays.

Translucent keyboard.

The sound and display controls are now integrated into the keyboard function keys.

Published Date: Feb 20, 2012

PowerBook (Bronze keyboard): How to Operate with Clamshell Closed

This article tells how the PowerBook G3 Series (Bronze keyboard) can be used with the display clamshell closed and an external monitor attached.
This article has been archived and is no longer updated by Apple.
If you have an external keyboard that has a power button follow the instructions below. (These instructions will not work with the Apple Pro Keyboard.)

1. Place your PowerBook in sleep mode by closing the display.
2. Connect your power adapter and external display.
3. Connect the Apple external USB keyboard and mouse, and then press the Power button on the keyboard to wake the PowerBook.

To activate the internal display again, put the PowerBook to sleep and wake it with the display open.

Notes:

1. If you are using your PowerBook with the clamshell closed, you cannot utilize Video Mirroring. If you have both a VGA and S-Video source connected to the PowerBook, it shows an image only on the VGA device.
2. Connecting an external display increases the power requirements of the PowerBook. Therefore you should use the AC adapter whenever you are connected to an external display.
3. To wake the PowerBook from sleep from an external keyboard (such as when you are running with the clamshell closed), you must press the power key on the external keyboard. Other keys on the external keyboard do not respond when the PowerBook is truly asleep. In contrast, if the PowerBook has simply spun down the hard disk and dimmed the display (but is not completely asleep), then the PowerBook wakes from any key pressed on the external keyboard.
4. External keyboards without a power button, such as the Apple Pro Keyboard, will not wake in closed clamshell mode.

Published Date: Feb 20, 2012

iBook: Read Me

This article contains the Read Me document included with iBook.
This article has been archived and is no longer updated by Apple.
Important Information About Your iBook

This document contains important late-breaking information about your iBook computer. You may want to print this document and keep it with your other printed iBook documentation. For additional information, see Mac Help and the print and online documentation that came with your computer. Apple also provides substantial information online. If you have access to the World Wide Web (WWW), you can check the latest information about iBook in the support area at the following Uniform Resource Locator (URL): **http://www.apple.com/support/ibook**

The following topics are covered in this document:

Using your iBook
Starting up: The Mac OS ROM file
Selecting a startup disk
Keeping Virtual Memory on for computers with 32 MB of RAM
Preserving the contents of memory before sleeping your computer
Allocating memory for third-party applications
Trouble connecting the internal modem in V.90 mode
Formatting external USB (Universal Serial Bus) hard disk drives
Copying and pasting alert sounds
Adjusting and testing external speakers
Adjusting the volume for audio CDs and CDs with audio
Playing and recording from audio CDs
Connecting to a 10/100Base-T network
Performance problems using Ethernet
Connecting your computer directly to an Ethernet switch
Using the "Wake for other network activity" option in the Energy Saver control panel
Using a RAM disk
Using your computer with a NetBoot Server
Password Security control panel

Third-party software issues
Moving Bookmarks and Favorites files before reinstalling Internet Explorer and Netscape Communicator
Using hard disk utilities and disk-locking programs
Using Virtual PC 2.1.3
Using fax software
Using the internal modem with third-party software
Using Palm Desktop Software 2.5
Setting up AOL when the Palm Desktop Software 2.5 is installed
Removing two extensions after installing Quake 1.08
FWB Hard Disk Toolkit 3.0.2
EdViewTM Internet Safety Kit

Hardware compatibility issues
Connecting USB devices while the computer is asleep
Mounting and disconnecting USB storage devices
Using USB devices with software applications
Using ADB dongles
Using USB-to-serial converters

Documentation changes
References to Monitors & Sound Control Panel in Mac Help
Mac Help instructions for modifying a remote access configuration

Using your iBook

Starting up: The Mac OS ROM file
The System Folder contains an important file-Mac OS ROM. This file is required for your computer to properly start up. If you delete this file or move it to another folder, your computer will not successfully start up.

Selecting a startup disk
Make sure a valid startup disk is selected in the Startup Disk control panel. If an invalid startup disk is selected (one your computer cannot start up from), your computer could take as long as two minutes to locate a valid startup disk and properly start up. A RAM disk cannot be used as the startup device, even though its icon may appear in the Startup Disk control panel.

If you have selected a CD as the startup disk in the Startup Disk control panel, and you start up your computer without a CD or with a CD other than the software install or software restore CD that came with your computer, a single folder with a reappearing question mark appears on the screen. The computer will search for a System Folder and start up. If no System Folder is available, you must insert the software install or software restore CD that came with your computer and restart your computer. If you don't want to start up from a CD, make sure you select another startup disk, such as the hard disk, as the startup disk in the Startup Disk control panel.

Selecting the Network Disk icon in the Startup control panel without having a Netboot server properly set up will also significantly delay the time it takes your iBook to start up.

Keeping Virtual Memory on for computers with 32 MB of RAM
If your computer has 32 megabytes (MB) of random-access memory (RAM), Apple recommends you do not turn Virtual Memory off in the Memory control panel. (To see how much built-in memory is available, open the Apple menu and choose About This Computer.)

If you accidentally turn off Virtual Memory and have problems starting up your computer, do the following:
1. Restart your computer while holding down the Shift key.
2. Open the Apple menu, select Control Panels, then choose Memory.
The Memory control panel opens.
3. Under Virtual Memory, click the On button, then click the close box to close the control panel.
4. From the Special menu, choose Restart.
Once your computer restarts, Virtual Memory is on.

Preserving the contents of memory before sleeping your computer
You can save the contents of memory to the computer's hard disk before your computer goes to sleep using the Advanced settings section of the Energy Saver control panel (for more information, see Mac Help). After you close the lid to put your computer to sleep, don't move the computer for approximately 20 seconds. When the save process is complete, the sleep indicator light blinks.
Important: You must have Virtual Memory turned on in the Memory control panel, in order for this option to work.

Allocating memory for third-party applications
Some third-party applications need to have a larger memory allocation than the default amount to run or print properly. Select the application's icon. From the File menu, select Get Info and from the pop-up menu, choose Memory. In the Memory Requirements section, increase the preferred memory size. For more information on increasing the amount of memory for an application, see the topic "Adjusting your memory usage" in Mac Help.

Trouble connecting the internal modem in V.90 mode
Your iBook comes with an internal 56K modem, based on the V.90 specification. If you're having problems connecting in V.90 mode-if the modem won't connect at all or the connection is dropped after a few minutes-the phone lines might be too noisy or there might be too much interference to sustain a connection at speeds above 33.6 kilobits per second (Kbps). Contact your ISP to ensure that it is using V.90 compliant modems or plans to update to them in the near future. Use the Apple Internal 56K Modem (V.34) modem script, which forces the modem to connect at 33.6 Kbps or lower speeds. This type of connection is more reliable in situations where the phone line quality is questionable.

To select the Apple Internal 56K Modem (V.34) modem script, follow these steps:
1. Open the Modem control panel in the Apple menu.
2. Make sure the "Connect via" pop-up menu is set to Internal Modem.
3. Open the Modem pop-up menu and choose Apple Internal 56K Modem (V.34).
4. If necessary, set the Sound and Dialing options.
5. Close the control panel.
A message asks if you want to save the changes to the current configuration.
6. Click Save.

Note: You do not have to restart your computer to use this modem script.

Formatting external USB (Universal Serial Bus) hard disk drives
Many USB hard disk drives are DOS-formatted at the factory. You can use DOS-formatted USB hard drives with your computer, but you will get much better performance if the USB hard drive is formatted as Mac OS Extended or Mac OS Standard. To reformat the hard drive to Mac OS Extended or Mac OS Standard format, use the formatting utility that came with the USB hard drive. If you do not have a formatting utility, you can change the drive to Mac OS format by following the steps below.

WARNING Erasing the hard drive will destroy any data stored on the drive.

1. If you haven't already done so, connect the external USB hard drive to your computer and turn it on.
For more information, see the topic "Connecting USB devices to your computer" in Mac Help and the documentation that came with the device.
2. Open the Apple menu, select Control Panels, then choose File Exchange.
The File Exchange control panel opens.
3. If necessary, click the PC Exchange tab.
4. Click the checkbox next to Mount at startup. (The checkbox should be blank.)
This turns off PC Exchange.
5. Click the close box to close the control panel.

6. Click the USB drive's icon on the Desktop, then from the Special menu choose Erase Disk.
A window appears.
7. From the Format pop-up menu, select Mac OS Extended or Mac OS Standard format, then click Erase.

Copying and pasting alert sounds
Long alert sounds require large amounts of memory. If you have difficulty copying and pasting long alert sounds into the Sound control panel, you may need to adjust memory requirements for the control panel. To do this, open the Control Panels folder within the System Folder. Select the Sound control panel. From the File menu, select Get Info and from the pop-up menu, choose Memory. In the Memory Requirements section, increase the preferred memory size until you are able to copy and paste the alert sound. The amount of memory needed depends on the sound quality of the sound input device you are using.

Adjusting and testing external speakers
The Speaker Setup section of the Sound control panel allows you to adjust the speakers connected to your computer. Use the Speaker Setup panel to select which speakers you want to use and to adjust the relative volume for each speaker. For example, if you have a subwoofer connected to your computer and want to adjust the volume for the subwoofer only, use the slider underneath the subwoofer to change the volume.

You can also test the speakers connected to your computer by clicking Start Test in the Speaker Setup section. The computer plays a "white noise" test tone on each speaker, allowing you to adjust the relative volume of that speaker. The "white noise" test tone contains sound for all frequencies and sounds like static. You should reduce the overall sound volume for your computer using the Output section of the Sound control panel before testing your speakers, as the test tone can be quite loud on some speakers.

Adjusting the volume for audio CDs and CDs with audio
If you can't hear the audio on a CD, try turning up the volume level in the AppleCD Audio Player. If that doesn't work, check that the Mute option is not selected in the Output section of the Sound control panel. If you started up your computer from a CD with system software, the volume for the AppleCD Audio Player might be set to zero.

Playing and recording from audio CDs
Audio CD playback is now done digitally for increased fidelity and use with digital audio peripheral devices. When you play audio CDs, you no longer have to select "Internal CD" in the Input section of the Sound control panel or the Sound section of the Control Strip. To record from an audio CD, you may need to select "Internal CD" in the Input section of the Sound control panel or the Sound section of the Control Strip.

Connecting to a 10/100Base-T network
When you connect your iBook to an Ethernet network, the computer automatically senses whether it is connected to a 10Base-T network or to a 100Base-T network. Some (possibly all) ports on some network hubs/switches support both speeds. If you're using this type of hub/switch, there may be a delay in establishing a network link. The delay may last for several seconds after you start or restart the iBook, and a message may appear saying the network is not available or that the network has only just become available. If you don't want a delay, connect your computer to an Ethernet network port that is not auto-sensing (10 or 100 megabits per second (Mbps) only). For more information, contact the manufacturer of the Ethernet hub/switch or your network administrator.

Performance problems using Ethernet
If you experience performance problems on your Ethernet network, check with your network administrator. Your computer performs best when the Ethernet port is set to auto-negotiate.

Important: The duplex mode of an Ethernet link to a switch is not detected if the switch's port is not auto-negotiating. If the switch's port is not auto-negotiating, your computer will detect the proper speed but default to half-duplex. If the switch's port at the other end of the link is configured for full-duplex, a large number of late events can occur on the link. Set the switch's port to auto-negotiate where possible. If this isn't possible, then set the switch's port to half-duplex. For more information, see the documentation that came with the Ethernet hub.

Connecting your computer directly to an Ethernet switch
If you connect your iBook directly to an Ethernet switch, you must disable spanning tree on that port. Otherwise your computer could duplicate the AppleTalk address of another computer on the same network and both network connections would become unreliable.

Using the "Wake for other network activity" option in the Energy Saver control panel
In the Energy Saver control panel, the "Wake for other network activity" option requires that an application using TCP/IP be open on your computer for this feature to function properly. You cannot just uncheck the "Load only when needed" option in the TCP/IP control panel.

Using a RAM disk
A RAM disk allows you to use part of the built-in random-access memory (RAM) in your computer as a high-speed storage disk. To save power when your computer is using battery power, you can use a RAM disk to store the documents you are working on. To set up a RAM disk, use the Memory control panel. For more information, see the topic "Improving performance of disk-intensive programs" in Mac Help.

Note: The contents of a RAM disk are saved to the startup disk when you restart your computer. Once the computer restarts, the contents are restored. Large RAM disks may add additional time to shutting down and restarting the computer.

Warning: You should regularly back up the contents of your RAM disk to another disk. The contents of the RAM disk can be lost if:

- the startup drive is read-only, such as a CD-ROM disc
- the startup drive does not have sufficient space to store the contents of the RAM disk

- the startup drive does not have a valid System Folder
- the computer loses power

Using your computer with a NetBoot Server
If you want to use your iBook as a NetBoot client, you may need to update the system on the NetBoot Server. Check the Mac OS X Server Web site at www.apple.com/macosx/server or the Apple Support Web site at www.apple.com/support for instructions.

Password Security control panel
The Password Security control panel mentioned in Mac Help was designed to work with older PowerBook computers and is not installed on your iBook.

Third-party software issues

Moving Bookmarks and Favorites files before reinstalling Internet Explorer and Netscape Communicator
If you inadvertently delete the Internet Explorer or Netscape Communicator applications, you can reinstall the applications using the software install CD that came with your computer. Before you reinstall Internet Explorer or Netscape Communicator, you must move the file that contains your Internet sites list to a different location, such as the desktop. In Internet Explorer, this file is Favorites.html; in Netscape Communicator, the file is Bookmarks.html. When you reinstall Internet Explorer or Netscape Communicator, the program overwrites these files and any locations or bookmarks that you added or that were preinstalled will be lost.

Using hard disk utilities and disk-locking programs
Some disk utility and disk-locking programs are incompatible with Mac OS Extended format. Before you use a disk utility or disk-locking program, make sure the version you have is compatible with Mac OS Extended format. Check the documentation that came with the software application or contact the software manufacturer.

Using Virtual PC 2.1.3
Virtual PC 2.1.3 does not work with iBook computers that have 32 MB of RAM. If you want to use this software, you'll need to add more RAM. For more information, contact the software manufacturer.

Using fax software
If your fax software is set to auto answer, the screen will dim but your computer will not go to sleep. To allow your computer to sleep, you must disable FAXstf auto-answering. To do this, open FaxBrowser, select Settings from the Edit menu. Then select the FaxModem icon and select Never from the Answer On pop-up menu.

Note: To avoid draining your computer battery, plug in the power adapter when waiting to receive a fax.

Using the internal modem with third-party software
Some third-party software, such as FaxSTF or Total Access, have different modem selections than the ones found in the Modem control panel. Using these selections can slow down your connection speed. To use these programs with your computer's internal modem at its highest speed, make sure you select Apple Internal 56K Modem (V.90) in the Modem control panel.

Using Palm Desktop Software 2.5
If you make a connection and a sync fails or doesn't complete, set the connection speed to a lower setting. To do this, open HotSync Manager (click the icon next to the Applications menu, choose HotSync, and in the pop-up menu, select Setup). Click the Serial Port Settings tab. In the Local Setup section, select 19200 as the speed.

Setting up AOL when the Palm Desktop Software 2.5 is installed
If you installed the Palm Desktop Software 2.5 on your computer and you attempt to set up AOL, there is a conflict and a message may appear saying you have a "port in use" error. You need to disable HotSync so you can properly set up AOL. To do this, open HotSync Manager (click the icon next to the Applications menu, choose HotSync, and in the pop-up menu, select Setup). If necessary, click the HotSync Controls tab. In the HotSync section, click the button next to Disabled. To obtain the latest version of AOL software, connect to AOL and go to the keyword Upgrade.

Removing two extensions after installing Quake 1.08
The Quake-1.08 Installer installs two extensions on your computer-ATIGraphicsAccel 2.0f1-CW and ATIGraphicsAccel 1.2f5-CW. After you install Quake and before you restart your computer, drag these two files from the Extensions folder, within the System Folder, to the Trash. If you restart your computer without deleting these two files, your computer may freeze. If that happens, start up your computer from the software install or restore CD, delete the two extensions, then choose Restart from the Special menu.

FWB Hard Disk Toolkit 3.0.2
FWB Hard Disk Toolkit 3.0.2 is not compatible with this model of iBook computer. For more information, contact the software publisher.

EdViewTM Internet Safety Kit
The version of EdView Internet Safety Kit that comes with your iBook is not compatible with the current version of Sherlock. Using Sherlock with EdView may cause a system freeze that will require you to force restart your iBook. To force your iBook to restart, simultaneously hold down the Control and Command keys and then press the power button.

Hardware compatibility issues

Connecting USB devices while the computer is asleep
If you connect a USB device while your computer is in sleep, your computer automatically wakes.

Mounting and disconnecting USB storage devices
To mount or remount a USB storage volume on the desktop, disconnect and then reconnect the device that contains the volume to a USB port on the computer, or to a USB hub attached to your computer. The volume should appear on the desktop in a few seconds. If the device uses removable media, the volume will not appear until the removable media is reinserted into the USB storage device.

Before you disconnect a USB storage device from your computer, close all open windows and quit all running applications that are stored on the USB storage device. If the device has a manual eject drive (you eject the removable media from the device yourself), make sure you eject the removable media first. Drag the device's icon to the Trash on the Desktop, then disconnect the device from your computer.

Using USB devices with software applications
Some applications don't recognize a USB device if the device is plugged in while the application is already running. To use the USB device with that application, quit the application, make sure the device is properly plugged in, then start the application again.

Using ADB dongles
Some applications require the use of an ADB (Apple Desktop Bus) dongle for security purposes to prevent software piracy. The iBook computer uses Universal Serial Bus (USB) technology. You may be able to use a USB dongle with these applications. For more information, contact the software manufacturer.

Using USB-to-serial converters
Some serial devices such as modems, printers, and digital cameras may be able to be used with your iBook using a third party USB-to-serial converter adapter. However, all serial devices may not be compatible with such an adapter. For more information, contact the adapter manufacturer.

Documentation changes

References to Monitors & Sound Control Panel in Mac Help
There are several references to the Monitors & Sound control panel in Mac Help. In the current version of Mac OS installed on your computer, the Monitors & Sound control panel has been divided into two separate control panels-a Monitors control panel and a Sound control panel.

Mac Help instructions for modifying a remote access configuration
In the Editing Remote Access settings topic of Mac Help, if you click "Help me modify a remote access configuration," the information incorrectly states,"If you don't care which protocol is used or don't know which protocols are supported by the server you are calling, choose Automatic." There is no Automatic setting in Remote Access 3.4; you must select PPP or ARAP.

Published Date: Feb 20, 2012

PowerBook G3 Series (Bronze keyboard): No Upgrade for DVD Capability

You may have a PowerBook G3 Series (Bronze keyboard) which does not have the DVD decoder installed. The PC card DVD decoder from the previous PowerBook G3 Series does not work on the PowerBook G3 Series (Bronze keyboard).

This article has been archived and is no longer updated by Apple.

Though the DVD video PC card fits into the PC card slot in your new PowerBook, Apple does not provide support for that particular combination. There are no plans to make the DVD drive available as an upgrade from Apple. Third party companies may provide this capability but Apple is unaware of any at this time.

Published Date: Feb 20, 2012

PowerBook: Information About ROM-in-RAM

The PowerBook G3 Series (Bronze keyboard), PowerBook (FireWire), and PowerBook G4 use ROM-in-RAM (NewWorld ROM). This article provides a technical explanation of ROM-in-RAM.

This article has been archived and is no longer updated by Apple.
These PowerBooks are different from previous PowerBook computers in that they have no single, large physical ROM that contains many components of the Mac OS, the 68K emulator, hardware initialization, and the nanokernel. Instead, a small physical ROM provides hardware initialization functions and provides a mechanism to load the Mac OS ROM image into RAM. The new software architecture that is centered around ROM-in-RAM and its ramifications has the code name "NewWorld".

ROM-in-RAM

Hardware-specific code resides in firmware (ROM) that fits into one ROM called the boot ROM. The boot ROM includes the code and tables needed to start up the computer, load an operating system, and provide common hardware access services.

All higher-level software resides in what has been historically known as the Mac OS ROM, but with much of the old hardware-specific code moved into the boot ROM. As before, the Mac OS ROM can still be augmented by enablers, the System file, and extensions.

Prior to the iMac, all Macintosh computers required a ROM component that contained many components of the Mac OS software. The ROM-in-RAM approach sidesteps this requirement by copying an image of the Mac OS ROM into RAM before the Mac OS begins operation. Once Mac OS begins operation, a Mac OS ROM image in RAM and an actual Mac OS ROM behave in the same way. No new or different software interfaces are directly accessible from the Mac OS. During the boot process, software contained in the Mac OS ROM file communicates with Open Firmware to collect information about the hardware, using the Open Firmware Client Interface.

Performance

Performance of a PowerBook computer using ROM-in-RAM should exceed performance measurements for other Macintosh computers with comparable microprocessors and speeds due to the improved interrupt handling with the ROM-in-RAM approach. In addition, performance is improved because code that used to exist in ROM is now in RAM and RAM chips operate faster than the ROM chips.

RAM Footprint

Because the Mac OS ROM image is stored in RAM, approximately 3 megabytes of RAM is removed from availability for other uses. In effect, a system with 64 megabytes of RAM appears to have only 61 megabytes available. Some portion of the missing 3 megabytes is offset by having fewer patches in RAM.

Data Structures and Files

The Mac OS ROM image is contained in a new file, named "Mac OS ROM", that is kept in the System Folder. The Mac OS ROM image is exactly the same as it would be if it were an actual Mac OS ROM, containing the high-level software, the kernel software, and the 68K emulator.

Startup Disk Control Panel

Previous systems stored the user's selected startup device in PRAM when the user selected a device in the Startup Disk control panel. This device was honored by the Mac OS ROM unless the selected device was unavailable or was overridden by the user. The startup disk routine for the ROM-in-RAM PowerBook computers, rather than setting Mac OS PRAM, sets an Open Firmware configuration variable called boot-device. This setting is honored by Open Firmware unless the selected device is unavailable or is overridden by the user.

Pressing the following keys during the startup sequence can be used to override the selected startup device.

- **Command-Option-Shift-Delete**: Ignore the device that is selected in the Startup Disk control panel.
- **C**: Force the internal CD-ROM drive to be the startup device.
- **D**: Force the internal hard disk to be the startup device.

Open Firmware and Startup Devices

In order for a device supported by an expansion card (for example a SCSI PC card) to participate in the startup process (for example, to start up from a drive connected to that SCSI PC card), the card must include an expansion ROM containing startup firmware. Expansion cards for startup devices must contain all the driver code required during startup in the expansion ROM on the card. Depending on their functions, such cards may also need to provide support resources such as fonts.

Examples of devices needed during system startup include display, keyboard, and mouse devices, and storage devices such as hard drives and CD-ROM drives.

Important: If Open Firmware code is not included in the expansion card for a startup device, the card will not be usable until the operating system loads its supporting software from disk after the startup process has concluded.

TA25871_PowerBook_Information_About_ROMinRAM.pdf

Published Date: Feb 20, 2012

PowerBook (Bronze keyboard and FireWire): Supported Resolutions for External Displays

This article documents the supported resolutions available for an external display connected to the PowerBook G3 Series (Bronze keyboard) and PowerBook (FireWire).
This article has been archived and is no longer updated by Apple.
The PowerBook has a video out port that allows you to directly connect a monitor with a VGA-style adapter, or other external video device such as a video projector. If you have an older Macintosh-compatible monitor, you can connect it using the VGA-to-Macintosh video adapter that came with your computer.

When an external monitor is connected, you can either have the same image appear on both the internal display and the external monitor (known as video mirroring) or use the external monitor to extend the size of the Mac OS desktop (known as dual display mode).

The supported resolutions for external displays are as follows:

Resolutions	Refresh Rate (Hertz)	Max. Number of colors
512 x 384	60 Hz	Millions (24 bit)
640 x 480	60/67/72/75/85 Hz	Millions (24 bit)
640 x 870	75 Hz	Millions (24 bit)
800 x 600	56/60/72/75/85 Hz	Millions (24 bit)
832 x 624	75 Hz	Millions (24 bit)
1024 x 768	60/67/72/75/85 Hz	Millions (24 bit)
1152 x 870	75 Hz	Millions (24 bit)
1280 x 960	75 Hz	Millions + (24 bit)
1280 x 1024	75 Hz	Millions + (24 bit)

+ Millions of colors are only available on the external monitor when the PowerBook display is closed, dedicating all 8MB of video memory for the external display.

Playback of DVD movies on a television connected to the PowerBook (FireWire) reduces the amount of video memory available for the built-in display. You may have fewer colors available at higher resolutions.

TV out supported resolutions
The TV out port (also known as an S-Video out port) on your computer lets you connect to a television, videocassette recorder (VCR), or video projection system.

Figure 1, TV out (S-Video out) port

You can use TV out to display images on a television or record computer images on a VCR. If your computer came with a DVD-ROM drive, you can use it to play DVD discs on your television.

When an external video device is connected to the TV out port, you can either have the same image appear on both the internal display and the device ("video mirroring") or you can use the device to extend the size of the Mac OS desktop ("dual display mode").

Because of the display limitations of most televisions, images displayed on the television screen are of lower quality than those on the built-in display or an external monitor.

How you connect video equipment to your computer depends on the type of equipment you want to connect. The S-video port can output the following display formats:

S-video: High-quality video format used by certain televisions, VCRs, and video projectors

Figure 2, S-Video cable

You can connect a cable from a S-video device directly to the S-video output port on the computer. S-video is recommended because it provides

better quality than standard composite video cables.

Composite video: Video format used by most televisions and VCRs

Figure 3, Composite video cable

To connect a composite video device, you need to use a composite video cable (not included with the PowerBook) and the composite to S-video adapter that came with your PowerBook. (Shown below)

Figure 4, Composite to S-Video adapter cable

Use the TV Mirroring portion of the Control Strip to turn video mirroring on and adjust the settings for how the images are displayed on the television.

TV Mirroring

Figure 5, TV Mirroring portion of the Control Strip

Format	Resolution	Refresh rate
NTSC	512 x 384	60 hertz (Hz)
	640 x 480	60 Hz
	720 x 480	60 Hz
	800 x 600	60 Hz
	832 x 624	60 Hz
	1024 x 768	60 Hz
PAL	512 x 384	50 hertz (Hz)
	640 x 480	50 Hz
	720 x 480	50 Hz
	800 x 600	50 Hz
	832 x 624	50 Hz
	1024 x 768	50 Hz

Notes:

1) NTSC is the television video standard for North America.

2) PAL is the television standard for most of Europe and some Asian countries.

Published Date: Feb 20, 2012

Extended Startup Time After Memory Upgrade

After installing an additional 128 MB of memory in my computer, the computer seems to takes a longer time to startup after shutdown. Is there some correlation between the amount of memory installed and a slower startup time?

This article has been archived and is no longer updated by Apple.
Yes, the memory test is part of the startup routine for computers introduced after mid-1999 such as the Power Mac G4, PowerBook G3 Series (FireWire), PowerBook G4, and iBook. Having more memory installed will extend the amount of time it takes the computer to boot.

Disabling the startup memory test may help reduce long boot times if you have a higher memory configuration.

Note: This option is normally hidden until you press and hold the Command and Option keys while opening the Memory control panel. The startup memory tests are designed to ensure that the memory is fully functional in the computer. You should disable the startup memory tests only if you are experiencing a long delay in starting up your computer.

Additionally, ensure that you have highlighted a startup disk in the Startup Disk control panel. Not having a disk highlighted can extend the startup time.

For additional information on reducing startup time, see article 31175: "**Macintosh: Reducing Startup Time**"

Published Date: Feb 20, 2012

PowerBook G3 Series (Bronze keyboard): Additional USB Device Drivers Provided?

My PowerBook G3 Series (Bronze keyboard) CD has a CD Extras Folder that contains a USB Device Drivers folder. What are the contents for and do I need to install them?
This article has been archived and is no longer updated by Apple.
To use a USB device with a Mac OS-based computer, the device needs a driver. Apple has drivers for some devices such as mice, keyboards, and hubs, already installed in the Mac OS. Third party devices also need a driver, some of which are in the USB Device Drivers folder.

For your convenience, Apple has provided some additional drivers in the CD Extras folder, including those for the UMAX 1220U scanner (UMAX VistaScan software), HP 600 Series DJ Printers and many Epson printers (Stylus COLOR 440, Stylus COLOR 600, Stylus COLOR 640, Stylus COLOR 740, and the Stylus Photo EX).

To install these drivers, double-click the appropriate folder to open it, then launch the Installer and follow the onscreen directions. After you install the driver software, you should be able to use the device. Driver software for other devices is available from the manufacturer of the device.

Important: If you have questions about these drivers, please contact the manufacturer of the device.

For the latest drivers or information about these devices, refer to the following web sites:

Printers

http://www.epson.com/support/

http://www.hp.com/

Scanners

http://www.umax.com/

Published Date: Feb 20, 2012

PowerBook G3 Series (Bronze keyboard): Restoring PowerBook Software Read Me

This article comprises the Restoring PowerBook Software Read Me from the PowerBook G3 Series (Bronze keyboard) CD.
This article has been archived and is no longer updated by Apple.

Restoring PowerBook Software on Your Hard Disk

If any of the applications or extra files on the hard disk is damaged or erased inadvertently, you can replace them by restoring the complete set of software from the PowerBook G3 Series CD. You use the Apple Software Restore program to restore the complete set of software on your hard disk.

Follow these steps to restore the complete set of PowerBook software on the hard disk.

IMPORTANT Be sure to use the power adapter when restoring software from the CD. This process takes some time, and it may not work correctly on battery power if the battery is low.

1. Insert a CD-ROM or DVD-ROM module into the right expansion bay.

2. Insert the PowerBook G3 Series CD.

3. Select restart from the Special menu to restart the computer. Hold down the C key until the welcome message appears. (This key allows the computer to start up from the CD.)

4. Double-click to open the Apple Software Restore icon.

5. Read the program's greeting and click OK.

6. Use the Switch Disk button to select the correct destination disk, if necessary.

7. Click Restore to begin restoring the original set of software on the hard disk. A message reports the progress of restoring software.

   The default setting allows you to restore a complete set of factory preloaded software onto your hard drive. Items already on the drive will be placed in a folder called "Original Items".

   If you select Restore in Place, overlapping files on your hard drive will be replaced by the corresponding files in the image.

   If you wish to erase all the data on the drive and reformat it, select the Erase before restoring checkbox. This is the recommended procedure for restoring your hard drive to it's original state. Make sure you back up the drive if there are files you need to save. In the adjacent popup menu, you can select which type of format you would like for the drive: Same as selected configuration, which will maintain the type of format your PowerBook shipped with, Standard or Extended Mac OS format. For more details on which type of formatting is best for your needs, please see the About Mac OS Extended Format Read Me contained on this CD.

8. Click Quit when the process is complete.

If you added items to the original System Folder on the hard disk, you can transfer those items from the original System Folder (inside the Original Items folder) to the new System Folder. For more information about this procedure, see the preventing and solving problems section of Mac OS Help available from the Help menu.

TIL article 58352: "**PowerBook G3 Series (Bronze keyboard): About Important Extra System Software Folder**" contains info on some system software additions which may need to be copied to your system folder after doing an install.

Published Date: Feb 20, 2012

PowerBook G3 Series (Bronze Keyboard): Read Me

This article comprises the PowerBook G3 Series (Bronze keyboard) Read Me.
This article has been archived and is no longer updated by Apple.

Important Information About Your Macintosh PowerBook

This document provides late-breaking news about your Macintosh PowerBook G3 Series computer. You may want to print this document to keep with the user's manual for your PowerBook.

Important Information About Your Hard Disk's Format

Using Hard Disk Utilities and Disk Locking Programs Some disk utility and disk locking programs are incompatible with Mac OS Extended format. Before you attempt to use a disk utility or disk locking program, make sure the version you have is compatible with Mac OS Extended format. Check the documentation that came with the program or contact the manufacturer or the vendor that supplied the program.

Important Information About Reinstalling System Software

Your computer came with all necessary system software already installed. However, if you use the Mac OS Install program to reinstall your system software you will need to install certain items from the CD separately. These items are located in a folder titled "Important Extra System Software"

To install the extra system software:

1. After reinstalling the Mac OS, drag and drop the items from the folder on top of a closed system folder on your hard disk.
2. Click OK when asked to put the items in their proper location.
3. Restart your computer.

Important Information About Your Battery

Your battery has external indicator LEDs that let you monitor the charge level of your battery. Before the LEDs will report levels correctly, the battery must be fully discharged and recharged to calibrate the battery. After this calibration, the LEDs will report charge levels properly.

Important Information About Computer Sleep

When Using IrDA When the IrDA method of infrared (IR) communication is selected in the AppleTalk control panel and AppleTalk is on, the computer will not go to sleep automatically.

When Using a Communications Program

Many communications programs, such as PPP, Apple Remote Access, or other dial-up programs, monitor the computer's modem port to check for incoming transmissions. This may mean that the PowerBook will not sleep automatically (after the interval set in the Energy Saver control panel). Forcing sleep while connected may result in a lost connection or crash. When your computer is using the battery, you may want to quit a communications program whenever you are not using it to conserve the battery's charge. (See the manual that came with your communications program for more information.)

When Using Fax Software

Your computer will not completely sleep and the screen will only dim (instead of turn off) when fax software is set to auto answer. To avoid draining your computer battery, plug in the power adapter when waiting to receive a fax.

When FAXstf is set to answer a fax automatically, your computer will not sleep automatically. To enable the Auto sleep function in FAXstf, select Settings from the Edit menu, choose the "Fax Modem" icon, and select Never from the pop-up menu.

Waking From Sleep and the CD-ROM or DVD-ROM Drive

There is a period of time when waking from sleep that the CR-ROM or DVD-ROM drive will allow you to manually eject a mounted disc using the button on the drive tray. This will cause unexpected behavior. Closing the tray will correct the situation.

Important Information About SCSI Disk Mode

SCSI Disk Mode

The software needed to SCSI Disk Mode, is now included in the Mac OS ROM file located in the System folder. Your PowerBook cannot operate in SCSI disk mode if the System Folder is damaged or missing. Repair your System Folder by starting up from the PowerBook CD that came with your computer and reinstalling system software.

PowerBook SCSI Setup control panel

The PowerBook SCSI Disk Mode control panel has been renamed PowerBook SCSI Setup because it includes a new feature that allows the ability to wake from sleep faster.

Setting the SCSI ID

When you use your PowerBook in SCSI Disk Mode, the SCSI ID of the PowerBook will be set to #2, regardless of the ID you set in the PowerBook SCSI Setup control panel. When setting up your PowerBook for SCSI Disk mode, make sure that no other devices use SCSI ID #2.

SCSI Disk Mode and Battery Power

Always connect the power adapter when operating in SCSI Disk mode. Low battery conditions are not reported and data loss could occur if the battery gets completely drained.

Important Information About Networking

Connecting to a 10/100Base-T network

When you connect your PowerBook to an Ethernet network, the computer automatically senses whether it is connected to a 10Base-T network or to a 100Base-T network. Some (possibly all) ports on some network hubs/switches support both speeds. If you're using this type of hub/switch, there may be a delay in establishing a network link. The delay may last for several seconds after you start or restart the PowerBook and a message may appear saying the network is not available or that the network has only just become available. If you don't want a delay, connect your computer to an Ethernet network port that is not auto-sensing (10 or 100 megabits per second (Mbps) only). For more information, contact the manufacturer of the Ethernet hub/switch or your network administrator.

Performance Problems Using Ethernet

If you experience performance problems on your Ethernet network, check with your network administrator. Your computer performs best when the Ethernet port that it is connected to is set to auto-negotiate.

Important: The duplex mode of an Ethernet link to a hub is not detected if the hub's port is not auto-negotiating. If the hub's port is not auto-negotiating, your computer will detect the appropriate speed but default to half-duplex. If the hub's port at the other end of the link is configured for full-duplex, a large number of late events can occur on the link. Set the hub's port to auto-negotiate where possible. If this isn't possible, then set the hub's port to half-duplex. For more information, see the documentation that came with the Ethernet hub.

Important Information About Displays

When connecting an Apple Studio Display monitor with a USB cable to your PowerBook, be sure to connect the monitor's USB cable to the USB port (on the back panel of the computer). The AppleVision software requires this connection.

If you have an older AppleVision or Apple Studio Display monitor that has an ADB type cable you will be unable to attach the ADB cable to your PowerBook. In order to adjust the screen image you will need to use the external controls on the monitor. For more information see the documentation that came with your monitor.

When using an Apple 15" MultiScan, Apple 1705 MultiScan or an AppleVision 1710AV monitor, the PowerBook display should be set to turn off rather than dim. If the computer is set to dim, the external display may behave erratically. To set the display:

1. Open the Energy Saver control panel
2. Click on "Advanced Settings"
3. Check "Turn off the PowerBook display instead of dimming it."

Important Information About Operating With the Display Closed

When operating with the display closed and an external monitor attached, you must have the PowerBook connected to the power adapter. Display closed operation while running on battery power is not supported.

Important Information About Your Expansion Bays

Booting from Expansion Bay devices If the system folder on your internal hard drive is invalid and you need to boot from an expansion bay module, be sure the module is inserted prior to booting or restarting your computer. If you insert the module after booting, you will see a blinking question mark or blinking folder icon. This is not recommended as unexpected results may occur.

Important Information About the Internal Modem

The modem used in the PowerBook G3 Series is a 56K modem based on the new V.90 specification. Any time a new modem standard is introduced there is a period of adjustment while various Internet service providers (ISPs) work to ensure that their POP (Point-of-Presence) servers are compatible with the new specification.

If you're having problems connecting in V.90 mode--if the modem won't connect at all, or the connection is dropped after a few minutes--it may be because the phone lines are too noisy or there's too much interference to sustain a connection of speeds above 33.6 kilobits/second (Kbps). Contact your ISP to ensure they are currently using V.90-compliant modems, or have plans to update to them in the near future. Use the PowerBook G3 Series Internal 56K (V.34 Only) modem script, which forces the modem to connect at 33.6 Kbps or lower speeds. This type of connection is more reliable in situations where the phone line quality is questionable.

To use the PowerBook G3 Series Internal 56K (V.34 Only) option, follow these steps:

1. Open the Modem control panel in the Apple menu.
2. Make sure the "Connect via" pop-up menu is set to Internal Modem.
3. Open the Modem pop-up menu and choose "PowerBook G3 Int56K (v.34 Only)".
4. If necessary, set the Sound and Dialing options.
5. Close the control panel. A message asks if you want to save the changes to the current configuration.
6. Click Save. **Note**: You do not have to restart your computer in order to use the new modem software.

Important Information About Startup Disk Devices

Be sure a valid startup disk is selected in the Startup Disk control panel. If an invalid startup disk is selected, your computer could take as long as 2 minutes to locate a volume that it can startup from. PC Card devices and RAM disks are examples of devices that are not valid to start up from, even though the icon may be displayed in the Startup Disk control panel.

Selecting the Network Disk icon in the Startup control panel without having a Netboot server properly setup will also significantly delay the time it takes you PowerBook to boot up.

Your computer cannot startup using an external USB device.

Important Information About Using A Television With Your PowerBook

The online Help incorrectly states that you can turn TV Mirroring on and off from the control strip. TV Mirroring should turn on automatically after you wake or start up the computer. To turn it off, sleep the PowerBook and then disconnect the video cable from the back panel of the computer.

Important Information About Viewing DVD Video

For best performance when viewing a DVD video:

- Turn off virtual memory in the Memory control panel.
- Turn off file sharing in the File Sharing control panel.
- Make sure that the disk cache is to the default setting in the Memory control panel.
- Quit all other applications.

Important Information About Third-Party Hardware

About drivers for USB input devices To run a USB device on a Mac OS-based computer, the device needs a software program called a "driver," available from the manufacturer of the device. Drivers appear as extension files stored in the Extensions folder within the System Folder. Apple already includes drivers in the Mac OS for USB mice, keyboards, hubs, game devices, and Iomega's USB Zip drive. Drivers for other devices, such as Epson and Hewlett-Packard printers, are included on the software install CD that came with your computer. These drivers can be found in the CD Extras folder, within the USB Device Drivers folder. After you install the driver software, you should be able to use the device. If you have problems, please contact the manufacturer of the device. From time to time, new versions of USB drivers become available. For up-to-date information on driver software, contact the manufacturer of the device.

Check the documentation that came with the device for installation instructions or contact the manufacturer or the vendor that supplied the device.

Some USB devices may not work with Mac OS until Mac OS drivers are made available. For information about the compatibility of a USB device with Mac OS, contact the manufacturer of the device.

Some applications don't recognize USB devices if the devices are plugged in while the application is running. To use the USB device with that application, quit the application, make sure the device is properly plugged in, then start the application again.

Using ADB Dongles

Some applications require the use of an ADB (Apple Desktop Bus) dongle for security purposes to prevent software piracy. The PowerBook now uses Universal Serial Bus (USB) technology. You may be able to use a USB dongle with these applications. For more information, contact the software manufacturer.

Using USB-to-Serial Converters

Some serial devices such as modems, printers and digital cameras may be able to be used with your PowerBook using a third-party USB-to-Serial converter adapter. However, all serial devices will not necessarily be compatible with such an adapter. For more information, contact the adapter manufacturer.

Using files on USB Storage devices

When working with files on an external USB storage device, always quit any open applications that may be using a file on the device before you sleep your PowerBook or disconnect the device. Unexpected results may occur, including the possibility of corruption of the media within the USB device. Contact the vendor of the specific USB device for more information.

Important Information About Installing Help For Your Computer

Your computer came with additional Help files specific for your model of computer. These files are already installed on your hard disk and available in the Help Center. This installation program will reinstall the Help files specific for your model of computer.

Reinstallation of these Help files is only necessary if you performed a clean installation of this or future versions of the Mac OS system software and your computer specific Help files are missing from the Help Center. The installation program for these computer specific Help files is located in the CD Extras folder on your PowerBook G3 Series CD.

Important Information About PC Cards

Your computer has a manual PC Card eject mechanism. To eject a PC Card, drag the card's icon to the trash and then use the PC Card eject button to eject the card. This is different from previous PowerBooks where dragging the icon to the trash would cause the card to be ejected from the slot.

Important Information About a RAM disk

The RAM disk cannot be used as a startup disk. If you create a RAM disk, its icon will not be displayed in the Startup Disk control panel.

The contents of a RAM disk are saved to the startup drive when you restart your computer. The contents are restored, once the computer restarts. Large RAM disks may add additional time to shutting down and restarting the computer.

Warning: The contents of the RAM disk can be lost if:

- the startup drive is read-only, such as a CD-ROM disc
- the startup drive does not have sufficient space to store the contents of the RAM disk
- the startup drive does not have a valid System Folder
- the computer loses power

Published Date: Feb 20, 2012

PowerBook G3 Series (Bronze keyboard): Description

This article comprises the description of the PowerBook G3 Series (Bronze keyboard) introduced in May, 1999.
This article has been archived and is no longer updated by Apple.
The Macintosh PowerBook G3 Series computers-the world's fastest notebook computers- are now almost 20 percent thinner and nearly 2 pounds lighter than their predecessors. With processor speeds up to 400 megahertz, they run up to twice as fast as comparable Pentium and Pentium II processor-based notebook and desktop systems.* And with as much as 10 gigabytes of hard disk capacity, plus a CD-ROM or DVD-ROM drive, they'll meet all your storage needs.

With these powerful capabilities and a high-resolution 14.1-inch (diagonal) color display, the Macintosh PowerBook G3 makes a versatile desktop computer as well as the ideal mobile solution, whether you work in creative design, business, or education. And with the dual-battery capability, you can keep working for longer than ever-up to 5 hours at a time with one battery or up to 10 hours with two batteries (depending on configuration and usage).

The new PowerBook G3 supports the latest technologies for connecting high-speed peripherals. Two Universal Serial Bus (USB) ports are already built in, and you can add an optional third-party FireWire CardBus card for connecting to peripherals such as digital video cameras and hard disk drives.

Ethernet connectivity is vital in business and education environments, so PowerBook G3 systems support both 10BASE-T and the high-speed 100BASE-T Ethernet protocols. And you can stay in touch wherever you are with the internal 56K modem that lets you tap in to your organizational network or the Internet.**

Built-in VGA and S-video output ports offer you flexible display options. Now, with built-in dual-display capability, you can add an external monitor and expand your on-screen workspace. For great presentations, simply connect a TV or projection device.

Want to enjoy movies while you're traveling? You can get your PowerBook G3 system with a built-in DVD-ROM drive that plays DVD movies and also lets you use your favorite CD-ROMs. Or choose the 24x-speed CD-ROM drive for fast, smooth playback of multimedia reference discs, educational titles, and games. The hot-swappable expansion bay also accepts third-party Zip, SuperDisk, and hard disk drives.

The Macintosh PowerBook G3 Series: desktop performance in a notebook computer.

Features

Outstanding performance

PowerPC G3 processors for the fastest performance of any notebook computer*

Performance-boosting backside level 2 cache

Support for up to 384MB of SDRAM

Up to 10 hours of battery life through dual lithium-ion battery capability

Latest I/O technology, including two USB ports for connecting a variety of peripherals

Stunning style

Thinner and lighter than ever-PowerBook G3 Series models start at just 5.9 pounds

Hot-swappable expansion bay that accepts CD-ROM or DVD-ROM drives and third-party peripherals such as Zip, SuperDisk, and hard disk drives

Handy weight-saving module that slips into the expansion bay in place of the CD-ROM or DVD-ROM drive or battery to reduce travel weight

Easy access to memory expansion and the removable hard disk drive through the flip-up keyboard

Advanced multimedia

14.1-inch (diagonal) active-matrix display for crisp text and brilliant color

8MB of video memory for displaying millions of colors on both the built-in screen and an external monitor

Support for dual displays and video mirroring with the integrated ATI RAGE LT Pro video controller

VGA and S-video output ports for easy connection to an external monitor, video projector, or TV

Integrated communications

Built-in 56K modem with V.90 support

10/100BASE-T Ethernet for easy access to high-speed networks

4-Mbps IrDA technology for quick wireless LAN access and file sharing

Available Configurations

Order no.	**M7304xx/A**	**M7308xx/A**	**Note:** In the US all model numbers are LL, thus the order number for the 400 MHz PowerBook would be M7308LL/A
Macintosh PowerBook G3 Display	14.1-inch TFT	14.1-inch TFT	
Processor speed	333 MHz	400 MHz	
Backside level 2 cache	512K	1MB	
Backside bus speed	133 MHz	160 MHz	
Memory (SDRAM)	64MB	64MB	
Video memory (SDRAM)	8MB	8MB	
Video controller	ATI RAGE LT Pro	ATI RAGE LT Pro	
Hard disk drive	4GB IDE drive	6GB IDE drive	
CD-ROM drive	Yes	-	
DVD-ROM drive with DVD-Video playback	-	Yes	
Ethernet	Built-in 10/100BASE-T	Built-in 10/100BASE-T	
56K modem (supports V.90)	Yes	Yes	
S-video output	Yes	Yes	

All models also include a built-in keyboard and trackpad; modem cable; power adapter; S-video to composite adapter; VGA-to-Macintosh adapter; Mac OS 8.6; Apple File Synchronization; Apple Location Manager; third-party software (Microsoft Internet Explorer, Microsoft Outlook Express, Netscape Communicator, and FAXstf); complete setup, learning, and reference documentation; and limited warranty.

Build-to-order (BTO) options

In addition to choosing from Apple's prebuilt systems, you can order a custom-configured PowerBook computer from your local reseller or the online Apple Store. This allows you to select the processor speed, amount of RAM, hard disk capacity, and a CD-ROM or DVD-ROM drive. You can also order an additional lithium-ion battery and third-party peripherals such as Zip and SuperDisk drive expansion modules or a FireWire CardBus card. For up-to-date information about options and availability, visit **www.apple.com/store**.

Related Products

Product	**Order no.**
PowerBook G3 Series Lithium-ion Rechargeable Battery	M7385G/A
PowerBook G3 Series Power Adapter	M6384xx/A
PowerBook G3 Series Power Adapter (for Europe and U.K.)	M6548G/A
Apple HDI-30 SCSI Disk Adapter for SCSI disk mode	M2539xx/A
Apple SCSI Peripheral Interface Cable for SCSI-to-SCSI connection	M0207
Apple HDI-30 SCSI System Cable for PowerBook-to-SCSI connection	M2538xx/A

For More Information

For more information about these products, or to find out where to buy Apple products, visit **www.apple.com** on the World Wide Web or call 1-800-538-9696 in the U.S. To purchase these products from the Apple Store, go to **www.apple.com/store**.

Visit the Macintosh Products Guide at **www.apple.com/guide** for the latest information on over 12,000 hardware and software products for your Macintosh. Apple stands behind its products with world-class service and support. Offering quality parts, extended hardware service options, phone support, and support via the Internet, we provide you with support choices that meet your needs. For more information, visit **www.apple.com/support**.

* Based on BYTEmark integer index processor scores.

** Data speeds up to 56 Kbps, fax speeds up to 14.4 Kbps. Download speeds vary with line conditions and your ISPs modem capabilities. FCC regulations limit ISP transmission speeds to 53 Kbps in the U.S.

TA25877_PowerBook_G_Series_Bronze_keyboard_Description.pdf

Published Date: Feb 20, 2012

Color StyleWriter: Troubleshooting Light Print or No Print Condition

This article describes a situation where a Color StyleWriter goes through the motions of printing, but no ink is deposited on the paper. In other cases, the print is light. Replacing the ink tanks did not help.
This article has been archived and is no longer updated by Apple.
Print quality symptoms with ink jet printers are almost always caused by ink cartridge or ink tank issues. First we need to make sure we are using the same terminology in describing these parts. The standard color cartridge assembly (this would include all the Color StyleWriters except the 4000 and 6000 series) comes with three parts:

- The cartridge itself which has the print head in it
- The black ink tank
- The three color (Cyan, Magenta, and Yellow) ink tank.

The two ink tanks snap into the cartridge to complete the assembly, and the cartridge assembly snaps into the carriage of the printer.

As would be assumed, an empty ink tank can cause the printer to print light or completely blank. However, this can also be caused by the cartridge if the print head had become clogged with dry ink. This can usually be cleared by using the utility in the printer driver to clean the print head. This is accomplished from the Print dialog box by selecting the 'Utility' button and check the 'Clean ink cartridge before printing' option. This may need to be done five or six times to clear a severely clogged print head.

If cleaning the print head does not resolve the problem, it is possible that the print head is bad and needs to be replaced. The print head cartridge is designed to be used through several changes of ink tanks, however as print quality degrades, the cartridge should also be replaced.

One of the worst things you can do to an ink jet printer is to allow it to go for extended periods of time without use. Without regular use, the small holes that make up the print head become clogged with dried ink. This is one of the major causes the symptoms we are discussing here.

Note: It is possible for the ink tanks and cartridge to be good and have the printer go through the motions of printing and put no ink on the page due to a failure in the printer. However, this is very rare and should only be considered after troubleshooting the cartridge/ink tank as described above.

Published Date: Feb 20, 2012

PowerBook G3 Series: Intermittent No Video on Wake From Sleep

Sometimes when waking a PowerBook from sleep the screen stays black.

This article has been archived and is no longer updated by Apple.
We have found that if the built-in display is set to a non-native resolution (something other than 1024 x 768 on a 14-inch display or something other than 800 x 600 on a 12-inch display), the PowerBook may do this in certain circumstances. The light stops blinking, the hard disk spins up, and the processor is functioning, but the screen remains black.

If you run into this situation, simply force the PowerBook back to sleep by pressing command-shift-0 (or closing the lid) and then wake it up again. It might also be a good idea to leave the PowerBook display set to its native resolution (1024 x 768 for 14-inch displays and 800 x 600 for 12-inch displays).

Note: This issue affects only the PowerBook G3 Series model number M4753 that was released in September of 1998.

Published Date: Feb 20, 2012

Personal File Sharing: Volume Size Reporting Limitations

Personal File Sharing in Mac OS 8.x can share volumes up to 2 terabytes in size. However, some size values may not be reported correctly on client machines.

This article has been archived and is no longer updated by Apple.

When you mount a Personal File Sharing volume having greater than 1.9GB of available space, only 1.9 GB of the available space is reported. When the available space is less than 1.9 GB, the size is reported correctly.

Example: If you mount a 6 GB volume with 2 GB of space used, you will see 1.9 GB free when viewing the volume from the remote machine. If you copy 500 MB of data to the remote volume, you will still see 1.9GB available. If you then attempt to copy 2.0 GB of data to the remote volume, you receive an erroneous message that there is not enough space on the remote volume. To work around this, copy the data in chunks of less than 1.9 GB. When you are finished, you will see (correctly) that there is only 1.5 GB of space available on the remote volume.

In addition, when you mount a volume larger than 2 GB, or a volume of any size that is formatted as Mac OS Extended, which is shared via Personal File Sharing, individual file sizes may appear incorrectly on your client machine.

These limitations are cosmetic only, and do not affect the integrity of the shared data. These limitations do not exist in the current version of AppleShare IP. For more information on AppleShare IP, please see http://www.apple.com/support and search AppleShare IP.

Published Date: Feb 20, 2012

Open Transport: DHCP Client Behavior

Different versions of Open Transport behave differently when discovering, renewing, and releasing a DHCP lease. This article describes the behavior of the DHCP client in different versions of Open Transport.
This article has been archived and is no longer updated by Apple.
In response to customer feedback, Apple has changed the DHCP client implementation in Mac OS 8.5, and again in Mac OS 8.6. A given DHCP client may behave in unexpected ways with certain DHCP servers. This document aids in troubleshooting DHCP issues by providing a reference for the expected behavior of each version of Open Transport and the Mac OS.

For a complete description of the terms used below, and for a description of the DHCP protocol, see RFC 2131.

Mac OS 8.1 and earlier (Open Transport 1.3.1 and earlier)

IP Load

Every time the IP stack loads, the DHCP client sends out a DHCPDISCOVER packet. If the Macintosh receives no response to this, IP does not load and any application trying to use IP services returns an error.

Loading IP in this manner does not attempt to keep the same IP address when a computer is restarted. Depending on the DHCP server configuration, the client may receive a different IP address every time the IP stack loads.

IP Unload

When the IP stack unloads, the DHCP client sends a DHCPRELEASE.

Mac OS 8.5.x (OpenTransport 2.0.1 & 2.0.2)

IP Load

The DHCP client was modified in Mac OS 8.5 so that the client would attempt to regain the previously assigned IP address if the lease is still active when the IP stack loads. This makes it much more likely that a computer retains the same IP address when it is restarted.

The IP stack can load in two different states in Mac OS 8.5:

INIT

A client starts up in the INIT phase when:

(a) the previous lease has expired when the client starts up.

(b) there is no previous lease information (this is the first start up with DHCP, or the previous attempt to load IP timed out).

In the INIT state, the Macintosh sends out a DHCPDISCOVER, requesting a lease from any DHCP server on the network. If the Macintosh client receives no response to the DHCPDISCOVER after about a 16-to 20-second wait, DHCP generates a randomly chosen IP address in the range 169.254.0.0 to 169.254.254.255 inclusive and a subnet mask of 255.255.0.0.

INIT-REBOOT

If the client's last assigned DHCP lease has not expired, then the client starts up in the INIT-REBOOT state in an attempt to regain the most recently used IP address. The Macintosh broadcasts a DHCPREQUEST asking to use its last IP address.

The server should respond to a DHCPREQUEST in one of two ways:

1. Server sends the client DHCPACK, which tells the client that it may use the requested IP address. In this case the client proceeds with a new lease on the same IP address.

2. Server sends the client DHCPNACK, which tells the client that it may not use the requested IP address. The client then moves to the INIT state and sends out DHCPDISCOVER as noted above.

If the Macintosh begins in the INIT-REBOOT state and receives no response to its DHCPREQUEST, this attempt to load the IP stack fails and the client has no IP services. The state of the client is changed so the next stack load starts in the INIT state described above.

IP Unload

When the IP stack unloads, the DCHP client sends out a DHCPRELEASE. This lets the server know that the client no longer needs the IP address and frees the server to allocate the address to another client.

Mac OS 8.6 and later (Open Transport 2.0.3 and later)

IP Load

The DHCP client behaves similarly to Mac OS 8.5 in that IP initially loads in the INIT state, and loads in the INIT-REBOOT state (sending out a DHCPREQUEST) if its previously assigned lease has not expired. However, unlike Mac OS 8.5, if no DHCP server responds and INIT-REBOOT times out, the computer automatically reverts to the INIT state, send out a DHCPDISCOVER, and search for another DHCP server on the network.

If there is no response to the DHCPDISCOVER after a few tries, it picks a randomly generated IP address as in Mac OS 8.5.

IP Unload

When the IP stack unloads, the DHCP client no longer sends a DHCPRELEASE.

Furthermore, once a DHCP lease is obtained, the IP stack does not unload, regardless of whether or not "Load Only When Needed" is checked (this is not true for PPP links, since this wouldn't allow users to automatically hang up after a specified period of idle time). The Macintosh unloads the IP stack only if it is shut down, restarted, or inactivated in the TCP/IP control panel. In addition, the stack unloads on a PowerBook when it is put to sleep. Otherwise, it continuse to renew the DHCP lease.

Note: Open Transport 2.5.1 and 2.5.2 have an issue which can cause the client not to renew the lease properly if the renewal time is longer than 1 hour. For additional information please see article 25049: "**Mac OS: DHCP Issues With Open Transport 2.5.1 and 2.5.2**"

TCP/IP Options (Mac OS 8.6)
For administrators who prefer the 8.1 DHCP client behavior, the TCP/IP Options control panel allows users to revert to the old behavior. By checking the box for "don't retain DHCP lease on shutdown, " the Macintosh always starts up with DHCPDISCOVER, and always send a DHCPRELEASE upon unloading the IP stack.

Published Date: Feb 20, 2012

Mac OS 8.5: Workaround to Non-functional PPP Connect AppleScript

As of Mac OS 8.5 the AppleScript command "PPP connect" no longer works. Any script which uses this command will fail to initiate a PPP connection. These scripts should be modified to use the scripting facilities provided by Network Setup Scripting 1.0, included in Mac OS 8.5 and later.
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Here is a sample script using "PPP connect" to initiate a PPP connection:

PPP connect

This command used to initiate a PPP connection with the active Remote Access configuration.

This same script using Network Setup Scripting would read:

```
tell application "Network Setup Scripting"

open database

tell Remote Access configuration x to connect

close database

end tell
```

"Remote Access configuration x" is an existing Remote Access configuration containing the values for user name, phone number, etc. for the connection you wish to make. This script will work for any Remote Access configuration regardless of protocol, so it can be used for either PPP or ARAP connections.

Published Date: Feb 20, 2012

Network Assistant 4.0.x: Desktop Items not Copied

The Apple Network Assistant has a Copy Hard Drive feature that can be used to copy an entire hard disk to client computers. Files and applications on the desktop of the administration computer do not get copied to the client computers. Likewise, items on the desktop of the client computers are not replaced or deleted.

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This is the expected behavior. Apple Network Assistant is designed to leave any items on the desktop alone, both on the client and on the administration computer. There are a couple of situations where this functionality comes in useful:

- On the client, when there are things you want to keep safe and do not want replaced or erased when you copy the entire hard disk.
- On the server, when there are just a few of things you do not want to copy to the client systems (administration applications, for example).

If your lab computers have items on the desktop and you want all of them to start off with a clean hard disk, use Network Assistant's Delete Hard Disk feature before copying the hard disk. This erases all items on the hard disk (except for the System Folder), including anything on the desktop.

Published Date: Feb 20, 2012

QuickTime 4: Common Issues After a Minimum Install

I ran the installer for QuickTime 4 and chose the "Minimum Install" option (it was selected by default). After installing QuickTime 4, I have noticed one or more of the following issues:

- PictureViewer was not installed
- I get an error saying "DVD Hardware not found" when I run the Apple DVD Player
- I cannot open certain file types in QuickTime Player (like QTVR files and MP3 files)
- The "preview" doesn't work in the open dialog box of some applications

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During the installation of QuickTime 4, you are presented with 3 different install options:

- Minimum
- Full
- Custom

By default, the Minimum option is checked. While Minimum is suitable for many customers, others will find that it does not install many QuickTime components that they rely on.

With a Minimum install, the QuickTime installer will remove the old QuickTime 3 extensions (as it should) and install the minimum QuickTime 4 components (including the QuickTime extension, QuickTime Streaming support, the QuickTime Plug-In, and the QuickTime player). PictureViewer, among other commonly used QuickTime components, does not get installed with the Minimum install option.

Because of this, certain applications that rely on those QuickTime components, such as the Apple DVD Player or applications that have the ability to show file previews in their Open dialog boxes, will not work properly. Furthermore, QuickTime Player will not be able to open certain file types without these additional components installed.

In most cases, QuickTime will display an alert that you are missing some components to provide you with comparable functionality and it should offer to download them automatically. However, this may not always occur.

If you are experiencing any of the above issues, you might need to re-run the QuickTime installer and select either the Full or Custom install option.
Published Date: Feb 20, 2012

Apple DVD Player: Troubleshooting Common Issues

This article is about possible issues when playing a movie from a DVD-Video disc.
This article has been archived and is no longer updated by Apple.

Black Bars Surround the Picture

Black bars on the top or bottom of the screen, and perhaps on the sides of the movie, are normal. See technical document 60795 "**Apple DVD Player: Why Black Bars Surround the Picture**" for more information.

Video or Sound Stutter

Stutter is a momentary pause in playback. It can affect the video image or the sound. See technical document 31020: "**Apple DVD Player: How to Reduce Skipping or Stuttering**" for tips on how to reduce stuttering. Also try these tips:

- The DVD-Video disc could be dirty. Clean it with a soft cloth.
- The DVD drive may need to be repaired or replaced. If you have a PowerBook, try a different DVD drive if one is available. If not, take your computer to an Apple Authorized Service Provider for further troubleshooting.

Hardware Error

The Apple DVD Player application displays a message that there is a hardware error.

- If you have a PowerBook G3 Series computer, see technical document 24865: "**PowerBook G3 Series: 'Apple DVD Player Cannot Open...' Error**"
- If you have installed Mac OS 9.0.4, you may also need to install Apple DVD Player 2.2. See technical document 20125: "**Mac OS 9.0.4: Requires Apple DVD Player 2.2.**"
- Use Apple System Profiler to verify that the computer has DVD capabilities.
- Make AppleTalk inactive in the AppleTalk control panel.
- Clean the DVD-Video disc.
- Make sure the Apple DVD Player application and the Apple CD/DVD Driver software is installed correctly and is active.
- If you have installed QuickTime 4 using the Basic Install option, which is the default, open the QuickTime installer and select the "QuickTime Authoring" option instead of the Basic option.
- Take your computer to an Apple Authorized Service Provider for service.

Pixelation in Dark Scenes

- Open the Monitors and Sound or Monitors control panel, and select Millions of colors. Select an 800 by 600 resolution. If your computer is connected to an external monitor, select a 720 by 480 resolution.
- Choose normal size as opposed to full screen for the best quality image.
- Select best for video when playing the movie on an S-video device like a television.

Audio Synchronization Issues

- If the sound does not synchronize with the video on a Power Mac G4 or iMac DV, see technical document 60718: "**Apple DVD Player: How to Improve Movie Playback From DVD Discs.**"

Low Sound Volume

1. Open the Sound or Monitors and Sound control panel
2. Make sure Line In audio is not selected.

No Sound

1. Change the sound setting while playing the movie by clicking the audio button on the DVD controller.
2. Access the DVD-Video disc as an ISO 9660 disc by pressing the Command-Option-i keys simultaneously while inserting the disc.
3. If you're using external speakers, check their connection. Try different external speakers, or use the internal speaker(s).
4. On a PowerBook G3 Series (Bronze keyboard) computer, make sure Zoomed Video is selected in the Sound Strip portion of the control strip.
5. Take your computer to an Apple Authorized Service Provider for service, especially if you don't hear sound from other applications.

No Video with Sound

1. Check to see if the Viewer Window is Hidden (using the Hide/Show Viewer option from the Window menu)
2. Verify that the application is not hidden (using the option from the Application Menu)
3. Make sure you are using the primary Apple display card as the boot monitor and that the location of the menu bar is on the primary display.
4. Make sure the DVD player is being presented on the factory installed Apple display card with the primary monitor attached to this card.

Movie Stops Playing at Opening Window

- Press Return for a few seconds. If the video has not started, press the Space bar.

Some Items in the Movie's Menu Can't Be Selected With the Mouse

- Use the arrow keys to select a menu item, then press Return to choose it.

White Image in Viewer Window

- Make sure Video Mirroring is turned off when connected to a television.

Window Will Not Move From External Source to Computer Display

When an external display is connected, the window is only viewable on the external display.

1. Put your computer to sleep.
2. Disconnect the external monitor.
3. Wake up the computer.

Compatibility With Additional Features

On a limited number of DVD-Video titles there is a message in small print on the back of the box that reads, "The DVD-ROM features will not work on a CD-ROM or a Macintosh computer." The movies "You've Got Mail" and "The Matrix" and "Enemy of the State" are examples.

- Many features of the DVD-Video disc, including the ability to play the movie, are available when using the Apple DVD Player application. Only features that require additional software to be installed are not available. For the most part, those features are likely to have software written for a Windows environment. It is possible the movie was not mastered in the standard format for DVD-Video (UDF). You may have to access the disc as an ISO 9660 disc. If you insert the DVD-Video disc and it doesn't contain any files, then it was not mastered in the standard format for DVD-Video discs.
    1. Eject the DVD-Video disc.
    2. Access the disc as an ISO 9660 disc by pressing the Command-Option-i keys simultaneously while inserting the disc. It may take a few minutes for the disc to be available on the desktop. For more information on this issue, see technical document 25000: "**Apple DVD Player: "Disc May Be Dirty or Scratched" Error Message.**"

Pause Before Playing

After clicking Play in the Apple DVD Player application, the movie does not start immediately.

- It takes a moment for the movie to load. The system software is accessing necessary information to decode the movie. This behavior is completely normal and is not indicative of any hardware or software issues.

Published Date: Feb 20, 2012

PowerBook G3 Series (Bronze keyboard): Password Security Issue with USB Keyboard

When a PowerBook G3 Series (Bronze keyboard) comes out of sleep and displays the Password Security dialog, an external keyboard may be unresponsive.

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When the PowerBook wakes from sleep the Password Security control panel is activating before the PowerBook has a chance to enable the USB bus. This results in any external USB keyboard not working. This happens only if Password Security is set to "ask when waking from sleep." To work around the situation, use the built-in keyboard on the PowerBook to type the password.

Published Date: Feb 20, 2012

PowerBook and iBook: What to do if trackpad button doesn‘t respond

This article has been archived and is no longer updated by Apple.

There are a number of possible causes if your trackpad button doesn't respond which could affect either a PowerBook or iBook computer.

- It is possible that the issue may be caused by a peripheral that has been attached to the computer. Disconnect any USB or ADB devices such as mice, keyboards, or joysticks and see if the issue still persists. If this resolves the issue then it could be an old version of the software that supports this accessory device, or it could be a hardware issue or incompatibility. You should refer to the vendor of the accessory for driver updates or service for the product.
- It could be a hardware issue with the trackpad button itself. If you need to use the computer until you can have it serviced, you may, depending on the iBook or PowerBook model you own, enable the Clicking feature in the Keyboard & Mouse pane of System Preferences (in Mac OS X) or the Trackpad control panel (in Mac OS 9).

When you enable the clicking feature, you are able to tap on the trackpad to duplicate the same action as clicking on the trackpad button.

Keyboard & Mouse pane of System Preferences in Mac OS X

Trackpad control panel in Mac OS 9

Note: Not all PowerBook models support the clicking feature in the Trackpad control panel. On those that do not, the "Use Trackpad for" section will not be displayed in the Trackpad control panel.

Published Date: Feb 20, 2012

Your PowerBook and iBook‘s trackpad doesn‘t respond

Your computer's trackpad isn't working? Try these helpful steps:
This article has been archived and is no longer updated by Apple.

- Try cleaning the trackpad. Use a soft cloth and gently wipe the trackpad. Also be sure your pointing finger is clean and not oily.
- The trackpad works on a principle called coupling capacitance. As your finger moves over the surface, the trackpad evaluates the change in capacitance between two layers of measurement electrodes built into the surface of the trackpad and translates that to cursor movement.

  Make sure only one part of your finger is touching the pad. You will not be able to use a pen or other object--the trackpad is designed to work only with your finger. Also make sure that you are not resting your wrist on or very close to the pad.
- If you have sweaty hands or if moisture collects on the pad, this may also confuse the trackpad. Wiping off the trackpad with a cloth or tissue will usually fix this symptom.
- Oil or lotion can also cause the same symptom. Either do not use hand lotion, or consider purchasing a Teflon pad to protect the trackpad. Before installing the Teflon pad, make sure the trackpad is clean and dry.
- Jewelry may also cause interference. Try removing rings or bracelets and see if the jumpy or erratic behavior disappears.
- Reset the Power Manager.
- Some software can make it look like the trackpad isn't working. Use the Extensions Manager control panel in Mac OS 9 and set the extensions to Mac OS All for your system. Restart the computer and see if the issue is resolved. If so, you need to troubleshooting your extensions.
- A peripheral connected to your computer could cause this symptom. Disconnect any USB or ADB devices such as mice, keyboards, or joysticks and see if the issue still persists. If this resolves the issue, it might be caused by an old version of the software that supports this peripheral, or it could be a hardware issue or incompatibility. Refer to the information that came with the peripheral to see if there may be driver updates or how to getting service for the product.
- This could be a hardware issue. If you need to use the computer until you can have it serviced, connect a mouse to one of the ports on the back of the computer. Some PowerBook models support ADB while other PowerBooks and iBooks support USB. Refer to your PowerBook User Manual if you are uncertain which mouse type you should use.

Related documents

17228: PowerBook: Jumpy or Erratic Trackpad Operation

Published Date: Feb 20, 2012

PowerBook S-video Questions and Answers

Learn about the S-video output port on the PowerBook G3 Series (Bronze keyboard), PowerBook (FireWire), and PowerBook G4 computers. This article has been archived and is no longer updated by Apple.

Question: How does the S-video output port work on the PowerBook G3 Series (Bronze keyboard), PowerBook (FireWire), and PowerBook G4 computers?

Answer: Simply plug an S-video cable into your television's S-video input port and into the computer's S-video output port. If your television doesn't have an S-video input port, you can use its composite connection using the S-video-to-composite video cable that came with your PowerBook computer. Once both the television and computer are connected and turned on, choose the NTSC or PAL resolutions from the Monitor Resolution portion of the Control Strip. For more information about using a monitor or television with your PowerBook computer see:

Article 58344: "**PowerBook G3 Series (Bronze keyboard and FireWire): Supported Resolutions for External Displays.**"

Question: Why is the image on the television fuzzy and not as sharp as the PowerBook's display?

Answer: The images on a television are of lower quality than those on a monitor, including your PowerBook computer's display. This is because most televisions have limited image quality, and not because anything is wrong with your computer.

Question: Why does my television only show images in black and white when connected to the computer with a composite cable?

Answer: This usually means you are not using the S-video-to-composite cable that came with your PowerBook computer. You are most likely using an S-Video input cable. Use the S-video-to-composite cable that came with your PowerBook computer instead.

Question: What resolutions can be used with the S-video output port?

Answer: See the following articles:

Article 58344: "**PowerBook G3 Series (Bronze keyboard and FireWire): Supported Resolutions for External Displays.**"

Question: When I play a movie from a DVD-Video disc it always plays on the television. How can I play it on the PowerBook computer's display instead?

Answer: If a monitor or television is connected to the PowerBook computer's S-video output port when you play a movie from a DVD-Video disc, it plays on the monitor or television. Do this to play the movie on the PowerBook computer's display:

1. Quit the Apple DVD Player application program.
2. Put the PowerBook computer in sleep.
3. Disconnect the monitor or television from the PowerBook computer's S-video output port.
4. Wake up the PowerBook.
5. Open the Apple DVD Player program.
6. Restart the movie.

Question: Can I use the PowerBook's video mirroring feature with the S-video output port?

Answer: Yes. Click the Video Mirroring portion of the Control Strip to turn on video mirroring. See Image 1 and Image 2. You may also see a Television Mirroring portion in the Control Strip that can improve the quality of video and graphics when mirroring to a television using S-video. See Image 3.

Video Mirroring On

These options are available on the Control Strip when Video Mirroring is turned off and a television is connected. (**Note:** Video Mirroring has a single monitor icon when disabled.)

Video Mirroring Off

These options are available on the Control Strip when Video Mirroring is turned on and a television is connected. (**Note:** Video Mirroring has a dual monitor icon enabled.)

Television Mirroring

These options are available when a television is connected to the PowerBook computer's S-video output port.

Choose "Best for Video" and "Best for Graphics" when mirroring with S-video. Overscan extends the desktop video and may cause the menu bar to go outside of the television's viewable image area.

Note: If you have a monitor and a television connected to your PowerBook computer, you can switch between the two by selecting the correct resolution. (S-video resolutions have either NTSC or PAL listed after the actual resolution size.)

Question: When I try to play a movie on the television from the PowerBook's DVD drive, why do I only get a white screen in the Apple DVD Player window?

Answer: You cannot use Video Mirroring when you watch a movie from a DVD-Video disc. Turn off Video Mirroring and then open the Apple DVD Player.

Question: When I play a movie from a DVD-Video disc, why isn't it centered on the television?

Answer: Each television has its own display characteristics. You may be able to adjust the television from its controls to center the movie.

Question: Can I display external video on the S-video port and on another external video port (such as DVI) at the same time?

Answer: Most models of PowerBook do not support displaying external video on multiple video ports. If a PowerBook model does support this feature, it will be listed in the technical specifications for that model.

Published Date: Feb 20, 2012

PowerBook G3 Series: Reducing Time to Awake From Sleep

Are there any methods available for reducing the amount of time it takes my PowerBook to wake from sleep?
This article has been archived and is no longer updated by Apple.
There are a couple of options which can reduce the time to wake from sleep:

- Turn off reconnect to servers in the advanced settings of energy saver.
- Making AppleTalk inactive using the Control Strip, or the Chooser.

Published Date: Feb 20, 2012

AppleWorks: Unexpected Results When Fit to Page Option is Enabled

If Fit to Page is enabled when AppleWorks or ClarisWorks prints to some Epson printers, the printout may look different than expected.
This article has been archived and is no longer updated by Apple.
The Fit to Page option may cause unexpected results when printing to some Epson inkjet printers from some applications, including AppleWorks and ClarisWorks.

The results may include:

- Text near the margins, usually at the right or bottom, may be cut off.
- The document contents may be compressed into the top left corner of the page.

The Epson printer driver software has a function that shrinks or enlarges the printout so that an entire document will fit on a single page. By default, this option is enabled within AppleWorks and ClarisWorks. The reduced or enlarged printout is an expected result when this function is enabled.

To solve this problem and print the document at its specified size, disable the Fit to Page option in Page Setup.

Published Date: Feb 20, 2012

Gigabit Ethernet Card: Q & A

This article contains frequently asked questions (FAQ) regarding gigabit Ethernet and the Apple gigabit Ethernet card, with answers to those questions.

This article has been archived and is no longer updated by Apple.

Questions answered in this article:

1. What is gigabit Ethernet?
2. What differences are there between gigabit Ethernet and standard (10BaseT) or fast (100BaseT) Ethernet?
3. What cables are supported by the Apple gigabit Ethernet card?
4. What Macintosh operating systems are supported by the Apple gigabit Ethernet card?
5. Does the gigabit Ethernet card auto-switch between 10Mbps, 100Mbps, and 1000Mbps?
6. How do I connect a Macintosh with the gigabit Ethernet card to my existing standard or fast Ethernet networks?
7. What network performance will I get with the gigabit Ethernet card?
8. Can I use the Apple gigabit Ethernet card with single-mode fiber?
9. Can I netboot a Power Macintosh G3 client over a gigabit Ethernet card?
10. Can I use Gigabit Ethernet on my NetBoot server?
11. Where can I purchase cables or products to support gigabit Ethernet?

Question 1: What is gigabit Ethernet?

Answer: Gigabit is the next generation Ethernet standard which provides a theoretical, raw data bandwidth of 1000Mbps (or 1 gigabit per second). As network bandwidth becomes strained by new network applications and the proliferation of rich media data types, like graphics and video, gigabit Ethernet will become a cost-effective method of alleviating bandwidth bottlenecks. Gigabit Ethernet is based on the IEEE 802.3z standard approved by the IEEE organization in 1998. For more information on gigabit Ethernet, see http://en.wikipedia.org/wiki/Gigabit_Ethernet

Question 2: What differences are there between gigabit Ethernet and standard (10BaseT) or fast (100BaseT) Ethernet?

Answer: Gigabit Ethernet increases the speed at which data is transmitted. The access method, packet format, packet length, error control, back off algorithm, and management information is identical to the other Ethernet standards ensuring that existing network services and protocols will work identically between standard, fast, and gigabit Ethernet.

Question 3: What cables are supported by the Apple gigabit Ethernet card?

Answer: The Apple gigabit Ethernet card allows you to connect your computer to a 1000Base-SX Ethernet fiber optic network. The card uses a short wavelength laser to support 62.5 Micron Multi-Mode fiber cable up to 250m and 60 Micron Multi-Mode fiber cable with SC-style connectors. The card does not support standard unshielded twisted-pair (UTP), or Category 5, wiring. The gigabit Ethernet standard, IEEE 802.3ab, to support unshielded twisted-pair wiring, or1000BASE-T, has not been finalized yet by the IEEE organization.

Question 4: What Macintosh operating systems are supported by the Apple gigabit Ethernet card?

Answer: The Apple gigabit Ethernet card supports both Mac OS and Mac OS X Server. For Mac OS-based systems, you must use Mac OS 8.5.1 or later. The drivers to support the gigabit Ethernet card in Mac OS will be included on a CD when you purchase the Apple gigabit Ethernet card. The driver to support the gigabit Ethernet card in Mac OS X Server is already preinstalled in the operating system.

Question 5: Does the gigabit Ethernet card auto-switch between 10Mbps, 100Mbps, and 1000Mbps?

Answer: No, the gigabit Ethernet card does not operate at 10Mbps or 100Mbps.

Question 6: How do I connect a Macintosh with the gigabit Ethernet card to my existing standard or fast Ethernet networks?

Answer: Connecting a Macintosh with the gigabit Ethernet card requires a compatible router or switch that has both the fiber-optic gigabit Ethernet connector and standard Ethernet connectors. A number of vendors, including Cisco, 3Com, and Bay Networks, offer solutions for connectivity between gigabit Ethernet and other standard networks.

Question 7: What network performance will I get with the gigabit Ethernet card?

Answer: The theoretical limit to gigabit Ethernet is 1000Mbps. However, network throughput is dependant on your hardware configuration, network infrastructure, and software and therefore, will vary accordingly.

Question 8: Can I use the Apple gigabit Ethernet card with single-mode fiber?

Answer: No. The Apple gigabit Ethernet card only supports multi-mode fiber.

Question 9: Can I netboot a Power Macintosh G3 client over a gigabit Ethernet card?

Answer: No. A client can use only Apple's built-in Ethernet to connect to the NetBoot. There are no plans to support netbooting clients over third

party PCI network interfaces at this time.

Question 10: Can I use Gigabit Ethernet on my NetBoot server?

Answer: Yes, but the server's Gigabit Ethernet must be connected to a switch capable of handling it. Individual Netboot clients can then be connected to this switch using the built-in Ethernet.

Question 11: Where can I purchase cables or products to support gigabit Ethernet?

Answer: Visit your local computer retailer to find selections of gigabit ethernet networking equipment. Or, visit online computer parts retailers for more information.

Published Date: Feb 20, 2012

PowerBook (Bronze keyboard and FireWire): Use of Weight Saving Device

My PowerBook G3 Series (Bronze keyboard) came with a Macintosh PowerBook G3 Series Weight-Saving Device. What is this for? The new PowerBook (FireWire) also has a similar device.
This article has been archived and is no longer updated by Apple.
The Macintosh PowerBook G3 Series Weight-Saving Device can be used in either expansion bay to reduce the overall weight of the system. It is intended to replace the CD-ROM or DVD-ROM drive when you know you will not need the drive. If you use it to replace the battery, the computer will not be able to run unless you have the AC adapter connected and plugged in.

If you do run the computer without the AC adapter and battery installed, the backup battery will drain in approximately 4 minutes. This will cause the PowerBook to lose its date and time, and other internal settings. You will then need to connect the PowerBook to AC power for 24 hours to fully recharge the internal battery.

Because the new PowerBook G3 Series (Bronze keyboard) is thinner than previous PowerBook G3 computers, the Macintosh PowerBook G3 Series Weight-Saving Device will only work with this computer.
For more information on identifying the various PowerBook G3 computers, refer to TIL article 24604: "**PowerBook G3 & G3 Series: Identifying Different Models**".

Unlike some previous PowerBook Weight-Saving Devices, the Macintosh PowerBook G3 Series Weight-Saving Device is not designed to store items. Trying to open it will cause damage.
Published Date: Feb 20, 2012

Power Macintosh G3: DVD Troubleshooting

This article provides troubleshooting information for a variety of issues which may arise when playing DVD video. This information is mainly directed at Power Macintosh G3 computers though general DVD troubleshooting is still relevant to other DVD-ROM capable computers.
This article has been archived and is no longer updated by Apple.

Video Stutter During Playback of a DVD Movie

There are a number of possible causes for stutter when playing back a movie. Stutter is defined as a momentary pause in playback; either sound or video could be affected.

Possible causes are:

- Virtual memory is turned on.
- Speech or other background processes/applications can also cause stutter. Quit all other applications when viewing DVD video.
- The disc could be switching layers.
- The disc may be dirty. Try cleaning it with a soft cloth.

"Cannot find required hardware" Error Message

This error can occur when either the appropriate hardware is not detected, or if the appropriate software components are not detected. Refer to article 30887: "**Power Macintosh G3 (Blue and White): Apple DVD Player Cannot Open**" for troubleshooting tips.

Pixelation in Dark Areas

- Set the Bit Depth to Millions in the Monitors & Sound control panel.
- Switch resolution to 800 x 600 or 720 x 480 if available (only when connected to an external display).
- Choose normal size as opposed to full screen for the best quality image.
- Select best for video when watching on S-video device such as a television.

Low Sound Volume

- Check preferences and make sure Line In audio is not selected.

No Sound

- Make sure the Sound In source in the Control Strip is set to DVD.
- Try changing the sound setting when playing the movie by selecting the audio button on the DVD Controller.

Stops at Opening Window

- Press Return key and wait a few seconds. If the video has not started, press the spacebar.

Some Items in the Menu Are Not Able to be Selected

- Try using the arrow keys and the return key.

The DVD Disc Box Says "The DVD-ROM features will not work on a CD-ROM or a Macintosh computer."

Many features, including the ability to play the movie, are still available when using the Apple DVD player. Only features that require additional software to be installed are not available. For the most part, those features are likely to have software written for a Windows environment.

Movie Does Not Immediately Start

It takes a moment for the movie to load. The system software is accessing necessary information to decode the movie. It is completely normal and not indicative of any hardware or software failure.

Published Date: Feb 20, 2012

PowerBook G3 Series (Bronze keyboard): Heatsink Reinstallation Tip

This article provides an important tip when reinstalling the processor heatsink in the PowerBook G3 Series (Bronze keyboard).
This article has been archived and is no longer updated by Apple.
When reinstalling the heatsink, for example after a memory upgrade, be sure that the ferrite bead on the display cable is not under the heatsink. If the ferrite bead is under the heatsink, the EMI gasket and ferrite bead will stack up possibly causing a slight bow in the keyboard after reinstallation.

Before screwing the heatsink down, gently push the ferrite bead towards the rear of the PowerBook creating the necessary clearance for the heatsink.

The following images show incorrect and correct alignment of the ferrite bead with regards to the processor heatsink.

Figure 1 Incorrect placement of ferrite bead.

Figure 2 Correct placement of ferrite bead.

Published Date: Feb 20, 2012

ATI Video Accelerator Update: Description

This article provides a description of the ATI Video Software Update 1.0 available for download from the Apple Software Updates Web site at http://www.apple.com/swupdates.
This article has been archived and is no longer updated by Apple.
Important Information About the ATI Video Accelerator Update

The ATI Video Accelerator Update accelerates playback of certain types of QuickTime movies. This document describes the ATI Video Accelerator Update and when you need to install it.

What Is the ATI Video Accelerator Update?

The ATI Video Accelerator Update is a system extension that accelerates playback of certain types of QuickTime movies. It enhances the ATI Video Accelerator in the following ways:

- **Multiple Movies Can Be Accelerated**--Previously, only one movie could be accelerated at a time. With the update, the amount of video memory (VRAM) determines how many movies can be accelerated.

- **Overlapped Movies Can Be Accelerated**--Prior to the update, a movie would only be accelerated if all of it was visible. Now it will be accelerated even if a portion of it is hidden by another window.
- **No Flashes When Acceleration Starts**--When acceleration is turned on for a movie, a black or dark green flash will no longer be seen when acceleration starts.
- **Better Color Matching Between Accelerated and Non-Accelerated Movies**--Previously, there was a detectable difference between the color of an accelerated and non-accelerated movie. These color differences are lessened with the update.

Who Needs to Install the ATI Video Accelerator Update?

The following computers, running Mac OS 8.6, which use the ATI Video Accelerator will benefit from the ATI Video Accelerator Update:

- All iMac *
- All PowerBook G3 Series
- All Power Macintosh G3
- Power Macintosh 4400, 5500, 6500
- Twentieth Anniversary Macintosh

***Note:** Although the ATI Video Software Update does not contain performance enhancements for ATI Rage II-based iMac computers, the software can be installed on a Series 1 iMac running Mac OS 8.6.

Below is a list of the ATI extensions that will be present after installing the update:

Extension Name	Minimum Version
ATI 3D Accelerator	4.5.3
ATI Graphics Accelerator	3.8.7
ATI Resource Manager	1.2.1
ATI Rage 128 3D Accelerator	5.2.9
ATI Video Accelerator	4.2.2
QuickDraw 3D	1.5.4
QuickDraw 3D RAVE	1.5.4

Is the ATI Video Accelerator Still Required?

Yes, the update is meant to complement the ATI Video Accelerator, not replace it. Eventually the update will be merged into the ATI Video Accelerator.

I Don't Notice Any Performance Improvement After Installing the Update.

With QuickTime 3.0, certain Macintosh models are not able to take advantage of the update due to hardware constraints in the RageII+, RageIIc, LT-G, and 264GT-B. QuickTime 4.0 provides acceleration of movie playback computers with these graphics controllers. Additionally, the performance benefits of the update will only be seen at thousands or millions of colors.

Movie Playback is Choppy at Large Display Resolutions.

Though the Rage 128 can easily play back a movie at any display resolution, movie playback might be choppy on the Rage II+, RagePro, RageIIC, LT-G, LTPro, and 264GT-B. Set the display to 1024 x 768 (or smaller) at thousands of colors to avoid this problem.

Published Date: Feb 20, 2012

iMac: How to Resolve Intermittent Pause During Usage

This article documents an iMac issue where the computer appears non-functional though the mouse cursor still moves.
This article has been archived and is no longer updated by Apple.
Apple has received reports from customers that their iMac will appear to pause or stall for about 10 seconds during normal use. This has been attributed to a situation where there is no CD in the CD-ROM drive.

Apple has posted a new version of the iMac CD Update which corrects an intermittent delay that can occur on some iMac models when the above situation is encountered. For best performance, all iMac users should install this new update which incorporates the iMac CD Update 1.0.

The iMac CD Update utility is available for download from the Apple Software Updates web site at http://www.apple.com/swupdates. Use "iMac and CD" as your search query.

Another potential cause of pausing is related to using a DHCP and is resolved in Mac OS 9 and later with Open Transport 2.6 and later. Please refer to article 60400: "**Mac OS 8.6: Computer Pauses Every Five Minutes On DHCP**" for more information.

Published Date: Feb 20, 2012

Macintosh: Moving Applications to a New Computer

I copied a number of my applications from my old Quadra 800 to my new iMac and many of them fail to run properly. On occasion, I receive a -192 error message.
This article has been archived and is no longer updated by Apple.
When upgrading to a new computer, for best performance reinstall the applications from the original disc to ensure that all the required files are present and in the proper location. This is particularly true when upgrading to a computer with a PowerPC processor because the application code is different depending on what computer the application was installed on.

Most current applications are written specifically to take advantage of the PowerPC processor. To be compatible with both older Macintosh computers and those based on the PowerPC processor, the Installer will build the application depending on what computer it is running on. If you were running AppleWorks on the Quadra 800 and dragged the application to the iMac, it would not function properly because the code necessary for AppleWorks to run on the iMac is not there. The likely result would be a -192 system error, or other unexpected behavior.

When you install your software, if the Installer prompts you to select the type of computer you have, be sure you select the installation for a PowerPC computer. Your software should function properly assuming it is the most current version for your particular computer or version of Mac OS.

Note: Be aware that the license agreement for your software may not allow the same copy of the program to be installed on more than one computer. Refer to the license agreement which accompanied the software or contact the vendor for specific information.
Published Date: Feb 20, 2012

iBook: How to Determine Battery Charge Status

This document explains how you can tell if your iBook battery is fully charged.
This article has been archived and is no longer updated by Apple.
iBook, iBook SE and iBook (FireWire) computers

There are a number of ways to determine if the battery has a full charge:

- If the battery is being charged, the AC power port on the rear of the iBook will glow amber. It changes to green when the battery has a full charge.
- The battery icon in the menu bar will have a lightning bolt through it when the battery is charging. The lightning bolt disappears when the battery is fully charged.
- The battery icon in the Control Strip will show the same lightning bolt when charging. It also disappears when the battery is fully charged.

The Lithium-Ion iBook battery will take approximately 2 hours to fully recharge when in sleep mode or when shut down. If the computer is running, the charge time doubles to approximately 4 hours.

iBook (Dual USB) and later

When the battery on these computers is fully charged, the four battery lights (located on the bottom of the computer) will glow green.

For more information on identifying your iBook model, refer to document 88039: "**iBook: How to Identify iBook Models**"

Published Date: Feb 20, 2012

Apple Cinema Display: Description

This article describes the Apple Cinema Display.

This article has been archived and is no longer updated by Apple.
The Apple Cinema Display brings an entirely new visual perspective to the desktop computing experience. With an enormous virtual workspace, elegant industrial design, and industry-leading all-digital LCD technology, it's perfect for those who have been waiting to own the highest-performance LCD flat-panel display available. And the combination of the powerful Apple Power Mac G4 computer with the many unique features of the Apple Cinema Display makes this the ideal solution for creative professionals.

If you work with large, unwieldy page layouts, manipulate complex 3D models, or edit QuickTime movies, this display is made for you. Its unique wide format and high-resolution 22-inch (diagonal) screen provide an incredibly large work area. You can display DVD movies in their native HDTV format without the annoying letterbox, making the display a perfect companion for use with Apple's DVD player or Final Cut Pro software. And even with two full pages of text and graphics displayed on screen simultaneously, there's still plenty of room for tear-off menus, palettes, and tool bars. With all this extra space to work, you'll spend a lot less time scrolling or toggling between windows.

Those who work in graphics-intensive professions will appreciate the Apple Cinema Display's technical innovations. Using a pure digital interface, it delivers distortion-free images every time. The display supports a true 16.7 million colors and uses the latest wide-angle viewing technology to ensure that colors appear consistently and uniformly, from edge to edge. All of this behind-the-scenes technology makes the Apple Cinema Display easy on your eyes, day in and day out-something you'll appreciate next time you're burning the midnight oil.

Although its virtual workspace is enormous, the Apple Cinema Display takes up only a small part of your physical desktop-and quite attractively, at that. Its elegantly streamlined industrial design includes many built-in conveniences, such as a two-port self-powered USB hub that makes it easy to connect USB devices such as your keyboard or other peripherals. A patented hinge design lets you effortlessly adjust the screen to your preferred viewing angle, and a handy one-button switch lets you turn on the display and the Power Mac G4 at the same time-or put your system to sleep and awaken it at a touch.

The Apple Cinema Display-you'll never look at your work the same way again.

Spectacular display performance

- 22-inch (diagonal) thin film transistor (TFT) active-matrix liquid crystal display delivers bright, sharp textand graphics.
- Wide-format design with 1,600 by 1,024 pixels displays two full pages of text or full-screen DVD movies.
- Designed to work with the Power Mac G4 digital graphics interface for distortion-free images.
- Lightning-fast pixel response supports full-motion digital video playback.
- Extrawide (160°) viewing angle maximizes visibility and color performance.
- Support for a true 16.7 million colors for use in all graphics-intensive applications.

Simple, elegant design

- Streamlined design minimizes desktop footprint.
- Built-in two-port USB hub for easy connection of peripheral devices.
- Integrated stand makes adjustment of viewing angle effortless.
- Unique integrated cable simplifies connection and minimizes desktop clutter.
- Power/instant-on switch turns on both the display and the computer simultaneously, or puts the system in and out of sleep mode.
- Complies with strict TCO 95 standards for low power consumption, low emissions, and recyclability.

Published Date: Feb 20, 2012

Power Mac G4: Using Apple System Profiler to Identify Video Card

This article describes how to use Apple System Profiler to identify the video card installed in a Power Mac G4 computer.
This article has been archived and is no longer updated by Apple.
Apple System Profiler will correctly identify a Power Mac G4 (PCI Graphics) computer running Mac OS 8.6 only. Look in the Hardware overview section next to the product name to determine the Power Mac G4 model. However, the current version of Apple System Profiler will not correctly identify the display card in the Power Mac G4 (AGP Graphics) running Mac OS 9 or Mac OS 8.6, and the Power Mac G4 (PCI Graphics) computers running Mac OS 9.

To determine if you have a PCI Graphics or an AGP Graphics version of the Power Mac G4 computer, refer to article 58418: "**Power Mac G4: How to Differentiate Between Models**".

Published Date: Feb 20, 2012

Mac OS: Select a Startup Disk to Reduce Start Up Time

Is it necessary to select a startup disk from within the Startup Disk control panel? I did not do it and it seems to take quite a long time for my computer to start up.
This article has been archived and is no longer updated by Apple.
Power Macintosh computers that use the ROM-in-RAM (otherwise known as New World) architecture, such as the Power Mac G4 or PowerBook (FireWire), will take longer to start up unless the drive that contains the active system folder and the Mac OS ROM file is selected in the Startup Disk control panel.

If you do not have a drive selected there, the computer has to scan through all the available interfaces where a start up device can be found, including SCSI (if installed), IDE, any network port, and USB. This takes some time to do, so the length of time to start up the computer is extended.

All you need to do is select the appropriate disk in the Startup Disk control panel, on the next restart you should notice an reduction in the amount of time it takes to start up your computer.

Published Date: Feb 20, 2012

Power Mac G4 (PCI Graphics): Upgrading Memory

This article provides the memory specifications and upgrade options for the Power Mac G4 (PCI Graphics). Article 58426: "**Power Mac G4 (AGP Graphics): Upgrading Memory**" has information on upgrading the RAM in that Power Mac G4.

This article has been archived and is no longer updated by Apple.
The Power Mac G4 logic board provides four PC-100 DIMM slots that work with industry standard PC-100 DIMMs of up to 256 MB each for a total of 1 GB. The Power Mac G4 works with 64Mbit and 128Mbit RAM. The memory should be rated at 8ns or faster.

Compatible DRAM DIMMs must meet all the following specifications:

- PC-100 Synchronous DRAM (SDRAM)
- 3.3 volt
- 64-bit wide, 168-pin module
- Maximum of 16 memory devices on the DIMM
- Unbuffered; do not use registered or buffered Synchronous DRAM (SDRAM)
- Maximum height of 2.0 inches.

The computer comes from Apple with one DIMM slot populated with a 64 MB DIMM. Additional DIMMs can be installed in any order, in any size. There is no performance benefit to matching DIMM sizes or installing them in pairs.

Published Date: Feb 20, 2012

Power Mac G4 (AGP Graphics): Upgrading Memory

This article provices the memory specifications and upgrade options for the Power Mac G4 (AGP Graphics). Article 58425: "**Power Mac G4 (PCI Graphics): Upgrading Memory**" has information on upgrading the RAM in that Power Mac G4.
This article has been archived and is no longer updated by Apple.
The Power Mac G4 logic board provides four PC-100 DIMM slots.

Compatible DRAM DIMMs must meet all the following specifications:

- PC-100 Synchronous DRAM (SDRAM)
- 3.3 volt
- 64-bit wide, 168-pin module
- Maximum of 16 memory devices on the DIMM
- Unbuffered; do not use registered or buffered Synchronous DRAM (SDRAM)
- Maximum height of 2.0 inches.

Note: Although 2 GB can be installed, a maximum of 1.5 GB can be addressed through the Finder in the Mac OS.

The computer comes from Apple with one DIMM slot populated with a 128 MB DIMM. Additional DIMMs can be installed in any order, in any size. There is no performance benefit to matching DIMM sizes or installing them in pairs.

Published Date: Feb 20, 2012

Power Mac G4: Video Card Memory and Resolutions Supported

The video card in a Power Mac G4 cannot be upgraded; it already has the maximum allowable memory (16 megabytes) installed.
This article has been archived and is no longer updated by Apple.
Both the AGP and PCI cards come with 16 MB of memory installed; they are not upgradeable beyond that amount.

The following resolutions are supported:

640 x 480 @ 85 Hz
640 x 480 @ 75 Hz
640 x 480 @ 72 Hz
640 x 480 @ 67 Hz

640 x 870 @ 75 Hz

800 x 600 @ 85 Hz
800 x 600 @ 75 Hz
800 x 600 @ 72 Hz
800 x 600 @ 60 Hz
800 x 600 @ 56 Hz

832 x 624 @ 75 Hz

1024 x 768 @ 85 Hz
1024 x 768 @ 75 Hz
1024 x 768 @ 70 Hz
1024 x 768 @ 60 Hz

1152 x 870 @ 75 Hz

1280 x 960 @ 75 Hz

1280 x 1024 @ 85 Hz
1280 x 1024 @ 75 Hz
1280 x 1024 @ 60 Hz

1600 x 1200 @ 85 Hz
1600 x 1200 @ 75 Hz
1600 x 1200 @ 70 Hz
1600 x 1200 @ 65 Hz
1600 x 1200 @ 60 Hz

1920 x 1080 @ 72 Hz
1920 x 1080 @ 60 Hz

Published Date: Feb 20, 2012

USB Info and Benefits of Dual-Channel USB

What are the benefits of dual-channel USB? Is there anything else new with regards to USB?
This article has been archived and is no longer updated by Apple.

Universal Serial Bus (USB)

The Power Mac G4 (AGP Graphics) and iMac (Slot-Loading) incorporate a separate 12-Mbps USB controller for each USB port. Now there is the potential to connect up to 127 devices to each port, as opposed to earlier USB-enabled Macintosh computers that support up to 127 devices connected to both USB ports.

What's New to USB?

Beginning with the Power Mac G4 (AGP Graphics) and the iMac (Slot-Loading), two new features to USB are most apparent: support for USB audio devices and booting from USB drives.

USB Audio Devices: This includes any device also that supports the Isochronous USB protocol (which are mostly Audio in nature). This includes USB speakers, microphones, and other recording/playback devices.

Bootable USB drives: A storage device such as a SuperDisk, Zip disk, or other USB storage drive can be used to hold a valid system folder and used at startup.

USB Specifications

- two Universal Serial Bus (USB) Type A ports
- a maximum of 500 Milliamps (mA) at 5 volts (V) is available per port, for a total of 1 ampere.
- data transfer rates:
    - low-speed: 1.5 megabits per second (Mbps) maximum
    - high-speed: 12 Mbps maximum

Published Date: Feb 20, 2012

iBook: Description of Charging Contacts on Underside

This article describes the two small contacts on the underside of the iBook.
This article has been archived and is no longer updated by Apple.
On the bottom of the iBook above the battery cover are alternative battery charging contacts, shown in the image below. These contacts provide an alternate method for charging the iBook's battery in addition to the AC Adapter. An example would be a rack system where multiple iBook computers could be charged simultaneously, each in their own charging bay.

Apple does not sell a battery recharging station that takes advantage of these battery charging contacts, but a third party company may release one.

Published Date: Feb 20, 2012

Power Macintosh G3/G4: Black Screen After Installing ATA Zip Drive

After installing an internal Iomega Zip drive on a Power Macintosh G3 (Blue and White), the computer starts up with a black screen.
This article has been archived and is no longer updated by Apple.
On Power Macintosh G3 (Blue and White) and Power Mac G4 computers, it is important to make sure that the power cable is connected to the internal Zip drive before powering up the computer. If only the data cable is connected, the computer will start up to a black screen.

If this should occur, power down the computer and make sure both the data and power cables are properly connected to the internal Zip drive then restart the computer. If the situation persists, consult your Apple Authorized Service Provider for further troubleshooting.

Published Date: Feb 20, 2012

Portable Computers: Models Which Do Not Have a Backup Battery

This document describes which portable Macintosh computers do not contain a backup battery and what this means.
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Portable Macintosh Computers without a Backup Battery

- iBook (all models)
- iBook G4 (all models)
- PowerBook G4 (12-inch) (all models)

Changing a Battery in a Portable Without a Backup Battery

Because there is no backup battery in the portable computers listed in the section above, additional care should be taken ensure the AC adapter is plugged in.

Removing the Main System Battery without AC Power

When removing the main battery without the AC Adapter, the computer should be shut down since the contents of RAM are lost when no power is available. There is a small capacitor that maintains the system clock long enough to swap the main battery.

Published Date: Feb 20, 2012

iBook: Trackpad Clicking Not Enabled by Default

While the iBook trackpad does support clicking and dragging, it is not enabled by default. This article notes the location of the trackpad button, as well as how to enable trackpad clicking.
This article has been archived and is no longer updated by Apple.
The iBook trackpad button is located just below the trackpad, as shown in the graphic below.

Figure 1, Location of trackpad button

To enable trackpad clicking and dragging, follow these steps:

1. Open the Trackpad control panel.
2. Click in the checkbox marked Clicking, as shown in the graphic below. This will make the Dragging and Drag lock check boxes active. Check them if you desire those features.
3. Close the Trackpad control panel.

Figure 2, Trackpad control panel
Published Date: Feb 20, 2012

iBook: How to Record Sounds

This document explains how to record sounds with iBook computers.
This article has been archived and is no longer updated by Apple.
How you record sounds depends on the model iBook computer you have. See the appropriate section below.

iBook and iBook (FireWire)

To record sounds, you must purchase an external microphone that connects to the computer's Universal Serial Bus (USB) port. Click the Macintosh Products Guide link on the Apple USB Web site (http://www.apple.com/usb/) to find a USB microphone. Follow the instructions that come with your microphone to record sounds.

iBook (Dual USB)

The iBook (Dual USB) has a built-in microphone you can use to record sounds. Follow these steps:

1. Open the Sound control panel. (See Figure 1.)

Figure 1 Sound control panel

2. Click the Input tab. Click Built-In Mic to select it as the input source. (See Figure 2.)

Figure 2 Sound input source

3. Click the Alerts tab.

4. Click New Sound. The Record New Sound window appears. (See Figure 3.)

Figure 3 Record New Sound window

5. Record and save your sound using the controls in the Record New Sound window.

Published Date: Feb 20, 2012

PowerBook G3 Series (Bronze keyboard): Restoring Battery Functionality After Deep Discharge

You may notice a red X through the battery icon in the menu bar of a PowerBook G3 Series (Bronze keyboard) indicating the battery is not installed when in fact it is. When viewing the Control Strip module for the battery, it is not shown there either.

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In some cases, the battery has gone into a deep discharge state. This situation may arise if the battery has been left in the computer for an extended period of time without AC power. The battery can discharge to a point where it is no longer recognized by the PowerBook as evidenced by the red X through the battery icon in the menu bar.

To help prevent this situation, try these suggestions:

- Recharge the battery when only one of the four green LEDs (Light Emitting Diode) on the battery is on, or shows one green LED blinking.
- If the PowerBook is not going to be used for an extended period of time, fully charge the battery and then remove it from the PowerBook for storage.

If you have a battery that is not recognized in the menu bar while inserted, the following steps provide sufficient charge to the battery to restore normal operation.

1. Insert the battery in either bay and leave it there for approximately 30 seconds.

2. After 30 seconds, release the battery and pull it out so that it protrudes from the bay approximately one inch, you do not need to fully remove the battery from the bay.

3. Leave the battery extended for several seconds then reinsert it for another 30 second interval.

Depending on the charge level of the battery, you may need to reinsert the battery 10 to 12 times. After the battery appears in the Control Strip and the red X no longer appears in the menu bar with the battery inserted, allow the battery to fully charge.

Apple has posted a system software extension named Battery Reset 2.0 that can be used to recover a battery that does not accept a charge. You may download the Battery Reset 2.0 software from the Apple Software Updates web site at http://www.apple.com/swupdates.

Published Date: Feb 20, 2012

What to do if your iBook won‘t run on battery

Your iBook should work when it's plugged in to the power adapter and on a charged battery. If it only works when it's plugged in, try the tips below. These tips are good for iBook through iBook (FireWire) models.
This article has been archived and is no longer updated by Apple.
If the battery doesn't appear in the Mac OS 9 control strip or has a red X through it, install the Battery Update 2.0. It's available from Apple Downloads.

1. Make sure the battery is fully charged. Use the proper power adapter for your iBook computer. If it is not charging, try a different power outlet. The power connector on the iBook glows amber if the battery is accepting a charge. It glows green once the battery is fully charged. If the power connector does not glow, there may be an issue with the AC adapter or power outlet.
2. Remove the battery and reinsert it making a good, solid contact with the iBook.
3. Reset the Power Manager.
4. Try a different battery.
5. Replace the battery.

Published Date: Feb 20, 2012

Power Mac G4 (AGP Graphics): Single Channel SCSI Cards May Interfere with Wake From Sleep

When the Power Mac G4 (AGP Graphics) enters sleep mode with a single channel PCI SCSI card installed, the computer may incorrectly assume the card supports PCI power down mode and not wake properly from sleep.
This article has been archived and is no longer updated by Apple.
Note: This issue is resolved with Mac OS 9.

When the computer goes to sleep, as a function of Power Manager 2.0, power to the PCI bus and the system fan are turned off to conserve energy. The PCI power should only be turned off if all installed PCI cards support this mode, a component of Power Manager 2.0. If the PCI card does not support this mode, the computer should not enter this state.

In this case, the card does not support Power Manager 2.0, but the card allows PCI power down and is then unable to awake from sleep correctly. Installing Mac OS 9 will resolve this issue, allowing the computer to go to sleep, without PCI power down and wake up properly. Another workaround is to disable system sleep in the Energy Saver control panel.

Note: This issue can affect only the AGP version of the Power Mac G4 with an Apple or third party single channel SCSI card installed.
Published Date: Feb 20, 2012

Why iBook display is not as sharp in 640 x 480 Mode

This article has been archived and is no longer updated by Apple.

The sharpness of the LCD panel in the iBook computer may vary depending on the selected resolution.

Traditionally LCD panels have been limited to one resolution because the panels are digital in design and have a fixed number of pixels. In the case of the original iBook and FireWire iBooks, that native resolution is 800 x 600. For white iBooks, the native resolution is 1024 x 768.

With new video technology you can now scale the size of the image on an LCD screen. On the original iBook and FireWire iBooks, the built-in 12-inch display can switch from the native 800 x 600 resolution to a scaled resolution of 640 x 480. The new image is remapped into the fixed pixel space of LCD panel. This remapped image is optimized by interpolation and anti-aliasing technology. Because the image is being remapped, the scaled resolutions will not appear as sharp as the native resolution.

For the white iBooks (both 12-inch and 14-inch models), the display can switch from the native 1024 x 768 resolution to a scaled resolution of 800 x 600 and 640 x 480. As with the earlier iBooks, the new image will not appear as sharp as the native resolution.

The advantage of having a scaleable resolution is some applications, mainly games, may only run at 640 x 480. If the display did not allow you to switch resolutions, you would not be able to use these applications.

Additional information on how to switch resolutions can be found in the Mac Help section under the Help menu.

Published Date: Feb 20, 2012

iBook: Description of Metal Tabs in Display Hinge Area

This article explains the presence of the two small metal tabs in the hinge area of the iBook.
This article has been archived and is no longer updated by Apple.
The iBook hinge mechanism is specially designed to work without a mechanical latch. The two metal tabs in the hinge area are part of the mechanism that holds the iBook clamshell in the closed position.

Refer to the image below for the location of the metal tabs.

Figure 1, Position of latch tabs

Published Date: Feb 20, 2012

iBook: Sound Capabilities

Learn about the sound capabilities of the iBook computers.

This article has been archived and is no longer updated by Apple.

The iBook has compact disc quality stereo audio circuitry. The sound system supports a sample rate of 44.1 kHz and sample sizes up to 16 bits.

Internal Speaker

The iBook has one built-in mono speaker located between the keyboard and the display on the left-hand side. All white iBook G3 and iBook G4 computers have two stereo speakers. The computer turns off the sound signal to the speakers when headphones are connected to the headphone or audio jack.

Sound Out port

The sound out port is a 16 bit stereo mini-jack located on the left side of the computer at the left palm rest. The headphone jack is configured to drive a pair of low-impedance stereo headphones. External powered speakers may also be connected to the headphone jack. Using this port or the USB port, one can connect two speakers for stereo sound.

Sound In

The iBook does not have a microphone or sound input jack. The USB port does support a USB microphone to allow for sound input into the iBook.

All white iBook G3 and iBook G4 computers have a built-in microphone.

USB Sound Support

You can attach USB speakers to get stereo sound. Also you can attach a USB microphone for sound in.

Function Keys

The function keys on the keyboard can be used to increase, decrease and mute the sound.

- F3 will decrease the sound volume
- F4 will increase the sound volume
- F6 will mute the sound.

Internal Modem

The internal modem will send the handshaking audio to the sound system so the user can hear the status of a dial-up modem connection. The level of handshaking audio is fixed. The handshaking audio is mixed into the sound output stream.

Optical Drives

Digital audio signals from the optical drives are sent to the speaker and the headphone jack.

Published Date: Feb 20, 2012

iMac (Slot Loading): Memory Specifications and Upgrades

This article provides the memory specification and expansion capability for the iMac (Slot Loading) computer.
This article has been archived and is no longer updated by Apple.
The iMac (Slot Loading) computer uses standard PC-100 DIMMs with the following specifications:

- PC-100 Synchronous DRAM (SDRAM)
- 64-bit wide, 168-pin module
- maximum of 16 memory devices on the DIMM
- unbuffered; do not use registered or buffered Synchronous DRAM (SDRAM)
- maximum height of 50 mm.

There are two DIMM slots accessible from the bottom of the computer. Use a coin, like a quarter, to release the access panel and install the DIMM or DIMMs.

The maximum DIMM size for each slot is 512 MB, for a total of 1 GB. The base memory configuration varies depending on the iMac model you purchased. The base model has 64 MB, the iMac DV has 64 MB, and the iMac DV Special Edition has 128 MB.

There is 8 MB of soldered SDRAM dedicated for video. Although it's not upgradeable, iMac can display 24-bit color at its highest resolution. In addition, the computer now uses AGP2X to make use of main memory for 3D rendering.

Published Date: Feb 20, 2012

iMac (Slot Loading): DVD Movie Playback

The iMac DV models provide the ability to view DVD movies via the built-in DVD-ROM drive.
This article has been archived and is no longer updated by Apple.
iMac uses software called Apple DVD Player to play DVD movies. iMac currently ships with a preview version (2.0b2). Apple expects to post a finished version on our Web site soon that can be downloaded at no charge.

The final version will only work on systems that came pre-installed with the preview version.

Published Date: Feb 20, 2012

iMac (Slot Loading): Different Functionality for Power Button

The iMac (Slot Loading) power button works differently than the power buttons of earlier iMacs and Macintosh computers.
This article has been archived and is no longer updated by Apple.
This table explains what happens when you press the power button on an iMac (Slot Loading) computer. The Power button on the keyboard works the same as it does on earlier iMac computers.

Current iMac State	**Result of Pressing**
Powered on	Puts iMac to sleep unless connected to file server, then alert box presented
Powered on but not responsive	Press and hold for five seconds to shut down iMac.
Powered off or in sleep	Powers on or wakes from sleep

Published Date: Feb 20, 2012

iMac (Slot Loading): What‘s New and Different

This article lists the major new features of iMac (Slot Loading), as well as a brief description of each feature.

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Here are the major new features of iMac:

- Slot loading CD- or DVD-ROM drive - Rather than using a tray to hold the disc, the iMac (Slot Loading) has a slot similar to an automotive CD player. Simply insert any 120-millimeter disc into the slot and iMac takes it from there.
- The iMac DV models have a slot loading DVD-ROM drive in place of the CD-ROM drive.
- VGA Mirroring - There is a VGA port on the iMac DV models that provides the capability to connect an external VGA style monitor to mirror the image on the iMac screen.
- FireWire - There are two 400 Mbps FireWire ports on the iMac DV models for use with high-speed FireWire devices such as video camcorders and hard drives. More information on FireWire and FireWire devices can be found at http://www.apple.com/firewire/.
- Firewire cable - To enable early adopters to get started making movies quickly, Apple is including as a special bonus, an Apple-designed FireWire (4-6 pin) cable in the box with iMac DV models. This is being provided while supplies last.
- Wireless networking ready - The iMac is ready to accept the an AirPort card. An antenna is built-in to the iMac enclosure.
- Better sound - The front speakers of iMac provide improved mid and high range sound, while a speaker port on the underside of iMac improves low end bass response.
- Dual Channel USB - Each USB port now has its own dedicated USB controller providing enhanced functionality such as USB booting and USB audio support.
- No System Fan - The iMac (Slot Loading) does not have an internal system fan. Instead, it relies on convection for cooling.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**"
Published Date: Feb 20, 2012

iMac (Slot Loading): Differences Between Models

This article documents the differences between models of the iMac (Slot Loading) computer.
This article has been archived and is no longer updated by Apple.
This table documents the major feature differences between the three iMac models introduced in September, 1999.

Feature	iMac	iMac DV	iMac DV Special Edition
Color	Blueberry	Tangerine, Blueberry, Strawberry, Grape, Lime	Graphite
Hard Drive	6 GB	10 GB	13 GB
Memory	64 MB	64 MB	128 MB
Processor	350-MHz G3 processor	400-MHz G3 processor	400-MHz G3 processor
CD or DVD Drive	CD-ROM	DVD-ROM	DVD-ROM

Published Date: Feb 20, 2012

iMac (Slot Loading): Technical Specifications

This article provides the technical specifications for the iMac (Slot Loading) computer.

This article has been archived and is no longer updated by Apple.
Technical Specifications

Processor and Memory

- 350 MHz or 400 MHz PowerPC G3 processor
- 512K backside level 2 cache
- 100 MHz system bus
- 64 MB or 128 MB of PC100 SDRAM (3.3-volt, 64-bit wide, 168-pin, running at 100 MHz); two DIMM slots support up to 512 MB each using 64 MB, 128 MB, 256 MB, or 512 MB DIMMs

Display

- Built-in 38 cm shadow-mask CRT (35 cm diagonal viewable image size); 0.28 mm dot pitch
- Built-in ColorSync color calibration for uniform color from input to display to output
- On-screen geometry adjustment to keep display images properly aligned throughout its lifetime
- Flip foot for 17° tilt

Graphics Support

- ATI RAGE 128 VR 2D/3D graphics accelerator with 8 MB of SDRAM graphics memory and AGP 2X support
- Three crisp, flicker-free screen resolutions: 640 x 480 pixels at 117 Hz, 800 x 600 pixels at 95 Hz, and 1024 x 768 pixels at 75 Hz
- 24-bit true color at all resolutions for displaying millions of colors

Storage

- 6 GB, 10 GB, or 13 GB Ultra ATA hard disk drive
- Slot-loading, 24x-speed (maximum) CD-ROM drive; or slot-loading, 4x-speed (maximum) DVD-ROM drive (plays DVD-Video discs; plays CD-ROMs at up to 24x speed)
- Support for external USB storage devices; DV models also support external FireWire storage devices

Communications

- Built-in 56K modem supports V.90 and K56flex standards (RJ-11 connector)*
- Built-in auto-switching 10/100BASE-T Ethernet (RJ-45 connector)
- AirPort wireless networking slot for optional AirPort Card; runs at up to 11 Mbps; 50 m maximum range (depending on surrounding environment); 2.4 GHz frequency; nominal power output of 15 dBm; compatible with other devices that comply with the IEEE 802.11 and 802.11HR specifications.

Note: An AirPort Card slot is not an option in the 350 MHz model.

Peripheral connections

- Two USB ports running at up to 12 Mbps each; provides up to 500 milliamps per port to support bus-powered devices
- Two, 6-pin FireWire (IEEE 1394) ports running at up to 400 Mbps (DV models only); provides 6 watts of power to support bus-powered devices

Audio

- Integrated, high-performance Odyssey audio system from Harman Kardon
- Built-in microphone for speech recognition and audio recording
- Front-mounted dual mini headphone jacks
- Analog audio input and output minijacks; up to 16-bit stereo and 44.1kHz sampling rate
- Support for external USB audio devices

Video (DV models only)

- Standard VGA output port (15-pin mini D-Sub connector)
  - Supports video mirroring: external devices display an image identical to that shown on the built-in display

Keyboard and Mouse

- Apple USB Keyboard
  - Integrated two-port USB hub with two Type A USB connectors
  - Two-position adjustable slope (0° and 6°) using flip foot
  - 12 programmable function keys
- High-resolution (400 dpi) Apple USB Mouse

Electrical Requirements and Agency Approvals

- Line voltage: 100 V to 260 V
- AC Frequency: 47 Hz to 63 Hz, single phase
- Maximum continuous power: 150 W
- EPA ENERGY STAR compliant

Environmental Requirements

- Operating temperature: 10 °C to 35 °C
- Storage temperature: -40 °C to 47 °C
- Relative humidity: 5 percent to 95 percent noncondensing
- Maximum altitude: 3000 m

Size and weight

- Height: 38 cm
- Width: 38 cm
- Depth: 43.5 cm
- Weight: 15.8 kg

*Actual modem speeds lower; speed depends on connection rate and other factors.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**"

Published Date: Feb 20, 2012

iBook: Embossed Image on Battery Cover

The iBook battery cover looks different from the other colored plastics on iBook due to an image being embossed onto the underside. This image may appear to be heat damage though it is not.
This article has been archived and is no longer updated by Apple.
When you lift the battery cover up, it may appear that there is damage to the plastics. This is not the case, it is simply the underside of the image silkscreened on the cover and is no cause for alarm.

If you look closely at the battery cover, you will see a small representation of the default desktop picture that appears on the iBook screen. The other colored plastics have no image behind them. This is normal, we wanted to give the battery cover a unique appearance from the rest of the plastics.

The following image shows the top of the battery cover. While the Tangerine iBook battery cover has been used for example purposes, the Blueberry cover has a similar image on it.

Figure 1 iBook battery cover

Published Date: Feb 20, 2012

iBook: Where to Find Nanosaur

This article provides information on where Nanosaur can be found on iBook.
This article has been archived and is no longer updated by Apple.
The Nanosaur game was not installed on the iBook's hard drive. The installer is on the iBook Install CD. If you insert the iBook Install CD and open the Applications folder on th CD you will see the Nanosaur folder. To install the game run the "Nanosaur 1.1.6 Installer" located in the Nanosaur folder.

The iBook Restore CD does not contain the Nanosaur game. If the Restore option to "erase before restoring" is chosen you will need to install the game from the iBook Install CD again.
Published Date: Feb 20, 2012

iBook, PowerBook (FireWire): When to Use the Escape Key During Startup

This document explains how to use the Escape key (esc) if the computer does not start up properly. This is only relevant when "Preserve memory contents on sleep" has been selected in the Energy Saver control panel.
This article has been archived and is no longer updated by Apple.
If you select the "Preserve memory contents on sleep" option in the Energy Saver control panel, the computer protects your RAM contents during sleep by saving all of your open work to a hidden file on the hard disk. See technical document 60429, "**iBook: Description of Preserve Memory Contents on Sleep**" for more information.

Note: For compatibility reasons, the Preserve Memory Contents on Sleep feature has been removed in Mac OS 9 versions 9.0.4 and later. You may still see the option in the Energy Saver control panel but it will be dimmed.

In some rare circumstances, the computer may have trouble reading this file, and will not start up properly. If this happens, restart the computer and immediately press the Escape key. Hold down the key until you see the Happy Mac icon, then release the key.

Important: All RAM contents are lost when doing this. Pressing the Escape key at startup tells the iBook or PowerBook (FireWire) computer to bypass reloading the RAM file, and to start up normally.

Published Date: Feb 20, 2012

PowerBook & iBook: Will Not Sleep When Speakable Items is Active

My PowerBook (or iBook) will not go to sleep when Speakable Items is enabled from the Speech control panel. Is this normal?
This article has been archived and is no longer updated by Apple.
Yes, this is normal. When the sound input driver is in use (this driver is activated by the Speakable Items selection in the Speech control panel) a PowerBook or iBook will not go to sleep on its own. However, it will still go to sleep manually when you select Sleep from the Special menu or when you close the lid.

If you would like your PowerBook or iBook to go to sleep after the time specified in the Energy Saver control panel, you must turn Speakable Items off.

Also, third-party applications may enable speech recognition without notifying you. If such an application is open, the computer will not sleep on its own.

Published Date: Feb 20, 2012

About Your Apple Dual Channel Ultra2 LVD SCSI Card, Version 2

This article provides information regarding the Ultra2 SCSI card version 2. This card has only been certified for use on the Power Mac G4 (AGP Graphics) and is not supported on other Power Macintosh computers.
This article has been archived and is no longer updated by Apple.

About Your Apple Dual Channel Ultra2 LVD SCSI Card, Version 2

Your Dual Channel Ultra2 LVD SCSI card (version 2) is a peripheral component interconnect (PCI) card that allows you to connect devices that use the Small Computer System Interface (SCSI). You can connect internal or external SCSI devices such as disk drives, CD-ROM drives, scanners, and other devices. A SCSI port permits high-speed communication between the computer and the device.

You connect internal and external SCSI devices to the card using SCSI cables. Your card also comes with a 68-pin VHDCI to 68-pin connector cable for connecting 68-pin devices. You can purchase SCSI cables from an Apple-authorized dealer or retailer.

Advantages of Your Dual Channel Ultra2 LVD SCSI Card

Your Dual Channel Ultra2 LVD SCSI card has two data channels and uses Low Voltage Differential (LVD) technology.

This technology provides the following benefits:

- High data transfer rates: Your card can transfer information over a single channel at up to 80 megabytes (MB) per second, twice as fast as Ultra SCSI devices.
- Connect more devices: You can connect up to a total of 30 SCSI devices to the card (15 per channel) internally and externally (limited by the type of devices and the number of internal devices your computer is designed to hold).
- Use of longer cable lengths: The cables used to connect a chain of Ultra2 SCSI devices can be up to 12 meters (about 39 feet) long facilitating easy positioning of external devices.
- Compatible with older SCSI devices: You can connect other SCSI devices that are not as fast as the Ultra2 SCSI, such as Wide Ultra, Narrow Ultra, Fast, and standard SCSI devices.

Note: Older SCSI devices must use SCSI Manager 4.3-compliant drivers. To determine if your device works with SCSI Manager 4.3, see your SCSI device documentation.

Connecting SCSI Storage Devices

You can connect SCSI devices in a chain. The first device connects to one of the SCSI card's connectors, the next device connects to the first SCSI device, and so on.

The card has an external cable connector for external SCSI devices and an internal connector for internal devices.

Channel 1 serves the 68-pin VHDCI external cable connector. Channel 2 serves the 68-pin internal connector.

All devices connected to the channel 1 connector are part of a single SCSI chain. Likewise, all devices connected to the channel 2 connector are part of another SCSI chain. You can connect up to 15 total devices to each channel for a total of 30 devices (although your computer will not be able to house this many devices internally.)

About Channel Data Transfer Rates

The SCSI card transfers information in Ultra2-LVD mode or single-ended mode.

In Ultra2-LVD mode, a chain of Ultra2 SCSI devices can transfer data at their fastest speed, 80 MB per second. However, if you connect a slower SCSI device to the chain, the channel defaults automatically to the slower single-ended mode.

In single-ended mode, a channel can support different data transfer rates from each device up to a top rate of 40 MB per second. For example, if you connect SCSI devices that have different transfer rates, each device transfers data at its own speed without affecting the transfer rate of other devices on the channel.

When you plan your chain of SCSI devices, take into account whether you want the chain to operate in Ultra2-LVD mode or single-ended mode. One channel can operate in Ultra2-LVD mode while the other operates in single-ended more. When connecting different SCSI devices to a channel that will operate in single-ended mode, connect Wide devices first (closest to the connector) followed by Narrow devices.

Make Sure Each Device In a Chain Has a Unique ID Number

Each SCSI device in a chain connected to your card must have its own unique ID number from 0 to 15 per channel. You can assign IDs from 0-6

and 8-15 to Wide SCSI devices. You can assign Narrow SCSI devices IDs from 0- 6. (The number 7 is assigned to the card.) The SCSI ID number helps the computer keep track of the devices when several devices in the SCSI chain are communicating with the computer simultaneously.

The SCSI devices can be in any physical order in the chain; it is not necessary to arrange them in numerical order. See the instructions that came with each SCSI device for information on checking and setting its SCSI ID number.

Important If two or more devices in a chain have the same ID number, your computer may not start up properly, your equipment may malfunction, and you may lose data as a result.

Use the Right Type and Length of Cable

To attach an external SCSI device to your computer or to another external device, always use SCSI cables that are double-shielded, such as Apple SCSI cables. Never use printer-type RS-232 cables. Poor-quality SCSI cables are often the cause of SCSI problems. Avoid mixing brands and types of SCSI cables.

Keep the cables between SCSI devices as short as possible. The maximum cable length that you can use depends on the types of devices in the chain. See the table below for information about maximum cable lengths:

SCSI device	**Maximum cable length**
Ultra2 LVD	12 meters (about 39 feet)
Ultra (or Ultra2 LVD devices in single-ended mode)	1.5 meters (about 5 feet)
SCSI-1, SCSI-2	3 meters (about 10 feet)

Terminate the SCSI Chain Properly

To ensure accurate transmission of information, a terminator must be present at each end of a SCSI chain. When you connect SCSI devices, make sure that only the last external device in the chain has a terminator. (There is already a terminator at the beginning of the SCSI chain inside your computer.)

The cable supplied for internal SCSI devices within your computer is already correctly terminated. The external cable is not terminated.

To terminate the last device in an external chain, do one of the following:

- Use a device that has a built-in terminator as the last device in the chain.
- If the device at the end of the SCSI chain does not have a built-in terminator, attach an external terminator. You can attach or remove external terminators yourself. Terminators are available at authorized Apple dealers.

Important Do not attach a terminator to a device that already has a built-in terminator. If you do, your computer may not start up properly.

Connecting an Internal SCSI Storage Device

To install an internal SCSI device, see the setup manual that came with your computer.

Connecting an External SCSI Device

To connect an external SCSI device to your card, follow the instructions below. Use these general instructions in conjunction with the more specific instructions that came with your external SCSI device.

1. Shut down your computer and make sure the SCSI device is switched off.

2. Use a SCSI cable to connect the device either to the card's external SCSI connector or to the last SCSI device already in the chain.

Use a SCSI cable that is compatible with the SCSI device. If you have a 68-pin connector on your external device, use the 68-pin VHDCI to 68-pin connector cable that came with your computer to connect the device to the card. Other cables or adapters may be required for SCSI devices with other types of connectors. For more information, see the documentation that came with the SCSI device.

Use the thumbscrews on the connectors to make a tight, reliable connection. Do not overtighten the thumbscrews.

3. Turn on all devices in your SCSI chain.

Important Always turn on all external SCSI devices connected to your computer before turning on the computer itself. Otherwise, your computer won't recognize that the SCSI devices are connected to it and your computer may not be able to start up.

4. Turn on your computer.

Icons appear for all SCSI devices connected.

Note: If you do not see an icon for a device, you may need to use drive formatting software, such as Drive Setup, to mount the device and make it available for use. Drivers installed by Apple's Drive Setup application may not be compatible with some devices.

5. Install any necessary device drivers (software that makes a device work with your computer).

Drivers needed for a SCSI device usually come on a disk or CD with the device. (If no drivers come with the device, contact the device's manufacturer.) Some older SCSI devices may require updated drivers to work with your computer.

Note: If you experience problems after connecting a SCSI device, see the troubleshooting documentation that came with your computer for possible solutions.

Technical Specifications

- Supports narrow and wide versions of Ultra-2, Ultra-1, Fast, and Standard SCSI devices
- Supports up to a total of 30 SCSI devices internally and externally (15 per channel, limited by the number of internal devices your computer is designed to house)
- Transfers data at up to 80 Megabytes per second (MB/sec) on each channel
- Supports SCSI Manager 4.3 compliant drivers only

Published Date: Feb 20, 2012

Sending and receiving email enclosures or attachments

Learn about sending and receiving email message enclosures or attachments between two Macs, and between a Mac and a PC.
This article has been archived and is no longer updated by Apple.
An enclosure or attachment is a file on your computer's hard disk that you want to send to someone through email. This is a simple feature of most email application programs. There are considerations to be made depending upon whom you are sending the enclosure or attachment to. These considerations are explained below.

Tip: For best results, use Mac OS X 10.3 Panther's easy-to-use Mail application. It can easily send Windows-friendly attachments.

Why Send an Enclosure or Attachment?

The main reason to send an enclosure or attachment is to transfer a file that does not easily conform to a text email message, such as a database or spreadsheet file, or a word processing file that contains formatted text crucial to the comprehension of the file.

Sending Enclosures or Attachments to Another Macintosh

Usually the person who receives the attachment on their Mac will have no issues with it. But they might have an issue if the file only works with an application the recipient doesn't have. Check with the recipient before sending the email message to make sure she can open the attachment.

Sending Enclosures to a Windows-compatible PC

Sending enclosures or attachments from a Macintosh to a Windows-compatible computer is usually as simple as sending them to another Macintosh. You should make sure that the recipient has the same or a similar application program, and that it can read the file format of your program.

Applications that are available on both the Macintosh and Windows platform simplify the process since the file can be read on either platform. You might have to add the appropriate filename extension before attaching the file. See "Internet: Common File Formats" for a list of file extensions.

It is best to check with the recipient to determine if he has the same, or a compatible, application that you used to create the file.

Tip: Do you really need to send an attachment?

If all you are sending is unformatted text, type or paste the text directly into the email message itself. If the document you need to send contains tables or graphics that are not easily placed into an email message, then an enclosure is a better choice.

For Mac-to-PC emails, if the enclosure or attachment is text, it is best to save the document as ASCII or plain text. This ensures that the person receiving the email message can open it with a Windows-compatible word processor.

Tip: Keep enclosures small, or compress them

If you cannot avoid an enclosure or attachment, make the enclosure or attachment as small as possible. Not everyone is on a fast network.

If the file is large, you may be able to make it a little smaller. Compression utilities exist for both the Mac OS and Windows that allow compressed files to be sent between the two systems, such as Aladdin Systems' StuffIt. A file compressed with StuffIt will have .sit as the filename extension.

Mac OS X 10.3 Finder can compress, or archive, files. You can then use the archived (compressed) file as a Mail attachment.

If the person receiving your email message uses a Windows PC, ask if she can receive a large enclosure before sending it.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

iMac: Downgrading Mac OS ROM Can Cause Start Up Failure

Installing iMac Update 1.0 places a downgraded version of the Mac OS ROM file on the iMac that is likely to cause the iMac to behave unpredictably or start up incorrectly.

iMac Update 1.0 was created to improve performance in iMacs with 233 and 266 MHz processors. It is not required, nor is it compatible with iMac 333 MHz and iMac (slot-loading) models.

This article provides a solution if the iMac Update 1.0 is accidentally installed.

This article has been archived and is no longer updated by Apple.
All iMac models have a file in the system folder called Mac OS ROM that contains information necessary for the proper start up of the computer. The version of the Mac OS ROM is matched to the individual iMac model and caution should be taken to avoid installing an earlier version of this file.

The iMac Update 1.0, which has been widely distributed on many third party software CDs for use on early iMac models, can be accidentally installed onto more recent iMac computers overwriting the more current Mac OS ROM file. This can cause the iMac to behave unpredictably or start up incorrectly, sometimes indicated by a blinking folder icon.

If you do install the iMac Update 1.0, you must replace the Mac OS ROM file with the version included with your computer, or a later version. To replace it with the proper version, do the following:

1. Start up from the Software Install CD that came with your computer (insert the CD and start up while holding down the C key).
2. Double-click the System Folder in the Software Install CD window.
3. Drag the Mac OS ROM file from the System Folder on the Software Install CD to the System Folder on your hard drive and click OK.
4. Restart your computer.

Note: The installer included with iMac updates later than version 1.0 perform a system check to prevent them from accidentally downgrading the Mac OS ROM file.

The Knowledge Base article 58174: "**iMac: When to Install Available Updaters**" has a complete list of the available updates and which ones should be installed on each iMac model.

Published Date: Feb 20, 2012

iBook: Mold Lines Above Keyboard Are Normal

The iBook has visible mold lines just above the keyboard that might be mistaken as cracks in the plastic.

This article provides the location and description of these lines.

This article has been archived and is no longer updated by Apple.
Mold lines, which are also referred to as weld lines, occur during the normal manufacturing process of the iBook's plastic top case. The lines occur where molten plastic comes together within the mold. On the iBook, these lines are faintly visible on the top case above the keyboard.

These mold lines are normal and no repair of the iBook is necessary.

Figure 1 Mold lines

Because the mold lines are very faint, the locations where they may occur have been highlighted in red in Figure 1.

Published Date: Feb 20, 2012

Differences Between the Mac OS ROM and bootROM

This article describes and differentiates the Mac OS ROM file and the Macintosh bootROM.
This article has been archived and is no longer updated by Apple.

Background

Historically, the Macintosh ROM (Read Only Memory) has been structured as one monolithic chunk of code residing on a physical chip on the logic board. It contained the routines needed by the computer at start up time (hardware knowledge, initialization, diagnostics, drivers, and such), as well as quite a bit of higher level Mac OS code.

While a computer needs to have a ROM with hardware-specific code in order to start up, the higher level code was also included in the Macintosh ROM because the Macintosh ROM had its genesis in the original 128K Macintosh computer back in 1983. At that time, ROM was cheaper than RAM, and the available disk space (which was floppy based) was at a premium. This is no longer the case.

The NewWorld architecture, introduced with the original iMac in 1998, separates the hardware-specific and higher level system software into two logically distinct pieces that are software based. Because the ROM information is now software based, it can be updated with software instead of requiring a hardware service.

bootROM vs. Mac OS ROM

In the NewWorld model, the bootROM holds most of the hardware-specific components needed to boot the specific logic board. Low-level hardware-specific code still exists in firmware (ROM) in order to handle the computer's start-up activities. This code fits into one physical ROM chip called the bootROM. The bootROM has the hardware-specific code and description of the hardware needed to start up the computer and provide common hardware access services the operating system might require.

The Mac OS ROM image file, present in the system folder, contains boot-time Mac OS routines and hardware-specific software components that are common to many Macintosh computers.

Both the bootROM and the Mac OS ROM can be updated, if need be, to provide enhanced functionality or to fix a known issue.

Determining whether to update your bootROM or Mac OS ROM

Before updating either the bootROM or the Mac OS ROM file, you should check the version you currently have installed. Apple System Profiler is the easiest method to determine the version of the Mac OS ROM and the bootROM. Simply click the triangle next to "Production information" under the System Profile tab. The information will look like this:

Look for the Boot ROM version and the Mac OS ROM file version and compare it with the update to ensure you are updating to a later version.

What about Open Firmware?

Open Firmware is the non-proprietary name of firmware complying with IEEE Standard 1275-1994. OpenBoot is Sun Microsystems trademark for the firmware product shipping on over one million SparcStations and SPARCServers since 1989.

Among Open Firmware's many features, it provides a machine independent device interface, which can be used to boot plug-in cards without providing OS-specific and/or machine dependent binary programs on the plug-in card. This feature enables plug-in card manufacturers to easily support several independent computer architectures without needing to supply different firmware for each one.

More information

Additional information on the Mac OS ROM, bootROM, and Open Firmware can be found on the Apple Developer Connection Web site at http://www.apple.com/developer. A search mechanism is available to assist you in finding the information you require.

Published Date: Feb 20, 2012

Power Mac G4: Choosing Between Internal Modem Scripts

This article provides information to help decide which modem script to use for the Power Mac G4 internal modem.

This article has been archived and is no longer updated by Apple.
There are two scripts that were designed for this modem. The Apple Internal 56k (V.90) modem script is designed to achieve a maximum 56 Kbps (kilobits per second) connection utilizing the V.90 protocol. The Apple Internal 56K (V.34) modem script is designed to achieve a maximum 33.6 Kbps connection utilizing the V.34 protocol.

Under normal circumstances, the V.90 modem script should be selected because it enables the fastest modem connection. Be sure to contact your Internet Service Provider to ensure they are using V.90 compliant modems. If not, you should select the V.34 modem script.

If the modem does not connect, or the connection is dropped after a few minutes, the phone lines may have too much interference to sustain a connection at the higher speeds possible with the V.90 protocol. In this case, use the Apple Internal 56K (V.34) modem script, which directs the modem to connect at 33.6 Kbps or lower. This connection is more reliable in situations where the phone line quality is questionable.

To use the Apple Internal 56k (V.34) modem script, follow these steps:

1. Select the Modem control panel from the Apple menu.
2. Make sure the "Connect via" pop-up menu is set to Internal Modem.
3. Open the Modem pop-up menu and choose Apple Internal 56k (V.34).
4. If necessary, set the Sound and Dialing options.
5. Close the control panel. A message asks if you want to save the changes to the current configuration.
6. Click Save.

You do not have to restart your computer in order to use the new modem software.

Note: On the Power Mac G4 (PCI Graphics), the modem script names are Power Mac G3 Int 56K (v.34 Only) and Power Mac G3 Internal 56K.

For more information about troubleshooting unreliable modem connections, see article 24803: "**Troubleshooting Unreliable Modem Connections**".

Published Date: Feb 20, 2012

PowerBook G3 Series: Battery Does Not Charge While in Use

The battery in a PowerBook G3 Series computer does not charge unless the PowerBook is in sleep mode or shut down. This article provides a workaround to this issue.
This article has been archived and is no longer updated by Apple.

Symptom

The battery does not charge when you're using the computer. It charges normally when the computer is in sleep mode or shut down.

Note: This issue only affects PowerBook G3 Series computers with a black keyboard. See article 24604 "**PowerBook G3 Computers: How to Identify Different Models**" for help identifying models.

Solution

There are several reasons why a battery may not charge when the computer is being used: the charging circuit hardware isn't working, the battery is no longer usable, or there is an issue with the AC adapter or wall outlet.

To help narrow down the possible cause, follow these steps:

1. Shut down the PowerBook
2. Connect it to AC power overnight and see if the battery is charged. If so, your PowerBook should be serviced. If it does not charge, try the next step.
3. Be sure the AC outlet is functional by plugging another electrical device into the wall outlet and turning it on.
4. If the outlet is working, try using a different AC adapter, if available, to charge the battery.
5. Download and install the PowerBook Battery Reset 2.0 from the Apple Software Updates Web site (http://www.apple.com/swupdates/).

Published Date: Feb 20, 2012

Mac OS: Cannot Copy a File Because It Is in Use

This article explains how to workaround instances when the Finder cannot copy a file because the "file is currently in use."
This article has been archived and is no longer updated by Apple.

Symptom

While trying to copy a file from one disk or volume to another, an alert box appears with a message that the file cannot be copied or opened because it is currently in use.

Solution

The Finder normally cannot copy a file that is already open by another application, or is in use by the operating system. To copy the item, try the following:

- Quit all open applications and try copying the file again.
- If you are trying to copy a file from a file server to your computer, try reversing the process. Share your computer's hard disk, connect to it from the other computer or server, and copy the file to your computer. In some instances when you do this you may have to duplicate the file on the other computer or server before copying it to your computer.
- Share your computer's hard disk. Use a CD that has Mac OS 8.0 or later on it to start up the computer or server where the original file is saved. Connect to your computer from the other computer or server (which is started up using the CD). Try copying the file again. **Note**: Mac OS 8 and later provide basic network services when a used to start up a computer from a CD. This should allow you to connect to network volumes using the Chooser.

Published Date: Feb 20, 2012

AirPort Card Not For Use in Standard PC Card Slot

Will a third-party wireless network PCMCIA (PC) card for my Macintosh PowerBook work in the AirPort slot inside a wireless capable Macintosh such as the iMac (Slot Loading), Power Mac G4 (AGP Graphics) or PowerBook (FireWire)? What about the opposite?

This article has been archived and is no longer updated by Apple.
No. There is an Apple AirPort Card designed specifically for Macintosh computers that support the AirPort wireless networking system. Refer to the printed materials that came with your computer to determine if it will support AirPort.

Conversely, you cannot use the Apple AirPort Card in the external PowerBook PCMCIA card slot.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**"

Published Date: Feb 20, 2012

AirPort Base Station: Character Limit for User Name and Password

This article outlines the number and kind of characters that can be entered in the user name, password, and phone number fields in the AirPort Base Station setup assistant.
This article has been archived and is no longer updated by Apple.
The AirPort Base Station setup assistant allows up to 255 characters per field.

- User Name: 255 characters (letters or numbers)
- Password: 255 characters (letters or numbers)

The Main Number and Alternate Number fields allow up to 16 characters.

- Main Number: 16 characters (all numbers, plus: #*(),-)
- Alternate Number: 16 characters (all numbers, plus: #*(),-)

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**"
Published Date: Feb 20, 2012

AirPort Base Station: Enter DNS Information During Setup

When configuring your AirPort Base Station, you must enter the Domain Name Server (DNS) information in the TCP/IP control panel, as shown in the graphic below.

This article has been archived and is no longer updated by Apple.
Typically, your Internet service provider (ISP) will supply you with the appropriate DNS information to enter during the setup process for the AirPort Base Station. If you do not enter the DNS information, you may not have full access to the Internet.

If you did not enter the DNS information while in the setup assistant, you need only open the TCP/IP control panel and enter it there and then run the AirPort Setup Assistant. Figure 1 shows an example of the PPP section of the TCP/IP control panel.

Figure 1. TCP/IP control panel

Note: This information can also be entered during setup of your Base Station using the AirPort Setup Assistant.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**"

Published Date: Feb 20, 2012

AirPort Base Station (Graphite): LED Behavior

This article describes the Light Emitting Diode (LED) behavior of the AirPort Base Station (Graphite).

This article has been archived and is no longer updated by Apple.
The LEDs on the AirPort Base Station (Graphite) provide feedback and status through the use of color or blinking. The indications are unique depending upon what state the AirPort Base Station is in.

During Start-up

All LEDs amber (yellow or orange)	ROM Power On Self Test
Left LED red	Modem reset and power-up
Right LED amber (yellow or orange)	Ethernet interface test and driver start-up
Left LED amber (yellow or orange)	Wireless interface test and start-up
Right LED amber (yellow or orange)	Modem interface and driver start-up
All LEDs off	Kernel initialization and start-up
Middle LED green	Normal mode

While in Use

Middle LED	
Continuous green	Power on, normal mode
Continuous amber (yellow or orange)	Power on, forced reload mode or soft reload mode
Left LED	
Flashing green	Normal wireless traffic
Flashing red	Transmit or receive error on Base Station
Flashing Amber (yellow or orange)	Combination of error and correct frames in last 100 ms. (Continuous green means at least one frame per 100 ms)
Right LED	
	Same indication as left, but for Ethernet and modem

Note: Wireless Internet access requires an AirPort Card, AirPort Base Station, and an Internet service provider, for which fees may apply. Some ISPs are not compatible with AirPort. America Online (AOL) works with AirPort software version 2.0 or later. For more information on AOL compatibility, see technical document 106591: "**AirPort: How to Use with AOL**." Range may vary with site conditions.
Published Date: Feb 20, 2012

AirPort Base Station (Graphite): Factory Default Settings

This article provides the default settings for the AirPort Base Station (Graphite), as well as how to return a Base Station or AirPort Card to the factory defaults.

This article has been archived and is no longer updated by Apple.

For AirPort Base Stations using version 1.3 software

Base station defaults

- Base Station Name: AirPort Base Station xxxxxx (the x indicates the last six digits of wireless MAC address, found on the bottom of the Base Station)
- IP Address: 192.42.249.13
- Subnet Mask: 255.255.255.0
- Network Password: None
- Base Station Password: public

Port Configuration

- Ethernet: DHCP Port Config
- Wireless: DHCP & NAT
- Network Name: AirPort Network xxxxxx (where x is the last six digits of the MAC address, found on bottom of the Base Station)
- Channel Frequency: 1
- Encryption: Off
- Closed network: Off
- Station density: Low
- Multicast rate: 2
- Interference Robustness: Off

Note: The AirPort Base Station is set up properly out of the box (and after a forced reload) to work with a cable modem or DSL modem that obtains its IP information from a DHCP server. On the wireless side it is setup as a DHCP server with Network Address Translation (NAT) turned on and network encryption off. The default base station password is "public". So if you are trying to use the AirPort Base Station in a Windows environment, it may not be necessary for you to run the AirPort Setup Assistant. You need only plug in the Base Station and configure your Windows computer to access the Base Station.

Resetting the AirPort Base Station
Resetting the Base Station is documented in a Read Me file included with the AirPort software. You may also see technical document 58613, "**AirPort Base Station (Graphite): How to Reset**".

For AirPort Base Stations using version 1.2 and earlier software

Base station defaults

- Base Station Name: AirPort Base Station xxxxxx (the x indicates the last six digits of wireless MAC address, found on the bottom of the Base Station)
- IP Address: 192.42.249.13
- Subnet Mask: 255.255.255.0
- Network Password: None
- Base Station Password: public

Port Configuration

- Ethernet: DHCP Port Config
- Wireless: DHCP & NAT
- Network Name: AirPort Network xxxxxx (where x is the last six digits of the MAC address, found on bottom of the Base Station)
- Channel Frequency: 1
- Encryption: Off

Note: The AirPort Base Station is set up properly out of the box (and after a forced reload) to work with a cable modem or DSL modem that obtains its IP information from a DHCP server. On the wireless side it is setup as a DHCP server with Network Address Translation (NAT) turned on and network encryption off. The default base station password is "public". So if you are trying to use the AirPort Base Station in a Windows environment, it may not be necessary for you to run the AirPort Setup Assistant. You need only plug in the Base Station and configure

your Windows computer to access the Base Station.

Resetting the AirPort Base Station
Resetting the Base Station is documented in a Read Me file included with the AirPort software. You may also see technical document 58613, "**AirPort Base Station (Graphite): How to Reset**".

Note: Wireless Internet access requires an AirPort Card, AirPort Base Station, and an Internet service provider, for which fees may apply. Some ISPs are not compatible with AirPort. America Online (AOL) works with AirPort software version 2.0 or later. For more information on AOL compatibility, see technical document 106591: "**AirPort: How to Use with AOL**." Range may vary with site conditions.

Published Date: Feb 20, 2012

Firmware Updates: Fully Depress the Interrupt Button

When you update your computer's firmware, the Interrupt (or Programmer's) button must be fully depressed or the update will not install.
This article has been archived and is no longer updated by Apple.
Firmware updates require that you press the Interrupt button, identified in Figure 1, while turning the computer on. Use a thin, blunt object such as a straightened paper clip or the tip of a pen.

Note: The Interrupt button on older iMacs is recessed so you will need to use a paper clip.

The Interrupt button is located on the front panel of the Power Macintosh G3 and Power Mac G4 computers, and on the right side of iMac computers. Refer to your Users Guide or Mac Help for the location of the Interrupt button on other computers.

Figure 1. Programmer's or Interrupt button

For specific firmware update installation instructions, please refer to the Read Me file that comes with the update.

Published Date: Feb 20, 2012

AirPort: What is Network Address Translation?

This article discusses Network Address Translation (NAT) and how it relates to the AirPort product family.

This article has been archived and is no longer updated by Apple.

Overview

Use of the Internet requires that your computer be identified with a unique address known as an Internet Protocol (IP) address. Unfortunately, there is a finite number of IP addresses available so Internet service providers (ISPs) typically assign only one IP address per subscriber.

Since many homes and small offices have multiple computers with access to the Internet, being limited to a single IP address can pose challenges. However, with NAT a small network of computers can share a single IP address to access the Internet.

The Apple AirPort Base Station provides NAT services to both AirPort-equipped clients and to clients connected to the AirPort Base Station via Ethernet.

IP Addresses

To understand NAT, it is not necessary to understand exactly how IP addresses are structured. However, it is important to understand that IP addresses are not random numbers.

Consider your street address. You cannot simply choose your street address. It is a number defined in relation to a numbering scheme used for your street, the street name, and zip code. All of these are part of a larger organizational system which makes it possible to locate your house.

Similarly, an IP address contains information that conforms to a larger organizational system. This system enables data intended for your computer to find your computer making communication on the Internet possible.

With regards to NAT, it is best to conceive of your home network and the Internet as two distinct environments. As the Network Address Translator, an AirPort Base Station serves as a mediator between these two environments. What makes your home network environment different from the Internet is that your home network does not need to conform to the large, complicated organizational structure of the Internet.

A device providing NAT service needs only one IP address to send and receive data from the Internet (like you have only one street address). The computers on your local network are assigned IP addresses; however the address are not communicated outside of your local network.

Ports

So if every computer on the local network communicates with the Internet using the same address, how does the AirPort Base Station determine where to send the different incoming messages? How does it know that an email for Computer A is not for Computer B or C?

NAT uses an aspect of Internet addressing called ports. Normally incoming data is sent not only to an individual IP address, but to a particular Application in use on that computer. So, Web browser packets go to your Web browser port and email packets go to your email port, and so forth.

As far as the Internet is concerned, your network is a single computer allowing you to use one IP address. Through the use of ports within NAT, email messages or Web pages are delivered to the proper computer and application.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**"

Published Date: Feb 20, 2012

iBook: Wireless Antenna Placement When Not Used

This article provides information on ensuring the wireless antenna cable remains secured when not in use.
This article has been archived and is no longer updated by Apple.
If your iBook does not have the AirPort Card installed, the antenna cable needs to be secured to ensure it does not come in contact with the logic board. Such contact could damage the iBook logic board.

Refer to Figure 1 for placement of the antenna cable under the wire bracket.

Figure 1 Placement of AirPort Card Antenna Cable

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**"

Published Date: Feb 20, 2012

PowerBook: Keyboard Does Not Recognize Multiple Keys Held Down

The built-in keyboard on PowerBook and iBook computers will not recognize more than two keys depressed simultaneously, with the exception of modifier keys. Some applications may require more than two keys be held down for certain functions.
This article has been archived and is no longer updated by Apple.
PowerBook computers have always had keyboards that will not recognize more than two keys held down simultaneously; otherwise known as two-key lockout. Modifier keys, such as the option, command, or control, are not affected by two-key lockout.

The Apple Extended Keyboard, Extended Keyboard II, and Apple USB keyboards do not have the two-key lockout. If you are using an application that requires you to hold down multiple keys, you can use one of these keyboards.

Published Date: Feb 20, 2012

AirPort Admin Utility: What To Do If It Cannot Locate a Base Station

This article provides troubleshooting tips for when the AirPort Admin Utility cannot locate any AirPort Base Station(s), and gives suggestions for accessing the AirPort Base Station if an error message is displayed.
This article has been archived and is no longer updated by Apple.
Use the following information if you cannot see an AirPort Base Station while using the AirPort Admin Utility 1.3 or later.

Before You Begin

Ensure you have power to the AirPort Base Station. If no lights come on when power is applied to the Base Station, verify the power adapter is plugged into a known good outlet. Try a different power adapter if available.

Part 1

1. After plugging in power and waiting one minute, verify the middle light on the Base Station is green.

2. In the AppleTalk control panel, set Connect via to AirPort.

3. Select the AirPort Base Station network in the AirPort portion of the Control Strip. (If only one Base Station is present its name appears below the Computer to Computer option.)

4. In the TCP/IP control panel, set Connect via to AirPort and Configure to Using DHCP Server.

5. Open the AirPort Admin Utility (in the AirPort folder inside the Apple Extras folder). You should see the AirPort Base Station name after scanning; if no Base Station appears and this computer has not been seeing wireless devices, make sure that the antenna is connected properly to the AirPort card. If you still do not see any Base Stations listed, continue on to part 2, step 5.

Part 2

1. Figure 1 shows the Select Base Station window in the AirPort Admin Utility. It lists any available AirPort Base Stations and the IP address associated with that Base Station. The screen shots and procedures that follow are helpful if you do not see a particular Base Station in the Select Base Station window.

Figure 1 Select Base Station Window in AirPort Admin Utility

2. Select the AirPort Base Station name and click Configure.

3. If the dialog box shown in Figure 2 appears, this indicates the AirPort Base Station was reset, or was never set up. You can bypass this dialog box by waiting 5 minutes after pressing the reset button on the AirPort Base Station itself, or by holding down the Option key when clicking the Configure button shown in Figure 1.

Figure 2 Set IP Address and Password Dialog Box

The Enter Password dialog box, shown in Figure 3, appears when you click Configure with the Option key held down, or when the Base Station has already been set up and you click Configure in the Select Base Station window.

Figure 3 Enter Password Dialog Box

4. Enter the password. If, after you select the base station and enter the password, you get the error message shown in Figure 4, verify the IP settings in the TCP/IP control panel. The settings should be as follows:

TCP/IP address - If you have an IP address, enter it here. Otherwise, use `192.42.249.13`.

Subnet mask - must be set to the same as the AirPort Base Station's subnet mask. If you do not know or did not change the AirPort Base Station subnet leave it blank. If blank does not work set it to `255.255.255.0`

Password - The default password is "`public`", and is case sensitive.

Figure 4 Error Message Window

5. Connecting to a Base Station through a wired connection.

If no Base Stations appear, as shown in Figure 5, you must have a direct connection to the Base Station from your Macintosh to perform a forced reload procedure. A direct connection is either an Ethernet crossover cable between the base station and Macintosh, or an Ethernet hub to which both devices are connected.

When using an Ethernet connection, change the TCP/IP control panel settings to:

Connect Via - Ethernet

Configure - Manually

IP address -`192.42.249.14`

Subnet mask - `255.255.255.0`

Figure 5 Select Base Station Window

Finally, perform a forced reload and your AirPort Base Station should be ready to be configured for use with the AirPort Admin Utility.

Note: A forced reload requires an Ethernet connection between the Base Station and the computer initiating the reload.

Note: Wireless Internet access requires an AirPort Card, AirPort Base Station, and an Internet service provider, for which fees may apply. Some ISPs are not compatible with AirPort. America Online (AOL) works with AirPort software version 2.0 or later. For more information on AOL compatibility, see technical document 106591: "**AirPort: How to Use with AOL**." Range may vary with site conditions.

Published Date: Feb 20, 2012

AirPort: Compatibility With Earlier Macintosh Products

Computers that do not have an AirPort card slot may join an AirPort network by using third-party wireless products or via Ethernet.
This article has been archived and is no longer updated by Apple.
Though AirPort cards are only for use with Apple computers that include an AirPort card slot, earlier PowerBook computers that have a free PCMCIA (PC) card slot may connect to an AirPort network with a third-party wireless card such as the Lucent WaveLAN, Agere ORiNOCO, or Farallon SkyLINE. For Mac OS 9, only 802.11b cards from some third-party vendors will be compatible. 802.11g or 802.11b/g cards will not work with the AirPort software included in OS 9. For more information about this topic, please see the document "Installation Instructions" included on the AirPort disk. For information on Mac OS X and wireless PC card compatibility see technical document 106205: "**Mac OS X, AirPort: Third-Party Wireless PC Cards Do Not Work With AirPort Client Software.**"

Figure 1 Location of Installation Instructions

Connecting to an AirPort Base Station without an AirPort card

Any computer that works with an IEEE 802.11 DSSS-compliant wireless interface card and its required software can connect to an AirPort Base Station. This applies to both Macintosh computers and those that use other operating systems. A computer connected with a third-party card can utilize TCP/IP-based services on the network, including Internet access where available. Computers without a PC card slot can utilize the AirPort Base Station as a router via Ethernet. See Note 1.

Using an AirPort Card
See the **Apple Spec Database** if you are unsure if your computer is compatible with the Apple AirPort card.

Using AirPort Admin Utility software

You may use the AirPort Admin Utility version 1.1 or later with any Macintosh computer that is connected to an AirPort Base Station either wirelessly or via Ethernet. If the software is not already on your computer, you may copy the Base Station Extras folder from the AirPort disc to the Macintosh from which you wish to use it. See Note 4.

Notes

1. If you are using a non-Apple 802.11 DSSS interface card, verify full AirPort compatibility with the vendor of the card.
2. The Indigo iMac (Summer 2000) computer with a 350 MHz microprocessor does not include an AirPort card slot.
3. The parenthetical product description (Summer 2000) refers to the summer of the Northern Hemisphere.
4. You do not have to use the AirPort Installer for the AirPort Admin Utility to work. In fact, the Installer does not work on some Macintosh computers. For related information, please see:

   Article 58584: "**AirPort: Configuring a Base Station With a non-AirPort-Capable Computer**"

Note: Wireless Internet access requires an AirPort Card, AirPort Base Station, and an Internet service provider, for which fees may apply. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access.**"

Published Date: Feb 20, 2012

Macintosh Server G4: Troubleshooting Checksum Error Message

This article offers troubleshooting advice for a checksum error message presented by the Macintosh Server G4 after performing a software restore.

This article has been archived and is no longer updated by Apple.

A checksum error can occur after running the Apple Software Restore (ASR) to restore an image (from CD) of Mac OS 9.0 or AppleShare IP 6.3 on to a SCSI drive that uses the SoftRAID v2.2 or v2.2.1 driver. Refer to Figure 1 for the complete error message text. The system does not crash or hang and a graceful exit is allowed.

Figure 1 Checksum Error Message Dialog Box

If you experience this error, it can be eliminated and the software restore allowed to complete successfully by following these steps:

1. Open the SoftRAID v2.2 or v2.2.1 application.
2. Select the drive to be restored to (**Note:** The SoftRAID application will automatically update the drivers on all SoftRAID controlled drives.)
3. Select Install Driver from the Disk menu.
4. Turn off Read Acceleration and Write Acceleration.
5. Close the window and quit the SoftRAID application.
6. Restart the computer to put the driver update into effect.
7. Retry the ASR; it should complete successfully.
8. Read Acceleration and Write Acceleration can be turned back on if desired.

Published Date: Feb 20, 2012

iMac (Slot Loading): Buzzing Noise After Shutdown

This article describes a buzzing noise the iMac (Slot Loading) may make after shut down.
This article has been archived and is no longer updated by Apple.
A very small number of iMac (Slot Loading) computers may produce a buzzing or humming noise from the speakers after shut down. The noise can last for several minutes and will go away if the power cord is unplugged from the computer.

If your iMac (Slot Loading) makes a loud buzzing or humming noise after shut down, contact Apple or an Apple-authorized service provider for assistance in resolving this issue.

Published Date: Feb 20, 2012

AirPort Base Station: Internet Application Timeout Error Discussion

I use an AirPort Base Station to establish a PPP connection to my Internet service provider (ISP) to view Web pages and check e-mail. The first time I attempt a connection each day I receive an error message from my Web browser. After I cancel the error message and retry the Web page, it loads fine. Why is this?

This article has been archived and is no longer updated by Apple.
When you first open an application that requires a connection to the Internet, your AirPort Base Station will start the connection process with your ISP by dialing the modem in the base station. The time it takes to make the connection is dependent upon the condition of your telephone line and the which ISP you are connecting to.

In certain cases you may notice that your first request for information is not successful resulting in the an error message from your Web browser indicating that a connection error occurred. This error appears because your Web browser tried to get information from the Internet before the AirPort Base Station finished the process of connecting to your ISP.

Wait until the AirPort Base Station has completed the process (right LED light has stopped blinking red or the AirPort application indicates that the base station is connected) and try to load another Web page.

The AirPort Base Station will stay connected to your ISP even though you may not be accessing the Internet. The default "Disconnect if Idle" setting is 600 seconds (10 minutes). This value can be changed using the AirPort Utility, however the default value is optimal for most situations.

Note: To verify the Base Station has made a connection to your ISP, look at the Status field within the AirPort application. It should say Connected or Active to indicate you are connected to your ISP. If you see a Connect button, as shown in Figure 1, click it to establish a connection.

Figure 1 AirPort Application window

Note: Wireless Internet access requires an AirPort Card, AirPort Base Station, and an Internet service provider, for which fees may apply. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**."

Published Date: Feb 20, 2012

AirPort: Difference Between DSSS and FHSS

What's the difference between DSSS and FHSS?
This article has been archived and is no longer updated by Apple.
Direct Sequence Spread Spectrum (DSSS) and Frequency Hopping Spread Spectrum (FHSS) are two different technologies in the IEEE 802.11 specification. They are incompatible with each other.

Frequency Hopping technology is older and is limited by government regulation to 2 megabits per second.

Direct Sequence technology is becoming more widespread and supports data rates of up to 11 megabits per second. Apple uses DSSS technology because it is equivalent to Ethernet data rates.

Note: Wireless Internet access requires an AirPort Card, AirPort Base Station, and an Internet service provider, for which fees may apply. Some ISPs are not compatible with AirPort. America Online (AOL) works with AirPort software version 2.0 or later. For more information on AOL compatibility, see technical document 106591: "**AirPort: How to Use with AOL**." Range may vary with site conditions.

Published Date: Feb 20, 2012

Mac OS 9: Keychain Not Applicable to AirPort 1.0

The Mac OS 9 Keychain works with AirPort software versions 1.1 and later.

This article has been archived and is no longer updated by Apple.
You may not add log on information for an AirPort network to the Keychain when using AirPort 1.0 software.

Versions 1.1 and later of AirPort, however, work with Keychain.

Note: For AirPort versions 1.1 and 1.2, the Keychain is dependent on the IP address of a device for recognition and not its name. This means that an AirPort Base Station set up for a dynamically provided IP address is not recognized by the Keychain after its address changes. AirPort 1.3, however, resolves this limitation by allowing the Keychain to identify the AirPort Base Station by its hardware (MAC) address.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**"

Published Date: Feb 20, 2012

AirPort 1.1: Base Station Extras Folder Contents

This article will discuss the contents of the folder Base Station Extras Folder on the AirPort CD.
This article has been archived and is no longer updated by Apple.
The Base Station Extras Folder contains the folder titled AirPort Admin Utility containing:

- Installation Instructions
- AirPort Admin Utility
- AirPort Admin Library

AirPort Base Station Software

The AirPort Base Station Software file is the software for the Base Station.

AirPort Admin Utility Folder

This folder contains the software and instructions on how one might configure an AirPort Base Station with a non-AirPort-Capable Computer.

For the contents of the Installation Instructions see article 58584: "**AirPort: Configuring a Base Station With a non-AirPort-Capable Computer**".

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**"

Published Date: Feb 20, 2012

Power Mac G4 (AGP Graphics): Installing AirPort Card

This article provides instruction on the installation of the AirPort Wireless Networking card into a Power Mac G4 (AGP Graphics) computer. Similar instructions, with graphics, are included with the AirPort card.

This article has been archived and is no longer updated by Apple.

1. Shut down the computer (choose Shut Down from the Special menu) and unplug all cables except the power cord.

2. Touch the metal PCI access cover on the back of the computer to discharge static electricity. Avoid walking around until you have finished installing the card. Unplug the power cord then lift the latch on the side of the computer.

3. Gently lower the side panel onto a clean, flat surface. Lower it onto a soft cloth to avoid scratching the case.

4. Connect the antenna cable to the connector on the end of the AirPort card. The cable is usually stowed on the side of the PCI card guide.

5. Remove the metal clip and pull the AirPort card from the adapter card, shown below. The adapter card and clip are not used with your Power Mac G4.

6. Insert the AirPort card (serial number side up) through the opening in the PCI card guide, and into the connector on the main logic board as shown below.

7. Raise the side panel and press it against the case until it snaps into place.

Instructions for using the AirPort software are in Mac Help, available in the Help menu.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**"

Published Date: Feb 20, 2012

AirPort Base Station: Troubleshooting a Dial-up Connection

This document discusses troubleshooting a dial-up connection with an AirPort Base Station.
This article has been archived and is no longer updated by Apple.
This information has been relocated to technical document 106858, "**AirPort: Troubleshooting Outline**".

This document contains steps for both Mac OS 9 and Mac OS X.

Published Date: Feb 20, 2012

AirPort Base Station: X2 Modem Compatibility

An AirPort Base station may connect to an X2 modem, but the connection speed varies depending on circumstances.
This article has been archived and is no longer updated by Apple.
Your Internet service provider may use either X2 or K56 Flex modems to provide access to the Internet. Your AirPort Base Station connects to either modem type. However, you can only get the maximum connection speed when those modems have been updated to the V.90 protocol.

The modem in the AirPort Base Station, like those of in iMac and PowerBook computers, is K56 Flex V.90 compliant. It connects to an X2 type modem whether or not the X2 modem is V.90 compliant.

If the X2 modem has been updated to the V.90 specification, connection speeds should approach the FCC-authorized maximum of 53 Kbps. But when an X2 modem is not updated to V.90, connection speeds are typically 33.6 kilobits per second (Kbps) or slower.

For additional information on the V.90 specification, please see:

Article 30734: "**V.90 Protocol: Connectivity Discussion**"

Additional Information

Immediately after a modem answers a call from another modem, the modems negotiate at what speed they will communicate. Typically each modem will attempt to communicate using a preferred standard at the highest speed possible. For the base station modem that is V.90 at 53 Kbps.

When the other modem does not support a particular protocol standard the modems begin slowing down until a mutually acceptable protocol is found. If V.90 is not available, the base station tries K56 Flex. The next protocol it would try is V.34.

To force the modem in the AirPort base station to begin connection negotiation at V.34 follow these steps:

1. Open the AirPort Admin Utility.
2. Click the Internet tab.
3. Choose Modem (V.34) from the Connect pop-up menu.
4. Click Update.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**"
Published Date: Feb 20, 2012

Apple Studio Display DVI: Plug In Power Cord First

This article clarifies information provided in the Users Guide as to why it is important to plug in the computer power cord before connecting the video cable of the Apple Studio Display DVI and Apple Cinema Display.
This article has been archived and is no longer updated by Apple.
The Apple Studio Display DVI and Cinema Display can be damaged by electro-static discharge (ESD), particularly when the data cable is connected to the computer. To prevent possible damage, the Power Mac G4 (AGP Graphics) must be plugged into a grounded power outlet before connecting the Studio or Cinema Display.

Once the computer is plugged into the power outlet, you may connect the display to the computer.

Published Date: Feb 20, 2012

Final Cut Pro: QuickTime Pro Registration

Learn where to enter the QuickTime Pro registration information in Final Cut Pro versions 1.2 or later.
This article has been archived and is no longer updated by Apple.

Final Cut Pro 2.0 to 5.0 and Final Cut Pro HD 4.5

To register the version of QuickTime Pro that comes with these versions of Final Cut Pro, Type "QuickTime Pro" in the "Register To" field and type the serial number included on the sheet in the appropriate field.

Final Cut Pro 1.2

To register the version of QuickTime 4 Pro that comes with Final Cut Pro 1.2, type "QuickTime 4 Pro" in the "Registered to" field. Then enter the serial number included on the sheet in the appropriate field within QuickTime 4 Pro and continue.

Important: Do not enter anything into the Organization field.

Verification of QuickTime Pro registration

Mac OS X

1. Open System Preferences.
2. Choose QuickTime from the View menu.
3. Click Registration. The registration information appears.

If the registration information was entered properly, the QuickTime field states "5.0 Pro Player Edition", "6.0 Pro Player Edition", or "QuickTime 7 Pro."

Mac OS 9

1. Open the QuickTime Settings control panel.
2. Select Registration from the pop-up menu. The registration information appears.

If the registration was entered properly, the QuickTime Key states "5.0 Pro Player Edition" **or** "6.0 Pro Player Edition"

Published Date: Feb 20, 2012

Open Transport Tuner 1.0: Description

This article describes Open Transport Tuner 1.0.

IMPORTANT: This update has been superceded by Open Transport 2.6. If you have installed the Open Transport Tuner 1.0, please download and install Open Transport 2.6 from the Apple Software Updates Web site at http://www.apple.com/swupdates.

This article has been archived and is no longer updated by Apple.
OT Tuner 1.0 switches off an option in Open Transport that would cause a Macintosh to respond to certain small network packets with a large Internet Control Message Protocol (ICMP) packet. This update prevents Macintosh computers from being used in certain types of Denial of Service (DoS) attacks.

This update will only function on computers running Open Transport 2.5.x. This includes all computers running Mac OS 9, as well as iBook, Slot-Loading iMac, and most Power Macintosh G4 computers running Mac OS 8.6.

Apple has identified certain issues that may occur after installing the Open Transport Tuner 1.0. These include:

- After installing the Tuner, if you make changes in the TCP/IP control panel, you must restart to use TCP services.
- In some circumstances, internet connections (such as DSL or cable modem) that can be maintained through sleep/wake cycles may not be maintained after installing the Tuner.

To resolve these issues and to take advantage of other improvements, Apple recommends that all Open Transport 2.5.x users update to Open Transport 2.6. This update can be downloaded from the Apple Software Updates web site at http://www.apple.com/swupdates. For more information on Open Transport 2.6, please see Knowledge Base article 32075: "**Open Transport 2.6: What's New**".
Published Date: Feb 20, 2012

ATI Rage 128 Pro Video Card: VGA Signals Through DVI Port

The ATI Rage 128 Pro video card installed in the Power Mac G4 (AGP Graphics) does not provide VGA signals through the Digital Visual Interface (DVI) port.
This article has been archived and is no longer updated by Apple.
The ATI Rage 128 Pro AGP video card provides a DVI and VGA video connector. The DVI connector follows the DVI-D standard and supports only digital displays. Customers needing to connect standard VGA displays can use the 15 pin VGA connector.

The DVI standard allows manufacturers to incorporate VGA signals into the DVI port. This variation of DVI is called DVI-I. The DVI-D and DVI-I connectors appear identical except for a single connector 'key'. The key on DVI-I connectors forms a plus (+) sign, while on DVI-D connectors it forms a minus (-) sign.

The ATI Rage 128 Pro card supports one display at a time. The DVI and VGA ports cannot be used simultaneously.
Published Date: Feb 20, 2012

Mac OS X Server: Starting and Stopping AFP services

This article tells how to start and stop Mac OS X Server AFP services, and how to send a custom notification message to users.

This article has been archived and is no longer updated by Apple.
You can start and stop the AFP server from the Web-based administration feature. If you use Web admin to stop the AFP server, you can specify a period of time for the server to wait before shutting down. You can also enter a custom message that the clients see. Consult the documentation that came with Mac OS X Server for more information on how to use the Web administration feature.

If you stop the AFP server from within the Macintosh Manager admin application (in the Server tab), the connected users receive a generic AppleShare message that the server has gone down.

Published Date: Feb 20, 2012

Disk Copy: Using with USB Drives

I have a USB floppy drive and when I try to use the "Make A Floppy" command in Disk Copy, it is dimmed. Is it possible to use Disk Copy with a USB floppy drive?
This article has been archived and is no longer updated by Apple.
You can create floppy disks from disk images using a USB floppy drive if you:

- Use disk copy 6.3.1 or higher.
- Insert a floppy in the USB drive before you choose the Make A Floppy command.

Note: You may need to install the latest driver for your USB floppy drive for it to work with this function of Disk Copy.

Once you have inserted a floppy into the drive, Disk Copy will recognize that the drive supports floppy disks and the Make A Floppy command will become available in the Utilities menu.

For more information about Disk Copy, see article 60353: "**Disk Copy 6.3.3: Quick Reference**".

Published Date: Feb 20, 2012

Mac OS 9 and Language Kits: Setting Sherlock 2 to Show Foreign Characters

When using Mac OS 9 with custom installed Japanese language support, Sherlock 2 search results for Japanese files or Web sites contains unreadable garbage text. This article explains how to get this list to properly display Japanese characters.
This article has been archived and is no longer updated by Apple.
Sherlock 2 uses the Views font set in the Finder to determine which foreign characters to display in the Items Found field.

To change the Views font, do the following:

1. Open the Appearance Control Panel, select the Fonts tab.

2. In the Views Font pop-up menu, choose one of the fonts installed by the Language Kit. For the Japanese Language Kit, change the font to Osaka.

The fonts included with each Language Kit are designed to support English characters and each Kit's specific language only. The Language Kits do not currently support viewing multiple languages (for example, Japanese and Korean) simultaneously with the same font.

If you have installed multiple language kits with Mac OS 9 and use Sherlock 2 to search for items with foreign names, change the Views font to correspond with the appropriate language.

Published Date: Feb 20, 2012

Using AirPort wireless communication internationally

This article has been archived and is no longer updated by Apple.

Regulations for wireless communication vary between countries, so an AirPort card or Base Station is only certified for use in the country in which it was originally sold. In the case of the base station, both the modem and wireless card must be individually certified for use in the various countries.

AirPort operates in the the 2.4 and 5.0 Ghz bands, which are internationally recognized band for radio LANs. However, regulations in certain countries do not allow the use of all available channels, so you should only use the permitted channels within a given country. The following chart describes the channel regulations for the 2.4 Ghz band.

Country/Continent	Permitted channels
North America	1 to 11
South America	1 to 11
Europe	1 to 13
Asia/Pacific (except Japan, Taiwan)	1 to 13
Japan	1 to 14
Taiwan	1 to 11

When traveling, beware that your AirPort product may be able to operate on channels that are not available in the country that you are visiting. For example: If you bought your AirPort card in Japan and traveled to North America, you should not use your computer to create a network on channels 12 to 14, because your North American colleagues would not be able to see your network (cards purchased in North America only work on channels 1 to 11). When creating a computer-to-computer network, select a channel by simply changing the Channel menu from Automatic (shown below) to another number.

Conversely, if you frequently travel to a region that allows more channels than your home region, you may want to consider purchasing an external wireless adapter from the region in which you are using the device.

Administrators of 2.4 Ghz wireless networks that frequently host foreign visitors should consider limiting their networks to channels 1 through 11, which are common to all AirPort products. You can change the channel of a base station using AirPort Admin Utility. Just click the AirPort tab, then use the Channel menu.

An AirPort client joining a network will see the network regardless of channel, so long as it's on one of the channels allowed by the country in which the client AirPort card was purchased. When a network does not appear to the client, it may indicate that the network is on a channel not supported by the client card (such as a North American AirPort card attempting to join a channel 14 network in Japan). It may also just be a "closed" network that you could join by choosing Other and typing the network name.

Note: You are responsible for complying with local regulations when using an AirPort product outside the country in which the device was purchased.

Important: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some Internet service providers are not compatible with AirPort. Read more about AirPort requirements for wireless Internet access.

Published Date: Feb 20, 2012

AirPort: Use the Same Software Version on All AirPort Devices

For best performance, you should use the latest version of AirPort software on all AirPort-equipped computers and AirPort Base Stations.
This article has been archived and is no longer updated by Apple.

Symptom

- Some computers on an AirPort network connect normally, while others do not detect the AirPort network at all.
- A computer with AirPort 1.3 may not be able to connect to a Computer-to-Computer network created by a computer using AirPort 1.2.
- Other unexpected connection behaviors may occur.

Solution

For best performance, you should be sure that all AirPort-equipped computers and AirPort Base Stations have:

- the latest version of the AirPort software installed
- the same version of the software installed

Mixing different versions of AirPort software among the computers or base stations on your network may cause unexpected results. For example, an AirPort 1.1 client using the AirPort Setup Assistant cannot detect a Base Station using a later version of the AirPort software.

You can download the latest version of AirPort software at Apple Software Updates (http://www.apple.com/swupdates/).

Note: As a workaround in the Computer-to-Computer example, you may start the network with a computer using AirPort 1.3 and then have computers using AirPort 1.2 join.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access"**

Published Date: Feb 20, 2012

AirPort 1.2 and Earlier: Using Computer to Computer Mode

This article discusses the use of Computer-to-Computer mode on AirPort-equipped computers with AirPort software versions 1.2 and earlier. This article has been archived and is no longer updated by Apple.
You may download a later version of AirPort software at Apple Software Updates (http://www.apple.com/swupdates/). This article is provided for customers who do not wish to update their software immediately.

Computer-to-Computer mode allows you to quickly create a small network between two AirPort- equipped computers or IEEE 802.11 compliant devices. This small network does not require an AirPort Base Station. It is theoretically possible to have more than two devices on a Computer-to-Computer network, but you should use an AirPort Base Station or Software Base Station if you are having difficulties.

Note: A preview version of the Software Base Station became available in the 1.1 version of the AirPort software.

AirPort versions 1.2 and earlier use channel 3 exclusively when in Computer-to-Computer mode. This is not adjustable.

If you are using a third-party IEEE 802.11 wireless device, it may have the ability to use a different channel frequency when in Computer-to -Computer mode. Ensure your third party device is set to channel 3 when setting up a Computer -to-Computer network with an AirPort equipped computer.

In Computer-to-Computer mode, the signal strength meter in the AirPort portion of the Control Strip will always show three green dots.

If you are unable to use AirPort to access another AirPort-equipped computer, make sure that:

- The TCP/IP and AppleTalk control panels on both your computer and the one to which you are trying to connect are set to use AirPort.
- You select Computer-to-Computer in either the AirPort application or the AirPort portion of the Control Strip.
- The two computers are within range of each other. (The typical range for an AirPort connection is up to 50 m.) Try moving the two computers closer together.
- There are no sources of interference, such as a microwave oven or 2.4 GHz cordless phone in range of the Base Station. (A list of interference sources is available in Mac Help.)
- File sharing is turned on in the File Sharing control panel (on both your computer and the one you are trying to connect to). If file sharing is turned off, you will be unable to see the other computer in the Chooser or Network Browser.

Note: While in Computer to Computer mode, you will be broadcasting without encryption (no network password). Therefore, the security of your computer is dependent upon the File Sharing privileges. If you have Guest access turned on, anyone with an AirPort equipped computer in a 50 m range could connect to your computer.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access"**

Published Date: Feb 20, 2012

AirPort 1.x: Disabling Software Base Station

This article describes how to disable the AirPort Software Base Station feature included AirPort versions 1.1 and later under Mac OS 9.
This article has been archived and is no longer updated by Apple.
There are two extensions that support the AirPort Software Base Station:

- AirPort AP Support
- AirPort AP

To disable the AirPort Software Base Station, you must remove the AirPort AP extension or turn it off using the Extensions Manager control panel.

If the Start button is clicked in the AirPort application after the extension is removed, the following message will appear indicating the software Base Station could not be started:

"Software Base Station could not be turned on because the required AirPort software was not found on this computer. Reinstall the AirPort software and try again."

Note: Wireless Internet access requires an AirPort Card, AirPort Base Station, and an Internet service provider, for which fees may apply. Some ISPs are not compatible with AirPort. America Online (AOL) works with AirPort software version 2.0 or later. For more information on AOL compatibility, see technical document 106591: "**AirPort: How to Use with AOL**." Range may vary with site conditions.
Published Date: Feb 20, 2012

AirPort: Turning On Access Control

You can use the MAC Access Control Table in the AirPort Admin Utility to provide additional security for an AirPort Base Station.
This article has been archived and is no longer updated by Apple.
Once you enter the first MAC address, Access Control becomes activated, there is no on/off switch. If you do not enter anything here, all clients will be permitted access. The number of addresses that you can add varies depending on which base station you have. By model:

- AirPort Base Station (Graphite): 497
- AirPort Base Station (Dual Ethernet): 300
- AirPort Extreme Base Station: 500
- AirPort Express: 25

Note: When you enter information in the description field, this decreases the total number of possible entries. For example, this may decrease to as low as 150 on the AirPort Base Station (Dual Ethernet).

To set up Mac Access Control follow the steps below:

1. In the Access Control tab for the base station, click Add as shown in Figure 1.

Figure 1 Access Control Tab

Note: The window shown in Figure 3 states that "Access to the AirPort network will be restricted to the clients listed here. If nothing is listed, all clients are permitted upon correctly entering the password." This assumes that WEP encryption has been enabled. If it has not, then no password will be required.

2. The Add Client window opens and prompts you for the AirPort ID and Description. Click OK after entering the appropriate information.

The Description entry is optional. However, if you don't enter one, the Access Control table only lists the numeric AirPort ID which makes it extremely difficult to associate it with a particular Client.

The AirPort ID is the same as the MAC Address. The MAC Address can be found on the AirPort card under the serial number. If you already have the card installed in your computer, use Apple System Profiler or the AirPort application to obtain the Mac (hardware) Address.

Figure 2 AirPort Card Showing AirPort ID

Figure 3 Apple System Profiler Window

3. The Access Control Table shows the AirPort ID and Description entered in the previous step.

4. You can enter additional clients to the table by clicking Add and providing the required information. A more complete Access Control Table with five entries is shown in Figure 4.

Figure 4 Access Control Tab

This particular AirPort Base Station (Ebbetts Field) only permits access to the network(s) (Ethernet, DSL, ISP, or cable modem) connected to the base station by the five Clients listed. In this example, the correct network password is also required.

Should an unauthorized client learn the password for this wireless network, they would still be able to associate with the base station and communicate with its associated Clients. However, because their AirPort ID is not in the Access Control Table, they would not be able to access the Ethernet network or dial-out through the Base Station.

Note: For AirPort Base Stations (Graphite) only, even with Access Control on, a client whose MAC address is not entered into the table can still use the control strip to select the network. The client can connect to the Base Station, but not access the Ethernet network or the analog connection. (The LED indicators show up in the control strip and the name gets a bullet next to it in list.)

For wireless clients not in the Access Control Table, file sharing access will still be available via TCP/IP and AppleTalk. Access Control offers

little protection to the wireless clients that are not following normal security procedures.

5. When you finish making entries to the Access Control table, click Update to save the changes.

6. After clicking Update, the Base Station must be reset to complete the update. Click OK when the following window appears:

Figure 5 Base Station Reset Dialog Box

Note: Wireless Internet access requires an AirPort Card, AirPort Base Station, and an Internet service provider, for which fees may apply. Some ISPs are not compatible with AirPort. America Online (AOL) works with AirPort software version 2.0 or later. For more information on AOL compatibility, see technical document 106591: "**AirPort: How to Use with AOL**." Range may vary with site conditions.

Published Date: Feb 20, 2012

Optimizing reception of your AirPort Base Station

To optimize reception between a base station and an AirPort-capable computer, you may need to adjust the placement of the base station or computer.
This article has been archived and is no longer updated by Apple.

1. Check the location of the AirPort Base Station. Place the base station in a good, clear, central location, where there is little or no interference.
2. In some environments, rotating or changing the orientation of the base station or computer can affect reception.
3. In Mac OS 9, use the Optimize Placement feature in the AirPort Admin Utility to verify that you have good reception in the locations you wish to use the system. If reception is not optimal, move or change the orientation of the base station or computer until you get an acceptable signal.
4. Use the AirPort Admin Utility to change the channel on the AirPort Base Station.
5. For more information on optimizing the placement of one or more AirPort Base Stations, refer to the "Designing AirPort Networks document." The AirPort Installer may have saved this document on your hard disk. It is also available from Apple Downloads.

Important: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some Internet service providers are not compatible with AirPort. Read more about AirPort requirements for wireless Internet access.
Published Date: Feb 20, 2012

AirPort for Mac OS 9: Third-Party Wireless Software and Equivalent Network Password

Some third-party wireless networking software may not utilize the standard AirPort password. This article describes what to do if your software does not recognize the password.
This article has been archived and is no longer updated by Apple.
This document covers AirPort when used with Mac OS 9. When using Mac OS X, see technical document 106864, "**AirPort for Mac OS X: Third-Party Wireless Software and Equivalent Network Password**".

Symptom

You are unable to connect to an AirPort Base Station using the standard AirPort password when you use third-party (non-Apple) wireless networking software.

Solution

If you are using a computer with non-Apple wireless software, you may be able to connect to the AirPort Base Station and use it for Internet access. However, the network password you enter may be different from the one an AirPort user would enter.
First try the standard password to see if it works. If it does not then you will want to try the equivalent network password. To find the equivalent network password for your AirPort Base Station, do the following:

1. Open the AirPort Admin Utility.
2. Select your base station from the list.
3. Click Configure.
4. When prompted, enter the password for your base station.
5. Choose Equivalent Network Password from the base station menu. A window appears with the network equivalent password for your base station.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**"
Published Date: Feb 20, 2012

AirPort Base Station (Graphite): How to Set Up Wired Clients

This article describes how to use wired Ethernet computers, in addition to AirPort-equipped computers, with the original AirPort Base Station (Graphite). This document includes configurations that require an additional Ethernet hub, as when using a cable or DSL modem.
This article has been archived and is no longer updated by Apple.
Note: This document discusses the original AirPort Base Station (Graphite). For configuration of later AirPort base station models ("Dual Ethernet" and "Extreme"), see these documents instead:

52002: "**Designing AirPort Extreme Networks : Manuals**"
120146: "**Designing AirPort Networks for Mac OS X (v10.2): Manuals**"
120061: "**Designing AirPort Networks for Mac OS X (v10.1) Manuals**"

There are a couple of ways you can connect a Macintosh with Ethernet, such as a Power Macintosh G3, to the Base Station to obtain Internet services via cable modem, DSL, or PPP.

If you are only sharing the Internet connection with wireless clients, you can connect the Base Station directly to your cable or DSL modem. If you are sharing the Internet connection with both wireless and Ethernet clients, an Ethernet hub will be required to connect non-AirPort capable computers to the Base Station.

Cable or DSL Connection Using DHCP

This setup assumes that you have successfully connected to the Base Station and the Internet from an AirPort capable computer such as an iBook. To add the Power Macintosh G3, set its TCP/IP control panel to use Network Address Translation (NAT) provided by the Base Station.

1. Open AirPort Admin Utility.
2. Select your base station from the list, and click Configure.
3. Click the Network tab. (With AirPort 3.0 or later, you must click the Show All Settings button to access the Network tab.)
4. Select the checkbox for "Ethernet client computers also share a single IP address (using NAT)."

Warning: When connecting a wired client to your AirPort Base Station (Graphite) to share cable Internet service, it is strongly recommended that you NOT allow the Base Station to provide IP addresses over Ethernet.

Connect your cable or DSL modem to the Ethernet hub. Then connect any computers to the hub that will use NAT services from the Base Station. To setup your wired computers, you need only:

- set the TCP/IP control panel to an IP address outside the range that it is being served wirelessly by the Base Station
- not set your wired computers to DHCP

On the Power Macintosh G3, enter10.0.1.201 in the IP address field within the TCP/IP control panel . Set additional computers to the next number, 10.0.1.202, up to 10.0.1.254. Enter the subnet address, 255.255.255.0 and router address, 10.0.1.1. The domain name server (DNS) IP address and the domain names should be the same as those used for your ISP. The TCP/IP control panel should appear as in Figure 1.

Figure 1: TCP/IP Control Panel Setup for Cable Modem

You could set up the Base Station so that it provides IP addresses on Ethernet, but this could cause trouble. Both your service provider's DHCP server and the Base Station would be attempting to provide IP addresses to any computers connected by Ethernet. This would cause conflicts and result in unreliable connections for both the wired and wireless computers. This could potentially disable all Internet traffic through your cable or DSL modem until the modem is reset.

Using a Static IP Address via Cable or DSL

If the cable ISP provided a static IP address for your connection, it is still appropriate to use the same setup as described above. While the AirPort Admin Utility software allows you to set up the Base Station to provide DCHP addresses over Ethernet, your Base Station could respond to DHCP requests from the Internet and create unwanted Internet traffic. This is not desirable to you or your ISP.

Note: This is unlikely to be an issue with DSL.

Dial-up PPP Connection

The setup described for cable or DSL modems should work with dial-up connections. No changes need to be made to the Base Station. Use the TCP/IP control panel on your wired computer to define the connection. In the TCP/IP control panel on the computer using Ethernet, enter an IP

address of 10.0.1.201. Additional computers would be set to the next number 10.0.1.202, an so forth, up to 10.0.1.254. Enter the subnet address of 255.255.255.0 and a router address of 10.0.1.1. The DNS IP addresses and the domain names should be the same as those used for your ISP. The TCP/IP control panel should appear as in Figure 2:

Figure 2: TCP/IP Control Panel Setup for PPP Connection

Note: The warning about providing IP addresses over Ethernet from the Base Station does not apply to PPP connections. If need be, you can set up the Base Station to provide IP addresses over the Ethernet for your wired client computers.

In the TCP/IP control panel for the wired computers, set them to "Connect via Ethernet" and "Configure Using DHCP Server."

Note: Wireless Internet access requires an AirPort Card, AirPort Base Station, and an Internet service provider, for which fees may apply. Some ISPs are not compatible with AirPort. America Online (AOL) works with AirPort software version 2.0 or later. For more information on AOL compatibility, see technical document 106591: "**AirPort: How to Use with AOL**." Range may vary with site conditions.

Published Date: Feb 20, 2012

AirPort 1.2: Updating Base Station Firmware

This article provides the necessary steps to update the firmware in an AirPort Base Station after updating to AirPort 1.2.
This article has been archived and is no longer updated by Apple.
Before beginning, make sure you are not connected to the Internet since the Base Station will be restated after the update has been performed.

1. Install the AirPort 1.2 software and restart the computer.

2. If you have installed AirPort on the computer for the first time, the AirPort Setup Assistant will launch automatically after you restart your computer. When it does, quit the AirPort Setup Assistant. The dialog box in Figure 1 will appear if you try to use the Setup Assistant before updating the Base Station.

Figure 1: AirPort Setup Assistant Dialog Box

3. Select AirPort network in the AirPort control strip portion or AirPort application.

4. Verify the TCP/IP control panel is set to AirPort and using DHCP.

5. Launch the AirPort Utility

6. Select the Base Station to be updated and click Configure (if it is a new Base Station, select Other and type in 10.0.1.1 and "public" for password).

Note: Although updating the Base Station software does not erase any settings, we recommend that you save your existing Base Station settings before uploading new software as a precaution. To do this, select Save As under the File menu.

7. In the Base Station menu, choose Upload Default Software and then click OK.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access"**

Published Date: Feb 20, 2012

AirPort: How to Use AirPort Setup Assistant

First you set up your computer to connect to the Internet, then AirPort Setup Assistant transfers the settings to an AirPort Base Station. More complex configurations are possible using the AirPort Admin Utility and the Designing AirPort Networks document.
This article has been archived and is no longer updated by Apple.
Before using the AirPort Setup Assistant, you should set up your computer for Internet access as if the base station were not present. Once you have set up the computer for Internet access, locate the AirPort Setup Assistant. The setup assistant transfers the settings you have just made to the base station.

I. Steps for Mac OS 9
II. Steps for Mac OS X
III. Complex networks

Steps to take in Mac OS 9

Note: If your computer is already successfully connecting to the Internet, skip to Step 3.

1. Locate the Internet Setup Assistant. You can locate it using Sherlock, which is accessible from the Apple menu.
2. Open the Internet Setup Assistant, and follow the prompts to complete it.
3. Locate the AirPort Setup Assistant, using Sherlock if needed.
4. Open the AirPort Setup Assistant and follow the prompts to set up the base station.

Optional: You may be able to open the Internet Setup Assistant through a feature in the AirPort Setup Assistant. The dialog shown in Figure 1 will only appear if you respond that your computer is not set up for Internet access.

Figure 1 AirPort Setup Assistant dialog box in Mac OS 9

If you choose this option, the AirPort Setup Assistant will quit, and the Internet Setup Assistant will open. Upon completing the Internet Setup Assistant, you will be returned to the Finder. You must then re-open the AirPort Setup Assistant.

Steps to take in Mac OS X

Note: If your computer is already successfully connecting to the Internet, skip to Step 4. If you have created more than one location, be sure that the settings you want transferred to the base station are the active location.

1. Choose System Preferences from the Apple menu.
2. Choose Network from the view menu.
3. Enter the settings for connecting to your Internet service provider. For help completing this step, see technical document 106796, "**Mac OS X: Internet and Network Topics (Getting Connected, Troubleshooting)**".
4. Locate the AirPort Setup Assistant. You may use Sherlock, located in your Applications folder, to find it.
5. Open the AirPort Setup Assistant and follow the prompts to set up the base station.

Complex networks

For a more complex network configuration that would not be applicable to a standalone computer, you may configure the base station directly using the AirPort Admin Utility. For more information on setting up such a network, see software download documents:

120061: "**Designing AirPort Networks for Mac OS X (v10.1) Manuals**"
75138: "**Designing AirPort Networks for Mac OS 9 Document**"

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**"
Published Date: Feb 20, 2012

PowerBook (FireWire): AirPort Card Installation

This article provides information about installing an AirPort card into a PowerBook (FireWire).
This article has been archived and is no longer updated by Apple.

1. Shut down your computer, remove the battery from the expansion bay, and disconnect the power adapter, modem, and any other cables connected to the computer.
2. Make sure that the keyboard locking screw, located between the F4 and F5 keys, is not in the locked position. Your new PowerBook comes with the keyboard unlocked, so unless you or someone else locked the keyboard, you can skip this step. If it is locked, turn the screw one half turn in either direction so that the screw slot is oriented horizontally.

   Warning: The internal components of your PowerBook may be hot. If you have been using your PowerBook, wait 30 minutes after shutting down your computer to let the internal components cool down before continuing.
3. Release the keyboard by pulling down on the keyboard release tabs (located to the left of the F1 and F9 keys) until the top portion of the keyboard pops up.
4. Lift the top portion of the PowerBook keyboard up slightly near the top row of keys and pull it back far enough to displace the small tabs that hold the bottom of the keyboard in place.
5. Flip the keyboard over and lay it on the palm rests and trackpad.
6. If your AirPort Card came with the AirPort adapter, remove the metal clip and pull the AirPort Card from the adapter. (The adapter and metal clip are not used with your PowerBook.)
7. Touch a metal surface inside the computer to discharge any static electricity.
8. With a Phillips screwdriver, remove the screws that secure the internal heat shield.
9. Lift up the internal heat shield.
10. Position the AirPort Card with the AirPort ID numbers and bar code facing up and connect the AirPort Card to the end of the antenna cable. Make sure that the connector on the end of the antenna cable is straight before inserting it into the card.
11. Slide the card into the connector located just above the PC Card slot. Make sure to slide the card all the way in until you feel that the card is securely attached to the connector. **Note:** When inserting the AirPort Card, you may need to tuck the end of the card under the plastic wall. This helps align the card with the connector and prevents the back end of the card from sticking up after it has been inserted.
12. Insert the internal heat shield.
13. Insert the small metal tabs at the base of the keyboard. Important When replacing the internal heat shield, make sure it does not cover the plastic tabs for the hard disk and AirPort Card. The plastic tab for the processor module should be placed under the heat shield.

Important: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some Internet service providers are not compatible with AirPort. Read more about AirPort requirements for wireless Internet access.]

Published Date: Feb 20, 2012

PowerBook (FireWire): Upgrading Memory

This article provides information on performing memory upgrades on the PowerBook (FireWire).
This article has been archived and is no longer updated by Apple.
The computer has two RAM expansion slots that accommodate standard SO (small outline) DIMMs. The lower slot is occupied by a factory-installed SO-DIMM, the upper slot is available for upgrade. The computer supports a maximum of 512MB of memory using two 256MB SO-DIMMs.

You should not need to remove the processor card module unless you are upgrading the memory in the lower slot. If you do remove the processor card module, make sure that it is firmly seated when you reinstall it. Failure to do so can result in a blank screen when you restart the computer.

Note: PowerBook G3 Series computers used PC66 RAM that is not recommended for use with the PowerBook (FireWire); Apple does not provide support for such a configuration. It is recommended that you obtain memory specifically designated for use with the PowerBook (FireWire).

Memory for the PowerBook (FireWire) must be:

- PC100 Compliant
- 3.3-volt
- unbuffered
- low-power
- 64-bit-wide
- 144-pin
- 8-byte
- up to 2.0 inches tall

Follow these steps to install the memory.

1. Shut down your computer, remove the battery from the expansion bay, and disconnect the power adapter, modem, and any other cables connected to the computer.

2. Make sure that the keyboard locking screw, located between the F4 and F5 keys, is not in the locked position. Your new PowerBook comes with the keyboard unlocked, so unless you or someone else locked the keyboard, you can skip this step. If it is locked, turn the screw one half turn in either direction so that the screw slot is oriented horizontally.

Warning: The internal components of your PowerBook may be hot. If you have been using your PowerBook, wait 30 minutes after shutting down your computer to let the internal components cool down before continuing.

3. Release the keyboard by pulling down on the keyboard release tabs (located to the left of the F1 and F9 keys) until the top portion of the keyboard pops up.

4. Lift the top portion of the PowerBook keyboard up slightly near the top row of keys and pull it back far enough to displace the small tabs that hold the bottom of the keyboard in place.

5. Flip the keyboard over and lay it on the palm rests and trackpad.

6. Touch a metal surface inside the computer to discharge any static electricity.

7. With a Phillips screwdriver, remove the screws that secure the internal heat shield.

8. Lift up the internal heat shield.

9. Locate the empty RAM expansion slot.

10. Hold the RAM expansion card at a 30-degree angle. Line up the notch in the card with the small tab in the RAM expansion slot. Then push the RAM expansion card into the expansion slot.

Note: You may feel some resistance. If you are having trouble inserting the card, try pushing one side at a time.

11. Gently push the RAM expansion card down until the two snaps on either side of the card lock into place.

12. Insert the internal heat shield.

Important: When replacing the internal heat shield, make sure it does not cover the plastic tabs for the hard disk and optional AirPort Card. The plastic tab for the processor module should be placed under the heat shield.

13. Press down on the bottom portion of the heat shield to secure it and then replace the screws.

Published Date: Feb 20, 2012

AirPort: Using a Non-AirPort-Capable Computer to Set Up a Base Station

This article provides procedures for using a non-AirPort-capable computer to set up an AirPort Base Station. If you cannot find the information you are looking for in this document, check the Apple Support Web site at http://www.apple.com/support.
This article has been archived and is no longer updated by Apple.

System Requirements

To use a non-AirPort-capable computer to set up an AirPort Base Station, the non-AirPort-capable computer must have:

- At least 32 MB of memory (RAM)
- Mac OS 8.6 or later
- Mac OS 9.0.4 or later is required to use AirPort 1.3 or later.

Installing the AirPort Admin Utility

With a non-AirPort-capable computer, use the AirPort Admin Utility to set up your AirPort Base Station.

Install the AirPort Admin Utility by dragging the AirPort Admin Utility Folder to your hard disk.

Configuring the AirPort Base Station

To set up your AirPort Base Station to access the Internet, you need:

- An Ethernet crossover cable, Ethernet network, or 802.11 wireless networking card
- An Internet account

Setting up your AirPort Base Station involves the following procedures:

- Configuring the TCP/IP settings on your computer to communicate with the AirPort Base Station.
- Using the AirPort Admin Utility to set up an AirPort network .
- Setting up the AirPort Base Station to access the Internet.

Connecting to the AirPort Base Station via wireless network

If you have a third-party wireless networking card, you may be able to set up your AirPort Base Station wirelessly.

To set up your Base Station wirelessly, do the following:

1. Open the TCP/IP control panel.

2. Choose the name of your third-party wireless card from the "Connect via" pop-up menu.

3. Choose DHCP from the Configure pop-up menu.

4. Close the window and save your changes.

5. Open the AirPort Admin Utility.

6. Click Other.

A message appears requesting the IP address of the base station you would like to open.

7. Type the IP address 10.0.1.1.

8. Enter the password "public."

9. Click Configure.

10. Follow the instructions in "Setting up your AirPort Base Station network" and "Setting up your AirPort Base Station to access the Internet" to set up your Base Station.

If you are unable to set up the base station wirelessly, use the instructions below to set up your base station using Ethernet.

Configuring TCP/IP to access the AirPort Base Station via Ethernet

Note: If your computer and your base station are on an Ethernet network using DHCP, don't perform the following steps. Skip ahead to "Connecting to the AirPort Base Station." If you don't know whether your network uses DHCP, ask your network administrator or ISP.

1. Open the TCP/IP control panel.

2. Choose Configurations from the File menu.

3. Click Default.

4. Click Duplicate.

5. Name the new configuration "Base Station Access" and click OK.

6. Click Make Active.

7. Choose "Ethernet" or "Ethernet built-in" from the "Connect via" pop-up menu.

8. Choose Manually from the Configure pop-up menu.

9. In the IP Address box, type 192.42.249.11.

10. In the "Subnet mask" box, type 255.255.255.0.

11. Make sure the "Router address" box is empty.

12. Close the TCP/IP control panel and save your changes.

Connecting to the AirPort Base Station

1. Connect the base station to your computer.

If you are using an Ethernet crossover cable, connect one end of the Ethernet crossover cable to your computer and the other end to the AirPort Base Station. If you are using an Ethernet network, connect the base station and your computer to your Ethernet hub.

2. Open the AirPort Admin Utility.

3. Select your base station from the list. A new AirPort Base Station has the name AirPort Base Station.

4. Click Configure.

If a message asks you to enter an IP address and password, type the address 192.42.249.12.

5. Type the password "public" and click OK.

The AirPort Admin Utility Configuration window appears. You are now ready to set up your AirPort Base Station.

Setting up your AirPort Base Station network

The AirPort tab enables you to name and provide passwords for the AirPort Base Station and for the network it creates.

You use the base station name and password only when you are configuring the base station. Users who want to join your AirPort network (to access the Internet or share files wirelessly) use the network name and password.

To set a network password, click the Enable Encryption (Using WEP) checkbox. After checking this box, click Change Password and enter the password of your choice.

Note: Some third-party wireless networking cards may not support the encryption feature. Do not enable encryption if your third-party wireless networking card does not support the encryption feature. Contact the card's manufacturer for questions about encryption.

Setting up your AirPort Base Station to access the Internet

For dial-up (PPP) Internet connections

To set up your AirPort Base Station to access the Internet using PPP, do the following:

1. Click the Internet tab of the AirPort Admin Utility configuration window.

2. Choose Modem from the Connect using pop-up menu.

3. In the Configure modem section, type the phone number for your ISP, your user name, and your password. If the computer you're using is set up to access the Internet using PPP, you can copy this information from the Remote Access control panel.

4. In the Configure TCP/IP using PPP section, type two DNS IP addresses appropriate to your ISP and your ISP's domain name.

Contact your ISP if you do not have this information.

IMPORTANT You must provide accurate DNS address information in the AirPort Admin Utility. See the AirPort Read Me for important compatibility information about the AirPort Base Station and server-assigned DNS addressing.

5. Click Update.

For DSL or cable modem Internet connections

To set up your AirPort Base Station to access the Internet using a cable modem or DSL, do the following:

1. Click the Internet tab of the AirPort Admin Utility configuration window.

2. Choose Ethernet from the "Connect using" pop-up menu.

3. In the Configure TCP/IP section, type the settings appropriate to your ISP. Contact your ISP if you do not have this information.

4. Click Update.

Using your AirPort Base Station

Connecting to an AirPort Base Station from a Computer Using Third-Party Wireless Software

If you are using a computer running wireless software other than AirPort, you may be able to connect to the AirPort Base Station and use it for Internet access. However, the network password you enter is different from the one AirPort users enter.

To find the network equivalent password for your AirPort Base Station, do the following:

1. Open the AirPort Admin Utility.

2. Select your base station from the list.

3. Click Configure.

4. Type the password for your base station.

5. Choose Network Equivalent Password from the Base Station menu.

The window displays the network equivalent password for your base station.

Connecting to the Internet

1. Connect the AirPort Base Station to your preferred means of Internet Access (telephone line, cable modem, or DSL router).

2. Change the TCP/IP settings on your computer to use DHCP and choose the option from the "Connect via" pop-up menu that is appropriate for your third-party wireless networking card.

3. Open an Internet program such as a Web browser. The AirPort Base Station automatically initiates a connection to the Internet when it receives an Internet request.

Finding Help - If you are using the AirPort Admin Utility with a non-AirPort-equipped computer, the "Wireless Internet and networking" section of Mac Help is not installed. For more information, see the AirPort Read Me file and Balloon Help in the AirPort Admin Utility.

For information about the compatibility of third-party 802.11 wireless networking cards, contact the card's manufacturer.

Note: Wireless Internet access requires an AirPort Card, AirPort Base Station, and an Internet service provider, for which fees may apply. Some ISPs are not compatible with AirPort. America Online (AOL) works with AirPort software version 2.0 or later. For more information on AOL compatibility, see technical document 106591: "**AirPort: How to Use with AOL**." Range may vary with site conditions.

Published Date: Feb 20, 2012

FireWire: Maximum Number of FireWire Devices

Learn about the number of maximum AC-powered and bus-powered FireWire devices you can use with FireWire capable Macintoch computers. This article has been archived and is no longer updated by Apple.

FireWire Devices

FireWire capable Macintosh computers support a maximum of 63 powered FireWire devices. You can connect a maximum of 16 FireWire devices in one chain.

Bus-powered FireWire Devices

When connecting multiple bus-powered FireWire devices to a computer, be careful that the total power consumed by the devices isn't more than the computer can provide. If the power draw exceeds the computer's limit, all devices on the FireWire bus may shut down unexpectedly during heavy activity. For example, copying several files from one FireWire drive to another.

If you experience FireWire devices shutting down unexpectedly:

- Use devices that have their own AC power supply. For example, plug device directly into a power outlet.
- Plug devices into separate FireWire ports instead of chaining them together.
- Reduce the number of FireWire devices connected to the computer.

Published Date: Feb 20, 2012

PowerBook (FireWire): What is New and Different?

This article provides a brief description of some of the new features of the PowerBook (FireWire).
This article has been archived and is no longer updated by Apple.
FireWire - There are two 400 Mbps FireWire ports on the PowerBook (FireWire) computer providing connectivity to high speed FireWire devices such as hard drives and digital video cameras.

DVD decoding via software - All configurations of the PowerBook (FireWire) provide the ability to view DVD movies without the need for a dedicated DVD hardware decoder.

No SCSI port - The external SCSI port has been removed and replaced with two FireWire ports.

Power adapter similar to iBook - The PowerBook (FireWire) uses a power adapter similar to that used with the iBook.

Published Date: Feb 20, 2012

PowerBook (FireWire): Supports Preserve Memory Contents on Sleep

The PowerBook (FireWire) provides the ability to save memory contents to the hard disk during a battery swap or other loss of power.
This article has been archived and is no longer updated by Apple.
Note: For compatibility reasons, the Preserve Memory Contents on Sleep feature has been removed in Mac OS 9 versions 9.0.4 and later. You may still see the option in the Energy Saver control panel but it will be dimmed.

The PowerBook (FireWire) supports hibernation. Hibernation is activated when you select "Preserve memory contents on sleep." in the Energy Saver control panel shown in Figure 1. In this mode, the computer saves the entire contents of RAM to an invisible file on the hard disk before going to sleep. When the computer comes out of sleep, the file is read back into RAM. If for some reason the computer loses power and shuts off, it can still start up to the exact state it was in before sleeping and not lose any data stored in RAM.

Hibernation requires that Virtual Memory be turned on.

When you press the Power key, the computer starts up and automatically reloads the RAM contents from the hard disk.

The computer goes through a process similar to a normal startup, but it does not display the startup screen or the extension icons; instead, it displays a progress bar. After it restores the prior state, the computer resumes execution of whatever application was executing at the time the power was lost.

Figure 1 Energy Saver Control Panel

Additional Features of Energy Saver Control Panel

Wake options

Wake when the modem detects a ring - If the internal modem is connected and this option is selected, then the PowerBook awakens. This allows any software which needs to answer the call (such as fax software) to answer the call.

Wake when the computer is opened - This awakens the PowerBook whenever the lid is opened. Combined with preserve memory contents on sleep, this option provides instant access to applications whenever needed.

Other Options

Reconnect to servers on wakeup - When selected, the PowerBook tries to connect to any AppleShare servers that you were logged into before going into sleep. With just this option selected, and not remember my passwords, you are prompted to reenter your password for all the servers being remounted. This option can also cause the PowerBook to take longer to come out of sleep since it is remounting all the servers.

Remember my passwords - This option when selected allows the servers to be remounted without requiring you to reenter the password for the server.

Allow processor cycling - When selected, this option causes the PowerPC processor to go into low power mode after a few seconds of computer inactivity . When the processor goes into low power mode, it runs at 20 percent of normal speed, saving power.

Published Date: Feb 20, 2012

USB: What Are Class Drivers?

While the majority of USB devices have drivers written specifically for them by the manufacturer, Apple includes USB Class drivers with the Mac OS that will control the majority of these devices. This article describes class drivers.
This article has been archived and is no longer updated by Apple.
Class drivers are software components that are able to communicate with many USB devices of a particular kind, such as disk drives, printers, or scanners. If the appropriate class driver is present, any compliant device can be plugged in and start working immediately without the need to install additional software. Mac OS 9 includes USB Mass Storage Support 2.0, a class driver that supports devices that meet the USB Mass Storage Class specification.

Because class drivers are written for generic classes of USB peripherals, some product specific features may not be available. If you find that some specific USB device function is not working, you may need to install the drivers included with the device, or download the most current version from the vendors Web site.

Published Date: Feb 20, 2012

PowerBook (FireWire): Physical Ports, Controls, and Connectors

This article provides a picture and description of the physical ports and connectors used in the PowerBook (FireWire).
This article has been archived and is no longer updated by Apple.
Below is a picture of the ports on the back of the PowerBook (FireWire).

Figure 1: External Ports and Features

From left to right the ports on the back are:

Power Adapter port
Sound input port
Sound output port
USB ports (2)
Ethernet port (10/100BaseT)
FireWire ports (2)
TV out port
External monitor port
Reset button
Internal Modem port (RJ11)
Infrared window

Below is a picture of the PowerBook (FireWire) with the keyboard flipped back.

Figure 2: Internal Features

Published Date: Feb 20, 2012

PowerBook (FireWire), G4: Keyboard Locking Screw

The PowerBook (FireWire) and PowerBook G4 have a keyboard locking screw that is similar to the iBook; it is not similar to the keyboard locking screw in the PowerBook G3 Series.

This article has been archived and is no longer updated by Apple.
To release the keyboard locking screw, turn the screw one half turn in either direction so that the screw slot is oriented horizontally. Your PowerBook comes from Apple with the keyboard unlocked.

Figure 1 Keyboard locking screw

Published Date: Feb 20, 2012

AirPort Base Station: How to Set up for Active Roaming

By combining multiple AirPort Base Stations with Ethernet for active roaming, AirPort-equipped client computers can log on to the network only once and move transparently between locations.
This article has been archived and is no longer updated by Apple.
AirPort-equipped computers connected to two or more different AirPort Base Stations can communicate with each other when the base stations are joined by a wired Ethernet network. Each base station may offer its own wireless network to clients, or the base stations may be set up for "active roaming," a configuration in which two or more base stations appear as one wireless network to client computers.

Note: Though an AirPort Base Station communicates wirelessly with AirPort-equipped computers, it cannot do so with other base stations. This means you must have Ethernet to connect LAN users across multiple base stations.

Active roaming and its advantages

Active roaming allows computers on one AirPort network to move throughout a coverage area greater than the 50 m radius provided by a single base station. An AirPort user with an iBook, for example, can log on to the network once then move into the coverage area of a different base station without having to log on again. By placing base stations strategically, you may also work around obstructions such as structural concrete or steel.

Setting up active roaming

To use active roaming, you must have AirPort 1.1 or later software. You may download AirPort 1.3 from Apple Software Updates (http://www.apple.com/swupdates/). These steps are performed using the AirPort Admin Utility.

1. Connect all the AirPort Base Stations to the same subnet on your Ethernet network.

2. Give the same network name and password to each base station.

3. Be sure that all base stations have the checkbox for "Enable AirPort to Ethernet bridging" checked.

Setting up DHCP with active roaming (optional)

These steps are performed using the Network pane of the AirPort Admin Utility.

1. Set one base station to act as a DHCP server by clicking the checkbox to "Distribute IP addresses."

2. For the same base station, click the radio button to "Share a range of IP addresses (using only DHCP)." In the corresponding fields, add a range of real IP addresses for client computers.

   Important: You should not use network address translation (NAT) with active roaming. Client computers on an active roaming network should receive real IP addresses via DHCP or manually.

3. Be sure that all base stations have the checkbox for "Enable AirPort to Ethernet bridging" checked.

4. Be sure that all base stations other than the one selected as DHCP server are acting as bridges only and do not have the checkbox checked for "Distribute IP addresses."

Learning more

AirPort 1.3 introduces new features including Base Station Density and Multicast Rate. For information on these and other considerations of setting up a network with multiple base stations, please see the document "Designing AirPort Networks." This document may have been installed on your computer by the AirPort Installer. It is also found at Apple Software Updates (http://www.apple.com/swupdates/).

Note: Wireless Internet access requires an AirPort Card, AirPort Base Station, and an Internet service provider, for which fees may apply. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**."
Published Date: Feb 20, 2012

AirPort Base Station (Graphite): Configuring As A Bridge

You may set up the AirPort Base Station (Graphite) to act as an AirPort-to-Ethernet bridge but not a router.
This article has been archived and is no longer updated by Apple.
The AirPort Base Station may be set up to act as only a bridge to your Ethernet network. To do so, follow these steps:

1. Open the AirPort Admin Utility.
2. Click the Network tab.
3. Ensure the checkbox for Distribute IP addresses is unchecked, as shown in Figure 1.

This turns off Network Address Translation (NAT) and DHCP routing in the base station making it act as a bridge only.

Note: With NAT and DHCP disabled, the AirPort Setup Assistant will not be able to communicate with the Base Station.

Figure 1 AirPort Admin Utility window

Note: When you use an AirPort-equipped computer as an AirPort Software Base Station, the bridging feature is not available.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access"**
Published Date: Feb 20, 2012

PowerBook (FireWire): Intermittent Errors at System Startup Time

PowerBook (FireWire) computers may have intermittent errors at system startup time.
This article has been archived and is no longer updated by Apple.

Symptom

You may sometimes see one of these errors at system startup time:

- bus error
- address error
- type 11 error

These errors may be caused by the SerialShimLib shared library.

Affected products

- PowerBook (FireWire) computer

Solution

Use the Software Update control panel to download and install Mac OS 9 Update (9.0.4). You can also download it from Apple Software Updates at http://www.apple.com/swupdates/ .

Published Date: Feb 20, 2012

Macintosh Server G4: Power Supply Needs Replacement Alert Box

On a small number of Macintosh Server G4 computers an alert box with a message that says the power supply needs to be replaced may appear. This document provides more information on the root cause of this alert.
This article has been archived and is no longer updated by Apple.

Symptom

An alert box with this message appears:

> "Your server's redundant power supply requires attention. It is recommended that the power supply be replaced to maintain system reliability. Contact you Apple service provider for details."

Figure 1 Redundant power supply alert

Solution

This alert box is likely to appear when server computers have no additional PCI cards or hard drives installed in them. In this configuration, there is not enough current draw on the +5 V line and the power supply reports this low current situation to the Mac OS. This, however, does not indicate there is an issue with the power supply.

If this alert appears on your server computer, and it is otherwise working normally, you may ignore this alert. Installing additional PCI cards or hard drives will provide additional load against the power supply and remove the likelihood that the alert box will appear.

If this is not possible, contact your Apple Authorized Service Provider for additional details.
Published Date: Feb 20, 2012

AirPort Base Station: DHCP Client ID Support

This article discusses how an AirPort Base Station works with DHCP Client ID.
This article has been archived and is no longer updated by Apple.

AirPort 1.3 software

The AirPort Base Station can accommodate a DHCP Client ID while providing Network Address Translation (NAT). This is one advantage of updating to AirPort 1.3.

If your network or Internet service provider requires the DHCP Client ID, follow these steps to add it:

1. Open the AirPort Admin Utility.
2. Click the Internet tab.
3. Choose Ethernet from the Connect Using pop-up menu.
4. Choose DHCP from the Configure TCP/IP pop-up menu. The DHCP Client ID field becomes available.
5. Enter the DHCP Client ID in the field.
6. Click Update.

AirPort 1.2 and earlier software

Though the AirPort Base Station does not accommodate DHCP Client ID, there are two solutions available. In either solution, the DHCP Client ID would be entered in the individual TCP/IP control panels of the computers that connect wirelessly to the AirPort Base Station.

Important: You should update your AirPort Base Station to AirPort 1.3 software. The presented solutions, while valid, require the dedication of time and resources that are unnecessary if you update your software. These solutions are presented for your information only.

Solutions for DHCP Client ID with AirPort 1.2 and earlier

An IP Address for Each Computer

1. Obtain additional DHCP leases from your Internet Service Provider or network administrator for each computer that will connect to the base station. A DHCP lease is the ability for one computer to obtain the IP address necessary to connect to the Internet. If your provider or network uses static IP addresses instead of DHCP service, obtain additional static IP addresses.
2. Set up the AirPort Base Station as a bridge only.

Add a Router

1. Set up a separate router on the network for DHCP and NAT services. Routers come in many sizes, from industrial strength to table top. A computer with two Ethernet interfaces and routing software may also serve the same purpose.
2. Set up the AirPort Base Station as a bridge only**.**

Important: Bridging may adversely affect other network services in certain environments. If you have a cable modem, you should not use the AirPort Base Station for bridging combined with NAT (network address translation) and DHCP services. NAT and DHCP services may be run on a separate router.

Note: Computers that are set up as AirPort software base stations do not have a bridging feature.

For related information, please see article 58597: "**AirPort Base Station: Configuring As A Bridge**"

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access"**

Published Date: Feb 20, 2012

PowerBook (FireWire): Device Control In Final Cut Pro

This article describes an issue and provides a resolution to controlling some Digital Video (DV) devices using Final Cut Pro on a PowerBook (FireWire) computer.
This article has been archived and is no longer updated by Apple.

Symptom

After controlling some DV cameras and video cassette decks with Final Cut Pro, you may lose communication with the camera or deck. In some cases Final Cut Pro may stop responding. This symptom is seen with the following devices:

- Sony DSR-20
- Sony GV-D300
- Sony GV-D900
- Sony PC-10
- Sony TRV-7
- Sony TRV-9
- Sony TRV-9E
- Sony WV-D9000

Solution

Use the Software Update control panel to download and install the Mac OS 9 Update (9.0.4), which includes FireWire 2.3.3. You can also download Mac OS 9 Update from Apple Software Updates at http://www.apple.com/swupdates/ .
Published Date: Feb 20, 2012

PowerBook (FireWire): Late Breaking News

This article is the Late Breaking News contained in the Mac Help for the PowerBook (FireWire). Because this article is quite long, you may want to use the search feature of your Web browser to find exactly what you are looking for.
This article has been archived and is no longer updated by Apple.

About your PowerBook

This document contains important late-breaking information about your PowerBook. For additional information, see the other sections of Mac Help or check out the Apple Support Site on the Internet at http://www.apple.com/support/powerbook

Important Information About Your PowerBook

AirPort software - AirPort 1.1 contains a preview version of the new software base station feature. This feature allows an AirPort-enabled computer to function as a base station for an AirPort network. An updated version of the software base station feature will be available soon from Apple. For the latest information, go to the Apple's Support Web site at www.apple.com/support.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: **"AirPort: Requirements for Wireless Internet Access"**

Using your PowerBook in FireWire Target Disk Mode - When setting up for FireWire Target Disk Mode, make sure that your PowerBook is the only FireWire device connected to the other computer and that no additional FireWire devices are connected to your PowerBook. If additional FireWire devices are connected, FireWire Target Disk Mode will not work.

Using your PowerBook

Selecting a startup disk - Make sure a valid startup disk is selected in the Startup Disk control panel. If an invalid startup disk is selected (one your computer cannot start up from), your computer may take as long as two minutes to locate a valid startup disk and start up properly. A RAM disk cannot be used as a startup disk, even though its icon may appear in the Startup Disk control panel.

If you select the Network Disk icon in the Startup control panel and are not connected to a Netboot server, your PowerBook will take significantly longer to start up.

Preserving the contents of memory before putting your computer to sleep - You can save the contents of memory on the computer's hard disk before your computer goes to sleep using the Advanced settings section of the Energy Saver control panel (for more information, see Mac Help). After you close the lid to put your computer to sleep, don't move the computer for approximately 20 seconds. When the save process is complete, the sleep indicator light blinks.

IMPORTANT: You must have virtual memory turned on in the Memory control panel to use this option.

Note: For compatibility reasons, the Preserve Memory Contents on Sleep feature has been removed in Mac OS 9 versions 9.0.4 and later. You may still see the option in the Energy Saver control panel but it will be dimmed.

Trouble connecting the internal modem in V.90 mode - Your computer comes with an internal 56K modem based on the V.90 specification. If the modem won't connect at all in V.90 mode or the connection is dropped after a few minutes, the phone lines may be too noisy or there may be too much interference to sustain a connection at speeds above 33.6 kilobits per second (Kbps). Contact your ISP to ensure that it is using V.90-compliant modems or plans to use them in the future. Use the Apple Internal 56K Modem (V.34) modem script, which forces the modem to connect at 33.6 Kbps or lower speeds. This type of connection is more reliable in situations where the phone line quality is questionable.

To use the Apple Internal 56K Modem (V.34) modem script, follow these steps:

1. Open the Modem control panel in the Apple menu.
2. Make sure the "Connect via" pop-up menu is set to Internal Modem.
3. Open the Modem pop-up menu and choose Apple Internal 56K Modem (V.34).
4. If necessary, set the Sound and Dialing options.
5. Close the control panel.
6. Click Save.

You do not have to restart your computer.

Formatting external USB (Universal Serial Bus) hard disk drives - Many USB hard disk drives are DOS-formatted at the factory. You can

use DOS-formatted USB hard disks with your computer, but you will get much better performance if the USB hard disk is formatted as Mac OS Extended or Mac OS Standard format. To reformat the hard disk to Mac OS Extended or Mac OS Standard format, use the formatting utility that came with the USB hard disk. If you do not have a formatting utility, you can change the drive to Mac OS format by following the steps below.

For instructions for reformatting your hard drive, choose Mac Help from the Help menu. Go to the section, "Erasing a disk" and follow the onscreen instructions.

Copying and pasting alert sounds - Long alert sounds require large amounts of memory. If you have difficulty copying and pasting long alert sounds into the Sound control panel, you may need to adjust memory requirements for the control panel. To do this, open the Control Panels folder within the System Folder. Select the Sound control panel. From the File menu, choose Get Info and from the pop-up menu, choose Memory. In the Memory Requirements section, increase the preferred memory size until you are able to copy and paste the alert sound. The amount of memory needed depends on the sound quality of the sound input device you are using.

Adjusting and testing external speakers - The Speaker Setup section of the Sound control panel allows you to adjust the speakers connected to your computer. Use the Speaker Setup panel to select which speakers you want to use and to adjust the relative volume for each speaker. For example, if you have a subwoofer connected to your computer and want to adjust the volume for the subwoofer only, use the slider underneath the subwoofer to change the volume.

You can also test the speakers connected to your computer by clicking Start Test in the Speaker Setup section.

IMPORTANT: You should reduce the overall sound volume for your computer using the Output section of the Sound control panel before testing your speakers, because the test tone can be quite loud.

The computer plays a "white noise" test tone on each speaker, allowing you to adjust the relative volume of that speaker. The "white noise" test tone contains sound for all frequencies and sounds like static.

Playing and recording from audio CDs - Audio CD playback is now done digitally for increased fidelity and use with digital audio peripheral devices. When you play audio CDs, you no longer have to select Internal CD in the Input section of the Sound control panel or the Sound section of the Control Strip. To record from an audio CD, you may need to select Internal CD in the Input section of the Sound control panel or the Sound section of the Control Strip.

Connecting to an Ethernet network - When you connect your PowerBook to an Ethernet network, the computer automatically senses whether it is connected to a 10Base-T network or to a 100Base-T network. Some ports on some network hubs/switches support both speeds. If you're using this type of hub/switch, there may be a delay in establishing a network link. The delay may last for several seconds after you start or restart the PowerBook and a message may appear saying the network is not available or that the network has only just become available. If you don't want a delay, connect your computer to an Ethernet network port that is not auto-sensing (10 or 100 megabits per second (Mbps) only). For more information, contact the manufacturer of the Ethernet hub/switch or your network administrator.

Performance problems using Ethernet - If you experience performance problems on your Ethernet network, check with your network administrator. Your computer performs best when the Ethernet port is set to auto-negotiate.

IMPORTANT: The duplex mode of an Ethernet link to a switch is not detected if the switch's port is not auto-negotiating. If the switch's port is not auto-negotiating, your computer will detect the appropriate speed but default to half-duplex. If the switch's port at the other end of the link is configured for full-duplex, a large number of late events can occur on the link. Set the switch's port to auto-negotiate where possible. If this isn't possible, then set the switch's port to half-duplex. For more information, see the documentation that came with the Ethernet hub.

Connecting your computer directly to an Ethernet switch - If you connect your PowerBook directly to an Ethernet switch, you must disable spanning tree on that port. Otherwise your computer may duplicate the AppleTalk address of another computer on the same network and both network connections may become unreliable.

Using a RAM disk - A RAM disk allows you to use part of the built-in random-access memory (RAM) in your computer as a high-speed storage disk. To set up a RAM disk, use the Memory control panel. For more information, see the topic "Improving performance of disk-intensive programs" in Mac Help.

Note: The contents of a RAM disk are saved on the startup disk when you restart your computer. After the computer restarts, the contents are restored. Large RAM disks may add additional time to shutting down and restarting the computer and may not leave enough room for you to run any applications.

WARNING: You should regularly back up the contents of your RAM disk on another disk. The contents of the RAM disk can be lost if:

- the startup disk is read-only, such as a CD-ROM disc
- the startup disk does not have sufficient space to store the contents of the RAM disk
- the startup disk does not have a valid System Folder
- the computer loses power

Note: Your computer will not save the contents of memory to the hard disk (preserve memory contents on sleep option in the Energy Saver control panel.) when the computer is in sleep if a RAM disk is used.

Using your computer with a NetBoot Server - If you want to use your PowerBook as a NetBoot client, you may need to update the system software on the NetBoot Server. Check the Mac OS X Server Web site at http://www.apple.com/macosx/server or the Apple Support Web site at http://www.apple.com/support for instructions.

Battery indicator icon - If the battery indicator icon in the menu bar has an X through it, make sure to let the internal battery charge for several minutes. If your PowerBook battery has been completely discharged, it may take several minutes of charging for the battery icon to recognize the battery.

Important information about system sleep - Certain system settings may prevent your computer from going to sleep. You may notice that the screen dims, but the sleep indicator light does not pulse. Leaving your computer in this state will cause your battery to become depleted quickly if the power adapter is not plugged in.

The Palm Desktop HotSync function may prevent your computer from going to sleep. To turn off the HotSync function, open Palm Desktop and choose Setup from the HotSync menu. Then click the Disabled button and make sure the "Enable HotSync software at system startup" checkbox is not selected. You will have to turn on HotSync when you want to synchronize with your Palm device.

If the Configure pop-up menu in the TCP/IP control panel is set to Using DHCP Server, your computer may not sleep when your Web browser or e-mail application is open or a file server is mounted on your desktop. Quit these applications and dismount file servers when they are not being used.

To allow your computer to sleep, you must disable FAXstf auto-answering. To do this, open FaxBrowser and choose Settings from the Edit menu. Then choose the FaxModem icon and select Never from the Answer On pop-up menu

When the IrDA method of infrared (IR) communication is selected in the AppleTalk control panel and AppleTalk is on, the computer will not go to sleep automatically.

Many communications programs, such as PPP, Apple Remote Access, and other dial-up programs, monitor the computer's modem port to check for incoming transmissions. This may mean that the computer will not go to sleep automatically (after the interval set in the Energy Saver control panel). Forcing the computer to sleep may result in a lost connection or crash. When your computer is using the battery, you may want to quit a communications program whenever you are not using it to conserve the battery's charge. (See the manual that came with your communications program for more information.)

When using fax software your computer will not completely sleep and the screen will only dim (instead of turn off) when fax software is set to auto answer. To avoid draining your computer battery, plug in the power adapter when waiting to receive a fax.

When the computer is waking from sleep,do not press the DVD-ROM drive button. This will cause unexpected behavior. If this happens close the DVD drive tray.

Using older printers - Printer driver software for some older printers is located in a folder called Additional Printer Drivers, within the CD Extras folder on your software install CD. These extensions are Color SW 1500 (for the Color StyleWriter 1500), Color SW 2500 (for the Color StyleWriter 2500), Color SW Pro (for the Color StyleWriter Pro), CSW 6000 Series (for the Color StyleWriter 6000 series), and ImageWriter.

Starting up from expansion bay devices - If you need to start up from an expansion bay module, insert the module before you start up.

Ejecting a PC Card - To eject a PC Card, drag the card's icon to the Trash and then use the PC Card eject button to eject the card.

Starting up from an external FireWire or USB device - If you start up from an external FireWire or USB hard disk, the disk must be connected and turned on before you turn on the computer.

Inserting an AirPort Card - The Apple AirPort Card is designed to fit only in the internal AirPort Card slot. Do not insert an AirPort Card in your computer's PC Card slot. To use the PC Card slot for AirPort, insert a compatible third-party wireless card.

About Apple DVD Player software - Your computer includes Apple DVD Player software as part of Mac OS 9.0. This version Apple DVD Player is not compatible with the DVD hardware in the Power Macintosh G3, older versions of the PowerBook G3 Series, and Power Mac G4 (PCI graphics) series computers. For the latest information about Apple DVD Player and answers to support questions, go to Apple's Support Web site at http://www.apple.com/support.

Third-party software issues

Graphics problems with games - Some games may exhibit drawing problems because not enough memory is available to load all of the required system components. Use the memory control panel to increase the amount of virtual memory so these components can load. If your virtual memory size is set to the default, increase the size by half the amount of physical memory you have installed. For example, if you have a 64MB system, set the virtual memory size to 96MB.

Using hard disk utilities and disk-locking programs - Some disk utility and disk-locking programs are incompatible with Mac OS Extended format. Before you use a disk utility or disk-locking program, make sure the version you have is compatible with Mac OS Extended format. Check the documentation that came with the program or contact the program's manufacturer.

Using fax software - To allow your computer to sleep, you must disable FAXstf auto-answering. To do this, open FaxBrowser and choose

Settings from the Edit menu. Then choose the FaxModem icon and choose Never from the Answer On pop-up menu.

Note: To avoid draining your computer battery, plug in the power adapter when waiting to receive a fax.

Using the internal modem with third-party software - Some third-party software, such as FAXSTF or Total Access, has different modem selections from the ones in the Modem control panel. Using these selections can slow down your connection speed. To use these programs with your computer's internal modem at its highest speed, make sure you select Apple Internal 56K Modem (V.90) in the Modem control panel.

Using Palm Desktop Software 2.5 - If you make a connection and a sync fails or doesn't complete, set the connection speed to a lower setting. To do this, open HotSync Manager (click the icon next to the Application menu, choose HotSync, and in the pop-up menu, choose Setup). Click the Serial Port Settings tab. In the Local Setup section, select 19200 as the speed.

FWB Hard Disk Toolkit 3.0.2 - FWB Hard Disk Toolkit 3.0.2 is not compatible with this computer. For more information, contact the software publisher.

Setting up your Internet account when the Palm Desktop Software 2.5 is installed - If you installed the Palm Desktop Software 2.5 on your computer and you attempt to set up AOL, there is a conflict and a message may appear saying you have a "port in use" error. You need to disable HotSync to set up your Internet account. To do this, open HotSync Manager (click the icon next to the Application menu, choose HotSync, and in the pop-up menu, choose Setup). If necessary, click the HotSync Controls tab. In the HotSync section, click the Disabled button.

Virtual PC - To run Virtual PC, your computer needs to have more than 64 MB of RAM installed.

Moving Bookmarks and Favorites files before reinstalling Internet Explorer and Netscape Communicator - If you inadvertently delete the Internet Explorer or Netscape Communicator applications, you can reinstall the applications using the software install CD that came with your computer. Before you reinstall Internet Explorer or Netscape Communicator, you must move the file that contains your Internet sites list to a different location, such as the desktop. In Internet Explorer, this file is Favorites.html; in Netscape Communicator, the file is Bookmarks.html. When you reinstall Internet Explorer or Netscape Communicator, the program overwrites these files and any locations or bookmarks that you added or that were preinstalled will be lost.

Hardware compatibility issues

Connecting USB devices while the computer is asleep - If you connect or disconnect a USB device while your computer is in sleep, your computer automatically wakes.

Mounting and disconnecting USB storage devices - To mount or remount a USB storage volume on the desktop, disconnect and then reconnect the device that contains the volume to a USB port on the computer, or to a USB hub attached to your computer. The volume should appear on the desktop in a few seconds. If the device uses removable media, the volume will not appear until the removable media is reinserted into the USB storage device.

Before you disconnect a USB storage device from your computer, close all open windows and quit all open applications that are stored on the USB storage device. If the device has a manual eject drive (you eject the removable media from the device yourself), make sure you eject the removable media first. Drag the device's icon to the Trash, then disconnect the device from your computer.

Using USB devices with software applications - Some applications don't recognize a USB device if the device is plugged in while the application is already open. To use the USB device with that application, quit the application, make sure the device is properly plugged in, then open the application again.

Using ADB dongles - Some applications require an ADB (Apple Desktop Bus) dongle to prevent software piracy. Your computer uses Universal Serial Bus (USB) technology. You may be able to use a USB dongle with these applications. For more information, contact the application's manufacturer.

Using USB-to-serial converters - Some serial devices such as modems, printers, and digital cameras may be used with your PowerBook using a third party USB-to-serial converter adapter. However, not all serial devices may be compatible with an adapter. For more information, contact the adapter manufacturer.

Starting up from a USB hard disk - Your computer may not start up correctly from a USB hard disk if the hard disk drivers are outdated. You may be able to remove the hard disk driver extension from the Extensions folder in the System folder and then start up from the USB disk. Check with the USB hard disk drive manufacturer for updated driver software.

Important information about external monitors - When connecting an Apple Studio Display monitor with a USB cable to your computer, make sure you connect the monitor's USB cable to a USB port on the back of the computer. The AppleVision software requires this connection.

If you have an older AppleVision or Apple Studio Display monitor that has an ADB cable in addition to the monitor cable, you can't attach the ADB cable to your computer. With older computers, the ADB cable allows you to make automatic software adjustments to the screen image. To make screen adjustments without the ADB cable attached, use the external controls on the monitor. For more information, see the documentation that came with the monitor.

Connecting a monitor that uses a DB-15 connector - To connect an older monitor that has a two-row DB-15 connector, use a Mac-to-VGA adapter to connect the monitor to the three-row VGA monitor port on the computer. For more information, see the documentation that came with

your computer.

Some Mac-to-VGA adapters don't let the monitor identify correctly itself to the computer. Incorrect screen resolutions and timings may appear as recommended settings in the Monitors control panel and the Monitor Resolution settings in the Control Strip.

To view all the screen resolutions and timings available: 1 Open the Apple menu, choose Control Panels, and choose Monitors. 2 In the Resolution section, choose All from the Show popup menu.

Using a digital video (DV) camcorder - Some DV camcorders may not be recognized immediately when you connect them to one of your computer's FireWire ports. If your computer does not recognize the DV camcorder, try turning the camcorder off and then on again to establish a connection. If you continue to have problems, contact the manufacturer of the DV camcorder.

Documentation changes

Password Security control panel - The Password Security control panel mentioned in Mac Help was designed to work with older PowerBook computers and is not installed on your PowerBook.

Apple Video Player references in Mac Help - The Apple Video Player application mentioned in Mac Help is used with older Macintosh computers that have video input capabilities. It is not installed on your PowerBook.

Published Date: Feb 20, 2012

PowerBook (FireWire): Ensuring Battery Level Indicator Accuracy

This article describes how to ensure the battery level indicator in the control strip is accurate on the PowerBook G3 Series (Bronze keyboard), iBook, and PowerBook (FireWire).
This article has been archived and is no longer updated by Apple.
To ensure the indication of remaining battery life is as accurate as possible, the battery should be fully discharged in your computer and then fully recharged. Simply use the PowerBook without the AC power connected until it shuts itself down, then plug in AC power and recharge the battery.

If this does not work then you may need to reset the power manager. Refer to Article 14449, "**PowerBook and iBook: Resetting Power Manager**".

For the PowerBook G3 Series (family number M4753 or M5343) or the iBook (family number M2453), refer to Article 60655 "**Battery Reset 2.0: Read Me**".

Published Date: Feb 20, 2012

Gigabit Ethernet: A Brief Description

This article briefly describes gigabit Ethernet as implemented by Apple Computer on several computer models.
This article has been archived and is no longer updated by Apple.

What is it?

Gigabit Ethernet is a standard developed by the Gigabit Ethernet Alliance, and defined by the IEEE 802.3 committee. The aim of this standard is to utilize existing local area network infrastructure to achieve up to 1 gigabit per second (1 Gbps) transfer rates. This is why gigabit Ethernet utilizes Category 5 or better unshielded twisted pair cabling (UTP), and the RJ-45 connector that is used in 10/100 megabits per second (Mbps) networks.

To achieve maximum transfer rates from gigabit Ethernet capable hardware, you also need to install gigabit Ethernet compliant switches, hubs, and routers. Otherwise, the Power Mac G4 (Gigabit Ethernet) computer switches to a 10 Mbps or 100 Mbps transfer rate depending upon the network hardware that is used.

To utilize gigabit Ethernet, you must use an Ethernet cable with all eight wires (four pairs) present. If you use an inexpensive two pairs-wired cable, the maximum connection speed can only be 100 Mbps.

How to determine connection speed

Open Apple System Profiler by choosing it from the Apple menu. Click the disclosure triangle next to "Network overview" to reveal speed (10 Mbps, 100 Mbps, or 1 Gbps) and duplex information (half- or full-duplex).

Using a crossover Ethernet cable

Connecting any gigabit Ethernet capable computer to another computer via Ethernet can be accomplished with a standard four pair category 5 or better Ethernet cable. No crossover cable is necessary.

Models with Gigabit Ethernet

- Power Mac G4 (Gigabit Ethernet)
- Power Mac G4 (Digital Audio)
- Power Mac G4 (QuickSilver)
- Power Mac G4 (QuickSilver 2002)

- PowerBook G4 (Gigabit Ethernet)

Published Date: Feb 20, 2012

AirPort: Reason for 169.254.x.x IP Address

The following article discusses the source of the 169.254.x.x address seen on AirPort clients attempting to connect to the AirPort Base Station. This article has been archived and is no longer updated by Apple.
The 169.254.x.x address is typically seen on computers set to connect to the network via Ethernet or AirPort using a DHCP server. If a DHCP (Dynamic Host Configuration Protocol) server is not found by the computer, a valid and unique address in the range of 169.254.0.0 to 169.254.254.255 inclusive and a subnet mask of 255.255.0.0 will be assigned. This feature has been built-in to every version of Open Transport since Mac OS 8.5. It is also built-in to all Microsoft Windows-based computers using Windows 95, Windows 98, or Windows 2000.

If you have been unsuccessful in trying to connect your AirPort equipped-computer to an AirPort Base Station, then you probably have seen this 169.254.x.x address. The most common reason for getting it is not associating with a base station before trying to use an application that uses TCP/IP such as a Web browser.

It may also indicate that the IP address of the base station is on a different subnet than the connecting computer. In this situation, you will need to manually assign the client computer an address that is on the same subnet before attempting to access the base station.

Remember that if you have the base station set to bridge to an existing local area network (LAN) providing IP addresses from a DHCP server, a wireless client can still obtain a 169.254.x.x address if a server is not found.

Why the 169.254.x.x address?

This 169.254.x.x address, although not an officially private address (as 10.0.0.0 would be), poses little if any chance for conflict with other addresses on the Internet. Open Transport will choose a number randomly in a range of 169.254.0.0 to 169.254.254.255 - a range of over 64,000 possible addresses.

The result of this auto configuration of addresses allows communication automatically with other 169.254.0.0 network addresses on the same LAN without a DHCP server. In other words, Macintosh and Windows-based computers with their default networking configurations installed can communicate with each other on the same LAN automatically.

The auto-configuration of IP addresses is beneficial for workgroups without a professional network administrator, as well as any LAN when its DHCP server is not available or when it has simply stopped working.

It is also very useful when using AirPort equipped-computers on an ad-hoc or computer-to-computer network.

Additional information is available in article 58619: "**AirPort Base Station: Reason for 192.42.249.12 IP Address**".

Note: Wireless Internet access requires an AirPort Card, AirPort Base Station, and an Internet service provider, for which fees may apply. Some ISPs are not compatible with AirPort. America Online (AOL) works with AirPort software version 2.0 or later. For more information on AOL compatibility, see technical document 106591: "**AirPort: How to Use with AOL**." Range may vary with site conditions.

Published Date: Feb 20, 2012

AirPort Base Station (Graphite): Reason for 192.42.249.12 IP Address

The following article discusses the source of the 192.42.249.12 address seen on the AirPort Base Station (Graphite).
This article has been archived and is no longer updated by Apple.
192.42.249.12 is the default address for a new base station. It is also the address assigned after a soft reset or after updating the software on the Base Station.

Note: The 192.42.249.13 address will be seen after performing a hard reset and before uploading the software into the base station.

You will also see this 192.42.249.12 when the base station is not assigned a static IP address and it is unable to receive one dynamically from a DHCP server or a dial-up Internet service provider.

Why Not a 169.254.x.x Address?

First, the base station was not equipped with the algorithm to generate such an address. Secondly, it was not designed to behave like a Macintosh computer in this manner. When the AirPort Base Station is started up, it is preset to try to obtain an IP address from a DHCP server. If no DHCP server responds, the base station will default back to the 192.42.249.12 address.

Even though the AirPort Base Station is initially setup to look for a DHCP server, it will default to 192.42.249.12 address if one cannot be found). The 192.42.249.12 address is a clue that your base station does not see a DHCP server on your network. It would be a good idea to look for any basic connectivity issues at this point, such as bad or improper cabling. If you're not even using DHCP or attempting to use a dial-up connection, this means that you have not programmed your base station and need to run the AirPort Setup Assistant.

Why Then, the 192.42.249.12 Address?

This 192.42.249.12 address is a globally valid IP address arbitrarily assigned to the base station by Apple.

How to Access a Base Station with a 192.42.249.12 address?

If you are having difficulties using the AirPort Admin Utility to reconfigure an AirPort Base Station with the 192.42.249.12 address, you have two alternate methods to access it.

These methods require that you make changes to the TCP/IP control panel or change the IP address of the computer trying to access the Base Station.

Method 1: Change the method of connection in the TCP/IP control panel.

1. Open the TCP/IP control panel and change the configuration from AirPort to PPP.
2. Close and save the setting in the TCP/IP control panel.
3. Open the TCP/IP control panel and change it back to AirPort and Using DHCP. The fields for IP Address, Subnet mask; and Router Address will say "< will be supplied by server >".
4. Close and save the settings.

Method 2: Use the TCP/IP control panel to change the IP address on your computer to 192.42.249.14. This will force your computer on to the same subnet as that of the base station.

For additional information, refer to article 58618: "**AirPort: Reason for 169.254.xxx.xxx IP Address**".

Note: Wireless Internet access requires an AirPort Card, AirPort Base Station, and an Internet service provider, for which fees may apply. Some ISPs are not compatible with AirPort. America Online (AOL) works with AirPort software version 2.0 or later. For more information on AOL compatibility, see technical document 106591: "**AirPort: How to Use with AOL**." Range may vary with site conditions.

Published Date: Feb 20, 2012

Using your PowerBook as a DVD player on an external monitor or TV

If your PowerBook has a DVD-capable optical drive, you can use your PowerBook as a DVD player to watch movies on an external monitor or television.

This article has been archived and is no longer updated by Apple.

Basic Steps

1. Shut down the PowerBook and turn off the external monitor or TV.
2. Connect a video cable from the video output port on your PowerBook to the video input port on the monitor or TV. You'll have to find the right combination of ports on the computer and monitor or TV. For example, if your computer has an S-video output port and your TV has an S-video input, you could use that connection for the picture, then connect an audio cable from the sound output port on your computer to the sound input port on the TV.
3. Turn on the monitor or TV, then start up your PowerBook. You'll probably also have to switch to the video input on your TV once it's on.
4. Make sure you can see the computer's desktop and menu bar on the monitor or TV. If not, check settings in Displays preferences (Mac OS X) or the Monitors control panel (Mac OS 8 and 9). Depending on your PowerBook model, you might have to reduce the number of colors on the screen to give enough memory to the DVD Player. Choose Thousands instead of Millions of colors.
5. Deselect the Video Mirroring if it's selected. You can't watch a DVD on the built-in display and an external display or TV at the same time.
6. Open DVD Player and insert a DVD-Video disc.

Troubleshooting playback on an external monitor

1. Make sure all the connections and cabling are correct and that you can see the Macintosh desktop and menu bar on the external monitor.
2. Make sure the Video Mirroring option is deselected. You can't watch a DVD on the built-in display and an external display or TV at the same time.
3. Make the external monitor the primary display by dragging the menu bar to it in Displays preferences (Mac OS X) or the Monitors control panel (Mac OS 8 and 9), as shown here.

4. If you see the error message, "The Apple DVD Player does not support the video card or settings of the main screen.", shown here, make sure that both the internal and the external video settings are set at thousands of colors and 1024 x 768.

Troubleshooting playback on a TV

1. Follow the steps for troubleshooting an external monitor above.
2. Because the quality of the picture on a TV is not as sharp as on the PowerBook's built-in display, it might be pretty hard to see small Mac OS interface items on the TV. It can help to set the TV's resolution to 640 x 480 (NTSC) or 640 x 480 (PAL) in Displays preferences (Mac OS X) or the Monitors control panel (Mac OS 8 and 9).

   Tip: Only NTSC and PAL video output formats are available. If you have a SECAM TV, chances are the PAL signal will work just fine. Most modern TVs that work with SECAM also work with PAL. If your TV only accepts a SECAM signal, select PAL as the output and put a PAL to SECAM converter between the connection from the PowerBook to the TV.

3. You may wish to do your setup tasks using the PowerBook's built-in display as the one with the menu bar, then drag the menu bar to the TV in Displays preferences (Mac OS X) or the Monitors control panel (Mac OS 8 and 9) just before you plan to watch the movie.
4. You can use the following keyboard shortcuts to close windows and watch the movie:
   - Command-W to close the Display preferences or Monitors control panel window.
   - Command-Option-P to Present Video in Viewer (Mac OS 9) or Command-0 (zero) in Mac OS X.
   - Spacebar to start and pause the movie.

- The Controller hides itself a few minutes into the movie.
- Press F3 and F4 to increase and decrease the volume.
- Command-Q to quit Apple DVD Player when you are finished watching the movie.

For more help with DVD Player, choose DVD Player Help from the Help menu.

Related documents

31020: DVD: Causes of Skipping/Stuttering
61330: Mac OS X: How to Set up Multiple Displays to Show the Same Image (Mirroring)
13074: Video Definitions: NTSC, PAL, SECAM
Published Date: Feb 20, 2012

iBook: Does Not Support Power-on From External Keyboard

Does the iBook support soft power-on from an external USB keyboard?
This article has been archived and is no longer updated by Apple.
No, the iBook cannot be powered on from an external USB keyboard. Pressing the power button on the keyboard will have no effect on the iBook.

If the iBook is in sleep mode however, pressing the power button will awaken the computer.

Published Date: Feb 20, 2012

Final Cut Pro: Preventing Audio Distortion

This article discusses common causes for audio distortion within movies created or edited in Final Cut Pro and how to avoid them.
This article has been archived and is no longer updated by Apple.
When audible audio distortion (crackling, popping) occurs while using Final Cut Pro, it is usually due to:

- Capturing audio at a sample rate other than the one it was initially recorded with (when importing clips from DV)
- Mixing audio clips with different sample rates together on playback

When distortion occurs outside of Final Cut Pro (for example, playing back a tape that was output from Final Cut Pro), it is usually because of too much dynamic range in the mix.

Distortion when Recording

The most frequent cause of audio distortion heard while recording clips in Final Cut Pro stems from the captured audio sample rate not matching the sample rate initially recorded onto a DV Tape. For example, if you shot footage with your camera set to record at 48 kHz, and you have the sound recording sample rate set to 32 kHz, you'll hear distortion. This distortion will be recorded into the clip.

It's easy to remember which Bit Rates correspond to which Sample Rates, and the two must always correspond:

12 bit = 32 kHz

16 bit = 48 kHz

Note: This can also be a cause of lost audio sync. For more information on this subject, see article 58640: "**Final Cut Pro: Dropped Frames and Loss of Audio Sync**".

Figure 1 The Sample settings of the Sound panel, showing the available sample rates

This setting can easily be changed. To do so:

1. Open the Capture Preferences tab.
2. Click Audio.
3. With the Sound panel open, set the upper left pop-up menu to Sample.
4. Select the appropriate sample rate from the Rate pop-up menu.

Distortion on Playback

The most frequent reason for audio distortion when playing back a mix in Final Cut Pro is the combination of too many audio clips with different sample rates. This distortion will take the form of crackling, popping, and sometimes even skipping in the audio.

Final Cut Pro, when faced with clips of varying sample rates, will resample the audio in real time. One result of this is to reduce the number of tracks that can be mixed in real time as specified in the General Preferences tab.

The other result of varying sample rates is distortion. For example, a sequence with 32 kHz audio from a consumer camcorder mixed with 48 kHz audio from a Pro camcorder and 44.1 kHz audio from a CD transfer is virtually guaranteed to create audible distortion. One solution to this would be to redub your 32 kHz source material, rerecording the audio at 48 kHz. Another solution would be to resample all 32 kHz audio using dedicated audio software, such as Bias Peak.

You should note that 44.1 kHz and 48 kHz audio generally work fine together without distortion. This is because the sample rates are so close together that the resampling is generally inaudible. With this in mind, it is important to know that Final Cut Pro is better at upsampling then it is at downsampling. For this reason, you should have your Sequence Settings default set to 48 kHz when mixing the two.

In general, you should record DV source material at 48 kHz whenever possible. Most DV cameras provide a menu setting to toggle between 32 kHz and 48 kHz. See your camera manual for more information.

Distortion Outside of Final Cut Pro

Another potential problem is when you output a sequence to tape, and when playing back the tape you notice audible distortion not present when the audio was playing out of the computer. This is generally because of too much dynamic range in the mix.

Dynamic range refers to the range from the softest sound to the loudest sound in a given sequence of clips. If this range is too great, and you set the recording input level of your VTR to record the soft parts at an acceptable volume, the loud parts will distort. Conversely, setting the recording input levels of your VTR to reflect the loud part will cause the soft parts to be too silent to hear. This is especially problematic if you're planning on sending your output tape to a dubbing facility. When making hundreds of dubs from a tape, engineers generally set the audio level of all the VTR's in the facility to match the level of the audio tone at the head of your master tape (Assuming you output to tape with bars and tone. If your audio varies widely from this benchmark, you can be sure that there will be audio problems.

The solution to this is to mix the audio levels of the different tracks in your sequence to bring the audio levels of the softer clips up and the louder clips down, in an effort to make the levels of all the clips in your sequence acceptable relative to your 0 dB reference tone. This is done by using the Clip Overlays. Clip Overlays are enabled by clicking Clip Overlays at the bottom of the Timeline window.

Figure 2 The Clip Overlays button

Once enabled, a thin red line indicates the volume of an audio clip relative to the others in a sequence.

Figure 3 Clip Overlays are the red lines in the center of the audio clips

The simplest form of mixing is to set the level up or down for the duration of the entire clip by clicking and dragging this red line. A small yellow window will indicate the new level of the clip in + or - decibels (dB). (For a hint on how to do this more precisely, refer to article 58632: "**Final Cut Pro: Using the Command Key Modifier to Make Subtle Keyframe Changes**")

Figure 4 Bringing down the audio level of the "Mahaiy" clip to -15 decibels

In this way, the relative levels of all audio clips in your sequence can be brought into an acceptable range for output to tape. More precise mixing can be achieved by setting keyframes with the Pen tool.

Use a Mixer to Set Your Audio Levels

Since it is difficult at best to accurately gauge the loudness of your mix by ear, it is a good idea to use the VU meters of an external mixing board to help you set your levels. In order for this to be effective, first play back the tone you placed at the head of your edit and adjust the level of your mixer such that the VU meter reads 0 dB Now, whenever your mix is too hot, you will have an accurate visual indicator warning you of the problem. Do not rely solely on your meter readings while mixing your tracks. Proper mixing requires careful attention to both the meter levels and to the sound coming out of your computer.

Note: It is a good idea to mix using high quality headphones. Inexpensive speakers, the physical space of a room, and the ambient noise in any home (such as refrigerators, traffic, purring cats) can all inadvertently alter the quality of what you are hearing, resulting in your producing a mix that may be louder than necessary. Wearing headphones while mixing minimizes this effect, and allows you to make better decisions about setting EQ and levels.

Using the Compressor to Reduce Dynamic Range

Other common sources of unwanted dynamic range that are not so easily fixed are music and voice-over. In both cases, the volume from one moment to the next can vary widely, but unfortunately any attempt to correct this by mixing will result in an audible change in volume, either in the background of the music or in the room tone of the voice-over. Either way, it is unacceptable to a high quality mix.

Fortunately, Final Cut Pro gives users a solution to this dilemma in the form of the Compressor/Limiter audio filter. This filter adjusts the dynamic range of the entire clip so that the loudest part is compressed to within a user selectable range of the quietest part of the clip.

Figure 5 The Compressor/Limiter filter, located in the Audio Filters folder of the Effects Pallette

To use it, simply:

1. Apply the filter to the audio clip in question via either the Effects menu, or drag and drop from the Effects bin in the Browser.
2. Double-click the audio sequence clip .

3. Select the Filters tab in the Viewer.

Application of this filter is largely a trial and error process. The Threshold parameter defines how loud the loudest portion of the clip can be before compression is applied, and is the first setting you will adjust. Ratio affects how much compression is applied. Resist the temptation to overdo this parameter; a little goes a long way, and too much will result in further distortion. Attack time defines how quickly this filter reacts to changes in volume, and release time defines how slowly it lets go (the defaults are generally fine, but you should experiment).

Figure 6 The Compressor/Limiter filter's parameters

By setting levels, mixing, and compression, you can create a professional sounding mix that will output to tape clearly and cleanly.

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The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"

Published Date: Feb 20, 2012

Final Cut Pro: Using the Command Key Modifier to Make Subtle Keyframe Changes

This article contains a tip on how to make smaller adjustments to the values of audio levels, keyframes, or graphical editing adjustments (such using the Ripple or Roll edit tools) by using the Command Key Modifier.
This article has been archived and is no longer updated by Apple.
When adjusting audio levels, keyframe values, or edit points simply clicking and dragging on the appropriate graphical element will make a change. The value of the selected parameter will change according to how far the mouse is dragged. In most cases the default 1 to 1 sensitivity of this change will be fine, but this can be modified.

Figure 1 The Command Key

In cases where you require a more subtle adjustment than the default sensitivity to mouse movement will allow, pressing the Command modifier key while clicking and dragging on a graphical control will result in much smaller changes. This modifier key will work with any click and drag parameter change. See the examples below:

Figure 2 Performing a Roll edit with the Command key modifier. Notice how the edit point lags behind the cursor, indicating slower movement.

Figure 3 Bringing down the audio level of the "Mahaiy" clip to -15 dB by clicking and dragging on the red audio Clip Overlay

Figure 4 Adjusting the Keyframe of a Video Filter by clicking and dragging on a Keyframe

Published Date: Feb 20, 2012

Final Cut Pro: Field Dominance Discussion

This article discusses field dominance and explains why it is important to have the correct field dominance applied in your Sequence Settings.
This article has been archived and is no longer updated by Apple.
NTSC and PAL are both interlaced video formats, as opposed to computer video and some High-Definition video formats, which are capable of using progressive scanning. All video displays, whether analog or digital, work by breaking a single frame of video down into lines of horizontal resolution running across the screen. When we say that a computer uses progressive scanning, we are saying that these lines are drawn one at a time from the top of the screen down to the bottom, in order.

Figure 1 Horizontal Lines of Resolution on a Computer or High-Definition Monitor

NTSC and PAL video is different from computer video and some High-Definition video formats. NTSC runs at 29.97 frames per second (fps), though it is referred to as 30 fps for the sake of discussion. PAL video runs at 25 fps. However, when you record footage with your camcorder, it does not not capture each whole video frame at once. Instead, each video frame is broken down into two fields, with each field containing half the total lines of resolution in the frame.

Figure 2 Horizontal Lines of Resolution on a Standard Definition Television Monitor

The first field is recorded, then the second, and these are laid down to tape in a linear fashion. Both fields are considered to be one frame, but it is important to remember that motion will occur from one field to the next, making it crucial that each field play back in the correct order. A television monitor then displays each recorded frame in two passes: It draws every other scan line on its way down (field 1), and when it's done, it goes back to the top 1/60th or 1/50th of a second later and fills in the missing lines to draw field 2 and complete one whole video frame.

Video capture cards deal with interlacing in one of two different ways. You will hear the terms Upper, or Field 2 Dominant, and Lower, or Field 1 Dominant. Field Dominance refers to how the video fields are recorded into a file when going from the analog world of tape to your hard drive. If you remember that video fields come one after another temporally, as if we were playing 60 frames per second, it becomes a little easier to understand.

You may ask, how do we determine which is Field 1 and which is Field 2? While this point is somewhat academic, if you put your monitor into underscan mode (where you see the entire video picture surrounded by a black frame around the edge) a Field 1 can be seen as the field that begins with the first full line of video on the screen and includes every other line going on down to the bottom. Field 2 is the field beginning with the little half line of video way at the top of the screen, (which is in fact located above the first line of Field 1) and includes all the other alternating lines going on down to the bottom. Even though the first line at the top of the monitor is the half-line, it's really a part of field 2.

Figure 3 Distinguishing Between Field 1 and Field 2 on a Standard Definition Monitor

Because there is motion between one field and another, and because different capture cards handle interlacing differently, it's important to render your digital video with the field dominance expected by your hardware. In Final Cut Pro, the options are referred to as Upper (equivalent to Field 2) or Lower (equivalent to Field 1) Field Dominant. Generally, Upper Field First is used by 640x480 systems, while Lower Field First is most common in professional 720x486 and DV 720x480 systems.

DV-NTSC, DV-Pal, and Targa 720x486 NTCS are all Lower Field Dominant. If you're unsure what the field dominance is with your particular hardware, refer to the manual that came with your capture card to find which dominance your Sequence Settings should use.

Figure 4 Changing Field Dominance in the Sequence Settings

Changing the Field Dominance setting is required only when either the video hardware setup is changed, or when rendering a Quicktime movie which is intended for Web or CD playback. Only full frame broadcast video uses interlaced fields, so if you are outputing a QuickTime movie for multimedia use, interlacing should be set to None.

Unfortunately, extreme movement in recorded video will result in a variance between fields that appears as a tearing or rippling in the still image. This tearing will appear also when interlaced material is played back on a computer's progressive scan monitor.

Figure 5 An NTSC Still Frame Before (Left) and After De-interlacing.

Notice the presence of thin lines due to excess movement between fields on the image to the left.

To eliminate these artifacts, especially when video is being rendered as a QuickTime movie for multimedia use, Final Cut Pro includes a De-Interlace filter in the Effects tab of the Browser.

Figure 6 The De-Interlace Filter Located in the Video Folder of the Effects Tab

When clips with extreme motion are rendering with excess artifacts due to interlacing, this filter may be applied to eliminate the problem. The De-Interlace filter strips out one field of video, and interpolates the remaining field to make up the difference. This can result in a slight softening of the image, but this is preferable to the artifact that it removes.

Still frames exported to Photoshop may have the same artifacts. A similarly named De-Interlace filter extists for the same purpose.

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Published Date: Feb 20, 2012

Final Cut Pro: Viewing DV Video out of an NTSC or PAL Monitor

When using Final Cut Pro to edit digital video (DV) material, users who want to watch their clips using a video monitor must convert the signal coming out of their Firewire port into either NTSC or PAL video. This article describes how to hook up a video monitor to your computer.
This article has been archived and is no longer updated by Apple.
Final Cut Pro sends video playing off of the timeline to the Firewire port when the following conditions are met:

- The clips you are trying to view must be compressed as DV. (Check Item Properties under the Edit menu to see if the compressor is DV NTSC or PAL)
- View External Video Using Firewire is enabled in the General Preferences tab
- The View>External Video submenu is set to All Frames

To be viewed on an external video monitor, the Firewire output must be converted into a standard NTSC or PAL Composite or S-Video signal. This is accomplished by using a DV camcorder, VTR, or converter box (such as the DA1 from Sony) as an intermediate link between your computer and your video monitor.

When viewing video with the External Video option enabled, the computer's built-in speaker is disabled and the audio will play out of the DV device used for conversion from FireWire. You should also know that this external audio is synchronized specifically to the external video coming out of the same converter, and that there is a delay in the sync between video displayed on the computer monitor and audio coming out of a DV converter box.

Connect your equipment in the following manner:

1. Connect your DV camcorder or VTR to your Apple Macintosh via the Firewire port (also known as the iLink port on some camcorders)

2. Connect your NTSC or PAL video monitor to the composite or S-Video out jack of the camcorder or VTR, and connect the stereo audio output of this same camcorder or VTR to the external speakers or headphones you are planning to listen to while editing.

Figure 1 Connecting a Camcorder to FireWire and a Monitor

3. In the General Preferences tab, go to the View External Video Using pop-up menu and choose Apple FireWire NTSC or PAL as appropriate.

Note: If that option is not listed then the computer is not recognizing the DV device. Double check that your DV device is turned on, that the input is set to DV, and that the Firewire cables are firmly connected.

Figure 2 The General Preferences Tab

Figure 3 Selection Choices for External Video Viewing

Users of PAL DV equipment will want to verify that this menu is set to Apple FireWire PAL

4. Select All Frames from the External Video sub-menu in the View menu.

Figure 4 External Video Selection

Selecting Single Frames prevents video from being output over FireWire until the user presses either F15 or Shift F12.

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Published Date: Feb 20, 2012

Final Cut Pro: Properly Configuring the Sequence Settings

You may find that you are unable to play clips from the timeline without rendering, even though it may be a cuts only edit with no filters or audio mixing applied. This is because the Sequence Settings are incorrectly set. This article discusses how to correct this in the Sequence Settings Panel. This article has been archived and is no longer updated by Apple.
A mistake that new users frequently make is to load a number of video clips into a new sequence which use a codec, frame rate, or frame size that does not match the preset Sequence Settings. For example, if you install Final Cut Pro and select DV as the default setting, then try to go through the tutorial using the supplied clips, you will find that Final Cut Pro will want to render every clip in the sequence before playing from the timeline. This is because the clips in the tutorial are compressed using the Software Preset, while in this situation the Sequence Settings by default are set to DV-NTSC.

The Sequence Settings define which clips will play from the Timeline without rendering. Since you can mix and match virtually any sort of Quicktime video clip in any sequence you choose, (for example, Animation clips with DV clips) it is important to tell Final Cut Pro which clips do not need rendering and which clips do.

You can find out if your clip settings do not match your sequence settings in one of two ways :

1. Select that clip in the Browser and choose Clip from the Analyze Movie sub-menu under the Tools menu shown in Figure 1.

Figure 1 The Tools>Analyze Movie>Clip menu

2. Use the contextual menu in the Browser (Control+click) to select the Item Properties command shown in Figure 2.

Figure 2 The Browser contextual menu showing the Item Properties command

Figure 3 The resulting Item Properties window. Properties used in the Sequence Settings box are highlighted in red.

If the clip settings do not match the currently applied Sequence Settings, then you need only open the Sequence Settings panel, select the preset that matches the type of video material you will be editing from the lower left-hand pop-up menu, and press the Load Preset button.

Figure 4 Selecting the Software Preset in order to go through the Tutorial

If you wish to edit using custom material, perhaps with a different frame size or Quicktime codec, you can easily create a new preset by following these steps:

1. Open Sequence Settings from the Sequence menu.

2. Set the Video Codec, Audio Sample Rate, Frame Size, Field Dominance, and Pixel Aspect Ratio that match those of your video clips.

3. Click the Save as New Preset button.

Figure 5 The Save as New Preset button

4. Give your new preset a name and click Save.

The Sequence Settings box will close. To actually use this new setting, you must reopen the Sequence Settings box, select the new setting from the lower left-hand pop-up menu, and click the Load Preset button.

Note: The timebase can not be changed once a sequence has been created. To change the timebase, you must first delete all sequences currently in the browser.

Published Date: Feb 20, 2012

USB Enabled Macintosh: Troubleshooting Sleep Issues

This article explains how to determine whether a sleep issue is caused by a USB conflict. USB-equipped Macintosh computers may encounter a gray screen when waking from sleep or a "Finder has unexpectedly quit" error when going to sleep in association with certain USB device configurations.

If the computer's screen is black and not gray on wake from sleep, this may be a separate issue for which you should contact Apple Technical Support or an Apple Authorized Service Provider.

This article has been archived and is no longer updated by Apple.
Troubleshooting a sleep issue may necessitate hardware resets of your computer if it fails to respond to keyboard or mouse input. If you are not familiar with the hardware reset procedure for your computer, consult the Emergency Troubleshooting Handbook that was included with your computer.

Steps to isolate the cause of a USB-sleep issue:

1. Verify normal hardware function

To verify that your Macintosh hardware is working normally, disconnect all non-Apple devices, set the Extensions Manager to the Mac OS All extension set, restart the computer and then test sleep behavior. If the computer wakes and sleeps normally, proceed to the next step. If the computer does not sleep and wake properly, reset your PRAM and restart using the Mac OS Software Install or Restore CD that was included with your computer. For further information on resetting PRAM, see "Macintosh: How to Reset PRAM and NVRAM".

Starting up from a CD is achieved by holding down the "c" key during the startup process. A unique desktop pattern containing images of a CD-ROM disc verifies that you have successfully started up from CD. If the hardware functions normally when started up from the CD, this may indicate your system software has become unusable. At this point, consider a clean installation of the Mac OS software. See "Mac OS 8.5, Mac OS 9: Performing a Clean Installation" and 30691, "Mac OS: When and Why to Perform a Clean Installation" for information about clean installations and how to perform them.

If your Macintosh hardware continues to malfunction while started up from CD, you may contact Apple Technical Support or an Apple Authorized Service Provider.

2. Extensions troubleshooting

The first step is to eliminate third-party extension conflicts. For detailed information on using the Extensions Manager, refer to "Mac OS: Extensions Troubleshooting/Extensions Manager Features".

If you removed a folder named Multiprocessing from the Extensions folder, that may be the cause of the sleep issue. For more information, see "Mac OS: Do Not Remove Multiprocessing Folder".

With all added USB devices attached, restart your Macintosh using the Mac OS All extension set. Put the computer to sleep and wake it up a minimum of three times to verify correct operation. If the issue does not persist in this state, then a third-party extension conflict is the cause of the sleep issue. Once you isolate the faulty extension, you may seek an update of that software from the third-party vendor or seek an alternative solution, such as creating different extension sets. If the sleep issue persists when the computer has been started up with the Mac OS All extension set, then continue to the next step.

3. Eliminate conflict with Input Sprockets

Mac OS 9 contains an extension named "InputSprocket Extension." Some third-party USB devices may conflict with this extension. You may determine this by using the Extensions Manager, as in step 1 above. Duplicate the Mac OS All set, name the new set "test set" and disable the InputSprocket Extension. Restart the computer after connecting the third-party USB device that you are testing.

Versions of the Mac OS prior to Mac OS 9 may have a set of Input Sprocket extensions in place of the unified extension. Under the older system, some conflicts may be resolved by disabling individual device extensions. Any Input Sprocket extension may be identified by the unique yellow gear in its icon.

Input Sprockets provide support for USB game controllers. They should not be confused with SoundSprocket or DrawSprocket, which use the same yellow gear icon. If this extension is in conflict with your USB device and you do not use a game controller, disable this extension. Otherwise, create a new extension set within the Extensions Manager with Input Sprockets active.

4. Direct connection versus hub connection

There are two ways to connect a USB device to your USB-equipped Macintosh: directly to a port on your Macintosh computer, or to one of the ports on a USB hub. Apple USB keyboards contain a built-in USB hub, with one port on either side of the keyboard, most frequently used for connecting the Apple USB Mouse. A wide variety of third-party USB hubs are also available. If the issue still has not been isolated, try connecting the affected USB device directly to the logic board and alternatively to the keyboard. In some cases, the behavior may occur only with one of the two connections.

If this process has not isolated the USB-sleep issue in question, you may have a USB device that is not Macintosh compatible, or that requires updated drivers from the manufacturer. If you believe that the USB device in question is Macintosh compatible and has up-to-date software, you should verify that information with the manufacturer, then contact Apple Support.

Published Date: Feb 20, 2012

Mac OS X: Do Not Connect USB Printer to Apple Pro Keyboard

For best results, connect your USB printer directly to your computer, or to a compatible USB hub instead of to the Apple Pro Keyboard.
This article has been archived and is no longer updated by Apple.

Symptom

Connecting a printer to the built-in USB port of an Apple Pro Keyboard may generate an alert message or result in the printer not working correctly.

Solution

Unplug the printer from the keyboard, and connect it to one of the computer's USB ports or a compatible USB hub.

For related information, see technical document 106714, "**Mac OS X: How to Troubleshoot Printing Issues**".
Published Date: Feb 20, 2012

Apple Pro Keyboard: Devices Connected to Hub May Not Work

Some USB (Universal Serial Bus) devices may not work as expected when connected to an Apple Pro Keyboard's USB hub. The computer may also experience System and other errors when a USB device is connected to an Apple Pro Keyboard's hub.
This article has been archived and is no longer updated by Apple.

Symptom

- A USB device does not work as expected when connected to an Apple Pro Keyboard's USB hub, particularly if it draws more power than the hub provides.
- The computer experiences System or other errors when a USB device is connected to an Apple Pro Keyboard's hub.

Solution

Unplug the USB device from the keyboard's hub, and plug it into one of the USB ports on your computer or display.

Notes:

1. The Apple USB keyboard acts as a bus-powered hub. Under the USB Specification you cannot connect two bus-powered hubs together because there won't be enough power for the second hub. See article 43005: "**USB: Hub Description" for further information.**"

2. Apple USB Speakers must be plugged into one of the USB ports on your computer or display because the Apple Pro Keyboard does not provide enough power to make them work.

Published Date: Feb 20, 2012

What to do if an optical mouse pointer moves slowly or doesn‘t move

Learn what the optimal conditions are for optical mice.
This article has been archived and is no longer updated by Apple.
Apple Pro Mouse, Apple Wireless Mouse, and Apple Pro Mouse (2003) are all optical mice. These mice detect movement using an optical sensor on the bottom instead of a ball. An optical sensor needs a surface that has some texture to work effectively. This is because changes in surface texture provide reference points that the optical sensor uses to detect movement, which is translated to pointer movement on the screen.

- Check the Mouse Tracking setting in the Mouse control panel. For more information see article 58651 "**Apple Pro Mouse: Optimal Setting in Mouse Control Panel**".
- Make sure the mouse is on a textured surface such as a table top, or a mouse pad that is a solid color.

The Apple Pro mouse does not work on these surfaces:

- glass, mirrored surfaces, or other glossy materials
- half-tone images, such as mouse pads with pictures

Published Date: Feb 20, 2012

Apple Pro Mouse: Optimal Setting in Mouse Control Panel

This article gives the optimal setting for the Apple Pro mouse in the Mouse control panel.
This article has been archived and is no longer updated by Apple.
If Mouse Tracking is set to Very Slow in the Mouse control panel, you may find that the pointer does not track the mouse's movement, especially during quick motions. If this happens, set Mouse Tracking between Slow and Fast as shown in Figure 1.

Figure 1 Mouse control panel
Published Date: Feb 20, 2012

Apple Pro Mouse: How to Adjust Click Tension

This article explains how to adjust the click tension on an Apple Pro Mouse.
This article has been archived and is no longer updated by Apple.
To adjust the click tension on an Apple Pro Mouse, rotate the adjustment dial on the bottom of the mouse to one of the three settings. Rotate toward the (-) indicator to reduce click tension. Rotate toward the (+) indicator to increase click tension.
Published Date: Feb 20, 2012

Apple Pro Mouse: Optical Technology Overview

This article gives an overview of the optical technology used in the Apple Pro Mouse.

This article has been archived and is no longer updated by Apple.

The optical technology in the Apple Pro Mouse works by beaming a light on the surface beneath the mouse and taking pictures of it. To ensure precise tracking, even during fast movement, the mouse takes 1500 pictures per second. These pictures are analyzed by a high-performance digital signal processor to determine direction and magnitude of movement. These data are communicated back to your computer and are interpreted into smooth pointer action on the screen.

Published Date: Feb 20, 2012

iMac (Summer 2000): How to Distinguish From Earlier iMac Models

This article explains how the iMac (Summer 2000) computer can be distinguished from previous iMac computers.
This article has been archived and is no longer updated by Apple.
The iMac (Summer 2000) product family has four members; iMac, iMac DV, iMac DV+, and the iMac Special Edition. These are the major differences from earlier iMac models:

- Apple Pro Keyboard
- Apple Pro Mouse
- New colors: Indigo, Ruby, Sage, and Snow
- Increased processor speed, up to 500 MHz
- Increased hard disk size, up to 30 GB
- Includes iMovie 2 (DV and Special Edition models only)

Please see article 58658: "**iMac (Summer 2000): What's New and Different**" for a feature comparison between the iMac (Summer 2000) and the previous model.
Published Date: Feb 20, 2012

iMac (Summer 2000): What‘s New and Different

This article provides a table of changes between the iMac (Slot Loading) product family and the iMac (Summer 2000) product family.
This article has been archived and is no longer updated by Apple.
The iMac (Summer 2000) product family has four members; iMac, iMac DV, iMac DV+, and the iMac Special Edition.

Feature	iMac family of 1999		iMac (Summer 2000)			
			iMac	iMac DV	iMac DV+	iMac DV Special Edition
CPU speed	350 or 400 MHz		350 MHz	400 MHz	450 MHz	500 MHz
System bus speed	100 MHz		100 MHz			
Main memory	64 or 128 MB, expandable to 512 MB		64 MB expandable to 1 GB			128 MB expandable to 1 GB
Graphics IC	ATI RAGE 128 VR		ATI RAGE PRO 128			
Graphics memory	8 MB, plus AGP expansion		8 MB	8 MB	8 MB	8 MB
Video Output	Mirrored VGA on DV models		No Mirrored VGA	Mirrored VGA		
Hard disk drive	6, 10, or 13 GB IDE drive		7 GB IDE	10 GB IDE	20 GB IDE	30 GB IDE
CD drive	Slot-load 24x CD-ROM or 4x DVD-ROM drive		Slot-load 24x CD-ROM		4x DVD-ROM	
Data ports	Two USB and FireWire ports on DV models		-Two USB	-Two USB -Two FireWire		
Communications	Ethernet; 56 Kbps modem; opt AirPort		-Ethernet -56 Kbps modem	-Ethernet -56 Kbps modem -AirPort ready		
Sound	Stereo with enhanced AC-3 and surround		Stereo with enhanced AC-3 and surround			
Keyboard	Apple USB Keyboard		Apple Pro Keyboard			
Mouse	Apple USB Mouse		Apple Pro Mouse			
Colors	Grape, Lime, Strawberry, Tangerine, Blueberry, Graphite		Indigo, Ruby, Sage, Graphite, Snow			

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access"**
Published Date: Feb 20, 2012

iMac: Video Mirroring Requires VGA Style Monitor

To utilize video mirroring on an iMac requires a monitor with a VGA style connector.
This article has been archived and is no longer updated by Apple.
Many iMac models, including the iMac (Summer 2000), iMac (Early 2001), and the iMac (Summer 2001) have a VGA port which provides the capability to mirror the image displayed on the internal display to an external display. The external display must utilize a VGA style connector to match that on the iMac. Refer to figure 1 for an image of a VGA connector.

Figure 1 VGA connector

Published Date: Feb 20, 2012

iMac (Summer 2000): Theater Mode Description and Use

This article describes Theater Mode and the applications that can take advantage of it.
This article has been archived and is no longer updated by Apple.
Theater Mode is built into the iMac (Summer 2000) computer and works with Apple's media playing software: QuickTime Player, iMovie, and Apple DVD Player. It enhances the brightness and contrast of video content that is presented at full screen size. Theater Mode produces a more lifelike image by increasing brightness up to three times and improving color saturation.

The versions of software that enable Theater Mode on the iMac (Summer 2000) are:

- QuickTime version 4.1.2 and later
- Apple DVD Player version 2.2.1 and later
- iMovie 2.0 and later

Theater Mode is enabled automatically in these applications. You may disable Theater Mode in the Monitors control panel as shown in Figure 1.

Figure 1 Theater Mode Preferences
Published Date: Feb 20, 2012

iMac (Summer 2000): Technical Specifications

This article provides the technical specifications for the iMac (Summer 2000) computer. You may find additional information in the Apple Spec database online at http://www.info.apple.com/applespec/applespec.taf.
This article has been archived and is no longer updated by Apple.

Processor and memory

- 350-, 400-, 450- or 500 MHz PowerPC G3 processor
- 512 KB backside level 2 cache
- 100 MHz system bus
- 64 MB or 128 MB of PC100 SDRAM (3.3-volt, 64-bit wide, 168-pin, running at 100 MHz); two DIMM slots support up to 1 GB using 64 MB, 128 MB, 256 MB, or 512 MB DIMMs

Storage

- 7 GB, 10 GB, 20 GB or 30 GB Ultra ATA hard disk drive (See Note 1.)
- iMac and iMac DV - Slot loading 24x-speed (maximum) CD-ROM drive
- iMac DV+ and Special Edition models - Slot loading 4x-speed (maximum) DVD-ROM drive (plays DVD-Video discs; plays CD-ROMs at up to 24x speed)
- Support for external FireWire and USB storage devices (FireWire on DV models only)

Display

- Built-in 38 cm shadow-mask CRT (35 cm diagonal viewable image size); 0.28mm dot pitch
- Onscreen geometry adjustment to keep display images properly aligned throughout its lifetime
- Theater Mode for enhanced brightness of full-screen video
- Flip foot for 17 degree tilt

Graphics support

- ATI RAGE 128 Pro graphics accelerator with 8MB of SDRAM graphics memory and AGP 2X support
- Three crisp, flicker-free screen resolutions: 640 by 480 pixels at 117 Hz, 800 by 600 pixels at 95 Hz, and 1024 by 768 pixels at 75 Hz
- 24-bit true color at all resolutions for displaying millions of colors

Communications

- Built-in 56K V.90 modem (RJ-11 connector) (See Note 2.)
- 10/100 Mbit BASE-T Ethernet (RJ-45 connector)
- Optional 11 Mbps AirPort Card: IEEE 802.11 DSSS compliant (DV models only)(See Note 3.)
- Optional AirPort Base Station containing 56 Kbps modem and 10 Mbit BASE-T Ethernet port (DV models only) (See Note 3.)
- **Peripheral connections**
- Two USB ports (12 Mbps each)
- Two 400 Mbps FireWire (IEEE 1394) ports (DV models only)

Audio

- Integrated high-performance Odyssey audio system from Harman Kardon
- Built-in microphone for speech recognition and audio recording
- Front-mounted dual mini headphone jacks
- Analog audio input and output minijacks; up to 16-bit stereo and 44.1 kHz sampling rate
- Support for external USB audio devices

Video (DV models)

- Standard VGA output port (15-pin mini D-Sub connector)

  -Supports video mirroring: external devices display an image identical to that shown on the built-in display

Keyboard and mouse

- Apple Pro Keyboard with full-size function and navigation keys, audio controls and media-eject key
- Apple Pro Mouse

  -Optical sensor provides precision cursor control

  -Features a comfortable design that allows virtually the entire surface to be clicked

  -Works on a wide variety of surfaces

  -Has no mouse ball to require cleaning

Electrical requirements and agency approvals

- Line voltage: 100 V to 260 V AC Frequency: 47 to 63 Hz, single phase , auto switching
- Maximum continuous power: 150 W
- EPA ENERGY STAR compliant

Environmental requirements

- Operating temperature: 10 C to 35 C
- Storage temperature: -40 C to 47 C
- Relative humidity: 5 percent to 95 percent noncondensing
- Maximum altitude: 0 m to 3000 m

Size and mass

- Height: 381 mm
- Width: 381 mm
- Depth: 435 mm
- Mass: 15.8 kg

Notes

1. For hard drive capacity measurements, 1 GB = 1 billion bytes; actual formatted capacity less.

2. Actual modem speeds lower; speed depends on connection rate and other factors.

3. Wireless Internet access requires AirPort Base Station and Internet access (fees may apply). Some ISPs are not currently compatible with AirPort, including America online. Range may vary with site conditions.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access"**
Published Date: Feb 20, 2012

Apple Display Connector: Description

This article describes the Apple Display Connector (ADC) used on many Apple displays and computers. Refer to article 58692: "**Power Mac G4: Display Compatibility**" for additional information.
This article has been archived and is no longer updated by Apple.
The Apple Display Connector carries video, USB, and power between a Macintosh computer and an ADC based display. It is illustrated in Figure 1.

Figure 1 Apple Display Connector

Note: Displays utilizing an Apple Display Connector require a Macintosh computer with an ADC video card. Apple ADC displays are not supported on Windows based computers because they lack the power line to drive the display.

Published Date: Feb 20, 2012

Apple Studio Display 17 (ADC): Theater Mode Description and Use

This article describes Theater Mode on the Apple Studio Display 17 (ADC).
This article has been archived and is no longer updated by Apple.
Theater Mode is a technology of the Apple Studio Display 17 (ADC), and works with Apple's media playing software: QuickTime Player, iMovie, and Apple DVD Player. It enhances the brightness and contrast of video content that is presented at full screen size. Theater Mode produces a more lifelike image by increasing brightness up to three times and improving color saturation.

The versions of software that enable Theater Mode on the Apple Studio Display 17 (ADC) are:

- QuickTime version 4.1.2 and later
- Apple DVD Player version 2.2.1 and later
- iMovie 2.0 and later

Theater Mode is enabled automatically in these applications. You may disable Theater Mode in the Monitors control panel as shown in Figure 1.

Figure 1 Theater Mode Preferences

Published Date: Feb 20, 2012

Apple Studio Display LCD (ADC): Information on Touch Switch

The Apple Studio Display LCD (ADC) does not have a typical power button. This article describes the display's touch switch.
This article has been archived and is no longer updated by Apple.
The touch switch on the Apple Studio Display (LCD) is used to turn on, put to sleep, or wake up a Power Mac G4 Cube or Power Mac G4 (Gigabit Ethernet) computer by sensing the touch of your finger. The switch gently flashes when you touch it.

The software launch button located on the front bezel of the Apple Studio Display (LCD) is also sensitive to touch. Touch it to open the Monitors control panel.

Published Date: Feb 20, 2012

Power Mac G4 Cube: Connect USB Speakers to Computer or Display

The Apple USB Speakers included with the Power Mac G4 Cube computer should be connected to one of the USB ports on the computer or the monitor (if it has an Apple Display Connector).
This article has been archived and is no longer updated by Apple.
The Apple USB (Universal Serial Bus) Speakers included with the Power Mac G4 Cube computer require more power to operate than is provided by a typical USB port. The USB ports of the Power Mac G4 Cube computer, and the following monitors with Apple Display Connector (ADC) have been enhanced to provide additional power:

- Apple Cinema Display (ADC)
- Apple Studio Display 17 (ADC)
- Apple Studio Display LCD (ADC)

For this reason, you should only connect the speakers to one of the USB ports on the Power Mac G4 Cube computer, or monitor listed above. You should not connect them to the USB ports of any Apple keyboard, other Apple computer, or third-party USB device.

Note: If you have more USB devices than available ports, a USB hub can be connected to one of the USB ports on the computer. The hub will provide additional USB ports. However, the Apple USB speakers must be connected to the computer or monitor.

Published Date: Feb 20, 2012

Power Mac G4 Cube: How to Eject a CD or DVD Disc

The DVD-ROM drive in the Power Mac G4 Cube computer does not have a mechanical eject button. This article explains how to eject a compact disc or DVD disc that does not appear on the desktop.
This article has been archived and is no longer updated by Apple.
The slot loading DVD-ROM drive in the Power Mac G4 Cube computer does not have a mechanical eject button to eject a disc in the drive.

To eject a disc that does not appear on the desktop:

- restart the computer and hold down the mouse button, or
- press the media eject button above the numeric keypad on the keyboard.

If you can see the disc on the desktop:

- click the disc to select it and choose Put Away from the File menu, or
- drag the disc's icon to the Trash.

Published Date: Feb 20, 2012

Power Mac G4 Cube: How to Insert a CD or DVD Disc

This article explains how to insert a CD or DVD disc in the Power Mac G4 Cube computer's DVD-ROM drive.
This article has been archived and is no longer updated by Apple.
When you insert a CD or DVD disc into the Power Mac G4 Cube computer's DVD-ROM drive, the label side should be facing you (assuming that the computer is oriented with the Apple logo facing you, and the ports are facing away from you). The drive ejects discs that are incorrectly oriented.

Some DVD discs have data on both sides of the disc, neither of which have a label. You should insert these discs with the side you want to access facing away from you.

See also article 58641: "**Macintosh: Using Nonstandard Discs in Optical Media Drives**" for specific examples of disc shapes that can be used in the slot loading drive of the Power Mac G4 Cube computer.

Published Date: Feb 20, 2012

Power Mac G4 (Gigabit Ethernet): Applications That Do Not Utilize Dual Processors

This article explains how applications not optimized for dual processors run on a Power Mac G4 (Gigabit Ethernet) computer with dual processors.
This article has been archived and is no longer updated by Apple.
An application that is not optimized to utilize both processors in a Power Mac G4 (Gigabit Ethernet) computer will function just as if it were running on a single processor computer.

Mac OS X, and applications written specifically for Mac OS X, are optimized for dual processing.

Published Date: Feb 20, 2012

Apple DVD Player 2: Application Version Must Match DVDRuntimeLib Version

Opening the Apple DVD Player application results in an error when different versions of the Apple DVD Player application and the DVDRuntimeLib library are installed.
This article has been archived and is no longer updated by Apple.

Symptom

Opening the Apple DVD Player application results in an error:

> "The application 'Apple DVD Player' could not be opened because 'DVDRuntimeLib--GetBounds__7CGWorldsFv' could not be found."

Products affected

- Apple DVD Player 2.0 or later

Solution

Follow the steps listed in the scenarios below.

Scenario 1

In most cases, there is an earlier version of DVDRuntimeLib in the Apple DVD Player folder (within the Applications folder) while the correct version is in the Extensions folder. When the library is in the same folder as the application, it overrides what is in the Extensions folder even though it is an earlier version.

To test for and correct this situation follow these steps:

1. Find and open the Apple DVD Player folder.
2. Find the DVDRuntimeLib file inside the DVD Player folder. If it is not there, move on to scenario 2.
3. Select the DVDRuntimeLib file by clicking it.
4. Choose Get Info from the File menu and note the version.
5. Select the Apple DVD Player application by clicking it once.
6. Choose Get Info from the File menu and note the version.
7. If the version of DVDRuntimeLib file is earlier than the version of the Apple DVD Player application, drag DVDRuntimeLib to the Trash.
8. Open the Apple DVD Player application.

Scenario 2

If you didn't find the DVDRuntimeLib file in the Apple DVD Player folder, then it is possible that there is an older version in the Extensions folder.

1. Open the Extensions folder located in the System Folder.
2. Select the DVDRuntimeLib file by clicking it.
3. Choose Get Info from the File menu and note the version.
4. Compare the version of the DVDRuntimeLib file to the version of Apple DVD Player.

If the versions are different, follow these steps remove and reinstall the Apple DVD Player software:

1. Drag the following files and folders to the Trash:

Apple DVD Player folder (in the Applications folder)
DVD Navigation Manager (in the Extensions folder)
DVD Region Manager (in the Extensions folder)
DVDRuntimeLib (in the Extensions folder)
DVD AutoLauncher (if present, in the Extensions folder)

2. Insert the Software Install CD that came with your computer (not the Restore CD).

3. Double-click the Apple DVD Update located in this path:
Software Installers
System Software
Apple DVD Software
Apple DVD Update

4. Follow the instructions to install the software.

5. Restart the computer.

6. Open the Software Update control panel and check if there are any DVD updates available for your computer.

Published Date: Feb 20, 2012

Power Mac G4 Cube: Mold Lines in Enclosure Plastics Are Normal

This article explains the surface lines on the plastic enclosure of the Power Mac G4 Cube computer.

This article has been archived and is no longer updated by Apple.
These lines are called mold lines, and occur when the enclosure is manufactured. These lines may appear on the enclosure's inside and outside surfaces. Mold lines are not cracks, and do not represent a weakness or defect in the plastic.

Published Date: Feb 20, 2012

Power Mac G4 (Gigabit Ethernet): Apple Hardware Test 1.0 Error ata4/1/2

When running Apple Hardware Test (AHT) 1.0 on a Power Mac G4 (Gigabit Ethernet) computer without an ATA (also known as IDE) hard drive installed, AHT generates an "ata4/1/2" error and stops testing.

This article has been archived and is no longer updated by Apple.

Symptom

Apple Hardware Test (AHT) displays error "ata4/1/2" and stops testing.

Solution

This issue has been resolved in version 1.0.1 of Apple Hardware Test for Power Mac G4 (Gigabit Ethernet) computers. Phone Apple technical support to request an updated version.

Published Date: Feb 20, 2012

Power Mac G4 (Gigabit Ethernet): CD/DVD Disc Does Not Appear on Desktop

This article provides troubleshooting information when a CD/DVD disc does not appear on the desktop of a Power Mac G4 (Gigabit Ethernet) computer.

This article has been archived and is no longer updated by Apple.

Symptom

A CD or DVD disc does not appear on the desktop.

Solution

Make sure the DVD drive's ribbon cable is installed securely in the drive by following these steps:

1. Shut down the computer.
2. Remove the power cord.
3. Open the door on the computer by pulling the latch.
4. Locate the DVD-ROM drive.
5. Locate the last connector on the ribbon cable that plugs into the back of the DVD-ROM drive.
6. Plug that connector into the drive's connector.
7. Push on the ribbon cable's connector to ensure a snug connection.
8. Close the computer's door.
9. Plug in the power cord.
10. Turn on the computer.
11. Insert a disc into the DVD-ROM drive and verify the disc appears on the desktop.
12. If the disc does not appear on the desktop, refer to article: 58382: "**Troubleshooting a CD-ROM or DVD-ROM Disc That Does Not Appear on the Desktop**".

Refer to the following URL for detailed instructions on the above process:

http://www.info.apple.com/installparts

Published Date: Feb 20, 2012

Power Mac G4: Second ATI RAGE 128 PCI Card Affects Low-Power Mode

Power Mac G4 computers with the optional second ATI RAGE 128 PCI video card installed always have the fan running even while in sleep mode.

This article has been archived and is no longer updated by Apple.

Symptom

The fan keeps running even when the computer is in sleep.

Solution

As the Power Mac G4 Read Me file notes, some PCI cards are not compatible with low-power mode.

The ATI RAGE 128 PCI card option, available only as a configure-to-order option from The Apple Store, prevents the computer from entering low-power mode when it is in sleep. The system fan continues to run while the computer is in sleep mode.

No upgrade is available to allow this card to enter low-power mode.

Published Date: Feb 20, 2012

Apple DVD Player: Type 1 or Type 2 Error When First Opened

This article describes a situation where the Apple DVD Player application generates an error the first time it is opened after running the Setup Assistant application on a new computer.
This article has been archived and is no longer updated by Apple.

Symptom

After opening Apple DVD Player, an alert box appears, which says that an error of Type 1 or Type 2 occurred. This occurs only the first time you turn on a new computer, complete the Setup Assistant, and open the Apple DVD Player application. It does not occur whenever you restart the computer later.

Solution

Restart the computer.

Notes:

1. The parenthetical product description (Summer 2000) refers to the summer of the Northern Hemisphere.

Published Date: Feb 20, 2012

About iMovie 2.0.1

This article contains the Read Me from iMovie 2.0.1.
This article has been archived and is no longer updated by Apple.
* About iMovie 2.0.1

Welcome to iMovie 2.0.1, an application that integrates digital video (DV) capture, scene editing, titling, transitions and effects, and audio to create broadcast-quality movies. This version of iMovie 2.0.1 does not include the Tutorial media that usually accompanies the CD version.

For the latest news and information about iMovie, along with a list of qualified camcorders and DV devices, go to the iMovie World Wide Web site at http://www.apple.com/imovie

The following topics are covered in this document:

System requirements

Installing iMovie

Using iMovie

System Requirements

- A Macintosh computer with a G3 (or later) 300 MHz or faster processor and a built-in FireWire port.
- A CD or DVD drive
- At least 64 megabytes (MB) of random-access memory (RAM). (128 MB of RAM is recommended.) If running with 64 MB you must turn Virtual Memory ON in the Memory Control panel in order to launch iMovie.
- 200 MB of available (unused) hard disk space (4 gigabytes are recommended. For example, 5 minutes of imported digital video requires about 1 gigabyte of disk space.)
- A monitor that supports 800 x 600 resolution (1024 x 768 is recommended) and thousands of colors (millions of colors is recommended)
- Mac OS 9.0.4 or later
- QuickTime 4.1.2 or later
- FireWire 2.4 or later (FireWire Support and Enabler extensions)

Other Requirements

- A digital video (DV) device, such as a camcorder or deck, with a FireWire, IEEE 1394, or iLink port
- A 4-pin-to-6-pin FireWire cable (for use with DV camcorders)

To view your movies with a television and/or VCR, you also need cables to connect your DV device to a VCR or television.

Installing or Reinstalling iMovie

Before you install:

1. If you've used iMovie on your computer before, make sure that any iMovie projects you want to save are moved from the iMovie folder to a different location on your hard disk.

2. Delete any older versions of iMovie by dragging the iMovie application folder to the Trash icon.

To install iMovie: Double-click the iMovie Installer icon and follow the onscreen instructions. The application and its components will be placed in a folder named iMovie, on the main level of your hard disk.

Note: If iMovie was pre-installed on your computer in the Applications folder, the Installer will create an iMovie folder on the main level of your hard disk. To restore iMovie to its original location, drag the new iMovie folder to the Applications folder on your hard disk.

Using iMovie

To learn how to use iMovie see the iMovie online help. In iMovie, choose iMovie Help from the Help menu.

For late breaking news and troubleshooting please refer to appropriate topics in iMovie Help.

Plug in any required devices before opening iMovie. Do not unplug devices while iMovie is open.

Published Date: Feb 20, 2012

USB: Pin Assignments

This article provides the pin assignments, also known as pinouts, for USB 1.1 and USB 2.0 ports used on Apple computers and keyboards. This article has been archived and is no longer updated by Apple.

Pin	Signal name	Description
1	VCC	+5 VDC
2	D-	Data -
3	D+	Data +
4	GND	Ground

Published Date: Feb 20, 2012

FireWire: Pin Assignments

This article provides the pin assignments, also known as pinouts, for the FireWire connector used on some Apple computers.
This article has been archived and is no longer updated by Apple.

Pin	Signal name	Description
1	Power	Unregulated DC; available voltage depends upon product
2	Ground	Ground return for power and inner cable shield
3	TPB-	Twisted-pair B, differential signals
4	TPB+	
5	TPA-	Twisted-pair A, differential signals
6	TPA+	
Shell	--	Outer cable shield

Published Date: Feb 20, 2012

Mac OS X Server: Installation Appears Stopped at Erasing Disk

This article describes what to do when the Mac OS X Server installation application appears to stop when erasing the disk.
This article has been archived and is no longer updated by Apple.

Symptom

The installation process appears to be stopped while the disk is being erased. The progress bar does not move.

Solution

There is no user feedback while the disk is being erased so this is normal behavior. The time it takes to erase the disk depends upon the size of the UFS partition being created. Times over 15 minutes for 20 GB partitions are normal.

If visual feedback is desired, starting up in verbose mode causes the system to display the backup superblocks that are created. To do this, follow the steps below:

1. Start up from the installation CD into Mac OS 9.
2. Run the Mac OS X Server installer.
3. Click the Restart button at the end of this process.
4. Hold down the 'V' key to start up in verbose mode.

Published Date: Feb 20, 2012

iMac: Sound Output Ports Specifications

This provides the specifications for the sound output ports of an iMac computer.
This article has been archived and is no longer updated by Apple.

Sound Output Port

The sound output port is a 3.5 mm miniphone jack located on the I/O panel on the right side of the computer. It accepts a stereo miniplug-to-RCA cable adapter for connecting stereo equipment to the computer.

The sound output port provides line level output with the following electrical characteristics:

- output impedance: 65 Ω
- maximum level: 1.4 V nominal (root mean square), 4.0 V peak-to-peak

Headphone Jacks

Two headphone jacks are located on the front of the computer next to the left speaker. Each jack provides enough current to drive a pair of low-impedance headphones.

The headphone jacks have the following electrical characteristics:

- output impedance: 65 Ω
- maximum level: 1.0 V (root mean square), 2.8 V peak-to-peak

The recommended minimum headphone impedance is 32 Ω. Headphones with lower impedance can be used, but with some degradation in performance.

Sound Specifications

The frequency response of the sound circuits, not including the microphone and speakers, is within plus or minus 1 dB from 20 Hz to 20 kHz.

Total harmonic distortion plus noise (THD+N)

THD+N as a percentage of full scale are as follows:

Connector and level THD+N

- line input 0.03 percent
- line output, open circuit 0.03 percent
- headphone jack, open circuit 0.03 percent
- headphone jack, 32 Ω headphones 0.5 percent

Signal-to-noise ratios (SNR)

The signal-to-noise ratios (SNR) for various inputs and outputs are shown below. The values shown are unweighted. Values with weighting would be approximately 8 dB higher.

SNR specifications

Connector signal-to-noise ratio

- microphone 65 dB
- line output 85 dB
- headphone jacks 85 dB
- line input 85 dB
- internal CD or DVD 85 dB

Published Date: Feb 20, 2012

iMac: Sound Input Port Specifications

This article provides specifications for the sound input port of an iMac computer.
This article has been archived and is no longer updated by Apple.
The sound input port is a 3.5 mm miniphone jack located on the I/O panel on the right side of the computer. The sound input port accepts line-level stereo signals, or an Apple PlainTalk microphone. It also accepts a stereo miniplug-to-RCA cable adapter for connecting stereo equipment to the computer.

The sound input jack has the following electrical characteristics:

- input impedance: nominal 2 kΩ
- maximum level: 1 V nominal (root mean square), 2.8 V peak-to-peak

For information on the PlainTalk microphone, refer to article 15884: "**PlainTalk Microphone: Specifications**".
Published Date: Feb 20, 2012

Power Mac G4 (Digital Audio): What‘s New and Different

This article describes the new features of the Power Mac G4 (Digital Audio) computer.
This article has been archived and is no longer updated by Apple.
The Power Mac G4 (Digital Audio) computer has these differences from earlier Power Mac G4 models:

Microprocessor clock speed: The microprocessor clock frequency is either 466 or 533 MHz.

Memory caches: The G4 microprocessor in the 466 MHz and 533 MHz configurations has an external 1 MB level 2 cache.

Bus clock speed: The system bus and the memory bus have a clock frequency of 133 MHz.

PCI card expansion slots: The Power Mac G4 computer has four expansion slots for PCI cards in addition to the AGP video card slot.

Memory Expansion slots: There are three slots for PC-133 memory DIMMs. Refer to article 58763 "**Power Mac G4 (Digital Audio): Requires PC-133 Memory**" for more information.

Optical drive: The computer comes with a built-in optical media drive, either CD-RW or DVD-R/CD-RW. A DVD-ROM drive is also available.

Zip drive: All configurations can accept an optional 250 MB ATAPI Zip drive.

Graphics card: The graphics card in the AGP-4x slot is either an ATI RAGE 128 Pro or NVIDIA GeForce2 MX.

Sound: The computer has a built-in speaker, a headphone sound output port, and an Apple speaker sound output port. More information is available in article 58764: "**Power Mac G4 (Digital Audio): Sound Output Ports**".

Published Date: Oct 7, 2016

Power Mac G4 (Digital Audio): Differences Between Models

This article differentiates between the various configurations of the Power Mac G4 (Digital Audio) computer.
This article has been archived and is no longer updated by Apple.

	M7627LL/A	M7688LL/A	M7945LL/A	M7681LL/A
Processor	466 MHz PowerPC G4	533 MHz PowerPC G4	667 MHz PowerPC G4	733 MHz PowerPC G4
On-chip cache	-	-	256K L2 at 667 MHz	256K L2 at 733 MHz
Backside cache	1 MB L2 at 233 MHz	1 MB L2 at 266 MHz	1 MB L3 at 167 MHz	1 MB L3 at 183 MHz
Memory (PC-133 SDRAM)	128 MB	128 MB	256 MB	256 MB
Hard disk drive	30 GB (5400 rpm)	40 GB (7200 rpm)	60 GB (7200 rpm)	60 GB (7200 rpm)
Graphics support	ATI RAGE 128 Pro 16 MB of SDRAM	NVIDIA GeForce2 MX 32 MB of SDRAM	NVIDIA GeForce2 MX 32 MB of SDRAM	NVIDIA GeForce2 MX 32 MB of SDRAM
Optical drive	CD-RW	CD-RW	CD-RW	DVD-R/CD-RW
FireWire	Two 400 Mbps ports	Two 400 Mbps ports	Two 400 Mbps ports	Two 400 Mbps ports
USB	Two ports (12 Mbps each)	Two ports (12 Mbps each)	Two ports (12 Mbps each)	Two ports (12 Mbps each)
PCI slots	Four slots	Four slots	Four slots	Four slots
Ethernet	10/100/1000BASE-T	10/100/1000BASE-T	10/100/1000BASE-T	10/100/1000BASE-T
Wireless networking	AirPort Ready	AirPort Ready	AirPort Ready	AirPort Ready
Modem	56K V.90	56K V.90	56K V.90	56K V.90

Note: Wireless internet access requires an internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590. "**AirPort: Requirements for Wireless Internet Access".**

Published Date: Oct 7, 2016

Disc Burner 1.x Software Records Single Session Only

This article describes an issue with the Disc Burner 1.x CD-RW software installed on Apple products containing a CD-RW drive such as the Power Mac G4 (Digital Audio) and iMac (Early 2001) computers.

This article has been archived and is no longer updated by Apple.

Each write to a recordable media, such as CD-RW, is called a session. Single session is the ability to write to a disc once. Multiple session allows you to write to the disc multiple times without reformatting.

Disc Burner 1.x will not rewrite to a CD-RW disc without first reformatting the disc. Once data has been written to the disc, no further writes are allowed until the disc has been reformatted.

Published Date: Oct 7, 2016

Power Mac G4 (Digital Audio): Digital Sound System Information

This article discusses the digital sound system used in the Power Mac G4 (Digital Audio) computer.
This article has been archived and is no longer updated by Apple.
Like other Macintosh computers, the sound circuitry and system software can create and record sounds digitally and play the sounds through the speaker inside the computer, and send audio signals out through the headphone and Apple Speaker sound output ports.

All audio is handled digitally inside the computer, including audio data from the CD or DVD drive and from devices connected to the USB and FireWire ports. Sound data is converted to analog form only for output to the internal speaker and the headphone sound output port.

The sound circuitry handles audio data as 44.1 kHz 16-bit samples. If audio data sampled at a lower rate on another computer is played as output, the Sound Manager transparently upsamples the data to 44.1 kHz prior to sending the audio data to the sound circuitry.
Published Date: Oct 7, 2016

Mac OS 9.1: Error When Initializing CD-R/CD-RW Disc

Disc Burner software is required to initialize a CD-R/CD-RW disc. If Disc Burner software is not installed on the computer, inserting a CD-R or CD-RW disc and choosing an option to initialize it results in an alert box with an error message or an unresponsive system.

This article has been archived and is no longer updated by Apple.

Symptom

Inserting an unformatted CD-R or CD-RW disc and then choosing an option to initialize it results in an alert box with an error message or an unresponsive system.

Solution

Use the Software Update control panel to download and install Disc Burner software on the computer. Or, use the Software Restore CD that came with your computer to Restore your original hard drive contents.

Note: Some Power Mac G4 (Digital Audio) computers do not include Disc Burner software.

For additional information, refer to article 75106: "**About Disc Burner 1.0.1 and Software**"

Published Date: Oct 7, 2016

Disc Burner 1.0: Requires Factory-Installed Disc Drive

Disc Burner 1.0 software requires that your computer have an internal disc drive that is able to write to a disc.

This article has been archived and is no longer updated by Apple.

Symptom

You've downloaded and installed the Disc Burner and iTunes software, but you can't record onto a disc.

Solution

1. Disc Burner 1.0 and iTunes 1.0 do not work with third-party disc drives. Make sure your computer has a factory-installed internal disc drive that is able to record to a disc. (Not all computers have this kind of drive.)

2. Make sure the Authoring Support system extension is installed and turn on in the Extensions Manager control panel. You might also make sure that the Authoring Support Files folder is also installed in the Extensions folder.

3. Use Disc Burner 1.0.1 and iTunes 1.1, which work with third-party disc drives.

Published Date: Oct 7, 2016

Power Mac G4 (Digital Audio/Gigabit Ethernet): Power Supply Replacement Instructions

This article provides replacement instructions for the Power Mac G4 (Digital Audio/Gigabit Ethernet) power supply.
This article has been archived and is no longer updated by Apple.
Be sure to follow the instructions in this sheet carefully. Failure to follow these instructions could result in damage to your equipment and may void your warranty.

Replacing the power supply requires five basic steps:

1. Turn off the computer.
2. Open the computer.
3. Remove the installed power supply.
4. Install the replacement power supply.
5. Close the computer.

Note: HTML/QuickTime video versions of the instructions are available at http://www.info.apple.com/installparts.

Tools Required

The following tools are required for this procedure:

- Phillips screwdriver
- Allen wrench

Electrostatic Discharge (ESD)

Static electricity, a normal and natural phenomenon, builds up on your body as you walk around. You experience an electrostatic discharge (ESD) when you touch an object and feel a spark. ESD can cause damage to the internal components of your computer. Avoid walking around while performing this procedure, and follow the instructions carefully when you are asked to discharge static electricity.

Opening the Computer

Warning: Always turn off your computer before opening it to avoid damaging its internal components.

1. Place your computer on a clean, flat surface.

2. If you think your computer is in sleep, press the power button on the front of the computer to wake it.

3. Shut down your computer by opening the Special menu and choosing Shut Down. Then wait five minutes for the computer's internal components to cool down.

4. If you attached a security cable through the computer's lockable cover latch, remove the cable.

5. Unplug all other cables from the computer except the power cord.

6. Touch the metal PCI access covers on the back of the computer.

Important: To avoid electrostatic discharge, always ground yourself by touching the port access covers before you touch any parts or install any components inside the computer. To avoid static electricity building back up in your body, do not walk around the room until you have completed your installation and closed the computer.

7. Unplug the power cord.

8. Lift the latch on the right side access panel.

9. Gently lower the access panel until it lies flat. To avoid scratching the case, lower the panel onto a soft, clean cloth.

Warning: If you see any lights glowing on the main logic board, the computer has not been shut down. Close the side access panel and shut down the computer before proceeding.

Removing the Installed Power Supply

1. From inside the computer, push the CD/DVD/Zip bezel tabs forward to release the bezel from the front panel.

2. Disconnect the bezel from the slots on the left side of the front panel and remove the bezel from the computer.

3. Remove the two screws on the drive carrier.

4. Move the CD/DVD/Zip drive carrier forward 1 inch.

5. Disconnect the power-to-fan connector.

6. Disconnect the following power cables:

- cables P6 and P7 from the CD/DVD and Zip drives (if installed)
- main power cable from the logic board
- power cable(s) from any hard drives

7. Using a 2.5 mm Allen wrench, remove the three screws on the rear vented panel.

8. Remove the Phillips screw that attaches the power supply to the power supply shelf.

9. If the opening for the cables in the power supply shelf extends across the width of the shelf, slide the power supply toward the front of the computer. Then maneuver the power supply and its cables out of the computer.

10. If the opening in the power supply shelf does not extend across the width of the shelf, remove the two screws that attach the fan bracket to the chassis.

11. Pull the bracket straight down to release it from the two holding tabs on the underside of the shelf, and remove the bracket from the computer.

12. Slide the power supply toward the front of the computer. Then maneuver the power supply and its cables out of the chassis.

Installing the Replacement Power Supply

1. Transfer the power supply bracket from the original power supply to the new power supply.

2. Position the new power supply in the power supply shelf and thread the main and hard drive power cables through the opening in the shelf.

3. If you removed the fan bracket, reinstall it and the two mounting screws. Make sure the slots in the top of the bracket engage with the two holding tabs on the underside of the power supply shelf. Otherwise, the screws that attach the bracket to the chassis will not align properly.

4. Reinstall the three Allen screws on the rear panel.

5. Reconnect the following power cables:

- cables P6 and P7 to the CD/DVD and Zip drives
- main power cable to the logic board
- power cable(s) to any hard drives

6. Reconnect the power-to-fan connector.

7. Move the CD/DVD/Zip drive carrier back so the carrier front is flush with the front panel.

8. Reinstall the two drive carrier mounting screws.

9. Position the CD/DVD/Zip bezel in the slots in the left side of the front panel, insert the bezel tabs into the slots on the right side of the panel, and snap the bezel into place.

Replacement Note: To avoid damaging the computer, make sure the power supply voltage switch is on the correct setting (115 V in US).

Closing the Computer

1. Raise the side access panel, lift the latch, and press the panel against the case until it snaps securely into place.

2. Reconnect all cables and restart your computer.

Warning: Never turn on your computer unless all of its internal and external parts are in place and it is closed. Operating the computer when it is open or missing parts can damage your computer or cause injury.

Published Date: Feb 20, 2012

Power Mac G4 (Digital Audio): CD-RW Drive Tray Continually Opens

The CD-RW drive tray in some Power Mac G4 (Digital Audio) computers may continually eject by itself. This article provides a solution to this issue.
This article has been archived and is no longer updated by Apple.

Symptom

As soon as computer is started up, the CD-RW drive tray ejects. After closing the tray, it immediately opens again.

Solution

1. Open the CD-RW door with your finger, as shown in Figure 1.

Figure 1 CD-RW door

2. Locate the CD-RW eject button on the lower right side of the drive face, as shown in Figure 2.

Figure 2 CD-RW drive face

3. Check for tape over the eject button.
4. Remove any tape if found.

If the drive tray continues to open by itself, disconnect the Apple Pro Keyboard, which may have a failing Eject button. If you have connected a third-party mouse or trackball you should disconnect it, too.
Published Date: Oct 7, 2016

Apple Hardware Test for Power Mac G4 Cube version 1.1, Read Me

This article comprises the Apple Hardware Test for Power Mac G4 Cube version 1.1 is distributed only with the G4 Cube, January, 2001; it will not work with any other computer.
This article has been archived and is no longer updated by Apple.

About Apple Hardware Test

Apple Hardware Test is a diagnostic tool for detecting problems with your computer's internal hardware components such as the logic board, memory, modem, video RAM, and Apple's AirPort card. It does not check externally connected hardware components such as USB drives or FireWire devices; it does not check non-Apple devices such as PCI cards from other vendors.

Before using Apple Hardware Test, disconnect external devices (excluding Apple keyboard, mouse, display, and speakers), and remove any non-Apple cards that were not included in Apple's shipping configuration of your system.

Apple Hardware Test does not check your computer for problems with the Operating System (OS) or other software related problems such as application or extension conflicts.

To use the Apple Hardware Test CD, restart your computer while holding down the C key until the "Loading..." icon appears, then you may release the C key. Loading will take approximately 45 seconds. Apple Hardware Test's main screen will appear. Follow the on-screen instructions and recommendations.

Apple Hardware Test for Power Mac G4 Cube version 1.1 is distributed only with the G4 Cube, and will not work with any other computer.

If you suspect your computer has a hardware problem, the information provided by Apple Hardware Test can help identify the problem. If Apple Hardware Test detects a problem, an error code will be displayed. Please make a note of the error code before pursuing support options. If no hardware failure is detected, the problem may be software related.

Known issues

Apple Hardware Test cannot be used when a mouse is directly connected to the USB port on the display or on the G4 Cube. Please connect the mouse to a USB keyboard.

It may take significantly more time than indicated (on the Apple Hardware Test screen) to run the Extended Test on a G4 Cube with more than 512 MB of RAM installed; durations between 18 and 20 minutes have been observed.

AppleCare Recommendations

Apple Hardware Test is one of several tools and procedures you can use when your Macintosh is having trouble. Here are some steps you can follow to help resolve problems. Please back up your data before performing any of these steps.

1. Turn the computer off and on.
You can often eliminate problems by selecting the "Shut Down" option from the Special menu to fully shut down the CPU, then restarting your system

2. Check cables, peripherals, and user controls.
Shut down your computer. Then disconnect and reconnect all cables. Disconnect all peripherals (such as printers, scanners, cameras and external mass storage devices) to see if they are causing conflicts with your system. Adjust user controls on your monitors and other peripherals to see if this helps

3. Turn off system extensions.
Restart your system while holding down the Shift key until the following message appears: "Extensions disabled." Then release the key. This turns off system extensions that often cause conflicts. If this solves your problem, use the Extensions Manager to turn off extensions that may be causing the problem.

4. Rebuild the desktop.
Restart your system while holding down the Option and Command keys. Click OK when asked if you want to rebuild the desktop.

5. Start up from the system CD that shipped with your computer.
Start your system from the system CD by holding down the C key until you see the smiling Mac face. If the system works properly when started (booted) from the system CD, you can generally assume that the problem relates to the software which is installed on your computer.

6. Start up from the Apple Hardware Test CD, and run the Quick and Extended Tests.
If the system does not work properly when started (booted) from a known-good system CD (Step 5), you can generally assume that the

problem relates to your computer's hardware components. The Apple Hardware Test CD can often be used to start up your computer even if it will not boot into the Mac OS. If Apple HardwareTest passes both the Quick Test and the Extended Test, the problem may be software related. If Apple Hardware Test detects a problem, make a note of the error code and contact Apple (Step 9).

7. Refer to Mac OS Help Center and the Internet for assistance.
The Mac OS help system under the Help menu in the Finder includes a wealth of technical information. Apple's Knowledge Base, and other resources for technical help and support are available 24 hours a day at www.apple.com/support.

8. Re-install Mac OS.
In many cases, a clean installation of the Mac OS will fix recurring problems. Back up any data before reinstalling. Please follow the instructions in your user manual or on your Restore CD to reinstall the Mac OS.

9. Contact Apple Service and Support for assistance.
If these steps don't help resolve the problem, please review the service and support material that accompanied your computer for information on how to contact AppleCare for further assistance. Apple reserves the right to change telephone hours at any time.

Published Date: Oct 7, 2016

Power Mac G4 Cube (CD-RW): Technical Specifications

This article provides the technical specifications for the Power Mac G4 Cube (CD-RW) introduced in February, 2001.
This article has been archived and is no longer updated by Apple.

Processor

- 450-MHz PowerPC G4 processor
- Velocity Engine vector processing unit
- Full 128-bit internal memory data paths
- Powerful floating-point unit supporting single-cycle, double-precision calculations
- Data stream prefetching operations supporting four simultaneous 32-bit streams
- 1MB backside level 2 cache running at 225 MHz
- 100-MHz system bus supporting up to 800-MBps data throughput

Memory

- 128MB of PC100 SDRAM
- Three DIMM slots support up to 1.5GB of PC100 SDRAM using up to 1.38-inch (35-mm) DIMMs, as follows:

  -32MB, 64MB, or 128MB DIMMs (64-bit-wide, 64-Mbit technology)

  -128MB or 256MB DIMMs (64-bit-wide, 128-Mbit technology)

  -512MB DIMMs (64-bit-wide, 256-Mbit technology)

Storage

- 20GB 5400-rpm Ultra ATA/66 hard disk drive
- Slot-loading CD-RW drive
- Support for external FireWire and USB storage devices

Graphics support

- ATI RAGE 128 Pro graphics card with 16MB of SDRAM graphics memory installed in a dedicated AGP 2X graphics slot
- Support for up to 1920-by-1200-pixel resolution at 32 bits per pixel (millions of colors)
- Apple Display Connector (ADC); carries analog and digital video, USB, and power
- 15-pin mini D-Sub VGA connector

Communications

- 10/100BASE-T Ethernet connector (RJ-45)
- Built-in 56K V.90 modem card
- Optional 11-Mbps AirPort Card; IEEE 802.11 DSSS compliant
- Optional AirPort Base Station containing 56K modem and 10BASE-T Ethernet port

Peripheral connections

- Two 400-Mbps FireWire (IEEE 1394) ports, 12W total power; includes 4-pin-to-6-pin FireWire cable for connecting DV camera
- Two USB ports (12 Mbps each)

Speakers and audio

- Digital amplifier and speakers with Harman Kardon audio technology

  -Total power output: 20W

  -Frequency response: 80 Hz to 20 kHz

  -Single USB cable carries both power and audio; plugs into USB port on the G4 Cube or a display with ADC

  -Removable covers protect speaker cones

-Digital amplifier module includes locking loop for theft prevention and minijack for connecting stereo headphones

- Support for external third-party FireWire and USB digital audio peripherals such as microphones, speakers, and MIDI devices

Keyboard and mouse

- Apple Pro Keyboard with full-size function and navigation keys, audio controls, and media-eject key
- Apple Pro Mouse with optical sensor for precision cursor control

Electrical requirements and agency approvals

- Line voltage: 115V AC (90V to 132V AC) or 230V AC (180V to 264V AC)
- Frequency: 47 to 63 Hz, single phase
- Maximum continuous power: 205W
- U.S. EPA ENERGY STAR compliant

Environmental requirements

- Operating temperature: 50 to 95 degrees F (10 to 35 degrees C)
- Storage temperature: -40 to 116 degrees F(-40 to 47 degrees C)
- Relative humidity: 5 to 95 percent noncondensing
- Altitude: 0 to 10,000 feet

Size and weight

- Height: 9.8 inches (24.8 cm)
- Width: 7.7 inches (19.5 cm)
- Depth: 7.7 inches (19.5 cm)
- Weight: Approximately 14 pounds (6.4 kg)

Note: Wireless internet access requires an internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590. "**AirPort: Requirements for Wireless Internet Access".**
Published Date: Oct 7, 2016

Power Mac G4 Cube: Troubleshooting: Power-On Light Self Test

This article explains how to interpret the Power Mac G4 Cube computer's power-on light flash sequence at system startup.
This article has been archived and is no longer updated by Apple.
The ROM of the Power Mac G4 Cube computer contains a self test that runs whenever the computer is turned on after having been shut down. It does not run if the computer is only restarted. If a potential issue is detected during the test, you will not hear a startup sound; instead, you will see the power-on light flash two, three, or four times.

Note: In this case, a flash is considered to be 1/4 second or 250 ms or greater in length.

Caution: To remove or reinstall the core from the enclosure, to install or reinstall memory, to understand and follow the Electrostatic Discharge (ESD) procedures and the general set up of the cube, please refer to the following materials:

- "Working Inside Your Computer" chapter, "Installing Memory" section in the "About the Power Mac G4 Cube" owners manual
- Installation Instructions web page on the Apple Support web site located at: http://www.info.apple.com/support/cip/g4cubecip.html

This article covers repair procedures for authorized service providers on selected Apple products, but we have published them in the Knowledge Base for the general public for educational purposes. At this time, there are a limited number of repairs that customers can perform. These are documented under the customer installable parts program at http://www.info.apple.com/installparts/.

If you have not been authorized to perform these procedures, please contact Apple (800-APL-CARE in the United States) or your local authorized service provider to schedule a repair.

If you do not hear a startup sound, the power-on light will flash as explained below:

Two Flashes: No memory is installed or detected.

If memory is installed, ensure it is seated properly, as follows:
1. Shut down the computer by holding down the power button (about 5 sec.) until it shuts off. Then disconnect the power cord from the computer.
2. Remove the computer core.
3. Rotate the core so you can see the memory.
4. Eject and reinsert the memory to ensure the memory is seated properly.
5. After reseating the memory, replace the core in the enclosure.
6. Plug in all the cables, and turn on the computer.
7. If the light still flashes, contact Apple Support for assistance.

If no memory is installed, install compatible memory, as follows:
1. Shut down the computer by holding down the power button (about 5 sec.) until it shuts off. Then remove the power cord from the computer.
2. Remove the computer core.
3. Rotate the core so you can see the memory slots.
4. Install compatible memory. Refer to the Power Mac G4 Cube owner's manual, which discusses the type of memory that is compatible with the computer. You can also refer to http://www.apple.com/guide/, and article 58776: "**Power Mac G4 Cube: Memory Specifications**".
5. After installing memory, replace the core in the enclosure.
6. Plug in all the cables, and turn on the computer.
7. If the light still flashes, contact Apple Support for assistance.

Three Flashes: Incompatible memory types are installed (for example both SDRAM and EDO installed).

Install compatible memory, as follows:
1. Shut down the computer by holding down the power button (about 5 sec.) until it shuts off. Then remove the power cord from the computer.
2. Remove the computer core.
3. Rotate the core so you can see the memory slots.
4. Install compatible memory. Refer to the Power Mac G4 Cube owner's manual which discusses the type of memory that is compatible with the computer. You can also refer to http://www.apple.com/guide/, and article 58776: "**Power Mac G4 Cube: Memory Specifications**".
5. After installing memory, replace the core in the enclosure.
6. Plug in all the cables, and turn on the computer.
7. If the light still flashes, contact Apple Support for assistance.

Four Flashes: No memory banks passed memory testing.

Either the memory or the memory slots need replacement, as follows:
1. Shut down the computer by holding down the power button (about 5 sec.) until it shuts off. Then remove the power cord from the computer.

2. Remove the computer core.
3. Rotate the core so you can see the memory.
4. Remove all the memory.
5. Check to make sure there are no bent pins in the memory slots.
6. If there are bent pins, contact Apple Support for assistance.
7. This step covers a repair procedure for Apple Authorized Service Providers. At this time, there are a limited number of repairs that a customer can perform and these are covered under the customer installable parts program http://www.info.apple.com/installparts/. If you have not been authorized to perform these procedures, please contact Apple (800-APL-CARE in the United States) or your local authorized service provider to schedule a repair.

If there are no bent pins, reset the logic board as follows:
a. Remove the video card and video riser card from the logic board.
b. Replace the video riser card back in its slot.
c. Locate the reset button (S1) on the logic board, shown in Figure 1.

Figure 1 Power Mac G4 Cube logic board

d. Wait 10 seconds, then press S1 once. Do **NOT** press the reset button a second time.

8. Reinstall memory, and replace the core in the enclosure.
9. Plug in all the cables, and turn on the computer.
10. If the light still flashes, replace the memory modules.
11. If the light still flashes, call Apple Support for further assistance

Published Date: Oct 7, 2016

Apple DVD Player: Distorted Video When Played Through VCR

The Macrovision copy protection included with most commercial DVD videos can cause distortion, including varying brightness, when the Macintosh video output is connected to a television through a VCR.

This article has been archived and is no longer updated by Apple.

Symptom

The video for the movie may appear to get brighter and then darker while the movie is playing. Sometimes colors appear to be mismatched

Solution

There is nothing wrong with the computer or the DVD.

Macrovision copy protection is designed to deter unauthorized recording of copyrighted materials. As a part of the Macrovision system, VCRs interpret the security codes from the DVD video. This causes the video signal to degrade. The most common symptom is the brightness of the video apparently pulsing bright and dark over the course of viewing. Other visual degradation may also occur.

Since the circuit that triggers the Macrovision security is within the VCR, the solution is to connect the video cable directly to the television.

If the TV has only a Radio-Frequency (RF) or coaxial-cable type connector and does not have a composite video or S-video type connector, then you would need an RF modulator. RF modulators can be found at most electronics stores.

A standalone DVD player will also experience the same symptoms and would require a direct connection to the TV or an RF modulator to avoid the Macrovision protection.

Additional Information

Refer to Knowledge Base article 16536: "**MultiMedia Glossary: A-F (1 of 3)**" for definitions of some of the terms used in this article.

For more information on Macrovision technology refer to their web site at http://www.macrovision.com/.

Published Date: Oct 7, 2016

Mac OS 9: Cannot Initialize Zip Disk Using DOS Format

After updating to Mac OS 9.1 or later the option to format a Zip disk in DOS format may no longer appears in the Format Options menu of the Iomega Tools application.

This article has been archived and is no longer updated by Apple.

Symptom

The option to format a Zip disk in DOS format no longer appears in the Format Options menu of the Iomega Tools application.

Solution

Upgrade to IomegaWare 3.0.4 or later and use the Iomega Tools application to format Zip disks as DOS. IomegaWare 3 is available for Mac OS 9 from the Iomega Web site (http://www.iomega.com/software/ioware3mac.html).

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

The following document can help you search for a particular vendor's address and phone number
Document 17159: "**Locating Vendor Information**"

Published Date: Oct 7, 2016

iMac (Early 2001): Technical Specifications

This article provides the technical specifications for the iMac (Early 2001) computer introduced February, 2001.

This article has been archived and is no longer updated by Apple.

Processor and memory

- 400 MHz, 500 MHz or 600 MHz PowerPC G3 processor
- 512K backside level 2 cache at 160 MHz (400 MHz system); or 256K on-chip level 2 cache at full processor speed (500 MHz and 600 MHz systems) (See Note 5.)
- 100 MHz system bus
- 64 MB or 128 MB of PC100 or PC 133 SDRAM; two DIMM slots support up to 1 GB using 64 MB, 128 MB, 256 MB, or 512 MB DIMMs

Keyboard and mouse

- Apple Pro Keyboard with full-size function and navigation keys, audio controls, and media-eject key
- Apple Pro Mouse with optical sensor for precision cursor control

Display

- Built-in 38 cm shadow-mask CRT (35 cm diagonal viewable image size); 0.28 mm dot pitch
- Onscreen geometry adjustment to keep display images properly aligned throughout its lifetime
- Theater Mode for enhanced brightness of full-screen video
- Flip foot for 17° tilt

Graphics support

- ATI RAGE 128 Pro graphics accelerator with 8 MB of SDRAM or ATI RAGE 128 Ultra graphics accelerator with 16 MB of SDRAM; AGP 2X support
- Screen resolutions: 640 by 480 pixels at 117 Hz, 800 by 600 pixels at 95 Hz, and 1024 by 768 pixels at 75 Hz
- 24-bit true color at all resolutions for displaying millions of colors

Video

- Standard VGA output port (15-pin mini D-Sub connector)
- Support for video mirroring: external devices display an image identical to that shown on the built-in display

Communications

- Built-in 56K V.90 modem (RJ-11 connector)(See Note 2.)
- 10/100BASE-T Ethernet (RJ-45 connector)
- Optional 11Mbps AirPort Card; IEEE 802.11 DSSS compliant (See Note 3.)
- Optional AirPort Base Station with 56K modem and 10BASE-T Ethernet port (See Note 3.)

Peripheral connections

- Two USB ports on computer (12 Mbps each; one used for keyboard); two USB ports on keyboard (12 Mbps each; one used for mouse)
- Two 400 Mbps FireWire (IEEE 1394) ports (See Note 4) ; includes 4-pin-to-6-pin FireWire cable for connecting DV camera

Audio

- Integrated high-performance Odyssey audio system by Apple and Harman Kardon
- Built-in microphone for speech recognition and audio recording
- Front-mounted dual mini headphone jacks (headphones not included)
- Analog audio input and output minijacks; up to 16-bit stereo and 44.1kHz sampling rate
- Support for external USB audio devices
- **Storage**
- 10 GB, 20 GB, or 40 GB Ultra ATA hard disk drive (See Note 1.)

- Slot-loading 24x (maximum) CD-ROM drive (reads CD at 24x speed); or 8x4x24x (maximum) CD-RW drive (writes CD-R at 8x speed, writes CD-RW at 4x speed, reads CD at 24x speed)
- Support for external FireWire and USB storage devices

Electrical requirements and agency approvals

- Line voltage: 100 V to 260 V AC
- Frequency: 47 Hz to 63 Hz, single phase
- Maximum continuous power: 150 W
- U.S. EPA ENERGY STAR compliant

Environmental requirements

- Operating temperature: 10 °C to 35 °C
- Storage temperature: -47 °C to 47 °C
- Relative humidity: 5 to 95 percent noncondensing
- Altitude: 0 m to 3000 m

Size and mass (weight)

- Height: 381 mm
- Width: 381 mm
- Depth: 435 mm
- Mass: 15.8 kg

Notes:

1. For hard drive capacity measurements, 1 GB = 1 billion bytes; actual formatted capacity less.

2. Actual modem speeds lower; speed depends on connection rate and other factors.

3. Wireless Internet access requires AirPort Card, AirPort Base Station, and Internet access (fees may apply). Some ISPs are not currently compatible with AirPort, including America Online. Range may vary with site conditions.

4. Actual rates will vary.

5. 500 Mhz models outside North America have 512K backside level 2 cache at 200 Mhz.

Note: Wireless internet access requires an internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590. "**AirPort: Requirements for Wireless Internet Access".**

Published Date: Oct 11, 2016

Power Mac G4 Cube: Troubleshooting: Mouse: Pointer Does Not Move With the Mouse

This article explains how to troubleshoot a Power Mac G4 Cube computer when the pointer does not move with the Apple Pro Mouse when the computer is turned on.
This article has been archived and is no longer updated by Apple.

Symptom

At system startup time, the pointer does not move with the Apple Pro Mouse.

Solution

1. Disconnect and reconnect the mouse securely to the keyboard.
2. If the mouse is connected to keyboard, connect the mouse to one of the USB ports on the computer instead. If the mouse works, replace the keyboard.
3. Start up from the Software Restore disc or use the Extensions Manager control panel to start up the computer with the Mac OS All 9.x extensions set. If OK, troubleshoot extensions. If the pointer doesn't move, replace the mouse.
4. Disconnect all third-party USB devices. If the symptom is resolved, the mouse is OK and the issue is with one of the third-party USB devices. Reconnect each USB device until the issue reappears. Refer to the third-party USB company for compatibility information.
5. One or both USB ports may be causing the symptom. Contact Apple to schedule a service repair.

Published Date: Oct 7, 2016

Macintosh Manager: Client Login Troubleshooting

This article discusses how to troubleshoot Macintosh Manager/Multiple Users client computers that are having difficulty logging in. This article assumes that the client computer displays the log in screen.
This article has been archived and is no longer updated by Apple.
1. Be sure that all of your software is up to date. Please refer to article 58821: "**Macintosh Manager: Recommended Software Versions**".

2. Extensions isolation.

a) Mac OS 9 clients: Set the Extensions Manager to "Mac OS 9.x All", restart to test the issue (this set includes the necessary Macintosh Manager/Multiple Users software.)
b) Mac OS 7.6.1/8.x clients: Set the Extensions Manager to "Mac OS All" and then duplicate the set. Enable the Macintosh Manager 1.3 package and restart to test again (for more information on extensions packages, refer to article 30929: "**Mac OS: Extension Conflict Troubleshooting/Extensions Manager Features"**).

Note: Customers using Mac OS 8.1 on client computers should refer to article 25080: "**Macintosh Manager: Unable to Start the Requested Environment Message**".

3. Determine if the issue is Client or Server specific.

a) If all Macintosh Manager clients are affected, it is likely to be a Server specific issue. Create a new test user and test workgroup and retest the issue. If you are still unable to log in, then follow the Network Troubleshooting steps in step 5.
b) If specific clients are affected, it is likely to be a Client specific issue addressed in step 4.

4. Drag relevant preferences to the Trash. Use the list below to determine which apply to your configuration:

Macintosh Manager clients

Drag the following items to the Trash:
ClientStartupDisk: System Folder: Preferences: Multiple-Users:
ClientStartupDisk: System Folder: Preferences: Macintosh Manager Prefs
ClientStartupDisk: System Folder: Preferences: Client Prefs

Multiple Users clients

Drag the following items to the Trash:

- ClientStartupDisk: System Folder: Preferences: Multi-User Items:
- ClientStartupDisk: System Folder: Preferences: Multi-User Prefs

Note: Macintosh Manager clients mean they bind to a Macintosh Management Server. Multiple Users clients mean they do not bind to a Macintosh Management Server but rather use local databases. When deleting local preferences (only for Multiple Users clients), some reconfiguring of the Multiple Users control panel is needed to continue testing the issue.

If deleting the preferences listed above did not resolve the issue, then drag the following items from the client's Preferences folder inside the System Folder to the Trash:

- AppleTalk Preferences
- TCP/IP Preferences
- AppleShare Prep

5. Check Network connections.

a) Verify network connectivity from System Access. Check AppleTalk and TCP/IP connectivity while in System Access. If you do not have network connectivity issues and this is a Client-specific issue, skip to step 6. If you do not have network connectivity issues and this is a Server-specific issue, then follow the steps in article 88023: "**Macintosh Manager: Recovering an Unusable Database**". If you do have network connectivity issues, proceed to step 5b.
b) Verify your Network settings, making sure you have proper subnet masks and the router/gateway address is in your subnet. Take note if your clients use DHCP or have static IP addresses. Also note your interface setting (AirPort or Ethernet or Ethernet slot x).
c) Be sure Spanning Tree Protocol is disabled as described in article 30922: "**Spanning Tree Protocol: AppleTalk Issues**".
d) Be sure to use Category 5 (Cat 5) Ethernet cable for proper 100-BaseT connections. Try swapping out with known good Ethernet cables. Also, try using another node (port) on your hub or switch.

6. If issue persists, additional software troubleshooting is required as follows:

a) Remove and reinstall Macintosh Manager on the affected client computers.
b) Remove and reinstall the AppleShare client software on the affected client computers.
c) Remove and reinstall Open Transport on the affected client computers.

7. If this is a client specific issue and none of the above steps have resolved it, perform a clean installation on the affected computers.

Published Date: Feb 20, 2012

Macintosh Manager: Recommended Software Versions

This document outlines the versions of Macintosh Manager and other related Apple software that should be used for Macintosh Management/Multiple Users environments.

This article has been archived and is no longer updated by Apple.

Macintosh Manager 1.0 to 1.4.1

The following table documents all the relevant software and versions:

Mac OS Version	Component Software Version	Download and Update
Mac OS 7.6.1	Macintosh Manager 1.4.1	Yes
	AppleShare Client 3.8.3	Yes
	Open Transport 1.1.2	Yes
	LaserWriter 8.6	Yes
Mac OS 8.1	Macintosh Manager 1.4.1	Yes
	AppleShare Client 3.8.6	Yes
	Open Transport 1.3.1	Yes
	LaserWriter 8.6	Yes
Mac OS 8.5.x	(update to Mac OS 8.6)	
Mac OS 8.6	Macintosh Manager 1.4.1	Yes
	AppleShare Client 3.8.8	Yes
	Open Transport 2.0.3 or 2.6	See technical document 58805: "**Open Transport 2.6 Document and Software**"
	LaserWriter 8.6.5	Ships with Mac OS 8.6
Mac OS 9.0.x	Update to OS 9.0.4	
Mac OS 9.0.4	Macintosh Manager 1.4.1	Yes
	AppleShare Client 3.8.8	Yes
	Open Transport 2.6	Yes
	LaserWriter 8.7	Included with Mac OS 9.0.4
Mac OS 9.1	Multi-User Startup 1.4.1	Yes
	AppleShare Client 3.8.8	Included with Mac OS 9.1
	Open Transport 2.7.4	Included with Mac OS 9.1
	LaserWriter 8.7	Included with Mac OS 9.1
Mac OS 9.2	Update to Mac OS 9.2.2	
Mac OS 9.2.2	Macintosh Manager 1.4.1	Included with Mac OS 9.2.2 but not automatically installed when using Software Update
	AppleShare Client 3.9.2	Included with Mac OS 9.2.2

	Open Transport 2.7.9	Included with Mac OS 9.2.2
	LaserWriter 8.7.1	Included with Mac OS 9.2 or later

Note: AppleShare Clients 3.8.6 and 3.8.8 require Keychain, which is part of Mac OS 9, to save name and password for automatically connecting to server volumes at startup. Mac OS 8.1 through 8.6 users who rely on this feature can use AppleShare Client 3.8.3 instead.

Macintosh Manager 2.0 and later

The following table documents all the relevant software versions for Macintosh Manager 2 clients.

Note: Clients should not be updated before the server is updated to Mac OS X Server 10.0.3 or later, which includes Macintosh Management Server 2.0 or later. Unless you have a specific reason not to update, you should use the latest versions of software listed for which your computers meet system requirements., currently Mac OS X Server 10.1.1 and Macintosh Manager 2.1.

Mac OS Version	**Component Software Version**	**Download and Update**
Mac OS 8.1	Macintosh Manager 2.1.1	Yes
	AppleShare Client 3.8.7 or 3.8.8	Macintosh Manager 2.1.1 installs 3.8.7 on computers with 68000-family microprocessors and 3.8.8 on computers with PowerPC microprocessors.
	Open Transport 1.3.1	Yes
	LaserWriter 8.6	Yes
Mac OS 8.5 to 8.5.1	Update to Mac OS 8.6	
Mac OS 8.6	Macintosh Manager 2.1.1	Yes
	AppleShare Client 3.8.8	Yes
	Open Transport 2.0.3 or 2.6	See technical document 58805: "**Open Transport 2.6 Document and Software**"
	LaserWriter 8.6.5	Included with Mac OS 8.6
Mac OS 9 to 9.0.3	Update to Mac OS 9.0.4 or later	
Mac OS 9.0.4	Macintosh Manager 2.1.1	Yes
	AppleShare Client 3.8.8	Yes
	Open Transport 2.6	Yes
	LaserWriter 8.7	Inluded with Mac OS 9.0.4
Mac OS 9.1	Macintosh Manager 2.1.1	Yes
	AppleShare Client 3.8.8	Included with Mac OS 9.1
	Open Transport 2.7.6	Yes
	LaserWriter 8.7	Included with Mac OS 9.1
Mac OS 9.2	Update to Mac OS 9.2.2	

Mac OS 9.2.2	Macintosh Manager 2.1.1	Yes
	AppleShare Client 3.9.2	Included with Mac OS 9.2 or later
	Open Transport 2.7.9	Included with Mac OS 9.2 or later
	LaserWriter 8.7.1	Included with Mac OS 9.2 or later

Related Documents

25104 Macintosh Manager: Compatible Versions and Configurations

Published Date: Oct 7, 2016

DVD Studio Pro 1.1: QuickTime Pro Registration

Learn how to register QuickTime Pro using the information included with DVD Studio Pro 1.1.

This article has been archived and is no longer updated by Apple.

The DVD Studio Pro 1.1 package contains an inbox notice titled "Read This Before Installing DVD Studio Pro." This notice describes how to register QuickTime Pro. A software serial number sticker is attached to the upper right corner of the notice. The sticker has two identical QuickTime Pro serial number labels. Apple suggests placing one label on the inside front cover of the product manual and the second in another safe place.

Unlocking QuickTime Pro

After you've installed QuickTime Pro on your computer, use the registration name and registration number on the label to unlock the extended multimedia capabilities of QuickTime Pro.

To unlock QuickTime Pro , follow these steps:

1. Open the QuickTime Settings control panel.
2. Choose Registration from the pop-up menu.
3. Click Enter Registration.
4. Enter the registration information exactly as it appears on the software serial number label. The content of the "Registered to" field is specific to the version of QuickTime being installed.
    - If you are upgrading QuickTime 4, in the "Registered to" field type "QuickTime 4 Pro".
    - If you are upgrading QuickTime 5, in the "Registered to" field type "QT5 for DVD Studio Pro 1.1".
    - If you are upgrading QuickTime 6, in the "Registered to" field type "QT6 for DVD Studio Pro 1.1".
    - In the "Registration Number" field, type the registration number listed on the software serial number label.

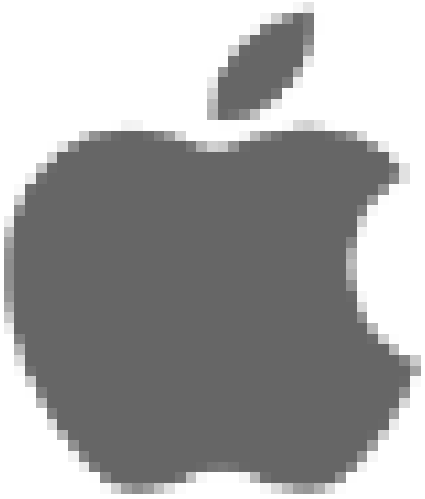

Figure 1 QuickTime control panel registration

5. Click OK.

6. Close the QuickTime Settings control panel.

If a message says the registration information is not valid, follow steps four through five again. When you enter the registration number, make sure you type a 0 for the numeral zero.

Note: The QuickTime Pro registration number that comes with DVD Studio Pro is also valid for QuickTime 5 or QuickTime 6 depending on which version of QuickTime was included with the DVD Studio Pro CD you received.

TA26084_DVD_Studio_Pro_QuickTime_Pro_Registration.pdf

For the latest information on updates and new versions, visit the DVD Studio Pro Web site.

Published Date: Oct 7, 2016

Mac OS X 10.0: Cameras and Devices That Work With Image Capture

Image Capture is Apple's image acquisition framework and application for Mac OS X. This article discusses what kinds of devices Image Capture will work with and how to determine if your camera or card reader is compatible.

This article has been archived and is no longer updated by Apple.

Note: This article applies to Mac OS X 10.0 to 10.0.4. If you have updated to Mac OS X 10.1, please see technical document 106523: "**Mac OS X 10.1: Cameras and Devices Compatible With Image Capture**"

Digital cameras use a variety of protocols for transferring data to your computer. Some are industry standard (such as PTP). Others are proprietary to a particular camera or company. Listed below are the five categories of devices that work with Image Capture (PTP, Digita, Mass Storage, Custom, and Card Readers) and the devices that Apple has successfully tested.

Note: The cameras listed in this article are cameras Apple has successfully tested with Image Capture. Your camera may still be compatible even though it is not listed. Check with the vendor of the camera to find out which transfer protocol it uses, or obtain a card reader compatible with Image Capture.

PTP (Picture Transfer Protocol)

- Kodak DC 4800
- Kodak mc3
- Sony DSC-S75

Note: Image Capture may have difficulty recognizing the Kodak DC 4800 camera if the Classic environment is open.

Digita

- Kodak DC 220, 260, 265, 290
- HP PhotoSmart 618, 912 (works with dual mode: Digita and Mass Storage)

Note: Image Capture may have difficulty recognizing Digita cameras if the Classic environment is open.

Mass Storage

- HP PhotoSmart 618, 912 (works with dual mode: Digita and Mass Storage)
- Panasonic SuperDisk
- Toshiba PDR-M4, M5, M70
- Fuji FinePix 1400, 2400, 40i
- HP PhotoSmart 315

Custom

Some camera makers may have made a custom plug-in for Image Capture. Contact the camera vendor to see if Image Capture plug-in module is available.

Card Readers

- SanDisk (USB)
- Sony Memory Stick Reader (USB)

Note: This article provides information about non-Apple products. Apple, Inc. is not responsible for its content and mention of this product should

not be interpreted as a recommendation by Apple. Please contact the vendors for additional information.

Published Date: Feb 20, 2012

Mac OS 9: Enabling/Disabling CD AutoPlay

This article explains how to enable or disable Audio CD AutoPlay when the CDStrip Control Strip Module is not installed. When AutoPlay is enabled, audio CDs begin playing as soon as they are inserted into the CD or DVD drive.
This article has been archived and is no longer updated by Apple.
CD AutoPlay can be enabled or disabled by using the CD portion of the Control Strip. However, computers that come with iTunes installed on the hard disk no longer use the CDStrip Control Strip module (CSM). The iTunes Strip CSM has replaced the CDStrip module but it does not allow you to disable Audio CD AutoPlay.

To enable or disable Audio CD AutoPlay follow these steps:

1. Open the QuickTime Settings control panel.
2. Choose AutoPlay from the pop-up menu.
3. Select or deselect the "Enable Audio CD AutoPlay" option.

Published Date: Feb 20, 2012

Apple ADC Displays: Will Not Turn Off Independent of Computer

Pressing the power button on an Apple display with Apple Display Connector (ADC), will put the computer and display to sleep. It is not possible to turn off the display and leave the computer on.

This article has been archived and is no longer updated by Apple.

Symptom

If the option "Pressing power button puts computer to sleep" is enabled in the Energy Saver control panel, touching the display's touch switch will put the computer and monitor to sleep.

If the option "Pressing power button puts computer to sleep" is not enabled in the Energy Saver control panel, touching the display's touch switch will not put the computer and monitor to sleep.

Solution

It is not possible to turn off the display and leave the computer on. If you wish to reduce the energy use of the display, use the Energy Saver control panel to adjust the time before the display goes to sleep.

To allow the display to sleep separately from the computer, follow these steps:

1. Open the Energy Saver control panel.
2. Click Sleep Setup.
3. Click the checkbox to turn on "Separate timing for display sleep."
4. Drag the slider to select the time for display sleep.
5. Close the Energy Saver control panel.

For more information on the Touch Switch, please see article 58671: "**Apple Studio Display LCD (ADC): Information on Touch Switch**"

Published Date: Feb 20, 2012

iMac (Early 2001): How to Identify an iMac With Elo iTouch Touchscreen

This article explains how to tell if an Elo iTouch touchscreen is installed on an iMac computer.

This article has been archived and is no longer updated by Apple.

You can tell if an Elo iTouch touchscreen is installed on an iMac computer by looking in two places:

1. The internal Elo board plugs into one of the computer's USB ports.
2. The computer has an Elo sticker on its bottom, as shown in Figure 1.

Figure 1 Elo product ID label

Important: Elo iTouch touchscreens use special transducers connected to the iMac CRT. As a result, any service that requires removal of the inner CRT bezel should be performed only by Elo Touchsystems.

You may contact Elo Technical Support at:
Toll-free: 800-557-1458, ext 4607 in Canada and the United States.
Corporate Switchboard + 1 510 739 4600
Email: elotech@elotouch.com
Web: http://www.elotouch.com

Published Date: Oct 7, 2016

iMac (Summer 2001): Technical Specifications

This article provides information on the iMac (Summer 2001) introduced in July, 2001.

This article has been archived and is no longer updated by Apple.

Technical Specifications

Processor and memory

500MHz, 600MHz or 700MHz PowerPC G3 processor with 256K on-chip level 2 cache

100MHz system bus

128MB or 256MB of PC100 SDRAM; two DIMM slots support up to 1GB using 128MB, 256MB, or 512MB DIMMs

Keyboard and mouse

Apple Pro Keyboard with full-size function and navigation keys, audio controls, and CD-eject key

Apple Pro Mouse with optical sensor for precise cursor control

Display

Built-in 15-inch shadow-mask CRT (13.8-inch diagonal viewable image size); 0.28-mm dot pitch

Onscreen geometry adjustment to keep display images properly aligned throughout its lifetime

Theater Mode for enhanced brightness of full-screen video using iMovie or QuickTime Player

Flip foot for 17° tilt

Graphics support

ATI RAGE 128 Ultra graphics accelerator with 16MB of SDRAM graphics memory; AGP 2X support

Three crisp, flicker-free screen resolutions: 640 by 480 pixels at 117 Hz, 800 by 600 pixels at 95 Hz, and 1024 by 768 pixels at 75 Hz

24-bit true color at all resolutions for displaying millions of colors

Video

Standard VGA output port (15-pin mini D-Sub connector)

Support for video mirroring: external devices display an image identical to that shown on the built-in display

Communications

Built-in 56K V.90 fax/modem (RJ-11 connector)(2)

10/100BASE-T Ethernet (RJ-45 connector)

Support for optional 11Mbps AirPort Card; IEEE 802.11 DSSS compliant (3)

Support for optional AirPort Base Station with 56K fax modem and 10BASE-T Ethernet port (3)

Peripheral connections

Two USB ports (12 Mbps each) on computer; two USB ports on keyboard

Two 400Mbps FireWire (IEEE 1394a) ports(4); includes 4-pin-to-6-pin FireWire cable for connecting DV camera

Audio

Integrated high-performance Odyssey audio system by Apple and Harman Kardon

Built-in microphone for speech recognition and audio recording

Front-mounted dual mini headphone jacks (headphones not included)

Analog audio input and output minijacks; up to 16-bit stereo and 44.1-kHz sampling rate

Support for external USB audio devices

Storage

20GB, 40GB, or 60GB Ultra ATA hard disk drive (1)

Slot-loading 8x4x24x (maximum) CD-RW drive (writes CD-R discs at 8x speed, writes CD-RW discs at 4x speed, reads CDs at 24x speed)

Support for external FireWire and USB storage devices

Electrical requirements and agency approvals

Line voltage: 100V to 260V AC

Frequency: 47 to 63 Hz, single phase

Maximum continuous power: 150W

Meets ENERGY STAR requirements

Environmental requirements

Operating temperature: 50° to 95° F (10° to 35° C)

Storage temperature: -40° to 116° F (-40° to 47° C)

Relative humidity: 5% to 95% noncondensing

Maximum altitude: 10,000 feet

Size and weight

Height: 15.0 inches (38.1 cm)

Width: 15.0 inches (38.1 cm)

Depth: 17.1 inches (43.5 cm)

Weight: 34.7 pounds (15.8 kg)

Notes:

1) For hard drive capacity measurements, 1GB = 1 billion bytes; actual formatted capacity less.
2) Actual modem speeds lower; speed depends on connection rate and other factors.
3) Wireless internet access requires an internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590. "**AirPort: Requirements for Wireless Internet Access".**
4) Actual rates will vary.

5) The parenthetical product description (Summer 2001) refers to the summer of the Northern Hemisphere.

Published Date: Oct 7, 2016

Apple Displays: Do Not Use Display Cable Extensions

You should not extend the length of the display cable used on Apple displays with an Apple Display Connector.

This article has been archived and is no longer updated by Apple.

You should not extend the length of the display cable used on Apple displays with an Apple Display Connector. Apple does not sell or endorse the use of any such extensions.

Published Date: Oct 7, 2016

Power Mac G4 (QuickSilver): Late Breaking News

This article consists of the Late Breaking News document included on the hard drive of the Power Mac G4 (QuickSilver) computer.

Using your Power Mac G4

1. Playing audio CDs
2. Important information about system sleep
3. Using your computer with a NetBoot Server
4. Using Easy Access with virtual memory in Mac OS 9
5. Using older Macintosh USB keyboards
6. Apple DVD Player
7. Recording media on CDs
8. Recording media on DVDs
9. Updating software
10. Installing Mac OS X server software

Third-party software issues

11. Using the internal modem
12. Using Palm HotSync Manager

Hardware compatibility issues

13. Opening the optical drive with third-party keyboards

This article has been archived and is no longer updated by Apple.

About your Power Mac G4

This document contains important late-breaking information about your computer. For additional information, see the other sections of Mac Help or go to the Apple Support Web site on the Internet at www.apple.com/support

Using your Power Mac G4

Playing audio CDs

You can use iTunes, in the Applications folder, to play audio CDs, import songs, create playlists, listen to Internet radio, and more. The AppleCD Audio Player and the CDStrip Control Strip module for Mac OS 9 are in the CD Extras Folder on the Software Install CD.

Important information about system sleep

Certain system settings may prevent your computer from going to sleep. You may notice that the screen dims and the sleep indicator light pulses, but the internal fan still runs.

Many communications programs, such as PPP, Apple Remote Access, and other dialup programs, monitor the computer's modem port to check for incoming transmissions when set to auto-answer incoming calls. This may prevent the computer from going into sleep completely.

If the Configure pop-up menu in the TCP/IP control panel (Mac OS 9) is set to Using DHCP Server, your computer may not sleep when your Web browser or email application is open or a file server is mounted on your desktop. Quit these applications and unmount file servers when they are not being used.

The Palm Desktop HotSync function may prevent your computer from going to sleep. To turn off the HotSync function, open Palm Desktop and choose Setup from the HotSync menu. Then click the Disabled button and verify that the "Enable HotSync software at system startup" checkbox is not selected. Turn HotSync back on when you want to synchronize with your Palm-compatible device.

If you use fax software, such as FAXstf, and the software is set to auto-answer, your computer may not sleep completely. The screen will dim (instead of turn off). To allow your computer to sleep, disable auto-answering. To disable auto-answering in FAXstf, open FaxBrowser and choose Settings from the Edit menu. Then choose the FaxModem icon and choose Never from the Answer On pop-up menu.

Note: If you connect a USB device while the computer is in sleep, your computer wakes.

Using your computer with a NetBoot Server

If you want to use your computer as a NetBoot client, you may need to update the system software on the NetBoot Server. Check the Mac OS X Server Web site at www.info.apple.com/support/macosxserver

Using Easy Access with virtual memory in Mac OS 9

The Easy Access control panel doesn't work with virtual memory turned on. Before using the Easy Access feature, open the Memory control panel and turn virtual memory off.

Using older Macintosh USB keyboards

You can use the Power button on older Apple USB keyboards to turn on your computer when it is connected to a USB port on your computer. You cannot use it to turn on your computer when the keyboard is connected to a USB hub or to a USB port on your monitor. You can also turn on the computer using the Power button on the computer. If you have an Apple Display with an ADC connector, you can also use the power button on the front of the display.

Apple DVD Player

If your computer has an optical drive with DVD playback capabilities and Multiple Users is enabled (through the Multiple Users control panel in Mac OS 9), Apple DVD Player will open automatically when you start up your computer in Mac OS 9. To prevent this, open the Extensions Manager control panel and turn off the DVD AutoLauncher extension. To play a DVD video, open the Apple DVD Player (in the Apple menu).

For information on optimal system settings for DVD playback, see the Apple DVD Player Read Me file located in the Apple DVD Player folder inside the Applications (Mac OS 9) folder on your hard disk.

Recording media on CDs

Use CD-R and CD-RW media with a 74-minute media capacity. You cannot record on "High-Speed" (greater than 4X) CD-RW media, although your drive can read these discs. You can record on high-speed CD-R discs. When handling discs, be careful not to leave fingerprints, place other materials on the discs, or add labels to the discs that may cause them to become unbalanced when spinning.

Use CD-R discs for recording audio CDs, because most audio CD players cannot read CD-RW discs. See technical document 58785 "**Macintosh: "Problem With Target Device. Error Code -7932" Alert**".

Recording media on DVDs

Use DVD-R General media with a 4.7 GB media capacity. Your drive doesn't support DVD-R Authoring media. Some DVD-R/CD-RW drives cannot read DVD-RAM discs and will eject them. When handling discs, be careful not to leave fingerprints, place other materials on the discs, or add labels to the discs that may cause them to become unbalanced when spinning.

Updating software

Use Software Update to ensure that you have the latest software versions, drivers, bug fixes, and other updates. In Mac OS X, open System Preferences and click Software Update. In Mac OS 9, choose Control Panels from the Apple menu, then choose Software Update from the submenu and click Update Now. You can also see the Apple Support Web site on the Internet for the latest troubleshooting information and software updates: www.apple.com/support

Installing Mac OS X server software

If you are installing Mac OS X server software on your computer, you need to install the Power Mac G4 Support application from the Mac OS X Install CD that came with your computer. For details, see the Read Before You Install document in the Mac OS X Server Support folder (in the Welcome to Mac OS X folder) on the Mac OS X Install CD.

Third-party software issues

Using the internal modem

Some communications software, such as FAXstf and Total Access, provide different modem selection preferences from those in the Modem control panel. To ensure the fastest possible connection speed, select Apple Internal 56K Modem (V.90) in the Modem control panel.

Using Palm HotSync Manager

If you attempt to make a connection and a sync fails or doesn't complete, set the connection speed to a lower setting. To do this, open HotSync Manager. Click the Serial Port Settings tab. In the Local Setup section, select 19200 as the speed.

Hardware compatibility issues

Opening the optical drive with third-party keyboards

If you use a keyboard that doesn't have a Media Eject key, you can assign a key to open and close the optical drive. Follow the instructions in your manual to start up your computer in Mac OS 9. Then follow the instructions in the Read Me in the Eject Extras folder located in the Apple Extras folder (in the Applications folder).

Published Date: Oct 7, 2016

Power Mac G4: How to Turn the Computer On and Off

The Apple Pro Keyboard does not have a Power button to turn on a computer. This article explains how to turn a Power Mac G4 computer on and off.
This article has been archived and is no longer updated by Apple.
There are two ways to turn the Power Mac G4 computer on and off:

- Press the power button on the computer
- Press the power button on one of these displays:
  - Apple Studio Display 17 (LCD)
  - Apple Cinema Display (ADC)
  - Apple Studio Display LCD (ADC)
  - Apple Studio Display 17 (ADC)
  - Apple Cinema HD Display

The power button on the Power Mac G4 Cube computer and the displays listed above can sense when you touch them with your finger. Refer to Figures 1 and 2 for the location of these buttons.

Touch the power button with the flat part of your finger and hold it there briefly. The switch gently flashes when you touch it.

Figure 1 Display power button

Figure 2 Power Mac G4 Cube power button

Note: The power button on other Power Mac G4 computers is mechanical and you must press to activate them.

To turn off the computer without choosing Shut Down, press the power button until the shut down dialog box appears on screen, then click Shut Down.

Published Date: Oct 7, 2016

Apple Displays: Touch Switches Don‘t Work Properly

This document lists troubleshooting steps you can try when the touch switches on an Apple display with an Apple Display Connector (ADC) don't work properly.

This article has been archived and is no longer updated by Apple.

Symptom

An Apple display with an Apple Display Connector (ADC) exhibits one or more of the following symptoms:

- Unable to turn on the display using the display's touch switch
- Display turns on then off
- Unable to open the System Preferences pane using the Launch touch switch
- USB devices don't work when plugged into the display's USB ports

Solution

1. Make sure the display cable is securely connected to the computer's video card. Turn on the computer to see if the symptom is gone. If not, continue with step 2.

2. Disconnect the display cable from the computer's video card.

3. Examine the Apple Display Connector on the display cable. Look for and carefully straighten any bent pins. Do not plug the display cable into the video card yet.

Figure 1 Apple Display Connector on display cable

4. Examine the Apple Display Connector on the video card. Look for any bent pins. Do not try to straighten them. Look for damage to the plastic housing surrounding the video pins.

Figure 2 Example of bent pins on a video card's Apple Display Connector

5. If you do not see any damage to the Apple Display Connector on the video card, reconnect the display cable. Turn on the computer to see if the symptom is gone.

6. If the symptom persists, or if the video card has bent pins, or its plastic housing is damaged, contact Apple or an Apple Authorized Service Provider for further assistance.

Note: Touch switches on some Apple displays can be disabled through the software. If the touch switches light up when touched but no action takes place, review technical document 58813, "**LCD Displays: How to Disable Touch Switch**" to determine whether the touch switches have been disabled.

Warning: If bent pins are found on either connector, the affected product **should not be used** until it has been repaired. Failure to do so will cause damage to any connector plugged into it.

Published Date: Feb 20, 2012

Power Mac G4 (QuickSilver): Apple Optical Drives and BURN-Proof Technology

This document describes the use of BURN-proof (Buffer Under Run Error Proof) technology in the optical drives of Power Mac G4 (QuickSilver) and Power Mac G4 (QuickSilver 2002)computers.
This article has been archived and is no longer updated by Apple.
The optical drives in the Power Mac G4 (QuickSilver) and Power Mac G4 (QuickSilver2002) computers do not use BURN-proof technology. Apple does not believe that there is a significant issue with buffer underrun in any Apple drives. BURN-proof is a technology developed by Sanyo that allows compact disc recording to automatically stop in the event of an unplanned interruption, and then to resume recording. BURN-Proof is a registered trademark of Sanyo.

Apple's systems are designed to virtually eliminate buffer underrun during the creation of CD-R and CD-RW discs. Buffer underrun occurs when the source volume cannot keep up with the target drive. In Apple computers, the source is always a hard drive and the target is a CD-RW, Combo, or Superdrive. Hard drives used in Apple computers have read rates that are always faster than optical drive writing rates.

Published Date: Oct 7, 2016

Ethernet: 10/100/1000Base-T Ethernet Port Pinouts

This document provides the pinouts for the 10/100 and Gigabit Ethernet ports on Macintosh computers.
This article has been archived and is no longer updated by Apple.
This article is relevant for the following products:

- iMac
- Power Mac G4
- PowerBook G3 Series (Bronze Keyboard)
- PowerBook (FireWire)
- PowerBook G4
- iBook (FireWire)
- iBook (Dual USB)
- Macintosh Server G3
- Power Macintosh G3 (Blue and White)

An Ethernet port uses an RJ-45 connector. It is typically located on the back or side of the computer. Table 1 shows the signals and pin assignments for 10Base-T and 100Base-T. Table 2 shows the signals and pin assignments for 1000Base-T, otherwise known as gigabit Ethernet.

Table 1 Signals for 10Base-T and 100Base-T

Pin	Signal name	Signal definition
1	TXP	Transmit (positive lead)
2	TXN	Transmit (negative lead)
3	RXP	Receive (positive lead)
4	Â	Not used
5	Â	Not used
6	RXN	Receive (negative lead)
7	Â	Not used
8	Â	Not used

Table 2 Signals for 1000Base-T

Pin	Signal name	Signal definition
1	TRD+(0)	Transmit and receive data 0 (positive lead)
2	TRDÂ(0)	Transmit and receive data 0 (negative lead)
3	TRD+(1)	Transmit and receive data 1 (positive lead)
4	TRD+(2)	Transmit and receive data 2 (positive lead)
5	TRDÂ(2)	Transmit and receive data 2 (negative lead)
6	TRDÂ(1)	Transmit and receive data 1 (negative lead)
7	TRD+(3)	Transmit and receive data 3 (positive lead)
8	TRDÂ(3)	Transmit and receive data 3 (negative lead)

Gigabit Ethernet is a standard developed by the Gigabit Ethernet Alliance, and defined by the IEEE 802.3 committee. The aim of this standard is to utilize existing local area network infrastructure to achieve up to 1 gigabit per second (1 Gbps) transfer rates. This is why gigabit Ethernet utilizes Category 5 or better unshielded twisted pair cabling (UTP), and the RJ-45 connector that is used in 10/100 megabits per second (Mbps) networks. To achieve maximum transfer rates from gigabit Ethernet capable hardware, you also need to install gigabit Ethernet compliant switches, hubs, and routers. Otherwise, the computer switches to a 10 Mbps or 100 Mbps transfer rate depending upon the network hardware that is used.

To utilize gigabit Ethernet, you must use an Ethernet cable with all eight wires (four pairs) present. If you use an inexpensive two pairs-wired cable, the maximum connection speed can only be 100 Mbps.

The Ethernet interface conforms to the ISO/IEC 802.3 specification, where applicable, and complies with IEEE specifications 802.3i (10Base-T), 802.3u-1995 (100Base-T), and 802.3ab (1000Base-T).

Published Date: Oct 7, 2016

About Final Cut Pro 1.0

This article contains the Read Me for Final Cut Pro 1.0, as well as other relevant and late-breaking information.
This article has been archived and is no longer updated by Apple.
This document provides information about Final Cut Pro 1.0 that supplements the information found in your User Manual and on-line help. For the latest information on product updates, tips and tricks, third-party software, and qualified third-party devices always go to the Final Cut Pro Web site at: **http://www.apple.com/finalcutpro/**

Installation Notes

Before You Install Any Software

Turn off any security software that you may have installed on your computer.

Turn off any virus-protection software that you may have installed on your computer.

Be sure to read all the recommendations below before beginning work with Final Cut Pro.

Installation Requirements

You must install Final Cut Pro on a startup hard drive containing Mac OS 8.5 or later.

Do not interrupt the installation process, doing so may result in an incomplete installation and will require you to reinstall the application.

Install QuickTime

The Beta version of QuickTime 4.0 included on your CD-ROM has been qualified for use with Final Cut Pro. However, before installing this version of QuickTime, check the Final Cut Pro Web site for the most current version of QuickTime. The website is at the following URL: **http://www.apple.com/finalcutpro/**

IMPORTANT If a new version of QuickTime 4.0 is not yet available, you need to copy the QuickTime Installer Folder (on your Final Cut Pro CD-ROM disc) to your hard disk before following the QuickTime installation instructions in the Final Cut Pro User's Manual. Open the QuickTime Installer from your hard disk to install the software.

See article 59002: **Final Cut Pro 1.0: QuickTime 4.0 Public Beta Compatibility** for the latest information.

Install All QuickTime Components

When installing, make sure to choose QuickTime Authoring as the installation type. If you experience problems or error messages when launching Final Cut Pro, reinstall QuickTime.

Unlock QuickTime Pro

A complimentary registration code has been included that allows you to unlock QuickTime Pro for this and future releases of QuickTime 4.0. See the update entitled "Read This Before Installing Final Cut Pro" in your box for your registration number and instructions.

Update your Firmware if you own a Power Macintosh G3 (Blue and White)

Before installing Final Cut Pro on a Power Macintosh G3 (Blue and White), you may need to update the firmware. Locate the G3 Firmware Update folder on your Final Cut Pro CD-ROM and open the G3 Firmware Updater utility. The utility determines whether updating is necessary and provides the onscreen instructions for updating.

Hardware Compatibility Notes

Check the following notes to learn of ways to solve problems with specific equipment.

Truevision Targa Audio Issues

When using Truevision hardware, if you capture audio from A2, you will get A1 from the deck. To work around this issue, capture A1+A2, then use the target track controls when editing the clip into a sequence to use only CH2.

To hear audio from a Targa card, use the Sound control panel to set the Sound In and Out to Targa. If the Sound control panel is not in the Control Panels folder in your System Folder, locate it in the Apple Extras folder on your hard disk and set Sound In and Out to Targa.

Targa Video Playback Performance

Clips compressed with non-Targa codecs may perform poorly during playback when using the Targa 2000 as the video card.

Targa Display Issues

If your monitor resolution is different each time you restart when using the Targa 2000 as your display card, use the monitor adapter that came with your Targa product and the monitor adapter that came with your monitor to stabilize your resolution setting.

If your Apple Studio Display 15" or 17" has a green tint when connected to a Targa card, turn off Sync on Green in the Targa control panel.

ATI Video Playback Issues

The Rage 128 ATI chipset is in all "blue and white" G3's and can easily play back a movie at any display resolution. However, if you are using an older model G3, movie playback might be choppy if you are using Rage II+, RagePro, LT-G, and LTPro. To avoid this problem, set the display to 1024 x 768 or smaller. Consult the documentation that came with your computer or use the Apple System Profiler to find out which ATI display card was included in your system. Also, download the latest display software from the ATI Web site at: **http://www.atitech.com/**

ATI Video Acceleration

Use the ATI Video Accelerator Update to speed up playback of certain types of QuickTime movies. The update complements, but does not replace, the ATI Video Accelerator. For more information, see the Read Me that accompanies the update. The update is available at the ATI Web site: **http://www.atitech.com/**

DV Playback

It's best to play your DV clips through ATI video display cards. Attempting to play DV clips on a monitor controlled by video cards from other vendors may result in dropped frames or otherwise poor performance.

If you experience poor performance when playing back DV clips, uncheck "Mirror on Desktop During Playback" in the General tab of the Preferences window.

DV Audio Playback

If you hear an echo when using DV, the built-in speaker in your computer may be competing with monitor speakers. Click the Audio button in the Capture tab of the Preferences window and choose Off in the Speaker pop-up menu.

Keyspan Serial Sevice Control Issues

Keyspan USB Serial Adapter users must use Keyspan driver version 1.5.1 or later. For the latest drivers and support, see Keyspan's Web site: **http://www.keyspan.com/**

If you are using a Keyspan USB Serial Adapter for RS-422 or RS-232 device control, you need to make a direct connection between your Macintosh and video device. For stable communications, connect the Keyspan adapter directly to your Macintosh and attach the serial cable between the Keyspan adapter and video device. You will encounter intermittent communication errors if you attach your Keyspan adapter to a USB hub or pass the signal through a device such as a monitor.

No Communication With a DV Device

If you are having trouble communicating with your DV camera, shut down both your computer and camera for a few minutes before proceeding.

Device control is not available when your camcorder is in Camera mode.

Sony Analog to FireWire Converter Box

The Sony DVMC-DA1 does not provide FireWire or any other form of device control. It only converts analog video and audio signals to DV, which can then be transmitted over FireWire. If you are using this box with a video device that supports serial device control such as RS-422, choose the supported device control protocol in the Device Control tab in the Preferences window. If your analog video device does not support device control, turn off device control in the Device Control tab in the Preferences window. Using Apple FireWire device control with the DVMC-DA1 is not recommended.

Limited Display Resolutions

If your resolution settings are limited to 640 x 480 when using the Apple Studio Display 15" or 17", you can gain access to other resolutions by turning off the Data Display Channel (DDC) control using the on-screen display (OSD) feature of your display. Follow these steps:

1. Press the OSD Enter button on the left of the monitor. The Basic Adjustments menu appears.

2. Choose the ETC icon and press the Enter button.

3. Choose Off to turn off DDC.

4. Press the OSD Exit button.

Causes of Unusual or Inconsistent Behavior

FWB Hardware and Software

Using FWB driver software or FWB SCSI cards, including the HammerTime extensions, with DV or Truevision capture cards is not recommended.

Energy Saving Utilities

Before capturing, turn off the energy saver, screen saver, and sleep features of your computer. These energy saving features may interrupt the capture.

Apple SoftRaid Software

If you experience problems when capturing to an Apple SoftRaid formatted volume using a Truevision capture card, get the most current version of Apple SoftRaid software from the Final Cut Pro Web site: **http://www.apple.com/finalcutpro/**

Deleting Presets

Deleting a preset cannot be undone. Final Cut Pro requires at least one preset to open. If you delete the last preset, you will need to reinstall Final Cut Pro.

Splitting Windows Across Multiple Screens

Splitting a window across multiple screens while working in Final Cut Pro is not recommended.

Operating With Different Drive Formats

Make sure you do not have both Remus and Atto extensions in your System Folder at the same time.

Avoid using drives striped with more than one type of drive formatting software.

Performance Notes

Audio/Video Synchronization in Final Cut Pro

Hardware variations occasionally lead to synchronization problems between audio and video. If you experience A/V sync drifts on long clips, check the box labeled AutoSyncCompensator in the General tab of the Preferences window. The AutoSyncCompensator analyzes clips and compensates for any audio drift by adjusting the sampling rate of audio to match the duration of video in a clip. This adjustment is only applied to the timing of clips in the Browser or Timeline and does not affect the media on disk.

You can specify a minimum duration limit to trigger the AutoSyncCompensator. The AutoSyncCompensator will only analyze clips longer than this duration. The default duration of 5 minutes is suitable for most circumstances.

{Editor's Note: The term AutoSyncCompensator is a single word, not AutoSync Compensator.}

Required DV Capture Frame Rate

DV must always be captured at 29.97 frames per second.

Recommended DV Audio Sample Rates

When creating a DV project, it's best to capture the material at the same audio sample rate it was recorded in. For best results, always shoot, capture, and output at 48 kHz.

Capturing From DV Media

When working with DV, it's best to capture from the original media. If you experience difficulties capturing from mini DV tapes that have been duplicated from DVCAM originals, try capturing from the original DVCAM media.

Disable Disk Monitoring Utilities

For best performance, do not use disk monitoring software such as Symantec's DiskLight while using Final Cut Pro.

Open Video Clips in One Application Only

Do not open a video clip in multiple applications at the same time. A DV file playing in Final Cut Pro while simultaneously open in Movie Player will not play back properly.

Restoring Video Playthrough in the Log and Capture Window

Occasionally you may need to move the Log and Capture window to restore video playthrough. This occurs most often when using Truevision cards with consumer VCRs that do not put out a constant sync signal. Have your input source on and ready before opening Log and Capture.

Eliminating Bad Cuts in Recaptured Clips

When recapturing a sequence with Targa Video when imported from an EDL, you must use handles in the batch capture process. Similarly if you use the sequence trimmer, you need to trim with at least 1 second handles on either side of the clip.

Label Drives With Unique Names

Drives with similar names may cause problems with the capture process. Each drive should have a unique name or at least a unique suffix identifier, for example, Media_1 and Media_2. Using "Media" and "Media_1" will not work.

Reclaiming Storage Space

To manage disk space, make sure to look in the Render Files folder and throw away project folders and render files that are no longer in use.

Capturing Live Video

Video captured live from a camcorder on Standby in Camera mode will not have a timecode. To capture video live from a camcorder with timecode, insert a tape into your camcorder, set your camcorder to Camera mode, then press the Record button.

Published Date: Feb 20, 2012

Mac OS X Server: About Mac OS X Server 1.0-2 Update

This article comprises the Read Me for Mac OS X Server Update version 1.0-2. This software was released by Apple on 21 July 1999 and is available for downloading from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Description
This update addresses a number of issues, and updates server components.

Requires
Mac OS X Server running on any Power Macintosh computer or Macintosh Server with a G3 microprocessor.

This article has been archived and is no longer updated by Apple.

About the Mac OS X Server 1.0-2 Update

This document contains important information about the Mac OS X Server 1.0-2 Update. This update includes a number of improvements and enhancements to Mac OS X Server software.

The update also includes enhancements provided with Mac OS X Server 1.0-1 Update, including support for the official release of the QuickTime Streaming Server, version 1.0 and later improved NetBoot performance

What's new in this update

- The update includes Apache Web server version 1.3.6, which addresses problems that could cause the Apache parent process to terminate unexpectedly.
- The update corrects a problem in which executing a large number of simultaneous CGI scripts could cause the system to become unresponsive if the Apache benchmarking module was enabled.
- Changes to the kernel improve its stability and correct problems that could occur when the server was heavily loaded.
- The version of the kernel now appears as version 5.5 when you are using the uname system utility with the -r or -v options.
- Changes to Network Filesystem (NFS) improve its operation and stability.
- You no longer need to configure TCP/IP to use only AppleTalk.
- If you have a newer ("blue and white") Power Macintosh G3, changes to your monitor resolution are now saved.
- You can now use the dual-channel, ultra-wide SCSI cards available from Apple with some Macintosh Server G3 computers.
- The Workspace Manager now saves the viewer options you select in the Preferences dialog box and the type of view (Icons, Columns, or List) you choose from the View menu for a specific window.
- When you hide the active application, the Workspace Manager now becomes the active application.
- You can now update the MacOS.app to Mac OS 8.6. Because the original image file (StartupDisk.img) is not large enough for the new version of Mac OS, you need to create a new one. To increase the size of the file, see "Enlarging Your Startup Disk Image File" in the "MacOS.html" file, located in the following directory on your Mac OS X Server: `/System/Documentation/ReadMe/Programs&Applications/` To install a new version of the Mac OS in MacOS.app, open MacOS.app and follow the same procedure you use to install the software on any Macintosh computer.
- You can now format disk image files on UFS volumes from MacOS.app; for example, when creating a new StartupDisk.img file using createimage.
- Apple file services works with encrypted passwords sent by AppleShare Client software version 3.8.3. (Be sure to update client computers using the AppleShare Client Installer. Although Mac OS 8.6 includes AppleShare Client software version 3.8.3, it does not include the DHX UAM extension, which is required for encrypted passwords.)

Apple File Services

This section contains important information about changes to Apple file services and Remote Server Administration for Mac OS X Server 1.0-2 Update.

Browser compatibility issues for Remote Server Administration

To use Microsoft Internet Explorer to access Remote Server Administration from a Macintosh computer, you need to select Mac OS Runtime for Java as the Java virtual machine. To do so, open the Edit menu in Internet Explorer and choose Preferences, then open the Web Browser category and select Java. Open the "Java virtual machine" pop-up menu and choose Apple MRJ.

You should also make sure your computer has Mac OS Runtime for Java version 2.0 or later installed. To do so, check the version of the MRJLib file, which is in the MRJ Libraries folder (in the Extensions folder in the System Folder).

To log in to Remote Server Administration using an administrator user name that contains two-byte characters, such as Japanese, you must have Mac OS Runtime for Java version 2.1.1 or later installed.

To access Remote Server Administration from a Web browser on a computer with a European or Japanese system installed, make sure you have selected the correct language and default character set encoding in the Web browser. On Mac OS computers, you must also have Mac OS Runtime for Java version 2.1.1 or later installed to log in with an administrator user name that contains special characters.

If you are using Netscape Navigator or Communicator, open the Edit menu and choose Preferences, then open the Navigator category and select Languages. If necessary, click Add to add French, German, or Japanese to the list. Remove other languages from the list. Finally, open the View menu, choose Character Set, then choose Western (ISO-8559-1) as the character set for European languages, or Japanese (Shift_JIS) for Japanese.

If you are using Microsoft Internet Explorer, open the Edit menu and choose Preferences, then open the Web Browser category and select Language/Fonts. Open the Language pop-up menu and choose French, German, or Japanese. Then open the "Character set" pop-up menu and choose Western (Latin1) for European languages, or Japanese (Shift-JIS) for Japanese.

Issues with using Remote Server Administration

- For Internet aliases and group names, you can use only lowercase letters, numbers, and the underscore character.
- The Server Administration Help on your Mac OS X Server states that to troubleshoot problems logging into Remote Administration you should open the Process Viewer to confirm that the AdminWebServer and RemoteAdminServer processes are running. Instead of "AdminWebServer", you should see "apache".
- When you create or edit a user account, the user name and Internet alias can be the same.

Issues with Apple file services

- You cannot change access privileges for read-only volumes, such as CD-ROM discs. You can share folders on these volumes, but files are read-only for everyone.
- When a user logs in to Apple file services from a computer with AppleShare Client version 3.8.2 installed, the user's password is sent over the network in clear text form. Someone monitoring your network traffic could get the Administrator password, thus compromising your network's security. To correct this situation, upgrade client computers to AppleShare Client version 3.8.3. For information about this version of AppleShare Client, see http://www.apple.com/support.
- If the AppleTalk seed router runs on your Mac OS X Server, then to connect to Apple file services over TCP/IP you need to enter the router's TCP address in the TCP/IP control panel on each client computer. To do so, open the TCP/IP control panel on the client computer, choose Ethernet from the "Connect via" pop-up menu and Manually from the Configure pop-up menu, then enter the router's TCP address in the "Router address" box and complete the other information required for the connection. If the client is not connected to a router, then you can enter the server's IP address in the Router box in the TCP/IP control panel on the client computer.

Issues with the AppleShare Client software

- If AppleShare client computers have Mac OS 8.5 or later installed and AppleShare Client version 3.8.1 installed, files that users copy to server volumes may be corrupted in some cases. To prevent this, install AppleShare Client version 3.8.2 or later on all client computers that have Mac OS 8.5 or later installed. Apple recommends upgrading to the latest AppleShare Client software, version 3.8.3. To get the latest version of the AppleShare Client software, see http://www.apple.com/support.
- If you want to change the access privileges of an Apple file services volume from a client computer, only enter a user name in the Owner box and a group name in the User/Group box in the Sharing window.

Installation instructions
For further information, refer to installation instructions for both in article 59004: "Mac OS X Server: Patch and QTSS 1.0 Download Instructions."

Published Date: Feb 20, 2012

Software Installation Instructions for Apple Products

This article will help to identify the recommended method of software installation for different models of Apple products, including desktop Macintosh computers, PowerBook, and Newton MessagePads.
This article has been archived and is no longer updated by Apple.
For all Macintosh computers, the steps below outline methods of installing any type of software, including System Software, applications, peripheral software (such as for a camera, display, modem, printer, scanner). Always refer to the Read Me document that came with your software for last minute updates.

Consult each heading below for software specific to your Apple product.

DESKTOP and POWERBOOK COMPUTERS
PERFORMA COMPUTERS
POWERBOOK 145B, POWERBOOK 150
NEWTON MESSAGEPAD

DESKTOP and POWERBOOK COMPUTERS

ANY software on floppy disk:

1. Start up the computer while holding the shift key down on the keyboard, until you see the "Welcome... Extensions Off (or Disabled)" message. Let go.
2. Follow the exact installation instructions provided with your software.
3. Restart normally, making sure you are NOT holding down any keys at startup.

ANY software on CD:

1. Insert the CD which contains your software. It should show up on the screen.
2. Now, follow the exact installation instructions provided with your software.
3. Restart normally, making sure you are NOT holding down any keys at startup.

PERFORMA COMPUTERS

For Performa computers, use all of the same steps above for **DESKTOP and POWERBOOK COMPUTERS** with the following exceptions:

- Your System CD that came with the Performa is entitled "Performa CD".
- For help understanding why Performa models are different than standard desktop computers, consult the following Knowledge Base article:
  article 12501: "**Performa: Backing Up and Restoring**"

POWERBOOK 145B, POWERBOOK 150

For these two PowerBook models, use all of the same steps above for **DESKTOP and POWERBOOK COMPUTERS** with the following exception:

- For help understanding why these two PowerBook models are different than standard PowerBooks, consult the following Knowledge Base article:
  article 17269: "**PowerBook 145B & 150: Backup and Restore Instructions**"

NEWTON MESSAGEPAD

Consult the following Knowledge Base articles:

- article 13855: "**Newton MessagePad: Installing System Updates**"
- article 36501: "**Newton Discussion Board: Frequently Asked Questions**"
- article 17339: "**Newton MessagePad: What Items Get Erased**"

TA26099_Software_Installation_Instructions_for_Apple_Products.pdf

Published Date: Feb 20, 2012

Macintosh 0S 7.5.5: How to Make a Computer Ready to Use the Internet

This article explains how to make a Macintosh computer ready to use the Internet.
This article has been archived and is no longer updated by Apple.
Follow these steps to make a Macintosh computer ready to use the Internet:

1. Make sure your computer has the right version of system software.
   - Computers with a 68030, 68LC040, or 68040 microprocessor should have System 7.5.5 or later with Open Transport networking enabled.
   - Computers with a PowerPC microprocessor should have Mac OS 9.
2. Make sure your computer has enough memory (RAM).
   - Computers with a 68030, 68LC040, or 68040 microprocessor should have at least 16 MB.
   - Computers with a PowerPC microprocessor should have at least 32 MB (64 MB recommended).
3. Make sure your computer has the kind of modem and modem connection your Internet service provider (ISP) requires.
   - Many Internet services use dial-up, or analog modems. These kinds of modems connect to a computer's serial port. At a minimum, your modem should be able to transfer data at 14.4 kbps. A 56 kbps modem is recommended.
   - Digital subscriber line (DSL) and cable modems connect to a computer's Ethernet port. Not all Macintosh computers have an Ethernet port. If your computer does not have one, check with an Apple reseller to see if one can be added.
4. Subscribe to an Internet access service of your choice.
5. Install software provided by your ISP.
   - If your computer is using System 7.5.5, your ISP generally provides dial-up and support software. If your computer is using Mac OS 9, Remote Access dial-up software is already installed.
   - Your ISP may also provide you with an Internet browser, such as Netscape Navigator or Microsoft Internet Explorer, and an email program, such as Microsoft Outlook Express. These programs are part of Mac OS 9 and are automatically installed.

The following articles may assist you in setting up a computer to connect to the Internet:

- Article 24138: "**Open Transport: How To Upgrade From Classic Networking**"
- Article 75085: "**Open Transport: TCP/IP Configuration**"

Published Date: Feb 20, 2012

Microsoft Office 98: How to Install

Microsoft Office 98 came with my Power Macintosh G3 computer. Do I need to install it?
This article has been archived and is no longer updated by Apple.
Apple has included Microsoft Office 98 with certain Power Macintosh G3 computers. The software is on a CD-ROM disc included with the computer. Office 98 must be installed before it can be used. Here's how:

There are two ways to install MS Office: drag-install from the installer CD, or run the traditional installer utility from the installer CD.

To drag-install, drag the MS Office folder from the CD to your hard drive. See Figure 1.

Figure 1: Drag-installing

The contents of the folder will copy over: then, the first time you launch one of the three applications from the hard drive (for example, Word), MS Office will complete the installation by installing needed extensions. No additional action is required by the user. During this "first run" of an Office application, startup is delayed a few seconds while the extensions installation takes place. That's all there is to the drag-install process.

The second way to install MS Office is to run the installer program that comes on the CD. The installer is located in the Office Custom Install folder of the CD, and like traditional Macintosh installers, allows you to either perform an Easy Install or a Custom Install.

Regardless of how you install MS Office, successful installation adds a folder named "Microsoft Office 98" to the hard drive. See figure 2.

Figure 2: The Microsoft Office 98 folder

What general information do I need to know about launching MS Office, creating and saving a document, and quitting MS Office?

The very first time you launch an MS Office application after installation, you will need to wait while the software checks for (and if needed, installs) the necessary extensions. Otherwise launching MS Office applications is quick, and the process of creating and saving documents is standard for Macintosh applications, as is quitting. We will cover specific examples later, in the hands-on lab.

Where are the various MS Office components located?

In addition to the Microsoft Office 98 folder discussed above, the MS Office installer creates or changes the following folders within the System Folder:

(added to) Extensions:

- Internet Config Extension
- Microsoft Component Library
- Microsoft Hyperlink Library
- Microsoft OLE Automation
- Microsoft OLE Library
- Microsoft RPC Runtime Library
- Microsoft Structured Storage
- MS Font Embed Library (PPC)
- Text Encoding Container
- MS C++ Library (PPC) (in MS Library Folder)
- MS Configuration Lib (PPC) (in MS Library Folder)
- MS Container Lib (PPC) (in MS Library Folder)
- MS Favorites Library (PPC) (in MS Library Folder)
- MS Internet Library (PPC) (in MS Library Folder)
- MS Parser Library (PPC) (in MS Library Folder)
- MS Preferences Library (PPC) (in MS Library Folder)
- MS Variant Lib (PPC) (in MS Library Folder)
- Standard OLE Types (PowerMac) (in Type Libraries folder)
- Standard OLE Types 2 (in Type Libraries folder)
- vba en olb (PowerMac) (in Type Libraries folder)

(added to) Control Panels:

- Configuration Manager

(added to) Fonts:

- Arial
- Arial Black
- Impact
- Monotype Sorts
- MT Extra
- Symbol
- Times New Roman
- Wingdings

(new folder created named) MS Preference Panels:

- Advanced Networking
- Cookies
- File Helpers
- General E-mail
- Home and Search
- Password Dialogs
- Protocol Helpers
- Proxies
- Ratings
- Security
- User Passwords

(added to) Text Encodings:

- Arabic Encodings
- Central Euopean Encodings
- Chinese Encodings
- Chinese Encodings Supplement
- Cyrillic Encodings
- Greek Encodings
- Hebrew Encodings
- Indic Encodings
- Japanese Encodings
- Korean Encodings
- Symbol Encodings
- Thai Encodings
- Turkish Encodings
- Unicode Encodings
- Western Language Encodings

(added to) Preferences:

- Internet Preferences
- Excel Chart Gallery (8)
- Graph Chart Gallery (8)
- Word Font Substitutes

(added to) Preferences (first time an MS Office application is run):

- Microsoft Office Settings (8)
- Office Registration Cache
- PPC Registration Database

(added to) Preferences (first time Excel is run):

- Excel Settings (8)

(added to) Preferences (first time PowerPoint is run):

- PowerPoint Settings (8)

(added to) Preferences (first time Word is run):

- Custom Dictionary
- Embedding Preferences
- MS Office ACL (8)
- Word Font Menu Cache (8)
- Word Settings (8)

Published Date: Feb 20, 2012

How To Turn Off Your Macintosh

This article explains how to shut down a Macintosh computer.
This article has been archived and is no longer updated by Apple.
Your Macintosh should be shut down, not just turned off. To shut down a Macintosh, switch to the Finder and choose the "Shut Down" command from the "Special" menu.

Figure 1, Shut Down command

You can also press the power key on the keyboard to shut down the computer. Pressing the power button displays a dialog box with options to restart, sleep, cancel, or shut down the computer. Click the button of your choice.

Figure 2, Shut down dialog box

During the shut down process, your Macintosh quits all open application programs. If you have not saved your work, most applications will give you the opportunity to do so during the shut down process. After all applications have been quit, the Macintosh turns itself off.

Published Date: Feb 20, 2012

iPod Dock: Specifications

This document outlines the specifications of the iPod Dock.
This article has been archived and is no longer updated by Apple.
The iPod Dock makes charging and syncing easier than ever. A convenient and elegant home base for iPod on a desk or connected to a home stereo system, the dock provides syncing via FireWire or USB 2.0, charging via FireWire and a stereo line out for simple connection to powered speakers or a stereo system.

Figure 1 iPod Dock

1. iPod Connector
The iPod can easily be inserted and removed from the iPod Dock.

2. Audio Line Out port
The audio line out port is line level. Insert a cable here to connect iPod to a stereo, or to external powered speakers.

3. iPod Dock Cover
For more information on the iPod Dock Cover see technical document 61912, "**iPod (with Dock Connector): How to Install Dock Cover M9130G/A**".

4. Cable Connection
You can connect either the iPod Dock Connector to FireWire Cable, or the iPod Dock Connector to FireWire and USB 2.0 Cable to the iPod Dock. For more information about iPod cabling see technical document 61913, "**iPod (with Dock Connector): About the Dock Connector and Cables**".

The iPod Dock is not included with all iPod (with Dock Connector) models, but can be purchased separately.

The iPod Dock can only be used with the iPod (with Dock Connector) models. Previous iPod are not compatible with the iPod Dock.

To identify iPod models see technical document 61688, "**iPod: How to Identify Models**".
Published Date: Feb 20, 2012

AppleShare IP 6.1: Read Me

This article comprises the Read Me for AppleShare IP 6.1. The contents include:

Introduction
Installation and Documentation
Requirements for Running AppleShare IP 6.1
Support
Notes About AppleShare IP 6.1

Article 58287: **AppleShare IP Web & File 6.1.1 Update Read Me** contains additional information which may be useful.

On May 24, 1999, Apple introduced its integrated file, print, web and mail server software suite, AppleShare IP 6.2. On the same day, Apple introduced an upgrade program for certain customers using earlier versions of AppleShare IP.

This article has been archived and is no longer updated by Apple.

Introduction

AppleShare IP 6.1 is the follow-on release to AppleShare IP 6.0 and builds on the existing AppleShare IP product by continuing to provide the complete suite of LAN and Internet services, including Web, File, Mail and Print services. New features for version 6.1 include support for Mac OS 8.5, Web-based remote administration, TCP Filtering, secure printing, multi-domain support in the Web Server, shared IMAP folders, and general performance enhancements and improvements. AppleShare IP continues to be fully compatible with Macintosh and Windows clients. AppleShare IP retains its traditional ease of use with a single administration console, making it simple to manage AppleShare users, groups, passwords and security.

Installation and Documentation

Complete installation instructions are contained in the Getting Started manual. Additional help can also be found in the AppleShare Client 3.8 User's Manual, and in the AppleShare IP Help and Remote Help, all of which are included with your AppleShare IP 6.1 software.

Requirements for Running AppleShare IP 6.1

Power Macintosh computers running AppleShare IP 6.1 Server

- CPU: Any Apple Power Macintosh computer or Macintosh Server with a PowerPC(TM) G3, 604e, 604, 603e 6500 series, or 601 microprocessor.
- RAM: 48 MB of memory with virtual memory turned on; 64 MB with virtual memory turned off. More memory may be needed if you are using one or more web server plug-ins.
- System Software: Mac OS 8.5 is recommended and is provided as part of your AppleShare IP Server software. TCP Filter software requires Mac OS 8.5; all other features require Mac OS 8.1 or later.
- Ethernet drivers: Apple Enet 2.0.1 is required, and is installed by the AppleShare IP installer. If you install on Mac OS 8.1, note that the older extension, called "Ethernet (Built-In)" is not removed.

Macintosh computers running AppleShare Client 3.8.1

- System Software: Mac OS 8.5 is recommended. The minimum requirement is Mac OS 7.6 or later with Open Transport 1.1.2 or later.
- AppleShare Client 3.5 or later is required for connecting to an AppleShare IP 6 server. However, Apple strongly recommends that you upgrade your client Macintosh computers to Mac OS 8.1 or later and AppleShare Client 3.8 or later.

Support

Telephone Support

In the United States, if you have questions about AppleShare IP 6.1 that are not answered by the Getting Started manual or AppleShare IP Help or Remote Help, call the Apple Assistance Center at 1-800-APL-CARE (1-800-275-2273) during telephone support hours (Monday through Friday, 6 am to 6 pm Pacific time). When prompted, enter the support access number provided on the back of your Apple Support Card and follow the instructions.

If you are located outside of the United States, refer to the support information that came with your AppleShare IP 6.1 software for instructions.

AppleShare IP Mailing List

To receive information about software updates, you are cordially invited to join the AppleShare IP mailing list. By joining the mailing list, you will also have the opportunity to share your experiences, questions, and comments with others using the software. Apple employees monitor the list, but Apple does not guarantee that any questions directed to this list will be answered.

Notes About AppleShare IP 6.1

- If a computer that is running AppleShare IP crashes, check your hard disks by running Disk First Aid before you start any service again. Disk First Aid is located in the Utilities folder on your Mac OS CD ROM disc. If you are running Mac OS 8.5, the system will check only the startup disk automatically, so you should still check any other disks with Disk First Aid.

Installation

* The AppleShare IP Installer will sometimes miscalculate the amount of space available on extremely large volumes. If, during the installation process, you receive a warning that there is not enough space to install AppleShare IP, try temporarily backing up and removing some items from the disk onto which you are trying to install (or install on a smaller drive partition, if available), and then begin the installation process again.

* If you are doing a custom installation, the installer will still install the Web & File extension, though it will not run. This extension is required for you to be able to edit Users and Groups.

* Although TCP Filter software requires Mac OS 8.5, as stated above, the Installer will install it on Mac OS 8.1-based computers. If you attempt to run the software under Mac OS 8.1, it will display an error and quit.

Registry

- The AppleShare IP Registry will convert your Users & Groups file to run with AppleShare IP 6.1 the first time you reboot with AppleShare IP installed. Since this file will no longer work with Personal File Sharing after the conversion, a copy of the original file is placed in your Preferences folder. The file is named Users & Groups Data File Backup. The copy of the original file may be used if you decide to restore your machine to Personal File Sharing after performing a "custom remove" of AppleShare IP 6.1.
- If you upgrade from one language of the server to another (for example, if you participated in the AppleShare IP seed program and tested the US version of the software, but you've upgraded to another version in your local language), you will lose your Users & Groups information if you upgrade. To preserve your setup, rename the file "Users & Groups Data File" to the appropriate name for your country, and restart your server before upgrading.

Web & File Server

- Sherlock is compatible with the AppleShare IP File Server, provided you ensure your server and clients are set up similarly. First, Sherlock indices must be created on the server, not on the client (this also saves time since the index only needs to be built once). Also, since Sherlock works with disks, you must share entire disks so that Sherlock on the client machines will recognize the indices created by the server. Because Sherlock uses dates and times to maintain its indices, the client and server times and time zones must be the same. Finally, because Sherlock is language aware, you must use the same localized system or language kit for Mac OS on the server to create an index as you use on the clients which use that index. Similarly, if either the server or the client has "Multilingual Internet Access" installed, the other should also have it installed, and if either the server or the client has the Japanese plug-in tokenizer installed, the other should also have it installed.
- If you receive a message stating that error -30523 has occurred in a Sherlock client, verify that you do not get the same message on the server machine itself. If you do, then delete and rebuild the index on the server. If you do not, and the client and server are using the same localized version of Mac OS, then there may be a problem with some of the disk dates. You may be able to fix this problem by backing up your data, erasing the disk using the "Erase Disk" command from the Special Menu in the Finder, and restoring your data.
- The AppleShare IP 6.1 Web & File Server will automatically adjust the configuration of the server according to the amount of memory available. When 12MB or less of memory is available to the AppleShare IP Web & File Server, the server will configure itself in standard mode, similar to AppleShare IP 5.x. When there is more than 12MB of additional free memory available at the time the server launches, the AppleShare IP Web & File Server configures itself in high performance mode, at the cost of an extra 3MB of memory. High performance mode provides greater performance and scalability through an increased number of internal buffers, larger buffer sizes, a maximum concurrent connection limit for file services of 500, and a maximum concurrent connection limit for web server requests of 150.
- AppleShare IP 6.1 may not behave correctly when used with Retrospect 4.1. Specifically, the server may not shut down or disconnect users when requested to do so by Retrospect. It is possible to avoid this problem by scripting your backups with AppleScript.
- The Adobe Acrobat(TM) Installer cannot be used while the Web & File Server is running. Be sure to install Adobe Acrobat before you start the Web & File Server.
- Do not launch the Web & File Server with AppleTalk turned off; various pieces of AppleShare IP require AppleTalk to be turned on, and the software may not work correctly if AppleTalk is turned off.
- AppleShare IP 6.1 is not compatible with ARA Multiport Server software. You should not run them on the same computer.
- Under some circumstances you may not be able to install PC applications from Windows File Sharing Server. To perform net installations of applications that are partitioned on multiple floppy disks, create a folder 'X' and copy each disk as a separate subfolder. Then make the parent folder 'X' a share point. From the client, connect to the share point and perform the installation.

- If you decide to host multiple web sites using the Multi Domain Plugin, be sure to examine the "Plug-In Messages" file after you've started the web server. If the Multi Domain Plugin encountered any errors while reading your "Multi Domain Settings" file, it will write error information to the "Plug-In Messages" file.
- Because of a driver problem, it is not possible to share PC-format ZIP(TM) disks. Mac OS format ZIP(TM) disks can be shared without problems.
- If you're using Windows File sharing, you may wish to increase the number of times your users can enter an invalid password before having their access revoked, because some Windows clients will resubmit invalid passwords several times to the server on the user's behalf (after which they give up), causing the count of the number of attempts to be artificially inflated. Alternatively, have your users use the same password on AppleShare as they do for other Windows services in your network.
- A known issue on Microsoft Windows 98 does not report a volume's total free space correctly. A share point for a volume that is 2GB or greater will show that 1.99GB free space and 0 user space. This is a cosmetic issue and should not affect the ability of Windows clients to use the share point.
- The AppleShare IP specification for "Total Share Points allowed" is 150, which includes both share points and mounted volumes.
- The AppleShare IP Web & File server may hang with virus protection installed. If you experience such problems, try removing or disabling your virus protection software.

AppleShare Client 3.8.1

- If you are running Mac OS 8.5, the AppleShare client, and have virus protection installed (such as NAI's Virex 5.9 or Norton Anti-Virus 5.0), you may experience system hangs on client machines when connecting to an AppleShare server. If you experience such problems, try removing or disabling your virus protection software.
- For additional items, please refer to the AppleShare Client Read Me.

Mail Server

- There is a problem with Netscape Communicator 4.5 and AppleShare IP 6.1 IMAP support. Although the AppleShare IP 6.1 Mail Server supports nested IMAP folders, Communicator will not properly display these nested folders. The folders are still present and all mail in them is still intact -- the nested folder simply fails to appear in Communicator's mailbox browser. If your AppleShare IP mail account contains nested folders, you will not be able to access them with Netscape Communicator 4.5. At this time Apple recommends the use of other IMAP clients for access to nested folders. The AppleShare IP 6.1 Mail Server is fully compatible with a number of other IMAP clients that offer full support for nested folders, including Nestscape Communicator 4.04.
- The AppleShare IP 6.1 Mail Server can not use previous versions of AppleShare IP 5.0.x mail Databases. If you have critical mail that you do not want to lose, you must download those messages from the AppleShare IP 5.0.x Mail Server before running AppleShare IP 6.1. Or if downloading mail is not an Option, the AppleShare IP Mail Tool 6.1 can convert 5.0.x Mail Databases to AppleShare IP 6.1 Databases.
- It is not necessary to update the AppleShare IP 6.0 Mail Databases to 6.1 Mail Databases with the AppleShare IP Mail Tool, as this will be done automatically when launching the AppleShare IP Mail Server 6.1. The AppleShare IP Mail Database 6.0 and 6.1 are interchangeable with the AppleShare IP Mail Server 6.0 and 6.1.

Web-based Remote Admin

- To use Internet Explorer as your Web browser, please set the Java preferences to use the "Apple MRJ" setting. Confirm that your computer is running Macintosh Runtime Java (MRJ) 2.0 or later by checking the version of the MRJLib contained in the MRJ Libraries subfolder of your Extensions folder. This release is incompatible with Internet Explorer when configured to use the Microsoft Java Virtual Machine.
- When attempting to log on multiple times to Remote Admin in the same Internet Explorer session, you should use the Log on link available on the Log out page or select the Refresh button in the browser to receive a fresh Log on page.
- Do not use the "Never" option in the Netscape Browser's Advanced Cache settings when running with Remote Admin. This option suppresses the browsers requests to get fresh pages and thus will result in out of date information being displayed.
- Web-based Remote Admin will not work properly if the "Remote Admin" folder inside your Default Web Folder is moved or renamed. Do not move, rename or delete the "Remote Admin" folder or its contents unless you are configuring your Web Server for multiple domains.
- If you have configured your Web Server to support multiple domains then you must move the Remote Admin folder from the Default Web Folder specified in the Web Settings panel to the "web folder" specified in the first entry of your Multi Domain Settings file. In order to access Remote Admin from the new location, you must use the host name or IP address specified in the first entry in your Multi Domain Settings file when entering the Remote Admin URL.
- When using Remote Admin with European keyboards on non-localized Mac OS systems, you must specify the appropriate settings for your keyboard in the Web browser. For Internet Explorer, check the Language/Fonts settings in your Internet Explorer Preferences. For the Netscape Browser, check the Encoding settings.
- When trying to access Remote Admin on a heavily loaded server, you may receive the "504 Gateway Timeout" message in your Web browser. Use the Web & File Admin application to set the Current User Activity to less than the maximum value to allow more processing time for the Remote Admin server application.
- For this release of Web-based Remote Admin, administrators may only log on with 7 bit character passwords and may only set user passwords in this range. The 7 bit character range is the standard ASCII character set including the control characters, alphanumerics, and standard keyboard characters. You can continue to use Web & File Admin to set 8 bit passwords but administrators will not be able to use

these passwords for log on to Remote Admin.
- Do not refresh or reload a page within Remote Admin. You will have to log on again.
- A limitation in Netscape Java does not allow the 'caps lock' key to be recognized. A Remote Admin user should use the 'shift' key when entering upper case letters in a password.

Print Server

- To use the AppleShare IP 6.1 Print Server's password security for print queues, the print client must have the LaserWriter 8.6.1 driver installed. This version of the LaserWriter driver is not yet available. Please check our website (www.apple.com/appleshareip) for updates regarding its availability.
- When creating or renaming print queues from Remote Admin, the AppleShare IP Print Admin application will not see the new queue names until the next time it is launched.
- It is recommended that a queue only contain printers of the same model and type. Also, printer features present in the first printer attached, but not present in subsequent printers, may cause print errors when jobs are printed to one of the subsequent printers.
- The "Allow binary data" and "Allow color printing" options are only used with AppleTalk print queues.
- Some LPR clients do not support queue names that include spaces. Therefore, the AppleShare IP Print Server will also recognize the name up to the first space. For example, if the print queue name is 'Accounting Department', the queue name 'Accounting' can be used by an LPR client to print to the same queue.
- Windows NT printer drivers are not compatible with the secure printing feature for print queuing. Do not enable security on a print queue if Windows NT clients use it.
- With secure printing activated, a Postscript file copied or sent from one client to another for printing may not work.

Documentation

- If you are experiencing any problem while printing the PDF documents that are included on the AppleShare IP 6.1 CD, increase the memory allocated to Adobe Acrobat(TM) application by 2MB.
- The AppleShare IP Help is html-based and uses Apple Browser Launcher to open the files within your default Web browser. Please note this browser launcher may fail to launch the Help system if you change the name of the AppleShare IP 6.1 folder at the root level of the hard disk or place the AppleShare IP 6.1 folder inside another folder. The alias for the AppleShare IP Help inside the AppleShare IP 6.1 folder will still work.
- The AppleShare IP Remote Help incorrectly states that you can remove a printer assignment from a queued job using Remote Admin. You must use the AppleShare IP Print Admin to perform this function; it is unavailable remotely.
- The 'AppleShare IP Help Launcher' brings up a dialog saying "Please wait a moment" with two lines of special characters. This is not in error. The Help Launcher works correctly.

Published Date: Feb 20, 2012

AppleShare IP 6.1: Remote Administration

AppleShare IP 6.1 supports remote administration. Using a standard Web browser, the server administrator can perform most tasks remotely, such as creating new users, changing passwords, or starting or stopping mail or print services.

This article contains the following sections:

- Setting Up Remote Administration
- Remote Admin interface
- What tasks cannot be performed remotely
- Remote Admin Security
- Troubleshooting Tips

This article has been archived and is no longer updated by Apple.

Setting Up Remote Administration

Remote administration of the ASIP 6.1 server requires the following:

- The Web & File Server must be running. Although you can start and stop other services (mail and print) remotely, the Web & File Server must be running to do any remote administration.
- Both Web access and Web Plug-Ins must be enabled. Set appropriate privileges to the default Web Folder (the administrator needs at least read access). If you change the Default Web Folder, be sure to move the Plug Ins and Errors folders to the new location.
- Remote Web Administration must be enabled; this is done in the Web & File Server Settings window, under "General". It is set to enabled by default.

Figure 1, Web & File Server Settings window

- You will need TCP/IP access to the server from the client machine. This can be over a LAN, WAN or a dialup connection. If using TCP Filtering (or a firewall), make sure that no filters are set up that would prevent the client machine from accessing the server on the Web Admin port (311).
- The Web browser used must be Netscape Navigator 3.0.1 or greater, Netscape Communicator 4.0 or later, or Microsoft Internet Explorer (MSIE) 3.0 or later. Apple strongly recommends Netscape Communicator 4.0 or later, or MSIE 4.0 or later. Other web browsers that support frames and Java might work, but they have not been tested and are not supported.
- To access Remote Administration, use the following URL:

```
http://your.server.com/.admin
```

You will be prompted to enter the administrator name and password.

Figure 2, Remote Server Administration log on window

- Read the ReadMe files for any late-breaking news about known issues or compatibility problems.

Remote Admin Interface

If you are familiar with performing administrative tasks at the server itself, you'll have no problem following the Remote Admin interface. (And if server administration is still unfamiliar to you, review the appropriate sections of the ASIP 6.0 training module, or on-line help files, to become familiar.) The Remote Admin interface is intuitive and mostly self-explanatory.

This toolbar appears on every page, and allows you to move easily between the different server components. The Status section will show you what services are enabled and running, and allow you to start or stop mail and print servers. (Web & File Services must be running at all times in

order to access Remote Administration.)

Figure 3, Remote Server Administration toolbar

The screenshot below shows the interface for managing users.

Figure 4, Remote Server Administration interface

This screenshot shows the options for managing Web Server Settings. As you can see, they closely mirror the options as they appear in the AppleShare IP Web & File Admin program.

Figure 5, Web Server Settings options

One nice feature that Remote Administration adds is the Usage History graph. This can be especially useful in troubleshooting; for example, if users reports that they found the server slow in the morning, you can use this chart to see how busy the server was at that time.

Figure 6, Web & File Server Activity Window

What tasks can't be performed remotely?

Some tasks still require you to be at the server itself; these are listed below:

AppleShare IP Manager
All of the AppleShare IP Manager functions are available in Remote Admin except launching the server-based administrative applications. See the Status page of Remote Admin.

Users & Groups
The following functions are NOT available in Remote Admin:

- Import Users and Export Users & Groups
- Duplicate User and Duplicate User Multiple features
- Batch attribute setting feature.

Web & File Admin
Start is NOT available since Remote Admin requires the Web service to be running at all times.
User and groups names must be typed in for setting access privileges.
Other functions NOT available are:

- Duplicate Folder
- Unmount Disk
- Web & FTP Mime Settings
- Reset cache
- Serialization Setting
- Send Message to Connected Users

Mail Admin

The following functions are NOT available in Remote Admin:

- Date & Time Modification on server
- Viewing and Managing mail messages on the server (NOTE: you can use IMAP Admin Access Port for this functionality)
- Attempt outgoing connections to Mail Hosts.
- Show pending messages for Mail Hosts. (NOTE: you can use IMAP Admin Access Port for this functionality)

Print Admin
The following function is NOT available in Remote Admin:

- Clear all Logs
- Remove a printer from a queue

Remote Admin Security

Every server administrator should be concerned about security. Remote Administration can be secured in the following ways:

- **Password security**: The client must provide the name and password of a server administrator to gain access.
- **Automatic LogOut**: The Remote Admin connection will close after a short period of inactivity; this will prevent unauthorized use if you are unexpectedly called away from your workstation.
- **TCP Filtering**: Using the TCP Filter Admin program, you can create a filter that would allow access to the Remote Admin port only from your own workstation, or from certain networks.
- **Disable Remote Administration**: You also could simply disable the feature altogether.

Troubleshooting Tips

Here are some general guidelines on how to troubleshoot problems accessing the server for remote administration:

- Review the steps listed under "Setting Up Remote Administration" above to verify configuration. In particular, confirm that Web service or Plug Ins have not been disabled due to an error, such as bad IP configuration or a low memory situation.

- Try accessing the server's default Web page; this will let you know whether its Web services in general, or remote administration in particular that is causing the problem.

- If the problem appears to be with accessing Web Services in general:
    - Try pinging the server, to test IP connectivity.
    - Try connecting from another workstation, to determine if the problem is at the client or the server. If possible, try connecting from a device on the same LAN as the server itself.
    - See if TCP Filtering is enabled, and carefully review the filters. You can also try disabling TCP Filtering at the server.
    - If Multi Domain support is enabled, test connections to the various domains.

- If the problem appears to be specifically with Remote Administration:
    - Verify the URL being used. It should be the domain name of the server, followed by "/.admin", without the quotes:

```
http://www.company.com/.admin
```

    - Verify that the name and password being entered are correct, and that the user is set up as a server administrator.
    - Verify that the Plug Ins folder is within the default Web Folder, that it contains the Remote Admin Folder, and that access privileges to all of the folders allow the administrator at least read access.
    - Verify that Plug Ins have not been disabled.
    - Verify that there's enough free RAM on the server to accommodate the Remote Admin.cgi.
    - If Multi Domain Settings file has been configured, the first domain listed in that file will be the default for Remote Admin. View the Plug Ins Messages file (found in Preferences:AppleShare IP Preferences:HTTP Logs:) to see what path is being searched for the Remote Admin cgi, and edit the Multi Domain Settings file if needed.
    - Verify that you're using a tested Web Browser; check that Java is supported. If using Internet Explorer, check to see if it is set to use Apple MRJ (Mac OS Runtime for Java), rather than Microsoft's Java Virtual Machine.

Published Date: Feb 20, 2012

AppleShare IP 6.1: Web Server Multi Domain Support

MultiDomain Support allows you to configure your Web server to host different web sites. A unique home page can be served for each site, a function of the URL used at the client. This is useful for Internet Service Providers, or other server administrators who manage a Web Server for various customers, each of whom want the URL to their home page to reflect their domain or company name.

This article contains the following sections:

- Setting up Multi Domain Support
- Troubleshooting Tips
- Setting up Secondary IP Addresses for the ASIP server.

This article has been archived and is no longer updated by Apple.

Setting Up Multi Domain Support

This section describes how to set up your Web Server to support multiple domain names. There are two approaches to this:

- If visitors to your web site have web browsers that support HTTP 1.1 or greater, you can use just one IP address for your server, with multiple domain names mapped to that one IP address. With an HTTP 1.1 compliant client, the domain name is passed along to the server, and the server uses that unique domain name to determine which home page to serve to the client.
- Earlier specifications of HTTP did not require the client to submit the domain name to the server; only the IP address was sent. For these clients (for example, versions 2.0 of Netscape and Internet Explorer, or Mosaic 2.0.1), you must set up multiple (i.e. secondary) IP addresses for your server (using the single-link multihoming feature of Open Transport), and have your DNS tables map each of your client's domain name to a different IP address. (Consult your network administrator for the unused IP addresses you will need.) When the client sends a request to the Web Server, the server will use the IP address the client used to determine which home page to serve to the client.

The instructions below address the first method; if you decide to use multiple IP addresses, see the note at the bottom of this page for assistance in setting up multiple IP addresses, then follow the instructions here with this exception: have your DNS tables map each domain name to the appropriate (i.e., different) IP address, and include the IP addresses in the Multi Domain Settings file, rather than the domain names for these sites.

Step 1: Create separate web folders for each domain.

AppleShare IP 6.1 allows you to configure the Web Server to host up to 50 domains. For each domain, create a folder on the hard disk that will include a default.html page. For example, you might have 3 clients: Alpha, Baker, and Charlie. Make a folder named "Alpha" that contains the default web page, other pages, and media, that you want visitors to see when they visit the Alpha site. Do the same for Baker and Charlie. The folders can reside anywhere on the hard drive.

The folders might look like:

Figure 1 AppleShare web folders

Step 2: Create appropriate DNS entries for each domain.
Each domain name will need an entry in your DNS tables, mapping it to the IP address of the server. In the example below using MacDNS, our domain is "company.com", but zone files have also been created for each of our customers :

<IMG SRC="http://www0.info.apple.com/images/kbase/60019/60019_2.gif">
Figure 2 Examples of domain name entries in DNS tables

Note that each domain name above is mapped to the same server. No matter which domain name is used in the URL (www.alpha.com, www.baker.com, etc.), the IP address returned will be 17.104.104.89, thus all requests will go to the same ASIP server.
Note also that, when preparing Web sites that will be available on the InterNet, each domain name must be registered with InterNIC, and the IP address of the primary name server for each domain specified; otherwise, other name servers and clients on the Internet will not be able to resolve those domain names.

Step 3: Create the Multi Domain Settings file

You will find a plain text file called "Multi Domain Settings," in the "Plug Ins" folder in your default Web Folder. Use SimpleText to open and edit that file.

The syntax for Multi Domain Settings file is described below. Each line of the file contains either the domain name or IP address, the port number, and the path to the web files for that domain on the server.

- domain name or IP address
  - Both can be used within the same Multi Domain Settings file; in fact, it's a good idea to list both your domain name with path, and to specify which page should be served if someone connects using the server's IP address.
  - Use domain names for your "customers" when you are using a single IP address at the server and will have HTTP 1.1-compliant clients connecting. In this case, the unique domain name will be what the server uses to determine what web pages to serve.
  - Use the IP addresses when you have multiple IP addresses configured for the server (using single-link multihoming).
- port number
- path to web files on the server

Note that the path of the first entry will be used to locate the Remote Admin cgi.

This is an example of the contents of a Multi Domain Settings file; while this example shows using port 80 for each domain, a different port number could be selected (just make sure the port number you select is not used by another application running on the server.

Extract from a Multi Domain Settings file:

```
dns=www.company.com port=80 path=Macintosh HD:Web Folder:
dns=17.104.104.89 port=80 path=Macintosh HD:Web Folder:
dns=www.alpha.com port=80 path=Macintosh HD:Client Folders:Alpha
dns=www.baker.com port=80 path=Macintosh HD:Client Folders:Baker
dns=www.charlie.com port=80 path=Macintosh HD:Client Folders:Charlie
```

Note that the first site specified is going to be our default, and the domain/path through which Remote Administration will be used. In the second line, we are specifying what page we want served if someone uses the IP address of the server to connect, rather than a domain name. The following lines define the paths for our customer folders.

Step 4. Settings in Web & File Admin Program

Verify in the ASIP Web & File Admin program that:

- Web Services are enabled
- Web Plug-Ins are enabled (Plug In Messaging is also very useful for troubleshooting purposes, so turn that on as well.)
- Appropriate privileges have been set up for each folder containing web pages that need to be served: each of your customer folders, as well as the default Web Folder.

Stop and restart the Web & File Services, for the Multi Domain Settings file to be recognized.

Step 5. Test from a client

Test the Multi Domain configuration by connecting to the web server from any client, using each of the domain names you set up: www.alpha.com, www.baker.com, www.charlie.com, and www.company.com.

If Plug In Messaging has been enabled in Web & File Server Settings, you can also check the Plug In Messages file found in System Folder:Preferences:AppleShare IP Preferences:HTTP Logs: to view the list of sites your server is ready to support.

NOTE: Using the same domain name with multiple ports does not work. For example, having www.company.com serve Alpha's page at port 8070, Baker's page at 8080 and Charlie's page at 8090, is not supported in this version (may be implemented in future).

Troubleshooting tips

- If problems arise, verify correct configuration as follows:
- Verify that Web Service and Web Plug Ins are enabled.
- Verify that privileges to the default Web Folder, and to your customer's web folders, and all enclosed folders, are set up correctly.
- Make sure that the domain names being used at client can be resolved. A utility such as MacTCP Watcher, DNS Lookup, or the Find IP Address feature of TCP Filtering Admin program can be used. If the domain names cannot be resolved, look into DNS issues.
- Make sure that the Multi Domain Settings file is a text file, named correctly, formatted properly and located in the Plug Ins folder of the default Web Folder (the folder specified in Web & File Admin program).
- Make sure that the paths indicated in the Multi Domain Settings file contain no typos and are accurate. There should not be blank spaces following the colons which delineate folders names. Remember that if any files are moved around on the server, or the names of disks or folders changed, the paths may no longer be accurate.
- If Plug In Messaging is turned on, view the Plug In Messages file for a list of sites that the server is ready to support.

- Verify that each of the web folders has a default.html page (the name of the default page to serve must match what has been set up in the Web & File Server Settings:Web screen); open the page locally using an HTML editor or browser to compare it against whatever page (if any) is being served to the client.
- Check TCP Filtering to make sure that no filters would prevent access to the Web port from the client computers.
- If using ports other than the default HTML port 80, make sure the port numbers are not being used by other services.
- Utilities like MacTCP Watcher could be used to view what ports the server is listening on; with this application open, choose "Show Connection list" from the File menu.

Setting up Secondary IP addresses on the ASIP server

The second way of configuring the ASIP server for multi domain support is to set up secondary IP addresses at the server, and have the clients' domain names mapped to the secondary addresses. Open Transport 1.3 or later and a PCI-based server is required to support this capability, which is called 'single-link multihoming', 'IP multinode support', or 'IP aliasing.'

This method is needed when clients are using older browsers (such as Mosaic) which may not support HTTP 1.1; in these cases, the domain name the client used in the URL is not passed to the server; only the IP address is. Thus, the ASIP Web Server must use the IP address to determine what home page to send to the client. When using this method, you should use IP addresses, rather than the domain name, in the Multi Domain Settings file.

- **Step 1: Verify that the server's primary IP address is static and configured manually.** Open the TCP/IP control panel to verify.
- **Step 2: Create an "IP Secondary Addresses" file**; this will be a plain text file that will contain the information on the secondary IP addresses. This file needs to be saved into the Preferences folder of the System Folder.

  Within this file, each line begins with "ip=" followed by a secondary IP address. If the subnet mask and router address are different from those used by the primary IP address, they should be specified also, preceded by "sm=" and "rt=", respectively. Here is an example; note that the first line which begins with a semi-colon is a comment.

```
;ip address subnet mask router address
ip=192.1.1.4 sm=255.255.255.0 rt=192.1.1.1
ip=192.1.1.5
ip=192.1.1.6
```

- **Step 3: Restart the server and test.** Using a ping utility like MacTCP Watcher (you can locate and download this handy utility from various ftp sites on the Internet), try pinging each of the secondary IP addresses you've set up for the server.

Published Date: Feb 20, 2012

AppleShare IP 6.1: TCP Filtering

This article describes how to use the TCP Filter Admin program to control access to the ASIP 6.1 server. It includes the following sections:

- What is TCP Filtering?
  - System requirements/Compatibility
  - Components installed
- How it works
- Creating, Editing, Duplicating, and Deleting Filters
- Troubleshooting Tips

This article has been archived and is no longer updated by Apple.

What is TCP Filtering?

TCP/IP Filters allow the server administrator to restrict access to TCP services running on the ASIP server by port number, by IP address of the client, or a combination of both. This powerful feature allows the administrator a great deal of flexibility in offering services and providing extra security. Here are some examples of how an administrator could filter services on the ASIP server:

- Limit all access to specific networks, such as the local LANs; this would prevent users on the Internet from accessing the server.
- Restrict a particular service, such as Remote Web Administration or the IMAP Admin Access Port, to a single IP address. This would allow additional security to these powerful administrative features.
- Permit server access to all clients within an IP address range, except for particular workstations. This might be used if you have some "public" workstations, such as you might find in a library or a business lobby. These public workstations could be set up with only certain types of access, such as access to the web server, while other access (FTP, SMTP, or AFP over TCP) is denied

TCP/IP Filtering includes a TCP Filter Admin program which is used to create the filters (like other ASIP administration programs, launching the TCP/IP Admin program requires the admin name & password). The other components are extensions which interpret the filters created and allow or deny services accordingly.

Figure 1, TCP Filter folder contents

System Requirements/Compatibility

Operating system

The TCP Filter feature is fully compatible with Mac OS 8.5 which includes Open Transport 2.0. It is not supported, and may not run on, 8.1 or earlier due to limitations in earlier versions of Open Transport.

Hardware

The TCP Filter feature will run on any supported hardware platform of the AppleShare IP 6.x product.

Components Installed

TCP/IP Filtering is installed as a standard part of the AppleShare IP 6.1 easy installation, and is implemented in 3 components:

- OT AutoPushSupport init (located in Extensions Folder)
- TCP Filter extension (located in Extensions Folder)
- TCP Filter Admin application (located in TCP Filter folder, within the AppleShare IP 6.1 folder at root level of startup volume)

The TCP/IP Filtering extension module verifies all incoming TCP/IP packets and the admin application is used for configuring the TCP filters for each TCP/IP port.

The initial state is off and thus by default all TCP/IP packets are accepted.

How it works

TCP/IP Filters may be defined for individual ports on the server or as server-wide filters that apply to "All ports" on the server machine. When a packet comes in, the software first checks to see if there is a filter that applies to that particular port. If more than one filter has been defined for that port, it will then check the IP address field, and use the filter that most closely matches the sender's IP address.

If no filter exists for that specific port, then it will look for the "All Ports" filters, and again, apply the one that most closely matches the sender's IP address.

TCP Filtering is installed on the server machine in the "off" or disabled state which means that there are no restrictions on incoming TCP/IP packets after installation. The administrator must enable TCP Filtering and restart the server before any filters can be operational; he should at this time also choose the Default filter state. The Default filter may be set to "Deny All" clients not specifically allowed by another filter or "Allow All" clients if not specifically denied by another filter. The initial state of the Default filter is "Deny All". After enabling TCP Filtering, the Default filter state should be either changed to "allow all", or supplemented by adding new filters.

Figure 2, TCP Filter List

To create a TCP filter, the administrator sets three values:

- Services or Port Numbers
- IP addresses
- Access type (deny or allow)

Services or Port numbers

When adding TCP filters, you may choose a service or a well-known TCP port number from the Port pop-up menu or you may type in any valid port number for which to define filters (port number only; no text). In addition, you may choose the "All ports" designation from the Port pop-up menu to apply the filter to all services running on the server system.

These are the ports that map to services offered by AppleShare IP 6.x:

Figure 3, All Ports pop-up menu

IP Addresses

Filters specify an IP address or range of IP addresses from which to control access to services running on the server system. An IP address consists of 4 decimal numbers (ranging from 0 to 255) that are separated by the period character (.). When creating a filter, an IP address may contain wildcard characters (*) that indicate that any number in that location is considered valid. Wildcard characters can not precede any numerical value in the filter, and must always be followed by other wildcard characters, or terminated. For example:

- 17.202.121.140 is a legal filter value, it specifies one particular machine at this IP address.
- 17.22*.***.*** is a legal filter value; it would specify any IP address with first two octets of 17.22x, where x could be any value between 0 and 9.
- 17.2*2.121.*** is an illegal value because of the second octet; wildcards cannot be followed by more numeric characters.
- ***.202.121.140 is also an illegal value, since the wildcards in the first octet are followed by numeric characters in the remaining octets.

Three wildcard characters are always assumed. If the administrator has specified only one or two wildcard characters for an individual byte of the address, the user interface will expand the wildcard character(s) to three. The following is the appropriate wildcard interpretation within individual bytes:

Use of wildcard within byte	Example of use	Could represent any value from:
*	192.1.1.*	0-255

**	192.1.1.**	0-255
***	192.1.1.***	0-255
0**	192.1.1.0**	0-99
0*	192.1.1.0*	0-9
1**	192.1.1.1**	100-199
1*	192.1.1.1*	10-19
2**	192.1.1.2**	200-255
2*	192.1.1.2*	20-29
3*	192.1.1.3*	30-39
4*	192.1.1.4*	40-49

Access Type

Filters may Allow or Deny access to ports on your servers. The initial Default of the TCP Filter is that all incoming packets are denied so you must add Allow filters after enabling filtering, to provide client access to your server.

Filter Interpretation

Filters that pertain to a specific port take precedence over filters that pertain to "all ports." And when more than one filter applies, the one that has a value in the IP address field that most closely matches the sender's IP address will be used.

The interpretation of the filters is not order dependent; in fact, the filters are sorted in order by port, with "All Ports" appearing first, and other specific port numbers listed numerically.

The following examples will clarify how filters are interpreted.

Example 1: In this case, the administrator wishes to restrict access to the local LANs, but they do want to open mail service to everyone except one particular site, which is a known spammer. He might set up his filters like this:

Figure 4, Filter set-up for Example 1

- The first filter denies all clients access to everything (but remember, the interpretation of filters is NOT order-dependent, as it may be in third-party Web Server applications, such as WebStar. Another, more specific, filter would override this one).
- The second filter allows clients on net 17.221.041 access to everything; because it specifically lists the IP address, this filter would take precedence over the first filter for clients from net 17.221.041, who would be allowed access to all services.
- The third filter allows mail servers access. Because it specifically mentions port 25, this filter would override the restrictions to all ports, set up in Filter 1.
- Because filter 3 specifically allows everyone access to port 25, another filter must be set up to deny access to a particular network. If a mail server from network 1.2.3.0 attempts to connect to port 25, Filter 4 will take precedence over filter 3 because it is more specific, in actually identifying the IP address of the client.

Example 2: The administrator wishes to allow everyone access to everything, but wants to limit access to the IMAP Admin Access port to his own computer.

Figure 5, Filter set-up for Example 2

- Filter 1 opens up access to everyone.
- Filter 2 will override filter 1 when it comes to port 626, because filters that specifically name ports are given precedence over the "all ports" filters.
- Filter 3 will take precedence over Filter 2 when a connection is made from a client at 17.221.41.2, because it is more specific in listing the IP address of the client.

Creating, Editing, Duplicating, and Deleting Filters

The icons on the toolbar can be used to create, edit, duplicate, and delete filters, respectively:

Figure 6, Filter toolbar icons: New, Edit, Duplicate, Delete

To add or edit a filter,

- Click the appropriate button from the toolbar to open the TCP Filter editor dialog. (If editing, select the filter you wish to change first.)

Figure 7, TCP Filter dialog box

- Select 'All Ports' or one of the well-known ports from a pop-up menu to which the filter will apply. If the port number is not available in the pop-up menu then enter the number for the desired port but no associated text is allowed (manually-entered ports do not get added to the selection in the popup menu).
- Enter the IP address (use wildcards if desired) of the clients to which you want to allow or deny access. All asterisks (***.***.***.***) would mean "everyone."
- Select access mode: allow or deny.

When you select "Save" then the filter is added to the list for this port. Selecting "Cancel" will discard this entry or any modification to an existing filter.

To duplicate a filter, select it and click the "duplicate" icon in the toolbar; then edit as needed.

To delete a filter, select it and click the trash can icon in the toolbar.

"Find..."

The TCP/IP Filter Admin also lets you do DNS lookups (Find IP Address).

Figure 8, Find IP Address dialog box

The administrator may specify a host name for which it wants to look up the associated IP address. The resulting IP address may then be used by the administrator to create a filter. If the administrator knows how the subnets are partitioned for a given network, she can replace the appropriate lower bytes of the returned IP address with wildcards, thus creating a filter that would apply to everyone at the site (i.e., on that network).

For example, if the IP address returned for "marvin.apple.com" is 17.104.104.86, and the server administrator knows that they are using subnet mask 255.255.255.0, then a filter can be created for IP address 17.104.104.***, thus applying not only to marvin.apple.com, but every other client on that network as well.

Troubleshooting Tips

Here are some suggestions for troubleshooting issues with TCP Filtering:

- Verify that the ASIP server running TCP Filtering has at least Mac OS 8.5 and Open Transport 2.0 installed.
- If clients are having issues accessing a particular service:
    - Verify that the service is enabled in ASIP Manager.

    - If TCP Filtering is enabled, check the Filter List for a filter that may be preventing access; look first at the filters that apply to the port the client is trying to access; check the range of IP addresses allowed or denied by that filter and compare it to client's IP address; if no filter for that particular port exists, then the "all ports" filter(s) would apply.
    - If confused by the combination of filters, try disabling TCP Filtering altogether, stop and restart the server and see if access is then successful. If not, then the issue is not with TCP Filtering. Remember that other firewalls implemented at the server's end, or at the end user's network, may prevent access to services also.
- If clients can access services when they should be denied:
    - Verify that TCP Filtering is enabled.
    - Verify that the filtering scheme is set up to deny access: check the filter for the specific port first, then look for the filter that has a value in the IP address field that would apply to the client in question.
    - Remember that changes in the Filtering will take affect immediately, but do not apply to active connections. The client must disconnect from the server, and test reconnecting again.
- Verify that the service is being offered on the port specified in the Filter. Some applications, such as the Mail Server Admin program or the ASIP Advanced Setup Utility, allow you to change the port numbers, so they will no longer match the predefined popup list in the TCP Admin program. A utility such as MacTCP Watcher has an option to "Show Connection List"; this will list the ports that the server is listening on.

Published Date: Feb 20, 2012

AppleShare IP 5.x, 6.x: First Aid Tool

AppleShare IP First Aid Tool is a utility being shipped for the first time to assist server administrators in verifying, reconstructing, and backing up the key files used for maintaining access privileges on the AppleShare IP (ASIP) 6.1 server: the Users & Groups data file, and the volumes' PDS files.

The ASIP First Aid tool is supported only on ASIP 5.x and 6.x servers.

This article covers the following topics:

- When to use AppleShare IP First Aid Tool
- How to use AppleShare IP First Aid Tool

This article has been archived and is no longer updated by Apple.

When to use the AppleShare IP First Aid Tool

You can use the AppleShare IP Tool on the following occasions to keep your server functioning properly. Remember that not all file corruption can be corrected with the tool.

- Use the ASIP First Aid tool to periodically back up your Users & Groups data file and PDS files. In addition to performing this task as part of routine server maintenance, it would be especially wise as a precaution before upgrading the server's OS or installing new hardware, or as a way of retaining access privileges when doing a clean install (after the clean install, restore the files).
- Whenever you have unexplained problems at the server, such as freezing or trouble with clients connecting, verify the state of the Users & Groups data file and PDS files. Corruption in either of these files can cause problems accessing the server.
- If the time it takes for the server to start up is very long, or the server simply never finishes starting up, verify the Users & Groups and PDS files; corruption in these files can cause problems when the server is checking the integrity of server information at start up.

How to use the AppleShare IP First Aid Tool

Verifying, reconstructing, and backing up

- Restart the ASIP 6.1 server with extensions off. Before attempting to use the ASIP First Aid Tool, quit all open applications and restart the server with the shift key down to turn off extensions. This keeps other applications from using the Users & Groups Data file; when this file is busy, the ASIP First Aid Tool cannot work on it.
- Launch the ASIP First Aid Tool.

Figure 1, ASIP First Aid Tool

- Back up your files first, by selecting the "Backup..." button and selecting the volume whose information you want to backup (backup each volume separately). This is a wise precaution, especially before you attempt a reconstruction. The data from the Users & Groups data file and the access privileges for that volume will be preserved in a file on your hard drive, that can then be used to restore the data at a later date.

Figure 2, FirstAidTool Backup icon

- Verify the PDS files. Each read/write volume on your desktop will have a PDS file, containing information about which folders are sharepoint, and what the access privileges are. After selecting the "Verify PDS" button, you'll be asked to select the volume you want to check. Verify each volume in turn. Reconstruct if problems are found, as indicated in the report below.

Figure 3, ASIP First Aid report

- Verify the Users & Groups Data file. Again, you'll be prompted to select which file to verify; be sure to select the file that is in the current startup disk's System Folder:Preferences folder.

Making PDS files visible.

The ASIP First Aid utility also allows you to make PDS visible or invisible. Select the option you want from the Utilities menu, then select the appropriate volume. (The AppleShare PDS file, normally invisible, is located at the root level of each local read/write volume on the server's desktop.) By making it visible, you can manually back up the file to a floppy or some other volume. It is not essential that the file be made invisible again, but by doing so, you prevent the file from being inadvertently renamed or moved, which would cause a loss of privileges on the server.

Figure 4, Utilities menu

Published Date: Feb 20, 2012

AppleShare IP 6.1: Installation Notes

AppleShare IP 6.1 ships with a Mac OS 8.5 CD. Detailed steps on how to install both the operating system and AppleShare IP (ASIP) can be found in the "Getting Started with Mac OS 8.5 Server" manual that shipped with the software. A text file entitled "ASIP 6.1 Upgrade Instructions" can also be found on the CD, with information for users who are upgrading from a previous version of ASIP. For seasoned administrators and technical support engineers, outlined below are the steps involved for:

- Upgrading. Installing over a previous version of AppleShare or AppleShare IP.
- Upgrading with Clean Install: Upgrading a previous version of AppleShare, but doing a clean install of the OS at the same time.
- New Install. Installing Appleshare IP on a machine for the first time.

This article has been archived and is no longer updated by Apple.

Upgrading

When ASIP 6.1 is being installed over a previous version of ASIP (not doing a clean installation).

- Back Up. Before starting any upgrade procedure, whether it be hardware or software, it's a good idea to have a backup of all server data. This allows you to get the server back up and running in the shortest possible time, in the event of an unforeseen situation, such as a power outage during the installation procedure.
    - Back up essential ASIP files (Users & Groups Data file and the invisible PDS file on each server volume). To back up the invisible PDS files, you'll need to use a utility such as ResEdit or Norton Disk Editor to first make the files visible. Then drag them to a floppy or another volume, keeping track of which volume each PDS file came from, so you can restore it to the proper location, should you need to. Backing up these files is just a precaution.). Note that the ASIP First Aid Utility facilitates the process of backing up these files on your 5.x or 6.x server.
    - Verify that you have a recent back up of all server data. At a minimum, you can back up the existing System Folder to another volume as a precaution before proceeding (in addition to backing up the ASIP files, as described above).
    - If you are installing on a mail server, make sure you have a backup of the mail database.
- Install Mac OS 8.5, if desired. The minimum version of Mac OS that can be used with ASIP is 8.1, but installing 8.5 is required to use the TCP Filtering feature. The OS installation process also runs Disk First Aid on the Startup Disk and updates hard disk drivers as necessary. It would also be wise at this time to run Disk First Aid on all other server volumes, and rebuild desktop files, before putting the server back on line.
- Install ASIP 6.1. Select easy install to install everything, or custom install to select a subset of server components, as you prefer.
- Restart and run Easy Setup. Your serial number should still be available from the old preference files, and you should be ready to go. If you are running a version of the mail database that is earlier than 6.0, you must use the ASIP Mail Tool to update the database.

Upgrading with Clean Installation

This process creates a new System Folder, and should be used whenever the integrity of the existing System Folder is in question.

- Back up before starting any upgrade procedure, whether it be hardware or software. It is a good idea to have a backup of all server data. This allows you to get the server back up and running in the shortest possible time, in the event of an unforeseen situation, such as a power outage during the installation procedure.
    - Back up essential ASIP files (Users & Groups Data file and the invisible PDS file on each server volume). To back up the invisible PDS files, you'll need to use a utility such as ResEdit or Norton Disk Editor to first make the files visible. Then drag them to a floppy or another volume, keeping track of which volume each PDS file came from, so you can restore it to the proper location, should you need to. Backing up these files is just a precaution.). Note that the ASIP First Aid Utility facilitates the process of backing up these files on your ASIP 5.x or 6.x server.
    - Verify that you have a recent back up of all server data. At a minimum, you can back up the existing System Folder to another volume as a precaution before proceeding (in addition to backing up the ASIP files, as described above).
    - If you are installing on a mail server, make sure you have a backup of the mail database.
- Install Mac OS 8.5, if desired, choosing the "Clean Install" option. Mac OS 8.1 could also be installed, but 8.5 is required for TCP Filtering. The OS installation process will also run Disk First Aid on the Startup Disk and update hard disk drivers as necessary. It would also be wise at this time to run Disk First Aid on all other server volumes, and rebuild desktop files, before putting the server back on line.
- Configure control panels:
    - Date & Time: Remember to set the time zone, also.
    - Energy Saver: Use Server Settings to prevent the server from sleeping. You can also set it to restart after a power outage.
    - AppleTalk: Select appropriate interface for AppleTalk communications.
    - TCP/IP: Configure the TCP/IP control panel with a static IP address, subnet mask, router address, DNS servers.
- Install ASIP 6.1 Select easy install to install everything or custom install, to select a subset of server components, as you prefer. Restart the server after the installation is complete, but don't launch the ASIP applications yet.
- Restore ASIP files. If you used the ASIP First Aid utility to backup the files, use the same utility to restore them to their correct locations. If you backed up the files manually, follow these steps to restore:
    - Drag the new Users & Groups Data file from the Preferences folder to the desktop.
    - Drag your backup of the Users & Groups data file (from Previous System Folder) to the Preferences folder.

        - The AppleShare PDS files from your server volumes do not need to be restored at this point, because they did not get altered by the clean installation process UNLESS you didn't follow these instructions and opened a Web & File program before restoring the Users & Groups data file. If you did so, your PDS files would have been set back to default; you will know when this happened because all privileges of the folders are lost. If this should happen, you can quit any open ASIP applications and restore the AppleShare PDS files to the volumes they came from at this time. The files do not need to be invisible, but making them so prevents them from being inadvertently moved or renamed.
    - Restart the server.
- Run Easy Setup.

New Install

This process should be followed when setting up a server for the first time.

- Install Mac OS 8.5, if needed/desired. ASIP 6.1 will work with Mac OS version 8.1, except for TCP Filtering which requires Open Transport 2.0, a part of Mac OS 8.5. If a System Folder already exists on the machine, it is advisable to select the option to do a clean install. This process will also run Disk First Aid on the startup disk, and update the hard disk drivers if needed. It would also be wise at this time to run Disk First Aid and update drivers on all other server volumes, and rebuild desktop files, before putting the server on line.
- Configure control panels if needed:
    - Date & Time: Remember to set the time zone, also.
    - Energy Saver: Use Server Settings to prevent the server from sleeping. You can also set it to restart after a power outage.
    - AppleTalk: Select appropriate interface for AppleTalk communications.
    - TCP/IP: Configure the TCP/IP control panel with a static IP address, subnet mask, router address, DNS servers.
    - File Sharing: Enter owner name (which will become server administrator's account name), password (admin password), and server name.
- Install ASIP 6.1:
    - The ASIP 6.1 installer will detect if Open Doc (needed for the Administrator applications) is present, and install it, if needed.
- Run ASIP Easy Setup, following the prompts (have your serial number handy).

Published Date: Feb 20, 2012

AppleShare IP First Aid 6.2: Read Me

This article comprises the Read Me for AppleShare IP First Aid version 6.2. This software was released by Apple on 21 May 1999 and is available for downloading from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Description
AppleShare IP First Aid is a repair and backup utility for AppleShare data files. It can check the integrity of these files as well as make attempts to repair files that may have become corrupted. It also simplifies the task of making backup copies of these files. Version 6.2 of this software is included with AppleShare IP 6.2 and can repair corrupted files on AppleShare IP 6.0, 6.1, and 6.2 regardless of what language of the Mac OS is being used.

Requires
Mac OS 7.6 is required. Mac OS 8.5.x or 8.6 is recommended
This article has been archived and is no longer updated by Apple.
Contents

- About AppleShare IP First Aid
- Feedback and the AppleShare IP Mailing List
- Requirements for Running AppleShare IP First Aid 6.2
- Using AppleShare IP First Aid 6.2
- Known Problems

About AppleShare IP First Aid

AppleShare IP First Aid is a repair and backup utility for AppleShare data files. It can check the integrity of these files as well as make attempts to repair files that may have become corrupted. It also simplifies the task of making backup copies of these files.

AppleShare uses two kinds of files, the Users & Groups Data File and the AppleShare PDS, during the course of its operation. The Users & Groups Data File, located in the Preferences folder in the current System Folder contains information about the users that can connect to the system and some configurable server settings, while the AppleShare PDS, an invisible file on the root of each volume, contains information about the access privileges and sharing status of each folder on the hard disk. Although normally these files don't require any special maintenance, unexpected events (such as a power outage) can sometimes cause damage to these files. The AppleShare PDS file and the Users & Groups Data File for a computer are connected -- the privileges in the AppleShare PDS file refer to users and groups contained in the Users & Groups Data File.

The user (typically the AppleShare Server Administrator) can Verify the files, which will indicate possible problems and if there is a need for repair. The files can then be Reconstructed, a process which extracts all remaining valid data and places it in a new file. The original, corrupted file is renamed Old Users & Groups or Old AppleShare PDS, and is made visible (if necessary), and the new file is put in the proper place to allow the server to continue functioning.

The user can also Backup and Restore these files simply by selecting the volume to backup, and a location to place the backup. Restoration of a backup is easy, simply select the backup folder and AppleShare IP First Aid determines from which volume the backup came. It is a good idea to make a backup before using Reconstruction.

Requirements for Running AppleShare IP First Aid 6.2

Macintosh computers running AppleShare IP Server 6 or 5

Important: AppleShare IP First Aid does not work with Macintosh File Sharing. Use AppleShare IP First Aid only on computers on which AppleShare IP is installed.

- System Software: System 7.6 is required. Mac OS 8.5 is recommended (with AppleShare IP 6.1)

Using AppleShare IP First Aid 6.2

1. Restart your Macintosh with Extensions off so AppleShare IP First Aid has exclusive access to files.
2. Double-click on the AppleShare IP First Aid application.

Known Problems

- You can't back up a volume more than once to a given folder.

- Not all damaged files can be repaired successfully.
- Sometimes PDS files are reported as damaged when they are perfectly fine - do not take reports of a problem as confirmation that there is a problem, but rather, take them as an indication that there may be a problem.

Published Date: Feb 20, 2012

Mac OS X Server: The Inspector

This article provides information on what the Inspector is, and how it is used in Mac OS X Server.
This article has been archived and is no longer updated by Apple.
A very useful tool in the Workspace Manager is the Inspector. It is similar to the Get Info feature of the traditional Mac OS. It provides information about an item's attributes, contents, tools that it can be used with, and access privileges.

There are several ways to open the Inspector. It can be opened by choosing the Inspector from the Tools menu, by clicking the Inspector button of the Tool Bar, or by keyboard shortcuts.

The Attributes Pane (Command+1)

The Attributes pane provides essential information. It shows if an item is a link and what it is linked to. This is the only way to determine this information.

It also displays the user and the group that the item belongs to. If the item is a directory, the size can be calculated by clicking on the button that has a folder on it. The modification date is displayed in the lower right-hand corner of the window.

The bottom of this pane lists the read and write access permissions for the selected item.

The Content Pane (Command+2)

The Content pane looks different depending on what the selected item is.

If the item selected is a directory or application wrapper then the Contents pane displays a "Sort by:" option. This sorting method is applied inside the wrapper or directory. Wrappers are special kinds of directories that contain executable files and their resources.

If the item is an application, the pane displays the hardware platform (kind of computer) the application was compiled for. For Mac OS X Server the application must be compiled for the PowerPC platform. (Some developers may include other platform versions) It also displays the button titled *Open Application Wrapper*. This allows you to see the files inside the wrapper.

Also displayed are the extensions that the application can open. In Mac OS X Server, applications recognize which documents they can open based on a file's extension. This method is familiar to DOS and Windows users, but quite foreign to traditional Mac OS users.

The extension usually comprises three characters that come after the period in a filename. For example "picture.tif" has tif as the extension. The Contents pane displays all the extensions that an application can open.

The Tools Pane (Command+3)

The Tools pane is used for setting the default application used to open the item. As discussed above, Mac OS X Server uses extensions to open a file. It is quiet possible that several applications are able to open the same type of file. From the Tools pane you can choose the default application to open the items with a particular extension by clicking the appropriate application's icon.

For directories or applications, the Tools pane has no options.

The Access Pane (Command+4)

The Access pane allows the owner of the selected item to set its access permissions. Permissions are divided into read, write, and execute. The ability to read, write, or execute is based on being the owner, a member of a group, or other.

If read, write, and execute are checked only for the owner, then only the owner is able to perform those actions on the item.

If other has execute, read, and write permissions then all users will be able to do all three to the file. This could be a security hole.

Also in this pane is a checkbox that applies the permissions for a directory to all items located inside that directory. This is useful for quickly ensuring that access permissions are set correctly through out an entire directory.
Published Date: Feb 20, 2012

Mac OS X Server: What Is FTP?

FTP (File Transfer Protocol) is a way for computers to transfer files over an IP network. In Mac OS X Server, FTP is started from the command line. This article provides the basic information needed to use the ftp program as a client on Mac OS X Server.

FTP has many options that are not described in this article. For a detailed description of other FTP features open the Terminal application and type "`man ftp`" at the command prompt. This brings up the manual pages for FTP which describe it in detail.
This article has been archived and is no longer updated by Apple.

Remote and Local Computers

First, a few terms need to be defined so that the information below is more clear. The computer that you are connecting to is the remote computer. It is also called a server. A local computer or client, is the computer that you are sitting in front of when connecting to a remote computer.

Using FTP

To start an FTP session, open `/System/Administration/Terminal.app`. This program allows you to access the command line interface that is built into Mac OS X Server. When Terminal.app is opened, a new window and a prompt appears. This is often called the command prompt, or command line because it is where you type in your commands. At the end of the prompt you see by default a % (percent) sign. Commands typed on the keyboard will appear to the right of the % prompt and will be executed when you press the Return (Enter) key.

At the command prompt, type "`ftp [hostname]`" and press return where [hostname] is name of the remote computer. For example:

```
ftp skye
ftp skye.apple.com
ftp 192.168.1.1
```

If a connection can be made to the remote computer you will be asked to provide a user name an password. If you do not have an account on the remote computer an FTP session may not be allowed.

Some FTP sites are set up for anonymous FTP. This is done by many companies and individuals to provide access to public files or updates. These sites are called anonymous FTP sites because the user name to connect to these sites is literally "anonymous". The password is usually your email address. If anonymous FTP is allowed it usually is stated in the message that appears when a connection is made.

After a successful login the command prompt changes to "ftp>". Most of the standard Unix-compatible command line commands can be used in FTP.

The most commonly used commands are "`get`" and "`put`". Any files that are on the remote computer are downloaded to the local computer using the "`get`" command. Files that are transferred from the local computer to the remote computers are uploaded using the "`put`" command.

For example, the command "`get text`" would download the file "`text`" to the local computer. "`Put text`" would upload the file "`text`" to the remote computer.

To get a list of all the commands that FTP accepts, type "`help`" at the "ftp>" prompt. This lists all the available commands.

Transfer Modes

If you are going to upload or download a binary file (an application, compressed file, or anything that is more than a plain text file), FTP must be put in binary mode before the file transfer occurs. This is done by typing "`binary`" at the command line. This is the default mode for Mac OS X Server's FTP program.

To switch to the ASCII transfer mode so that plain text files can be downloaded type "`ascii`" at the command line. If the incorrect transfer mode is used the file probably is not transferred correctly.

Exiting FTP

To terminate an FTP session, type "`exit`" at the "ftp>" prompt. The connection to the remote computer is terminated and the normal command prompt returns. This can also be done to exit the FTP session at anytime.

FTP Server On Mac OS X Server

Mac OS X Server comes with an FTP server. The server is off by default, but may have been turned on when the Setup Assistant was run.

To verify this on Mac OS X Server 10.0 or later, connect to the server using the Server Admin application, click on the Sharing option, and check if the FTP icon indicates that the server is running. See the Mac OS X Server Administrator's Guide for more information on configuring FTP

TA26116_Mac_OS_X_Server_What_Is_FTP.pdf

Service on Mac OS X Server 10

On Mac OS X Server 1.x, open `/System/Applications/Preferences.app`. Double-click on the network option, and then click the "Services" tab. Here it is possible to turn on the FTP server, if you have root access.

Published Date: Feb 20, 2012

Mac OS X Server: The System Log

The System Log is a background process that allows messages from different parts of the operating system to be recorded in several ways. These messages are often important in diagnosing problems with the system, but the messages contain other useful information. This document focuses on the syslog.conf file because understanding it is the key to understanding the system log and its functionality.
This article has been archived and is no longer updated by Apple.
The syslogd is the daemon (background process) that facilitates what is done with the message that the system has generated. The file /etc/syslog.conf is the configuration file that syslogd reads when it starts up.

The syslogd is started when the /etc/rc script executes the /etc/startup/0900_SystemLog script. When the syslogd is started it creates a file called /var/run/syslog.pid. This file contains the process id of the syslogd so that it can be stopped. The syslogd can be stopped and restarted so that a new syslog.conf can be read by the syslogd without restarting the entire computer. The syslogd must be restarted for the changes in syslogd.conf to take effect.

Restarting the syslogd can be done by executing the /etc/startup/0900_System Log script, or by typing syslogd at the command line. **Note**: this must be done as root.

syslog.conf

The syslog.conf file is the configuration file for the syslog. It has only a few operands, but it is highly configurable. The syslog.conf file is divided into two fields, the selector field and the action field. These are usually separated by two tabs.

Selector Field	Action Field
facility.levels	action

The "*" symbol is a wildcard and denotes all facilities or levels.

The Selector Field

The selector field consists of the facility and the level, as shown in the table above. The facility is the part of the operating system reporting the messages, the level is the strength of message. If a message is at or above the level in the selector field, then the action is executed. Actions can do several things with the message and are discussed below.

The possible facilities that can be used are: auth, authprive, cron, daemon, kern, lpr, mail, mark, new, syslog, user, uup, and local0 through local7.

The possible levels are emerg, alert, crit, err, warning, notice, info, debug, and none. The levels are listed from highest to lowest, so a level of debug is the lowest level that can be set and it will report all messages.

Facilities	Levels
auth	alert
authprive	crit
cron	err
daemon	warning
kern	notice
syslog	info
lpr	debug
mail	
mark	
user	
uup	
local0 through local7	

Each facility can be used with any level.

Commas are used to separate multiple facilities from each other. Mulitple selector field on the same line can be separated by a semicolon. All selector fields on the same line have will have the action specified on that line.

Selector Field	Action Field
facility,facility.level;facility.level,level;facility.level	action

All of the messages recorded by the system log would have the same action in this example.

The Action Field

The action field specifies what is done with the message. The following table lists the four possible actions, and what they do.

Message Is	Action
appended to existing file	/var/log/syslog
sent to a host	@[hostname]
sent to a user	user name (commas separate multiple users)
sent to all users	the "*" symbol

Examples

Anything after a "#" symbol on a line is a comment.

kern,lpr.err	root,jim_bob # sends kern and lpr level err and higher to the users root and jim_bob
mail.*;cron.debug	root #sends only to root
mail.alert	* #sends to all users
syslog.err	@records.foo.com #sends to the host records.foo.com

Published Date: Feb 20, 2012

Mac OS X Server: The Installer.app

The installation process in Mac OS X Server centers around the Installer.app located in /System/Administration. The Installer.app installs groups of files called packages. All packages end in the .pkg or .mpkg extensions. A .pkg extension indicates a single package where as a .mpkg extension signifies multiple packages to be installed. Once a package is installed a receipt is created to keep track of the files installed and to remove the package if needed. All receipts are stored in the /Local/Library/Receipts directory.
This article has been archived and is no longer updated by Apple.

Packages

As stated above, a package is a collection of files. One of these is a compressed files that contains the software to be installed. The other files facilitate the installation process. The file contained in a package are:

Package file	What the files does
product.pax.gz	The files to be installed, compressed with gzip and archived with pax (see the man pages for more info)
product.bom	Bill Of Materials: a record of where files are to be installed. This is used in the verification and uninstall processes
product.info	Contains information to be displayed while installing
product.sizes	Text file containing the number of files in the package
product.tiff	Custom icon for the package
product.status	Created during the installation, it will either say installed or compressed
product.location	The location where the package will be installed
software_version	May or may not be present. contains the version of the package to be installed

The contents of a package can be viewed by selecting the package and holding down the command, shift, and "o" key. This opens a new viewer window in which the contents of the package are displayed.

Receipts

The Installer.app creates a receipt after a package has been installed. All receipts are stored in the /Local/Library/Receipts directory. **Note**: all receipts have the .pkg or .mpkg extension so that the Installer.app opens them.

A receipt is very similar to a package. Most of the files explained above are part of the receipt with one major exception: the product.pax.gz file is not contained in the receipt.

The files that make up the receipt allow the Installer.app to remove the package at a later date, or to display the location of the installed files.

The contents of a receipt can be viewed by selecting the receipt and holding down the command, shift, and "o" key. This opens a new viewer window in which the contents of the package are displayed.

The Installer.app

To install a package, open the directory that contains the package and double-click the package to be installed. The Installer.app opens and the "Install" button and the "List" button is active. The Install button starts the install process, while the List button lists the files to be installed and where they are to be placed.

Deleting a package is accomplished by double-clicking on its receipt located in the /Local/Library/Receipts directory. When the Installer is done opening the receipt, the "Delete" button and the "List" button will be active. The "Delete" button removes the files installed by the package and also the package receipt itself.

Also, in the Installer.app window is a pull down menu. This menu has three selections, info, progress, and log. The info option is what the Installer.app shows by default. It shows some basic information about the package or receipt. The progress option shows the user the progress of the operation that is currently taking place (installation, uninstall, or listing). Finally, errors will sometimes be reported during an installation. When this happens the Installer.app will refer the user to the log for a description of the issue.

OpenUp and the Installer

There is a very useful third party program called OpenUp that uncompresses files in Mac OS X Server. This program sometimes tries to open packages or receipts when they are double-clicked. See the following article under the Tools heading for instructions on solving this problem:

TA26118_Mac_OS_X_Server_The_Installerapp.pdf

Article 60030: "**Mac OS X Server: The Inspector**."
Published Date: Feb 20, 2012

Mac OS X Server: Restart After Changing Network Settings

Mac OS X Server requires that you restart the computer after making changes to any of the network settings.
This article has been archived and is no longer updated by Apple.
There may be times when Mac OS X Server does not automatically restart, or prompt you to restart the computer when you make a change. However, **any** time there is a change to the network configuration, the computer must be restarted for the change to take effect.
Published Date: Feb 20, 2012

Mac OS Runtime for Java 2.1: Files Installed

This article identifies the files installed with Mac OS Runtime for Java version 2.1, and their locations.
This article has been archived and is no longer updated by Apple.
In the Extensions folder (inside the System folder)

- MRJ Libraries folder, containing MRJ Lib, MRJ Symantec JITC, the MRJClasses folder and the lib folder.
- MRJ Enabler extension (installed only on computers using Mac OS 8.1 or earlier)
- Text Encoding Converter 1.4.2
- Appearance Extension 1.0.3 (installed only on computers using Mac OS 7.6.1)

In the System folder:

- A Text Encodings folder containing version 1.4.2 of the encodings

In the Control Panels folder (inside the System folder):

- Appearance control panel 1.0.3 (installed only on computers using Mac OS 7.6.1)

In the Preferences folder (inside the System folder):

- Appearance Preferences 1.0.3 (installed only on computers using Mac OS 7.6.1)

In the Apple Extras folder:

- Mac OS Runtime for Java folder

Published Date: Feb 20, 2012

Mac OS Runtime for Java 2.1: Installing on Localized Mac OS

This article identifies some issues with using the North American English installer of Mac OS Runtime for Java (MRJ) on localized versions of the Mac OS.

This article has been archived and is no longer updated by Apple.

The Mac OS Runtime for Java (MRJ) version 2.1 Installer installs the North American English version of the Text Encoding Converter 1.4.2 extension and its associated text encodings. The MRJ 2.1 installer is programmed to replace older versions of these same files. However, on computers running localized versions of the Mac OS, the names of the existing Text Encoding Converter and associated text encodings have been localized as well. On these computers, the North American English MRJ Installer cannot recognize the older files, and does not install the newer Text Encoding software. A localized MRJ 2.1 installer is expected to be available in a future release of the Mac OS.

If your computer is running a localized version of the Mac OS with Text Encoding Converter extension 1.3 or later installed, MRJ 2.1 works but may experience some text handling errors.

If you have an earlier version of the Text Encoding software installed (previous to version 1.3), an alert message appears during installation to indicate that your system software must be updated before MRJ can be installed.

Published Date: Feb 20, 2012

Mac OS Runtime for Java 2.1: Known Issues

This article describes the known issues with Mac OS Runtime for Java 2.1.
This article has been archived and is no longer updated by Apple.
Secure Sockets: MRJ 2.1 does not support the Secure Sockets Layer interface (SSL), which allows applets to access Web pages via "https."

Appearance Manager 1.0: If your system is using Appearance Manager 1.0 (which comes with Mac OS 8), you may see dialog boxes without borders or other visual inconsistencies. You should upgrade to Mac OS 8.1 or later. A free upgrade from 8.0 to 8.1 is available at Apple's Web site: **http://www.apple.com/swupdates**.

Games and modifier keys: Some game applets use the Shift, Alt, and Control keys as game controllers. In some cases, these controls will not work as expected.

Apple Studio Display: If you have an Apple Studio Display (flat-panel monitor) and Mac OS 8.1 or earlier installed, you may see cosmetic inconsistencies in the Monitors & Sound control panel. You should update your Apple Displays software as soon as an update becomes available. To check on its availability, go to **http://www.apple.com/swupdates**.

Yahoo games: Multi-user Yahoo games do not work correctly using Internet Explorer and MRJ 2.1. Apple, Microsoft, and Yahoo are working together to resolve this problem.

Low memory: When Java applications are running out of memory, MRJ may put up a blank window with no information in it and appear to crash. If this occurs, you can sometimes quit by selecting "Quit" from the Apple Menu (there is no Edit menu since Java did not start up properly). If several applications are running at the same time, quit unused applications to free up memory, or increase the amount of virtual memory in the Memory Control panel, and then try the application again. If this problem persists, you may need to add additional physical RAM.

Printing: If you use your browser's Print command to print a Web page that contains an applet, the page will contain a blank area where the applet should be. If available, use the applet's Print menu to print the page.
Published Date: Feb 20, 2012

Mac OS Runtime for Java 2.1: Configuring For Proxy Servers

Mac OS Runtime for Java (MRJ) 2.1 ignores Internet Explorer's HTTP proxy settings when loading applets in a browser window. For users behind a firewall that requires a proxy server, this will result in an inability to load any Java applets from websites outside the firewall. Users will see an "Applet closing" error message in the Internet Explorer status line, and opening the Java Log window will reveal ClassNotFound exceptions.

This condition is only found in MRJ 2.1, which is currently available only as a separate download from Apple's website. It is not found in MRJ 2.0, the version included in Mac OS 8.1 and 8.5.
This article has been archived and is no longer updated by Apple.
Apple plans to make available a revised version of MRJ that will correct this condition. Until the revised version is available, you may have to enter proxy information directly into an MRJ configuration file using the following steps.

Before you begin you will need to know the address and port number of your intranet's HTTP proxy server. If Internet Explorer is already configured, you can find this information in the Proxies panel of the Preferences dialog. Otherwise you can ask your network administrator for this information.

1. Launch SimpleText and choose the "Open..." command from the File menu.

2. In the file dialog, navigate to the active System folder, then the Extensions folder, then the "MRJ Libraries" folder, then the "lib" folder.

3. Choose the "appletviewer.properties" file. It will open in a SimpleText window.

4. Scroll to the end of the file if necessary, and click at the end of the last line to put the insertion point at the very end of the file.

5. Press the Return key a few times, then enter the following three lines:

proxySet=true
proxyHost=NAMEOFYOURPROXYSERVER
proxyPort=80

Press the Return key at the end of each line (including the final line). The spelling and capitalization must be exactly as shown above. Do not put any blank spaces anywhere in these lines. On the second line you **must** replace "NAMEOFYOURPROXYSERVER" with the name of your HTTP proxy server, for example, "proxy.mycompany.com". If the proxy server uses a port other than the default 80, replace the "80" on the third line with the actual port number.

6. If your network also has an FTP proxy server, enter the following
three additional lines:

ftpProxySet=true
ftpProxyHost=NAMEOFYOURFTPPROXY
ftpProxyPort=21

Enter this exactly as shown, just as in step 5, except: On the second line you **must** replace "NAMEOFYOURFTPPROXY" with the name of your FTP proxy server, for example, "ftpproxy.mycompany.com". If the proxy server uses a port other than the default 21, replace the "21" on the third line with the actual port.

7. Save changes to the "appletviewer.properties" file, and quit SimpleText.

8. Quit Internet Explorer if it was running, then launch it again. You should now be able to access Java applets outside the firewall.

Note: Once the "appletviewer.properties" file has been configured for your firewall, you may copy the file onto other computers, replacing the original file in the "lib" folder. This is a lot easier and more reliable than hand-editing the file on each computer.
Published Date: Feb 20, 2012

Mac OS X Server: About bootp and NetBoot

Learn about the bootstrap protocol (bootp) and how it relates to NetBoot.
This article has been archived and is no longer updated by Apple.
Bootp is the bootstrap protocol. It can be used to transfer an IP configuration image to a client; in addition it can also transfer an operating system image to run diskless clients. These are two separate steps so that a client can get an IP address without having to boot from the server. This is the basically the same procedure as NetBooting.

When a client makes a bootp request, it broadcasts its Ethernet address. This is the address for the computer's network interface card(s). Specifically, it is referred to as a MAC (Media Access Control) address. The network interface may be built into the logic board, or it may come from a card that has been added to the computer. A bootp server recognizes a client via its Ethernet address. The server will ignore all bootp broadcasts that come from Ethernet addresses that are not in its configuration table.

If a bootp server is in the same subnet as the client making the request the server will return the IP configuration of the client. It will also return the name and location of the file used to boot diskless clients. Note: bootp packets do not travel across subnets, but some routers have the extensions to allow this, check with the router manufacturer. In normal operation it is not a good idea to allow bootp packets to cross subnets.

If the client is going to boot from its hard drive, bootp will quit and the normal boot sequence will continue. However, if the client is going to boot from the server it will need to download the operating system image file. This is done by bootp and TFTP (trivial file transfer protocol). TFTP is a simple version of FTP that operates via UDP instead of TCP. UDP is a much lower level process than TCP and requires fewer resources to operate.

The bootp client will pass the location of the bootfile image to the TFTP client. The TFTP client will then request that the image be downloaded from the server. Once the image has been downloaded, bootp will load the image into memory (including virtual memory) and booting will continue.

Bootp Daemons

Two daemons should be running on a bootp server. These are bootpd and bootparamd. The easiest way to confirm this is to open the ProcessViewer and visually inspect that both the processes are running. Another way is to type "`ps -aux | grep bootp`" at the command line. This searches the currently running processes for these processes. This command will also show the user that the owner of these processes is root.

Both the bootpd and bootparamd must be running for bootp and NetBooting services to work properly.

NetInfo Bootp Properties

If a Netinfo server is also a bootp server the configuration information for the clients will have to be in NetInfo, so that bootp can do its job. There are five properties that must be present in the NetInfo database. The table below shows these properties and theoretical values associated with them.

Here is a table of the five properties and their values:

name	Skye
bootfile	mach
ip_address	192.168.1.1
en_address	0:5:b:3b:f6:7
bootparams	root=scotland:/bootimages/MXS private=scotland:/bootimages/MXS/private

These properties and values tell the server which IP configuration to assign to a client based on its MAC address. The en_address is the MAC address and is used for identification of authorized clients. The name and ip_address properties are assigned to the client, thus configuring it for TCP/IP network access.

The server also returns the values for bootfile and bootparams. The bootfile is the file that contains the operating system the client will boot from. The bootparams property is the location of the operating system image. The client will only use these values if it is booting from the server.

NetBoot uses a modified version of bootp. For information about the NetBooting implementation of bootp, please see the following article:

Article 60080 "**Mac OS X Server: NetBoot Theory Of Operation**."
Published Date: Feb 19, 2012

Macintosh G3 Server (Blue and White): Selecting Ethernet Ports

If you purchased a Macintosh Server G3 With Mac OS X Server, the server computer includes a 4-port Ethernet card that may be labeled incorrectly.

This article has been archived and is no longer updated by Apple.

In "Connecting to an Ethernet Network" of Setting Up Your Macintosh Server G3, an illustration shows the four ports of the Ethernet card numbered 1 to 4 from left to right. However, the ports are numbered from right to left. Therefore, in Mac OS X Server's Setup Assistant or Network settings panel, Ethernet port 1 corresponds to the port on the right while Ethernet port 4 corresponds to the port on the left.

Published Date: Feb 20, 2012

Mac OS X Server: Making Sure the Hard Disk Is Working Properly

How can I check to see if the hard disk is working properly in my Mac OS X Server computer?
This article has been archived and is no longer updated by Apple.
You use the fsck command to repair corrupted or damaged hard disks in Mac OS X Server format.

You use Disk First Aid to verify and repair a hard disk in Mac OS Extended format. The volumes you use to store NetBoot users' documents use Mac OS Extended format.

Note: Some volumes can be verified but not repaired, such as the volume the Disk First Aid application is stored on, a write-protected disk, or a disk that has open files. On your NetBoot server, the Disk First Aid application is located on a volume formatted in Mac OS X Server, and Disk First Aid does not verify or repair this type of volume.

To verify or repair a hard disk:

1. Log in to the server as the Administrator ("root").
2. Open the Server Administration menu (in the Apple menu) and choose Disk First Aid.
3. Click the volume you want to verify or repair, then click Verify or Repair. You verify a hard disk first. If problems are found, then you can repair the disk. You can select more than one volume by pressing the Shift key while clicking a volume.

Published Date: Feb 19, 2012

Mac OS X Server: Creating a QuickTime Server Firewall

I am firewalling a QuickTime server with Cisco access control lists. What rules do I need beyond:

```
!inbound
access-list 101 permit tcp any host qtserver eq 554
!outbound
access-list 102 permit tcp host qtserver eq 554 any established
```

This article has been archived and is no longer updated by Apple.

Inbound and outbound UDP for the data traffic. Each track in a movie uses a pair of UDP ports (even/odd number). The RTP traffic flows on the even port, from server to client (no back traffic). RTCP traffic flows on the odd port, both ways. QuickTime uses ports 6970 and up on the client side, servers vary widely. Opening, say, 30 ports here should allow any client to view several movies and not run out.

Published Date: Feb 19, 2012

Mac OS X Server: Power Macintosh G3 (Blue and White) Won‘t Start up With Mac OS 8.x

A Power Macintosh G3 (Blue and White) will not start up with Mac OS 8.x when holding down the option key.
This article has been archived and is no longer updated by Apple.
This is a result of the New World ROM architecture on these computers. When trying to start up from the default operating system, it will scan drives and partitions until it finds a suitable one. If it comes across the MOSX_OF3_Booter partition first, it will start up with Mac OS X Server instead of Mac OS 8.x.

The MOSX_OF3_Booter partition is a hidden Mac OS format partition that contains a blessed System Folder with a Finder, System, and BootX file. The BootX file is analogous to the Mac OS ROM files used in Mac OS and is needed to start up Mac OS X Server.

Solution
Make sure Mac OS 8.5 or later is installed on the first partition on the drive.
Published Date: Feb 19, 2012

Mac OS X Server: USB Keyboard and Restart/Shut Down Window

Under Mac OS X Server, users can restart or shut down the Mac OS X Server by pressing the Control and Power keys to bring up the Restart/Shutdown mini-monitor window. Users are presented with the following message:

> Restart or shutdown?
>
> Type R to restart, or H to shutdown.
> Type C to continue

For computers with a USB keyboard like the Power Macintosh G3 (Blue and White), the Restart/Shutdown mini-monitor appears, but users are unable to type anything in the window. Users are forced to restart or shutdown the computer manually.

Why does this occur?
This article has been archived and is no longer updated by Apple.
The Restart/Shutdown mini-monitor window occurs at a lower level than the code for the USB driver in Mac OS X Server. As a result, USB input is not recognized in this window.

If you have a computer that has a USB keyboard, you should not use the Restart/Shutdown mini-monitor window. Instead you should restart or shut down the server by logging out of Mac OS X Server and clicking the appropriate button. Additionally, Power Macintosh G3 (Blue and White) users can use an Apple ADB keyboard as this issue does not occur with an Apple ADB keyboard.
Published Date: Feb 19, 2012

Mac OS X Server: ATTO SCSI Cards In Macintosh Server G3 (Blue and White)

The ATTO SCSI cards that shipped with the original Macintosh Server G3 cannot be used under Mac OS X Server with the Macintosh Server G3 (Blue and White).

This article has been archived and is no longer updated by Apple.

ATTO SCSI cards that were included with the Macintosh Server G3 prior to 1999-01 cannot be used in the Macintosh Server G3 (Blue and White). Attempting to use these cards in a Macintosh Server G3 (Blue and White) with Mac OS X Server will result in a SCSI driver initialization failure.

Published Date: Feb 19, 2012

Mac OS X Server: How Darwin OS Differs

What is the difference between Mac OS X Server and Darwin OS?
This article has been archived and is no longer updated by Apple.
Mac OS X Server is a retail product. It is a server operating system with a Macintosh-like Graphical User Interface (GUI).

Darwin OS is the Open Source release of the Mac OS X Server operating system foundation. It does not include source code for the graphical user interface, NetBoot, Macintosh Manager, Apple File Services or WebObjects. Darwin OS is available from Apple at http://www.apple.com/darwin/

Apple does not offer telephone technical support for Darwin OS components.
Published Date: Feb 19, 2012

Mac OS X Server: WebObjects Installation - Overwrite Existing Files?

While installing the following packages from the WebObjects disc, messages will sometimes appear asking if existing files should be overwritten:

- MacOSXServerDeveloper.mpkg
- WebObjectsDeployment.mpkg
- WebObjectsDeveloper.mpkg

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The WebObjectsDeveloper package includes the WebObjectsDeployment and MacOSXServerDeveloper package. This will be the package most developers will want to install because it provides the widest range of options and programming environments. Developers will only need to install the deployment package if they only want to deploy WebObjects applications. The MacOSXServerDeveloper package installs the development tools used to create non WebObjects applications.

In any case, overwriting the existing files will not cause a problem and is the proper action when installing these packages.
Published Date: Feb 19, 2012

Mac OS: Can‘t Start Up Computer From Mac OS Disc

I can't start up the computer using the Mac OS CD. What should I do?
This article has been archived and is no longer updated by Apple.
Cause 1: Your computer located the system software on your hard disk before it located the system software on the CD. If you have an external hard disk with system software, the computer may locate and start up from that device instead of the CD.

Solution 1: With the CD inserted, open the Startup Disk control panel and click the CD icon in the Startup Disk window. Then restart the computer.

After you install the software, use the Startup Disk control panel to reselect your hard disk, then restart your computer.

Cause 2: You don't have an Apple-brand CD-ROM drive, or you're accessing the CD from a PowerBook using file sharing.

Solution 2: To ensure a smooth installation, turn off any disk security or virus-protection software you have installed. Then follow the steps in this section to temporarily disable all non-Apple extensions and control panels so they won't cause problems during installation.

If you are using System 7.5 or later, use the Extensions Manager control panel to turn off non-Apple extensions and control panels. In the Extensions Manager, open the Sets pop-up menu and choose the item that has the word "base" and the version of system software currently installed on your computer. (If you have System 7.5, choose the item that has "system" in it.) Then restart the computer.

If you are using an earlier version of system software, or don't have the Extensions Manager, do the following:

1. Open the System Folder, then open the Extensions folder.
2. Drag any non-Apple extensions out of the Extensions folder and onto the desktop. If you don't know where a particular extension came from, click it once to select it, then open the File menu and choose Get Info. If the Version section of the Info window doesn't say "Apple Computer, Inc.," drag the extension to the desktop.
3. Open the Control Panels folder.
4. Drag any non-Apple control panels out of the Control Panels folder and onto the desktop. As in step 2, use the Get Info command if you're not sure whether to remove a control panel.
5. Restart your computer.

After you've finished installing the software, you can drag the extensions and control panels back to your System Folder. To make sure the software is compatible with this version of the Mac OS, restart your computer after you reinstall each item.
Published Date: Feb 20, 2012

Mac OS 8/9: The Installer Cannot Repair Your Hard Disk

When I try to install Mac OS 8.x or 9.x, I get a message that says the installer was unable to repair a problem with the hard disk. What should I do?
This article has been archived and is no longer updated by Apple.
Solution 1: If you see a message that the disk can't be fixed because a file is open, quit all programs. If file sharing is on, turn it off. Then try installing again.

Solution 2: Use Disk First Aid, provided on the appropriate Mac OS CD, to see if it can repair the disk.

Solution 3: Use a third-party disk repair utility to see if it can repair the disk.

Warning! If you use Norton Utilities, make sure you have version 3.5.2 or later. Earlier versions may damage data on Mac OS Extended format disks.

If you don't have a third-party utility, or if that utility can't repair the disk either, you will need to reinitialize the hard disk.

First, back up your hard disk because reintializing erases everything on the disk. Then use the Drive Setup utility program to reinitialize the disk. If your hard disk is not an Apple hard disk, use the disk utility software provided by the manufacturer instead of Drive Setup.

You can find Drive Setup in the Utilities folder on the appropriate Mac OS CD. To reinitialize your startup disk (the disk with system software on it), you need to start up the computer from the appropriate Mac OS CD. For help with Drive Setup, open the program, then look in the Help menu.

After you've reinitialized the disk, use the appropriate Mac OS Installer to reinstall system software, then reinstall your application programs.
Published Date: Feb 19, 2012

Mac OS: The Installer Cannot Update The Hard Disk Driver

When I try to install Mac OS, I get a message that says the installer could not update the hard disk driver. What should I do?
This article has been archived and is no longer updated by Apple.
Cause 1: You don't have an Apple hard disk.

Solution 1: Use the disk utility recommended by the manufacturer of your hard disk to update the drivers on your system before installing the Mac OS. Make sure to get a version of the utility that is compatible with the software you are installing. An old utility will not be able to update your disk with the most current driver.

Cause 2: You've previously updated your Apple hard disk with a non-Apple disk utility.

Solution 2: You need to use the utility you used previously to update the driver again. To ensure a successful update, obtain the latest version of the utility from the manufacturer.

Cause 3: Your hard disks may need to be reinitialized before you can update the driver.

Solution 3: Reinitializing your hard disk will completely erase the disk. Be sure to back up all the files on the hard disk before proceeding. For instructions on reinitializing the hard disk, see the manual that came with your computer, but use the Drive Setup program provided on the Mac OS CD to perform the initialization, even if a different Apple disk formatting utility was supplied with your computer.
Published Date: Feb 19, 2012

Mac OS: "System File Cannot Be Modified" Message

When I try to install Mac OS, I get a message that says the System file could not be modified. What should I do?
This article has been archived and is no longer updated by Apple.
Cause 1: You have installed virus-protection software that guards against modification of the System file.

Solution 1: Start up your computer from the Mac OS CD.

Solution 2: Drag any virus-protection software out of the System Folder and restart your computer. You can put the virus-protection software back after installation.

Cause 2: The System file or the Finder file may be locked.

Solution 2: To see if your System file or Finder file is locked, select the file's icon. Then open the File menu and choose Get Info. Make sure the Locked checkbox is not selected.
Published Date: Feb 19, 2012

AppleShare IP 6.1: File Save/Open Issue With PowerPoint 97 via SMB

Apple has received reports of a problem saving/opening Microsoft PowerPoint 97 file on an AppleShare IP (ASIP) 6.1 volume via Windows File Sharing (SMB) connections.

When saving a file to an ASIP volume, the file may appear to save properly but contains no slides.

When opening a file on an ASIP volume, the following error may occur:

PowerPoint can't open the type of file represented by <filename>

In both cases, the file rendered unusable.

Note: PowerPoint 97 apparently writes to a file when it is opened, so opening a file without specifically saving may also render it unusable.

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Apple has investigated these reports and has determined that the problem is partially solved by updating PowerPoint 97 with Office 97 Service Release 2 (SR-2). Apple has addressed the remainder of this issue in AppleShare IP 6.2, which can be downloaded from the Apple Software Updates Web site at http://www.apple.com/swupdates/ .

To avoid this issue, please make sure you are running both AppleShare IP 6.2 and PowerPoint 97 SR-2.
Published Date: Feb 20, 2012

Mac OS X Server: Server Computer Will Not Start up Past "Starting name server"

I just set some IP addresses in Mac OS X Server as a test, and now the server computer is displaying a message that says "Starting name resolver" but it won't start up beyond that. What could be wrong?
This article has been archived and is no longer updated by Apple.
Setting the IP address of the built-in Ethernet interface to 0.0.0.0 causes this error. Using this setting on other interfaces such as en1, en2 works OK for testing purposes. However, with this setting, the server computer can't continue to start up. With the "Starting name resolver" message on the screen, do the following steps:

1. Restart the computer. For computers with an Apple Desktop Bus keyboard, press and hold down simultaneously the Control, Command and Power keys. For computers with a Universal Serial Bus keyboard, shutdown the computer by pressing the Power button, then press the Power button again to start up the computer.

2. Force the computer to start up in single-user mode by immediately holding down the "S" key.

3. At the single-user mode prompt "#" type the following commands to perform a root "/" file system check and enable the root "/" write permission for modification:

```
# /sbin/fsck -fy
# /sbin/mount -uw /
```

4. Using a text editor change the built-in Ethernet interface line of the `/etc/iftab` file (the interface table) to the valid IP address and netmask number. For example change this:

```
en0    inet  0.0.0.0   netmask  0.0.0.0  up
```

to something like:

```
en0    inet 192.168.100.2  netmask 255.255.255.0  up
```

5. Quit the editor program, then type the exit command to continue starting up:

```
# exit
```

Published Date: Feb 19, 2012

Cyrillic Language Kit: Keyboard Stickers Don‘t Match the Keyboard

I am using the Cyrillic Language Kit, and I am trying to use the keyboard stickers that come with it. I am following the included keyboard diagram, but there seem to be too many keys on the second row of letters (a, s, d, etc). The label sheet and keyboard diagrams show 12 keys on this row, but my keyboard has 11. The last key on the row is "E" (E with umlaut) in the Russian layout and ")" in the Bulgarian and Ukrainian layouts. Where do I put this sticker?

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If you are using a US keyboard and a Russian, Bulgarian, or Ukrainian keyboard layout, this last sticker goes on the "\\" key, just above the Return key.

If you are using the Cyrillic-QWERTY transliterated keyboard layout, there is no key that corresponds with this character. The "E" (E with umlaut) is produced by the Option-e key combination, and parentheses are produced just as with a standard US keyboard layout. For details, see page A-19 of your Cyrillic Language Kit Installation and User's Guide.

Published Date: Feb 20, 2012

Mac OS X Server: G3 Still Displays "Firmware Update Needed" Message

When starting up a Power Macintosh G3 (Blue and White) from a NetBoot server, a message is displayed stating that the firmware must be updated. The computer has been updated with the latest version from Apple's web site. Why is the message displayed?
This article has been archived and is no longer updated by Apple.
This is a known issue and Apple is looking into why the message is erroneously displayed. The G3 Firmware Update installs version 1.1f4 of the Boot ROM and should be new enough to avoid this message.

This message can be ignored if the Power Macintosh G3 (Blue and White) has been updated. To check the Boot ROM version, start up into Open Firmware by holding down the Command-Option-O-F keys. The Boot ROM and Open Firmware versions will be listed. To continue starting up, type "mac-boot" and press the Return key.
Published Date: Feb 19, 2012

Mac OS X Server: "G3 Firmware Update Needed" Message

When starting up a Power Macintosh G3 (Blue and White) computer from a NetBoot server, a message is displayed stating that the firmware must be updated. What do I do?

This article has been archived and is no longer updated by Apple.

You should update the computer's firmware. The Power Macintosh G3 Firmware Update 1.1 is available from the Apple Software Updates Web site at http://www.apple.com/swupdates.

The Read Me file for this update is available in article 58374: "**Power Macintosh G3 (Blue and White): Firmware Update 1.1: Read Me**"

Published Date: Feb 19, 2012

Mac OS X Server: iMac Firmware Update Needed For NetBoot

When starting up an iMac from a NetBoot server, a message is displayed stating that the firmware must be updated. The iMac has been updated with the latest version from Apple's web site. Why is the message displayed?
This article has been archived and is no longer updated by Apple.
There is a newer version of the iMac firmware included with Mac OS X Server. It is installed as part of the NetBoot Server software and can be found in the "Admin" folder on the Mac OS X Extended format volume the NetBoot software was installed on.

There are two ways to tell the different firmware updates apart. The version of the updater application included with the NetBoot Server is 1.1. The updater application from the web site is version 1.0. Also, the modification date for the "iMac Firmware 3.0" file is December 1998 for the one on the web site and February 1999 for the one installed with the NetBoot Server.
Published Date: Feb 19, 2012

Mac OS X Server: Mac OS Installed From MacOS.app Will Not Startup a Power Macintosh G3 (Blue and White)

In Mac OS X Server, you can install Mac OS from MacOS.app onto a disk partition. The installer creates a System Folder there that will not start up a Power Macintosh G3 (Blue and White).
This article has been archived and is no longer updated by Apple.
MacOS.app requires no Mac OS ROM file because it is not a New World ROM based system, such as the iMac or Power Macintosh G3 (Blue and White). When installing Mac OS from within MacOS.app, the installer places a version of the Mac OS on the drive for MacOS.app and not one for the Power Macintosh G3 (Blue and White). This System folder contains no Mac OS ROM file and will not start up a Power Macintosh G3 (Blue and White) if you select that partition as your startup disk. The installed system will start up Mac OS.app, however.

The workaround is to start up the Power Macintosh G3 Blue and White from the Mac OS 8 or Mac OS 9 CD and install from it.
Published Date: Feb 19, 2012

Mac OS X Server: Selecting a Default AppleTalk Zone Without Routing AppleTalk

This article discusses how to select a default AppleTalk zone without routing AppleTalk.
This article has been archived and is no longer updated by Apple.
Selecting a default AppleTalk zone requires a Terminal window since it must be done from the command line. To select a zone, follow these steps:

1. Stop all processes that may be using AppleTalk. These include MacOS.app, AppleFileServer and MacintoshManagementServer.
2. Open a Terminal window if one is not already open.
3. Type "`appletalk -d`" at the command line and press return.
4. Type "`appletalk -u`" and press return.
5. There should be a list of zones available and a prompt asking for the number of the zone you want to select. Type the number of the zone and press return.

The AppleTalk zone configuration on some networks may cause an error message stating 'message too long' when this procedure is attempted. If that occurs substitute 'appletalk -x' in place of the 'appletalk -u' in step 4.

Mac OS X Server AppleTalk based services will now appear in the selected zone. The default zone is stored in `/etc/appletalk.nvram` file.

These steps are not necessary if routing AppleTalk since the default zone can be selected in Network Preferences.

Published Date: Feb 19, 2012

Mac OS X Server: Computer Stops Responding in "Starting Name Resolver"

This error can occur when the server computer's IP address is mistakenly entered in the Default Router Address field in the Setup Assistant.
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Use the procedure below to correct this condition.

1. Restart your server computer. The cleanest way to do this is to first press Control-and Power, then press the R key.

2. Immediately after you hear the startup chime, press and hold the S key. This will force your server computer to startup into "single-user mode."

3. In single-user mode, you will be presented with a "#" prompt. The line before the # prompt should provide you with instructions for how to mount the root directory with read/write access. You can issue both of these commands on the same line by separating them with a semicolon:

```
# /sbin/fsck -y; /sbin/mount -uw /
```

4. Verify that the default router address is indeed incorrect by issuing the following command:

```
# cat /etc/hostconfig | grep ROUTER
```

It will output a line of the form:

```
ROUTER=192.168.0.23
```

If the value after "`ROUTER=`" is your server computer's IP address instead of the default router address, then this is the cause of your server computer not starting up. Go on to step 5.

5. Now you need to change the `ROUTER` line in `/etc/hostconfig` file. You can do this on the command line, or using a text editor.

Here's the command line method for setting the `ROUTER` line:

```
# mv /etc/hostconfig /etc/hostconfig.broken
# sed 's/ROUTER=.*/ROUTER=192.168.0.1/' /etc/hostconfig.broken >
/etc/hostconfig
```

Of course, replace "`192.168.0.1`" with the actual value for your default router.

To edit `/etc/hostconfig` using a text editor, you will first need to set the `TERM` environment variable.

```
# TERM=nx; export TERM
```

Then invoke pico to edit the `/etc/hostconfig` file:

```
# pico /etc/hostconfig
```

Use Control-N to move the cursor down to the `ROUTER=` line. Then use `Ctrl-F` to move the cursor to the position after the "=". Use Ctrl-D to delete the existing value for ROUTER, then type in the correct value. Finally, press Ctrl-X to exit, press "y" when it asks you if you want to save, and press the Return key to write over the existing `/etc/hostconfig` file.

6. Issue the `exit` command to exit single-user mode and complete starting up. Your server computer will continue starting up and should now get past the Configuring network time message.
Published Date: Feb 19, 2012

Final Cut Pro 1.0: How to Install

Installation places the Final Cut Pro application and its components on your hard disk. Installation of certain software components is determined by the type of capture hardware you will be using with Final Cut Pro. If you have not yet installed and configured the additional hardware you will be using with your computer, read article 60227: "**Final Cut Pro 1.0 Hardware Setup and Configuration**." If you already have a system configured with capture hardware and a camcorder or deck, proceed with the installation instructions in this article.
This article has been archived and is no longer updated by Apple.

1. Insert the Final Cut Pro CD into your CD-ROM drive.
2. Double-click the Install Final Cut Pro icon.
3. Choose a destination disk from the pop-up list and click Select. Note: Final Cut Pro can only be installed on a hard disk with Mac OS 8.5 or later.
4. Read the Software License Agreement and click Continue.
    - Click Agree to continue with the installation.
    - Click Disagree to cancel the installation.
5. Specify the video capture hardware you will be using:
    - Select Truevision Targa Series if you will use a Targa video capture card.
    - Select DV (digital video) if you will use Apple FireWire and DV devices. When you select DV, your default video frame size is set to 720 x 480. **Note**: Selecting DV will install FireWire extensions in your System Folder. These extensions are optimized for Final Cut Pro. If you have existing FireWire extensions in your System Folder that you want to retain, move them out of the Extensions folder before you continue.
    - Select None/Don't Know if you will use hardware other than DV or Truevision Targa.
6. To specify a default video frame size (Truevision only):
    - Select NTSC Standard for a 640 x 480 frame size.
    - Select NTSC (CCIR 601) for a 720 x 486 frame size.
7. To specify the type of video source connection:
    - Select Composite to sample video over a single cable using a BNC or RCA connector.
    - Select S-Video to sample video over a single cable using a 4-pin S-video connector.
    - Select Component to sample video over three cables using Betacam (r-y, b-y, Y) Component BNC or RCA connectors.
8. Click Start to install Final Cut Pro.
9. Restart your computer.
10. Open the Final Cut Pro application and enter your registration information and serial number.

Note: Final Cut Pro is configured to use a standard set of preferences and preset controls based on answers given during installation. You may want to change these before you proceed any further.
Published Date: Feb 20, 2012

Final Cut Pro 1.0: Hardware Setup and Configuration

Final Cut Pro is designed to work with DV and Truevision Targa Series hardware. If you are using DV equipment, use the FireWire cable included with this package to connect your camcorder or deck to your computer. DV devices with FireWire transmit device control data, timecode, video, and audio over a single FireWire cable.

If you are using Truevision Targa equipment, device control and timecode signals are transmitted over one cable while video and audio data use another set of cables depending on the type of video source connection you choose. See your Targa manual for details.

You can also connect camcorders or decks that do not support device control to capture video clips and export edited sequences. To print to video or edit to tape, the card must have video out capabilities. To connect these devices, you need a QuickTime-compatible video capture card. Go to the Final Cut Pro Web site at www.apple.com/finalcutpro for a list of vendors and qualified products.
This article has been archived and is no longer updated by Apple.

Connecting Video Devices to Your Computer

Devices can be connected to your computer through a dedicated video capture card or FireWire connection. It is recommended that you connect and turn on the device before opening Final Cut Pro so the application can detect the device.

If you are connecting devices to your computer with video and audio cables:

- Connect the video and audio cables to the output jacks of your camcorder or deck.
- Connect the other ends of the cables to the corresponding input jacks of your capture hardware.
- Connect an appropriate device control cable between your camcorder or deck and the serial port of your computer.

If you are connecting a DV device to your computer with FireWire:

- Use the 2-meter, 6-pin to 4-pin FireWire cable supplied with Final Cut Pro to connect the device to your computer.
- Plug the 6-pin connector into the computer's FireWire port and the 4-pin connector into the device's DV port. (FireWire ports on external devices are sometimes labeled IEEE 1394 or DV IN/OUT.)

The Apple FireWire port on your Macintosh is a 6-pin port.

Warning! Do not attempt to force the 4-pin connector into the computer's 6-pin FireWire port. 4-pin connectors and ports can be especially fragile. Before connecting a 4-pin connector to its corresponding port, be sure it is aligned properly by matching an indent on the connector to the indent in the port. Do not force the two together.

Both connectors snap into place when properly engaged.

Once you have connected a camcorder or deck to your computer, turn on the device. If you are using a camcorder, switch it to VCR mode (sometimes labeled VTR.) In VCR mode, the camcorder operates as a playback/record deck and uses the video and audio connectors or FireWire for input and output. In Camera mode, the camcorder acquires video and audio through the CCD sensor and built-in Mic, not through the input connectors or FireWire. Final Cut Pro cannot record to the camcorder while it is in Camera mode.

Controlling Video Devices With Your Computer

Final Cut Pro can control devices through a serial or FireWire cable. If your camcorder or deck supports one of the following device control protocols, Final Cut Pro can transmit and receive timecode and transport control data to and from the device. Search mechanisms within some decks can also be controlled by Final Cut Pro.

Note: If your computer does not have a serial port, but does have a USB port, you can use a third-party product such as the Keyspan USB Serial Adapter, which allows you to attach serial devices to the USB port.

The following device protocols are supported:

- Apple FireWire or Apple FireWire Basic
- JVC RS-232
- Panasonic RS-232 or RS-422
- Sony RS-422 or RS-232
- Sony VISCA or LANC

Note: The Panasonic RS-422 and Sony RS-422 protocols require special cables. For more information about the various protocols and their cables, see the Final Cut Pro Read Me file in the Final Cut Pro application folder or visit the Final Cut Pro Web site at http://www.apple.com/finalcutpro

About Apple FireWire
Apple FireWire is designed to work with digital video camcorders and decks that have a FireWire port and use the DV format. With Final Cut Pro and a FireWire connection, you can control external DV devices and capture DV movie clips to your hard disk. You can then view, edit, and apply effects to the DV clips and render movies in the DV format. Final Cut Pro can also play the movies to your camcorder or deck through the FireWire connection where the output can then be recorded on tape.

Apple FireWire Basic
FireWire (IEEE 1394) is a serial bus currently supported by many professional and consumer level camcorders and decks. However, there is a wide range of functionality and adherence to the FireWire specifications among these devices. For this reason, two versions of the FireWire protocol (Apple FireWire and Apple FireWire Basic) are provided in Final Cut Pro's Device Control preferences.

If your deck or camcorder uses FireWire, begin by using the Apple FireWire protocol. This is the default protocol if you selected DV during the installation setup. While all decks and camcorders support the most basic functions like returning timecode and accepting basic transport commands, other commands may not be supported. If you find that the device does not accurately go to specified timecodes or fails to execute special commands, try the Apple FireWire Basic protocol.

To switch between FireWire protocols in Final Cut Pro:

- Choose Preferences from the Edit menu and click the Device Control tab.
- Choose Apple FireWire or Apple FireWire Basic from the Protocol pop-up menu.

System Configurations
A basic configuration includes a computer, a high-resolution monitor, and a video camcorder or deck. Your source footage will be sampled to the internal hard disk of the computer via FireWire or other video/audio connection. Footage can then be edited on the computer with Final Cut Pro and output back to tape through FireWire or other video/audio connection.

A recommended setup also includes an Ultra Wide A/V hard disk drive, an external set of speakers, and an NTSC video monitor.

- An Ultra Wide A/V hard disk drive provides a dedicated, high-throughput storage medium where video and audio can be recorded or rendered. The benefit of using a dedicated drive for your media is that the drive contains no operating system software or other applications and files that can fragment the disk. Fragmentation can interfere with the continuous data flow of video and audio to and from the disk. You can add an internal drive to your existing SCSI bus or you can install an Ultra Wide SCSI card to support an external A/V drive.
- External speakers allow you to hear audio output from your video camcorder or deck. Many camcorders come with a built-in speaker, but external speakers will provide you with higher quality audio output.
  Audio is output through the camcorder or deck
  - when playing back video with audio in the Viewer, Canvas, or Timeline
  - when printing or editing video to tape

  Note: When playing video in the Canvas, audio output through the external speakers will be slightly out of sync with the video. Audio from the external speakers will, however, be in sync with video displayed on an NTSC monitor.
- An NTSC monitor is highly recommended for previewing video output from your hard disk if you intend to output to videotape or broadcast on television. Final Cut Pro outputs video to the NTSC monitor through the camcorder or deck. Many video camcorders have built-in LCD displays that can also be used for this purpose. An NTSC monitor can also be used to view the playback from your video device when you are searching for edit points. Connect the NTSC monitor to your video deck or camcorder using the Component, S-Video, or Composite output jacks.

Ultra Wide SCSI Hard Disk Drive and PCI Card Specifications
Digital video and audio demands high data throughput to and from the hard disk drive. For the best performance when working with digital media, use a high-capacity, Ultra Wide SCSI drive. Depending on your system configuration, you may be able to add an internal drive if you have an existing Ultra Wide SCSI bus. If you do not have an internal Ultra Wide SCSI bus, install an Ultra Wide SCSI card in one of your computer's PCI slots. Refer to the Final Cut Pro Web site at http://www.apple.com/finalcutpro for a list of vendors and qualified products.

About the Internal Ultra Wide SCSI Bus
If your computer came with an Ultra Wide SCSI card, all devices on the same SCSI bus must have unique ID numbers. However, devices on different SCSI buses may use the same SCSI ID number. (For example, you can have a removable media drive with ID number 3 connected to the computer's built-in regular SCSI bus and a hard disk with ID number 3 connected to the Ultra Wide SCSI bus.)

Important: Hard disks installed in your computer at the factory and the SCSI card have reserved certain SCSI ID numbers on the Ultra Wide SCSI bus. Other ID numbers are available for assignment to SCSI devices that are added later, as described in the following table.

Ultra Wide SCSI ID No.	Device
0	Factory-installed hard disk drive (terminated)

1 through 6	Available (If your computer came with two or more Ultra Wide SCSI hard disk drives, use the System Profiler program (available in the Apple menu) to find out the SCSI ID numbers of your drives.)
7	SCSI PCI card (terminated)
8 through 15	Available

If you want to install an internal SCSI-3 drive, use the internal ribbon cable with the 68-pin connector to connect the device to the Ultra Wide SCSI bus.

Warning! Do not connect any SCSI devices to the external 68-pin SCSI-3 connector or to the internal 50-pin SCSI-2 connector on the PCI card that supports the internal hard disk. Connecting even one external SCSI device to the external 68-pin connector extends the overall cable length of the SCSI bus beyond the limit for which error-free operation can be guaranteed; the combined length of the internal cable and the external cable reduces the reliability of all the devices connected to the Ultra Wide SCSI bus. Connecting a device to the internal 50-pin SCSI-2 connector will cause your Ultra Wide SCSI devices to transfer data at the slower, SCSI-2 rate.
Published Date: Feb 20, 2012

Mac OS 8.5: System Freezes When Opening Help Viewer

I moved my Help Viewer window off the screen, up and to the left, by dragging the window with one of its edges. Now, when I try to open the Help Viewer, my computer freezes.
This article has been archived and is no longer updated by Apple.
The solution is to throw away the Apple Help Viewer Preferences. The Apple Help Viewer Preferences are located in the Apple Help Viewer folder in the Preferences folder. Once the old preferences for the Apple Help Viewer are deleted, the Help Viewer then opens at the default position.

Mac OS 8.6 resolves the issue.
Published Date: Feb 19, 2012

QuickTime 4.0.x: System Requirements

This article outlines the system requirements for QuickTime 4.0.x.
This article has been archived and is no longer updated by Apple.

Mac OS

- 68020, 68030, 68040, or PowerPC processor (PowerPC processor recommended for effects, 3D, Floating-Point Audio, DV, MPEG, RTP streaming features, or QDesign Music)
- 68000-family microprocessor based Macintosh computers must also support Color QuickDraw
- At least 8MB of RAM (random-access memory) recommended for 680x0-based computers; at least 16MB of RAM recommended for PowerPC-based computers
- Mac OS 7.1 or later. QuickTime's RTP streaming works with Mac OS 8.0 or later because it requires OpenTransport 1.2--or later--part of Mac OS 8.0.

Windows

- Intel or compatible processor or any MPC2- compliant PC (minimum 66-MHz 486 processor; also supports Pentium, Pentium Pro, and Pentium II with MMX processors; Pentium processor recommended when using effects, 3D, Sorenson Video, DV, RTP streaming features, or QDesign Music)
- At least 16MB of RAM
- Windows 95, Windows 98, or Windows NT 4.0 system software
- Sound Blaster or compatible sound card and speakers
- Installation of Direct X version 3.0 or higher is recommended for best performance
- Installation of DirectDraw and DirectSound drivers is recommended for best performance

Note: QuickTime 4.1 has system requirements greater than QuickTime 4.0.x. For more information see Knowledge Base article 60686: "**QuickTime 4.1 System Requirements**."
Published Date: Feb 20, 2012

Mac OS 8.5: Unable To Install With Large Disk Cache

After starting up from the Mac OS 8.5 installation disc and opening the installer program, the following alert dialog is displayed:

The applications "DFA Server" could not be opened because there is not enough memory available to continue. Try quitting other applications to make more memory available.

What should I do to complete the install?
This article has been archived and is no longer updated by Apple.
This situation can occur in memory configurations, where a large amount of RAM has been allocated for the disk cache in the Memory control panel.

Starting up from the installer disc with the Shift key held down will revert back to the minimum size of the disk cache (96KB) and will consume less memory, so that the installation may proceed.
Published Date: Feb 19, 2012

Mac OS: How to Move the Control Strip

This article explains how to change the position of the Control Strip.
This article has been archived and is no longer updated by Apple.
To move the Control Strip:

1. Press and hold down the Option key.
2. Drag the tab at the end of the Control Strip. If you drag it more than halfway across the display, the Control Strip moves to the other edge. If you have more than one display, you can drag the Control Strip to the left or right edge of the other display as well. The Control Strip always stays on the left or right edge of your display.

Changing the display's resolution from a smaller setting to a larger one and restarting the computer moves the Control Strip higher up on the display.
Published Date: Feb 19, 2012

Mac OS 8.5: Finder AppleScript Dictionary No Longer Has ‘obsolete‘ Suffix For Properties

The 'obsolete' keywords in the Finder's AppleScript Dictionary are no longer present. Has this compatibility feature been removed?
This article has been archived and is no longer updated by Apple.
Structural changes in the Finder between System 7 and Mac OS 8 required special script coding to maintain compatibility for the "locked", "file type", "creation date", "modification date", and "folder" properties of an item.

The word 'obsolete' was placed after these properties in scripts written within Mac OS 8 in order to have them work with the System 7.x Finder. The terminology in the Mac OS 8.0 and Mac OS 8.1 Finder dictionary contained references to this technique.

The 'obsolete' parameter is still usable with Mac OS 8.5. However, the Finder dictionary in Mac OS 8.5 no longer contains the 'obsolete' parameters.

The following script is an example showing how to write AppleScripts for the Finder, accessing these properties, that are compatible across System 7.x and Mac OS 8.x.

```
set SysFldrPath to path to system folder as text -- some item, here the System folder
set SystemPath to SysFldrPath & "System" as text

tell application "Finder"
get the version -- of the Finder
set FinderVersion to the result as text

if FinderVersion is less than "8.0" then
--Pre Mac OS 8
get locked obsolete of SystemPath -- file property
get file type obsolete of SystemPath -- file property

get the creation date obsolete of alias SysFldrPath -- item property
get the modification date obsolete of alias SysFldrPath -- item property
else
--Mac OS 8
get locked obsolete of SystemPath -- file property
get file type obsolete of SystemPath -- file property

get the creation date of alias SysFldrPath -- item property
get the modification date of alias SysFldrPath -- item property
end if
end tell
```

Published Date: Feb 20, 2012

Mac OS: Apple CD/DVD Driver: Only Mac OS Volumes Appear on the Desktop

The Apple CD/DVD driver does not make the multiple volumes on enhanced or hybrid discs appear on the desktop.

This article has been archived and is no longer updated by Apple.

This is the expected behavior. Having multiple volumes from one disc appear on the desktop causes confusion. To eject a disc that has multiple volumes appearing on the desktop, you must drag the icons for all of the disk volumes to the Trash. If you drag only the icon for one of the volumes the computer will not eject the disc.

Published Date: Feb 20, 2012

Final Cut Pro 1.0: Setting Scratch Disk Preferences

This article explains how to set scratch disk preferences in Final Cut Pro.
This article has been archived and is no longer updated by Apple.
The scratch disk is a folder on a hard disk or other storage medium where the program stores its media source files, including captured video and audio and rendered files. Always use your fastest audio/video (A/V) disk drives as your scratch disks. For best performance, avoid setting the system hard disk as the scratch disk and do not use a disk that has virtual memory turned on.

To change scratch disk preferences:

- Open the Edit menu and choose Preferences, then click the Scratch Disks tab.

Scratch disk options include:

- Capture Audio and Video to Separate Files: when on, video and audio are saved separately, which allows for better performance during playback and capture. To save audio and video files separately, you must specify a different disk for each (no tincluding the system disk).
- Video, Audio, Render storage: the disk or folder where video, audio, and rendered files are stored; specify more than one disk for increased storage space. The program automatically uses the specified disk with the most space available (rendering) or the next disk listed (capturing) when the current disk runs out of space.
- Waveform Cache: the folder or disk for waveform cache files (graphical representations of audio signals)
- Thumbnail Cache: the folder or disk for thumbnail cache files
- Minimum Allowable Free Space on Scratch Disks: when disk space falls below this minimum, the program will use another specified disk

Published Date: Feb 20, 2012

Final Cut Pro 1.0: Setting Up For Video Capture

You need to adjust several types of settings before capturing video from an external source. These settings include device control preferences, video signal settings, capture preferences, and clip settings.
This article has been archived and is no longer updated by Apple.

Setting device control preferences

Before you can begin logging and digitizing source footage, you must set device control preferences. (To use device control, you must have an external video source that is compatible with the program. See Final Cut Pro's World Wide Web site for more information.)

To set device control preferences:

1. Open the Edit menu and choose Preferences.
2. Click the Device Control tab.
3. Select Enable Device Control, unless you are not using a controllable video source.
4. Use the pop-up menus to choose the broadcast standard for your system, the computer port to which your device control cable is connected, the edit protocol your deck (or other device) uses, and the timecode source you want to use.
5. Turn off Use Deck Search Mechanism if your deck has difficulty moving the playhead to a specified timecode during capture or searching.
6. Set intervals for pre-roll, post-roll, timecode offset, handle size, and playback offset for the video being played.

Note: If the timecode you capture doesn't match the timecode on your video deck, you need to change the timecode offset or playback offset. See "Calibrating the Timecode Signal You Are Capturing" in Chapter 5 of the "Final Cut Pro User's Manual."

Setting capture preferences

Capture preferences determine the quality at which Final Cut Pro captures video. You must set these preferences before capturing any video.

To specify capture preferences:

1. Open the Edit menu and choose Preferences.
2. Click the Capture tab.
3. Choose a capture quality setting from the pop-up menu at the top of the window.
4. Set capture preferences.

   The video and audio options you can set depend on the video capture card you're using. Your video and audio preferences are stored as part of the capture quality settings.

   Be sure that your capture settings match the hardware you're using and that you've set your best-performing disk drive as the scratch disk. The scratch disk must be able to sustain transfer at the data rate you set, or frames will be dropped.

For best performance

Select the box labeled "Always Turn Off AppleTalk When Capturing." If you select this option, the program turns on AppleTalk when you quit Final Cut Pro.

Make sure that no part of the window that's playing video while capturing is covered by another window or partially offscreen. Make sure that the window is on the correct monitor (the one connected to the capture card, for example).

If you want to switch between sets of capture preferences:
You can save up to four sets of capture preferences and choose the one you want to use before capturing footage.

If you want to change the frame size:
Choose a size from the Aspect Ratio pop-up menu, or enter sizes in the Width and Height boxes.

If you want to set options for dropped frames:
*Select Abort to stop capturing video if frames are dropped during capture.
*Select Report to complete capturing video if frames are dropped, and to see a report of dropped frames.

If your video capture card lets you play and capture video at the same time:
Select the box labeled "Capture Card Supports Simultaneous Play Through and Capture."This is only used for Edit to Tape; it does not affect capture.

Adjusting clip settings for capturing video and audio

Before you begin logging and capturing footage, you may want to adjust the incoming video signal to ensure the best image quality.

You can adjust settings for capturing or logging video, including hue, saturation, brightness, contrast, sharpness, black level, white level, and gain.

Note: Not all video capture hardware has these adjustments; for example, DV sources do not.

Clip settings are saved with the clip; every time you recapture the clip, these settings are used. To override clip settings, turn off "Use Clip Settings" in the Batch Capture dialog box.

To adjust clip settings for capturing video:

1. Open the File menu and choose Log and Capture.
2. Use the transport controls in the Log and Capture window to play the color bar portion of your tape.
3. Click the Clip Settings tab.
4. Adjust the video settings you want to change.
5. Use the Gain slider to adjust the audio signal so that it does not peak into the red areas of the audio monitors.
6. Choose the type of signals you want to capture from the Capture pop-up menu.
7. Choose an option from the Audio Format pop-up menu.

Audio formats include:

- Ch 1+ Ch 2: two channels of audio, with two tabs in the Viewer; each channel is panned to the center (the sound comes from both speakers equally).
- Ch 1 (L) or Ch 2 (R): captures only the left or right channel from the deck.
- Stereo: two audio tracks on one tab in the Viewer; the tracks are panned to the left and right.
- Mono Mix: takes both channels and mixes them to one track, which is panned to the center.

Tip: It's a good idea to record at least 30 seconds of standard color bars to use when making adjustments for capturing.

Adjusting the Waveform Monitor and Vectorscope

You can fine tune the video signal when preparing to capture video. For instructions, see "Calibrating Capture Settings with Bars and Tone from Tape" in Chapter 5 of the "Final Cut Pro User's Manual."

Using the Wavefore Monitor and Vectorscope affect performance when capturing. Once you've adjusted your settings, close the Waveform Monitor and Vectorscope window before capturing.

Published Date: Feb 20, 2012

Final Cut Pro 1.0: Logging Video Footage

This article describes how to log video with Final Cut Pro.
This article has been archived and is no longer updated by Apple.
To log video with Final Cut Pro, you need a controllable video device.

Final Cut Pro logs shots by creating offline clips that it stores in a bin of your choice. When you complete logging, you can select the offline clips you want to capture and digitize them in a batch.

To log footage:
1. Make sure your video deck is properly connected and set to its remote setting.
2. Choose Log and Capture from the File menu.
3. Click the Logging tab.
4. Specify a logging bin (where offline clips are stored during logging) by Control-clicking the bin you want and choosing Set Logging Bin from the pop-up menu.
5. Type a name for the reel (the tape or other video source). Click the Slate button to have the program add a numeric reel name.
6. Name the clip in the Label box, or select Prompt if you want to name each clip as you log it (useful if you use keyboard shortcuts during logging).
7. Use the transport controls in the Log and Capture window to control your source deck and find the footage you want to log.

Figure 1, Transport controls

A - Shuttle Control: Drag to the right or left changes the speed of fast forward or rewind.
B - Rewind
C - Play In to Out
D - Stop
E - Play
F - Play Around Current
G - Fast Forward
H - Jog control: Drag to move frame by frame

8. Mark a clip by doing one of the following:

- Click the Mark In and Mark Out buttons, or press "i" to set the In point and "o" to set the Out point.
- Enter specific timecodes (In on the left, Out on the right) in the timecode fields at the bottom of the Log and Capture window.

9. Log a clip by doing one of the following:

- If the Prompt option is on, click Log Clip and type a name. Type a note in the Log Note area to use for locating this clip quickly.
- If the Prompt option is off, click the Slate button next to the fields you want to increment, then click Log Clip.

10. To add a marker to a clip while logging, click the indicator next to Markers at the bottom of the logging tab. Enter a marker name, In and Out timecodes, and comment as desired, and click Set Marker. These markers appear as subclips in the Browser once a clip is captured.
Published Date: Feb 20, 2012

AppleWorks 5: How to Open a Microsoft Word Document

This article explains how to open a Microsoft Word document with AppleWorks 5.
This article has been archived and is no longer updated by Apple.
An error may occur when you try to open Microsoft Word 6 or later files with AppleWorks 5 (and ClarisWorks 5) by double-clicking on the file. AppleWorks 5 includes translators for Word 5 files and earlier. AppleWorks 5 does not include translators for Word 97 (PC), Word 95/6.0 (PC/Mac), or Word 98 (Mac) file formats, and cannot open these files.

Workarounds

1. To open a Microsoft Word 6 document using AppleWorks 5 (and ClarisWorks 5), drag the file onto the AppleWorks 5 application icon. Double-clicking the file will not work (unless you have installed a third-party translation program).

2. To open a Word 97 (PC), Word 95/6.0 (PC/Mac), or Word 98 (Mac) file, save the file in text (.txt), or rich text format (.rtf), then open it with AppleWorks 5. Rich text format retains most of the document's formatting. Text format retains the text but loses any format and style.

Some utilities like MacLink Plus and Conversion Plus can also help you open different file types with AppleWorks 5.

Note: This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following Knowledge Base article can help you search for a particular vendor's address and phone number:
Article 17159: "**Locating Vendor Information**"
Published Date: Feb 20, 2012

PowerBook G3 Series: Floppy Drive Not Recognized By Virtual PC

The floppy drive module in my PowerBook G3 Series computer is not recognized by Connectix's Virtual PC software when it is inserted in the left expansion bay. If the floppy module is placed in the right side bay, it is recognized and works fine with Virtual PC. Why is this?

This article has been archived and is no longer updated by Apple.

Connectix has verified this situation and has created a fix in the form of an updater. Running the Virtual PC 2.1.3 updater software should remedy this issue.

Published Date: Feb 20, 2012

QuickTime 4: MP3 VBR Encoding Supported in Version 4.1

The QuickTime Player included with QuickTime 4 seems to open some MP3 audio files but not others. Why is this?
This article has been archived and is no longer updated by Apple.
QuickTime 4 supports the majority of available MP3 audio files. QuickTime 4.1 can also play MP3 files encoded with VBR (variable bit rate). QuickTime 4.0.x only supported CBR (constant bit rate) MP3 encoding. To play MP3 files with VBR encoding, you should upgrade to QuickTime 4.1.

See article 60690 "**QuickTime: How to Upgrade To QuickTime 4.1**" for more information on upgrading to QuickTime 4.1.
Published Date: Feb 20, 2012

Mac OS X Server: Does Not Work With ADB Hardware Copy Protection Devices

On a computer running Mac OS X Server and MacOS.app, even though MacOS.app is a full virtual Macintosh implementation and gives every appearance of full Mac functionality, there are certain kinds of hardware that do not work, even though they work normally under Mac OS 8.
This article has been archived and is no longer updated by Apple.
The Mac OS X Server Release Notes state, "Direct ADB access is not supported. Applications that read directly from ADB devices and expect mouse ADB events will not work."

Mac OS X Server is a direct descendant of BSD unix, implemented using the Mach microkernel. As a rule, an operating system is tightly wedded to the hardware on which it runs, and Mac OS X Server is no exception, so it is accurate to say that "Mach owns the hardware".

MacOS.app is a complete and robust implementation of a virtual computer (a virtual Macintosh) that runs as an application within the Mach OS. As such, it directs all input/output requests to the Mach kernel or its processes. Because of this, ADB devices, serial devices, SCSI devices, and PCI devices must be addressed from MacOS.app using standard system calls (most of which are mapped very directly to Mach-side APIs). Any program that attempts to access hardware or memory locations directly from the Blue Box may be ignored, but will more likely hang or crash MacOS.app, often in spectacular or profound fashion. This may not always be escaped with the Command-Shift-Q keyboard force-quit for MacOS.app, either, accounting for another situation in which telnet access can be handy.

Thus, devices such as ADB copy-protection "dongles", and some ADB devices such as ADB modems, serial switches, and pointing devices may fail to work or cause MacOS.app to hang or crash. PCI boards that are otherwise unrecognized by BSD and Mach may lead to similar situations if Mac OS drivers are installed within the MacOS.app environment. Programs that issue low-level SCSI commands (such as RAID utilities, disk formatters, and maintenance utilities like SCSI Probe or third-party CD ROM drivers) can be expected to cause similar problems within MacOS.app.

For more information about telnet and Mac OS X Server, see the following article:

Article 60092: "**Mac OS X Server: Why and Why Not to Allow Remote Login.**"

For more information about ADB and other hardware support, see the following article:

Article 60124: "**Mac OS X Server Release Notes**."
Published Date: Feb 19, 2012

QuickTime 4: What‘s New

This article outlines the new features in QuickTime 4.
This article has been archived and is no longer updated by Apple.

- Streaming Internet services
  - Play live and stored streaming video and audio using standards-based low-bit-rate compressors and decompressors
  - Experience smooth playback even over 28.8-Kbps modems
  - Network protocol support: HTTP, RTP/RTSP, FTP
  - URL data handler
  - Ability to open an HTTP, RTSP, or FTP URL, including password-protected FTP sites, in the QuickTime Player
- Easy-to-use QuickTime Player interface
  - Visible Timecode and audio EQ display
  - Single-click access to your favorite QuickTime movies
- Automatic selection of the best-quality movie for a given Internet connection, processor speed, or spoken language
  - Internet decompressors: H.263, GSM, MS DVI, RTP DVI, MPEG-1 Layer 3 (MP3)
- Small, fast dynamic Internet installer
  - Component installation updates your system as you need it
- Optimized audio sample rate conversion for improved playback quality
- Bass, treble, and balance control
- Sophisticated lens flare and zoom effects
- QuickTime API support for Java
- QuickTime VR speed and accuracy improvements
- QuickDraw 3D support for compressed textures and wired sprite actions
- QuickDraw 3D performance improvements
- Media import and export for PNG, TIFF, TARGA, MacPaint, Macromedia Flash, and FlashPix formats (import only for FlashPix)
- Image sequence movie exporters

Published Date: Feb 20, 2012

QuickTime 4: 10 Great Reasons to Upgrade to QuickTime 4 Pro

Ten great reasons to upgrade to QuickTime 4 Pro:
This article has been archived and is no longer updated by Apple.

1. Create and edit your own streaming movies from existing QuickTime content
2. Convert pictures and still images between standard publishing formats
3. Add special effects to your movies
4. Provide full-screen movie playback
5. Make presentations and slide shows that can be played back with any application that supports QuickTime 4
6. Compress video using the state-of-the-art Sorenson Video 2 compressor
7. Export video, audio, and pictures to more than a dozen standard file formats
8. Enable, disable, or extract specific tracks of a movie
9. Compress audio using QDesign Music 2 up to 100:1 for Internet streaming
10. Save movies from web sites

Published Date: Feb 20, 2012

Mac OS X Server 1.0: Ethernet Interface Can Have Multiple IP Addresses

You may (as the Administrator, or root user) use the `ifconfig` command to add IP addresses to a single Ethernet interface. In this example, IP addresses other than the first IP address are added for the first Ethernet interface (en0).
This article has been archived and is no longer updated by Apple.
Type the following commands in a Terminal window:

```
ifconfig en0 down
```

This takes the interface down and is required before changing configurations.

```
ifconfig en0 alias 123.456.789.101 netmask 255.255.255.0
```

This adds additional IP address of 123.456.789.101 to this interface with netmask of 255.255.255.0

```
ifconfig en0 up
```

This brings the interface back up.

Test the new IP address by ping or telnet.

The ifconfig command may also be used to configure a port with a single IP address or change existing configurations. These steps are simpler to perform from Network Preferences (under the Apple menu).

More information about ifconfig is available by typing `man ifconfig` at the command prompt.

Note: Type the desired IP address in the place of 123.456.789.101 above.
Published Date: Feb 19, 2012

Password Security: May Not Accept Password If Keyboard Layout Changes

I have changed my keyboard layout since first entering my password into the Password Security control panel. Now the control panel will not accept my password. Why is this?
This article has been archived and is no longer updated by Apple.
Because Password Security loads so early in the startup process, it is forced to use the native keyboard layout, no matter which layout is chosen in the Keyboard control panel. This is normally not a problem since as long as you type the same keys, Password Security will interpret the password as the same. However, if you change the keyboard layout and then type your password using the new keys to match the same characters, Password Security will reject the password since the key strokes are different.

To get around this, simply type the password as if the original keyboard layout were selected. Then, if you intend to use the same keyboard layout, open the Password Security control panel and reenter the password with the new layout.

There is an issue with Password Security 2.0, which is included with Mac OS 8.5. If a user has a 2-byte (Chinese, Korean, Japanese) Language Kit installed, and Font and Keyboard Synchronization disabled in the Keyboard menu; a user can potentially enter a 2-byte password. Since the Language Kit input methods aren't yet loaded at the point where the Password Security dialog appears during startup, it is possible to create a password that can't be typed. This issue is addressed in Password Security 2.0.1, which is part of the Mac OS 8.6 update.

Note: This article mentions an Apple software update. You may search for software updates in the Apple Software Updates Web site at **http://www.apple.com/swupdates**.
Published Date: Feb 20, 2012

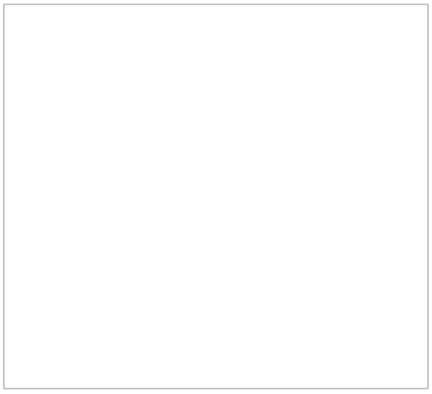
QuickTime 3: Can‘t Hear Audio In Movies

I'm using QuickTime 3 and I'm using trying to play a movie. I can see the video, but I can't hear any sound from it at all--even with the volume all the way up. What is wrong?
This article has been archived and is no longer updated by Apple.
One possible issue is that QuickTime 4 introduced a new compression format for sound called "QDesign Music 2". Quicktime 3 does not support this new compression. Thus, if the movie file in question was created using the QDesign Music 2 compression format in QuickTime 4, then users of QuickTime 3 will be able to play the movie and see the video, but they will not hear any audio.

If you have a Pro version of QuickTime, and you have a local copy of the movie, here is a way to verify if this is the case:

- Open the movie in Movie Player (or QuickTime Player)
- Choose Get Info from the Movie menu
- Choose Sound Track from the left pop-up menu and choose Format from the right pop-up menu.

If you are using QuickTime 3 Pro, under "Compression", if it will say "Unknown."



If you are using QuickTime 4 Pro, under Compression, it will say "QDesign Music 2"

If this is the case, there are two solutions to this issue:

1. Download and install QuickTime 4 on the computer where you want to play the movie, or
2. Open the movie on a computer that has QuickTime 4 Pro installed and export it using a different sound compressor that is supported by QuickTime 3.

Published Date: Feb 20, 2012

QuickTime 4: Known Issues

This article lists known issues with the GM (final) release of QuickTime 4.
This article has been archived and is no longer updated by Apple.
Platform: Mac
Issue: Some games may give an error on launch if a Minimum installation of QuickTime 4 is used.
Workaround: Use the Full install option.

Platform: Mac
Issue: The default amount of memory allocated to a web browser on a Macintosh is often not enough to view streaming movies using the QuickTime 4 plug-in, and can sometimes result in system unresponsiveness.
Workaround: If you want to watch streaming movies in your web browser program, you should increase the amount of memory allocated to it.

Platform: Mac
Issue: Using a Startup Movie that uses the Sorenson codec will cause an unimplemented trap error at startup.
Workaround: Do not use a Startup Movie, or use one that does not use the Sorenson codec.

Platform: Windows
Issue: If "Show window contents while dragging" is enabled, users might experience redraw anomalies while dragging a window over a QuickTime movie playing in the background.
Workaround: Do not drag another window over a QuickTime movie which is playing, or consult the documentation that came with your computer for information on turning off "Show window contents while dragging".
Published Date: Feb 20, 2012

Final Cut Pro 1.0: Newer Version of G3 Firmware Updater Available

Apple has posted a newer version of the Power Macintosh G3 Firmware Update than that on the Final Cut Pro 1.0 disc.
This article has been archived and is no longer updated by Apple.
The version posted to the Apple Software Updates Web site at http://www.apple.com/swupdates/ is newer than the one that was included on the Final Cut Pro disc (version 1.0.1). Apple recommends that all Power Macintosh G3 (Blue and White) customers download and install the most recent firmware updater for their computer. It is not necessary to install version 1.0.1 before installing the most recent version.

Note: If you install the most recent version of the firmware updater, and then attempt to install the 1.0.1 version of the firmware updater after that, you will receive and error dialog box that says you already have a newer version of firmware and it will not allow you to run the updater.
Published Date: Feb 20, 2012

Mac OS X Server: Capturing and Streaming QuickTime Video

Can I use the same computer to simultaneously capture QuickTime video and stream it on the Internet?

See the QuickTime Streaming Server website for more information.
This article has been archived and is no longer updated by Apple.
QuickTime Streaming Server (QTSS) can stream pre-recorded QuickTime-compatible audio and video (media) originating at the server, as well as reflect live multicasts and unicasts (broadcasts) originating from another computer (or source).

QTSS can reflect any QuickTime-compatible broadcast. Examples of this range from a Mac OS computer using Sorenson Broadcaster to a Windows NT computer using Cisco IP/TV, IBM VideoCharger, or SGI WebFORCE MediaBase.

Reflecting a signal can be useful in separating high-bandwidth (broadband) users on the intranet from low-bandwidth users on the Internet. In this scenario, video is captured and compressed on a transmitter (computer), and broadcast to a QuickTime Streaming Server computer(s), or local viewers. Remote viewers on the Internet connect to the reflected stream through QuickTime Streaming Server.

By separating the two tasks (broadcasting and reflecting) it is much easier to tune the performance of both computers. Reflecting a broadcast also allows for scaling, with the addition of multiple QTSS reflectors or multiple source computers.

Capturing and compressing video and audio in real time consumes the majority of a computer's bus and CPU resources. Adding server responsibilities on top of that only increases the demand on system resources and can diminish performance.

Stored movies can be compressed for higher quality or multiple data rates at slower than real time, before uploading to a busy server--thus allowing for remote administration.

Note: QuickTime 4 is required to view streaming movies on a Mac OS or Windows client.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Final Cut Pro 1.0: How To Work Without Rendering

In general, you need to render transitions, effects, and composited layers to play a sequence smoothly. Sequences consisting of cuts only do not require rendering for playback as long as sequence size and frame rate match the original source material.
This article has been archived and is no longer updated by Apple.
To avoid rendering when creating a sequence with cuts only, make sure that the sequence's editing timebase, frame rate, and compression settings are the same as the frame rate, frame size, and compression settings of your source media. If the frame rate, frame size, or video or audio compression settings in your source media are different from those settings in your sequence, those frames need to be rendered before the sequence can be exported or printed to video.

To view the compression settings for source material:

1. Select the clip in the Browser or Timeline.
2. Choose Item Properties from the Edit menu.

Item Properties window

Or:

1. Select the clip in the Browser or Timeline.
2. Choose Analyze Clip from the Tools menu.

Analyze Clip window

Every Final Cut Pro sequence has a set of properties that determines the sequence's editing timebase (or frame rate), frame size, compression settings, and various display options. This set of properties is known as a preset. When a sequence is created, the chosen preset becomes the sequence settings for the new sequence. Final Cut Pro comes with a collection of presets that you can apply to your sequences. The following rules determine the way that sequence presets are used:

- When you create a new sequence, the default preset is automatically applied to it.
- If you have selected the "Prompt on New Sequence" box in Sequence Presets, you will be prompted to choose a preset from those which have been previously saved.

- You can create, delete, and edit presets. Creating a preset doesn't apply it to a sequence. It just saves it for future use.
- If you want to change the settings for an existing sequence, you use the Settings command in the Sequence menu. This allows you to change everything except the frame rate for the sequence. Changing a sequence's settings has no effect on the preset that was applied to the sequence, and changing a preset does not affect any sequences to which that preset was previously applied.

Sequence Settings window

You can also avoid unnecessary rendering by nesting sequences within other sequences. Refer to the section named, "Using Nested Sequences," on pages 245 and 267 of the Final Cut Pro Manual.

Tip: Pressing the Caps Lock key temporarily disables rendering. This allows you to adjust all of your settings before rendering a preview. It does not speed up final rendering, but allows you to work faster without the processing overhead of background rendering.
Published Date: Feb 20, 2012

QuickTime: Creating Movies Optimized For Web Playback

This article has been archived and is no longer updated by Apple.

This article explains how to make movies that are optimized for playback at various data rates on the Internet.

There is a very powerful feature of QuickTime that works with "fast start" movies or "rtsp streamed" movies. Users can let QuickTime automatically detect their Internet connection speed in the Streaming panel in QuickTime Preferences.

On the server side, content creators can embed a single movie into a web page that automatically senses the client's connection speed, and plays back the movie with the appropriate data rate. This way, clients connected with a 28.8 kbps modems don't have to wait for long downloads of high-bandwidth movies (or stream movies that would exceed the available bandwidth). At the same time, clients with faster connections can view higher quality movies.

To take advantage of this feature, you first need to export movies for different internet connection speeds. You can do this with QuickTime Player Pro and other QuickTime based programs. For each movie, you can adjust many aspects of the file in order to make it smaller for slower connection rates (such as movie size, codec, data rates, frames per second, etc.). When you have created the multiple versions of your movie, you need to create what is called a "reference movie." The reference movie acts like an "alias" in many respects--it basically serves as a pointer to the different movie files you have created.

To create a reference movie, you need a tool, such as Media Cleaner, or Apple's MakeRefMovie application. To learn how to make reference movies with MakeRefMovie, go here. For more information on these and other QuickTime authoring tools, see the QuickTime website.

Finally, put the movie files on your server, and then embed the single reference movie into your web page and the QuickTime plug-in will automatically handle the rest.

Published Date: Feb 20, 2012

Final Cut Pro: Compatible Cameras, Decks, and Video Capture Hardware

This document provides links to information about video capture solutions and video devices that are compatible with Final Cut Pro.
This article has been archived and is no longer updated by Apple.
You should frequently check the Final Cut Pro Device Qualification Pages listed below for the latest information on which camcorders, VTRs, and video capture solutions are qualified by Apple for use with Final Cut Pro.

For Final Cut Pro 1.2.1 and 1.2.5 see technical document 60885 "**Final Cut Pro 1.2.1, 1.2.5: Device Qualification**"

For Final Cut Pro 2 see technical document 75354 "**Final Cut Pro 2.0.2: Third-Party Hardware Compatibility**"

For Final Cut Pro 3 see technical document 93261 "**Final Cut Pro 3: Camera Compatibility Information**"

For Final Cut Pro 4, see the Final Cut Pro Web site (http://www.apple.com/finalcutpro/qualification.html).

Published Date: Feb 20, 2012

QuickTime 4: About QuickTime Streaming

QuickTime Streaming extends the QuickTime software architecture to support the creation, transmission, and playback of multimedia streams. This allows QuickTime programmers to create applications that send and receive multimedia in real time, and to create authoring and editing tools that work with streaming content.
This article has been archived and is no longer updated by Apple.
QuickTime Streaming is a capability supported by QuickTime 4 to view live and video-on-demand QuickTime movies using industry standard RTP (Real-time Transport Protocol) and RTSP (Real Time Streaming Protocol). Support is provided to view streaming live content, previously-recorded movies, or a mixture of both. Broadcasts can be one-to-one (unicast) or one-to-many (multicast). Existing applications that play QuickTime movies can play streaming movies with little or no code change. QuickTime Streaming also extends the QuickTime file format to support streaming. Local movies can contain streaming tracks, which call up live content or video-on-demand when the movie is played.

The new QuickTime streaming capabilities are perfect for:

- Viewing and listening to long files
- Providing random access to any moment in a long program
- Viewing live events

QuickTime Streaming FAQ

1. Where can I find QuickTime Streaming content?
2. How do I view streaming content?
3. Why is QuickTime Streaming useful?
4. What are the advantages of using QuickTime Streaming?
5. What is the difference between live and video-on-demand streaming?
6. What is the difference between HTTP "fast-start" streaming and RTSP "live" streaming?
7. How can I broadcast my own streaming multimedia content?

Question 1: Where can I find QuickTime Streaming content?

Answer: There are audio and video samples available on the Apple QuickTime Web Site at http://www.apple.com/quicktime/. We expect third-party sites to also begin offering QuickTime Streaming content.

Question 2: How do I view streaming content?

Answer: Viewing QuickTime Streaming is as easy to view as QuickTime has always been. You have the ability of viewing a streaming movie using your web browser with the QuickTime Plug-In or by using QuickTime Player. In fact, any application which currently supports QuickTime 3 or later is capable of viewing QuickTime Streaming content.

Question 3: Why is QuickTime Streaming useful?

Answer: Streaming allows you to view live events such as concerts and video-on-demand movies. Streaming also allows many users to tune in to one stream, decreasing the amount of bandwidth which would otherwise be consumed by http streaming.

Question 4: What are the advantages of using QuickTime Streaming?

Answer: Using QuickTime Streaming as a solution allows you to utilize the QuickTime 4 features such as effects, chapter tracks, MIDI, alternate language tracks, poster effects, overlays, client-side transforms, and alternate data rate selections.

Question 5: What is the difference between live and video-on-demand streaming?

Answer: Live Streaming is a live broadcast which allows users to join a session in which real time media is being sent over a network. Because these streams are live, users are not allowed to jump around to any point in time. Video-on-demand represents content stored on a streaming server which can be viewed at any time. Unlike live streaming, video-on-demand allows users to jump to any point in time in the media.

Question 6: What is the difference between HTTP "fast-start" streaming and RTSP "live" streaming?

Answer: The new live streaming capabilities of QuickTime 4 are complementary to the QuickTime HTTP (Hypertext Transfer Protocol) streaming that is currently built into QuickTime 3. QuickTime HTTP, otherwise known as "fast-start", downloads the entire QuickTime file to your computer. As soon as enough of the content has been downloaded, it will begin to playback the movie while downloading the rest of the file. QuickTime RTSP Streaming does not download the movie to the computer, but loads and plays the movie in real time as the data is received.

For a demonstration of QuickTime RTSP Streaming, visit the Apple Computer QuickTime web site:**http://www.apple.com/quicktime/**

You must have QuickTime 4 software installed on your computer in order to view QuickTime Streaming content.

Question 7: How can I broadcast my own streaming multimedia content?

Answer: QuickTime 4 software allows you to only view streaming content, but does not provide the ability to broadcast. For this capability, a QuickTime-compatible streaming server solution such as Mac OS X Server with QuickTime Streaming Server Software is required.
Published Date: Feb 20, 2012

Mac OS 8.6: Open Transport 2.0.3 Read Me

This Read Me document contains late-breaking information about Open Transport and 3rd party software compatibility information. For instructions about how to use the Open Transport control panels (AppleTalk and TCP/IP), choose Mac OS Help in the Finder's Help menu.

For additional technical information about Open Transport, see the "OT 2.0 Technical Info - Part 1" and "OT 2.0 Technical Info - Part 2" documents. These documents can also be found in the OT Extras folder in the CD Extras folder on your Mac OS 8.6 CD.
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Contents

What's new in Open Transport 2.0 - general
Bugs addressed
Network interface options
General compatibility
Apple product compatibility update
Known limitations and other issues

What's new in Open Transport 2.0 - general

- Open Transport 2.0 now supports AppleScript. Through the use of Network Setup Scripting (NSS) Macintosh users can use AppleScript to configure all network communication options currently available in the AppleTalk, Infrared, Modem, Remote Access, and TCP/IP control panels. NSS operates locally and remotely, offering powerful automation capabilities to end users and network administrators.
- Open Transport's implementation of the Dynamic Host Configuration Protocol (DHCP) has been improved to support Client Identification and retention of the lease on a given IP address across reboots.
- The Open Transport DHCP implementation now supports RFC 2131, and the temporary generation of an IP address when no DHCP server is available. For more information, see "OT 2.0 Technical Info - Part 1" for more information.
- When using the new DHCP Client ID feature, the Client ID is entered into a new field in the TCP/IP control panel.
- Support for the Simple Network Management Protocol (SNMP) is available for Open Transport. Support for the version 2 Management Information Base (MIB II), instrumentation for AppleTalk and TCP/IP protocols and transports, administrative tools, and system agent support for the PCI bus is now provided. For more information, see the Open Transport SNMP Read Me on your Mac OS 8.6 CD.
- In the TCP/IP 2.0 control panel, users can now enter an IP address in standard "dot" notation in the IP Address text box, and immediately follow it with a slash ("/") and a number ranging from 1 to 32 (indicating the number of contiguous one bits in the subnet mask, counted from the high-order bit). For example, if a user's IP address is "198.162.22.10", and the appropriate subnet mask is "255.255.255.252", the user can enter "198.162.22.10/30" in the IP Address text box.

Issues Addressed

- The following issues have been addressed in Open Transport 2.0.3:
- Open Transport fixes several issues with DHCP:
  - DHCP now sends out a decline packet when detecting a duplicate IP address.
  - An issue was fixed which could cause a computer to become unresponsive when acquiring a DHCP lease.
  - Issues with DHCP and some brands of cable modems have been fixed.
- The AppleTalk control strip can now be used to turn AppleTalk on and off.
- Open Transport 2.0.3 now fixes several issues with the OT Printer Access Protocol (PAP) Client.
- Miscellaneous fixes are included in Open Transport that increase overall performance and reliability.

Network interface options

Open Transport supports PCI bus, NuBus, communications slot, and PC Card network interface cards, as well as Token Ring, Ethernet, and built-in LocalTalk network adapters. Open Transport 2.0 also supports a SCSI-attached network adapter for computers without expansion options. Third party network interface options available for Open Transport include Ethernet, ATM, and FDDI.

General compatibility

Open Transport is compatible with the following existing products:applications that use AppleTalk as specified by Apple, Inc.

- applications that use MacTCP as specified by Apple, Inc.
- devices (such as printers) that you select in the Chooser
- Ethernet PCI and NuBus network interface cards for the Mac OS Computers running Open Transport can be added to an existing AppleTalk or TCP/IP network without upgrading other computers on the network.

Apple product compatibility update

- At Ease version 2.x or 3.x may encounter difficulties when starting up with Open Transport. At Ease Update 1.0 will update non-Workgroup versions of At Ease 2.x or 3.x to include Open Transport compatibility. If you are using At Ease for Workgroups, you should upgrade to version 3.0.2 or later. Both can be found on Apple Software Update sites on the Internet and selected online services.
- Apple exited the market as a vendor for Token Ring products. Apple has no plans for any new Apple-branded Token Ring products for Mac OS. Apple is no longer a vendor for Token Ring products. Apple has no plans for any new Apple-branded Token Ring products for Mac OS. However, Apple continues to work with Madge Networks to ensure the availability of 3rd party Token Ring products that are compatible with the latest Apple hardware and the Mac OS operating system. Madge Token Ring products are available through authorized Madge resellers. For more information, see the Madge Web site at http://www.madge.com.

Known limitations and other issues

- Open Transport 2.0.3 has been qualified with Mac OS 8.6 only, using Open Transport 2.0.3 with any other version of the Mac OS may result in anomalous behavior.
- To make sure your computer is "pingable" at all times, turn off the "Load only when needed" option in the TCP/IP control panel, and restart your computer. (To turn off "Load only when needed," open the TCP/IP control panel, choose User Mode from the Edit menu and select Advanced. Then click the Options button, and click the "Load only when needed" checkbox to remove the checkmark.)
- When TCP/IP is set to "Load only when needed," the first TCP/IP application opened will cause Open Transport to load into memory. Some older applications don't cause Open Transport to load, and then report errors similar to those encountered when MacTCP is not installed. If this is a problem, turn off "Load only when needed" and restart your computer. For instructions, see above.
- Generally, you should turn on the "Load only when needed" option in the TCP/IP control panel when using a modem. If TCP/IP is always loaded ("Load only when needed" is not checked), your modem may attempt to initiate a dialup connection at startup. Some MDEVs require more system heap memory than is available at startup, which may cause the computer to hang. Also, some Internet service providers charge by connect time, so you may be charged for the connection, even if you weren't using it.
- To make AppleTalk active or inactive, use the AppleTalk control panel or the AppleTalk control strip. Using the Chooser to make AppleTalk inactive may not completely deactivate AppleTalk.
- The TCP/IP control panel is able to obtain and utilize multiple gateway and name server addresses from DHCP and BootP servers. However, TCP/IP currently displays only the first address, and only in Basic user mode.
- You should only specify use of 802.3 framing in the TCP/IP control panel if you have been directed to do so by your network manager, or if you are sure that all other stations on your network segment, including your IP router(s), are also configured to use 802.3 and not Ethernet version 2.0 framing.
- Claris Emailer version 1.1 v3 or later and Claris Emailer Lite version 1.1 v4 or later is compatible with Open Transport 1.1.2 and later. Earlier versions of Claris Emailer may not be compatible with Open Transport's "Load only when needed" configuration option. If you experience a system crash 2-3 minutes after quitting Emailer, turn off the "Load only when needed" option. (Open the TCP/IP control panel and click the Options button, then click the "Load only when needed" checkbox to remove the check mark.)
- NFS/Share versions 1.4.4 or later are compatible with Open Transport. NFS/Share is now part of Intragy Access from Ascend http://www.ascend.com/.
- When using Netware Client version 5.11 configured for NetwareIP service, the first login may yield a Netware Configuration error message. To avoid this error, open the NetwareIP control panel and change the value under Domain SAP Server (DSS) Retry Attempts from 1 to 2. You can also change Open Transport TCP/IP control panel to always load TCP/IP into memory (open the TCP/IP control panel, click the Options button, and click the "Load only when needed" box to remove the check mark).
- eXodus 5.2.2 and later versions are compatible with Open Transport.
- If an Apple Remote Access (ARA) user is on a non-routed, extended (Ethernet) network, and there are devices on the local network with the same network number as devices on the remote network, the user won't be able to see the local devices. This issue can be fixed by installing a router. Another work around is to clear the PRAM on the ARA computer. (Hold down the Command, Option, and PR keys simultaneously while starting up the computer). Clearing PRAM causes the computer to start up with a new network number, which should not conflict with the remote network number.

Published Date: Feb 20, 2012

PlainTalk: Using Speech Recognition 1.5.4

This article comprises the Read Me for PlainTalk version 1.5.4. This software was released by Apple 10 May1999 and is available for download from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Description
PlainTalk is a collection of software programs that let your Macintosh speak written text and respond to spoken commands. PlainTalk 1.5.4 includes English Text-to-Speech, Mexican Spanish Text-to-Speech, and English Speech Recognition.

Requires

- Mac OS 8.6
- a Power Macintosh or Macintosh G3 computer
- a 16-bit microphone, such as the Apple PlainTalk microphone or the microphone built into some Apple audio-visual monitors

This article has been archived and is no longer updated by Apple.
Using the English Speech Recognition software and the proper hardware, your computer can respond to your spoken commands. English Speech Recognition includes the Speech Recognition extension and a utility program called Speakable Items.

This document explains how to set up and use Speech Recognition and the Speakable Items software. For more information, open Mac OS Help (in the Finder's Help menu) and choose the Speech topic.

The instructions in this document tell you:

- What you need to use this software
- How to install the software
- How to prepare the microphone and sound software on your Macintosh
- About the Speakable Items software
- How to solve common problems

What you need to use Speech Recognition 1.5.4

To use Speech Recognition 1.5.4 you need the following:

- a Power Macintosh or Macintosh G3 computer.
- system software version 8.6 or later.
  Note: The Read Me file included with Mac OS 8.6 Update mistakenly states that Speech Recognition 1.5.4 requires Mac OS 8.5.
- a 16-bit microphone, such as the Apple PlainTalk microphone or the microphone built into some Apple audio-visual monitors.

Installing the Speech Recognition software

You may want to print these instructions before you start, because you won't be able to view them on screen during the procedure.

You install the Speech Recognition software as follows:

If you are installing Mac OS and would like to include Speech Recognition with the standard installation:

1. Double-click on the "MacOS Install" icon on your system software CD.
2. At the screen that shows "Click Start to Install MacOS..." click on the "Customize" button at the bottom of the window.
3. Select the "English Speech Recognition"check box.
4. Click "Install." The speech recognition software will be installed with the rest of the MacOS.

If you are installing Speech Recognition alone:

1. Click on the "MacOS Install" icon on your system software CD.
2. Indicate you are installing new software when asked.
3. Select the "English Speech Recognition"check box.
4. Click "Install." The speech recognition software will be installed.
5. When you see a message that installation was successful, click Restart.

The first time you turn on Speakable Items, you will see two windows on the screen at once: the feedback window and an Introduction to Speech

tutorial window.

Note: If you see a message telling you the standard microphone is not selected, click OK, turn Speakable Items off in the Speech control panel, and check your sound input settings as described in "Preparing the Sound Software," later in this document.

Note to iMac users: If you're using the iMac's built-in microphone, you will see a message telling you that your recognition accuracy might not be optimal. For best results, connect an external PlainTalk microphone to your iMac.

Preparing the microphone

If you don't have an audio-visual monitor with a built-in microphone, you need to connect an Apple PlainTalk Microphone (or equivalent) to your computer. Position the microphone as follows:

- Center the microphone on top of your monitor (if possible), with the microphone's Apple icon facing you.
- Make sure that you're between 1 and 3 feet in front of the microphone when you're giving spoken commands.
- Adjust the microphone cord so it is not looped around itself or other cords.

Preparing the sound software

For your microphone to work, you need to select it as the sound input source in the Monitors & Sound control panel.

1. Open the Monitors & Sound control panel (in the Control Panels submenu in the Apple menu).
2. Click the Sound button.
3. Make sure the Sound Monitoring Source is set to the microphone you are using (External Mic or Built-in Mic).
4. Close the Monitors & Sound control panel.

About the Speakable Items software

Speakable Items is a utility that lets you speak commands to your computer. You can tell your computer to do things such as close windows, tell what time it is, open applications and folders, or tell a joke. Speakable Items comes with a set of commands that the computer already understands, and allows you to create new speakable items quickly and easily.

There are three components with which you interact with the Speakable Items utility: the Speech control panel, the feedback window, and the Speakable Items folder.

- You use the Speech control panel to turn Speakable Items on and off, and to specify how the computer listens and how it gives you feedback.
- You use the feedback window to check whether the computer is listening and how it has responded to your command. The feedback window is open whenever Speakable Items is turned on.
- The Speakable Items folder in the Apple menu contains all the items whose names the computer can recognize. When you say the name of an item in this folder, the computer acts as if you double-clicked its icon. You can add to or delete the items in this folder, or change their names.

For instructions on using Speakable Items, search on the term "Speakable Items" in Mac OS Help (in the Finder's Help menu).

Troubleshooting

If you run out of memory while using speech recognition

- If you see a message that Speech Recognition is having trouble due to lack of memory, save all your open documents and quit the application programs you have open.
- Use the Speech control panel to choose a voice that requires less memory, or turn off voice feedback altogether. The voices with "high quality" in their names use the most memory. "Fred" uses the least. To see how much memory a voice needs, look at the size of the voice files in the Voices folder in the Extensions folder.
- Use the Memory control panel to turn on virtual memory. (With virtual memory on, voices may be slightly distorted and, with some programs, speech performance may decrease.)
- Install more memory in your computer. If you are using System 8.5 or later on a Power Macintosh with English Text-to-Speech and English Speech Recognition installed, then it is recommended that your computer have at least 32 megabytes of RAM.

If you have problems using other applications

A few applications may interfere with Speech Recognition. For example, Speech Recognition may not work with programs that use the microphone themselves, such as software that lets you record and edit sound. Turn off Speakable Items (see above) and any other Speech

Recognition applications that you may be running when using these programs.

If the computer isn't recognizing your commands correctly

- If you are using your computer's built-in microphone, it may not have sufficient audio quality to work well with Apple's Speech Recognition software. This is most likely to happen on computers where the monitor, microphone, and computer are combined, and is more problematic on the iMac because of the noise coming from the internal fan. If you are experiencing problems with the accuracy of Speech Recognition, you should connect an Apple PlainTalk microphone to your computer.
- If you consistently experience problems in recognizing a particular Speakable Item (in the Speakable Items folder), try renaming the item. The way in which individuals pronounce and emphasize certain words can affect recognition accuracy.

Published Date: Feb 20, 2012

Mac OS 8.6: Late-Breaking Tips

This document contains information about Mac OS 8.6 that was not included in the documentation with the software.
This article has been archived and is no longer updated by Apple.

Mac OS 8.6 and Mac OS X Server's NetBoot Server

If you are using Mac OS X Server's NetBoot Server, use NetBoot Desktop Admin 1.1 application to update to Mac OS 8.6. For complete information, please see the following article:

Article 60363: "**Mac OS X Server: Updating The NetBoot HD.img to Mac OS 8.6**."

Mac OS 8.6 and Mac OS X Server's MacOS.app

An incompatibility between MacOS.app and Mac OS 8.6 has been found. This can result in MacOS.app becoming unstable when quitting a Mac OS application. For complete information, please see the following article:

Article 60362: "**Mac OS X Server: Mac OS 8.6 and MacOS.app**."

Mac OS 8.6 Installer and Special Folder Deletions

When installing or updating to Mac OS 8.6, the installer deletes certain obsoleted folders. This may affect you if you store your documents in these folders. For complete information, please see the following article:

Article 60383: "**Mac OS 8.6: Folders That Are Removed**"

Configure TCP/IP if printing using LPR

If you are attempting to print using LPR and you do not have TCP/IP properly configured, you may experience a crash. The solution is to properly configure TCP/IP. For complete information, please see the following article:

Article 24907: "**Mac OS 8.6: Hang When Printing To An LPR Printer.**"

Searching the Knowledge Base

To find all Knowledge Base articles on Mac OS 8.6, search on keyword "kmos86".

Published Date: Feb 19, 2012

Mac OS X Server: NetBoot Client Firmware Updates

When trying to run the iMac Firmware Update to resolve the issue documented in article 60219: "**Mac OS X Server: iMac Firmware Update Needed For NetBoot.**"

The computer restarts without incident, and there is no visual indication that the firmware has been updated. However, the error stating that the firmware must be updated continues to appear.
This article has been archived and is no longer updated by Apple.
When the iMac Firmware Update application runs, it copies a file to the Startup Items folder in the iMac computer's System Folder. If the iMac is NetBooted when the updater application is run, it is not copied to the iMac computer's local hard disk, but instead to the System Folder "shadow" image residing on the NetBoot Server. Upon restart, the iMac uses the unmodified System Folder on the NetBoot HD.img. The file that should be in the Startup Items folder is not there, and the iMac computer's Firmware is not updated.

In order to run any Firmware update on an iMac or other NetBootable computer, you must first start up the computer from the internal hard disk, run the update, and restart from the internal hard disk.

Note: The issue described in this article may also apply to other CPU-specific firmware updates.
Published Date: Feb 19, 2012

Mac OS X Server: Which Networking Protocol Is Used?

This article tells which networking protocol Mac OS X Server uses.

This article has been archived and is no longer updated by Apple.
The native networking protocol for Mac OS X Server is TCP/IP, based on the robust BSD TCP/IP stack used in much of the industry.

All the services in Mac OS X Server are tuned to deliver optimum performance over TCP/IP. AppleTalk is supported for some services for use with legacy clients, and to allow Macintosh systems to easily find the server. However, the server is not intended for use in AppleTalk-only networks, or to support large numbers of AppleTalk clients using Apple file services.
Published Date: Feb 19, 2012

Final Cut Pro 1.0: No Video While Editing to Tape

It is possible when attempting to use Final Cut Pro's Edit To Tape command, that clicking Assemble properly rewinds the tape to the specified "in point" and the deck begins recording. However, it either records no video or it immediately stops recording and says to "Check DV-Input".
This article has been archived and is no longer updated by Apple.
If Edit To Tape is not outputting any video, yet Device Control does work properly, then the issue is most likely that you need to specify the Video Output target in Final Cut Pro's preferences. To do this, open Final Cut Pro's preferences window and click the General tab. In the pull down menu labeled "View External Video Using" choose your recording device. For example, if you are outputting to a DV Camera, you would select "Apple FireWire..."

Final Cut Pro preferences

Helpful Notes

- If your recording device is not connected to your computer, it will most likely not show up as an option in this pull down menu. You must first connect your recording device to your Macintosh and then specify it as the video output target.
- Checking the "Mirror on desktop during Print to Video" may cause output to be jerky. If you are experiencing dropped frames when editing to tape, make sure this option is not selected.
- For most purposes, when you are simply editing your video, set the "View External Video" option to "None". That way during the editing process, video is being output only to your monitor and not your recording device

Published Date: Feb 20, 2012

QuickTime: How To Get The Latest Release

This article provides information on obtaining the latest release of QuickTime software.
This article has been archived and is no longer updated by Apple.
Apple may periodically post updates to QuickTime. There are three ways to obtain these updates, depending on what version you currently have installed.

If You Have Installed Any Version Of QuickTime 4

If you have already installed any version of QuickTime 4 since the initial Public Beta release, simply open your QuickTime Folder and run the QuickTime Updater application program. It automatically checks the server, then downloads and installs any pieces that have been updated.

While in the QuickTime Player Application, open the Help menu and choose "Check for QuickTime Updates." Make sure you have an active Internet connection before you check for updates.

If You Have Not Installed Any Version Of QuickTime 4

If you are running any version of QuickTime prior to QuickTime 4, you must go to **http://www.apple.com/quicktime** where you can download and run the latest QuickTime installer. Specific computer compatibility information is posted on the Web site.
Published Date: Feb 20, 2012

AppleScript 1.3.7: Read Me

About AppleScript CD ROM Extras
This article has been archived and is no longer updated by Apple.
To aid you in using and learning AppleScript, we've included a script menu and example scripts in the AppleScript CD ROM Extras folder.

For more information about AppleScript, please use the online help system. To access AppleScript Help, switch to the desktop, choose Help Center from the Help menu, and then click the AppleScript Help link.

More information, examples, and tutorials are also available from the AppleScript website at:
http://www.apple.com/applescript/

OSA Menu

OSA Menu is a system extension written by Leonard Rosenthol which places a script scroll icon at the top right of the menu bar. When the scroll icon is clicked it will display a list of available scripts, including those used by the currently active application. Selecting a menu item will run the chosen script.

OSA Menu is not an Apple product and Apple makes no guarantees as to its use. Please read the documentation in the OSA Menu Installer for instructions on its installation, use, and for information about technical support issues.

iDo Script Scheduler

Script Scheduler, from Sophisticated Circuits, Inc., lets you automatically run AppleScripts at any time you choose. You can use it to make your Macintosh perform tasks such as downloading e-mail every morning, or backing up your important data when you're not at the computer. You can use Script Scheduler to create multiple types of repeating "events". Each event can run any chosen AppleScript, and it can pass a line of parameters when the script is run. It is especially useful in systems which run unattended, such as servers, store demos and and information kiosks.

Example Scripts

Included in the More Sample Scripts folder are the following script collections, designed for use with OSA menu.

To install these extra scripts:

1. Locate and open the Scripts folder in the System folder
2. Place the Universal Scripts folder, the Finder Scripts folder, and the Script Editor Scripts folder in the Scripts folder in the System folder.
3. Close the Scripts folder and the System folder.

Once placed into the Scripts folder, the example scripts will be accessible from the OSA Scripts menu.

The following is a brief listing and description of the included scripts.

Universal Scripts
Located on the upper section of the script menu, these scripts will be available from within any application.

Open Folder... This script will present a choose folder dialog from which you can select a folder to open on the desktop.

Unmount/Eject All Disks This script will attempt to unmount and eject all non-local volumes.

Finder Scripts

Add Prefix/Suffix to Files, Add Prefix/Suffix to Folders
These scripts can be used to add a prefix or suffix to the beginning or end of file or folder names. For example, you could choose to add .TXT to the end of every file in a folder of text files.

Change Case of All Names
This script can be used to change the case of every file name in a specified folder. For example, the file name: AppleScript Read Me could be converted to either upper case: APPLESCRIPT READ ME, or lower case: applescript read me.

Info for Selected Items
This script will display information about the selected files in the Finder. Information, including: size, file type, and creator code will be displayed for each selected item via successive dialogs.

Replace Text in Item Names
This script can be used to replace specified text in item names. For example: the text "image" can be replaced in all file names with "img" as in the file name: TEST IMAGE 1 would become: TEST IMG 1

Size of Finder Selection
This script will display the combined size of all the selected items in the Finder.

Trim File Names
This script can be used to trim text from the beginning or end of every file name in a folder. For example: you could choose to trim ".TIF" from every file name as in the file name: IMAGE1.TIF would be renamed to: IMAGE1

Script Editor Scripts

These scripts are a collection of sub-routines addressing common AppleScript tasks. When one of these script is run, a sub-routine is placed on the clipboard ready for you to paste into your script. Every script is editable and contains a description and example use within the script.

ASCII Sort
Change Case of Text
Convert Number to Text
Date Slug
FilePath - Extract File Name
FilePath - Parent Fldr Name
FilePath - Parent Fldr Path
Name Item
Read File
Return High/Low From List
Round - Convert - Truncate
Time Slug
Write to File

More Folder Actions Scripts

The scripts in the More Folder Actions Scripts folder are for use with the new Folder Actions feature of System 8.5. Place the individual scripts contained in the More Folder Actions Scripts folder into the Folder Actions folder located in the Scripts folder in the System folder. Please refer to the Online Help System for information about using Folder Actions.

add - add to activity log
This Folder Action script will create a log file on the desktop containing information about the items placed into the attached folder.

add - match parent label
This Folder Action script will change the label of every added item to match the label of the attached folder.

summarize added text files
This Folder Action script will read every added text file and summarize its contents in three sentences. You can edit the script to change its parameters including the number of sentences used in the summary.
Published Date: Feb 20, 2012

Mac OS X Server: Mac OS 8.6 and MacOS.app

This article discusses compatibility between Mac OS 8.6 and MacOS.app.

This article has been archived and is no longer updated by Apple.
Mac OS 8.6 is compatible with MacOS.app with Mac OS X Server 1.0-2, which is Mac OS X Server with the Mac OS X Server Update 1.0-2 applied. This can be verified by checking the console window in Workspace. The first line should be "Software Version Mac OS X Server+Mac OS X Server 1.0-2 Patch (Hera1O9+Loki2G1)."

Mac OS 8.6 is not compatible with previous versions of MacOS.app.
Published Date: Feb 19, 2012

Mac OS X Server: Updating The NetBoot HD.img to Mac OS 8.6

This article tells how to update the NetBoot HD.img to Mac OS 8.6 for use with Mac OS X Server's NetBoot Server and the benefits of doing so.
This article has been archived and is no longer updated by Apple.
The Mac OS 8.6 Update should be applied to the NetBoot HD.img with the NetBoot Desktop Admin 1.1 application. Please note that the NetBoot Desktop Admin must be updated to version 1.1 available from the Apple Software Updates Web site at http://www.apple.com/swupdates.

A clean installation of Mac OS 8.6 is not recommended. A clean installation requires the NetBoot HD.img to be resized. Use the update install instead. The Mac OS 8.6 Update install is also available from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Changes made to the version of the Mac OS ROM file in Mac OS 8.6 greatly reduce the size of NetBoot "Shadow" files resident on the NetBoot Server from roughly 230 Mbytes to approximately 4 Mbytes. When running the NetBoot Desktop Admin application it is not necessary to manually update the Mac OS ROM file located in the "Shared Images" folder. The NetBoot Desktop Admin application checks for a modified Mac OS ROM in the NetBoot HD.img and update the file in the "Shared Images" folder automatically as necessary. It is necessary to update the NetBoot HD.img to Mac OS 8.6 in order to properly NetBoot PowerBook G3 Series (Bronze keyboard) computers. For more information, refer to article 58346: "**PowerBook G3 Series (Bronze keyboard): NetBooting With Mac OS 8.5.1 Not Supported.**"

Similar more generic instructions than the following are also available from the "About NetBoot Desktop Admin" Read Me that accompanies the NetBoot Desktop Admin application:

Installation Instructions

To install Mac OS 8.6 or other System Software updates to the NetBoot HD disk images, you need to log on to a NetBoot client computer, connect to the NetBoot server volume, and open the NetBoot Desktop Admin program several times. Your changes are not available to you or other users until after the NetBoot client computer restarts the last time.

Before you start, you need the following information:

- Name and password for a Global Administrator who belongs to the System Access workgroup.
- Name and password of a user with read and write access privileges to the NetBoot server volume (for example, the Administrator of the Mac OS X Server).

1. Log on to a NetBoot client computer as a Global Administrator who belongs to the System Access workgroup.

2. Open the NetBoot Desktop Admin application and log on to the server volume as a user with read and write access privileges (for example, the Administrator of the Mac OS X Server).

The application is installed originally in the NetBoot Desktop Admin folder, which is in the Admin folder on the NetBoot server.

3. Click Make Private Copy.

NetBoot Desktop Admin creates copies of the disk images which you can change. This may take several minutes and you should not interrupt the process. When it finishes, your NetBoot client computer restarts automatically.

IMPORTANT Because the copies of the disk images are associated with the NetBoot client computer you used to create them, you must make the changes to the images using the same computer. If you change computers, you cannot see the changes you have made and your changes are not available to users. In addition, you increase the risk of unauthorized persons making changes to the disk images.

4. Log on to the NetBoot client computer again as the same user and install the Mac OS 8.6 Update on the NetBoot HD image. The Mac OS 8.6 default installation places newer versions of certain files on the NetBoot HD disk image, but does not remove the older versions which are on the Applications HD disk image. After installing Mac OS 8.6, you need to move the newer versions from the NetBoot HD to the Applications HD, and delete the older versions. It may also be necessary to update any aliases to those items. Certain items such as Apple Secure Compression are not contained within the Apple Extras folder installed by updating to Mac OS 8.6. Extra care should be taken to not overwrite these items when updating the Applications HD image.

5. Be sure there aren't any files in the Trash that you want to save. (The Trash is emptied automatically after the next step.)

Note: If you cannot empty the Trash because it contains files that are in use, you may need to restart the computer and log on to the NetBoot client computer again.

6. Open the NetBoot Desktop Admin application and log on to the server, then click Save or Discard. The computer restarts automatically.

If you need to make other changes, you can click Quit and return to step 4.

7. Log on to the NetBoot client computer again, then open the NetBoot Desktop Admin application and log on to the server.

If you want to keep a backup copy of the old disk image, leave the "Keep previous disks as backup" option selected. Backup copies are stored in the Backup Images folder in the Shared Images folder on the NetBoot server.

8. If you clicked Save in step 6, click Restart. Otherwise, click OK.

If you click Restart, NetBoot Desktop Admin saves your changes, deletes the copies of the disk images, then restarts the computer. Changes are available the next time a NetBoot client computer restarts. If you click OK, NetBoot Desktop Admin deletes the copies of disk images.

Published Date: Feb 20, 2012

Mac OS 8.6: Language Kit Update

I noticed that the Language Kit Update contained in CD Extras on the Mac OS 8.6 CD refers to Mac OS 8.5. Can I use this update with Mac OS 8.6?
This article has been archived and is no longer updated by Apple.
The Language Kit Update contained on the Mac OS 8.6 CD within CD Extras is applicable to Mac OS 8.6 although the Read Me file notes that it is for Mac OS 8.5.

If no Apple Language Kits are installed, the update is unneeded. If Language Kits are installed, then the Language Kit Update should be run to update files for Mac OS 8.6 compatibility. Despite which Kit(s) is installed, the updater deletes outdated components and installs or updates files as necessary.

For more information, see the following Tech Info Library Articles:

Article 24799: "**Language Kit Updater For Mac OS 8.5: Read Me**"
Article 60283: "**Mac OS 8.6: About Mac OS 8.6 Update**"

Note: The Language Kit updater is not included with the Mac OS 8.6 Update download. However, the original Mac OS 8.5 Installation or Restore CD contains the Language Kit Updater necessary for use with Mac OS 8.6 as well.
Published Date: Feb 19, 2012

AppleTalk Options Control Panel Read Me

This article comprises the Read Me for AppleTalk Options Control Panel, part of Open Transport Extras version 2.0.3. This software was released by Apple 10 May 1999 and is available for download from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Requires
Mac OS 8.6
This article has been archived and is no longer updated by Apple.
Important Do not use the AppleTalk Options control panel unless instructed to do so by your network administrator. AppleTalk Options control panel is an unsupported utility developed by Apple Computer, Inc. and requires Open Transport 1.1.1 or later.

About the AppleTalk Options feature
This feature allows a user to suppress unwanted router-related alerts.

Why suppress router-related alerts?
Some Ethernet-ISDN bridges used for remote LAN-to-LAN connectivity drop the connection when there is no active data transfer, and dial on demand when there is information to be transferred. If a user's local network does not include an AppleTalk router, a message appears each time the connection is dropped. Use the AppleTalk Options control panel to prevent the alerts from being displayed.

Disabling the router-related alerts feature

To install and use the AppleTalk Options control panel, follow these steps:

1. Drop the AppleTalk Options control panel onto a closed System Folder.
2. Open the Control Panels folder from the Apple menu.
3. Open the AppleTalk Options control panel.
4. To eliminate unwanted alerts, click the "Suppress router-related alerts" checkbox to put a check in it.
5. Close the AppleTalk Options control panel.
6. Either turn AppleTalk off and on, or reboot your system in order for your setting to take effect.

Re-enabling the router-related alerts feature

To revert to the normal Open Transport mode, uncheck the "Suppress router-related alerts" check box in the control panel and reboot your system.

Important: Simply removing the control panel from your Control Panels folder does not re-enable the alerts. You must deselect the "Suppress router-related alerts" option in the control panel.
Published Date: Feb 20, 2012

Open Transport/SNMP Read Me

This article comprises the Read Me for Open Transport/SNMP, part of Open Transport Extras version 2.0.3. This software was released by Apple 10 May 1999 and is available for download from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Requires
Mac OS 8.6
This article has been archived and is no longer updated by Apple.

Contents

- Introduction
- Requirements
- Installation Instructions
- SNMP Implementation
- SNMP Transports
- Third Party Consoles

Introduction

Open Transport/SNMP provides an implementation of the Simple Network Management Protocol (SNMP) standard. SNMP can be used to display detailed technical information about the inner workings of Open Transport/TCP and Open Transport/AppleTalk which can assist when advanced troubleshooting of the network protocol stacks, or performance monitoring of Open Transport is required. It can also be used to retrieve information about a Mac OS system across an AppleTalk or TCP/IP network using a standards-based SNMP Management Console application. Much of the Mac OS information is also available locally through the Apple System Profiler application.

A Management Information Base, or "MIB", is a formal description of a set of network objects that can be managed using the Simple Network Management Protocol (SNMP). Included with OT/SNMP is support for three MIBs. One provides statistical information about the Open Transport/TCP protocol stack. The second provides statistical information about the Open Transport/AppleTalk stack. The third provides information about Mac OS.

OT/SNMP can be configured with the SNMP Admin application, which is found on the Mac OS 8.6 installation CD, in the CD Extras folder, in the folder called Network Extras, in the Open Transport folder. (Mac OS 8.6 installation CD/CD Extras/Network Extras/Open Transport/SNMP Administrator)

The default configuration only enables access to TCP/IP statistics from a management console on the network. Using the SNMP Admin application a network manager can allow additional information about a Macintosh to be collected using a SNMP Management Console.

Requirements

Minimum system requirements for this release:

- Any Power Macintosh system
- Any 68K Macintosh system with at least an 68030 processor (a math co-processor is not required)
- Mac OS 7.5.5 or newer
- Open Transport 1.1.1 or newer
- At least 2 mb of free space on the startup disk
- 16 mb of physical RAM (OT/SNMP is compatible with Virtual Memory and RamDoubler)

Installation Instructions

Mac OS 8.6

OT/SNMP is an optional component with Mac OS 8.5, and is not installed by default. To install OT/SNMP, select the "Customize" button from within the "Install Software" screen of the Mac OS 8.6 Installer.

Within the "Custom Installation and Removal" screen of the installer, place the pointer on the "Recommended Installation" button to the immediate right of the Mac OS 8.6 title in the "Software Components" list. Depress the mouse button, and choose "Customized Installation" from the pop-up menu.

From the list of networking features that appears, toggle the "Networking & Connectivity" triangle control, and from the list that appears click the check box next to "SNMP" and then click Ok. When finished, click the start button, and OT/SNMP will be installed.

Older releases of Mac OS

Copy the SNMP Administrator folder from the Mac OS 8.6 installation to your hard drive. The SNMP Administrator application can reside anywhere on your hard disk.

Drag the "Open Transport SNMP" and "OpenTptSNMPLib" extensions into the Extensions folder.

AppleTalk must be active and TCP/IP should be configured so the "load only when needed" checkbox is not checked. To change this TCP/IP setting, select "User Mode" under the Edit menu and enable Advanced or Administrator user mode. Then press the options button that is displayed in the TCP/IP Control Panel window.

SNMP Implementation

OT/SNMP implements version 1 of SNMP as defined in IETF STD 15 (RFC 1157): "A Simple Network Management Protocol (SNMP)".

The following MIB groups, as defined in IETF STD 17 (RFC 1213) "Management Information Base for Network Management of TCP/IP-based internets: MIB-II", are supported:

- System
- Interfaces
- IP
- ICMP
- TCP
- UDP
- SNMP

Note: statistics for the Interfaces group depend on network drivers for SNMP data. If a driver is not DLPI-based or does not support the DLPI DL_GET_STATISTICS_REQ operation, SNMP counters for the interfaces it supports are not available.

Mapping of interface numbers between different tables (e.g. ifIndex and ipRouteIfIndex) is not implemented.

The following MIB-II groups are NOT implemented in this release:

- Address Translation (deprecated)
- EGP
- Transmission

The following MIB groups defined in RFC 1742 "AppleTalk Management Information Base II" are implemented:

- LLAP
- AARP
- DDP
- RTMP Stub
- ZIP End Node
- NBP
- ATEcho
- ATP
- PAP
- ASP
- ADSP
- Per Port Counters

In addition, there is support for these groups defined in "Mac OS Management Information Base":

- System
- Software
- Hardware

Note: most variables defined as having read/write access are read-only in this release.

SNMP Transports

This release implements SNMP over UDP as defined in IETF STD 15 (RFC 1157) Section 4, and SNMP over DDP as defined in RFC 1419 "SNMP over AppleTalk".

Transports are loaded only when their associated protocol stacks are active and loaded into memory. Using the "Options" dialog from the TCP/IP control panel interface select the "Active" radio button and uncheck the "Load only when needed" checkbox. Using the "Options" dialog from the AppleTalk control panel select the "Active" radio button.

Third Party Consoles

Open Transport/SNMP includes text files that define the MIB variables implemented in the AppleTalk and Mac OS MIBs. These can be imported into some third party SNMP Management Console applications. See your console's documentation for more information about importing new MIBs.

To date, Open Transport SNMP has been tested with the following SNMP Management Console applications:

- Dartmouth College SNMP Watcher URL: http://www.dartware.com
- Hewett Packard OpenView URL: http://www.hp.com
- Neon Software LanSurveyor URL: http://www.neon.com

Published Date: Feb 20, 2012

Disk Copy 6.3.3: Fails To Open From Image

After downloading version 6.3.3 of Disk Copy and mounting the image on the desktop, attempting to open the Disk Copy application fails with the message: "Disk Copy could not update the disk image driver. Please unmount all disk images and try again."

This article has been archived and is no longer updated by Apple.

Disk Copy was not intended to be opened from within an image mounted on the desktop because it uses the code base used to mount images on the desktop. That is, to avoid this situation, open the .smi file to mount the image on your desktop, then copy Disk Copy to your hard disk. Before using Disk Copy, drag any disk images mounted on the desktop into the Trash or restart. Disk Copy should then work correctly.

Published Date: Feb 20, 2012

AppleWorks: "Default location required for this install could not be found" Alert

If AppleWorks components are moved from their default locations, AppleWorks updater software may be unable to perform an update.
This article has been archived and is no longer updated by Apple.

Symptom

The AppleWorks updater software halts, and an alert box appears with this message:

> "The default location required for this install could not be found. The install will be canceled."

Products affected

- ClarisWorks 5
- AppleWorks 5
- AppleWorks 6

Solution

Reinstall the software from the original disk(s) and then perform the update.

The symptom described above can also occur for the following reasons:

- If an AppleWorks component has been moved from its default location.
- If you are attempting to update to AppleWorks 5.0.3 and the update has already been performed.
- If you are attempting to update AppleWorks using an updater in a language that does not match the installed version of AppleWorks.

Published Date: Feb 20, 2012

Apple Remote Access Server 3.0.2: Read Me

This article comprises the Read Me for Apple Remote Access (ARA) Server version 3.0.2. This software was released by Apple on 01 June 1999 and is available for download from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Description
This software will update Apple Remote Access Server Software to version 3.0.2. The ARA 3.0.2 Server Updater fixes the following issues: AppleTalk Network Access Interruption, a G3 Sleep Issue, and Incorrect Status Display. Apple recommends that customers use this utility to update the ARA 3.0 Server.

Requires
Apple Remote Access Server 3.0
This article has been archived and is no longer updated by Apple.

About the Update for ARA 3.0.2 Server

What the Updater Does

The ARA 3.0.2 Server Updater fixes the issues described below. Apple recommends that customers use this utility to update the ARA 3.0 Server.

Note: If the client version of Apple Remote Access (version 3.0 or later) is installed, follow the directions outlined in Knowledge Base article 30830: "**Mac OS 8.5: Installing ARA Personal Server 3.0.**" to remove the client software prior to installing Apple Remote Access Server 3.0.

AppleTalk Network Access Interruption

On certain networks a Macintosh connected to a Local Area Network (LAN) will periodically get a message stating "Access to your AppleTalk Network has been interrupted." In some cases AppleTalk services become available again, in other cases the AppleTalk network does not become available again.

For additional detailed information, please refer to Knowledge Base article 24549: "**ARA 3.0: 'AppleTalk Network Not Available' Message.**"

G3 Sleep Issue

This applies only to Macintosh computers that use the G3 processor: If the computer has been in "Sleep" mode prior to attempting to make an ARA connection, the computer will not successfully connect to a remote access server using ARAP. The modem will dial and establish a connection but the connection never gets beyond the status message which states "Starting ARAP..." The connection will eventually time out with an alert. The connection attempt can also be terminated using the Cancel button.

Once the Macintosh has been put into sleep mode, it must be restarted in order to make ARAP connections. This does not occur with ARA 2.1.

Connections made via PPP will work whether the Macintosh has been put to sleep or not.

Incorrect Status Display

Several minor issues that would cause Remote Access status to display incorrect status information have been fixed. The most common symptom of these issues is that the status display would not get beyond the message, "Starting Network Protocols."

For additional information, please refer to Knowledge Base article 22070: "**ARA 3.0: 'Starting Network Protocols' Status Does Not Change.**"

Updating the ARA 3.0 Server

To update an ARA 3.0 Server, double click on the Update for ARA 3.0.2 Server icon. The updater will search for the appropriate files to update and list them in a window. Select either the file "OpenTpt Remote Access" or "OpenTpt Remote Access 68K" that resides in the Extensions folder inside the active System Folder and click on the Update button. If both the PPC and 68K files are present, the updater must be run twice, once for each file. After the update is complete the following message will be displayed: "The file has been successfully updated." The final step is to quit the updater utility and restart the Macintosh.

In order to verify whether or not the ARA 3.0 Server has already been updated, open the Remote Access control panel and Get Info (using the Get Info command in the File menu). An updated server will display "Remote Access: 3.0.2" Any Remote Access files that are placed in the Trash by the updater can be deleted.
Published Date: Feb 20, 2012

TA26193_Apple_Remote_Access_Server_Read_Me.pdf

AppleShare IP 6.2: Read Me

This article comprises the Read Me for AppleShare IP version 6.2. This software was released by Apple on 01 June 1999 and is available for download from the Apple Software Updates Web site at http://www.apple.com/swupdates.
This article has been archived and is no longer updated by Apple.

Description

AppleShare IP 6.2 is the an update to AppleShare IP 6 and builds on the existing AppleShare IP product by continuing to provide the complete suite of LAN and Internet services, including Web, File, Mail and Print services. New for version 6.2 is full compatibility with Mac OS 8.6, allowing server administrators to take advantage of improvements in the Mac OS. AppleShare IP 6.2 now provides the ability to maintain a centralized user database on one server, and utilize that database on up to ten AppleShare IP 6.2 servers on the network. AppleShare IP 6.2 also provides default home directory support, Sherlock web server searching, and many other feature enhancements. In addition, AppleShare IP 6.2 provides many bug fixes and general performance improvements. AppleShare IP continues to be fully compatible with Macintosh and Windows clients. AppleShare IP retains its traditional ease of use with a single administration console, making it simple to manage AppleShare users, groups, passwords and security.

Requires

- Any Power Macintosh computer, iMac, or Macintosh Server with a G3, 604e, 604, or 601 microprocessor, or a 6500 series computer with a 603e microprocessor.
- Any English Mac OS 8.6
- AppleShare IP Server 6.x

Contents

- Introduction
- Installation and Documentation
- Requirements for Running AppleShare IP 6.2
- Support
- Notes About AppleShare IP 6.2

Introduction

AppleShare IP 6.2 is an update to AppleShare IP 6 and builds on the existing AppleShare IP product by continuing to provide the complete suite of LAN and Internet services, including Web, File, Mail and Print services. New for version 6.2 is full compatibility with Mac OS 8.6, allowing server administrators to take advantage of improvements in the Mac OS. AppleShare IP 6.2 now provides the ability to maintain a centralized user database on one server, and utilize that database on up to ten AppleShare IP 6.2 servers on the network. AppleShare IP 6.2 also provides default home directory support, Sherlock web server searching, and many other feature enhancements. In addition, AppleShare IP 6.2 provides many bug fixes and general performance improvements. AppleShare IP continues to be fully compatible with Macintosh and Windows clients. AppleShare IP retains its traditional ease of use with a single administration console, making it simple to manage AppleShare users, groups, passwords and security.

Installation and Documentation

Complete installation instructions are contained in the Getting Started manual. Additional help can also be found in the AppleShare Client 3.8 User's Manual, and in the AppleShare IP Help and Remote Help, all of which are included with your AppleShare IP 6.2 software.

Please note: in the Software License Agreement window within the installer, you will need to click the "Continue" button to proceed to the window where you can Agree or Disagree to the license terms and conditions.

Requirements for Running AppleShare IP 6.2

Power Macintosh computers running AppleShare IP 6.2 Server

- CPU: Any Power Macintosh computer, iMac, or Macintosh Server with a G3, 604e, 604, or 601 microprocessor, or a 6500 series computer with a 603e microprocessor.
- RAM: 64 MB of memory with virtual memory turned on; 80 MB with virtual memory turned off. More memory may be needed if you are using one or more web server plug-ins.
- System Software: Mac OS 8.6 is required and is provided for use on the server as part of your AppleShare IP Server software.

Macintosh computers running AppleShare Client 3.8.3

- System Software: Mac OS 8.6 is recommended. The minimum requirement is Mac OS 7.6 or later.
- AppleShare Client 3.5 or later is required for connecting to an AppleShare IP 6 server. However, Apple strongly recommends that you upgrade your client Macintosh computers to Mac OS 8.1 or later and AppleShare Client 3.8 or later.

Support

Telephone Support

In the United States, if you have questions about AppleShare IP 6.2 that are not answered by the Getting Started manual or AppleShare IP Help or Remote Help, call the Apple Assistance Center at 1-800-APL-CARE (1-800-275-2273) during telephone support hours (Monday through Friday, 6 a.m. to 6 p.m. Pacific time). When prompted, enter the support access number provided on the back of your Apple Support Card and follow the instructions.

If you are located outside of the United States, refer to the support information that came with your AppleShare IP 6.2 software for instructions.

Web Sites

If you have an Internet connection, check the Apple Support Web site at http://www.apple.com/support/. For recent downloads, refer to the Apple Downloads page at http://www.apple.com/support/downloads/ and search AppleShare IP.

AppleShare IP Mailing List

To receive information about software updates, you are cordially invited to join the AppleShare IP mailing list. By joining the mailing list, you will also have the opportunity to share your experiences, questions, and comments with others using the software. Apple employees may monitor the list, but Apple does not guarantee that any questions directed to this list will be answered. For more information about joining the mailing list, see the AppleShare IP Web site at www.apple.com/appleshareip, and look for the heading "Feedback".

Notes About AppleShare IP 6.2

General

- If you purchase an Unlimited license upgrade, do not forget to increase the number of guest connections allowed in the Web & File Admin's Web & File Settings' General window. This setting is located under the Server menu.
- As a convenience, the AppleShare IP Installer changes the Energy Saver preference on your server to turn off the server monitor after 30 minutes. The Energy Saver control panel has 'Separate Timing for Display Sleep' set to 30 minutes.

Web & File Admin

In low memory situations, Web & File Admin may not work properly. If necessary, turn on Virtual Memory or quit other applications. In addition, make sure that you set aside enough memory in the AppleShare IP Cache panel for your other applications to launch, including Web & File Admin.
You should quit the Web & File Administration application when not making changes to the Admin application.

Registry

The AppleShare IP Registry will convert your Users & Groups file to run with AppleShare IP 6.0 and later the first time you reboot with AppleShare IP installed. Since this file will no longer work with Personal File Sharing after the conversion, a copy of the original file is placed in your Preferences folder. The file is named Users & Groups Data File Backup. The copy of the original file may be used if you decide to restore your computer to Personal File Sharing after de-installing AppleShare IP 6.0 and later.

Web & File Server

- If a computer that is running the Web & File Server crashes, check your hard disks by running Disk First Aid before you start the Web & File Server again. Disk First Aid is located in the Utilities folder on your MacOS CD ROM disc or within your utilities folder on your startup disk.
- The Adobe Acrobat(TM) Installer cannot be used while the Web & File Server is running. Be sure to install Adobe Acrobat before you start the Web & File Server.
- AppleShare IP 6.2 is not compatible with ARA Multiport Server software. You should not run them on the same computer.
- Under some circumstances you may not be able to install PC applications from Windows File Sharing Server. To perform net installations of applications that are partitioned on multiple floppy disks, create a folder 'X' and copy each disk as a separate subfolder. Then make the

parent folder 'X' a share point. From the client, connect to the share point and perform the installation.

- If you receive a message stating that error -30523 has occurred in a Sherlock client, verify that you do not get the same message on the server computer itself. If you do, then delete and rebuild the index on the server. If you do not, or if the client and server are not using the same localized version of Mac OS or are in different time zones, then upgrade client computers to Mac OS 8.6.
- AppleShare IP 6.2 may not behave correctly when used with Retrospect 4.1. Specifically, the server may not shut down or disconnect users when requested to do so by Retrospect. Contact Dantz for an update to Retrospect.
- If you decide to host multiple web sites using the Multi Domain Plugin, be sure to examine the "Plug-In Messages" file after you've started the web server. If the Multi Domain Plugin encountered any errors while reading your "Multi Domain Settings" file, it will write error information to the "Plug-In Messages" file, which is located in the AppleShare IP Preferences folder within the Preferences folder within the System Folder.
- Because of a driver issue, it is not possible to share PC-format ZIP(TM) disks. Mac OS format ZIP(TM) disks can be shared without difficulty.
- A known issue on Microsoft Windows 95 or 98 does not report a volume's total free space correctly. A share point for a volume that is 2GB or greater will show that 1.99GB free space and 0 user space. This is a cosmetic issue and should not affect the ability of Windows clients to use the share point.
- The AppleShare IP Web & File server may hang with virus protection installed. If you experience such behavior, try removing or disabling your virus protection software.
- The Upload plugin only uploads text files to the AppleShare IP web server; it does not "decode" binary files or applications that are uploaded. An ftp client can be used to upload other types of files to your web server folder.
- SMB connections may not be automatically disconnected with the idle timeout feature. To disconnect SMB connections, the Windows client has to log out or be manually disconnected by the AppleShare IP administrator.
- Some characters used in the name of a file or folder on the AppleShare IP server will not map correctly between Mac and Windows 98/NT 4.0 Workstations. In some cases, the character may show up as the incorrect character. In other cases, the client may receive the message: "The folder <path> does not exist." when attempting to open, rename, delete, or access a folder. Windows clients may not be able to delete files that contain certain characters. If you have Windows clients, some characters you should avoid using include: a (aacute), a (agrave), a (acirc), a (atilde), e (egrave), e (ecirc), S (sect).
- PowerPoint 97 for Windows requires Office 97 Service Release 2 (SR-2) in order for files to be opened correctly from AppleShare IP server by a Windows client.
- Automatic user directories are limited to 27 characters in length. In 6.2, user names are limited to 27 characters, but previously-existing names may be longer. If you wish to assign a user with a name longer than 27 characters access to an automatic user directory (home directory), you will need to shorten the name to 27 characters or fewer.

Shared Users & Groups

- Administrators should not make user and group changes on the Secondary server. User and group changes made on the Primary server will not go into effect until the Secondary server user connection expires.
- When sharing users and groups between servers, you will need to stop and restart the computer that is the Primary AppleShare IP server if its TCP/IP address is changed. In addition, you will need to reflect this change in the Secondary server(s) if its Primary server's address is entered by TCP/IP address. At Secondary server, go to the Web & File Admin's Web & File Server Settings' General window to make this change. This setting is located under the Server menu.
- If you share users and groups between many different computers, you may experience delays and performance bottlenecks, particularly with the "Download All" operation. Under some circumstances, the "Download All" operation may time out, and report a network error. If this should happen, try again later.
- To use the "Download All" feature of Shared Users & Groups, or to change the name of your Primary Shared Users & Groups in Web & File Admin, you must stop the Web & File server, or you will receive an error message. This is because user & group information that the Web & File Server requires may change as a result of performing these operations.
- The Apple Remote Access Server software will not automatically update its user account information when it is running on a Secondary AppleShare server. To configure or update user account information for a Remote Access Server, the server administrator must always enter or make changes to the ARA dial-in information at the Primary server, and then use the Download All command at the Secondary server to force these changes to be copied over to the Secondary server.

AppleShare Client 3.8.3

- If you are running Mac OS 8.5, the AppleShare client, and have virus protection installed (such as NAI's Virex 5.9 or Norton Anti-Virus 5.0), you may experience system hangs on client computers when connecting to an AppleShare server. If you experience such behavior, try removing or disabling your virus protection software.
- For additional items, please refer to the AppleShare Client Read Me.

Mail Server

- If you have exported users with mail attributes using AppleShare IP 6.0 or 6.1, be aware of a format change required to import users into AppleShare IP 6.2. There is now an extra column at the end of the mail attributes which contains the new "mail server account location" attribute. This value can be empty, but to import successfully, you will need to add at least a "blank" column (tab) before the end of the line.

- The AppleShare IP 6 Mail Server can not use previous versions of AppleShare IP 5.0.x mail Databases. If you have critical mail that you do not want to lose, you must download those messages from the AppleShare IP 5.0.x Mail Server before running AppleShare IP 6. Or if downloading mail is not an option, the AppleShare IP Mail Tool 6.2 can convert 5.0.x Mail Databases to AppleShare IP 6 Databases.
- It is not necessary to update the AppleShare IP 6.0 & 6.1 Mail Databases to 6.2 Mail Databases with the AppleShare IP Mail Tool, as this will be done automatically when launching the AppleShare IP Mail Server 6.2.

Print Server

- You must use the Chooser for creating client-side Desktop Printers for secure print queues. Do not use the Desktop Printer Utility to create your client-side Desktop Printers for secure print queues as it does not allow you to enter your account information, so your jobs will not be printed correctly.
- It is recommended that a queue only contain printers of the same model and type. Also, printer features present in the first printer attached, but not present in subsequent printers, may cause print errors when jobs are printed to one of the subsequent printers.
- The "Allow binary data" and "Allow color printing" options are only used with AppleTalk print queues.
- Some LPR clients do not support queue names that include spaces. Therefore, the AppleShare IP Print Server will also recognize the name up to the first space. For example, if the print queue name is 'Accounting Department', the queue name 'Accounting' can be used by an LPR client to print to the same queue.
- Windows and Windows NT printer drivers can only be used with secure print queues that don't require a password. There is currently no method for the Windows clients to enter their name and password for a print job.
- When printing to a secure print queue from a Windows client, no alert is posted on the client for a security failure. Check the Print Server log file for confirmation if a job fails to print.
- With secure printing activated, a Postscript file copied or sent from one client to another for printing may not work.
- When creating or renaming print queues from Remote Admin, the Print Admin application will not see the new queue names until the next time it is launched.
- Using the Apple Printer Utility to rename or change the IP address for a printer does not update the Print Server settings. Use the Print Server Admin to re-enter the new printer name and/or IP address for the associated print queue.
- Using the Apple Printer Utility with LaserWriter 8.6 or earlier will return a spurious "PostScript Error" if you attempt to get configuration information for secure print queues of the Print Server.
- The Apple LaserWriter 8500 cannot be "hidden" or "captured" by print servers when you have an IP Gateway address set on the printer. Please refer to article **24788** for details.
- The LaserWriter IIg with v1.0 ROMs cannot be hidden with the Print Server.

Web-based Remote Admin

- To use Internet Explorer as your Web browser, please set the Java preferences to use the "Apple MRJ" setting. Confirm that your computer is running Macintosh Runtime Java (MRJ) 2.0 or later by checking the version of the MRJLib contained in the MRJ Libraries subfolder of your Extensions folder. This release is incompatible with Internet Explorer when configured to use the Microsoft Java Virtual Machine.
- Do not use the "Never" option in Internet Explorer or Netscape Browser's Advanced Cache settings when running with Remote Admin. This option suppresses the browsers requests to get fresh pages and thus will result in out of date information being displayed. We recommend that you select "Update Pages" everytime or always.
- Web-based Remote Admin will not work properly if the "Remote Admin" folder inside your Default Web Folder is moved or renamed. Do not move, rename or delete the "Remote Admin" folder or its contents unless you are configuring your Web Server for multiple domains.
- If you have configured your Web Server to support multiple domains then you must move the Remote Admin folder from the Default Web Folder specified in the Web Settings panel to the "web folder" specified in the first entry of your Multi Domain Settings file. In order to access Remote Admin from the new location, you must use the host name or IP address specified in the first entry in your Multi Domain Settings file when entering the Remote Admin URL.
- When trying to access Remote Admin on a heavily loaded server, you may receive the "504 Gateway Timeout" message in your Web browser. Use the Web & File Admin application to set the Current User Activity to less than the maximum value to allow more processing time for the Remote Admin server application.
- When using Remote Admin with European keyboards on non-localized Mac OS systems, you must specify the appropriate settings for your keyboard in the Web browser. For Internet Explorer, check the Language/Fonts settings in your Internet Explorer Preferences. For the Netscape Browser, check the Encoding settings.
- When using Remote Admin with Japanese or European keyboards on Mac OS systems, you must specify the appropriate language and encoding settings in your Web Browser. From Microsoft Internet Explorer with MRJ 2.1.1 or later, choose Japanese Language with Shift-JIS character set for Japanese systems. Choose French or German Language with Western (Mac) character set for European systems. From the Netscape Browser, choose Japanese Language with Shift-JIS encoding for the Japanese system. Choose French or German language with Western (MacRoman) encoding for European systems.
- For this release of Web-based Remote Admin, administrators may only log on with 7 bit character passwords and may only set user passwords in this range. The 7 bit character range is the standard ASCII character set including the control characters, alphanumerics, and standard keyboard characters. You can continue to use Web & File Admin to set 8 bit passwords but administrators will not be able to use these passwords for log on to Remote Admin.
- Do not use the Reload button in Netscape to download a page in Remote Admin. You will have to logon again.
- A limitation in Netscape Java does not allow the 'caps lock' key to be recognized. A Remote Admin user should use the 'shift' key when

entering upper case letters in a password.

Documentation

- If you are experiencing any difficulty while printing the PDF documents that are included on the AppleShare IP 6.2 CD, increase the memory allocated to Adobe Acrobat(TM) application by 2MB.
- The AppleShare IP Help is html-based and uses the Apple Help Viewer browser application, which is included with your Mac OS 8.6 system software. Please note this browser may fail to launch the Help files if you change the name of the AppleShare IP Help folder (located in the Help folder within your System folder) or place the AppleShare IP Help folder inside another folder. The alias for the AppleShare IP Help inside the AppleShare IP 6.2 folder will still work.
- The AppleShare IP Remote Help incorrectly states that you can remove a printer assignment from a queued job using Remote Admin. You must use the AppleShare IP Print Admin to perform this function; it is unavailable remotely.

Published Date: Feb 20, 2012

Upgrading to AppleShare IP 6.2

This document contains important information and upgrading instructions for AppleShare IP 6.2. You may want to print this document and keep it for future reference.

The 6.2 update of AppleShare IP provides several new features and enhancements, and fixes faults from previous releases. You must have a retail version 6.0 or 6.1 of AppleShare IP (not an AppleShare IP seed version) to install this update.

See also:

Article 60376: "**AppleShare IP 6.2: Read Me**."
This article has been archived and is no longer updated by Apple.

New Features

- Mac OS 8.6 compatibility
- ability to share users and groups information between servers
- option to automatically create user home directories
- Sherlock indexing capabilities
- automatic hiding of non-accessible share points
- automatic mail database verification
- support for Realtime Blackhole List anti-spam
- support for remote POP account download
- a queue setting to place new print jobs on hold
- secure (non-password) LPD print queues for Windows clients

New System Requirements

The following additional system requirements are new with AppleShare IP 6.2. Previous system requirements still apply; see your AppleShare IP 6.0 (or 6.1) Getting Started manual for details.

- Any Apple Power Macintosh computer, iMac, or Macintosh Server with a PowerPC(TM) G3, 604e, 604, or 601 microprocessor, or a 6500 series computer with a 603e microprocessor
- 64 MB of physical random access memory (RAM) with virtual memory turned on (80 MB of RAM without virtual memory turned on) to run all of the AppleShare IP server programs simultaneously
- Mac OS 8.6

Installation Instructions

Preparing Your Computer

Before installing AppleShare IP 6.2, you need to make a copy of your System Folder. This allows you to restore a copy of the previous Users & Groups Data File and the AppleShare PDS file (an invisible file installed on every volume), and make it possible for you to switch back to your previous version of AppleShare IP if you desire. When you create your duplicate copy, make sure that the AppleShare IP Web & File Server is running.

Installing Mac OS 8.6 and AppleShare IP 6.2

If you are installing Mac OS 8.6 and AppleShare IP 6.2, be sure to install Mac OS 8.6 first following the instructions that come with that software. Then restart the computer with extensions off by holding down the Shift key while restarting.

To preserve your previous AppleShare IP and OpenDoc setup, it's recommended that you do not perform a clean installation of Mac OS 8.6.

If you choose to perform a clean installation of Mac OS 8.6 anyway, you must install Mac OS 8.6, then OpenDoc (available on the Mac OS 8.6 CD), then AppleShare IP 6.0 or 6.1. Then you need to restart the computer with extensions off by holding down the Shift key while restarting, and install the AppleShare IP 6.2 Update. You should then copy the file "Users & Groups Data File" from the Preferences folder in the backup copy of your System Folder to the Preferences folder inside your newly-created System Folder.

Installing AppleShare IP Software

To perform an installation, double-click the icon labeled Installer and follow the instructions onscreen. There is not a custom installation option.

Installing AppleShare 3.8.3 Client Software

To update client computers to AppleShare 3.8.3, see the AppleShare Client 3.8 User's Manual in the Client Software 3.8.3 folder on your hard disk. See your license agreement for the number of clients your AppleShare IP server may have.

Setting Up AppleShare IP

Using Easy Setup

You need to use the AppleShare IP Easy Setup program before you can use AppleShare IP. The program asks a few questions about how you plan to use AppleShare IP and sets up your AppleShare IP servers accordingly.

To use the Easy Setup program, double-click the Setup AppleShare IP icon on your computer desktop. Follow the instructions that appear onscreen. Your previous serial number appears automatically; you do not need to enter a new serial number.

If you need more help using the Easy Setup program, see your AppleShare IP 6.0 (or 6.1) Getting Started manual.

Setting Up Remote Admin for the First Time

To use the Web browser-based remote administration feature in AppleShare IP, you need to enable it in the Web & File Admin program. You also must be designated as an administrator in that program's Users & Group List.

For extra security, you can use TCP Filter software to allow access to the AppleShare IP Remote Admin application only from specific computers. See the TCP Filter section of AppleShare IP Help for details.

Follow these steps:

1. Click the Open Web & File Admin program button in the AppleShare IP Manager. Enter your name and password in the Administer Web & File Server dialog box, then click OK.
2. Make sure the Web & File server is running by checking the status line in the Web & File Server Activity window. If it's not running, choose Start Web & File Server from the Server menu.
3. Choose Web & File Server Settings from the Server menu.
4. Choose Web from the pop-up menu.
5. Select the "Allow remote administration via a Web browser" checkbox.
6. Make sure the Enable Web Service checkbox is selected.
7. Click Save.

Your changes take effect immediately. To administer your server remotely from any computer on the network, type the following URL in any industry-standard Web browser:

http://<your Web server's DNS name or TCP/IP address>/.admin

Setting Up Shared Users and Groups

If you've installed AppleShare IP on multiple servers and you want to perform all users and groups administration on one server, you can set up servers to get the latest users and groups information from a primary server. Setting up shared users and groups is optional.

Note: To install the same AppleShare IP service (Web & File Server, Print Server, or Mail Server) on more than one computer, you need to purchase a copy of AppleShare IP for each computer. For more information, see your license agreement.

You can share users and groups information with a maximum of 11 servers (10 secondary servers and 1 primary server). AppleShare IP uses industry-standard, high-security encryption methods to share users and groups information between servers.

See AppleShare IP Help for detailed instructions on setting up shared users and groups.

For More Information

See AppleShare IP Help. You can open AppleShare IP Help by choosing AppleShare IP Help from the Help menu within any AppleShare IP administration program, or by double-clicking the AppleShare IP Help icon in the AppleShare IP 6.2 folder.

If you are using Remote Admin, see AppleShare IP Remote Help. To access Help while you are using the Remote Admin application, click the

Help link at the bottom of any Remote Admin page in your Web browser. You can also double-click the AppleShare IP Remote Help icon in the AppleShare IP 6.2 folder.

For recent downloads, refer to the Apple Downloads page at http://www.apple.com/support/downloads/ and search AppleShare IP.
Published Date: Feb 20, 2012

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Published Date: Feb 20, 2012

Mac OS X Server 1.0: Opening File With Long Name Disconnects Clients

On a network containing Mac OS clients and a Mac OS X Server 1.0 running Apple File Services, opening certain files on the Mac OS X Server disconnects all clients who are connected through Apple File Services.
This article has been archived and is no longer updated by Apple.
Apple has determined that all Apple File Services connections to the server are terminated if a client tries to open or get info on a file that has a filename longer than 31 characters.

All connected clients receive the message, "The file server's connection has unexpectedly closed down." Clients connected over TCP disconnect immediately, while connections over AppleTalk timeout after two minutes. Once disconnected, clients can immediately reconnect to the server.

Until a solution to this condition is reached, you should avoid sharing files with names longer than 31 characters with Apple File Services.

Mac OS clients are not able to create filenames longer than 31 characters. However, they can be created at the Mac OS X Server computer or copied over from other file services running on the server.
Published Date: Feb 19, 2012

Sherlock: Search Internet Tab Dimmed

This article explains why Sherlock's Search Internet tab may be dimmed, leaving you unable to search the Internet, and provides the solution.
This article has been archived and is no longer updated by Apple.
Sherlock requires that certain system software components be installed in order to search the Internet. If one or more pieces are disabled, missing or damaged, then you may need to enable, or reinstall them.

QuickTime 3 or later is required for all versions of Sherlock. Mac OS 8.6 installs URLAccess, and it is required for Sherlock to run on Mac OS 8.6 or later.

When Sherlock opens it verifies that necessary files are present for each Mac OS environment. If a necessary file is not present, Sherlock issues a dialog indicating what needed file is missing. See Figure 1.

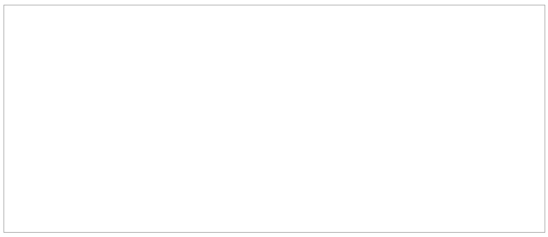

Figure 1 Sherlock dialog box.

If you click the OK button, Sherlock continues to display error dialogs when it opens if the required software components are missing. If you click the Don't Show Again button, Sherlock opens without any notification, and the Search Internet feature are unavailable. Sherlock can still find by content, and find files.

If Sherlock's error messaging has been turned off, you may be uncertain which files are missing. To restore Sherlock to reinstate the error dialog when opened, drag the Sherlock Preferences file to the Trash. It can be found in the Preferences folder of the System Folder. When Sherlock is opened again, it issues error messages by default.

Use the Extensions Manager to enable the necessary files for Sherlock and then restart, to be able to use Search Internet.
Published Date: Feb 20, 2012

Mac OS: Installing Older Mac OS Component After Updating System Software or Firmware

When a computer has one version of Mac OS installed (or its firmware has been updated) and a software component from an earlier version of Mac OS is installed (such as from Mac OS software installer disc), the computer may not work properly or may not start up.

This article has been archived and is no longer updated by Apple.

System Software

Your Mac OS System Folder may no longer be valid because your System file and other crucial items from the two versions of Mac OS have become mismatched. To fix this, start up from another volume (such as your Software Installer disc) and run the update again to re-synchronize the items.

Sometimes a Mac OS installer system software discs opens an additional installer after the system software installation is complete. This extra installer may replace certain system files such as the Mac OS ROM, System Resources and System file with versions intended for use with its (older version) of Mac OS. Installing any older Mac OS item from its installer still causes this extra installer to open. Unfortunately, this additional installer does not check to see if a newer item is installed and instead replaces the items that were updated in the newer version of Mac OS already installed on the hard disk. Although these items are inadvertently replaced with older versions, the version of the Finder and other items installed are not replaced, so you end up with a non-functioning System Folder.

If you have a Mac OS full install or update disc, you can start up from it and simply install the update to repair the System Folder. If you downloaded the update and it is still on your hard disk, you can start up from the older Mac OS disc and run the updater from the hard disk to repair the System Folder, too.

Firmware

The discussion above applies to firmware updates, too. If a firmware update has been installed, using an older Mac OS system software installer may cause the same difficulties.

Published Date: Feb 20, 2012

Mac OS 8.6: Folders Deleted by Installer

The following is a list of folders that are automatically removed as a result of installing Mac OS 8.6.
This article has been archived and is no longer updated by Apple.
Important: The colon is not part of the name, but is used to separate names of different folders. In the first example below, the AppleScript folder is inside the Apple Extras folder on the volume named "Macintosh HD" (or whatever your hard disk may be named).

- Macintosh HD : Apple Extras : AppleScript
- Macintosh HD : Apple Extras : Monitors Extras : Monitors Extras Folder
- Macintosh HD : Apple Extras : QuickDraw 3D Extras : QuickDraw 3D 1.5.4 Folder
- Macintosh HD : Mac OS Read Me Files : Open Transport Information

One potential concern is that if you are storing other documents in the folders listed above, you are not given a warning upon deletion.

Special AppleScript Information
With Mac OS 8.1 and earlier, the AppleScript folder inside the Apple Extras folder had a (TM) (trademark symbol) in the name. Beginning with Mac OS 8.5, the AppleScript folder inside the Apple Extras folder does not include a (TM). If you upgraded from previous versions of the OS, it may be possible that you have two AppleScript folders inside the Apple Extras folder: one named "AppleScript" and one named "AppleScript(TM)" (with trademark symbol). The Mac OS 8.6 installer deletes the folder named "AppleScript(TM)" (with trademark symbol) if it is present. If you have AppleScript documents or other documents you've created, please move them to another location before installing Mac OS 8.6.
Published Date: Feb 20, 2012

Mac OS Setup Assistant: Cannot Print After Changing Zone

After using the AppleTalk control panel to change the zone in which my Macintosh resides, the Macintosh now displays this error when attempting to print to my Desktop Printer:

The document "xx" failed to print on the printer "yy" because the requested printer could not be found. Cancel Job. Stop Queue. Try Again."

Additional observations: the printer does appear in the Chooser but there is no printer icon adjacent to its name.
This article has been archived and is no longer updated by Apple.
This error appears when these three conditions are all true:

1. You used Mac OS Setup Assistant to select your Desktop printer (any version of the assistant up to and including Mac OS 8.6).
2. Your computer is on a network that has multiple zones you can register it in.
3. From the AppleTalk control panel you've selected a zone for your Macintosh other than the one your printer is located in.

Some possible workarounds include:

- From the AppleTalk control panel reselect the original zone your Macintosh was located in, or
- Select and setup the printer again, only this time through the Chooser, then drag the first Desktop Printer created by Mac OS Setup Assistant to the Trash.

Note regarding the scenario above:

- This assumes that you have different zones available to register in on the network cable segment your Macintosh is connected to (this is a different concept than zones listed in the Chooser).
- To view the different zones your Macintosh can register in, open the AppleTalk Control Panel. The available zones you may register your Macintosh in are displayed in the "Current zone" scroll bar.

Published Date: Feb 20, 2012

QuickTime: "VISEData" or "viseicat.idx" Alerts

This document includes tips to try when "VISEData" or "viseicat.idx" alerts appear when you install QuickTime.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to install QuickTime, an alert box appears with one of these messages:

"An error occurred trying to download the file VISEData"

"The file 'viseicat.idx' couldn't be downloaded."

Solution

- If the alert box appears while you're installing QuickTime, try installing again. The installer will begin where it left off when the alert box appeared.
- Macintosh users should be aware that this alert box can appear if certain system extensions or files are missing, or if there is an extensions conflict. Choose the "Mac OS All" extension set in the Extensions Manager control panel and restart the computer before attempting the installation. If any extensions that are part of this set are missing, reinstall the Mac OS before installing QuickTime.
- This alert can be caused by slow or dropped Internet connections. Be sure that your Internet connection is reliable and working correctly. You may also have more success installing QuickTime at times of lighter Internet traffic.
- In some cases the QuickTime Installer may try to use a proxy server. If your computer is not behind a firewall and doesn't need to use a proxy server, make sure the "Use Web Proxy" option is deselected.

These workarounds may not be effective for all users. You can also download the stand-alone QuickTime installer, which does not require an active Internet connection when it installs. See technical document 36507: "**QuickTime: How to Obtain the Stand-Alone Installer**".

Microsoft Windows Users

The stand-alone QuickTime installer for Windows is compressed as a ZIP archive. Once you have downloaded the file in this format, you must use a decompression program to 'UnZIP' the file. Programs such as PKWARE Inc.'s PKZIP, WinZIP, and others, can be used for this purpose. See article 75098: "**Software Downloads: Software Formats and Assistance**" for additional help and information on downloading.

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

The following document can help you search for a particular vendor's address and phone number:
Document 17159: "**Locating Vendor Information**"
Published Date: Feb 20, 2012

Power Macintosh G3 All-in-one: Issue With ADB Powered Modems

Sometimes, when turning on a Power Macintosh G3 All-In-One with an Apple Desktop Bus (ADB) modem attached, the modem doesn't always initialize correctly. It may immediately go off hook, or not respond to AT commands, for example.

This article has been archived and is no longer updated by Apple.

Customers have reported this behavior with some, but not all, modems that receive power from the Apple Desktop Bus. Modems with a dedicated power supply that plugs into a wall outlet do not show this issue. If restarting or shutting down and starting up the computer does not seem to make a difference, then either resetting your modem (assuming it has a reset button) or disconnecting and reconnecting the modem's ADB cable should resolve the issue.

Published Date: Feb 20, 2012

Control Strip: Listing Additional Display Resolutions

I've noticed that the Monitors and Sound control panel has a pull down to choose between recommended resolutions for my display and all available resolutions. Since I upgraded my system software though, my control strip only lists the recommended resolutions. Is there any way to list all available resolutions in the control strip?

This article has been archived and is no longer updated by Apple.

A change was made to the Monitor Resolution control strip and introduced in Display Software 1.6. The control strip now only lists the recommended resolutions by default. To force the control strip to list all available resolutions, hold down the control key while selecting the Monitor Resolution module from the control strip.

Published Date: Feb 20, 2012

Mac OS 8.6: Computer Pauses Every Five Minutes On DHCP

It sometimes seems that my computer, which is running Mac OS 8.6, becomes unresponsive for about 25 seconds upon first IP activity and then every five minutes thereafter. It seems to occur under the following circumstances:

- TCP/IP set to Connect via "Ethernet"
- TCP/IP set to Configure via "Using DHCP Server"
- Computer is on a network that does not have active DHCP services, or computer is not attached to an Ethernet network

This article has been archived and is no longer updated by Apple.
When a DHCP server is not available and the computer is configured as above, the computer searches for a DHCP server until it times out in about 25 seconds. At this point, the computer will select a temporary IP address in the non-routable 169.254.x.x range. The computer will continue to look for a DHCP server every five minutes until a DHCP server is found. On this five minute interval, the computer becomes unresponsive for another 25 seconds or so.

This should not occur if your computer is on a TCP/IP network that provides IP addressing via DHCP. If it does occur, the server may be down or there may be a network issue. Consult your network administrator for further assistance.

Identification
If you are experiencing 'pauses' of about 25 seconds at five minute intervals, open the TCP/IP control panel. If TCP/IP is set to configure "Using DHCP Server" and the IP address is in the 169.254.x.x range, your computer is exhibiting the behavior described above.

Another cause of pausing on iMacs running Mac OS 8.6 is resolved by the iMac CD Update 1.0. Please refer to the following article for complete details on this specific issue: Article 58412: "**iMac: How To Resolve Intermittent Pause During Usage**".

Workarounds
If your computer is on a TCP/IP network that does not supply DHCP services, you should set TCP/IP to use an appropriate configuration method; for example, Configure Manually.

If your computer is temporarily not connected to a TCP/IP network that supplies DHCP services, make TCP/IP inactive or configure TCP/IP to connect using a different method; for example, Connect via AppleTalk (MacIP) or Connect via PPP.

In Mac OS 9 and later with Open Transport 2.6 and later, your computer will no longer pause when attempting to renew a DHCP lease.

Note: If you are unable to change the settings in the TCP/IP control panel, your network administrator may have locked the settings to prevent modification. Consult your network administrator if these settings are locked.

Published Date: Feb 20, 2012

AppleShare IP 6.2: Can‘t Change Password on Secondary Server

Under AppleShare IP 6.2, I have User & Group sharing set up. When I am in the Chooser under AppleShare and try to change my password on a secondary server, I get a dialog that says "Your password could not be changed. Please try again or see your server administrator." I can log on just fine, and I know that my name and password are correct. What is happening?

This article has been archived and is no longer updated by Apple.

Passwords may only be changed on the primary server. As long as users can reach the primary server (either via AppleTalk or TCP/IP), they will be able to change their password there, despite whether they have access to any files on the primary server.

Until the user, on the secondary server, reaches its scheduled expiration time, users may continue to use their old passwords on the secondary server. If a user enters a new password on a secondary server before the current password expires, the login attempt will fail once. This will cause the secondary server to clear its cached entry for that user, and download a fresh one from the primary server. Therefore, when the user tries a second time with their new password, they will be able to log in with it.

Published Date: Feb 20, 2012

iBook: How Programmable Function Keys Work

This article describes the programmable function key operation for iBook and the PowerBook (FireWire) computers.
This article has been archived and is no longer updated by Apple.
The programmable function keys were created to help simplify common, everyday tasks performed on the computer. You can use these keys to open a browser, an email application, or any other frequently used application or server by pressing a single key.

To set up a programmable function key, open the Keyboard control panel. Or, if the keys have not been programmed yet, simply pressing one of them brings up a dialog box that leads you to the Keyboard control panel. Apple has preprogrammed F1 through F6 with such common control functions as screen brightness, speaker volume, and so on. F7 through F12 can be programmed for your personal choices.

To help you identify what the function keys were programmed to do, Apple includes with iBook a variety of durable stickers with preselected icons. Once the keys are programmed, you can select the stickers that will best remind you of the assigned functions.

Note: The stickers should not be placed on the keycap itself, rather above them on the iBook case. To remove the sticker, use a fingernail or other non-abrasive tool to remove them and avoid scratching the plastics.

The function keys F1 through F12 can be easily reset to have primary functionality. Simply open the Keyboard control panel and select Options. Then check the box that says Use F1 through F12 as Function keys.

Note: Programmable function keys are not a feature of Mac OS X 10.0

Published Date: Feb 20, 2012

AirPort Base Station: Description

This article describes the Apple AirPort Base Station.
This article has been archived and is no longer updated by Apple.
The AirPort Base Station is a dedicated hardware access point. It contains a 56 Kbps modem and a 10 BASE-T (10 MB per second) Ethernet port for connecting to a phone line, cable modem, DSL modem, or local area network for terrestrial Internet access. See Notes 1 and 2.

Up to ten AirPort enabled computers can communicate with an AirPort Base Station up to 50 m away. (More than ten users can connect to a base station, but ten users is the recommended limit based upon optimum performance.)

With AirPort-enabled computers and an AirPort Base Station, you can create a wireless network in your home, office, or classroom. You can also add more base stations to provide coverage for your entire location.

A. Modem port (RJ-11), **B.** AC power, **C.** 10 BASE-T Ethernet port (RJ-45)

Figure 1 AirPort Base Station

Notes:

1. Modem data speeds up to 56 Kbps. Download speeds vary with line conditions and your ISP's modem capabilities.
2. The AirPort Base Station will not function on a 100 BASE-T (100 MB per second) network.

3. Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access".**

Published Date: Feb 20, 2012

Mac OS 8.6: Beep On Opening Chooser With Command-Option Keys Down

When holding down the Command and Option keys while opening the Chooser under Mac OS 8.5, 8.5.1 or 8.6, I notice that there is a slight pause and a beep that is not normally associated with opening the Chooser. I have heard that this resets the serial ports on computers that have them. Is this true?

This article has been archived and is no longer updated by Apple.

No, the serial ports are not reset. Mac OS 8.5, 8.5.1 and 8.6 include Chooser version 7.6.2. It is true that you will hear a System beep upon opening the Chooser with the Option and Command keys down, however, there are no parameters that are automatically reset. To reset serial ports on computers that have them, you will still need to reset the parameter memory (PRAM), by restarting the computer and holding down the Option, Command, 'P' and 'R' keys. For more information on resetting PRAM and NVRAM, please see the following Knowledge Base article:

Article 2238: "**Macintosh: How to Reset PRAM and NVRAM.**"
Published Date: Feb 20, 2012

Mac OS: Using DOS/Windows ICC Profiles With ColorSync

I have a third-party display that I would like to use with the ColorSync color matching software on my Mac OS computer. The display came with ICC profiles in DOS/Windows format, but the ColorSync software does not seem to recognize these files when I drag install them onto my Mac. How do I properly install these files?

This article has been archived and is no longer updated by Apple.

Check with the manufacturer, possibly by visiting their website, to see if a Mac OS format ColorSync profile is already available for the device. If not, ColorSync uses the standard ICC (International Color Consortium) format to store its profiles, so you should be able to use a similar DOS/Windows formatted file by using the following instructions:

1. If the profile is part of a larger software install package, it may actually be in a compressed format. If this is the case, try installing the display software on a computer running Windows, then locate the individual decompressed profile on the Windows hard drive to transfer to the Mac OS computer. Stuffit Expander will also decompress zip (.zip) and self-extracting archives (.exe) of some DOS/Windows formats directly on the Mac if DropStuff is also installed. Stuffit Expander and DropStuff are included with Mac OS 8.x systems in the Internet Utilities folder.
2. You will need to convert the generic file to the ColorSync profile filetype in order for it to be properly recognized by the ColorSync control panel. You can do this with ResEdit, or third party utilities, but you can also do it with AppleScript. A sample AppleScript is included at the bottom of this article.
3. You will need to drag the converted ICC profile into the ColorSync profiles folder of your active System Folder. The profile should then show up in the ColorSync control panel listing.

To create an AppleScript which will convert generic ICC profiles to the ColorSync profile type, cut and paste the text below into the Script Editor application. Save the script as run only. Dragging files onto this application will convert them to recognized ColorSync profiles.

```
on open (these_items)

	tell application "Finder"
		activate
		repeat with this_item in these_items
			set the creator type of this_item to "sync"
			set the file type of this_item to "prof"
		end repeat
	end tell

end open
```

For more information about ColorSync, visit Apple's ColorSync website at http://www.apple.com/colorsync.

For more information about AppleScript, visit Apple's AppleScript website at http://www.apple.com/applescript.

Published Date: Feb 20, 2012

Mac OS: Launcher - Displaying Custom Folder Icons On Buttons

When I drag folders with custom icons onto the Launcher, the Launcher buttons have generic folder icons. How can I get the custom folder icons to appear on the Launcher buttons?
This article has been archived and is no longer updated by Apple.
Here's a procedure to get custom folder icons to display on Launcher buttons.

1. Drag a folder(s) with a custom icon onto the Launcher.
2. Option-click on the category button to open the related Launcher Items subfolder. If you have no Launcher category buttons, open the Launcher Items folder within the System Folder.
3. Select all alias items in the folder that do not appear correctly in the Launcher.
4. Choose Get Info from the File menu for the selected items.
5. Close those Info Windows.
6. Go back to the Launcher window, and if the icons aren't correct yet, click another category button and back to get the Launcher to update. If you have no Launcher category buttons, close the Launcher and open it again.

The buttons should now show the correct icons.
Published Date: Feb 19, 2012

AppleShare IP 5: Mail Server Does Not Forward Mail

In the AppleShare IP 5.x Mail Server, you have the option to forward mail that has an unknown host to another mail server. I turned this on, but the mail still isn't being forwarded. The mail server is queueing up messages that I want it to forward instead. What is wrong?
This article has been archived and is no longer updated by Apple.
The mail server has a specific definition of an unknown host. It considers a host unknown only if it looks up the DNS host name and receives an authoritative "Host does not exist."

Notice that a "Host does not exist" reply is not the same as receiving no reply on a query. Receiving no reply is considered a failed lookup and does not tell the server that the host definitely does not exist. It may be the case that the host actually does exist, but the lookup failed as a result of troubles with the DNS server, or because of network problems. For this reason, the mail server will hold the mail and attempt to look up the name again later.

Since the server must receive a response from a DNS server to consider a host unknown, this means that running the mail server without any DNS server will result in no mail being forwarded. One way to work around this is to run MacDNS for the mail server. For example, if your mail server is receiving mail for "company.com" and you want all such mail forwarded to another server, you can create a MacDNS zone file for "company.com" and create no hosts for that zone. Since MacDNS considers itself the authority for company.com, it will give a "Host does not exist" reply for any query about a host in the company.com domain. Keep in mind that this will also prevent the mail server from contacting any host in the company.com domain that actually does exist.
Published Date: Feb 20, 2012

Power Macintosh G3 (Blue and White): Using Shift Key During Startup with Multiple Keyboards

This article describes how to disable extensions by holding down the shift key when there are two USB keyboards connected to the same computer.
This article has been archived and is no longer updated by Apple.
When the computer starts up, it detects devices on the USB chain. You can see the Caps Lock key light blink as each keyboard is detected. This initialization procedure takes slightly longer and the keyboard lights will blink more than once if more than one keyboard is connected.

If you hold down a key before the keyboard has been detected by the computer, it will not be recognized.

During startup, If you have this keyboard configuration, the Caps Lock light will blink a final time before the Happy Mac icon appears on the display. Hold down the Shift Key after the keyboard light blinks for the last time, before the Happy Mac icon.

This behavior also affects other keys held down during startup, including:

- Command key - disables Virtual Memory
- Space Bar - opens the Extensions Manager

Published Date: Feb 20, 2012

Mac OS X Server: About QuickTime Streaming PlaylistBroadcaster

About QuickTime Streaming PlaylistBroadcaster

This document describes how to use PlaylistBroadcaster, a new feature available with QuickTime Streaming Server 1.0.2. PlaylistBroadcaster broadcasts QuickTime media, "movies," to a streaming server, such as QuickTime Streaming Server, which then reflects the media to clients. This lets you create a virtual radio station or TV broadcast that appears to users as a live broadcast of the media.

This document is installed in the `/System/Documentation/Administration/Services/QuickTimeStreaming/` directory.

For more information, see the QuickTime Streaming Server website.
This article has been archived and is no longer updated by Apple.
To specify the media to broadcast, you create a playlist. To specify how PlaylistBroadcaster broadcasts the media, you use a broadcast description file.

You can broadcast the media in the playlist once through the list sequentially, repeatedly through the list sequentially, or randomly.

If you broadcast the media randomly, you can specify a weight for each media file in the list. The weight, which is a number from 1 to 10, determines how often an item plays. Media files that are weighted as 10 play more often than media files weighted with lower numbers. In addition to using weights, you can prevent a media file from playing again until a specified number of other media files play.

To broadcast a playlist, you use the PlaylistBroadcaster command to start the process. The PlaylistBroadcaster process is a separate process from the QuickTime Streaming Server. Each process can broadcast the media from one playlist only. However, you can run the PlaylistBroadcaster process as many times as you want to broadcast other playlists.
As PlaylistBroadcaster broadcasts a playlist, you can have it keep a log of the media files it plays so you can keep track of what media is broadcast.

To use PlaylistBroadcaster, you need to do the following:

- prepare the QuickTime media for streaming
- prepare a reference media file
- create a playlist, which is a text file that specifies the QuickTime media to broadcast
- create a broadcast description file, which is a text file that specifies information for PlaylistBroadcaster

Once you're set up to use PlaylistBroadcaster, you can execute the PlaylistBroadcaster command to start the broadcast. If you broadcast the media repeatedly or randomly, you also use the PlaylistBroadcaster command to stop the broadcast.

Setting up to use PlaylistBroadcaster

Preparing the QuickTime media for streaming

You can use PlaylistBroadcaster to broadcast any media that the QuickTime Streaming Server is capable of streaming. For more information about the types of media you can stream, see Server Administration Help on your Mac OS X Server. To see the Help, open the Server Administration Help (named ServerAdministrationHelp.help), located in `/System/Documentation/Help`.

To prepare the media, you must do the following:

- Be sure all the media files contain compatible media types. For example, all audio tracks should use the same encoding and bit rate. All video tracks should also use the same encoding.
- Format the media in each file in the same way. For example, use the same frame size for each file that contains a video track.
- Be sure each item is a hinted QuickTime movie optimized for the server.

Note: To hint a QuickTime movie, you can export it from QuickTime Player and select one of the hinting options in the export dialog box. To optimize the movie for the server, click Options in the export dialog box. If the Hint Exporter Settings dialog box appears, select the Optimize Hints for Server option. If the Movie Settings dialog box appears, open the pop-up menu below Prepare for Internet Streaming and choose Hinted Streaming, then click Settings to see the Hint Exporter Settings dialog box.

Preparing a reference movie
PlaylistBroadcaster requires that you specify a reference movie in the broadcast description file. This is a QuickTime hinted movie that contains the same types of tracks and encodings used in the actual media files. Normally, you can specify any of the media files included in the playlist because

they are the same, although you can author a reference movie.

Creating the playlist file
The playlist text file specifies the media to use in the broadcast. To create a playlist, you can use any text editor, such as TextEdit on the Mac OS X Server, to type the information for each item included in the playlist. Then, save the text file where you can locate it on your server.

Keep these points in mind about the playlist file:

- You must begin the playlist with *PLAY-LIST*.
- The list can consist of individual media files or other playlist files.
- To specify a media file or another playlist file, provide the complete or relative pathname to the file.
- To specify another playlist, precede the pathname with the "+" symbol.
- For individual media files, the list should include a weight. The weight is a number from 1 to 10. Items with a weight of 10 play more often than those with lower numbers. If you don't specify a weight, PlayList Broadcaster assigns 10 as the weight.

Here's an example of a playlist file containing individual files with weights and another playlist:

```
*PLAY-LIST*
# Lines beginning with "#" are comments
# individual media files weight (1-10)
#--------------------------------------
/music/jazz/take5.mov 2
/music/rock/freebird.mov 9
/music/reggae/onedrop.mov 5

# path to another playlist
#--------------------------------------
+ /music/classical/playlist.txt

# relative path to another playlist
#--------------------------------------
+ music/funk/funkplist.txt

# individual media file with space
#--------------------------------------
"/music/jazz/ice cream love.mov" 9
```

Note: If the pathnames include spaces, enclose the pathname in quotation marks.

You can change a playlist file after starting to broadcast it. However, you must stop and restart the broadcast to use the changes.

Creating the broadcast description file
The broadcast description file is a text file that specifies how the media should be broadcast, the playlist file, the IP address of the QuickTime Streaming Server, and other information about the broadcast.

To create a broadcast description file, you can use any text editor, such as TextEdit on the Mac OS X Server, to type the information needed to broadcast the playlist. Then, save the text file where you can locate it on your server.

The information you need to enter in the broadcast file includes the following:
Σ Playlist (playlist_file): The complete or relative pathname of the playlist file you want to broadcast.
Σ Play Mode (play_mode): The method you want to use to broadcast the media files. Specify one of three modes:

sequential
sequential_looped
weighted_random

If you specify sequential or sequential_looped, PlaylistBroadcaster broadcasts the media in the order it appears in the list.

If you specify weighted_random, PlaylistBroadcaster broadcasts the media in random order using the specified weights to broadcast how often an item plays. It continues to broadcast the media until you stop the PlaylistBroadcaster process.

Σ Destination (destination_ip_address): The IP address of the QuickTime Streaming Server you are using to broadcast the media. The default destination is the QuickTime Streaming Server on the same computer as the PlaylistBroadcaster.

Σ Destination Base Port (destination_base_port): This specifies the base port number for the broadcast, which must be an even number. If you do

not specify a base port, PlaylistBroadcaster uses the default port (5004).

Each track of the media you are broadcasting requires two ports. If the media contains several tracks (for example, video and sound), PlaylistBroadcaster uses the destination base port as the starting port number, then assigns an incremental port number to other tracks automatically.

Important: Each track of each broadcast must use a different port number. If you are streaming more than one broadcast of multi-track media from your QuickTime Streaming Server, be sure to assign destination base ports so that tracks do not play on the same port.

For example, if you use the default destination base port for a broadcast in which the media has three tracks (video, audio, and text), then the broadcast will use ports 5004 through 5009 (two for each track). If you want to broadcast another stream, then you should set the destination base port of the second stream to at least 5010.

Σ Recent Movies List Size (recent_movies_list_size): If you broadcast a playlist using the weighted_random Play Mode, you can use this parameter to specify the minimum number of files to broadcast before allowing a file to play again.

By default this parameter is zero (0), so that all the media files play randomly based only on the weight you have assigned to each one.

If you set the parameter to a value greater than zero, then after a media file is broadcast, it will not be available to play again until the number of files specified by the parameter have played. Of course, it may not play again immediately because PlaylistBroadcaster will broadcast any available media randomly.

Note: Be sure to set this parameter to a number less than the number of media files in the playlist. If you set it to a number equal to or greater than the number of media files in the playlist, the broadcast will play each media file once then stop. If you perform a preflight check, you will see a message about this problem.

Σ SDP File (sdp_file): The complete or relative pathname of an SDP file in the movies folder used by the QuickTime Streaming Server. You must specify an SDP file. If the SDP file you specify doesn't exist in the location, PlaylistBroadcaster creates one.

Important: If you stop a broadcast and change the broadcast description file, be sure to move the SDP file from the QuickTime Streaming Server movies folder before you restart the broadcast.

Σ SDP Reference Movie (sdp_reference_movie): The complete or relative pathname of the reference movie, which can be one of the media files you are broadcasting.

Σ Logging (logging): You use this parameter to specify whether or not to keep a log. It can have one of two values:

enabled
disabled

If you enable logging, PlaylistBroadcaster records information about the broadcast in the log file, including error messages. For more information, see "Using the Log File" and "Understanding Error Messages" later in this document.

Σ Log File (log_file): The complete or relative pathname of the log file. If you enable logging but do not specify a log file, then PlaylistBroadcaster creates a log file with the name of the broadcast description file followed by ".log" in the same directory as the broadcast description file.

Here's an example of the items for a broadcast file:

```
playlist_file /server/local/media/lists/playlist1
play_mode weighted_random
sdp_reference_movie /music/jazz/take5.mov
destination_ip_address 12.123.123.123
destination_base_port 5004
recent_movies_list_size 10
sdp_file /server/QTSS/movies/playlist1.sdp
logging enabled
log_file /server/local/playlistlogs
```

Starting and stopping PlaylistBroadcaster

To start, you use the PlaylistBroadcaster command. You also use the command to list existing playlist broadcasts and to stop broadcasting a playlist.

Using preflight to check your broadcast

If the playlist you are broadcasting includes a large number of media files, you may want to use the following command:

```
PlaylistBroadcaster broadcast_filepath -preflight
```

Preflight causes PlaylistBroadcaster to determine if each media file in the playlist can be broadcast. Preflight does not start the broadcast.

After performing the preflight check, PlaylistBroadcaster displays information about the broadcast description file, including information about these types of problems:

- if there is a problem with a media file included in the playlist file
- if it can't find the playlist file
- if there's a problem with the broadcast description file

Note: If you perform a preflight check, PlaylistBroadcaster creates an SDP file, if the file doesn't exist already. If you change the broadcast description file, be sure to move the SDP file from the QuickTime Streaming Server movie folder before restarting the broadcast..

Starting to broadcast a playlist
To start broadcasting a playlist, type the following command in a Terminal window:

```
PlaylistBroadcaster broadcast_filepath
```

where the "broadcast_filepath" is the complete or relative pathname of the broadcast description file that describes the playlist you want to broadcast.

When you start PlaylistBroadcaster, it creates the SDP file, if the file doesn't exist already. PlaylistBroadcaster also creates a playlist in memory that lists all the media files in the playlist and in any playlist files included in the playlist.

Note: If you change a playlist file used by a broadcast, you must start and restart the broadcast to use the changes. If you change the broadcast description file, you must stop the broadcast, move the SDP file from the QuickTime Streaming Server movie folder, then restart the broadcast.

Listing broadcasts
To stop a broadcast, you need to specify an index number. If you are broadcasting more than one playlist, you need the index number of the playlist broadcast. To see the index number of the playlists that are broadcasting, type the following command in a Terminal window:

```
PlaylistBroadcaster -list
```

This lists all the PlaylistBroadcaster broadcasts that are currently running. Here's an example:

```
[ 1] JazzBroadcast.txt; pid: 12318
[ 2] RockBroadcast.txt; pid: 12389
[ 3] ClassicBroadcast.txt; pid: 12730
```

The number at the beginning of each item is the broadcast's index.

Stopping a playlist broadcast
If you are broadcasting one playlist and want to stop it, then type the following command in a Terminal window:

```
PlaylistBroadcaster -stop 1
```

If you are broadcasting more than one playlist, list the broadcasts that are currently playing, then type the following command in a Terminal window:

```
PlaylistBroadcaster -stop broadcast_index
```

where "broadcast_index" is the index of the broadcast you want to stop.

Restarting a playlist broadcast
You can restart a broadcast using the PlaylistBroadcaster command. If you restart a broadcast, PlaylistBroadcaster uses the SDP file it created when you started the broadcast previously. If you make changes to the broadcast description file, be sure to move the SDP file from the QuickTime Streaming Server movie folder before restarting the broadcast.

Seeing information about PlaylistBroadcaster

You can use the following command to see information about PlaylistBroadcaster, such as the version number of the program:

```
PlaylistBroadcaster -help
```

Connecting to the broadcast

To connect to the broadcast, users need client software that can play QuickTime media, such as the QuickTime Player. They can also use Internet browser programs, such as Microsoft Internet Explorer or Netscape Communicator, if they have the QuickTime Plug-in installed. For best results, users should have the latest version of the QuickTime software installed on their computers.

You will need to provide users with the URL for the QuickTime Streaming Server and the SDP file that connects to the playlist broadcast.

Solving problems with PlaylistBroadcaster

The media in the playlist is not being broadcast:
Use ProcessViewer to be sure the PlaylistBroadcaster process is running. If it is and the media is not being broadcast, stop the broadcast using the PlaylistBroadcaster command, move the SDP file for the broadcast from the QuickTime Streaming Server movie folder, then restart the broadcast.

Be sure the broadcast description file is correct for all the parameters correctly. If you change the broadcast description file, stop the broadcast, move the SDP file for the broadcast, then restart.

The media in the playlist is not broadcast randomly:
Be sure the broadcast description file specifies that the play_mode parameter is weighted_random.

The media plays once then stops:
Be sure the broadcast description file specifies that the play_mode parameter is sequential_looped or weighted_random.

If you broadcast the playlist as weighted_random and set the Recent Movies List Size (recent_movies_list_size), be sure the number is less than the number of media files in the playlist.

Some media in the playlist is not being played:
Check the weight you have assigned to each media file in the playlist. If you change the playlist, be sure to stop and restart the broadcast to use the changes.

Check the settings for the Recent Movies List Size parameter in the broadcast description file. If you change the broadcast description file, be sure to stop the broadcast, move the SDP file for the broadcast from the QuickTime Streaming Server movie folder, then start the broadcast again.

The media isn't presented correctly:
Be sure the content, format, and encoding of the media is the same for all files in the playlist. Also, be sure users have the latest version of the QuickTime software installed on their computers.

The presentation of the media is slow:
Be sure each media file is a hinted movie optimized for the server.

A user cannot connect to the broadcast:
Be sure the user's computer has QuickTime 4.0 or later installed. If the user is connecting to the broadcast using a Web browser, be sure the QuickTime 4 Plug-in is installed correctly for the browser.

If the correct software is installed, be sure the user has the correct URL.

Be sure the broadcast file has the correct IP address, base port, and pathname for the SDP file.

A user gets a "404" error in a Web browser but is using the correct URL:
Be sure that the destination IP address is correct in the broadcast description file.

A user's computer crashes while streaming a playlist that includes media files with video tracks:
Be sure all the video tracks in the media files use the same frame size.

Using the log file

If you enable logging, PlaylistBroadcaster records information about the broadcast. The log file can help you determine problems that occur during the broadcast, as well as maintain records of the media file you broadcast.
A log file contains this information:

- the date and time the broadcast started

- the date and time each media file played, the pathname of the media file, and if any errors occur a description of the problem
- the date and time the broadcast stopped

Using the error messages

If it detects a problem during a preflight check, PlaylistBroadcaster displays an error message. It also includes a description of any problems that occur in the log file, if you enable logging.

Most of the error messages are self-explanatory. Following is a description of a few of the messages.

Permission denied to access the broadcast description file. Read access required. (path: <pathname>, errno: <error number>)
PlaylistBroadcaster was unable to open the file with Read/Write privileges.

Unable to access the broadcast description file. (path: <pathname>, errno: <error number>)
PlaylistBroadcaster was unable to open the file, but it could not determine a specific reason.

Error reading the broadcast description file "<pathname>." (bad format or missing file)
PlaylistBroadcaster cannot read lines from the broadcast description file.

PlaylistBroadcaster set up failed: There are no movies to play.
PlaylistBroadcaster found no media files in the playlist.

Warning, movie tracks do not match SDP file. Movie: <pathname>
Some of the tracks in a movie are not mapped in the SDP file and cannot be broadcast. The message shows the number of tracks that will not be broadcast.

Permission to access the SDP file was denied. Read/Write access is required. (path: <pathname>, errno: <error number>)
PlaylistBroadcaster was unable to open the file with Read/Write privileges.

Unable to access the SDP file. (path: <pathname>, errno: <error number>)
PlaylistBroadcaster was unable to open the file, but it could not determine a specific reason.

Permission to access the SDP reference movie was denied. Read access required. (path: <pathname>, errno: <error number>)
PlaylistBroadcaster was unable to open the file with Read privileges.

Unable to access the SDP reference movie. (path: <pathname>, errno: <error number>)
PlaylistBroadcaster was unable to open the file.

Warning: The recent_movies_list_size is greater than or equal to the number of movies in the playlist. Each movie will play once, then the broadcast will end.
This message appears after a preflight check. If you want to broadcast to play continuously, you should change the parameter to a number less than the number of movies in the playlist.

Could not open /tmp/broadcastlist. Reason: access denied.
PlaylistBroadcaster uses this file to maintain a list of broadcasts. PlaylistBroadcaster was unable to open the file with Read/Write privileges. You may see this during the preflight check, when starting a new broadcast, or when stopping a broadcast.

Error opening "/tmp/broadcastlist". (<error number>)
PlaylistBroadcaster was unable to open the file.

PlaylistBroadcaster broadcast ID <number> not running.
The broadcast ID number specified in a stop command is not a valid, running broadcast ID.

PlaylistBroadcaster broadcast ID <number>, permission to stop denied.
You tried to stop a broadcast owned by another user; for example, a broadcast started when logged in as Administrator.

Bad argument to stop: ("<stop argument>")
The broadcast ID specified with the stop command was not a number or was less than zero.
Published Date: Feb 20, 2012

About QuickTime Streaming Server 1.0.2

QuickTime Streaming Server

Streaming is a service that sends live and stored multimedia over a network at a rate that lets a client computer play the media in real time. QuickTime Streaming Server streams QuickTime-compatible media to client applications that support QuickTime, including a Web browser with the QuickTime plug-in.

This document is installed with QuickTime Streaming Server in the `/System/Documentation/Administration/Services/QuickTimeStreaming/` directory.
This article has been archived and is no longer updated by Apple.
You can use QuickTime Streaming Server to

- stream low-bandwidth and high-bandwidth multimedia (up to 1.5 megabytes per second).
- reflect live broadcast streams, either unicast or multicast streams.
- manage the number of concurrent connections to the streaming server and the maximum throughput per connection.
- log server usage.
- monitor server activity.

You can install QuickTime Streaming Server when you install Mac OS X Server release 1.1, or you can install it later. To install it later, use the Mac OS X Server installer and be sure to check the option to install QuickTime Streaming Server.

QuickTime Streaming Server software includes

- QuickTime Streaming Server, installed in the /usr/sbin/QuickTimeStreamingServer directory.
- QuickTimeStreamingServerAdmin.app, installed in the /System/Administration/ directory.
- a sample multimedia file, installed in the /Local/Library/QuickTimeStreaming/Movies/ directory.
- a configuration file, installed in the /etc/ directory.

Protocols Used for Streaming

QuickTime Streaming Server uses standard Internet protocols: Real-Time Protocol (RTP), Real-Time Streaming Protocol (RTSP), and Session Description Protocol (SDP). RTP sends data from the server to a client computer. RTSP controls the server from the client computer. It allows a stream to be started and stopped, much the way a VCR can be started and stopped. SDP is used to reflect a multicast.

For information on the files you can stream, see the section "File Formats and Compression Methods Compatible for Streaming."

Server Configuration

Your server must have the following:

- Ethernet connection set up already
- Enough hard disk space to store the multimedia you want to stream
- For best performance, three or more Wide Ultra SCSI hard disk drives are recommended.

Managing QuickTime Streaming Services

You use QuickTimeStreamingAdmin.app to start or stop streaming services, to manage streaming traffic, and to monitor streaming activity. To open QuickTime Streaming Server Administration, choose QuickTime Streaming Admin from the Apple menu.

Starting or Stopping Streaming Services

To start streaming services, open Quick Time Streaming Server Administration and click Start Server in the Settings panel.

To stop streaming services, click Stop Server. If there are active connections to the streaming server, you see a message. You can choose to stop streaming immediately or wait until there aren't any active connections. If you choose to wait until there aren't any active connections, then no new connections will be established.

If streaming service does not start up:

- Check the error log file for error messages.
- Check to be sure QuickTime Streaming Server is in the usr/sbin/QuickTimeStreamingServer directory. The file isn't visible unless you look

for it from Terminal.app. If it is not there, you need to reinstall QuickTime Streaming Server. (Terminal.app in located the /System/Administration directory.)

Making Multimedia Available for Streaming

When QuickTime Streaming Server is installed, a folder named Movies is created automatically in the /Local/Library/QuickTimeStreaming/ directory. Users who connect to your streaming server can stream any multimedia files located this folder.

To use a different folder for streamed media, click the folder button in the Quick Time Streaming Server Settings panel. You can choose only one folder for streaming. All items in the folder you choose are available for streaming, so be sure to check the contents of the folder before you make it available for streaming services.

For best performance, you can put media files on two or more hard disks. But because you can use only one folder for streaming, you need to create a symbolic link from the streamed media folder to the actual location of the media files. For information on creating a symbolic link, see the man pages for the "ln" command.

Setting Up Streaming Capacity

You use Quick Time Streaming Server Administration to limit the number of connections and to set the maximum throughput allotted for streaming services. If you use your server for other services in addition to streaming, you may want to control how much of your server's capacity is dedicated to streaming.

Monitoring Server Activity

You can track peak periods of usage by monitoring server activity. To view server activity, choose Show Activity Monitor from the Server menu. You can change the range of each histogram by clicking the low and high range buttons.

Logging and Viewing Access History

Access history lets you see how many times each media file has been streamed since a particular date and time. To log access history, the Log Access checkbox in the QuickTime Streaming Server Settings panel must be checked. (It is checked by default.) To view Access History, choose Show Access History from the Server menu.

If you click the Clear button in the Access History window, information in the access log is copied to another file, named by date. If you don't clear the log, then access information older than one week is cleared automatically. If you want to delete the cleared access information, drag the dated file to the Trash.

If you want more details about what's being accessed, by whom, and when, you can view the file located at /Local/Library/QuickTimeStreaming/QuickTimeStreamingAccess.log. You may need to write a utility to process the file so you can view a digest of the most important information for your site. For example, you can write a script (using Perl, cshell, or a similar scripting tool) to tally the number of times users from a particular domain connected to the streaming server during a specific time period.

Logging and Viewing Error Messages

A log of error messages can help you troubleshoot problems with streaming services. To log errors, open Quick Time Streaming Server Administration and be sure the Log Errors box in the Settings panel has a checkmark in it. (It is checked by default.) To view the error log file, choose Show Error Log from the Server menu.

If you click the Clear button in the Error Log window, information in the error log is copied to another file, named by date. If you don't clear the log, then error information older than one week is cleared automatically. If you want to delete the cleared access information, drag the dated file to the Trash.

Troubleshooting

You'll be able to troubleshoot streaming problems more easily if error logging is turned on. See the previous section, Logging and Viewing Error Messages.

If performance seems slow

- If you are using the computer for streaming as well as other services, you may need to limit the number of connections or the throughput available for streaming so that other services don't slow down. If you don't want to reduce the number of streaming connections or the throughput, you may need to move other services to another computer.
- If you are using 10-BaseT Ethernet, you may need to upgrade to 100-BaseT Ethernet.
- Put media files on two or more hard disks. But because you can use only one folder for streaming, you need to create symbolic links from

the streamed media folder to the actual location of each media file. For more information see the previous section "Making Multimedia Available for Streaming."
- You may need to expand your server by adding additional hard disks, random-access memory, or Ethernet ports.

If streaming service quits unexpectedly

- Check the error log file for error messages.

If multimedia files are not streamed properly, or errors occur during streaming

- Check the error log file for error messages.
- Check to be sure you have enough random-access memory to support the number of connections or throughput you've set up for streaming.
- Check to be sure you are not running out of hard-disk space.

Preparing Media for Streaming

Any "hinted" QuickTime file can be streamed. You use an application such as MoviePlayer Pro to export media as a hinted QuickTime movie.

A hint track contains information about the media file that's needed to stream the file properly. You must use an RTP hint track with QuickTime Streaming Server; other protocols will not work. Each track in a media file must have its own hint track.

Files do not need to be self-contained. If files are not self-contained, the files that they reference must also be placed directly on the server (AppleShare aliases will not work). In addition, files must have been prepared from the same volume, and placed on the same volume. (The file name in the hinted movie must be relative to the movie, not an absolute path onto another volume). Enclosed files can be in "foreign" formats.

Reflecting a Multicast

To reflect a multicast, copy the Session Description Protocol (SDP) file that describes the multicast to the streaming media folder you set up previously. You must use RTSP to reflect a multicast; other protocols will not work with QuickTime Streaming Server.

When you give your users the URL for the multicast, do not include the sdp extension. For example, if the sdp file is named "greatshow.sdp," the URL you give to your users is

rstp://yourserver.yourdomain.com/greatshow

Note: When you export a hinted streaming movie using MoviePlayer, you have an option to create an SDP file. This SDP file is unrelated to the SDP file needed to reflect a multicast. Do not make this type of SDP file and place it in the server directory. It will not work.

File Formats and Compression Methods Compatible with Streaming

File Formats

- Video: QuickTime, AVI
- Audio: AIFF/AIFC, Sound Designer II, System 7 Sound, uLaw (AU), WAV
- MIDI: Karaoke MIDI, Standard MIDI

Compression-Decompression Methods (CODECs)

Preferred video compressors

- H.263
- Motion JPEG A
- Sorenson Video
- H.261

Preferred audio compressors

- QDesign Music codec
- QUALCOMM Pure Voice
- DVI 4:1
- ALaw 2:1
- uLaw 2:1

- 16-bit raw

Supported video compressors

- Animation
- Cinepak
- Graphics
- Motion JPEG B
- None
- Photo JPEG
- Video

Supported audio compressors

- IMA 4:1
- MACE 3:1
- MACE 6:1

Published Date: Feb 20, 2012

Mac OS 9: PowerPrint USB Compatibility

This article describes the compatibility of Infowave's PowerPrint USB with Mac OS 9.
This article has been archived and is no longer updated by Apple.
Infowave's PowerPrint USB enables USB-equipped computers "to print to over 1600 PC-compatible printers," including the Apple Portable StyleWriter. This is accomplished by using Infowave's printer software and USB-parallel adapter cable, sometimes referred to as a dongle.

PowerPrint 5.0 includes support for Mac OS 9.

PowerPrint 4.5.7 may work with Mac OS 9 with some printers after the PowerPrint USBPrintDriver file is removed from the Extensions folder, the Macintosh is restarted, and the printer is selected again in the Chooser.

Versions 4.5.4 and 4.5.5 of PowerPrint USB are **not** compatible with Mac OS 9.

Note: Infowave distributes other printing solutions including "PowerPrint Serial to Parallel" and "PowerPrint for Networks." Apple is not aware of incompatibilities with these products.

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following Knowledge Base article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"
Published Date: Feb 20, 2012

Mac OS 9: Arabic Setting Control Panel and Default Arabic Fonts

I installed Mac OS 9, and custom installed Arabic Language Support. I am trying to change the associated Roman Font settings for the Arabic fonts that were installed by Mac OS 9. The Arabic Setting control panel doesn't seem to affect how the fonts are displayed. If I change the associated font to Times, it's still displayed as Geneva or Chicago.
This article has been archived and is no longer updated by Apple.
The Arabic Setting control panel lets you select the Roman Font you want to associate with Arabic fonts. The Font pop-up menu allows you to choose the default Roman font whenever you type Roman characters in an all-Arabic context. This is useful if you are using an application that allows only one text font, or that doesn't let you have multiple fonts in a single line of text.

Arabic Language Support from the Mac OS 9 disc installs two Arabic fonts, AB Cairo and AB Geeza. These fonts have fixed associations with the Roman fonts Chicago and Geneva, respectively. Changes made in the Arabic Setting control panel do not affect these two fonts. However, there are additional Arabic fonts located on the Mac OS 9 disc whose associations to Roman fonts can be set by the Arabic Setting control panel.

These fonts are located on the Mac OS 9 disc, in the CD Extras folder, in the Language Kit CD Extras folder.
Published Date: Feb 19, 2012

Mac OS 9: About Persian Language Support

This article contains the Read Me document for the Persian Language Support feature of Mac OS 9.

The Persian Language Kit Support disk image is included on the Mac OS 9 disc in the CD Extras folder, in the Language Kit CD Extras Folder.

Note: The Persian Language Kit requires a component of Mac OS called WorldScript I. The Read Me below does not mention this. Before following the installation steps provided below, use the Custom Install feature of your Mac OS 9 install CD to install WorldScript I. Select Customized Installation for Mac OS, and click the International checkbox to select it.
This article has been archived and is no longer updated by Apple.

About Persian Language Support

The Persian disk image contains software that allows you to use the Persian language with Mac OS 9.0. This document describes how to install the software and any issues you might encounter.

Using Persian Language Support

The Persian disk image contains the Persian script itself, a Persian keyboard, Persian fonts, and the Persian Setting control panel.

Installing Persian

IMPORTANT The Persian script cannot be installed at the same time as the Arabic script. If you have already installed Arabic support, remove it using the Custom Remove option of your Mac OS 9.0 installer before you attempt to install the Persian script. It is possible to use Persian together with Arabic by only installing the keyboard and fonts, but then sorting will follow Arabic conventions and localized applications will run with Arabic fonts.

If you do not have Arabic installed, you can install Persian by dragging the following items to your closed System folder icon, in this order: the Persian fonts inside the Fonts folder, then the Persian script inside the Persian Script folder, then the Persian Setting control panel inside the Control Panels folder. Do not install the Persian keyboard.

If you do have Arabic installed, you can add limited Persian support by dragging the following items to your closed System folder icon, in any order: the Persian fonts inside the Fonts folder, and the Persian keyboard inside the Keyboards folder. Do not install either the Persian script or the Persian setting control panel.

You must restart your system after installing Persian before you can use it.

Persian Localized Version of SimpleText

This is a version of SimpleText whose menus and dialogs are in the Persian language. To install it, drag it to your hard disk.

IMPORTANT The Persian version of SimpleText can only be used if the Persian script is installed. It will not work correctly using the Arabic script.
Published Date: Feb 19, 2012

Mac OS 9: Do Not Install Older Language Kits

This article describes how to install and use older Apple Language Kits with Mac OS 9.
This article has been archived and is no longer updated by Apple.
Mac OS 9 includes Language Kit functionality that was previously sold separately for Mac OS 8.6 and earlier. Doing an Easy Install of Mac OS 9 onto an existing System Folder does not automatically update any Language Kits that are installed.

If you upgrade an existing Mac OS System Folder to Mac OS 9 where a previous Language Kit had been installed, you must also upgrade your Language Kits for full compatibility with Mac OS 9. Running the Mac OS 9 Installer, and selecting a Customized Installation of the appropriate Language Kit, based on what you had previously installed can do this. You can also select additional Language Kits to install. This will ensure that you have the latest and most compatible components.

If you already have Mac OS 9 installed, you can do a custom install of the Language Kits you want, using the Mac OS 9 installer. Apple recommends that you do not install any of Apple's previous Language Kits. If you are using Mac OS 9 and have installed one or more of the previous Apple Language Kits, please custom re-install the appropriate Language Kits from within the Mac OS 9 installer as mentioned above.

Additional fonts and utilities for certain Language Kits can be found on the Mac OS 9 CD, in the CD Extras Folder, in the Language Kits CD Extras folder.
Published Date: Feb 19, 2012

Mac OS 9: Network Browser Fails To Open

When I try to open the Network Browser application, a dialog appears saying: "'Network Browser' is unable to launch because your system software is not configured properly."

What must I do to correct this?
This article has been archived and is no longer updated by Apple.
Under Mac OS 9, this message indicates that the AppleShare client has been disabled. Network Browser requires the AppleShare extension to be enabled.

Figure 1, Network Browser error message under Mac OS 9

Under Mac OS 8.x, when AppleShare is disabled, the error message from Network Browser is different. It says: "Could not connect to 'at:'. This URL is not correct. Please verify it and retry."

Figure 2, Network Browser error message under Mac OS 8.x

Published Date: Feb 19, 2012

Mac OS 9: Multiple Users - Users and Environments

This article describes the different kinds of users and environments of multiple users, a Mac OS feature introduced in Mac OS 9.0.
This article has been archived and is no longer updated by Apple.
The Multiple Users feature of your operating system offers three different user environments and a full system access environment (accessible only to the owner of the computer). In all the user environments, when a user attempts to open or save a document, the computer automatically points the user to the user's documents folder, and in some restricted cases, the user cannot move away from that location.

Panels
The Panels interface is simple and easy to use. The user has limited access to the computer's hard disk. The user's approved items appear on one panel and the user's documents on another. The environment features large one-click buttons. You can customize the interface to allow large or small icons, and to display the open panels side by side or overlapping, with tabs at the top or the bottom.

Limited user
The Limited user environment allows users access only to some parts of the Finder. Usually, users can save items only in their own folders and can only open approved applications.

Normal user
A normal user can access the Finder and all applications on the startup disk but usually cannot see the contents of another user's documents folder. A normal user with privileges to manage user accounts (account manager) can create, delete or modify user accounts with the exception of the owner's account.

Owner
When you log in as the owner, you gain access into the full system access environment. In this environment, you can:

- install applications
- set up printers
- access other users' documents
- turn Multiple Users access on or off

Published Date: Feb 19, 2012

Mac OS 9: Multiple Users - Setting Privileges For Limited and Panels Users

This article describes how to set privileges for multiple users, a Mac OS feature introduced in Mac OS 9.0.
This article has been archived and is no longer updated by Apple.
You can set certain privileges for Limited and Panels users in the Privileges tab of the user account window in the Multiple Users control panel.

To set privileges for these users:

1. Select a user account.
2. Click Privileges.

The privileges you can change are these:

- CD/DVD-ROMs: Allows users access to all or some CD and DVD-ROM discs. To restrict the user to only certain discs or specific content on selected discs, select the box labeled "List for Restricted Users" and also make your choices in the Other Global settings. If you allow users access to any CD or DVD disc, but you restrict user access to certain content in these discs in the Other Global settings, the users will have access only to specific content in all the discs.
- Removable Media: Allows users access to floppy disks and other storage media (except CD/DVD-ROM discs).
- Shared Folder: Allows users access to the global shared folder on your computer.
- Chooser and Network Browser: Allows users access to the Chooser to create printers and log in to shared disks and allows access to a Network Browser. (Allowing access to the Chooser does not automatically allow printing.)
- Control Panels: Allows users access to the Control Panels folder and all items within it.
- Other Apple Menu Items: Allows users access to items in the Apple Menu other than Chooser, Control Panels, Recent Items, and the About command.
- User Can Print: Allows users to print to the printer specified in the "Allowed Printer" pop-up menu.

Troubleshooting

If Limited users can't do certain tasks included in Mac Help:
Mac Help includes some tasks such as changing the desktop appearance that requires the use of control panels and applications on the hard disk. If users can't complete these tasks, you may not have given the users access to the necessary items.

If CDs to which users don't have access play before being ejected:
Turn off the CD Autoplay feature in the QuickTime Settings control panel.
Published Date: Feb 19, 2012

Mac OS 9: Multiple Users - Restricting Access To Certain Applications

This article describes how to restrict access to applications using multiple users, a Mac OS feature introduced in Mac OS 9.0.

This article has been archived and is no longer updated by Apple.
The owner or account manager can restrict the applications to which a Limited or a Panels user has access.

To set user access to certain applications:

1. Open the Multiple Users control panel.
2. Double-click the name of a Limited or Panels user.
3. Click Show Setup Details and select the Applications tab.
4. In the User Applications list, select the checkbox next to each application the user will use.

Tip: After you have selected the applications, you can use the Show pop-up menu to view just those items to which the user has access.

5. To add a file that is not an application, such as a template for a document or a control panel, to the list of applications, click Add Other.
6. To allow access to most applications and restrict only a few, use the Select All button. If you have selected "All but AppleScripts" in the Show pop-up menu and click the Select All button, the list of applications will not include any AppleScripts. Use the Select None button to set the list of applications back to the default.

Note: To restrict or enable access to "sub-applications" (applications that are part of a larger set of applications), select the sub-application and not just the main application. For example, to give access to Microsoft Word, make sure you select MS Word in the list, not just Microsoft Office.

Troubleshooting

If you aren't notified when new applications are installed:

1. Click Options.
2. lick the Other tab.
3. Make sure that the "Notify when new applications have been installed" checkbox is selected.
4. Log in as the Owner before you install new applications. If any other user has installed a new application, you (the owner) will be notified only when you log out. This will ensure that only you can allow other users access to any new application.

If Limited and Panels users see error messages the first time they use certain applications:

You (the owner) must open all the applications in the system access environment at least one time before the applications are opened by the Limited and Panels users.

Some applications may rely on 'sub-applications' for features such as spell checking. If you experience difficulties using a certain application's feature (for example spell checking), log in under the owner account, open the application, and perform the function. The feature should now function as expected for Limited and Panels users.

If applications fail to work in the Limited or Panels environment:

You (the owner) need to give the users who need to use these applications normal user privileges to access the hard disk.

If aliases of applications deleted from the hard disk remain in the User Applications list:

To remove aliases of deleted applications, click Select None in the Applications tab, choose All Applications from the Show pop-up menu and then click the Select All button.

If Limited users open applications to which you have not given them access:

TA26228_Mac_OS_Multiple_Users_Restricting_Access_To_Certain_Applications.pdf

Limited users can use the Script Editor (an application program for creating AppleScript scripts) to open applications to which they do not have access. To avoid this, you must deny the user access to the Script Editor.

Published Date: Feb 19, 2012

Mac OS 9: Multiple Users - Managing Global User Options

This article describes how to manage global user options for multiple users, a Mac OS feature introduced in Mac OS 9.0.
This article has been archived and is no longer updated by Apple.
You can manage settings that affect all users of your computer using the Multiple Users control panel.

To manage global user settings:

- Click the Options button.

Login settings

- Welcome Message: You can set up a welcome message to appear each time a user logs in.
- Log-in Settings:
  - You can allow or prevent users from using an alternative to a typed password, such as a voiceprint password.
  - You can have users speak their names (if Speakable Items software is installed and enabled in the Speech control panel of your computer) instead of typing or selecting their names. Note: If the voice recognition software is not installed, you can install it by using the Mac OS Installer.
  - You can set login timeout options, specifying whether the user should be logged out or the screen locked.

CD/DVD-ROM Access settings

You can allow users access to only certain CD and DVD-ROM discs and only to specific content in them.

- The "List for restricted users" displays the titles of CD/DVD-ROMs that can be accessed by Limited or Panels users. You can add or remove discs to this list.
- The "Restrict content to" list displays the main contents (root directory level) of the CD/DVD-ROM selected in the "List for restricted users."

Note: If you restrict user access to only certain content in the discs, while allowing user access to any disc (as selected in the Privileges tab of the user window) the users will still have access only to specific content in all the discs.

Other settings

- You can allow or prevent guest access to your system. The privileges you set up for the guest account apply to all who log in as guest.
- You can be notified (through an alert message) when a new application is installed and allow or prevent users from accessing it.
- You can have users choose their names from a list or enter their names when they log in.
- You can specify which kinds of user accounts can log in to your computer:
- Click "Multiple User Accounts (local)" if accounts are located on your computer.
- To allow access only to accounts created in Macintosh Manager, Click "Macintosh Manager Accounts (on network)."

Note: The "Macintosh Manager Accounts (on network)" option is available only if the Macintosh Manager software is available in the language you're using on your computer.

Troubleshooting

If you've turned on the idle timeout option but users aren't logged out (or their screens locked):
Make sure the user has a password. If a user does not have a password, he or she will not be logged out or the screen locked after an idle timeout. To avoid security risks, it is recommended that all users have passwords.
Published Date: Feb 20, 2012

Mac OS 9: File Security - About Digital Certificates and Keys

This article describes kinds of digital certificates and keys supported by file security, a Mac OS feature introduced with Mac OS 9.0
This article has been archived and is no longer updated by Apple.
Digital certificates, or IDs, allow application developers to digitally "sign" files so that users can verify that the file came from the developer. For example, you can check the signatures of applications that you download from the Internet to make sure they come from an authorized source.

Types of certificates

Certificates are issued by Certificate Authorities, independent organizations that verify the identity of the person requesting the certificate.

There are several types of certificates. A **personal certificate** is a certificate that has a corresponding public and private key in the keychain. Personal certificates can be used to sign, verify, encrypt or decrypt information in files.

Only the owner of a personal certificate has its private key. Therefore, files can only be signed by the owner.

A **regular certificate** is used to verify signatures from another person/organization, or to encrypt information for another person/organization.

A **root certificate** belongs to a Certificate Authority.

A root certificate is used to sign certificates issued by the Certificate Authority. Root certificates ensure that the public certificates a person (or organization) uses to verify their signed files are genuine.

The built-in certificates that come with your Keychain software are "trusted" root certificates. That is, Apple has verified the authenticity of their origin.

If you add additional root certificates to your keychain, you must verify the authenticity of their origin. The MD5 and SHA-1 fingerprints can be used to perform the verification.

Viewing the built-in root certificates

As long as you have the root certificate for a Certificate Authority, you can verify any certificates that were issued by that authority.

To see a list of the built-in certificates that come with your Keychain software open the Edit menu and choose Built-in Certificates.

For more information on the built-in certificates, open the Help menu and choose Show Balloons, then point to the item you want to learn more about.
Published Date: Feb 19, 2012

Mac OS 9: File Security - Verifying Digital Signatures

This article explains how to verify a digital signature using file security, a Mac OS feature introduced with Mac OS 9.0
This article has been archived and is no longer updated by Apple.
You can verify whether a Mac OS file or program that you've downloaded from the Internet is from the authorized sender and has not been modified by checking its digital signature using the Apple Verifier program (in the Security folder inside the Applications folder).

To verify the digital signature of a file or program:

- Drag the item to the Apple Verifier icon.
- If the file's signature is verified using the certificates in your keychain, you can choose to open the file or view the certificate by clicking a button in the Verification Results window.
- If the signature is not verified, you can choose to trust that the certificate came from the person (or organization) it says it came from, and the certificate will be added to your keychain. If you choose not to trust it, the file remains on your hard disk.

IMPORTANT: Before you trust a certificate, you should personally verify its digital "fingerprint" (the certificate's unique ID number that appears in the certificate window) by contacting the company directly. If you trust a certificate without verifying its ID, the security of files on your computer may be compromised.

Tip: For more information about items in the Verification Results or Trust windows, open the Help menu and choose Show Balloons, then point to the item you want to learn about.

Creating and adding items to a keychain
You can create an empty keychain and then add items to it when you connect to servers or use applications that require passwords. Or, if a keychain doesn't already exist, you can tell an application to add an item to your keychain and it will automatically create a keychain for you.
Published Date: Feb 19, 2012

Mac OS 9: File Security - Creating a Keychain

This article explains how to create a keychain using file security, a Mac OS feature introduced with Mac OS 9.0
This article has been archived and is no longer updated by Apple.
Note: If you used the Multiple User control panel to set up your computer for multiple users, each user already has a keychain.

To create a keychain:

1. Open the Keychain Access control panel.
2. If a keychain doesn't already exist, you're asked if you want to create one. Click Create. If a locked keychain already exists, click Cancel, then open the File menu and choose New Keychain.
3. Enter information for your new keychain and click Create.

Remember your password, because you'll need to re-enter it exactly to use the keychain. To make your keychain more secure, be sure to choose a good password.

Your keychain is stored in the Keychains folder in the Preferences folder inside the System Folder.

IMPORTANT: When your keychain is unlocked, any person using your computer can open applications using the passwords on your keychain. (They cannot, however, see the passwords on your keychain unless they know your keychain password). For security, you should always lock your keychain when you're not at your computer.

The first keychain you create is your "default" keychain. All new keychain items are added to the default keychain.

To change the default keychain, unlock the keychain, and choose "Make <your keychain> default," where "your keychain" is the name of the active keychain, from the Keychains menu. (The Keychains menu only appears when you have more than one keychain).

Adding items to a keychain

You can add items to your default keychain from within an application or login dialog box that requires password access, or from the desktop.

To add application passwords to your default keychain, open the application and enter your password. Look for a checkbox (or other device) that allows you to add your password information to a keychain.

If you don't see a way to add your password information to a keychain, check the documentation that came with the program. The program might not support keychains.

To add items to your keychain from the desktop, drag the AppleShare IP server, Internet location, or certificate icon to your Keychain window. You can also drag URLs directly from a web browser or Network Browser.

Tip: You can also add new certificates to your keychain while you're using the Apple Verifier program to check a file's signature.

If an AppleShare IP server's "Add to Keychain" checkbox is dimmed, the server may not be set up to allow users to save passwords on a keychain. For more information, contact your server administrator.
Published Date: Feb 19, 2012

Mac OS 9: File Security - Choosing a Good Password

This article explains how to choose a good password for use with file security, a Mac OS feature introduced with Mac OS 9.0
This article has been archived and is no longer updated by Apple.
Choosing a good password for your keychain is an important step in keeping the keychain secure. Your keychain password protects all information stored on the keychain.

IMPORTANT: If your keychain password is discovered, all of your passwords can be discovered. However, personal certificates are still secured by their passwords.

Keep the following tips in mind when choosing your password:

- Make your password unique. For example, do not use the same phrases or words you use for your server passwords.
- Include some numbers in your password, but do not use your banking PIN, address, phone number, or other numbers that can be easily guessed.
- Don't base your password on personal information, such as your spouse's name, your pet's name, or the city where you live.
- Don't use single words or phrases that are found in the dictionary.
- Don't tell anyone your password, and never write it down.
- Use upper- and lowercase letters and punctuation, but make sure you remember what you choose. You must enter your password and user name exactly as you originally entered them.

Example of a good password:
Choose a phrase that's easy for you to remember, and follow the guidelines above to make it into a unique password. For example, the phrase "To be or not to be, that is the question" could be made into the following password: 2BrntB-Titq
Published Date: Feb 19, 2012

Mac OS 9: File Security - Changing Keychain Settings

This article explains how to change keychain settings using file security, a Mac OS feature introduced with Mac OS 9.0.
This article has been archived and is no longer updated by Apple.
You can edit your keychain password and other settings in the Settings window (in the Edit menu) of the Keychain Access control panel.

Important: If multiple user access is turned on, you should only change your keychain password in the login window that appears when you turn on your computer. If you change your password in the Keychain control panel, you will not be able to log in to your personal environment the next time you start up your computer.

To change your keychain settings:

- Unlock the keychain you want to edit, then open the Edit menu and choose "your keychain Settings," where "your keychain" is the name of the currently active keychain. Make your changes in the settings window, then click Save.
- To change your password, enter a new password, then type it again to confirm it.
- To see a dialog box when an application tries to access your keychain, make sure the "Allow access without warning" checkbox is unchecked.
- To automatically lock your keychain after your computer has been idle for a specified number of minutes, make sure the "Lock after 10 minutes of inactivity" checkbox is checked, and enter a number of minutes.
- To automatically lock your keychain when your computer goes to sleep, make sure the "Lock when the system sleeps" checkbox is checked.

Deleting a keychain

To delete a keychain, make sure the keychain is locked, then drag the keychain file from the Keychains folder in the Preferences folder (inside the System Folder) to the Trash.

Important: If you delete a keychain that holds certificates, you may not be able to verify files which have been signed by those certificates.

Published Date: Feb 19, 2012

Mac OS 9: File Security - Using Your Keychain On Another Computer

This article explains how to copy your keychain to another computer in order to use file security, a Mac OS feature introduced with Mac OS 9.0
This article has been archived and is no longer updated by Apple.
You can use your keychain on more than one computer, such as your computers at home and at work.

To use a keychain on another computer:

1. Make sure the Keychain Access control panel is installed on the computer you want to use.
2. Lock your keychain.
3. Make a copy of your keychain file. Keychains are stored in the Keychains folder, in the Preferences folder, inside the System Folder.
4. Copy the keychain file to the Keychains folder on the other computer.
5. Unlock your keychain.

Published Date: Feb 19, 2012

Mac OS 9: File Security - How to Protect Files and Disks, and Turn on Password Security

This document explains how to protect files and disks using file security, a Mac OS feature introduced with Mac OS 9.0
This article has been archived and is no longer updated by Apple.
You can prevent users from accidentally changing or deleting important information on your hard disk by locking files and disks, and adding password protection.

Locking and unlocking files
If a file is locked, you can open it and copy its contents, but you can't change or delete the file. To lock a file, click the name of the file, then open the File menu and choose Get Info.

Protecting files on a disk
You can protect a disk so that the information on it can be viewed but not erased or changed. To protect a hard disk, cartridge, or optical disk, use the Drive Setup application program, inside the Utilities folder on your hard disk.

Note: Many disks and cartridges also have locking mechanisms on their cases or containers. See the instructions that came with the disk for more help.

Password-protecting your portable computer's hard disk
You can protect the contents of your portable computer's hard disk by creating a password. When password security is turned on, you must enter your password when the computer first starts up or when it wakes from sleep (optional).

To create a password and turn on password security, use the Password Security control panel.

You can change your password or turn off password security at any time.

You should not use the Password Security control panel with PowerBook (FireWire) computers. See technical document 60729: "**PowerBook (FireWire): Password Security**".
Published Date: Feb 19, 2012

Mac OS 9: File Security - Encrypting and Decrypting Files

This article explains how to encrypt and decrypt files using file security, a Mac OS feature introduced with Mac OS 9.0
This article has been archived and is no longer updated by Apple.
You can encrypt your files so that others cannot open them without your password. To do so, use the Apple File Security program (in the Security folder inside the Applications folder). The program also automatically compresses files so they take up less disk space.

Apple File Security uses a 56-bit key to encrypt files.

Note: You cannot encrypt folders, disks, volumes, items in the System Folder, or files that are open or locked.

Encrypting files

To encrypt a file:

1. Open the File menu and choose Open, then locate the file you want to encrypt. Tip: You can also choose Encrypt from the Finder's File menu. If you open an alias, the file that the alias refers to will be encrypted.
2. Enter a password for the file. Be sure to remember your password so you can enter it to decrypt the file. By default, the password is added to your keychain. To prevent it from being added, deselect the "Add to keychain" checkbox.
3. Click Encrypt. Tip: As long as the file is not a stationery pad document, you can also encrypt (or decrypt) the file by dragging it to the Apple File Security icon.

Decrypting files

To decrypt a file:

1. Double-click the file you want to decrypt.
2. Enter the password that was used to encrypt the file. If you added this password to your keychain and your keychain is unlocked, you won't be asked to enter your password here.
3. Click Decrypt. After you decrypt the file, the password you used to encrypt it is removed from your keychain.

Published Date: Feb 19, 2012

Mac OS 9: Matching Fonts With FontSync

This article explains how to match fonts using FontSync, a Mac OS feature introduced with Mac OS 9.0.
This article has been archived and is no longer updated by Apple.
You can create profiles of the fonts on your system, called "FontSync profiles," to make sure the fonts used in your documents match the fonts used on the computer where the document is printed. You can also change the default font-matching criteria.

Creating a FontSync profile

To create a FontSync profile, open the Create FontSync Profile script, in the Font Extras folder in the Apple Extras folder, then name the profile.

After the profile is created, you can take it to another computer and use the Match FontSync Profile script to compare it to the fonts on that computer.

Comparing FontSync profiles

To compare a FontSync profile to a set of fonts, open the Match FontSync Profile script, in the Font Extras folder in the Apple Extras folder, then select the FontSync profile that you want to compare to the fonts on this computer.

The matching script will create a list of the fonts that do not match those in the profile.

Tip: If you're familiar with AppleScript, you can modify this script to do other actions. For example, you can make the script compare two profiles. See the comments in the script file.

Changing the default font-matching criteria

The default font-matching criteria define what parts of a font are used when comparing a FontSync profile against the fonts on a computer. You can change the default font-matching criteria using the FontSync control panel, in the Font Extras folder in the Apple Extras folder.

Note: For most users, the default FontSync control panel settings do not need to be changed.

To change the default font-matching criteria, click the checkbox next to the font criteria that you want to be used when creating font profiles, then then close the control panel.

Tip: For more information about the matching criteria, open the Help menu and choose Show Balloons, then point to the item you want to learn more about.

Tip: If you plan to use this control panel frequently, you may want to put it in your Control Panels folder, inside the System Folder.
Published Date: Feb 19, 2012

Mac OS 9: About Mac OS 9.0

This article provides links to last-minute information about Mac OS 9.0
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Notes About Installation

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Published Date: Feb 19, 2012

Desktop Printing: Error -8940

This document explains what Error -8940 is and how to correct this issue.
This article has been archived and is no longer updated by Apple.

Symptom

When trying to print to a LaserWriter it displays this error:

"Document (name of print job) failed to print on the printer (printer name) because of an error -8940. Cancel Job, Hold Job and Try Again"

A similar message may appear when I attempt to Auto Setup the DTP with the Desktop Printer Utility or when using the Finder's Printing menu.

Solution

Error -8940 is an errInvalidDTPType, returned from psGetDTPType. This error code indicates that the PAPA Resource described an invalid or unrecognized desktop printer type. Basically your desktop printer has incorrect information about your printer and as a result is unable to communicate with and print to it properly.

Typically this occurs when creating a desktop printer whereas the error message is typically displayed when attempting to communicate and open up a PAP connection with the printer. Clues that a desktop printer may not work include:

1. It has a generic icon.

2. The Info window for the desktop printer may have no information listed in the Zone field. (Choose Get Info from the File menu to open the Desktop Printer's Info window.)

   - Note that an asterisk is an acceptable Zone name. A blank Zone field indicates a problem with the desktop printer, when using LaserWriter software 8.5.1 or later.
   - Desktop printers created with older drivers or for IP or other connections may not list a Zone or include a Zone field at all.

Often this issue is easily worked around by throwing away the existing desktop printer icon, emptying the Trash, then creating a new one with the Chooser, Desktop Printer Utility, or the Mac OS Setup Assistant. In some cases, it may be necessary to also throw away the printer preference file. However, there are some configurations where these solutions will not work as expected, described in more detail below.

Using the Desktop Printer Utility v1.0, 1.1, or 1.2, On a Network That Has No Zone

You will likely encounter an -8940 error message when creating or when printing to an AppleTalk desktop printer created with the Desktop Printer Utility on a network that has no defined zone or zones. The error message will also occur when you create an AppleTalk desktop printer using the DTP Utility, when the printer is directly connected to your Macintosh with a serial cable.

The workaround is to use the Chooser or Mac OS Set Up Assistant to create and configure your AppleTalk desktop printer. You may continue to use the Desktop Printer Utility to configure an IP, USB or other type of PostScript laser printer desktop printer.

Using the Chooser on a Macintosh Connected to LocalTalk, When a Bridge is Present

You will likely encounter an -8940 error message when creating or when printing to a desktop printer created with the Chooser, if the client and printer are both on the same LocalTalk segment, and there is a LocalTalk Bridge or possibly a hardware bridge on that segment. Note that this should not pose difficulties if the Macintosh is on Ethernet and the printer is on LocalTalk, or vice versa.

The workaround is to use the Mac OS Setup Assistant to select the printer. Alternatively, disable the bridge, choose and create the Desktop Printer, then re-enable the bridge. A third option is to install LaserWriter 8 and PrintingLib versions 8.4.3 and print from them. Note that LaserWriter 8, version 8.4.3 has received very little testing after Mac OS 8.0, so its compatibility with current Mac OS system software is unknown.

Described above are two very specific situations where the desktop printer created for your printer may not be able to communicate with the printer and returns an -8940 error. This occurs at the time the desktop printer is created, but may be discovered later when the desktop printer attempts to open up an AppleTalk connection and communicate with the printer.

If you encounter an -8940 error, check whether your environment is described as above. If so, you may wish to pursue one of the suggested workarounds.

If your printing environment is not as described above, the first workaround is to throw away the desktop printer icon for the printer you are unable to print to, empty the Trash, then attempt to create a new DTP.

In some cases you may need to throw away the old DTP and the Parsed PPD Folder (System Folder: Preferences: Printing Prefs: Parsed PPD

Folder), empty the Trash, then rebuild the Desktop Printers DB. To rebuild the Desktop Printers DB:

1. Restart your Macintosh.
2. Press and hold down the Command and Option keys until this message is displayed: Are you sure you want to rebuild the desktop file on the disk "your hard disk"?
3. Click OK to rebuild the desktop files.

After performing these steps, attempt to create the DTP with the Chooser or Mac OS Setup Assistant.

If difficulties were first encountered after installing other vendors' PostScript printer software, consider removing or throwing away that printer software, then reinstall the latest version of LaserWriter 8 from CD or from Apple Software Updates. The LaserWriter 8 driver uses PostScript Printer Description (PPD) files to determine the characteristics of the printers it uses. PPDs may be obtained from your printers' manufacturer. Copy the PPD to the Printer Descriptions folder (System Folder: Extensions folder: Printer Description).

If -8940 errors persist, be very observant when creating a new desktop printer. For example, if you use the Chooser to create a desktop printer, and the printer is not visible in the Chooser at all or if the Auto Selection process does not work as anticipated, some other issue may exist that could result in the desktop printer not being created. Such a situation preventing the proper creation of the desktop printer may require additional troubleshooting to identify and work around.

Published Date: Feb 20, 2012

Mac OS 9: Installing the Mac OS

This article provides instructions for installing Mac OS 9.
This article has been archived and is no longer updated by Apple.

Step 1: Start Up From the Mac OS 9 CD

Before you begin, turn off any security or virus-protection software you have installed on your computer.

If you have a PowerBook, plug it in and set Sleep Setup to Never in the Energy Saver control panel.

Next, start up your computer using the Mac OS 9 CD.

1. Insert the CD in your computer's CD-ROM drive.
2. Shut down your computer.
3. Turn on your computer while holding the C key on your keyboard. Continue holding the C key until you see the "Happy Mac" icon. You'll know you've started up from the CD when your computer's desktop pattern changes to a light-colored background that says "CD."

Step 2: Open the Installer

To begin installation, double-click the Mac OS Install icon.

Note: If you see a message that your computer's firmware needs to be updated, restart the computer from the hard drive, and then follow the instructions for updating your firmware in the CD Extras folder on the Mac OS 9 CD before proceeding. After a moment, a screen appears describing the installation process.

After Installing the Mac OS

After you install the Mac OS, you can easily set up your computer and prepare it to connect to the Internet by using the Mac OS Setup Assistant and the Internet Setup Assistant.

Mac OS Setup Assistant

The Mac OS Setup Assistant appears automatically after you install the Mac OS, making it easy to set up your computer. The assistant asks questions about you, your location, and how you want your computer configured. Then it makes all the settings for you.

Internet Setup Assistant

After the Mac OS Setup Assistant is finished, the Internet Setup Assistant will help you set up your computer for Internet access. You can use it to sign up for an Internet account, if you don't already have one. If you were already set up for Internet access before installing the Mac OS, your previous settings are retained and you don't need to use this assistant.

Register With Apple

In most countries, you can register your computer and other Apple products on the World Wide Web. Double-click the Register With Apple icon on your computer's desktop. Be sure to place your sales receipt in a safe place. You will need it for warranty validation.
Published Date: Feb 20, 2012

Mac OS 9: Troubleshooting Installation from CD-ROM

This article has been archived and is no longer updated by Apple.

This document provides troubleshooting tips for common installation questions. The topics discussed in this document are:

I. If the computer does not have a CD-ROM drive
II. If you cannot start up the computer from CD
III. "Installer cannot repair your hard disk" message
IV. "Update firmware" message
V. Installer cannot update non-Apple hard disks
VI. "Not Enough Memory" to install message
VII. "Not Enough Disk Space" to install message
VIII. "System File Cannot Be Modified" message
IX. "Item Cannot Be Replaced" message
X. "Installation Was Not Successful" message
XI. "Must boot with the Mac OS CD" message
XII. "Big System Morsels" message

I. If the computer does not have a CD-ROM drive

You can install the Mac OS using a CD-ROM drive attached to another Macintosh. Connect both computers to a network, then use file sharing to access the CD from across the network. See the onscreen Help for information about using file sharing with your computer.

To ensure a trouble-free installation, turn off any disk security or virus-protection software you have installed. Then use the Extensions Manager control panel to turn off non-Apple extensions and control panels. Make sure you have AppleShare extension 3.6.4 or later (a copy is available on the Mac OS CD; install it if necessary). See the onscreen Help for information about using the Extensions Manager control panel.

After you've turned off the extensions, restart your computer, then open the Installer and install the Mac OS. Following this process will help ensure that incompatible extensions don't interfere with the installation process.

After the installation is finished, you can turn on your extensions and virus-protection software.

Please note that this process will not work if your Mac cannot boot from a local hard drive. This process also won't update the volume you are booted from.

II. If you cannot start up the computer from CD

With the CD inserted, open the Startup Disk control panel and click the CD icon in the Startup Disk window. Then restart the computer and install the Mac OS. After installation, use the Startup Disk control panel to reselect your hard disk, then restart your computer.

III. "Installer cannot repair your hard disk" message

See technical document 60203, "**Mac OS 8/9: The Installer Cannot Repair Your Hard Disk**."

IV. "Update firmware" message

See technical document 60643, "**Mac OS 9: Update Firmware Before Installing**."

V. Installer cannot update non-Apple hard disks

Use the disk utility recommended by the manufacturer of your hard disk to update your drivers before installing the Mac OS. Make sure to get a version of the utility that is compatible with the software you are installing. An old utility will not be able to update your disk with the most current driver.

VI. "Not Enough Memory" to install message

Make sure you've started up your computer from the Mac OS CD. If you can't start up from the CD, quit all open applications and make sure you've followed the steps described in "You Can't Start Up the Computer Using the Mac OS CD" above.

VII. "Not Enough Disk Space" to install message

Make more space available on your hard disk by removing some files from the disk. Copy the files you want to keep to another disk, then drag them to the Trash and choose Empty Trash from the Special menu to delete the files. You don't need to quit the Installer before you remove files from the disk.

VIII. "System File Cannot Be Modified" message

Make sure that you've started up your computer using the Mac OS CD. If you can't start up from the CD, make sure any security and virus-protection software is turned off.

IX. "Item Cannot Be Replaced" message

The Installer is attempting to replace a file, but there is a folder on the disk that has the same name as the file being replaced. (Files cannot replace folders.) Find the folder on your disk and rename it, then try the installation again.

X. "Installation Was Not Successful" message

Make sure that you've started up your computer using the Mac OS CD. If you can't start up from the CD, make sure any security and virus-protection software is turned off. Press and hold the Shift key while starting up from the Install disc to disable extensions; try the installation again.

XI. "Must boot with the Mac OS CD" message

If you are installing Mac OS 9 after Mac OS X, this message appears: "To install this software you must boot with the Mac OS CD". See technical document 106244, "**Mac OS 9.1, Mac OS X 10.0: "To install this software you must boot with the Mac OS CD" Message**."

XII. "Big System Morsels" message

See technical document 25222, "**Mac OS 9: "Big System Morsels" Error During Installation**."

Published Date: Feb 20, 2012

Mac OS 9: Resolving Software Conflicts After Installation

If your computer does not start up properly or behaves erratically, you probably have an incompatible extension, control panel, or application. This article has been archived and is no longer updated by Apple.

Step 1: Verify the Problem

To verify that you have a compatibility problem, follow these steps:

1. Start up your computer while holding down the Space bar. When the Extensions Manager control panel appears, release the Space bar.
2. Open the Selected Set menu and choose the item with the words "Mac OS Base." This turns off all extensions and control panels except those installed with the Mac OS.
3. Close the Extensions Manager to continue startup.
4. When the computer is finished starting up, try the same actions that caused the problem.

If the problem no longer occurs, you probably have an extension or control panel that doesn't work with this version of the Mac OS. Continue with the steps in "Test Individual Extensions and Control Panels," next, to identify the item that is causing the problem.

If the problem still occurs, try checking your hard disk for problems using the Disk First Aid utility, provided on the Mac OS CD. If the problem occurs only when using a certain program, that program is probably not compatible or may need to be reinstalled. Check with the program's manufacturer for information.

Step 2: Test Individual Extensions and Control Panels

To test an individual extension or control panel for compatibility, follow these steps:

1. Restart your computer while holding down the Space bar. The Extensions Manager appears again.
2. Turn on the item you want to test by clicking its checkbox.
3. Close the Extensions Manager to continue startup.
4. Try the same actions that caused the problem. If the problem does not occur again, then the item you turned on is probably compatible with this version of the Mac OS. If the problem occurs again, the item you turned on is probably incompatible. Open the Extensions Manager control panel and click the item's checkbox to deselect it.
5. Repeat steps 1 through 4 for each item you want to test.

If you find that a piece of software is incompatible, turn it off or remove it from your computer, then contact the manufacturer of the software to see if an updated version is available.

Related Documents

30929 Mac OS: Extension Conflict Troubleshooting/Extensions Manager Features

Published Date: Feb 20, 2012

Mac OS 9: Troubleshooting Setting Up Internet Access

This article provides troubleshooting tips for setting up Internet Access.
This article has been archived and is no longer updated by Apple.

Your modem doesn't appear in the list of modem types in the Modem Settings window of the Internet Setup Assistant.
Copy the modem script file (CCL) supplied with your modem into the Modem Scripts folder in the Extensions folder. Additional modem scripts are available in the CD Extras folder on the Mac OS CD. If you can't find a script for your modem, contact the manufacturer of the modem to get this file. Once the file is copied into the Modem Scripts folder, your modem will appear as a choice the next time you open the Internet Setup Assistant.

You have an internal modem, but the Port menu in the Modem Settings window of the Internet Setup Assistant does not include Internal Modem as a choice.

- On computers with an internal comm slot, the internal modem shows in the software as if it were attached to the modem port. If your computer has an internal modem, but it does not appear as a choice, then Modem Port is the correct selection.
- Some modems require special extensions to allow the computer to recognize them. Use the Extensions Manager control panel to turn on any modem extensions. You may need to reinstall the software that came with your modem if you cannot identify the required extension.

Your modem appears in the list of modem types in the Modem Settings window, but your modem does not seem to be working.

- Check to see that your modem is turned on and connected to your computer and to your phone line correctly.
- You may need to contact the modem vendor to get an updated modem script. Once you get this script, copy it into the Modem Scripts folder in the Extensions folder (inside the System Folder).

While you are attempting to create a new account, the line seems to have dropped or you get no response.
When you create an account, the Setup Assistant places a call to an Internet registration server. Sometimes the server is busy temporarily and you can try to create the account again almost immediately.

You used the Internet Setup Assistant to select your previous configuration, but now you can't connect to the Internet.
Make sure the settings in the TCP/IP control panel are correct. Or, use the Internet Setup Assistant to create a new configuration with the correct settings. Contact your Internet service provider or network administrator to find out what your settings should be.
Published Date: Feb 19, 2012

Mac OS 9: Missing or Moved Items After Installation

After I installed Mac OS 9, I can't see the AppleCD Audio Player in the Apple Menu, in fact there are a lot of things missing from there. Where did these things go?
This article has been archived and is no longer updated by Apple.
Many of the items that were previously located in the Apple Menu are not actually removed with a Mac OS 9 installation, they are simply installed elsewhere on the hard drive.

Now located in the Applications folder:

- Apple DVD Player
- Apple Video Player
- Apple CD Audio Player
- Graphing Calculator
- SimpleSound

Now located in the Apple Extras folder:

- Note Pad

Internet items are located in the Internet folder on the root level of the hard drive. The "Connect to..." application is no longer installed. For more information see Knowledge Base article:

Article 60599 "**Mac OS 9: What Happened To The "Connect To..." Application?**"

If you still wish to have these applications present in the Apple Menu, simply create an alias of the Application from its new location and move the alias to the Apple Menu Items folder in the System Folder.

Note: Jigsaw Puzzle is only present if upgrading from Mac OS 8.5 or earlier. It was removed by the Mac OS 8.6 installer and is no longer installed by Mac OS 9.
Published Date: Feb 19, 2012

Mac OS 9: Open Control Panels Listed in Application Menu

With Mac OS 9, open control panels appear in the Application menu.
This article has been archived and is no longer updated by Apple.
In Mac OS 9, control panels are treated as if they were individual application programs. Like applications, all open control panels are listed in the Application menu.

In previous versions of Mac OS, some control panels shared memory with the Finder or System. If a control panel failed, it could cause the Finder or System to stop responding, or "freeze." Under Mac OS 9, when a control panel fails, it quits and the message "Application Unexpectedly Quit" appears.

Some control panels must run in the Finder's memory partition to work with Mac OS 9. As a workaround, you can open such a control panel in the Finder's memory partition by holding down the Command and Control keys while opening the control panel. This technique works only for control panel files containing a 'cdev' resource. Because this is only a workaround, you should check with the control panel's publisher or programmer for an update.
Published Date: Feb 19, 2012

Mac OS 9: What‘s New - Package Files

Mac OS 9 supports a new way to distribute applications, documents or libraries. A series of related files (templates, preferences or other application-specific files) can be "combined" into a folder that looks and behaves like a file.
This article has been archived and is no longer updated by Apple.
You can identify a package file by looking at the general information pane of the Get Info window in the Finder. A package will have the word "package" in the kind field. Some examples are: document package, library package, application program package, or simply 'package'.

In most cases, the package will be treated just like it's single file equivalent. However, any software that has not been revised to work correctly with packages may show a package as a folder and you will be able to see the files inside of it.
Published Date: Feb 19, 2012

Mac OS 9: Folders That Behave Like Package Files

I have a folder on my disk that has suddenly turned into a "package" file. I can't get it to open. Is there a way to fix this?
This article has been archived and is no longer updated by Apple.
The Package First Aid utility on the Mac OS 9 CD is used to fix a folder that has started behaving like a package in the Mac OS 9 Finder.

To turn the "package" back into a folder:

1. Copy the Package First Aid utility to your computer from the Mac OS 9 CD.
2. Drag the folder that is behaving like a package on top of the Package First Aid utility's icon.

Published Date: Feb 19, 2012

Mac OS 9: How To Use The Software Update Control Panel

Software Update is a new feature of Mac OS 9 that checks for updates to the operating system. It does not check for updates for non-Apple software. Using this feature of Mac OS 9 you can quickly check for, download, and install updates to the system software without having to open a web browser.
This article has been archived and is no longer updated by Apple.
To use Software Update:

1. Connect to the Internet.
2. Open the Software Update control panel.
3. Click Update Now.

The computer will check to see if there are any updates available. If there are updates you will be prompted to install them.

You can also set Software Update to check for updates automatically. If you are not connected to the Internet when the software update is scheduled, it will check the next time you connect.

If a particular update requires that the computer be restarted, you will be prompted to do that, too.

The Software Update control panel does not check for software that is not installed on your computer. It cannot check for updates for another computer, either.
Published Date: Feb 19, 2012

Mac OS 9: "Allow File Sharing Clients To Connect Over TCP/IP" Is Disabled

The "Allow File Sharing clients to connect over TCP/IP" feature in the File Sharing control panel is disabled. What should I do?
This article has been archived and is no longer updated by Apple.
Possible solution:

The ShareWay IP Personal Bgnd extension is missing, disabled, or damaged. Use the Extensions Manager to enable this system extension.
Published Date: Feb 19, 2012

Mac OS 9: Is TCP/IP File Sharing Faster Than AppleTalk File Sharing?

Is Personal File Sharing over TCP/IP included with Mac OS 9 faster than Personal File Sharing over AppleTalk?
This article has been archived and is no longer updated by Apple.
The implementation of Personal File Sharing over IP included with Mac OS 9 will not always be faster than Personal File Sharing over AppleTalk depending on file size, computer configurations, network configuration, and traffic load. You may wish to use File Sharing over TCP/IP if that is your organization's preferred networking protocol.

Note: The AppleTalk control panel must be on in order to start Personal File Sharing over IP. However, you can set your AppleTalk control panel to any setting in order to remove AppleTalk from your network connection.
Published Date: Feb 19, 2012

Mac OS 9: File Sharing Versus AppleShare IP

Now that Personal File Sharing supports IP, do I need AppleShare IP?
This article has been archived and is no longer updated by Apple.
AppleShare IP provides more services, and can support more concurrent users than Mac OS 9's File Sharing. If you have a small workgroup, and the only feature of AppleShare IP you use is the ability to connect over TCP/IP, File Sharing over IP may be all you need. If you need a Web server, Mail server or DNS server (through bundled MacDNS), then you would benefit from using AppleShare IP.

File Sharing in Mac OS 9 has the same limitations that File Sharing does. Only ten users can be connected at one time.
Published Date: Feb 19, 2012

Mac OS 9: Installing Apple Remote Access 3.5

This article provides tips on installing Apple Remote Access 3.5, part of Mac OS 9.0.
This article has been archived and is no longer updated by Apple.
Apple Remote Access (ARA) 3.5 now includes both server and client software. This allows a Macintosh computer to act as a server for remote clients dialing in via a modem and phone line. These clients can connect using either the AppleTalk Remote Access Protocol (ARAP) or Point-to-Point Protocol (PPP). Once the connection is successfully made, the computer acts just like being on a local AppleTalk (ARAP) or TCP/IP (PPP) network.

Apple Remote Access is a separate package from Mac OS 9, but is installed by default. As with other components of the Mac OS 9 Installer, ARA can be custom installed if necessary. Apple Remote Access can also be custom removed using the Mac OS 9 Installer. In addition, the components installed in the system can be disabled in the Extensions Manager by viewing as packages and disabling the ARA Server 3.5 package.

Note: If you have Remote Access (client or server) installed but disabled, the Mac OS 9 installer will not update the software. The pieces used by previous, separate versions of ARA client and ARA server have the same name, so you must look at the package name and version. The Extensions Manager package Mac OS 9 installs is called "ARA Server 3.5". This is a bit of a misnomer, it is really the client AND server versions. You will need to either manually discard the pieces of the old package of software, or use the extensions manager to enable (or disable) both packages. When you close the Extensions Manager control panel, you will be prompted once for each piece (5 in all) to replace them. MAKE SURE to keep the newer version and delete the older version.
Published Date: Feb 19, 2012

Mac OS 9: Limitations of Apple Remote Access Personal Server 3.5

This article outlines the limitations of Apple Remote Access (ARA) Personal Server 3.5.
This article has been archived and is no longer updated by Apple.
Remote Access Personal Server cannot perform the following tasks:

- Bridge two networks. ARA cannot bridge two networks connected via modems. It may be necessary for the client to configure AppleTalk for Remote Only if problems arise in such a scenario.
- Handle multiple connections. ARA Server can only handle one remote dial-in connection at a time.
- Connect over the Internet. ARA must connect over a phone line using analog modems. It is not possible to use ARA over LANs or LAN connections such as T1s, cable modems, ADSL, etc. ISDN connections are supported.

Published Date: Feb 19, 2012

Mac OS 9: What Is A Neighborhood?

This article describes network services called Neighborhoods.
This article has been archived and is no longer updated by Apple.
A neighborhood is a group of network services that have a logical grouping. They can share a TCP/IP domain or subdomain, (apple.com, or euro.apple.com)You can add your own neighborhoods. The ones you add will show up in the Favorites folder as a neighborhood location-type Internet location file. An apple.com neighborhood is installed by default.

Mac OS 9 computers can only see Personal Web Sharing and File Sharing of other Mac OS 9 computers (SLP version 1.1). Mac OS 8.5 or Mac OS 8.6 computers can only see other services with the same OS.

If your network does not have multi-cast-enabled routers, then you might only see services on your TCP/IP subnet.
Published Date: Feb 19, 2012

Mac OS 9: What is NSL?

What is NSL?
This article has been archived and is no longer updated by Apple.
The Network Services Location (NSL) Manager provides a protocol-independent way for applications to discover network services that are available in the local network. An application can use the NSL Manager to obtain a list of network services, display the list, and allow the user to choose and connect to a particular network service. Both Navigation Services dialog boxes and Network Browser use NSL.

NSL features in Mac OS 9 are:

- NBP Plug-in - For the Name Binding Protocol (part of AppleTalk).
- LDAP Plug-in - For the Lightweight Directory Access Protocol (LDAP).
- Supports version 2.0 of the Service Location Protocol (SLP).
- You can drag and drop from NSL dialogs and make internet location files.

SLP - Service Location Protocol
An emerging standard, open protocol. Used for advertising and discovering network services. File Sharing and Personal Web Sharing use this.

DNS - Domain Name Server
This looks up machine names (like www.apple.com) and translates them into IP addresses

LDAP - Lightweight Directory Access Protocol
Commonly used for phone directories, etc. The "People" servers that Sherlock 2 uses are LDAP servers. LDAP is a standard protocol defined in RFC 1488 (1777, 2251). This protocol communicates over TCP/IP.

NBP - Name Binding Protocol (NBP)
Part of AppleTalk that translates AppleTalk zone and machine names into their corresponding numbers. This protocol communicates over AppleTalk.
Published Date: Feb 20, 2012

Mac OS 9: Troubleshooting NSL Used By Network Browser

This article answers common questions in troubleshooting Network Services Location (NSL) used by the Network Browser.
This article has been archived and is no longer updated by Apple.

Why can't I see computers listed on my DNS server?
The DNS server has to be properly configured by the administrator to have an entry for each service and to accept zone transfers.

I can't see some devices.
The routers on your network must support IP multicasting. The Network Administrator should refer to the router vendor to find out, if she doesn't already know.

I can't see some devices on my older Macs.
Older Macs can see each other. Mac OS 9 Macs can see each other. Mac OS 8.5 and 8.6 clients can see each other because they use version 1.0 of the SLP protocol. Mac OS 9 clients can see other Mac OS 9 clients. Mac OS 9 uses version 1.1 of the SLP protocol.
Published Date: Feb 20, 2012

Mac OS 9: What‘s New - Open Transport 2.5

This article describes the new features of Open Transport 2.5 in Mac OS 9.0.
This article has been archived and is no longer updated by Apple.
The new features of Open Transport in Mac OS 9 are:

- Stability and performance have been improved.
- Copy stall problems should not occur over TCP/IP connections while transferring large blocks of data.
- The number of Open Transport library files has been reduced to two thereby reducing clutter in the extensions folder.
- Mac OS 9 includes a client/server version of ARA.
- Dial on demand performance has been improved.
- Corrects some problems affecting various third party wireless modems.
- Some internal changes to fix Dynamic Host Configuration Protocol (DHCP)-related pausing behavior.
- DHCP packets are now more compatible with Windows NT DHCP servers and other types of DHCP servers.

Published Date: Feb 20, 2012

Mac OS 9: What‘s New - Drive Setup 1.8.1

Drive Setup is the application that formats, partitions, and tests the Apple hard drives. Drive Setup also installs and updates the hard drive driver on Apple hard drives.
This article has been archived and is no longer updated by Apple.
The new features of Drive Setup 1.8.1 in Mac OS 9 are:

- You can format drives to use the Unix File System (UFS) with Mac OS X, Mac OS X Server, A/UX, LinuxPPC and MkLinux for PowerPC. Mac OS 9 does not use UFS-formatted volumes.
- Drive Setup is now installed inside a folder in the Utilities folder called "Drive Setup f". This folder contains Drive Setup and Drive Setup Guide. Drive Setup can be custom-installed from the Mac OS 9 installer.

UFS Formatting
You can format drives using the Unix File System (UFS) format. This is the file system used by Mac OS X Server and other unix-style operating systems that run on computers made by Apple. Mac OS uses Mac OS Standard (HFS) and Mac OS Extended (HFS Plus) format

To get to custom formatting options, highlight the volume you want and click on the Initialize button.

Drive Setup's partitioning schemes are predefined groupings of volume types. The volume types are for specific uses (in the case of A/UX and Linux) and may include small Mac OS (Standard or Extended) partitions for Mac OS Partitioning Schemes:

- Mac OS UFS
- Mac OS Server UFS
- Default MkLinux
- Preferred MkLinux
- Preferred LinuxPPC
- Default A/UX

What's the difference between Mac OS UFS and Mac OS Server UFS?
Mac OS UFS is for Mac OS X. Mac OS Server UFS is for Mac OS X Server and can only be chosen when running MacOS.app in Mac OS X Server.
Published Date: Feb 20, 2012

Mac OS 9: What‘s New - Speakable Items

Speakable Items is the set of commands that you can speak for your computer to perform. This feature is sometimes called "Speech Recognition" or "PlainTalk".
This article has been archived and is no longer updated by Apple.
Speakable Items 2.0 in Mac OS 9 now includes the following new features:

- There is a speakable commands window.
- Speakable Items can be application-specific.
- Accuracy is improved.
- There are new speakable items.
- You can make AppleScripts use speech recognition by using the AppleScript Listener scripting addition.
- Speakable Buttons and checkboxes.
- Speech control panel changes.

Speakable Items uses speech recognition to recognize when you say the name of the speakable item and open the file with that name. These are predominately AppleScripts or compiled applications that are named as commands that describe their action. For example: "Close this window" would be the name of the item that closes the front window.

You can now have speakable items that are specific to a particular application. You can make any application speakable by using the "Make this application speakable." command.

Accuracy is improved with Mac OS 9 also because Speakable Items adjusts to constant noise (CPU fans, air conditioners, electric hums). Irregular noise (TV, radio, talking) will likely still be a problem)

You can now speak the names of most buttons (OK, Cancel), Radio buttons and checkboxes. You cannot speak items from a menu bar or pop-up menu.
Published Date: Feb 20, 2012

Mac OS 9: Troubleshooting Speakable Items

This article provides troubleshooting tips for Speakable Items.
This article has been archived and is no longer updated by Apple.

Speech Recognition doesn't work at all. It doesn't hear or respond.
Check the obvious. Make sure the microphone works by recording an alert sound in the Sound control panel. Make sure that Speech Recognition is turned on in the Speech control panel (or in the Control Strip).

Speech Recognition hears but doesn't seem to respond or it "hears" the wrong thing.
Speech recognition is designed to recognize normal volume, continuous speech in the North American English dialect. Pausing unnaturally or speaking too loud or too soft, too slow or too fast will cause it to be less accurate or to fail. Over-enunciating or pausing between words is not helpful. Speak naturally. If Speech Recognition is hearing something, you should see some animation in the feedback window. The kind of animation varies.

1. Sit in front of the computer in a typing position.
2. Place the microphone on top of your monitor. Optimum distance is about 50 cm from your microphone.
3. Speak at a normal volume, tone and speed. If you have some success with Speech Recognition, you're likely to have more success.
4. Say "What time is it" and 'What day is it". If those work, then the computer should have tuned itself for you. It only takes about 3 seconds to tune itself.

My custom speakable items aren't recognized or don't work.
Custom speakable items with longer names are easier to recognize because they're more distinctive than shorter names. You may want to rename document and folder aliases. Try pasting the name of the file in Simple Text so it can speak the file. What is says is what it's listening for (generally speaking).
Published Date: Feb 20, 2012

Mac OS 9: What‘s New - Multilingual Internet Access 2.0 and Language Kits

Multilingual Internet Access is the software that allows you to view and edit text in WorldScript-aware applications from one or more of the following language families: Arabic (Arabic and Persian), Cyrillic (Bulgarian, Russian, Ukrainian), Central European (Polish, Hungarian, Czech), Indic (Devanagari, Gujarati, and Gurmukhi), Hebrew, Japanese, Korean, Simplified Chinese, Traditional Chinese.
This article has been archived and is no longer updated by Apple.
Mac OS 9 adds an input method for each of Japanese, Korean, Simplified Chinese and Traditional Chinese languages. An input method refers to a way to use a keyboard with 26 (or so) letters to enter characters in a character-based language that may have thousands of characters.

- New language scripts are supported with this version.
- The Cyrillic Language Kit supports Bulgarian, Russian, and Ukrainian.
- The Central European (CE) Language Kit supports Polish, Hungarian, Czech, and Slovak.

Language Kits
A language kit is a product that allows you to type text in languages which do not use the Roman alphabet using English (or other Roman) keyboards and Mac OS versions. Instead of the 26 (or so) characters that Roman alphabets use, non-Roman alphabets use other alphabets or character sets of many thousands of characters.

Apple includes the latest versions of each language kit in Mac OS 9.

As of Mac OS 9, the following language kit-specific extensions are no longer necessary: Language Kit Extension and WorldScript II. Note that the WorldScript I extension is still installed (and needed).

The Language Kit CD Extras folder on the Mac OS 9 CD includes extra fonts for each language kit and a version of SimpleText for that works with that language kit.

What a language kit does not do

- A language kit does not translate between languages.
- A language kit does not change the language that your system software uses.
- A language kit does not enable speech recognition or text to speech in other languages.

In order to be able to use a language kit, you need an application that can deal with languages that use non-roman characters, right-to-left word order and other features. Apple's system-level technology to make this easy is called WorldScript. Applications that make use of WorldScript are called WorldScript-savvy applications. You need WorldScript-savvy applications for Language Kits to work.

DO NOT install older versions of language kit on Mac OS 9.
Published Date: Feb 20, 2012

Mac OS 9: What‘s New - Apple Verifier

This article describes the Apple Verifier, an application included with Mac OS 9.0.
This article has been archived and is no longer updated by Apple.
The Apple Verifier can be used to ensure that a file you have received is the same file the author intended you to get; that is, the file has not been corrupted, altered or infected with a virus. Signed files include a digital certificate and a signature. The Apple Verifier uses these tools to help determine who originally created a file and to make sure that the file hasn't been corrupted. This verification process can help you avoid running applications containing viruses. This process doesn't take the place of using virus protection/detection software, but it gives you a chance to detect viruses before they are "set free" on your system.

You can only verify files that have been signed. Only developers can get the tools from Apple Developer Support to sign files. A signed file has a new icon badge that looks like a medal.
Published Date: Feb 20, 2012

Mac OS 9: File Security - Forgotten Passphrase

I have forgotten the passphrase for a file that I encrypted with Apple File Security. Is there a way I can decrypt the file anyway?
This article has been archived and is no longer updated by Apple.
There is no way to decrypt the file without the passphrase. Apple Computer, Inc. is unable to retrieve a forgotten passphrase.
Published Date: Feb 20, 2012

Mac OS 9: Multiple Users - Tips For Creating a Secure Voice Password

This article contains tips for creating a secure voiceprint for the multiple users feature of Mac OS 9.
This article has been archived and is no longer updated by Apple.
The more similar your voice recordings are to each other, the more secure your voiceprint will be. Try to make each recording as similar to the others as you can. If there is background noise during the recording, the computer will expect it during each voice login.

Do the following:

- Speak at a normal rate. Trying to "help" by over-enunciating or inserting pauses between each word will cause it to fail.
- Speak at a normal volume. - Trying to "help" by speaking too loudly or too softly will cause it to fail. You will be alerted if this is the case.
- Speak at a normal distance from the microphone (about 50 cm). If you are too close or too far, it's as bad as speaking at an abnormal volume.
- Position the microphone on top of the monitor.

The computer will alert you if you speak too loudly or too softly, or too close to the end of the recording. It will try to guide you into making a good sound by making helpful suggestions.
Published Date: Feb 20, 2012

Mac OS 9: Multiple Users - Voice Password Stopped Working

I've been using the same voice password for a while, but it's stopped working. How can I get it to work again?

This article has been archived and is no longer updated by Apple.

While you may not hear it, the more you practice saying your voice password, the more your voice will change the way you say it. The computer notices these subtle changes, however. If this happens, the voice password appears to stop working. To solve this, record a different voice password to use.

Published Date: Feb 20, 2012

Macintosh Manager/Multiple Users: Can‘t Open Some Control Panels

This article describes an issue where users are unable to open networking control panels after logging in using Multiple Users.
This article has been archived and is no longer updated by Apple.

Symptom

Users logged in using Multiple Users are not able to open the Multiple Users, AppleTalk, TCP/IP, Remote Access, or File Sharing control panels.

Solution

This is normal behavior. Network settings are specific to each computer-not to each user. Only the owner can make changes in these control panels.

Note: Normal users that are allowed to manage user accounts can open the Multiple Users control panel (using Mac OS 9.x).

If Normal, Panels or Limited users must change network settings, consider using Location Manager as described in Article 60657: "**Mac OS 9: Location Manager and Multiple Users**."

Published Date: Feb 20, 2012

Mac OS 9: Multiple Users - Voice Password Doesn‘t Work On PowerBook 5300

Can I use the voice password in the multiple users feature of Mac OS 9.0?
This article has been archived and is no longer updated by Apple.
It is not possible to use a Voice Password on PowerBook 5300 computers. You must use a typed password instead.
Published Date: Feb 20, 2012

Mac OS 9: What is the Type 1 Scaler?

What is the Type 1 Scaler in the Extensions Folder?
This article has been archived and is no longer updated by Apple.
Type 1 Scaler uses Type 1 PostScript fonts to draw smooth fonts on the screen in applications that use Apple Type Services for Unicode Imaging (ATSUI). Type 1 Scaler does for ATSUI applications what Adobe Type Manager (ATM) does in traditional QuickDraw applications.

Unless you have an ATSUI enabled application, you can disable the Type 1 Scaler to free up about 1 megabyte of memory.
Published Date: Feb 20, 2012

Mac OS 9: Using Programmable Keyboard Function Keys

This article outlines which computers can use the programmable function key feature of Mac OS 9.
This article has been archived and is no longer updated by Apple.
Programmable keyboard function keys only works on computers that have the ROM-in-RAM feature (iMacs, iBooks, PowerBook G3 Series (Bronze Keyboard), Power Macintosh G3 (Blue and White), Power Macintosh G4 (all models) and later computers). Other computers do not have this button in their Keyboard control panel.
Published Date: Feb 20, 2012

Mac OS 9: What‘s New - Sound Control Panel

This article describes the new features of the Sound control panel in Mac OS 9.0.
This article has been archived and is no longer updated by Apple.
New features of the Sound control panel in Mac OS 9 include:

- New control panel
- More alert sounds
- Sound Input changes
- New Speaker Setup pane
- Sound Output pane changes - 3D Stereo sound on some computers

More Alert Sounds

- Chu Toy
- Glass
- Laugh
- Logjam
- Pong2003
- Purr
- Submarine
- Temple
- Uh oh
- Voltage

Retired Alert Sounds

- Droplet
- Quack
- Wild Eep

Sound Input pane
On some computers (those that have an ATAPI CD-ROM and ROM-in-RAM) Audio CDs now always play through regardless of your setting in the Sound Input pane in the Sound control panel. However, if you want to record a CD, you'll have to change the sound input setting to Internal CD.

Speaker Setup
There is an additional option for Speaker Setup that allows you to pick certain speakers and adjust their relative volume.
Published Date: Feb 20, 2012

Mac OS 9: What‘s New - File Exchange 3.0.2

File Exchange allows you to set mappings from filename extensions (ex.: ".TXT") to Mac OS file types (ex.: 'TEXT'), to mount DOS SCSI disks and drive containers, and to set File Translation preferences.
This article has been archived and is no longer updated by Apple.
The new features of the File Exchange control panel in Mac OS 9 are:

- Provides better support for PC-formatted 120 MB Imation SuperDisk disks
- File Exchange no longer allows a space as a disk name. This would disable the disk.
- Provides less confusing information and better appearance during online mount.
- Accommodates the new HDI driver (1.4.1).
- Fixed problems reformatting PC disks in Mac formats

Published Date: Feb 20, 2012

Mac OS 9: Application Quits Because "An Update Is Required"

Whenever I use certain applications, I see the following error message:
"The application<application name> has unexpectedly quit, because an update to this software is required for compatibility with the improved Mac OS file system.
"You should save your work in other open applications and restart the computer.
"You should contact the developer of the software that quit to see if an update to ensure compatibility with Mac OS 9 is available."

These applications worked fine with Mac OS 8. Why don't they work with Mac OS 9?
This article has been archived and is no longer updated by Apple.
In order to modernize the Mac OS's foundations, Apple greatly increased the number of files that can be open from 348 in Mac OS 8 to 8169 in Mac OS 9. The total number of open files includes many files used by the system, such as fonts, and files used by applications, such as documents, and so forth.

This change means that you can install many more fonts and other system resources without running into the 348 open file limit. Unfortunately, it also means that some programs that relied on an outdated method to access the system will fail to work.

Any program could be prone to encounter this error, but for the most part, applications that worked in Mac OS 8 but that won't work in Mac OS 9 fall into the following categories:

- disk utilities
- file compression
- font management
- virus utilities

Apple has long provided a programming method (API) for software developers to access the system without causing an error. The only programs that display this error are the ones that use the outdated API. Many software publishers plan to release updated programs that work with Mac OS 9, and can take advantage of the increased number of open files that is allowed.

Check with your program's publisher to see if an updated version is available. The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"
Published Date: Feb 20, 2012

Mac OS 9: How to Set up Epson Printers for Multiple Users

This article explains how to set up Epson printers when Mac OS 9's Multiple Users feature is turned on.
This article has been archived and is no longer updated by Apple.
In order for users to print to Epson printers when the multiple users feature of Mac OS 9 is turned on, the user "Owner" must allow access to "All Printers" for other users. A user in the Limited or Panels environment should set up the Epson printer driver to use a spool folder located in the user's folder, or another location where the user can create files, such as the User's Documents folder.

To do this follow these steps:

1. Log in as a Limited or Panels User.

2. Choose Print Desktop from the Finder's File menu. If logging in as a Panels User, open an Application that the Panels User may print from (such as Appleworks 6), and select Print from the Application's File menu.

3. In the Print dialog box that appears, click the Utility button provided by Epson (this button has a tools icon).

4. Click Configuration.

5. For both the Temporary Spool and Temporary High Speed Copies folder locations, click Select and navigate to the following: Macintosh HD > Users > [user's name] folder > Documents folder

6. Click Select Documents.

7. Click OK.

8. Click OK.

9. Click Cancel.

Published Date: Feb 20, 2012

Mac OS 9: Adobe Type Manager, Type Reunion Compatibility, Error -119

Important news about Mac OS 9 and Adobe Type Manager (ATM), ATM Deluxe, and Adobe Type Reunion (ATR) Deluxe.

This article has been archived and is no longer updated by Apple.

Symptom

An alert box appears with error -119.

Solution

Download and install ATM 4.6, ATM Deluxe 4.6, and ATR Deluxe 2.5.2.

ATM 4.6, an updater from ATM Deluxe 4.5 to 4.6, and an updater from ATR Deluxe 2.5 to 2.5.2 are available from Adobe at http://www.adobe.com/support/downloads/main.html. You can find information about upgrading ATM Deluxe 4.0x and ATR Deluxe 2.0x to the latest versions at http://www.adobe.com/products/atm/main.html.

To temporarily get your computer running without the error alert box, start up while holding down the Space bar; the Extensions Manager opens. Disable the ATM control panel, then click Continue to continue the startup process.

Note: Earlier versions of Adobe Acrobat do not work with Mac OS 9. For more information, please see article 60571: "**Mac OS 9: Using Acrobat PDF Documents.**"

Article 17159: "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Mac OS 9: Unsupported Mac OS Technologies

This article lists the Mac OS technologies no longer supported in Mac OS 9.0.
This article has been archived and is no longer updated by Apple.
The following Mac OS technologies are no longer supported in Mac OS 9.0:

- LaserWriter 8f driver - for fax cards only (LaserWriter 16/600, LaserWriter Select 360, LaserWriter Pro 810)
- Apple Telecom - for GeoPort modems (includes GeoPort Telecom Adapters and Apple Express Modem software)
- QuickDraw GX - no longer installed or available

Published Date: Feb 20, 2012

Mac OS 9: Color StyleWriter 4000 Series Requires Updated Driver

Color StyleWriter 4000 Series printers require an updated printer driver to work with Mac OS 9.
This article has been archived and is no longer updated by Apple.
Apple Color StyleWriter 4000 Series printers require an updated printer driver to work with Mac OS 9. The Mac OS 9 installer deletes the Color StyleWriter 4000 series driver when you install Mac OS 9. This is normal. The old software does not work and should not be installed.

The updated printer driver for the Apple Color StyleWriter 4000 Series printers can be downloaded from Apple Software Updates at http://www.apple.com/swupdates/ .

Article 75083 "**Color StyleWriter 4000 Series: About CSW 4000 Series Drivers**" contains the Read Me document for the new driver.
Published Date: Feb 20, 2012

Mac OS 9: Where Is Sherlock 2‘s "Update Search Sites" Command?

I can't find Sherlock 2's "Update Search Sites" command. How can I make sure I'm using the latest plug-ins?

This article has been archived and is no longer updated by Apple.

Sherlock 2 does not have an option to manually check for updated search sites. Sherlock 2 automatically searches for and downloads any updated search sites. This means you will no longer get a dialog telling you there are new versions, they will simply be installed for you.

Published Date: Feb 20, 2012

Mac OS 9: Use Disk First Aid 8.5.3 and Drive Setup 1.8.1

I am trying to launch Disk First Aid and Drive Setup under Mac OS 9, but I keep getting an error message that "The application program cannot be launched because it cannot be run on this computer."
This article has been archived and is no longer updated by Apple.
If you attempt to launch a version of Disk First Aid or Drive Setup that is older than the version included with Mac OS 9 you will receive this error message. The version of Disk First Aid included with Mac OS 9 is 8.5.4. The version of Drive Setup included with Mac OS 9 is 1.8.1.

These applications are installed in the Utilities folder of the same drive as the Mac OS 9 System Folder. If you cannot locate these versions or newer versions of these utilities, you can custom install Disk First Aid and Drive Setup from the Mac OS 9 installer.
Published Date: Feb 20, 2012

Mac OS 9: Where‘s the Users & Groups Control Panel

Where is the Users & Groups control panel in Mac OS 9.0? Was it not installed?
This article has been archived and is no longer updated by Apple.
The Users & Groups control panel is part of the File Sharing control panel in Mac OS 9.0.
Published Date: Feb 20, 2012

Mac OS 9: Not Supported In MacOS.app

Can Mac OS 9.0 be installed in the MacOS.app (a.k.a. "Blue Box") on Mac OS X Server?
This article has been archived and is no longer updated by Apple.
No, Mac OS 9.0 is not compatible with the MacOS.app on Mac OS X Server. However, It can be used with Mac OS X Server's NetBoot feature.

Note: NetBoot images on Mac OS X Server require a Mac OS 9 license for each NetBoot client.
Published Date: Feb 20, 2012

Mac OS 9: File Sharing Owner Password Field Shows 8 Bullets

I typed my password into the Owner Password field in the File Sharing control panel and it shows eight bullets. My password is only 5 characters long. Why is it showing the wrong number of bullets?

This article has been archived and is no longer updated by Apple.

In Mac OS 9.0, the owner password field shows the same number of bullets (8) regardless of the actual length of the password. This makes the owner's password harder to guess.

Published Date: Feb 20, 2012

Mac OS 9: What Is the Servers Folder in the System Folder?

With Mac OS 9, the Servers folder in the System Folder stores aliases to file server volumes that you have chosen to automatically open at system startup time.

This article has been archived and is no longer updated by Apple.

When you connect to an AppleShare or File Sharing file server you can usually choose to have the computer automatically connect to a shared volume at system startup time. With Mac OS 9, the Servers folder in the System Folder holds the aliases to these shared volumes. The system attempts to connect to the servers whenever you start up the computer.

For related information on this topic, refer to document 25214: "**Mac OS 9: Brief Delay When Desktop First Appears**"

Published Date: Feb 20, 2012

Mac OS 9: Multiple Users - No Sleep Option At Login Screen

My computer is configured to use the multiple users feature of Mac OS 9.0. I can't find a button or command to put the computer to sleep. Is there one?

This article has been archived and is no longer updated by Apple.

There is not a sleep option at Mac OS 9.0's login screen. You can shut down the computer, or log in and then put the computer to sleep. The screen will dim if you leave the login screen alone, however.

Published Date: Feb 20, 2012

Mac OS 9: Folder Protection Disabled in General Controls

The Folder Protection check boxes in the General Controls control panel are disabled. How can I get them to work?

This article has been archived and is no longer updated by Apple.

In Mac OS 9.0, these features are disabled. If you need to protect files and applications, you should use Mac OS 9.0's multiple users feature to limit access to the computer.

Published Date: Feb 20, 2012

Mac OS 9: File Security - Can‘t Unlock Keychain

I can't unlock my keychain even though I'm sure I'm using the correct password. What could be wrong?
This article has been archived and is no longer updated by Apple.
Possible solution:

You have disabled the file security extensions and need to turn them on.

1. Open the Extensions Manager

2. Make sure these files are turned on: Security Cert Module, Security Library, Security Manager, Security Policy Module, Security Storage Module.

Published Date: Feb 20, 2012

Mac OS 9: Multiple Users - Alternate Password Panel Is Disabled

The Alternate Password panel is disabled for each user in the Multiple Users control panel. How can I turn it on?
This article has been archived and is no longer updated by Apple.
The Alternate Password panel is enabled when you allow users to use a voiceprint password.

1. Open the Multiple Users control panel.
2. Click Options.
3. Check Allow Alternate Password.

Published Date: Feb 20, 2012

Apple Customer Global Internet Privacy Policy

This article outlines Apple's Internet privacy policy.
This article has been archived and is no longer updated by Apple.
Apple Customer Global Internet Privacy Policy

Protecting your privacy is important to Apple, Inc. ("Apple"). We hope the following policy will help you understand how Apple collects, uses, and safeguards the personal information you provide on our web site.

Information Collection

If you browse Apple's web site, you do so anonymously. We don't collect personal information - including your e-mail address. We do log your IP address (the Internet address of your computer) to give us an idea of which parts of our web site you visit and how long you spend there. But we do not link your IP address to anything personally identifiable. The only other information automatically provided to us is the type of computer and operating system you are using. Your browser supplies us with this information.

Like many other commercial web sites, the Apple web site may use a standard technology called a "cookie" to collect information about how you use the site. Please go to http://www.apple.com/legal/privacy/aboutcookies.html for more information.

At times we may request that you voluntarily supply us with personal information, such as your e-mail address and postal address, for purposes such as corresponding with us, registering at a site, making a purchase, entering a sweepstakes, registering a new product, or participating in an online survey. When you register a product with Apple, for example, we collect the serial number and your name, address, and e-mail address.

We will use the personal information you provide to create a personal ID, called Apple ID. Your Apple ID gives you easy access to Apple services including product registration and the Apple Store. Here's how it works. Using a unique identifier (your current e-mail address and a password for security), you fill out your Apple profile with information you feel comfortable sharing with us, such as your name and telephone number. Once you enter your information, your Apple ID saves you time when you order something from the Apple Store or register a new product. You simply enter your Apple ID and password, and the system looks up the information it needs.

Because Apple, Inc. operates globally, we make company information available to our worldwide business units. As part of this process, the personal information that you have provided to us may be sent to other Apple business units around the world. However, we do not share your profile with anyone else outside of Apple without your consent, and no one else can access your information. Using your Apple ID and password, you can easily delete, edit, or change your personal information and preferences at any time.

Information Use

If you provide us with your e-mail or postal address, or have done so in the past, we will ask you if we can use it to send you updates on the latest Apple products and promotions. We also ask if you want us to share your personal information with other companies that offer related services. If you do not want us or other companies to contact you, you can choose to "opt out," and Apple will respect your wishes.

We may use information that you have given us to learn more about our customers so that we can develop better products and services. We may also use the information to inform you about new products, services, and offers that may be of interest to you. These offers may be based on information you provided in your initial transaction with us or in surveys.

Declining E-mail Offers

Apple provides customers with an easy means to decline to receive e-mail offers. Although most customers tell us they appreciate receiving notice of these opportunities, we recognize the importance of providing you with choices. At any time, you may request to discontinue receiving these offers from us by simply replying to the e-mail and informing us of your preferences. All e-mail offers that you receive from Apple will tell you how to decline further e-mail offers.

Children

While Apple's product ad campaigns and marketing materials are often viewed by children, we do not solicit data from them. Apple encourages parents and guardians to spend time online with their children and to participate in the interactive activities offered on the sites their children visit. No information should be submitted to, or posted at, Apple's web site by visitors under 18 years of age without the consent of their parent or guardian.

Company Commitment to Privacy

Apple is actively involved in current industry initiatives -- such as the Online Privacy Alliance (http://www.privacyalliance.org)-- to preserve individual privacy rights on the Internet and in all aspects of electronic commerce.

Apple, Inc.'s privacy policy is subject to change at any time and without notice. Please check http://www.apple.com/legal/privacy for updates.

TA26289_Apple_Customer_Global_Internet_Privacy_Policy.pdf

Published Date: Feb 20, 2012

Mac OS 9: Multiple Users - How to Disable Extensions Manager

This document describes how to turn off Extensions Manager in a Multiple User environment.
This article has been archived and is no longer updated by Apple.
Network users can gain access to the Extensions Manager control panel by holding down the space bar when restarting the computer. However, they cannot disable the Multiple Users environment from within the Extensions Manager unless they are the administrator.

If you do not wish for users other than the administrator to gain access to the Extensions Manager control panel in this way, you should manually disable the "EM extension" extension located in the Extensions folder of the System Folder. This extension appears near the top of the listing if the extensions folder is viewed by name. You must manually drag this extension out of the Extensions folder since it does not appear in the Extensions Manager control panel under Mac OS 9.
Published Date: Feb 20, 2012

Mac OS 9: Font Manager Update No Longer Needed

I had installed the Font Manager Update extension under Mac OS 8.6, do I still need this extension if I'm running Mac OS 9?
This article has been archived and is no longer updated by Apple.
The Font Manager Update extension was created specifically for Mac OS 8.6. The issue it addressed has been corrected and the fix is included in Mac OS 9.0 as part of the System Suitcase or Mac OS ROM file (depending on the Macintosh model). You do not need to re-install the font update extension, and it is safe to remove this extension if you are running Mac OS 9.0.

If you believe you may have a damaged font resource as a result of previously running Mac OS 8.6, you can still run the Font First Aid application included as part of the Font Manager Update 1.0 package under Mac OS 9.0 to search for and repair damaged font resources.

Be careful not to confuse the "Font Manager Update" extension with the "Font Updater Extension" which is part of the Language Kit installation package included with Mac OS 9.0. If you are using a language kit under Mac OS 9.0, leave the "Font Updater Extension" installed.

Font First Aid is also not the same application as the Font Updater utility that is installed as part of the Language Kit installation package. For more information on Font Updater, see Tech Info Library article:

Article 60557: "**Mac OS 9: About the Font Updater for Language Kits.**"
Published Date: Feb 20, 2012

Mac OS 9: Multiple Users - Owner Name Or Password Change

After creating a voice print alternative password for the administrator user, I changed information in the File Sharing Control Panel. Now voice authentication for the owner is not working correctly.
This article has been archived and is no longer updated by Apple.
Changing the owner name or password in the File Sharing Control Panel will cause the multiple users owner information, that was originally known, to not match the new settings.

If you just changed the password, the voice password dialog will appear, but after successful authentication, the type password dialog will appear. If the name was changed, the voice password dialog never shows and the type password is presented instead.

Multiple Users must be opened to resynchronize information. If just the password was changed, then opening Multiple Users and changing the password for the owner will resync the Voice Verification database. If the owner name or owner name and password are changed, then the owner will need to recreate a voice print.
Published Date: Feb 20, 2012

Mac OS 9: Late-Breaking Tips

This document contains information about Mac OS 9 that was not included in the software's documentation.
This article has been archived and is no longer updated by Apple.

Download and Install DVD Player 2.2 After Updating to Mac OS 9.0.4
Mac OS 9.0.4 requires Apple DVD Player 2.2, which is available from Apple Software Updates. Using any previous version of Apple DVD Player results in an error.

Article 25125: "**Mac OS 9.0.4: Requires Apple DVD Player 2.2.**"

Install Firmware Updates Before Installing Mac OS 9
For computers that need to install a firmware update, it is necessary to start up from the Mac OS on the computer's hard disk and then run the firmware update installer from the Mac OS 9 install disc.

Article 60643: "**Mac OS 9: Update Firmware Before Installing.**"

Starting up from Mac OS 9 CD-ROM, asks to initialize the hard drive
This issue can happen with a limited number of hard drives. To avoid this situation, open the Startup Disk control panel, select the Mac OS 9 CD-ROM, and then start up normally.

Article 60662: "**Mac OS 9: Hard Disk 'Unrecognized' Message When Starting Up From Mac OS 9 CD**"

Troubleshooting Before or During Installation
You may not have a CD-ROM drive or you may encounter error messages during the installation process. Suggestions and solutions are covered in the Knowledge Base:

Article 60493: "**Mac OS 9: Troubleshooting Before or During Installation.**"

Resolving Software Conflicts After Installation
If your computer does not start up properly or behaves erratically, you probably have an incompatible extension, control panel, or application. For complete information, please see the Knowledge Base:

Article 60495: "**Mac OS 9: Resolving Software Conflicts After Installation.**"

Application Quits Because "An Update Is Required"
Some applications may receive this message when launching. Due to modernization of Mac OS 9, applications may also need a revision by the developer or author. For complete information, please see the Knowledge Base:

Article 60533: "**Mac OS 9: Application Quits Because An Update Is Required.**"

A complete list of Knowledge Base articles related to Mac OS 9 can be found by typing the keyword "kmos90" into the search field.

A list of articles explaining new features of Mac OS 9 can be found by searching the Knowledge Base using the search criteria "kmos90 and What's new."
Published Date: Feb 20, 2012

Mac OS 9: About the Font Updater for Language Kits

This article contains answers to commonly asked questions about the Font Updater, which is included with Mac OS 9.
This article has been archived and is no longer updated by Apple.
Question 1: What does the Font Updater do?

Answer: Many older 2-byte (Chinese, Japanese, and Korean) fonts were created in a format that stored 'fbit' bitmapped data in files outside the font's suitcase, in the root level of the System Folder. With Mac OS 8.5 and later, Apple moved to an improved data structure for 2-byte fonts, storing all the font data within the font's suitcase.

If you are using Mac OS 9, and have custom installed any of the 2-byte Language Kits, you already have the latest Apple fonts. If you have older third party 2-byte fonts which use fbit data, convert them using the Font Updater utility.

If you still see fbit files inside your System Folder after you have used the Font Updater, this is normal, and was done to maintain compatibility with some older applications that still look for the fbit files.

Question 2: When is the Font Updater utility installed?

Answer: If you are using Mac OS 9, and have used the Mac OS 9 Custom Install option to install the Chinese, Japanese, or Korean Kits, the Font Updater application and the Font Updater extension are both installed, in the Utilities and Extensions folders, respectively.

Question 3: What does the Font Updater Extension do?

Answer: If there are any fonts in the Fonts folder of the System Folder which need to be updated, they will be updated during startup when the Font Updater Extension loads. An indicator bar will appear showing the progress of the update for each font which is being updated.

Question 4: Is this utility related to the Font Manager Update for Mac OS 8.6?

Answer: No. The Font Manager Update 1.0 corrects unrelated issues with character height in some 2-byte fonts and font corruption. If you are using Mac OS 8.6, you should install Font Manager Update. The functionality of Font Manager Update 1.0 is incorporated into Mac OS 9.

Important: See also the following Tech Info Library article:

Article 60468: "**Mac OS 9: Do Not Install Older Language Kits**"

For more information about the Font Manager Update for Mac OS 8.6, see the following Tech Info Library article:

Article 60444: "**Font Manager Update 1.0: Read Me**"

For information about 2-byte fonts, see the following Tech Info Library article:

Article 31106: "**WorldScript: 1-byte and 2-byte Script Systems Explained**"
Published Date: Feb 20, 2012

Mac OS 9: Tips For Using Voice Verification and Speak Your Name

This article is intended to answer frequently asked questions and to provide general tips for using Voice Verification and Login under Mac OS 9. This article has been archived and is no longer updated by Apple.
Question: I cannot get the "allow users to speak their names" option to work on my computer. The Voice Verification option works fine, so I know my microphone is connected and working. What am I doing wrong?

Answer: Speech Recognition must be installed, and you must use the settings established in the Speech control panel in order for the voice login feature to work correctly. Check to see what the microphone is set to in the Speech control panel, or try using Speakable Items from the Finder to see if Speech Recognition is working correctly. If the Speech control panel is set so that users must say "Computer" before speaking a command, then at the log in screen you must say "Computer," followed by the user's name to log in as well.

If you do not have Speech Recognition installed, you can re-install it from the Mac OS 9 installer.

You may want to consider instructing users on how to use the voice login feature by changing the text of the welcome message. The option to change the welcome message text is available in the Multiple Users control panel under Options.

Question: When I try to record a voice password, it says that my password is "too soft."

Answer: Password phrases that are too short can sometimes be misinterpreted by the computer as being too soft. The Voice Verification setup process should warn you if you type a password phrase that it feels is too short. Try using the default password phrase, or try establishing a longer phrase during setup to avoid problems using a voice password during login.

Question: Do I have to speak the text of the Voice Verification password in order for the password to work?

Answer: Yes, although you can change the text of the phrase you should speak the exact text of the chosen phrase in the Voice Verfication setup. The computer uses this phrase along with the four voice samples taken from you during the setup to create a more accurate voiceprint. If you do not want other users to know what phrase you use, there is an option not to display the text of the Voice Verification phrase at log in during the Voice Verification setup.

You should also avoid altering the way you speak the verification phrase during the Voice Verification setup process. Speak naturally and consistently during each sample. The more that you change your intonation between each recording, the more likely the computer will not successfully establish an accurate voiceprint.
Published Date: Feb 20, 2012

iMovie 2: How to Import Non-DV QuickTime Movies

This document explains how to import non-DV QuickTime movies into iMovie.
This article has been archived and is no longer updated by Apple.
iMovie is designed to get all video clips by capturing them directly from a digital video (DV) device. If you want to use video from other sources they must first be converted into DV streams.

The following steps apply to iMovie and iMovie 2. For iMovie 3 see technical document 61816 "**iMovie 3: How to Import a QuickTime Movie**."

With QuickTime Pro, you can convert a QuickTime movie into a DV stream.

1. Open the QuickTime movie in QuickTime Player.
2. Choose Export from the File menu.
3. In the Export pop-up menu, select Movie to DV Stream. Use the Default Settings.
4. Type a name for your DV movie and click Save.
5. Drag the newly saved DV movie into the Media folder of your project. **Note:** The DV clip may be much larger than the original QuickTime movie. Make sure you have enough space on your hard disk.
6. Open iMovie. You will see the following dialog box:

Figure 1 iMovie dialog

7. Click OK. The DV clip will be imported to the Shelf. If the shelf is already full, you may see a different dialog saying that the shelf is full. Delete some files from the Shelf, or move them to the timeline to make room for the new clip which will then appear on the Shelf.

For information on how to upgrade to QuickTime Pro, visit the QuickTime website (http://www.apple.com/quicktime/).
Published Date: Feb 20, 2012

Files split at 1.9 GB (about 9 minutes) when capturing clips in iMovie 5 or earlier

This article has been archived and is no longer updated by Apple.

When importing media using iMovie 5 or earlier, large video and audio files will be split into multiple clips in the Shelf. Each clip of DV video has a maximum length of about 9 minutes.

iMovie saves imported video in large, full-quality DV format. Because DV clips contain a lot of data, they can be very large files.

Earlier versions of Mac OS had a file size limitation of 2 gigabytes (GB). For compatibility with earlier versions of Mac OS, iMovie does not create files larger than 2 GB when it imports media. If you exceed this limit by capturing a clip that is very long, iMovie splits the clip, and continues capturing into another clip, and continues doing this until the capture is completed. The maximum length of an individual DV movie clip in this case is limited to approximately 9 minutes. The length of other media will vary depending on the type of data.

To play back multiple clips as a single sequence when editing your movie, drag the clips to the Timeline in the correct order.

Published Date: Feb 20, 2012

iMovie: About Transition and Title Clip Progress Bars

This document describes iMovie's transition and title clip progress bars.
This article has been archived and is no longer updated by Apple.
Since iMovie renders transition clips and title clips as they are placed in the Clip Viewer, you will not see a regular progress bar dialog box. Instead, a red progress bar for individual transition clips and title clips is displayed within the clip's icon in the Clip Viewer. This allows you to render several transition clips or title clips at the same time.

A transition clip's red progress bar appears in the lower part of the transition icon visible in the Clip Viewer. The transition icon is the image that connects the "transition from" clip and "transition to" clip to each other.

The title clip's red progress bar appears just above the title clip's name. The title clip progress bar is about 20 percent of the way up from the bottom of the title clip's Clip Viewer icon.

Additional clips may be added to the Clip Viewer while other clips are rendering -- up to the point where a certain percentage of available memory is consumed. At that point, no additional transition clips or title clips may be added. Once the clips' progress bars have reached the right side of their clip icon the rendering process is finished, and additional transition clips or title clips may be added to the Clip Viewer.
Published Date: Feb 20, 2012

Mac OS 9: Monitor Resolution Changes After Installation

After installing Mac OS 9, is it normal for my monitor to change resolutions?
This article has been archived and is no longer updated by Apple.
After you do a clean installation of Mac OS 9, your monitor resolution may have changed from its previous settings. You can change your monitor resolution back by using the Monitors control panel.
Published Date: Feb 20, 2012

Mac OS 9: Viewing QuickTime Content With AOL

I use America Online (AOL) to access the Internet, and I can't seem to see anything that requires QuickTime. Do I need to install something?

This article has been archived and is no longer updated by Apple.

To view QuickTime content while using America Online (AOL), drag a copy of the file "QuickTime plugin" into the AOL Plug-ins folder (located in the same folder as the AOL application), then reopen AOL. The QuickTime plugin is in the QuickTime folder in the Applications folder.

Published Date: Feb 20, 2012

Mac OS 9: Iomega Driver and Virtual Memory

This article provides important information about using an Iomega volume for virtual memory under Mac OS 9.

This article has been archived and is no longer updated by Apple.
Mac OS 9 allows you to use removable media (such as an Iomega Jaz drive) for virtual memory.

If you want to install Mac OS 9 onto a Zip or Jaz disk, you should use a non-removable volume for virtual memory. To do this, hold down the Shift key while choosing Restart from the Special menu (to disable your extensions). Then open the Memory control panel and turn on virtual memory. Select a volume that is compatible with virtual memory as the virtual memory volume.

Published Date: Feb 20, 2012

Mac OS 9: Drive Setup and Energy Saver

This article provides important information about the Energy Saver control panel settings when using Drive Setup under Mac OS 9.

This article has been archived and is no longer updated by Apple.
If you use Drive Setup to perform an operation that takes more than a few minutes, such as testing a disk or initializing a disk with a low-level format, make sure the hard disk will not go to sleep by dragging the slider in the Energy Saver control panel to "Never."

Published Date: Feb 20, 2012

Mac OS 9: Using Acrobat PDF Documents

This article provides important information about Mac OS 9.
This article has been archived and is no longer updated by Apple.
Some of the documents included with Mac OS 9 were created using Adobe Acrobat (these files have "pdf" at the end of their names). To view or print these documents, you must install Adobe Acrobat Reader 4, located in the Adobe software folder on the Mac OS 9 CD. Previous versions of Adobe Acrobat are not compatible with Mac OS 9.

Acrobat Reader 4 can also be downloaded from Adobe's web site at http://www.adobe.com.

For additional information on Adobe software compatibility, please see the following article:

Article 60535: "**Mac OS 9: Adobe Type Manager, Type Reunion Compatibility.**"
Published Date: Feb 20, 2012

Mac OS 9: Viewing Web Pages With WorldScript I Language Kits

This article provides important information about viewing web pages using certain language kits included with Mac OS 9.
This article has been archived and is no longer updated by Apple.
WorldScript I languages (i.e., Arabic, Devanagari, Gujarati, Gurmukhi, and Hebrew) that are custom installed (by choosing Language Kits in the Custom Install window of the Mac OS Installer) are not fully supported by most Internet applications. You may see some unreadable text on Web pages with content in those languages.
Published Date: Feb 20, 2012

Mac OS 9: Apple CD-ROM Extension and Non-Apple CD-ROM Incompatibilities

This article provides important information about compatibility with Mac OS 9.
This article has been archived and is no longer updated by Apple.
If your computer or CD-ROM drive is not manufactured by Apple, or you have an Apple CD-ROM drive and you use a non-Apple driver, your CD-ROM drive may not function correctly. Remove the file named "Apple CD / DVD" from the Extensions folder (in the System Folder), and reinstall the software that came with your CD-ROM drive. Contact the CD-ROM manufacturer to see if you have the latest version of their software.
Published Date: Feb 20, 2012

Mac OS 9: Do Not Use Apple HD SC Setup Program

This article provides important information about Mac OS 9, Drive Setup, and Apple HDSC Setup.
This article has been archived and is no longer updated by Apple.
After installing Mac OS 9, do not use the Apple HD SC Setup program to initialize your Apple hard disk. Instead, use the Drive Setup program on your Mac OS 9 CD.
Published Date: Feb 20, 2012

Mac OS 9: Applications That Install QuickTime

This article provides important information about Mac OS 9 and QuickTime.

This article has been archived and is no longer updated by Apple.
Some applications replace the version of QuickTime installed by Mac OS 9 with an earlier version. If this occurs, you need to re-install QuickTime by selecting "Add/Replace" in the Mac OS Installer, and then doing a customized installation. For additional help, search on "adding or removing system software."

Note: The latest version of QuickTime can be downloaded from the QuickTime Web site at: http://www.apple.com/quicktime/ .

Published Date: Feb 20, 2012

Mac OS 9: Compatibility With Connectix Virtual PC

This article provides important information about compatibility with Mac OS 9.
This article has been archived and is no longer updated by Apple.
Connectix Virtual PC 2.1.1 and earlier is not compatible with Mac OS 9.0. If you're using Connectix Virtual PC, make sure you're using version 2.1.2 or later. You can download the 2.1.2 updater (for Virtual PC 2.0 users) on the Connectix Web site: http://www.connectix.com/ or contact the Connectix sales department for upgrade information.

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following Knowledge Base article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"
Published Date: Feb 20, 2012

Mac OS 9: Dr. Solomon‘s Virex Issue

This article provides important information about Mac OS 9 and Dr. Solomon's Virex.
This article has been archived and is no longer updated by Apple.
If you are using Dr. Solomon's Virex version 5.9 or earlier, make sure the "Scan Files When Opened" option is turned off. This option does not work with Mac OS 9. For more information on upgrading your Virex software, contact the vendor.

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following Tech Info Library article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"
Published Date: Feb 20, 2012

Mac OS 9: FM Radio Application and Appearance Sounds

This article provides important information about the FM Radio application and Appearance Sound.

This article has been archived and is no longer updated by Apple.
Under Mac OS 9, opening the FM Radio application after turning on Appearance Sounds (in the Appearance control panel) may disable sound on your computer. To resolve this issue, turn off Appearance Sounds before you open the FM Radio application, then turn Appearance Sounds on again after the application is open.

Published Date: Feb 20, 2012

Mac OS 9: Problems Opening Programs

This article provides important information about compatibility with Mac OS 9.
This article has been archived and is no longer updated by Apple.
A small number of application programs will not open unless the system font is set to Chicago. Others may require additional memory. If you have problems opening a program after you've installed Mac OS 9, do the following:

1. Open the Appearance control panel and set the large system font to Chicago, then open the program again. Or, contact the software manufacturer to see if an updated version of the program is available.
2. Select the program's icon, open the File menu and choose Get Info, and increase its minimum memory allocation by 300K. For more information, see the Memory topic in Mac Help.

Published Date: Feb 20, 2012

Mac OS 9: Custom Icons and File Synchronization Control Panel

This article provides important information about the File Synchronization control panel under Mac OS 9.

Note: This has been fixed in Mac OS 9.1.

This article has been archived and is no longer updated by Apple.
The File Synchronization control panel may not work properly if folders or volumes listed in the control panel window have custom icons.

To remove a custom icon from a folder or volume:

1. Select the icon on the desktop.
2. Choose Get Info from the File menu.
3. Select the icon in the upper-left corner of the window.
4. Choose Cut from the Edit menu.

Published Date: Feb 20, 2012

Mac OS 9: Setting Remote Access Server To Answer Calls

This article provides important information about Mac OS 9 and Apple Remote Access Personal Server.

This article has been archived and is no longer updated by Apple.
If using Apple Remote Access Personal Server and you perform a clean installation of Mac OS 9, the server may not answer incoming calls correctly the first time you restart the computer after the installation. Restart your computer a second time before using the Apple Remote Access Personal Server.

Published Date: Feb 20, 2012

Mac OS 9: Password Security Protects One Partition Only

Does the Password Security control panel protect my whole computer?

This article has been archived and is no longer updated by Apple.

You can use the Password Security control panel to require that a password be entered to start up your PowerBook. If you have formatted your internal hard disk so that it has more than one partition, only the startup partition will be password-protected. Additionally, if more than one partition has a System Folder, your computer may start up from a non-protected partition.

Published Date: Feb 20, 2012

Mac OS 9: PowerBook 3400/G3 Modem Extension and Ethernet

Should the PowerBook 3400/G3 Modem extension be installed on my PowerBook?

This article has been archived and is no longer updated by Apple.

In order to use your PowerBook 3400 or PowerBook G3 Ethernet port, you must have the PowerBook 3400/G3 Modem extension installed. This extension is installed by the Mac OS 9 Installer and should not be removed, even if other modem software is installed.

Published Date: Feb 20, 2012

Mac OS 9: The Control Strip and Zip Disks

The Expansion Bay control strip module may not show Zip disks.

This article has been archived and is no longer updated by Apple.

On some PowerBook models, Zip disks won't appear in the menu of the Expansion Bay control strip module, but they will appear on the desktop.

Published Date: Feb 20, 2012

Mac OS 9: Switching Between a LocalTalk Network and a Serial Printer

This article provides important information about printing with Mac OS 9.
This article has been archived and is no longer updated by Apple.
If you use the same port to alternately connect to a LocalTalk network and a serial printer, the port may not reset properly after you turn off AppleTalk to use the printer. If you have trouble printing after turning off AppleTalk, restart your computer.
Published Date: Feb 20, 2012

Mac OS 9: Reinstalling StyleWriter Printer Drivers

This article provides important information about printing with Mac OS 9.
This article has been archived and is no longer updated by Apple.
If you do a clean installation of Mac OS 9 and an icon for your printer is not available in the Chooser, you may need to reinstall the software that came with your printer.

- If you have a StyleWriter, StyleWriter II, or StyleWriter 1200, use the StyleWriter 1500 driver that comes with Mac OS 9 (instead of installing your original printer software).
- If you have a Color StyleWriter 2200 or 2400, install the Color StyleWriter 2500 driver that comes with Mac OS 9 (instead of installing your original printer software).

You may also need to reinstall fonts that came with your printer software. Follow the instructions that came with your printer software.

Note: If you have a Color StyleWriter 4100 or 4500 series be aware that Mac OS 9 does not include a compatible driver for these printers, and you should not install an older driver. For more information, see the following Knowledge Base article:

Article 60537: "**Mac OS 9: Color StyleWriter 4000 Series Requires Updated Driver.**"
Published Date: Feb 20, 2012

Mac OS 9: Multiple Users - Printer Access

This article provides important information about printing with Mac OS 9.
This article has been archived and is no longer updated by Apple.
Printers that do not appear on the desktop are not shown in the list of available printers in the Multiple Users control panel. To allow restricted users to use these printers, grant access to "all printers" or allow the users access to the Chooser.
Published Date: Feb 20, 2012

Mac OS 9: iMac Update 1.0 Is Not Necessary

This article provides important information installing Mac OS 9 on an iMac computer.
This article has been archived and is no longer updated by Apple.
The iMac Update 1.0 is not necessary for iMac computers with Mac OS 9. If you have the update, do not use it. Doing so may cause your computer to stop responding when it is restarted.

For more information, see Knowledge Base article:

Article 24969: "**Mac OS: Crash/Freeze Caused By Erroneous ROM File Update.**"
Published Date: Feb 20, 2012

Mac OS 9: Listening To Audio CDs

This article provides important information about listening to audio CDs with Mac OS 9.
This article has been archived and is no longer updated by Apple.
Newer Macintosh computers now use digital audio CD playback for increased fidelity and for improved compatibility with digital audio peripherals. On these computers, you no longer need to select the CD as the input source in the Sound control panel or Control Strip to listen to audio CDs. To record from a CD, you may need to select Internal CD as the audio source.
Published Date: Feb 20, 2012

Mac OS 9: Possible "Port in use" Error With Palm Desktop 2.5 Installed

This article provides important information about the "Port in use" error message that may appear when using Mac OS 9 with Palm Desktop 2.5 software installed.
This article has been archived and is no longer updated by Apple.

Symptom

When using Mac OS 9 with Palm Desktop 2.5 software installed, and setting up the Internet or American Online (AOL) connection, a "port in use" error message may appear.

Solution

1. Turn off the Palm Desktop HotSync.
2. Open HotSync Manager by selecting the Palm Desktop icon in the menu bar (next to the Applications menu).
3. Choose Setup from the HotSync menu.
4. If necessary, select the HotSync Controls tab.
5. In the HotSync section, click the button next to Disabled and deselect the checkbox titled: 'Enable HotSync software at system startup.'

To obtain the latest version of AOL software, connect to AOL and go to the keyword Upgrade.
Published Date: Feb 20, 2012

Mac OS 9: Pause With Password Security

I installed Mac OS 9.0 and now when I turn PowerBook Password Security on or off using the control panel, the cursor temporarily freezes for a couple of seconds. Is this normal?

This article has been archived and is no longer updated by Apple.

Yes, this is normal. When Password Security is turned on or off (and when the setup dialog is opened) it resets the ATA bus. As of Mac OS 9.0, the CD/DVD driver supports bus resets and so responds with a short delay. This won't happen if there is a disc in the CD-ROM drive and it doesn't happen on PowerBook G3 Series (Bronze) models. This does not affect the functionality of Password Security at all.

Published Date: Feb 20, 2012

Mac OS 9: PowerBook Doesn‘t Sleep With TCP/IP File Sharing Enabled

Under Mac OS 9, sometimes my PowerBook won't go to sleep after the time set in the Energy Saver control panel has elapsed. Why is this?
This article has been archived and is no longer updated by Apple.
If the following conditions are present, your PowerBook may not go to sleep automatically:

- File Sharing over TCP/IP is enabled
- File Sharing is on
- the PowerBook is on the Internet

You can put the PowerBook to sleep manually, however. The reason the PowerBook does not go to sleep automatically is because TCP/IP file sharing probes the computer name periodically, which can in turn reset the timer for automatic sleep.
Published Date: Feb 20, 2012

Mac OS 9: Using Software Update With VPN/Connection "Keep-Alive" Agents

This article describes the interaction between the Software Update feature (introduced in Mac OS 9) and certain "keep alive" Internet connection software.
This article has been archived and is no longer updated by Apple.

Symptom

After the Software Update control panel presents a list of updates and you click Install, nothing appears to happen and the updates are not installed.

Solution

Do not use the "Update software automatically" feature of the Software Update control panel if the use of a "keep alive" application is required to maintain your Internet connection. Follow these steps instead:

1. Click Update Now in the Software Update control panel.
2. Note the updates that Software Update lists.
3. Connect to the Apple Software Downloads site at http://www.apple.com/downloads/.
4. Download and install each update.

The Software Update feature quits all open applications as part of its preparation to install or update components. Some network connections require an active application to maintain the connection. Virtual Private Network (VPN) clients, and cable modem connections that require a "keep-alive" agent are usually instructed to quit by the Software Update mechanism thereby removing the means for the actual update to be performed. Provisions for several commonly known applications of this kind have been made in order for them to function with Software Update. However, VPN and cable modem authentication mechanisms often differ in their implementation and may require custom client applications. The Software Update mechanism may fail if such a custom application is required to obtain (and maintain) a network connection.
Published Date: Feb 20, 2012

Mac OS 9: Where is "Connect To..."?

The functionality of the Connect To applet has been integrated into the Network Browser application. This article explains how to access it, and how to create your own 'Connect To' applet.
This article has been archived and is no longer updated by Apple.
The "Connect To..." applet, which is included with Mac OS 8, is not installed with Mac OS 9. Its functionality has been integrated into the Network Browser application.

To connect to a specific URL, open the Network Browser from the Apple Menu and choose "Connect To Server" from the Shortcuts button.

If you still wish to use the Connect To... applet, you can copy it from a computer running Mac OS 8.x, or you can create your own Connect To... applet and even expand its capabilities using AppleScript.

Here are two example Applescripts (type option-L to produce a Â¬ character):

Example 1

```
display dialogÂ¬
       "Enter an internet address (URL) to connect to:" default answerÂ¬
       "http://www.apple.com/" buttons {"Cancel", "Connect"}Â¬
       default button "Connect"

set theURL to the text returned of the result
open location theURL
```

Example 2

```
choose URL
open location the result
```

You can save either of these scripts as a run-only application (set to never show startup screen) from the Script Editor application included with Mac OS 9. For more information about AppleScript, see Mac Help, or visit http://www.apple.com/applescript.

Published Date: Feb 20, 2012

AppleShare IP 6.3: Problems Accessing The Server Over TCP

This article provides troubleshooting information for AppleShare IP 6.3.
This article has been archived and is no longer updated by Apple.

If you can't access any services over TCP from any client computer:

- Check the settings in the server's TCP control panel. Make sure the IP address, subnet mask, router address, and Configure settings match those given to you by your network administrator. You can also check TCP settings by trying to connect to your Web site with a Web browser. If you can, TCP settings are correct.
- If the TCP settings appear to be correct:
  - Make sure Ethernet is working by checking the status lights on your Ethernet hub or switch.
  - Check to be sure routers are working by using software that can "ping" network devices. Pinging lets you check whether a network device (such as a router or a computer) is online. You can find out more about ping and other tools on the AppleShare IP Web site
  - If you have turned on TCP filtering using the TCP Filter Admin application but have not added any additional filters, all access to your server is denied by default. You need to do one of the following:
    - Turn off TCP filtering.
    - Add new filters to your filter list that allow access to computers that have the IP addresses you specify.

If only a few client computers can't access the server over TCP:

- Check the settings in the client computer's TCP/IP control panel. Make sure the IP address, subnet mask, router address, and Configure settings match those given to you by your network administrator.
- Make sure Ethernet is working by checking the status lights on the Ethernet hub or switch to which the client computer is connected.

Published Date: Feb 20, 2012

AppleShare IP 6.3: Problems Logging On Using Web-based Remote Admin

This article provides troubleshooting information for AppleShare IP 6.3.
This article has been archived and is no longer updated by Apple.
Web-based Remote Admin lets you use a Web browser to manage many of the AppleShare IP services.

If your password doesn't work:

- Your password must consist only of 7-bit characters (the standard ASCII character set). Use Mac OS Server Admin to change your password.
- If you use Netscape to log on to Web-based Remote Admin, use the Shift key, not the Caps Lock key to enter uppercase characters in a password.

If you are unable to connect through a Web browser:

- Make sure file services are running on the computer that's acting as your Web server.
- Make sure Web service is turned on.
- Make sure remote administration is enabled (in the General panel of the Web Server Settings window).
- Make sure you've entered the correct URL into your Web browser program (http://<your Web server's DNS name>/.admin)
- Make sure you've enabled your Web server plug-ins by selecting "Enable Plug-ins" in the Plug-Ins panel of the Web Server Settings window.
- If you've configured your Web server for a single domain, make sure the Remote Admin folder is located inside your default Web folder. If you move, rename, or delete the Remote Admin folder or its contents, you may not be able to connect.
- If you've configured your Web server to support multiple domains, you must move the Remote Admin folder from the default Web folder to the Web folder specified in the first entry of your Multi Domain Settings file. To access Remote Admin, you must use the DNS name or IP address specified in the first entry in the Multi Domain Settings file.
- Make sure you haven't set up TCP Filter Admin to restrict access to Web-based Remote Admin from your computer's IP address.
- Make sure your Web browser has Java enabled.
- Try quitting your browser program, then open it again and enter the URL for Web-based Remote Admin.

If you log on to Remote Admin and are asked to log on again:

- If you press the Reload button in your browser, you must log on again.

If you see a "404" error message:

- Reinstall the Remote Admin folder on your server.

If you see a "504" error message:

- Try adjusting the current file server activity to less than the maximum. The Remote Admin CGI may not be getting enough processing time.
- Try disabling any proxies in your browser and try again. There may be a network configuration error.

If you see an error message with no number:

- Make sure you've entered the correct URL and try again.

If you receive proxy timeout errors when you try to make changes using Web-based Remote Admin:

- Ask your proxy server administrator to give you Write access for the Web server.
- If this is not possible, then disable any proxies in your browser and select the option to connect directly to the Internet.

Published Date: Feb 20, 2012

AppleShare IP 6.3: Serial Number Issues

This article provides troubleshooting information for AppleShare IP 6.3.
This article has been archived and is no longer updated by Apple.
When you set up AppleShare IP, you need to provide the serial number on the sticker included with your AppleShare IP materials. You'll also need the serial number if you have to reinstall your computer's software, or if you're having problems with your serial number. A serial number looks similar to this:

A-111-BBB-222-CCC-333-DDD-444-EEE-555

Important: For convenience, your serial number comes printed on a small adhesive label. Don't put the adhesive label on a removable media disk. The label could come loose and damage the drive.

You've lost your serial number

If you lose your AppleShare IP serial number before you set up AppleShare IP, contact the appropriate Apple support representative in your area or contact AppleCare Technical Support to request a new serial number. You'll need to provide your identification and purchase information.

Displaying your serial number

If you lose your serial number after you start your AppleShare IP server, follow these steps to display your serial number:

1. Open Mac OS Server Admin and log on to the server you want to configure.
2. Click File Services.
3. Choose Configure File Server. Your serial number appears in the General panel.
4. Write down the serial number and store it in a safe place. Put a photocopy in another location, too.

You see "duplicate serial number" or conflict alerts

When the AppleShare IP server starts up, it checks your computer's network for other computers using the same serial number. If no matching number is found, your serial number is encrypted and registered on the network. If the AppleShare IP server detects a matching serial number, it displays a message. When you click OK, the server program quits.

If you have AppleShare IP 6.3.3, the Mac OS Server Admin modules do not load if a duplicate serial number is detected. An error message appears for each module (see Figure 1).

Figure 1 Error text generated by Mac OS Server Admin

Your computer may detect a duplicate serial number on the network if:

- An administrator typed the wrong number during setup.
- An administrator made a copy of an existing computer's Users & Groups Data File on another computer but did not type the new serial number for it.
- Someone else used your serial number in violation of the license agreement.

If you see the duplicate serial number message, try these suggestions:

- Be sure your serial number is correct. Follow the steps above to display your serial number, then check it against the number provided with your software.
- Find the computer with the incorrect serial number. Contact the administrator of the other computer as soon as possible. Ask that person to check the serial number for his or her software and make any needed corrections. If necessary, contact the administrator of your entire network for help in locating, checking, and correcting the serial number.
- Use network tracking and analysis software to locate the duplicate of your software.
- Your software can help locate the duplicate software. You need to convert the other computer's name and zone into an AppleTalk network address and use that address to find the computer's physical location on the network.
- Follow the network cables and check each computer. When you know the AppleTalk network address for the computer that is running the

duplicate software, identify the physical location of the network cable that matches the network address. This location will probably give you a good idea where the computer is located. If you still can't find the computer, follow the cable along its path, checking each attached computer to see if it's the duplicate. A network topology map may help you in your search.

- If you can't contact the other computer's administrator and you do not have network tracking and analysis software, see the Apple Software Service Directory that came with your AppleShare IP software for information about contacting the appropriate support representative for your area. Apple's support representatives will help you determine if a new serial number is needed. Be prepared to provide your identification and purchase information.
- After you've found the computer with the duplicate serial number, change the serial number to the correct one for that server, or purchase an additional license with a new serial number. Only a user who has administrative privileges can change the serial number.

Published Date: Feb 20, 2012

AppleShare IP 6.3: Unexpected Crashes or Shutdowns

This article provides troubleshooting information for AppleShare IP 6.3.
This article has been archived and is no longer updated by Apple.
If any of your servers stop working (the system "freezes" or locks up), or if any administration programs unexpectedly quit, try the following:

- Run Disk First Aid or another disk repair utility program that is compatible with the version of Mac OS on each of the server volumes.
- Verify that your software is compatible with the version of Mac OS on your server.
- If you have virus protection software installed, try removing or disabling the software.
- If you do not have virus protection software installed, use a virus-detection program or similar utility to check for viruses and other disk problems.
- Turn off extensions not supplied by Apple. Hold down the Space bar while restarting the server, then when the Extensions Manager opens, turn off extensions from other software manufacturers and let the startup continue. Restart the AppleShare IP servers you were using. If the problem doesn't recur, use the Extensions Manager to turn on one of the extensions. Restart the server and let it run for an extended period of time. If the problem doesn't recur, turn on the next extension, restart the server, and let it run. Eventually you may find an extension that seems to cause problems with your server. Leave that extension turned off.
- Make sure the invisible AppleShare PDS files are not damaged and reconstruct them if necessary. Each AppleShare IP volume contains an invisible AppleShare PDS file that retains folder access privileges. If you are unable to change the access privileges for a folder or volume, you can replace the damaged file with a backup copy.
- Verify that any PCI cards installed in your computer are properly installed (or "seated") in their slots. Make sure that the internal cables for PCI cards have no bent pins and are not being pinched. Replace the cables if necessary. For instructions, see the documentation that came with your server hardware.
- Verify that installed random-access memory (RAM) is properly seated. You may need to remove and reinstall the RAM. For instructions, see the documentation that came with your computer.
- Verify that your hardware and cables are properly connected. Make sure any SCSI devices are properly connected and that the SCSI cables do not exceed maximum cable lengths. For instructions, see the documentation that came with your computer and devices.

If the problem still exists:

1. Reinstall your AppleShare IP software following the instructions in the documentation that came with your software.
2. Make a backup copy of the PDS file after you've created your share points and assigned access privileges.

Published Date: Feb 20, 2012

AppleShare IP 6.3: A User Is Having Trouble Sending Mail

This article provides troubleshooting information for AppleShare IP 6.3.
This article has been archived and is no longer updated by Apple.

- If the mail is addressed to a user who connects to the same mail server, verify that mail is enabled for the addressee.
- Make sure that the user's e-mail application is properly configured for your network with the correct mail server name, e-mail address, and so on.
- Check the Mail Server Activity window. If the number of active users and the number of users sending mail is always high, there may be too many users trying to connect at the same time. Try allocating more memory to mail services.
- Make sure that there is enough free space on the volume where the mail database is located.
- Check the size of the mail the user is trying to send; the mail server may limit the size of messages. You can change incoming mail restrictions to allow larger messages to your server.
- Check the mail server log to see if there is a pattern of failed connections for the mail server.
- If the destination is a computer for which you provide DNS service, check the MX record on the DNS server. If you change the MX record, remember that DNS caches must be flushed before the change takes effect.
- Make sure SMTP mail is enabled on your server. The default SMTP port is 25. See Changing mail protocol settings.
- Make sure that the mail server and the user's computer are using the same DNS server. (The DNS server is specified in the TCP/IP control panel.) If they are using different DNS servers, make sure the MX records match on both DNS servers.

Published Date: Feb 20, 2012

AppleShare IP 6.3: A User Is Having Trouble Receiving Mail

This article provides troubleshooting information for AppleShare IP 6.3.
This article has been archived and is no longer updated by Apple.

- Check the user's e-mail address. If the user name contains spaces, then you must set up an Internet alias to use as the e-mail address.
- Make sure mail is enabled for the user and the user's mail is not set to be forwarded to another address.
- Make sure the DNS mail system is configured correctly by checking with your network administrator or Internet service provider. If you are using Mac DNS to provide DNS, check the MacDNS Administrator's Guide, in the MacDNS folder inside the AppleShare IP 6 folder on the server's hard disk.
- If the user's mail account is set up for an APOP-encrypted password, make sure that the user's mail application is also set up for APOP.
- If the user is having trouble receiving replies to mail that he or she sent, make sure that the user's e-mail address is correctly set up in the mail application's return information field.
- If you are sharing users and groups and have set up a user's mail account on a secondary server (by typing that server's DNS name in the Mail Account Location text box), make sure you've followed all of the steps to set up users and groups on a secondary server and to run the mail server on a secondary server. Then make sure the user's e-mail application is configured to log on to the correct server.

Published Date: Feb 20, 2012

AppleShare IP 6.3: Users Cannot Connect To The Mail Server

This article provides troubleshooting information for AppleShare IP 6.3.
This article has been archived and is no longer updated by Apple.

- Make sure the mail server is running. See Starting and stopping the mail server.
- Make sure the users' e-mail applications are properly configured for your network.
- Try allocating more memory to the mail server.
- If users are connecting to the mail server over TCP, check the connection between the user's computer and the server using a utility that allows you to "ping" the computer. (If users are connecting over AppleTalk, make sure they can see the mail server in the Chooser.) You can find out more about ping and other tools as well as troubleshooting here.
- Check the Mail Server Activity window. If the number of active users and the number of users sending mail is always high, too many users may be trying to connect at the same time.
- If other services are running on the same computer as the mail server, the server may be too busy. Consider adding more RAM to the computer or moving the mail server to another computer.
- If you are sharing users and groups and have set up a user's mail account on a secondary server (by typing that server's DNS name in the Mail Account Location text box), make sure you've set up the secondary server properly. Then make sure the user's e-mail application is configured to log on to the correct server.
- Make sure you haven't blocked access to the mail server's ports for these users using TCP Filter Admin.

Published Date: Feb 20, 2012

AppleShare IP 6.3: You Can‘t Attach a Printer To a Queue

This article provides troubleshooting information for AppleShare IP 6.3.
This article has been archived and is no longer updated by Apple.

- Someone may be using the printer. If so, wait for the job to finish printing. Use the print utility that came with the printer to check the printer's status.
- Make sure the printer has paper and is working properly (doesn't have a paper jam and is ready for printing).
- If you're printing over TCP/IP, make sure that the attached printer supports the LPD protocol (also referred to as LPR). See the documentation that came with your printer.
- Make sure the printer supports LaserWriter driver 8.4 or later.
- Try turning the printer off and on again.
- Make sure that the printer is visible on the network by looking for it in the Chooser (if it is connected over AppleTalk), or using a "pinging" utility (if it is connected over TCP/IP). If you can't find the printer, there's a problem with your network connections. Check the server's AppleTalk or TCP/IP settings, or ask your network administrator if there's a problem with the network.

Published Date: Feb 20, 2012

AppleShare IP 6.3: A Printer Can‘t Be Found

This article provides troubleshooting information for AppleShare IP 6.3.
This article has been archived and is no longer updated by Apple.
When a printer attached to a queue can't be found on the network, an alert icon appears next to the printer name in the Queue Monitor window. Take the following steps:

- If the printer is not printing a document, turn the printer off and then on again. Check the name of the printer on the startup page.
- If someone has changed the printer's name, rename it or attach the printer again under its new name. For information on renaming, see the documentation that came with your printer.
- If you're printing over TCP/IP, make sure that the attached printer supports the LPD protocol (also referred to as LPR). See the documentation that came with your printer.
- If you're printing over TCP/IP, check the printer's network connection using a "pinging" utility.
- After checking the above, try reattaching the printer to the queue.

Published Date: Feb 20, 2012

AppleShare IP 6.3: A Document Can‘t Be Queued

This article provides troubleshooting information for AppleShare IP 6.3.
This article has been archived and is no longer updated by Apple.
If a user receives a message that a document can't be queued, or if a document can't be sent to the print server, check the following:

- Make sure the user is printing to a print server queue. Print queues are listed in the Chooser (for AppleTalk connections), the printer-selecting software (for Windows users), and the Desktop Printer Utility (for TCP/IP connections).
- Check the print server log for errors.
- Verify that the disk on which the print server stores jobs is not full.
- Make sure that Enable Queuing is selected, and that AppleTalk and TCP/IP printing are enabled for the queue.
- If users are trying to print to a queue that contains an older printer, check the print queue settings to make sure "Allow binary data" is not selected.
- If only Windows clients can't print, make sure the LPR/LPD settings in the Windows printing utility are correct. Also make sure the IP address and queue name are entered properly. The queue name is case-sensitive; however, the Windows client may show the name in all caps.
- If you've limited who can print to a queue, make sure that the user has been given printing access and that the printer driver installed on his or her computer allows secure printing. (The Desktop Printer Utility, for example, does not allow secure printing.) Make sure the user types the user name and password you've assigned (check the File Sharing control panel on the user's computer). Check the Security menu in the Print dialog box to see if a different name has been saved as default.
- If users are trying to print to a queue over TCP/IP, make sure printing over TCP/IP is enabled in the Protocol panel of the Print Server Settings window. Also, make sure that the server's TCP/IP settings are correct.
- If users are trying to print over TCP/IP and they've entered the DNS name of the print server into their TCP/IP utility, DNS may not be working. Try entering the IP address instead. Make sure the queue name does not include any spaces and case is correct.
- If only one person has reported problems printing, see if you can print from another user's computer. If you can, there may be problems with the first user's TCP/IP or AppleTalk settings. If multiple users cannot print, check whether the users have other file sharing or TCP/IP services available. If not, there may be a problem with your network.
- On the user's computer, try printing from another application. The problem may be related to the application or document.
- Try printing directly to the printer, or to a different printer or queue.
- If the print server's queues aren't listed in the Chooser or other printer-selecting software, check your network connections. Refer to the documentation for your networking hardware and software to answer any questions about setting up and solving problems with the network.

Published Date: Feb 20, 2012

AppleShare IP 6.3: A Document Can‘t Be Printed

This article provides troubleshooting information for AppleShare IP 6.3.
This article has been archived and is no longer updated by Apple.

- The PostScript printer description (PPD) file for the queue may be inappropriate for the document. For each queue, the print server uses the PPD file for the first printer attached to the queue. If you attach subsequent printers that have different capabilities, documents that require those capabilities may not print, even when they are assigned to the correct printer. Create a separate queue for the printer you want to print to and try printing again.
- Check the Queue Monitor for the queue to make sure the print job is not on hold.
- If no other printer is available, make an attached printer visible on the network. Have the user print directly on the printer by selecting its name in the Chooser or in the printer-selecting software (for Windows).
- If the user is printing binary data, make sure that the "Allow binary data" checkbox is selected in the General panel of the Print Queue settings window and that the printer supports printing binary data. Some older printers don't support printing binary data.
- If the user still can't print the document, consult the manual that came with the printer and the documentation that came with the program.

Published Date: Feb 20, 2012

AppleShare IP 6.3: About Sharing, Share Points, and Access Privileges

This article provides troubleshooting information for AppleShare IP 6.3.
This article has been archived and is no longer updated by Apple.

About sharing and share points

A shared item is a document, folder, or disk that can be accessed by users who connect to the file server. You determine which users can access the item and how they can use it.

A share point is a folder, hard disk, or CD-ROM disc that contains shared items. Items in a share point by default have the same access privileges as the share point, but you can give them different access privileges if you wish.

You cannot have a share point within a share point. See the illustration:

Figure 1, Share point folder diagram

About access privileges

You can assign three levels of user access privileges to a share point or shared item. Access privileges determine what users can do with a shared item. Access privileges apply to all users except AppleShare IP administrators.

Adopted versus explicit access privileges:
By default, a folder within a share point or shared item "adopts" access privileges of the enclosing share point or shared items. If you move the folder, its access privileges change to match the new location.

You can also assign "explicit" access privileges to a folder. When you move a folder that has explicit access privileges, its access privileges stay the same. See the illustration:

Figure 2, Access privileges illustration

Access privileges you can assign:

You can assign the following access privileges to a shared item:

- Read & Write privileges allow a user to open a disk or folder and see, open, copy, delete, move, create, and change the files inside.
- Read Only privileges allow a user to open a disk or folder and see, open, and copy the folders and files inside (but not move or change them).
- Write Only privileges allow a user to put items into the shared area but not see or use any items inside (an item with Write Only privileges is also known as a drop box).
- None: If no privileges are assigned, the user cannot open the item, see or change its contents, or add content.

How access privileges appear to users:
How access privileges appear to a user depends on the version of operating system software on the user's computer.

Windows file sharing users can set folder properties, but not privileges.

Users of AppleShare Client software or Mac OS 8.0 or later can set access privileges for folders they own using the Sharing command in the Finder's File menu. When users of earlier versions of system software set privileges, the file server translates them as follows:

User setting	Privileges
See folders, See files, Make changes	Read & Write
See folders, See files	Read
See folders, Make changes	Write Only
Make changes	Write Only

See files, Make changes	None
See folders	None
See files	None

About user categories

You assign access privileges separately to three user categories:

Owner

The administrator (owner of the computer running AppleShare IP) by default owns all volumes and folders and has Read & Write access to all shared items on the computer running AppleShare IP.

A user who creates a new folder on the file server is its default owner. The folder inherits the privileges of the enclosing folder (unless the administrator changes the privileges settings).

The owner of an item is the only user who can change its access privileges.

User/Group

One user or one group can be assigned special access privileges for a shared item.

Everyone

All users who can log on to the file server: registered users, guests, anonymous FTP users, and Web visitors.

If a user is included in more than one category, the following rules apply:

Owner privileges override User/Group privileges.

User/Group privileges override Everyone privileges.

For example, when a user is both the owner of a shared item and a member of the group assigned to it, the user has owner access.
Published Date: Feb 20, 2012

AppleShare IP 6.3: Users Can‘t Connect To Your Web Site

This article provides troubleshooting information for AppleShare IP 6.3.
This article has been archived and is no longer updated by Apple.

- Make sure that the Web server is turned on.
- Make sure that the correct folder is selected as the default Web folder. Make sure that the correct HTML file is selected as the default document page.
- For the default Web folder, make sure that Read Only access privileges are assigned to the Everyone category.
- Verify that users' computers are configured correctly for TCP. Check each user's TCP/IP control panel. If there doesn't appear to be a problem with the TCP/IP settings, use a "pinging" utility that allows you to check network connections.
- Verify that the problem is not a DNS problem by trying to connect with the IP address of the Web server instead of its DNS name.
- Make sure users are entering the correct URL to connect to the Web server.
- Make sure your DNS server's entry for the Web server's IP address and domain name are correct.
- If you have set up multiple Web sites, make sure you have configured the Multi Domain Settings file correctly and performed any other necessary steps.
- If your Web site is restricted to specific users, make sure those users have access privileges to your Web site.
- Make sure your Web site is available on the Internet.
- If users see a Java error and use Internet Explorer, tell them to make sure that Java Virtual Machine is selected in the Java section of the Internet Explorer Preferences window.

Published Date: Feb 20, 2012

Mac OS 9: File Sharing Security

This document gives tips for sharing files securely in Mac OS 9.
This article has been archived and is no longer updated by Apple.
You should make good security decisions when sharing your files, whether it be via AppleTalk on a local area network (LAN) or on the Internet (TCP/IP). Keep the following in mind no matter which networking protocol you choose to use:

- Choose good user names and passwords that include alphanumeric characters.
- Do not share your entire startup disk. Rather, share folders that are necessary or a secondary disk that is dedicated to storage.
- Encrypt sensitive files using the Encrypt command in the Finder's File menu.
- When setting privileges, be careful about what you allow guests to access on your computer. If at any time you wish to disable guest access, use these steps:
    1. Open the File Sharing control panel.
    2. Click on the Users & Groups tab.
    3. Click the user "Guest" then click Open.
    4. Choose Sharing from the Show pop-up menu.
    5. Make sure "Allow guests to connect to this computer" is **not** checked.

Published Date: Feb 20, 2012

Mac OS 9: RAM Disk Considerations When Installing On Computers With 32MB RAM

An issue can occur when doing an upgrade install of Mac OS 9 from Mac OS 8.1, 8.5 or 8.6 on a computer with minimal RAM.
This article has been archived and is no longer updated by Apple.
If you have a computer with the minimum 32 megabytes of RAM and also have a large RAM disk defined, say 75 percent of available memory, then Mac OS 9 will freeze or behave strangely upon restarting after upgrading.

The computer will start up and then either freeze at the Happy Mac or display a grey screen and freeze. The dedicated RAM disk does not leave enough memory for Mac OS 9 to run. It's possible to recover from the startup freeze by restarting and resetting PRAM.

This issue can be avoided by reducing the size of the RAM disk before installing Mac OS 9. Larger memory configurations should not encounter this situation.
Published Date: Feb 20, 2012

Mac OS 9: File Sharing Over TCP/IP Requires AppleTalk To Be Active

This article explains why AppleTalk must be active even when trying to perform file sharing using TCP/IP.
This article has been archived and is no longer updated by Apple.
AppleTalk must be active to use the implementation of TCP/IP filesharing included with Mac OS 9. If you do not want AppleTalk active over your network connection, you can set the AppleTalk control panel to another port such as "Remote Only."
Published Date: Feb 20, 2012

Mac OS 9: Where Is The Monitors & Sound Control Panel?

After installing Mac OS 9, I can no longer find the Monitors & Sound control panel.
This article has been archived and is no longer updated by Apple.
As of Mac OS 9, the Monitors & Sound control panel has been replaced with two separate control panels: The Monitors control panel and the Sound control panel.

Note: If you have an AppleVision AV or AudioVision monitor, the controls for the speakers built-into your monitor are located in the Monitors control panel (click on the Monitor Sound button).
Published Date: Feb 20, 2012

Mac OS 9: Multiple Users - Rebuilding The Desktop File

I'm trying to rebuild the Desktop, by holding down Command-Option as the Finder opens, but the keys seem to be ignored.
This article has been archived and is no longer updated by Apple.
This can happen if Multiple Users is enabled and a limited Finder account is being used instead of a owner Finder account.

The simple way to recognize that Multiple Users is enabled is that either a login screen is present, or for a logged in user that the Special menu has a Logout command as the last choice. Note that only the computer's owner user can disable Multiple Users.

To rebuild the desktop under Multiple Users you must log in as a normal Finder account (it does not have to be the owner), and then hold down the Command-Option after entering the password, either by voice or by typing. You will then receive the usual message "Are you sure you want to rebuild the desktop file on the disk 'Macintosh HD'?"
Published Date: Feb 20, 2012

Mac OS 9: No Error When Software Update Can‘t Quit Applications

When the Software Update control panel says there is an update, and I ask it to install it, the control panel hangs when trying to quit other applications.

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Software Update first tries to quit all non-background applications, by bringing them to the foreground and sending them a quit request (AppleEvent). Software Update then waits until the application quits. If after waiting for a period of time the requested application has not terminated, Software Update assumes there is some problem or delay in quitting the application, and it terminates the update action without issuing any message. Software Update will likely be the frontmost application after this has happened.

To workaround this, quit all applications, responding to save document dialogs as necessary. When all applications have quit, then initiate the Software Update operation.

Published Date: Feb 20, 2012

Mac OS 9: Netscape Will Not Open

An alert with one of the following messages when you open Netscape Communicator:

"The application Netscape Communicator has unexpectedly quit, because an update to this software is required for compatibility with the improved Mac OS file system"

- or -

"An Error of Type -119 occurred."

This article has been archived and is no longer updated by Apple.

Symptom

An alert with one of the following messages when you open Netscape Communicator:

> "The application Netscape Communicator has unexpectedly quit, because an update to this software is required for compatibility with the improved Mac OS file system"

- or -

> "An Error of Type -119 occurred."

Solution

Remove the Talkback folder from the Netscape folder.

For more information about this error message and Mac OS 9 compatibility, see article 60533: "**Mac OS 9: Application Quits 'Because An Update Is Required.**"

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"

Published Date: Feb 20, 2012

Mac OS 9: Multiple Users - Microsoft Applications Won‘t Launch

I have set up a number of panels users and have noticed that when they open Internet Explorer 4.5, the computer will not open the application or will sometimes appear to be frozen. What can I do to prevent this?
This article has been archived and is no longer updated by Apple.
Some Microsoft applications, including Internet Explorer 4.5 and Office 98 components, will open an installer or self-repair application the first time they are run. This application will in turn attempt to place items in the System Folder, to which the user may not have access privileges. When setting up multiple users it is also likely that you gave the user access to the Microsoft application you wanted the user to be able to run, but did not give the user access to the Microsoft First Run application.

To avoid this issue, launch any applications such as Internet Explorer, Excel, Word and PowerPoint at least once from the owner environment before giving a Limited or Panels user access to that application.

This issue is not limited to only Microsoft applications, but can happen with any program that uses a similar installation method. It is a good idea to install applications from the Owner environment and to make sure each application runs correctly in the owner environment before giving other users access to the application.

For additional guidelines on setting up a Multiple Users environment, refer to Mac Help from the Help menu.
Published Date: Feb 20, 2012

Mac OS 9: DVD Player Will Not Play After Clean Installation

I installed Mac OS 9 on my Power Mac G4 and now it will not play any DVD movies.

This article has been archived and is no longer updated by Apple.

Apple DVD Software 2.0 Available

Some Power Macintosh G4 and iMac computers shipped with Apple DVD 2.0 Beta 2 software. A final release of Apple DVD Software 2.0 is available from Apple Software Updates sites. We strongly recommend updating to the final 2.0 version available from the Apple Software Updates Web site at http://www.apple.com/swupdates.

If You Are Using Apple DVD 2.0 Beta 2 Software

On Power Macintosh G4 and iMac computers that shipped with Apple DVD 2.0 Beta 2, performing a clean installation of Mac OS 9 can result in the Apple DVD Player not working. Instead, you are presented with the message:

> The application "Apple DVD Player" could not be opened because "DVDRuntimeLib" could not be found.

If you do not update to the final release of the software (as mentioned above), you can solve the issue by dragging the DVD components in the previous Extensions folder over to the new Extensions folder and restarting. Follow these steps:

1. Open the Previous System Folder on your hard drive. This was the active System Folder before performing the clean installation.
2. Open the Extensions folder within the Previous System Folder.
3. Select "as List" from the View menu so that the items are in alphabetical order.
4. Option-drag (hold down the Option key while dragging) the following items from the old Extensions folder (the one within the Previous System Folder) onto the current, closed System Folder. The files will be auto-routed to the correct folder within. (Avoid lingering over the System Folder while dragging or Mac OS spring loaded folder facility may open the folder):
   - DVD Navigation Manager
   - DVD Region Manager
   - DVDRunTimeLib
5. Restart the computer.

The Apple DVD Player should now function properly.

If you have initialized your computer's hard disk, or have erased the Previous System Folder that was created during the clean installation, you will not be able to follow the steps outlined above. However, a disk image of your computer's hard disk as it was shipped from the factory is located on the CD (disc) that came with your computer. By mounting that hard disk image, you can drag the necessary files from its System Folder to your Mac OS 9 System Folder. Follow these steps:

1. Insert the Power Mac G4 or iMac Restore CD that came with your computer.
2. Open the Configurations folder located on the disc.
3. Double-click the "Power Mac G4 HD.img" or "iMac HD.img" file. Accept the agreement and wait for the progress bar to complete.
4. Locate on the Desktop an icon that looks like floppy disk titled Macintosh HD.
5. Double-click this icon, locate the System Folder.
6. Drag the following items from the disk image's Extensions folder to the current, closed System Folder on your computer's hard disk:
   - DVD Navigation Manager
   - DVD Region Manager
   - DVDRunTimeLib
7. Open the Applications folder on the disk image.
8. Drag the "Apple DVD Player" folder to the Applications folder on your hard drive, replacing the old one.
9. Restart.

The Apple DVD Player should now function properly.

If you use the Extensions Manager to use the "Mac OS 9.0 All" or "Mac OS 9.0 Base" extension sets, DVD video will not work. You must also enable the three DVD extensions in the Extensions folder.

Note: In Mac OS 9, the Apple DVD Player is no longer listed in the Apple menu. It can be found in the Applications folder. You can put an alias to the Apple DVD Player in the Apple Menu Items folder if you wish. Apple DVD Player 2.0 is required to view DVD movies on these computers. If an earlier version is in the Application folder, then you will have to install it as well. Do this by moving the newer player over from the hard drive image in the Configurations folder on the Restore CD.

Update Using AppleScript

This AppleScript can update your new system folder using the components from the Previous System Folder.

1. Open the Launcher control Panel and click the Script Editor button.
2. Paste the following AppleScript into a new Script Editor window and run it:

--- Copy the following --

```
tell application "Finder"

set BootDrive to name of startup disk
set SysFldr to system folder as text
set ExtFldr to SysFldr & "Extensions:" as text
set DVDExists to every file in folder ExtFldr whose name starts with "DVD"

-- Are DVD files already installed?
if DVDExists is not {} then
set DVDInstalled to "Apple DVD Software is already installed"
display dialog DVDInstalled buttons {"OK"} with icon note

else
set PrvSysFldr to BootDrive & ":Previous System Folder:" as string

-- the previous System Folder still around?
if folder PrvSysFldr exists then
set PrevExtFldr to (PrvSysFldr & "Extensions:" as text) -- yes
else
-- locate it
choose folder with prompt "Locate your previous System Folder"
set PrvSysFldr to the result as text
set PrevExtFldr to PrvSysFldr & "Extensions:" as text
end if

--copy the old extensions to the new System Folder
select (every file of folder PrevExtFldr whose name starts with "DVD")
duplicate the selection to system folder

--copy the AMI item to the new Apple Menu Items folder
set PrevAMIFldr to PrvSysFldr & "Apple Menu Items:" as text
duplicate file "Apple DVD Player" of folder PrevAMIFldr to ¬
folder "Apple Menu Items" of system folder with replacing
set RestartMsg to ¬
"You need to restart to enable usage of the Apple DVD Player."
display dialog RestartMsg buttons "OK" default button 1 with icon caution

end if
end tell
```

-- End Selection and paste this into your Script Editor --

This AppleScript will copy the necessary Extensions and the alias for Apple Menu as well. It will tell you whether the files appear to have already been copied (if you have done it manually or run the script once already). If the Previous System Folder has already been removed, it can also be used to locate the System Folder on the mounted disk image from the secondary recovery method above and copy the files from there.

Note: This AppleScript has been compiled and is available at:

ftp://ftp.info.apple.com/Apple_Support_Area/Apple_Software_Updates/English-North_American/Macintosh/Misc/AppleScript/Install_DVD_SW.bin

Published Date: Feb 20, 2012

Mac OS 9: Why Does The Sound Control Panel Show Headphones Attached?

Why does the Speaker Setup portion of the Sound control panel show headphones attached when I have no headphones hooked up to my computer?
This article has been archived and is no longer updated by Apple.
Under Mac OS 9, the Sound control panel has several new aspects to it, one being the ability to check your speaker setup when you have either headphones or speakers plugged into the speaker port.

The picture of the headphones is a representation for any device connected to the speaker port of the computer. The Sound control panel will always show the headphones picture no matter what device you have plugged into the speaker port.

The same does not hold true for speakers hooked up to the USB port. For example, the speaker setup will not only see USB speakers but it also has the ability to see USB sub-woofers, if they are attached.
Published Date: Feb 20, 2012

Mac OS 9: Update Firmware Before Installing

When trying to update to Mac OS 9 I receive a message during installation that the computer's firmware is out of date. However, when I try to update the firmware I receive a message that I cannot do this because my System Folder is locked. What should I do?
This article has been archived and is no longer updated by Apple.
Possible solution:

You must install the firmware update before installing Mac OS 9.

1. Start up the computer from its hard disk (not from the Mac OS 9 Install CD).
2. Follow the instructions for updating your firmware in the CD Extras folder on your Mac OS CD.
3. After the computer's firmware has been updated, start up the computer from the Mac OS 9 Install CD and proceed with the installation.

When you update the firmware, certain modifications are made to the System Folder. When your computer is started up from the Mac OS 9 install disc, the firmware program is unable to make those modifications because the disc is locked.
Published Date: Feb 20, 2012

Mac OS 9: Is Compatible With MacPoET 1.1

MacPoET 1.1, software that provides PPP over Ethernet (PPPoE), is compatible with Mac OS 9.

This article has been archived and is no longer updated by Apple.
MacPoET 1.1, software that provides PPP over Ethernet (PPPoE), is compatible with Mac OS 9. Only your Internet Service Provider (ISP) can provide the software to you. If you are using an earlier version of MacPoET, contact your ISP for an update.

Note: This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"

Published Date: Feb 20, 2012

Mac OS 9: No Sound From Apple Video Player

I'm trying to use Apple Video Player to watch TV using Mac OS 9, but I can't hear anything.
This article has been archived and is no longer updated by Apple.
Possible solution:

You need to set the input source before opening the Apple Video Player application. To do this, choose the sound input setting you wish to monitor from the sound input control strip (such as tv/cd/video), then open the Apple Video Player application. Now, you should be able to hear the sound that accompanies the video signal.
Published Date: Feb 20, 2012

Mac OS 9: Multiple Users - Startup Items Folder Is Not Configurable By Restricted Users

As a restricted (limited or panels) user, I cannot configure my own Startup Items folder or Shutdown Items folder.
This article has been archived and is no longer updated by Apple.
This is a design limitation in the first release of Multiple Users. Normal users can configure their Startup Items folder and Shutdown Items folder. Only the Owner can configure the Startup Items folder and Shutdown Items folder for Limited and Panels user accounts.

Examples of situations of where this will be noticed are:

- The Startup Items / Shutdown Items folder, when opened, will have the No-Write access icon shown in the Finder window, preventing any changes by Limited or Panels users.
- The General Controls Control Panel fails, with no error message, to create an alias to the Launcher for Normal or Limited users. The Owner can configure Launcher startup through General Controls. Normal Users can work around this situation by creating an alias of the Launcher in their Startup Items folder (which is inside the User's Folder). Limited users will need the Owner to create an alias of the Launcher in their Startup Items folder (which is inside the User's Folder). Panels users cannot use the Launcher, because it has Finder dependencies.
- Stickies fails with an informative error message (-5000) when trying to create an alias in the Startup Items. This error will occur for Limited and Panels users only. Restricted (Limited or Panels) users who would like Stickies to appear on startup, need the Owner to create an alias to Stickies in their Startup Items folder (which is inside the User's Folder)

Note: Stickies application will successfully access the Startup Items folder when used in conjunction with Multiple Users 1.4.1.

Tip: For the Owner's convenience, if File Sharing is active, the creation and deletion of aliases could be accomplished by accessing the volume over a network to create and remove aliases in the Startup Items folder or Shutdown Items folder for restricted users.

Apple plans to remove this limitation in a future update of Multiple Users for Mac OS 9.

Published Date: Feb 20, 2012

Mac OS 9: USB Adapter Card Support

I've installed Mac OS 9, but am now unable to use a PCI USB adapter card in my Power Macintosh. The vendor of my adapter card(s) has referred me to Apple.
This article has been archived and is no longer updated by Apple.
In some instances it may be necessary to re-install the latest version of USB Adapter Card Support after installing Mac OS 9 in order to restore function for USB PCI Adapter cards.

The latest version of USB Adapter Card Support can be obtained from the Apple Software Updates Web site at http://www.apple.com/swupdates.
Published Date: Feb 20, 2012

Mac OS 9: Hard Disk "Unrecognized" Message When Starting Up From Mac OS 9 CD

When installing Mac OS 9 by starting up from the Mac OS 9 CD, some hard disks behave as if they are damaged and unreadable, when in fact they are not. This article describes the exact symptom and offers the solution.
This article has been archived and is no longer updated by Apple.

Symptom

When starting up from the Mac OS 9 Installation CD (by pressing the 'c' key during startup), a dialog box may appear stating that the computer's hard disk is unrecognizable and asks if you would like to initialize (erase) it.

Products Affected

- Any version of Mac OS 9

Solution

Apple has identified an issue with a limited number of hard disks that result in this message when starting up from the Mac OS 9 CD. The files and directory structure on these drives are not modified or damaged in any way. To resolve the situation:

1. Click Cancel in the dialog box.
2. Restart from hard disk, making sure the Mac OS 9 CD is still in the computer.
3. Open the Startup Disk control panel and select the Mac OS 9 CD. See Figure 1.
4. Close the Startup Disk control panel.
5. Restart the computer with the Mac OS 9 CD, and proceed with the Mac OS 9 installation.

Since the Mac OS 9 CD has been selected as the startup volume the "c" key should not be pressed at startup. After installing Mac OS 9 you should open the Startup Disk control panel and select the internal hard disk as the startup volume.

Figure 1 Startup Disk control panel showing Mac OS 9 CD selected as startup disk.

Published Date: Feb 20, 2012

Mac OS 9: Includes Battery Updater Functionality

Do I need to install the Battery Reset 2.0 software on my iBook or PowerBook G3 Series computer if I am running Mac OS 9?
This article has been archived and is no longer updated by Apple.
Although you will not see the Battery Updater file in the Extensions folder, Mac OS 9 includes the functionality of the Battery Updater 1.0 extension installed by the Battery Reset 2.0 software. For iBook owners with Mac OS 9 installed this means there is no reason to install the Battery Reset 2.0 software. The same holds true for PowerBook (FireWire) owners.

PowerBook G3 Series owners with Mac OS 9 installed may still want to install the Battery Reset 2.0 software to get the Battery Reset application. This application will reset a battery which may have been damaged in a certain way. The Battery Reset application is not needed, and will not work on an iBook or PowerBook (FireWire) computer.
Published Date: Feb 20, 2012

Mac OS 9: HP DeskWriter 600 Series Requires Updated Driver

Can I use my HP DeskWriter 600 series printer with Mac OS 9?
This article has been archived and is no longer updated by Apple.
Hewlett-Packard DeskWriter 600 Series printers (and certain HP DeskJet printers) require an updated printer driver for use with Mac OS 9.

Hewlett-Packard has published this statement regarding the update:

DeskJet and DeskWriter Driver Patch Application for v.9.4.0 and v.9.4.1

You should apply this driver updater if you are using Mac OS 9 with one of the printers listed below. Do not apply if your current operating system is not Mac OS 9. This program is designed to perform updates to versions 9.4.0 and 9.4.1 of the DeskJet printer driver for Mac OS.

When it is run, this program will perform the following driver updates:

1. *Serial drivers for DeskWriter 600, 660, 680 and 690 series; v.9.4.1 updated to v.9.4.3.*
2. *AppleTalk (AT) drivers for DeskWriter 600, 660, 680 and 690 series; v.9.4.1 updated to v.9.4.3*
3. *Serial drivers for DeskJet 850, 855 and 870 series; v.9.4.0 updated to v.9.4.2*
4. *AppleTalk (AT) drivers for DeskJet 850, 855 and 870 series; v.9.4.0 updated to v.9.4.2*

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Published Date: Feb 20, 2012

Macintosh Manager 1.2: Read Me

This article comprises the Read Me for Macintosh Manager version 1.2. This software was released by Apple on 06 January 2000.
This article has been archived and is no longer updated by Apple.
Note: Any reference to "Mac OS X Server" in this article pertains to Mac OS X Server versions 1.2.x, which were released prior to May 2001.

About Macintosh Manager 1.2

Macintosh Manager 1.2 is intended to be used with client computers that have Mac OS 8.1 or later (including Mac OS 9) installed. Macintosh Manager 1.2 does not include the server process necessary to run Macintosh Manager. You should use the Macintosh Management Server 1.2 software that came with Macintosh Manager 1.1 for Mac OS X Server 1.2, or the Macintosh Management Server 1.2 software for an AppleShare IP 6.3 server, available on the Apple Software Updates web site (http://www.apple.com/swupdates).

IMPORTANT If you are using Macintosh Manager 1.1 (which is preinstalled on Mac OS 9 systems), it is recommended (though not necessary) that you update your client computers to version 1.2 to take advantage of bug fixes included in this version.

What's New in Macintosh Manager 1.2

- Support for Mac OS 8.1 or later systems, including new options in the administration program.
- Fixes for some known problems. For a list of corrected problems, see "Major Problems Fixed in Version 1.2," at the end of this document.

If you are using Mac OS 9, you will also notice these changes.

- *User preferences:* Mac OS 9 now manages user preferences and stores them on the workgroup data volume, which, by default, is the Macintosh Manager server volume. Unlike previous versions of Macintosh Manager, Mac OS 9 can use the preferences for a user stored on the server without having to copy them to the client computer. Because preferences do not have to be copied between the server and the client workstation, users should be able to log in faster.
- *Desktop items:* Mac OS 9 saves the folder for desktop items only on the local volume and not on the server volume. Therefore, if users place items on the desktop, they must log in to the same computer to access those items. On netboot systems, instruct users not to place items on the desktop because all client image changes are erased any time the netboot server restarts.
- *Keychains:* Macintosh Manager creates a keychain for users when they log in the first time. When users log in using their Macintosh Manager password, the keychain unlocks. If a user or the administrator changes the user's password, Macintosh Manager does not update the keychain to the new password and the user's keychain may not unlock when logging in. To unlock the keychain and use its services, use the Keychain Access control panel.
- *Application preferences:* Because Mac OS 9 manages preferences, you can no longer add or remove specific preferences for applications. If an application does not save its preferences in the Preferences folder (in the System Folder), you may not be able to save individual preferences for each user. Contact the application developer to determine if an update is available.
- *User documents:* Macintosh Manager now saves user documents in a folder with the user's name in the Users folder on the workgroup data volume sharepoint.
- *Login dialog:* For security reasons, if you choose "Users choose their name from a list" in the Macintosh Manager administration program and "Users type their names" in the Multiple Users control panel, users must type their user name to log in.
- *Multiple Users control panel:* Macintosh Manager does not support some features in the Multiple Users control panel in Mac OS 9, including alternate passwords, user pictures, automatically detecting recently installed applications, and allowing users to let other users view their documents folders.

Installing Macintosh Manager 1.2

IMPORTANT You should use the Macintosh Manager administration program to set up your users and workgroups before installing the client software.

The Macintosh Manager software has three components:

- a server process, either Mac OS X or AppleShare IP 6.3
- an administration application installed on the administrator's workstation
- client software installed on each computer you want to manage with Macintosh Manager

The Macintosh Management Server process is *not* included in this update. The Macintosh Management Server 1.2 server process for use with a Mac OS X server is available with the Mac OS X Server 1.2 product. The Macintosh Management Server 1.2 server process for use with an AppleShare IP 6.3 server is available on the Apple Software Updates Web site: http://www.apple.com/swupdates.

In addition to the Macintosh Manager components, when you install the client software on pre-Mac OS 9 clients, a new shared library called NavSecurityLib is also installed. The library is only active on computers with Mac OS 8.5 to 8.6.

There are several ways of updating your client computers to use this new version of Macintosh Manager:

- Use the Installer to update each individual workstation.
- Use Network Assistant to copy the appropriate files to client workstations.
- If you already have Macintosh Manager 1.1 on client workstations, use the new auto-update feature that is now part of the client software. For instructions on using the auto-update feature, see "Using the Update Package," later in this document.

If you are updating a specific client workstation from Macintosh Manager 1.0 or 1.1 to version 1.2, you should run the Installer application on the client computer to update your software.

If you run the Installer on a Mac OS 9 system, you will also be given the option of installing the administration application on your workstation.

Turning On Macintosh Manager 1.2

On Mac OS 9 client computers, follow these steps to turn on Macintosh Manager 1.2:

1. Open the Multiple Users control panel.
2. Click On for the Multiple User Accounts option.
3. Click the Options button to open the Options window.
4. Click the Other tab.
5. Select the "Macintosh Manager account (on network)" radio button.
6. Click Save and then close the Multiple User control panel to save changes.
7. Restart or log out (Command-Q) from the Finder to enter the Macintosh Manager login screen.

Using Network Assistant to Turn On Macintosh Manager

If you have Network Assistant client software set up on your client computer, you can use the Network Assistant administration program to update a group of workstations quickly. To do so, follow these steps:

1. On one client computer, follow the steps described above to set up the client to select its accounts from Macintosh Manager. **IMPORTANT** Do not restart or log out yet.
2. Open the Network Assistant administration program and select the computers you want to update.
3. Open the Manage menu and choose Copy Items.
4. Type "Multi-User Prefs" in the text box and click Find. Select the file in the list and click Copy. The file is in the Preferences folder (in the System Folder) and contains the information that indicates where the client should find its accounts.
5. Open the Manage menu and choose Restart to restart the client computers.

On Mac OS 8.x client computers, you only need to restart your computers once the software has been installed. The Macintosh Manager 1.2 software will automatically scan for the Macintosh Manager server.

Using the Update Package

If you are using Macintosh Manager 1.1 on your client computers, you can use the auto-update package, instead of the Installer, to upgrade your clients to this version of Macintosh Manager. To do this, your client computers must be properly configured and running Macintosh Manager 1.1.

To use the auto-update package, do the following:

1. Open the Macintosh Manager 1.2 Installer disk image and locate the "MM Update Package" file, which should be inside the Update Package folder.
2. Copy the "MM Client Package" file to the top level of your Multi-User Items folder *on the server.* This folder should be located inside the Macintosh Manager share point on the server.

Client workstations periodically monitor the folder for the update package; if the folder is found, the client will update the software automatically when the client workstation is in the Login screen. After all your clients have updated, it is recommended that you remove the update package file to prevent your clients from unnecessarily accessing the server. Also, if you connect your client to a server unintentionally, and the server you connect to has an update package, your client software may change from the version that you are using. Thus, you should only connect to servers that you have direct responsibility for to ensure that your client software is not changed by an update package file set up by someone else.

System Requirements

Server
Mac OS X Server software or AppleShare IP 6.3 server software installed and configured

Macintosh Management Server 1.2 software installed

Administration Workstation
Mac OS 9
Networking (IP or AppleTalk) set up
800 x 600 minimum display resolution

Client Computer
Mac OS 8.1 or later (Earlier versions of the Mac OS are not supported.)
Networking (IP or AppleTalk) set up

Changes to Preference Handling on Mac OS 8.x Client Computers

Unlike Mac OS 9 client computers (which do not need to copy preference files from the server), Mac OS 8.x clients have the option of copying user preferences from the server. This option must be enabled in the administration program; this allows the administrator to prevent preferences from being copied if the time required to do so becomes excessive and causes delays in user login and logout times. The instructions for turning on preference handling are described in the next section.

User Documents Folder Privileges

In previous versions of Macintosh Manager, if you disabled a user's access to his or her user documents location (via the Privileges panel of the Workgroups panel), and the user's documents were stored on a different volume from the Macintosh Manager volume, the user could not access the documents volume. In Macintosh Manager 1.2, since preference information is now stored in that location, the user will always have some access to the documents volume, though the user's actual documents folder may still be protected via the privileges set up in the administration program.

Appearance Preservation

Appearance-related preferences (desktop pattern, etc.) will only be preserved for client computers running Mac OS 8.5 or later.

Turning on Preference Handling for Mac OS 8.x Client Computers

To enable the option to preserve user preference files, follow these steps:

1. Open the Macintosh Manager administration program.
2. Click the Workgroups tab, then click the Options panel.
3. Enable preference handling for each workgroup for which you want Macintosh Manager to preserve Mac OS 8.x users' preference files.
4. Click the Global tab, then click the Security panel.
5. Select which files are copied when users log in to a workgroup. You can choose to copy the entire Preferences folder, or just a preset list of Internet-related preferences.

Note that, unlike with Macintosh Manager 1.0, you can no longer copy specific items anymore, and some system preferences will never be copied when users log in or out. Also, only items that are normally stored in the Preferences folder will be moved.

Mac OS 8.x clients will copy preferences to and from the same location on the server that Mac Os 9 clients use to store preferences. Users will have the same preferences whether they log on from a Mac OS 9 client or from a Mac OS 8.x client.

IP Access to Workgroup Volumes

In order to better allow access to volumes using IP, instead of AppleTalk, a few minor changes have been made to the Macintosh Manager administration program's workgroup options.

Workgroups Tab; Options Panel

The pop-up menu that allows the administrator to select a group documents volume contains an option for "Other." Selecting this option opens a window that lists the currently mounted volumes on your desktop. If you want to use an IP-only volume, you should click the Chooser button and use the Chooser's Server IP Address option to mount the volume using IP. Then, return to the administration program, which will now show the newly mounted volume in the list. Select the volume in the list and click OK. The volume should show up in the pop-up menu along with its IP information.

Workgroups Tab; Volumes Panel

The list of available volumes has been changed to show volumes mounted on your desktop. To have your workgroup members automatically mount certain volumes using IP, you should click the Chooser button and mount the volume with the Chooser's Server IP Address option. After

you return to this window, you can select and add the volume to your workgroup's list. The accompanying IP information should be displayed in the list to indicate that an IP connection will be attempted.

Login Performance

When a workstation user logs in, there are a number of places that can cause slowdowns for the login process. This section will help you better understand where these places are, and in some instances, how to avoid them.

"Finding User Documents"

If your workgroup does not store its documents on the Macintosh Management Server, login will need to locate the volume. If you think you are experiencing overall slowdown on the network, you may want the workgroup's Group Documents server to remain on the "Designated Macintosh Management Server." If you are using DHCP, you may want to try using static IP numbers to see if performance increases.

"Updating items: Locating items on disk"

Changing a workgroup's items (approved applications) can affect login performance the next time the user logs in. Any changes to the list, regardless of whether or not you are adding or removing items, will cause the workstation to re-find the items the next time the user logs in. Usually, only the first user of the changed workgroup to log into that workstation will notice this particular slowdown. Also, you may wish to reduce the number of approved items to increase login performance.

"Setting up Apple Menu Items aliases"

When a user logs in on a Mac OS 9 workstation, aliases to their Apple Menu Items are created in the user's own directory in order to save disk space. The time it takes to create these items can be long, so you should not make unnecessary changes to a workgroup's Apple Menu privileges, especially the "(Show Other Items)" option.

If a user logs into different workstations, it is possible that these aliases will be created every time the user moves to a different machine. To minimize login time, users should attempt to use the same workstation at every login.

Finally, if you continue to have problems with this area, you can bypass this function by putting a copy of the Calculator file inside the user's Apple Menu Items folder. This must not be an alias; it must be a real Calculator file. When login sees this file, it triggers itself to not create aliases to the other Apple Menu Items files and can speed up login during this phase. You can also manually put other menu items in here, but you should be aware that any aliases to a local workstation object may not resolve properly. And, aliases to the Chooser, control panels and other system folders will always be created during login.

Other Changes

- When using the Panels environment, after opening some older control panels, you will no longer be allowed to open additional control panels until you close the current control panel.
- On Mac OS 9 clients, the individual desktop picture aliases stored in the user's own Desktop Pictures folder are replaced by a single alias to the system Desktop Pictures folder.
- Locked items in the Apple Menu Items folder will not be deleted when the user logs into a different computer from the one he or she was previously using.
- Global and workgroup administrators will no longer be forced to enter an administrator password when ejecting volumes or printing.
- On Mac OS 8.x client computers, file sharing is not allowed in any environment, including System Access. If an attempt is made to start file sharing, it will be ignored and in some cases an error message will be displayed.
- When a user opens or saves a file, Macintosh Manager 1.2 will no longer show its own view of the disk hierarchy. Instead, the location shown in the window will be the actual location on the disk, because security on a folder is now enforced strictly by the file system. Depending on the version that you were previously running, this might mean that you will no longer see a Places button, or that when users move up the folder hierarchy from their own documents folder, the users will move to the top-level Documents folder instead of the desktop or places location.
- If a user belongs to more than one workgroup, only the workgroups that have the same Group Documents volume will show up in the menu that allows the user to switch workgroups without logging out.

Major Problems Fixed in Version 1.2

The following problems have been corrected in this version of Macintosh Manager:

- If a user belonged to only one workgroup, sometimes an alert message appeared requiring the user to shut down.
- Desktop printers were not remembered properly.
- Users could sometimes unmount volumes without an administrator password (if this option was activated) in restricted environments.
- In some cases, an inserted CD did not appear even though the user had access to it.
- Users could not directly copy files to a shared folder even when read and write access was allowed.
- Panels users were sometimes unable to log in if their Documents folder access was disabled.

- Even if the option to show a volume as a tab was disabled, sometimes volumes appeared.
- The workgroup menu always said "System Access" when a user logged into a workgroup that was accessed using the option to "always use selected workgroup" in the workgroup selection screen.
- Users could change their passwords when offline access was invoked; they can no longer do so.
- If you changed the administrator password in the login screen, the change did not take effect with other clients until you ran the administration program.
- Some problems with using control panels in the Panels environment have been corrected.
- A user could use the mini-debugger to quit the login process; this should no longer be possible.
- Disk quotas did not work properly for some users.
- An error message sometimes appeared when renaming removable media in the Panels environment.
- On some sleep-enabled computers, the Sleep button did not appear when you pressed the Power key at login time.
- If you did not have any desktop printers set up for a Finder workgroup, but used the "Remember last used printer" option, the printer wouldn't be remembered.
- If a user logged out during an idle lock or logoff session and the application that the user had open required the user to save changes to their document, if the user clicked Cancel, the Save dialog box did not reappear for 10 seconds. Now, for better security, users who click Cancel should immediately be presented with the same Save dialog box. This helps prevent other users from damaging the account of the user who is logging out.

Known Issue in Version 1.2

You can use the "Shut down the computer" command in Macintosh Manager to shut down workstations that provide a shutdown option in their Energy Saver settings. Workstations that provide a sleep option (rather than shutdown) in their Energy Saver settings will be put to sleep instead of shut down when you use the Macintosh Manager shutdown command.
Published Date: Feb 20, 2012

Mac OS 9.0: Software Update 1.1.1 - Read Me

This article comprises the Read Me for Software Update version 1.1.1. This software was released by Apple on 01 February 2000 and is available for download from the Apple Software Updates Web site at http://www.apple.com/swupdates.

This article has been archived and is no longer updated by Apple.

About Software Update 1.1.1

What's new in Software Update 1.1.1

Software Update 1.1.1 provides enhancements which will make it faster to deliver Apple software updates over the Internet. Software Update1.1.1 includes Disk image support and MacBinary and AppleSingle support which allows files to be encoded more efficiently.

This update includes the following components: the Software Update Engine application, the Software Update Scheduler extension, and the Software Update Control Panel.

Published Date: Feb 20, 2012

Power Mac G4: Red Light on Logic Board

A Power Mac G4 computer's logic board may have a red light that you can see through the case, even if the side door is closed.
This article has been archived and is no longer updated by Apple.
A Power Mac G4 computer's logic board may have a red light, which may occasionally be visible through the case when the side door is closed. The characters "DS5" are printed on the logic board next to the light.

The light may be lit whenever the computer is turned on, regardless of whether you're using it or have put it to sleep. When you open the computer for service or an upgrade, check to see if the light is lit. If so, be sure to shut down the computer before continuing. Choose Apple menu > Shut Down (Mac OS X) or Special > Shut Down (Mac OS 9).
Published Date: Feb 20, 2012

QuickTime 4.1: What‘s New?

This article describes the new features in QuickTime 4.1.
This article has been archived and is no longer updated by Apple.

Supports Apple PowerPC-based computers only.
QuickTime 4.1 will not install on Macintosh computers with a 680x0 processor. It is also only supported on Apple computers with a PowerPC processor.

Supports Intel Pentium-class computers only.
QuickTime 4.1 is not supported on computers with processors older than the Intel Pentium, such as the 80486. Pentium-class computers include corresponding non-Pentium brand processors such as the Intel Celeron and the AMD Athlon.

Plays MP3 VBR files.
You can now play MP3 media (audio) using variable bit rate compression.

Access to controlled sites.
You can tune in to more sites now that QuickTime supports logging on to sites with controlled access, such as pay-per-view sites. All you need to do is set up an account with the content provider, then enter your user name and password when you want to access that site.

Improved navigation through firewalls.
Your QuickTime Settings control panel has additional options for Streaming Proxy settings and a new Streaming Transport panel. Click the Auto Configure button in the Streaming Transport panel to improve streaming performance.

Browser Plug-In settings via control panel.
You can configure the browser QuickTime Plug-in option in the QuickTime Settings control panel. Previously, this had to be configured via a pop-up menu in an active QuickTime movie.

Supports Mac OS 7.5.5 or later (Mac OS version).
System 7.5.5 is the base Mac OS version supported on Apple PowerPC-based computers.

Control Strip (Mac OS version).
You can use the QuickTime control strip to launch QuickTime Player, PictureViewer, and QuickTime control panel to adjust Settings, as well as select a streaming Channel from a channel list to view with QuickTime Player.

AppleScript support (Mac OS version).
You can use AppleScript and the QuickTime scripting dictionary to automate tasks.
Published Date: Feb 20, 2012

QuickTime 4.1: System Requirements

This article outlines the system requirements for QuickTime 4.1.
This article has been archived and is no longer updated by Apple.
QuickTime 4.1 runs on Macintosh and Windows computers and requires the following (by platform):

Macintosh

- Apple computer with a PowerPC processor
- System 7.5.5 or later

Windows-based PC

- Windows-based computer with a Pentium-class processor
- Windows 95, 98, NT 4, or Windows 2000

Note: Although QuickTime 4.1 was not extensively tested with Windows 2000, no significant issues have been identified. A forthcoming update to QuickTime will be fully tested with Windows 2000.
Published Date: Feb 20, 2012

QuickTime: How to receive a streaming movie behind a firewall

Learn how to set up QuickTime clients behind a firewall to receive a streaming movie.
This article has been archived and is no longer updated by Apple.

About Streamed movies behind a firewall

QuickTime uses the Real Time Streaming Protocol (RTSP) to send video and audio over the Internet. Some institutions may have a firewall that prevents movies streamed by RTSP to be viewed by clients behind a firewall. To overcome this, QuickTime can stream video and/or audio using the Hypertext Transport Protocol (HTTP)--the protocol used by the Web. **Note:** Playback performance may lag when using HTTP streaming instead of RTSP. In addition, the streaming server must also have a streaming over HTTP feature.

How to set up QuickTime

Mac OS X

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **QuickTime**. The QuickTime preferences pane appears
3. Click on the Connection tab.
4. Choose your Internet connection from the Connection Speed pop-up menu.
5. Click Transport Setup. The Streaming Transport Setup window appears.
6. Click Auto Configure.

If QuickTime is able to configure itself for use behind a firewall, you should be able to watch a streamed movie.

Windows

1. Click Start and point to Control Panels.
2. Open the QuickTime control panel.
3. From the pop-up menu, choose Streaming Transport.
4. Click Automatically determine the best protocol and port ID.

If QuickTime is able to configure itself for use behind a firewall, you should be able to watch a streamed movie.

Mac OS 7.5 through Mac OS 9

1. Open the QuickTime Settings control panel.
2. Choose Streaming Transport from the pop-up menu.
3. Click Auto Configure.

If QuickTime is able to configure itself for use behind a firewall, you should be able to watch a streamed movie. If you are still unable to view streaming movies, contact your institution's network administrator.
Published Date: Feb 20, 2012

AppleWorks 6: CarbonLib Required

CarbonLib is required to run AppleWorks 6.
This article has been archived and is no longer updated by Apple.

Symptom

When you open AppleWorks 6 an alert box with the following error message appears:

> "The application 'AppleWorks 6' could not be opened because 'CarbonLib' could not be found"

Solution

Install CarbonLib 1.0.2 or higher.

You can use the AppleWorks First Run program in the AppleWorks Essentials folder to install CarbonLib 1.0.2 and other system extensions required by AppleWorks. Later versions of CarbonLib are available.

- If your computer has Mac OS 8.1 through Mac OS 8.6.1, you can download a later version of CarbonLib from http://www.apple.com/swupdates/ .
- If your computer has Mac OS 9 use the Software Update control panel to update to a later version.

What is CarbonLib?
"Carbon" is a set of programming interfaces that developers use to create software for Mac OS 9 and Mac OS X. CarbonLib is a system extension that allows a Carbon-based application to be used with Mac OS 8.1 or later.

For more information on Carbon, see the Apple Developer Web site:
http://developer.apple.com/techpubs/carbon/carbon.html
Published Date: Feb 20, 2012

AppleWorks 6: How to Make a Template

You can create templates that you can access from the Templates panel of the Starting Points window.
This article has been archived and is no longer updated by Apple.
To create a template:

1. Prepare a document that contains all the text, graphics, and formatting options you want to be a standard part of the template.
2. Choose Save As from the File menu.
3. Type a name for the template.
4. Click the Template button.
5. Use the controls in the Save dialog box to navigate to the Templates folder (located in the Starting Points folder, which is in the AppleWorks folder). If you don't want your template to appear in the Starting Points window, save it in another location.
6. Click Save.

Published Date: Feb 20, 2012

AppleWorks 6: Converting an AppleWorks 5 User Dictionary

The dictionary format used by AppleWorks 6 is different from AppleWorks 5. To use your user dictionary in AppleWorks 6, you must first convert it to AppleWorks 6 format.

This article has been archived and is no longer updated by Apple.

Exporting user dictionary terms from AppleWorks 5

To export words from the AppleWorks 5 user dictionary:

1. Choose Writing Tools from the Edit menu, then choose Edit User Dictionary from the submenu.
2. Click the triangle next to Text File in the lower-right corner of the dialog box.
3. Click Export.
4. Select where to save the file and Click Save.
5. Click OK when the file has been exported.
6. Click OK to dismiss the dialog.

Importing user dictionary terms into AppleWorks 6

To import words from a text file into the current user dictionary:

1. Choose Writing Tools from the Edit menu, then choose Edit User Dictionary from the submenu.
2. Click the triangle next to Text File in the lower-right corner of the dialog box.
3. Click Import.
4. Select the file you want to import, then click Open.

Published Date: Feb 20, 2012

AppleWorks 6: What‘s New - Presentations

This article describes some of the new features of AppleWorks 6.
This article has been archived and is no longer updated by Apple.
AppleWorks 6 contains a new environment designed for presentation development. As you design and organize your presentations, you can take advantage of the following features:

- Choose from a variety of slide templates or design your own presentation from scratch.
- Design a common slide background.
- Design and name multiple slide masters.
- Reorder and name individual slides using the thumbnail viewer.
- Draft speaker's notes using the Notes View feature.
- Group related slides together for reordering as a unit.

When you're ready to give your presentation, you can use the following playback features:

- Choose visual effects to use as transitions between slides.
- Use the Auto Advance or Loop feature to run a presentation automatically.
- Attach multimedia files to add music, movies, or voice annotation to your presentation.
- Hide individual slides so that you can use the same presentation for different audiences.

Published Date: Feb 20, 2012

AppleWorks 6: What‘s New - Tables

This article describes some of the new features of AppleWorks 6.
This article has been archived and is no longer updated by Apple.
AppleWorks 6 has greatly improved capabilities for creating and modifying tables. You no longer need to use a spreadsheet frame to organize text in rows and columns.

Easy table creation:
With the new table frame tool, you simply draw a frame where you want to add a table and specify the number of rows and columns.

Flexible table structure:
You can easily add and delete table cells individually, in ranges, or in entire rows and columns. Cells can span multiple rows or columns. When you type in a cell, it can expand downward to accommodate the text.

Customizable table appearance:
You can customize the appearance of table elements such as lines and line segments, cells, rows, and columns. Within each table cell you can apply the full range of text-formatting options, including word-processing options such as outlines.

Embedded content:
You can embed pictures, sounds, or movies in table cells. You can also embed other types of frames (spreadsheet, painting, word-processing, and even other table frames) within cells. You can even link a cell's text or graphics to a Web site.

Easy export to the Web:
HTML export capability has been enhanced to allow table export. Even complex nested tables with graphics are converted to HTML accurately.
Published Date: Feb 20, 2012

AppleWorks 6: How to Set up Default Templates for Specific Document Types

If you typically use particular content and formatting options for a particular document type, you can set up a default template for that document type. Default templates are also known as Options documents.
This article has been archived and is no longer updated by Apple.

Creating a default template

To create a default template document for a specific document type:

1. Prepare a document that contains all the text, graphics, and formatting options you want to be a standard part of the template.
2. Choose Save As from the File menu.
3. Enter the appropriate name for the document:
   - For word-processing documents, type AppleWorks WP Options.
   - For spreadsheet documents, type AppleWorks SS Options.
   - For presentation documents, type AppleWorks PR Options.
   - For database documents, type AppleWorks DB Options.
   - For drawing documents, type AppleWorks DR Options.
   - For painting documents, type AppleWorks PT Options.
4. Click the Template button.
5. Use the controls in the Save dialog box to navigate to the Templates folder (located in the Starting Points folder, which is in the AppleWorks folder).
6. Click Save.

The next time you create a new document of that type, your new default template opens. You can still open a document with standard formatting options (instead of the options you created in your default template). To do so, click the Standard button for the desired document type (for example, Standard WP) on the Basic panel of the Starting Points window.

Some versions of AppleWorks 6 automatically append the template filename with ".cws". If the default template does not open as expected, locate the file in the Templates folder using the Finder, and delete the .cws filename extension if present.

Important: Your default template is saved in the AppleWorks Templates folder. If you move the template to another folder, it will no longer function as the default template.

Deactivating a default template

If you no longer want to use a default template document for a document type, you can deactivate it.

To deactivate a default template:

1. Quit AppleWorks.
2. Open the Templates folder (in the Starting Points folder).
3. Delete, rename, or move the default template document for the document type. (See above for the names of default template documents for each document type.)

Published Date: Feb 20, 2012

AppleWorks 6: What‘s New - Internet Content

This article describes some of the new features of AppleWorks 6.
This article has been archived and is no longer updated by Apple.
Using the new Internet content capability of AppleWorks 6, you can access an abundance of material on the AppleWorks Web site (or anywhere on the Internet) without having to launch a Web browser or decompress files.

In the Clippings and Starting Points windows you can access:

- thousands of Web-based clip art images using the powerful search function in the Clippings window
- hundreds of additional Web-based templates
- regular newsletters offering AppleWorks tips, projects, special offers, and news

If you have your own Web site, you can also use the Internet content feature to post AppleWorks templates, clip art, and documents that you've created and want to share with friends and colleagues.
Published Date: Feb 20, 2012

AppleWorks 6: What‘s New - Updated User Interface

This article describes some of the new features of AppleWorks 6.
This article has been archived and is no longer updated by Apple.
If you have used an earlier version of AppleWorks or ClarisWorks, you'll notice that AppleWorks 6 has a new look.

Starting Points:
The Starting Points window, which replaces the New Document dialog box, lets you quickly create and open documents including recently opened files, templates, and Assistants, and access Internet content. You can add your own panels to Starting Points to provide easy access to your frequently used files.

Clippings:
The Clippings window, which replaces the libraries in earlier versions of AppleWorks, gives you ready access to the variety of clip art included with AppleWorks 6 as well as Internet clippings. A powerful search feature helps you find the items you want easily.

Accents:
The Accents window combines the tools for setting colors, patterns, wallpaper (textures), gradients, and line styles into a single floating window with palettes for adding or changing the fill, pen, and text attributes.

Button Bar:
In addition to its new appearance, the Button Bar can now be scrolled. It has been streamlined to include a single set of the most commonly used buttons for each of the six AppleWorks environments. You can add, delete, or customize buttons if the default buttons don't meet your needs.

Tools:
Tools now appear in a floating window, giving you more flexibility in managing the "real estate" in the document window. The Tools window allows quick access to frame creation, drawing, and painting tools.
Published Date: Feb 20, 2012

AppleWorks 6: What‘s New - Productivity Enhancements

This article describes some of the new features of AppleWorks 6.
This article has been archived and is no longer updated by Apple.

Auto-Save and auto-recover

When the new Auto-Save preference is turned on, you can create documents without worrying about losing data. AppleWorks automatically saves your documents as often as you like: every few seconds, every 12 hours, or anything in between.

Further, if your computer or AppleWorks unexpectedly quits, AppleWorks automatically reopens the files you were working on.

Improved mail merge

An enhanced mail merge feature makes it easy to merge data from a database document into a form letter or other word-processing or spreadsheet document. With AppleWorks 6, you can merge to a single file, multiple files, or directly to a printer.

Enhanced spreadsheet functionality

- You can now insert references to external spreadsheet documents or frames.
- Using the new Paste Function dialog box, you can choose from over 100 built-in functions for spreadsheet and database calculations. The dialog box now provides both the function name and a simple description.
- New cursor key commands make it easy to navigate around large spreadsheets without using the mouse.
- AppleWorks 6 automatically adds an ending parenthesis if it is accidentally omitted from a spreadsheet formula.

Published Date: Feb 20, 2012

About the button bar icons in AppleWorks 6

Learn about the icons in the various AppleWorks 6 button bars.
This article has been archived and is no longer updated by Apple.
The icons are read from left to right and include comments when necessary.

Common Tools

- Bold
- Italic
- Underline
- Anchor (makes the select text or object an anchor)
- Document link (creates a link to another document)
- URL link (creates a link to a web page)
- Links On/Off (turns actives links on or off so you can edit text within a link)
- Print
- Word Processor (open a new word processor file)
- Drawing (open a new drawing file)
- Painting (open a new painting file)
- Spreadsheet (open a new spreadsheet file)
- Database (open a new database file
- Presentation (open a new presentation file)

Word Processor

- Promote (moves the selected topic one level to the left)
- Demote (moves the selected topic one level to the right)
- Check Spelling
- Show/Hide Invisibles (shows or hides formatting characters such as spaces or tabs
- Sort Paragraphs (sorts selected paragraphs in order specified)

Spread Sheet

- Outline Border (outlines the selected range within a border)
- Left Border
- Top Border
- Right Border
- Autosize Column (Makes the selected columns as wide as the widest cell in the range)
- Autosize Row (Makes the selected rows as tall as the tallest cell in the range)
- AutoSum (Calculates the total of the data in the selected range and displays the results in the next empty cell)
- Make Chart (Creates a chart from the selected data)

Database

- Sort+ (sorts the found set of records in ascending order (A to Z))
- Sort - (sorts the found set of records in descending order (Z to A))
- New Record
- Delete Record
- Show All Records
- Browse Mode (switches the current database to browse mode)
- List Mode (switches the current database to list mode)
- Create Labels (Lets you create a new label layout)

Drawing

- Text Wrap (wraps text tightly around the selected object)
- Rotate 90° (rotates the selected object 90° counterclockwise)
- Align (aligns the selected objects)

Painting

- Lighter (adds a white tint to the selected object)
- Darker (adds a black tint to the selected object)
- Tints (tints the selected image with the current fill color)
- Blend (softens an image by adding intermediate colors)
- Invert (reverses the colors of the selected image)
- Pickup (picks up the selected image's attributes)

Published Date: Feb 20, 2012

Mac OS 9: Keychain and Chooser Interaction

I am using the Chooser and selecting Add to Keychain, but it appears that my name and password are not being saved correctly. If I open the Chooser to log on to the server again, I have to re-enter my name and password as I did on the first log in, even though I selected Add to Keychain in the Chooser window.
This article has been archived and is no longer updated by Apple.
The Chooser is working correctly It should ask you for a name and password when you log on to a file server. The Add to Keychain feature is simply a convenience that allows you to add your name and password, plus the server information to your Keychain.

If you want to connect to a file server volume using the Keychain, and without typing your name and password, do this:

- Use the Network Browser application instead of the Chooser.

or

- Make an alias of the server volume once you have connected to the server using the Chooser. Use the alias to connect to the server in the future.

To make sure your Keychain is working correctly, open the Keychain Access control panel and open the entry for the server. You should see the server/volume name. You can check your password for the server by opening the associated Keychain entry for the volume by double clicking on the volume name. You will need to enter your Keychain password to view these settings.

Note: Server administrators have the option of not allowing you to use the Keychain to automatically log on to a server volume.
Published Date: Feb 20, 2012

Apple DVD Player: How to Improve Audio Synchronization

This article explains how to improve audio synchronization when playing movies from DVD-Video discs.
This article has been archived and is no longer updated by Apple.

Symptom

When playing a movie from a DVD-Video disc the sound is not synchronized with the picture.

Affected Products

- Power Mac G4
- iMac (Slot loading)
- PowerBook (FireWire)
- iBook

Solution

1. Install these updates:
   - Mac OS 9 Update (9.0.4)
   - Apple DVD Player 2.2 or later
   - QuickTime 4.1.1 or later
2. Turn off Virtual Memory in the Memory control panel
3. Turn off AppleTalk in the AppleTalk control panel by clicking the Options button, selecting Inactive, and clicking OK
4. Make sure there are no background tasks, like copying files in the Finder, that could make the computer busy

You can use the Software Update control panel to install Mac OS 9 Update and Apple DVD Player 2.2. The current version of Apple DVD Player is 2.7. Each version can also be download from Apple Software Updates at http://www.apple.com/swupdates/ . Use the QuickTime Updater application in the QuickTime folder to update to QuickTime 4.1.1 or later of visit http://www.apple.com/quicktime/ to download the latest version.

Important: You must install Mac OS 9 Update before installing Apple DVD Player 2.2.

Specific movies on DVD-Video discs may have their own audio synchronization issues that are unrelated to Apple DVD Player. Audio synchronization issues with these discs could happen on any kind of DVD player.

For additional information on improving movie playback from DVD-Video discs, see article 58383: "**Apple DVD Player: Troubleshooting Video Issues.**"

Published Date: Feb 20, 2012

Power Mac G4 Cube: How to Connect a Projector or Monitor

This article explains how to connect a projector or monitor with a VGA connector to a Power Mac G4 Cube computer.
This article has been archived and is no longer updated by Apple.
If your projector or monitor has a VGA connector, connect the VGA-to-VGA adapter that came with your computer to the VGA port and then connect your monitor cable to the adapter.

A. VGA monitor port on a Power Mac G4 Cube computer

Figure 1 Connecting the VGA-to-VGA adapter

To connect a projector or monitor to the VGA-to-VGA adapter:

1. Plug the VGA adapter into the VGA monitor port and tighten the thumbscrews.
2. Plug the project or monitor cable into this end of the adapter and tighten the thumbscrews.

Published Date: Feb 20, 2012

Apple DVD Video Player: Error -9845 Disc Could Not Be Authenticated

The Apple DVD Player displays this error: "-9845 Disc could not be authenticated."
This article has been archived and is no longer updated by Apple.

Symptom

After the FBI warning and studio logos appear, the Apple DVD Player application displays an error (-9845) that the disc could not be authenticated.

Products affected

- Apple DVD Player 1.0
- Power Macintosh G3
- Power Macintosh G3 (Blue and White)
- Power Mac G4 (PCI Graphics)
- PowerBook G3 Series
- PowerBook G3 Series (Bronze keyboard)

Solution

Download and install Apple DVD Player Software 1.1 or later from Apple Software Updates at http://www.apple.com/swupdates/.
Published Date: Feb 19, 2012

Mac OS 9: About the Mac OS 9 Utilities Read Me

The contents of this article are from a Read Me file included with Mac OS 9.
This article has been archived and is no longer updated by Apple.

About the Mac OS 9 Utilities

This document contains information about the utilities provided with Mac OS 9.

5xxx/6xxx Tester
This program tests Performa and Power Macintosh 5200, 5300, 6200, and 6300 computers for a possible hardware problem. If you have a Performa or Power Macintosh 5200, 5300, 6200, or 6300 series computer, you should use the tester before installing Mac OS 9. See the document inside the Tester folder for instructions on using the tester.

IMPORTANT The Power Macintosh or Performa 6320, 6360, and 5260 computers do not have this hardware problem. If you have a Power Macintosh or Performa 6320, 6360, or 5260 computer you do not need to use the tester program.

AppleShare software
If you have AppleShare software earlier than version 3.6.4, you should upgrade to version 3.6.5 or later before installing Mac OS 9 over a network. See the document inside the AppleShare folder for instructions. If your computer already has Mac OS 8 or later, you do not need to update the AppleShare software before installing Mac OS 9.

Drive Setup
Use the Drive Setup program provided with Mac OS 9 to update your disk driver or to reinitialize a disk. When you do initialize a disk all the contents of your disk are erased.

NOTE Earlier versions of Drive Setup can reintroduce problems resolved with this version of Drive Setup. You should throw away any earlier versions you have on your computer.

To update the disk driver with Drive Setup, follow these steps:

1. Open the Drive Setup program.
2. Click the disk whose driver you want to update.
3. Choose Update Driver from the Functions menu.

WARNING Turn off any disk protection software before using Drive Setup to update your disk driver.

IMPORTANT If the Update Driver command is dimmed, or if the disk name doesn't appear when you click the Drive button, either the disk is not supported by Drive Setup or it has been previously updated with a non-Apple utility.

- If the disk isn't supported, check the instructions that came with your computer or disk to see if the manufacturer includes or recommends a disk utility, then use that utility to update the driver. To ensure a successful update, obtain the latest version of the utility.
- If you've updated or formatted the disk with a non-Apple utility, you'll need to use that utility again to perform the update. To ensure a successful update, obtain the latest version of the utility.

NOTE After installing Mac OS 9, you cannot use the obsolete Apple HD SC Setup utility to initialize your hard disk. Use the current Drive Setup program supplied with Mac OS 9 instead.

Disk First Aid
Use the Disk First Aid program to diagnose and repair problems with your hard disk.

NOTE Old versions of some third-party disk repair utilities can cause problems when used on Mac OS Extended format disks. Disk First Aid may be able to correct these problems if they occur.

Disk Copy
Use the Disk Copy program to make exact copies of floppy disks from a disk image, mount disk images on your desktop, and various other functions related to disk images. Many Apple updates are provided in Disk Copy format. See the information in the Disk Copy folder for details.

SimpleText
SimpleText is a text editing program that can be used to create, edit, and view documents. It can also play QuickTime movies, display QuickDraw 3D objects, and speak text aloud. Many Read Me files, such as this one, are distributed in SimpleText format.
Published Date: Feb 20, 2012

Mac OS 9: Before You Install Read Me

The contents of this article are from a Read Me file included with Mac OS 9.
This article has been archived and is no longer updated by Apple.

Before You Install

This document tells you how to prepare for installing Mac OS 9 and gives compatibility information and basic troubleshooting. For additional information, see the Mac OS installation manual.

Before installing Mac OS 9, do these tasks:

- Turn off any security software that you may have installed on your computer.
- If you have a PowerBook, make sure that it is plugged into AC power and set not to go to sleep.
- Start up your computer using the Mac OS CD. See your installation manual for instructions.

Note: If you're installing the Mac OS from a network, you won't be able to start up using the CD. Before installing the Mac OS software, make sure the AppleShare extension (version 3.6.4 or later) is installed on your computer. For instructions, see the document in the AppleShare folder in the Utilities folder on the Mac OS CD.

If you can't start up from the Mac OS CD, or you're installing from a network, be sure to do the following additional tasks:

- Turn off File Sharing.
- Turn off any virus-protection software that you may have installed on your computer.
- Turn off all non-Apple extensions and control panels. Open the Extensions Manager control panel, then open the selected Set pop-up menu and choose "Mac OS All."
- Restart your computer.

Although compatibility problems are not expected, you can ensure a smooth upgrade by checking with the manufacturers of any non-Apple software you use to make sure it is compatible with Mac OS 9. If you do experience a problem, see the troubleshooting chapter in your installation manual for information on isolating compatibility problems.

Compatibility information

Apple language kits and Mac OS 9
Apple's retail language kit products have been incorporated into Mac OS 9. If you currently have one or more retail language kits installed, click the Customize button in the "Install Software" section of the Mac OS 9 installer, select "Language Kits", select "Customized Installation" from the popup menu, and then select any languages you already have installed, as well as any other languages you are interested in adding. Do not attempt to reinstall the retail language kit products on Mac OS 9.

Apple language kits and ATM Deluxe 4.5
ATM Deluxe 4.5 is not compatible with WorldScript I, the system extension used to support certain languages in Mac OS. Do not install ATM Deluxe 4.5 if you plan on using any of the following language kits: Arabic, Hebrew, Devanagari, Gurmukhi, Gujarati, Persian.

Installing Mac OS 9 on accelerated NuBus PowerPC computers
If you have a Power Macintosh 6100, 7100, 8100, or 9150 with a third-party accelerator card that increases the speed of your computer, the Installer may not install Mac OS 9. Contact the accelerator card's manufacturer for help.

If you are upgrading from Mac OS 8.1 or earlier

Installing Mac OS 9 on computers with Ultra Wide SCSI cards
Some older Ultra Wide SCSI cards require a firmware update before they will work with Mac OS 9. If the card's firmware is not compatible, your computer will crash during installation or when you start up from the CD. Before installing Mac OS 9, contact the manufacturer of your Ultra SCSI card to determine if a firmware update is necessary.

Third-party Finder and utility software
Some third-party programs that extend or add features to the Mac OS may be incompatible with Mac OS 9. Examples include programs that change the way menus work, change how files are stored, or alter the way you work with files in the Finder. Contact the software's manufacturer for information about using such programs with Mac OS 9. This is especially important if you're using a program that automatically alters the way files are stored (such as compressing them) because you might not be able to access those files until you obtain updated software for use with Mac OS 9.

Computers with DOS Compatibility cards
Apple DOS Compatibility cards do not work with Mac OS 9. After you install the software, you will no longer be able to use your DOS Compatibility Card to run DOS or Windows software.

Performa or Power Macintosh 5000 and 6000 series computers
Some Performa or Power Macintosh 5200 series, 5300 series, 6200 series, and 6300 series models cannot use Mac OS 9 until a hardware problem is fixed. The repairs are covered under the Apple repair extension program. To see if your computer has this hardware problem, use the 5xxx/6xxx Tester utility in the Utilities folder on the CD before installation.

IMPORTANT The Power Macintosh or Performa 5260, 6320, and 6360 do not have this hardware problem and do not need to use the tester program.

Troubleshooting suggestions

If you experience problems during installation, be sure to start up with the Mac OS CD. See your installation manual for instructions.

Updating your disk drivers
Some Apple-branded disks manufactured by third parties, including the Apple 365 MB external hard disk, are not supported by the Apple disk utilities. If your disk cannot be updated with the Apple utilities, you'll need to use a third-party disk utility to update the driver.

Repairing disks
If you see a message that your disk has problems and cannot be repaired, make sure file sharing is off, then try installing again. If that doesn't work, try using another disk-repair utility. If you don't have another utility, or if that utility also doesn't work, you may need to reinitialize the disk. Copy all your files to another disk first, as reinitializing erases the disk. For more information about reinitializing, see the manual that came with your computer.

Installing over a network
If you're installing over a network, or if you have a non-Apple CD-ROM drive and can't start up with the CD, turn off all extensions that weren't provided with your system software, then restart your computer.

Updating your firmware
If you receive a message during installation that your firmware is out of date, follow the instructions for updating your firmware in the CD Extras folder on your Mac OS CD.

Additional troubleshooting information is available in the installation manual.
Published Date: Feb 20, 2012

Mac OS 9: Package First Aid Read Me

The contents of this article are from a Read Me file included with Mac OS 9.
This article has been archived and is no longer updated by Apple.

Package First Aid

Package First Aid is a utility that resets folders that have been incorrectly configured as application packages. If you have a package or folder that cannot be opened, drag it on this utility to reset it as a folder. Do not drag application packages on this utility.

Published Date: Feb 20, 2012

Mac OS 9: Using the English Text-to-Speech Software Version 2.0 Read Me

The contents of this article are from a Read Me file included with Mac OS 9.
This article has been archived and is no longer updated by Apple.

Using the English Text-to-Speech Software Version 2.0

With the English text-to-speech software installed, many Macintosh programs including SimpleText can read English text and the contents of many alert dialog boxes out loud. SimpleText comes with this computer and is already installed on your hard disk. (You are probably reading this document using the SimpleText program.)

The instructions in this document tell you:

- how to install the software
- how to try out the software using SimpleText
- how to choose the default voice
- how to annotate text to improve intelligibility or add emotion
- some technical details, including what Text-to-Speech software is installed
- how to solve common problems

Installing the software

To install the English text-to-speech software, follow these steps.

1. Print these instructions before you start. You will not be able to view them on screen during the installation.
2. If you have been using an earlier version of text-to-speech software, see the note at the end of this section.
3. Double-click the Installer that's in the same folder as this document.
4. Click "Continue", then click "Install". The installation takes a few minutes.
5. When you see a message reporting that the installation was successful, click Restart.

After the computer restarts, you can start using the text-to-speech software.

Note for users of older English text-to-speech software. Installing English Text-to-Speech software version 2.0 may remove some or all of your older English Text-to-Speech voices. You can restore those voices by downloading an older version of the English Text-to-Speech software from http://www.apple.com/speech. However, only the voices that came with this version of the software have been tested and qualified by Apple on this Mac OS release. MacinTalk 2 and its associated voices (Ben, Boris, Brenda, Mariel, Marvin, Mr Hughes, Otis, Robovox, Votron, and Xero) are no longer supported. For a corresponding but more intelligible sound, we recommend trying Trinoids or Zarvox.

Trying out the Text-to-Speech software.

Follow these steps to try out text-to-speech software:

1. Open any SimpleText document. (This document will work well.)
2. Click anywhere in the text to make sure nothing is selected.
3. Choose "Speak All" from the Sound menu. (If you cannot hear anything, you may have the sound turned all the way off. Check in the Sound control panel.)
4. If you want the computer to stop reading, choose Stop Speaking from the Sound menu.

You can also try the following:

- To read a portion of the file, select the words you want to read, then choose Speak Selection from the Sound menu.
- To have the computer speak in a different voice, select a voice from the Voices sub-menu in the Sound menu, then choose the Speak All or Speak Selection command from the Sound menu.
- To use the text-to-speech features of other programs, see the instructions that came with those programs.

Choosing the default voice.

You can use the Speech control panel to use your favorite voice as the default voice for all your programs. To set the default voice, follow these

steps.

1. Open the Apple menu and choose Control Panels.
2. Open the Speech control panel by double-clicking its icon in the Control Panels window.
3. Open the Options pop-up menu at the top of the Speech control panel and choose Voice.
4. To change the default voice, choose the voice you want from the Voice pop-up menu. To hear what the voice you chose sounds like, click the speaker button.
5. To change the rate at which the default voice speaks, move the Rate slider.
6. Close the control panel.

Memory Constraints

If there is not enough memory available to hold a voice, then this software will not speak. The voices with "high quality" in their names have the most natural and intelligible sound, but take up the most memory. To see the memory requirements of the voices, view their sizes in the Voices folder, which is in the Extensions folder. To see how much memory you have available, click the desktop and then select "About This Computer" in the Apple menu.

Turning Talking Alerts on or off.

You can use the Speech control panel to turn Talking Alerts on or off. When this feature is on, your computer will read aloud the contents of alerts. (An alert appears, for example, when your printer runs out of paper.) To turn on the Talking Alerts feature, follow these steps.

1. Open the Apple menu and choose Control Panels.
2. Open the Speech control panel by double-clicking its icon in the Control Panels window.
3. Open the Options pop-up menu at the top of the Speech control panel and choose Talking Alerts.
4. To have your Macintosh speak a phrase like "Alert!" or "Hey!" when an alert appears, click the "Speak the phrase" check box to select it, and choose the phrase you want to be spoken from the adjacent popup menu.
5. To have your Macintosh speak the content of an alert when one appears, click the "Speak the alert text" check box to select it.
6. To adjust how long your Macintosh waits after an alert appears before speaking the alert text, adjust the slider beneath the "Speak the alert text" check box.
7. To test how Talking Alerts will behave with your chosen settings, click the speaker icon to the right of the slider.

To interrupt and cancel the computer's speaking, click the mouse or type a key.

Tip: You can edit or add to the phrases spoken when alerts appear. To do this, select "Edit Phrase List in the popup menu adjacent to "Speak the phrase:" And for extra interest, if you select "Next in the list" (in the same popup menu), then each time an alert appears a different phrase from the list will be spoken. You can make sequences of phrases which work together, such as following "It's not my fault" with "It's still not my fault".

How to annotate texts to improve intelligibility or add emotion

You can use punctuation and embedded commands to improve how the synthesizer speaks text. For example, select the following two texts and compare how they are spoken by the "Victoria, high quality" voice. We recommend that you turn up your volume and close your eyes to make this comparison.

> There are big computers that are difficult to use
> there are small computers that are difficult to use
> And then there's Macintosh.
>
> There are [[emph +]] big computers that are difficult to use,
> there are [[emph +]] small computers that are difficult to use.
> And then [[emph -]] there's: Macintosh!

For more details about how to use these commands, search for "Speech" in Apple Help.

Technical details

The software that enables your computer to speak has these components:

- Speech Manager, a system extension

- one or both of these English speech synthesizers, which are system extensions that convert text to speech
  - MacinTalk 3 for standard speech
  - MacinTalk Pro for high-quality speech
- several voice files, each identified with one particular synthesizer in the Voices folder in the Extensions folder
- the Speech control panel

The Installer removes older versions of Apple's Text-to-Speech software that won't run properly under this Mac OS release.

Troubleshooting (problems and solutions)

My Macintosh won't speak.

- Turn up the speaker volume in the Sound control panel.
- If this doesn't work you may not have enough memory for the voice you have selected. Use the Speech control panel to select "Fred", which is the smallest voice, then click the speaker button. If you hear speech, you did not have enough memory available. Try closing some applications or windows, or selecting a different voice.

The Installer program says there's a problem with the hard disk.

- Re-install your system software, then try installing the English Text-to-Speech software again.

The Installer program displays other error messages.

- Make sure you restart the computer with the Mac OS CD as the startup disk.

I had an older version of text-to-speech software, then did a custom installation of the new software, but some of my older voices disappeared.

- The custom installation erased the older version of the software that uses MacinTalk 2 voices. You can re-install that old software by doing a custom installation from the English Text-to-Speech 1.4.1 installer. You can download the installer from http://www.apple.com/speech.

Published Date: Feb 20, 2012

PowerBook (FireWire): Password Security

You should not use the Password Security control panel on the PowerBook (FireWire) computer.
This article has been archived and is no longer updated by Apple.
The Password Security control panel does not come with the PowerBook (FireWire) computer and cannot be custom installed. If you copy the Password Security control panel from another computer and try to use it on the PowerBook (FireWire), you risk losing data on the PowerBook (FireWire) computer's hard disk.

If you have installed the control panel, an Apple Authorized Service Provider should be able to:

- remove the hard drive from your computer
- move it to an older PowerBook that is compatible with Password Security
- disable the security software
- reinstall the drive in your PowerBook with the data intact.

Published Date: Feb 20, 2012

Mac OS 9: How to Set Date and Time to ISO 8601:1988 Standard

This article explains how to set Mac OS 9's Date & Time control panel to use the ISO 8601:1988 date and time notation standard.
This article has been archived and is no longer updated by Apple.
Follow these steps to set Mac OS 9's Date & Time control panel to use the ISO 8601:1988 date and time notation standard.

1. Open the Date & Time control panel.
2. Click Date Formats. The Date Formats window appears.
3. In the Long Date area, set the pop-up menus to this order:
    - Weekday
    - Day
    - Month
    - Year
4. Delete the comma in the field next to the Month pop-up menu.
5. Click the checkbox to enable "Leading zero for day".
6. In the Short Date area, choose Year/Month/Day from the pop-up menu.
7. Type a hypen in the Separator field.
8. Click the checkboxes to enable "Leading zero for day", "Leading zero for month", and "Show century".

When you have finished these steps, your settings should look like those in Figure 1.

Figure 1 Date Formats window

9. Click OK.
10. Click Time Formats. The Time Formats window appears.
11. Click 24 hour.
12. Click the checkbox to enable "Use leading zero for hour".

When you have finished these steps, your settings should look like those in Figure 2.

Figure 2 Time Formats window

13. Click OK.
14. Close the Date & Time control panel.

More information

For more information on the ISO 8601:1988 standard, Open Sherlock 2 and search for ISO 8601.

Published Date: Feb 20, 2012

Macintosh Manager 1.3: Print Jobs Only Appear to Print

This article discusses an issue where print jobs appear to be sent to the printer, but they are never actually printed. The same jobs print when you log into System Access.
This article has been archived and is no longer updated by Apple.

Symptom

Print jobs appear to be sent to the printer, but they are never actually printed. The same print jobs print when you log into System Access.

Solution

Try these three solutions:

Solution 1

1. Open the Macintosh Manager Admin program.
2. Click the Computers: Security tab.
3. Click to enable the "Applications can: Open other applications, such as helper applications" option.

Solution 2
Turn off background printing. Follow these steps to turn off background printing using the LaserWriter 8 driver:

1. Choose Print from the File menu.
2. Choose Background Printing from the pop-up menu.
3. Click "Foreground (no spool file)" to enable that option.
4. You can force a configured Printing Preferences folder out using the Managed Preferences feature of Macintosh Manager by placing it in the Initial Preferences folder.

Solution 3

1. Allow clients access to the Print Monitor.
2. Instruct clients to open Print Monitor after sending a job to the printer. When Print Monitor opens, it will immediately print all spooled jobs.

Printers that do not work with Desktop Printing
If your Macintosh Manager clients use printers that do not work with Desktop Printing, you should set up and select the printer on the client computer before installing and enabling Macintosh Manager. When you've enabled Macintosh Manager set the workgroup printer option to use the "printer selected in System Access." Be sure to check with the vendor of your printer if it does not work with Desktop Printing for any possible updates or procedures to print in Macintosh Manager or Mac OS 9's Multiple Users environment.
Published Date: Feb 19, 2012

Apple DVD Player 1.0: Limited to Region 1 DVD-Video Discs

You insert a Region 2, 3, 4, 5, or 6 DVD-Video disc into your computer's DVD drive, open Apple DVD Player, and an alert box with this error message appears: "Sorry, this disc cannot be played."
This article has been archived and is no longer updated by Apple.

Symptom

You insert a Region 2, 3, 4, 5, or 6 DVD-Video disc into your computer's DVD drive, open Apple DVD Player, and an alert box with this error message appears:

> "Sorry, this disc cannot be played."

Solution

Apple DVD Player 1.0 was only released in North America and only works with Region 0 and 1 DVD-Video discs. You should use a later version of Apple DVD Player if you need to play discs from a different region. You can update Apple DVD Player 1.0 by downloading and installing Apple DVD Software Update 1.1 from http://www.apple.com/swupdates/ . However, if you have Mac OS 9, you should simply use Apple DVD Player 1.3, which is included with that version of the Mac OS.

See article 60183: "**Apple DVD Player: DVD-Video Region Discussion**" for more information about DVD region codes.

Note: You should only use Apple DVD Player 1.1 or 1.3 if you have a computer with DVD decoding hardware, such as the Power Mac G4 (PCI Graphics), Power Macintosh G3, Power Macintosh G3 (Blue and White), PowerBook G3 Series, and PowerBook G3 Series (Bronze keyboard) computers. Other Macintosh computers with DVD drives should use Apple DVD Player 2.x.
Published Date: Feb 19, 2012

Mac OS 9: Missing Apple Menu Items Could Be Due to Damaged Preferences

A damaged Apple Menu Options Prefs file can cause unexpected Apple menu behavior, such as recent items no longer being listed.
This article has been archived and is no longer updated by Apple.

Symptom

- The Recent Applications, Recent Documents, and Recent Servers folders in the Apple menu are empty, despite items being recently accessed.
- When you open the Apple Menu Options control panel an alert box with this error message appears:

  "There has been an error opening the preferences file. As a result Apple Menu options can not launch."

Solution

Drag the Apple Menu Options Prefs file located in the Preferences folder of the active System Folder to the Trash.
Published Date: Feb 20, 2012

Mac OS: Type 3 or Type 10 error may occur if Internet Config is missing

When opening an application, a Type 3 or a Type 10 error occurs if the Internet Config Extension has been removed from the Extensions folder. You may also see an alert with this message: "[Application] cannot be launched because an unexpected error occurred."
This article has been archived and is no longer updated by Apple.
This can happen with Mac OS 8.1 through 9.0.4

The solution is to install URL Access 2.3 or later, or make sure that the Internet Config Extension is installed in the Extensions folder inside the System Folder. **Note**: The Internet Config Extension does not appear in the Extensions Manager control panel. Check inside the Extensions folder itself for the presence or absence of the Internet Config Extension.
Published Date: Feb 20, 2012

Macintosh: Display Resolution Stays at 640 by 480 When Extensions Are Off

When you start up the computer holding the Shift key, the display stays in 640 by 480 resolution, and never switches to the resolution you set in the Monitors control panel.

This article has been archived and is no longer updated by Apple.

Symptom

When you start up the computer holding the Shift key, the display stays in 640 by 480 resolution, and never switches to the resolution you set in the Monitors control panel.

Solution

When the computer is started with the Shift key down, all system extensions are disabled, including the display extension that loads the display preferences. To see the resolution that you set in the Monitors control panel, you should use the Extensions Manager control panel to enable the system extensions used by your monitor.

Published Date: Feb 20, 2012

Power Macintosh G3: Display Resolution Switches When the Computer Turns On

When the computer starts up the display resolution begins at 640 by 480, and switches during system startup time to the normally selected resolution. The desktop pattern behind the Mac OS logo disappears, and changes to gray until the Finder loads.
This article has been archived and is no longer updated by Apple.

Symptom

When the computer starts up the display resolution begins at 640 by 480, and switches during system startup time to the normally selected resolution. The desktop pattern behind the Mac OS logo disappears, and changes to gray until the Finder loads.

Solution

This is normal behavior.

Published Date: Feb 20, 2012

iPod 2.0: About vCalendar Standard Support

iPod Software 2.0 and later supports industry-standard iCalendar and vCalendar files, which can be exported by many applications including Microsoft Entourage, Microsoft Outlook, and Palm Desktop.
This article has been archived and is no longer updated by Apple.
iPod Software 2.0 and later supports industry-standard iCalendar and vCalendar files, which can be exported by many applications including Microsoft Entourage, Microsoft Outlook, and Palm Desktop.

vCalendar version 1 (the predecessor to iCalendar) is described in the document "vCalendar The Electronic Calendaring and Scheduling Exchange Format Version 1.0" (http://www.imc.org/pdi/).

iCalendar 3.0 is described in RFC 2445, "Internet Calendaring and Scheduling Core Object Specification (iCalendar)" (http://www.imc.org/rfc2445).

The following vCalendar 1.0 components/properties are supported by iPod:

- To-do
- Time Zone
- Alarm (as part of an event)
- Event
- Date/Time Completed
- Date/Time End
- Date/Time Due
- Date/Time Start
- Duration
- Time Zone Offset From (+ or - from UTC only)
- Attendee
- Organizer
- Unique Identifier
- Exception Date/Times
- Exception Rule*
- Recurrence Date/Times
- Recurrence Rule*
- Repeat Count
- Trigger
- Display Alarm
- FREQ

* Daily, weekly, monthly and yearly are supported. Secondly, minutely and hourly are not supported.

The following vCalendar 1.0 properties are ignored by iPod, but are preserved if a .vcs file is stored on an iPod and then transferred back to a computer with an application that support them:

- Delegatees
- Format Type
- Language
- Participation Status
- Participation Role
- RSVP Expectation
- Attachment
- Categories
- Classification
- Description
- Geographic Position
- Location
- Resources
- Status
- Summary
- Time Transparency
- Related To
- Uniform Resource Locator
- Mail reminder
- Procedure reminder
- Date/Time Created

TA26397_iPod_About_vCalendar_Standard_Support.pdf

- Last Modified

Published Date: Feb 20, 2012

Disc Burner 1.0: Standard Disc (HFS Plus/ISO 9660) Appears As ISO 9660 Disc

A disc prepared as Standard format (HFS Plus/ISO 9660) appears as an ISO 9660 formatted disc on Macintosh computers running Mac OS 8.6 or earlier.

This article has been archived and is no longer updated by Apple.

Symptom

A disc prepared as Standard format (HFS Plus/ISO 9660) appears as an ISO 9660 format disc on Macintosh computers running Mac OS 8.6 or earlier, and Apple CD/DVD Driver 1.2.2 or earlier. ISO 9660 format discs do not include Mac OS Finder information, such as window position, icon position, and Mac OS-style file names. The most obvious difference is that file names are in all capital letters and may be truncated to eight characters, plus a period and a three character extension.

Solution

- Use the disc as you would an ISO 9660 format disc, or upgrade to Mac OS 9.0.4 or later.

Published Date: Oct 7, 2016

Clean Installation or Complete Restore Disables Disc Burner 1.0

If you perform a clean installation or complete restore of Mac OS 9.1 on a Power Mac G4 (Digital Audio) or iMac (Early 2001) computer, you may also need to install Disc Burner software to format CD-R or CD-RW discs.

This article has been archived and is no longer updated by Apple.

Symptom

1. Opening the Disc Burner application results in an alert box with the following error message:
"The application 'Disc Burner' could not be opened because 'PerformanceBurnEngine could not be found."

Figure 1 Disc Burner alert box

2. Inserting an unformatted disc and choosing an option to initialize it results in an alert box with an error message or an unresponsive system.

Solution

Use the Software Update control panel to download and install Disc Burner software on the computer. It can also be downloaded from Apple Software Updates at: http://docs.info.apple.com/article.html?artnum=75106

Note: This error may also occur on any Macintosh computer with a CD-RW, CD-RW/DVD-ROM, or SuperDrive if the Disc Burner Extension has been disabled in Extensions Manager. If Disc Burner Extension is not listed in Extensions Manager and the computer shipped with Mac OS 9.2 or later, then perform a custom Installation of the Disc Burner software. If the computer shipped with an earlier version of the Mac OS then download and reinstall the Disc Burner software from the link above.

Published Date: Oct 7, 2016

Disc Burner: Burn CD Command No Longer Appears in Special Menu

Using the Software Restore disc to "Restore in Place" may remove the Burn CD command from the Finder's Special menu. You may also need to install Disc Burner software in order to see all the Disc Burner menu commands in the Finder.

This article has been archived and is no longer updated by Apple.

Symptom

CD-R and CD-RW discs can be initialized, but the Burn CD command is no longer available from the Finder's Special menu.

Solution

Disc Burner 1.0 and later installs Finder 9.1.1, which may be newer than the version of the Finder installed during a Restore in Place. Use the Software Update control panel to download and install Disc Burner software on the computer. It can also be downloaded from Apple Software Updates (http://www.apple.com/swupdates/).

Published Date: Oct 7, 2016

iTunes: How to Synchronize the Library

This article explains how to synchronize the iTunes Library on two different computers running Mac OS 9.
This article has been archived and is no longer updated by Apple.
To synchronize the iTunes Library on two different computers running Mac OS 9.:

1. Share the hard disk of one computer.
2. Connect to the computer with the shared hard disk.
3. Open the File Synchronization control panel.
4. Open your computer's hard disk.
5. Open the Documents folder.
6. Drag the iTunes folder into the left or right area on the File Synchronization control panel.
7. Open the shared hard disk of the other computer.
8. Open the Documents folder.
9. Drag the iTunes folder into the opposite area on the File Synchronization control panel.
10. Click Synchronize.

For more information on sharing files with other computer, choose Mac Help from the Finder's Help menu and search on "file sharing".
Published Date: Oct 7, 2016

iDVD: Questions and Answers

Learn the answers to the frequently asked questions (FAQ) regarding the current version of iDVD.

For the latest information on iDVD, please visit http://www.apple.com/idvd.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. What is iDVD?
2. How do I get iDVD?
3. Can I play the DVDs I make with iDVD on the DVD player that's connected to my TV? What about on my computer's DVD player?
4. Which software applications from Apple allow me to author and encode DVDs on Macintosh computers?
5. In what ways do iDVD and DVD Studio Pro differ?
6. How do I prepare my movies and pictures for use in iDVD?
7. Can I only use iDVD with a built-in Apple SuperDrive?
8. Does iDVD require special discs?
9. How much material can a single DVD disc hold?
10. Is Dolby Digital AC-3 or Digital Theater Sound (DTS) supported by iDVD?
11. Can I set the region code?
12. Can I protect my disk from unauthorized copying?
13. Do I have to burn a disk to test my final product?

Question 1: What is iDVD?

Answer: iDVD is a software application from Apple that enables you to author desktop movies and still images, then write the project to a recordable DVD disc using an Apple DVD-R drive. With iDVD, you have simple-to-use tools for making DVD-Video discs on your Macintosh and a great way to share your movies and still pictures with anyone who has a DVD player.

Question 2: How do I get iDVD?

Answer: iDVD 6 is part of iLife ’06. iLife ’06 is available for purchase separately and also comes installed in all new iBook, iMac, eMac, PowerBook, MacBook Pro, Mac mini and Power Mac computers.

Question 3: Can I play the DVDs I make with iDVD on the DVD player that's connected to my TV? What about on my computer's DVD player?

Answer: DVD discs created with iDVD on an Apple DVD-R drive are compatible with most standard set-top and computer-based DVD players.

Question 4: Which software applications from Apple allow me to author and encode DVDs on Macintosh computers?

Answer: Two software applications from Apple allow you to create DVD discs: iDVD and DVD Studio Pro. iDVD is a simple way for beginners to get started creating their own DVD discs. DVD Studio Pro is a full-featured software package that offers additional, professional-level functionality.

Question 5: In what ways do iDVD and DVD Studio Pro differ?

Answer: iDVD provides the tools to create DVDs containing video and still images with simple menu navigation. Its drag-and-drop ease of use and predesigned themes make iDVD ideal for non-experts who want to get started creating DVD discs right away. DVD Studio Pro is a professional DVD authoring tool. It allows you to create DVD discs that include every feature outlined in the DVD-Video specification, with video, still images, audio, and even web links. DVD Studio Pro is most appropriate for projects that require copy protection, scripting, multiple languages, subtitles, Dolby Digital and DTS audio and many other advanced features. When it comes to burning DVD discs, iDVD is designed to work only on computers with built-in Apple SuperDrives. DVD Studio Pro offers numerous methods for outputting a finished DVD-Video project, including and beyond the Apple SuperDrive.

Question 6: How do I prepare my movies and pictures for use in iDVD?

Answer: iDVD accepts movies in QuickTime format, which is supported by most video editing and creation tools. Still pictures can be any QuickTime-compatible format, such as PICT, TIFF, or JPEG. Starting with iLife '04, there are special buttons to send your photos from iPhoto or your project from iMovie directly to iDVD. In iDVD, movies are converted into MPEG-2 format just before they are written to the DVD disc.

Question 7: Can I only use iDVD with a built-in Apple SuperDrive?

Answer: iDVD 5 allows you to "Save As Disc Image" and then you can use Disk Utility to burn to a third-party DVD burner. iDVD 6 allows you to burn directly to a third-party drive.

Question 8: Does iDVD require special discs?

Answer: iDVD uses standard blank DVD-R discs, called DVD-R General. The General designation distinguishes these discs from those labeled Authoring. Authoring discs are used in professional DVD authoring drives. With some Superdrives, you can use DVD+R, DVD+RW, DVD-RW, and DVD+R DL discs also.

Question 9: How much material can a single DVD disc hold?

Answer: A DVD-R disc can hold about 4.7 GB. This allows up to 120 minutes of high-quality video to fit on a DVD.

Question 10: Is Dolby Digital AC-3 or Digital Theater Sound (DTS) supported by iDVD?

Answer: iDVD only supports audio formats playable in QuickTime. DVD Studio Pro supports Dolby Digital AC-3 and DTS audio formats.

Question 11: Can I set the region code?

Answer: DVD-Video discs created with iDVD will have set the region code such that the discs will be playable in all regions. If you are interested in setting region codes to specific regions, DVD Studio Pro offers that functionality.

Question 12: Can I protect my disc from unauthorized copying?

Answer: iDVD does not include CSS (Content Scrambling System), Macrovision or any other copy protection schemes. DVD Studio Pro offers CSS and Macrovision features.

Question 13: Do I have to burn a disk to test my final product?

Answer: No. iDVD has a preview function. You can also save your project as a Disc Image, which allows you to view it on your computer using Apple DVD Player before you burn a disc.

Published Date: Oct 7, 2016

iTunes: Using the Radio Tuner Behind a Firewall

The iTunes Radio Tuner feature may not work if your network access is limited by a firewall.
This article has been archived and is no longer updated by Apple.

Symptom

You double-click a stream in the iTunes Radio Tuner, but iTunes is unable to access the stream.

Solution

If your network access is limited by a firewall, and the iTunes Radio Tuner feature does not work, contact your network administrator for assistance.

The iTunes Radio Tuner feature may not work if your network access is limited by a firewall. Different Radio Tuner streams use different firewall ports, which may be blocked. To listen to a Radio Tuner stream, your network administrator would have to open the firewall to allow access through the port used by that stream. Some streams use ports in the 8000 range, while others use ports in 42000 range.

If your network administrator opens the port(s) you can make the appropriate settings in the Firewalls section of the Internet control panel's Advanced tab.

For more information about firewalls and ports, see article 24514: "**TCP/IP: Ports And Firewalls Explained**."
Published Date: Oct 7, 2016

DVD-R for Authoring Versus DVD-R for General Media

Learn the difference between DVD-R for Authoring and DVD-R for General media.

This article has been archived and is no longer updated by Apple.

There are two types of DVD-R media: DVD-R for Authoring, and DVD-R for General. While both types of DVD-R media can be played back equally well on DVD players or DVD-ROM drives that are compatible with DVD-R playback, each type of media must be matched to the proper DVD-R recorder when recording.

Apple's SuperDrive writes only to DVD-R for General media. As of 2001-02 a drive that can record to both types of media is not available.

Why two formats?

The principle reason for DVD-R for General media is that it contains content protection measures that make it physically impossible to make bit-for-bit copies of CSS-encrypted entertainment titles.

Professional Authoring

Either type of DVD-R media can be used for DVD-Video authoring, which is the process of preparing video content for use in DVD players. Apple's SuperDrive and DVD-R for General media can be used for this purpose.

However, to use CSS encryption, or to prepare a DVD-Video for mass replication you should use a third-party DLT tape drive, or a DVD recorder that can write to DVD-R for Authoring media as outlined below.

CSS encryption

- DVD Studio Pro
- third-party DLT tape drive

Note: DVD-R media cannot be used with CSS-encrypted video.

Mass replication

- DVD Studio Pro
- third-party DLT tape drive
- third-party DVD recorder that can write to DVD-R for Authoring media, such as Pioneer's DVR-S201

Published Date: Oct 7, 2016

iTunes: About Variable Bit Rate Encoding

This article has been archived and is no longer updated by Apple.

This article explains the function of the Variable Bit Rate Encoding (VBR) option in iTunes.

When the Use Variable Bit Rate Encoding option is enabled in iTunes Preferences, iTunes automatically raises and lowers the compression bit rate in order to keep a consistent level of quality. For example, if there is a point in the source music that contains a wider range of frequencies, iTunes increases the bit rate. Conversely, if there is a point that contains a narrower range of frequencies, the bit rate is decreased. iTunes does not allow the bit rate to go lower than the bit rate settings you've chosen.

See this document for steps to access VBR settings for a Mac, along with additional custom settings. See this document for steps to access VBR settings in Windows, along with additional custom settings.

The MP3 encoder has a Quality pop-up menu lets you choose how strictly you want iTunes to maintain bit rates that provide a particular quality. Higher quality settings use higher bit rates, which create larger files but with higher quality music playback.

Published Date: Oct 7, 2016

Apple DVD Player: Why Black Bars Surround the Picture

This article discusses when, why, and where you will see black bars while watching a movie from a DVD-Video disc with Apple DVD Player. This article has been archived and is no longer updated by Apple.

Question Why are there black bars on the top and bottom of the movie I'm watching from a DVD-Video?

Answer
The distributor of the movie wanted you to enjoy the full widescreen version of the movie. Because the movie has a wider aspect ratio than the average computer monitor and television, black bars are placed (or *matted*) onto the video.

Question What are "aspect ratios" ?

Answer Movies on DVD-Video discs have many different aspect ratios (the ratio of a movie image's width to its height). These ratios are expressed in units of width to units of height. The most common ratios for movies on DVD-Video discs are 1.33:1, 1.85:1, and 2.35:1. Most televisions and computer monitors have a fixed ratio of four units to three, often expressed as 4:3. Some televisions have a ratio of 16:9, also known as widescreen or letterbox.

Question How does the aspect ratio of the original movie differ from that of the video on the DVD?

Answer The video on the DVD itself is in standard NTSC or PAL format such that the aspect ratio is always 4:3. So, the aspect ratio of the original movie must be adapted to the standard aspect ratio of 4:3. How this is accomplished, combined with the aspect ratio of the screen used to view the DVD, will determine whether black bars appear, where they appear, and how big they are.

Question I see movies on television all the time that have no black bars. Why do I have to see them now?

Answer Movies on television are often cropped so that the movie fits the entire screen. Depending on the original aspect ratio of the movie, up to 40 percent of the picture can be lost. If you prefer movies in this format, look for DVD-Video titles that include a "standard format" version.

Question I get black bars on the *sides* of the screen. Why is this?

Answer If your display is wider than 4:3 (like the Apple Cinema Display at 8:5 or the PowerBook G4 at 3:2) and the DVD-Video title uses a 4:3 aspect ratio (like a standard format movie or any content that was originally broadcast for television), the picture would have to be stretched horizontally to occupy the full width of the screen. Further, widescreen format DVD titles will have bars on the top, bottom, and sides of the screen if they are not anamorphically encoded and are viewed on a wide-format display.

Question What is anamorphic encoding?

Answer Some movies use anamorphic encoding to minimize the use of the black bars and increase the resolution of the picture. This technique stretches the image vertically before transferring it to the 4:3 format. When the movie is played back, the DVD player detects that it is an anamorphic title and stretches the video horizontally. If your display has a wide format aspect ratio (like the Apple Cinema Display or the PowerBook G4) the movie can span the full width of the display. When anamorphic encoding is used, the resulting video occupies a 16:9 aspect ratio. DVD-Video titles using this encoding will usually state on the back of the box that the movie uses anamorphic encoding, or has been "enhanced for widescreen TVs". However, some titles do not state this feature on the box at all.
Published Date: Oct 7, 2016

SuperDrive: Ejects DVD-RAM Discs

The SuperDrive, included with some Power Mac G4 and iMac (Flat Panel) computers, does not read DVD-RAM discs.

This article has been archived and is no longer updated by Apple.

Symptom

The DVD drive ejects every DVD-RAM disc, but accepts DVD-ROM and DVD-R discs, which appear on the desktop without any issues.

Solution

The SuperDrive does not read DVD-RAM discs and will eject them. They will not appear on the desktop, nor will the Finder display an alert box or error message. For more information about the discs that are compatible with the SuperDrive, see article 58770 "**CD-RW and SuperDrive: Specifications and Usage Information**."

Published Date: Feb 19, 2012

DVD Studio Pro 1.0: FAQ

This document contains frequently asked questions (FAQ) regarding DVD Studio Pro 1.0, with answers to those questions. See also document 61587: "**DVD Studio Pro 1.5: Frequently Asked Questions**."

This article has been archived and is no longer updated by Apple.

Questions answered in this document

1. What is DVD Studio Pro?
2. How does DVD Studio Pro differ from iDVD?
3. Can I make both still and motion menus using DVD Studio Pro?
4. Can I add web links to DVDs authored in DVD Studio Pro?
5. DVD audio is encoded in Dolby, but QuickTime is the standard audio format for digital video edited on a computer. Which format works in DVD Studio Pro?
6. To what formats can I output a project authored in DVD Studio Pro?
7. Which DVD recorders does DVD Studio Pro support?
8. Is there any difference between discs written with the Apple DVD-R drive and those written with the Pioneer DVD-R recorder?
9. I don't have a DVD recorder. How can I burn DVD discs using the content I've authored in DVD Studio Pro?
10. What are 4:3 and 16:9 aspect ratios?
11. What is anamorphic media?
12. What operating systems support DVD Studio Pro?
13. What software comes with DVD Studio Pro?
14. What are the system requirements for DVD Studio Pro?

Question 1: What is DVD Studio Pro?

Answer: DVD Studio Pro is an application that makes it easy for non-specialists to author and encode professional-quality DVD-Video discs on their Macintosh desktop. Tight integration with the Apple DVD-R drive on select Power Mac G4 systems makes it easy to record DVDs as well.

DVDs authored with DVD Studio Pro are fully compatible with the DVD-Video standard, and will run on most TV- and computer-based players that are compliant with the DVD-Video standard.

Source material can be either QuickTime movies or MPEG streams. DVD projects authored with DVD Studio Pro can include every feature that the DVD-Video standard allows, including up to 99 video tracks, Dolby Digital AC-3 audio, web links, and slide shows. If you're shooting and editing digital video, you can now retain digital quality and precision from start to finish. What was once a very expensive and technical undertaking is now more affordable and much easier than ever before.

Question 2: How does DVD Studio Pro differ from iDVD?

Answer: DVD Studio Pro gives you access to the entire range of features outlined in the DVD-Video specification. iDVD, on the other hand, gives you just the basic capabilities needed to put video and still images on a DVD. For example, iDVD offers simple, preset menu navigation templates, whereas DVD Studio Pro gives you complete control over the navigation structure. If you want your project to include advanced features such as scripting, multiple languages, subtitles, and Dolby Digital audio, you'll want to choose DVD Studio Pro.

Question 3: Can I make both still and motion menus using DVD Studio Pro?

Answer: Yes. Motion menus are video clips designated to function as menus. The clips can be created in a video editor such as Final Cut Pro, then imported into DVD Studio Pro. Still menus are created using images created in applications such as Photoshop. When working with Photoshop graphics, you can choose which layers are visible at any time without having to flatten or convert the Photoshop files.

Question 4: Can I add web links to DVDs authored in DVD Studio Pro?

Answer: DVDs have a unique advantage over videotape because they can include web links. In DVD Studio Pro, this feature is made possible by Apple DVD@CCESS technology. Web connections let your viewers access late-breaking information that's relevant to the content of your project. They also let businesses create promotional DVDs that link their audience directly to their web store. With web links, salespeople can enhance their presentations by jumping to up-to-date, web-based inventory and pricing details.

Question 5: DVD audio is encoded in Dolby, but QuickTime is the standard audio format for digital video edited on a computer. Which format works in DVD Studio Pro?

Answer: You can use your multichannel QuickTime audio files as the source for encoding into Dolby AC-3 format. Or you can use uncompressed

AIFF or QuickTime sound files for stereo audio.

Question 6: To what formats can I output a project authored in DVD Studio Pro?

Answer: After you complete authoring and testing your project in DVD Studio Pro, the software allows you to output your work in the format that best fits your audience and budget. You can

- Output your project in DVD-R format and record it using the DVD-R drive on your new Power Mac G4, or deliver it to a DVD service bureau for recording.
- Transfer your project to digital tape and deliver it to a replicator for mass duplication.
- Select DVD-RAM format to record your project using a computer DVD-RAM drive. This is an inexpensive way to test your project before committing it to other media.

Question 7: Which DVD recorders does DVD Studio Pro support?

Answer: DVD Studio Pro supports the Apple DVD-R drive available on select Power Mac G4 systems as well as the Pioneer DVR-S201 DVD recorder.

Question 8: Is there any difference between discs written with the Apple DVD-R drive and those written with the Pioneer DVD-R recorder?

Answer: Yes. The Pioneer DVR-S201 recorder writes DVD-R Authoring media. These discs can be used as masters for replicating multiple DVD discs. The Apple DVD-R drive writes DVD General media, which are not intended for use as replication masters. If you are creating a project for replication, output your DVD Studio Pro project to digital tape or use a DVD-R Authoring disc as a master.

Question 9: I don't have a DVD recorder. How can I burn DVD discs using the content I've authored in DVD Studio Pro?

Answer: If your Macintosh does not have a DVD-R drive, you can still use DVD Studio Pro to author and test your projects. You can hire a DVD service bureau to create the discs for you. Just output your content onto digital tape or deliver your work on a portable hard drive. You can also output your work onto a DVD-RAM disc, then play it on a computer with a DVD-RAM drive.

Question 10: What are 4:3 and 16:9 aspect ratios?

Answer: Standard NTSC and PAL televisions have a picture aspect ratio of 4:3 and many new DV devices support a picture aspect ratio of 16:9. DVD Studio Pro supports the acquisition, creation, and distribution of 16:9 and anamorphic media. On DV devices that have a 16:9 setting, DVD Studio Pro captures and exports the proper 16:9 image.

Question 11: What is anamorphic media?

Answer: Some widescreen video material is shot using a special anamorphic lens that squeezes the wide image horizontally so it can be captured on the standard 4:3 aspect ratio of video. When this material is played back, it needs to be expanded horizontally to match the original shape. DVD Studio Pro can work with this anamorphic material and instructs DVD players to restore the shape on playback.

Question 12: What operating systems support DVD Studio Pro?

Answer: DVD Studio Pro works with Mac OS 9.0.4 through 9.2.2. DVD Studio Pro 1.0 is not compatible with the Classic environment of Mac OS X.

Question 13: What software comes with DVD Studio Pro?

Answer: The DVD Studio Pro package offers several tools:

- DVD Studio Pro software for authoring and testing DVDs
- QuickTime MPEG Encoder software
- DVD@CCESS software to create DVDs that support web links
- A.Pack Dolby digital encoding software to produce high-quality surround sound audio
- Subtitle Editor software to create subtitles
- QuickTime Pro software to update your computer's QuickTime capabilities
- Instruction manual with a comprehensive tutorial and sample files to make learning DVD Studio Pro easy

Question 14: What are the system requirements for DVD Studio Pro?

Answer: DVD Studio Pro requires a Power Mac G4 computer with an Apple-supplied AGP graphics accelerator. The earliest Power Mac G4 computers, which featured PCI-based graphics cards, are not supported. Recommended RAM is at least 128 MB. The amount of hard disk space needed for authoring depends on a number of factors, including the compression format of the source material and the length of the project. A typical DVD-5 project with DV source material uses about 20 GB of disk space. DVD Studio Pro can take advantage of large displays; a display resolution of at least 1024 by 768 pixels is recommended. Mac OS 9.0.4 or 9.1 is required.
Published Date: Feb 19, 2012

iDVD 1.0: Cannot Import MPEG 1 Video

iDVD 1.0 cannot import MPEG 1 video, even though QuickTime can import it, and the iDVD help files indicate that iDVD can use any QuickTime video file.
This article has been archived and is no longer updated by Apple.

Symptom

You're unable to import an MPEG 1 video file into your iDVD project. QuickTime Player can read and play the file, and iDVD Help says: "You can add any video or image file supported by QuickTime to your iDVD project."

Solution

iDVD 1.0 cannot read MPEG 1 video files. The Help file is in error. You may be able to convert your MPEG 1 video files to a different QuickTime format that iDVD can read by using the Cleaner 5 application from Terran (http://www.terran.com/).

This article provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"

Note: MPEG 1 files in QuickTime are technically not video tracks, they're MPEG tracks. iDVD can import files that are QuickTime video tracks.
Published Date: Oct 7, 2016

Apple DVD Player: Movies Play in Slow Motion

This article describes an issue where movies may occasionally play in slow motion, stutter, or stop playing when you watch them from a DVD-Video disc on your computer.
This article has been archived and is no longer updated by Apple.

Symptom

When watching a movie from a DVD-Video disc, the sound stutters, the movie plays in slow motion (two or three frames per second), or it completely stops playing.

Solution

1. Make sure you have installed the latest version of the Mac OS and Apple DVD Player software.
2. If you are using latest version of Apple DVD Player, use the tips in article 58383: "**Apple DVD Player: Troubleshooting Video Issues**" to eliminate any other possible causes.

If the DVD-Video title uses "Concealment Motion Vector" (CMV) encoding, a type of encoding used in some countries, including Japan, the video will appear to play very slowly in Apple DVD Player. Download and install **Apple DVD Player 2.7** or later to correct this issue.
Published Date: Feb 19, 2012

El Reproductor DVD 2.0 de Apple: No es compatible con el Mac OS 9.1

This article has been archived and is no longer updated by Apple.

Es posible que el Reproductor DVD de Apple no funcione después de actualizar el sistema al Mac OS 9.1.

Síntoma

Después de actualizar el sistema al Mac OS 9.1, al abrir la aplicación Reproductor DVD de Apple aparece el siguiente mensaje de alerta:

"El Reproductor DVD de Apple no es compatible con la tarjeta de vídeo de la pantalla principal".

Productos a los que afecta

- iMac (carga por ranura)
- Power Mac G4 (AGP)
- PowerBook (FireWire)

Solución

Importante: Las versiones actualizadas del Reproductor DVD de Apple ya han solucionado este problema. Consulta el documento 26201 para descargar el Reproductor DVD 2.4 de Apple o el documento 120022 para descargar el Reproductor DVD 2.7 de Apple.

El motivo de este error es el Reproductor DVD de Apple no estaba actualizado a la versión 2.2 antes de instalar la Actualización Mac OS 9.1. El Mac OS 9.1 sólo admite las versiones Reproductor DVD 2.2 de Apple y posteriores; no es compatible con la versión Reproductor DVD 2.0b de Apple que se incluye con el Mac OS 8.6 ni con la versión Reproductor DVD 2.0 de Apple que se incluye con el Mac OS 9.0 a 9.0.3. El Reproductor DVD 2.2 de Apple está disponible en la sección de Descargas de software Apple.

Si intentas instalar el Reproductor DVD 2.2 de Apple a un ordenador actualizado con el Mac OS 9.1 utilizando la actualización descargable y no la de CD-ROM, aparecerá el siguiente mensaje de alerta:

"No es posible instalar el Reproductor DVD de Apple en un volumen que no disponga de la versión para EE.UU., G.B. o Internacional del Mac OS 9.0.1 o posteriores".

Para instalar el Reproductor DVD 2.2 de Apple:

1. Reinicia el ordenador desde el CD de Instalación del sistema. Consulta el documento 50055: "Miscellaneous Manuals". Selecciona el Manual de solución de problemas - Arranque desde CD.
2. Ejecuta una instalación desde cero del Mac OS 9.0.2, 9.0.3 o 9.0.4. Se instalará una nueva Carpeta del Sistema y la anterior pasará a llamarse Carpeta Anterior del Sistema. Consulta el documento 60496: "Mac OS 9: Performing a Clean Installation" (ver Nota 1).
3. Al finalizar la instalación, sal del Instalador e instala el Reproductor DVD 2.2 de Apple.
4. Al finalizar la instalación, sal del instalador y mueve la carpeta del Reproductor DVD de Apple de la carpeta Applications a la carpeta Applications (Mac OS 9). Es posible que aparezca un mensaje de alerta que te pida autorización para reemplazar un elemento anterior con el mismo nombre; haz clic en OK.
5. Abre la Carpeta del Sistema
6. Abre la Carpeta Extensiones
7. Arrastra las siguientes extensiones al primer nivel del disco duro:
    - - DVD AutoLauncher
    - - DVD Decoder Library (tal vez sólo en equipos iMac)
    - - DVD Navigation Manager
    - - DVD Region Manager
    - - DVD Runtime Lib
8. Arrastra estas extensiones a la carpeta Extensiones de la Carpeta Anterior del Sistema.
9. Arrastra las siguientes extensiones a la Papelera:
    - - Carpeta del Sistema
    - - Applications (**Atención**: NO la carpeta Applications (Mac OS 9))
    - - Apple Extras
    - - Assistants
    - - Internet
    - - Utilities
    - - Web pages
10. Cambia el nombre Carpeta Anterior del Sistema por Carpeta del Sistema.
11. Para confirmar esta Carpeta del Sistema: ábrela, abre el archivo Sistema (icono de maletín) y cierra ambas.

12. Reinicia el ordenador.

Ahora ya debe ser posible ejecutar el Reproductor DVD de Apple con el Mac OS 9.1.

Este problema no tiene por qué ocurrir si se actualiza el sistema al Mac OS 9.1 con el CD-ROM correspondiente. El disco permite la instalación completa y desde cero. Si ya dispones de una versión del Mac OS 9, puedes comprar la actualización al Mac OS 9.1 a precio reducido. Para más información, visita la sección Software en http://www.apple.com/.

Notas:

1. 1. Si dispones del CD de Instalación del Mac OS 8.6 CD, deberás actualizar el sistema al Mac OS 9 e instalar la actualización Mac OS 9.0.4. Si dispones del CD de Instalación del Mac OS 9, deberás instalar la actualización Mac OS 9.0.4. La actualización Mac OS 9.0.4 está disponible en http://www.apple.com/support/downloads/.

Documentos relacionados

43038 Troubleshooting Handbook: Starting Up From a CD
60496 Mac OS 9: Performing a Clean Installation

Descargas de Software relacionadas

60791 About Mac OS 9.0.4 Update Document and Software
26201 Apple DVD Player 2.4 and 2.2 Document and Software
120022 Apple DVD Player 2.7 Document and Software

Published Date: Oct 7, 2016

Mac OS 9: Help Viewer "Not Enough Memory" Message

An alert box may appear with a message that there is not enough memory to use Mac Help, particularly after updating or installing new software on your computer.

This article has been archived and is no longer updated by Apple.

Symptom

When you try to search Mac Help, an alert box with this message appears:

> "There is not enough memory to complete this operation. Quit other open applications and try again."

However, the Finder indicates that there is an adequate amount of available memory.

Solution

Remove the file "Help Viewer Accessors" from the Apple Help Prefs folder in the Preferences folder.

Published Date: Feb 20, 2012

Disc Burner 1.0.1: Does Not Work With SCSI CD-RW Drives

You cannot burn discs with Disc Burner 1.0.1 and a SCSI CD-RW drive.

This article has been archived and is no longer updated by Apple.

Disc Burner 1.0.1 is compatible with some third-party CD-RW mechanisms.

These CD drive mechanisms are supported:

- LG (CD-RW CED-8042B)
- Matshita (CD-RW CW-7121, CD-RW CW-7586, UJDA310)
- Mitsumi (CR-4802TE, CR-4804TE)
- Philips Iomega (CDD4801 CD-R/RW, ZIPCD 650)
- Pioneer (DVD-RW DVR-103)
- Plextor (CD-R PXW1210A, CD-R PX-W8432T, CD-R PX-W8220T, CD-R PX-W124TS)
- Ricoh (CD-R/RW RW8040A)
- Samsung QPS (CD-R/RW SW-208B)
- Sanyo LaCie (CDBP-121032, CDBP-161040, CRD-BP1300P)
- Sony (CD-RW CRX140E, CD-RW CRX700E, CD-RW CRX140, CD-RW CRX145, CD-RW CRX160, CD-RW CRX700, CD-RW CRX10U)
- Teac (CD-W24E)
- Yamaha (CRW4416, CRW6416, CRW8424, CRW8824, CRW2100)

These mechanisms are compatible with Disc Burner software when they are used in USB or FireWire drives, but not in SCSI drives.

See software download document 75106 "**Disc Burner 1.0.1 Document and Software**" for additional information.

Published Date: Oct 7, 2016

Mac OS 9.1 and Software Updates: .smi Disk Image Volumes Appear Empty

On computers with Mac OS 9.1, a self-mounted disk image volume may appear to be empty the first time it appears on the desktop. This type of disk image is frequently used for Apple software downloads.
This article has been archived and is no longer updated by Apple.

Symptom

A disk image volume appears to be empty.

Note: A disk image **volume** has an icon that looks like a disk and a filename without any extensions. It behaves like a disk. A self-mounting disk image **file** has an icon that looks like a file (a paper with a dog-eared corner) and a filename extension of ".smi".

Solution

1. Drag the icon of the disk image volume to the Trash. **Important:** This icon's filename does not have an extension such as ".smi" or ".img".
2. Double-click the self-mounting disk image file with a filename extension of ".smi". A new disk image volume icon appears on the desktop, and its contents should be visible.

For additional information on this issue, see technical document 75098 "**Software Downloads: Software Format and Assistance**".
Published Date: Feb 20, 2012

Disc Burner: How to Use Saved Disk Images

This article explains what to do with the Disk Copy image file named "DiscBurnerImage" that may be created if a burn did not successfully complete.

This article has been archived and is no longer updated by Apple.

Disc Burner gives you the option of saving the data you are attempting to burn as a Disk Copy disk image file if an alert box with any of these messages appears:

"The burn cannot proceed because the startup disk is full."
"The burn cannot proceed because the disc is too full."
"The burn cannot proceed because the disc contains filenames that could not be converted."
"The burn cannot proceed because the disc has folders nested deeper than 8 levels."

Once you address the issue that prompted the burn to stop, follow the steps below. See Figure 1 for help in identifying the respective icons of the files mentioned because some of the names can vary.

Figure 1 File icons

A. The DiskBurnerImage file moved from the preferences folder to the desktop

B. The disk image file (with the default name) made available on the desktop when you double-click the DiskBurnerImage file.

C. The CD-R/CD-RW disc icon representing the blank disc with the default name.

Follow these steps to burn a disc from the saved DiscBurnerImage file:

1. Locate the file named "DiscBurnerImage" in the Preferences folder and drag it to the desktop. Depending on how many discs you have saved, you may have other files with a number following the name (DiscBurnerImage1, DiscBurnerImage2, and so forth).

2. Double-click the DiscBurnerImage icon to make the disk image available on the desktop.

When the disk image appears on the desktop, you will see a new icon with the name that you originally used for the CD-R or CD-RW disc. If you did not change the name, then it will appear with the default name "untitled" as in Figure 1.

3. Insert the blank CD-R or CD-RW media you want to use. Prepare it as you did previously. You may notice a new "DiscBurnerImage" file in the Preferences folder. Do not move or remove this file. It will be automatically removed when the burn is completed.

4. Open disk image file (named untitled, or the name you gave the disc). Choose Select All from the Edit menu and drag the files from the window to the CD-R or CD-RW icon on the desktop.

When the files are done copying, click the disk image file to select it and choose Put Away from the File menu.

5. Drag the file "DiscBurnerImage" on the desktop to the Trash.

6. Continue to burn the disc as normal by selecting the disc icon and then choosing Burn CD-R from the Special menu.

Published Date: Feb 20, 2012

Final Cut Pro: Requires Apple CPU Plugins 2.7 or Later

On Power Mac G4 computers with dual G4 microprocessors, you should have version 2.7 or later of Apple CPU Plugins installed in the Extensions:Multiprocessing folder.

This article has been archived and is no longer updated by Apple.

Symptom

Final Cut Pro stops responding, mouse clicks have no effect, or video stops playing while audio continues and the dropped frame alert appears.

Solution

Download and install Apple CPU Plugins 2.7. The software can be downloaded from article 88054 "**Apple CPU Plugin Document and Software**."

Published Date: Feb 20, 2012

Mac OS 9: Type 41 Error and VistaScan Software

An alert box with a positive or negative error type 41 may appear when certain versions of UMAX scanner software are installed and the computer is waking from sleep mode.
This article has been archived and is no longer updated by Apple.

Symptom

An alert box with a positive or negative error type 41 may appear on screen when certain versions of scanner software are installed and the computer is waking from sleep mode. The alert may also occur at shutdown, restart, when the Finder is forced to quit, or when the Finder reloads in a multi-user environment.

Solution

UMAX has updated the VistaScan software to version 3.75. Contact UMAX for information on obtaining this update.

Temporarily, you could disable the VS Control Strip module to alleviate this alert box prior to updating the software. To do this, locate the file in the Control Strip Modules folder in the System Folder and drag it to the desktop. Note that there is a space at the beginning of the filename so when viewing the Control Strip Modules folder by name, look towards the top.

See also article 24431 "**Mac OS: Error Type 41**"

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

The following article can help you search for a particular vendor's address and phone number:

Article 17159: "**Locating Vendor Information**"

The Web address for UMAX is http://www.umax.com/ .

Published Date: Oct 7, 2016

AppleScript 1.6: What‘s New and Different from AppleScript 1.5.5

AppleScript 1.6 for Mac OS 9.1 can be installed in three ways: by using the Software Update control panel, by downloading the software from Apple Software Updates, and by running the Classic environment on a computer with Mac OS X.

AppleScript 1.6 for Mac OS 9.1 is functionally compatible with AppleScript 1.6 for Mac OS X, though there are differences in behavior due to differences between Mac OS 9.1 and Mac OS X.

This article has been archived and is no longer updated by Apple.

What's New in AppleScript 1.6 and Different From AppleScript 1.5.5

AppleScript 1.6 for Mac OS 9.1 (like AppleScript 1.6 for Mac OS X) has several substantial changes and improvements from version 1.5.5, which is included with Mac OS 9.1. If you use the Unicode Text or Read/Write Commands features of AppleScript, you should quickly upgrade to AppleScript 1.6 for Mac OS 9.1. Like AppleScript 1.5.5, AppleScript 1.6 will function only with Mac OS 9.1 or later.

Stability and Reliability

AppleScript 1.6 fixes a long-standing issue in AppleScript in which scripts may claim to run out of memory, even when plenty of memory is available. AppleScript 1.4.3 and 1.5.5 also had rare issues with applets losing track of global variables; these issues have been fixed in AppleScript 1.6.

Support for Large Files in Read/Write Commands

The Read/Write commands in Standard Additions 1.6 now can work with files greater than 2 GB in size. In addition, all of the issues introduced in the Read/Write commands in AppleScript 1.5 and 1.5.5 have been fixed, and several long-standing issues with reading and writing lists and records have been fixed.

Note: AppleScript 1.6 introduces a known issue with the read command when using both the "as list" and "using delimiters" parameters. Where previous versions would return a list of strings, AppleScript 1.6 returns a list of one-item lists. Also, using the read command with the "before or until" parameter and an "as" parameter of a type other than text will return erroneous results. These issues will be addressed in a future release of AppleScript.

Support for Unicode

The Unicode text data type has been growing in functionality since version 1.3 and is now comparable in functionality with the string data type. Not only can Unicode text strings be received from and sent to applications, they display properly in the Results and Event Log windows of the Script Editor (and third-party editors); they can be accessed with the character, word, paragraph, and text item element classes and the first, last, middle, some, and every access forms; they can be operated on with the & (concatenation) operator; and they can be compared with the less than, greater than, less than or equal to, greater than or equal to, equals, contains, is contained by, begins with, and ends with operators. For text item elements of a Unicode string, the text item delimiters can be either string or Unicode text values. When comparing Unicode strings, the considering and ignoring constructs are supported for case, diacritical marks and punctuation.

Support for Mac OS X

AppleScript 1.6 supports many changes in general system operation introduced in Mac OS X. It can use applications and scripting additions that are stored as "bundles" or "packages" for Mac OS X. It can load scripts and application terminologies from files that do not have traditional Mac OS resource forks. It accommodates the fact that many Mac OS X applications actually have a ".app" filename extension that is hidden from the user.

No Dependence on Security Library

The Standard Additions functionality in AppleScript 1.5.5 depended on the presence of the Security Library system extension in order to function. In Standard Additions 1.6, if the Security Library is missing or disabled, only the mount volume command's ability to use the Keychain will be disabled, but all other Standard Additions features will be available.

Other Changes and Improvements

AppleScript 1.6 has improvements to the random number command, to make random numbers more evenly distributed and less predictable; it returns more correct results from certain unusual operations (item 0 of a list, set text item delimiters to {}, strings of a string, strings of a list that doesn't contain strings) where previous versions of AppleScript would return unhelpful results or fail to signal appropriate errors.

Note: AppleScript 1.6 introduces a known issue with using the mount volume command to mount volumes hosted on certain kinds of servers,

especially computers with Windows 2000. This issue is expected to be addressed in a future version of AppleScript.

For More Information

To download AppleScript 1.6, see article 120001: "**About AppleScript 1.6**".

See the AppleScript Web site (http://www.apple.com/applescript/).

Published Date: Feb 19, 2012

Mac OS 9FU: "Table du système de fichiers incorrecte" Alert at System Startup Time

This article explains what to do if an alert box with this message appears: "Table du système de fichiers incorrecte."
This article has been archived and is no longer updated by Apple.

Symptom

The computer stops responding at system startup time and an alert box with this message appears:

> "Table du système de fichiers incorrecte" (File system map inconsistent.)

Solution

1. Disconnect USB devices that you're not using. Plug them in only after the computer has started up and when you need to use them.
2. Reset the computer's parameter memory (PRAM). See article 2238 "**Macintosh: How to Reset PRAM and NVRAM**" if you need help with this step.
3. Use the Extensions Manager control panel to disable libraries (bibliothèques) for application programs or USB devices that you don't use, or use infrequently. (You may need to turn them back on in order to use an application or USB device at a later time.)

Published Date: Feb 20, 2012

Mac OS: Sound Preference Settings and Macintosh Manager Interaction

This article describes the steps necessary to define and retain sound preferences settings for Macintosh Manager clients using Mac OS 9.1 and earlier.
This article has been archived and is no longer updated by Apple.

Symptom

Sound Preferences cannot be forced or set up as initial preferences on Mac OS 9.1 and earlier.

Solution

The following steps describe how to define a set of Sound control panel settings (to mimic forcing sound preferences) for Macintosh Manager clients using Mac OS 9.1 and earlier:

1. Grant access to control panels to a workgroup containing at least one user. This option is located in the Macintosh Manager admin utility under Workgroups Tab:Privileges Tab:Apple Menu box.
2. On the Macintosh Manager admin computer, log in to the user's account with access to the control panels.
3. Make desired changes to the sound settings.
4. Log out of that user's account.
5. On the Macintosh Manager server, locate the user's Preferences folder. Inside this folder you will find the Sound Preferences file.
6. Click to select the file.
7. Choose Get Info from the File menu.
8. Click Locked to lock the file.
9. Copy this user's Sound Preferences file to all other user's Preferences folders who require these settings.
10. (Optional) In the Macintosh Manager Admin utility, under the Privileges tab, disable Control Panel Access. The Control Strip will also need to be disabled on each Macintosh Manager client. This would be used to further prevent user access to Sound control panel settings during the Macintosh Manager login process.

These settings remain intact when a user logs out and subsequently logs in with Mac OS 9.x clients:

- Alert Sound: Transfers OK across multiple logins as long as the selected alert sound is present in the client's System file.
- Alert Volume: Transfers OK across multiple logins and hardware.
- Main Volume: Transfers OK.
- Input Source: Transfers OK, provided hardware configuration exists. Because there is no built-in microphone on the Power Macintosh G3 (Blue and White) computer, for example, this setting will default to "No Selection" on this computer if "Built-in" was selected in an iMac computer's Sound control panel.
- Output Device: Transfers OK, provided the hardware configuration exists.
- Speakers: Transfers OK, provided the hardware configuration exists. This selection will be available if external speakers are detected. The right and left sound levels are not transferred properly over multiple logins.

Mac OS 9.1 preinstalled alert sounds include: ChuToy, Glass, Indigo, Laugh, Logjam, Pong2003, Purr, SimpleBeep, Single Click, Sosumi, Submarine, Temple, Uh oh, Voltage, and Whit.

Mac OS 8.6 and Earlier Macintosh Manager Client Sound Preference Behavior

The following steps describe how to define a desired set of Sound control panel settings (to mimic forcing sound preferences) for Macintosh Manager clients using Mac OS 8.6 and earlier versions of Mac OS.

The System Access settings will always remain intact unless the users are given access to the Sound control panel, Control Strip or any other utility capable of altering sound-related settings. Changes will be made to the client computer's sound settings and not the user's. The next user who logs in on that computer will see the previous user's settings if any changes were made.

If you wish to assign Monitors & Sounds settings en masse to Mac OS 8.6 users, a template of the desired Sound Preferences and Monitors & Sounds folder must be set up on a client and copied manually or via Network Assistant to the Preferences folder of each computer. (See Note 1). All settings transfer to the Mac OS 8.6 client computers except the Alert Sound selection.

If the you wish to retain sound settings on these Macintosh Manager clients, you must prevent access to the Monitors & Sound control panel, Control Strip and any other utility capable of altering sound settings.

Mac OS 8.6 preinstalled alert sounds include: Droplet, Indigo, Quack, Simple Beep, Sosumi, and Wild Eep.

Notes

1. Network Assistant 3.6.x client software is for use with Mac OS 8.1 through 8.6. Do not install Network Assistant 4.0.x client software with computers using Mac OS 8.1 through 8.6.

Published Date: Oct 7, 2016

Firmware Update: Firmware Updates 4.1.7 and Later May Disable Out-of-Spec Third-Party RAM

This article describes why some third-party RAM (memory) may no longer be recognized by the computer after installing the 4.1.7, 4.1.8, or 4.1.9 firmware updates for iBook, PowerBook G3 and G4, Power Mac G4, Power Mac G4 Cube, and iMac.
This article has been archived and is no longer updated by Apple.
The Apple 4.1.7, 4.1.8, and 4.1.9 firmware updates incorporate a number of fixes that dramatically improve system stability and performance. The update also includes a check that validates whether the memory installed in the computer is compatible. This check was added to help alleviate random crashes and stability issues. This memory test disables memory DIMMs that are found to be out of specification, and DIMMs that cannot be determined to be compatible. As a result, some third-party memory that was recognized by previous versions of firmware may no longer be recognized after the updates.

With this set of firmware updates, Apple is strictly enforcing adherence to published RAM specifications. RAM that falls outside of specification can cause stability issues with Apple hardware and software, including Mac OS X. If out-of-spec RAM is installed in a Macintosh computer, the system cannot be expected to perform reliably. Apple has provided RAM specifications to memory developers for some time.

When purchasing RAM modules for use in Macintosh computers, make sure that they conform to the JEDEC specification. Check with your memory vendor to ensure that the RAM module supports the correct timing modes and that their Serial Presence Detect (SPD) feature has been programmed properly, as called out in the JEDEC specification.

If you have installed the 4.1.7, 4.1.8, or 4.1.9 firmware update on your computer and some of your third-party RAM is not recognized, contact the vendor of that RAM.
Published Date: Oct 7, 2016

QuickTime 5: System Requirements

This article outlines the system requirements for QuickTime 5 on Windows and Mac OS.

This article has been archived and is no longer updated by Apple.

Mac OS System Requirements

- PowerPC-based computer
- 32 MB of memory (RAM) or more
- Mac OS 7.5.5 or later

Windows System Requirements

- QuickTime 5 is compatible with:
  - Windows 95
  - Windows 98
  - Windows 2000
  - Windows NT
  - Windows Me
- Intel Pentium or compatible microprocessor
- 32 MB RAM
- Sound Blaster or compatible sound card and speakers
- DirectX 3.0 or later

Published Date: Feb 19, 2012

Apple Software Restore: How to Perform a Multiple Disc Restoration

This article explains how to use Apple Software Restore to reinstall the operating systems and application programs that came with your computer.

This article has been archived and is no longer updated by Apple.

Important: If your computer came with both Mac OS 9.1 and Mac OS X installed on the hard disk, you should follow the steps in this article. If your computer came with only Mac OS 9.1 or earlier installed on the hard disk, you should follow the steps outlined in article 24270: "**Apple Software Restore: How to Perform a Single Disc Restoration.**"

Warning: Apple Software Restore will completely erase the contents of your hard disk or disk partition. You should back up important files and documents that you want to keep before using Apple Software Restore.

Follow these steps to reinstall the operating systems and application programs that came with your computer:

1. Make sure you have made backup copies of files and documents you want to keep. You should save these copies to a removable medium (CD-RW disc, floppy disk, ZIP disk, and so forth), or to a file server or your iDisk.
2. Find the Restore CDs that came with your computer. There may be five or more.
3. Insert disc 1.
4. If your computer is using Mac OS 9.1, choose Restart from the Special menu to restart the computer. If your computer is using Mac OS X, choose Restart from the Apple menu.
5. Press and hold the C key until the "Welcome to Macintosh" message appears. (This key allows the computer to start up from the CD.)

Figure 1 Multiple disc Apple Software Restore

6. Select the disk or volume onto which you want to restore the software, then click Restore. This process could take 20 to 30 minutes.

Figure 2 When prompted by Apple Software restore, insert the next disk

7. When prompted, remove the disc from the drive, and insert the next one as indicated on the screen.
8. When this process is finished, restart your computer to use the new software.

Published Date: Feb 19, 2012

How to Determine a CD or DVD Drive‘s Mechanism and Firmware Version

This document explains how to determine which mechanism is used in an external USB or FireWire CD or DVD drive, and what version of firmware that mechanism uses. This information can be useful in determining if the drive is compatible with iTunes.

This article has been archived and is no longer updated by Apple.

Follow these steps to determine a CD or DVD drive's mechanism and firmware version:

1. Connect the external CD or DVD drive to the computer.
2. Start up the computer.
3. Choose Apple System Profiler from the Apple menu (Mac OS 9), or open it from the Utilities folder (Applications/Utilities) in Mac OS X.
4. Click the Devices and Volumes tab.
5. Locate the listing for the optical drive in the USB or FireWire device tree.
6. Click the disclosure triangle to the left of the device listing to get more information about it.

Below is a screenshot of the information listed in Apple System Profiler for a FireWire optical drive.

Apple System Profiler information about an optical drive

1. Mechanism model
2. Firmware version
3. Mechanism vendor

Tip: In Mac OS 9, Apple System Profiler 2.5.8 or later is required. It is included in the Authoring Support Update 1.1. In Mac OS X, Apple System Profiler 2.7 or later is required.

Use the Software Update control panel to download and install the Authoring Support Update version 1.1. You can also download Authoring Support Update version 1.1 from Apple Downloads.

For the latest information about compatible CD-RW drives, visit the iTunes website.

Published Date: Oct 7, 2016

Apple Studio Display 17 (LCD): Apple Displays Software Won‘t Install

If your computer has Mac OS X 10.0.4 or later, or Mac OS 9.2 or later, you do not need to install the Apple Displays software that comes with the Apple Studio Display 17 (LCD).

This article has been archived and is no longer updated by Apple.

Symptom

When you try to install the Apple Displays Software an alert box with this message appears:

"This software cannot be installed on this computer."

Solution

You do not need to install this software. It is already part of Mac OS X 10.0.4 and later, as well as part of Mac OS 9.2 and later.

You should install this software if your computer uses earlier versions of the Mac OS, although it is better to upgrade to a later version.

Related Articles

58761 Apple Studio Display 17 (LCD): Install Display Software for Best Performance

58767 Apple Studio Display 17 (LCD): Compatibility

58823 Apple Studio Display 17 (LCD): Technical Specifications

Published Date: Feb 19, 2012

iBook: About the Video-Out Port

This article contains compatibility information for the video-out port on the iBook computer.

This article has been archived and is no longer updated by Apple.

Note: The computers are all white in color.

The iBook computer has a video (standard red/green/blue video) output port that allows you to connect an RGB video monitor to the computer. The computer detects when a monitor is plugged in and sets up the monitor accordingly.

You use the VGA Adapter included with your iBook computer to connect an external monitor to the computer's video-out port.

Figure 1 VGA Adapter

To connect a monitor to your iBook computer:

1. Choose Sleep from the Special menu.
2. Connect the monitor cable to the VGA Adapter.
3. Connect the VGA Adapter to the iBook computer's video-output port.
4. Press the computer's power button to wake it from sleep.

The monitor you connected to the computer operates in mirror mode, which means that you see the same image on the iBook's display as you see on the external monitor.

The iBook computer's video-out port can work with monitors that are compatible with these video resolutions:

- 640 by 480 pixels at 60 Hz
- 800 by 600 pixels at 75 Hz
- 1024 by 768 pixels at 75 Hz

Note: The video-out port and Apple VGA Adapter are compatible with most monitors that have a VGA-style connector. Many monitors have this connector. If you use an earlier Apple monitor that has a DB-15 connector, you may need to connect a Mac-to-VGA adapter, which you can purchase from an Apple reseller.

The iBook computer's video-out port works with RGB monitors that use the DDC (display data channel) standard for identification. Earlier monitors that do not use the DDC standard are not compatible, including the following Apple monitors:

- Multiple Scan 17
- Multiple Scan 20
- AudioVision 14
- Apple Hi-Res RGB
- Apple 16-inch Color
- Apple Hi-Res Monochrome
- Macintosh 12-inch RGB

Related Documents

88396 iBook: Adapters and Resolutions

Published Date: Oct 7, 2016

DVD Studio Pro: Compatibility information for DVD-R playback devices

DVD-R discs produced with Apple SuperDrives are compatible with a wide variety of DVD hardware.

This article has been archived and is no longer updated by Apple.

Check the documentation that came with your player or with the manufacturer to find out if it is compatible with DVD-R media.

Published Date: Oct 7, 2016

Mac OS X 10.0: Managing AppleTalk Printers

Use the Apple Printer Utility to manage AppleTalk printers.
This article has been archived and is no longer updated by Apple.

Symptom

You are unable to change the name and manage the startup page of an AppleTalk printer in the Print Center.

Solution

Use the Apple Printer Utility to manage an AppleTalk printer in the Classic Environment or when started up with Mac OS 9.1.

Related articles

20663: "**LaserWriter Printers: Renaming and Turning Off Startup Page**"
26060: "**Apple Printer Utility 2.2 - Read Me**"
30513: "**Apple Printer Utility: Where to Find?**"
Published Date: Oct 7, 2016

Final Cut Pro: About Luminance

This article is about luminance and how Final Cut Pro handles black, white, and super-white levels.

This article has been archived and is no longer updated by Apple.

Measuring Black and White Levels

How Brightness is Measured

The way brightness (also referred to as luminance) is measured in analog video differs from the way it is measured digitally by Final Cut Pro's Waveform monitor. (The Waveform monitor uses the ITU (International Telecommunications Union) standard for digital video.)

Measuring Digital Video During Capture

When you use Final Cut Pro's Waveform monitor, black is always represented on a digital scale as 0 percent, and white is represented by 100 percent, regardless of the source.

Many consumer camcorders record super-white video levels, or video levels that exceed a digital value of 100 percent. Some record at up to 109 percent. Final Cut Pro is capable of capturing and maintaining these super-white levels through final output as long as the video codec you use to capture is compatible with YUV processing. The Apple DV codec included with QuickTime is compatible with YUV processing. It allows the seamless capture and processing of DV clips with super-white video levels. If you have a third-party capture card, check the documentation that came with it to find out if it is compatible with YUV processing.

If your video capture codec does not work with YUV processing, you may see an effect called luma clamping when Final Cut Pro renders clips with super-white luminance levels. When this occurs, clips with super-white luminance levels that have filters or transitions applied to them will have all portions of the signal from 101 to 109 percent clamped to 100 percent after rendering. Luma clamping appears as a slight darkening of the super-white areas in the picture. This effect is most noticeable when using a transition, such as a dissolve, between two clips. The super-white areas of the clip that is making the transition will appear to suddenly darken for the duration of the rendered transition.

Because the Apple DV codec is compatible with YUV processing, it preserves all super-white levels in both rendered and unrendered clips, eliminating luma clamping altogether.

Measuring Analog Video During Output

After you have captured and edited your video in Final Cut Pro, you may need to output it to tape. If you are outputting an analog signal (such as S-video or YUV) and you use a hardware Waveform monitor to measure the signal's brightness, it's measured in IRE (Institute of Radio Engineers) units. In professional analog video, 100 IRE represents absolute white. Absolute black, or Setup, is represented by 0 IRE for PAL, 0 IRE for NTSC in Japan, and 7.5 IRE for NTSC in the United States.

If you are outputting back to analog tape using the built-in FireWire interface of your Apple computer with a consumer DV device, the black level of your video may vary depending on the device you use. While the digital video signal output from FireWire always has a digital black value of 0 percent, some DV devices output analog black around 0 IRE, and others around 7.5 IRE, depending on the model. Professional video facilities are fairly stringent about keeping video levels at precisely 0-Setup for PAL and NTSC in Japan, and 7.5-Setup for NTSC in the United States, so you may need to use a hardware Proc Amp to adjust your analog video signal accordingly.

What is Setup?

Setup refers to the black level of an analog video signal. If you use a hardware Proc Amp to adjust an incoming or outgoing analog video signal, the Setup control will allow you to adjust the analog video signal's voltage level for black.

If you are outputting back to analog tape using a third-party analog video interface, you should check its manual to determine how to configure it for the U.S. (7.5-Setup) or the Japanese (0-Setup) NTSC standard. Most vendors of analog video I/O cards include a control panel that allows selection of which black level to use. Most vendors label this as "7.5 Setup" or "0 Setup". In some cases it ma be labeled "NTSC" or "NTSC-J".

If you are outputting back to digital tape as a digital signal (for example, "SDI", "601", or HD) using a third-party digital video interface, you do not need to worry about Setup levels because the digital values for black and white specified by the ITU are standardized worldwide. They are also the same as the digital values Final Cut Pro uses.

About the Super-White Tab

The options in this tab are available for codecs that work with YCrCb color space. To find out which codecs work this way, go to the Final Cut Pro Web site (http://www.apple.com/finalcutpro/).

Always Render in RGB
When this is checked, codecs that normally process color using the YUV (or YCrCb) color space are forced to process in RGB color space. Selecting this option may cause subtle changes in color in your rendered material. If the video capture codec you are using does not work with YUV rendering, this option is unavailable.

Use this option if you want to accomplish a specific compositing task, and you think color clamping in the RGB color space might give you a different desired result than using the straight YUV color space. For example, if you are using After Effects filters, which only process in RGB color space, with Final Cut Pro filters, which process in YUV color space, choosing this option ensures a consistent look.

Process maximum white as
Many DV camcorders record video with whites that are brighter than 100 IRE, the level allowed by the CCIR 601 engineering standard for video. White levels brighter than 100 IRE are called super-white.

When you use clips created in RGB color space (for example, imported graphics files, Final Cut Pro generator clips such as the Text Generator, or QuickTime movies that use codecs in RGB color space), Final Cut Pro sets the maximum whites values in these imported clips to the white level specified by this pop-up menu. In this way, you can make sure that the white levels of your graphics or generator clips will match those of your captured video.

This pop-up menu allows you to match RGB brightness to YUV (or YCrCb) clips using super-white. It is only available if 'Always Render in RGB' is not selected. It has two options:

- **White**
  If you choose this, the maximum brightness of imported graphics or generators using the RGB color space will be set to a digital level of 100 percent. If the exposure of your video was carefully controlled during your shoot and you are sure that the brightness of your imported video clips is no more than 100 IRE, you should use this setting. As a result, the brightest whites in your graphics or generators will be at 100 percent when viewed on Final Cut Pro's Waveform monitor. Using the White setting will result in the luminance of the graphics in your project being broadcast-legal, and is the recommended mode for video destined for on-air broadcast.
- **Super-White**
  If you choose this, the maximum brightness of imported graphics or generators using the RGB color space will be set to a digital level of 109 percent. This will allow you to match the super-white levels of clips from some DV camcorders with the maximum white levels of your graphics or generator clip. As a result, the brightest white in your graphics or generators will be mapped to 109 percent when viewed on Final Cut Pro's Waveform monitor. Using the super-white option can be important if you are trying to achieve a consistent look between RGB clips in your project and video clips with super-white levels.

  Important: While using the Super-White setting will match the super-white levels recorded by some consumer camcorders, the output will not be "broadcast legal" because the luminance levels will be too high according to the CCIR 601 broadcast definition for video. In this case, if you have to output a tape for broadcast, you will need to correct the white levels in your edited sequence either with filters, or by using external hardware such as a Proc Amp to adjust the levels of your video on output.

Published Date: Feb 20, 2012

Mac OS X Server: How to Set Up Virtual Hosts

This documents describes how to set up virtual hosts in Mac OS X Server 10.0 through 10.2. Sometimes serving virtual hosts is referred to as a multi-domain feature. Name-based virtual hosts have been used since the HTTP 1.1 standard, and allow a server with a singe IP address to host multiple Web sites. IP-based virtual hosts work with the HTTP 1.0 standard and allow a server with multiple IP addresses to serve a Web site for each IP.

This article has been archived and is no longer updated by Apple.

To set up virtual hosts

1. Log in to Server Admin (on Mac OS X Server 10.0-10.1) or Server Settings (on Mac OS X Server 10.2).
2. Click the Internet Tab.
3. Click Web.
4. Select 'Configure Web Service.'
5. In the Configure Web Service area, click Sites.
6. Click Add.
7. Set up a site for each virtual host. To configure name-based virtual hosts, be sure to enter the same IP address for each virtual host. To configure IP-based virtual hosts, enter the correct IP for each domain.

In order to serve a domain as well as host in that domain, you need to configure each as a separate name-based virtual host. For example, if you are setting up www.example.com and you want visitors entering example.com to get to your Web site, you must:

- make sure that DNS is correctly configured to allow this.
- enter example.com and www.example.com as two separate name-based virtual hosts configured the same except for their names.

Published Date: Oct 7, 2016

Macintosh Manager 2: "AFP User log-in" Error

Restarting a server computer with Mac OS X Server 10.0 on 2001-06-22 or later prevents the Macintosh Manager Admin application from connecting to the server.
This article has been archived and is no longer updated by Apple.

Symptom

An alert box with this message appears when connecting with Macintosh Manager Admin:

> "Unable to open databases on "server name" because of an error. The AFP user log-in information is incorrect."

Figure 1 Macintosh Manager Admin alert box

Solution

This symptom is caused when a server computer is restarted on 2001-06-22 or a later date. To resolve this issue:

1. Install the Mac OS X 10.0.4 Update.
2. Install the Mac OS X 10.0.4 Server Update.

   Note: When using the automatic Software Update feature of System Preferences, the Mac OS X 10.0.4 Server Update does not appear until the Mac OS X 10.0.4 Update has been installed.

3. Install the Macintosh Manager 2.0.2 Update. Be sure to follow instructions included the Macintosh Manager 2.0.2 Update.

Published Date: Feb 19, 2012

Mac OS X 10.0: How to Download Developer Tools

Mac OS X 10.0 Developer Tools are available for download from the Apple Developer Connection Web site.
This article has been archived and is no longer updated by Apple.

To download the Mac OS X 10.0 Developer Tools:

1. Go to http://developer.apple.com/ .
2. Click the Join Now link in the Partner with Apple section and follow the instructions to join Apple Developer Connection.
3. Once your Apple Developer Membership is confirmed, log in and click the Download Software link.

The Mac OS X 10.0 Developer Tools are available for download there.
Published Date: Oct 7, 2016

iBook (Dual USB): Computer Doesn‘t Respond After Screen Dims

An iBook (Dual USB) computer with Mac OS X may stop responding after the display dims, or the computer is put to sleep.

This article has been archived and is no longer updated by Apple.

Symptom

The computer stops responding if the display dims after a period of time, or in some cases if you put it to sleep. The only way to get the computer to respond is to restart it. You notice that this happens if the Classic environment is open when the screen dims or when the computer is put to sleep.

Solution

Download and install Mac OS X 10.0.4:

1. Connect to the Internet.
2. Choose System Preferences from the Apple menu.
3. Click Software Update.
4. Click Update Now. The computer will check for available updates.
5. Make sure Mac OS X 10.0.4 is selected and click Install. The computer will download and install the update.

The update is also available from Apple Software Updates (http://www.apple.com/swupdates/).

Published Date: Oct 7, 2016

QuickTime Streaming Server: "Unable to establish a secure connection to ‘server.domain.com‘" Alert

This article describes the cause and solution for the "Unable to establish a secure connection to 'server.domain.com'" alert.
This article has been archived and is no longer updated by Apple.

Symptom

An alert appears with this message when you click on the Streaming Server Admin icon in the Dock:

> "Unable to establish a secure connection to 'server.domain.com'."

Solution

Your Web browser is reacting to the presence of SSL. SSL is the Secure Sockets Layer protocol. It was designed to provide additional security for electronic transactions, and QuickTime Streaming Server was written to take advantage of SSL. Because SSL requires that you obtain a valid server-side individual certificate, your browser is warning you that it cannot determine if your default certificate is valid. The default certificate installed by QTSS is simply a sample certificate.

For more information on what SSL is and how to use it, see "Providing Secure Transactions" on page 122 of the Mac OS X Server Administrator's Guide.

If you do not have a valid certificate of your own at this time and wish to disable SSL for the Streaming Server Admin, you can do so by using the following procedure:

1. Login to Mac OS X as an admin user.
2. Choose Go To Folder from the Go menu in the Finder.
3. Type in "/Library/QuicktimeStreamingServer/Config/" and click Go.
Note: For for versions of QuickTime Streaming Server prior to 4, you would type "/private/etc/streaming/".
4. Double-click the file "streamingadminserver.conf" and choose a text editor, such as TextEdit, that can open the file. **Note:** This file is created when you log in to the Streaming Server Admin program (using a Web browser) and make a configuration change.
5. Add the following information to the file:

   ssl=0

   Note: If the line "ssl=1" already exists, edit it to read "ssl=0" rather than adding a new line.

6. Save the changes, and click Overwrite when prompted. Make sure you save the file as plain text (not RTF).
7. Restart the server. SSL will be disabled.

If you have an SSL certificate that you would like the Streaming Admin Server to use, then you need to copy and paste your certificate into the /private/etc/streaming/streamingadminserver.pem file, and make sure that the /private/etc/streaming/streamingadminserver.conf file does not contain ssl=0.

Published Date: Oct 7, 2016

Network Assistant 4.0.x: Troubleshooting by Forcing a Connection Using AppleTalk or TCP/IP

When troubleshooting Network Assistant issues, it is helpful to know if the issues occur when connecting to clients using AppleTalk, TCP/IP, or both. This article discusses how to force Network Assistant to the use a single network protocol.

This article has been archived and is no longer updated by Apple.

The Network Assistant can connect to clients using two networking protocols: AppleTalk and TCP/IP. When adding client computers to your workstation list, the protocol you select with "Find using:" is the default protocol used to communicate with that client.

When troubleshooting issues in Network Assistant, it is good to know if the issue is due to the use of a particular network protocol. To force Network Assistant to use a signal protocol, use the following steps:

1. Open the Network Assistant application while pressing the Control key.

Note: If you are using Network Assistant Admin on a computer with Mac OS 8.5 and later, you will see a contextual menu if you click while pressing Control. In such situations, select Open from the contextual menu.

2. Listen for a system beep when the Network Assistant application opens, just before the password prompt appears. The system beep is your confirmation that the Network Assistant will now force the network connection protocol used to find each workstation.

3. Release the Control key, enter your password, and click OK.

For this entire session in Network Assistant Admin, the clients will be forced to use the protocol that was used to assign the workstation.

It may be necessary to remove workstations and add them again, using the other protocol to test issues.

Both Network Assistant Admin 3.x and 4.x have this feature.

Published Date: Oct 7, 2016

Macintosh Manager 2: Logging in As a Mac OS X Server Admin User

A Mac OS X Server Admin user is unable to connect to (mount) her Home directory when logging in to a Macintosh Manager client.
This article has been archived and is no longer updated by Apple.

Symptom

When a Mac OS X Server Admin user logs in to a Macintosh Manager client, an AppleShare connection dialog appears. The user can authenticate or cancel. In either case, an alert box with one of these messages appears (Figures 1 and 2):

> "Your documents can't be accessed at this time. (User canceled AFP server login.)"
>
> "You may work offline--documents you save while offline will be moved to your documents folder when the server comes back. Do you want to continue?"
>
> "Your documents can't be accessed at this time. (Access to the server was denied.)"
>
> "You may work offline--documents you save while offline will be moved to your documents folder when the server comes back. Do you want to continue?"

Figure 1 "User canceled AFP server login"

Figure 2 "Access to the server was denied"

Solution

1. Create another user that is not an Admin user for Mac OS X Server.
2. Log in with that user.

This means that the person who logs in as this user will have multiple home directories, one for the original Admin user account, and one for the new non-Admin user account.
Published Date: Feb 19, 2012

Apple System Profiler: How to Find a Computer‘s Serial Number

This document explains how to find a computer's serial using Apple System Profiler.

This article has been archived and is no longer updated by Apple.

To find a computer's serial number with Apple System Profiler 3.0 or later:

1. Open Apple System Profiler.
2. Click the System Profile tab, if you don't already see it.
3. Click the disclosure triangle next to "Hardware overview" to reveal the computer's serial number. See Figure 1.

Figure 1 Apple System Profiler 3.0 window

To find a computer's serial number with Apple System Profiler 2.6.1:

1. Open Apple System Profiler.
2. Click the System Profile tab, if you don't already see it.

The computer's serial number is located directly below the System Profile and Devices and Volumes tabs. See Figure 2.

Figure 2 Apple System Profiler 2.6.1 window

To find a computer's serial number with Apple System Profiler 2.6 or earlier:

1. Open Apple System Profiler.
2. Click the System Profile tab, if you don't already see it.
3. Click the disclosure triangle next to "Production information" to reveal the computer's serial number. See Figure 3.

Figure 3 Apple System Profiler 2.6 window

Published Date: Feb 19, 2012

Apple DVD Player 2.7: "Apple DVD Player cannot find software it needs" Alert

ATI Resource Manager 2.7.3 must be installed for Apple DVD Player 2.7 to work.
This article has been archived and is no longer updated by Apple.

Symptom

When you open Apple DVD Player, an alert box with this message appears:

> "Apple DVD Player cannot find software it needs. Try reinstalling Apple DVD Player. (201)."

Figure 1 Apple DVD Player 2.7 alert box

Reinstalling the Apple DVD Player software does not resolve the issue.

Solution

Reinstall ATI Resource Manager 2.7.3 by

- installing the Mac OS 9.1 Update
- custom installing ATI Graphics if you have the Mac OS 9.1 Install CD

Note: The ATI Resource Manager must be present in the Extensions Folder for the Mac OS 9.1 Installer to update it.

Related documents

Document 120022: "**Apple DVD Player 2.7 Document and Software**"
Document 75103: "**Mac OS 9.1: Software and Before You Install Document**"
Published Date: Oct 7, 2016

QuickTime: Broken Plug-In Icon With Internet Explorer 5.5 SP2 and later for Windows

This document explains a broken plug-in icon issue which may occur with Microsoft Internet Explorer version 5.5 SP2 and 6.0 for Windows
This article has been archived and is no longer updated by Apple.

Symptom

Windows users who try to play a QuickTime movie in Internet Explorer version 5.5 SP2 or later see a "broken plug-in icon".

Users of other browsers on either Windows or Mac OS are unaffected; they can continue to use the plug-in installed with QuickTime.

Solution

To restore compatibility, Apple has provided an ActiveX control in the QuickTIme 5.0.5 and later. The latest version of QuickTime is available at http://www.apple.com/quicktime/. Once you have the new ActiveX control installed, you are unaffected by this issue; you can also view existing Web pages with QuickTime movies.

Web Content Developers

When authoring Web pages, you can prevent this issue by authoring your HTML to check if the required ActiveX control is installed wherever you have QuickTime content embedded. This HTML change will result in Web pages compatible with Netscape and Internet Explorer browsers on both Mac and Windows computers (see below for more information).

The required code consists of an HTML OBJECT element with an enclosed EMBED element as in the following example:

```
<OBJECT CLASSID="clsid:02BF25D5-8C17-4B23-BC80-D3488ABDDC6B" WIDTH="160"HEIGHT="144"
CODEBASE="http://www.apple.com/qtactivex/qtplugin.cab">
<PARAM name="SRC" VALUE="sample.mov">
<PARAM name="AUTOPLAY" VALUE="true">
<PARAM name="CONTROLLER" VALUE="false">
<EMBED SRC="sample.mov" WIDTH="160" HEIGHT="144" AUTOPLAY="true" CONTROLLER="false"
PLUGINSPAGE="http://www.apple.com/quicktime/download/">
</EMBED>
</OBJECT>
```

CLASSID must always equal: clsid:02BF25D5-8C17-4B23-BC80-D3488ABDDC6B
CODEBASE must always equal: http://www.apple.com/qtactivex/qtplugin.cab
PLUGINSPAGE must always equal: http://www.apple.com/quicktime/download/

The other attributes should be customized to your Web page. You need to substitute "sample.mov" (in both SRC attribute elements) with the URL of the actual movie to be played. You should also change the HEIGHT and WIDTH parameters to match the height and width of the movie (in pixels).

If you already have EMBED elements for the QuickTime plug-in on the relevant pages, you need to enclose each of them in an OBJECT element with CLASSID and CODEBASE parameter values as shown above and with SRC and other parameter values to match those in your existing EMBED element. The OBJECT element can use any EMBED attributes QuickTime understands. Go here for more information.

For existing Web pages, it may be sufficient to add such an OBJECT element to the "front door" page of your site. Once the OBJECT element on the "front door" page has caused the user to install the ActiveX control, all subsequent pages with the original EMBED elements will work properly. In cases where you cannot be certain that the "front door" page is always visited, then all your pages should be revised to use these OBJECT elements.

Background

QuickTime uses a plug-in mechanism to display movies from your Web page in the user's browser. Before, you would use an EMBED element alone to display QuickTime content within the browser, much like in the example below:

```
<EMBED src="sample.mov" width="160" height="144" autoplay="true" CONTROLLER="false"
PLUGINSPAGE="http://www.apple.com/quicktime/download/"></EMBED>
```

For this mechanism to work, the user must have the QuickTime plug-in installed on his or her system. If the appropriate QuickTime plug-in is not installed, when your HTML page with QuickTime content is loaded into the user's browser, the movie is not visible. Instead, the browser replaces

it with a "broken plug-in icon" and attempts to assist the user in obtaining the required software. An unfortunate side effect of this approach is that the user is directed away from your site and is distracted by the installation process.

How it works

The OBJECT element is used by Internet Explorer on Windows 9x/NT/2000/XP platforms and by other browsers that support the QuickTime ActiveX control. The enclosed EMBED element is used by Netscape browsers, Internet Explorer for the Mac, and other browsers that support the "Netscape style" QuickTime plug-in. Browsers that understand the OBJECT element ignore the EMBED element; those that don't understand the OBJECT element use the EMBED element.

Within the OBJECT element, the CLASSID parameter uniquely identifies which ActiveX control to use. A CLASSID parameter with the value "clsid:02BF25D5-8C17-4B23-BC80-D3488ABDDC6B" tells Internet Explorer to use the QuickTime ActiveX control. (You must use exactly this value; it is the only value that identifies the QuickTime ActiveX control). If the user does not already have the ActiveX control installed on his or her system, the CODEBASE parameter tells the browser where to find it for downloading. Internet Explorer will automatically offer to download and install the ActiveX control for the user, after which the movie can be played without restarting the browser, or, if QuickTime is not already installed, will prompt the user to download and install QuickTime. You must always use "http://www.apple.com/qtactivex/qtplugin.cab" for the CODEBASE URL. This URL will always have the latest version of the QuickTime ActiveX control.

Because a browser will use either the OBJECT element or the EMBED element, but not both, most of the element attributes must be included in each. Note that in the example above the EMBED element has autoplay="true" and the OBJECT element has <param name="autoplay" value="true">, so the movie will begin to play automatically whether it is loaded with the QuickTime ActiveX control or the QuickTime plug-in. The only attributes that should not be duplicated are CLASSID, CODEBASE, and PLUGINSPAGE. CLASSID and CODEBASE are specific to the OBJECT element. PLUGINSPAGE is specific to the EMBED element.

Although Windows Internet Explorer 5.5 SP2 and 6.0 will no longer use the QuickTime plug-in, once the QuickTime ActiveX control has been installed on a user's system, these versions of Internet Explorer will use the installed ActiveX control to satisfy a properly coded EMBED element.

Additional Reading

For more information on the OBJECT element, see: The W3C Web site (http://www.w3.org/TR/REC-html40/struct/objects.html#edef-OBJECT)

For more information on HTML in general, see: HTML & XHTML: The Definitive Guide 4th Edition, by Chuck Musciano & Bill Kennedy, published by O'Reilly.

Dynamic HTML: The Definitive Reference, by Danny Goodman, published by O'Reilly.

For more information about QuickTime on Web sites, see: QuickTime for the Web, published by Morgan Kaufmann Publishers.
http://developer.apple.com/techpubs/quicktime/qtdevdocs/QT4WebPage/QT4WebBook.htm

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Published Date: Oct 7, 2016

Mac OS 9: Update Does Not Install, "cannot read file in.img or help.img" Alert Boxes Appear

During an upgrade installation of Mac OS 9, an alert box appears with a message that installation cannot continue because the installer cannot read one or more .img files.

This article has been archived and is no longer updated by Apple.

Symptom

While installing a Mac OS 9 update over an existing System Folder, an alert box appears with one of the following messages:

- "cannot read file in.img"
- "cannot read file help.img"

Solution

Note: A disk image **volume** has an icon that looks like a disk and a filename without any extensions. It behaves like a disk. A disk image **file** has an icon that looks like a file (a paper with a dog-eared corner) and a filename extension of ".smi" or ".img".

1. Drag the icon of the updater disk image volume to the Trash. **Important:** This icon's filename does not have an extension such as ".smi" or ".img".
2. Double-click the disk image file of the Mac OS 9 update icon whose filename has a ".smi" or ".img" extension. A new disk image volume icon appears on the desktop.
3. Open the disk image volume, and install the update.

For additional information on this issue, consult the "ShrinkWrap or ShrinkWrap engine reports an error" section of technical document 75098 "**Software Downloads: Software Format and Assistance**".

Published Date: Oct 7, 2016

Apple Studio Display 17: Only 640 by 480 Resolution Is Available

Apple Studio Display 17 monitors may only show a 640 by 480 resolution, even though the computer's video card and the display are capable of higher resolutions.

This article has been archived and is no longer updated by Apple.

Symptom

When you turn on the computer, the display defaults to a 640 by 480 resolution. No other resolutions are available in the Monitors control panel. Resetting the computer's PRAM or dragging the Display preferences file to the Trash temporarily restores all resolutions, but the issue recurs when you restart the computer.

Solution

1. Make sure your computer is using Mac OS 9.2 or later. If not, download and install the Mac OS 9.2.1 Update or later. Once Mac OS 9.2 or later is installed, continue with the next steps.
2. Press the display's power button to turn it off.
3. Unplug the display's power cord.
4. Plug in the display's power cord.
5. Turn on the display.

If you cannot upgrade to Mac OS 9.2 or later, you can restore the resolutions by turning off the display data channel (DDC) feature. Follow these steps:

1. Press the On-Screen Display (OSD) Enter button located on the left side of the display. The Basic Adjustments menu appears.
2. Use the left or right arrow buttons to select the ETC icon.
3. Press the Enter button. The choices On or Off appear.
4. Use the left or right arrow buttons to select the Off icon.
5. Press the Exit button to leave the OSD.

The DDC feature is now turned off and the resolutions should appear in the Monitors control panel.

Published Date: Feb 19, 2012

DVD Studio Pro, Apple DVD Player: Built-In DVD Drives Required for DVD-Video Preview and Playback

Learn about the requirements for previewing a disc with DVD Studio Pro.

This article has been archived and is no longer updated by Apple.

DVD Studio Pro 1.x requires an Apple-shipped internal DVD-ROM or DVD-R drive in order to use the Preview mode, or to test built projects using the Apple DVD Player application. These features will not work with Macintosh computers containing built-in CD-RW drives.

DVD Studio Pro 2 can Preview projects without a DVD drive. DVD Studio Pro final output is limited to the following:

- DVD-R using Apple DVD-R SuperDrive or Pioneer DVR-S201 recorder
- DLT tape (required for DVD-9 projects)
- Disk Image

The Apple DVD Player application requires an internal Apple DVD drive, regardless of whether you have DVD Studio Pro installed.

Published Date: Oct 7, 2016

DVD Studio Pro and iDVD: Some Philips ProDVD Players Cannot Read DVD-R General Media Discs

Some Philips ProDVD players can not read DVD-R General Media discs.
This article has been archived and is no longer updated by Apple.
Certain Philips ProDVD players, such as the ProDVD 170, cannot play DVD-R General Media discs. DVD-R General Media is the type of media used by the SuperDrive, which comes with some Macintosh computers. The Philips ProDVD can play DVD-R Authoring Media. Apple's SuperDrive does not write to DVD-R Authoring media, although it is possible to use DVD Studio Pro with an external third-party DVD-R drive, which can write DVD-R Authoring Media.

For compatibility and upgrade information contact Philips by visiting the following Web site: http://www.prodvd.philips.com/

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

The following document can help you search for a particular vendor's address and phone number:

Document 17159: "**Locating Vendor Information**"

Published Date: Oct 7, 2016

DVD Player 3.0: Does Not Work With External Monitor Connected to PowerBook

DVD Player 3.0, included with Mac OS X 10.1, does not work with external monitors or televisions connected to PowerBook computers.

This article has been archived and is no longer updated by Apple.

Symptom

When you open DVD Player 3.0 after an external monitor or TV has been connected an alert box with this message appears:

> "This machine configuration is not supported."

When you open DVD Player 3.0 before an external monitor or TV is connected, you can hear the movie, but no see no video when it is played.

Solution

1. Make sure the computer is not in video mirroring mode, which is incompatible with DVD Player 3.0. You can turn off video mirroring in the Displays pane of System Preferences.
2. Download and install Mac OS X 10.1.3 or later. It is available using the Software Update pane of System Preferences, or from Apple Software Downloads (http://www.apple.com/swupdates/).

Published Date: Oct 7, 2016

DVD Player 3.0: "DVDManager Fatal Error -36" Alert Appears When Computer Wakes From Sleep

This article explains an intermittent problem where DVD Player 3.0 displays the message "DVDManager Fatal Error -36" after the computer wakes from sleep.
This article has been archived and is no longer updated by Apple.

Symptom

When you wake the computer from sleep, a movie that was playing before the computer when into sleep mode plays for a few seconds and an alert with this message appears:

> "DVDManager Fatal Error -36"

Solution

Download and install DVD Player 3.0.1 or later from Apple Software Downloads (http://www.apple.com/swupdates/).
Published Date: Oct 7, 2016

DVD Player 3.0: Unexpectedly Quits When Ejecting or Quitting

Stop the movie from playing before quitting the DVD Player 3.0 application or ejecting the DVD-Video disc.
This article has been archived and is no longer updated by Apple.

Symptom

If you quit DVD Player 3.0 before stopping a movie from playing the application stops responding.

If you eject a DVD-Video disc while a movie is playing an alert box with this message appears:

> "The application DVD Player has unexpectedly quit."

Solution

Download and install DVD Player 3.0.1 or later from Apple Software Downloads (http://www.apple.com/swupdates/).
Published Date: Oct 7, 2016

DVD Player 3.0: iBook Stops Responding When AV Cable Is Unplugged

An iBook (Dual USB) computer running Mac OS X 10.1 will stop responding if you unplug the AV cable while watching a movie on a DVD-Video disc with DVD Player 3.0.

This article has been archived and is no longer updated by Apple.

Symptom

If you unplug the iBook AV cable while playing a movie on a DVD-Video disc, the pointer turns into a spinning disc and the computer stops responding.

Solution

Restart the iBook computer by pressing Command-Control-power. The computer restarts. Other applications that were open will quit without saving changes to open documents or files.

Published Date: Oct 7, 2016

Mac OS X 10.1: Eject Rio One MP3 Player Before Unplugging USB Cable

To prevent Mac OS X 10.1 from "freezing", eject the Rio One MP3 player prior to unplugging the USB cable.
This article has been archived and is no longer updated by Apple.

Symptom

When you unplug the Rio One MP3 player USB cable the computer stops responding or "freezes" and have to press the reset button to restart the computer.

Solution

Eject the Rio One MP3 player's icon before unplugging its USB cable.
Published Date: Oct 7, 2016

Mac OS X 10.1: Lexmark Z22/32 Series, Z53 Drivers Not Included

The Lexmark Z22/32 Series and Z53 printer drivers are not included with Mac OS 10.1. They are available from Lexmark's Web site.
This article has been archived and is no longer updated by Apple.

Symptom

When you print from a Mac OS X application, shortly after Print Center opens and displays the status of the print job, a message appears that says the printer connection is closing. An alert message may also appear. The printer doesn't print anything.

Solution

1. Download and install the current driver for your printer from Lexmark's Web site (http://www.lexmark.com).
2. On the Install Ink Cartridge screen, you **must** click Edit and then select your cartridges. **This step is not optional.**

Published Date: Oct 7, 2016

Mac OS 9, Disc Burner: CD Burning and Creation/Modification Dates of Files and Folders

When burning a CD-R/CD-RW disc using Mac OS 9 and Disc Burner, the creation and modification dates of the files on the finished media are reset to the date and time that the media was burned.

This article has been archived and is no longer updated by Apple.

Symptom

When burning a CD-R/CD-RW using Mac OS 9 and Disc Burner, the creation and modification dates of the files on the finished media are reset to the date and time that the media was burned. The creation and modification dates of your original files and folders are not affected.

Solution

Download and install Mac OS 9.2.1, from Apple Software Downloads (http://www.apple.com/swupdates/).

Published Date: Oct 7, 2016

Hard Drive: Fluid Dynamic Bearing (FDB)

This document discusses the Fluid Dynamic Bearing (FDB) motor feature of hard drives used in Apple products.

This article has been archived and is no longer updated by Apple.

Hard drive manufacturers have used a ball bearing spindle motors for many years. However, an innovative motor design, called Fluid Dynamic Bearings (FDB), which is not based on ball bearings, eliminates metal to metal contact. This improves acoustics, reduces vibration, lengthens the drive's useful life, and increases its shock resistance. Hard drives used in certain Apple products take advantage of this motor feature.

Published Date: Feb 20, 2012

DVD Player 3.0: Video Stops When Using DTS Surround Sound

When watching some movies with DVD Player 3.0, the video may freeze shortly after playing if DTS Surround is selected as the audio format.
This article has been archived and is no longer updated by Apple.

Symptom

Video freezes after playback.

Solution

1. Choose DVD Menu from the Controls menu.
2. Click the button or menu option that allows you choose audio formats.
3. Select a different audio format, such as 5.1 Dolby Digital Surround or Dolby Prologic.
4. Choose Play from the Controls menu.

Published Date: Oct 7, 2016

DVD Player 3.0: Error -70027 When No Speakers Are Connected to the Computer

An alert box with a system error message may appear if you open the DVD Player 3.0 application program on a Power Mac G4 Cube computer that has no speakers connected to it.

This article has been archived and is no longer updated by Apple.

Symptom

An alert box with the message "System error -70027" appears.

Solution

Download and install DVD Player 3.0.1 or later from Apple Software Downloads (http://www.apple.com/swupdates/).

Published Date: Oct 7, 2016

iTunes: 22 Preset Equalizer Settings

This document lists the 22 preset settings of the iTunes equalizer.
This article has been archived and is no longer updated by Apple.

The 22 preset settings of the iTunes equalizer include:

- Acoustic
- Bass Booster
- Bass Reducer
- Classical
- Dance
- Deep
- Electronic
- Flat
- Hip-Hop
- Jazz
- Latin
- Loudness
- Lounge
- Piano
- Pop
- R&B
- Rock
- Small Speakers
- Spoken Word
- Treble Booster
- Treble Reducer
- Vocal Booster

Published Date: Oct 7, 2016

Print Explosion Deluxe 2.0.2 Update for Mac OS X

Print Explosion Deluxe for Mac OS X requires an update to work with Mac OS X 10.1.
This article has been archived and is no longer updated by Apple.

Symptom

The Print Explosion Deluxe application program stops responding ("freezes") when you open it with Mac OS X 10.1.

Solution

Download and install the update from Nova Development at http://www.novadevelopment.com/mainus/support/updates.htm .

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

The following document can help you search for a particular vendor's address and phone number:

Document 17159: "**Locating Vendor Information**"

Published Date: Feb 19, 2012

iPod: Does Not Wake From Sleep

Make sure the hold switch is off if iPod does not wake from sleep.
This article has been archived and is no longer updated by Apple.

Symptom

iPod does not wake from sleep.

Solution

1. Check to see if the hold switch on the top of the iPod is pushed to the center exposing the orange patch under the switch. See Figure 1.
2. Slide the hold switch to the outside of the iPod to enable its buttons.
3. Press a button to wake iPod.

Figure 1: iPod hold switch when turned on

Published Date: Oct 7, 2016

iPod no longer plays music after formatting or partitioning the hard disk

This article has been archived and is no longer updated by Apple.

You should not partition, format, or change the formatting of iPod's hard disk using Disk Utility, Windows Explorer or other utility unless you are performing troubleshooting steps that require this step.

iPod, iPod mini, and iPod shuffle cannot play music if you format or partition the hard disk.

iPod only works (as a music player) when its hard disk is formatted for the appropriate platform using the Mac OS Extended (HFS Plus) or FAT32 formats. Do not reformat the disk using Mac OS Standard (HFS), New Technology File System (NTFS), or UNIX File System (UFS) formats.

Whether you use a Mac or Windows, iPod shuffle only works (as a music player) when its disk partition is formatted as FAT32 format.

If iPod's hard drive was partitioned, formatted, or the format was changed, use the latest version of the iPod Updater application to restore iPod iPod back to its factory condition.

Warning: The restore process cannot be undone. All of your songs and files will be deleted. Always make a backup of your important data.

Published Date: Oct 7, 2016

iTunes: Importing Songs Whose Artist‘s Name Begins With a Dot

When you import a song from an audio CD an artist's name that begins with a dot "." is changed to an underscore "_".
This article has been archived and is no longer updated by Apple.

Symptom

When you insert an audio CD iTunes gets the CD track names from the CDDB, but when you import a song from the CD an artist's name that begins with a dot "." is changed to an underscore "_".

Solution

This is the way iTunes works on Mac OS X. Artist's names that start with dot "." will be changed to begin with an underscore "_" when you import them from an audio CD.
Published Date: Oct 7, 2016

iPod: Can become warm under normal usage

iPod can become warm under normal usage.
This article has been archived and is no longer updated by Apple.

iPod and iPod shuffle have many electronic parts that can become warm under normal usage, particularly the hard drive, flash memory, and the battery. When these parts become warm, iPod's exterior may also become warm to the touch. This is normal.

iPod may become warm to the touch when:

- charging the battery.
- updating the music library with iTunes.
- used as an external FireWire hard drive.

iPod will cool down when it is no longer in use.

Published Date: May 9, 2012

AirPort Base Station: About Power Adapter Compatibility

The table below shows which power adapters are used with which AirPort base stations.
This article has been archived and is no longer updated by Apple.
Note that the power adapter included with the AirPort Base Station (Graphite) has shorter plug and a clear or translucent DC power cord. If you need larger pictures, see identifying AirPort hardware.

	Power adapter with 9.5 mm plug (Graphite)	Power adapter with 12.3 mm plug (Dual Ethernet)	AirPort Extreme Power Adapter
AirPort Extreme (802.11n) Base Station	No	No	**Yes**
AirPort Extreme Base Station	No	No	**Yes**
AirPort Base Station (Dual Ethernet)	No	**Yes**	No
AirPort Base Station (Graphite)	**Yes**	**Yes**	No

Published Date: Oct 7, 2016

AirPort Extreme and AirPort Base Station: About the Mounting Brackets

This document describes the differences between the mounting brackets that come with AirPort Extreme and AirPort Base Station models.

Note: AirPort is called AirMac in Japan.

This article has been archived and is no longer updated by Apple.
The mounting brackets included with the AirPort Extreme and AirPort Base Stations are not interchangeable. The top hook on the mounting bracket (815-6532) for the AirPort Base Station (Dual Ethernet) is shorter than the top hook used on the bracket (815-3263) of the earlier AirPort Base Station (Graphite).

Figure 1 AirPort Base Station mounting brackets

The AirPort Extreme Base Station bracket (815-7118) has two hooks at the top and the cable routing chamber is approximately 5 mm (3/16-in.) deeper. The deeper cable chamber allows for the routing of the additional printer and antenna cables.

Figure 2 AirPort Extreme Base Station mounting brackets

Published Date: Oct 7, 2016

iPod: Noise in Silent Passages

Under certain circumstances, you may hear a high-pitched noise in a song's silent passages.
This article has been archived and is no longer updated by Apple.

Symptom

You may hear a high-pitched noise during a song's silent passages. This only occurs with MP3 files and is most noticeable when the volume is set higher than 75 percent.

Note: Most people are not able to hear this sound. iPod itself is functioning normally.

Solution

Update iPod to iPod software 1.1 or later. The updater is available from Apple Software Downloads (http://www.apple.com/swupdates/).

Lowering the volume may minimize the noise with MP3 files.

AIFF and WAV files are not affected since they do not use the MP3 decoder.
Published Date: Oct 7, 2016

iPod: May Make Noise When Shaken

If shaken, iPod's Hold switch and hard drive may make some noises.
This article has been archived and is no longer updated by Apple.

Symptom

If you shake iPod, the Hold switch and hard drive make a rattling noise.

Solution

iPod is well constructed, but if you shake it you may hear some rattling noises that come from the Hold switch and the hard drive. This is not unusual, however, you should not needlessly or carelessly shake it.

If iPod does not work and you hear a rattling noise, follow the troubleshooting steps in technical document 60942: "**iPod: Does Not Turn On**."
Published Date: Oct 7, 2016

How to put iPod to sleep

Put iPod to sleep when you're not using it.
This article has been archived and is no longer updated by Apple.
To sleep iPod, press and hold the Play/Pause button until the iPod screen turns off. Press any button to turn iPod on. If you have an iPod shuffle, slide the switch on the back to the Off position.

To keep iPod from accidentally waking from sleep, slide the Hold switch toward the headphones port. For more information on the Hold switch see "**iPod: About the Hold Switch**."

For more information about sleep see "**iPod: About Sleep**."

Published Date: Oct 7, 2016

DVD Player 3.0.1 and Later: Compatible Computers

This document lists the computers that are compatible with DVD Player 3.0.1 and later.
This article has been archived and is no longer updated by Apple.
Your computer should have these characteristics to use DVD Player 3.0.1 or later:

Software

- Mac OS X 10.1 or later

Hardware

A built-in DVD drive and built-in FireWire port(s) are required. This includes the following computers:

- iBook
- iMac
- PowerBook (FireWire)
- PowerBook G4
- Power Mac G3 (Blue and White)
- Power Mac G4 Cube
- Power Mac G4

If you have a Mac OS X computer with a built-in DVD drive that is not on this list, you can view DVD-Video discs by starting up the computer using Mac OS 9.

Note: Not all of the above computers came with built-in DVD-ROM drives. Adding an external DVD-ROM drive will not enable DVD Player to be installed or to function. See technical document 42727 "**Apple DVD Player: Requires an Internal DVD Drive**" for additional information. PowerBook (FireWire) users should also review technical document 106479 "**Mac OS X 10.1: DVD Player Not Installed on PowerBook (FireWire) Computer**."

Earlier PowerBook computers

DVD Player 3.0.1 and later do not work with PowerBook computers that do not have built-in FireWire ports. Based on the combined performance of microprocessor, memory, and bus speed, and on-graphics architecture, Apple was able to add Power Macintosh G3 (Blue and White) and Power Mac G4 (PCI Graphics) computers to the list of computers that work with DVD Player 3.0.1 or later.

Apple does not plan to update DVD Player 3 to work with earlier PowerBook computers.

Published Date: Oct 7, 2016

AppleShare IP 6.3: Mac OS Server Admin - Alert When Assigning Privileges

An alert message may appear when you choose Set Privileges from the Privileges menu in Mac OS Server Admin.

This article has been archived and is no longer updated by Apple.

Symptom

An alert box with one of these messages appears:

"OpenTransport error -3155"
"Unexpectedly quit, error type 2."
"Unexpectedly quit, error type 12."

Solution

Download and install Mac OS 9.2.2 Update, which includes AppleShare Client 3.9.2.

Published Date: Feb 19, 2012

FireWire: Frequently Asked Questions

This document contains frequently asked questions (FAQ) regarding FireWire, with answers to those questions.

This article has been archived and is no longer updated by Apple.

Questions answered in this document:

1. What is FireWire?
2. What is the data transfer speed?
3. Does FireWire have "plug-and-play" capability?
4. What is FireWire Target Disk Mode?
5. How many FireWire devices can be connected at any one time?
6. Does a FireWire device need to be turned on, before it is connected to the FireWire port?
7. Can FireWire devices be connected in a daisy chain?
8. What is i.LINK?

Question 1: What is FireWire?

Answer: FireWire, also known as IEEE 1394, is one of the fastest peripheral standards ever developed. It was developed by Apple in the 1990s and has been included with Macintosh computers beginning with the Power Macintosh G3 (Blue and White) model. FireWire has been widely adopted as a standard by digital peripheral companies such as Sony, Canon, JVC and Kodak. Specifications for FireWire ports used in Apple products can be found in technical document 58207: "**FireWire Ports: Specifications**."

Question 2: What is the data transfer speed?

Answer: FireWire can transfer data at up to 400 Mbps. FireWire 800 can transfer data at up to 800 Mbps.

Question 3: Does FireWire have "plug-and-play" capability?

Answer: Yes, if the FireWire device is designed according to the FireWire standard, the device can be connected and disconnected, while both the device and the Macintosh are turned on.

Question 4: What is FireWire Target Disk Mode?

Answer: FireWire Target Disk Mode allows a Macintosh computer with a FireWire port (the target computer) to be used as an external hard disk connected to another computer (the host). See technical document 58583 :"**Macintosh: How to Use FireWire Target Disk Mode**" for further information.

Question 5: How many FireWire devices can be connected at any one time?

Answer: Fire Wire can work with up to 63 devices on a bus. The number of bus-powered devices you can connect depends on the amount of power available from the computer, and the amount of power required by each device.

Question 6: Does a FireWire device need to be turned on, before it is connected to the FireWire port?

Answer: If the device is designed according to the FireWire standard, then it does not need to be turned on before it is connected to the computer. The computer can tell the difference between a device that is connected and not turned on, and a device that is connected and turned on. In practice, though, most devices profit from being turned on at the time they are connected.

Question 7: Can FireWire devices be connected in a daisy chain?

Answer: Yes, and if the devices are designed according to the FireWire standard, they can be turned on and off as needed. For example, all devices don't need to be powered on to use the last device in the chain. For the best result, and to avoid overstressing the FireWire port, connect one FireWire device to the Macintosh, then add one device at a time to the chain. Avoid plugging in live power adapters into devices connected to the chain.

Question 8: What is i.LINK?

Answer: i.LINK is Sony's name for FireWire.

Related Documents

75471 FireWire 800: Technology Brief

Published Date: Feb 20, 2012

Final Cut Pro 3: FireWire Output Disabled While Voice Over Set to DV Audio Input

The Voice Over audio input source cannot be set to DV Audio while external video is output through FireWire. Before DV Audio input can be used with the Voice Over tool, External Video (available from the View menu) must be set to off.

This article has been archived and is no longer updated by Apple.

Symptom

- An alert box with this message appears: "No sound recording devices are available" when you select the Voice Over tool.
- DV Audio is not an available audio source selection when the Voice Over tool is open.

Solution

Turn External Video off from the View menu before recording audio from a DV source using the Voice Over tool.

Published Date: Feb 20, 2012

Final Cut Pro 3: "Codec Not Found" Alert When Importing Grayscale JPEG

An alert box with this message may appear: "Codec not found. You may be using compression type without corresponding hardware card" when you render grayscale NTSC Photo JPEG video or a grayscale JPEG graphic into an NTSC DV sequence.

This article has been archived and is no longer updated by Apple.

Symptom

An alert box with this message appears:

> "Codec not found. You may be using compression type without corresponding hardware card."

Solution

Install QuickTime 6.0 or later.

Published Date: Feb 20, 2012

Final Cut Pro 3.0: Before You Upgrade

This document contains system requirements and things to do before you upgrade the application. It also includes information on new features, how to access late-breaking news, where to start, and using the tutorials. For the latest information on product updates, tips and techniques, third-party software, and qualified third-party devices, visit the Final Cut Pro Web site (http://www.apple.com/finalcutpro/).

This article has been archived and is no longer updated by Apple.

Before You Upgrade to Final Cut Pro 3.0

System requirements

You'll need the following hardware, software, and video equipment for Final Cut Pro:

Hardware and video equipment

- Power Macintosh G3/300 MHz or faster with built-in FireWire
- PowerBook G3/400 MHz or faster with built-in FireWire
- iMac 350 MHz or faster with built-in FireWire
- iBook (Dual USB) 500 MHz or faster with built-in FireWire
- A CD or DVD drive
- 256 MB random access memory (RAM) (384 MB or greater required for G4 real-time editing)
- A 6 GB, Audio/Video rated hard disk drive (20 GB or greater recommended)
- Dual-monitor support (optional)
- A Final Cut Pro-qualified video capture card for capturing video from an external source or exporting video to tape (optional)
- The correct FireWire or device control cable and any additional cables you may need for connecting your deck or camcorder to your computer
- A DV (digital video) source, such as a camcorder or deck, connected to your computer via a FireWire port (FireWire is also referred to as IEEE 1394 or Sony i.LINK.)
- An analog video source, a Final Cut Pro-qualified video capture card or device, and an adapter cable to connect the video source to your computer

Note: G4 real-time editing requires a single or dual-processor Power Macintosh G4 500 MHz or faster, or a PowerBook G4 667 MHz or faster. For more information about G4 real-time editing, see the Final Cut Pro Web site (http://www.apple.com/finalcutpro/).

Software

- Mac OS 9.2.2 or Mac OS X 10.1.1 or later
- QuickTime 5.0.4 or later

Before you upgrade Final Cut Pro

Important: The French, German, and Japanese versions of Final Cut Pro are only supported on a matching localized French, German, or Japanese version of the Mac OS. Multiple localized versions of Final Cut Pro from different countries on a single system are not supported. For example, if your computer has the French version of the Mac OS installed on it, you cannot install both the French and German versions of Final Cut Pro. For more information, see the Final Cut Pro Web site (http://www.apple.com/finalcutpro/).

Make sure you do the following before you install the software:

- Turn off any virus protection and security software that you may have installed on your computer.
- Upgrade to Mac OS 9.2.2 or later
  Final Cut Pro for Mac OS 9 requires you to upgrade to Mac OS 9.2.2 which is included on the Final Cut Pro CD. If you don't have Mac OS 9, you need to install it on your computer before you can upgrade to Mac OS 9.2.2.
- Upgrade to Mac OS X 10.1.1 or later
  Final Cut Pro for Mac OS X requires that you upgrade to Mac OS X 10.1.1. This requires you to first upgrade to Mac OS X 10.1, then use the Software Update pane of the System Preferences to install the latest Mac OS X updates.
- Install QuickTime 5.0.4 and unlock QuickTime Pro
  QuickTime 5.0.4 for Mac OS 9 and Mac OS X is included on the Final Cut Pro CD. See the document Final Cut Pro and QuickTime Pro Registration Numbers that came with Final Cut Pro for instructions on installing this software. To unlock QuickTime Pro, you need the registration number that's located on the front of the document.
- Enter a valid serial number in the older version of Final Cut Pro before upgrading
  The Final Cut Pro 3.0 Upgrade program requires that you have a previous valid and serialized version of Final Cut Pro. If you do not have an earlier version of Final Cut Pro, you won't be able to upgrade to Final Cut Pro 3.0.

Upgrading Final Cut Pro 3.0 for Mac OS 9

- You cannot install Final Cut Pro 3.0 for Mac OS 9 when you are using Mac OS X. Restart your computer using Mac OS 9, then you can upgrade to Final Cut Pro 3.0 for Mac OS 9.
- If your computer is set up for Multiple Users, make sure to log in as the "Owner" user.
- The Final Cut Pro 3.0 folder is installed in the Applications (Mac OS 9) folder by default. However, you can change this if you like, so the application is installed in a different location. The old version of Final Cut Pro is left unchanged.
- Make sure you keep your Upgrade CD on hand. As part of the registration process, you need to insert the Upgrade CD in your CD or DVD drive the first time you open Final Cut Pro 3.0.

Upgrading Final Cut Pro 3.0 for Mac OS X

- You need Final Cut Pro 1.0 or later, or Final Cut Pro 2.0 or later installed on your computer before you can use the Final Cut Pro for Mac OS X installer.
- Make sure you log in using the System Administrator account. If you only have one account for Mac OS X, it is also the System Administrator account.
- Open the Classic environment at least once. This step is necessary to set system variables that allows the upgrade program to find your Classic System folder while running under Mac OS X.

  Important: Make sure the selected Classic System Folder is the one with the Final Cut Pro system files. If you select a different System Folder before upgrading to Final Cut Pro 3, an alert box this message appears:

  "Registration Error (2). You must have a registered copy of Final Cut Pro installed. Please reinstall Final Cut Pro from its original CD, launch it, and complete the registration screen before running this computer."
- Final Cut Pro 3.0 for Mac OS X is installed in the Applications folder by default. However, you can change this if you like, so the application is installed in a different location.
- Make sure you keep your Upgrade CD on hand. As part of the registration process, you need to insert the Upgrade CD in your CD or DVD drive the first time you open Final Cut Pro 3.0.

Finding out about new features, late-breaking information, and an overview of the application

After you install Final Cut Pro, you can learn about new features and late-breaking information on known issues.

- To get the latest information about known issues with the application, choose Final Cut Pro Help from the Help menu and click "Late-breaking news."
- To find out about new features and enhancements, choose What's New? from the Help menu.
- To get a brief overview of the major tasks and windows in Final Cut Pro, choose Where Do I Start? from the Help menu.

Using the tutorials

There are several tutorials that come with Final Cut Pro. These are available in print in a separate book.

Using the documentation

The Final Cut Pro user's manual is divided into three volumes for ease of use. There is also an addendum, What's New in Final Cut Pro 3.

- Volume 1, Getting Started, Input, and Output: Covers everything you need to know to set up your Macintosh with Final Cut Pro, capture video for use in your project, and output to a variety of formats.
- Volume 2, Editorial: Focuses on basic and advanced editing techniques in Final Cut Pro, including transitions, trimming and working with audio.
- Volume 3, Effects and FXScript: Covers Final Cut Pro's compositing tools, including motion settings, filters, generators, and how to use FXScript to create your own custom filters and generators.
- What's New in Final Cut Pro 3: Includes information about new features, tools, and commands available in Final Cut Pro 3.0.

Published Date: Oct 7, 2016

Final Cut Pro: How to Preview Real-Time Effects on an NTSC or PAL Monitor

The Final Cut Pro 3 user's manual states: "Video cannot be output over FireWire while you're playing G4 RT effects." This document explains how to preview real-time effects on an NTSC or PAL monitor.

This article has been archived and is no longer updated by Apple.

By using a PowerBook G4 or Power Mac G4 (1) computer with an S-video output port, you can view real-time effects on an external NTSC or PAL monitor. Follow these steps:

1. Connect the external NTSC or PAL monitor to the S-video output port on the computer's video card or PowerBook. **Important:** You may need to turn off your computer or put it to sleep before connecting video devices to the S-video output port.
2. Set the resolution of the external monitor to 720 by 480 for NTSC or 720 by 576 for PAL.
3. Open Final Cut Pro.
4. Choose Audio/Video Settings from the File menu (Mac OS 9), or Final Cut Pro menu (Mac OS X).
5. Choose Desktop (720x480) (or similar) from the External Video pop-up menu.
6. Click OK.
7. Choose External Video from the View menu, then choose All Frames from the submenu.

Video from the Viewer and Canvas should now play on the external NTSC or PAL monitor.

Notes

1. Power Mac G4 computers do not have an built-in S-video output port. You must install a video card that has an S-video output port.

Published Date: Feb 20, 2012

QuickTime: Embedding QuickTime for web delivery

This article has been archived and is no longer updated by Apple.

Learn how to embed QuickTime content on an Internet web page. To see the full reference list for the Embed tag's attributes, go here.

The `<EMBED>` tag allows media file types other than those directly supported by the browser to be handled with an external application or plugin. In this case, the external application is QuickTime Player and the plugin is the QuickTime Plugin.

Note: With the release of Internet Explorer 5.5 SP2 and later, you must use an `<OBJECT>` tag in addition to the `<EMBED>` tag for your web pages to be compatible with both Netscape/Mozilla, Safari, and Internet Explorer on Mac and Windows systems.

Basic Necessities

The `<EMBED>` tag is similar to the `<IMG>` tag; they both have a `SRC`, `WIDTH` and `HEIGHT` parameter. These parameters are required and tell the browser the media to be displayed and the width and height of the media specified in the `SRC` attribute.

For example:

```
<embed src="sample.mov" width="320" height="256"></embed>
```

The `SRC` attribute is the media file to display either by an absolute or relative URL. The `HEIGHT` attribute specifies the vertical size in pixels of the `SRC` attribute. The `WIDTH` attribute specifies its horizontal size.

Watch the Size

In order for the controller to appear properly, add 16 pixels to the height of a movie.

For example:

Set `HEIGHT="256"` for a movie 240 pixels high: `<embed src="sample.mov" width="320" height="256"></embed>`

For a sound-only movie, use a height of 16 for the controller and any width that looks good on your Web page. (If you set the width to 16 for a sound-only movie, the controller is minimized to a single Play/Pause button.)

For example:

```
<embed src="sound.mov" width="216" height="16"></embed>
```

Never set `HEIGHT` or `WIDTH` to less than 2, even if the movie is hidden.

Embed Tag Attributes

AUTOHREF
AUTOPLAY
BGCOLOR=HEX
BGCOLOR=NAME
CACHE
CONTROLLER
CORRECTION
DONTFLATTENWHENSAVING
ENABLEJAVASCRIPT
ENDTIME
FOV
GOTO*n*
HEIGHT
HIDDEN
HOTSPOT*n*
HREF
KIOSKMODE
LOOP
MOVEID
MOVIENAME
NODE
PAN
PLAYEVERYFRAME
PLUGINSPAGE
QTNEXT*n*
QTSRC
QTSRCCHOKESPEED
QTSRCDONTUSEBROWSER
SCALE
SRC
STARTTIME
TARGET*n*=FRAME_NAME
TARGET=MYSELF
TARGET=QUICKTIMEPLAYER
TARGETCACHE
TILT
TYPE=*MIMEtype*
URLSUBSTITUTE*n*
VOLUME
WIDTH

For more information about utilizing QuickTime for websites, visit Apple Developer Connection's QuickTime Topics.

Published Date: Oct 7, 2016

QuickTime: Embed Tag Attributes

This article has been archived and is no longer updated by Apple.

This is the complete reference guide to the Embed tag and its attributes. To learn how to embed QuickTime content on an Internet webpage, go here.

Embed Tag Attributes

AUTOHREF
AUTOPLAY
BGCOLOR=HEX
BGCOLOR=NAME
CACHE
CONTROLLER
CORRECTION
DONTFLATTENWHENSAVING
ENABLEJAVASCRIPT
ENDTIME
FOV
GOTO*n*
HEIGHT
HIDDEN
HOTSPOT*n*
HREF
KIOSKMODE
LOOP
MOVEID
MOVIENAME
NODE
PAN
PLAYEVERYFRAME
PLUGINSPAGE
QTNEXT*n*
QTSRC
QTSRCCHOKESPEED
QTSRCDONTUSEBROWSER
SCALE
SRC
STARTTIME
TARGET*n*=FRAME_NAME
TARGET=MYSELF
TARGET=QUICKTIMEPLAYER
TARGETCACHE
TILT
TYPE=*MIMEtype*
URLSUBSTITUTE*n*
VOLUME
WIDTH

`AUTOHREF=value` (optional...requires QuickTime 4 or later)

> `AUTOHREF` can either be set to `TRUE` or `FALSE`. The default behavior is set to FALSE. When set to TRUE, the `AUTOHREF` attribute causes any URL specified in the HREF parameter to load immediately, without waiting for a mouse click.
>
> For example:
>
> <embed src="sample.mov" width="200" height="240" href="http://dns/foo.mov" autohref="true">

`AUTOPLAY=value` (optional...requires QuickTime 3 or later)

> `AUTOPLAY` can either be set to `TRUE` or `FALSE`. The default behavior is set by the user in the 'QuickTime Plug-in Settings.' When set to TRUE, the `AUTOPLAY` attribute causes the movie to start playing as soon as the QuickTime Plug-In estimates that it will be able to play the entire movie without waiting for additional data.
>
> For example:
>
> <embed src="sample.mov" width="200" height="240" autoplay="true">

`BGCOLOR=hex value` (optional...requires QuickTime 3 or later)

> This attribute specifies the background color for any space that is not taken by the movie. For example, if a 160x120 movie was embedded in a space of 200x120, there would be 40 pixels of undefined color space in the width. Specifying the hex value of the background color will fill the undefined space with the value chosen.
>
> For example:
>
> <embed src="sample.mov" width="200" height="240" bgcolor="000000">

`BGCOLOR=name` (optional...requires QuickTime 4)

The QuickTime 4 Plug-in has additional support for the BGCOLOR attribute by recognizing color names. Acceptable values for this attribute are:

"BLACK" (#000000), "GREEN" (#008000), "SILVER" (#C0C0C0), "LIME" (#00FF00),
"GRAY" (#808080), "OLIVE" (#808000), "WHITE" (#FFFFFF), "YELLOW" (#FFFF00),
"MAROON" (#800000), "NAVY" (#000080), "RED" (#FF0000), "BLUE" (#0000FF),
"PURPLE" (#800080), "TEAL" (#008080), "FUCHSIA" (#FF00FF), "AQUA" (#00FFFF)

For example:

```
<embed src="sample.mov" width="200" height="240" bgcolor="black">
```

`CACHE=value` (optional...requires QuickTime 3 or later)

If `CACHE=TRUE` is specified, the browser will `CACHE` movies. If the movie is in `CACHE` when the user returns to the page, the movie will be played from `CACHE` instead of downloading again. `CACHE` can either be `TRUE` or `FALSE`, or simply `CACHE`. `CACHE` by itself implies `TRUE`. The default behavior is set by the user in the 'QuickTime Plug-in Settings.'

Note: The functionality of this attribute is only supported by Netscape Navigator, version 3.0 or later.

For example:

```
<embed src="sample.mov" width="200" height="240" cache="true">
```

`CONTROLLER=value` (optional...requires QuickTime 3 or later)

The `CONTROLLER` attribute sets the visibility of the movie controller. `CONTROLLER` can either be `TRUE` or `FALSE`. By default, `CONTROLLER` is `TRUE`. If `CONTROLLER` is set to `FALSE`, the movie controller will not display.

Note: For compatibility with existing web pages, the default is `FALSE` for QuickTime VR movies, image files, and flash files.

Note 2: For poster movies, you would normally set `controller="false"`.

For example:

```
<embed src="sample.mov" width="200" height="240" controller="false">
```

See also `HEIGHT`

`CORRECTION=value` (optional...requires QuickTime 3 or later)

`CORRECTION` can either be `NONE` or `FULL`. By default, `CORRECTION` equals `FULL`. This attribute is only appropriate for QuickTime VR panoramas.

For example:

```
<embed src="sample.mov" width="320" height="240" correction="full">
```

`DONTFLATTENWHENSAVING` (optional...requires QuickTime 4)

`DONTFLATTENWHENSAVING` makes the plug-ins' 'Save as QuickTime movie' work the same way the 'Save as source' does. Adding the `DONTFLATTENWHENSAVING` tag saves the data into a movie file without flattening it.

For example:

```
<embed src="sample.mov" width="320" height="240" dontflattenwhensaving>
```

`ENABLEJAVASCRIPT` (optional...requires QuickTime 4)

ENABLEJAVASCRIPT can either be set to TRUE or FALSE. The default behavior is FALSE. If you want to control a QuickTime movie using JavaScript functions, you need to enable JavaScript for that movie by setting ENABLEJAVASCRIPT="TRUE".

For example:

<embed src="sample.mov" width="320" height="240" enablejavascript=true">

ENDTIME=*time* (optional...requires QuickTime 4)

The ENDTIME attribute defines the last frame of the movie. ENDTIME can be any time up to the duration of the movie. By default, ENDTIME is the duration of the movie. This attribute takes a time value in the form -- Hours:Minutes:Seconds:Frames (30ths). The frames component can be specified as a fixed point number so that more specific times can be specified for instance 3:30:22.5 means 3 minutes, 30 seconds and 22.5 frames.

For example:

<embed src="sample.mov" width="200" height="240" endtime="3:30:22.5">

See also STARTTIME

FOV=*integer* (optional...requires QuickTime 3 or later)

Only integer values between 8 and 64 degrees are supplied for this attribute. If no value is specified for FOV, the value stored in the movie is used. The FOV attribute allows you to specify the initial field of view angle for a QuickTime VR movie.

For example:

<embed src="sample.mov" width="320" height="240" fov="55">

GOTO*n* (Optional...Requires QuickTime 4)

See QTNEXT

HEIGHT=*size in pixels* (Required)

The HEIGHT attribute specifies the height of the embedded file in pixels. The HEIGHT attribute is **required** unless the HIDDEN attribute is specified. The HEIGHT of the movie can be found by choosing 'Get Info...' in the 'Movie' menu within QuickTime Player. If you do not use the SCALE attribute and you supply a height that is smaller than the actual height of the movie (plus 16 if you are showing the controller), the movie will be cropped to fit the height. If you supply a height that is greater than the height of the movie, the movie will be centered inside this height.

Note: Never specify a height of less than 2 as this can cause problems with some browsers.

Note 2: The movie controller is 16 pixels high, so add 16 pixels to the height of the movie to make the movie controller visible.

For example:

<embed src="sample.mov" width="200" height="240" controller="true">

See also WIDTH

HIDDEN (optional...requires QuickTime 3 or later)

There are no values to supply for this attribute. The HIDDEN attribute controls the visibility of the movie. If you do not supply HIDDEN, then the movie will be visible. If you supply HIDDEN, the movie is not visible on the page. This option is not appropriate for QuickTime VR Objects or Panoramas. The HIDDEN attribute is appropriate for sound-only movies which are hidden in the background.

Note: If you add the HIDDEN attribute, be sure to set AUTOPLAY="TRUE" as well.
For example:

<embed src="sample.mov" width="200" height="240" hidden>

HOTSPOTn="*url*" (optional...requires QuickTime 3 or later)

This attribute enables clicking on a hotspot with the specified ID in a VR panorama to take the user to the specified URL. *n* is the hotspot ID as defined when the hot spot is created in the QuickTime VR authoring tools.

You can use TargetN to target a hotspot URL to a frame or window, or to the special targets "quicktimeplayer" or "myself". For example:

<embed src="sample.mov" width="200" height="240" hotspot17="http://www.apple.com">

HREF=*url* (optional...requires QuickTime 3 or later)

When set, the HREF attribute provides a link to another page or movie when the movie is clicked on.

Note: If you are using a relative path name for the HREF then it should be relative to the location of the movie specified in the SRC attribute.

For example:

<embed src="sample.mov" width="200" height="240" href="http://www.apple.com/quicktime">

See also: TARGET and TARGET="QUICKTIME_PLAYER"

KIOSKMODE=*value* (optional...requires QuickTime 4)

KIOSKMODE is either TRUE or FALSE. By default, KIOSKMODE is FALSE. When KIOSKMODE is set to TRUE, the plug-in does not include its pop-up menu in the movie controller and does not allow drag and drop to save the movie.

For example:

<embed src="sample.mov" width="200" height="240" kioskmode="true">

LOOP=*value* (optional...requires QuickTime 3 or later)

LOOP is either TRUE, FALSE or PALINDROME. By default, LOOP is set to FALSE. When set, the LOOP attribute makes the movie play continuously. Setting LOOP to PALINDROME causes the movie to play alternately forwards and backwards. This option is not appropriate for QuickTime VR Objects and Panoramas.

For example:

<embed src="sample.mov" width="200" height="240" loop="true">

MOVIEID=*integer* (optional...requires QuickTime 4)

Just like MovieName, but uses a numeric ID instead of a name string. MovieID may be computed in the Wired Sprite scripts and may be useful where the MovieName of the target movie is not known.

For example:

<embed src="sample.mov" width="200" height="240" movieid="5">

MOVIENAME=*name* (optional...requires QuickTime 4)

With QuickTime 4.0 the targeting mechanism of wired actions has been extended to enable any action to target an element of another open movie. This means two or more movies within the same web page can communicate using the QuickTime 4.0 Plug-in. These same movies may communicate if they are opened in QuickTime Player if they are named using userdata atoms. For example, one movie can act as a controller for another movie setting things such as it's rate, volume, the pan angle of a QTVR track it contains, or the location of a sprite in a sprite track that it contains. In many cases things that required JavaScript can now be done using only the QuickTime Plug-in with Wired Movies.

For example:

<embed src="sample.mov" width="200" height="240" moviename="targetmov">

NODE=*integer* (optional...requires QuickTime 3)

The NODE attribute allows you to specify the initial node for a multi-node QuickTime VR movie. Only integer values are supplied for this attribute. If no value is specified for this attribute, the default NODE and view (specified at creation time of the pano movie) is used.

For example:

<embed src="sample.mov" width="320" height="240" node="128">

See also: FOV, PAN, TILT

PAN=*integer* (optional...requires QuickTime 3)

The PAN attribute allows you to specify the initial pan angle for a QuickTime VR movie. Only integer values are supplied for this attribute. The range of values for a typical movie would be 0 to 360 degrees. If no value for PAN is specified, the value stored in the movie is used. This attribute has no meaning for a standard QuickTime movie.

For example:

<embed src="sample.mov" width="320" height="240" pan="180">

See also: FOV, NODE, TILT

PLAYEVERYFRAME=*value* (optional...requires QuickTime 3)

PLAYEVERYFRAME is either TRUE or FALSE. By default, PLAYEVERYFRAME is set to FALSE. When set, the PLAYEVERYFRAME attribute causes the movie to play every frame of the movie even if it is necessary to play at a slower rate to do so. This attribute is particularly useful to play simple animations. This option is appropriate for QuickTime movies.

Note: Setting PLAYEVERYFRAME=TRUE will turn off all audio tracks.

For example:

<embed src="sample.mov" width="200" height="240" playeveryframe="true">

PLUGINSPAGE=*url* (optional)

The PLUGINSPAGE attribute allows you to specify a URL from which the user can fetch the necessary plug-in if it is not installed. This attribute is handled by your browser. If your browser cannot find the plug-in when loading your page, it will warn the user and allow them to bring up the specified URL, from which one could download QuickTime which includes the QuickTime Plug-In.

IMPORTANT: Please set this attribute to: "http://www.apple.com/quicktime/download/" which will point to the latest version of the plug-in. This option is appropriate for QuickTime movies and QuickTime VR Objects and Panoramas.

For example:

<embed src="sample.mov" width="200" height="240" pluginspage="http://www.apple.com/quicktime/download/">

QTNEXTn="*URL*" (optional...requires QuickTime 4)

QTNEXT can be used to specify the url of a movie to load and play at the end of the current movie. This allows up to 256 consecutive movies to play one after the other. This behaves exactly the same as if the movie has a HREF track with an auto-url ("A<url>") at the end of the movie. Where n is an integer greater than 0 and less than 256 that defines the index of the url in the playlist. A QTNEXT tag's value can be a url (and optional target) or GOTOn where "n" is the index of the QTNEXT url to load. This allows you to make an endlessly repeating playlist.

Note: that the original movie (the SRC attribute) is implicitly QTNEXT0.

Note 2: The target T<myself> is normally specified. If no target is specified, the URL replaces the current browser window, and any subsequent QTNEXT statements are ignored.
For example:

<EMBED SRC="nameof.mov" WIDTH="200" HEIGHT="240"
QTNEXT1="<http://www.apple.com/quicktime/movies/sample.mov> T<myself>"
QTNEXT2="<rtsp://www.apple.com/quicktime/movies/sample.mov> T<myself>"
QTNEXT3="<URL> T<myself>"
QTNEXT4="GOTO0"

See also: TARGET

QTSRC="*URL*" (optional...requires QuickTime 4)

This attribute allows content developers to force a browser to use the QuickTime Plug-in for a file no matter what its MIME type is. The attribute treats it's value as a URL to load, and ignores any data loaded by the browser from the "src" parameter.

For example:

<EMBED src="sample.mov" qtsrc="rtsp://www.apple.com/quicktime/sample2.mov">

This does not require the file type to be .mov. This can be any media type that QuickTime can read such as:

<EMBED src="sample.mov" qtsrc="rtsp://www.apple.com/quicktime/sample.mp3">

QTSRCCHOKESPEED (optional...requires QuickTime 4)

Using the QTSRCCHOKESPEED attribute gives content developers the ability to specify the datarate of a movie being served regardless of the connection speed an end user has. This may be useful when a particular movie is requested from a server by large volumes of users to eliminate congestion in routers.

Note: When setting the choke speed, you will specify the maximum datarate.

For example:

<embed src="sample.mov" width="320" height="240" qtsrcchokespeed=33600>

QTSRCDONTUSEBROWSER (optional...requires QuickTime 4)

QTSRCDONTUSEBROWSER can either be set to TRUE or FALSE. By default, the behavior is set to FALSE. When set to true, the URL specified in the QTSRC parameter is loaded using QuickTime's internal methods, instead of using the browser to fetch the file. This prevents the browser from caching the file, which speeds access to local movies and can help prevent copying movies over the Web.

For example:

<embed src="foo.mov" qtsrc="sample.mov" width="320" height="240" qtsrcdontusebrowser>

SCALE=*value* (optional...requires QuickTime 3)

SCALE is either TOFIT, ASPECT or a number. By default the value of SCALE is 1. If set to TOFIT, the movie is scaled to fit the embedded box as specified by the HEIGHT and WIDTH attributes. If this is set to ASPECT, the movie will scale to fit the embedded box while maintaining the aspect ratio. If this is set with a number, the movie will be scaled by that number (e.g. 1.5). Note: Using the number scale attribute with a QTVR Panorama movie can degrade the performance of the movie even on high-end systems.

For example:

```
<embed src="sample.mov" width="200" height="240" scale="tofit">
```

SRC=*URL* (required)

The SRC attribute defines the url to the file for the plugin or helper application to play. The SRC attribute is the most common way to embed the media, except for occasional instances where the TYPE attribute may be necessary.

For example:

```
<embed src="sample.mov" width="200" height="240">
```

See also: TYPE

STARTTIME=*time* (optional...requires QuickTime 4)

The STARTTIME attribute defines the first frame of the movie. STARTTIME can be any time within the length of the movie. By default, STARTTIME is the first frame of the movie (or 00:00:00). This attribute takes a time value in the form Hours:Minutes:Seconds:Frames (30ths). The frames component can be specified as a fixed point number so that more specific times can be specified for instance 3:30:22.5 means 3 minutes, 30 seconds and 22.5 frames.

Note: For fast start movies, the entire file is still downloaded even if a STARTTIME is specified.

For example:

```
<embed src="sample.mov" width="200" height="240" starttime="00:15:22.5">
```

See also: ENDTIME

TARGET="QUICKTIMEPLAYER" (optional...requires QuickTime 4)

When set, the QuickTime Plug-in will launch QuickTime Player as a helper application (if it is not already running) and opens the url of the movie file. In order for TARGET="QUICKTIMEPLAYER" to work, there needs to be an href attribute in the embed tag which points to the movie file.

For example:

```
<embed src="poster.mov" width="200" height="240" href="sample.mov" target="quicktimeplayer">
```

TARGET="MYSELF" (optional...requires QuickTime 4)

When set, the QuickTime Plug-in will replace the movie specified in the SRC parameter with the movie specified in the HREF attribute when a user clicks on the movie. In order for TARGET="MYSELF" to work, there needs to be an HREF attribute in the embed tag pointing to a media type.

For example:

```
<embed src="poster.mov" width="200" height="240" href="sample.mov" target="myself">
```

See also: HREF

TARGET*n*="*FRAME_NAME*" (optional...requires QuickTime 3)

TARGET is an optional attribute, used in conjunction with the HOTSPOT or HREF attributes. When set, the TARGET attribute is the name of a valid frame (including _self, _top, _parent, _blank or an explicit frame name) that will be the target of a link specified by the HOTSPOT or HREF attribute. Leaving TARGET unspecified will open the new file in the same place as the current movie.

For example:

```
HOTSPOT32="http://www.apple.com/quicktime" TARGET32="_blank"
```

would specify that when hotspot 32 is clicked, the QuickTime home page will load in a new window.

NOTE: It is important to use the same ID# for both the HOTSPOT and TARGET for each URL reference. This ensures that the plug-in knows what HOTSPOT goes with what TARGET.

TARGETCACHE=*value* (optional...requires QuickTime 4)

The TARGETCACHE attribute allows content creators to cache the movie the poster movie is targeting.TARGETCACHE is either TRUE or FALSE. By default, TARGETCACHE is FALSE.

For example:

```
<embed src="poster.mov" width="200" height="240" cache="true" href="sample2.mov" TARGET="myself" targetcache="true">
```

TILT=*integer* (optional...requires QuickTime 3)

The TILT attribute allows you to specify the initial tilt angle for a QuickTime VR movie. Only integer values are supplied for this attribute. The range of values for a typical movie would be -42.5 to 42.5 degrees. If no value for TILT is specified, the value stored in the movie is used. This attribute has no meaning for a standard QuickTime movie.

For example:

```
<embed src="sample.mov" width="320" height="240" tilt="20.0">
```

See also: FOV, NODE, PAN

TYPE="MIMEtype" (optional)

TYPE="MIMEtype" specifies the MIME type of the EMBED file, which in turn determines which plug-in to load. Use the TYPE attribute for a plug-in that requires no data, for example, a plug-in that draws an analog clock or fetches all of its data dynamically. For a visible plug-in, you must include both the WIDTH and HEIGHT attributes if you use TYPE; no default values are used.

Note: The functionality of this attribute is only supported by Netscape Navigator, version 2.0 or later.

For example:

```
<embed src="sample.mov" type="video/quicktime" width="200" height="240">
```

URLSUBSTITUTE="<String>:<SubstituteURL>" (optional...requires QuickTime 4)

Replaces every instance of String with SubstituteURL inside any HREF tracks, sprite action URLs, or VR hotspot URLs. Both String and SubstituteURL must be surrounded by angle brackets, and the two must be separated by a colon. The value n may be any integer from 1 to 999, and may be omitted if only one URLSUBSTITUTE parameter is specified. Use this parameter to repurpose QuickTime movies with embedded URLs without editing the movies.
For example:

```
<embed src="sample.mov" width="200" height="240" urlsubstitute="<samplestring>:<http://dns/foo.mov>">
```

VOLUME=*value* (optional...requires QuickTime 3)

The VOLUME attribute sets the movie's initial audio volume. Only integer values between 0 through 100 are applied for this attribute. By default, VOLUME is set to 100. A setting of 0 effectively mutes the audio whereas a setting of 100 is the maximum volume.

For example:

```
<embed src="sample.mov" width="200" height="240" volume="50">
```

`WIDTH=size in pixels` (required)

The `WIDTH` attribute specifies the `WIDTH` of the embedded file in pixels. The `WIDTH` of the movie can be found by choosing 'Get Info...' in the 'Movie' menu within QuickTime Player.

For example:

```
<embed src="sample.mov" width="200" height="240">
```

See also: `HEIGHT`

For more information about utilizing QuickTime for websites, visit Apple Developer Connection's QuickTime Topics.

Published Date: Oct 7, 2016

Final Cut Pro 3: "General Error 34" During Tutorial

While following the Compositing and Effects portion of the Final Cut Pro 3 tutorial, you may encounter a "General Error 34" in the program. This can occur on page 90 of the Tutorial guide while trying to move Dances.psd layers in the timeline. After the alert is dismissed, the canvas window is red with white letters stating "Display unavailable. Close and reopen window to restore."

This article has been archived and is no longer updated by Apple.

Symptom

An alert box with this message appears: "General Error 34".

Products Affected

- Final Cut Pro 3

Solution

Follow these steps to resolve the issue:

- In the Browser, delete the Dances.psd file.
- Choose Import from the File menu, then choose Files from the submenu (or type Command-I).
- Navigate to the tutorial folder, and then to the Compositing Pieces folder.
- Select the file called Dances.psd.
- In the Browser window, drag the newly created Dances.psd file into the Graphics bin.

You can now continue with the Compositing and Effects tutorial.

Related documents
300709 "Final Cut Express HD: Turning off or disconnecting a FireWire device while rendering a project may cause unexpected results"

Published Date: Feb 20, 2012

Troubleshooting songs that skip on iPod

Find out what you can do if a song skips while playing.
This article has been archived and is no longer updated by Apple.

Install the latest iPod software

Always update your iPod with the latest software before troubleshooting.

Use compressed songs

iPod's skip protection works best with compressed audio files. This allows multiple songs to fit into iPod's memory cache.

If your audio files are large, or are uncompressed (such as songs in AIFF format), you may want to compress them, and use the MP3 or AAC compressors when importing new songs. Consider breaking large files into smaller files. If your songs aren't compressed, in AIFF or WAV format, for example, they take up a lot more space. Instead of holding 25 minutes of music, the cache can only hold a few minutes. This means the hard drive has to work a lot harder to keep the cache full. Since it has to turn on a lot more often, the hard disk is more prone to be affected by movement as it loads the cache, and that could make a song skip. More hard drive access can also affect battery life.

Avoid shaking iPod

iPod provides skip protection by playing music from its solid-state cache. When all the music stored in the cache has played, iPod's hard drive copies more music to the cache. Shaking iPod while the hard drive is copying music can cause songs to skip.

Make sure song files are not damaged

If just one song skips when you play it, it may be damaged.

1. Delete the song and update your iPod.
2. Insert the CD you used to import the song, and import it again. If the CD is scratched or dirty, iTunes may not be able to import the song. Try cleaning the CD or use a different one.
3. Update your iPod with the new copy of the song.

Unplug the USB cable or turn off the EQ

If you have an iPod (with Dock Connector) model and you're using a Windows PC, unplug the USB cable from iPod, or turn off the EQ.

Reset iPod

Resetting iPod can sometimes help. When you reset iPod all your songs and files are saved, but some customized settings may be lost.

Restore iPod

If all the songs you play skip and their file sizes are small, you may need to restore iPod. **Warning:** The restore process cannot be undone. All the songs and files on your iPod will be deleted. Always keep a backup of your important files. Content in your iTunes Library will not be affected by restoring your iPod.

Related documents

93318: iPod: Maximizing skip protection
302392: How to back up your media in iTunes
61003: iPod shows a folder icon with exclamation point when you turn it on
61771: iPod does not appear in iTunes or on the desktop, an exclamation point or sad iPod icon appears onscreen
61711: Your Windows PC doesn't recognize iPod

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Published Date: Oct 7, 2016

Mac OS X: Audio Playback Skips on Computers With Dual Microprocessors

Update Mac OS X to resolve an issue in which audio may skip during playback.
This article has been archived and is no longer updated by Apple.

Symptom

Under certain conditions audio playback skips. This may happen when playing MP3 files with any MP3 player application, but is especially apparent during network activity, such as viewing Web pages using Internet Explorer.

Solution

Download and install Mac OS X 10.1.2 or later. Use the Software Update pane of System Preferences, or download the update from Apple Software Downloads (http://www.apple.com/swupdates/).
Published Date: Oct 7, 2016

Final Cut Pro and iMovie: Cameras in SDL Mode Not Recognized

Some consumer DV cameras have a recording mode called SDL, which increases recording time on mini-DV cassettes by reducing the track width and slowing down the tape speed. In some cases, trying to capture from a camera in SDL mode in iMovie and Final Cut Pro can result in the application not recognizing the camera or not capturing any video.

This article has been archived and is no longer updated by Apple.

Symptom

In iMovie, the camera is not recognized. In Final Cut Pro the camera is recognized but no video can be seen or captured.

Solution

Using the camera's menu system, switch it from SDL mode to "SD" or "Standard" recording mode. After this you may need to turn the camera off and on before Final Cut Pro or iMovie will recognize it.

Additional information

SDL is an open industry standard specified by ISO/IEC 61883 and 61834. Other long play formats are not affected by this issue.

Published Date: Feb 20, 2012

iPod: How to Browse by Artist

This document describes how to browse iPod for a songs by a specific artist.
This article has been archived and is no longer updated by Apple.
If a song on iPod has information about the performing artist, you can look for the song by artist.

1. Select Artists from the main menu.
2. Select an artist's name.
3. Select an album title.
4. Scroll to the song you want and press the Play button.

If there are no album names listed after selecting an artist's name, then select All. Songs that do not have an album listed in the MP3 tags appear under the All listing.

You can push Play in the artist list to play all songs by the selected artist.

See technical document 61043: "**iPod: How to Browse by Album Title**" and technical document 25293: "**MP3 ID Tags: What Are They?**" for additional information.
Published Date: Feb 20, 2012

iPod: How to Browse by Album Title

This document describes how to browse iPod by album title.
This article has been archived and is no longer updated by Apple.
Follow these steps to browse by album title:

1. Select Artists in the main menu.
2. Select All from the top of the list. A list of all of the albums appears. Songs that do not have an MP3 tag for album title do not appear in this list.
3. Click All again to display songs titles grouped by album title. Songs without an album MP3 tag appear at the bottom of the list.

You can push Play while in the album list to play all songs on the selected album.

See technical document 61042: "**iPod: How to Browse by Artist**" and technical document 25293: "**MP3 ID Tags: What Are They?**" for additional information.
Published Date: Feb 20, 2012

Mac OS X: Unable to Open QuickTake 100, 150 Pictures

The QuickTake 100 and QuickTake 150 digital cameras have a unique codec (compressor-decompressor) that is not available in Mac OS X. QuickTake Pictures must be converted to a different compression format under Mac OS 9 or earlier to be opened in Mac OS X.
This article has been archived and is no longer updated by Apple.

Symptom

Symptoms vary depending on the application importing the pictures. They can include an alert box with a message about the compressor not being found, the picture may open as a white frame, or the files may not be recognized as photos.

Solution

The pictures must be exported to a different format when started from Mac OS 9 or earlier startup disk. No matter which program is used to convert the pictures, the QuickTake Image extension must be present in the Extensions folder of the startup disk. QuickTake Image is installed with the QuickTake Software Installer.

You could use these conversion applications:

- Picture Viewer (with QuickTime Pro)
- Graphic Converter
- Photoshop
- PhotoFlash

Review the documentation for the conversion application for specific steps on how to convert images. You should convert the files to JPEG or TIFF formats, either of which is compatible with Mac OS X.

Mention of any third-party products is for informational purposes only, and constitutes neither an endorsement nor a recommendation.
Published Date: Feb 19, 2012

iTunes: About import settings and hard disk space

This article has been archived and is no longer updated by Apple.

About import settings and hard disk space

When you import a song into the library, the song is encoded and stored on your hard disk. The amount of space the file takes up depends on the song and the import settings that are chosen in iTunes preferences. The import settings also affect the audio quality of the imported song. Larger files take up more hard disk space, but generally sound better.

The default encoding format in recent versions of iTunes is MPEG-4 AAC, a compressed format that rivals the sound quality of audio CDs.

AAC-encoded files will sound as good as or better than MP3 files encoded at the same or even a higher bit rate. For example, a 128 kbps AAC file should sound as good as or better than a 160 kbps MP3 file. Because the bit rate is lower, the AAC file will also be smaller than the MP3 file. AAC files allow you to store the most music on your hard disk or iPod, and may allow for longer battery life on the iPod. The High Quality AAC setting creates files that are usually less than 1 MB for each minute of music.

If you plan to transfer files to a third-party digital music player, you might want to choose the MP3 Encoder and the High Quality setting to fit more songs on the player. The High Quality MP3 setting creates files that are about 1 MB in size for each minute of music.

The WAV and AIFF encoders do not compress the songs. They make files that are several times larger than AAC or MP3 files and take up a large amount of hard disk space (about 650 MB per CD or 10 MB per minute of music). Encoding music using the Apple Lossless encoder will preserve the high-quality sound found on the CD but create significantly smaller files than the WAV and AIFF encoders. Files encoded with the Apple Lossless encoder are still much larger than files created using either the default 128 kbps AAC or MP3.

Learn how to convert songs to a different file format here:
"iTunes: How to convert a song to a different file format"

Published Date: Feb 20, 2012

iTunes: About Equalizers

This article has been archived and is no longer updated by Apple.

An equalizer (EQ) lets you fine-tune specific frequencies of the sound spectrum, much like the treble and bass controls of a stereo, but with even more power and flexibility.

By adjusting the different frequencies, you can customize your music playback for different musical genres, listening environments, and output methods (such as speakers or headphones).

The horizontal values on the equalizer represent the spectrum of human hearing in hertz (hz). 32 Hz represents the deepest frequency (bass), 250 Hz and 500 Hz represent the mid-range frequencies, and 1 kHz to 4 kHz represent the higher frequencies (treble).

The vertical values on each bar are represented in decibels (dB), units that measure the volume or intensity of each hz frequency. By moving the sliders (also called "faders") up or down, you increase or decrease the sounds that you hear in that particular frequency range.

Preamp is a secondary volume adjustment that is applied to all frequencies equally. You might want to increase or decrease the preamp volume when listening to music that was recorded particularly quietly or loudly.

iTunes lets you adjust the equalizer settings yourself, or choose from over 20 presets of the most commonly used EQ settings.

Published Date: Feb 20, 2012

How to adjust the sound volume on iPod

This article has been archived and is no longer updated by Apple.

If you see the Now Playing screen, which shows the title of the song or audiobook playing, you can use the wheel to adjust the volume.

If you don't see the Now Playing screen, select Now Playing in the main menu. Then use the wheel to raise or lower the volume.

If nothing is playing, you can't change the volume.

Published Date: Oct 7, 2016

How to set the screen contrast on iPod

This article has been archived and is no longer updated by Apple.

To set iPod's screen contrast, select Settings in the main menu. Then select Screen Contrast and use the scroll wheel to adjust the contrast.

To reset the screen contrast to normal, press and hold the Menu button for about 4 seconds.

Note: The contrast setting for the iPod models that have a color display is not adjustable. This includes iPod nano, Fifth Generation iPod, iPod with color display, and earlier iPod photo models. If you're not sure what iPod model you have, click here.

Published Date: Oct 7, 2016

How to set the sleep timer on iPod

This article has been archived and is no longer updated by Apple.

You can set iPod to turn off automatically after a specific period of time.

To set the interval before iPod turns off, select Extras > Clock > Sleep Timer. Then select the time you want.

When you set the sleep timer, a clock icon and the number of minutes left until iPod turns off appear near the top of the Now Playing screen.

The iPod nano and Fifth Generation iPod (iPod with video) both support multiple clocks. You can use sleep timer with one clock at a time. See this document for more information on configuring multiple clocks.

Published Date: Feb 20, 2012

How to turn on iPod‘s backlight

iPod has backlighting, so you can see the display in low light.

This article has been archived and is no longer updated by Apple.

You can configure iPod so the backlight turns on for a set amount of time when you press a button or move the scroll wheel.

To access the backlight settings:

1. Select **Settings** > **Backlight Timer**.
2. Select a setting from the menu. Options include having the backlight timer:
    - Off
    - Turn off after a period of time between 2 and 20 seconds
    - Always on

A backlight on/off switch can be added to the Main menu by selecting:
Settings > **Main Menu** > **Backlight**

With iPod models prior to Fifth Generation iPod and iPod nano, you can also press and hold the Menu button down to toggle the backlight on or off. Find out which iPod model you have.

Published Date: Oct 7, 2016

Mac OS X: An application stopped working

If an application isn't working and you can't quit, you can force it to quit. When you force an application to quit, you lose any changes to documents open in the application.
This article has been archived and is no longer updated by Apple.
Choose Force Quit from the Apple menu. Select the application in the list and click Force Quit.

You can also press the Command, Option, and Esc keys at the same time or hold down the Option key and press the application icon in the Dock.

After you force an application to quit, try using it again. If you continue to have problems, you may need to install the application again or contact the maker of the program for more help.
Published Date: Oct 7, 2016

Mac OS X: About installing applications

You can install Mac OS X applications in your home or the Applications folder.
This article has been archived and is no longer updated by Apple.
If automatic login is turned off, log in as an administrator to install software in the Applications folder and the Library folder on your Mac OS X disk.

To make sure an application works properly, install it following the instructions provided with the software.

To get more applications, choose Get Mac OS X Software from the Apple menu. Check the Applications folder on your iDisk for new Mac OS X applications from Apple, updates to existing applications, and demonstrations from other developers.
Published Date: Oct 7, 2016

Mac OS X: Getting to know Mac OS X

When you start your computer with Mac OS X, the Finder appears with the Dock at the bottom of the screen. You use the Finder window to see your disks, servers, applications, and documents. You can open, copy, move, and make aliases to these items.
This article has been archived and is no longer updated by Apple.
The Dock contains some of the applications included with Mac OS X, such as Mail. When you open another application or minimize a document window, its icon also appears in the Dock. You can add many types of items to the Dock by dragging their icons to the Dock.

The Dock also includes the Trash. To delete a file, drag it to the Trash.
Published Date: Oct 7, 2016

Mac OS X: How to change the way Finder windows look

You can change the way Finder windows in icon or list view look.
This article has been archived and is no longer updated by Apple.
For example, you can change the size of the icons and add a background picture to a window in icon view.

You can change an individual window or all the windows that use global options.

To change an individual window, make the window active and choose Show View Options from the View menu. Select "This window only," then select the options for the folder.

If a window is in column view, you can change the size of columns by dragging the bottom of the column divider.
Published Date: Oct 7, 2016

Mac OS X: About working with an administrator account

When you set up Mac OS X, you create a user account. This user is an administrator user. An administrator can create user accounts, install software in the Applications and Library folders, and change computer settings.
This article has been archived and is no longer updated by Apple.
If you turn off automatic login, log in as an administrator to make these changes to your computer.

If you know the name and password of an administrator account, click the lock icon to change settings in System Preferences panes when you're not logged in as an administrator.

To keep your computer secure, don't share an administrator name and password with anyone. Be sure to log out when you leave your computer or set Screen Saver preferences to require a password. You may also want to log in as a user that is not an administrator.
Published Date: Oct 7, 2016

Mac OS X: The computer‘s screen keeps going black

What should you do if your computer's screen keeps going black?
This article has been archived and is no longer updated by Apple.
If your computer screen goes black, then comes back on when you move the mouse or press a key, it has gone to sleep. Sleep saves energy when you're not using your computer.

To change sleep settings, open System Preferences and click Energy Saver. Click the Sleep tab to set how long the system should be inactive before it goes to sleep.

You can set the time when your display and hard disk go to sleep separately. The display wakes up faster than the hard disk.
Published Date: Oct 7, 2016

Mac OS X: How to set keyboard key repeat rate

You can set the key repeat rate if characters are typed too fast or too slow when you press their keys on the keyboard.
This article has been archived and is no longer updated by Apple.
If you hold down a character key briefly, the character begins to repeat. You can set how long you must hold down the key before the character starts repeating and how fast it repeats once it starts.

To set how fast characters repeat, open System Preferences and click Keyboard, then click the Repeat Rate tab. You can press a key to see how the settings work.
Published Date: Oct 7, 2016

Mac OS X: How to automatically open applications when you log in

You can have applications or documents open automatically when you start Mac OS X.
This article has been archived and is no longer updated by Apple.
Open System Preferences and click Login. Click the Login Items tab and click Add, then select an application or document. Drag items in the list to change the order in which they open.

To stop an application from opening at startup, select it and click Remove.
Published Date: Oct 7, 2016

Mac OS X: How to open another window in the Finder

You may need to open more than one window in the Finder so you can copy or move items from one folder to another, or create an alias to an item in another folder.
This article has been archived and is no longer updated by Apple.
Choose New Finder Window from the File menu.

To select whether the new window shows your home or the computer, choose Preferences from the Finder menu.

To open a separate window for a folder if the toolbar is showing, press the Command key when you double-click its icon. If the toolbar is not showing, just double-click a folder to open a separate window.
Published Date: Oct 7, 2016

What to do if a USB device isn‘t working

If a USB device isn't working, make sure all USB cables and power cords are plugged in properly. Also, make sure you installed any software that came with the device. You may be able to download the software from the manufacturer's website.

This article has been archived and is no longer updated by Apple.

If the device doesn't have a power cord and is plugged into another USB device that doesn't have a power cord, try plugging the device directly into your computer or to a USB device that does have a power cord. You may have to unplug and replug the other device as well, if it has stopped responding.

Related documents

USB: Troubleshooting Error Messages
USB: Device Troubleshooting

Published Date: Oct 7, 2016

Mac OS X: How to open locations in the Finder

Click the buttons in a Finder window toolbar to open important locations on your disk.
This article has been archived and is no longer updated by Apple.
Click Computer to see your disks and servers. Click Applications to see your Mac OS X applications. Click iDisk to open your iDisk.

Click Home to see the Documents, Public, Sites and other folders in your home. Click Favorites to see your favorite items.

Click the Back button to see the previous folder again.

Choose Customize Toolbar from the View menu to add icons to the toolbar. You can also drag icons for disks, servers, folders, and other items to the toolbar in a Finder window.
Published Date: Oct 7, 2016

Mac OS X: About seeing your disks and servers

Your computer comes with at least one hard disk and you may use other disks with it. If your computer is on a network, you may connect to servers and shared folders.
This article has been archived and is no longer updated by Apple.
To see which disks and servers you are using, look on the desktop or click the Computer button in a Finder window toolbar.

If icons for the disks and servers do not appear on the desktop, choose Preferences from the Finder menu and select the items you want to show there.
Published Date: Oct 7, 2016

Mac OS X: How to make an alias

To make it easier to access an application, document, or folder from another folder or the desktop, you can create an alias to it.
This article has been archived and is no longer updated by Apple.
In the Finder, open a window showing the item. Press the Command and Option keys while you drag the icon to another folder or the desktop.

If you want to find the original item of an alias, select the alias and choose Show Original from the File menu.
Published Date: Oct 7, 2016

Mac OS X: How to get information about applications, files, folders and disk drives

You can see information about applications, files, folders, disks, and servers.
This article has been archived and is no longer updated by Apple.
You can also change settings for these items.

Mac OS X 10.0 - 10.1.5
In a Finder window, select the item and choose Show Info from the File menu. Use the General Information pane to lock a file or folder and make a file work like stationery.

Choose Name & Extension from the pop-up menu to change the name of the item and show or hide the filename extension.

For a file, choose "Open with application" to select the application to open the file.

Choose Privileges to change access privileges for an item.

Mac OS X 10.2
In a Finder window, select the item and choose Get Info from the File menu. To protect your files from being changed or deleted, you can lock them. In the Finder, select the file you want to protect and choose Get Info from the File menu. Select the Locked checkbox.

To make changes to the file, deselect the Locked checkbox.
Published Date: Oct 7, 2016

Mac OS X: About controlling access to files and folders

If your computer is on a network and you turn on file sharing, other people can access your Public folder from the network. You can control access to items in your Public folder.
This article has been archived and is no longer updated by Apple.
Select your Public folder, then choose Show Info from the File menu. Choose Privileges from the pop-up menu and select access privileges for the owner, group, or everyone.

To select privileges for a group, you must log in as a member of the group or as an administrator.

Your Public folder contains a Drop Box folder. Other people can copy files to your Drop Box, but they cannot see its contents.
Published Date: Oct 7, 2016

Mac OS X: How to eject a disk

Before you eject a disk, close any documents on the disk and quit any applications that may be using files on the disk.
This article has been archived and is no longer updated by Apple.
Select the disk and choose Eject from the File menu. You can also drag the disk icon to the Trash.

If your keyboard has an eject key, you can use that.
Published Date: Oct 7, 2016

Macintosh: How to troubleshoot a FireWire device that isn‘t working

Follow these steps to troubleshoot a FireWire device that isn't working.

This article has been archived and is no longer updated by Apple.

Make sure all FireWire devices are turned on and all cables and power cords are plugged in. Make sure the cables are no more than 15 feet (4.5 meters) long and that you haven't connected a device to the computer in two ways.

Be sure you installed any software that came with the device. Check the manufacturer's Web site for the latest software.

If the device still doesn't work, try quitting and restarting any applications that use the device.

Published Date: Oct 7, 2016

How to connect a display to your Mac

You may be able to connect certain displays to your computer with or without an adapter.

This article has been archived and is no longer updated by Apple.

Your computer, display, or graphics card may have more than one video output port. Each type of port requires a special cable.

If the display you want to use has a port that is different from those on your computer, you may be able to purchase adapters or other products from third-party manufacturers to connect them. (You may also need to update software so that your computer works correctly with the display.)

For example, you can use an adapter to connect a flat panel display to an earlier computer.

See your Apple-authorized dealer or check out the Macintosh Products Guide (http://guide.apple.com/) for more information.

Published Date: Oct 7, 2016

What kind of recordable CD media can you use with a Mac?

Your optical drive can "burn" (record) your favorite music, computer applications, documents, and other digital files on recordable CDs. You can create your own music CDs and play them on a standard audio player.

This article has been archived and is no longer updated by Apple.

CD-R (CD-Recordable) and CD-RW (CD-Rewritable) discs come in normal and high-speed formats. You can write once to CD-R discs or erase and rewrite data to CD-RW discs.

You can't write (save) anything on a CD-ROM disc.

Published Date: Feb 19, 2012

Choosing a disc format for burning a CD in Mac OS X

This article has been archived and is no longer updated by Apple.

Learn about your options when choosing a format to burn a CD.

Note: This document applies to Mac OS X 10.1 through 10.3.9.

Mac OS X 10.2 through 10.3.9

When you insert a blank CD-R or CD-RW disc, you can select from a list of optional applications

- Open Finder
  Use when burning a HFS Plus/ISO 9660 hybrid disc.
- Open iTunes
  Use when burning Audio CD or MP3 (ISO 9660) disc, as specified in iTunes preferences.
- Open Disk Copy
  Use when burning a disc from an image file.
- Open Other Application
  Use this to open a specified application such as a third-party disc burning application.
- Run Script
  Use this to run an AppleScript. Normally this is used if you want to create your own automated burning script.

If you have a computer that can burn DVD-R discs, inserting a DVD-R disc in Mac OS X 10.2 provides the additional option to open iDVD. With Mac OS X 10.2.8 or earlier, DVD-R discs burned in the Finder are Mac OS Extended format (HFS Plus), not hybrid. With Mac OS X 10.3 or later, they are hybrid.

Mac OS X 10.1 to 10.1.5

Your computer gives you three options for preparing a blank CD for burning: Standard (HFS Plus/ISO 9660), iTunes (Audio CD), and MP3 (ISO 9660).

Choose Standard format if you want to save data or multimedia files on your CD. A file on a standard format CD can be read on both PC and Macintosh computers using any application that can recognize the file format. Standard format also lets you use long file names and international file names, and allows the encoding of larger files.

Note: If you are viewing your CD from an operating system that supports only eight-character file names, a longer file name on the CD is truncated into an eight-character filename made up of the first six characters of the name, a tilde (~), and a unique number.

Published Date: Oct 7, 2016

The disc drive tray on your Mac won‘t open

This article has been archived and is no longer updated by Apple.

What can you do if the disc drive tray won't open?

Drag the disc icon to the Trash, or press the Media Eject key on your keyboard.

If the disc icon doesn't appear on the desktop, restart your computer and hold the mouse button.

You can also press the Media Eject key on your keyboard immediately after you hear the startup sound.

Published Date: Oct 7, 2016

Macintosh: About CD-R and CD-RW Discs

About CD-R discs

This article has been archived and is no longer updated by Apple.

You can burn a CD-R (CD-Recordable) disc once. Once files are written, they cannot be changed or deleted. With some third party applications, you may still be able to add more information in multiple burning sessions until the disc is full. See the documentation that came with your third-party application for specific information about recording on your CD-R disc.

It is best to use CD-R discs for recording audio CDs, because most standard audio CD players cannot read CD-RW discs. For longer-term storage and reliability, use CD-R discs.

About CD-RW discs

CD-RW (CD-Rewritable) discs can be erased and reused multiple times. However, some software for burning media files on CDs can write data on the disc only once. With some external CD-RW drives, you can add more information in multiple burning sessions until the disc is full, depending on the application you use. See the documentation that came with your external drive and application for specific information about multiple-session recording on your CD-RW disc.

CD-RW discs may be incompatible with some older computers and audio CD players. See the documentation that came with your CD burning application.

Published Date: Oct 7, 2016

How to add someone to Address Book

Use the Address Book to store contact information for people you correspond with.

This article has been archived and is no longer updated by Apple.

The Mail application uses your address book to complete email addresses as you type.

Open Address Book and choose New from the File menu.

To add the address of someone who sent you email, open Mail, select their message and choose Add Sender To Address Book from the Message menu.

To add a virtual address card (vCard) that someone has sent you, drag it to the Address Book window.

Published Date: Feb 19, 2012

CMYK photos do not print correctly in iPhoto

CMYK photos do not print correctly and should be avoided.
This article has been archived and is no longer updated by Apple.
Some image editing applications can create photo files in the CMYK format. These photo files will not print properly from iPhoto and should be avoided when printing, ordering prints, or ordering books.
Published Date: Feb 20, 2012

iMovie 2 for Mac OS X v10.1.x: How to Install Additional Plug-Ins

You can extend iMovie's features by installing plug-ins. Apple and third parties have created plug-ins for iMovie. This document explains how to install additional plug-ins in iMovie for Mac OS X v10.1.x.
This article has been archived and is no longer updated by Apple.

How to install additional plug-ins

1. Quit iMovie, if it is open.
2. Click the Finder in the Dock.
3. Choose Go to Folder from the Go menu.
4. Type "~/Library" and click Go.
5. If you don't see a folder named "iMovie" choose New Folder from the File menu, and name it "iMovie".
6. Open the iMovie folder.
7. If you don't see a folder named "Plug-ins" choose New Folder from the File menu and name it "Plug-ins".

The resulting path should look something like this:
Macintosh HD/Users/Your User Name/Library/iMovie/Plug-ins/

8. Copy any additional iMovie 2 for Mac OS X plug-ins into the Plug-ins folder.
9. Open iMovie.

The iMovie Plug-in pack 2.1.1 for Mac OS X is available from the iMovie Web site (http://www.apple.com/imovie/).
Published Date: Feb 19, 2012

iMovie: Automatic Scene Detection Requires That Camera Clock Be Set Properly

For iMovie's "Automatically start new clip at scene break" feature to work, you must make sure your camera's clock is set properly.
This article has been archived and is no longer updated by Apple.

Symptom

iMovie's scene detection feature doesn't work. Scenes that should be imported separately are imported together.

Solution

Make sure your video camera's clock is set correctly, and that the camera's battery is charged.

iMovie's scene detection uses the time stamp from your camera's internal clock. If scene detection is not working, you should make sure the camera's clock has been set and is running properly. Many cameras have a small battery that powers the clock. If this battery hasn't been installed, or if its power has been depleted, your camera's clock will not run and your tapes will not have the time stamp iMovie needs to detect scene breaks. Consult the manual that came with your camera for more information.
Published Date: Oct 7, 2016

Troubleshooting iPod‘s headphones

If you think your iPod or iPod mini headphones aren't working correctly, try these simple troubleshooting steps.

This article has been archived and is no longer updated by Apple.

If you have the Apple In-Ear Headphones, first see Tip - Getting Optimal Audio Quality before continuing.

Connect the iPod headphones to the sound output port ("speaker jack") on your computer or another audio device that has a 3.5 mm stereo headphone jack. If the issue with the headphones is still apparent, you can request replacement headphones from the iPod Service Website.

If the issue with your iPod headphones is not apparent on another device, try connecting a different set of headphones with a 3.5 mm plug to your iPod. If the issue is apparent with these headphones on your iPod, you can arrange to have your iPod repaired at the iPod Service Website.

Published Date: Feb 19, 2012

Final Cut Pro 3: Troubleshooting Installation Issues

This document describes how to troubleshoot situations where the Final Cut Pro 3 application or installer unexpectedly quits, or an alert box with this message appears: "Final Cut Pro requires a System ID file which is either missing or invalid. Please reinstall using the original CD that was used to install Final Cut Pro."

This article has been archived and is no longer updated by Apple.

Symptom

An alert box with this message appears:

> "Final Cut Pro requires a System ID file which is either missing or invalid. Please reinstall using the original CD that was used to install Final Cut Pro."

OR

The Final Cut Pro 3 installer unexpectedly quits near the end of the installation process.

OR

The Final Cut Pro 3 application unexpectedly quits directly after installation.

Solution

Try one or more of the following troubleshooting steps:

- If you are using Final Cut Pro on a dual-processor computer in Mac OS X, download and install the Final Cut Pro 3.0.1 update.
- Be sure to carefully follow the instructions in technical document 75215: "**Final Cut Pro 3: Before You Install**" or technical document 61001; "**Final Cut Pro 3: Before You Upgrade**". (These are also displayed by the installer.)
- Check Apple Software Downloads (http://www.apple.com/swupdates/) for the latest Final Cut Pro updates.
- In the Internet pane of System Preferences, in the Email tab, make sure that the User Account ID and Outgoing Mail Server fields are either both
  filled or both empty before installing. The installer can fail if one field is filled out and the other is empty, resulting in a Final Cut Pro 3 application that will not open. This applies to Mac OS X only.
- Reinstall from the original Final Cut Pro CD
- If you are installing Final Cut Pro for Mac OS 9, do not run the installer from Mac OS X in Classic. If you have already done so, you will need to
  uninstall and reinstall the software by following the next step.

  Important: Installing a Final Cut Pro update while the application is running will result in an incomplete installation. Make sure that you quit the
  program before installing an update.
- If the issue persists even after reinstalling, follow these steps:
  1. If using Final Cut Pro for Mac OS X, delete the Final Cut Pro 3 application package. If using Final Cut Pro for Mac OS 9, delete the Final Cut Pro 3 folder. **Note:** Be sure to remove any files you may have added to these directories, such as custom FXScripts.
  2. Remove any of the following folders that may be present on your drive(s):
     /Library/Application Support/Final Cut Pro System Support (Mac OS X only)
     /System Folder/Application Support/Final Cut Pro System Support (Mac OS 9 only)
     /System Folder/Preferences/Final Cut Pro User Data (Mac OS 9 only)
     Note: By deleting these folders you will lose FCP preferences such as custom presets, setups, and window layouts.
  3. Empty the Trash
  4. Disconnect third-party hardware such as USB devices
  5. Reinstall from the original Final Cut Pro CD

Related Documents

n/a	Final Cut Pro 3.0.4 Update for Mac OS X: Information and Download
122009	Final Cut Pro 3.0.2 for Mac OS 9: Information and Download

Published Date: Oct 7, 2016

Mac OS X 10.1: DVD Player 3.1 Unexpectedly Quits With a "System Error"

After upgrading to DVD Player 3.1, the application may unexpectedly quit if the General pane of System Preferences is set to use an Appearance setting other than "Blue".
This article has been archived and is no longer updated by Apple.

Symptom

DVD Player 3.1 quits unexpectedly when opened and an alert box with this message appears: "A system error has occurred. 1852402768".

This happens if the preferred language is something other than English in the International pane of System Preferences, and if something other than Blue is selected in the Appearance pop-up menu of the General pane of System Preferences.

Solution

Download and install DVD Player 3.1.1 or later.

Related documents

Technical document 60975: "**DVD Player 3.0.1 and Later: Compatible Computers**"

Published Date: Feb 19, 2012

NVIDIA Driver Update: "This program cannot run on your computer" Alert

The NVIDIA Driver Update, which installs updated drivers for Power Mac computers with nVidia graphics cards in Mac OS 9, does not work in the Mac OS X Classic environment.

This article has been archived and is no longer updated by Apple.

Symptom

An alert box with this message appears:

> "This program cannot run on your computer. See the documentation for more information."

Solution

1. Start up the computer using Mac OS 9
2. Open the installer to install the software.

Related Software Downloads

120106 NVIDIA Driver Update 3.0 v1.1: Information and Download

Published Date: Feb 20, 2012

Final Cut Pro: Tips For Installing 3.0.1 Update

This document lists four things to check if the Final Cut Pro 3.0.1 Update cannot be successfully completed.

This article has been archived and is no longer updated by Apple.

Check these items if the Final Cut Pro 3.0.1 Update cannot be successfully completed.

1. Application renamed

If you've renamed the application to something other than "Final Cut Pro" then the installer won't work.

2. Wrong folder selection

If an alert box with this message appears: "Unable to start Final Cut Pro. One or more plugins are missing", the Updater and the Installer were not installed in the same folder. Repeat the procedure and be careful to choose the folder that contains the Final Cut Pro 3.0 application.

3. Wrong updater

Important: If, after installing the Final Cut Pro 3.0.1 Updater, you are unable to get past the Final Cut Pro serial number dialog, you have used the wrong version of the Final Cut Pro 3.0.1 Updater. Download the version of the Updater that matches your version of Final Cut Pro 3.0, and follow the instructions "When Final Cut Pro 3.0 has already been installed."

4. Get Info window is open

The Show Info window must be closed while the updater is installing the software. Otherwise, the Finder's Show Info window will continue to show the incorrect version, size, and icon until you restart the computer.

Published Date: Feb 20, 2012

DVD Player 3.1.1: What‘s New?

This document describes the difference between DVD Player 3.1.1 and the previous version, 3.1.

This article has been archived and is no longer updated by Apple.

DVD Player 3.1.1 fixes an issue that could occur on non-English versions of Mac OS X if using the Graphite Mac OS X appearance theme. In this configuration, DVD Player 3.1 would unexpectedly quit when opened.

Published Date: Feb 20, 2012

iPod: How to use the equalizer

This article has been archived and is no longer updated by Apple.

You can use equalizer presets to change iPod's sound to suit a particular music genre or style.

For example, to make rock music sound better, set the equalizer to Rock.

Select Settings in the main menu. Then select EQ and select a music type.

If you assign an equalizer preset to a song using iTunes, then turn on the iPod's equalizer by selecting any equalizer setting other than off. The song will play using the iTunes setting if the iTunes setting exists on iPod.

You can't create custom equalizer settings on iPod, or transfer custom settings to iPod.

Published Date: Oct 7, 2016

Scrolling to any point in a song on iPod

This article has been archived and is no longer updated by Apple.

With iPod 1.1 software or later you can scroll backwards or forwards to any point in a song while it is playing. This feature is sometimes called "scrubbing."

1. From the Now Playing screen, press the Center button. A diamond symbol indicates the point in the song that is selected.
2. Use the scroll wheel to go to any point in the song. The diamond symbol moves as you scroll, and the elapsed time and time remaining indicators change.
3. The song continues playing from the point where you stopped scrolling. You may also press the Center button to continue playing.

This feature is useful if you want to go to a particular part of a song or recording, such as an audiobook.

Tip: You can also press and hold the Fast-forward or Rewind buttons instead of scrolling to go to any point in the song.

Note: Scrubbing is only available from the Now Playing screen. It is not available via a workout from the Nike+iPod menu.

If you have an iPod shuffle, you can use Fast-forward and Rewind, but you can also find additional audio book navigation tips here.

Published Date: Oct 7, 2016

iPod: vCard fields that can be displayed

This article has been archived and is no longer updated by Apple.

iPod can display certain fields in vCards that following the vCard 2.1 and 3.0 format.

iPod software can display information from these vCard fields:

- fn -The contact's formatted name (how it is sorted)
- n - The contact's name as it appears in the Contact
- adr & add - The contact's address(es)
- tel - The contact's telephone number(s)
- email - The contact's email address
- title - The contact's title
- org - The contact's company name
- url - The contact's Web address
- note - Notes on the contact

Note: In order to see notes attached to specific contacts on the iPod as entered in the Mac OS X Address Book application, you may need to turn on the option to "Export notes vCards" from the Address Book application's preferences (under vCard preferences).

Any other information stored in a vCard is ignored by iPod. Applications such as Mac OS X's Address Book, Eudora, Microsoft Entourage, and Palm Desktop 4.0 allow you to export your contacts' names and addresses as vCards.

Sample

Here are the contents of the Sample vCard included with iPod software:

```
begin:vcard
version:3.0
fn:Sample
n:Sample;;;;
title:Accountant
org:Sample Company\\, Inc.
note:Here's a sample to show you all that can be displayed in a contact on your iPod.
url;type=work:apple.com/support/ipod
adr;type=work;type=pref:;;200 Industrial Park Circle;Metropolis;CA;98765;USA
label;type=work;type=pref:200 Industrial Park Circle\\nMetropolis\\, CA 98765\\nUSA
adr;type=home:;;10201 Fine Drive;Smallville;CA;98765;USA
label;type=home:10201 Fine Drive\\nSmallville\\, CA 98765\\nUSA
tel;type=home:408-555-9292
tel;type=work:408-555-3131
tel;type=cell:408-555-1010
end:vcard
```

Note: iPod software version 1.1 and later are required for viewing contacts on the iPod. Updates for iPod software are available in the latest version of iTunes (http://www.apple.com/iTunes/download/).

Published Date: Oct 7, 2016

iPod 1.1: How to delete a contact

This document explains how to delete a contact from iPod's Contacts list.
This article has been archived and is no longer updated by Apple.
To delete a contact from iPod's Contacts list:

1. Make sure iPod is set up to be used as an external hard disk.
2. Connect iPod to your computer. The iPod appears as a hard disk on your desktop or in a Finder window.
3. Open the iPod hard disk.
4. Open the folder named "Contacts".
5. Find the vCard for the contact you want to delete.
6. Drag the vCard to the Trash.

Tip: It is possible for more that one contact to be stored in a single vCard file. If this is the case, you'll have to determine which file stores the contact you want to delete.
Published Date: Oct 7, 2016

One or more contacts don‘t appear in iPod‘s Contacts list

This article has been archived and is no longer updated by Apple.

Follow these steps if one or more contacts don't appear in iPod's Contacts list even though their vCard is in the Contacts folder.

1. Make sure the contact's vCard is in a compatible format, either 2.1 or 3.0.
2. Make sure the vCard was copied to the Contacts folder. The folder's name must be spelled correctly. It is not case sensitive.
3. Use a contact manager application, such as Mac OS X's Address Book, to make a new vCard. Copy it to iPod's Contacts folder and see if it appears.
4. Reset iPod. When you reset iPod all your music and data files are saved, but some customized settings may be lost.

Related document

93678: iPod: Importing Contacts and Appointments

Published Date: Oct 11, 2016

Only part of a vCard is displayed on your iPod

iPod only displays certain fields of a contact's vCard.

This article has been archived and is no longer updated by Apple.

While your contact or email application program may store more information in a vCard, iPod does not display that information. To see a list of fields iPod displays, see technical document 61568: "iPod 1.1: Contact vCard Fields That Can Be Displayed."

Published Date: Oct 11, 2016

iPod 1.1: Contacts list sorting

iPod sorts the Contacts list using the vCard "formatted name" field.
This article has been archived and is no longer updated by Apple.
This field typically contains a person's full name beginning with the first name. Example: "Thomas Grey" is a formatted name beginning with the first name. iPod sorts this contact on Thomas and not on Grey. You can see the "fn" field in the sample vCard below.

Using a text editor, such as TextEdit, you can change a contact's sort order by modifying the information in the "fn" field. For example, changing "fn:Thomas Grey" to "fn:Grey, Thomas" causes iPod to sort on the last name instead of the first name.

Important: Certain characters may sort differently than expected on iPod. For example, a name beginning with the letter É, such as Étienne, will sort to the bottom of the list instead of among the contacts that begin with the letter E.

For more information on the vCard format in general, see http://www.imc.org/pdi/ .

Sample

Here are the contents of the Sample vCard included with iPod 1.1 software:

```
begin:vcard
version:3.0
fn:Sample
n:Sample;;;;
title:Accountant
org:Sample Company\\, Inc.
note:Here's a sample to show you all that can be displayed in a contact on your iPod.
url;type=work:apple.com/support/ipod
adr;type=work;type=pref:;;200 Industrial Park Circle;Metropolis;CA;98765;USA
label;type=work;type=pref:200 Industrial Park Circle\\nMetropolis\\, CA 98765\\nUSA
adr;type=home:;;10201 Fine Drive;Smallville;CA;98765;USA
label;type=home:10201 Fine Drive\\nSmallville\\, CA 98765\\nUSA
tel;type=home:408-555-9292
tel;type=work:408-555-3131
tel;type=cell:408-555-1010
end:vcard
```

Published Date: Oct 11, 2016

Final Cut Pro 3: Keyboard Shortcuts Don‘t Work When Full Keyboard Access Is On

Using the Full Keyboard Access feature available in the Keyboard pane of the Mac OS X System Preferences may cause some keyboard shortcuts to not function correctly in Final Cut Pro.

This article has been archived and is no longer updated by Apple.

Symptom

Turning on Full Keyboard Access may cause some keyboard shortcuts in Final Cut Pro to not function correctly.

Solution

Turn off Full Keyboard Access while using Final Cut Pro. Full keyboard Access is located in the Keyboard pane of System Preferences.

Published Date: Feb 20, 2012

DVD Player 3: "DVDManager" Alert Message (-70001)

This document explains how to troubleshoot a DVD Player 3 "DVDManager" alert message.
This article has been archived and is no longer updated by Apple.

Symptom

An alert message regarding "DVDManager" appears when you try to play a movie from a DVD-Video disc.

Solution

1. Verify that your DVD-Video disc is clean and free from abnormalities (smudges, scratches, dust, and so forth).
2. If the issue persists, restart your computer.

Published Date: Oct 7, 2016

iPod (10 GB): Capacity Appears to Be 5 GB, There Is No Contacts Menu

Restore your iPod (10 GB) if only 5 GB of the disk capacity is available, or if there is no Contacts menu.
This article has been archived and is no longer updated by Apple.

Symptom

- Only 5 GB of the disk capacity is available even though your iPod has a 10 GB disk.
- There is no Contacts menu, or other features of iPod 1.1 software.

Solution

This issue occurs if you install iPod 1.0.4 or earlier software on an iPod (10 GB), which already has iPod 1.1 or later software installed on it.

1. Download iPod Software 1.1 Updater or later from Apple Software Downloads (http://www.apple.com/swupdates/).
2. Connect iPod to your computer using the FireWire cable that came with iPod.
3. Back up any files data you want to keep from iPod's hard disk.
4. Follow the instructions for restoring iPod as described in technical document 60983: "**iPod: How to Restore**".

Important: Do not use the iPod Software 1.1 Updater to simply update iPod. It must be restored to work correctly.
Published Date: Oct 7, 2016

Mac OS: How to Type the Euro Glyph (€)

This document explains how to type the euro glyph in Mac OS 9 and Mac OS X.
This article has been archived and is no longer updated by Apple.
How you type the euro glyph (€) in Mac OS 9 and Mac OS X depends on which keyboard layout you use. See the table below to determine how to type the euro glyph using your keyboard layout.

Keyboard layout	Keystroke combinations
Austrian	Option-Shift-D
Belgian	Option-$
British	Option-2
Catalan	Option-U
Dutch	Option-2
Finnish	Shift-4
French	Option-$
French - numerical	Option -Shift-R
German	Option-E
Italian	Option-I
Italian - Pro	Option-E
Portuguese	Option-3
Spanish	Option-U
Spanish - ISO	Option-E
Swiss French	Option-E
Swiss German	Option-E
U.S.	Option-Shift-2

Published Date: Feb 19, 2012

DVD Studio Pro 1.5: Frequently Asked Questions

This document contains frequently asked questions (FAQ) regarding DVD Studio Pro 1.5, with answers to those questions.
This article has been archived and is no longer updated by Apple.

Questions answered in this document

1. What is DVD Studio Pro?
2. Who will want to use DVD Studio Pro?
3. Can I run the DVDs that I make with DVD Studio Pro on the DVD player connected to my TV? What about on my computer's DVD player?
4. Why is DVD Studio Pro the best tool for creative professionals to use for authoring DVDs?
5. How does DVD Studio Pro differ from iDVD?
6. How does DVD Studio Pro make DVD authoring easy for creative professionals?
7. What is the MPEG Encoder and why does it help make DVD Studio Pro easy to use?
8. Can I make both still and motion menus using DVD Studio Pro?
9. Can I add web links to DVDs authored in DVD Studio Pro?
10. DVD audio is encoded in Dolby, but QuickTime is the standard audio format for digital video edited on a computer. Which format works in DVD Studio Pro?
11. Can DVD Studio Pro translate my Final Cut Pro markers into DVD chapter markers?
12. To what formats can I output a project authored in DVD Studio Pro?
13. Which DVD recorders does DVD Studio Pro support?
14. Is there any difference between discs written with the Apple DVD-R drive and those written with the Pioneer DVD-R recorder?
15. I don't have a DVD recorder. How can I burn DVD discs using the content I've authored in DVD Studio Pro?
16. Isn't MPEG encoding slow? What does DVD Studio Pro do to increase encoding speeds?
17. When it comes to working with digital video (DV), what are some of the advantages that Macintosh systems have over Windows-based PC systems?
18. What are 4:3 and 16:9 aspect ratios?
19. What is anamorphic media?
20. When will DVD Studio Pro 1.5 be available?
21. What operating systems support DVD Studio Pro?
22. What software comes with DVD Studio Pro?

Question 1: What is DVD Studio Pro?

Answer: DVD Studio Pro is a new software application from Apple that makes it easy for nonspecialists to author and encode professional-quality DVD-Video discs on their Macintosh desktop. Tight integration with the Apple DVD-R drive on select Power Mac G4 systems makes it easy to record DVDs as well.

Source material can be either QuickTime movies or MPEG streams. DVD projects authored with DVD Studio Pro can include every feature that the DVD-Video standard allows, including up to 99 video tracks, Dolby Digital AC-3 audio, web links, and slide shows.

If you are shooting and editing digital video, you can now retain digital quality and precision from start to finish. With DVD Studio Pro, what was once a very expensive and technical undertaking is now more affordable and much easier than ever before.

Question 2: Who will want to use DVD Studio Pro?

Answer: DVD Studio Pro is designed for creative professionals who work with video and who recognize the quality and durability of DVDs. They include:

- Video production companies
- Video departments in corporations, schools, and advertising agencies
- Independent filmmakers
- Multimedia producers
- Wedding and event photographers
- Training departments in corporations and government organizations
- Sales departments in corporations
- Advanced users of iDVD software who are looking to enhance their DVDs with features that are not available in iDVD

Question 3: Can I run the DVDs that I make with DVD Studio Pro on the DVD player connected to my TV? What about on my computer's DVD player?

Answer: DVDs authored with DVD Studio Pro are fully compatible with the DVD-Video standard. Your DVDs will run on most TV- and computer-based players that are compliant with the DVD-Video standard.

Question 4: Why is DVD Studio Pro the best tool for creative professionals to use for authoring DVDs?

Answer: DVD Studio Pro is in a class by itself because it is the only full-featured, professional DVD authoring tool that is both affordable and easy to use.

- Full featured. DVD projects authored with DVD Studio Pro can include every feature that the DVD-Video standard allows, including motion or still menus, web links, multiple language< tracks, up to 99 video tracks each enhanced with up to 9 different angles, 8 separate audio streams, and 32 subtitle streams.
- Easy to use. DVD Studio Pro is designed to work smoothly with the tools you already use. For example, DVD Studio Pro reads native Adobe Photoshop files directly, making it easy to add great-looking menus, buttons, and overlays. You can also design animated menus using full-motion clips imported from a video editor such as Final Cut Pro. Features such as intelligent pop-up menus help you make the right choices.
- Affordable. At under 1000 USD, DVD Studio Pro can pay for itself in just one project, making DVD authoring affordable to the many professionals who are shooting and editing digital video.

Question 5: How does DVD Studio Pro differ from iDVD?

Answer: DVD Studio Pro gives you access to the entire range of features outlined in the DVD-Video specification. iDVD, on the other hand, gives you just the basic capabilities needed to put video and still images on a DVD. For example, iDVD offers simple, preset menu navigation templates, whereas DVD Studio Pro gives you complete control over the navigation structure. If you want your project to include advanced features such as motion menus, chapter markers, scripting, multiple languages, subtitles, and Dolby Digital audio, you'll want to choose DVD Studio Pro.

Question 6: How does DVD Studio Pro make DVD authoring easy for creative professionals?

Answer: DVD Studio Pro takes what was once a highly technical process and puts it in a context that makes sense for creative professionals. DVD Studio Pro fits nicely into nearly any digital video production environment, such as Final Cut Pro, so you don't need to learn a new editing system in order to author your projects on DVD.

The easy-to-use Apple interface displays all aspects of the project at a glance, and DVD Studio Pro is packed with helpful tools. For example, the Property Inspector helps you make the right choices as you work. Pop-up menus simplify the settings selection process, keeping track of all the details of the DVD-Video standard. Even if you're a beginner, these features can help you be confident that you're making the appropriate choices.

Real-time previews let you see your progress as you work. Competitive DVD authoring tools make you wait for multiplexing or require you to create a disc image. By contrast, the simple preview command in DVD Studio Pro offers instant playback. The complete tutorial and sample files help you work productively right away.

Question 7: What is the MPEG Encoder and why does it help make DVD Studio Pro easy to use?

Answer: DVD Studio Pro comes with an MPEG encoding software plug-in that works within QuickTime-compliant video editing software products such as Final Cut Pro. With a few simple settings you can create high-quality MPEG video files to use in DVD Studio Pro. Purchasing a separate encoder isn't required (although you may want to consider a third-party hardware encoder if you frequently encode large amounts of video material).

Question 8: Can I make both still and motion menus using DVD Studio Pro?

Answer: Yes. Motion menus are video clips designated to function as menus. The clips can be created in a video editor such as Final Cut Pro, then imported into DVD Studio Pro. Still menus are created using images produced in applications such as Photoshop. When working with Photoshop graphics, you can choose which layers are visible at any time without having to flatten or convert the Photoshop files.

Question 9: Can I add web links to DVDs authored in DVD Studio Pro?

Answer: DVDs have a unique advantage over videotape because they can include web links. In DVD Studio Pro, this feature is made possible by Apple DVD@CCESS technology. Web connections let your viewers access late-breaking information that's relevant to the content of your project. They also let businesses create promotional DVDs that link their audience directly to their web store. With web links, salespeople can enhance their presentations by jumping to up-to-date, web-based inventory and pricing details.

Question 10: DVD audio is encoded in Dolby, but QuickTime is the standard audio format for digital video edited on a computer. Which format works in DVD Studio Pro?

Answer: You can use your multichannel QuickTime audio files as the source for encoding into Dolby AC-3 format. Or you can use uncompressed AIFF or QuickTime sound files for stereo audio

Question 11: Can DVD Studio Pro translate my Final Cut Pro markers into DVD chapter markers?

Answer: Yes. Markers placed in Final Cut Pro 3.0.2 can be recognized as either chapter or compression markers when imported into DVD

Studio Pro. This streamlined process makes it easier and faster to place chapter markers at precisely the frame you want.

Question 12: To what formats can I output a project authored in DVD Studio Pro?

Answer: After you complete authoring and testing your project in DVD Studio Pro, the software allows you to output your work in the format that best fits your audience and budget. You can:

- Output your project in DVD-R format and record it using the DVD-R drive on your new Power Mac G4, or deliver it to a DVD service bureau for recording.
- Transfer your project to digital tape and deliver it to a replicator for mass duplication.
- Select DVD-RAM format to record your project using a computer DVD-RAM drive. This is an inexpensive way to test your project before committing it to other media.

Question 13: Which DVD recorders does DVD Studio Pro support?

Answer: DVD Studio Pro supports the Apple SuperDrive available on select Power Mac G4 and iMac systems, as well as a number of external third-party DVD-R drives. Check the DVD Studio Pro website at for the latest information.

Question 14: Is there any difference between discs written with the Apple DVD-R drive and those written with the Pioneer DVD-R recorder?

Answer: Yes. The Pioneer DVR-S201 recorder writes DVD-R Authoring media. These discs can be used as masters for replicating multiple DVD discs. The Apple DVD-R drive writes DVD General media, which are not intended for use as replication masters. If you are creating a project for replication, output your DVD Studio Pro project to digital tape or use a DVD-R Authoring disc as a master.

Question 15: I don't have a DVD recorder. How can I burn DVD discs using the content I've authored in DVD Studio Pro?

Answer: If your Macintosh does not have a DVD-R drive, you can still use DVD Studio Pro to author and test your projects. You can hire a DVD service bureau to create the discs for you. Just output your content onto digital tape or deliver your work on a portable hard drive. You can also output your work onto a DVD-RAM disc, then play it on a computer with a DVD-RAM drive.

Question 16: Isn't MPEG encoding slow? What does DVD Studio Pro do to increase encoding speeds?

Answer: Software-based MPEG encoding has traditionally been a very slow process, taking between 30 and 50 times the length of the source video material. DVD Studio Pro speeds up the process substantially. Included with DVD Studio Pro is Apple's MPEG Encoder plug-in, which is optimized for PowerPC G4 processors with Velocity Engine. This plug-in produces high-quality MPEG files but takes only about 3 times the length of the source video material. If you need higher throughput, hardware-accelerated MPEG encoders that work in real time are available separately.

Question 17: When it comes to working with digital video (DV), what are some of the advantages that Macintosh systems have over Windows-based PC systems?

Answer: Because Apple makes the components of a complete DV system, including the FireWire input technology, the video editing applications, the MPEG Encoder, the DVD authoring tools, and the DVD-R drive, you can be assured that everything works together smoothly. Windows-based PC systems do not offer the plug-and-play ease of Apple's solution. The formats of choice for PC users, Microsoft's AVI and DirectShow, are not able to meet the demands of professional editing.

In addition, all current DV editing applications for the PC require additional hardware. Competitive DV applications also require awkward export rendering and often don't address proper machine control and other issues. During the coming years, these issues may be resolved as other vendors follow Apple's lead. For now, however, Apple is the only company to offer a complete, integrated solution for digital video production.

Question 18: What are 4:3 and 16:9 aspect ratios?

Answer: Standard NTSC and PAL televisions have a picture aspect ratio of 4:3, and many new DV devices support a picture aspect ratio of 16:9. DVD Studio Pro supports the acquisition, creation, and distribution of 16:9 and anamorphic media. On DV devices that have a 16:9 setting, DVD Studio Pro captures and exports the proper 16:9 image.

Question 19: What is anamorphic media?

Answer: Some widescreen video material is shot using a special anamorphic lens that squeezes the wide image horizontally so it can be captured on the standard 4:3 aspect ratio of video. When this material is played back, it needs to be expanded horizontally to match the original shape. DVD Studio Pro can work with this anamorphic material and instructs DVD players to restore the shape on playback.

Question 20: When will DVD Studio Pro 1.5 be available?

Answer: An international English version of DVD Studio Pro will be available worldwide in 2002-04. Please visit the online Apple Store for more information about availability.

Question 21: What are the system requirements for DVD Studio Pro 1.5?

Answer: See technical document 61590: "**DVD Studio Pro 1.5: System Requirements**".

Question 22: What software comes with DVD Studio Pro?

Answer: The DVD Studio Pro package includes a complete package of tools:

- DVD Studio Pro software for authoring and testing DVDs
- QuickTime MPEG Encoder software

Published Date: Oct 7, 2016

DVD Studio Pro 1.5: System Requirements

This document outlines the system requirements for DVD Studio Pro 1.5.
This article has been archived and is no longer updated by Apple.
DVD Studio Pro 1.5 requires the following configuration:

Hardware

- Power Mac G4 computer with Apple-supplied AGP graphics card and DVD drive (configuration must support Apple DVD Player 2.0 or later)
- display with 1024-by-768-pixel resolution or higher (1280-by-1024-pixel resolution recommended)
- 256 MB of RAM (512 MB recommended)
- 12 GB hard disk for project files (20 GB for DVD-5 projects)

Software

- DVD Player 2.7 or later (installed as part of the Mac OS 9 Update to 9.2.2, included on the DVD Studio Pro disc, or with Mac OS X)
- Mac OS 9.2.2 or later (included on the DVD Studio Pro disc)
- Mac OS X 10.1.3 or later
- QuickTime 5.0.5 (included on the DVD Studio Pro disc)

Other

- Video and audio source material in QuickTime or MPEG format (for Dolby encoding, sound files in QuickTime, AIFF, Sound Designer or WAVE formats)
- Graphics editing application for creating menu graphics and overlays (Adobe Photoshop 4.0 or later recommended)
- Final Cut Pro 3.0.2 (required only if you want to access the chapter and compression marker creation feature)

Published Date: Feb 19, 2012

iMac (Flat Panel): Mac OS 9 DVD Player Is Not Installed

The Apple DVD Player for Mac OS 9 may not be preinstalled.

This article has been archived and is no longer updated by Apple.

Symptom

The Apple DVD Player for Mac OS 9 may not be preinstalled.

Solution

Install Apple DVD Player software in order to view movies on DVD-Video discs when the computer is started up in Mac OS 9. You can download Apple DVD Player from Apple Software Downloads (http://www.apple.com/swupdates/) or perform a custom installation of the Apple DVD Player using the Mac OS 9 CD-ROM disc that came with your computer.

For more information on performing a custom installation, see technical document 31288: "Mac OS 9: Installing or Removing Individual Components."

Published Date: Oct 7, 2016

About 1-Click

This document explains 1-Click, which is used with iPhoto and the Apple Store.

This article has been archived and is no longer updated by Apple.

What is 1-Click?

1-Click is a convenient shopping feature that allows you to purchase anything on the Apple Store with single click of your mouse! Activating 1-Click for this computer causes a new button, "Buy with 1-Click", to appear on most product pages. You simply select the products you desire and click the "Buy with 1-Click" button. That's all it takes! Apple will process your order according to the instructions you supply when you turn on 1-Click. 1-Click must be turned on for each computer you desire to use this feature. By activating 1-Click, you indicate that you have read and agree with Apple's Sales and Refunds Policy.

What are 1-Click Settings, and how do I turn 1-Click on and off?

1-Click settings let you set your shopping preferences, allowing you to shop faster and easier at the Apple Store. These preferences include your preferred shipping and payment method. To turn your 1-Click preferences on and off, simply follow the instructions provided in the "Your Account" section of the store.

How do I review or edit my 1-Click settings?

If you wish to edit or change your 1-Click settings you can access your profile in two easy ways.

1. Click on the "Change Your Profile" link in the upper right corner of the Apple Store Home Page, then click on the Change 1-Click Settings section to access the settings for your account.
2. You can also review your settings by accessing the Your Account Section on the main navigation bar At the bottom of your profile, you can turn the 1-Click Settings on and off by selecting the appropriate button in the lower right hand corner of the web page.

How long do I have to change my 1-Click Order?

Items ordered by 1-Click (except for Electronic Software Downloads) will be processed at the end of a 90 minute waiting period. During this period, you will be able to modify and delete your pending 1-Click order.

How Can I review my 1-Click Order?

For each 1-Click order, a thank you page confirming your web order number will be made available to you. On this same page, you can access your 1-Click order by using the "Edit 1-Click Order" button which will take you directly to your pending 1-Click order. In addition, a separate confirmation email is sent to your email address that is registered under your Apple Store Account. You can edit and change your 1-Click order within the 90 minute waiting period.

Published Date: Feb 20, 2012

iPhoto ‘11: Change what happens when you connect a camera to your computer

This article has been archived and is no longer updated by Apple.

When you open iPhoto for the first time, you’re asked if you want iPhoto, or a different application, to open each time you connect a camera to your computer. You can change this preference any time.

To choose the application that opens:

1. Make sure no cameras are connected to your computer.
2. Choose iPhoto > Preferences, and then click General.
3. Choose an option from the “Connecting camera opens” pop-up menu.

   iPhoto is an option. Another option is Image Capture, an application included with OS X that you can use to transfer photos and video from your digital camera to your computer. Image Capture is useful if:

   - You want to transfer photos from your camera to your computer, but you don’t want to import them into the iPhoto or Aperture library.
   - You automate part of your photo-editing workflow with scripts that download and preprocess photos before you import them into iPhoto or Aperture.

Published Date: Jun 1, 2018

Helpful?

Yes No

iPod: iTunes does not download streaming songs

Learn how to recognize which songs in your iTunes playlists are streaming radio stations, and that cannot, therefore, be downloaded to iPod.
This article has been archived and is no longer updated by Apple.
You can add streaming radio stations to your iTunes music library. These icons are pointers that allow you to quickly tune into a favorite streaming station. Since they reference a radio station, and not a specific song, they cannot be transferred to iPod.

Globe icon for streaming songs

Later versions of iTunes use a broadcast icon for streaming songs

Related documents
93861: Songs are not copied to iPod
150284: Adding songs from the Internet to your library
Published Date: Oct 7, 2016

Macintosh: FireWire Issue With Some Canon Mini-DV Cameras

This document describes a FireWire issue that can occur when connecting Canon ZR-40, ZR-45, and ZR-50 Mini DV camcorders. For more information about this issue, please contact Canon, Inc.

This article has been archived and is no longer updated by Apple.

Symptom

When other FireWire devices are connected at the same time as the Canon camera, one or more of the following symptoms can occur:

- Devices unexpectedly disappear from the FireWire bus. For example, FireWire hard drives disappear from the desktop.
- An alert box appears with this message: "The storage device that you just removed was not properly put away before being removed from this computer."
- Video editing software such as Final Cut Pro and iMovie report dropped frames during capture.
- The computer stops responding.

Solution

Try one of the following workarounds:

- Disconnect FireWire devices other than the camera. This step should always alleviate the issue.
- Try a different length or brand of FireWire cable.
- Rearrange the order of devices in the chain.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

iPhoto: How to print on perforated or borderless paper

This article has been archived and is no longer updated by Apple.

To print photos on borderless or perforated paper, follow these steps:

1. Choose **File > Page Setup**.
2. Make sure the correct printer is chosen in the **Format for:** pop-up menu.
3. Select 4x6 as the paper size, and click OK.
4. Select the photos you want to print.
5. Click Edit.
6. Constrain your selection to 4x6. Choose the 4x6 ratio from the Constrain pop-up menu before dragging to enclose the desired area.
7. Position the arrow pointer at one corner of the area you want to select, then drag to enclose the desired area.
8. Click the Crop icon in the Edit pane.
9. Choose **File > Print**.
10. In the print dialog window, choose Full Page from the **Style:** pop-up menu.
11. Click Print.

Note: Some Epson models may require these additional steps before step 11:

1. Click Advanced Options in the print dialog.
2. Select Print Settings in Advanced Options of the Print dialog.
3. Select Ink Jet Postcard from Media Type menu. (Plain Paper is selected as default in Media Type menu.)

If you are using iPhoto 6 or later, you may also be able to use the following steps, which do not require you to pre-crop the photo:

1. Choose **File > Print**.
2. Choose your printer from the **Printer** pop-up menu
3. Choose Standard from the **Presets** pop-up menu
4. From the **Paper** pop-up menu, choose the paper size you currently have in the printer (such as 4x6 Photo Paper).
5. Choose Standard Prints from the Style pop-up menu.
6. Choose the print size which closely matches the paper size you are using from the **Size** pop-up menu (such as 4x6).
7. Choose one photo per page.
8. Select zoom and crop.
9. Select Borderless.
10. Click Print.

Published Date: Oct 7, 2016

iPod: Do Not Connect or Disconnect While Burning a CD Using an External FireWire Burner

An external FireWire CD-RW drive may not successfully create a CD if you connect or disconnect iPod while the CD is being burned.
This article has been archived and is no longer updated by Apple.

Symptom

An external FireWire CD-RW drive may not successfully create a CD if you connect or disconnect iPod while the CD is being burned.

Solution

Wait until the CD has been created before connecting or disconnecting iPod (if using an external FireWire-based CD-RW drive).
Published Date: Oct 7, 2016

DVD Player 3.0: "This machine configuration is not supported. The application will now quit." Alert

Mac OS X 10.1.5 requires DVD Player 3.1 or later.
This article has been archived and is no longer updated by Apple.

Symptom

When you open DVD Player an alert box with this message appears:

> "This machine configuration is not supported. The application will now quit."

Solution

Download and install DVD Player 3.1.1 or later from Apple Software Downloads (http://www.apple.com/swupdates/).
Published Date: Oct 7, 2016

DVD Studio Pro: Does Not Properly Encode Macrovision

Learn how to prevent DVD Studio Pro from incorrectly setting Macrovision encoding flags.

This article has been archived and is no longer updated by Apple.

This happens when using:

- DVD Studio Pro 1.0 through 1.5

Download and install DVD Studio Pro 1.5.1 or 1.2.1 software update, whichever is appropriate for your version of DVD Studio Pro. These updates are available from Apple Software Downloads (http://www.apple.com/swupdates/).

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Published Date: Oct 7, 2016

Final Cut Pro: How to Use Analog/FireWire Converter Devices

This document explains how to use devices that convert analog video to or from DV over FireWire (IEEE 1394) with Final Cut Pro.

This article has been archived and is no longer updated by Apple.

You can convert analog video formats such as Betacam SP, 8 mm, Hi8, VHS, or SVHS to digital video (DV) using a special converter device such as the Sony DVMC DA-2, Hollywood Dazzle DV Bridge, and the Synchrotech Formac Studio. These devices are a convenient way to interoperate with Final Cut Pro when the video deck you are working with does not input or output video via FireWire.

To ensure compatibility with third-party video devices please consult the Final Cut Pro certified devices page (http://www.apple.com/finalcutpro/qualification.html), the Apple Store (http://www.apple.com/store/), and/or vendor Web sites for compatibility information.

Note: These procedures describe connecting an analog/FireWire converter box while not using any sort of device control, which is the most common configuration. For instructions on using device control, see the documentation that came with the converter box and the Final Cut Pro user's documentation.

How to Capture Analog Video From a Converter Box Into Final Cut Pro

Follow these steps to capture video from an analog/FireWire converter box:

1. The computer and the converter box should both be turned on. However, Final Cut Pro should not be opened yet and the converter box should not be connected to the computer using the FireWire cable. While this step is not always necessary, it will help ensure proper initialization between the software and hardware.
2. Connect the video cable from the video output of the VCR or camera to the analog video input of the converter box. A video camera should be in playback or VTR mode. Connect the audio source in the same way.
3. The converter box will typically have a switch or button that tells the device which direction to convert the video, analog to DV or DV to analog. For capturing analog video, you will want to press the button labeled "Analog In" or something similar.
4. Connect a 4-to-6 pin FireWire cable from the DV out port on the converter box (sometimes labeled FireWire, IEEE 1394, or iLink with Sony devices) to a FireWire port on the computer.
5. Open Final Cut Pro.
6. Select Log and Capture from the File menu or press Command-8 on the keyboard. You may see an alert box with a message stating that the video deck could not be initialized. This just indicates that the converter box does not work with device control.
7. Click the Capture Settings tab on the right side of the Log and Capture window.
8. Choose Non-Controllable Device from the Device Control pop-up menu. If you plan on capturing from a converter box often, you may want to make this setting the default from the Final Cut Pro menu (File menu in Mac OS 9) -> Audio/Video Settings -> Summary Tab -> Device Control Preset pop-up menu.
9. Some converter boxes have a status light that is normally green. If this light is amber or red at this point, there may be a communication issue. Try turning the device off for several seconds and then back on again. You may also need to reopen Final Cut Pro.
10. Press play on the VCR. You should see the video signal in the Log & Capture window. If you have speakers or headphones connected to the VCR or camera then you can monitor the audio.
11. Cue the video tape to the desired spot and click Capture Now in the bottom right portion of the Log and Capture window. By default Capture Now is limited to 30 minutes of captured video. To change this setting, select Final Cut Pro menu (or File menu in Mac OS 9) -> Preferences -> Scratch Disks.

How to Send Video From Final Cut Pro to the Converter Box

Follow these steps to output video from Final Cut Pro to an analog video deck using an analog/FireWire converter box:

1. The computer and the converter box should both be turned on. However, Final Cut Pro should not be opened yet and the converter box should not be connected to the computer using the FireWire cable. While this step is not always necessary, it will help ensure proper initialization between the software and hardware.
2. Connect the video cable from the analog video output of the converter box to the video input of the VCR or camera. Connect the audio source in the same way.
3. The converter box will typically have a switch or button that tells the device which direction to convert the video, analog to DV or DV to analog. For exporting analog video from Final Cut Pro, you will want to press the button labeled "DV In" or something similar.
4. Connect a 4-to-6 pin FireWire cable from the DV in port on the converter box (sometimes labeled FireWire, IEEE 1394 or iLink with Sony devices) to a FireWire port on the computer.
5. Open Final Cut Pro.
6. Select Audio/Video Settings from the Final Cut Pro menu (or File menu in Mac OS 9).
7. In Final Cut Pro 3 click the External Video tab. In Final Cut Pro 4 click the A/V Devices tab.
8. Choose the appropriate output setting for the device you are recording to in the View During Playback Using and View During Recording Using pop-up menus. For example, in North America and Japan this would typically be "Apple FireWire NTSC (720x480)".

9. Make sure that the View->External Video menu is set to All Frames.
10. Select Print to Video from the File menu or press Control-M on the keyboard.
11. In the Print to Video window, configure settings such as leader, trailer, and color bars and then click OK.
12. Wait for Final Cut Pro to render any necessary audio or video (a progress dialog will appear if needed).
13. Press record on the VCR and click OK.
14. When finished, press stop on the VCR and Esc on the computer keyboard.

Document 17159: "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number:

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

iMovie: Use 16-bit audio for best results

Creating iMovie projects with DV footage that uses 12-bit audio may cause a gradual loss of audio/video synchronization when the project is exported to QuickTime or iDVD.
This article has been archived and is no longer updated by Apple.

For best results when creating long movies (over 20 minutes), record footage using 16-bit audio. Recording with 12-bit audio may result in a gradual loss of audio-video synchronization. Check the manual that came with your DV camcorder to find out how to set the audio format.

If you have already created a project with 12-bit audio, you may be able to export the project to QuickTime as follows:

1. Import your 12-bit video footage into a new iMovie project.
2. Insert a fresh tape into your camera, and set the camera to 16-bit audio.
3. Export the iMovie project that contains the 12-bit audio footage to your DV camcorder set to 16-bit audio.
4. Create another new iMovie project.
5. Import the fresh footage from your new tape into this new iMovie Project.
6. Export this project to QuickTime if needed or simply edit the project.

This includes versions of iMovie for Mac OS X and Mac OS 9.

Related document

42974: "iMovie: Improving audio and video synchronization"

Published Date: Oct 7, 2016

iPod: Playing Music Files That Contain Data and Resource Forks

When playing a music file that contains a resource fork, iPod may play a small section from a random song after first song ends.
This article has been archived and is no longer updated by Apple.

Symptom

When playing a music file that contains a resource fork, iPod plays a small section of a random song after the first song ends.

Solution

To work around this behavior, you can either re-encode your music files using iTunes, or you can try the following steps for each affected file:

1. Select the file in the Finder.
2. Choose Show Info (Mac OS X) or Get Info (Mac OS 9) from the File Menu.
3. Click the icon for the file in the Info window.
4. Press Delete on the keyboard, or type Command-X to cut the icon.

Additional information

Music data in files, including MP3 files, contain all the audio data within a part of the file called the "data fork." Some earlier MP3 encoder applications embedded custom icon data into MP3 files, to identify them with the application. In some cases, this causes iPod to continue reading past the end of the actual music data. You might hear a portion of another song, which is the data that happens to be adjacent on iPod's hard drive to the data from the first song.
Published Date: Feb 20, 2012

iBook (16 VRAM): Battery Level Shows More Than 100 Percent

Under certain conditions, iBook (16 VRAM) and iBook (Opaque 16 VRAM) computers may indicate battery charge levels as being more than 100 percent, sometimes up to 106 percent, for a short period of time.

This article has been archived and is no longer updated by Apple.

Symptom

The battery level indicator in the menu bar shows a percentage greater than 100 percent.

Solution

This does not mean that the battery is faulty. Numbers reported as greater than 100 percent are equivalent to a 100 percent charge.

Published Date: Oct 7, 2016

Final Cut Pro 3: When to Install the 3.0.1 Update

This document describes when and how to install the Final Cut Pro 3.0.1 update.

This article has been archived and is no longer updated by Apple.

Symptom

The Final Cut Pro application unexpectedly quits after installing the 3.0.2 update.

OR

Alert boxes with erroneous "missing system ID" messages appear after installing the Final Cut Pro 3.0.2 update.

Solution

Download and install the Final Cut Pro 3.0.1 Updater. It is available from Apple Software Downloads (http://www.apple.com/swupdates/).

If you have already installed the 3.0.2 update, drag these files to the Trash:

- /Applications/Final Cut Pro
- /Library/Application Support/Final Cut Pro System Support/

How to Install the 3.0.1 Update

1. Install the 3.0.1 update
2. Open and run the Final Cut Pro 3 full installer
3. Install the the 3.0.4 update

Note: The 3.0.4 update supersedes the 3.0.2 update.

Frequently Asked Questions

Q: I have already installed the 3.0.4 update. Do I still need to install 3.0.1?

A: If you have successfully installed the 3.0.4 update, you do not need to install the 3.0.1 updater. However, if you cannot complete the full installation or the 3.0.4 update, follow the instructions in How to Install the 3.0.1 Update.

Q: Why doesn't the 3.0.4 updater include the fixes in 3.0.1?

A: It does. However the 3.0.4 updater is not a full installer so some customers still need to run the Final Cut Pro 3.0 installer from the CD before running the updater. Installing the 3.0.1 update before running the 3.0 installer ensures that the installer will not quit unexpectedly.

Q: Why do I run the 3.0.1 updater before installing 3.0?

A: The 3.0.1 updater doesn't actually install or change the Final Cut Pro application. Instead, it installs and correctly prepares some of the support files so that the full installation can complete normally.

Q: My Final Cut Pro 3 CD has version 3.0.2 on it, not 3.0. Do I need to install the 3.0.1 updater?

A: No. The 3.0.2 full installer is not susceptible to the issue.

Published Date: Oct 7, 2016

Xserve: Initial Password Is Case Sensitive

When you first set up Xserve you must enter a password in the password field, which is case sensitive. The initial password is the first 8 digits of the hardware serial number.
This article has been archived and is no longer updated by Apple.
For the initial setup of an Xserve using Server Assistant or remote SSH login, the documentation instructs the administrator to use the first 8 characters of the hardware serial number as the password.

The password is case sensitive. If the server's serial number is "ABC123H2" and "abc123h2" is entered, an alert appears with a message that the password is invalid.
Published Date: Oct 7, 2016

Mac OS X 10.1: About Improving SMB File Transfer Speed with cp or CpMac

This document explains how you can enhance the file transfer rate when copying files between Mac OS X and a SMB file server volume, using Terminal and cp or CpMac (CpMac is included with Developer Tools). This document is needed only for Mac OS X versions 10.1 to 10.1.5. This article has been archived and is no longer updated by Apple.
Mac OS X permits normal file transfers with SMB server volumes via the Finder. For information about accessing an SMB server, see technical document 106471: "**How to Connect to an SMB Volume (Microsoft Windows)**".

When transferring very large files, you may wish to enhance file transfer rates by using cp or CpMac, which is included with Developer Tools. You must install the complete Developer Tools package to use CpMac.

CpMac is required before using Terminal to copy any application or file with a resource fork.

Follow these steps to install CpMac. (You only need to do this one time.)

1. Insert the Mac OS X Developers Tools CD. **Note:** If you do not have access to a Developer Tools CD, a CD image is available from the Apple Developer Connection (http://www.apple.com/developer/).
2. Double-click "Developer.pkg"
3. When the Installer window appears, click the padlock button and enter your Admin password.
4. Install Developer Tools. **Note:** 513 MB of disk space is required for installation

Copying file(s) using Terminal

if you are copying files that do not have resource forks, such as plain text files, you should use cp. If you are copying files that have resource forks, or if you are not sure, you should use CpMac. Instructions for both commands follow.

Copy files using cp

1. Open Terminal.
2. Type: `cp <source file location> <target location>/<name of file>`
3. Press Return.

Example: You would use this single Terminal command to copy a file named "List.txt" from the Home directory of a user name "Jane" to a folder named "Janes" on an SMB volume named "SMB_stuff":

```
% cp [space] /Users/Jane/List.txt [space] smb://SMB_stuff/Janes/List.txt
```

Copy files using CpMac

1. Open Terminal.
2. Type: `/Developer/Tools/CpMac <source file location> <target location>/<name of file>`
3. Press Return.

Example: You would use this single Terminal command to copy a file named "List.txt" from the Home directory of a user name "Jane" to a folder named "Janes" on an SMB volume named "SMB_stuff":

```
% /Developer/Tools/CpMac [space] /Users/Jane/List.txt [space] smb://SMB_stuff/Janes/List.txt
```

Note: This article contains information about Apple Developer Tools software. AppleCare does not provide usage support for Apple Developer Tools software. Paid support for Apple Developer Tools software is available at http://developer.apple.com.
Published Date: Oct 7, 2016

Mac OS X 10.1: Video on VGA Monitor Connected to a PowerBook G4 Is Garbled

If you connect a VGA monitor to your PowerBook G4 computer and do not click "Detect Displays" in the Displays pane of System Preference Pane (or choose the same command from the menu bar extra) the video on the monitor may be garbled.
This article has been archived and is no longer updated by Apple.

Symptom

When you connect a VGA monitor to your PowerBook G4 computer and do not click "Detect Displays" in the Displays pane of System Preference Pane (or choose the same command from the Displays menu bar extra) the video on the monitor may be garbled.

Solution

Download and install Mac OS X 10.1.4 or later. It is available from the Software Update pane of System Preferences, or from Apple Software Downloads (http://www.apple.com/swupdates/).

Temporarily, you may resolve the issue by using one of these methods:

- Click Detect Displays in the Displays pane of System Preferences
- Choose Detect Display from the Displays menu bar extra
- Choose Sleep from the Apple menu, then press a key to wake the computer
- Choose Restart from the Apple menu.

Published Date: Feb 19, 2012

QuickTime: MPEG-2 Playback Component Download and Installation Instructions

This article has been archived and is no longer updated by Apple.

This document outlines steps you can take to troubleshoot the installation of the MPEG-2 Playback Component once you have purchased it from the Apple Store.

Download instructions

1. Make sure QuickTime or QuickTime Pro is already installed on your computer.
2. Purchase the MPEG-2 Playback Component from the Apple Store (http://www.apple.com/store/).
3. Click Download to begin downloading the software.

Troubleshooting downloads

Some Web browsers may not recognize the file type of the MPEG-2 Playback Component. If this is the case, after you click Download, a dialog box appears with a message that asks you what you would like to do with the file. You should choose to download it, or open it with QuickTime Updater if that option appears. Once downloaded, you can double-click the file to install it.

The Apple Store keeps track of your purchase(s) and you can always download the file again if something goes wrong by clicking "Your Account" in the store menu bar. After entering your Apple ID and password, click "Software Download Purchases."

Installation instructions

Once the software is downloaded it should automatically install via the QuickTime Updater if you have Windows. If not, see the troubleshooting section below.

If you have Mac OS X, follow these steps:

1. Locate the QuickTimeMPEG2.pkg file. It is probably on your desktop, or in the default "downloads" folder you designated in your Web browser.
2. Double-click the file to begin installation.

Troubleshooting installation

If the MPEG-2 Playback Component does not automatically install in Windows, follow these steps:

1. Locate the QuickTimeMPEG2.qup file. It is probably on your desktop, or in the default "downloads" folder you designated in your Web browser.
2. Double-click the file to begin installation.

Published Date: Feb 19, 2012

QuickTime 6: Instant On Streaming Does Not Work

This document explains why the Instant On streaming feature of QuickTime 6 may not work.

This article has been archived and is no longer updated by Apple.

Symptom

The Instant On streaming feature does not work.

Solution

1. Open the QuickTime Settings control panel (Mac OS 9, Windows) or the QuickTime pane of System Preferences (Mac OS X).
2. Make sure the Instant On setting is enabled.
3. Make sure the Connection Speed setting is set to "112 Kbps Dual ISDN/DSL" or faster. Instant On streaming doesn't work with slower connections.

Other reasons why Instant On streaming may not work:

- The stream is being sent from a version of QuickTime Streaming Server (or Darwin Streaming Server) earlier than version 4.1.
- The stream comes from a QuickTime Streaming Server (or Darwin Streaming Server) with version 4.1, but the administrator has disabled the Instant On streaming feature.
- Your Internet connection is 56 kbps or slower.
- When you open a streaming movie, QuickTime determines your connection speed is too slow to work with Instant On.

Published Date: Feb 19, 2012

QuickTime 6: Instant On Works With Some Movies, but Not Others

Some movies may not begin playing as quickly as expected using Instant On streaming if they were encoded with the QDesign audio codec.

This article has been archived and is no longer updated by Apple.

Symptom

Instant On streaming works with some movies, but other movies only begin to play after a few seconds.

Solution

Some movies may not begin playing as quickly as expected during Instant On streaming if they use the QDesign audio codec. This is due to a built-in buffer delay that is a feature of the codec.

Published Date: Feb 19, 2012

QuickTime 6: Installation Fails If "QuickTime Extensions" Folder Is Missing

Create a new folder called "QuickTime Extensions" in the Mac OS 8 or Mac OS 9 Extensions folder if QuickTime 6 will not install.

This article has been archived and is no longer updated by Apple.

Symptom

QuickTime 6 won't install. An alert message will appear, "This installation requires a System Folder on the destination drive".

Solution

1. Open the System Folder.
2. Open the Extensions Folder
3. Choose New Folder from the File menu.
4. Type: QuickTime Extensions
5. Press Return. The new folder should be titled QuickTime Extensions.
6. Install QuickTime 6.

Published Date: Feb 19, 2012

QuickTime 6: System Requirements

This document outlines the system requirements for QuickTime 6.

This article has been archived and is no longer updated by Apple.

Macintosh

- A PowerPC microprocessor-based Macintosh computer.
- At least 32 MB of RAM
- Mac OS 8.6 or later; or Mac OS X 10.1.3 or later

Windows

- A Pentium microprocessor-based PC or compatible computer
- At least 32 MB of RAM
- Windows 98/NT/Me/2000/XP
- A Sound Blaster or compatible sound card and speakers recommended
- DirectX version 3.0 or later recommended

Note to QuickTime Pro Users
QuickTime 6 replaces earlier versions of QuickTime. A QuickTime 6 Pro key is required to unlock Pro features of QuickTime 6. If you wish to use a QuickTime 4 or 5 Pro key, you need to use an earlier version of QuickTime, which you can download from the Apple Support Web site (http://www.info.apple.com/usen/QuickTime/).

Published Date: Feb 19, 2012

iTunes: How to Turn Off "Copy files to iTunes Music folder when adding to library" Option

This document explains how to keep iTunes 3 and iTunes 4 from copying music files to the iTunes Music folder when you add them to the library.
This article has been archived and is no longer updated by Apple.
Follow these steps to keep iTunes 3 and iTunes 4 from copying music files to the iTunes Music folder when you add them to the library:

1. Choose iTunes > Preferences.
2. Click Advanced.
3. Click "Copy files to iTunes Music folder when adding to library" to deselect that option.
4. Click OK.

Published Date: Oct 7, 2016

iTunes 3: Join CD Tracks Command Is Dimmed

iTunes 3 can join CD tracks to eliminate gaps between songs only before the song has been encoded or "ripped."
This article has been archived and is no longer updated by Apple.

Symptom

The Join CD Tracks command in the Advanced menu is dimmed.

Solution

You can only join tracks before they are encoded or "ripped". You cannot join songs after they have been encoded.

To join two or more tracks, they must be sequential. For example, you can join tracks 2 and 3 from an audio CD, but you cannot join tracks 3 then 2. Follow these steps:

1. Insert the CD with the songs you want to join.
2. Select the CD from the iTunes Source list.
Note: Make sure the list is sorted by track number.
3. Select the adjacent tracks you want to join.
4. Choose Join CD Tracks from the Advanced menu.
5. Click Import.

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Published Date: Oct 7, 2016

iTunes 3: Genre Does Not Appear in Browser Window

You must turn on the "Show genre when browsing" option to see the Genre column in the iTunes 3 browser.
This article has been archived and is no longer updated by Apple.

Symptom

When you click Browse (or choose Browse from the Edit menu), only the Artist and Album columns appear. the Genre column doesn't appear.

Solution

1. Choose Preferences from the iTunes menu.
2. Click General (if necessary).
3. Click the checkbox to select the "Show genre when browsing" option.
4. Click OK.

Published Date: Oct 7, 2016

iTunes: About Reproduction of Copyright Materials

This document outlines the conditions under which iTunes software may be used to reproduce materials.
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iTunes software may be used to reproduce materials. It is licensed to you only for reproduction of non-copyrighted materials, materials in which you own the copyright, or materials you are authorized or legally permitted to reproduce. If you are uncertain about your right to copy any material you should contact your legal advisor.
Published Date: Oct 7, 2016

iTunes 3: System Requirements

This document outlines the system requirements to use iTunes 3.
This article has been archived and is no longer updated by Apple.
To use iTunes 3, your computer must have:

- Mac OS X 10.1.4 or later
- built-in USB ports
- 400 MHz G3 processor or better recommended
- 256 MB RAM recommended

Published Date: Oct 7, 2016

iTunes 3: About Moving the iTunes Folder to Your Music Folder

When you first open iTunes 3, a dialog box appears with a message that asks you if you want to move the iTunes folder to the Music folder in your Home directory.
This article has been archived and is no longer updated by Apple.
When you first open iTunes 3, a dialog box appears with this message appears:

> "iTunes has detected an existing iTunes folder in your Documents folder. Would you like to move this folder to your Music folder? This will not affect playback of your music in iTunes."

If you click Yes, iTunes will move the iTunes folder in your Documents folder to the Music folder in your Home directory. This includes all the music that you have encoded (as long as the iTunes Music folder is in the iTunes folder). iTunes doesn't copy the folders. It simply moves them. No extra disk space is required.

If you click No, iTunes will continue to work with the iTunes folder in your Documents folder.
Published Date: Oct 7, 2016

Final Cut Pro 3: Serial Device Control With Panasonic AJ-D250

When using Final Cut Pro 3 with the Panasonic AJ-D250 deck, you may experience an issue where RS-232 device control does not work.

This article has been archived and is no longer updated by Apple.

Symptom

The deck does not respond to transport commands (play, pause, and so forth) sent from Final Cut Pro. The ETT or Log & Capture window says "No communication" instead of "VTR OK".

Solution

Turn the VTR deck off and back on again. The ETT or Log & Capture window in Final Cut Pro should now say "VTR OK".

Published Date: Feb 20, 2012

iPod 1.2: Screen Says "Do Not Disconnect" If You Restore Using iPod 1.1 Software

You can disconnect iPod from your computer to finish installing iPod 1.1 software if you decide to reinstall it after having already installed iPod 1.2 software.

This article has been archived and is no longer updated by Apple.

Symptom

iPod's screen says "Do Not Disconnect" after you restore using iPod 1.1 Software Updater, but the updater says to disconnect to finish the installation.

This only occurs if you have already installed iPod 1.2 software.

Solution

You can safely disconnect iPod to finish the installation.

Published Date: Feb 20, 2012

iPod 1.2: Check Clock Time After Updating, Restoring, or Resetting

After you have installed iPod 1.2 software or later, you should check iPod's clock for accuracy after installing a subsequent update, restoring, or resetting.
This article has been archived and is no longer updated by Apple.
When you restore, or update iPod with the iPod Software Updater 1.2 or later, or when you reset iPod, you should check the accuracy of the clock. During the update process, the clock is reset, and the time will not be accurate.

For information on how to update, restore, or reset iPod, see the following technical documents:

60944 "**iPod: How to Update**"
60983 "**iPod: How to Restore**"
61705 "**iPod: How to Reset**"
Published Date: Oct 7, 2016

iPod for Windows: Do Not Use Within a Virtual PC Environment

You should not use iPod for Windows within a Virtual PC environment.
This article has been archived and is no longer updated by Apple.
You should not use iPod within a Virtual PC environment. Virtual PC is an application that simulates a PC environment, and is available for both Windows and Macintosh. If you have a Windows PC, use iPod for Windows, but don't try to use a virtual operating system environment. If you have a Macintosh, use iPod for Macintosh with iTunes and Mac OS X, or Mac OS 9.2.

For more information, see technical document 60971: "**iPod: System Requirements**".

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Document 17159: "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.

Published Date: Oct 7, 2016

iPod 1.2: How to Change Contact Display and Sort Settings

This document explains how to change the display and sort settings for contacts in iPod Software 1.2.
This article has been archived and is no longer updated by Apple.
iPod Software 1.2 introduces the ability to change two settings for contacts:

- sort order
- display order

Sort order

The sort order affects how the list of contacts is sorted in the Contacts list. You can choose between two settings for names:

- First Last
- Last, First

Follow these steps to change the Sort order setting for iPod's contacts:

1. Select Settings from the main menu.
2. Select Contacts from the Settings menu.
3. Select Sort from the Contacts menu.
4. Press the Select button to toggle between the two settings.

Display order

The Display order setting affects how the list of contacts is viewed. You can choose between two settings for names:

- First Last
- Last, First

Follow these steps to change the Display order setting for iPod's contacts:

1. Select Settings from the main menu.
2. Select Contacts from the Settings menu.
3. Select Display from the Contacts menu.
4. Press the Select button to toggle between the two settings.

Published Date: Oct 7, 2016

iPod Software 1.2: About Sound Check

This document describes how iPod Software 1.2 works with iTunes' Sound Check feature.
This article has been archived and is no longer updated by Apple.
iTunes 3 introduced the Sound Check feature. For more information about it, see technical document 61655, "**iTunes: About Sound Check**".

Sound Check settings can be uploaded to iPod. However, the Sound Check settings can only be transferred to iPod when iTunes' Sound Check option is enabled.

iPod only uses these values if the Sound Check setting in iPod's Settings menu is set to On.

Published Date: Oct 7, 2016

Using Audible spoken word files with iPod

This article has been archived and is no longer updated by Apple.

Learn how iPod software works with Audible spoken word files.

iPod 1.2 software and later can play Audible spoken word files, which are easily recognized by their filename extension: ".aa".

Tip: All audio books purchased from the iTunes Store are Protected AAC files recognized by the filename extension "m4b".

You can purchase spoken word content from the iTunes Store, or from audible.com.

Audible Formats

When you purchase a book from Audible, depending on the title, you may be able to download it in several different formats. iPod only works with Audible 2, 3, and 4 formats. The different formats are designed for different purposes as outlined here.

Format 2

Designed for maximum compression and smallest file size. The sound quality is the poorest of the formats, but allows you to store more books in the same amount of space.

Format 3

Designed for best quality and compression for spoken voice recordings.

Format 4

This is an MP3 compression of the spoken voice recording, but in the .aa format so iTunes and iPod can use bookmarks. This format usually results in a larger file than Format 3, so it may not be the best format for spoken voice recordings that don't have any music.

If the sound quality of an Audible file on iPod is not to your liking, you may want to download it in a different format if one is available.

Apple does not provide support for using the Audible website or with the quality of the Audible files. For assistance with Audible spoken word files contact Audible. If you purchased an audiobook from the iTunes Store and need help, contact us.

Bookmarks

iPod 1.2 software and later works with the bookmark feature of Audible files. If you stop or pause an Audible file, it will automatically bookmark that spot. The next time you play that file it will start playing from the bookmarked spot.

Bookmarks sync to and from iTunes. Whichever bookmark is further along in iPod or iTunes becomes the effective bookmark.

Bookmarks work with both Audible files (with .aa file extension) and Audio Books purchased from the iTunes Store (with .m4b file extension). If you have an audio book or spoken word file in any other format, such as MP3, click here for information on the remember playback position feature in iTunes 5 or later.

Three Computers Per Account

Audible's licensing agreement allows you to play the files you have purchased on three different computers. On each computer you can authorize your Audible account with iTunes by adding the files to iTunes or by playing them in iTunes if you previously deauthorized your account. You can download and listen to your spoken word files on all three computers. iPod does not count as one of the three computers.

Two Accounts Per iPod

iPod does not count as one of the three computers in Audible's licensing agreement, but you may only download books from two different Audible accounts to your iPod.

If you try to download an Audible file purchased with a third Audible account, iTunes will not synchronize the file, and this message will appear:

> "Some of the Audible Files in the iTunes music library were not copied to the iPod "iPod" because an iPod may only contain content from two Audible accounts."

If you manually manage your iPod's songs and playlists, you won't be able to copy a file from a third account to your iPod either. No message will appear to explain why the file doesn't copy.

TA26591_Using_Audible_spoken_word_files_with_iPod.pdf

Audible and Earlier Version of iTunes

Some customers may experience an issue where they receive the error message above when trying to sync Audible.com content to their iPod even if they do not have content from more than two accounts on the iPod. This issue may be resolved by updating to the latest version of iTunes and making sure that your your computer is authorized to play the content being synced as described above.

Related Documents

61656: iTunes: About Using Audible Spoken Word Files

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.
Published Date: Oct 7, 2016

Power Mac G4 (Mirrored Drive Doors): Does Not Wake From Sleep With Radeon 9000 Pro Graphics Card

A Power Mac G4 (Mirrored Drive Doors) computer with an ATI Radeon 9000 Pro graphics card installed may have difficulty waking from sleep. This article has been archived and is no longer updated by Apple.

Symptom

When you press a key on the keyboard, or move the mouse to wake the computer, it may briefly wake up, but then unexpectedly goes back into sleep.

This issue occurs when one of the following is connected to the display card's DVI port:

- a monitor with a DVI-style connector
- a VGA monitor using a DVI to VGA adapter
- a DVI to VGA adapter that does not have a monitor connected to it

Solution

Update to the latest version of Mac OS X.

To download and install an update via the automatic Software Update feature in Mac OS X, choose System Preferences from the Apple menu, choose Software Update from the View menu, then click Check Now. Any available updates will be listed in Software Update.

If the behavior persists after updating to a current version of Mac OS X, the issue may be related to the configuration outlined in technical document 86219, "**Power Mac G4, Power Mac G5: Computer Restarts After Being Shut Down**". Follow the steps in that document to see if they resolve the issue.

Note: To restart the computer hold in the Power button, until the computer shuts down. Press the power button again to start. If holding the power button does not turn off the computer, turn off the power on the wall switch or remove the power cable from the back of the computer.

Published Date: Oct 7, 2016

iPod 1.2: No Longer Plays Audible Spoken Word Files

If you connect iPod with version 1.2 of iPod software to a computer with iTunes 2, it will no longer be able to play Audible spoken word files.
This article has been archived and is no longer updated by Apple.

Symptom

After you connect iPod to a computer with iTunes 2 installed, it no longer plays Audible spoken word files.

Solution

Connect iPod to the computer you used to download the Audible files to iPod with iTunes 3. Once iPod appears in the Source List, it will be able to play Audible files, but you will need to copy the Audible files to iPod again.

Related documents

61695 "**iPod 1.2: About Using Audible Spoken Word Files**"

Notes

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Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Feb 20, 2012

Shake: Support Information for Shake

This document outlines the technical support available for Shake.

This article has been archived and is no longer updated by Apple.

Getting support for Shake

Apple offers the following support options for Shake customers:

For the first 90 days after your software purchase, Apple provides support over the telephone at no charge, giving you expert assistance with installation and launch. In addition, your software includes comprehensive user manuals, convenient electronic documentation and helpful tutorials.

Shake Online

For an easy way to get help at any time, visit the Apple Support web site for Shake at www.apple.com/support/shake. You can also search the Apple Knowledge Base or get help from the Shake community in Apple Discussions forums.

Published Date: Feb 20, 2012

QuickTime 6: Embedded URLs May Not Work

When using QuickTime 6 in Mac OS X you may encounter an issue where embedded URLs do not work correctly. These URLs could be a QTVR hot spot, a sprite, or imported as part of a text track.

This article has been archived and is no longer updated by Apple.

Symptom

When you click an embedded URL in a QuickTime movie, a Finder window opens instead of a Web page.

Solution

Download and install QuickTime 6.0.2 or later. It is available from the QuickTime website (http://www.apple.com/quicktime/). You may also download and install it using the QuickTime pane of System Preferences.

Published Date: Feb 19, 2012

iPod: Short delay for calendars to appear

This article has been archived and is no longer updated by Apple.

Sometimes a calendar event may not immediately appear on your iPod screen when you select Extras > Calendars. This delay occurs when iPod is still loading calendars. This can happen with any iPod model (including iPod, iPod photo, and iPod mini) that has the Calendar feature, and can occur after you've synced iCal calendars to your iPod with iSync, or manually copied this information to your iPod.

You may experience a short delay after you first copy or sync a large number of contacts and calendar events, or after you reset iPod. When iPod first loads a large number of contacts, it displays a progress indicator before displaying the contacts. However, iPod does not display a progress indicator when it loads a large number of calendar items. Instead, just wait about 10 seconds and then try to view your calendars again.

Published Date: Oct 7, 2016

Manually adding your calendars to iPod‘s Calendars list

This article has been archived and is no longer updated by Apple.

The easiest way to add your iCal calendars to iPod's Calendars list is to use iTunes, but you can manually add it if you want. To find out how to sync calendars with iTunes click here.

Update iPod

Update your iPod with the latest software for your model.

Export your calendar in iCalendar format

1. Open iCal.
2. Select the calendar you want to export from the Calendars list.
3. From the **File** menu, choose **Export**.
4. Type a filename in the field when prompted.
5. Click Export.

Copy the iCal (.ics) file to iPod

1. Make sure iPod is set up to be used as a hard disk you can store files on.
2. Connect iPod to your computer using the cable that came with it.
3. Double-click the iPod icon on the desktop or in a Finder window.
4. Drag the .ics file you saved earlier to the Calendars folder on your iPod.
5. Disconnect iPod from your computer.
6. Select Extras from the iPod menu.
7. Select Calendars.
8. Select the calendar you wish to view.

Days with events have a bullet (·) in the day cell. Scroll through the calendar and select a day to view its events.

Events with alarms you create in iCal also work on your iPod.

Related documents

61707: iPod 1.2: Calendar Events and To Do Items May Not Appear Immediately
61754: iSync: About synchronizing data with iPod

Published Date: Oct 7, 2016

iCal 1.0: Date in Dock Icon Does Not Update at Midnight

When you open iCal, the icon in the Dock reflects the current date. If you leave iCal open overnight, the icon does not update at midnight to reflect the change of date.

This article has been archived and is no longer updated by Apple.

Symptom

The date in the iCal application icon is not updated in the Dock.

Solution

Update to iCal 1.0.2 or later.

Published Date: Oct 7, 2016

iCal 1.0: Only Works With Mac OS X Mail Application

iCal 1.0's email-dependent features, including meeting invitations and email reminders, only work with the Mac OS X Mail application.
This article has been archived and is no longer updated by Apple.

Symptom

- When you send an email invitation, an alert box appears and the invitation is not sent.
- When you receive an email invitation and click on the link to add it to your calendar, an alert box appears.

Solution

iCal 1.0 only works with the Mac OS X Mail application. To send or receive invitations, make sure the Mail application is set up to send and receive email.
Published Date: Oct 7, 2016

Using iCal with Microsoft Entourage

iCal and the calendar feature of Microsoft Entourage can be used together--as long as you have iCal 1.5 or later and Mac OS X 10.3.5 or later installed.
This article has been archived and is no longer updated by Apple.
If you have earlier versions of iCal or Mac OS X, when you try to add an iCal invitation to an Entourage calendar, an alert box with an error message could appear; an Entourage invitation received with the Mac OS X Mail application could appear as plain text instead of as an attachment; or, when you try to import or add an .ics file from Entourage into iCal by double-clicking the file's icon, an alert box might appear.

Simply use iCal 1.5 or later and Mac OS X 10.3.5 or later to avoid these issues.
Published Date: Oct 7, 2016

iCal meeting invitees aren‘t notified if you delete an event

If you invite guests to an event in your iCal 1.0 calendar and later remove that event, the invited guests are not notified.

This article has been archived and is no longer updated by Apple.

Notify guests that the event has been canceled by other means, such as email.

Published Date: Feb 19, 2012

Final Cut Pro 3: Voice Over Tool Reports No Available Sound Input Devices

This document describes an issue with Final Cut Pro 3 for Mac OS X. On late-model computers, you may see an alert box when trying to use the Voice Over tool.

This article has been archived and is no longer updated by Apple.

Symptom

When you choose Tools > Voice Over, an alert with this message appears :

> "No sound recording devices are available. They may be in use by another application, incorrectly connected or may be conflicting with a video output device."

Solution

1. Download and install Mac OS X 10.2.3 or later, which is available from the Software Update pane of System Preferences, or from Apple Software Downloads (http://www.apple.com/swupdates/).

2. Ensure you are using QuickTime 6.1 or later.

Published Date: Feb 20, 2012

Mac OS: Alert Message When Opening Microsoft Outlook Express 5

An alert appears when opening Microsoft Outlook Express version 5.0 or later.
This article has been archived and is no longer updated by Apple.

Symptom

An alert box with one of the following messages appears when opening Microsoft Outlook Express:

"An error has occurred. Unexpected end of file. "

"Memory is full."

"An unknown error 4359 occurred."

Solution

You may find a solution for this issue at the Microsoft Knowledge Base (http://support.microsoft.com/default.aspx?scid=KB;EN-US;Q296844).

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

You should seek additional support information from documents included with third-party software, from Web-based help at the software manufacturer's Web site, or by contacting the third-party's support personnel when applicable.

Document 17159: "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Feb 19, 2012

Using analog/FireWire converter devices with iMovie

Learn how to use devices that convert analog video to or from DV over FireWire (IEEE 1394) with iMovie.
This article has been archived and is no longer updated by Apple.
You can convert video in 8 mm, Hi8, VHS, or SVHS format to digital video (DV) format, using a special converter box (sometimes referred to as AV adapters), such as the Sony DVMC-DA2 or the Synchrotech Formac Studio.

If you use a converter to import non-DV video, you can't control your camera or deck with iMovie. However, you can manually control the camera to import video clips and use all of iMovie's editing features, then export your video through the converter back to your video recorder or camera.

A converter of this kind will generally have standard S-video and RCA input/output ports for video and audio, and a FireWire or iLink (IEEE 1394) input/output port. Make sure you have the appropriate cables for your configuration.

To ensure compatibility with third-party video devices, check the iLife Camcorder Compatibility page, the Apple Store, and/or vendor websites for compatibility information.

For more information, check the documentation that came with your converter.

Capturing Analog Video From a Converter Box Into iMovie

Follow these steps to import video from an analog-to-FireWire converter device. While this specific order may not be necessary with all converters, it will help ensure proper initialization between the hardware and software:

1. Start up your computer, turn on the converter box, and connect the computer to the converter with a FireWire cable.
2. Connect the video cable from the video output of the video source (for example, a VCR or video camera) to the analog video input of the converter box. A video camera should be in playback or VTR mode. Connect the audio source, too.
3. The converter box will typically have a switch or button that tells the device which direction to convert the video, analog to DV or DV to analog. For capturing analog video, you will want to press the button labeled "Analog In" or something similar.
4. Connect a 4-to-6 pin FireWire cable from the DV out port on the converter box (sometimes labeled FireWire, IEEE 1394, or iLink with Sony devices) to a FireWire port on the computer.
5. Open the iMovie application program.
6. Make sure the Mode Switch under the iMovie monitor is set to Camera Mode, as shown here.

7. Some converter boxes have a green status light, to indicate a good connection. If this light is amber or red at this point, try turning the device off for several seconds and then back on again. You may also try quitting and opening iMovie again.
8. Press play on the VCR or analog camera. You should see the video signal in the iMovie monitor. If you have speakers or headphones connected to the VCR you can monitor the audio.
9. Use the controls on the video source to manually cue the video tape to the desired spot, and click Import in iMovie. iMovie will create a new clip for about every nine minutes of video. You can join all the clips later by dragging them into the timeline.

Sending Video From iMovie to the Converter Box

Follow these steps to export video to an analog-to-FireWire converter box. While this specific order may not be necessary with all converters, it will help ensure proper initialization between the hardware and software:

1. Start up your computer, turn on the converter box, and connect the computer to the converter with a FireWire cable.
2. Connect the video cable from the video output of the source (for example, a VCR or video camera) to the analog video input of the converter box. A video camera should be in playback or VTR mode. Connect the audio source, too.
3. The converter box will typically have a switch or button which tells the device which direction to convert the video, analog to DV or DV to analog. For exporting analog video, you will want to press the button labeled "Analog In" or something similar.
4. Connect a 4-to-6 pin FireWire cable from the DV out port on the converter box (sometimes labeled FireWire, IEEE 1394, or iLink with Sony devices) to a FireWire port on the computer.
5. Open the iMovie application program.
6. From the **iMovie** menu, choose **Preferences** (or **File** menu in Mac OS 9).
7. Click the Advanced tab.
8. Make sure the checkbox for "Video Play Through to Camera" is selected.
9. Choose Export Movie from the File menu, or press Command-E on the keyboard.

10. In the Export Movie window, select the pop-up menu for "Export to Camera", even if you're exporting to a VCR through the converter.
11. Press record on the VCR and click Export in iMovie.
12. When finished, press the stop button on the VCR and Stop in the iMovie monitor.

Related documents

60731 iMovie: Unable to Export Movies Using Sony DVMC-DA2

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 7, 2016

iSync 1.x: Both First and Last Name of a Contact From a Mobile Phone Appear in Last Name Field

Setting the contact view to "Last name, First name" on some mobile phones may cause the contact name to be incorrectly imported into Address Book.
This article has been archived and is no longer updated by Apple.

Symptom

A contact's last name and first name both appear in the Last name field in Address Book.

Solution

On some phones, you can set contacts to be displayed by either last name first or first name first. If the phone is set to display contacts with the last name first, the contact name will be reported to iSync incorrectly, and it will sync erroneous data into Address Book. Consult the documentation that came with your mobile phone, or contact the phone's manufacturer for more information about how to set the sync view to First name Last name.

Related document

302470: "iSync: First and last name fields show up as dots or dashes on phone"
Published Date: Oct 7, 2016

iSync: Contact with a phone number in Address Book isn‘t synced to your mobile phone

This article has been archived and is no longer updated by Apple.

When using the "Only synchronize contacts with phone numbers" feature of iSync, a contact may not be transferred to a phone if there is no Home or Work phone number attached.

For example, a contact with only a pager phone number might not appear in your mobile phone's contacts list after you sync.

Solution

Either do not use the "Only synchronize contacts with phone numbers" option, or paste the number into a different field, such as home or work.

Note: You can set iSync to not sync contacts to your phone if they don't have telephone numbers in Address Book.

Published Date: Oct 7, 2016

iSync: Some recurring events do not sync correctly to a Palm OS device

This article has been archived and is no longer updated by Apple.

Recurring events scheduled on the last day of the month may not sync correctly to a Palm OS-based device.

For example, a recurring event scheduled on the last day of the month (30th, or 31st) in iCal, does not sync to a Palm OS-based device correctly. For example, if a recurring event is scheduled on 08-31, it will appear on 09-30 when the expected behavior would be to skip all months that have less than 31 days.

This issue only affects Palm OS-based devices. The same information synced to other devices, such as a mobile phone with a calendar, behave as expected.

Related Documents

93172: "iSync: About Syncing Recurrent Events Between iCal and Palm OS Based Devices"
Published Date: Oct 7, 2016

Sync fast or slow with iSync and HotSync Manager

In the iSync conduit settings, accessed through Palm's HotSync Manager application, there is an option for "Force slow sync". What's a slow sync for?

This article has been archived and is no longer updated by Apple.

Slow sync

All records on a device are examined for modifications, additions, and deletions. The records are compared to a cached checksum to figure out if the record is different. This takes more time than a fast sync.

Fast sync

A device gives iSync a list of additions, modifications, and deletions. Because records on the device aren't looked at individually, the sync is faster.

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Published Date: Oct 7, 2016

Some calendar events and contacts are duplicated on your iPod

iSync copies all of your Address Book and iCal information to iPod. Any calendar or contact information you copied to iPod yourself isn't affected by iSync, which may create some duplicate entries.
This article has been archived and is no longer updated by Apple.

Duplicate contacts or calendars appear on iPod

1. Make sure iPod is set up to be used as a hard disk you can store files on.
2. Connect iPod to your computer.
3. Double-click the iPod disk icon in the Finder.
4. Open the Contacts folder.
5. Drag vCard files for contacts that are already in Address Book from the Contacts folder to the Trash. Do not remove "iSync.vcf".

Tip: To synchronize your iPod with data from more than one computer, use the .Mac feature of iSync to sync the two computers first.

Syncing data already on iPod

If you have contact or calendar information on iPod that isn't in Address Book or iCal, you can import this data and sync it all with iSync.

1. Import contact and calendar files from iPod into Address Book and iCal.
2. Drag the files you imported from iPod to the Trash.
3. Sync iPod to Address Book and iCal using iSync.

Related documents

60950: iPod doesn't appear in iTunes or on my Mac desktop
151073: iSync: Synchronization Overview
Published Date: Oct 7, 2016

iSync‘s log helps when troubleshooting issues

iSync's log contains useful, easily-understood messages that can help isolate issues.

This article has been archived and is no longer updated by Apple.

When iSync is used to synchronize data among devices, it generates a log containing information about what data and devices were synchronized. This information can be helpful in isolating and resolving issues in iSync.

You can see this log by choosing Show Logs from the Window menu, or by pressing the Command-L keyboard shortcut.

Information contained within the log is organized and easy to read. Error messages are in colored text so they can be easily noted.

Published Date: Oct 7, 2016

iSync: Address fields with the same name are not synced

This article has been archived and is no longer updated by Apple.

In Address Book, it is possible to create multiple address fields or phones numbers with the same name (label) in a contact. For example, two "home" addresses or two "work" phone numbers. When you sync with iSync (any version), only the first of the same-named fields is synced. Other fields with the same name are ignored.

Make sure the address you want synced to your devices is listed first.

Published Date: Oct 7, 2016

iSync: Due Dates for To Do Lists on Mobile Phone Do Not Sync Correctly

Due dates for To Do items may not sync correctly on some mobile phones.
This article has been archived and is no longer updated by Apple.

Symptom

When you change a To Do item's due date on your mobile phone, this change is not synced to iCal.

Solution

Some mobile phones do not indicate that the due date has been changed, so iSync cannot change the due date in iCal.

Contact the phone manufacturer for information regarding resolution of this issue.
Published Date: Oct 7, 2016

iSync: Certain mobile phone modes may cause an improper or incomplete sync

This article has been archived and is no longer updated by Apple.

If your mobile phone is in a certain mode (state) your sync may be incomplete or may fail.

When you sync a mobile phone that is in a state or mode that prevents data from being copied, the sync may be incomplete, or may fail. For example, if you are editing a contact on the phone when a sync is initiated, the information in that contact may not sync properly.

For best results, make sure the phone or other device is in its normal standby mode before trying to sync.

Published Date: Oct 7, 2016

iSync: Same picture used on two Macs may cause conflict

This article has been archived and is no longer updated by Apple.

When you use the same picture for a contact in Address Book on two different computers, a conflict may occur when the Address Books are synched.

Solution

Add an image to the contact on both computers (even if it's the same image). When the sync conflict occurs, pick one of the two images to resolve the conflict. Note: It is possible for this issue to reappear.

Additional information

When a picture is added to a contact in Address Book, the image is stored as a TIFF file. When the image is saved, information from the computer's Display Profile is used to compress the image. Because each computer's profile can be different, this creates an image file with slightly different information. In this situation, when you perform a sync using iSync, the two images are interpreted as different, and a conflict occurs.

Published Date: Oct 7, 2016

iSync: About To Do list priority differences between iCal and Palm

This article has been archived and is no longer updated by Apple.

Read about differences between To Do list priorities in iCal and Palm OS in this informative document.

iCal and Palm OS have different priority quantities. When synching data between iCal and a Palm, the priorities will be somewhat different, but they will still reflect a relative order.

Palm devices also have no method for specifying a "no priority" condition. When a "no priority" iCal task is synced, it will assume the lowest priority on a Palm.

Relative priorities of iCal and Palm devices

Palm	iCal
1	1
2	2
3	3
4	3
5	none

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Published Date: Oct 7, 2016

iSync: Recurring events appear in iCal‘s unfiled calendar

This article has been archived and is no longer updated by Apple.

If you change a recurring event on a Palm, it may be moved to the Unfiled calendar in iCal when you sync the Palm with iSync.

Symptom

When a recurring event is modified on a Palm OS-based device and then synced with iSync, the event is moved to iCal's Unfiled calendar. This potentially creates a duplicate in the Unfiled calendar of an event that is already in another calendar ("Home", for example).

Solution

If the event was originally in the Unfiled calendar in iCal, it will not be moved to another calendar type.

Published Date: Oct 7, 2016

iSync: About recurring events on earlier mobile phones

This article has been archived and is no longer updated by Apple.

Recurring events are handled differently when synced with a earlier ("older") mobile phone.

Some phones allow you to create a recurring event in the calendar application on the phone. On some earlier phones, iSync may not treat these events as recurring, but instead will create individual, detached events for each occurrence in iCal when syncing.

Related Document:

25573: iSync's repeating event doesn't appear in iCal after sync
Published Date: Feb 20, 2012

iSync 1.0: Contact Information Appears Truncated in Address Book

If a truncated field is modified on a mobile phone and then synced with Address Book, the modified, truncated field will overwrite the field in Address Book.
This article has been archived and is no longer updated by Apple.

Symptom

When you sync a contact that you updated on your mobile phone to your computer using iSync, information in some of the fields is truncated in Address Book.

Solution

For best results, only edit contact information in Address Book.

Additional information

Because of the limited memory and display space on most phones, some contact information and event data may be truncated when synchronized using iSync.

If a truncated field is modified on the phone and then synched using iSync, the modified information on the phone will overwrite the information in Address Book, resulting in truncated information in Address Book.

This is correct behavior because when determining which information is to be kept, the most recently modified version is the one that is kept. However, due to limitations of the phone noted above, this may result in some undesired results in Address Book, or other applications where field length is not an issue.

Only fields that have been modified on the phone will be synced. If you have an Address Book contact where the first and last name were truncated on a sync to the phone, and the last name is edited on the phone and you sync again, only the last name field will be sent back in a truncated form to Address Book. The first name will not be changed.
Published Date: Oct 7, 2016

iSync conduit is activated from Palm HotSync Manager

In order to sync with a Palm OS device, configure conduit settings in HotSync Manager. Otherwise your contacts might not be synchronized.
This article has been archived and is no longer updated by Apple.
Make sure you have configured the iSync conduit from HotSync Manager:

1. Open the HotSync Manager application (usually located in /Applications/Palm/).
2. From the **HotSync** menu, choose **Conduit Settings**.
3. Select the iSync Conduit from the list of available conduits.
4. Click Conduit Settings.
5. Select "Enable iSync for this Palm device".
6. Click OK.
7. Quit the HotSync Manager application.
8. Open the iSync application.

You should now see a Palm icon in the iSync device list. Select the Palm icon in the iSync application to configure the information you wish to synchronize with this device.

Tip: To synchronize a Palm device via USB and iSync,initiate the sync by pressing the HotSync button on the Palm cradle. See iSync Help for additional information.

Published Date: Oct 7, 2016

Macintosh: How to Connect to the Internet Using a GPRS Mobile Telephone

This document explains how to connect to the Internet using a GPRS mobile telephone as a wireless modem.

This article has been archived and is no longer updated by Apple.

You can connect your Macintosh to the Internet using a GPRS (General Packet Radio Service) mobile telephone as a modem. To do so, you should first make sure that you can:

- Connect to the Internet over GPRS using the WAP browser in your telephone
- Connect your Macintosh to your mobile phone over IrDA or Bluetooth.

Once you can do these two things, you can set up your computer to use the telephone as a wireless modem to connect to the Internet.

Important: GPRS data services and Internet access are typically optional offerings. Ask your mobile phone operator about GPRS availability in your area, and what the subscription fees and service charges are.

Connecting to the Internet over GPRS using the WAP browser in your telephone

Most recent mobile phones allow wireless Internet access right on the phone. This service uses the Wireless Application Protocol (WAP) and a "microbrowser" in the telephone to allow you to browse the Internet. Before you try to connect your Mac to the Internet using your telephone as a wireless modem, you should first make sure that you can connect to the Internet using the WAP microbrowser over GPRS. Not all telephones that use WAP have a GPRS data feature, and not all mobile telephone operators offer a GPRS service--even if your telephone is capable of using it.

1. Make sure your mobile phone is capable of using your operator's GPRS data service. Some phones may only be able to use WAP over circuit-switched data (CSD) connections. In this case you won't be able to use your phone as a wireless modem.
2. Subscribe to the GPRS data service.
3. Configure your telephone with the necessary network settings to use your operator's GPRS data service. The GPRS settings used by your mobile phone operator may already be saved on the phone's SIM card. If this is the case, you need only select this setting or profile. If not, your operator should have given you these settings, and explained how to enter them into your telephone. Typically, these settings include:
    - GPRS dial-up number
    - APN (Access Point Name)
    - User ID
    - Password
    - IP Address
    - DNS Address
    - other advanced settings such as authentication, data compression, header compression, and quality of service

See the related documents for further instructions.

Related documents

25419: "**Macintosh: How to Connect Your Mac to Your Mobile Phone**"
25420: "**Macintosh: How to Use Your Mobile Phone as a Wireless Modem**"

Published Date: Feb 20, 2012

QuickTime: About the QuickTime 6.0.2 Update

The QuickTime 6.0.2 Update addresses certain issues, and updates QuickTime software.

This article has been archived and is no longer updated by Apple.

This software updates QuickTime 6.0, or 6.0.1 to QuickTime 6.0.2.

Installation

There are two ways to update from QuickTime 6.0, or 6.0.1 to QuickTime 6.0.2.

Automated Software Update Installation

Mac OS X

1. Choose System Preferences from the Apple menu.
2. Choose QuickTime from the View menu.
3. Click the Update tab.
4. Click Update Now.

Note: QuickTime 6.0.2 is also available as an update in the Software Update pane of System Preferences.

Mac OS 9 and Windows

1. Open the QuickTime folder.
2. Open the QuickTime Updater application program. It automatically checks the server, then downloads, and installs the update.

Alternatively, open the QuickTime Player application, and choose "Check for QuickTime Updates" from the Help menu. Make sure you have an active Internet connection before you check for updates.

Note: QuickTime 6.0.2 for Windows is only available in English, French, German, and Japanese.

Standalone Installer

A standalone installer is available from the QuickTime website (http://www.apple.com/quicktime/).

Enhancements included with this update

- Enhances the security of QuickTime software updates and downloads
- Improves the stability and performance of exporting audio
- Enhances the performance of MPEG-4 playback
- Improves MPEG-4 recording and streaming
- Improves QuickTime Java usability
- Improves AAC audio export feature

Using QuickTime 6 with other applications

Final Cut Pro 3.0.2 has been qualified for use with QuickTime 6 included with Mac OS X 10.2. If you are using an earlier version of Mac OS X, you should continue using QuickTime 5.

Published Date: Feb 19, 2012

QuickTime: About the QuickTime 6.1.1 Update

The QuickTime 6.1.1 Update addresses certain issues, and updates QuickTime software.

This article has been archived and is no longer updated by Apple.

This software updates QuickTime 6.0, 6.0.1, 6.0.2, or 6.1 to QuickTime 6.1.1.

System Requirements

To use QuickTime 6.1.1, your computer should meet these system requirements.

- PowerPC G3, or PowerPC G4 microprocessor
- Mac OS X 10.1.5 or later
- A minimum of 128 MB of memory (RAM)

Automated Software Update Installation

1. Choose Apple menu > System Preferences.
2. Choose View > QuickTime.
3. Click the Update tab.
4. Click Update Now.

Note: QuickTime 6.1 is also available as an update in the Software Update pane of System Preferences.

Standalone Installer

A standalone installer is available from the QuickTime website (http://www.apple.com/quicktime/).

About QuickTime 6.1.1

QuickTime is Apple's award-winning, industry-leading software architecture for creating, playing, and streaming digital media for Mac OS and Windows. With the introduction of QuickTime 6.1.1, Apple builds on its tradition of leading the industry in the adoption of revolutionary worldwide standards.

- MPEG-4 ISO compliant file creation
- MPEG-4 video codec
- AAC audio codec
- Instant-On streaming
- Macromedia Flash 5
- Enhanced QuickTime Player interface
- QuickTime Picks, bringing you the best, up-to-date content

Included in QuickTime 6.1.1

A true all-in-one, standards-based, cross-platform media tool, QuickTime 6.1.1 delivers a host of features that includes the following:

- JPEG 2000 (Mac OS X Only)
- Enhanced AppleScript integration (Macintosh Only)
- Improvements to iMovie and iDVD audio/video synchronization.
- Significant performance improvements in DV.
- Full screen enhancements for QuickTime Pro users.
- Important improvements to MPEG-4 streaming.

For more information, see the QuickTime website at (http://www.apple.com/quicktime/). The QuickTime website also provides many links to cool QuickTime content and to other Internet sites that showcase QuickTime.

Published Date: Feb 19, 2012

QuickTime 6: About the 3GPP Component

This software allows you to import and play 3GPP content with QuickTime 6.3 and later.
This article has been archived and is no longer updated by Apple.

About QuickTime's 3GPP component

QuickTime is Apple's award-winning, industry-leading software architecture for creating, playing, and streaming digital media for Mac OS and Windows. QuickTime 3GPP Component adds the ability to import and play back files in the 3GPP format, the worldwide standard for the creation, delivery, and playback of rich multimedia over high-speed wireless networks. In addition, this component enables QuickTime Pro users to author 3GPP files including video, audio, and text. This release of QuickTime 3GPP Component requires QuickTime 6.3 or later.

For details on this feature and to download the software, visit the QuickTime website. The QuickTime website also provides many links to cool QuickTime content and to other Internet sites that showcase QuickTime.

Published Date: Oct 7, 2016

iCal: "This invitation is not correct" Alert

In order to use the invitation features of iCal, you must specify your card in the Address Book application.

This article has been archived and is no longer updated by Apple.

Symptom

When you double-clicking an iCal invitation in the Mail application, an alert box with this message appears:

> "This invitation is not correct. Your email address does not appear among the attendees of this event."

When you try to invite a contact to an event, an alert box with this message appears:

> "Before you can invite anyone to an iCal event, you need to add their name and email address to your Mac OS X Address Book and create an address card for yourself."

Solution

One of the email addresses in an iCal invitation must correspond to one of your email addresses as noted in the Address Book application. iCal also requires that you specify your email address in the Address Book application before sending an invitation.

You can specify your card and email addresses in the Address Book application as follows:

1. Open the Address Book application.
2. Create a new contact if you are not already listed.
3. Select your name in the Address Book listing.
4. Make sure that each email address (account) you receive mail from in the Mail application is also listed in your contact information. If one or more addresses are not listed, click Edit, then click the Add (+) button next to the Email field to add additional email addresses you use.
5. Choose This Is My Card from the Card menu in Address Book.

The icon next to your name in the Address Book listing should change from a card icon to a user icon to indicate that this is your card. You should now be able to send and receive invitations.

Published Date: Feb 19, 2012

Final Cut Pro 3 for Mac OS X: About Using Text Editors for Text Assets

This document describes issues you should be aware of when importing text assets, such as batch lists and EDLs, into Final Cut Pro 3 for Mac OS X.

This article has been archived and is no longer updated by Apple.

Final Cut Pro 3 expects text files to be in plain text format with Mac line endings. Because of this, you should not use TextEdit, the default text editor in Mac OS X, to edit or create text assets for Final Cut Pro 3. While TextEdit can be configured to save plain text files instead of RTF, TextEdit uses UNIX line endings, which are not properly recognized by Final Cut Pro 3.

As a solution, you should use a text editor that can be configured to use Mac line endings. For example:

- AppleWorks (Save As->Text)
- BBEdit (Preferences->Text Files: Saving->Default Line Breaks:Macintosh)
- Microsoft Word (Save As->Text Only)
- SimpleText in Classic mode (default saves OK)

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.

Published Date: Feb 20, 2012

Final Cut Pro 3: 29.97 fps Source Material Captured at 24 fps and 23.98 fps Timecode Issue

After capture of NTSC material that has been reverse telecined on capture with third-party cards to 24 or 23.98 fps, timecode will no longer reflect the original source tapes.

This article has been archived and is no longer updated by Apple.

Symptom

Immediately after capturing 29.97 fps source at 24 fps or 23.98 fps, Media Start and Media End timecode will still reflect correct timecode values. However, once the project is closed and re-opened, the timecode is no longer accurate.

Solution

This document will be updated as more information becomes available.

Published Date: Feb 20, 2012

PowerBook G4 (1 GHz/867 MHz): Starts Up to Blinking Folder Icon After Restoring Hard Disk

The computer may start up to a blinking folder icon if Mac OS 9 is selected in the Startup Disk preferences and the computer's hard disk has been erased and restored.
This article has been archived and is no longer updated by Apple.

Symptom

The computer starts up to a blinking folder icon.

Solution

1. Restart the computer from the Restore DVD disc.
2. Open Disk Utility and turn on the option to install the Mac OS 9 drivers.
3. Erase the hard disk.
4. Reinstall Mac OS X and the additional software components.

Warning: Be sure to back up any files you wish to keep from the destination volume before erasing it.

Related documents

75275 "**Mac OS X: About the 'Install Mac OS 9 Drivers' Option in Disk Utility**"

Additional information

All PowerBook computers come with DVD Install/Restore software. They will not be able to start up using Mac OS 9 if you use this disc to erase the computer's hard disk and then restore the software. This is because the Mac OS 9 disk driver is disabled by default. The standard settings will not install the Mac OS 9 drivers.
Published Date: Feb 20, 2012

.Mac Backup: CD/DVD Disc Spanning Restore Fails When Named in Japanese

You may not be able to restore from a backup if the CD/DVD is named in Japanese.

This article has been archived and is no longer updated by Apple.

Symptom

Backup fails to restore from a CD/DVD spanned backup if the backup was named in Japanese. An alert with this message appears:

> "Error copying the file 'File Name.'"

Solution

- Upgrade to Mac OS X 10.2.3.
  Upgrading resolves this issue.

Until you upgrade, if this issues occurs if you open Backup before inserting the master disc. Follow these steps:

1. Insert the master (last) disc in the CD/DVD drive. The disc appears on the desktop, or in the Finder window.
2. Open Backup.
3. Choose "Restore from CD/DVD" from the View menu.
4. Select the items you want to restore.
5. Click Restore Now.

Published Date: Oct 7, 2016

AppleCare Protection Plan CD 0Z691-4021: Slow to Start Computer

The AppleCare Protection Plan CD that can start up in both Mac OS 9 and Mac OS X may be slow to start the computer.

This article has been archived and is no longer updated by Apple.

Symptom

Starting up from the CD takes a long time.

Solution

It is normal for the multi-lingual AppleCare Protection Plan CD to take up to 2 minutes to start up to the language selection dialog on some computers and configurations.

Figure 1 TechTool Deluxe X dialog

Published Date: Feb 19, 2012

iPhoto: Device Compatibility With Mac OS X 10.3

This article has been archived and is no longer updated by Apple.

This document is a mirror of the information available from the iPhoto website as of 18 Nov 2002. Check the iPhoto website (http://www.apple.com/iphoto/compatibility/) for the latest information about device compatibility.

iPhoto Device Compatibility

Cameras

- Canon
- Casio
- Epson
- Fuji
- Hewlett-Packard (HP)
- Kodak
- Minolta
- Nikon
- Olympus
- Pentax
- Sigma
- Sony
- Media Readers (Card Readers)

Printers

Built-in raster printer support

- Canon
- Epson
- Hewlett-Packard (HP)
- Lexmark

Built-in PostScript printer support

- Apple
- Epson
- Hewlett-Packard (HP)
- Xerox/Techtronix
- Lexmark

Cameras

Canon Digital Cameras	Nikon Digital Cameras
PowerShot A200	CoolPix 990
PowerShot A30	CoolPix 880
PowerShot A40	CoolPix 775
PowerShot A100	CoolPix 885
PowerShot G3 (3)	CoolPix 995

TA26638_iPhoto_Device_Compatibility_With_Mac_OS_X_.pdf

PowerShot S330
PowerShot S45 (3)
PowerShot S10
PowerShot S20
PowerShot S30
PowerShot S40
PowerShot S100 Digital Elph
PowerShot S110
PowerShot S200
PowerShot S230 (3)
PowerShot S300
PowerShot A10
PowerShot A20
PowerShot G1
PowerShot G2
PowerShot Pro90IS
EOS D30
EOS D60
EOS 1D
IXY DIGITAL
IXY DIGITAL 200
IXY DIGITAL 300
DIGITAL IXUS v2
DIGITAL IXUS v

Casio Digital Cameras

Casio QV-3000EX

Epson Digital Cameras

Epson PhotoPC 3100Z

Fuji Digital Cameras

FinePix 1300
FinePix 1400 Zoom
FinePix 2300
FinePix 2400 Zoom
FinePix 2600 Zoom
FinePix 2650 Zoom
FinePix 2800 Zoom
FinePix 3800 Zoom
FinePix 4700 Zoom
FinePix 4900 Zoom
FinePix 6300 Zoom
FinePix 6800 Zoom

CoolPix 2000
CoolPix 2500
CoolPix 3500
CoolPix 4300
CoolPix 4500
CoolPix 5000
CoolPix 5700
D100
D1H*
D1X*
D10*

Olympus Digital Cameras

Brio D-100
Brio D-150 Zoom
Brio D-230
C-21
C-120
C-211 Zoom
C-220 Zoom
C-300 Zoom
C-700 Ultra Zoom
C-720 Ultra Zoom
C-730 Ultra Zoom
C-2000
C-2020 Zoom
C-2040
C-2100 Ultra Zoom
C-2500L
C-3000
C-3020
C-3030 Zoom
C-3040
C-4000
C-4040 Zoom
D-40 Zoom
D-320L
D-340L
D-340R
D-360L
D-370
D-380
D-400
D-450

TA26638_iPhoto_Device_Compatibility_With_Mac_OS_X_.pdf

FinePix 6900 Zoom
FinePix A101
FinePix A200
FinePix A201
FinePix A202
FinePix A203 Zoom
FinePix A303 Zoom
FinePix F401 Zoom
FinePix F402 Zoom
FinePix F601 Zoom
FinePix S304 Zoom
FinePix S602 Zoom
FinePix S1 Pro
FinePix S2 Pro

HP Digital Cameras
PhotoSmart 120
PhotoSmart 315
PhotoSmart 318
PhotoSmart 320
PhotoSmart 612
PhotoSmart 618
PhotoSmart 620
PhotoSmart 715
PhotoSmart 720
Photosmart 812
PhotoSmart 850
PhotoSmart 912

Kodak Digital Cameras
CX4200
CX4230 zoom
DC 220
DC 240
DC 260
DC 265
DC 280
DC 290
DC3215 zoom
DC3400
DX3500
DX3600 zoom
D-460
D-490 Zoom
D-500
D-510 Zoom
D-520 Zoom
D-550 Zoom
D-600
D-620L
E-10
E-20N
E-100RS

Pentax Digital Cameras
Optio 230
Optio 330GS
Optio 330RS
Optio 430RS

Sigma Digital Cameras
SD-9

Sony Digital Cameras
CyberShot DSC-P1
CyberShot DSC-P2
CyberShot DSC-P3
CyberShot DSC-P5
CyberShot DSC-P7
CyberShot DSC-P9
CyberShot DSC-P20
CyberShot DSC-P30
CyberShot DSC-P31
CyberShot DSC-P50
CyberShot DSC-P51
CyberShot DSC-P71
CyberShot DSC-S75
CyberShot DSC-S85
CyberShot DSC-F505V
CyberShot DSC-F707
CyberShot DSC-F717**
CyberShot DSC-U10
CD Mavica MVC-CD250
CD Mavica MVC-CD300
CD Mavica MVC-CD400
FD Mavica MVC-FD100

DX3700
DX3900 zoom
DC4330
DC4800
DC4900 zoom
DC5000
DX4900
MC3
DCS Pro Back 620x*
DCS Pro Back 720x*
LS420

Minolta Digital Cameras
DiMAGE 5
DiMAGE 7
DiMAGE 7Hi
DiMAGE 7i
DiMAGE E201
DiMAGE EX 1500
DiMAGE F100
DiMAGE RD 3000
DiMAGE X
DiMAGE S304
DiMAGE S404

FD Mavica MVC-FD200

Media Readers
Belkin USB Media Reader/Writer for MultiMedia Card and Secure Digital
Dazzle 6 in 1 Reader
Zio! Memory Stick Reader
Imation MultiMedia/SecureDigital Reader
Imation Memory Stick USB Reader
LaCie HEXA Media Drive
Lexar Media SmartMedia USB Reader
Lexar Media MultiMedia/SecureDigital Reader
Lexar Media Memory Stick USB Reader
Memorex USB Dual Card Reader
SmartDisk Reader for Memory Stick
SmartDisk MemoryStick Reader
SmartDisk CompactFlash Reader
Sony MSAC-US1 (Memory Stick)

Developers who wish to have products added to this list should download the **Image Capture SDK** and send a copy of each successful CameraCheck report to **ica@group.apple.com**.

All cameras are USB 1.x unless otherwise noted. Additional cameras may be supported. Non-USB digital still cameras that use CompactFlash, Memory Stick, MultiMedia Card (MMC), SecureDigital (SD) and SmartMedia cards are supported when the memory card is used with a supported media reader. While most media readers are MSC-compliant and will "just work", some media readers may require additional drivers to be installed in order to work with Mac OS X. Native ("RAW") picture formats may require additional software.

Notes:

(1) FireWire (IEEE 1394a) interface.

(2) USB 2.0, will work at 1.x speed when connected via a USB 1.x port.

(3) Requires Mac OS X v10.2.2 to work in default mode. Will work with any version of Mac OS X when set to PTP mode.

Built-in Raster Support
Canon printers

BJF210
BJF360
BJF660

Built-in PostScript Support (cont.)
HP Printers

Business Inkjet 2250
Business Inkjet 2280
Business Inkjet 2600

BJF850

BJF870
BJC85
BJC2100
BJC8200
BJM70
BJS6300
BJS600
BJS630
S100
S100SP
S300
S400
S400SP
S450
S500
S750
S600
S630
S800
S900
S6300
S9000

Epson printers

C40 Series
C60 Series
C70 Series
C80 Series
CL750
MC 2000
PM-2200C
PM-720C
PM 730C
PM-780C
PM 790PT
PM 830C
PM-880C
PM 890C
PM-900C
PM-920C
PM-950C
PM-3500C

Color LaserJet
Color LaserJet 4500
Color LaserJet 4550
Color LaserJet 4600
Color LaserJet 5M
Color LaserJet 8500
Color LaserJet 8550
DesignJet 1050C PS3
DesignJet 1055CM PS3
DesignJet 2500CP PS3
DesignJet 3500CP PS3
DesignJet 5000 PS3
DesignJet 800C PS3
LaserJet 1200
LaserJet 1220
LaserJet 2100 Series
LaserJet 2200
LaserJet 3200
LaserJet 3300 Series
LaserJet 4 Plus
LaserJet 4000 Series
LaserJet 4050 Series
LaserJet 4100 MFP
LaserJet 4100 Series
LaserJet 4ML
LaserJet 4MP
LaserJet 4Si v2011.110
LaserJet 4V
LaserJet 5000 Series
LaserJet 5100 Series
LaserJet 5M
LaserJet 5MP
LaserJet 5Si
LaserJet 5Si Mopier
LaserJet 6MP
LaserJet 8000 Series
LaserJet 8100 Series
LaserJet 8150 Series
LaserJet 9000 Series
LaserJet 9000 MFP
Mopier 240
Mopier 220
LaserJet 4

Xerox/Techtronix Printers

- Stylus Color 680
- Stylus Color 740
- Stylus Color 760
- Stylus Color 777
- Stylus Color 860
- Stylus Color 880
- Stylus Color 900
- Stylus Color 980
- Stylus Photo 780
- Stylus Photo 785EPX
- Stylus Photo 790
- Stylus Photo 810 Series
- Stylus Photo 820 Series
- Stylus Photo 870
- Stylus Photo 875DC
- Stylus Photo 890
- Stylus Photo 895
- Stylus Photo 1270
- Stylus Photo 1280
- Stylus Photo 1290
- Stylus Photo 2000P

HP printers

- Color Inkjet CP1700
- Color Inkjet CP1160
- Deskjet 350
- Deskjet 3420
- Deskjet 3820
- Deskjet 5550
- Deskjet 5551
- Deskjet 640C
- Deskjet 810C
- Deskjet 815C
- Deskjet 816C
- Deskjet 825C
- Deskjet 830C
- Deskjet 840C
- Deskjet 845C
- Deskjet 880C
- Deskjet 920C
- Deskjet 935
- Deskjet 895Cse
- Deskjet 895Cxi
- Document Centre 490/480/470/460 families
- Document Centre 440/432/425/420 families
- Document Centre 340/332/230/220 families
- Document Centre 265/255/240 families
- DocuPrint N2025 PS
- DocuPrint N2125 PS
- DocuPrint N2825 PS
- DocuPrint N3225 PS
- DocuPrint N4025 PS
- DocuPrint N4525 PS
- Phaser 790
- Phaser 840Ev5
- Phaser 840Pv5
- Phaser 840v5
- Phaser 850DPv2
- Phaser 850DXv2
- Phaser 850Nv2
- Phaser 860Bv2
- Phaser 860DPv2
- Phaser 860DXv2
- Phaser 860Nv2
- Phaser 360 Extended
- Phaser 740 Extended
- Phaser 740 Plus
- Phaser 750N
- Phaser 750P
- Phaser 780 Graphics
- Phaser 780 Plus
- Phaser 840 Extended
- Phaser 840 Plus
- Phaser 850N
- Phaser 740
- Phaser 780
- Phaser 840
- Phaser 1235 PS
- Phaser 2135 PS
- Phaser 8200Bv2
- Phaser 8200DPv2
- Phaser 8200DXv2
- Phaser 8200v2
- Tektronix 750DP1
- Tektronix 750DX1
- Tektronix 7700DN
- Tektronix 7700DX

Deskjet 930C
Deskjet 940C
Deskjet 948C
Deskjet 950C
Deskjet 955C
Deskjet 957C
Deskjet 960Cxi
Deskjet 960Cse
Deskjet 970
Deskjet 980Cse
Deskjet 980Cxi
Deskjet 990Cse
Deskjet 990Cxi
Deskjet 990Cm series
Deskjet 995
Deskjet 1125C
Deskjet 1220C
Deskjet 3420C
Deskjet 1200-series

Lexmark printers

Z22-32
Z23-22
Z25-35
Z53
Z45
Z55
Z65

Built-in PostScript Support
Apple Laserwriter printers
4/600 PS
12/640 PS
16/600 PS
16/600 PS Fax
16/600 PS-J
8500
Color 12/600 PS
Color 12/600 PS-J
Color 12/660 PS
IIf v2010.113
IIf v2010.130
IIg v2010.113

Tektronix 7700GX
Tektronix Phaser 360 P1
Tektronix Phaser 740 E1
Tektronix Phaser 740 E4
Tektronix Phaser 740 P1
Tektronix Phaser 740 P4
Tektronix Phaser 750 N1
Tektronix Phaser 750 P1
Tektronix Phaser 780 G1
Tektronix Phaser 780 P1
Tektronix Phaser 780 G4
Tektronix Phaser 780 P4
Tektronix Phaser 1235 Series
Tektronix Phaser 2135 Series
Tektronix Phaser 7401
Tektronix Phaser 7404
Tektronix Phaser 7801
Tektronix Phaser 7804
Xerox 2006
Xerox Phaser 790
Xerox Phaser 3400
Xerox Phaser 5400
Xerox Phaser 6200B
Xerox Phaser 6200DP
Xerox Phaser 6200DX
Xerox Phaser 6200N

Lexmark

Lexmark 4039 plus
Lexmark 4079 plus
Lexmark C720
Lexmark C750
Lexmark C910
Lexmark E320
Lexmark E322
Lexmark Optra C
Optra C710
Optra Color 40
Optra Color 45
Optra Color 1200
Optra E310
Optra E312
Optra E312L

Ilg v2010.130
Personal 320
Personal NTR
LaserWriter Pro 400
LaserWriter Pro 405
LaserWriter Pro 600
LaserWriter Pro 630
Pro 810
Pro 810f
Select 360
Select 360f
Select 360 v2013.112
Select 610

Some printers may require a 3rd party adapter or print server.

Additional PPD files are available from several sites on the Internet, including Adobe.

Lexmark Optra Ep
Lexmark Optra K
Lexmark Optra L
Lexmark Optra Lx+
Lexmark Optra Lx
Lexmark Optra Lxi+
Lexmark Optra Lxn+
Optra M410
Optra M412
Lexmark Optra N
Lexmark Optra R+
Lexmark Optra R
Lexmark Optra Rn+
Lexmark Optra Rt+
Lexmark Optra Rx
Lexmark Optra S plus
Lexmark Optra S xxx5 Series
Lexmark Optra S
Lexmark Optra SC
Optra T
Optra W810
T520SBE
T520
T522
T620
T622
W820
IBM Color Jetprinter PS 4079
IBM Laserprinter 4029
IBM Laserprinter 4039

Published Date: Feb 20, 2012

AppleWorks 6 for Windows: Unexpectedly Quits When You Resize a Graphic

This article has been archived and is no longer updated by Apple.

After updating to QuickTime 6, AppleWorks 6 for Windows may unexpectedly quit when you resize a graphic.

Symptom

When you resize a graphic in an AppleWorks document, the application unexpectedly quits.

Solution

Update to AppleWorks 6.2.2 or later. The update can be found in "**AppleWorks 6.2.2 for Windows: Information and Download**"
Published Date: Feb 20, 2012

iPhoto: Do Not Include the ? Character in a Photo‘s Filename When Ordering Prints

Apple is unable to make prints of photos that have a question mark (?) in their filename.
This article has been archived and is no longer updated by Apple.
One or more of the photos you ordered is missing. When you look at the photo in the library, it has a ? character in its filename.

This happens when using:

- iPhoto 1.1 and later

Before you order prints, make sure none of the photos in your order have a ? character in their filenames. If any photo's name contains a ? character, rename it without using a ?. Follow these steps:

1. Select Photo Library.
2. Select the photo(s).
3. Choose Export from the File menu.
4. Click Export. **Note:** Take note as to where the photo(s) will be exported.
5. Rename the file without the ? character.
6. Choose Import from the File menu.
7. Select the photo(s).
8. Click Import.

Note: You will now have duplicate photos in the iPhoto Library. You might want to delete the photo with the ? character in the filename to prevent confusion when ordering prints.

Additional information

If a print order has a photo with a filename containing a ? character, the order will be set aside, and examined by Apple.

If the number of affected photos is less than 10 percent of the total order, the affected photos will be removed from the order. The billing statement will be updated to reflect that these photos were removal, and an email will be sent to you explaining the situation.

If the number of affected photos makes up more than 10 percent of the order, the whole order will be canceled, and an email will be sent to you explaining the situation.

You will not be billed for prints Apple can't process.
Published Date: Oct 7, 2016

QuickTime for Windows: How to Remove QuickTime From the System Tray

This document explains how to remove QuickTime from the Windows system tray.

This article has been archived and is no longer updated by Apple.

Follow these steps to remove QuickTime from the system tray:

1. Right-click the QuickTime icon in the system tray. A contextual menu appears. See Figure 1.
2. Choose QuickTime Preferences. The QuickTime Settings window appears. See Figure 2.
3. Click the checkbox to deselect "QuickTime system tray icon".

Figure 1 Contextual menu

Figure 2 QuickTime Settings

Published Date: Feb 19, 2012

iDVD 2: Burning a DVD-R Using a PowerBook G4 With Built-In SuperDrive

On a PowerBook G4 (1 GHz/867 MHz) with built-in SuperDrive, iDVD 2 will not ask you to insert a blank DVD-R if you click the Burn button only once. Click the burn button a second time before inserting a blank DVD-R disc.
This article has been archived and is no longer updated by Apple.

Symptom

When you click Burn in iDVD and insert a blank DVD-R disc, the disc is opened by the Finder instead of iDVD.

Solution

Click the Burn button twice. iDVD will then ask you to insert a blank DVD-R disc.
Published Date: Oct 7, 2016

iSync: How to Avoid Data Loss

This document lists steps you can take to avoid losing information when you sync devices with iSync.
This article has been archived and is no longer updated by Apple.
Important: You should always make a backup of your information before syncing devices with iSync. See Related Documents below for information on backing up.

Use these tips to avoid losing information when syncing with iSync.

- Make sure your computer's date and time are set correctly. Use the Date & Time pane in System Preferences to set the correct time.
- Make sure the devices you want to sync have their date and time set correctly.
- Check the battery or other power sources of your devices, and make sure there is enough charge to successfully sync with your computer.
- Only sync your devices with one computer. Syncing your devices with multiple computers could cause data to be lost. (You can sync data between two computers using .Mac).

Related Documents

93004 iSync: How to Back Up and Restore Your Data

Published Date: Feb 20, 2012

iSync: Information With Asian Characters Not Synced to Palm OS Device

Calendar or contact information that contains traditional Chinese, simplified Chinese, or Korean characters is not synced to Palm OS devices.
This article has been archived and is no longer updated by Apple.
When you sync contacts or calendar information, the alert "<String is unprintable>" appears. Some of your information contains traditional Chinese, simplified Chinese, or Korean characters. This is expected behavior.

Published Date: Feb 20, 2012

Keynote 1.0: Locations of Associated Files

This document describes the locations of files associated with Keynote 1.0.
This article has been archived and is no longer updated by Apple.
Keynote must be installed on your startup volume (the partition of your hard disk that contains a System folder for Mac OS X version 10.2 or later). During installation, files related to the Keynote application are placed on your hard disk in the following locations:

Sample documents are placed in the folder /Library/Application Support/Keynote/Samples.

The Image Library is placed in the folder /Library/Application Support/Keynote/Image Library.

Any custom themes you create using Keynote must also be saved in one of the following locations, if you want them to be available in the Keynote theme selection dialog: /Library/Application Support/Keynote/Themes or ~/Library/Application Support/Keynote/Themes.
Published Date: Oct 7, 2016

Keynote: System Requirements

This document outlines updated system requirements for Keynote.
This article has been archived and is no longer updated by Apple.
Important: The system requirements included in the documentation and inbox materials of early shipments of Keynote 1.0 are incorrect.

To use Keynote, you need:

- Power Mac G3* or G4, PowerBook G4, eMac, 500 MHz or faster iMac or iBook (PowerPC G4 recommended)
- Mac OS X 10.2 or later
- 128 MB of RAM (512 MB recommended)
- 8 MB of video memory (32 MB recommended)
- 1 GB of available disk space

* Power Mac G3 and PowerBook computers with ATI Rage II, Rage IIc, or Rage Pro video graphics processors are not supported.

Keynote must be installed on your startup volume (the partition of your hard disk that contains a System folder for Mac OS X 10.2 or later).

Note: If you're using Mac OS X 10.2.3, see technical document 61858, "**Keynote 1.0: Stops Responding During Slide Show**".
Published Date: Oct 7, 2016

Keynote 1.0: Transitions Appear "Choppy" When Viewed on a Projector

Builds and slide transitions may not appear to execute smoothly when viewed on a VGA Projector set to a low refresh rate.
This article has been archived and is no longer updated by Apple.

Symptom

Builds and slide transitions (such as the Move In transition) appear to stutter when viewed on a VGA Projector.

Solution

Builds and transitions, especially the Move In transition, can look choppy on low-end VGA projectors. To alleviate this problem, try selecting a different refresh rate, which you can set in the Displays pane of System Preferences. You can also try to fine-tune the input signal on the projector. Generally, the best results are achieved by matching the refresh rate of the projector to that of the primary monitor (60 Hz for LCD displays). This problem is not an issue with projectors that use a DVI connection.

To open the Displays pane of System Preferences:

1. Choose Apple menu > System Preferences
2. Choose View > Displays.

Published Date: Oct 7, 2016

Keynote 1.0: Translucent Elements Look Fuzzy When Viewed in PowerPoint

Microsoft PowerPoint may not display all translucent graphic elements of a Keynote presentation properly.
This article has been archived and is no longer updated by Apple.

Symptom

Keynote presentations which include graphic elements that use image transparency may look fuzzy when viewed in Microsoft PowerPoint for OS X.

Solution

This is a limitation of Microsoft PowerPoint. Consider viewing Keynote presentations using the Keynote application, or export the presentation to QuickTime to be viewed in QuickTime player.
Published Date: Oct 7, 2016

Keynote 1.0: "Computer does not have enough video random-access memory" Alert

If you connect a second display to the computer while the Keynote application program is open, an alert with a message about the computer not having enough video random-access memory (VRAM) may appear.
This article has been archived and is no longer updated by Apple.

Symptom

When you play a slideshow and then connect a second display to the computer while the Keynote application is open, an alert with this message appears:

> "Your computer does not have enough video random-access memory (VRAM) to play the slideshow at the current screen resolution"

Solution

Quit the Keynote application before connecting a second display,

or

Download and install Mac OS X 10.2.4 or later. It is available from the Software Update pane of System Preferences, or from the Apple Software Downloads website (http://www.apple.com/swupdates/).

Published Date: Oct 7, 2016

Keynote 1.0: How to Import a File

This document explains how to import different types of files.
This article has been archived and is no longer updated by Apple.
You can place many different types of file on the slide canvas. You can drag graphics, movies, and sound files directly from the Finder to the slide canvas, or you can use the Place command to find the file.

To place a file:

1. Choose Edit > Place > Choose and select the file you want.
2. Click Place.

Compatible file types include all QuickTime and graphics formats (for example, MP3, Flash, QuickTime, PDF, TIFF, JPEG, and GIF).

Related documents

61841 "**Keynote 1.0: How to Import Flash Files**"
61842 "**Keynote 1.0: How to Import Photoshop Files**"
61843 "**Keynote 1.0: How to Import Illustrator Files**"
Published Date: Oct 7, 2016

Keynote 1.0: How to Import Photoshop Files

This document explains how to import Adobe Photoshop files into Keynote 1.0.
This article has been archived and is no longer updated by Apple.
To import a file from Photoshop, first export it as a TIFF file.

Follow these steps in Photoshop:

1. Choose File > Save As.
2. Choose TIFF from the Format pop-up menu.
3. If you want to preserve layers, leave the Layers checkbox selected. Otherwise, click the checkbox to deselect this option.
4. Click Save
5. In the TIFF options panel, select appropriate compression and byte order (Macintosh).
6. Click the checkbox to select the "Save Transparency" option.
7. Select the appropriate Layer Compression.
8. Click OK.

Follow these steps in Keynote:

1. Choose Edit > Place > Choose.
2. Select the TIFF file, and click Place.

Published Date: Oct 7, 2016

Keynote 1.0: How to Import Illustrator Files

This document explains how to import Adobe Illustrator files into Keynote 1.0.
This article has been archived and is no longer updated by Apple.
To import Illustrator files into Keynote, first save them as PDF files.

Follow these steps in Adobe Illustrator:

1. Choose File > Save As.
2. Choose Adobe PDF from the Format pop-up menu.
3. Click the checkbox to select the "Append File Extension" option.
4. Click Save.

Follow these steps in Keynote:

1. Choose Edit > Place > Choose.
2. Select the PDF file, and click Place.

Published Date: Oct 7, 2016

Opening an iMovie project in Final Cut Express HD

This article has been archived and is no longer updated by Apple.

You can open and edit movies created in iMovie with Final Cut Express HD.

Note: Project files created in iMovie 2 or earlier cannot be opened in Final Cut Express HD. To open an iMovie project, follow these steps:

1. Open Final Cut Express HD.
2. From the **File** menu, choose **Open**.
3. In the dialog that appears, select the iMovie project you want to open. The iMovie project opens in the Browser and contains the sequence and clips as they appeared in the iMovie clips shelf.
   Important: Final Cut Express HD does not import iMovie sound effects, audio levels, or transitions. All other applied effects are imported.
4. Double-click the sequence to open the iMovie project in the Timeline.
5. Render the sequence if necessary.

Imported clips are linked to the original clips captured and/or rendered in iMovie. These original clips can be found inside the iMovie project bundle for iMovie HD or in the iMovie project's Media folder for versions 3 and 4.

Notes

- DV Stream files do not have timecode tracks, so DV media imported from iMovie project files cannot be recaptured.
- Imported iMovie DV files might not play back or print to tape in real time without being rendered first.
- All imported source media must be backed up for future reediting.

Published Date: Oct 7, 2016

iSync 1.x: Admin user can sync, but other users cannot

This article has been archived and is no longer updated by Apple.

If you have limited users' capabilities on a computer, only users with administrator accounts can sync using iSync.

Symptom

Only users with administrator accounts can sync using iSync 1.5 or earlier. Other users can open the application, but it does not sync.

Solution

1. Log in as a user with an administrator account.
2. Choose Apple menu > System Preferences.
3. Choose View > Accounts.
4. Select the affected user name and click Capabilities.
5. Drag the file /System/Library/CoreServices/SyncServer into the list of allowed applications, or click the checkbox to deselect the "Use only these applications" option.

If you choose to keep a list of allowed applications, you should also drag these files into that list if the users may use mobile phones:

- /System/Library/CoreServices/BluetoothUIServer
- /System/Library/CoreServices/OBEXAgent

Published Date: Oct 7, 2016

Mac OS X 10.2.3: Software Update Erroneously Shows the iTunes 3.0.1 Update

If you have selected a preferred language other than English in the International pane of System Preferences in Mac OS X 10.2.3, Software Update erroneously shows the iTunes (3.0.1) update even though the installed version of iTunes is version 3.0.1.
This article has been archived and is no longer updated by Apple.

Symptom

The iTunes (3.0.1) update appears in Software Update even though the installed version of iTunes is version 3.0.1.

Solution

1. Make sure that the current installed version of iTunes is 3.0.1.
2. Select the iTunes 3.0.1 update in the Software Update window.
3. Choose Update > Make Inactive.

This will prevent the iTunes 3.0.1 update from appearing in the list of available software updates. You can make the hidden iTunes 3.0.1 update available again by choosing Update > Show Inactive Updates.
Published Date: Oct 7, 2016

iSync: How to use disabled Palm Conduits

This article has been archived and is no longer updated by Apple.
This document explains how to use disabled conduits again if you wish.

Installing the iSync Conduits for Palm automatically turns off conduits the installer thinks may conflict with the iSync conduit. This is because only one application can sync with a PalmOS database at at time. When you use the iSync Palm Conduits installer, it assumes that you want to use iSync to synchronize your Palm calendar, address book, and to-do list with iCal and Mac OS X Address Book.

If you decide to not use iSync, or if you feel that one of the disabled conduits will not conflict if configured properly, you can use these conduits again by dragging them from:

/Library/Application Support/Palm HotSync/Disabled Conduits

to:

/Library/Application Support/Palm HotSync/Conduits

Be sure to configure the conduit(s) in HotSync Manager.

Additional information

The following conduits which are included with Palm Desktop can safely be installed in the /Conduits folder without conflicting with the iSync conduit:

- Backup Conduit
- Install Conduit
- Memo Conduit
- Memos Conduit
- Voice Memo Conduit
- Photos Conduit
- Note Pad Conduit

Published Date: Feb 20, 2012

Final Cut Express 1.0: Does Not Open iMovie 2 Projects

This document discusses what types of iMovie projects Final Cut Express can open.
This article has been archived and is no longer updated by Apple.
Final Cut Express 1.0 can only open projects created with iMovie 3 and later. Projects from iMovie 2 cannot be opened.

Published Date: Oct 8, 2016

iCal 1.0.1/1.0.2: Late Breaking News and iCal Help "Short Movies" Are Not Available

Italian, Swedish, Finnish and Norwegian language localizations of iCal 1.0.1 and 1.0.2 do not display Late Breaking News, or the option to view the iCal Help example movies.
This article has been archived and is no longer updated by Apple.

Symptom

You cannot open the Late Breaking News or view the iCal Help example movies.

Solution

You can read the localized versions of the Late Breaking News for iCal 1.0.1 and 1.0.2. by pasting these URLs into any Web browser.

Italian: http://helposx.apple.com/icalhelpr1/italian/pgs2/wrRtoc07.html
Swedish: http://helposx.apple.com/icalhelpr1/sv/pgs2/wrRtoc07.html
Finnish: http://helposx.apple.com/icalhelpr1/fi/pgs2/wrRtoc07.html
Norwegian: http://helposx.apple.com/icalhelpr1/no/pgs2/wrRtoc07.html

You can watch the iCal 1.0.1 and 1.0.2 iCal Help Example Short Movies by pasting these URLs into any Web browser.

To see how events are created and people are invited to an event:
Italian: http://helposx.apple.com/icalhelpr1/italian/pgs/wr24ovr2.html
Swedish: http://helposx.apple.com/icalhelpr1/sv/pgs/wr24ovr2.html
Finnish: http://helposx.apple.com/icalhelpr1/fi/pgs/wr24ovr2.html
Norwegian: http://helposx.apple.com/icalhelpr1/no/pgs/wr24ovr2.html

To see how to view multiple calendars:
Italian: http://helposx.apple.com/icalhelpr1/italian/pgs/wr25ovr3.html
Swedish: http://helposx.apple.com/icalhelpr1/sv/pgs/wr25ovr3.html
Finnish: http://helposx.apple.com/icalhelpr1/fi/pgs/wr25ovr3.html
Norwegian: http://helposx.apple.com/icalhelpr1/no/pgs/wr25ovr3.html

To see how a calendar is published:
Italian: http://helposx.apple.com/icalhelpr1/italian/pgs/wr26ovr4.html
Swedish: http://helposx.apple.com/icalhelpr1/sv/pgs/wr26ovr4.html
Finnish: http://helposx.apple.com/icalhelpr1/fi/pgs/wr26ovr4.html
Norwegian: http://helposx.apple.com/icalhelpr1/no/pgs/wr26ovr4.html

To see how subscribing to a calendar works:
Italian: http://helposx.apple.com/icalhelpr1/italian/pgs/wr27ovr5.html
Swedish: http://helposx.apple.com/icalhelpr1/sv/pgs/wr27ovr5.html
Finnish: http://helposx.apple.com/icalhelpr1/fi/pgs/wr27ovr5.html
Norwegian: http://helposx.apple.com/icalhelpr1/no/pgs/wr27ovr5.html

To see how wireless synchronization works:
Italian: http://helposx.apple.com/icalhelpr1/italian/pgs/wr50ovr6.html
Swedish: http://helposx.apple.com/icalhelpr1/sv/pgs/wr50ovr6.html
Finnish: http://helposx.apple.com/icalhelpr1/fi/pgs/wr50ovr6.html
Norwegian: http://helposx.apple.com/icalhelpr1/no/pgs/wr50ovr6.html

To see how searching works:
Italian: http://helposx.apple.com/icalhelpr1/italian/pgs/wr28ovr7.html
Swedish: http://helposx.apple.com/icalhelpr1/sv/pgs/wr28ovr7.html
Finnish: http://helposx.apple.com/icalhelpr1/fi/pgs/wr28ovr7.html
Norwegian: http://helposx.apple.com/icalhelpr1/no/pgs/wr28ovr7.html
Published Date: Feb 20, 2012

Keynote 1.0: Unexpectedly Quits When Opened

Keynote 1.0 unexpectedly quits when opened if your computer doesn't have enough free disk space.
This article has been archived and is no longer updated by Apple.

Symptom

The application unexpectedly quits ("crashes") when you open it.

Solution

Make sure there is more than 138 MB of free disk space on the startup volume. You can make more space by dragging files you don't need anymore to the Trash and choosing Finder > Empty Trash. **Important:** Once you empty the Trash you cannot retrieve deleted files.
Published Date: Oct 8, 2016

Keynote 1.0: Cannot Export to PowerPoint If GIF Graphic Is Present

GIF format graphics may prevent Keynote from exporting to PowerPoint.
This article has been archived and is no longer updated by Apple.

Symptom

If you try to export a Keynote presentation that contains a GIF graphic, the export progress window closes before the export is complete. No PowerPoint file is created as a result of the export.

Solution

This issue is addressed with Keynote 1.1. Download and install the "**Keynote 1.1.1**" updater.
Published Date: Oct 8, 2016

Keynote: How to Put a Picture Into the Frame of a Template Slide

This document explains how to place and resize a picture so it fits into the built-in frame of some Keynote slide templates.
This article has been archived and is no longer updated by Apple.
Follow these steps to place a picture into the frame:

1. Drag an image from the Finder onto the slide canvas. (You may also choose Edit > Place > Choose to select a picture to place in the frame.)
2. Drag the picture into position on the canvas.
3. Resize the picture by dragging the small white boxes on the corners and sides of the picture, or by changing the values in the Metrics Inspector.
4. Once the picture is the size you want, click the Back button above the canvas, or choose Arrange > "Send to Back".
5. You can adjust the position of the picture or resize it by clicking on it.

Published Date: Oct 8, 2016

DVD Studio Pro 1.5.2: Dual Layer Break Point Message While Building a Single-Layer Project

When building a disc from a Single Layer project using DVD Studio Pro 1.5.2, under certain conditions you may see a message that says a valid Dual Layer Break point was not found, or a messaging reporting that a Dual Layer Break point was successfully set.
This article has been archived and is no longer updated by Apple.

Symptom

When building a disc from a Single Layer project using DVD Studio Pro 1.5.2, under certain conditions you see a message that says a valid Dual Layer Break point was not found, or a messaging reporting that a Dual Layer Break point was successfully set.

Solution

This situation generally can occur if you are building a single layer project with a disc size in the range of 3.9 to 4.7 GB, containing one long video asset, and if there are very few or no markers set toward the end of the track.

This error does not occur with DVD Studio Pro 1.5.1 or earlier. You can see the messages in DVD Studio Pro's log. An example of the layer break error log might look like this:

4:25:51 PM This disc complies to version 1.0 of the DVD-Video Specification
4:25:51 PM Building finished
4:25:51 PM Start Formatting on "Pioneer DVD-RW DVR-104"
4:25:53 PM Unable to find a valid Dual Layer Break Point.
4:25:53 PM A new marker must be created after marker 1 in track 1.
4:25:53 PM The new marker must be located within the range of 51.3 to 96.5% in this track.
4:25:53 PM Formatting Failed! (Error #81)

To workaround this error, add a marker to the track that is reporting an error, and Build & Format the project again. The steps for adding a marker can be found on page 35 of the DVD Studio Pro manual.

1. In Graphical View, double-click the video thumbnail of the track listed in the log, to open the Marker editor.

Figure 1 Marker editor

2. Click the New Marker button.
3. Drag the slider to an area in the range described in the log (in this case, 51.3 to 96.5% from the start of the track)
4. Name the marker something like, "blank marker".
5. In the Property Inspector, under the General settings, set "Can Be Accessed" to No.

Figure 2 Property Inspector

6. Save your project. Choose File > Build & Format Disc to rebuild your project.

In the other scenario where you get a successful break point message in a single layer project, the log would look something like this:

4:25:51 PM This disc complies to version 1.0 of the DVD-Video Specification
4:25:51 PM Building finished
4:25:51 PM Start Formatting on "Pioneer DVD-RW DVR-104"
4:42:29 PM The dual layer breakpoint has been set at block number 2204592.
4:42:29 PM Formatting Finished.

The message/action is harmless and does not impact the burning or playability of the title.
Published Date: Feb 19, 2012

Image Capture, iPhoto: Camera With Newly Formatted Memory Stick Not Recognized

When you connect a digital camera with a newly formatted Memory Stick to your computer, iPhoto or Image Capture may not automatically open.

This article has been archived and is no longer updated by Apple.

Symptom

If you format (erase) a Memory Stick with your digital camera and then connect to your computer, the media will appear on the desktop, but Image Capture or iPhoto do not recognize the media and do not automatically open.

Solution

Take a picture before connecting the camera to the computer.

When a memory stick is formatted in the camera it lacks the file structure needed for the Macintosh to recognize the media as camera storage media. Once you take a picture, the file structure is created, which indicates to the Macintosh that the Memory Stick is camera media. Image Capture and iPhoto will then recognize the card and open automatically when the camera is connected to the computer.

Published Date: Feb 20, 2012

iSync: Home address is only address synced with Palm OS devices

iSync only syncs the Home address field of Address Book with Palm OS devices.
This article has been archived and is no longer updated by Apple.
Street address information appears in Address Book, but does not appear on the Palm OS device for some contacts after synchronization. Other contact information in Address Book seems to sync correctly.

Enter the address information you would like to sync with your Palm OS device in the Home address field of Address Book.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 8, 2016

Keynote 1.0: "Not enough VRAM" Alert If Third-Party ATI Drivers Are Installed

When using Keynote 1.0 on Mac OS X 10.2.3, if you have installed a retail ATI video card, and then installed ATI driver software, an alert will appear when you try to play a slideshow.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to play a slideshow, an alert with the message "Not enough VRAM" appears.

Solution

Mac OS X 10.2.3 and later include driver software that works with these cards. If you install the ATI drivers, you may need to do an Archive & Install of Mac OS X, preserving user settings, to return to a configuration that works with Keynote 1.0. For more information see technical document 107120, "**Mac OS X 10.2: About the Archive and Install Feature**".

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Feb 20, 2012

Keynote 1.0: About Using Flash .swf Files

Keynote 1.0 provides basic playback support for Macromedia Flash (.swf) files. Interactive aspects of Flash, such as actions and links, are not supported.
This article has been archived and is no longer updated by Apple.
Keynote 1.0 provides basic playback support for Macromedia Flash (.swf) files. Interactive aspects of Flash, such as actions and links, are not supported.

Related document

61841: "**Keynote 1.0: How to Import Flash Files**"

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Feb 20, 2012

iMovie: About "Found files that don‘t belong in project folder. Okay to move them to Trash?" Alert

This document discusses the alert message that may appear when an iMovie project is opened: "Found <number> files that don't belong in project folder. Okay to move them to Trash?"
This article has been archived and is no longer updated by Apple.
This message appears when extraneous files are in the project's Media folder. These items may typically be in the Media folder for one of two reasons: they were intentionally put there, or iMovie unexpectedly quit or was force-quit while rendering a file.

Click "Trash Unused Files" to move the files to the Trash. You should select this unless you know which files are in the Media folder and do not want them removed. You can examine which files these are by quitting iMovie and clicking the Trash icon on the Dock.

Click "Leave Files Alone" to leave the unused files in the Media folder. This message will continue to appear each time the affected iMovie project is opened.
Published Date: Feb 20, 2012

iPod 2.0: How to Display Notes Created With Japanese, Korean, or Traditional or Simplified Chinese Characters

When you copy a TextEdit note to iPod that has Japanese, Korean, or traditional or simplified Chinese characters with UTF8 text encoding, the note might not appear on iPod's display.
This article has been archived and is no longer updated by Apple.

Symptom

When you copy a TextEdit note to iPod that has Japanese, Korean, or traditional or simplified Chinese characters with UTF8 text encoding, the note does not appear on iPod's display.

Solution

The iPod Note Reader (Extras > Notes on iPod) can display any plain text file. To display a file with characters from these languages, make sure you are using the right text encoding, or use an application that can save the note as Unicode text.

Additional information

By default all note files are considered to be encoded in Latin1, unless the iPod language preference is set to Japanese, Korean, or traditional or simplified Chinese, in which case all note files are assumed to be in that encoding.

Note: You can tag a note file with a different encoding by including the following line: <?xml encoding="MacJapanese"?>

iPod handles these encodings: Latin1, MacRoman, MacJapanese, Korean, simplified Chinese, traditional Chinese, UTF8 Unicode and UTF16 Unicode.

iPod recognizes these encoding names:
For Latin1: iso-8859-1, Latin-1.
For MacRoman: x-Mac-Roman, Mac, Macintosh.
For MacJapanese: x-Mac-Japanese, Mac-Japanese, MacJapanese, Shift-JIS, Shift_JIS.
For traditional Chinese: x-Mac-Chinesetrad, Mac-Chinesetrad , BIG5, CN-BIG5.
For simplified Chinese: x-Mac-Chinesesimp, Mac-Chinesesimp, EUC-CN.
For Korean: x-Mac-Korean, Mac-Korean, EUC-KR.
For UTF8 Unicode: UTF8, UTF-8.
For UTF16 Unicode: UTF16, UTF-16, UCS2, Unicode.

Note: Each line lists multiple names for the same encoding, not separate encodings.

The only way to display multiple encodings in the same note is to use Unicode.
Published Date: Oct 8, 2016

iPod 2.0: Titles of Notes With Japanese Ligature Characters Display Incorrectly

Japanese ligature characters in the title of notes saved to iPod may not display as expected.
This article has been archived and is no longer updated by Apple.

Symptom

Japanese ligature characters in the title of Notes may not display as expected. For example, the character of text title '«Å' (Romaji: ga) is displayed as '«©≈H'

Solution

This document will be updated when more information becomes available.
Published Date: Oct 8, 2016

iPod for Windows 2.0: Configure iPod Progress Bar May Appear Behind Other Open Windows During Installation

When you install iPod 2.0 software on your computer, the Configure iPod window appears behind any other windows that are open.
This article has been archived and is no longer updated by Apple.

Symptom

When you install iPod 2.0 software on your computer, the Configure iPod window appears behind any other windows that are open.

Solution

Close any open windows before using the iPod 2.0 installer, or just wait until the Configure progress is complete.
Published Date: Oct 10, 2016

iPod: Remote Identification and Compatibility

There are two iPod remotes. This document explains how to identify the two remotes and which iPod models you can use them with.
This article has been archived and is no longer updated by Apple.
There are two iPod remotes. They are not interchangeable. Both remotes supply the same features.

Original remote

The original remote has a round connector as illustrated in Figure 1.

Figure 1 iPod remote with round connector

This remote works with these iPod models:

- iPod (5 GB)
- iPod (10 GB)
- iPod (Touchwheel)

Note: You must install iPod Software 1.2 or later to use a remote.

iPod (with Dock Connector) remote

This remote has a connector attached to the side of the headphone minijack as illustrated in Figure 2.

Figure 2 iPod (with Dock Connector) remote

This remote only works with iPod (with Dock Connector) models.
Published Date: Oct 10, 2016

iPod 2.0: Artists That Begin With "The" Appear Under "T"

Artists whose names begin with "the" are alphabetized under "T".
This article has been archived and is no longer updated by Apple.

Symptom

When you browse by artist, "The Beatles" appear in the "T" artists instead of the "B" artists even though in iTunes the opposite is true.

Solution

Reset iPod to use the same alphabetization as iTunes. See technical document 61705 "**iPod: How to Reset**" for instructions.
Published Date: Oct 10, 2016

iPod: Developer Information Available at developer.apple.com

See Apple's Developer website for information about iPod's hardware and software.

This article has been archived and is no longer updated by Apple.

Apple has information about the iPod's software and hardware for developers. For more information, see the Apple Developer website (http://developer.apple.com/).

Published Date: Oct 10, 2016

iPod 2.0 and 1.3: Software Version Comparison

This document describes the features and functions of iPod Software versions 2.0 and 1.3.

Note: iPod Software 2.0 and its features are only compatible with iPod (with Dock Connector) models. iPod Software 1.3 allows earlier iPod models to play MPEG4-AAC encoded files, including music purchased from the iTunes Store.
This article has been archived and is no longer updated by Apple.

iPod Software 2.0

iPod Software 2.0 includes these features and functions:

- Improved interface
  The menu system includes new and reorganized commands.
- On-The-Go Playlist
  You can create a temporary playlist directly on iPod.
- Improved Clock Menu
  All clock settings are accessible in one location for easy access.
- Alarm Clock
  You can set an alarm to go off at a specified time.
- To-Do Lists Viewing
  iCal to-do lists can be viewed on iPod.
- Notes
  iPod can store and view notes (text files).
- Games
  Includes three games.
- Customizable Main Menu
  You can decide which menu options appear in the main menu.
- Backlight Menu Command
  You can turn on and off the backlight from a menu command.
- Rating Songs
  You can rate songs on iPod.
- Updating Smart Playlists
  Smart Playlists update on iPod and sync back to iTunes.
- AAC File Playback
  iPod plays back AAC (.m4a and .m4p) files.
- Disconnect Message Removed
  The "OK to disconnect" message no longer appears.
- Improved iPod Software Updater
  You can update and restore without disconnecting and reconnecting iPod.
- NotesOnly (also known as "Museum Mode)
  Allows for complete customization of the entire menuing system. Example uses include using iPod in museums and kiosks. See the Apple Developer website (http://developer.apple.com/hardware/ipod/index.html) for more information.

iPod Software 1.3

iPod Software 1.3 includes these features and functions:

- Backlight Menu Choice
  A menu command has been added to turn on and off the backlight.
- AAC File Playback
  iPod plays back AAC (.m4a and .m4p) files.
- Battery Improvements

TA26677_iPod_and_Software_Version_Comparison.pdf

Includes the battery improvements that were introduced with iPod Software 1.2.6.

Published Date: Oct 10, 2016

iPod: Battery Indicator Does Not Display Charge of External Battery Packs

iPod's battery indicator only displays the charge of the internal battery. It does not display the charge of external battery packs.

This article has been archived and is no longer updated by Apple.

The iPod battery indicator only displays the charge of iPod's internal battery. The battery indicator does not display the charge of external, third-party battery packs connected to iPod.

Published Date: Feb 20, 2012

iPod (with Dock Connector): About the Touch-Sensitive Buttons

This document describes the iPod (with Dock Connector) model's touch-sensitive buttons.
This article has been archived and is no longer updated by Apple.
All buttons on the iPod (with Dock Connector) model are touch-sensitive. This includes the Select button, Previous/Rewind button, Menu button, Play/Pause button, and Next/Fast-Forward. These touch-sensitive buttons increase iPod's ruggedness and durability because there are fewer moving parts.

Building on the success of the touch wheel, touch-sensitive buttons are not affected by motion. Instead, they are activated when they contact another electrical conductor. Since the human finger is an electrical conductor, when it makes contact with the touch buttons and touch wheel, an electrical phenomenon called capacitance activates the command that has been entered.

When iPod's backlighting turns on, the four buttons above the touchwheel are illuminated orange-red. See Figure 1.

Figure 1 Illuminated buttons

The iPod (with Dock Connector) model's hold switch is not a touch-sensitive button. The buttons on the remote for the iPod (with Dock Connector) are mechanical buttons.
Published Date: Oct 10, 2016

iPod (with Dock Connector): Reset to Wake From Sleep

You may need to reset the iPod (with Dock Connector) model to wake it from sleep.
This article has been archived and is no longer updated by Apple.

Symptom

iPod will not wake from sleep.

Solution

Reset iPod. See technical document 61705, "**iPod: How to Reset**" for steps to reset your iPod.

Note: When you reset iPod all your music and data files are saved. Some customized settings may be lost.

Published Date: Oct 10, 2016

iPod (with Dock Connector): About the Dock Connector and Cables

This document describes the iPod dock connector and the cables you can use with it.
This article has been archived and is no longer updated by Apple.
On the bottom of the iPod (with Dock Connector) is the dock connector.

A = Dock connector

Figure 1 The bottom of iPod

The dock connector port allows the iPod (with Dock Connector) to be connected to different devices.

There are two Apple-branded cables that use this connector. When disconnecting any of these cables, press in on the sides of the dock connector to release.

By using the iPod Dock Connector to FireWire Cable you can connect the iPod (with Dock Connector) to a computer with a FireWire port. Or, you can use the cable to connect this computer to the iPod Dock.

Figure 2 iPod Dock Connector to FireWire Cable

By using the iPod Dock Connector to FireWire and USB 2.0 Cable you can connect the iPod (with Dock Connector) or an iPod Dock to a computer with a USB 2.0 or USB 1.1 port and also connect iPod to power. Since USB does not supply power to iPod, it is important to plug the FireWire connector into the iPod AC Adapter.

Figure 3 iPod Dock Connector to FireWire and USB 2.0 Cable

Notes

1. The iPod (with Dock Connector) cannot use the 6-pin to 6-pin FireWire cable that came with previous iPod models.
2. Syncing with USB (certain versions of Windows-only) requires optional iPod Dock Connector to FireWire and USB 2.0 Cable and iPod Software Upate 2.0.1 or later. See technical document 60971, "**iPod: System Requirements**" for more information.
3. Connecting the USB and FireWire connectors into your computer simultaneously can cause the computer and/or the iPod to behave erratically or stop responding.

Published Date: Oct 10, 2016

iPod for Windows: Do Not Synchronize When Battery Is Low

Charge iPod before synchronizing it with a Windows-compatible computer.

This article has been archived and is no longer updated by Apple.
Not all FireWire ports of Windows-compatible computer supply power to iPod when it is connected to the computer. For this reason, you should charge iPod by connecting it to the Apple iPod Power Adapter before synchronizing with your computer. iPod's battery is 80 percent charged in about an hour, and fully charged in about three hours.

To determine if your computer charges iPod when connected, see technical document 61676, "**iPod for Windows: Does Not Charge When Connected to Your Computer**".

For more information on how to charge the iPod see technical document 60939, "**iPod: About the Apple iPod Power Adapter**".
Published Date: Oct 10, 2016

iPod: Skips to the Next Song

iPod sometimes skips to the next song if the file for the currently playing song is damaged.
This article has been archived and is no longer updated by Apple.

Symptom

iPod unexpectedly skips to the next song while playing a song.

Products affected

- iPod

Solution

1. Open iTunes and delete the song that skips from your music library.
2. Insert the audio CD for the song(s) that skip in your computer.
3. Use iTunes to Import the song from CD again.

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Published Date: Oct 10, 2016

iPod (with Dock Connector): About the Dock Connector Cover Plug

iPod (with Dock Connector) models come with a Dock Connector cover plug.
This article has been archived and is no longer updated by Apple.
You insert the cover plug into iPod's Dock Connector port on the bottom of iPod. This plug protects the connector, and keeps foreign matter out of the opening.

Figure 1 Dock Connector port plug

To put iPod in its dock, or to connect the Dock Connector to FireWire cable, remove the plug. iPod will not fit into its dock when the plug is installed.
Published Date: Oct 10, 2016

iPod: About the Carrying Case With Belt Clip

Learn about the iPod carrying case with belt clip and how to distinguish between the different models.

This article has been archived and is no longer updated by Apple.
The iPod carrying case with belt clip protects iPod from the elements and enhance its portability. It is made of high-quality Schoeller woven nylon. It has a steel belt clip that allows you to clip iPod to a belt, purse, or backpack.

There are three models of the carrying case. Each model is designed to work with certain iPod models.

To distinguish between the carrying cases, look for the number on the back of the tag sewn into the top of the case.

You can identify iPod carrying case models by these tag numbers:

- 1
  Compatible with iPod (Touchwheel 10 GB), iPod photo (40 GB), and iPod photo (60 GB)
- 2
  Compatible with iPod (5 GB), iPod (10 GB), and iPod (Touchwheel 20 GB)
- 3
  Compatible with the iPod (10 GB with Dock Connector), iPod (15 or 20 GB with Dock Connector), iPod (30 or 40 GB with Dock Connector) and iPod (40 GB Click Wheel)
- 4
  Compatible only with the iPod (20 GB Click Wheel)

Not all iPod models include the carrying case with belt clip. You can purchase a carrying case from the Apple Store.

Tip: The carrying case ships in a case cover. While this cover is not designed to hold iPod, you can use it to polish iPod.

Related documents

61688: Identifying different iPod models
Published Date: Oct 10, 2016

iPod: Use USB 2.0 with Dell Inspiron 8500

The iPod (with Dock Connector) and the iPod mini does not sync to Dell Inspiron 8500 computers when you use the FireWire ports.
This article has been archived and is no longer updated by Apple.
Connect to the Dell Inspiron 8500 Laptop using the computer's USB 2.0 ports. Note: This workaround requires the iPod Dock Connector to FireWire + USB 2.0 cable, which is sold separately.

iPod mini users can connect with the included Dock Connector to USB 2.0 cable.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please **contact the vendor** for additional information.
Published Date: Feb 20, 2012

Mac OS X 10.2: softwareupdate man Page

The man page (System Manager's Manual) for the softwareupdate command is not installed with Mac OS X 10.2 through 10.2.6. This document is a copy of the man page for the 10.2 version of softwareupdate

This article has been archived and is no longer updated by Apple.

```
SOFTWAREUPDATE(8)           System Manager's Manual
SOFTWAREUPDATE(8)

NAME
    softwareupdate - system software update tool

SYNOPSIS
    softwareupdate [item ...]

DESCRIPTION
    Software Update checks for new and updated versions of your software
    based on information about your computer and current software.

    If you give no arguments, a list of available software updates is
deter-
    mined and displayed.  Each entry includes the item name, description,
    version, and size.

    For each item name you give, the corresponding software update is down-
    loaded, unarchived, and installed.

    softwareupdate must be run as root.

EXAMPLES
    The following example shows how to give items to the shell:

    softwareupdate

          Software Update found the following new or updated software:
           - ExampleUpdate
                  My Example Software (5.0.2), 1292K

    softwareupdate ExampleUpdate

          Downloading "My Example Software"... 10% 20% 30% 40% 50%
          Unarchiving "My Example Software"... 50%
          Installing "My Example Software"... 50% 60% 71% 83% 99%

FILES
    /usr/sbin/softwareupdate  Software Update tool

Darwin                          May 2, 2002
```

Published Date: Feb 19, 2012

iPod (with Dock Connector): Does Not Play AIFF Files Copied From CD

AIFF files you copied from an audio CD don't play on the iPod (with Dock Connector) model.
This article has been archived and is no longer updated by Apple.

Symptom

AIFF files you copied from an audio CD in the Finder don't play on the iPod, but they play OK in iTunes.

Solution

When you copy an audio track from an audio CD using the Finder, the result is an AIFF file that iPod cannot play. However, iPod can play the audio tracks if you import them as AIFF file in iTunes instead. For instructions, see technical document 93118, "**iTunes 4: How to Choose Import Options**."

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Published Date: Feb 20, 2012

iPod battery frequently asked questions (FAQ)

This article has been archived and is no longer updated by Apple.

Read below answers to the most frequently asked questions about iPod's battery. For additional information, see the Apple Batteries website.

Questions answered in this document:

1. What kind of battery does iPod have?
2. How long does the battery last?
3. How long does it take to charge the battery?
4. How do I charge my iPod's battery?
5. Do I need to "prime" my iPod's battery by letting it charge for 24 hours before I use it the first time?
6. Do I need to completely empty the battery before charging it, and does doing this prevent the so-called "memory effect"?
7. Should I leave iPod connected to the charger or in the dock whenever I'm not using it?
8. Is it better to empty the battery before charging it, or can I charge it whenever it's convenient?
9. Can I charge the battery when traveling abroad?
10. How long can iPod's battery keep a charge without being used?
11. Why does iPod stop playing even though the battery indicator says there's power left?
12. How can I tell if my iPod's battery is working correctly?
13. Why doesn't my iPod's battery last as long as it should?
14. Does the battery ever wear out?
15. What is a "charge cycle"?
16. Can I get the battery replaced?

1. **Question**: What kind of battery does iPod have?
   Answer: iPod and iPod mini have built-in, rechargeable lithium-ion batteries. For more information about this battery technology, see the Apple Batteries website.

2. **Question:** How long does the battery last?
   Answer: When new and fully charged, the battery provides up to 8 or 12 hours of battery life, depending on your model. For additional information see "Tips and tricks to get the most out of your iPod's battery".

3. **Question:** How long does it take to charge the battery?
   Answer: Fully charging the battery takes about 4 hours. You can also fast-charge the battery to 80 percent capacity in 1 hour (2 hours for iPod (Click Wheel)). Charging the battery may take longer if you're using iPod as it charges.

4. **Question:** How do I charge my iPod's battery?
   Answer: The easiest way is to connect it to the Apple iPod Power Adapter. You can also charge it by connecting iPod to your computer or putting it in its optional dock. For additional information, see "Charging iPod's internal battery"

5. **Question:** Do I need to "prime" my iPod's battery by letting it charge for 24 hours before I use it the first time?
   Answer: No. Just charge the battery until the indicator says the battery is full.

6. **Question:** Do I need to completely empty the battery before charging it, and does doing this prevent the so-called "memory effect"?
   Answer: You don't need to empty the battery before charging it. Lithium-based batteries, like those used in iPod, have none of the memory effects seen in nickel-based rechargeable batteries.

7. **Question:** Should I leave iPod connected to the charger or in the dock whenever I'm not using it?
   Answer: The battery stops charging when it's full. Leaving it connected won't charge it any more. It's perfectly OK to leave it connected so it can charge overnight, for example.

8. **Question:** Is it better to empty the battery before charging it, or can I charge it whenever it's convenient?
   Answer: You can charge iPod's battery whenever it's convenient.

9. **Question:** Can I charge the battery when traveling abroad?
   Answer: Absolutely. The Apple iPod Power Adapter can accommodate the common electrical standards used throughout the world. To make it easy, consider purchasing the World Travel Adapter Kit so you'll always have the right set of plugs for the many outlets you're bound to encounter. The kit also works with most iBook and PowerBook G4 power adapters.

10. **Question:** How long can iPod's battery keep a charge without being used?
    Answer: The standby time is 1 month when fully charged. After a month of not being used, the battery will likely be fully discharged. You may find that the battery is empty before then, and that's normal. Even when it's not being used, iPod uses a small amount of battery power.

Lithium-ion batteries need to be used for maximum performance. If you don't use your device often, be sure to complete a charge cycle at least once per month.

11. **Question:** Why does iPod stop playing even though the battery indicator says there's power left?
    Answer: The battery indicator is only an approximation of the amount of power that's left. For more information, see "iPod's battery indicator is approximate".

12. **Question:** How can I tell if my iPod's battery is working correctly?
    Answer: You can perform a simple test to tell if your battery is working properly. Follow the steps in "iPod's battery indicator is approximate".

13. **Question:** Why doesn't my iPod's battery last as long as it should?
    Answer: See "Tips and tricks to get the most out of your iPod's battery" for information on how to extend your battery life.

14. **Question:** Does the battery ever wear out?
    Answer: Rechargeable batteries have a limited number of charge cycles and may eventually need to be replaced. Battery life and number of charge cycles vary by use and settings. As with other rechargeable batteries, you may eventually need to replace your battery.

15. **Question:** What is a "charge cycle"?
    Answer: Lithium-ion batteries can be charged a finite number of times, as defined by charge cycle. A charge cycle means using all of the battery's power, but that doesn't necessarily mean a single charge. For instance, you could listen to your iPod for a few hours one day, using half its power, and then recharge it fully. If you did the same thing the next day, it would count as one charge cycle, not two, so you may take several days to complete a cycle. Each time you complete a charge cycle, it diminishes battery capacity slightly, but you can put your iPod's battery through many charge cycles before it will only hold 80 percent of its original battery capacity.

16. **Question:** Can I get the battery replaced?
    Answer: Yes. All models of iPod are covered by the Out of Warranty Battery Program. See the iPod battery service FAQ.

If you think you need iPod service for something other than the battery, click here.

Published Date: Oct 10, 2016

Repair status terminology

This article has been archived and is no longer updated by Apple.

To learn about the terms used when checking on a repair via the Repair Status web page, visit the What Do The Repair Status Messages Mean section of this webpage.

Published Date: Feb 19, 2012

How to Clean a Mechanical Mouse

This article explains when and how you should clean a mechanical mouse. It does not apply to the the Apple Pro Mouse.

This article has been archived and is no longer updated by Apple.
You should clean a mouse if it is does not track smoothly, or if it jumps or skips. A mouse contains a small ball that must roll smoothly for the mouse to work properly. You should keep this ball free of dirt and oil by using the mouse on a clean, lint-free surface, and cleaning it occasionally.

Use the following procedure to clean a mouse:

1. Turn off your computer.
2. Turn the mouse upside down and rotate the plastic ring on the bottom counterclockwise to release it.
3. Turn the mouse right side up with one hand and catch the ring and ball with your other hand.
4. Clean the three small rollers inside the mouse with a cotton swab moistened with water. Rotate the rollers to clean all around them. If there is a build-up of material on the rollers that the cotton swab does not remove, you can use your fingernail to gently remove the material.
5. Wash the mouse ball in soapy, warm water with a mild soap such as a dishwashing liquid if oil from your hands has collected on it. Be sure to dry the mouse ball thoroughly.
6. Gently blow into the mouse case to remove any accumulated dust.
7. Put the mouse ball back in the mouse case and replace the retaining ring.

If cleaning the mouse as described does not correct your issue, the mouse may need to be replaced. Have an Apple Authorized Service Provider check it for excessive wear or other failure.
Published Date: Feb 20, 2012

WebObjects 4: Deployment FAQ

This article contains frequently asked questions (FAQ) regarding WebObjects 4 Deployment, with answers to those questions. This FAQ does not include questions involving Monitor or MonitorProxy; for Monitor issues, please see the WebObjects 4 Monitor FAQ, **article 70121**.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. Where can I get the latest documentation?
2. What does the $NEXT_ROOT/Library/WebObjects/Configuration/WebObjects.conf file do? How about the /tmp/WebObjects.conf file? What is the difference?
3. How do I go about using multiple Web Servers?
4. For some reason, the public WebObjects.conf file is not being updated by Monitor. Everything is configured correctly, what am I doing wrong?
5. How do I turn on adaptor logging?
6. How do I restart the adaptor?
7. How can I confirm that the adaptor is running?
8. What databases/adaptors are supported by WebObjects Enterprise?
9. How do I configure Microsoft IIS for WebObjects?
10. I've read all the Release Notes and still can't get WebObjects installed and running!

Question 1: Where can I get the latest documentation?

Answer: Current WebObjects documentation is available on the Apple DevWorld WWW server at http://devworld.apple.com/dev/SWTechPubs/Documents/WebObjects/ It is available in HTML and PDF formats.

Documentation is also available as part of your WebObjects installation, at:

file://$NEXT_ROOT/System/Documentation/Developer/WebObjects/ServingWebObjects.pdf
and
file://$NEXT_ROOT/System/Documenation/Developer/WebObjects/PostInstall/PostInstallTOC.html

Question 2: What does the $NEXT_ROOT/Library/WebObjects/Configuration/WebObjects.conf file do? How about the /tmp/WebObjects.conf file? What is the difference?

Answer: $NEXT_ROOT/Library/WebObjects/Configuration/WebObjects.conf is the "Public" WebObjects.conf file. /tmp/WebObjects.conf is the "private" WebObjects.conf file. For more information on public and private WebObjects.conf files, please see **article 70040**.

Question 3: How do I go about using multiple Web Servers?

Answer: To deploy on multiple web servers, the public WebObjects.conf file needs to be distributed to all web server machines. The best technique is to run Monitor on one app server, and rdist or rcp the WebObjects.conf file to all the webservers. That way you do not need to run Monitor on the webserver and you are not forced to NFS mount a single file system. You could have the webservers "pull" rather than push if security is an issue.

Question 4: For some reason, the public WebObjects.conf file is not being updated by Monitor. Everything is configured correctly, what am I doing wrong?

Answer: Check your license. If your license is only for a single application instance, then the public WebObjects.conf file will not be updated and requests for the startup for multiple instances will silently fail.

Question 5: How do I turn on adaptor logging?

Answer: Go to the /tmp directory and create a file called "logWebObjects". Depending on the adaptor and its settings, the amount of time that the resultant log file "WebObjects.log" will be created varies greatly. If it is the CGI adaptor, the next time the adaptor is run, it will check for the log. In fact, everytime the CGI adaptor receives a hit, it will check the current configuration files and the existence of the "logWebObjects" file.

The NSAPI, ISAPI, Apache, and WAI adaptors are set by the compile options in /opt/Apple/Developer/Examples/WebObjects/Source/Adaptors/Adaptor/config.h:

```
#define TPSEC   1       /* expected WO-requests / second */
#define STATLOG (TPSEC*20)      /* check /tmp/logWebObjects counter */
#define ALWAYS_LOG              /* of course, you might want to just always.. */
```

TPSEC defines how many expected WO requests you will receive in one second. STATLOG simply multiples TPSEC by 20 (or whatever number you provide). The result will be how requests the adaptor will receive before stat()'ing for the logWebObjects file. You can always turn on the ALWAYS_LOG define and the logging will begin, even without a logWebObjects file.

Also, remember to check the web server logs. In particular, the Netscape log is pretty good about reporting what the NSAPI adaptor did on startup.

Question 6: How do I restart the adaptor?

Answer: For all adaptors other than CGI, you'll need to restart the web server.

Question 7: How can I confirm that the adaptor is running?

Answer: In the game "Adventure", xyzzy is a "magic command" that allows you to transport yourself between two rooms. Xyzzy is also an option that you can enable when you compile your own adaptor. It provides a very cheap way of checking to see if the adaptor is running and to get some basic information on the adaptor. Once again, in the file:

```
/opt/Apple/Developer/Examples/WebObjects/Source/Adaptors/Adaptor/config.h:
```

set the option:

```
#define XYZZY   "xyzzy"
// #undef XYZZY
```

After recompiling the adaptor, and restarting the web server, try entering a URL such as:

http://your_web_server/cgi-bin/WebObjects/xyzzy

The following output is an example of what you'll see:

```
Server Adaptor: Server = Netscape/NSAPIWebObjects
Server Adaptor version = 4.0
Load balancing algorithm = roundrobin
Custom Adaptor File Name = libapple.so
Custom Adaptor File Version Name = 1.1
Customer Adaptor Config File Name = dflink.conf
Configuration File Path = WebObjects/Configuration/WebObjects.conf
Log File Name = WO.log
Log File Flag = logWOHeaders
```

Question 8: What databases/adaptors are supported by WebObjects Enterprise?

Answer: Apple provides Sybase, Oracle and generic ODBC adaptors for most versions of WebObjects. Third-party adaptors may be available for other databases, including Informix, Quickbase, AS/400, Supra, DB2, Gupta SQL Base, VSAM, ADABAS, IMS/DB, and NCR Teradata. Other databases may be accessed programmatically through custom libraries provided by your database vendor.

Question 9: How do I configure Microsoft IIS for WebObjects?

Answer: If you're using Microsoft IIS or PWS as your HTTP server, The CGI user must have Administrator privileges to access the NEXT_ROOT environment variable. This is necessary if you want to enable load balancing (distributing the processing load among multiple instances of a WebObjects application). Load balancing is a performance feature that you'd use on a deployment site.

To grant Administrator privileges to the CGI user, do the following:

- Open the "User Manager for Domains" application under Administrative Tools.
- Double-click the entry with the full name "Internet Guest Account." (The user name usually starts with "IUSR_".)
- In the window that opens, click the Groups button.

You'll see two tables, one called "Member of" and one called "Not member of."

- Move the Administrators group from the "Not member of" table to the "Member of" table.
- Click the OK button.

Question 10: I've read all the Release Notes and still can't get WebObjects installed and running!

Answer: It seems that on some systems the /tmp or C:\\TEMP directories either don't exist or don't have read/write permissions set correctly. Be sure the directory can be seen and accessed by all. WebObjects, other apps and users need access to this directory to work properly. On Windows NT, also make sure that your environment variables (TMP and TEMP) are set to C:\\TEMP.

Published Date: Feb 20, 2012

WebObjects: WebObjects And the Browser Stop Button

This document discusses what happens when a user presses the browser's "Stop" button during a WebObjects session. This document assumes that you are using WebObjects 4 or WebObjects 4.5.
This article has been archived and is no longer updated by Apple.
Whether because of complex processing or network load, some WebObjects requests may take a long time to execute. If the user presses their browser's "Stop" button during one of these requests, what happens to the WebObjects application?

In this case, the server has no way of knowing that the user has pressed the stop button; it will continue to process the request and return the response page. This page will then be ignored or discarded by the browser. As a result, there could be a state synchronization issue between the client and the server. If the WebObjects application is storing state on the server, this will always be the case; the user will still see the original page, but the WebObjects application on the server will think that the client has moved on to the next page. This gives the same result as if the client had pressed the "Back" or "Previous" button on their server and accessed a cached page.

In most cases, where state is stored on the client, in cookies or hidden fields, the stop button will have no effect on the session. However, it is possible that a cookie which is storing state could be updated without the page being updated; this would cause a similar synchronization issue to that caused by the server-side state storage discussed above.

Whether state is stored on the client or on the server, there will be no other ill effects caused by the stop button; the WebObjects application will complete its normal request-response loop and remain in a normal post-processing state until it receives another request. In general, if you know that a particular operation will take a long time to complete, consider using the **WOLongResponsePage**. This will immediately return a page asking the user to wait and optionally displaying the status of a request. For more information on WOLongResponsePage, see the class documentation or the LongRequest example that is part of the WebObjects 4 distribution. For more information on dealing with state synchronization issues and the browser "Back" button, see the state management sections of the WOInfoCenter.

Published Date: Feb 20, 2012

WebObjects 3.5.1 Java Bridge Troubleshooting Guide

This document describes some common problems developers may encounter when using the Java development components of WebObjects 3.5.1, and suggests some ways to work around them.
This article has been archived and is no longer updated by Apple.
There are several steps you can follow to resolve or avoid crashes in your Java applications:

Use the best Java Bridge you can

Developers who make extensive use of Java should consider upgrading to WebObjects 4. In addition to bug fixes, the Java Bridge included with WebObjects 4 has enhanced control of asynchronous garbage collection. New features in the WebObjects 4 Java Bridge may allow you to correct problems that may not be fixable with WebObjects 3.5.1.

If upgrading is not an option for your organization, make sure you have the most recent relevant patches installed. The WebObjects 3.5.1 Java Patch 2 contains several Java Bridge bug fixes and should be installed by anyone developing WebObjects applications using Java. For more information, please see the list of current WebObjects patches at:

http://docs.info.apple.com/article.html?artnum=70037

Avoid multiple EOF threads

Some thread safety issues which have been resolved in WebObjects 4 could not be addressed by the WebObjects 3.5.1 patch. You can avoid many JavaBridge-related crashes in a multithreaded EOF application by keeping all of your EOF calls in your main thread.

Increase the Java VM heap size

Java error messages like "StackOverflowError" and "OutOfMemoryError" can be caused by an overflow of the Java Virtual Machine's heap memory. By default, the heap size is 16 MB. Each increase of 16 MB corresponds to an increase of 1,300-1,500 additional active sessions for an average WebObjects application. Apple recommends that you set your Java VM heap size as high as your system resources permit:

```
//Assume that the JavaVM framework is included with your project
// Add this code to your MyApplication_main.m file

#import <JavaVM/NSJavaVirtualMachine.h>


int main(int argc, const char *argv[])
{
NSAutoreleasePool* myPool=[NSAutoreleasePool new];
       NSMutableDictionary* myArguments=[NSDictionary
dictionaryWithObjectsAndKeys:
[NSNumber numberWithInt:32*1024*1024], @"NSJavaMinHeapSize",
               [NSNumber numberWithInt:64*1024*1024], @"NSJavaMaxHeapSize",
nil];
       [NSJavaVirtualMachine setDefaultVirtualMachineArguments:myArguments];
       return WOApplicationMain(@"Application", argc, argv);
}
```

For a complete list of arguments for NSJavaVirtualMachine, see **NSJavaVirtualMachine.h** in the **JavaVM.framework** headers.

Avoid asynchronous garbage collection

Java error messages like "NoSuchMethodError" and "nukeObjCObject" may be caused by the asynchronous garbage collector releasing inappropriate objects. Ordinarily, asynchronous garbage collection will be triggered automatically when the Java VM heap is full. If your heap size is large enough, you can avoid asynchronous garbage collection completely by periodically initiating garbage collection at the end of a request. The following source code explains how to manually initiate the garbage collector every twentieth request, looping through the procedure three times to ensure that all dependent objects are released. You should experiment with different values for the collection frequency and loop count to determine the optimal values for your application.

Add this code to your Application.java file:

```
public Response handleRequest(Request request) {
      Response response = super.handleRequest(request);
       requestsCount++;
          if (requestsCount % 20 == 0) {
               FullGarbageCollection();
```

```
            }

          return response;
       }
```

Also, modify the FullGarbageCollection code to include a bridge crossing:

```
  private static void FullGarbageCollection() {

    for (int i=1; i<3; i++) {      // 3 here could be changed
       Runtime runtime = Runtime.getRuntime();
       long isFree = runtime.freeMemory();
       long wasFree;
       do {
           wasFree = isFree;
           runtime.gc();
           isFree = runtime.freeMemory();
       } while ( isFree > wasFree );
       runtime.runFinalization();

       // WARNING: The following line is necessary in order to ensure
       // that the ObjC counterparts of any collected hybrid objects
       // are released (and subsequently dealloc'ed) to clear any weak
       // references. This happens when the main thread crossed the
       // bridge during the wrapped call.
       application();
     }
   }
```

Retain Java arrays

If a Java method returns a new Java array which is not referenced outside the scope of that method, the Java garbage collector may remove it while its Objective C counterpart is still in use. This will result in an Objective C error messages indicating that a message was sent to a freed object, or a "selector not recognized" error message from the enclosing object when a message is sent to the released object. To avoid this problem, explicitly retain the Java array, vector, or other affected object:

Instead of:

```
public ImmutableVector myVector() {
    _myVector=<some complex calculation>;
    return _myVector;
}
```

Do this:

```
ImmutableVector _myVector;
public ImmutableVector myVector() {
    _myVector=<some complex calculation>;
    return _myVector;
}
```

Explicitly release autorelease pools

If you create an autorelease pool in your Java code, be sure that you release it manually. For example, if you write the following code:

```
Incorrect()
{
  AutoreleasePool pool = new AutoreleasePool();
  /* function implementation */
  /* forget about pool, leaving it for the gc to clean up */
}
```

the objects in the autorelease pool could be released at any point during the execution of the function. Instead, ensure that your autorelease pool is always released manually, even if an exception is encountered:

```
Correct()
```

```
{
  AutoreleasePool pool = new AutoreleasePool();
  try
  {
     /* function implementation */
  }  finally {
     pool.release();
  }
}
```

In general, you should only create autorelease pools in Java in WebObjects 3.5.1 if you need extremely fine control over the lifetime of objects.

Always call super.finalize()

The **finalize()** method is called by the Java garbage collector before deallocating your object. If any of your hybrid Java objects implement finalize(), the implementation must call **super.finalize()** to avoid potentially serious memory leaks. In addition, you should never make a call in a finalize() method that could result in a method invocation across the bridge.

Catch all constructor exceptions

When instantiating a wrapped or hybrid object, checking for a non-null return from your constructor method is not enough. Always use a try/catch statement to ensure that an instantiation error will throw an exception.

Published Date: Feb 20, 2012

WebObjects 3.5.1 Patch 3 Overview

This patch is now obsolete. Please see the WebObjects Current Patch List, article **70037**, for information on the most current patches for WebObjects and Enterprise Objects Framework. This obsolete patch is provided here as a convenience to our customers who have not yet upgraded to the most current patch level.
This article has been archived and is no longer updated by Apple.

About WebObjects 3.5.1 Patch 3

This patch contains a number of bug fixes affecting the Java components of WebObjects 3.5.1. This patch and **EOF 2.2 Patch 2** include all bugs fixed in WebObjects 3.5.1 Java Patch 2. Apple recommends this patch for anyone developing or deploying WebObjects 3.5.1 Java applications on Windows NT or Solaris. For more detailed information on this patch, please see the sections "New Features" and "Problems Fixed" below. For important general information on avoiding problems with Java code under WebObjects 3.5.1, please read **TIL article 70035**.

Installing WebObjects 3.5.1 Patch 3 on Windows NT 4.0

1. Download the Windows NT version of the patch from Apple's FTP site at ftp.info.apple.com. Also **download** the installer script, "patcher.nt.sh".

2. Log in as a user with Administrator privileges.

3. Open a Bourne shell. The Bourne shell should be available from your Start menu, under the WebObjects program group, or under your Apple root directory at NextLibrary\\Executables\\sh.exe.

4. Change to the directory containing the patch and the patch installer, "patcher.nt.sh".

5. Type the following at the shell prompt (make sure that there are no WebObjects applications running first):

```
./patcher.nt.sh -install WOF351_NT_Patch3.TAR.gz
```

For more information on using the "patcher.nt.sh" program, type the following at the command prompt:

```
./patcher.nt.sh -help
```

6. Reboot your Windows NT system

Installing WebObjects 3.5.1 Patch 3 on Solaris

1. Download the Solaris version of this patch from Apple's FTP servers at ftp.info.apple.com. Also **download** the installer script, "patcher.sh".

2. Log in as root. If you're not sure how to log in as root, see your system administrator.

3. Change to the directory containing the patch and the patch installer, "patcher.sh".

4. Type the following at the shell prompt (make sure that there are no EOF applications running first):

```
./patcher.sh -install WOF351_Solaris_Patch3.TAR.Z
```

For more information on using the "patcher.sh" program, type the following at the command prompt:

```
./patcher.sh -help
```

5. Reboot your Unix system

New Features

New in WebOjects 3.5.1 Patch 3

JDK 1.1.6: WebObjects 3.5.1 shipped with version 1.1.3 of Sun's Java Development Kit. This patch upgrades the JDK to version 1.1.6. The new version contains a number of bug fixes, performance improvements, internationalization improvements, and other enhancements. See Sun's JDK 1.1.6 web pages at http://java.sun.com/products/jdk/1.1.6/ and http://java.sun.com/products/jdk/1.1/CHANGES for details on JDK 1.1.6 and the changes from previous versions.

New in WebObjects 3.5.1 Java Patch 2

Java VM arguments: You may now pass "command line" arguments to the Java Virtual Machine. This is particularly useful for increasing the memory allocation pool (the garbage collected heap), which defaults to a maximum size of 16 MB. You should increase the pool size if you receive a java.lang.OutOfMemoryError exception.

Here is some sample code showing how to pass these arguments. Be sure to add the JavaVM framework to your project. In YourApplication_main.m, do something like this:

```
#import <WebObjects/WebObjects.h>
#import <JavaVM/NSJavaVirtualMachine.h>
int main(int argc, const char *argv[])
{
NSNumber *minHeap = [[NSNumber alloc] initWithInt:30*1024*1024];
NSNumber *maxHeap = [[NSNumber alloc] initWithInt:60*1024*1024];
NSDictionary* myArguments = [[NSDictionary alloc]
 initWithObjectsAndKeys:
  minHeap, @"NSJavaMinHeapSize",
  maxHeap, @"NSJavaMaxHeapSize",
  nil];

[NSJavaVirtualMachine setDefaultVirtualMachineArguments:myArguments];
[minHeap release];
[maxHeap release];
[myArguments release];
return WOApplicationMain(@"Application", argc, argv);
}
```

For a complete list of arguments, refer to the NSJavaVirtualMachine.h header in the JavaVM framework.

Problems Fixed

Corrected in WebObjects 3.5.1 Patch 3

Some exceptions not passed across Java Bridge
Apple reference # 2300566

PROBLEM:
If an Objective C exception was raised in an Objective C method called from Java, the bridge correctly converted the NSException to a Java exception and threw it in Java. If the conversion of the NSException itself raised an exception, the subsequent behavior of the application was undefined.

RESOLUTION:
The conversion exception is now caught, both exceptions are logged, and a Java UnknownError is thrown in the Java VM with the message: "Failed to convert Objective C exception to Java exception. Refer to log output for more information."

Java access violation error when bridge cannot find a class
Apple reference # 2303014

PROBLEM:
If a Java exception occurred while WebObjects was attempting to look up a Java class, the exception might not be re-raised in Objective C. If this occurred, the JavaBridge sometimes crashed when it failed to load the wrapper class.

RESOLUTION:
The JavaBridge now raises an appropriate exception in Objective C when a wrapper class can not be found.

Java object creation race condition
Apple reference # 2310235

PROBLEM:
A race condition on Windows NT sometimes allowed the Java garbage collector to reclaim a Java object while it was still needed by Objective C code, resulting in application crashes.

RESOLUTION:
The integration between Java and Objective C during the creation of hybrid objects has been improved to decrease the likelihood of premature garbage collection.

Garbage collector frees wrapped objects prematurely
Apple reference # 2310270

PROBLEM:

When a wrapped Objective C object was created in a Java method, the Objective C proxy object was not retained. Java garbage collection could then release this object while it was still in scope.

RESOLUTION:
Objective C proxy objects are now retained until the appropriate autorelease pool is deallocated.

next.util.CalendarDate constructors calculate year values incorrectly
Apple reference # 2310340

PROBLEM:
Under WebObjects 3.5.1, next.util.CalendarDate constructors did not correctly handle the two-digit year values returned by by the Java Date class' getYear() method, causing CalendarDate objects to be constructed with incorrect year values..

RESOLUTION:
These next.util.CalendarDate constructors now calculate year values correctly.

Java Bridge fails when an Objective C constructor returns nil
Apple reference # 2310395

PROBLEM:
The Java Bridge did not correctly handle the case where the Objective C base of a hybrid object returned nil from its Objective C init method.

RESOLUTION:
In this case, a NullPointerException is now raised in Java. This fix included a change to one of the header files used by the "bridget" utility. All Java projects must be rebuilt to take advantage of this fix. Please note that your code still needs to wrap Java constructors in try/catch statements to catch instantiation exceptions; see **article 70035** for more details.

NSUnicodeStrings not correctly converted by Java Bridge
Apple reference # 2310656

PROBLEM:
In WebObjects 3.5.1, NSUnicodeStrings were not correctly converted into Java strings.

RESOLUTION:
Unicode strings are now detected and correctly converted into Java strings.

AutoreleasePool.finalize() releases Objective C autorelease pool
Apple reference # 2310883

PROBLEM:
The next.util.AutoreleasePool.finalize() method contained code that released the underlying Objective C autorelease pool. Although the intention of this code was to prevent leaks, it could result in an Objective C autorelease pool being released unexpectedly by routine Java garbage collection if a reference to the Java pool was not held.

RESOLUTION:
The Objective C autorelease pool is no longer released in AutoreleasePool.finalize(). If AutoreleasePool.release() is not explicitly called, the underlying Objective C pool will leak into its containing pool. Refer to **article 70035** for more information about proper use of autorelease pools in Java.

Corrected in WebObjects 3.5.1 Java Patch 2

DecimalNumber: Several of the next.util.DecimalNumber arithmetic methods raised exceptions when called. These methods now work properly.

CalendarDate: The next.util.CalendarDate constructor CalendarDate(java.util.Date date) would sometimes return an incorrect date. This has been fixed.

NoSuchMethodError exceptions: WebObjects applications written in Java would occasionally raise a java.lang.NoSuchMethodError exception, when the method did in fact exist. This was caused by a race condition on the interaction between Objective C's reference counting and Java's garbage collection. This has been fixed. These exceptions could also be raised if a subclass of next.eo.CustomObject did not implement a default constructor (that is, an -init method with no parameters). Chained initializer methods would give the same result if some of the methods in the chain did not have Java equivalents. After installing this patch, a missing default constructor will generate a more meaningful error message.

Java string retain crashes: A problem was fixed where Java strings were garbage collected before WebObjects had a chance to retain them. The missing strings caused some applications to crash under heavy use.

Multiprocessor crashes on Solaris: Because of improper use of lock files, WebObjects 3.5.1 applications would sometimes crash on multiprocessor Solaris machines. This behavior is fixed in this patch.

Incorrect cloning behavior: Previously, custom Java objects did not correctly implement the Cloneable interface. With this patch installed, subclasses of NextObject and CustomObject should be cloneable.

DirectToWeb application crashing: The previous version of this patch for Windows NT caused crashes when launching a DirectToWeb application. This has been corrected in the current patch release.

EOEditingContext can now retain all referenced objects: EOEditingContext's weak references to objects caused problems with Java's multithreaded garbage collection. If you are writing an application which accesses the Enterprise Objects Framework from Java, you may encounter two problems:

- EOEditingContext's processing of an EO's deallocation notification is not thread safe
- An object that is no longer retained by your application but has not been deallocated may be refetched. However, the reference may be reestablished too late to prevent the object from being deallocated.

In order to solve this problem, we have made it possible for EOEditingContext to retain all of its objects. Two class methods have been added:

```
+ (void)setInstancesRetainRegisteredObjects:(BOOL)flag;

+ (BOOL)instancesRetainRegisteredObjects;
```

If instancesRetainRegisteredObjects is YES, newly created EOEditingContexts will retain any EOs that it is observing. The default value for this flag is YES if an application contains Java, and NO otherwise. Each EOEditingContext caches the value of this flag, so it is possible to switch from one state to the other midway through your application. Note that only newly created EOEditingContexts will be affected by the flag.

In order to collect the EOs, you must either deallocate the editing context, or call the new method:

```
- (void)reset;
```

on the editing context. Calling reset causes the editing context to forget and release all of the objects that it is watching, and makes all of those objects effectively unusable. You typically will not not have to do anything to a Java WebObjects application in order to be compatible with this new behavior. A session's defaultEditingContext will get collected when the session times out, releasing all of the EOs fetched by that session.

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Published Date: Feb 20, 2012

WebObjects: Current patch list

This article has been archived and is no longer updated by Apple.

This document discusses the current updates for various versions of WebObjects. Click the links for detailed information about each patch. To determine which updates are installed on your computer, see:

- 70148: "WebObjects: Using Fingerprint Files" for Solaris and HP-UX.
- 70074: "WebObjects: Determining the Installed WebObjects Version" for Mac OS X and Windows.

WebObjects 5.3

WebObjects 5.3 users should install the following update:

- WebObjects 5.3.1: This update adds a modified Developer tools license, improves the Xcode EOModeler plug-in, improves WebObjects Builder workflow, and includes general improvements.
- WebObjects 5.3.2: This update improves security and deals with incompatibilities with Xcode 2.4.
- WebObjects 5.3.3: This update includes 2007 time zone information that changes the start of Daylight Saving Time in several countries. This update is *strongly recommended* for all WebObjects 5.3 applications.

WebObjects 5.2

WebObjects 5.2 users should install the following updates:

- WebObjects 5.2.1 : This update contains general improvements for WebObjects 5.2 on all platforms. It is recommended that WebObjects users on all platforms install this update.
- WebObjects 5.2.2: This update is recommended only for WebObjects customers who want to use Mac OS X 10.3 (Panther), use JDK 1.4.1, or deploy their applications on JBoss servers.

  The Mac OS X edition of WebObjects 5.2.2 adds support for, and requires, Mac OS X 10.3 (Panther). The Mac OS X, Windows, and Solaris editions all add support for, and require, Java 1.4.1. All versions add support for JBoss deployment, and also include several improvements.

- WebObjects 5.2.3: This update contains general improvements for WebObjects 5.2 on all platforms. It is recommended that WebObjects users on all platforms install this update. The WebObjects 5.2.3 release officially supports Java 1.4.2.
- WebObjects 5.2.4: This update is for users who plan to develop their WebObjects applications on Mac OS X 10.4 using the Xcode development tool suite, or plan to deploy their WO 5.2 applications on Mac OS X Server 10.4. Windows and Solaris users should also install this update.

WebObjects 5.1

WebObjects 5.1 users on all platforms should install one or more of the following updates:

- WebObjects 5.1.4: This update resolves incompatibilities between WebObjects 5.1.x Developer and Mac OS X 10.2, and is required to run WebObjects 5.1.x Developer on this version of the operating system.
- WebObjects 5.1.3: This update contains targeted improvements for WebObjects 5.1 on all platforms. Apple does not recommend that all customers install this update. Only customers who are affected by one or more of the issues described in the release notes should install this update.
- WebObjects 5.1.2: This update contains general improvements for WebObjects 5.1 on all platforms. It is recommended that WebObjects users on all platforms install this update.

WebObjects 5

WebObjects 5 users on all platforms should install one of the following updates:

- WebObjects 5 Update 3: This update contains improvements for WebObjects 5 on Mac OS X (Server) 10.1, and is required to run WebObjects on this version of the operating system.
- WebObjects 5 Update 2: This update contains general improvements for WebObjects 5 on Mac OS X (Server) 10.0.4, Windows, and Solaris. It is recommended that WebObjects users on these platforms install this update. If you want to run WebObjects on Mac OS X 10.1, you should install WebObjects 5 Update 3 instead.

WebObjects 4.5.1

WebObjects 4.5.1 users should install the following update:

- WebObjects 4.5.1 Update 4: This update contains general improvements for WebObjects 4.5.1 on all platforms. It is recommended that WebObjects users on all platforms install this update. Since it includes all changes made in earlier updates for WebObjects 4.5.1, you only need to install this update.

WebObjects 4.5

WebObjects 4.5 users should install one of the following updates:

- WebObjects 4.5 Update 3**:** This update contains general improvements for WebObjects 4.5 on all platforms. It is recommended that WebObjects users on all platforms install this update. Since it includes all changes made in earlier updates for WebObjects 4.5, you only need to install this update.
- WebObjects 4.5 Update 1**:** This update contains improvements for WebObjects 4.5 on Windows 2000, and is required to run WebObjects on this operating system. This update contains the minimal set of changes needed to run WebObjects 4.5 on Windows 2000, but these are included in WebObjects 4.5 Update 3.

WebObjects 4 and EOF 3.0

WebObjects 4.0.1 users should install one of the following patches:

- WebObjects 4.0.1 Patch 2--This patch contains general improvements for WebObjects 4.0.1 on all platforms except for Mac OS X Server 1.2. WebObjects users on Mac OS X Server 1.0 and HP-UX should install this patch. Mac OS X Server 1.2, Solaris, and Windows NT users should install Patch 3.
- WebObjects 4.0.1 Patch 3--This patch contains general improvements for WebObjects 4.0.1 on Mac OS X Server 1.2, Solaris, and Windows NT. It is recommended that WebObjects users on these platforms install this patch.

WebObjects 3.5.1 and EOF 2.2

WebObjects 3.5.1 users on all platforms should install the following patches:

- WebObjects 3.5.1 Patch 4--This patch corrects a number of issues with the WebObjects 3.5.1 frameworks, including Year 2000 date rollover issues. Includes patches for Solaris, HP-UX, and Windows NT, and documentation for OPENSTEP 4.2 for Mach.
- EOF 2.2 User Patch 3 and EOF 2.2 Developer Patch 2--This patch contains improvements for Apple's Enterprise Objects Framework and includes fixes from several previous patches, including fixes for Java issues. . It should be installed by Windows NT users only. Solaris users should install EOF 2.2 Patch 2 instead. OPENSTEP for Mach and HP-UX users should install EOF 2.2 Patch 1 instead.
- EOF 2.2 User Patch 2 and EOF 2.2 Developer Patch 2--This patch contains improvements for Apple's Enterprise Objects Framework and includes fixes from several previous patches, including fixes for Java issues. . It should be installed by Solaris users only. OPENSTEP for Mach and HP-UX users should install EOF 2.2 Patch 1 instead.
- EOF 2.2 Patch 1--This patch contains improvements for Apple's Enterprise Objects Framework and includes fixes from several previous patches. It should be installed by OPENSTEP for Mach and HP-UX users only. This patch includes developer and deployment components.
- WebObjects 3.5.1 Monitor Patch--This patch corrects a number of issues with the Monitor application which shipped with WebObjects 3.5.1.

In addition, there is a procedure that some WebObjcts 3.5.1 users may wish to follow depending on their platform and needs: Revised RebuildWODefaultApp Script. This allows developers to access EOF from pure-WebScript WebObjects applications

WebObjects 3.1 and EOF 2.1

WebObjects 3.1 users on all platforms should install the following: WebObjects 3.1 Patch 1. This patch corrects a number of issues with the WebObjects 3.1 frameworks, including Year 2000 date rollover issues. Includes patches for Solaris, HP-UX, and Windows NT, and documentation for OPENSTEP 4.2 for Mach.

WebObjects 3.0 and EOF 2.0

Note: Apple is allowing Enterprise Objects Framework version 2.0 users to upgrade to a patched version of EOF 2.2 at no cost. Details on the upgrade and the patch will be posted here in the near future. Apple recommends this upgrade for all users of EOF 2.0.

There are no general patches available at this time for users of WebObjects 3.0.

These patches affect users of EOF 2.0, the version of Apple's Enterprise Objects Framework that shipped with WebObjects 3.0:

TA26697_WebObjects_Current_patch_list.pdf

- EOF 2.0 Adaptor patches for the ODBC, Oracle, and Informix adaptors
- A workaround for an issue with multiple BLOBs under EOF 2.0
- Sybase client libraries for EOF 2.0

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Published Date: Feb 20, 2012

WebObjects and SQL Server 7

The workaround described in this article has been included in WebObjects 4.0.1 Patch 2 and subsequent patches. Please see the WebObjects Current Patch List, **article 70037**, for information on the most current patches for WebObjects and Enterprise Objects Framework. This obsolete article is provided here as a convenience to our customers who have not yet upgraded to the most current patch level.
This article has been archived and is no longer updated by Apple.
Q: I get a crash when I try to use the WebObjects ODBC adaptor to connect to Microsoft SQL Server 7. How can I fix this?

A: This is a known issue with some versions of WebObjects and SQL Server 7. WebObjects 3.5.1 users can avoid this by installing **EOF 2.2 User Patch 2**. An updated version of the WebObjects 4 ODBC adaptor for Windows NT is now available which will work with Microsoft SQL Server 7. This is an **unsupported product** and users should install it at their own risk. Apple will not guarantee or provide support for this package.

To install the modified ODBC adaptor on WebObjects 4:

1. **Download** the adaptor package from Apple's FTP server.

2. Uncompress the ODBCEOAdaptorWO401.tar.gz file. This file contains both the source code and a built version of the ODBC adaptor for WebObjects 4.

3. Copy the file ODBCEOAdaptor.dll from inside the ODBCEOAdaptor.framework directory to <$NEXT_ROOT>/Library/Executables. Be sure to back up the original file first.

4. Copy the ODBCEOAdaptor.framework to <$NEXT_ROOT>/Library/Frameworks. Be sure to back up the original .framework directory first.

You must make clean and recompile existing WebObjects projects against the new frameworks in order to connect to SQL Server 7 databases. This version of the adaptor also corrects issues with case-insensitive database comparisons and the naming of reverse engineered tables. However, Apple recommends this patch **only** for customers who need SQL Server 7 connectivity. This patch was tested with version 3.510.3711.0 of the ODBC core components.

Published Date: Feb 19, 2012

WebObjects 4: Troubleshooting Apache Web Server Deployments

This document describes a problem which can occur with some versions of the Apache web server and WebObjects 4, and explains how to avoid it.

This article has been archived and is no longer updated by Apple.

Q: I'm using WebObjects 4. When I connect to an Apache web server with the WebObjects cgi adaptor, form names and variables are not returned. My application works fine when I run it from Project Builder. How can I make it work with Apache?

A: Some versions of the Apache web server have the **ServerSignature** setting turned on by default. In some cases, this generates http headers that the WebObjects cgi adaptor cannot interpret. To avoid this problem edit your **httpd.conf** configuration file and change the ServerSignature setting from "on" to "off".

Published Date: Feb 19, 2012

WebObjects 4: Setting Java VM Command-Line Arguments

This document discusses methods for configuring the Java Virtual Machine under WebObjects 4. For information on using Java under WebObjects 3.5.1, please see article 70035, **WebObjects 3.5.1 Java Bridge Troubleshooting Guide**.
This article has been archived and is no longer updated by Apple.

Setting Java VM Command-Line Options

Q: How do I pass command-line arguments to the Java VM? I need to increase the garbage heap size, so that my application doesn't run out memory.

A: WebObjects 4 introduces a new way to specify arguments to the Java VM. The following arguments may be specified. Those ending in "Size" or "Port" take number arguments; all others take YES or NO.

- NSJavaCheckSource (equivalent to -cs or -checksource)
- NSJavaNativeStackSize (equivalent to -ss<number>)
- NSJavaStackSize (equivalent to -oss<number>)
- NSJavaMinHeapSize (equivalent to -ms<number>)
- NSJavaMaxHeapSize (equivalent to -mx<number>)
- NSJavaVerifyMode (equivalent to -verify)
- NSJavaEnableClassGC (NO is equivalent to -noclassgc)
- NSJavaEnableVerboseGC (equivalent to -verbosegc)
- NSJavaDisableAsyncGC (equivalent to -noasyncgc)
- NSJavaVerbose (equivalent to -v or -verbose)
- NSJavaDebugging (equivalent to -debug)
- NSJavaDebugPort

There are three ways to set these arguments:

1) Use the defaults command-line tool:
```
defaults write myapp NSJavaMinHeapSize 33554432
```
2) Pass them on the command line:
```
MyApp.woa/MyApp -NSJavaMinHeapSize 33554432
```
3) Set them programatically. Refer to the documentation for **NSUserDefaults** (Objective C) or **com.apple.yellow.foundation.NSUserDefaults** (Java).

Q: After porting a WebObjects 3.5.1 application to WebObjects 4, I receive this message. What should I do?

```
Mar 22 08:23:54 VM[268] NSJavaVirtualMachine: WOF 3.5.1 compatibility method
+setDefaultVirtualMachineArguments: has been called.  This call is no longer
necessary, and will not be supported in the future.  Get your code off it
now!
```

The **setDefaultVirtualMachineArguments:** method was introduced in the WebObjects 3.5.1 Java Patch (see article 70037, **WebObjects Current Patch List** for current WebObjects patch information.) It should only be called on patched WebObject 3.5.1 systems. After porting to WebObjects 4, this call should be replaced by the technique described above.
Published Date: Feb 19, 2012

WebObjects 4: Troubleshooting Error Messages and the WebObjects URL

When debugging a WebObjects application, the error messages you see in your web browser can help you diagnose deployment problems. Once you recognize where the error message is coming from and what the message means, you will be well on your way to solving your problem.

This document explains what each element of the WebObjects URL means, and what error messages a problem with that element might cause. We will examine the URLs of both Direct Connect and web server-based applications.
This article has been archived and is no longer updated by Apple.

The Direct Connect URL

Deploying WebObjects Applications With Direct Connect

WebObjects 4's Direct Connect option allows you to develop and test a WebObjects application without a separate web server. This is the default when you start an application from the command line. This option is useful for developers, because it eliminates the need to run a web server on your development system.

The URL for a DirectConnect application will look something like this:

```
http://localhost:33543/cgi-bin/WebObjects/HelloWorld
```

The Hypertext Protocol

The first part of the URL:

```
http://localhost:33543/cgi-bin/WebObjects/HelloWorld
```

represents the protocol you are using to communicate. The http prefix represents the hypertext transfer protocol and means that you are expecting a response in html format. For a deployed WebObjects application this response will come from a web server; for a direct connect application, it comes from a WebObjects application. If you had misspelled this part of the URL, for example:

```
htpp://localhost:33543/...
```

you would get an error message from your web browser such as:

```
The protocol specified in this address is not valid. Please make sure the address is correct and try again!
```

The browser will raise an error of this kind whenever it doesn't recognize the protocol you request. This error message will vary according to your browser and version.

The Hostname

The next part of the URL:

```
http://localhost:33543/cgi-bin/WebObjects/HelloWorld
```

is the hostname of the machine you are connecting to and the port number to which you're trying to connect. In this case, it is an alias for your local machine. If you mistype the hostname, the Domain Name Lookup performed by your web browser will fail, and you will get an error message something like this:

```
Internet Explorer could not open the Internet site
A connection with the server could not be established
```

or this:

```
Netscape is unable to locate the server
Please check the server name and try again
```

This message is generated by the browser and will vary according to your browser and version.

The Port Number

The hostname for a DirectConnect application is always followed by a port number:

```
http://localhost:33543/cgi-bin/WebObjects/HelloWorld
```

When a WebObjects application is started at the command line, the port number can be specified with the **-WOPort** option.

If there is no WebObjects application running on the port you specify, you will get an error message something like this:

```
Internet Explorer could not open the Internet site
A connection with the server could not be established
```

or this:

```
There was no response.  The server could be down or is not responding.
If you are unable to connect again later, contact the server's administrator
```

This error message comes from the browser and will vary according to your browser and version. This error message may be the same as the error message for an incorrect hostname, above.

Communicating with the DirectConnect Application

If there were a WebObjects application running on port 33543 of your local system, the URL:

```
http://localhost:33543/
```

would connect to it successfully. Since each Direct Connect application will be using a unique port, nothing after the port number is significant when making the initial connection. However, the rest of the URL is very important when you deploy your application on a web server.

The Web Server URL

Deploying WebObjects Applications With a Web Server

While DirectConnect provides a quick way for developers to work with their WebObjects applications, once development is finished the application should be deployed on a web server. The URL of a WebObjects application running on a web server will look something like this:

```
http://webserver.domain.com/cgi-bin/WebObjects/HelloWorld
```

The Protocol And Host

The first part of this URL:

http://webserver.domain.com/cgi-bin/WebObjects/HelloWorld

is the same as for the direct connect URL above. The difference is that here the hostname will be either the numerical or named IP address of the web server:

http://**www.apple.com**/...

or

http://**17.254.0.91**/...

In addition, no port number is given. This means that the web browser will try to connect to the default http port, port 80. If the protocol, hostname or port number is incorrect, you will see the same errors as given above for the direct connect URL.

The cgi-bin Directory

The next part of the URL:

http://webserver.domain.com/**cgi-bin**/WebObjects/HelloWorld

represents the web server's cgi-bin directory. The web server should recognize this as a signal that the next part of the URL is an executable to be run. You can run executables from any path if your web server is configured to do so. Microsoft's IIS web server normally uses the path "scripts" instead of "cgi-bin":

http://webserver.domain.com/**scripts**/WebObjects.exe/HelloWorld

If the web server does not have the cgi-bin path configured to run executables or does not exist you will get an error message such as:

```
Not Found
The requested object does not exist on this server. The link you followed is
either outdated, inaccurate, or the server has been instructed not to let
you have it.
```

This error message is generated by the web server and is usually displayed as a page in the web browser. If you receive this error, check that the server is configured to run executables from the path cgi-bin. The specific steps required will depend on your web server. The web server error log

files will help you to debug this.

The WebObjects Adaptor

The next part of the URL is the name of the executable to run, in this case the WebObjects adaptor:

```
http://webserver.domain.com/cgi-bin/WebObjects/HelloWorld
```

On Windows NT this may be "WebObjects.exe". The error messages you get from the adaptor will vary depending on the specific adaptor module you are using; cgi-bin, NSAPI, ISAPI, or Apache. If you send a URL with the adaptor and no other arguments, you might get a response from the adaptor or an error message from the web server. Instead, to test the adaptor, send a URL with some characters after the adaptor name:

```
http://webserver.domain.com/cgi-bin/WebObjects/someJunktext
```

You will get an error message like:

```
The requested application was not found on this server
```

This message comes from the WebObjects adaptor. Since the adaptor is now running, you can debug adaptor error messages by turning on adaptor logging. This is normally
done by creating a file named logWebObjects in your system's $TEMP folder. On Solaris, for example, you must create the file **/tmp/logWebObjects** as the root user. The adaptor will then start logging information into the file **/tmp/WebObjects.log**.

The WebObjects Application

The last part of the URL:

```
http://webserver.domain.com/cgi-bin/WebObjects/HelloWorld
```

is the name of your WebObjects application. The WebObjects adaptor will check the **public webobjects.conf file** to find instances of an application with this name. If it finds one, it will forward the request to that application. If it does not, it will check the **private webobjects.conf file**. If no instance with the appropriate application name is found in either file, you will see the same error message as when you typed in garbage above:

```
The requested application was not found on this server
```

This error message is generated by the WebObjects adaptor.

If you have the HelloWorld application configured and running, you will see the page generated by the application in your web browser. Once you have connected to the application, you may see additional information at the end of the URL:

```
http://webserver.domain.com/cgi-bin/WebObjects/HelloWorld.woa/wo/3HGN10gz64bjuvic1/0.2
```

This is added to the URL by the WebObjects application and should not be edited by the user.

Conclusion

The web browser, web server, and WebObjects adaptor parse the URL from left to right, only proceeding when there are no errors. Recognizing where the error messages you see in the browser come from can give you valuable clues to where problems exist in your WebObjects deployment.

Published Date: Feb 20, 2012

WebObjects 4.0.1 Frequently Asked Questions

This document answers some common questions about the 4.0.1 release of Apple's WebObjects application server development system.
This article has been archived and is no longer updated by Apple.
Q: What is WebObjects 4.0.1?

A: WebObjects 4.0.1 was released in conjunction with Apple's MacOS X Server operating system. Its most important feature is support for the MacOS X Server platform. However, the release also includes several other enhancements, including more examples, tutorials, and documentation; enhancements to WOInfoCenter; and several high priority bug fixes. See below for details on specific changes made in this release.

Q: How do I get WebObjects 4.0.1?

A: If you're a licensed user of WebObjects 4 on Windows NT, Solaris, or HP-UX, Apple will mail you a CD of WebObjects 4.0.1 automatically. If you received WebObjects 4 as part of the MacOS X Server distribution, or if you received your copy of WebObjects 4 after mid-April, 1999, you already have WebObjects 4.0.1. If you have questions about your status, please contact your Apple sales representative for more information.

Q: What version do I currently have installed?

A: The WebObjects CD has a version number printed on the right-hand side, underneath the platform identifier. It will say either "WebObjects 4.0" or "WebObjects 4.0.1."

Q: I've received my copy of WebObjects 4.0.1, and I already had WebObjects 4.0 installed. Do I need to uninstall my old WebObjects or can I just install WebObject 4.0.1 over it?

A: You must completely uninstall WebObjects 4.0 before installing WebObjects 4.0.1. See the WOInfoCenter for instructions on uninstalling the software.

Q: What changed in WebObjects between the 4.0 and 4.0.1 releases?

A: WebObjects 4.0.1 supports MacOS X Server and Solaris 2.7. There were many changes and corrections made to the tutorials, examples, and documentation, including enhancements to WOInfoCenter itself. A new application, the WebObjectsLicenseKeyUpgrader, was added to make it easier for customers to upgrade their deployment licenses after installation. In addition, the following specific bugs were corrected for this release:

WODefaultAdaptor hangs on stale socket
Apple reference # 2281185

ISSUE:
The WODefaultAdaptor could not recover from a situation where the socket it was using went bad.

RESOLUTION:
The WODefaultAdaptor now recognizes when there is an issue and tries to recreate the socket.

EOPopUpAssociation passes duplicate items to AppKit
Apple reference # 2289602

ISSUE:
If multiple identical items were passed from an EOPopUpAssociation to an AppKit NSPopUpButton, the AppKit object would raise an exception.

RESOLUTION:
EOPopUpAssociation now uniques its contents before passing them to the AppKit.

ODBC date values cause crash
Apple reference # 2289803

ISSUE:
Generating EOF dates from an ODBC database's timestamps would sometimes cause an "invalid date format" error. This was due to an error in the code which rounded ODBC time values from nanoseconds to milliseconds.

RESOLUTION:
EOF now truncates timestamp values instead of rounding them. Optimistic locking and other functions which require timestamp comparison will no longer cause this exception.

Resources missing from preindexed frameworks
Apple reference # 2292280

ISSUE:
If a framework was preindexed, WebObjects Builder would not load any of the project's resources.

RESOLUTION:
WebObjects Builder now recognizes the resources of preindexed projects correctly.

EOProject parser does not recognize some method names
Apple reference # 2292470

ISSUE:
If EOProject's parser encountered a method named just "get" or "set" while checking for accessor methods, an exception would be raised.

RESOLUTION:
The parser now checks for and handles this condition correctly.

EOEditingContext archiving issues
Apple reference # 2297455

ISSUE:
EOEditingContext's encodeWithCoder: and initWithCoder: methods were not thread safe. In addition, under certain conditions, the archive methods could overwrite meaningful changes and result in lost data. These methods would also fail if an object was unarchived from a data store other than the default data store, or if the object being edited was the entry point to the archive.

RESOLUTION:
EOEditingContext's archiving methods have been rewritten to avoid these issues.

EOEditingContext saveChanges() exceptions not propagated to Java
Apple reference # 2297457

ISSUE:
Exceptions raised within EOEditingContext's **saveChanges()** method would not propagate to Java unless they were caused by a validation failure.

RESOLUTION:
These exceptions are now propagated to Java correctly.

Application inactivity timeout is broken
Apple reference # 2297505

ISSUE:
If an inactivity timeout was set for a WebObjects application, the app would crash when the timeout expired.

RESOLUTION:
WebObjects applications will now exit cleanly after the timeout is reached.

Memory leak in WODisplayGroup
Apple reference # 2298170

ISSUE:
WODisplayGroup's -initWithCoder: method leaked a small amount of memory each time it was called.

RESOLUTION:
The leak in this method has been eliminated.

Exception handlers may message freed objects
Apple reference # 2298174

ISSUE:
If an exception was raised and caught by a handler which unlocked an editing context, the exception could be freed before it was reraised. This would cause a fatal error rather than a catchable exception.

RESOLUTION:
EOF's internal exception handlers have been modified to prevent this behavior.

Undo manager not thread safe
Apple reference # 2298337

ISSUE:
When the NSUndoManager was handled at the endOfEvent notification, while it's editing context is unlocked, it was possible for a new request for the same session to come in, causing the same instance of the undoManager to be accessed by two threads at once. This would cause occasional crashes in some high-volume applications.

RESOLUTION:
The endOfEvent notification is now posted before the editing context is unlocked, and these crashes no longer occur.

Sybase adaptor may generate duplicate primary keys for multiple application instances
Apple reference # 2299035
ISSUE:
The Sybase adaptor uses a stored procedure called "eo_pk_for_table" to generate primary key values. Because this stored procedure does not run in a transaction, if two application instances request a primary key simultaneously, they could be assigned the same primary key.

RESOLUTION:
The "eo_pk_for_table" stored procedure now runs in a transaction. Duplicate primary keys will no longer be generated.

Adaptor tries to reconnect to dead instances
Apple reference # 2300000

ISSUE:
The WebObjects adaptor would re-read the WebObjects configuration file even when the compiled adaptor parameters told it not to. A a result, dead instances would come back into the list too often. If adaptor logging were turned on, and an application instance were killed, you could see the adaptor repeatedly trying to re-connect to the app instance, despite its being marked dead.

RESOLUTION:
The WebObjects adaptor now re-reads the configuration file in accordance with the compiled adaptor parameters.

WOLongResponsePage issues in Java apps
Apple reference # 2300113

ISSUE:
Because of a bug in NSJavaVirtualMachine, Java-based applications were not able to use the WOLongResponsePage.

RESOLUTION:
This issue no longer occurs in this release.

Can't open older eomodels with current tools
Apple reference # 2300129

ISSUE:
WebObjects would fail to read archived eomodel files which had been generated by older WebObjects versions.

RESOLUTION:
WebObjects now reads these files correctly.

Cross-model relationships crash EOModeler
Apple reference # 2300382

ISSUE:
EOModeler would crash when the user attempted to close a model with relationships to other models.

RESOLUTION:
EOModeler now handles these relationships correctly.

OBLite Adaptor may contain incorrect typeInfo and modelInfo information
Apple reference # 2301085

ISSUE:
In some cases, the typeInfo and modelInfo information of an OBLite connection dictionary would be corrupted, crashing a customer's application or preventing database access.

RESOLUTION:
Since the typeInfo and modelInfo are the same for every OBLite database, the values have now been hard-coded into the adaptor and can no longer be corrupted.

NT Sybase adaptor compiled with older client libraries
Apple reference # 2301732

ISSUE:
On Windows NT, the Sybase Adaptor shipped with an older version of the Sybase client libraries, which were not certified by Sybase for Year 2000 compliance.

RESOLUTION:
The Sybase client libraries that ship with WebObjects 4.0.1 are an updated version that Sybase has certified as Year 2000 compliant.

Crash when passing null java.math.BigDecimal
Apple reference # 2307624

ISSUE:
If a null value was passed to a wrapped object which was expecting a java.math.BigDecimal, it would crash the application.

RESOLUTION:
WebObjects now checks for null values and handles them correctly.

WebObjects header files conflict with C++ compilation
Apple reference # 2309963

ISSUE:
Some C++ reserved words were used in the WebObjects headers files. This caused serious issues with the compilation of C++ code for WebObjects applications.

RESOLUTION:
Customers can now use hybrid WebObjects Objective C objects in their applications.

Using enumerations with Java causes deadlocks
Apple reference # 2283190

ISSUE:
Using enumerations on Foundation collections from Java would cause deadlocks during garbage collection. This would happen because the enumerator object was being released too early.

RESOLUTION:
The enumerator object is now released at the proper time, and the error no longer occurs.

NSNumber can't accept some valid values
Apple reference # 2211791

ISSUE:
The **numberWithLongLong:** and **numberWithUnsignedLongLong:** constructor methods of NSNumber would fail for very large numbers.

RESOLUTION:
All of NSNumber's constructor methods now work correctly for appropriate values.

Can't compile with Foundation and -ansi flag
Apple reference # 2228578

ISSUE:
The gcc compiler would not compile a class which imported the Foundation framework when the -ansi flag was set. This was due to an omission in one of the framework header files.

RESOLUTION:
The relevant header file has been fixed and these classes now compile correctly.

Date constructors give wrong date for nil input
Apple reference # 2256550

ISSUE:
If the locale argument to the various date classes' **dateWithNaturalLanguageString:locale**: method was nil, incorrect results would be returned because the classes were not correctly determining the language selected by the system.

RESOLUTION:
The date classes now determine the system default locale and return a correct date value.

Files which import NSString.h causes compiler warnings on HP-UX
Apple reference # 2258616

ISSUE:
Because of a naming conflict between NSString.h and NSObjCRuntime.h, compiling any file which imported NSString.h would cause many compiler warnings on HP-UX. This would not affect compilation, but it was annoying and made it difficult to find real compiler errors.

RESOLUTION:
The conflict has been resolved and these errors no longer occur.

NSDateFormatter interprets year "00" as "Current Year"
Apple reference # 2278053

ISSUE:
NSCalendarDate would interpret year "0" or "00" as "current year", rather than "2000", which was inconsistent with the interpretation of two-digit years in UNIX and not Year 2000 compliant.

RESOLUTION:
NSCalendarDate now interprets "0" or "00" year values as "2000"

Bundle class loader loads all classes in main component
Apple reference # 2280719

ISSUE:
The Java VM would become confused when classes in the main bundle are loaded by two different class loaders. This would happen because the Java warmup code in Foundation forced the bundle class loader to load all classes in the main bundle, despite having passed the main bundle's Java resources directory in the class path to the VM. The result would be spurious security and class cast exceptions.

RESOLUTION:
The bundle no longer loads all of these classes, and these errors no longer occur.

Java object notifications not thread safe
Apple reference # 2287349

ISSUE:
Due to timing issues, in multithreaded Java applications notifications would sometimes be sent to freed objects.

RESOLUTION:
The NotificationCenter now uses a locking system to provide full multithreading support.

dateWithYear doesn't accept nil time zone
Apple reference # 2258428

ISSUE:
The NSCalendarDate constructor **dateWithYear:month:day:hour:minute:second:timeZone:** would not accept a nil value for the time zone. If a nil time zone was passed, the constructor would return nil.

RESOLUTION:
A nil value is now interpreted as the current time zone.

NSDate methods calculate incorrect dates across DST boundary
Apple reference # 2281625

ISSUE:
The NSCalendarDate methods **dateByAddingYears:months:days:hours:minutes:seconds:** and **years:months:days:hours:minutes:seconds:sinceDate:** would not handle time zone transitions correctly. Thus, the number of minutes between two dates separated by a daylight savings time boundary was not calculated correctly.

RESOLUTION:

Daylight savings time transitions are now calculated correctly.

Redirected HTTP URL headers are case sensitive
Apple reference # 2287408

ISSUE:
NSURL would not recognize redirections if the HTTP headers were not capitalized correctly.

RESOLUTION:
NSURL now handles the case where redirection headers are improperly capitalized.

Published Date: Feb 20, 2012

WebObjects 4: Changes in Time Zone Information in WebObjects 4

The time zone information, and the Foundation classes that use it, have been updated in WebObjects 4 to the information published by the U.S. Government, current as of October 1998. This document describes the changes to the system time zone information that have occurred since the release of WebObjects 3.5.1.
This article has been archived and is no longer updated by Apple.

General Information Regarding Time Zone Changes

In brief, the update of time zone data underlying the NSTimeZone class cluster in WebObjects 4 includes:

- Addition of new time zones across the world
- Changes in the names of previously-existing time zones
- Addition of new time zone abbreviations across the world
- Changes to daylight saving time algorithms for named time zones, both current and historical.
- Change in notation of time offsets from Greenwich Mean Time to the POSIX minutes-west-of-GMT convention

These are all changes in the raw data received from the U.S. Government. Apple has no control over these changes, which will substantially affect customers whose software relies on time zone information. It is important for customers to understand these changes before upgrading time zone-sensitive software from WebObjects 3.x to WebObjects 4.x in order to assure their success in working with the new data.

For additional general information on time zones, see also:

http://www.cl.cam.ac.uk/~mgk25/iso-time.html

Changes in Foundation's NSTimeZone Class Cluster

The NSTimeZone class cluster was reimplemented between OpenStep 4.2 and WebObjects 4:

- Some methods in NSTimeZone have been deprecated, some have changed.
- New methods have been added to NSTimeZone--refer to the class documentation for details.
- The NSTimeZoneDetail class has been deprecated.
- NSTimeZone and NSCalendarDate objects created in OPENSTEP 4.2/WebObjects 3.5.1 can be unarchived and transmitted via DO to WebObjects 4.x, but the reverse is not true.

Some of the deprecated methods in the NSTimeZone and NSTimeZoneDetail classes still work as before, some have changed behavior. In any case, customers wishing to move forward to WebObjects 4 and future Apple development products need to remove any usage of NSTimeZoneDetail, and of deprecated NSTimeZone methods, from their code as part of the transition.

NSTimeZone

+abbreviationDictionary

Returns an NSDictionary of the new mapping of time zone abbreviations to named time zones. See sections below on mapping of abbreviations to zones.

+localTimeZone

Returns the new time zone object for the local named time zone. For example, if your machine is set to "US/Central" (old) or "America/Chicago" (new), this method will return the NSTimeZone object for the America/Chicago zone. See NSTimeZone class documentation for further details on this method.

+defaultTimeZone

Returns the new time zone object for the local named time zone. See NSTimeZone class documentation for further details on this method.

+setDefaultTimeZone:

No change in behavior.

+timeZoneForSecondsFromGMT:

Returns the GMT offset object for the time value, in seconds, represented by the integer argument. See section "Named Time Zones versus GMT Offsets", below, for important information on changes since OpenStep.

Due to a known problem, this method **does not work** in currently shipping versions of WebObjects 4. No workaround is currently available.

+timeZoneArray

No change in behavior.

Deprecated. There is no replacement for this method.

+timeZoneWithName:

Returns the new time zone object for any old or new time zone name that Foundation recognizes.

Due to a known problem, this method **does not work** on the Windows NT version of WebObjects 4. For a workaround, see **TIL article 70013**.

+timeZoneWithAbbreviation:

Returns the new time zone object for the named zone associated with the abbreviation argument in the Abbreviation.table resource. Use+abbreviationDictionary to get the current association of abbreviation to zone. See sections below on mapping of abbreviations to zones.

-timeZoneName

Returns the new name for the time zone instance. For example, a time zone object created via +timeZoneWithAbbreviation: with an argument of "US/Mountain" will return a name value of "America/Denver".

Deprecated. Replace with -[NSTimeZone name].

-timeZoneDetailArray

Returns an empty NSDictionary.

Deprecated. There is no replacement for this method.

-timeZoneDetailForDate:

No change in behavior; class of return valued changed from NSTimeZoneFileDetail to NSConcreteTimeZone.

Deprecated. Replace with -[NSTimeZone abbreviationForDate:].

NSTimeZoneDetail

-isDaylightSavingTimeZone:

No change in behavior.

Deprecated. Replace with -[NSTimeZone isDaylightSavingTime]

-timeZoneAbbreviation

No change in behavior;

Deprecated. Replace with -[NSTimeZone abbreviation]

-timeZoneSecondsFromGMT

No change in behavior - correctly handles old and new time zone names.

Deprecated. Replace with -[NSTimeZone secondsFromGMT]

The reimplementation of NSTimeZone cluster classes has altered the encoding and archiving of NSTimeZone and NSCalendarDate objects. WebObjects 4.x is able to unarchive and decode (transmit over DO) objects of the classes from OpenStep 4.2 / WebObjects 3.x. However, OpenStep and WebObjects 3.x can not unarchive or receive over DO NSTimeZone or NSCalendarDate objects from WebObjects 4.x.

Regardless of whether archiving or DO is used, mixed testing or deployment environments using both old and new time zone data and classes will be problematic and should be avoided. If the software stores time zone information in a database, old applications reading that database will be unable to interpret the new time zone names stored there by applications converted to YellowBox or WebObjects 4.x.

Named Time Zones versus GMT Offsets

A crucial concept for developers to grasp when working with time zone data is the difference between named time zones and GMT offsets. These are two fundamentally different concepts which can not be used interchangeably.

GMT offsets are absolute distances from Greenwich, England. Although a GMT offset can be constructed with any value, the usual usage divides

the globe into 24 whole-hour units - twelve east of Greenwich and twelve west. The NSTimeZone class constructs GMT offsets from integer arguments representing the number of seconds east (positive integers) or west (negative integers) of Greenwich. GMT offsets do not vary with season, historical year, or political boundary.

Named time zones, such as "US/Eastern" or "Europe/London", do vary with season (daylight saving), historical year (the rules for daylight saving may change for a given time zone, over time), and political boundary (as political boundaries shift and laws change, the date calculations for a particular geographic location may change). The data for named time zones have changed for WebObjects 4--there are numerous corrections and additions to daylight saving rules resulting from improved accuracy in political and historical information and in daylight saving transition formulae.

For named time zones that observe daylight savings, the GMT offset which corresponds to the zone changes at different times of the year. For example, during the observation of standard time, the named time zone which encompasses most of the west coast of the United States (formerly called "US/Pacific", now "America/Los_Angeles") corresponds to the offset seven hours west of GMT. During the observation of daylight savings, this named zone corresponds to the offset eight hours west of GMT. Daylight savings shifts are not always whole hours - some named time zones shift by only one-half hour, some shift by some other fraction of an hour (like 50 minutes).

Not all named time zones observe daylight savings. For these, the GMT offset remains constant throughout the year.

Change in GMT Offset Notation

A key change in the time zone data which customers should understand before converting their applications to YellowBox / WebObjects 4.x is the change in the way that GMT offsets are denoted. The convention followed by the U.S. Government time zone data underlying Foundation in OpenStep 4.2 subtracted hours as one moved west of Greenwich and added hours as one moved east of Greenwich. Therefore, the offset five hours east of Greenwich was denoted as "GMT+5" or "GMT+0500" and the offset five hours west of Greenwich was denoted as "GMT-5" or "GMT-0500".

In the current time zone data received from the U.S. Government, the notation for GMT offsets has been changed to to the POSIX minutes-west-of-GMT convention, which adds hours west of Greenwich and subtracts hours east of Greenwich. This is OPPOSITE of the notation in OpenStep 4.2, so that the offset which used to be designated as "GMT-8" or "GMT-0800" is now designated "Etc/GMT+8".

The Foundation in WebObject 4.x can correctly map the old GMT offsets onto the new ones. However, if a customer is extracting the hour value from the offset and doing math calculations with it, they will need to take this into account or their software will return the opposite result from that obtained in OpenStep 4.2 / WebObjects 3.x.

Mapping of Old Time Zone Names to New Time Zone Names

A large number of named time zones have been added since the original release of OpenStep 4.2. Many reflect political changes in Europe and the former Soviet Union, but there are also many new named time zones for Pacific, Asian, Latin American, and African nations.

In addition, many previously-existing named time zones now have different names. For example, ALL of the named time zones in Canada, the U.S., and Australia have changed names. Here are some examples of the old and new time zone names from those countries:

OLD	**NEW**
Canada/Atlantic	America/Halifax
US/Eastern	America/New_York
US/Central	America/Chicago
Canada/Pacific	America/Vancouver
US/Pacific	America/Los_Angeles
US/Hawaii	Pacific/Honolulu
Australia/North	Australia/Darwin
Australia/Queensland	Australia/Brisbane

Many other time zones across the world have changed names as well. Foundation includes data tables and mechanisms to automatically convert old named time zones to new named time zones. In OpenStep 4.2 on UNIX, the OldTZNameToNewTZName.table located in Foundation.framework/Resources/TimeZoneInfo performed this mapping. In WebObjects 4, the mapping is done by an internal mechanism. The NSTimeZone class in YellowBox includes a class method, **+knownTimeZoneNames**, which returns a list of all the old and new time zone names which Foundation is able to recognize and process.

Microsoft Windows uses different time zone names than either old or new UNIX names. In order to provide consistent behavior across platforms, the Foundation framework translates Windows' time zone names to UNIX names, using the WindowsName.table in both OpenStep and YellowBox.

Time Zone Abbreviation to Time Zone Name Mapping

For each named time zone, several time zone abbreviations may be used to designate different local time types, that is, sets of rules for the

behavior of local time in that zone. For example, the America/Los_Angeles time zone (formerly called US/Pacific) has three local time types with associated abbreviations: PST, PDT, and PWT. A single named zone may contain a number of local time zones which reuse the same abbreviation. For example, the Pacific/Niue time zone covers three local time types which all use the abbreviation NUT. The Africa/Ceuta zone covers seven local time types, of which two use the abbreviation WET, two use WEST, two use CET, and one uses CEST.

Conversely, any number of different named time zones may reuse the same abbreviation. For instance, the abbreviation NST is used by the America/Adak, America/Goose_Bay, America/Nome, America/St_Johns, Pacific/Midway, and Pacific/Pago_Pago time zones. The abbreviation CET is used by 30 named time zones in the Atlantic, Europe, and Africa regions! As a result, there are very few time zones or time zone abbreviations for which the mapping from name to abbreviation is unambiguous. This ambiguity existed with the old time zone information but is much more pronounced with the greatly increased number of named time zones in the new data.

Foundation limits the ambiguity of mapping between time zone name and abbreviation for the NSTimeZone class by maintaining a dictionary which associates a single named time zone (the value) with a single abbreviation (the key). This file, Abbreviation.table, is located in the Foundation.framework/Resources/TimeZoneInfo directory. The list of abbreviations in the file is not comprehensive and the choice of time zone name associated with each is necessarily arbitrary. The NSTimeZone class in both WebObject 4 and OpenStep includes a class method, **+abbreviationDictionary**, which returns a dictionary containing the current association of time zone with abbreviation.

Changing the Time Zone Abbreviation to Time Zone Name Mapping

The Abbreviation.table file is a Unicode persistent property list. It may be edited by users, if needed, to achieve a different association of abbreviation with named time zone. Root permission is needed to edit this file. Anyone editing this file should be sure to use a Unicode-capable editor and save the edited file as Unicode. It is strongly recommended that a back-up copy of the original file be made before editing. Also, customers should keep in mind that if the abbreviation-to-named-zone mapping is changed on one machine and not on others which operate on the same data, inconsistent results will occur.

Foundation Time Zones versus Operating System Time Zones

All of the operating systems on which OpenStep and WebObjects ship include time zone information as part of the OS. The time zone information on different operating systems, and operating system versions, varies. In order to provide consistent behavior of applications across the various platforms, Foundation encapsulates the time zone data on which its time zone classes operate.

Thus, in many cases, the time zone names, time zone data, and/or GMT conventions in Foundation and applications utilizing the Foundation time zone classes is different from the time zone names, daylight saving data, and /or GMT conventions of the operating system. Customers should particularly keep this in mind if they have non-OpenStep/WebObjects applications which manipulate or store time zone information in a database or other persistent storage.

Published Date: Feb 20, 2012

WebObjects 4: Using JDK 1.1.8 with WebObjects

This article explains how to use updated versions of Sun's JDK with WebObjects 4. This is an **unsupported configuration** and users should use these instructions at their own risk. Apple will not guarantee or provide support for this procedure.
This article has been archived and is no longer updated by Apple.
To install the JDK 1.1.8 and the JDK 1.2 Collection Classes on Solaris or Windows NT:

- Download JDK 1.1.8 and the JDK 1.2 Collection Classes from Sun's web site.
- Install the JDK (use the default location of /jdk1.1.8 on Windows NT, /usr/local/jdk1.1.8 on Solaris)
- Install the Collections (In this example, we will use /jdk1.1.8/collections on Windows NT, /usr/local/jdk1.1.8/collections on Solaris)
- Create the following environment variables:

JAVA_HOME	/usr/local/jdk1.1.8 (or c:/jdk1.1.8 for NT)
JDKDIR	$JAVA_HOME

- Edit $(NEXT_ROOT)/Library/Java/JavaConfig.plist to conform to the following:

```
Vendor = sun1.1.8
sun1.1.8 = {
VM = "$JDKDIR/bin/java.exe";
DefaultClasspath =  "$HOME/Library/Java; $NEXT_ROOT/Library/Java; $JDKDIR/lib/classes.zip;
$JDKDIR/collections/lib/collections.jar";
DefaultBeanpath =   "$HOME/Library/JavaBeans; $NEXT_ROOT/Local/Library/JavaBeans;
$NEXT_ROOT/Library/JavaBeans";
Compiler = "$JDKDIR/bin/javac.exe";
Headers = "$JDKDIR/include $JDKDIR/include/winnt";
Library = "$JDKDIR/lib/javai.lib";
DebugLibrary = "$JDKDIR/lib/javai_g.lib";
```

On Windows NT, this is all you need to do. On Solaris, you'll need to perform some extra steps:

- Change to the directory /opt/Apple/Library
- Rename the JDK directory to "JDK1.1.6"
- Recreate JDK as a link to the $JAVA_HOME directory:

```
ln -s $JAVA_HOME JDK
```

Be aware that the java compiler used by **make** is hardcoded to use JDK 1.1.6. This will not affect most Java projects.

Published Date: Feb 19, 2012

WebObjects 4: Using OptimizeIt! With WebObjects

This article explains how to use the OptimizeIt! performance profiler with WebObjects 4 on Windows NT. This document assumes you are using OptimizeIt! 3.0 Professional Edition and WebObjects 4 on Windows NT 4.0.

OptimizeIt! is a product of Intuitive Systems, Inc. For more information or to download a demonstration version of OptimizeIt!, visit their web site at http://www.optimizeit.com.

This is an unsupported configuration. Apple will not guarantee or provide support for this procedure.

This article has been archived and is no longer updated by Apple.
Follow these steps to use OptimizeIt! with your WebObjects application on Windows NT:

1. Install OptimizeIt!

Follow the vendor's instructions to install OptimizeIt! Professional Edition. After installation, run the OptimizeIt.exe application. The Java setup wizard will prompt you for the location of your Java VM. The WebObjects Java VM is located in $NEXT_ROOT/Library/JDK.

2. Uncompress optit.jar

Find the optit.jar file and copy it to $NEXT_ROOT\\Library\\Java. By default, this file is installed into C:\\Program Files\\Intuitive Systems\\OptimizeIt30D\\lib. From a Bourne shell, manually uncompress this file with the command:

```
jar xf optit.jar
```

3. Add the OptimizeIt! .DLL's to your path

Find the two OptimizeIt! libraries, audit11.dll and audit12.dll. Edit your PATH environment variable to include the directory where these files are located, or copy these libraries into a directory which is in your PATH.

4. Modify Application.java

Because a WebObjects Java application handles its own startup of the Java VM, you will not be able to start up a WebObjects application from within OptimizeIt! as you would with a traditional applet. Instead, you will need to enable the OptimizeIt! audit system inside your WebObjects application and instruct OptimizeIt! to communicate with the application via a specified port.

In your WebObjects application, add the following statement to Application.java:

```
import intuitive.audit.*;
```

Also, add the following code to the constructor:

```
Audit.start(1470, Audit.WAIT_FOR_OPTIMIZEIT);
Audit.enableCPUProfiler();
Audit.enableMemoryProfiler();
```

5. Build and launch your application

Make clean and recompile your application. Before you compile, make sure the JIT compiler is disabled. If the JIT is not disabled, you can disable it by moving the JIT DLL (normally called SYMCJIT.DLL) into the directory:

/Apple/Library/JDK/bin

You are now ready to start using OptimizeIt! To begin profiling, first launch the WebObjects application. Because of the Audit.WAIT_FOR_OPTIMIZEIT start option which was added to the Application constructor, the application startup will stop at a statement similar to the following:

OptimizeIt! 3.0 audit system. (c) 1997-1999 Intuitive Systems Inc.
Port is 1470

Launch the OptimizeIt.exe application if you have not already. Since we are not starting an application process from OptimizeIt, there is no need to use the UI panel which comes up when the application is started. Do not enter any information into that panel.

NOTE: OptimizeIt! will not work if your WebObjects application is started inside GDB.

6. Attach your application

Choose "Attach" from the OptimizeIt! "Program" menu. In the "attach" panel, enter the host name of the machine on which your application is running and 1470 for the port number. Press the "Attach" button.

7. Collect profiling data

Once you have successfully attached to OptimizeIt!, you can start your application with the Program item of the Start menu. OptimizeIt! allows you to collect profiling information on the Java portions of your WebObjects application. Please see the OptimizeIt! documentation for more information on profiling your application.

Published Date: Feb 19, 2012

WebObjects: How to determine the installed WebObjects version

This article has been archived and is no longer updated by Apple.

This article explains how to determine the version of WebObjects installed on a particular system.

Mac OS X Client 10.0 - 10.3, Mac OS X Server 10.0 - 10.2

Look in /Library/Receipts. You will see a list of .pkg files representing the installed software. If you see update packages, the name of the newest one tells you which release and update of WebObjects is installed. Examples:

```
WOxxxDeveloper.pkg ==> x.x.x Developer
WOxxxDeployment.pkg == > x.x.x Deployment
WOxxxMacOSX...UpdateN.pkg ==> x.x.x Update N
```

If you don't see any update packages, control-click (or right-click) on a WebObjects package (i.e. WODeveloper.pkg), choose 'Show Package Contents', and open the file Contents/Resources/software_version. Consult the 'WebObjects Build Names' table below to find your version.

Mac OS X Server 10.3

Note: Beginning with Mac OS X Server 10.3, WebObjects Deployment is included with the OS, and does not need to be installed separately.

1. Look in /Library/Receipts.
2. If you see ApplicationsServerUpdate.pkg, control-click (or right-click) it and choose 'Show Package Contents'.
3. Open Contents/Info.plist, and find the CFBundleShortVersionString key. A value of 1.0 indicates WebObjects Deployment 5.2.3.
4. If you do not see ApplicationsServerUpdate.pkg, look inside ApplicationsServer.pkg (control-click (or right-click) and choose 'Show Package Contents') and open Contents/Info.plist.
5. Find the CFBundleShortVersionString key.

```
CFBundleShortVersionString = 3.0 ==> WebObjects Deployment 5.2.4
CFBundleShortVersionString = 2.0 ==> WebObjects Deployment 5.2.3
CFBundleShortVersionString = 1.0 ==> WebObjects Deployment 5.2.2
```

Mac OS X Client 10.4 or later, Mac OS X Server 10.4 or later

Open /System/Library/Frameworks/JavaWebObjects.framework/Resources/version.plist. The value of the CFBundleShortVersionString key is the WebObjects version.

Windows

1. Click the 'Support Information' link in the WebObjects entry of the Add/Remove Programs control panel. This also shows any installed updates. If the control panel does not list WebObjects, a version prior to 5.0 may be installed.
2. While logged in as a user with Administrator privileges, look in the Start menu under WebObjects for 'About Apple Software' or 'About NeXT Software'.
3. Consult the 'WebObjects Build Names' table below to find your version.
4. Do not rely on product names shown in the panel, such as "WebObjects 3.5 Prerelease Developer"; use the table instead. For very old versions of WebObjects from NeXT, the Windows registry may be the most accurate source.
5. Under HKEY_LOCAL_MACHINE, look at SOFTWARE\\Apple or SOFTWARE\\NeXT\\WebObjects. You should see an entry for the major version of WebObjects, and another for any installed updates.

Solaris / HP-UX

1. Look in $NEXT_ROOT/Library/Receipts/PDO/software.ver or $NEXT_ROOT/NextLibrary/Receipts/WOF/software.ver for a build name, and consult the 'WebObjects Build Names' table below.
2. Do not rely on product names given, such as "WebObjects 3.5 Prerelease Developer"; use the table instead. WebObjects updates to versions 4.5 (4.5.0) and older did not update the software.ver file. See Knowledge Base article 70148 for instructions on determining which updates were installed.

OPENSTEP 4.2 for Mach

1. Look in /NextLibrary/Receipts. You will see a list of .pkg files representing the installed software.
2. To find the exact version, press command-shift-O to open the .pkg folder, and look at the software_version file inside.
3. Consult the 'WebObjects Build Names' table below to find your version. Do not rely on product names given, such as "WebObjects 3.5 Prerelease Developer"; use the table instead.

WebObjects Build Names

WebObjects Version	OS	Project Name	Build
5.2.4	Mac OS X	EU	7A31
5.2.4	Mac OS X Server	Tiger	8A428
5.2.4	Windows/Solaris	EU	7A31a
5.2.3	Mac OS X	EU	6A8
5.2.3	Mac OS X Server	SUPanFeldspar	7F46
5.2.3	Windows/Solaris	ErteW	6A7
5.2.2	Mac OS X	EU	5A21
5.2.2	Mac OS X Server	Panther	7B86
5.2.2	Windows/Solaris	ErteW	5A20
5.2.1	Mac OS X	ErteXUpdate	4A13
5.2.1	Windows/Solaris	ErteW	4A13
5.2	Mac OS X	ErteX	2E5
5.2	Windows/Solaris	ErteW	2E4
5.1.4	Mac OS X	Kahlo	1V5
5.1.3	Mac OS X	KahloX	3A2
5.1.3	Solaris	KahloW	3A2
5.1.3	Windows	KahloW	3A3
5.1.2	Mac OS X	KahloX	2A6
5.1.2	Windows/Solaris	KahloW	2A6
5.1.1	Mac OS X	KahloX	U5
5.1.1	Windows	KahloW	1U5
5.1.1	Solaris	KahloW	1U6
5.1	Mac OS X	KahloX	1R9
5.1	Windows/Solaris	KahloW	1R9
5 Update 3	Mac OS X Server	MonetX	3P4
5 Update 2	Mac OS X	MonetX	4A7
5 Update 2	Windows	Monet	4A8
5 Update 2	Solaris	Monet	4A12
5 Update 1	Mac OS X/Solaris	Monet	3R2
5 Update 1	Windows	Monet	3R4
5.0	(all)	Monet	3P4
4.5.1 Update 4	Mac OS X	Siren	4A4
4.5.1 Update 4	Windows/Solaris	Kali	4A4
4.5.1 Update 3	Mac OS X	Siren	3A7
4.5.1 Update 2	Mac OS X	Siren	2C3
4.5.1 Update 2	Windows/Solaris	Kali	2C3
4.5.1	(all)	Siren	1X5
4.5 Update 3	(all)	Dali	3V6
4.5 Update 2	(all)	Dali	3U4
4.5 Update 1	(all)	Dali	3S3
4.5	(all)	Dali	2S1
4.0.1 Patch 3	(all)	Picasso	3R
4.0.1 Patch 2	(all)	Picasso	3O
4.0.1	(all)	Picasso	2Z
4.0	(all)	Picasso	2N1
3.5.1 Patch 3	(all)	Bay	1C
3.5.1	(all)	Paris	1U2
3.1	(all)	GrannySmith	1R
3.0	(all)	Argonaut	4V
2.0	(all)	Argonaut	2V
1.0	(all)	Argonaut	1R

See also: WebObjects Current Patch List.

Published Date: Feb 20, 2012

WebObjects 4: Developer License and Application Instance Number

This article discusses why a user might see the message:

```
"Attempt to access application in a way not permitted by licensing (more than one instance detected)"
```

when running a single instance of a WebObjects 4 application with a web server using the Developer license.

This article has been archived and is no longer updated by Apple.
Note: Any reference in this article to Mac OS X Server pertains to version 1.2, which was released prior to May 2001.

The WebObjects 4 Developer license permits the following:

- Platform: Windows NT and, with WebObjects 4.0.1, Mac OS X Server
- Single application instance
- Single Processor
- No multithreading
- No load balancing
- 25 transactions per minute on Windows NT
- 50 transactions per minute on Mac OS X Server

By default, WebObjects is set up to run in DirectConnect mode, but if you want to do some limited testing with an http server, you might encounter the following error:

```
"Attempt to access application in a way not permitted by licensing (more than one instance detected)."
```

To understand why that error message occurs, even if only a single instance of your application is running, take a look at your public WebObjects.conf file in $(NEXT_ROOT)/Library/WebObjects/Configuration. It probably lists an entry like:

```
MyApp:1@myhost 2001
```

where **MyApp** is the application name, **1** is the application instance number, **myhost** is the hostname, and **2001** is the WOPort. You probably also have a private WebObjects.conf file in the directory pointed to by the TEMP environment variable with an entry like:

```
MyApp:-1@myhost 2001
```

Since the Developer license allows only a single instance of your application to run at any given time, the WOResponse code checks for a hard-coded value for the application instance number. The hard-coded value it looks for is -1. If you change your public WebObjects.conf file to match the entry in the private WebObjects.conf file, i.e.:

```
MyApp:-1@myhost 2001
```

you should be able to run a single instance of your app with your Developer license without seeing this error message.

Normally you should not need to modify the WebObjects.conf file manually, as its primary function is for load balancing when using the Monitor application with a deployment license. For more information about the WebObjects.conf files (both public and private), please see **article 70040**, "WebObjects 4: Public and Private WebObjects.conf Files." Also see the "Serving WebObjects" documentation for more information about running a WebObjects application under Monitor.

Published Date: Feb 19, 2012

WebObjects 4: Finding Memory Leaks in Java Applications

There are two common types of memory leaks in WebObjects Java applications: leaks caused by the Java garbage collection scheme and leaks due to known problems with Java or the WebObjects Java components. This article discusses ways to prevent and analyze both types of memory leaks. This article assumes that you are using WebObjects 4.
This article has been archived and is no longer updated by Apple.

Leaks due to garbage collection

Often, the garbage collector has to run many times in order to completely find and free every unused object. The Sun garbage collector is not very aggressive; It often stops collecting even when there is more garbage left. Object references across the Java bridge can require many passes of the collector before they are cleaned up. Since the Java garbage collector cannot see references made by Objective C objects, they will appear as global, or non-collectable, references. Thus, several collections may be required to resolve some relationships; the Java garbage collector, then the Objective C garbage collector, then the Java garbage collector again, and so on. This results in memory temporarily leaking from the application.

For example, when Objective-C objects have their Java side garbage collected by the Java Garbage Collector thread, they themselves are not immediately dealloc'd. This happens only when the main thread crosses the Java bridge. When the Bridge frees up the global retain count it keeps on behalf of the Java VM for the Objective-C object, it may free up more Java/Objective-C objects. In order to reach a steady state over time, you will need to cause multiple runs of the garbage collector by forcing a loop of collection and autorelease. You can do this in WebObjects 4 by setting two different environment variables which tell the garbage collector to loop collection during session deallocation, **WOGarbageCollectionRepeatCount** and **WOWorkerThreadCount.**

WOGarbageCollectionRepeatCount is used to force garbage collection to occur a sufficient number of times so that most of the objects held by timed out sessions will be freed. A value of 3 for WOGarbageCollectionRepeatCount means that WebObjects assumes that you have object graphs that are (on average) about three references deep. This is also the default value in case no user default is specified. WOGarbageCollectionRepeatCount == 0 means that the garbage collector isn't run upon session deallocation.

WOWorkerThreadCount specifies the maximum number of worker threads for a multithreaded application. The default value for WOWorkerThreadCount is 8. Setting this count to 0 results in a single threaded request dispatch, similar to WebObjects 3.5.1. Please note that if WOWorkerThreadCount value == 0, then WOGarbageCollectionRepeatCount will no longer have any effect.

In Project Builder, bring up the Launch Panel and add the following launch arguments:

```
-WOWorkerThreadCount 8  -WOGarbageCollectionRepeatCount 6
```

WOWorkerThreadCount can have any value greater than zero, and WOGarbageCollectionRepeatCount can have any value between 3 and 8. You can also specify these two variables when starting your application from the command line. Please note that running the Garbage Collector repeatedly may affect the performance of your application.

Leaks due to known Java memory problems

Static or global references

Leaks can occur if your application keeps an array of allocated sessions, or some kind of global notification registry. Since Java (in JDK 1.1) does not support weak references, any object placed in that array, and all objects referenced by that array, will never be collected. Even in JDK 1.2, using weak references correctly to avoid this problem is still problematic.

Retain cycles across the Java bridge

One potential source of leaks is when your application creates a reference cycle across the bridge. For example, WOApplication has an Objective C retain on its WOSessions. If a Java subclass of WOSession then adds an instance variable to point at WOApp, you have created a cycle across the bridge and your session will never be collected.

This problem is documented in the WebObjects 4 release notes as follows:

Apple Reference # 2282368

Problem: Java Inner classes can create retain cycles resulting in leaked sessions and pages.

Description: If you are using inner classes in your session and/or pages, be aware that non-static inner classes have a hidden pointer to their owning class. This make it easy to get into situation where a mixed objC-Java retain cycle is created, preventing the deallocation of all objects on that cycle. For example, if you pass an instance of an inner class of a page to one of its subcomponents, you get the following cycle:

```
yourSubcomponent > theInnerClassInstance > (through the hidden ivar)  theTopLevelPage > (through normal objC containment) > yourSubComponent
```

Workaround: One possible way to break the cycle is to use a *static* inner class, which does not have this hidden instance variable.

Published Date: Feb 19, 2012

EOF 2.2 User Patch 3 Overview

This document contains release notes for EOF 2.2 User Patch 3, an update to Apple's Enterprise Objects Framework on Windows NT. This patch incorporates all EOF bug fixes released in EOF 2.2 Patch 1 and 2, the WebObjects 3.5.1 Database Adaptor Patches and the WebObjects Java Patch 2. This patch should **only** be applied to systems with EOF 2.2 installed. This patch only addresses user-level issues. EOF 2.2 developers should also see **article 70057** for more information on EOF 2.2 Developer Patch 2.

The WebObjects Current Patch List, **article 70037**, contains information on all available patches and workarounds for all versions of WebObjects, including EOF patches. The OPENSTEP Current Patch List, **article 70033**, contains information on all available patches and workarounds for all versions of OPENSTEP, including EOF patches. Please read these documents if you're not sure which patches you need on your system.
This article has been archived and is no longer updated by Apple.
Installing EOF 2.2 User Patch 3 on Windows NT 4.0

1. Download the Windows NT version of the patch from Apple's FTP site at ftp.info.apple.com. Also **download** the installer script, "patcher.nt.sh".

2. Log in as a user with Administrator privileges.

3. Open a Bourne shell. The Bourne shell should be available from your Start menu, under the WebObjects program group, or under your Apple root directory at NextLibrary\\Executables\\sh.exe.

4. Change to the directory containing the patch and the patch installer, "patcher.nt.sh".

5. Type the following at the shell prompt (make sure that there are no EOF applications running first):

```
./patcher.nt.sh -install EOF22_NT_User_Patch3.TAR.gz
```

For more information on using the patcher.nt.sh program, type the following at the command prompt:

```
./patcher.nt.sh -help
```

6. Reboot your Windows NT system

Issues Fixed

Corrected in EOF 2.2 User Patch 3

Editing context should not decrement snapshot retain count when forgetting a fault
Apple reference # 2326799

ISSUE:
When an editing context was released, the snapshot retain count was decremented for all of its registered objects, both "real" objects and faults. Since the snapshot retain count is only incremented when "real" objects are registered, this caused the snapshot retain count to be too low for faulted objects. An exception might be raised later because the snapshot had been released prematurely. This problem was listed as corrected in the release notes for EOF 2.2 User Patch 2, but the fix was not actually included in that patch.

RESOLUTION:
EOEditingContext now decrements the snapshot retain count only for complete objects, not for faults.

Corrected in EOF 2.2 User Patch 2

EOF applications crash accessing SQL Server 7
Apple reference # 2315234

ISSUE:
EOModeler and other EOF-based applications crashed when trying to connect to Microsoft SQL Server 7.0.

RESOLUTION:
The EOF ODBC adaptor has been updated, enabling EOF applications to connect to SQL Server 7 without error.

Java project recompilation
Apple reference # 2315243

ISSUE:
In order to take advantage of a bug fix in an upcoming WebObjects patch, some EOF Java projects needed to be recompiled.

RESOLUTION:
The relevant projects have been recompiled in this patch.

ODBC adaptor generates spurious login error message
Apple reference # 2315563

ISSUE:
While defining a new model or switching a model's adaptor to ODBC, the first attempt to connect to the database failed and a misleading "invalid login" error message was displayed. However, if the user continued with the login, entering the correct user name and password, the login succeeded. Subsequent attempts to log in with the same model did not produce this false error message.

RESOLUTION:
The connection information associated with the initial login panel is now properly constructed.

ODBC adaptor prepends owner to table name
Apple reference # 2319114

ISSUE:
When reverse engineering a Microsoft SQL Server database with ODBC, the table names all had the form OWNER.NAME instead of just NAME.

RESOLUTION:
The table names no longer have the owner prefixed to the name.

Snapshot refcount not incremented correctly with Entity Caching turned on.
Apple reference #2327400

ISSUE:
With entity caching enabled, the snapshot retain count was not correctly incremented when an entity was cached. Since the retain count was too low, a crash could result when attempting to access a cached entity whose snapshot had been released too soon.

RESOLUTION:
The EOAccess framework now increments the snapshot retain count for each object in an entity when the entity is cached and decrements the snapshot retain count for each object when the cache is invalidated.

Corrected in EOF 2.2 Patch 1

OracleEOAdaptor generates incorrect SQL for left and right outer joins
Apple reference # 2165674, 2288089

ISSUE:
The SQL generated by the Oracle adaptor for a left outer join was actually the syntax for a right outer join, and vice versa.

RESOLUTION:
The Oracle adaptor now generates the correct SQL for left and right outer joins.

EODatabase never releases snapshots
Apple reference # 2169671, 2231693

ISSUE:
Snapshots associated with enterprise objects were never released.

RESOLUTION:
EOF now tracks references to an object and releases the object's snapshot when there are no more references to it

Newly inserted objects not deleted correctly
Apple reference # 2176466, 2253191

ISSUE:
An object created and inserted into an editing context or relationship, then deleted before being saved to the database, was not completely removed from the editing context. This caused an exception to be raised the next time the editing context was saved.

RESOLUTION:
Deletion of a newly-inserted object now completely removes the object from the editing context.

Optimistic locking fails on rows with trailing spaces
Apple reference # 2177721, 2231704

ISSUE:
OracleEOAdaptor stripped trailing spaces from VARCHAR2 data fetched from or committed to an Oracle database. If VARCHAR2 data containing trailing spaces had been inserted by another tool, optimistic locking failed for any affected row and the row could not be updated.

RESOLUTION:
OracleEOAdaptor no longer strips trailing spaces from VARCHAR2 data.

Incorrect NSNumber formatting for zero values
Apple reference # 2181645, 2264031

ISSUE:
Zero values for number fields displayed by EOF did not always have appropriate formats for their types. For example, some integer zero values were represented as "0.00".

RESOLUTION:
EOEntity has been modified to format zero values appropriately for all number types.

Logic error in EOAccess layer sometimes raises exception while generating primary keys
Apple reference # 2182084, 2278561

ISSUE:
Under certain circumstances, the EOAccess code that generates primary keys sent a message to inappropriate objects causing a "NoSuchMethodError" exception to be thrown in Java or one of several exceptions to be raised in Objective C.

RESOLUTION:
EOAccess now checks the class of the receiver before sending the message that was causing the issue.

EOModeler can't create a model with EODeleteRuleNoAction
Apple reference # 2202107, 2248443

ISSUE:
In EOModeler's AdvancedRelationship inspector, if the Delete Rule was set to "No Action", the following warning was posted the next time the model was opened:

```
Invalid delete rule string:'EODeleteRunNoAction' on entity with name: '<entity_name>'
```

This issue could also affect applications which create their own models.

RESOLUTION:
This issue was caused by a simple typographical error which has been corrected. It is now possible to create models with EODeleteRuleNoAction.

EOQualifier qualifierWithFormat methods conflict
Apple reference # 2203613, 2275802

ISSUE:
If a qualifier was created using **+[EOQualifier qualifierWithQualifierFormat: arguments:]** and, subsequently, another qualifier was created using **+[EOQualifier qualifierWithQualifierFormat:]**, a parse error occurred, even if the second qualifier was valid.

RESOLUTION:
The interference between these two methods has been removed and they now operate correctly.

selectObject: method return values don't match documentation
Apple reference # 2205357, 2275804

ISSUE:
The **[EODisplayGroup selectObject:]** method would only returned 'NO' if it could not end editing or if the delegate refused the change. According to the class documentation, it should also return 'NO' if the EODisplayGroup's displayedObjects array does not contain a match with the method's object argument.

RESOLUTION:
As stated in the documentation, this method now also returns 'NO' when it cannot find a match for the argument object.

Sybase can't fetch float and text data together
Apple reference # 2208497, 2259088, 2274601

ISSUE:
The Sybase adaptor could not fetch data of types text and float together.

RESOLUTION:
The adaptor has been fixed so that there is no longer a conflict between these data types.

EOControl layer raises exception while building qualifier
Apple reference # 2213188, 2271206

ISSUE:
The qualifier parsing code in the EOControl layer incorrectly sends **copyWithZone:** to custom enterprise objects under certain conditions, causing a "selector not implemented" exception to be raised in Objective C or a "CloneNotSupportedException" to be thrown in Java.

RESOLUTION:
copyWithZone: is no longer called on custom enterprise objects when building a qualifier.

Nil value in EOAttribute causes crash while saving EOModel
Apple reference # 2220588, 2274226

ISSUE:
In certain circumstances, a crash occurred during the save of an eomodel because a nil serverTimeZone attribute was being inserted into the eomodel.

RESOLUTION:
The EOAccess layer has been changed to test for and handle a nil value for this attribute.

Exception while writing an eomodel to disk corrupts the model
Apple reference # 2220893, 2274225

ISSUE:
If an exception was raised while an eomodel was being written to disk, the original model was lost and only the partially-written or corrupted model was left on the disk.

RESOLUTION:
A backup copy of the eomodel is now made before the write begins. If an error occurs during the write the partially-written file is saved as <model_name>.eomodeld# and the original eomodel is restored from the backup.

Prefetching can mysteriously fail
Apple reference # 2223730, 2264033

ISSUE:
Prefetching would sometimes failed for no apparent reason, due to inappropriate filtering of relationships inside the EOAccess layer.

RESOLUTION:
The incorrect filtering on prefetches has been removed from EOEntity.

Unnecessary firing of to-many faults
Apple reference # 2227660, 2248080

ISSUE:
If the PropagatePrimaryKey flag on an EOEntity was set to YES, saving changes to the EOEditingContext caused array faults for all of that entity's to-many relationships to be fired. This was not necessary and could cause performance issues.

RESOLUTION:
The EOAccess layer has been changed so that it no longer fires unnecessary faults.

EOFault retain/release behavior conflicts with Java bridge
Apple reference # 2239504, 2297785

ISSUE:
EOFault's special handling of retain and release sometimes caused conflicts with the Java bridge.

RESOLUTION:
The retain and release behaviors of EOFault have been modified to interoperate correctly with Java via the bridge.

Incorrect Sybase smallint mapping
Apple reference # 2241377, 2247522

ISSUE:
On HP-UX and Solaris, data with the Sybase type **smallint** was mapped to **NSNumber/Integer** and assigned the original value times 2 ^16 when retrieved from a Sybase database.

RESOLUTION:
The Sybase adaptor now correctly maps smallint data to type NSNumber/Short and does not modify the value.

No EOActionCellAssociation for most controls
Apple reference # 2243956, 2269874

ISSUE:
EOActionCellAssociation did not work with controls other than NSTextField in EOF 2.2 and WebObjects 3.5.1.

RESOLUTION:
This class has been changed to work with NSButtons and other controls, as well as NSTextFields.

Can't use Sybase 11 stored procedures
Apple reference # 2244533, 2274650

ISSUE:
The Sybase adaptor was unable to interpret stored procedures created in Sybase 11.

RESOLUTION:
The adaptor has been fixed to work properly with stored procedures from both Sybase 10 and Sybase 11.

Case-insensitive matching sometimes fails
Apple reference # 2248977, 2275805

ISSUE:
Case-insensitive matching in EOQualifier did not correctly match uppercase letters in the search pattern with lowercase letters in the receiving string.

RESOLUTION:
EOQualifier has been fixed. **[EOQualifier isCaseInsensitiveLike:]** now works correctly.

EOEntity methods raise exceptions
Apple reference # 2251180, 2256685

ISSUE:
Under some circumstances some methods of EOEntity, including setAttributes, setClassProperties, setRelationship, and removeRelationship, did not clear a private variable, potentially resulting in an application exception.

RESOLUTION:
These methods now handle their private instance variables correctly.

Oracle adaptor state not reset when closing the database channel fails
Apple reference # 2252175

ISSUE:
If the Oracle adaptor encountered an error while closing the database channel, the adaptor state was not reset correctly. As a result, the database connection could not be re-established on that channel once the database came back up.

RESOLUTION:
The Oracle adaptor now sets its internal state correctly before raising the error, allowing the connection to be re-established once the database is restored.

Multiple propagation primary keys create race condition
Apple reference # 2260541, 2267964

ISSUE:
Saving changes to two databases when both had a propagation primary key would not work in previous versions of EOF. A race condition occurred and only one database was able to generate primary keys.

RESOLUTION:
EODatabaseContext has been changed to correct this behavior. Both databases can now generate their primary keys correctly.

Special characters crash Sybase adaptor
Apple reference # 2260785, 2261262

ISSUE:
The SybaseEOAdaptor crashed when saving Text or BLOB data containing characters which could not be successfully encoded using the specified database encoding.

RESOLUTION:
The adaptor has been fixed to detect the encoding failure and raise an exception, so that a database encoding which is able to handle the issue characters may be specified in the connection dictionary.

Can't use smallints as arguments to Sybase stored procedures
Apple reference # 2262888, 2274608

ISSUE:
The Sybase adaptor did not allow the use of smallints as arguments to stored procedures.

RESOLUTION:
The Sybase adaptor now allows stored procedures with smallint arguments.

Java garbage collecting fails with EOEditingContext
Apple reference # 2264063, 2264251, 2270489

ISSUE:
EOEditingContext did not retain its registered objects. This could cause issues with Java garbage collection.

RESOLUTION:
EOEditingContext now allows users to specify whether editing contexts retain their objects or not with the new class methods **setInstancesRetainRegisteredObjects:flag:**, **getInstancesRetainRegisteredObjects**, and **reset**. For API details, please see EOEditingContext.h. By default, in applications which contain Java, the editing context does retain all registered objects.

Deallocating an EODatabase containing snapshots causes crash
Apple reference # 2265751, 2272549

ISSUE:
EODatabase released its snapshots too early during deallocation, causing a fatal exception to be raised if any snapshots were present.

RESOLUTION:
The order in which instance variables are released by EODatabase has been corrected.

Memory leak in EODisplayGroup
Apple reference # 2217263, 2256402

ISSUE:
A private variable was not being released in EODisplayGroup, causing a memory leak.

RESOLUTION:
This variable is now released correctly.

Informix adaptor crashes on failed referential integrity check
Apple reference # 2272207, 2274351

ISSUE
If the InformixEOAdaptor was unable to find matching source and destination entities of a referential integrity constraint, it passed a nil pointer to the database, causing a crash.

RESOLUTION
The InformixEOAdaptor now detects this condition and handles it appropriately.

Incorrect time zone conversions in the SybaseEOAdaptor
Apple reference # 2276899, 2276907

ISSUE:
When converting a time value to the server time zone, the SybaseEOAdaptor only substituted the server's time zone without actually adjusting the time value for the zone difference.

RESOLUTION:
SybaseEOAdaptor now performs the conversion of the time value to the corresponding value in the server's time zone.

Can't subclass entities with fetch specifications
Apple reference # 2278492, 2279849

ISSUE:
Due to an error in EOKeyValue encoding, EOModeler was unable to create a subclass when a fetch specification was associated with the entity being subclassed.

RESOLUTION:
The encoding is now correct and entities with associated fetch specifications can be subclassed from within EOModeler.

Deleting objects with "toManyToOne" relationships sometimes fails.
Apple reference # 2278795, 2287021

ISSUE:
In some circumstances, EOF did not correctly handle deletion of an object with a toManyToOne relationship, leaving rows in intermediate tables which should have been deleted.

RESOLUTION:
The EOAccess layer now does a more thorough analysis of an object's relationships when it is deleted, and data in intermediate tables is correctly removed.

BusinessLogic framework fails to retain some global IDs
Apple reference # 2290233, 2290236

ISSUE:
Several classes in the BusinessLogic framework example failed to retain global IDs for some enterprise objects, resulting in messages being sent to unexpectedly freed objects.

RESOLUTION:
The classes now retain global IDs appropriately.

Editing the owning relationship in a nested editing context more than once corrupts the database snapshots.
Apple reference # 2280979, 2287025

ISSUE:
Due to an error in the processing of array faults by the database context, editing the owning relationship in a nested editing context more than once corrupted the database snapshot for the owning object, resulting in database corruption.

RESOLUTION:
The error in EODatabaseContext has been corrected.

EODisplayGroup instances leak
Apple reference #2286314

ISSUE:
Each EODisplayGroup instance leaked two EOObserverProxy objects.

RESOLUTION:
This leak in EODisplayGroup has been fixed.

Incorrect time zone conversion in EOAccess layer.
Apple reference #2287379

ISSUE:
When converting a time value to the server time zone, the EOAccess layer substituted the server's time zone without actually adjusting the time value for the zone difference.

RESOLUTION:
EOAttribute now performs the conversion of the time value to the corresponding value in the server's time zone.

Corrected in EOF 2.2 Sybase Adaptor Patch

All parameters required for Sybase stored procedures
Apple reference # 2203081

ISSUE:
If you did not supply all values when executing a Sybase stored procedure, the execution would fail with an exception like:

```
Feb 19 11:23:53 WOF_3_5_Sybase_Patch[1027] Caught exception:EOGeneralAdaptorException

Sybase: Server:unknown Procedure:NEXT_MOVIE_PRIMARY_KEY Line:0 Procedure NEXT_MOVIE_PRIMARY_KEY expects
parameter @A_MOVIE_ID, which was not supplied.
```

This happens even though A_MOVIE_ID is not required for the stored procedure.

RESOLUTION:
The Sybase adaptor no longer requires optional arguments to stored procedures.

Corrected in EOF 2.2 ODBC Adaptor Patch

ODBC Adaptor cannot execute stored procedures with output parameters
Apple reference # 2208503

ISSUE
The EOF 2.2 (WebObjects 3.5) version of ODBCEOAdaptor.framework introduced a bug which causes an error when using a stored procedure with an output parameter.

RESOLUTION
The ODBC adaptor now handles output parameters correctly.

ODBC adaptor leaks connections with Microsoft Access
Apple reference # 2209574

ISSUE:
The EOF 2.2 (WOF 3.5) and earlier versions of ODBCEOAdaptor.framework did not release ODBC connections when using Microsoft Access (or any JET based data source) in order to work around a bug in the Microsoft odbcjt32.dll library; this bug caused a crash when SQLFreeConnect was called. The SQLFreeConnect bug was discovered in version 3.40.2829 of the DLL. Newer versions of the DLL (beyond 3.50) no longer exhibit the crashing issue.

RESOLUTION:
The patched version of this framework now checks the version of the DLL more carefully and allows SQLFreeConnect to be called unless the DLL version is 3.4X. The adaptor no longer leaks the ODBC Connection when running with fixed versions of odbcjt32.dll.

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Published Date: Feb 20, 2012

WebObjects 4: Using JavaClient with Internet Explorer under Mac OS 8.6

Q: I'm using JavaClient in my WebObjects application, but Internet Explorer version 4 on Mac OS 8.6 won't run my JavaClient components. How can I configure Mac OS 8.6 and IE to run my application correctly?
This article has been archived and is no longer updated by Apple.
A: To use JavaClient on Mac OS 8.6, you will need to install the correct versions of MRJ and the Swing libraries. You need MRJ version 2.1.2 or later and Swing version 1.0.3 or later. You should be able to find links to both from Apple's web site at:

http://www.apple.com/java

Next, open the Preferences panel in Internet Explorer (under the Edit menu) and select "Java" to bring up the Java preference panel. Select the new MRJ version as your Java virtual machine and add the swingall.jar file to your classpath. WebObjects Java client applications should now work correctly.

Published Date: Feb 19, 2012

WebObjects 3.5.1 Patch 4 Overview

This document contains an overview and download information for Apple's Patch 4 for WebObjects 3.5.1.

This article has been archived and is no longer updated by Apple.

Introduction

This document describes Apple's Patch 4 for WebObjects 3.5.1. This patch set includes fixes that address the Year 2000 compliance issue (century rollover). Users of WebObjects 3.5.1 should install this patch set. Detailed release notes, including specific problems fixed with Apple bug tracking numbers, are included in the download package. Please read these release notes for important information on what is and is not covered by this patch. These Release Notes also document the issues found in Enterprise Objects Framework (EOF).

WebObjects 3.5.1 Patch 4 supercedes all previous WebObjects 3.5.1 general system patches. If you have already installed a WebObjects patch on your system, you can install Patch 4 over your existing installation. If you have not installed any previous patches, you do not need to.

For additional Year 2000 tips for WebObjects developers, see article 70048: "**WebObjects Year 2000 Technical Tips.**"

WebObjects 3.1 users should see article 70099**:** "**WebObjects 3.1 Patch 1 Overview**" for information on the equivalent patch for WebObjects 3.1.

The WebObjects Current Patch List (see article 70037: "**WebObjects Current Patch List**"), contains information on all available patches and workarounds for all versions of WebObjects, including EOF patches. Please read this document if you're not sure which patches you need on your system.

How To Use

This patch consists of patch binaries for **Solaris**, **Windows NT**, and **HP-UX** platforms. The **release notes** included with the patch contain descriptions of additional steps required for full compliance on developer installations for all platforms. A separate **patch installation script** is also required for Solaris and HP-UX users.

This patch affects the development and deployment versions of WebObjects 3.5.1 on Windows NT, Solaris, and HP-UX. No WebObjects patch is required for users of WebObjects 3.5.1 on OPENSTEP 4.2 for Mach; however, you must have OPENSTEP 4.2 for Mach Patch 4 or later installed on your OPENSTEP system. WebObjects users on OPENSTEP for Mach should also read sections 3 and 4 of the **patch release notes**; these sections describe some manual steps you should take to avoid some Year 2000-related problems.

Apple has tested WebObjects 3.5.1 with Patch 1 installed and has determined based on the results that the software meets Apple's standard of Year 2000 compliance. For Apple, Year 2000 compliance means that the software does not produce errors processing date data in connection with the year change from December 31, 1999 to January 1, 2000, when using accurate date data in accordance with its documentation, provided all other products used with it properly exchange date data with the Enterprise Software product.. This includes the use of the database adapters included with EOF, when used through EOF. It has been determined that the direct use of client library API, custom SQL statements, or other use of the database adapters or software other than through the EOF APIs may produce results that do not meet Apple's standard of Year 2000 compliance.

What Is Not Covered

Third Party Software Applications

WebObjects 3.5.1 is designed to support certain third-party products, including but not limited to databases, web servers and HTML editors. Apple has not tested the Year 2000 status of these products and will not guarantee or provide support for them.

Operating System Software

WebObjects 3.5.1 can be used under OPENSTEP for Mach, Windows NT, Solaris, and HP-UX. Because WebObjects depends on the underlying operating system for some time and date information, Apple cannot guarantee the operation of WebObjects after December 31, 1999 unless the underlying operating system is free of Year 2000 problems. Please contact your operating system vendor regarding the Year 2000 status of your system. WebObjects installations running on OPENSTEP 4.2 for Mach systems must have OPENSTEP 4.2 for Mach Patch 4 or a later patch version installed on their system for Year 2000 compliance.

Published Date: Feb 19, 2012

WebObjects 4: Using SSL with WebObjects 4

Secure Sockets Layer (SSL) is the Internet security protocol for point-to-point connections. It provides protection against eavesdropping, tampering, and forgery. Clients and servers are able to authenticate each other and to establish a secure link, or "pipe," across the Internet or Intranets to protect the information transmitted. (Source: RSA Security Protocols Overview, http://www.rsa.com/standards/protocols/ssl_tls.html.) This article discusses how to implement SSL with WebObjects 4.

An example using the techniques discussed in this article is available in **Article 70106**

This article has been archived and is no longer updated by Apple.

Establishing an SSL Connection

Traditional, non-secure connections are made with the HTTP protocol, using a URL such as "http://www.webobjects.com." A web browser will attempt an HTTP connection with the server on port 80 unless another port is specified. By changing the "http://" to "https://", e.g. "https://www.webobjects.com", the web browser will attempt to connect to the server via SSL. This connection defaults to port 443.

Setting up a secure server is beyond the scope of this article. For assistance, contact one of the Certificate Authorities such as VeriSign (at www.verisign.com), RSA (at www.rsa.com), Entrust (at www.entrust.com), or Thawte (at www.thawte.com).

Why Doesn't WebObjects Support SSL?

Actually, it does! An entire WebObjects application can be run in SSL mode by starting it with an "https:" URL. However, encrypting and decrypting every page uses system resources. Also, there's no way to switch between HTTP and SSL. This is because WebObjects generates URL's relative to the server root, omitting the protocol prefix. For example, a typical URL generated by WebObjects starts with "/cgi-bin/WebObjects/..." instead of a complete URL like "http://www.webobjects.com/cgi-bin/WebObjects/...".

Why does WebObjects generate these abbreviated URL's? Once the initial URL is given with the protocol, host name, and (optional) port number, these don't need to be re-specified for every connection. The same protocol, host name, and port numbers are used for subsequent connections. Omitting them saves on system overhead, and in most cases they're not needed anyway.

Adding SSL Support to WebObjects

To switch to SSL mode, your app must generating a URL beginning with "https://". To switch back, it must generate a URL beginning with "http://". Both of these tasks require that WebObjects generate complete URL's, instead of URL's relative to the server's document root (/cgi-bin/WebObjects/...). There is a private method in WOContext which allows this, called _generateCompleteURLs. Calling this method during the request-response loop ensures that all subsequently-generated URL's in the response have URL's beginning with "http://", followed by the host name and (optional) port number.

The _generateCompleteURLs method prefixes URL's with the value of the WOCGIAdaptorURL variable. This value can be set from the command line when launching the application (with the -WOCGIAdaptorURL flag), through user defaults, programatically via WOApplication methods, or via Monitor. WOCGIAdaptorURL defaults to "http://localhost/cgi-bin/WebObjects". Despite its name, WOCGIAdaptorURL is also used by the NSAPI and IIS adaptors. The user default WOAdaptorURL may also be used for compatibility, although this is not recognized as a command-line option.

Now that we can generate complete URL's, and specify the prefix, all that's required to generate a URL pointing to a secure server is to get the value of WOCGIAdaptorURL, change the "http" prefix to "https", and call _generateCompleteURLs. For example:

```
url = [[WOApplication cgiAdaptorURL] mutableCopy];
range = [url rangeOfString:@"http://"];
if (range.length > 0) {
[url replaceCharactersInRange:range withString:@"https://"];
[WOApplication setCGIAdaptorURL:url];
}
[context _generateCompleteURLs];
```

This code is from the enableSSLInContext method of the SSL class, available for download as part of the WebObjects 4 SSL Example, **Article 70106**. Executing this code anytime during the request-response loop will cause all subsequently-generated URL's to link to the secure server; the disableSSLInContext method switches back to "http://". These methods are written in Objective C, but are "wrapped" for use in Java.

Mixing Normal and Secure URL's

A major limitation of the above code is that it changes the protocol for an entire page. To mix normal and secure URL's on a page, you must know exactly where in the request-response loop to change the protocol, and where to change it back.

A new dynamic element, SSLContainer, has been provided in the SSL Example. This element can be "wrapped" around any block of HTML, and any URL's generated by WebObjects inside the SSLContainer will have an "https://" prefix. The element does not take any bindings. For example,

consider the following HTML:

```
<webobject name=GiftIdeas>
</webobject>
<webobject name=ContinueShopping>
</webobject>
<webobject name=SecureArea>
 <webobject name=Checkout>
 </webobject>
</webobject>
```

And the following wod:

```
GiftIdeas: CatalogPage { ... }
ContinueShopping: WOActiveImage { ... }
SecureArea: SSLContainer { }
Checkout: WOActiveImage { ... }
```

All of the URL's on the page will start with"http://", except for the link to the checkout page, which will start with "https://". Since it works similarly to the WOComponentContent dynamic element, SSLContainer can include any number of nested components.

Known Problems

- The method _generateCompleteURLs and the class WOHTMLStaticGroup are private, and their use is not supported by Apple. They are subject to change or removal in future WebObjects releases. The example code distributed with this article was developed using WebObjects 4.
- The WOQuickTime dynamic element uses its own algorithm for assembling complete URL's, instead of calling _generateCompleteURLs. As a result, QuickTime movies should not be placed on a secure server. (If this is required, use an HTML hyperlink instead.)
- This method will not work if the value for WOCGIAdaptorURL includes a port number. This would be required if the non-secure web server was running on a port other than 80. The enableSSLInContext method simply replaces "http" with "https", but does not rewrite port numbers, so the browser would attempt an SSL connection to the HTTP port and fail. Of course, it is still possible to run your application on a port other than 80. Just be sure to omit the port number from WOCGIAdaptorURL (i.e. instead of "http://www.webobjects.com:5000/cgi-bin/WebObjects", use "http://www.webobjects.com/cgi-bin/WebObjects"). You will not be able to auto-launch your application from Project Builder with this setup, so set WOAutoOpenInBrowser to NO.

Published Date: Feb 19, 2012

WebObjects 4: Performance Tips

Aggressive schedules and the quick pace of web time don't always leave developers with much time for performance optimization. This article is a collection of practical tips on speeding up your WebObjects application after most of your code has been written. This performance tuning information has been gathered while assisting our developers in support, and from in-house projects and testing. This article concentrates on the I/O processing between your application and the database; we'll also tell you about some of the features of WebObjects 4 that you might have missed.
This article has been archived and is no longer updated by Apple.

Measure your application

In a WebObjects application, there are four basic sources of response time delays. Ordered with the most expensive first, they are:

- I/O & processing between your application and the database
- WOF request/response handling
- Custom application action handling
- I/O between browser, web server, and Application

Of course, the source of performance delays in deployed application will vary from project to project. This article focuses on database I/O; however, before you spend a lot of time fine-tuning your app, we recommend measuring your application to see where your bottlenecks are. You may find problems where you least expect them; sometimes adding hardware is the best solution to a performance problem.

How much speed do you need?

You can get a rough estimate of your application's ability to generate pages by running one instance and observing the response time of your pages. Run through what you think is a typical session, using the WOStats page to tell you the relative speed of each page in your application. Run through several sessions and subtract out the times for the first hit on any page to allow for the one-time overhead in HMTL/wod parsing. Inverting the resulting average response time will give you a pages per second measurement. For an app that is CPU limited, this figure can serve as an estimate of the total page throughput that your app can deliver. If it is greater than the expected load for your app by an order of magnitude or more, you probably don't need to worry about further performance tweaks.

For a more reliable performance estimate, WebObjects 4 provides the WOPlaybackManager. This lets you create a few typical scenarios and let them run simultaneously against your server. You can start them all up to warm up the application, then reset your WOStats and let them run for a few minutes. For more information on WOPlaybackManager, please see the WebObjects documentation.

Add timing code

In addition to WOStats, consider adding timing code to your Application object to establish timing for the different phases in the request/response loop. The timing for the methods takeValues and appendToResponse relates to WebObjects, while the timing for invokeAction measures your code. This is usually where fetching happens. If invokeAction is taking a long time, the first place to look is at your For an example of timing the request/response loop, use the WOAssociationTiming framework; for details, see **article 70105**.

Optimize your fetches

To test the performance of your fetches, run your application with EOAdaptorDebugEnabled set to YES. This will give you an idea of how much SQL you are sending on a given page. Keep in mind that the Object Uniquing feature in EOF means that previously fetched data won't get fetched again when navigating the same relationships. For each page, look at the SQL generated by each hit after the warmup phase.

Pay special attention to any SQL that looks like a fault firing. Faults are a convenient feature in EOF, but incrementally firing several of them can slow down your app significantly. If you can identify that some of the faults are being fired for most requests, try prefetching them instead. If the usage pattern is not clear, the "batch faulting" feature might be a better choice. Both prefetching and batch faulting are documented in the Enterprise Objects Framework Developer's Guide.

Looking at the SQL should also help you determine if performance problems occur during fetching or during saving. Web apps tend to do mostly fetching, but if you are regularly saving data, this could also cause a performance hit.

Set a fetch limit

With the EOFetchSpecification API, fetch limits can be set on an application-wide basis or for each fetch.

Use one global editing context or share display groups

Using a global editing context, instead of the default of one editing context per session, will reduce the session size and speed up your app if you need to archive sessions. Having one shared editing context will also speed up the retrieval of read-only data.

Here is one way to implement a globally shared editing context in Objective C. Put this code in your Application.m file. If the shared global editing context does not exist, this method creates a new one. At the same time, a global fetch limit is set to 20. Please note that the "fetchLimit" here can be stored as a user default and can be changed in a convenient way. When a session needs to refer to the editing context, it can do the following:

```
ec = [(Application *) WOApp sharedGlobalEditingContext];
```

Remember to send a release message to your ivar _sharedGlobalEditingContext in Application's dealloc method to avoid leaks.

```
int globalFetchLimit;
- (EOEditingContext*)sharedGlobalEditingContext {
 if (!_sharedGlobalEditingContext) {
   EOObjectStore* anOS = [EOEditingContext  defaultParentObjectStore];
   _sharedGlobalEditingContext = [[EOEditingContext alloc] initWithParentObjectStore:anOS];
   globalFetchLimit = [[NSUserDefaults standardUserDefaults] integerForKey:@"fetchLimit"];
 if (!globalFetchLimit)
   globalFetchLimit = 20;
 return _sharedGlobalEditingContext;
}
```

In addition, you might want to share WODisplayGroups in the same session, instead of putting DisplayGroups on every page. If you are displaying the same objects on multiple pages, you won't need to refetch them to get the same result set again or a subset of the original result set.

Cache the fetch results

If one page is slow and is accessed very frequently, you may want to add some code to cache recent fetches. If a fetch is repeated, the database will not be accessed the second time. A sample implementation of such a cache is provided in the download package that accompanies this article, as EOKeyValueCache.[hm]. In addition, the Application class needs to implement the EODatabaseContext delegate methods:

```
-databaseContext: shouldFetchObjectsWit hFetchSpecification: editingContext:
```

and

```
-databaseContext: didFetchObjects: fetchSpecification: editingContext:
```

to keep the cache up-to-date. Please note that this type of cache is primarily for read-only data, or data that changes infrequently.
Use raw rows

If you need to fetch very large amounts of data, you may want to use raw row fetches. This is a new feature in WebObjects 4; the API is documented in EOUtilities. You can also set raw mode fetching directly in the fetch specification using EOModeler. If you use raw row fetching, you will no longer be able to access to-many relationship information or use uniquing, but most fetches will execute at least twice as fast. Fetching objects with multiple relationships, or only fetching a subset of your attributes, will result in even greater speed improvements.

EOF has API to convert raw rows into enterprise objects, so once you have identified the objects you need, it is easy to put them into the editing context. To convert a raw row to an EO in Objective C, use the method:

```
eo = [globalEditingContext faultForRawRow:anObject entityName:@"Product"];
```

Cache primary key sequence values

If you notice poor performance on your Insert or Save Page, you may want to implement a better primary key generation mechanism to reduce the number of round trips to the database. One possibility is to use a batch of primary keys, instead of generating them each time.

For example, you can modify the SQL for the Oracle SEQUENCE to hand out sequences incremented by 100. Your application will grab a range of 100 primary keys and hand them out as needed. In addition, you will need to implement the EODatabaseContext delegate method databaseContext: newPrimaryKeyForObject:entity: in your Application.m file to return the proper primary key in case of a fast save. Be aware that if your application is restarted regularly, there will be gaps in the range of your primary keys.

Tune your database queries

Use the RDBMS "Explain Plan" functionality to get the exact execution plan, and verify that all of your queries are using indexes. If you are doing a case insensitive comparison, the database must do a full table scan and you will not be able to use indexing. If you are using Oracle and doing a LIKE comparison, you will need to turn off bind variables for that query and make sure that you aren't passing in a pattern that begins with a wildcard; otherwise you will not be able to use indexing. In addition, never mark a BLOB as used for locking. Instead of marking all attributes as used for locking, mark one attribute, preferably a 'date changed' attribute.

To turn off the use of bind variables, you can do something like:

[EOSQLExpression setUseBindVariables:NO];

Another possibility, on the MacOS X Server platform, is to set the user default named EOAdaptorUseBindVariables. For example, at a shell prompt, type:

```
defaults write NSGlobalDomain EOAdaptorUseBindVariables NO
```

Compile or wrap your EO's

If you have a few Enterprise Objects that are accessed a lot, moving them to Objective C can help. Consider compiling these objects and creating Java wrappers from them. You can add some code to your accessor methods to help determine which enterprise objects, if any, should be converted to Objective C. For example:

```
static int firstNameAccessorCount = 0;
public String firstName() {
 if ((++ firstNameAccessorCount % 1000) == 0)
  System.out.println("firstName accessor called " +
                firstNameAccessorCount + " times");
return firstName;
}
```

Of course, if you find that some enterprise objects or keys are being accessed very often, you should try to reduce the number of times they get called as well as wrapping them to speed up access.

Take advantage of EOModeler caching

With the EOModeler Advanced Entity Inspector, you can mark an entity as "cache in memory". EOF will evaluate queries against that entity in memory and avoid round trips to the database. This is most useful for read-only entities, since there is no danger that the cached data will get out of sync with the database data. Since EOF will keep all of the entity's objects in memory, this technique should only be used for small tables.

Use EOModeler to create fetch specifications

If you have an EOFetchSpecification object that will be used frequently, use EOModeler to create and store it in the model file, instead of re-creating it programmatically each time you perform a fetch.

Published Date: Feb 19, 2012

WebObjects 4: SSL Example

The WebObjects SSL Example demonstrates the use of Secure Sockets Layer, or SSL, with WebObjects 4. For more information on the applications of this example and on using SSL with WebObjects, please see **article 70101**.

WARNING: The code contained in this example is not thread-safe and should not be used with multithreaded applications.

This article has been archived and is no longer updated by Apple.

Where to Find the Example

Download the SSL Example from Apple's FTP servers.

Building and using the Example

The example is distributed as a standard WebObjects framework. Please see **article 70101** for more information on using SSL with WebObjects applications.

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Published Date: Feb 19, 2012

WebObjects 4: JDBC Adaptor

This document contains an unsupported database adaptor that allows WebObjects 4 users on Mac OS X Server and Windows NT to connect their WebObjects applications to JDBC databases. This package is not supported by Apple, Inc. and should be used at your own risk. The adaptor posted here is version 0.7; newer versions will be posted as they become available.
This article has been archived and is no longer updated by Apple.
Note: Any reference in this article to Mac OS X Server pertains to version 1.2, which was released prior to May 2001.

About the JDBC Adaptor

The JDBC Adaptor provided here was designed to allow WebObjects users to use JDBC data sources during application development. This adaptor is not a supported product of Apple, Inc.; use it at your own risk. This adaptor has not been optimized for performance; therefore, for performance reasons, Apple strongly discourages using this adaptor for application deployment.

Before You Install

Because of the immature nature of this release, it is important to keep Apple informed about your usage. It is strongly recommended that you send email to JDBCEOAdaptor@group.apple.com and include:

- Your name, company name and contact information
- Your WebObjects platform
- Your database and JDBC driver vendor and version

The JDBC EOAdaptor is a little complicated to install. The adaptor itself is only one piece, you will still need to install software from your database vendor, as well as some setting up a bundle to fix EOModeler's JVM initialization. Please read the installation instructions (both ours and your database vendors) in detail.

Installing the JDBC Adaptor on Mac OS X Server

1. **Download** version 0.7 of the Mac OS X Server version of the JDBC Adaptor from Apple's FTP servers.

2. At a shell prompt, type:

```
gnutar -xzf JDBCEOAdaptorOSX.tgz
```

This will create a folder called "JDBCEOAdaptor.framework".

3. Move this folder into /Local/Library/Frameworks

4. Launch EOModeler. In the EOModeler preferences, add:

```
/Local/Library/Frameworks/JDBCEOAdaptor.framework/Resources
```

to your list of "EOModeler Bundle Search Paths". This will make sure that a helper bundle which turns off fast JVM loading is loaded into EOModeler during startup This is needed to get the JDBC login panel to work.

NOTE: The JDBC-EOModelerFix.EOMbundle located in JDBCEOAdaptor.framework/Resources can also be used to fix ProjectBuilder so that the wizard's create new model will work. The trick here is that you might have a hard time with PB's bundle chooser since it wants to use bundles with '.bundle' extension and the fix is in a ".EOMbundle". In the worst case, you can either create your EOModels first using EOModeler and then run the wizard, or you can copy the bundle to the same name with a ".bundle" extension for PB.

5. Quit EOModeler and launch it again.

6. Go to the Workspace and bring up the console from the Tools menu. You should see a message telling you that "JDBCJVMFix" has initialized. If it has not, there is a problem with your installation.

7. Quit EOModeler.

Installing the JDBC Adaptor on Windows NT

1. **Download** version 0.7 of the Windows NT version of the JDBC Adaptor from Apple's FTP servers.

2. At a Bourne shell, type the following commands:

```
gunzip JDBCEOAdaptorNT.tgz
```

```
gnutar xf JDBCEOAdaptor.framework.NT.tar
```

This will create a folder called "JDBCEOAdaptor.framework".

3. Move this folder into ($NEXT_ROOT)/Local/Library/Frameworks

4. Move the file:

```
($NEXT_ROOT)/Local/Library/Frameworks/JDBCEOAdaptor.framework/JDBCEOAdaptor.dll
```

to:

```
($NEXT_ROOT)/Local/Library/Executables
```

5. Launch EOModeler. In the EOModeler preferences, add:

```
($NEXT_ROOT)/Local/Library/Frameworks/JDBCEOAdaptor.framework/Resources
```

to your list of "EOModeler Bundle Search Paths". This will make sure that a helper bundle which turns off fast JVM loading is loaded into EOModeler during startup This is needed to get the JDBC login panel to work.

NOTE: The JDBC-EOModelerFix.EOMbundle located in JDBCEOAdaptor.framework/Resources can also be used to fix ProjectBuilder so that the wizard's create new model will work. The trick here is that you might have a hard time with PB's bundle chooser since it wants to use bundles with '.bundle' extension and the fix is in a ".EOMbundle". In the worst case, you can either create your EOModels first using EOModeler and then run the wizard, or you can copy the bundle to the same name with a ".bundle" extension for PB.

6. Quit EOModeler and launch it again.

7. Bring up the Event viewer and check the Application events. You should see a message telling you that "JDBCJVMFix" has initialized. If it has not, there is a problem with your installation.

8. Quit EOModeler.

Installing the JDBC Drivers

Before you can use this adaptor, you will need to download and install JDBC drivers for your database. These drivers will normally be available from your database vendor; Apple cannot provide them.

Make sure that you are using:

- The Java 1.1.x version, not the Java 1.2 version.
- The 100% Pure Java version. (This is sometimes called the Type 4 version.)

Follow the vendor instructions to install the drivers and add the driver to the CLASSPATH environment variable. You should now be able to launch EOModeler and create a new model with "JDBC" as your adaptor type.

Sources for JDBC Drivers

Sybase drivers are available from Sybase. Go to:

http://www.sybase.com/products/allproductsa-z/softwaredeveloperkit/jconnect

Oracle drivers are available from Oracle. Go to:

http://www.oracle.com/technology/tech/java/java_db/index.html

Openbase drivers are included in the main product download. Go to:

http://store.openbase.com/cgi-bin/WebObjects/OpenBaseStore?openbase=1

SQLServer users can download a test version of i-net SPRINT, a Type 4 JDBC 2.0 driver for Microsoft SQLServer6.5 and 7.0, from:

http://www.inetsoftware.de. (A test-version of i-net

Driver Parameters

For your convenience, the following is a list of drivers and their associated connection parameters that have been used successfully with this adaptor.

Informix = {
JDBCDriverName = com.informix.jdbc.IfxDriver;
password = informix;
protocol = jdbc;
subname = "//somehost:1526/movies:INFORMIXSERVER=eof";
subprotocol = "informix-sqli";

```
username = informix;
};
ODBC = {
JDBCDriverName = sun.jdbc.odbc.JdbcOdbcDriver;
password = "";
protocol = jdbc;
subname = "dbName;";
subprotocol = odbc;
username = "";
};
OpenBase = {
JDBCDriverName = openbase.jdbc.ObDriver;
password = "";
protocol = jdbc;
subname = "//hostname/dbName";
subprotocol = openbase;
username = "";
};
Oracle = {
JDBCDriverName = oracle.jdbc.driver.OracleDriver;
password = tiger;
protocol = jdbc;
subname = "thin:@localhost:1521:ORCL";
subprotocol = oracle;
username = scott;
};
Sybase = {

JDBCDriverName = com.sybase.jdbc.SybDriver;
password = "";
protocol = jdbc;
subname = "localhost:3696/dbname";
subprotocol = "sybase:Tds";
username = sa;
}
```

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Published Date: Feb 20, 2012

WebObjects: WebObjects Guides

These WebObjects Guides were written by Theresa Ray with input from Apple Enterprise Support and Apple Worldwide Developer Relations technical staff. They were originally provided on the Apple Developer CD series provided by Apple Developer Connection.

Theresa Ray is a Senior Software Consultant for Tensor Information Systems in Fort Worth, TX. She has programmed with WebObjects and the AppKit interface on projects for a wide variety of clients including the U.S. Navy, the United States Postal Service, America Online, and Lockheed-Martin. Her experience spans all versions of WebObjects from 1.0 to 4.0, EOF 1.1 to 3.0, NEXTSTEP 3.1 to OPENSTEP 4.2, Rhapsody and MacOS X Server. In addition, she is an Apple-certified instructor for WebObjects courses.

For more information on Apple Developer Connection, please visit:

http://www.apple.com/developer

One of the best resources for all WebObjects programmers, regardless of experience level, is Apple's on-line technical documentation. Apple's technical documentation can be found at:

http://developer.apple.com/techpubs/enterprise/WebObjects/WebObjectsTOC.html

This article has been archived and is no longer updated by Apple.

WebObjects Tools and Techniques

Whether you are creating a new WebObjects application or maintaining an existing one, proficiency in using the ProjectBuilder, EOModeler and WebObjects Builder tools is essential. This survival guide enumerates tips and techniques which will allow you to enhance and tailor these tools to suit your programming needs and personal style.

Learning EOModeler

Learning how to effectively use the EOModeler application is an essential beginning to the development of any database driven web site. This survival guide explains the most commonly used features and options available in the EOModeler application.

Performance Tuning, Part I and Performance Tuning, Part II

Performance tuning your WebObjects application is a critical step on the road to successful deployment of a web site. Optimization of a web site is always productive, only costs a moderate amount of development time, and results in a solid, scalable system. By properly coding, testing and administrating your application, your web site can be a great success!

Categories and Posers

Categories and posers are powerful mechanisms for extending and/or replacing the behavior of classes for which you cannot update the source. These techniques are essential tools that every WebObjects programmer should understand.

Debugging WebObjects

A quick reference guide to the major topics involved in debugging a WebObjects application including ProjectBuilder's debugging tools for both Objective-C and Java applications, as well as other logging and debug techniques available outside ProjectBuilder.

Building Custom Frameworks with WebObjects

A framework can be defined as a set of classes and other resources commonly available to many applications. Learning to use and create frameworks effectively will have a positive affect on your application development cycle-time and reliability. When you write an object-oriented program, you rarely do it from scratch. There are almost always class definitions available that you can use. All you need are the class interface files, a library with compiled versions of the class implementations, and some documentation. In OpenStep/Yellow Box, groups of well-defined object-oriented classes with specific behavior are organized in structures known as frameworks.

Design For Reuse

One of the biggest challenges facing today's programmers is the issue of "design for reuse". Every application has a specific set of requirements and goals which requires some customized code, but starting the code from scratch on every project is not the best use of your company's available resources. Obviously, the average application will consist of both reusable and application-specific code, but how do you determine the best way to segment your code? The best application design starts with a good project architecture. Design patterns, such as the Model-View-Controller design pattern, can help you structure your application in the most efficient way.

Advanced Web Site Management and Techniques Using WebObjects

Designing a cost-effective, manageable, technically powerful web site is not an issue to be taken lightly. You've worked hard to develop your application, but if the users have difficulty connecting to that application, or poor performance from that application due to insufficient server resources, all of your hard work may be in vain. This survival guide addresses the questions and issues faced by companies seeking to provide a

scalable, robust deployment for their applications.

Debugging WebObjects

A quick reference guide to the major topics involved in debugging a WebObjects application including ProjectBuilder's debugging tools for both Objective-C and Java applications, as well as other logging and debug techniques available outside ProjectBuilder.

Design For Robustness

A quick reference guide to the major topics involved in designing abulletproof WebObjects application including application coding techniques, application configuration options, multi-platform development and testing.

Frameworks

A framework can be defined as a set of classes and other resources commonly available to many applications. Learning to use and create frameworks effectively will have a positive affect on your application development cycle-time and reliability.

Porting Objective-C to Java

A quick reference guide to the major topics and tips involved converting an Objective-C application or Framework to Java.

WebObjects Database Connectivity, Part I and **WebObjects Database Connectivity, Part II**

Creating powerful websites for your users often involves integration with a database for storage and retrieval of information. WebObjects provides efficient access to nearly every database on the market through it's Enterprise Object Frameworks (EOF). EOF allows you to map the information stored in your database to business objects used by your applications - whether web based or windowed. And by putting your business logic into one set of objects used by all your applications, behavior such as validation, data conversion, or security restricted access is guaranteed to be the same no matter which application is accessing the data.

WebObjects Memory Management

Regardless of the technology used to create it, memory management techniques can make or break an application. This is especially true for web applications, where response times need to be very fast, and the memory footprint an application requires determines how many instances of that application that one server can manage. The memory management techniques required in a compiled WebObjects application (or any compiled OPENSTEP application) are fairly straightforward, but are usually not well understood by programmers new to this technology. Hopefully, this survival guide will make these issues clear so that developers will be able to create leak-free, crash-free applications.

Working with WebObjects

An introductory overview to WebObjects and to WebObjects development.

Published Date: Feb 19, 2012

WebObjects 4: "fatal error LNK1106"

This article explains why a WebObjects developer on Windows NT might see the error message:

```
fatal link error LNK1106
```

when linking new or updated libraries into their WebObjects application.

This article has been archived and is no longer updated by Apple.
WebObjects 4.01 on Windows NT uses version 3.10 of the Microsoft linker. Microsoft has released a new version of the linker, version 6.00, which uses a different file format than previous linker versions. As a result, libraries created with link.exe version 6.00 can not be used with any previous version of the Microsoft linker, including the versions Apple is licensed to provide with WebObjects. The new Microsoft linker is included in Microsoft development products such as Visual C++ 6.0.

The error:

```
fatal link error LNK1106
```

occurs when WebObjects encounters a library in a format it does not understand. In order avoid the error, the library must be rebuilt with link.exe version 5.00 or earlier. Only libraries built with link.exe version 5.00 or earlier can be linked into WebObjects 4 applications.

Published Date: Feb 20, 2012

WebObjects 4: Monitor FAQ

This article contains frequently asked questions (FAQ) regarding WebObjects 4 and the WebObjects Monitor utility, with answers to those questions. For general deployment questions, see the WebObjects 4 Deployment FAQ, **article 70001**.

Please be aware that Monitor works very differently in WebObjects 4.5 than it does in WebObjects 4. Most of this information no longer applies to WebObjects 4.5. For more information on using Monitor with WebObjects 4.5, please see the WOInfoCenter on your local WebObjects 4.5 system.

This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. How do Monitor and MonitorProxy communicate?
2. If I want to make Monitor talk to a MonitorProxy through a firewall, what ports should I open up?
3. How do I specify which port a given application will reside on?
4. Who holds on to the scheduling information for WebObjects applications--Monitor or MonitorProxy?
5. Why do I have instances running that the Monitor can't communicate with?
6. Why doesn't Monitor notice when my applications die?
7. How do I run MonitorProxy (or Monitor) to make sure that if it dies, it'll respawn?

Question 1: How do Monitor and MonitorProxy communicate?

Answer: As of WebObjects 4, Monitor and MonitorProxy communicate via Apple's Distributed Objects (DO) protocol.

Question 2: If I want to make Monitor talk to a MonitorProxy through a firewall, what ports should I open up?

Answer: You'll need to open up the following ports:

Port	Protocol
2453	tcp
7656	udp
7657	udp

Question 3: How do I specify which port a given application will reside on?

Answer: Use **-WOPort <port_number>** as the argument to any WO Application. As long as that port is currently available, the application will launch and will register to the given port. If the port you specify is already in use, the application will exit with a "Could not register with nameserver" error.

Question 4: Who holds on to the scheduling information for WebObjects applications--Monitor or MonitorProxy?

Answer: Monitor. Monitor talks directly to the applications. MonitorProxy is not involved in scheduling at all. In addition the applications do not hold onto any scheduling information. If Monitor dies, your scheduling will die until Monitor is back up.

The scheduling information is stored in the Monitor.conf file, located in NEXT_ROOT/Apple/Library/WebObjects/Configuration.

Question 5: Why do I have instances running that the Monitor can't communicate with?

Answer: This may happen when you are using the "Start auto recovery application when Monitor starts" setting. If your application takes more than thirty seconds to start up, the WebObjects auto-recover feature will time out and WebObjects will try to start a second instance. The second instance will fail because the first instance is using the port; there will now be a WebObjects application running with no connection to the Monitor. Make sure that your applications start in less than thirty seconds if you want to use this procedure (this should not be a problem for most WebObjects applications.)

Question 6: Why doesn't Monitor notice when my applications die?

Answer: WebObjects 4 uses DO to determine when an application has died. If the application server and the Monitor host are on different subnets, the DO message (a broadcast message) will not be received by the Monitor system. As a result, stopped applications will appear still to be running.

Question 7: How do I run MonitorProxy (or Monitor) to make sure that if it dies, it'll respawn?

Answer: Use MonitorDaemon. Depending on which application you specify, MonitorDaemon will execute and keep up either Monitor or MonitorProxy. Usage is fairly straightforward:

```
MonitorDaemon Monitor
```

or

```
MonitorDaemon MonitorProxy
```

In NT, you will want to first install MonitorProxy as a service and then configure it to start automatically. To install MonitorProxy or Monitor as a service, type "MonitorDaemon.exe -InstallMonitorProxy" or "MonitorDaemon.exe -InstallMonitor". Then go to the Services panel within the Control Panel and select the MonitorProxy or Monitor service. Set that service to start on boot up.

In UNIX, Monitor/MonitorProxy's startup should be in a start up script. Here is an example script for Solaris that starts Monitor on port 3000:

```
#!/sbin/sh
#
#       MonitorDaemon (Monitor) Startup Script
#       Damien Weiss
#       Apple Computer
#       March 1, 1999
#
#ident  "@(#)womonitor  1.0     99/03/01 DAW"

# The FILE variable is just the path to the executable.  MONITOR is the
# actual command line that is executed.

FILE="/opt/Apple/Library/WebObjects/Applications/Monitor.woa/MonitorDaemon"

MONITOR="/opt/Apple/Library/WebObjects/Applications/Monitor.woa/MonitorDaemon
/opt/Apple/Library/WebObjects/Applications/Monitor.woa/Monitor -WOPort 3000"

case "$1" in
'start')
       if [ -f ${FILE} ]; then
               ${MONITOR} >/dev/null 2>&1 &
       fi

       ;;

'stop')
       pid_daemon=`/usr/bin/ps -eo pid,comm | /usr/bin/awk '{ if ($2 =="/opt/Ap
ple/Library/WebObjects/Applications/Monitor.woa/MonitorDaemon") print $1 }'`
       pid_monitor=`/usr/bin/ps -eo pid,comm | /usr/bin/awk '{ if ($2 =="/opt/A
pple/Library/WebObjects/Applications/Monitor.woa/Monitor") print $1}'`
       if test "$pid_daemon"
       then
               /usr/bin/kill $pid_daemon
               /usr/bin/kill $pid_monitor
       fi

       ;;

*)
       echo "Usage: $0 { start | stop }"
       exit 1
       ;;
esac
exit 0
```

Published Date: Feb 20, 2012

WebObjects: WebObjects and Windows 2000

Q: What version or versions of WebObjects will run under Windows 2000?
This article has been archived and is no longer updated by Apple.
A: Windows 2000 is a supported platform for WebObjects 4.5. However, WebObjects 4.5 Update 1 or later is required to address certain issues on this platform. See the WebObjects Current Patch List for information on the most current updates for Windows 2000.

WebObjects 4.0.1 and earlier versions of WebObjects were developed and tested using Windows NT 4.0. These versions of WebObjects were not developed for, nor tested on, Windows 2000. Apple does not warrant that WebObjects 4.0.1 or any previous version of WebObjects will work on Windows 2000. Apple does not intend to do comprehensive regression testing of these products on Windows 2000, and does not intend to provide updates and/or patches to make such products compatible with Windows 2000.

Published Date: Feb 20, 2012

WebObjects 4: Troubleshooting Broken Images

This is a troubleshooting guide for broken images in WebObjects applications. A "broken image" is one that is not displayed correctly by the web browser, either because of an error in an IMG tags or because an image file is missing from the web server.
This article has been archived and is no longer updated by Apple.
If you see broken images in your WebObjects application, check the following four items:

1. Is your app running in Direct Connect mode?

Running in Direct Connect mode bypasses your web (HTTP) server; therefore, images in the web server's document root directory won't load. You're probably using Direct Connect mode if your URL contains a port number, i.e.:

`http://localhost:4398/..`.

This is the default mode in WebObjects. If you are using Direct Connect, when you view your application's HTML source (with the browser View Source command), your IMG tags will have this format:

```
<IMG src="/cgi-bin/WebObjects.exe/ImageTest.woa/wr?wodata=pathname">
```

There are two ways to fix these broken images:

- Don't use Direct Connect mode. Use either the launch option "-WODirectConnectEnabled NO", or the command-line "defaults write MyAppName WODirectConnectEnabled NO".
- Don't use IMG tags in your HTML. Instead, use the WOImage dynamic element.

2. Look for correctly formed IMG tags

Use your browser's View Source command to see the HTML that is being sent to the browser. (This alone is a handy troubleshooting tip that is often overlooked.)

A correctly formed IMG tag will look something like this:

```
<IMG src="/WebObjects/ImageTest.woa/WebServerResources/foo.jpg">
```

If your image tags are missing some of the components:

```
<IMG src="/WebObjects/ImageTest/foo.jpg">
```

then you should take the following steps:

- Turn off Direct Connect mode. See above for details. (Note, this is probably already off if you're seeing IMG tags with "/WebObjects" in them.)
- Do a "split install". First, edit Makefile.preamble to uncomment the line containing INSTALLDIR_WEBSERVER. Then build using the "install" target. This will copy your web server resources (i.e., images) into the web server's document root.
- Set NSProjectSearchPath. You may use the launch option "-NSProjectSearchPath "()"", or the command-line "defaults write MyAppName NSProjectSearchPath "()"".

Please note that the default NSProjectSearchPath is "(../..)", which is relative to the application executable. When running from the source directory, "../.." is usually one level up from the PB.project. The resource manager then searches all subdirectories for a directory matching PROJECTNAME, and looks in there for resources. If one is found, it prepends the value of WOApplicationBaseURL to its pathname to get something like "/WebObjects/ImageTest/foo.jpg".

After changing NSProjectSearchPath, it is sometimes necessary to rebuild using the "install" target.

3. Look for error messages in the IMG tags

When you view your document source, your IMG tags may look like this (for a Direct Connect application):

```
<IMG src="/cgi-bin/WebObjects.exe/ImageTest.woa/wr?wodata=ERROR_NOT_FOUND_framework_*nil*_filename_foo.jpg">
```

or like this (for a non-Direct Connect application):

```
<IMG src="/ERROR/NOT_FOUND/app=ImageTest/filename=foo.jpg">
```

To fix either of these problems, take the following steps:

- Check your image names for typos and correct capitalization. Remember that Windows NT is case-insensitive, and Unix platforms (MacOS X Server, Solaris, HP-UX) are case-sensitive. An image that works on Windows NT will not work on Unix if the capitalization is not consistent.

- If the image is in a framework, make sure you're not trying to reference it with a relative pathname. For example, if you're using the filename = "../foo.jpg", remove the "../" and let the resource manager find the image for you.

4. Is the correct image displayed?

Sometimes you may see the wrong image displayed correctly, or an image with the correct filename but from a different directory. These problems can usually be corrected by setting NSProjectSearchPath. You may use the launch option "-NSProjectSearchPath "()"", or the command-line "defaults write MyAppName NSProjectSearchPath "()"".

This problem happens when you have two copies of a project in a common directory. Even if the two projects are in subdirectories with different names, they will have the same internal name (identified by PROJECTNAME in the PB.project file), and the resource manager can't tell the difference unless NSProjectSearchPath is set.

Published Date: Feb 20, 2012

WebObjects 4.0.1 Patch 1 Overview

This patch is now obsolete. Please see the WebObjects Current Patch List, article 70037, for information on the most current patches for WebObjects and Enterprise Objects Framework. This obsolete patch is provided here as a convenience to our customers who have not yet upgraded to the most current patch level.
This article has been archived and is no longer updated by Apple.

About WebObjects 4.0.1 Patch 1

The version of gnutar which shipped with WebObjects 4.0.1 did not accept four-digit dates as arguments to a specific option. While this feature is not used directly by WebObjects, Apple recommends that all users of WebObjects 4.0.1 install this patch. WebObjects developers should also read **article 70135** for an explanation of some manual steps they may wish to take to avoid some Year 2000 issues with the WebObjects examples.

Installing WebObjects 4.0.1 Patch 1 on Windows NT 4.0

1. Download **WO401NTPatch1.exe**, the patch installer for Windows NT.

2. Run this executable to uncompress the patch installer, WO401Patch1Installer.exe.

3. Log in as a user with Administrator privileges.

4. Make sure that there are no WebObjects, OPENSTEP or EOF applications running.

5. Double-click on the patch installer, WO401Patch1Installer.exe, to start the install process.

6. A screen will appear with some information about this patch. After you have read it, click "Next" to continue.

7. The license agreement for this patch will appear. To agree to the license and continue the installation, click "Yes".

8. The patch will now be installed on your system and you will be asked if you want to reboot. Select "Yes, I want to restart my computer now" to reboot your Windows NT system. The WinZip self-extractor will automatically quit and remove the temporary installation in about 20 seconds.

9. For WebObjects developer installations, see **article 70135**. There are manual steps you must take to avoid some century issues

Installing WebObjects 4.0.1 Patch 1 on Solaris and HP-UX

1. Download **WO401SolarisPatch1.TAR.Z**, the patch installer for Solaris, or **WO401HPUXPatch1.TAR.Z**, the patch installer for HP-UX.

2. Log in as root. If you're not sure how to log in as root, see your system administrator.

3. Make sure that there are no WebObjects, OPENSTEP or EOF applications running.

4. Change to the directory containing the patch and the patch installer, "patcher.sh".

5. At a shell prompt, type:

patcher.sh -install WO401SolarisPatch1.TAR.Z

-OR-

patcher.sh -install WO401HPUXPatch1.TAR.Z

For more information on using the "patcher.sh" program, type the following at the command prompt:

patcher.sh -help

6. Restart your Unix system.

Issues Addressed

Corrected in WebObjects 4.0.1 Patch 1

'gnutar' command didn't accept dates later than 1999
Apple Reference #2405644

ISSUE:
The 'gnutar' command has an option to only write files newer than a given date, but version 1.11.2, the version shipped with WebObjects 4.0.1,

didn't accept dates past the end of 1999, even using four-digit years.

RESOLUTION:
'gnutar' has been updated to version 1.12, which accepts dates after 1999.

Published Date: Feb 20, 2012

WebObjects 4: Correcting Century Issues in the WebObjects 4.0.1 Examples

Some of the examples included with WebObjects 4.0.1 use two-digit or three-digit date values. While this will not affect the average user's development or deployment of WebObjects applications, is not consistent with Apple's recommended date-handling practice. This article provides instructions on how to change these examples to use the preferred four-digit year format. In addition, WebObjects 4.0.1 users should install WebObjects 4.0.1 Patch 1, described in **article 70134**, which contains an updated version of the gnutar utility with enhanced date-handling capabilities.

This article has been archived and is no longer updated by Apple.

ModelerBundle

The ModelerBundle example in the Enterprise Objects Examples on WebObjects 4.0.1 uses a two-digit year format for dates. The string is only used for display, not editing, so there is no problem with the function of the example. However, this is not preferred usage for Year 2000 compliant applications. The Apple reference number for this bug is 2414932.

Customers can edit the source for this example and rebuild it if a four-digit year format is desired. In $NEXT_ROOT/NextDeveloper/Examples/EnterpriseObjects/ModelerBundle/CustomeColumns.m, change the date format on line 67 from %y to %Y:

```
67c67
<         formatter = [[NSDateFormatter alloc]
initWithDateFormat:@"%m/%d/%y: %H:%M" allowNaturalLanguage:NO];
---
>         formatter = [[NSDateFormatter alloc]
initWithDateFormat:@"%m/%d/%Y: %H:%M" allowNaturalLanguage:NO];
```

Rebuild the example according to the instructions in the EnterpriseObjects directory.

ElementTour

The WebObjects Java example "ElementTour" calls java.util.Date.getYear() without correcting for the fact that the value returned by this method is "years since 1900". The result is two-digit years through 1999, and three-digit years thereafter. This is not the preferred usage for Year 2000 compliant applications. The Apple reference number for this bug is 2415034

Customers who wish to correct this behavior may achieve this by making the following modifications in the example source and recompiling.

Add 1900 to the value returned by java.util.Date.getYear() in the following location:

$NEXT_ROOT/Developer/Examples/WebObjects/Java/ElementTour/ODE.java, line 13

Change:

```
        "today.getMonth()+1,\\"/\\",today.getDate(),\\"/\\",today.getYear());";
```

To:

```
        "today.getMonth()+1,\\"/\\",today.getDate(),\\"/\\",today.getYear() + 1900);";
```

Â

FDF1040EZ

The WebObjects Java example "FDF1040EZ" calls java.util.Date.getYear() without correcting for the fact that the value returned by this method is "years since 1900". The result is two-digit years through 1999, and three-digit years thereafter. This is not the preferred usage for Year 2000 compliant applications. The Apple reference number for this bug is 2415036.

Customers who wish to correct this behavior may achieve this by making the following modifications in the example source and recompiling.

In the file $NEXT_ROOT/Developer/Examples/WebObjects/Java/FDF1040EZ/TenFortyEZ.java:
Add the following to the import statements at the top of the file:
import java.text.*;
import java.util.*;

Change lines 111 and 112:

```
        java.util.Date d=new java.util.Date();
```

```
return " "+d.getMonth()+"/"+d.getDate()+"/"+d.getYear();
```

To:

```
return DateFormat.getDateInstance(DateFormat.SHORT).format(new Date());
```

Published Date: Feb 20, 2012

WebObjects: gnutar changes in Apple patches

Several Apple Enterprise and NeXT products included the GNU 1.11.2 version of tar, which for certain operations did not handle dates after 1999 properly. A newer version of tar based on the GNU tar-1.12 source has been provided in Apple patches for many affected products on Mach, Solaris, and HP-UX platforms. This newer version of tar, while correcting all known Year 2000 issues, may have unwanted side effects for some users. In an effort to minimize these side effects, Apple made some modifications to the standard version of GNU tar-1.12.

This document describes the changes Apple made to the GNU tar-1.12 source. In addition, it discusses potential problems Apple users may encounter using GNU tar-1.12 on older systems, and provides workarounds for them.

This article has been archived and is no longer updated by Apple.

Which products and patches are affected?

The Apple Enterprise Software product patches which include an updated version of gnutar include:

- NeXTSTEP 3.3 Patch 2 and subsequent NeXTSTEP 3.3 patches
- OPENSTEP 4.2 Patch 4 and subsequent OPENSTEP 4.2 patches
- WebObjects 3.1 Patch 1 and subsequent WebObjects 3.1 patches
- WebObjects 3.5.1 Patch 4 and subsequent WebObjects 3.5.1 patches
- WebObjects 4.0.1 Patch 1 and subsequent WebObjects 4.0.1 patches

For complete information on the current patches available for Apple Enterprise Software products, please see the NeXTSTEP Current Patch List, the OPENSTEP Current Patch List, and the WebObjects Current Patch List

Apple modifications to tar

GNU tar-1.12 expects a more recent version of the system header file 'stat.h' than the one shipped with OPENSTEP and NeXTSTEP. Some of the symbols defined in stat.h have changed, including the symbolic link symbol, formerly _S_IFLNK, now S_ISLNK. A test in the file tar-1.12/src/system.h in the GNU source distribution (lines 144-148) defines 'lstat' to be 'stat' if the newer symbolic link symbol is not found, with the result that symbolic links are not processed properly:

```
#include <sys/stat.h>

#ifndef S_ISLNK
# define lstat stat
#endif
```

Since there is code later in the same file which correctly handles the older symbols, Apple modified the code above as follows:

```
#include <sys/stat.h>

#ifndef S_ISLNK
/* # define lstat stat */
#endif
```

This was the only modification made to the GNU tar 1.12 source files for Apple's patches.

Problems which may be encountered due to changes between GNU tar-1.11.2 and GNU tar-1.12

When processing input being read from a pipe, the older version of tar read only the contents of the .tar file and then exited. But tar-1.12 continues to read from the pipe (discarding the data) until the pipe is closed, even after the .tar file ends.

Because of this change, some third-party OPENSTEP and NeXTSTEP applications may not be fully compatible with the gnutar. This is known to affect Quantrix.app and Concurrence.app. Information on a Quantrix-specific workaround is available as **article 70128**.

For other applications, you may need to copy the original gnutar from your installation media and reinstall it on your system. You may need to edit the application binary or an application-specific configuration file to force the application to use this version of gnutar.

Building GNU tar-1.12 on NeXTSTEP or OPENSTEP

In order to build GNU tar-1.12 on NeXTSTEP or OPENSTEP, you must modify one of the files which is automatically generated by the 'configure' script included in the GNU tar-1.12 distribution. To make the modification:

1. Run 'configure'

2. Using a text editor, make the following change in the config.h file:

Change:

/*#undef HAVE_UNION_WAIT */

To:

#define HAVE_UNION_WAIT 1

3. Run 'make' to compile the package.

Consult the INSTALL documentation included in the GNU tar-1.12 distribution for additional information on building the package.

Published Date: Feb 20, 2012

WebObjects 4: Understanding Worker Threads and WOWorkerThreadCount

This article describes the role of worker threads in a WebObjects application, and explains how to use the WOWorkerThreadCount option to manage them.
This article has been archived and is no longer updated by Apple.

The Job of a Worker Thread

When a request arrives at the WebObjects application, the request data is held in a socket stream. In multi-threaded mode, the pool of worker threads is idle until a socket is queued, whereupon they wake up and one grabs the active socket. The worker thread reads a request from the active socket and creates a WORequest object. It then invokes the dispatchRequest method, which determines the appropriate request handler and invokes the handleRequest method on it. In single-threaded mode, of course, all of the above operations is done by one thread.

At this point, in protected multi-threaded mode, lockRequestHandling is called. This protects user code from the ambiguity problems inherent in multi-threaded environments. Bear in mind that if you override the dispatchRequest method to set some application variables before calling super's dispatchRequest method, those variables may get out of sync and cause undesirable side effects.

A worker thread processes an individual request and generates a response, via the usual takeValuesFromRequest, invokeAction and appendToResponse methods. It's worth pointing out that resource requests are handled without locking request handling, and therefore do not impact any TPM limits which may be imposed on you by your licence.

About WOWorkerThreadCount

The WOWorkerThreadCount setting controls the number of worker threads started by the default WebObjects adaptor, WODefaultAdaptor. By default, WOWorkerThreadCount is set to 8. What this means is that eight worker threads will be started when the application is launched. The adaptorsDispatchRequestsConcurrently method of WOApplication determines whether requests are processed concurrently or not. It also doubles as a flag to indicate single-threaded operation vs. multi-threaded operation. Remember that setting adaptorsDispatchRequestsConcurrently to true requires that the application be thread-safe.

Setting WOWorkerThreadCount to 0 will force your application to run in single-threaded mode. In this mode, a single thread is responsible for polling for new requests on the listen socket, running the main runloop (for timers, D.O. activity, etc.) and processing the requests that arrive and generating responses, as described above.

Performance Considerations

Finally, a few notes on the performance implications of threads in WebObjects 4:

- A static resource which doesn't require a request/response cycle, such as a JPEG image file, will be served directly by the Web server without involving any WebObjects worker threads. However, a WebObjects resource, such as a WOImage dynamic element representing a JPEG image, becomes part of the request/response loop and will be affected by WOWorkerThreadCount settings.
- Using WOWorkerThreadCount=0 only makes sense if your app is not at all multi-threaded. If your application is written in Java or uses NSThread elsewhere, you are better off using the default setting.
- Garbage collection runs differently in single-threaded mode than it does in multi-threaded mode. For more information on how multi-threaded garbage collection works, see **article 70086**.
- In multi-threaded mode, all socket I/O is multi-threaded.

Published Date: Feb 20, 2012

WebObjects 4.0.1 Patch 2 Overview

This document contains an overview and download information for Apple's Patch 2 for WebObjects Release 4.0.1. Apple recommends that users of WebObjects 4.0.1 install this patch set on Mac OS X Server 1.0 and HP-UX. Users on other platforms, including Mac OS X Server 1.2, Solaris, and Windows NT, should install **WebObjects 4.0.1 Patch 3**.

WebObjects 4.0.1 Patch 2 includes all of the fixes from WebObjects 4.0.1 Patch 1. If you have already installed WebObjects 4.0.1 Patch 1 on your system, you can install Patch 2 over your existing installation. If you have not installed Patch 1, you do not need to.

The WebObjects Current Patch List, **TIL article 70037**, contains information on all available patches and workarounds for all versions of WebObjects, including EOF patches. Please read this document if you're not sure which patches you need on your system.

This article has been archived and is no longer updated by Apple.
Note: Any reference in this article to Mac OS X Server pertains to version 1.0.x (1.0-2, for example), which released prior to version 1.2.

Before You Install (Windows NT)

Windows NT users who have customized their WindowsName.table time zone assignment file should back up that file before installing this patch and restore their custom file after this patch is installed. This patch installs a new copy of WindowsName.table which contains different default assignments for some Windows time zones.

Before You Install (Mac OS X Server)

This version of the patch is intended for Mac OS X Server versions prior to 1.2. Do not install this patch on Mac OS X Server 1.2.

Mac OS X Server users who have customized their tnsnames.ora Oracle database configuration file should back up that file before installing this patch and restore their custom file after this patch is installed. This patch will overwrite your tnsnames.ora file.

Installing WebObjects 4.0.1 Patch 2 on MacOS X Server 1.0

1. Download **WO401OSXPatch2.pkg.compressed**, the patch installer for Mac OS X Server.

NOTE: Some versions of OmniWeb for Mac OS X Server incorrectly add a .Z file extension to downloads in .compressed format. If the file you download has an extension of .compressed.Z, rename it to .compressed or it will not be correctly uncompressed by OpenUp.

2. Uncompress the patch file. Your web browser or FTP client may perform this step for you.

2. Log in as root on your Mac OS X Server system. If you're not sure how to log in as root, see your system administrator.

3. Double-click on the WO401MacOSXSPatch2.pkg file.

4. Click the Install button in the Installer package window. An Install Package panel will open.

5. Make sure that there are no other WebObjects or EOF applications running.

6. Click 'Install' in the Install Package panel and, when prompted for confirmation, click OK to proceed. The Installer window displays information about the progress of the installation, which may take several minutes.

7. When the installation completes, the system must be rebooted. Log out and use the reboot button on the login panel.

Installing WebObjects 4.0.1 Patch 2 on Windows NT 4.0

1. Download **WO401NTPatch2.exe**, the patch installer for Windows NT.

2. Log in as a user with Administrator privileges.

3. Make sure that there are no WebObjects, OPENSTEP or EOF applications running.

4. Double-click on the patch installer, WO401NTPatch2.exe, to start the install process.

5. A screen will appear with some information about this patch. After you have read it, click "Next" to continue.

6. The license agreement for this patch will appear. To agree to the license and continue the installation, click "Yes".

7. The patch will now be installed on your system and you will be asked if you want to reboot. Select "Yes, I want to restart my computer now" to reboot your Windows NT system. The WinZip self-extractor will automatically quit and remove the temporary installation in about 20 seconds.

8. For WebObjects developer installations, see **TIL article 70135**. There are manual steps you must take to avoid some century issues

Installing WebObjects 4.0.1 Patch 2 on Solaris and HP-UX

1. Download **WO401SolarisPatch2.TAR.Z**, the patch installer for Solaris, or **WO401HPUXPatch2.TAR.Z**, the patch installer for HP-UX. Also download the patch installer, **patcher.sh**.

2. Log in as root. If you're not sure how to log in as root, see your system administrator.

3. Make sure that there are no WebObjects, OPENSTEP or EOF applications running.

4. Change to the directory containing the patch and the patch installer, "patcher.sh".

5. At a shell prompt, type:

patcher.sh -install WO401SolarisPatch2.TAR.Z

or

patcher.sh -install WO401HPUXPatch2.TAR.Z

For more information on using the "patcher.sh" program, type the following at the command prompt:

patcher.sh -help

6. Reboot your Unix system

Issues Addressed

Corrected in WebObjects 4.0.1 Patch 2

Application hangs if a Sybase stored procedure is missing from the database
Apple reference #2309889

ISSUE:
If an EOF application called a stored procedure that was not actually in the database, the db_ctx structure that ct_lib uses was not cleaned up, leaving the entire application unusable.

RESOLUTION:
EOF now detects that a stored procedure is missing, cleans up the server command structure, and raises an exception normally in the application.

SybaseChannel doesn't raise an exception when execution of a stored procedure fails.
Apple reference # 2309891

ISSUE:
The SybaseEOAdaptor did not raise the current exception if execution of a stored procedure failed. Thus, in some cases, the developer had no way to handle the failure.

RESOLUTION:
An exception is now raised in the failure case. See also Apple Reference 2309889.

String conversion for case-insensitive comparison should all be done by the database
Apple reference #2309907

ISSUE:
In case-insensitive comparison of a value string with a database column, the EOF adaptors uppercased the value string but relied on the database itself to uppercase the column. If there was any difference in the way uppercasing was performed by the adaptor and the database, comparison would fail incorrectly.

RESOLUTION:
The EOF adaptors now have the database uppercase both the value string and the column, to eliminate possible inconsistency.

Sybase varbinary type mapped to incorrect Foundation type
Apple reference #2309912

ISSUE:
The SybaseEOAdaptor's -internalTypeForExternalType: model: method incorrectly mapped the Sybase "varbinary" type to "NSString".

RESOLUTION:
This method now correctly maps "varbinary" to "NSData".

SybaseEOAdaptor's binaryID prototype should map to Sybase binary type
Apple reference #2309918

ISSUE:
The SybaseEOAdaptor's binaryID prototype should be mapped to the Sybase binary type rather than the varbinary type.

RESOLUTION:
The EOSybaseAdaptorPrototype.plist mapping of binaryID has been changed to Sybase binary.

EOF fails silently if an entity name is typed incorrectly.
Apple reference #2309929

ISSUE:
EOF could silently fail in cases where an entity name had been typed incorrectly (misspelled or miscased), the model name had been updated in the model file but not in the program code, or the model group had been constructed incorrectly.

RESOLUTION:
EOObjectStoreCoordinator's -objectsWithFetchSpecification: editingContext: method now detects these conditions and raises appropriate exceptions.

Can't use object-based qualifiers with raw row fetches.
Apple reference #2309931

ISSUE:
Object-based qualifiers could not be used with raw row fetches.

RESOLUTION:
The raw row fetch code has been changed to transform object-based qualifiers to schema-based qualifiers before performing the fetch.

ODBC adaptor generates spurious login error message
Apple reference #2309933

ISSUE:
The first time the user tried to connect to the ODBC database when defining a new model (or switching adaptors to ODBC), an invalid login error message was encountered. If the user proceeded to log in with the correct name and password everything worked, but the error was misleading.

RESOLUTION:
The connnection information for the initial login panel is now properly constructed.

Leak in EODatabaseContext avaliableChannel method
Apple reference #2309934

ISSUE:
The -availableChannel method of EODatabaseContext leaked one object for each EODatabaseChannel object allocated.

RESOLUTION:
This leak has been fixed.

EODatabase never releases snapshots
Apple reference #2315267

ISSUE:
Snapshots associated with enterprise objects were never released.

RESOLUTION:
EOF now tracks references to an object and releases the object's snapshot when there are no more references to it.

Optimistic locking fails on Oracle for rows with trailing spaces
Apple reference #2315268

ISSUE:
OracleEOAdaptor stripped trailing spaces from VARCHAR2 data fetched from or committed to an Oracle database. If VARCHAR2 data containing trailing spaces had been inserted by another tool, optimistic locking failed for any affected row and the row could not be updated.

RESOLUTION:
OracleEOAdaptor no longer strips trailing spaces from VARCHAR2 data.

Deleting newly inserted objects fails
Apple reference #2315270

ISSUE:
An object created and inserted into an editing context or relationship, then deleted before being saved to the database, was not completely removed from the editing context. This caused an exception to be raised the next time the editing context was saved.

RESOLUTION:
Deletion of a newly-inserted object now completely removes the object from the editing context.

Exception logging into SQL Server 7.0 via ODBCEOAdaptor
Apple reference #2315283

ISSUE:
The ODBC adaptor shipped with WebObjects 4.0.1 did not work with version 7.0 of Microsoft's SQL Server product.

RESOLUTION:
The ODBC adaptor has been updated to work with SQL Server 7.0 as well as SQL Server 6.5.

Incorrect time zone conversion in EOAccess layer
Apple reference #2315287

ISSUE:
When converting a time value to the server time zone, the EOAccess layer substituted the sever's time zone without actually adjusting the time value for the zone difference.

RESOLUTION:
EOAttribute now performs the conversion of the time value to the corresponding value in the server's time zone.

Incorrect time zone conversion in SybaseEOAdaptor
Apple reference #2316883

ISSUE:
When converting a time value to the server's time zone, SybaseEOAdaptor only substituted the server's time zone without actually adjusting the time value for the zone difference.

RESOLUTION:
SybaseEOAdaptor now performs the conversion of the time value to the corresponding value in the server's time zone.

Special characters crash Sybase adaptor
Apple reference #2316889

ISSUE:
The SybaseEOAdaptor crashed when saving Text or BLOB data containing characters which could not be successfully encoded using the specified database encoding.

RESOLUTION:
The adaptor has been fixed to detect the encoding failure and raise an exception, so that a database encoding which is able to handle the problem characters may be specified in the connection dictionary.

OracleEOAdaptor generates incorrect SQL for left and right outer joins
Apple reference #2316963

ISSUE:
The SQL generated by the Oracle adaptor for a left outer join was actually the syntax for a right outer join, and vice versa.

RESOLUTION:
The OracleEOAdaptor now generates the correct SQL for left and right outer joins.

Some exceptions not passed across Java Bridge
Apple reference #2317188

ISSUE:
If an Objective C exception was raised in an Objective C method called from Java, the bridge correctly converted the NSException to a Java exception and threw it in Java. However, if the conversion of the NSException itself raised an exception, the subsequent behaviour of the

application was undefined.

RESOLUTION:
The conversion exception is now caught, both exceptions are logged, and a JavaUnknownError is thrown in the Java VM with the message: "Failed to convert Objective C exception to Java exception. Refer to log output for more information."

Java access violation error when bridge cannot find a class
Apple reference #2317205

ISSUE:
If a Java exception occurred while WebObjects was attempting to look up a Java class, the exception might not be re-raised in Objective C. If this occurred, the JavaBridge sometimes crashed when it failed to load the wrapper class.

RESOLUTION:
The JavaBridge now raises an appropriate exception in Objective C when a wrapper class can not be found.

Garbage collector frees wrapped objects prematurely
Apple reference #2317214

ISSUE:
When a wrapped Objective C object was created in a Java method, the Objective C proxy was not retained. Java garbage collection could then release this object while it was still in scope.

RESOLUTION:
Objective C proxy objects are now retained until the approriate autorelease pool is deallocated.

alloc or init returning nil confuses the Java bridge
Apple reference #2317215

ISSUE:
The JavaBridge did not correctly handle the case where the Objective C base of a hybrid object returned nil from its Objective C init method.

RESOLUTION:
In this case, a NullPointerException is now raised in Java. This fix included a change to one of the header files used by the bridget utility. All Java projects must be rebuilt to take advantage of this fix. Please note that your code still needs to wrap Java constructors in try/catch statements to catch instantiation exceptions; see TIL article 70035 for more details.

Case-insensitive matching sometimes fails
Apple reference #2318841

ISSUE:
Case-insensitive matching did not correctly match uppercase letters in the search pattern with lowercase letters in the receiving string.

RESOLUTION:
Case-insensitive matching now works correctly for all combinations of uppercase and lowercase comparison.

ODBC adaptor prepends owner to table name
Apple reference #2319115

ISSUE:
When reversing engineering a Microsoft SQL Server database with ODBC database, the table names all had the form OWNER.NAME instead of just NAME.

RESOLUTION:
The entity names no longer have the owner prefixed to the name.

selectObject: method return values don't match documentation
Apple reference #2319284

ISSUE:
The [EODisplayGroup selectObject:] method only returned 'NO' if it could not end editing or if the delegate refused the change. According to the class documentation, it should also return 'NO' if the EODisplayGroup's displayedObjects array does not contain a match with the method's object argument.

RESOLUTION:
As stated in the documentation, this method now returns 'NO' when it cannot find a match for the argument oject.

WebObjects applications set unnecessary cookies

Apple reference #2319507

ISSUE:
A WebObjects application could erroneously set two cookies, wosid and woinst, in the browser.

RESOLUTION:
WebObjects applications no longer set these unnecessary cookies.

Can't compile EOArchive subclasses containing JavaBeans
Apple reference #2319614

ISSUE:
An EOArchive method needed by subclasses containing JavaBeans was incorrectly declared private. This leads to a compilation error in any JavaBean-bearing EOArchive.

RESOLUTION:
This method is now declared protected.

DirectToWeb generation fails on MacOS X Server
Apple reference #2319617

ISSUE:
DirectToWeb generation on MacOS X Server can generate the following exception:

```
[DTWTemplate writeAndAddToProjectComponentNamed:]: selector not recognized
```

RESOLUTION:
This has been corrected.

OracleEOAdaptor state not reset when closing the database channel fails
Apple reference #2319664

ISSUE:
If the OracleEOAdaptor encountered an error while closing the database channel, the adaptor's state was not reset completely. As a result, the database connection could not be re-established on that channel once the database came back up.

RESOLUTION:
The OracleEOAdaptor now sets its internal state correctly before raising the error, allowing the connection to be re-established once the database is restored.

EnterpriseObjects examples Rental data contains an invalid date value
Apple reference #2324048

ISSUE:
The data with which the Rentals database is populated in the EnterpriseObjects examples contained an invalid credit card expiration date, 2597. With SQL Server 7.0, Microsoft's ODBC Driver fails to convert this date to the smalldatetime type, causing the examples' install_database script to fail and the Rentals data to be incompletely installed.

RESOLUTION:
The problem date has been changed to a value within SQL Server 7.0's valid range, 1900 to 2079.

Calls to NSLog() are very slow on Windows NT
Apple reference #2338242

ISSUE:
Calls made by an application to the NSLog() function may take as long as six seconds to return on Windows NT.

RESOLUTION:
NSLog()'s usage of the Windows API has been optimized to provide much better performance.

Raw row fetch ignores CustomQuery hint
Apple Reference #2343246

ISSUE:
In WebObjects 4.0.1, any CustomQuery hint was ignored during raw row fetches.

RESOLUTION:
The EOAccess layer now checks for a CustomQuery hint during raw row fetches and uses it if one is provided.

Applications using multiple databases may experience unexpected interactions.
Apple Reference #2343328

ISSUE:
In WebObjects 4.0.1, applications that use multiple databases could sometimes experience strange interactions due to an error in the EOAccess layer in the caching of database records.

RESLOUTION:
The EOAccess layer no longer caches database records in the manner that caused this problem, and the interaction between databases has been eliminated.

WebObjects example "FDF1040EZ" uses deprecated java.util.Date API
Apple reference #2405646

ISSUE:
The WebObjects Java example "FDF1040EZ" called deprecated java.util.Date API which returned a two-digit year. This is inconsistent with good Year 2000 programming practice.

RESOLUTION:
This example has been corrected to use the java.util.Date API correctly.

Enterprise Objects "ModelerBundle" example uses two-digit year format
Apple reference #2405647

ISSUE:
The ModelerBundler example in the Enterprise Objects Examples uses a two-digit year format for dates. This is not prefered usage for Year 2000 compliant applications.

RESOLUTION:
This example has been changed to use a four-digit year format.

WebObjects example "ElementTour" uses deprecated java.util.Date API
Apple reference #2405648

ISSUE:
The WebObjects Java example "ElementTour" called deprecated java.util.Date API which returned a two-digit year. This is inconsistent with good Year 2000 programming practice.

RESOLUTION:
This example has been corrected to use the java.util.Date API correctly.

NSTimeZone method +timeZoneForSecondsFromGMT returns incorrect results
Apple Reference #2406594

ISSUE:
The NSTimeZone method +timeZoneForSecondsFromGMT returned incorrect values in WebObjects 4.x.

RESOLUTION:
This method has been corrected.

Mapping of old time zone names and abbreviations not completely accurate.
Apple reference #2406610

ISSUE:
In the Foundation framework shipped with WebObjects 4.0.1, the mapping of old time zone names and abbreviations to the new names and abbreviations contained several errors and omissions.

RESOLUTION:
These issues have been corrected.

WOApplication raises a released exception.
Apple reference #2425076

ISSUE:
There were two places (one in WOApplication and one in WOSessionTimeOutManager) where an exception was caught, an autoreleasepool was released, and the exception was re-raised. This resulted in a message (-raise) being sent to a freed object.

RESOLUTION:

The exception is now properly retained before the pool is released, and is autoreleased before being raised again.

Corrected in WebObjects 4.0.1 Patch 1

'gnutar' command didn't accept dates later than 1999
Apple Reference #2405644

ISSUE:
The 'gnutar' command has an option to only write files newer than a given date, but version 1.11.2, the version shipped with WebObjects 4.0.1, didn't accept dates past the end of 1999, even using four-digit years.

RESOLUTION:
'gnutar' has been updated to version 1.12, which accepts dates after 1999.

Published Date: Feb 20, 2012

WebObjects 4: Inheritance in EOModeler

One of the most commonly used elements of object-oriented design is class inheritance. The properties of a parent class may be expressed or selectively overridden in a child or subclass. The subclass is then said to "extend" the capabilities of its parent.
WebObjects and Cocoa applications are completely object-oriented. Implementing inheritance in this environment is straightforward. However, these applications frequently store and retrieve data in relational database management systems or other data sources that were not designed with object-oriented principles in mind. Thus the properties of an object model must somehow be transformed to the properties of the data storage model. The role of the Enterprise Objects Framework (EOF) is to abstract any data source and act as the transformation agent between an application's business objects and its data sources. This article is intended to describe how an object-oriented model with inheritance is implemented in EOModeler. Additional details on EOF, EOModeler and inheritance are available in the Enterprise Objects Developer's Guide and online documents.
This article has been archived and is no longer updated by Apple.

EOModeler

In a Cocoa or WebObjects application, EOModeler supports the expression of your application's model as objects and handles the details of writing a structure that EOF can use to interface with a data source. In the common case of mapping objects to relational database systems, EOModeler will:

- Map object classes to relational database tables
- Map relationships between objects to relational database joins
- Map object class inheritance to relational tables via these joins

Types of Inheritance in EOModeler

Inheritance is a powerful property in any object-oriented design, but it is still optional. First, decide whether inheritance is necessary in your implementation. Any attempt to add an object-oriented layer to non-object-oriented data sources inevitably results in a performance and complexity overhead, but by design EOF handles this transformation effectively and efficiently. EOModeler supports three types of inheritance: vertical, horizontal, and single table.

There are several considerations for selecting a type of inheritance. Each type has advantages and disadvantages. Some of the questions you should consider are:

- Are fetches directed primarily to leaf or root classes?
- How deep is the class hierarchy?
- What is the database storage cost for nulls?
- What is the likelihood of changing the model?
- Will other tools access the database?

The next three sections will concisely describe the characteristics, implementation steps, advantages and disadvantages of each EOModeler inheritance type.

Vertical Mapping

This is the most elegant of the three types, as it maps both to object-oriented concepts and to the normalized relational database structure often preferred by DBA's and data modelers. Performance issues may result from the multiple joins inherent in well normalized relational data. EOModeler represents vertically-inherited attributes in a bold oblique font in subclasses, making it easy to discern inherited properties.

Sample Output

This is an example of the SQL generated by EOModeler for an implementation of vertical mapping. The data model used in this implementation has three classes. The superclass Person has two subclasses, Employee and Customer. The SQL output was generated by the command line option -EOAdaptorSetDebugEnabled YES.

Inserting a Customer

```
SELECT UNIQUE FROM "PERSON";
INSERT INTO "Customer" ("Custacctno", "Id") VALUES ('Cust123', 1000001);
INSERT INTO "Person" ("Id", "Firstname", "Lastname", "Persontype")
VALUES (1000001, 'Fred', 'Foobar', 'C');
COMMIT;
```

Searching for an Employee with a Customer name

```
SELECT t0."Id", t0."Empno", t1."Firstname", t1."Lastname", t1."Persontype"
FROM "Person" t1, "Employee" t0
WHERE UPPER(t1."Lastname") LIKE 'FOOBAR%'
```

```
AND t0."Id" = t1."Id";
Inserting an Employee
SELECT UNIQUE FROM "PERSON";
INSERT INTO "Employee" ("Empno", "Id")
VALUES ('EmpNo1234', 1000002);
INSERT INTO "Person" ("Id", "Firstname", "Lastname", "Persontype")
VALUES (1000002, 'Johnny B.', 'Goode', 'E');
COMMIT;
```

Selecting a Person (Person.lastName = 'Foobar')

```
SELECT t0."Id", t0."Custacctno", t1."Firstname", t1."Lastname",

t0."Persontype" FROM "Person" t1, "Customer" t0 WHERE UPPER(t1."Lastname")
LIKE 'FOOBAR%' AND t0."Id" = t1."Id";
SELECT t0."Id", t0."Empno", t1."Firstname", t1."Lastname", t0."Persontype"
FROM "Person" t1, "Employee" t0 WHERE UPPER(t1."Lastname") LIKE 'FOOBAR%' AND
t0."Id" = t1."Id";
SELECT t0."Id", t0."Firstname", t0."Lastname" FROM "Person" t0 WHERE
UPPER(t0."Lastname") LIKE 'FOOBAR%';
```

Characteristics

- Each entity class has its own database table
- The model directly reflects the class hierarchy
- Superclass data will be fetched with subclass fetch
- Relational joins resolve inheritance relationships

Implementation

- Create a superclass entity with superclass attributes only
- Create subclass entities with subclass-specific attributes
- The superclass and all subclasses need a stored primary key
- Create to-one relationships from the subclasses joining on primary keys; do not set them as class attributes
- Flatten the superclass attributes into subclasses
- Set the attributes as class properties if they are class properties in superclass
- EOModeler displays attributes in bold oblique style
- Flatten superclass relationships into each subclass and set them as a class property per the superclass property
- Set superclass relationships as class properties if they are class properties in the superclass
- Set the superclass as the parent of the subclasses in the Advanced Entity Inspector
- Attributes defined in the parent appear italicized in the subclass's attribute list
- Derived attributes must have table columns
- Set the superclass as abstract if it is never instantiated
- If the superclass needs persistent storage for its attributes, then this class must have a table

Advantages

- Add subclasses at any time without affecting other parts of model
- Clean, normalized database schema
- Most closely resembles normal object-oriented inheritance

Disadvantages

- Least efficient performance
- Particularly slow for deep hierarchies and fetching from superclass

Horizontal Mapping

This is perhaps the most balanced of the three types. It provides enforcement of superclass attributes in subclasses similar to that of abstract classes or Java interfaces, but has much less performance overhead. As with vertical inheritance, EOModeler represents horizontally-inherited attributes distinctly; they are shown in a plain oblique font in subclasses.

Sample output

This is an example of the SQL generated by an implementation of horizontal inheritance. the data model used in this implementation has three classes. The superclass Person has two subclasses, Employee and Customer. The SQL output was generated by the command line option -EOAdaptorSetDebugEnabled YES.

Inserting a Customer

```
SELECT UNIQUE FROM "PERSON";
INSERT INTO "Customer" ("Persontype", "Custacctno", "Firstname", "Lastname", "Id")
VALUES ('C', 'cust2323', 'Sherlock', 'Holmes', 1000001);
COMMIT;
```

Querying for a Person (Person.personType = 'C')

This example is a bit different. A type attribute for the subclass could be added either to the superclass or the subclass. If it is added to the superclass, a person who is both an employee and a customer would be represented twice in the database. If it is added to the subclass, the person would only be in the database once. In this case, additional care must be taken so that there is no redundant information between the subclasses.

```
SELECT t0."Custacctno", t0."Firstname", t0."Lastname", t0."Id",
t0."Persontype" FROM "Customer" t0 WHERE (t0."Persontype" = 'C' AND
UPPER(t0."Persontype") LIKE 'C%');
SELECT t0."Empno", t0."Firstname", t0."Lastname", t0."Personid",
t0."Persontype" FROM "Employee" t0 WHERE (t0."Persontype" = 'E' AND
UPPER(t0."Persontype") LIKE 'C%');
SELECT t0."Personid" FROM "Person" t0 WHERE UPPER(t0."Persontype") LIKE 'C%';
```

Characteristics

- Subclasses contain all class-specific attributes, plus all superclass attributes
- The superclass can be abstract or concrete
- The superclass must have a database table if it is instantiated
- The superclass is specified as the parent entity in Advanced Entity Inspector
- The superclass acts as an abstract class specification

Implementation

- Create a superclass entity with superclass attributes
- Create subclass entities with all superclass and subclass-specific attributes
- EOModeler displays attributes in oblique style
- Set the superclass as parent of the subclasses
- Set the parent as abstract if it is never instantiated
- Flattening is not required

Advantages

- No joins required for fetch since all parent attributes are in subclass table
- More efficient than vertical mapping for deep hierarchies
- Best if only subclass fetches are required

Disadvantages

- New parent attributes must be added to every subclass
- Frequency of table changes must be balanced against frequency of fetches

Single Table Mapping

This is perhaps the easiest of the three types. It inherently enforces superclass attributes in subclasses, but has little or no performance or maintenance overhead. But it also is the least elegant solution from a data modeling and normalization perspective.

Characteristics

- All superclass attributes and all attributes of all subclasses are combined in one table
- Nulls are assigned for attributes not in a particular subclass object
- Use a class attribute for a subclass type identifier

Implementation

- Create a superclass entity and all subclass entities
- Add a type attribute to distinguish the subclasses
- In the Advanced Entity Inspector, set the superclass as parent to the subclasses
- In the Advanced Entity Inspector, create qualifiers in each of the subclasses to fetch only objects of that subclass
- The superclass may be abstract if it is never instantiated

Advantages

- Superclass objects retrieved with single fetch
- Model changes are only made on one entity

Disadvantages

- Every row in database contains columns for all subclasses' attributes
- Depending on database's null storage this can consume a lot of space
- Limitations on number of database columns can preclude using this inheritance type

Published Date: Feb 20, 2012

WebObjects: Preventing Security Holes with Dynamic Content

On February 2, 2000, the CERT coordination center issued a security advisory entitled "CERT® Advisory CA-2000-02: Malicious HTML Tags Embedded in Client Web Requests". The alert concerns web sites which generate dynamic content. This article discusses the impact of this advisory on web sites built with WebObjects.
This article has been archived and is no longer updated by Apple.

About Dynamic Content Security

The issue described in the CERT advisory concerns sites which generate dynamic content from user input; for example, web discussion boards and guestbooks. Attackers can embed tags in this input, such as SCRIPT or FORM tags, that can run scripts on a client's system or compromise the security of their information. This can cause security issues even if the page is only visible by the user who appears to have given the input; attackers can include poisoned URLs in email or newsgroup messages or on other web sites. In some cases, the attacks can be made persistent with cookies.

All dynamic content providers need to be aware of this serious issue. All WebObjects developers should read the original CERT advisory, which can be found at: http://www.cert.org/advisories/CA-2000-02.html

WebObjects and Dynamic Content

By default, when an NSString is used to create a dynamic page, WebObjects escapes all special characters, including the "<" and ">" characters. For example, if a user input the following HTML code into a WebObjects application:

```
Hello message board. This is a message.
<SCRIPT>malicious code</SCRIPT>
This is the end of my message.
```

WebObjects, when dynamically building a page with this input, would generate:

```
Hello message board. This is a message.
&lt;SCRIPT&gt;malicious code&lt;/SCRIPT&gt;
This is the end of my message.
```

This will prevent the malicious code from executing.

However, WebObjects allows developers great flexibility, and some developers may have chosen to change this default behavior to allow users to enter valid HTML tags. If you have chosen to allow HTML tags in user input, your application will be vulnerable to this issue. In addition, static pages generated by your web server, such as the "404 Not Found" page, may be vulnerable to malicious tags. Contact your web server vendor for more information.

Published Date: Feb 20, 2012

WebObjects: Using Fingerprint Files

This document describes how to use .fingerprint files and the checkpatchinstall script on Solaris or HP-UX to determine which WebObjects patch has been installed on your system for versions up to and including WebObjects 4.5. For more information on WebObjects patches and what they do, see the WebObjects Current Update List, Knowledge Base document 70037. To find the patch level of a Mac OS X (Server) or Windows WebObjects installation or a Solaris or HP-UX installation of WebObjects 4.5.1 or later, see Knowledge Base document 70074.

Related Documents

70037 WebObjects Current Patch List

70074 WebObjects: How to Determine the Installed WebObjects Version

This article has been archived and is no longer updated by Apple.

Downloading the Script and Fingerprint Files

To check your patch installation, first download the **checkpatchinstall.pdo.csh** script from Apple's FTP servers. You will also need to download the fingerprint file from the appropriate patch version. Follow the links below to download the fingerprint file:

Solaris Files

WebObjects 4.5 Update 3 for Solaris

WebObjects 4.5 Update 2 for Solaris

WebObjects 4.0.1 Patch 3 for Solaris

WebObjects 4.0.1 Patch 2 for Solaris

WebObjects 3.5.1 Patch 4 for Solaris

WebObjects 3.1 Patch 1 for Solaris

HP-UX Files

WebObjects 4.5 Update 3 for HP-UX

WebObjects 4.5 Update 2 for HP-UX

WebObjects 4.0.1 Patch 2 for HP-UX

WebObjects 3.5.1 Patch 4 for HP-UX

WebObjects 3.1 Patch 1 for HP-UX

Using the Script and Fingerprint Files

The syntax for the checkpatchinstall script is:

```
checkpatchinstall.pdo.csh <fingerprintfile>
```

The script will then report whether the patch represented by the fingerprint file is installed on the system.

Published Date: Feb 20, 2012

WebObjects 4.5: Setting Java VM Command-Line Options

This document discusses methods for configuring the Java Virtual Machine under WebObjects 4.5. For information on using Java under WebObjects 3.5.1, please see the **WebObjects 3.5.1 Java Bridge Troubleshooting Guide**.

This article has been archived and is no longer updated by Apple.
Q: How do I pass command-line arguments to the Java VM? I need to increase the garbage heap size, so that my application doesn't run out memory.

A: WebObjects 4 introduces a new way to specify arguments to the Java VM. The following arguments may be specified. Those ending in "Size" or "Port" take number arguments; all others take YES or NO.

- NSJavaCheckSource (equivalent to -cs or -checksource)
- NSJavaNativeStackSize (equivalent to -ss<number>)
- NSJavaStackSize (equivalent to -oss<number>)
- NSJavaMinHeapSize (equivalent to -ms<number>)
- NSJavaMaxHeapSize (equivalent to -mx<number>)
- NSJavaVerifyMode (equivalent to -verify)
- NSJavaEnableClassGC (NO is equivalent to -noclassgc)
- NSJavaEnableVerboseGC (equivalent to -verbosegc)
- NSJavaDisableAsyncGC (equivalent to -noasyncgc)
- NSJavaVerbose (equivalent to -v or -verbose)
- NSJavaDebugging (equivalent to -debug)
- NSJavaDebugPort

There are three ways to set these arguments:

1) Use the defaults command-line tool:
```
defaults write myapp NSJavaMinHeapSize 33554432
```
2) Pass them on the command line:
```
MyApp.woa/MyApp -NSJavaMinHeapSize 33554432
```
3) Set them programatically. Refer to the documentation for **NSUserDefaults** (Objective C) or **com.apple.yellow.foundation.NSUserDefaults** (Java).
Published Date: Feb 20, 2012

PowerBook/iBook: No Issues Caused By Airport Security Scanners

Airport X-ray security scanners do not cause any issues with iBook and PowerBook computers.
This article has been archived and is no longer updated by Apple.
Airport X-ray security scanners do not cause any issues with iBook and PowerBook computers.

The American Society for Testing and Materials (ASTM) conducted a study on X-ray induced issues to memory devices, including audio and video tapes and floppy disks, and found that these devices have enough shielding to protect the media.

The study found that the magnetic field was actually strongest around the security monitor, which most computers never even come close to. They taped a disk to the monitor for several hours without harm. A committee member suggested that it would take at least 1000 million passes through the X-ray machine before any issues would be evident.
Published Date: Feb 20, 2012

WebObjects 3.5.1 Administration FAQ

This article contains frequently asked questions (FAQ) regarding WebObjects 3.5.1 installation and administration, with answers to those questions.
This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. What databases/adaptors are supported by WebObjects Enterprise 3.5.1?
2. How do I configure Microsoft IIS for WebObjects?
3. I've read all the Release Notes and still can't get WebObjects installed and running!

Question 1: What databases/adaptors are supported by WebObjects Enterprise 3.5.1?

Answer: Apple provides Sybase, Oracle and generic ODBC adaptors for WebObjects on most platforms. Third-party adaptors may be available for other databases, including Informix, Quickbase, AS/400, Supra, DB2, Gupta SQL Base, VSAM, ADABAS, IMS/DB, and NCR Teradata. Other databases may be accessed programmatically through custom libraries provided by your database vendor.

Question 2: How do I configure Microsoft IIS for WebObjects?

Answer: This bug concerns Microsoft IIS Server running on Windows NT Server (Microsoft IIS Server does not currently run on Windows NT Workstation). On Windows NT Server, if you install WebObjects 3.1 or 3.5.1 under a **C:\\NeXT** directory, the cgi adaptor won't autostart your applications correctly. The IIS Server creates subprocesses with a special user that has no privilege at all, and that has no access to the NEXT_ROOT environment variable. An autostarted application won't have any privilege either, and won't be able to locate WebObjects resources (for example TimeZone files).

First:

- Install WebObjects under the root directory. When the installer asks you for a directory name to be the root of all Apple Enterprise software, set it to the root directory of a drive (such as **C:**).
- When asked for your **cgi-bin** directory, you should enter the path of the **Scripts** directory.

After installation:

- In the **Scripts** directory rename **WebObjects** to **WebObjects.exe**
- In **C:\\NextLibrary\\WebObjects\\Executables**, make a copy of **DefaultApp** and name the copy **DefaultApp.exe**. (You need to have both **DefaultApp** and **DefaultApp.exe** in that directory.)

Then, either:

- Run the Internet Service Manager application, bring up the Server Properties panel, and change the Anonymous Logon Username and Password to a user with administrator privileges. This will allow you to autostart web applications from the browser.

Or:

- Start your web applications by hand.

Also, if you're using the IIS Server, the URL to your WebObjects application should contain **/Scripts/WebObjects.exe** instead of **/cgi-bin/WebObjects**, as the **cgi-bin** directory is actually called **Scripts**. For example,
`http://server/Scripts/WebObjects.exe/Examples/HelloWorld` is the right way to invoke the HelloWorld application.

Question 3: I've read all the Release Notes and still can't get WebObjects installed and running!

Answer: It seems that on some systems the **/tmp** or **C:\\TEMP** directories either don't exist or don't have read/write permissions set correctly. Be sure the directory can been seen and accessed by all. WebObjects, other apps and users need access to this directory to work properly.

Published Date: Feb 20, 2012

DriveSavers, Inc.

DriveSavers, Inc.
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Company Profile:
Provides data recovery services for storage devices.
Published Date: Feb 20, 2012

EOF 2.2 Release Notes

This document contains the release notes for release 2.2 of Enterprise Objects Framework, included with release 3.5 of WebObjects.
This article has been archived and is no longer updated by Apple.
The Windows version of this release can be used to develop software for Intel machines running Windows NT. The MachOS version of this release is 3-way fat; it can be used to develop software for NeXT, Intel, and SPARC. The PDO version of this release can be used to develop software for Solaris and HPUX. None of the versions have been qualified for OpenStep application development.

Note that the installation of WebObjects 3.5 replaces your existing OpenStep installation with new development tools, frameworks, and files. For example, there are modifications to ProjectBuilder, makefiles, and project types to accomodate new features in WebObjects. Interface Builder and the AppKit framework are installed with WebObjects 3.5, but have not updated from the OPENSTEP 4.2 release. While we don't believe there are issues developing OpenStep applications on a WebObjects 3.5 system, you will not receive support related to issues you encounter while developing OpenStep-based applications. If you need to develop OpenStep applications on a supported platform, use a machine that does not have WebObjects 3.5 installed.

These release notes are organized into the following sections:

- Information About Other Releases
- Notes specific to Windows NT Developers
- Notes specific to PDO Developers
- Database Client Libraries
- New Features in Release 2.2
- Locating the Documentation for this Release
- Installing the Examples
- Known Issues in Release 2.2
- Enterprise Objects Framework User Defaults

Note: Because release 2.0 of Enterprise Objects Framework and later releases are based on the same architecture, many of the subjects in this document are relevant to all 2.x releases. Consequently, the term "release 2.x" is used where a discussion applies equally to releases 2.0 and higher.

Information About Other Releases

This document describes the features introduced, the bugs fixed, and the known issues in Enterprise Objects Framework release 2.2.

For a description of the features introduced in Enterprise Objects Framework release 2.0, see the 2.0 release notes. They contain a lot of information that's still relevant for 2.2, including information about converting release 1.x applications to 2.0 and a list of features shared with Enterprise Objects Framework release 1.2.

For a description of how Enterprise Objects Framework 2.x differs from the preceding releases, see the document Differences Between Enterprise Objects Framework 1x and 2.0 in /NextLibrary/Documentation/NextDev/EnterpriseObjects/1x_To_2.

Notes Specific to Windows NT Developers

References to filenames in this document use UNIX format. On Windows NT, you can interpret these by reading backslashes for the slashes and adding the installation directory (c:\\NeXT\\ by default) to the beginning. For example, /NextLibrary/Documentation on Windows NT is c:\\NeXT\\NextLibrary\\Documentation

To use Enterprise Objects Framework on Windows NT, you must have the appropriate database client libraries. The Sybase client libraries are provided on the WebObjects Enterprise 4.2 CD as an optional package. To install the Sybase client libraries, you must do a custom installation and explicitly specify that you want to install the package. To use Enterprise Objects Framework with Oracle or Informix, you must purchase the appropriate client libraries from your database vendor.

Here's what you need:

Oracle

Phone: (800) 542-1170 or call your local sales representative

Ask for: SQLNET v2.2 for PC/Windows NT

The Oracle adaptor on NT requires the Oracle 8.0, 7.3, or 7.2 Client Library. It won't work with the 7.1 libraries.

Informix

Phone: (800) 331-1763 or call your local sales representative

Ask for: ESQL/C version 7.2 for Win32

Notes Specific to PDO Developers

To use Enterprise Objects Framework on PDO, you must have the appropriate database client libraries.

Here's what you need:

Oracle

Phone: (800) 542-1170 or call your local sales representative

Ask for: 7.3.2 SQLNet V2 TCP/IP Client libraries

Informix

Phone: (800) 331-1763 or call your local sales representative

Ask for: ESQL/C Version 7.20.UC2

Sybase

Phone: (800) 685-8225 or call your local sales representative

Ask for: OpenClient/C Version 11.1

On PDO applications must explicitly link against the adaptor framework and the client libraries. New makefiles look for adaptor frameworks and automatically add in the right linker arguments. Simply add the adaptor framework to your project, and set the requisite environment variable specifying where the client libraries are installed. For Oracle set ORACLE_HOME and optionally ORACLE_REL. (The ORACLE_REL flag controls which set of libraries are used. It uses the Oracle 7.3 static link libraries by default, but you can also specify "8.0-static" or "7.3-dynamic.") For Sybase set SYBASE_HOME. For Informix set INFORMIX_HOME.

If you use dynamic libraries on Solaris, you need to set the LD_LIBRARY_PATH environment variable when running your application.

Database Client Libraries

This section includes some tips on using database client libraries with Enterprise Objects Frameworks. It is organized by database vendor.

Oracle

On Windows NT, using the latest release of the client library (7.3) requires you to use SQL*Net v2, which requires a tnsnames.ora file. tnsnames.ora is a file that you put on client machines, generally in the directory Orant/Network/Admin. The file contains information needed to connect to a server over the network. Entries in tnsnames.ora are keyed off of a server ID alias, and they include information such as the server ID, the host machine name, and the network protocol used by the client library to resolve the server ID alias. An entry in tnsnames.ora might resemble the following:

myServerAlias = (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)

(HOST=myMachine) (PORT=1521))(CONNECT_DATA=(SID=eof)))

Oracle provides tools you can use to create tnsnames.ora files. Refer to your Oracle documentation for more information on tnsnames.ora files and the tools you can use to create them.

If you're using the 7.2 version of the Oracle client libraries on Windows NT or if you're using Mach clients, you can use either SQL*Net v1 or SQL*Net v2. To use SQL*Net v1, you should set your adaptor's connectionDictionary serverId entry to "T:<host-machine>:<server-name>".

To use SQL*Net V2 on Mach clients, you should create a tnsnames.ora file and put it in the /etc directory.

Informix

If you get the error "INFORMIXSERVER not in sqlhosts file (25596)" but can connect to your database server using the Informix ilogin program, you may need to run SetNet32 to update the environment variables used by Informix.

The Informix client libraries appear to have redundant sources of server information. They use the sqlhosts file ($INFORMIXDIR/etc/sqlhosts) as well as a collection of environment variables managed by the Setnet32 program.

See your Informix documentation for more information on the sqlhosts file and the Setnet32 program.

New Features for 2.2

Java-wrapped Access and Control Layers

EOF 2.2 includes:

- Java-wrapped versions of the EOAccess and EOControl frameworks, so that you can write your Enterprise Object classes and Enterprise Objects Framework code in Java.
- A Java class browser demo application for browsing Java APIs, available in NextDemos/JavaBrowser.app.

EOModeler

- EOModeler can generate template code for Java enterprise object classes.
- Reverse engineering incorporates more schema information from your database into newly created models.

Framework

EOF 2.2 provides:

- Caching of to-many array faults that greatly reduces faulting (especially in WebObjects applications), thereby improving performance.
- A new insensitive like qualifier.

Locating the Documentation for this Release

The documentation for this release is provided in HTML and PDF formats. You can locate and view the documentation using the WebObjects Home Page. On NT, click the Start button and choose WOHomePage in the WebObjects program group. Or open the home page in a web browser directly, using the file <DocRoot>/WebObjects/Documentation/WOHomePage.html.

In addition to the documentation listed in the home page, this release also includes the document Differences Between Enterprise Objects Framework 1x and 2.0 on-line, which describes how the product has changed between the 1x and 2.0 releases. It is located in the directory: /NextLibrary/Documentation/NextDev/EnterpriseObjects/1x_To_2.

Issues with Reading PDF Files

If you're using the Acrobat Reader to view PDF files on Windows NT, some text may initially appear as gray lines. If this happens, you can fix it by choosing File -> Preferences -> General. In the General Preferences panel, uncheck the Greek Text option.

Documentation Feedback

Your comments on our documentation are especially valuable. Please send electronic mail with your comments and suggestions to techpubsfeedback@group.apple.com.

Installing the Examples

This release provides on-line examples to help familiarize you with Enterprise Objects Framework 2.x. These examples are located in /NextDeveloper/Examples/EnterpriseObjects. For more information on installing and building the examples, see the ExamplesGuide within the examples directory or refer to Post Installation Instructions, which is accessible from the WebObjects Home Page.

Known Issues in Release 2.2

This section describes known issues with release 2.2 of Enterprise Objects Framework. It is organized into the following sections:

- Java-wrapped Access and Control Layers
- Access Layer
- Control Layer
- Miscellaneous Framework
- Informix Adaptor
- ODBC Adaptor
- Oracle Adaptor
- Sybase Adaptor
- EOModeler
- On-line Examples
- Documentation

Java-wrapped Access and Control Layers

These issues exist in the Java-wrapped versions of the Access and Control layers of this Enterprise Objects Framework release:

Reference: 81432

Issue: Key-value coding invocations raise if the provided key is different in Java from what it is in Objective-C.

Description: If you use key-value coding to invoke a method whose name is different in Java from what it is in Objective-C (for example, ImmutableVector.size is mapped to [NSArray count]), the key is unbound on the Objective-C side and an exception is raised.

Workaround: In key-value coding invocations, use the Objective-C keys instead of their Java counterparts.

Reference: 81711

Issue: **valueForKey** raises an unbound key exception if the Objective-C method corresponding to the provided key returns **void**.

Workaround: If you're writing Objective-C code that you're going to bridge, write Objective-C methods that return a value (instead of **void**).

Access Layer

These issues exist in the access layer of this Enterprise Objects Framework release:

Reference: 81863

Issue: There isn't a publicly available method to turn off to-many array fault caching.

Workaround: If you need to turn off to-many array fault caching for any reason (if you've implemented your own solution, for example), invoke the following method before the creation of any instances of EODatabase or EODatabaseContext. Calling it from main() would be good.

[EODatabaseContext _setUseToManyCaching:NO];

Reference: 82008

Issue: NSNumber with value 0 is still taken to be NULL for primary key.

Description: Starting in EOF 2.2, the EODatabaseContext assumes that an object with a single attribute primary key with a value of zero must be a newly created instance. And as such, the database context will attempt to get a new primary key for the object via delegate hook or the adaptor-specific primary key generation mechanism. This change allows users to use scalar data types (such as int) as an enterprise object's primary key, and still rely on EOF automatic primary key generation.

Unfortunately, if you have an existing database containing rows that have a primary key of 0, an attempt to update an object created from such a row will cause the database context to incorrectly assume that an object created from such a row needs to get a new primary key. This can leave invalid foreign key references in other tables.

Workaround: Implement the EODatabaseContext delegate method databaseContext:newPrimaryKeyForObject:entity: to catch the case where the framework is going to mistakenly get a new key.

From EODatabaseContext.h:

```
- (NSDictionary *)databaseContext:(EODatabaseContext *)context

   newPrimaryKeyForObject:(id)object

   entity:(EOEntity *)entity;

   // If a newly inserted EO doesn't already have have a primary key set,

   // this delegate is called to generate a key.  If the delegate is not implemented,

   // or returns nil, then the DatabaseContext will call

   // [EOAdaptorChannel primaryKeyForNewRowWithEntity:(EOEntity *)entity]

   // to attempt to generate the key.
```

Example of how to get the database context and set its delegate:

```
{

...

   model = [[EOModelGroup defaultGroup] modelNamed:@"myModel"];

   dbContext = [EODatabaseContext

       registeredDatabaseContextForModel:model
```

```
        editingContext:editingContext];

    [dbContext setDelegate:self];

...

}
```

Example of a delegate method implementation:

```
- (NSDictionary *)databaseContext:(EODatabaseContext *)context

    newPrimaryKeyForObject:(id)object

    entity:(EOEntity *)entity

{

    if (entity == entityThatIKnowHasAValidRowWithAKeyOfZero)

        if ([[object valueForKey:primaryKeyThatCanBeZero] isEqual:[NSNumber zero]])

            return [NSNumber zero];

    return nil;

}
```

Reference: 77721

Issue: Can't update rows containing string attributes with trailing spaces.

Description: The Enterprise Objects Framework adaptors automatically strip trailing spaces from string values fetched from the database. They also strip spaces on newly inserted strings before sending them to the database. This works fine until you fetch data that a non-Enterprise Objects Framework application inserted that contains trailing spaces. If that attribute is marked as "used for locking," Enterprise Objects Framework will be unable to update the row (because the version in the database is different from the space-stripped version in the snapshot).

Workaround: Do not mark columns that could contain trailing spaces as used for locking. Alternately, strip the spaces from the data in your server.

Reference: 77546

Issue: Inclusion of framework models in defaultModelGroup doesn't happen automatically on PDO.

Description: Applications on PDO that link with frameworks that include models don't automatically get the models put in the applications.

Workaround: Manually construct the the model group yourself at application initialization. For example:

```
EOModelGroup *group = [EOModelGroup new];

        // repeat for each model containing framework used by app

NSBundle *bundle = [NSBundle bundleForClass:[SomeClassInFramework class]]

NSEnumerator *enumerator = [[bundle pathsForResourcesOfType:@"eomodeld"  inDirectory:nil] objectEnumerator];

NSString *modelPath;

while (modelPath = [enumerator nextObject])

    [group addModelWithFile:modelPath];

[EOModelGroup setDefaultGroup:group];

[group release];
```

Reference: 77631

Issue: If you're editing a model (in code or with EOModeler), sometimes an EORelationship will return nil from inverseRelationship, even though you just added the inverse relationship.

Description: The first time you ask an EORelationship for its inverse relationship, it searches all the relationships in its destinationEntity looking for an inverse. It caches the result of this search, and this cache does not always get invalidated when the relationships of the destinationEntity change.

Workaround: See the category on EORelationship in the ModelerBundle/RelationshipExtras.m example.

Reference: 77354

Issue: Issues saving changes to attributes with mutable custom value objects.

Description: Suppose you have a mutable custom value type, PhoneNumber, that implements methods such as setAreaCode: and setPrefix: to change an enterprise object's values. If you use such methods to modify an enterprise object's values and save changes, the enterprise object is not saved to the database.

Workaround: To use mutable value classes you must do three things:

1. In the PhoneNumber value class object, implement isEqual: to appropriately compare two instances.
2. If the PhoneNumber value is about to be modified, its owning enterprise object must invoke [self willChange] before the modification.
3. In your enterprise object class, you must implement a "set" method that copies rather than retains the object passed to it. For example:

```
- (void)setDayTimePhone:(PhoneNumber *)number {

[dayTimePhone autorelease]

dayTimePhone = [number copy];

}
```

#1 would be required, even in a perfect world. #2 is a requirement of the basic Enterprise Objects Framework architecture. #3 is a bug in Enterprise Objects Framework -- Enterprise Objects Framework should be passing enterprise objects a copy of their values, but instead it's passing the the same instance that's shared in the snapshot.

In general, the simplest workaround is to use immutable custom value objects.

Reference: 72619

Issue: EOAdaptorChannel does not inherit EOAdaptor's delegate.

Description: According to the EOAdaptorChannel class specification and header file, the EOAdaptorChannel's delegate should automatically be kept in synch with its adaptor. Indeed, if a new delegate is assigned to an EOAdaptor, the new delegate is propagated to any of that adaptor's existing contexts and channels. However, if you create an EOAdaptor, assign a delegate to it, and then create EOAdaptorContexts and EOAdaptorChannels, the newly-created contexts and channels don't have the delegate assigned to them.

Workaround: Wait until all of the channels and contexts are instantiated before assigning the adaptor's delegate, or reassign the adaptor's delegate each time a new channel or context is created.

Reference: 61475

Issue: Enterprise Objects Framework performs less efficient deep fetches for single-table inheritance mappings than it should.

Description: To perform a deep fetch, Enterprise Objects Framework performs a fetch for each concrete class in an inheritance hierarchy. For a single-table inheritance mapping, Enterprise Objects Framework should perform only one fetch and then sort the results in memory. For example, if Person, Employee, and Customer objects are stored in one table<the PERSON table<the Framework should perform one fetch on the PERSON table to fulfill a deep fetch request of Person, Employee, and Customer objects. Instead, it performs three fetches: one to get Person objects, one to get Employee objects, and another to get Customer objects.

Workaround: Define only one entity for the entire inheritance hierarchy, and use the EOModelGroup delegate methods subEntityForEntity:primaryKey:isFinal:, and entity:classForObjectWithGlobalID: to create instances of the proper subclasses from database rows.

Reference: 74251

Issue: Changes made during saveChanges are silently lost.

Description: If you change an enterprise object while its editing context is in its saveChanges method (for example, if you change an enterprise object in an EODatabaseContext delegate method), the changes may be silently lost.

Workaround: Don't make changes to objects during the save process. Instead, make the changes from the EOEditingContext delegate method editingContextWillSaveChanges:.

Reference: 74345

Issue: You can't update to-many relationship if the foreign key isn't marked as a class property or as used for locking.

Description: Suppose that an entity's foreign key attribute isn't marked as a class property or as used for locking. If you designate the foreign key attribute as a to-many relationship's destination key, the foreign key value isn't always updated. This occurs because the destination entity doesn't know that the attribute participates in a relationship. Therefore, the destination entity doesn't fetch the foreign key from the database or update it.

Workaround: Mark attributes that are destination keys of a to-many relationship so they are fetched. For example, you could:

- Mark them as class properties.
- Mark them as used for locking.
- Use them in inverse relationships to the problematic to-many's source entity.

Reference: 74379

Issue: EODatabaseContext can't be the direct parentObjectStore of an EOEditingContext.

Description: The EODatabaseContext requires that an EOObjectStoreCoordinator sit between it and any EOEditingContexts that it serves. This is the default configuration set up by the framework, so you shouldn't normally run into this issue. Just a reminder, you can set up an editingContext and be ready to go with this one line:

```
EOEditingContext *editingContext = [EOEditingContext new];

// automatically uses [EOObjectStoreCoordinator defaultCoordinator]

// as parentObjectStore
```

Any necessary EODatabaseContexts are created and registered automatically.

Workaround: Don't assign an EODatabaseContext as the parentObjectStore of an EOEditingContext. There's no benefit to doing so anyway.

Reference: 76526

Issue: Applying a qualifier with key path to top of horizontally mapped inheritance hierarchy generates invalid SQL.

Description: Enterprise Objects Framework's query building mechanism doesn't handle relationships to inheritance hierarchies. For example, suppose that you are are attempting to qualify a fetch through a to-many relationship (planes) that points to the top of a horizontally mapped inheritance hierarchy (for the entities Plane, FighterPlane, and TrainerPlane). If you want the query to test against all tables, you'd expect Enterprise Objects Framework to generate SQL similar to the following:

```
SELECT  t0.AIRPORT_ID

FROM PLANE t1, FIGHTER t2, TRAINER t3, AIRPORT t0

WHERE

(t1.LENGTH <= 1000 AND t0.AIRPORT_ID  = t1.AIRPORT_FK) OR

(t2.LENGTH <= 1000 AND t0.AIRPORT_ID  = t1.AIRPORT_FK) OR

(t3.LENGTH <= 1000 AND t0.AIRPORT_ID  = t1.AIRPORT_FK)
```

Instead, Enterprise Objects Framework generates the following SQL:

```
SELECT  t0.AIRPORT_ID

FROM PLANE t1, AIRPORT t0

WHERE

(t1.LENGTH <= 1000) AND

t0.AIRPORT_ID = t1.AIRPORT_FK
```

In other words, only the table for the root of the hierarchy is queried.

Workaround: You can create a qualifier that generates the correct SQL by:

1. Adding relationships in the source entity to all the tables in the inheritance hierarchy. For example, to the Airport entity, you'd add the

relationships toFighters and toTrainers to the destination entities FighterPlane and TrainerPlane, respectively. Mark the relationships so they aren't class properties.

2. When building your query, explicitly list these extra relationships. In the Planes example, you'd fetch from Airport where "planes.length < 1000 OR toFigtherPlanes.length < 1000 OR toTrainerPlanes.length < 1000"

Alternatively, you might be able to solve this issue more generally by writing a post processor for EOQualifiers that splits up clauses that perform inheritance tests. The post processor could even programmatically generate the additional relationships on demand and register them with the model using names like "plane_Subclass_Fighter".

A generic EOQualifier post processor could be wired into Enterprise Objects Framework so that application writers don't have to know it exists. The right place for such a mechanism is probably in EOKeyValueQualifier's schemaBasedQualifierWithRootEntity: method (see EOSQLQualifier.h). You could put the post processor code in a subclass of EOKeyValueQualifier (with an appropriate call to super after the transformation, if any, is performed) and have your subclass pose as EOKeyValueQualifier.

Reference: 47832

Issue: Enterprise Objects Framework can't update attributes whose internal types are custom (such as NSImages).

Description: A custom value class must implement isEqual: to be used for attributes marked as used for locking.

Workaround: Implement isEqual: in the custom value class or don't mark the attribute as used for locking.

Reference: 65078

Issue: Seemingly innocuous qualified fetch always causes exception.

Description: Some qualified fetches raise exceptions because values in the SQL have been formatted as strings when they should have been formatted as some other type. This can happen when you enter an invalid external type or when a Sybase model doesn't contain information about user-defined types that are used in the model.

Workaround: In the case of an invalid external type, simply correct it. In the case of a user defined type, create a new model by reverse engineering the database. The new model's connection dictionary contains information about user-defined types. Copy the connection dictionary from the new model to the original one.

Reference: 69039

Issue: Alert panel displaying adaptor error is never dismissed.

Description: This occurs whenever an adaptor operation that was invoked from an awakeFromNib: method displays an alert panel. The issue is that the entire object graph is not yet instantiated when awakeFromNib: is invoked.

Workaround: Database operations should be begun from the applicationDidFinishLaunching: method rather than the awakeFromNib: method. Of course, this means that any methods that indirectly cause database communication should also be invoked from the applicationDidFinishLaunching: method.

Reference: 76885

Issue: The set of valid values for the databaseEncoding entry of a connection dictionary are not documented, and the set can vary in different locales.

Description: A connection dictionary's databaseEncoding entry contains the localized name for the string encoding. The localized names are not documented. Furthermore, the localized names for string encodings can vary with the user's locale. Consequently, the specified encoding for an application might not work for users in different locales.

Workaround: You can find the localized name for string encodings in /NextLibrary/Frameworks/Foundation.framework/Resources/language.lproj/EncodingNames.strings.

Reference: 59472

Issue: Derived attributes are limited and don't offer full SQL as advertised.

Description: Placing a string or a numeric constant in the definition field of a derived attribute generates invalid SQL. Definitions such as Âªtitle Âº and Âª0.0Âº don't work correctly. However, definitions such as Âªatt1 + 5Âº should work correctly when Âªatt1Âº specifies another attribute.

Workaround: None.

Reference: 70049

Issue: EOModelGroup doesn't raise an exception when more than one entity has the same name.

Description: Although it is illegal to have the same entity name in two different models in a model group, EOModelGroup doesn't check to see if this is the case when adding a model.

Workaround: Manually verify that no two models have entities with the same name or write a method to perform the check.

Reference: 70260

Issue: Some error messages returned by the Framework's default validation methods (such as methods that check that a value doesn't exceed the maximum width specified in its attribute) aren't localized.

Workaround: Implement an exception handler for use with the EOEditingContext, and have the handler replace the error messages with localized strings.

Reference: 76152

Issue: Inserting and deleting objects involved in inverse, to-many relationships can be very slow.

Description: Suppose that a ServiceRequest has a to-one relationship to its CustomerServiceRepresentative, and that the CustomerServiceRepresentative has an inverse to-many relationship to its ServiceRequests. When you assign a request to a representative using addObject:toBothSidesOfRelationshipWithKey:, you fire the fault for the CustomerServiceRepresentative.serviceRequests. So, if a representative has a large number of requests, assigning a new request to a representative can be very slow. Correspondingly, when you delete a request, Enterprise Objects Framework fires the corresponding representative's serviceRequests fault so it can remove the request from the array.

Workaround: Set the inverse, to-many relationship so it isn't a class property. For example, in the above request-representative scenario, you would remove the serviceRequests relationship from the class properties of the CustomerServerRepresentative entity.

Reference: 82173

Issue: EOAdaptorChannel.h has an erroneous comment for the method fetchRowWithZone:.

Description: When fetchRowWithZone: returns nil signaling the end of the result set, isFetchInProgress can return YES to indicate that there are more result sets. The comment should read:

```
- (NSMutableDictionary *)fetchRowWithZone:(NSZone *)zone;

   // Fetches the next row from the result set of the last

   // -selectAttributes:...  message and returns values for the attribute

   // names in attributes. When no rows are left, this method invokes

   // adaptorChannel:didFinishFetching:, and returns nil.

   // For adaptors that can have multiple result sets (ODBC and Sybase),

   // This method will return nil at the end of each result set, however

   // isFetchInProgress will return YES. The channel will also send the

   // delegate an an adaptorChannelDidChangeResultSet: message whenever

   // the end of one result set has been reached and another one is

   // pending.

   // This methods may raise an exception if an error occurs.
```

Control Layer

These issues exist in the control layer of this Enterprise Objects Framework release:

Reference: 82210

Issue: Attempt to copy an EOSortOrdering object throws an exception:

*** -[EOSortOrdering copyWithZone:]: selector not recognized

Workaround: Don't copy EOSortOrderings, or implement copyWithZone: in a category on EOSortOrdering.

Reference: 68146

Issue: Fault failure leaves EOInterface layer unstable.

Description: If a displayed enterprise object has a to-one relationship to a non-existent destination row, attempting to access the destination object raises an exception and corrupts the state of user interface objects. (Enterprise Objects Framework raises an exception when a to-one relationship cannot be resolved due to a referential integrity issue in the database).

Workaround: See the chapter "Advanced Enterprise Object Modeling" in the Enterprise Objects Framework Developer's Guide for information on handling optional to-one relationships.

Reference: 64084

Issue: Inserted enterprise objects don't get removed from EODisplayGroup after sending revert to EOEditingContext.

Description: If you fetch objects into an EODisplayGroup, insert a few objects, delete a few objects, and then update a few objects; telling the EOEditingContext to revert backs out the updates, but not insertions or deletions. The actual insertions and deletions have been reverted, but the EODisplayGroup doesn't know how to revert its object list (since is doesn't keep track of what its original object list was before the insertions and deletions).

Workaround: Programmatically tell all affected EODisplayGroups to refetch after telling the EOEditingContext to revert, or use refetch: (invalidateAllObjects:) instead of revert.

Reference: 72177

Issue: Deleted objects are still registered in the EOEditingContext after a saveChanges operation.

Description: If an object is deleted in the EOEditingContext and then the EOEditingContext is saved, the deleted object isn't forgotten by the EOEditingContext (i.e., sending the EOEditingContext the message objectForGlobalID: should return nil, but it doesn't).

Workaround: Fortunately, this should have no affect on most applications. However, if you need to work around this issue, remember the deleted objects in the editingContextWillSaveChanges: delegate, and then invoke forgetObject: for each object after a successful save.

Reference: 72269

Issue: You can't tell Enterprise Objects Framework to not undo your changes when delete propagation fails.

Description: The EOEditingContext delegate method editingContextShouldUndoUserActionsAfterFailure: is supposed to allow programs to indicate that they do not want user actions undone if a validation or delete propagation error occurs. However, the EOEditingContext undoes the user action regardless of the return value from the method.

Workaround: None.

Reference: 72903

Issue: Aborted deletions are incorrectly recorded in the undo stack as empty undos.

Description: When the deletion of an object fails due to a deny rule, the undo manager records an empty undo group. This means that although nothing actually happened during the operation, the operation still needs to be undone before previous operations can be undone. For interactive programs this is not normally an issue since users rely on visual cues to determine how many times to undo. However, this may be an issue for code that programmatically performs undo operations.

Workaround: None.

Reference: 74965

Issue: The EOEditingContext delegate method editingContext:shouldPresentException: isn't called when saveChanges is invoked programmatically.

Description: If you use the following code:

```
eo = [[[Movie alloc] init] autorelease];

[eo setTitle:nil];   // Assume that the TITLE column doesn't allow NULLs

[editingContext insertObject:eo];

      [editingContext saveChanges];
```

the editingContext:shouldPresentException: delegate method isn't called. Instead, an exception is raised.

However, if you instead set a user interface control object as the target for the editing context's saveChanges: action, the delegate method is

invoked.

Workaround: Always use saveChanges: instead of saveChanges. If you don't have an argument to pass, just use

```
[editingContext saveChanges:nil];
```

Reference: 76466

Issue: EOEditingContexts don't propagate uninserts.

Description: Propagate delete works fine for an object that that is fetched from the database. However, if an object is created and inserted in an editing context and then deleted (thus never being saved to the database), the delete isn't propagated to the destinations of the object's relationships. For example, suppose you create an ExpenseReport object and several LineItems for it. If you then delete the ExpenseReport, the delete doesn't propagate to the LineItems. If the LineItems can't exist without an owning ExpenseReport, EOEditingContext's saveChanges fails when the delete is performed within the same event as the insert.

Workaround: Call [editingContext processRecentChanges] before deleting the previously inserted object.

Reference: 76901

Issue: Associations are refreshed too early when a modal panel (such as the fetch limit panel) is raised, possibly causing an exception.

Description: Suppose you have two EODisplayGroups that are set to fetch on load. If the second display group to fetch exceeds the fetch limit, an alert panel inquiring whether to continue the fetch pops up. Presenting the panel causes the run loop to flush the first display group's user interface drawing. If the first display group's user interface displays enterprise object properties via key paths, EOFaults may be fired. Since the default EODatabaseChannel is busy with the fetch for the second display group, an exception is raised because there isn't an available channel.

Workaround: There are several workarounds:

1. Don't use the fetch "prompt on limit" feature.

2. If your application only uses modal panels for alerts and warnings, disable the modal refresh by sending the following message in your application's initialization code (make sure to awake the EODisplayGroup first so it's initialize method is called before you send this message):

```
[[EODelayedObserverQueue defaultObserverQueue]

setRunLoopModes:[NSArray arrayWithObject:NSDefaultRunLoopMode]]
```

3. Implement your own fetch limit panel that doesn't invoke a modal event loop.

4. Register an additional EODatabaseChannel with the EODatabaseContext so the fetch of the faults can occur while the second EODisplayGroup fetch is paused.

Reference: 77181

Issue: The EOQualifier contains operator doesn't do SQL generation.

Description: The contains operator is meant to do to-many array comparison. For example, you might query on the Studio entity using the following qualifier format:

```
"movies contains %@", someMovieObj
```

The resulting qualifier works for an in-memory search, but doesn't generate SQL for a database search.

On the other hand, using the equality operator for to-many array comparison kind of works in SQL, but not in memory. For example, you might query on the Studio entity using the following qualifier format:

```
"movies = %@", someMovieObj
```

The resulting qualifier returns no matches when evaluated in memory because the array property is not equal to the movie object as determined by isEqual:. However, when it's evaluated in the database, it returns the same studio N times (where N is the number of movies in the Studio's movies array), even though the qualifier is attempting to match only one movie.

Workaround: Use the contains operator for qualifiers in-memory evaluation and the equality (=) operator (with usesDistinct on the fetch specification) for evaluation in the database.

Miscellaneous Framework

These issues exist in this Enterprise Objects Framework release:

Reference: 46679

Issue: Enterprise Objects Framework's private instance variables aren't declared @private and don't have names that begin with the underbar ('_') character.

Description: All instance variables in Enterprise Objects Framework should be considered private.

Workaround: Don't directly access Enterprise Objects Framework instance variables.

Reference: 69211

Issue: Link errors on Windows NT.

Description: Programs on Windows NT must add explicit references to at least one class in each framework in order to avoid link errors at run time.

Workaround: Add a function like that in the following code snippet, which refers to classes in each of Enterprise Objects Framework's layers. Though never invoked, it forces the appropriate linking to occur.

```
#ifdef WIN32

#import <EOControl/EOControl.h>

#import <EOAccess/EOAccess.h>

#import <EOInterface/EOInterface.h>

void _referenceAllEOFrameworks()

{

       [EODisplayGroup new];       // EOInterface

       [EOEntity new];             // EOAccess

       [EOEditingContext new];     // EOControl

}

#endif
```

If you create your project with the type "EOApplication," this code is automatically added to your project main file.

Reference: 72027

Issue: EOKeyValueCoding is broken for doubles on HPUX PDO.

Description: EOKeyValueCoding doesn't work correctly for accessor methods that set and return doubles on HPUX under PDO 4.1 (and previous releases). This means that users cannot correctly fetch enterprise objects that have class properties with accessor methods that use doubles.

Workaround: Change your enterprise objects' accessor methods to return and take as arguments NSNumbers, NSDecimalNumbers, or ints.

Informix Adaptor

These issues exist in the Informix adaptor supplied with this release of Enterprise Objects Framework:

Reference: 64031

Issue: Informix adaptor user defaults for Enterprise Objects Framework 2.x are different than those for Enterprise Objects Framework 1.2.

Description: In Enterprise Objects Framework 1.2, the InformixAdaptor stores defaults in the EOFInformixAdaptor domain and uses the following keys:

INFORMIXDIR, DBDATE, DBLANG, DBMONEY, InformixLogErrors, ShowSystables, ShowTableOwner, Beautify, DefaultIsolationLevel, GlobalOptimization, GlobalExplain, GlobalLockMode, GlobalPDQPriority, GlobalDataSkip, GlobalConstraints, DatabaseExclusive

Enterprise Objects Framework 2.x stores defaults in the standard NSGlobalDomain and prefixes all keys with ÂªInformixÂº, that is:

InformixINFORMIXDIR, InformixDBDATE, InformixDBLANG, InformixDBMONEY, InformixLogErrors, InformixShowSystables, InformixShowTableOwner, InformixBeautify, InformixDefaultIsolationLevel, InformixGlobalOptimization, InformixGlobalExplain, InformixGlobalLockMode, InformixGlobalPDQPriority, InformixGlobalDataSkip, InformixGlobalConstraints, InformixDatabaseExclusive.

Workaround: None.

Reference: 70232

Issue: Informix adaptor raises an exception when you try to sort on attributes that are not in the select list.

Description: Due to a restriction in the Informix adaptor, it's not possible to sort on attributes that aren't included in the select list. This means that it isn't possible to sort the results using an attribute that is not marked on the entity as either a primary key, used for locking, or a class property.

Workaround: If possible, add the attribute to the entity and mark it as used for locking. Otherwise, there is no workaround.

ODBC Adaptor

These issues exist in the ODBC adaptor supplied with this release of Enterprise Objects Framework:

Reference: 81774

Issue: Can't save large BLOB's to SQLServer

Description: If you try to save large BLOB's (more than 1 meg), you will probably encounter a segmentation violation. This is happening because something in the ODBC stack can't handle large buffers.

Workaround: You can add a special EOF flag to the driverInfo dictionary that will cause EOF to use the SQLPutData() function to break up large BLOB's into smaller pieces for transmission. To enable this behavior, add the following line to your driverInfo dictionary in the EOModel.

```
EOF_ENABLE_SQLPUTDATA = Y;
```

Starting with EOF 2.2, this flag is always set when you reverse engineer a model, but older models created with EOF 2.1 or EOF 2.0 will not have the flag.

Warning to users of MS-Access: The ODBC Access driver doesn't handle the SQLPutData() calls correctly, so Access users should not turn this flag on. It will be set to "N" by default when reverse engineering an Access database.

Oracle Adaptor

These issues exist in the Oracle adaptor supplied with this release of Enterprise Objects Framework:

Reference: 82299

Issue: On NT, you can't use gdb on an app running against the oracle adaptor.

Description: It has been reported that running gdb on an application running against the OracleAdaptor can sometimes result in unexplained crashes or hangs, even when the same application works when run from outside the debugger. It seems that something in the Oracle Tracing mechanism causes the entire process to behave unpredictably when running within gdb. Some people never see this issue, others may see it occasionally, some may never be able to run gdb acceptably.

Workaround: There are several ways to deactivate this tracing. The easiest is to remove tracing from the registry by renaming the HKEY_LOCAL_MACHINE\\SOFTWARE\\ORACLE\\OTRACE73 entry.

Reference: 77517

Issue: If you try to update an enterprise object with an attribute that maps to a LONG RAW column while using on-demand locking, you get the following exception:

"fetchObject -- EODatabaseChannel 0x12345678: attempt to

lock object that has out of date snapshot"

Description: It appears that the Oracle database sometimes returns wrong BLOB values when it's passed "SELECT ... <long-raw-column,... FOR UPDATE". So when the EODatabaseChannel attempts to acquire a lock on the row, the results of the SELECT don't match the results that were gotten on the last SELECT (without the FOR UPDATE clause).

Workaround: None. You can't use on-demand locking if you're going to be updating tables with LONG RAW columns.

Reference: 77366

Issue: If you're using pessimistic locking in combination with batch faulting or prefetching of relationships, you'll get the error "ORA-01786: FOR UPDATE of this query expression is not allowed" when you run your application.

Description: When you use pessimistic locking mode in combination with batch faulting or prefetching of relationships, Enterprise Objects Framework generates a SQL statement like the following:

<OracleSQLExpression: "SELECT DISTINCT t0.CATEGORY, t0.DATE_RELEASED, t0.LANGUAGE, t0.MOVIE_ID, t0.RATING, t0.REVENUE, t0.STUDIO_ID, t0.TITLE FROM DIRECTOR t1, MOVIE t0 WHERE t1.TALENT_ID = :talentID AND t0.MOVIE_ID = t1.MOVIE_ID FOR UPDATE" withBindings:{talentID = 87; }>

This statement fails with the ORA-01786 error. The Oracle RDBMS doesn't support the use of DISTINCT with the FOR UPDATE clause.

Workaround: If you use the pessimistic locking mode against an Oracle database, you can't use the batch faulting or prefetching features.

Reference: 62425

Issue: Oracle Adaptor doesn't read stored procedures inside of packages.

Description: There is no way to get the database to tell you the components (procedures and functions) that are inside a package definition. Clients can still create stored procedures in the model that will call into packages, it's just that model description using EOModeler won't create these at connect time.

Workaround: You can use EOModeler to create the stored procedure definitions in the model. Just set the external name of the stored procedure to package-name.procedure-name.

Reference: 73333

Issue: The Oracle adaptor has character set issues on Sparc and m68k.

Description: The Oracle adaptor on Mach does not properly support certain character set conversion on certain architectures:

- On SPARC ISOLatin1 works, but Japanese character sets do not.
- On m68k non-ASCII ISOLatin1 characters are stripped and Japanese character sets don't work at all.

On Intel all character sets work fine, including European and Japanese.

Workaround: To get non-ASCII character sets on SPARC and m68k, install the EO2JOracleAdaptor.pkg that's on the Enterprise Objects Framework 2.1 Mach CD.

Note: The EO2J Oracle Adaptor is built with the 7.0 version of the Oracle client libraries. Consequently, returning fetch sets from stored procedures is not supported.

Reference: 77990

Issue: Sometimes when you run the install_database script or use the schema object creation window in EOModeler, you might get one of the following errors.

```
Mar 27 10:19:34 eoutil[1577] Exception running dump: ORA-00955: name is already used by an existing object

create table  !!! eo_temp_table as select max(MOVIE_ID) counter from MOVIE

Mar 27 10:27:54 eoutil[1591] Exception running dump: ORA-00955: name is already used by an existing object

create procedure  !!! eo_set_sequence is

   xxx number;

   yyy number;

begin

   select max(counter) into xxx from eo_temp_table;

   if xxx is not NULL then

       yyy := 0;

       while (yyy < xxx) loop

           select MOVIE_SEQ.nextval into yyy from dual;

       end loop;

   end if;

end;
```

Description: If the primary key support code dies unexpectedly, it can leave the eo_set_sequence stored procedure and the eo_temp_table table in the user's schema. This isn't an issue right away, but any subsequent attempt to run the install_database script will fail because the statements that attempt to create these schema objects will fail and the data loading will stop before it is finished.

Workaround: Use the following commands from SQLPlus to remove these objects before you attempt to create the schema objects with the install_database script.

```
SQL> drop table eo_temp_table;

SQL> drop procedure eo_set_sequence;
```

Sybase Adaptor

These Issues exist in the Sybase adaptor supplied with this release of Enterprise Objects Framework:

Reference: 62634

Issue: The Sybase adaptor uses CS_CONVERT() to convert numeric data into NSDecimalNumbers.

Description: Fetching decimal numbers in locales that use a characters other than `.' for the decimal may not work.

Workaround: None.

Reference: 63169

Issue: Models created for version 4.9 Sybase servers do not include stored procedures.

Description: EOModeler gets stored procedure information using functionality that isn't provided in old servers.

Workaround: Use EOModeler's Stored Procedure Editor to add EOStoredProcedure objects to a model.

Reference: 74633

Issue: You can't link against the Sybase1x framework.

Description: The Sybase1x framework has a bug in its sybase1x.lib, such that anything linked against it attempts to load the nonexistent Sybase.dll (rather than Sybase1x.dll). If you never access an adaptor-specific class such as SybaseChannel, you won't have issue. However, if you do reference an adaptor-specific class, your application (or framework) won't be able to initialize.

Workaround: Make a copy of the Sybase1x.dll named Sybase.dll.

Reference: 75024

Issue: The SQL generation for primary key support in the Sybase adaptor isn't sufficient.

Description: The SQL generated by EOModeler to support primary key generation in Sybase simply invokes the sp_primarykey stored procedure. sp_primarykey adds useful information to the syskeys table, but doesn't create constraints that enforce uniqueness (or NOT NULL) in the primary key columns.

Workaround: Add the constraints yourself using statements of the following form:

```
alter table <table-name> add constraint primary key (<column-name> {, <column-name })
```

EOModeler

These issues exist in EOModeler with this release of Enterprise Objects Framework:

Reference: 77880

Issue: EOModeler exhibits odd behavior if you try to paste model objects from a closed window.

Description: Copy a model object (or objects), close the window from which you copied, and then open a new window. The Paste menu item is enabled in the new window, but if you try to paste, nothing happens.

Workaround: Don't close the original window before pasting the model objects.

Reference: 77608

Issue: Existing Enterprise Objects Framework projects don't see the new Enterprise Objects Framework 2.1 source code generation templates (used when you issue the "Generate Source Files..." command in EOModeler).

Description: Enterprise Objects Framework 2.1 includes fixes and additions to EOInterfaceFile.template and EOImplementationFile.template. If a user has a project from Enterprise Objects Framework 2.0 that contains the old versions of these files, the old versions will continue to be used.

Workaround: If you didn't customize the templates, then you should just remove these old files from your project.

If want to build a customized template based on the newest versions, copy /NextDeveloper/Apps/EOModeler.app/Resources/EOImplementationFile.template and /NextDeveloper/Apps/EOModeler.app/Resources/EOInterfaceFile.template into your project directory.

Reference: 77134

Issue: If you open two different Diagram View windows for the same model file, the layout for only one of the windows is saved, and which layout is saved is indeterminate.

Workaround: Only open one Diagram View window for a model at a time.

Reference: 77191

Issue: Pasted attributes do not retain their primary key, used for locking, or class property settings.

Description: If you copy and paste an attribute, the pasted attribute's primary key, used for locking, and class property bits revert to their default settings, regardless of their state in the original. This occurs because the settings are actually maintained by the owning entity, which isn't incorporated into an attribute's pasteboard rendering.

Workaround: Manually set the bits after pasting.

Reference: 63118

Issue: Schema generation may produce identifiers that are too long.

Description: If your database table names are long, the names generated for constraints may be too long.

Workaround: Shorten your table names, or edit the SQL EOModeler generates to shorten the constraint names.

Reference: 51250

Issue: You can't join on derived attributes.

Description: Invalid SQL is generated whenever a derived attribute is designated as a join attribute in a relationship.

Workaround: None.

On-line Examples

These issues exist in the on-line examples included in this release of Enterprise Objects Framework:

Reference: 65165

Issue: install_database doesn't work: Sybase: Can't find type `decimal'.

Description: The install_database script in the EnterpriseObjects/DatabaseSetUp directory doesn't work for Sybase 4.9 servers.

When the models in the examples directory were converted to Sybase, the server version wasn't taken into account. Some of the attributes were converted to Âªdecimal Âº data type and the Sybase 4.x server doesn't know about these.

Workaround: Use EOModeler to find and change all the external types from decimal to float in each of the models in your examples directory.

Reference: 68231

Issue: make all in the Enterprise Objects Framework examples fails sometimes.

Description: The Enterprise Objects Framework examples will fail to make if ${NEXT_ROOT}/LocalDeveloper is present on your system and you don't have write access to it. The makefile tries to install the BusinessLogic framework in the /LocalDeveloper/Frameworks directory.

Workaround: Execute make as root or ask your system administrator to create a /LocalDeveloper/Frameworks directory and make it writable by you. Alternatively, use ProjectBuilder to change the install directories for BusinessLogic and EOExtensions to a location that's writable by you, then change all the projects that depend on BusinessLogic or EOExtensions to look in the new location.

Reference: 70557

Issue: The Customer.app example doesn't propagate changes to CreditCard objects.

Description: The relationship between CreditCard and Member is not modeled correctly in the examples. CreditCard's primary key is composed of its cardNumber and cardType attributes. In the Customer application, you can modify the cardNumber and cardType of a Member's CreditCard, but these changes aren't propagated to the objects to which the CreditCard is related. That is, after saving the changes to the database, the CreditCard's cardNumber and cardType are updated, but foreign keys in the MEMBER table still have the old values.

CreditCard should have a separate primary key identifier, such as cardID, on which the CreditCard-Member relationships are based. This approach would keep CreditCards and Members in sync, and it would also be a more efficient implementation.

Workaround: None.

Reference: 72246

Issue: The ODBC adaptor source code provided as an example is only available on OpenStep for Windows NT.

Description: The source code for the ODBC adaptor is available on Windows NT as an example. It is not, however, included on Mach or PDO.

Workaround: Copy the source code from an NT machine.

Note: If you just want the ODBC adaptor to see an example of a concrete adaptor, you can look at the FlatFile adaptor that's included in all releases.

Reference: 76020

Issue: In the Studios.app, buying the movies associated with a Talent doesn't update the Movies' Studios.

Description: The Studio class's buyAllMoviesStarring: method doesn't take advantage of Enterprise Objects Framework's EOKeyRelationshipManipulation methods. Instead, it simply invokes [self addToMovies:...].

Workaround: Change Studio.m's buyAllMoviesStarring: implementation to the following:

```
- (void)buyAllMoviesStarring:(Talent *)talent

{

   NSEnumerator *movieEnumerator = [[talent moviesStarredIn] objectEnumerator];

   id movie;

   while ( (movie = [movieEnumerator nextObject]))

       [self addObject:movie toBothSidesOfRelationshipWithKey:@"movies"];

}
```

Reference: 69419

Issue: Example data for Movie and Rental models must be installed in different databases for Sybase and Informix.

Description: When installing data for more than one model in a database, the eo_sequence_table is only properly initialized for the first model installed.

Workaround: You can either install the data for each model in a different database or change the last line in the install_database script located in the DatabaseSetUp directory of your examples directory as follows:

Change this:

```
${EOUTIL} dump ../BusinessLogic/Rentals.eomodeld -source plist database -schemaCreate -postInstall <
RentalData.plist
```

To this:

```
${EOUTIL} dump ../BusinessLogic/Rentals.eomodeld -source plist database -schemaCreate -postInstall -force <
RentalData.plist
```

When you use the -force option as a workaround, exceptions are logged because the eo_sequence_table table and eo_pk_for_table procedure already exist when you execute install_databases. You can just ignore these exceptions.

Documentation

This issue exists in the documentation included in this release of Enterprise Objects Framework:

Reference: 77170

Issue: Enterprise Objects Framework Developer's Guide sections about ordering database operations are out of date.

Description: The sections "How Do I Order Database Operations" and "Constraints for Enforcing Relational Integrity Rules" in the chapter "Answers to Common Design Questions" in the Enterprise Objects Framework Developer's Guide need to be updated to reflect a new operation ordering algorithm.

The new algorithm works as follows:

- If an entity (Movie) has a to-one relationship to a second entity (Studio) and the inverse relationship is a to-many, then the second entity (Studio) is considered the master.
- If an entity (Talent) has a to-one relationship to a second entity (TalentPhoto) and the inverse relationship is also a to-one, then the entities are peers.

Enterprise Objects Framework builds up an entity ordering based on the "master-ness" of the entities. This ordering is built up dynamically and is enhanced as your application touches more and more entities.

Before sending operations to the database, Enterprise Objects Framework orders the operations based on the entity ordering. For inserts, Enterprise Objects Framework orders master entities first; whereas for deletes, Enterprise Objects Framework orders master entities last. Order on updates doesn't generally matter, Enterprise Objects Framework orders masters first.

This new algorithm should reduce the number of scenarios in which you have to reorder operations. However, if your database has sophisticated referential integrity, if it uses triggers, or there are referential integrity constraints that are not modeled as EORelationships, you may still need to reorder adaptor operations programmatically.

Enterprise Objects Framework Defaults

This section lists the user defaults for which Enterprise Objects Framework checks and changes its behavior.

Defaults in the NSGlobalDomain

To change these defaults, issue a command such as the following from a shell:

defaults write NSGlobalDomain EOAdaptorUseBindVariables NO

EOFDebugEditingContext

Default is NO.

EOControl Layer will log every time an object is changed.

EOFDebugUndo

Default is NO.

Logs each time something is pushed on or popped off an undo list.

Also logs in [_EOUndoStack dealloc].

EOAdaptorDebugEnabled

Default is NO.

Logs for connection attempts, all transaction activity (begin, rollback, commit), and SQL statements (select, update, etc.).

EOProjectSourceSearchPath

An optional array of paths in which EOAccess searches for framework project directories that contain models.

EOAdaptorUseBindVariables

Default is YES.

Controls whether or not the SQL generation process will use bind variables (for Oracle

and Informix).

EOOracleTableNamesSQL

SQL statement used to identify tables for the model reverse-engineering process.

Default is:

SELECT TABLE_NAME FROM USER_TABLES ORDER BY TABLE_NAME')

If you would like the model reverse-engineering to look at a different set of the tables, you can provide your own SQL statement, for example:

SELECT TABLE_NAME FROM USER_TABLES ORDER BY TABLE_NAME

WHERE TABLE_NAME not in ('MY_USELESS', 'FOO')

EOOracleUseNoWaitLocks

Default is NO.

Controls whether Oracle uses NOWAIT locks.

EOSybaseInterfacesFile

Default is unset.

If the default is set, the SybaseAdaptor initializes the client library to run with this interface the specified interfaces file. This default is not applicable on Windows NT.

EOSybaseTableNamesSQL

This default can be used to change the default SQL used to determine the tables that are analyzed in creating a new model.

Default is

select name from sysobjects where type = 'U' or type = 'V'

EOSybaseAttributeSQL

SQL statement used to get the attribute information for a given table.

Default is

select a.name attr_name, b.type attr_type, b.name type_name, b.allownulls allownulls, c.type primary_key, a.length width, a.prec prec, a.scale scale from syscolumns a, systypes b, syskeys c where a.id = object_id('%@') and a.id *= c.id and (a.colid *= c.key1 or a.colid *= c.key2 or a.colid *= c.key3 or a.colid *= c.key4) and (c.type = 1 or c.type is null) and a.usertype = b.usertype and datalength(a.name) > 0 order by a.name

EOSybaseRelationshipSQL

Default is

select a.keycnt, b.name tname, c.name cname, d.name dtname, e.name dcname from syskeys a, sysobjects b, syscolumns c, sysobjects d, syscolumns e where (b.type = 'U' or b.type = 'V') and a.depid is not null and a.depid > 0 and b.id = a.id and b.id = c.id and ((c.colid = a.key1 and e.colid = a.depkey1) or (c.colid = a.key2 and e.colid = a.depkey2) or (c.colid = a.key3 and e.colid = a.depkey3) or (c.colid = a.key4 and e.colid = a.depkey4)) and d.id = a.depid and d.id = e.id order by b.name, d.name

EOSybaseStoreProcedureSQL

Default is

select name, id from sysobjects where type = 'P'

EOSybaseStoredProcedureDetailsSQL

Default is

sp_sproc_columns %@

InformixINFORMIXSERVER

No default value.

The name of the Informix server.

InformixInformixTableNamesSQL

This default can be used to change the default SQL used to determine the tables that will be analyzed in creating a new model.

Default is

select tabname, owner, tabid from informix.systables where (tabid > 99) and (tabname <> 'ANSI') order by tabname

Defaults in the EOModeler Domain

To change these defaults, issue a command such as the following from a shell:

```
defaults write EOModeler DisableInheritenceCheck YES
```

BundlesToLoad

If you write extensions to EOModeler, you can get EOModeler to load them by setting this default. This default is an array, so remember to include parentheses when you set it. For example:

defaults write EOModeler BundlesToLoad "(/LocalDeveloper/ModelerBundles/MyModelerBundle.bundle, $HOME/eoexamples/ModelerBundle/ModelerBundle.bundle) "

RECORD_FETCH_LIMIT

Default is 100.

For the Data Browser in EOModeler. This controls how many rows to fetch before asking users if they want to fetch all, fetch another n rows, or just stop now.

Consistency Checks

All of the following defaults have the default NO:

DisableConsistencyCheckOnSave

DisableExternalNameCheck

DisableInheritenceCheck

DisablePrimaryKeyCheck

DisableRelationshipCheck

DisableStoredProcedureCheck

SkipBeautifyNamesOnModelCreation

Default is NO.

Setting this default to YES will cause EOModeler to leave the entity names and attribute names matching the exact names of their corresponding database objects (including the case).

DisableAdvancedOptions

Default is NO.

If set to YES, the EOModeler runs in "Simplified mode". The advanced inspectors don't

appear, the choices of table view columns is limited, and so on.

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Published Date: Feb 20, 2012

WebObjects compatibility guide

This article has been archived and is no longer updated by Apple.

The tables below list which operating systems, Web servers, databases, and other third-party software have been tested for compatibility with WebObjects. All databases in the tables below have been qualified unless otherwise noted. A database listed as "unqualified" has been previously qualified and has a JDBC plugin, but is not tested as regularly as a qualified database. An effort will be made to resolve compatibility issues with a supported database whether qualified or unqualified.

Note: For minor "dot release" versions (such as 5.2.1) please refer to the Release Notes provided with the update.

WebObjects 5.4

Operating Systems
Mac OS X 10.5 Leopard (Developer only)
Mac OS X Server version 10.5 (Deployment only)
Java
SDK 1.5
Web Servers
Tomcat 6.0
Apache 2.2
Apache 1.3
Databases supported, qualified
FrontBase 4.7
Derby 10.2.2.0
MySQL 5 (Mac OS X Server version 10.5)
OpenBase 10
Oracle 10g Enterprise Edition
Oracle 9i Enterprise Edition, Oracle Thin JDBC Driver 10.1.0.2.0
Databases supported, unqualified
Microsoft SQL Server
Sybase Adaptive Server Enterprise

WebObjects 5.3

Operating Systems
Mac OS X 10.4.1 with Xcode 2.1 (Developer only)
Mac OS X Server 10.4.1 (Deployment only)
Java
SDK 1.4.2
Web Servers
Apache 1.3.33
Databases
Microsoft SQL Server 2000 Standard Edition 8.00.194
MySQL 4.1.10a
OpenBase 8.0
Oracle 10g Enterprise Edition
Oracle 9i Enterprise Edition, Oracle Thin JDBC Driver 10.1.0.2.0
Sybase Adaptive Server Enterprise 12.5, Sybase jConnect JDBC Driver 5.5 (build 25137)

WebObjects 5.2

Operating Systems
Mac OS X 10.2.2 with July 2002 or December 2002 Developer Tools (Developer only)
Mac OS X Server 10.2.2 (Deployment only)

Windows 2000 Professional SP3 (Developer only)
Windows 2000 Server SP3 (Deployment only)

Solaris 8 (Deployment only)

Java

SDK 1.3.1

Web Servers

Apache 1.3.9 (shipped with Solaris 8.0) and 1.3.27 (shipped with Mac OS X 10.2)
Sun ONE Web Server 6.0 SP2
Microsoft Internet Information Server 5.0

Databases

Microsoft SQL Server 2000 Standard Edition 8.00.194 (Intel X86), driver 2.2.0022
MySQL 3.23.51 (shipped with Mac OS X Server 10.2), driver MySQLConnector/J 2 2.0.14
OpenBase 7.0.8 (shipped with WebObjects 5.2 Developer), OpenBase JDBC Driver 1.11
Oracle 8i Enterprise Edition 8.1.7.0.0 (Production), Oracle JDBC driver 8.1.7.0.0
Oracle 9i Enterprise Edition 9.2.0.1.0 (Developer), Oracle JDBC driver 9.2.0.1.0
Sybase Adaptive Server Enterprise 12.5.0.2 (Early Adaptor), jConnect JDBC driver 5.5 (Build 25137)

LDAP Servers

Sun ONE Directory Server 5.0
OpenLDAP 2.0.25

Third-Party Application Servers

Apache Tomcat 3.2.4 and 4.0.5
BEA WebLogic 7.0
IBM WebSphere 4.0.4
JBoss 3.2.3 (starting with 5.2.3)
Tomcat 4.1.29 (starting with 5.2.3)

WebObjects 5.1

Operating Systems

Mac OS X 10.1.1 with Mac OS X 10.1 December 2001 Developer Tools
Mac OS X 10.1.3 (starting with 5.1.1)
Mac OS X 10.1.4 (starting with 5.1.2)
Mac OS X 10.2 (starting with 5.1.4)
Windows 2000 Professional SP2
Solaris 2.8 (Deployment only)

Java

SDK 1.3.1

Web Servers

Netscape iPlanet Web Server, Enterprise Edition 6.0 SP1
Apache 1.3.9 (shipped with SunOS 8.0)
Apache 1.3.20 (shipped with Mac OS X 10.1 and Mac OS X Server 10.1)
IIS 5.0

Databases

Oracle 8.1.7
SQL Server 2000 Standard Edition, with beta Merant and Microsoft drivers
MySQL 3.23.42 with 2.0.6 driver (shipped with Mac OS X Server 10.1)

LDAP Servers

Netscape iPlanet Directory Service 5.0
OpenLDAP 2.0.15

Third-Party Application Servers

WebLogic 6.1 patch 1
Tomcat 3.2.3 (shipped with Mac OS X Server 10.1; version 4.0.1 used for PetStore example)

WebObjects 5

Operating Systems

Mac OS X 10.0.x
Mac OS X 10.1 (starting with 5.0 Update 3)
Windows 2000 Professional SP1
Solaris 2.8 (Deployment only)

Java
SDK 1.3
Web Servers
Netscape Enterprise Server 4.0 (Solaris)
iPlanet WebServer 4.1 (Windows 2000)
IIS 5.0
Databases
Oracle8i (via JDBC)
OpenBase 6.5 (via JDBC)

WebObjects 4.5.1

Operating Systems
Windows NT 4.0 with Service Pack 4 or 5
Windows 2000 Professional
HP-UX 11 (Deployment only)
Solaris 2.6 and 2.7 (Deployment only)
Mac OS X Server 1.2
Mac OS X Server 1.0 (no Java support, Objective C only)
Mac OS X Server 10.1 (starting with 4.5.1 Update 3)
Web Servers
Netscape Enterprise Server 4.0

WebObjects 4.5

Operating Systems
Windows NT 4.0 with Service Pack 4 or 5
HP-UX 11
Solaris 2.6 and 2.7
Mac OS X Server 1.2
Web Servers
Netscape Enterprise Server 3.6 and 4
IIS 4.0
Apache 1.3.6 (Solaris and HP-UX)
Apache 1.3.9 (Mac OS X Server 1.2)
Databases
Oracle 8.0.3
Sybase 11.0.2
Informix 7.11.UC1
Microsoft SQL Server 7.0
MS-Access 98, driver 4.00.4202.00
OpenBase Lite

WebObjects 4.0.1

Operating Systems
Windows NT 4.0 with SP3 or SP4
HP-UX 10.20
Solaris 2.6 and 2.7
Mac OS X Server 1.0 (starting with 4.0.1 update 2) and 1.2 (starting with 4.0.1 update 3)

WebObjects 4.0

Operating Systems
Windows NT 4.0 with Service Pack 3 or 4

HP-UX 10.20
Solaris 2.5.1 and 2.6
Web Servers
Netscape Enterprise Server 3.5.1 (HP-UX, Solaris)
Netscape Fastrack Server 3.01 (Windows NT)
IIS 3.0 and 4.0b3 (2.0 is no longer supported)
PWS 2.0
Apache 1.3.2 (HP-UX and Solaris)

WebObjects 3.5.1

Operating Systems
Windows NT 4.0
HP-UX 10.20
Solaris 2.5.1 and 2.6
OpenStep for Mach 4.2
Web Servers
IIS 2.0, 3.0 and 4.0b
PWS 2.0

WebObjects 3.1

Operating Systems
Windows NT 3.51 and 4.0
Windows 4.0
HP-UX 10.10
Solaris 2.5, 2.5.1, and 2.6
OpenStep for Mach 4.1
Web Servers
IIS 1.0 and 2.0
PWS 2.0

WebObjects 3.0

Operating Systems
Windows NT 3.51 and 4.0
Windows 4.0
HP-UX 10.10
Solaris 2.5, 2.5.1, and 2.6
OpenStep for Mach 4.0
Web Servers
IIS 1.0 and 2.0
PWS 2.0

WebObjects 2.0

Operating Systems
Windows NT 3.51
Windows NT 4.0b2
HP-UX 9.03 and 10.10
Solaris 2.4 and 2.5
NeXTSTEP 3.3
Web Servers
IIS 1.0

TA26741_WebObjects_compatibility_guide.pdf

WebObjects 1.0

Operating Systems
NextStep 3.3
Windows NT
HP-UX 9.03 and 10.10
Solaris

Notes:

- Windows NT support is for Workstation and Server, on Intel hardware only.
- NeXTSTEP/OPENSTEP support is for Intel and Motorola 68000 family hardware only.
- Solaris support is for Sun (SPARC) hardware only.
- Windows 95 and Windows 98 are not supported for development or deployment.
- For information on Windows 2000 support, see WebObjects: WebObjects and Windows 2000.
- Listings for older WebObjects versions may be incomplete.

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Published Date: Feb 20, 2012

Porting WebObjects Applications to Unix Deployment Platforms

This article highlights some common problems encountered moving your WebObjects 3.51 or WebObjects 4 applications from Windows NT or Mac OS X Server to HP-UX or Solaris.
This article has been archived and is no longer updated by Apple.
Note: Any reference in this article to Mac OS X Server pertains to versions 1.x, which were released prior to May 2001.

Q: How do I deploy my application, developed on Windows NT or Mac OS X Server, on a Solaris or HP-UX system?

A: For most applications, all you have to do is install WebObjects on the appropriate platform and compile the application using the "make" utility. Be sure that the developer components are included in your WebObjects installation.

Q: I have an EOF WebObjects application that compiles and runs correctly on Windows NT or Mac OS X Server. I've ported it to HP-UX and it compiles correctly, but when I run it I get a bus error and a core dump. What's happening here?

A: If your application fetches many records at once, or fetches a number of very large objects, you may be running up against HP-UX's default per-process memory limits. Use the "limit" command to check your datasize and stacksize; it is possible for large EOF fetches to fill up the memory allocated for data. For more information on modifying HP-UX kernel parameters, see your HP-UX system administrator or check your HP-UX documentation.

Q: I have an application that compiles and runs correctly on Windows NT. I've ported it to Solaris and it compiles correctly, but when I run it I get the error message:

"Cannot find class or component named <MyCustomScriptedComponent> in runtime or in a loadable bundle."

Why does this error occur on one platform but not the other?

A: Carefully check the capitalization of your component when it is defined and called. This problem can occur when porting a WebObjects or OPENSTEP application from Solaris to Windows NT as a side effect of the fact that Solaris is case sensitive, while Windows NT is not. Thus, if a component called "MySuperGreatObject" is called in your application as "MySupergreatObject", it will compile and run correctly on Windows NT. On Solaris, however, you will get a run-time error. Since Mach and HP-UX are also case-sensitive, improper capitalization may cause run-time or link-time errors on those platforms as well.

Q: Why won't NSTasks run under Solaris?

A: On Solaris, the **fork()** command is used only in non-threaded contexts; **fork1()** is used for multithreaded applications. Because Apple's implementation of NSTask in WebObjects release 3.5.1 does not conform to this usage, you will not be able to use NSTasks on the Solaris platform. Instead, you will have to use **fork1()** and **exec()** to manually spawn a process.

This code example shows how an external task might be set up to run with **fork** and **exec** for Solaris and HP-UX systems, and with NSTask for other WebObjects platforms.

```
- (oneway void)startAppWithInstanceDict:(NSMutableDictionary*)instanceDict {
// if solaris or hpux--make sure the NeXT_PDO and _svr4_ variables are defined
#if ((NeXT_PDO && (__svr4__ || hpux)) || __hpux)
{
//Use fork and exec to launch a task manually for Solaris (and HP-UX) systems.
// we need to build a command string that will look like:
// DocumentPath/exec -a WODefaultAdaptor -n instanceNumber -p portNumber -d DocumentPath
// executable path ...
int····pid;
int·····execReturnValue;
NSString * cmdString;
NSEnumerator *stringEnum;
NSString *aString;
char *cpath, **argvp;
int nargs, n;
int maxfds = getdtablesize();

NSLog(@"Executing non-Mach or non-NT code");

//Determine whether we should use fork() (for HP-UX systems) or fork1() (for Solaris)

#if (hpux || __hpux)
switch ( pid = fork() )
#else
switch ( pid = fork1() )
#endif
{
case 0:
NSLog(@"Enter child process fork(), maxfds = %d", maxfds);

// for ( n = 3; n < maxfds; n++)
{
//···· NSLog(@"Closing descriptor %d, retval = %d", n, close(n));
//···· close(n);
}
```

```
cpath = [fullExePath fileSystemRepresentation];
nargs = [cmdArray count];
argvp = NSZoneMalloc(NULL, (2 + nargs) * sizeof (*argvp));
argvp[0] = (char *)cpath;
for (n=0; n < nargs; ++n)
{
argvp[n+1] = (char *)[[cmdArray objectAtIndex:n] cString];
}
argvp[n+1] = (char *)0;

chdir([currentDir fileSystemRepresentation]);

execReturnValue = execv(cpath, argvp);
NSLog(@"Exec return value is %d", execReturnValue);
exit(127);
break;

case -1:
NSLog(@"*** Error: fork() returned an Error");
break;

default:
NSLog(@"returning to parent process");
// do nothing ...
}
}
#else
{

//Use NSTask to launch the same task on other platforms

aTask = [[[NSTask alloc] init] autorelease];
[aTask setCurrentDirectoryPath:currentDir];
[aTask setLaunchPath:fullExePath];
[aTask setArguments:cmdArray];
[aTask launch];
}
#endif
}
```

Q: My custom EOF subclasses work fine on Windows NT, but when I compile on Solaris I get run-time failures.

A: When writing a subclass of CustomObject under WebObjects 3.5.1, you should be sure that your class defines a constructor that takes the following three arguments:

```
EditingContext ec, ClassDescription cd, GlobalID id
```

If this constructor is missing, the application will still run on Windows NT, but will fail on Solaris systems with the WebObjects Java patch installed. The easiest way to implement this method is simply to call the superclass:

```
public MyCustomEOClass (EditingContext ec, ClassDescription cd,
GlobalID id) {
super (ec,cd,id);
}
```

To save time, you can modify the 3.5.1 EOModeler Java templates to always create this constructor. The templates you'll need to change can be found under:

```
$NEXT_ROOT/Developer/Applications/EOModeler.app/Resources/EOJavaClass.template
$NEXT_ROOT/Developer/ProjectTypes/WebObjectsApplication.projectType/Resources/English.lproj/projectTemplate/EOJavaClass.template
```

And optionally:

```
$NEXT_ROOT/Developer/ProjectTypes/EOApplication.projectTypes/Resources/EOJavaClass.template
```

Under WebObjects 4, the templates have been modified to correct this problem, but you may still encounter it while porting WebObjects 3.5.1 code to WebObjects 4.

Q: When I run my app under Solaris, I get the error message:

```
Program received signal SIGLWP, signal LWP.
```

What is causing this and how can I fix it?

A: These error messages are normal when running WebObjects apps on Solaris under GDB. They will not affect program execution, and they will only occur when running your application under GDB.

Published Date: Feb 20, 2012

Troubleshooting Windows NT WebObjects 3.5.1 Installations

This document covers some of the most common problems encountered while installing WebObjects 3.5.1 on Windows NT 4.0.
This article has been archived and is no longer updated by Apple.

Introduction

You can be confident that your WebObjects installation is correctly installed if:

+ You can run the install program without errors
+ You can successfully launch WebObjects Builder (Developer installations only)
+ You can run the scripted HelloWorld example that ships with WebObjects

Before you try any of these steps, please be sure you've read the post-installation instructions that are installed as part of WebObjects 3.5.1's online documentation. Certain web servers require special installation steps before they will run WebObjects applications correctly.

Before you install

If your Windows NT system has had a previous version of WebObjects or a previous installation of WebObjects 3.5.1 on it, WebObjects may not install correctly. Before installing WebObjeccts 3.5.1, follow the instructions in **TIL article 72556** to completely remove the old WebObjects installation.

Problems installing WebObjects

There are a few common snags you should check for if you have a problem while running the WebObjects installer:

+ Check your Windows NT path variable; a space in your pathname can cause the installer to hang or exit
+ Be sure you're installing the software as the local machine administrator
+ Be sure you're using a developer license string to install developer software, and a deployment license string for deployment-only installations
+ Disable any unusual services you have running. Some services, such as Seagate Crystalinfo Sentinel, can prevent the WebObjects install from completing successfully.

Problems launching WebObjects Builder

The default installation will add WebObjects Builder, as well as a few other applications and documents, to your Windows NT start menu. Under some circumstances, the software will be installed correctly, but the appropriate Start Menu shortcuts will not be created. If this is the case, simply add WebObjectsBuilder, ProjectBuilder, EOModeler, and any other files you want to your Start menu manually. The WOBuilder executable is located under your WebObjects root directory (the default root directory is \\NeXT) at the path NeXTDeveloper\\Apps\\WebObjectsBuilder.app\\WebObjectsBuilder.exe. You may want to check the on-line Post-Install Instructions that were installed with WebObjects to make sure all of the WebObjects files are in the correct place.

If WebObjects Builder hangs or generates an error message when you try to launch it, you may have an incomplete WebObjects installation. You may be able to fix the problem without completely reinstalling WebObjects. First, see if the WebObjects services are running:

+ From the Start menu, select Settings, then Control Panel
+ In the Windows NT control panel, double-click on Services

Look through the list of services. You should see two services called **"NeXT Mach Daemon"** and **"NeXT Netname Server"**. Both should have a Startup value of "Automatic." If either of these services is not present or is not starting automatically, you can try removing and reinstalling the individual services:

+ From a Windows NT command line, change to the NextLibrary\\System directory under your system's NeXT_ROOT directory
+ To remove and reinstall the NeXT Netname Server, type "nmserver -remove" and press return; then type "nmserver -install" and press return
+ To remove and reinstall the NeXT Mach Daemon, type "machd -remove" and press return; then type "machd -install" and press return

If these services are both present and running, check WebObjects' two required background processes:

+ Right-click on the Windows NT menu bar and select "Task Manager" from the menu that appears
+ Click on the "Processes" tab in the Task Manager window

You should see two WebObjects background apps running, **WindowServer.exe** and **pbs.exe**. These two programs should start up automatically when you start your computer. If they do not start up automatically, either start them manually or add them to your Startup program group. WindowServer.exe can be found under the NeXT_ROOT directory at NextLibrary\\System. pbs.exe can be found under the NeXT_ROOT directory at NextLibrary\\Frameworks\\AppKit.framework\\Resources.

Problems running the HelloWorld example

The easiest way to launch the HelloWorld example is to use one of the links from the Examples section of the documentation that is installed with WebObjects. There are three types of error messages you could get while running a WebObjects application.

A **browser** error message indicates that your browser can not communicate with your web server. Normally these messages will appear in their own panel and not in a browser window. These messages normally indicate a problem with your web server configuration. To test your web server setup, try pointing your browser at `http://localhost` or the address of your server machine's home page. Until you can communicate with your web server, you won't be able to communicate with WebObjects. Please contact your web server vendor for help with these problems.

A **server** error message usually indicates that the page you requested couldn't be found on the server or that you don't have permission to access it. It will often have a number along with the error message; for example, "404 not found" or "403 access forbidden". In the case of WebObjects, this means that the server couldn't find the WebObjects adaptor; that is, there is a problem with the path you've entered before the "/WebObjects/" or "/WebObjects.exe/" section. There are a few possible causes for this:

+ Your WebObjects adaptor was not installed. Follow the post-install instructions that installed with WebObjects to make sure that all of WebObjects' components were installed properly.
+ The cgi-bin directory you gave during the installation process was not your server's correct cgi-bin address. Copy the WebObjects and WebObjects.exe files to your server's correct cgi-bin directory.

If neither of these solutions seems to apply, try running another script (an example that came with your web server, for instance) from the cgi-bin directory. Unless you can run scripts in general from that directory, you won't be able to access WebObjects. Please contact your web server vendor for help setting up your web server to run cgi scripts.

There are only a few **WebObjects** error messages you are likely to encounter. "Could not find the application specified in the URL" is the most common; in this case, your server is pointing at the WebObjects adaptor correctly, but the application you specified did not exist. There are a few possible causes for this:

+ The application you're trying to run does not exist, possibly because the WebObjects examples were not installed. Follow the online post-install instructions that installed with WebObjects to make sure that all of WebObjects' components were installed properly.
+ The document root you gave during the installation process was not your server's correct document root. Copy the WebObjects directory to your server's correct document root.

Other WebObjects resources

For more detailed troubleshooting information, please see the online post-install documentation that is installed with WebObjects. To view the online documentation, just choose "**WOHomePage**" from your Windows NT Start menu.
Published Date: Feb 20, 2012

Apple System Profiler: Identifies Video Card as ATY Instead of ATI

When Apple System Profiler (ASP) is run on any Macintosh with an ATI video card installed, the vendor of the card will be identified as ATY rather than ATI and the card name may not be identical to the product name.
This article has been archived and is no longer updated by Apple.
Apple System Profiler is properly displaying the information located in the ROM (Read Only Memory) on the ATI card, or ATI video chipset itself. This is because ATI chose to identify themselves as ATY in the ROM. It is not an issue with ASP nor does it indicate a different vendor.

You will notice this discrepancy after performing the following steps:

1. Run Apple System Profiler 2.1.x or later.
2. Click the Devices and Volumes tab.
3. Click the PCI tab.

The picture below illustrates how the ATI RAGE 128 Pro chipset, used in some Power Macintosh G3 and G4 computers, appears in the ASP Devices and Volumes tab under Mac OS X. The card name and model will vary depending upon what card or chipset is installed. See below for some examples.

ASP Devices and Volumes tab under Mac OS X

Apple System Profiler Identifiers	Display Card Name and Apple System Profiler Data		
	RAGE 128 Pro	**Radeon 7500**	**Radeon 8500**
Card type:	display	ATY,DDParent	ATY,DDParent
Card name:	ATY,Rage128Pd	ATY,BlueStoneParent	ATY,R200Parent
Card model:	ATY,Rage128Pro	ATY,RV200	ATY,R200
Card ROM #:	113-72701-125	113-91701-222	113-85710-123
Card revision:	0	0	0
Card vendor ID:	1002	1002	1002

Table 1 Examples ASP data of some recent display cards

ATI video cards were used in a number of products, including, but not limited to:

- Power Mac G4 - all models
- Power Mac G4 Cube
- iMac - all models
- iBook - all models
- PowerBook G3 - all models
- PowerBook G4
- Power Macintosh G3 (Blue and White)
- Power Macintosh G3

Note: In some models, an alternate video card could be substituted for the ATI card.

Published Date: Feb 20, 2012

MacBinary: File Format Description

This article contains a brief description of the MacBinary file format. A detailed description and technical information is available from Apple's Developer Web Site.
This article has been archived and is no longer updated by Apple.

Overview

Because of the way the Macintosh file system keeps track of files, there was a need to provide this tracking information when transmitting files through a modem. A committee was established, which developed the original MacBinary and later the MacBinary II and MacBinary III format. These formats remain functionally identical, though the MacBinary II format added additional information to maintain the integrity of the file system information and the MacBinary III format added support for extended Finder information introduced in Mac OS 8.

Macintosh Files

Every Macintosh file (through Mac OS 9) contains two parts: a resource fork, which contains data used by an application, such as menus, fonts, and icons; and a data fork, which contains data specific to an application. Additionally, information about the file such as the file type, creator code, Get Info comments, creation date, and modification date are stored by the file system.

Originally, telecommunication programs only sent one part of a Macintosh file (the data fork). This meant that when a binary file was transferred from a Macintosh it lost its icon, and Type & Creator information. Since this information is important to the Macintosh file system, MacBinary was developed.

MacBinary

MacBinary is not a transfer protocol like Xmodem, Kermit, or Zmodem. Instead, it is used in conjunction with a transfer protocol, although it is independent of that protocol. MacBinary can be used when binary files are placed on an FTP server or emailed through the Internet. It allows the various parts of a Macintosh file to be combined into a single chunk of data which can be sent anywhere and downloaded to any kind of computer, and then be reconstructed into the original Macintosh file at the end of its journey.

MacBinary consists of 128 bytes, which are added to beginning of the file. Most Macintosh telecommunication and Internet programs automatically use MacBinary when a binary file is sent. Most applications also allow you to turn off MacBinary. If you are sending a binary file such as a TIFF or JPEG file to someone who uses a Windows computer, you must turn off MacBinary. If you do not turn off MacBinary, the additional 128 bytes at the beginning of the file will corrupt the file. There are ways of removing the MacBinary information, but most of these are designed for Macintosh. At one time there were a couple of MS-DOS terminal programs that automatically detected MacBinary files and stripped off the first 128 bytes of the file.

MacBinary versus BinHex and UUencode

MacBinary, unlike BinHex or UUencode, does not convert the data into a text representation of the binary data. The following articles provide additional information on UUencode and BinHex:

Online Archive Article 18499: "**What Is Binhex & Where To Obtain It**"
Article 18758: "**UUencode & UUdecode: Explained**"

These articles can help you decide the best way to send your files through email systems. If you are placing binary files such as applications, compressed binary files (StuffIt, Compactor), or other Macintosh specific binary files on a remote file server or FTP site here is a chart that can help you determine if you need to use MacBinary or not.

Primary users	MacBinary	Examples
Macintosh	Yes	Applications, Control Panels
MS-DOS/Windows	No	GIF, TIFF, QuickTime, MIDI files
Mixture	No	GIF, TIFF, QuickTime, MIDI files

Published Date: Feb 20, 2012

QuickTime Streaming Server 2.0: Streaming Live Audio or Video

This article describes how to stream live audio or video using QuickTime Streaming Server 2.0.

Notes:

1. All information in this article comes from the help file distributed with QuickTime Streaming Server 2.0. The help file includes additional help topics which are not covered in the Knowledge Base.

2. Any reference in this article to Mac OS X Server pertains to version 1.2, which was released prior to May 2001.

This article has been archived and is no longer updated by Apple.

Streaming Live Audio or Video

You need the following equipment to stream live audio or video:

- Recording equipment for audio, video, or both.
- A computer that has broadcast software and a video or audio capture card installed. You use this computer to capture and encode live audio or video and then broadcast it to your streaming server.
- A Mac OS X Server computer that has QuickTime Streaming Server software installed. You use this computer to send the captured media to your viewers. The streaming server must be connected to the capture and encode computer over an IP network.

Sample Setup for Live Video

The illustration shows a setup for streaming live video and audio. (Most video cameras have a built-in microphone.) You can stream audio only using a microphone, mixer, and other appropriate audio equipment.

A Mac OS computer captures and encodes video and audio. The encoded signal is sent to a QuickTime Streaming Server over an IP network.

A Mac OS X Server with QuickTime Streaming Server sends the signal to client computers who tune in with QuickTime Player.

Figure 1 Live video and audio streaming setup.

Streaming Live Media

To stream live audio or video:

1. Set up your broadcast software following the instructions that came with it.

2. Connect the audio or video equipment to the computer you're using to capture and encode the signal.

3. Use your broadcast software to create a Session Description Protocol (SDP) file on the computer you use to capture and encode the live signal.
See the instructions that came with your broadcast software.

4. Copy the SDP file to your QuickTime Streaming Server computer.
Be sure to copy the file into the media folder you're using for streaming.

5. If you want the streamed media to show on a Web page, set up the Web page.

6. Make sure streaming services are started.

7. Start the capture software by following the instructions that came with the broadcast software.

8. Tell users how to view the streamed media.

IF USERS CAN'T SEE THE LIVE STREAMED MEDIA:

- Make sure you are capturing a signal from the audio or video equipment into the computer you're using for capture and encoding.
- Make sure the SDP file is located in the media folder you set up on your streaming server.

For more information on streaming live media, see these Web sites:

QuickTime Web site: http://www.apple.com/quicktime/

Sorenson Broadcaster Web site: http://www.sorenson.com/

Published Date: Feb 20, 2012

QuickTime Streaming Server 2.0: How to Broadcast Prerecorded Audio or Video

This document describes how to broadcast prerecorded audio or video using QuickTime Streaming Server 2.0.

Notes

1. The information in this document was taken from the help file distributed with QuickTime Streaming Server 2.0. The help file includes additional help topics that are not covered in the Knowledge Base.

2. This document discusses software for use only with Mac OS X Server version 1.2, released prior to 2001-05.

This article has been archived and is no longer updated by Apple.

Broadcasting Prerecorded Audio or Video

With PlaylistBroadcaster you can create a virtual "radio station" or video broadcast by setting prerecorded QuickTime media files to play in a specified order (a "playlist"). PlaylistBroadcaster broadcasts the media to the QuickTime Streaming Server, which sends the media to viewers in the sequence you set up (random or ordered). Although the media is prerecorded, it appears to viewers as a live broadcast. All viewers see the same media being played when they tune in to the broadcast.

To broadcast media, you need to do the following:

- Prepare QuickTime media and a reference movie file.
- Create a playlist.
- Create a broadcast description file.
- Start broadcast service.
- Tell users how to connect to the broadcast.

Published Date: Feb 20, 2012

QuickTime Streaming Server 2.0: Setting Up Authentication

This article describes how to setup authentication using QuickTime Streaming Server 2.0.

Notes:

1. All information in this article comes from the help file distributed with QuickTime Streaming Server 2.0. The help file includes additional help topics which are not covered in the Knowledge Base.

2. Any reference in this article to Mac OS X Server pertains to version 1.2, which was released prior to May 2001.

This article has been archived and is no longer updated by Apple.

Setting Up Authentication

QuickTime Streaming Server comes with two authentication modules you can use to control access to streamed media files.

- **QTSSAccessModule**
  This module lets you set up access to QuickTime streaming services, but not to any other services on your Mac OS X Server.
- **QTSSFilePrivsModule**
  This module lets you set up access to QuickTime streaming services using Mac OS X Server's built-in file access and user and groups database.

Users must have QuickTime Player 4.1 or later to access a media file for which authentication is enabled. The user must enter his or her user name and password to view the media file. Users who try to access a media file with an earlier version of QuickTime installed will see an error message: "`401: Unauthorized.`"

Note: Authentication modules control access to media streamed from your server. It does not control access to media you relay. Access to media streamed from a relay server must be set up by the administrator of the relay server.

Enabling or Disabling an Authentication Module

To enable an authentication module, copy it to the QuickTime Streaming Server modules directory, which is located at `/usr/sbin/QTSSModules`.

To disable an authentication module, remove it from the modules directory, and copy it to another directory, such as the `/usr/sbin/QTSSModules(Disabled)` directory.

When you install QuickTime Streaming Server, QTSSAccessModule is enabled, and the QTSSFilePrivsModule is disabled. If you want to enable the QTSSFilePrivsModule, move it from the `/usr/sbin/QTSSModules(Disabled)` directory to the modules directory.

Setting Up an Authentication Module

After you've enabled the module you want to use, you need to set up access.

If you are using QTSSAccessModule, set up an access file and user and group files.

If you are using QTSSFilePrivsModule, use NetworkManager to set up users and groups, then set up file access.

Published Date: Feb 20, 2012

QuickTime Streaming Server 2.0: Viewing Streamed Media From a Client Computer

This article describes how to view streamed media from a client computer when using QuickTime Streaming Server 2.0.

Notes:

1. All information in this article comes from the help file distributed with QuickTime Streaming Server 2.0. The help file includes additional help topics which are not covered in the Knowledge Base.

2. This article discusses software for use only with Mac OS X Server version 1.2, released prior to May 2001.

This article has been archived and is no longer updated by Apple.

Viewing Streamed Media From a Client Computer

Users can view media streamed from your server using software that supports QuickTime 4, such as QuickTime Player.

Viewing Streamed Media Through QuickTime Player

To view live media from any computer that has QuickTime 4 or later installed:

1. Open QuickTime Player.

2. Choose Open URL from the File menu.

3. Enter the URL for the SDP file. Do not enter the '.sdp' extension.

For example: `rtsp://www.myserver.com/mymedia`

You would replace "`www.myserver.com`" with the DNS name of your QuickTime Streaming Server computer, and "`mymedia`" with the name of your SDP file.

For more information about software that supports QuickTime streaming, see the Apple QuickTime Web site: **http://www.apple.com/quicktime**

Viewing Streamed Media Through a Web Browser

If you want users to view streamed media through a Web browser, you must set up a Web page to show streamed media. Then give the user the URL of the Web page.

If a User Cannot Connect to the Broadcast:

- Make sure the client computer has QuickTime 4 or later installed. If the user is connecting using a Web browser, be sure the QuickTime 4 Plug-in is installed correctly for the browser.
- Make sure the user has the correct URL.
- If you are trying to connect to a broadcasted playlist, make sure the broadcast description file contains the correct IP address, destination base port, and pathname for the SDP file.

If Users See Error Messages While Streaming Media:

- Error code 401 indicates unauthorized access to a protected file. The user may need to upgrade to QuickTime 4.1 or later.
- Error code 404 indicates that the server cannot locate the URL entered by a user. Make sure users have the correct URL to locate the stream.
- Error code 415 indicates the movie file is not hinted or has a compressed movie resource. You need to hint the movie again using the Pro version of QuickTime Player.
- Error code 453 indicates that the server is too busy for a user to view the stream. The user should try again later. You may want to increase the maximum connections in the Settings panel in QuickTime Streaming Admin.
- Error code 454 indicates that the connection to the server was dropped. Users must start viewing the stream again.

Published Date: Feb 20, 2012

QuickTime Streaming Server 2.0: Viewing Access and Error Logs

This article describes how to view QuickTime Streaming Server 2.0 access and error logs.

Notes:

1. All information in this article comes from the help file distributed with QuickTime Streaming Server 2.0. The help file includes additional help topics which are not covered in the Knowledge Base.

2. This article discusses software for use only with Mac OS X Server version 1.2, released prior to May 2001.

This article has been archived and is no longer updated by Apple.

Viewing access and error logs

If logging is turned on in the Settings panel in QuickTime Streaming Admin, information about access and errors is saved to log files.

To open a log:

1. Open QuickTime Streaming Admin.

2. Choose Show Access History or Show Error Log from the Server menu.

Updating and Saving Logs

Each week the current log file is renamed with the current date and a new log file is started. Old log files are saved in `/Local/Library/QuickTimeStreaming/LogArchive`.

To save the information in the current log file at any time:

1. Open the log file

2. Click Reset
The current log file is renamed with the current date and a new log file is started.

Analyzing the Access Log

The information that's stored in the access log can be analyzed using third-party software. See Access log format* for a list of information in the log.

*Editor's note: The Access log format is covered in the article titled "**QuickTime Streaming Server 2.0: Access Log Format**".

Published Date: Feb 20, 2012

Apple Studio Display LCD (DVI): Meaning of LED Colors

My Apple Studio Display with DVI has a green LED that is visible when looking from the rear of the display. What is this LED used for?
This article has been archived and is no longer updated by Apple.
There are two LEDs on the Apple Studio Display DVI. The LED visible from the rear of the display is a visual indication that the display's controller circuitry is on and functioning properly.

The status LED visible from the front of the display is a power indicator light. A solid green LED indicates that the display is powered on and ready to display an image. An amber LED indicates that the display is in the energy saving sleep mode.

Published Date: Feb 20, 2012

QuickTime Streaming Server 2.0: Access Log Format

This article describes the QuickTime Streaming Server 2.0 access log format.

Note: All information in this article comes from the help file distributed with QuickTime Streaming Server 2.0. The help file includes additional help topics which are not covered in the Knowledge Base.

This article has been archived and is no longer updated by Apple.

QuickTime Streaming Server 2.0 Access Log Format		
Field Name	**Value**	**Example Value**
c-ip	client IP address	192.100.20.35
date	date of access	11/16/99
time	time of access (HH:MM:SS)	15:30:30
c-dns	resolved dns of the client	aclient.company.com
c-url-stem	requested file	rtsp://server/sample.mov
c-starttime	start time in whole seconds	0
x-duration	duration of the session(s) in whole seconds	31
c-rate	not used at this time	
c-status	HTTP return code; 200 is success, 404 file not found	200
c-playerid	unique player ID	
c-playerversion	QuickTime streaming version	4.1
c-playerlanguage	player language (two letter country code)	EN
cs (User-Agent)	user agent	
cs (referer)	referring URL	http://www.apple.com
c-hostexe	not used at this time	
c-hostexever	not used at this time	
c-os	operating system	Mac OS 9.0
c-osversion	not used at this time	
c-cpu	type of cpu	PPC
filelength	file length(s) in whole seconds	60
filesize	file size (bytes)	86000
avgbandwidth	bytes per second	24300
protocol	rtp	rtp
transport	udp or tcp	udp
audiocodec	audio codec name	QDesign
videocodec	video codec name	Sorenson
channelURL	not used at this time	
sc-bytes	bytes sent by server to the client	30000
cs-bytes	bytes received by the client	28000
s-pkts-sent	packets sent by server	55
c-pkts-received	packets received by the client	50
c-pkts-lost-client	packets lost by the client	5
c-pkts-lost-net	packets lost at the network layer	2
c-pkts-lost-cont-net	continuous packets lost at the network layer	2
c-resendreqs	packets resent	5
c-pkts-recovered-ECC	packets resent successfully; recovered in the client layer	1

c-pkts-recovered-resent	packets recovered via udp resend	5
c-buffercount		1
c-totalbuffertime	seconds buffered	20
c-quality	quality measurement (percent)	89
s-ip	server IP address (entered by unicast server)	155.12.1.234
s-dns	server DNS address	myserver.company.com
s-totalclients	total client connections at the time of access	201
s-cpu-util	percent cpu utilization at the time of access	40
cs-uri-query	not used at this time	

Published Date: Feb 20, 2012

Macintosh Manager: Additional Online Resources

This article contains a list of additional online resources for Mac OS X Server's Macintosh Manager.
This article has been archived and is no longer updated by Apple.
Additional information on Macintosh Manager is available from the sources listed below.

- Apple's Discussion forum for Mac OS X Server and AppleShare IP (ASIP).
  http://discussions.info.apple.com
- John DeTroye's Tips and Tricks
  http://homepage.mac.com/johnd/
- The Macintosh Manager mailing list:
  http://www.lists.apple.com/mailman/listinfo/macintosh-manager

Published Date: Feb 19, 2012

Belkin Components: Support and Upgrades

This article contains support links for Belkin Components products sold through the Apple Store.

Important: All non-Apple products sold through the Apple Store are supported by the vendor of the product, not by Apple.

This article has been archived and is no longer updated by Apple.

Company:	**Belkin Components**
Company Web Site:	http://www.belkin.com/
Product Support Site:	http://www.belkin.com/support/
Technical Support Site:	http://www.belkin.com/contactus/index.asp

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker web site at:
http://www.versiontracker.com

Published Date: Feb 20, 2012

Epson: Support and Upgrades

This article contains contact information for Epson America Inc., plus support links and software upgrade links for Epson products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company:	**Epson**
Company Web Site:	http://www.epson.com/

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker web site at:
http://www.versiontracker.com

Published Date: Feb 20, 2012

Hewlett-Packard: Support and Upgrades

This article contains support links for Hewlett-Packard products sold through the Apple Store.

Note: Apple support for third party products sold through the Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Software Update Information

If you want to be notified automatically of software updates, use the Version Tracker web site at:
http://www.versiontracker.com

Published Date: Feb 20, 2012

Company:	**Hewlett-Packard**
Company Web Site:	http://www.hp.com/
Contact:	Contact Us

Lexmark: Support and Upgrades

This article contains support links and software upgrade links for Lexmark products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company:	**Lexmark**
Company Web Site:	http://www.lexmark.com

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker web site at:
http://www.versiontracker.com

Published Date: Feb 20, 2012

Wacom Technology Company: Support and Upgrades

This article contains support links and software upgrade links for Wacom products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company:	Wacom Technology Company
Company Web Site:	http://www.wacom.com/index2.cfm

Product:	graphire
Product Description:	Cordless USB Mouse and Pen Tablet
Product Support Site:	http://www.wacom.com/productsupport/
Technical Support	
Telephone:	800.922.6613
email:	**macsupport@wacom.com**

Software Update Information

If you want to be notified automatically of software updates for this product, or other third-party products, you can use the Version Tracker Web site at: http://www.versiontracker.com.

Published Date: Feb 20, 2012

Imation: Support and Upgrades

This document contains support links and software upgrade links for Imation products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company: **Imation**
Company Web Site: http://www.imation.com/

Product:	USB 2X External SuperDisk Drive
Product Description:	External USB Floppy drive

Technical Support

Telephone: 800.888.2700
email: info@imation.com

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker website (http://www.versiontracker.com/).

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.

Published Date: Feb 20, 2012

AEC Software: Support and Upgrades

This article contains support links and software upgrade links for AEC Software products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company: AEC Software, Inc.
support@aecsoft.com
+1 703 405 2318

Product:	FastTrack Schedule 7.02
Product Description:	Electronic Scheduling Software
Support Site:	http://www.aecsoft.com/support/
Product Updates:	http://www.aecsoft.com/update/
FAQ:	http://www.aecsoft.com/support/

Software Update Information

If you want to be notified automatically of software updates for this product, or other third-party products, you can either use the Version Tracker Web site at:

http://www.versiontracker.com

or the AppleUpdate Web site, which also tracks international updates, at:

http://AppleUpdate.com

Published Date: Feb 20, 2012

Dantz Development Company: Support and Upgrades

This article contains contact information for Dantz Development Company, plus support links and software upgrade links for Dantz products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Contact Information

Dantz Development Company
4 Orinda Way, Bldg. C
Orinda, CA 94563

(925) 253-3000 (Main)
(925) 253-9099 (Fax)
(925) 253-3050 (Tech Support)

Premier Support and Upgrades:
800.225.4880 or 925.253.3000 ext. 3

Email addresses:
Customer service: customer_service@dantz.com
General product info: customer_service@dantz.com
Sales: sales@dantz.com
Technical Support: tech_support@dantz.com
Upgrades: upgrades@dantz.com

URL: **http://www.dantz.com**

Company Profile:

Software, specializing in hard drive and remote Macintosh backup software.

Apple Store Support Links and Upgrade Links

Company:	**Dantz Development Company**
Company Web Site:	http://www.dantz.com/
Product:	Retrospect Express 4.2
Product Description:	Backup software
Product Support Site:	http://www.dantz.com/index.php3?SCREEN=service_and_support
Product Updates Site:	http://www.dantz.com/index.php3?SCREEN=updates

Technical Support

Telephone: 925.253.3050
email: http://www.dantz.com/index.php3?SCREEN=cs_form
FAQ: http://www.dantz.com/index.php3?SCREEN=express_common_questions

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker web site at:
http://www.versiontracker.com

or the AppleUpdate Web site, which also tracks international updates, at:

http://AppleUpdate.com

Published Date: Feb 20, 2012

Power On Software: Support and Upgrades

This article contains support links and software upgrade links for Power On Software products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company:	**Power On Software**
Company Web Site:	http://www.nowsoftware.com/

Product:	Now Up-to-Date & Contact
Product Description:	Electronic Organizer and Scheduling software
Product Support Site:	http://www.nowsoftware.com/support/
Product Updates Site:	http://www.nowsoftware.com/products/nudc5/upandbuy.asp
Technical Support	http://www.nowsoftware.com/customercenter/supportNow/faqsearch.aspx
Telephone:	(614) 413-4000
Email:	**support@nowsoftware.com**

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker web site at:
http://www.versiontracker.com

Published Date: Feb 20, 2012

Dorling Kindersley: Support and Upgrades

This article contains support links and software upgrade links for Dorling Kindersley (DK) products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company: **Dorling Kindersley (DK)**
Company Web Site: http://www.dk.com/

Product:	The New Way Things Work: Pinball Science
Product Description:	Educational Multimedia CD Software
Technical Support	
email:	**support@dk.com**

Product:	My First Amazing World Explorer 2.0
Product Description:	Educational Multimedia CD Software
Technical Support	
email:	**support@dk.com**

Product:	Amazing Animals CD-ROM Lab Pack
Product Description:	Educational Multimedia CD Software
Technical Support	
email:	**support@dk.com**

Product:	My Amazing Human Body
Product Description:	Educational Multimedia CD Software
Technical Support	
email:	**support@dk.com**

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker web site at:
http://www.versiontracker.com

Published Date: Feb 20, 2012

DataViz: Support and Upgrades

This article contains contact information for DataViz, plus support links and software upgrade links for DataViz products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

DataViz
55 Corporate Dr.
Trumbull, CT 06611

(203) 268-0030 (General Information & Tech Support)

(800) 733-0030 or (203) 268-0030 (Sales & Upgrade Information)

(203) 268-4345 (Fax)

URL: **http://www.dataviz.com**

Company Profile:

DataViz Inc., software, specializing in communications and data conversion products. DataViz makes MacLink Plus, Easy Open Translators, Translators Pro, PC Connect.

Apple Store Support Links and Upgrade Links

Company:	**Dataviz**
Company Web Site:	http://www.dataviz.com
Product:	MacLinkPlus Deluxe 11.0
Product Description:	File Conversion Utility
Product Support Site:	http://www.dataviz.com/mlpdeluxesupport
Product Updates Site:	http://support.dataviz.com/index_nr.html
Technical Support	
Telephone:	203.268.0030
email:	http://www.dataviz.com/eforms/sales/infomail.html
FAQ:	http://www.dataviz.com/products/maclinkplus/mlp_faqs.html

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker web site at:
http://www.versiontracker.com

or the AppleUpdate Web site, which also tracks international updates, at:

http://AppleUpdate.com

Published Date: Feb 20, 2012

Corel: Support and Upgrades

This article contains support links and software upgrade links for Corel products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company:	**Corel**
Company Web Site:	http://www.corel.com/

Product:	Corel Painter Essentials 3
Product Description:	Multimedia painting software
Telephone:	Contact Corel Customer Service - North America Phone: 1-800-772-6735

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker web site at:
http://www.versiontracker.com

or the AppleUpdate Web site, which also tracks international updates, at:

http://AppleUpdate.com

Published Date: Feb 20, 2012

LaCie: Support and Upgrades

This article contains support links and software upgrade links for LaCie products sold through the Apple Store.
Important: All non-Apple products sold through the Apple Store are supported by the vendor of the product, not by Apple.
This article has been archived and is no longer updated by Apple.

Company:	LaCie
Company Web Site:	http://www.lacie.com

Product:	DDS4
Product Description:	20 GB (non-compressed) / 40 GB (compressed) 4 MM cartridge SCSI backup drive
Product Support Site:	http://www.lacie.com/scripts/support/help_tape.cfm
Product Updates Site:	http://www.lacie.com/scripts/support/updaters.cfm

Technical Support

Telephone: 816.483.0904 (Mon-Fri : 6AM to 6PM, Sat :8AM-noon Pacific Time)
email: **support@lacie.com**

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker web site at:
http://www.versiontracker.com

Published Date: Feb 20, 2012

MySoftware: Support and Upgrades

This article contains support links and software upgrade links for MySoftware products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company:	**MySoftware**
Company Web Site:	http://www.mysoftware.com

Product:	My Advanced Invoices & Estimates
Product Description:	Creates Professional Invoices and Estimates
Product Support Site:	http://www.mysoftware.com/support/index.html
Technical Support	
Telephone:	510.273.2026 Technical Support is available for a fee of $19.95 for all calls up to 10 minutes, after which each additional minute will be charged at $2.95 per minute.

Published Date: Feb 20, 2012

Pangea Software: Support and Upgrades

This article contains support links and software upgrade links for Pangea Software products sold through the Apple Store.
Note: Apple support for third-party products sold through The Apple Store varies by country.
This article has been archived and is no longer updated by Apple.

Company:	**Pangea Software**
Company Web Site:	http://www.pangeasoft.net/

Product:	Bugdom
Product Description:	A dazzling 3D game for the whole family
Product Updates Site:	http://www.pangeasoft.net/bug/updates.html
Technical Support Strategy Guide:	http://www.maccentral.com/bugdom.shtml

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker web site at:
http://www.versiontracker.com

Published Date: Feb 20, 2012

Aspyr Media: Support and Upgrades

This article contains support links and software upgrade links for Aspyr Media products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company:	**Aspyr Media**
Company Web Site:	http://www.aspyr.com/
Product:	Tomb Raider: The Last Revelation
Product Description:	Continuation of Eidos' popular game for the Mac OS
Technical Support	
Telephone:	512.708.8100
email:	**info@aspyr.com**
FAQ:	N/A

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker web site at:
http://www.versiontracker.com

Published Date: Feb 20, 2012

Activision: Support and Upgrades

This article contains support links and software upgrade links for Activision products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company: **Activision**
Company Web Site: http://www.activision.com/

Product:	Quake III Arena
Product Description:	Action game
Product Support Site:	https://activision.custhelp.com/cgi-bin/activision.cfg/php/enduser/std_alp.php

Technical Support

Telephone: 310.255.2050
Knowledgebase: http://www.activision.com/support/217.asp
Tips & Hints: US - 1 (900) 680-HINT* ($.99/min.)

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker web site at: http://www.versiontracker.com

Published Date: Feb 20, 2012

Mattel Media: Support and Upgrades

This article contains support links and software upgrade links for Mattel Media products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company: **Mattel Media**
Company Web Site: http://www.mattelmedia.com/

Product: Rugrats Mystery Adventures
Product Description: Children's Mystery game
Technical Support
Telephone: 1 (888) MATTEL9

Product: Rugrats Adventure Game
Product Description: Children's adventure game
Technical Support
Telephone: 1 (888) MATTEL9

Product: Family Tree Maker Deluxe Edition II
Product Description: Genealogy Program
Technical Support
Telephone: 1 (888) MATTEL9

Product: Myst Masterpiece Edition
Product Description: 3D Adventure Game
Product Web Site: http://www.mystmasterpiece.com/
Technical Support
Telephone: 1 (888) MATTEL9

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker web site at:
http://www.versiontracker.com

or the AppleUpdate Web site, which also tracks international updates, at:

http://AppleUpdate.com

Published Date: Feb 20, 2012

MindScape: Support and Upgrades

This article contains support links and software upgrade links for MindScape products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company:	Feral Interactive
Company Web Site:	http://www.feralinteractive.com/

Product:	Chessmaster 9000
Product Description:	Computerized chess game for Mac OS
Product Support Site:	http://www.feralinteractive.com/?section=support&language=english
email:	chessmaster9ksupport@feralinteractive.com
FAQ:	http://www.feralinteractive.com/?game=chessmaster9k§ion=faq&language=english

Company:	Borderbund
Product:	Mavis Beacon Teaches Typing 17
Product Description:	Electronic typing tutor application

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker web site at: http://www.versiontracker.com

or the AppleUpdate Web site, which also tracks international updates, at:

http://AppleUpdate.com

Published Date: Feb 20, 2012

Alsoft: Support and Upgrades

This article contains support links and software upgrade links for Alsoft products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company: **Alsoft**
Company Web Site: http://www.alsoft.com

Product:	Disk Warrior
Product Description:	Hard disk repair utility
Product Support Site:	http://www.alsoft.com/DiskWarrior/support.html
Product Updates Site:	http://www.alsoft.com/download.html
Technical Support	
Telephone:	281.353.1510
email:	http://www.alsoft.com/Support/techsupportform.html ***OR*** **Tech.Support@Alsoft.com**

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker web site at: http://www.versiontracker.com

Published Date: Feb 20, 2012

How to Set File Type Associations in Windows 95/98

After QuickTime 4 is installed, Windows assigns QuickTime Player and Picture Viewer as the default applications for certain kinds of files. This article explains how to assign a different program as the default application to open a specific kind of file.
This article has been archived and is no longer updated by Apple.
To change file type associations do the following:

1. Right-click a file of the file type you want to change.
A menu appears.

2. Choose Open With from the pop-up menu.
A window appears with applications you can use.

3. Click the checkbox next to the application you want to open the file with.

4. Click the checkbox next to "Always use this program to open this type of file".

5. Click OK.

Published Date: Feb 20, 2012

Harman Multimedia: Support and Upgrades

This article contains support links and software upgrade links for Harman Multimedia 's iSub and SoundStick products sold through the Apple Store.

Note: Apple support for third party products sold through the Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company:	Harman Multimedia (Harman/Kardon) US: 516-255-HKHK Canada: 800-567-3275

Product:	SoundSticks
Product Description:	3-piece speaker system
Support Site, FAQ:	http://www.harmankardon.com/product_support/interstitial.aspx?Region=USA&Country=US&Language=ENG

Product:	iSub
Product Description:	Subwoofer for some Macintosh models
Support Site, FAQ:	http://www.harmankardon.com/product_support/interstitial.aspx?Region=USA&Country=US&Language=ENG

Software Update Information

If you want to be notified automatically of software updates for this product, or other third-party products, you can use the Version Tracker Web site at:

http://www.versiontracker.com

and don't forget to make sure all your Apple software is up to date, using the Software Update feature of Mac OS X.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Setup Assistant: Selecting Canada Chooses French Canadian Format

When Canada is selected as the country of residence in Mac OS Setup Assistant, the keyboard layout, date, time, and numbers are set to French Canadian standards. This article describes how to set these items to the English standards.
This article has been archived and is no longer updated by Apple.

Symptom

The keyboard layout, date, time, and numbers are set to the French Canadian format when Canada is selected in Mac OS Setup Assistant.

Affected Products

- Mac OS 9

Solution

Manually change the appropriate Control Panel settings to the English format. You need to adjust the Numbers, Date and Time, and Keyboard Control Panels. The instructions below explain how to set each individual control panel.

Setting the Numbers Control Panel

1. Open the Numbers control panel.
2. Choose the appropriate number format from the Number Format popup menu.
3. Close the Numbers control panel.

Setting the Date and Time Control Panel

1. Open the Date & Time control panel.
2. Click the Date Formats button.
3. Choose the appropriate date format from the Region popup menu.
4. Click OK.
5. Click the Time Formats button.
6. Choose the appropriate time format from the Region popup menu.
7. Click OK
8. Close the Date & Time control panel.

Setting the Keyboard Control Panel

1. Open the Keyboard control panel.
2. Select the appropriate keyboard layout from the list.
3. Close the Keyboard control panel.

Country Flag in the Menu Bar

If a country flag appears in the right corner of your menu bar, you have more than one keyboard layout selected in the Keyboard control panel. To remove the country flag, open the Keyboard control panel and make sure only one keyboard layout is selected. After selecting only one keyboard layout and closing the Keyboard control panel, the country flag disappears.

Published Date: Feb 20, 2012

Blizzard Entertainment: Support and Upgrades

This article contains support links and software upgrade links for Blizzard Entertainment products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Product:	**WarCraft III Battle Chest**
Product Description:	The Warcraft III Battle Chest is the ultimate collection of the best-selling Blizzard strategy games. This set includes 2002 Game of the Year Warcraft III: The Reign of Chaos, as well as the recently released and critically acclaimed follow-up - Warcraft III Expansion: The Frozen Throne.
Product Support Site:	http://www.blizzard.com/support/?id=mwr000p
Product Updates Site:	http://www.blizzard.com/support/?id=mwr0642p

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker web site at:
http://www.versiontracker.com

or the AppleUpdate Web site, which also tracks international updates, at:

http://AppleUpdate.com

Published Date: Feb 20, 2012

Final Cut Pro: Audio Playback Configurations

This article explains audio playback configurations available in Final Cut Pro.

Note: This article primarily describes configurations involving digital video (DV). However, the information may also apply to other configurations.

This article has been archived and is no longer updated by Apple.

Configurations

There are two basic audio configurations which can be used in video editing, audio playback from the internal Macintosh speaker (or external speakers connected to the Macintosh Speaker output connector) and audio playback from an external device.

Figure 1, Typical Video Editing Configuration

View External Video Set to All Frames

When External Video is set to All Frames, audio and video are sent to the external video device attached to FireWire interface. The Macintosh Speaker is disabled in this configuration to prevent an echo effect caused by the latency of video and sound through the FireWire interface. If external speakers are not connected to the video device, no audio can be heard.

Because of delay in the audio coming from a device connected using FireWire, the audio on the external device is not synchronized to the video playback on your computer monitor. Externally connected audio only synchronizes to externally connected video.

For additional information on configuring your digital video system to work with an external monitor, see article 58635 "**Final Cut Pro: Viewing DV Video out of an NTSC or PAL Monitor**".

Monitoring Audio

Having All Frames selected will send both the video and audio out through FireWire. You would monitor audio using whatever video device is connected to the FireWire port. This can include:

1. A built-in camcorder speaker
2. Headphones or externally amplified speakers connected to your camcorder
3. A NTSC/PAL monitor's built-in speaker connected to your camcorder

If you are using a DV to Analog converter box, you must monitor your audio by connecting RCA cables from the audio out to

1. A video monitor's built-in speaker

or

2. Externally amplified speakers

View External Video set to Off

When External Video is set to Off under the View>External Video menu, the audio plays back only from your computer's speaker (or any external speakers or headphones connected to the speaker connector on your computer). This is true even if you do not have Mirror on desktop during Playback selected in the General Preferences tab under the Edit pulldown window.

Published Date: Feb 20, 2012

Final Cut Pro: How to Upgrade to Final Cut Pro 1.2.5

This article describes how to upgrade Final Cut Pro to version 1.2.5, as well as when it is appropriate to upgrade, what steps to follow immediately after using the updater, what new extensions are installed, and what changes have been made to the application.
This article has been archived and is no longer updated by Apple.

Before You Upgrade

It is important to know when it is appropriate to upgrade. Generally, you should never upgrade in the middle of a project. While the Final Cut Pro update process is fast and automatic, recreating necessary preferences and other small changes that happen during the updating process make it an undesirable task to perform when you are in the middle of an edit. In all cases, you should finish your project first, output it to tape, then upgrade Final Cut Pro after the project has been successfully delivered.

If you are using Digital Video (DV) and want to take advantage of the new YUV rendering capabilities of Final Cut Pro 1.2.5, you should finish your project first. Output to tape, then upgrade. Import your project file into the new version, update the project file, re-render it, and output this final version to tape.

Important: Do not install an English version of Final Cut Pro 1.2.5 on a localized version of the Mac OS. Doing so results in extension conflicts.

Installation Requirements

Hardware Requirements

- Power Macintosh G3 computer with a 266 MHz processor or faster (300 MHz processor or faster required for DV)
- PowerBook G3 computer with a 300 MHz processor or faster
- 128 megabytes of RAM
- CD-ROM drive
- 6 Gigabyte A/V rated drive (16 GB recommended)
- ATI built-in video on G3 models or later (required for DV)
- Apple FireWire or other QuickTime compatible digital video card for capturing video from an external source or exporting video to tape.
- The correct FireWire or device control cable and any additional cables you may need for connecting your deck or camcorder to your computer.

Software Requirements

- Final Cut Pro 1.0, 1.0.1, or 1.2.1 (The Final Cut Pro 1.2.5 updater updates any of these versions.)
- Mac OS 9, Mac OS 9.04 recommended
- QuickTime 4.1.2 or later (A QuickTime Pro License is included with the Final Cut Pro CD).

Where to Find the Updater

Final Cut Pro 1.2.5

The Final Cut Pro 1.2.5 updater may be found in the document:

120026 **Final Cut Pro 1.2.5: Document and Software**

Mac OS 9.0.4

If you are using Mac OS 9 and have not updated to Mac OS 9.0.4, the necessary Mac OS updater is located in the Update Mac OS 9 folder on the Final Cut Pro CD. If you do not have Mac OS 9, you must install it first before running the updater.

Before You Run the Updater

Before opening the updater, it is important to follow these guidelines:

- Turn off any security software that you may have installed on your computer.
- Turn off any virus-protection software that you may have installed.
- Do not interrupt the installation process; doing so may result in an incomplete installation and will require you to reinstall Final Cut Pro.

After performing any necessary preinstallation instructions, double-click the Final Cut Pro 1.2.5 updater and follow the on-screen instructions.

Potential Issues when Running the Updater

- When a custom icon is attached to the previously installed version of Final Cut Pro, the 1.2.5 update fails. To resolve this issue remove the custom icon.

Follow these steps to remove the custom icon:

1. Click the Final Cut Pro application icon to select it.

2. Choose Get Info from the Finder's File menu. A new window appears. The custom icon is located in the upper left corner of the info window.

3. Click the icon to select it.

4. Choose Clear from the edit menu. This deletes the custom icon. You can now run the Final Cut Pro 1.2.5 update.

- When the name of the previously installed Final Cut Pro application has been changed, the 1.2.5 update fails. To update Final Cut Pro, rename the original 1.2 version of the application to "Final Cut Pro" All three words must be capitalized, and be separated by spaces.

After You've Run the Updater

Before you open the new version of Final Cut Pro for the first time, do not forget to readjust its memory allocation, as it was reset by the upgrade process. For additional information on allocating additional memory, see article 58630 "**Final Cut Pro: Allocating Memory**".

Now you're ready to open Final Cut Pro, but before you start editing be sure to check the following preferences to make sure that they are correct, since the preferences from your previous version of Final Cut Pro have been moved to the desktop in preparation for deletion:

1. Make sure that the Scratch Disk Preferences are set to the disks you intend to use for video capture.

2. Double-check that the Device Control method is correct for your configuration (DV or Serial).

3. If you are using a serial device for control, you should recalibrate the timecode offset.
For additional assistance in calibrating serial timecode, see article 25154, "**Final Cut Pro: How to Calibrate Serial Timecode**".

4. If you are using a third-party video capture solution, you should set your "Capture Input" and default Sequence Settings appropriately.

Updating Project Files

When updating projects from prior version of Final Cut Pro, an alert box appears with message asking if you want to delete all render files associated with that project. If you have DV footage captured using Apple FireWire you should do this because Final Cut Pro now uses YUV rendering for DV video; rendering with much higher quality than before.

The Final Cut Pro Device Qualification page can be found at http://www.apple.com/finalcutstudio/resources/devicelist.php

If you are using an analog capture card, check the Final Cut Pro Device Qualification page to determine if it takes advantage of YUV rendering. If you have a third party capture solution that does not work with YUV rendering, you should not delete your render files because there is no advantage to rerendering them.

System Software Installed by the Final Cut Pro 1.2.5 Updater

These system software extensions are installed by the Final Cut Pro updater, overwriting any previous versions:

- FireWire Enabler 2.4
- FireWire Support 2.4
- QuickTime FireWire DV Enabler 2.2
- QuickTime FireWire DV Support 2.2

New Features in Final Cut Pro 1.2.5

Final Cut Pro introduces several new features in version 1.2.5:

- Capturing, editing, and exporting of 16:9 wide-screen video
- YUV processing to preserve the values of the original video material
- "Make Reference Movies," enabling the use of pointers to source video files, saving both rendering time and disk space

Issues Addressed in Final Cut Pro 1.2.5

These are some of the known issues that have been addressed in Final Cut Pro 1.2.5:

- Edit Decision Lists (EDL) now get proper timecode when exported with subclips.
- When recapturing PAL media, Final Cut Pro no longer attempts to recapture more media than requested.
- There are memory improvements for better performance with large projects.
- There is better reel name substitution

Published Date: Feb 20, 2012

Intego: Support and Upgrades

This article contains support links and software upgrade links for Intego products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company: Intego
Company Web Site: http://www.intego.com/

Product:	NetBarrier
Product Description:	Personal Firewall for the Internet
Product Support Site:	http://www.intego.com/support
Product Updates Site:	http://www.intego.com/updates

Technical Support

Telephone: +1 305 868-7920
email: support@intego.com

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker web site at:
http://www.versiontracker.com

or the AppleUpdate Web site, which also tracks international updates, at:

http://AppleUpdate.com

Published Date: Feb 20, 2012

Symantec Corporation: Support and Upgrades

This article contains support links and software upgrade links for Symantec products sold through the Apple Store.

Important: All non-Apple products sold through the Apple Store are supported by the vendor of the product, not by Apple.

This article has been archived and is no longer updated by Apple.

Company:	**Symantec Corporation**
Company Web Site:	http://www.symantec.com/

Product:	**Norton AntiVirus 10.0 for Macintosh**
Product Description:	Hard disk utilities and virus utility bundle
Product Support Site:	http://www.symantec.com/home_homeoffice/support/productdetail/index.jsp?pvid=navm_10
Company:	**Symantec Corporation**
Company Web Site:	http://www.symantec.com/

Product:	**Norton Confidential for Macintosh**
Product Description:	Norton Confidential helps protect you from fraudulent websites, while securing your important files and identity data.
Product Support Site:	http://www.symantec.com/home_homeoffice/support/productdetail/index.jsp?pid=&pvid=nco_mac_1

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker web site at:
http://www.versiontracker.com

or the AppleUpdate Web site, which also tracks international updates, at:

http://AppleUpdate.com

Published Date: Feb 20, 2012

Final Cut Pro: DV and Widescreen Video Formats Explained

This article discusses the differences between 4:3 and 16:9 video, shooting widescreen video using anamorphic lenses, and working with 16:9 video in Final Cut Pro 1.2.5.
This article has been archived and is no longer updated by Apple.

How is 16:9 different from normal video?

DV video has a frame size of 720x480 pixels. The width to height ratio of the frame is called the Aspect Ratio, and the Aspect Ratio of this frame size is 4:3. It is possible, however, to shoot video for playback using a different Aspect Ratio. The "wide-screen" Aspect Ratio commonly used by video is 16:9, and it allows video producers to create a wide screen experience similar to film.

Videographers and editors must bear in mind, however, that when shooting "wide-screen" video using standard definition DV camcorders, the recorded DV video frame is still 720x480 pixels. Shooting 16:9 visuals and recording them to a 4:3 frame size is referred to as shooting Anamorphic video. An anamorphic image is created when a wide frame is stretched into the same space as a normal frame, with the result being visible horizontal distortion (a "squished" look) in the video frame.

Figure 1 A Widescreen Image

Figure 2 Image Anamorphically Fitted into a 4:3 Aspect Ratio

The advantage of this is that producers can shoot wide-screen material using inexpensive equipment. The disadvantage of shooting anamorphic video is that everything in the Anamorphic frame looks thin and distorted on a normal monitor unless the image is adjusted, either by software or by pushing the 16:9 button found on high-end broadcast video monitors. This button rescales the video vertically as it is displayed on the monitor, giving it the proper widescreen dimensions.

Remember that 16:9 anamorphic video is supposed to look "squished" on a typical 4:3 monitor. Although this may seem odd, it is the correct behavior. When recording, transferring, editing, and outputting to tape, an anamorphic image should never be permanently rescaled in order to retain the full video resolution of the image for future use, either for display on a widescreen monitor, or for enlarging to film.

Since anamorphic video creates a widescreen experience by stretching a "squished" 4:3 image out to fill a larger area, fewer pixels are rescaled to fit a larger area. The only video format that actually has a larger frame, using more vertical and horizontal pixels to create a wide-screen image, is High-Definition video. High-Definition video is a completely different format, however, and is not covered in this article.

Rescaling anamorphic video in order to see the entire wide screen frame on a standard definition 4:3 monitor is called "letterboxing," and results in the loss of the maximum resolution available in the source footage. A letterboxed frame has two black borders both at the top and at the bottom of the frame (Laserdisc and DVD aficionados will be used to this). You should only letterbox your video when you are finished editing and want to deliver a tape that will look right on consumer equipment.

Figure 3 A 16:9 Letterbox image

Why shoot 16:9 video?

There are three main reasons to shoot 16:9, or anamorphic video:

1. Because it looks neat. Even if you end up letterboxing the eventual output for standard definition televisions, viewers tend to associate the widescreen look with a cinematic feel. A wide screen also allows video-makers more room for creativity in their shot composition.

2. Preparation for transfer to film. Film and video both have different aspect ratios. 35 mm film, with an aspect ratio of 1.85:1, is wider than the standard 4:3 ratio of broadcast video.

Figure 4 Aspect Ratios Compared

Those who shoot standard 4:3 video end up having to crop off the top and bottom of the image in order to resize it to fit the film frame, losing resolution and therefore quality.

Figure 5 Cropping 4:3 Video to Fit into a 1.85:1 Frame

Videomakers shooting 16:9 will be able to make higher resolution transfers by virtue of not having to crop out as many pixels (16:9 is still a bit narrower than the American film standard 1.85:1).

3. Looking to the future. High-Definition video also has an aspect ratio of 16:9. While High-Definition video is not in common use yet, eventually the entire broadcast industry will move to High-Definition video as the standard means of broadcast. Videomakers who want to be able to resize their productions to take advantage of the new frame size of this upcoming standard should shoot 16:9 anamorphic.

How can I acquire Anamorphic Video?

Anamorphic video can be acquired in one of two ways:

1. Using the 16:9 button found on most camcorders. This method, while easy and inexpensive, yields the lowest resolution. What is actually happening is that the camcorder crops off the top and bottom of the screen, then stretches this smaller widescreen image vertically to fit the full 4:3 aspect ratio, thus producing the necessary anamorphic distortion before recording the image to tape. This method is the less desirable of the two as it uses fewer pixels, actually reducing the available resolution, and can result in degradation of the final image. On the other hand, an advantage of this method for those seeking convenience over quality, is that many camcorders embed information in the video signal that indicates whether or not it was recorded in 16:9 mode. Final Cut Pro 1.2.5 can read this information and automatically capture and output it in the correct fashion.

2. The second method involves using an anamophic lens. An anamorphic lens is a wide angle lens that optically distorts the 16:9 image into a 4:3 frame before sending it into your camcorder's CCD (charged coupling device). Because this is done optically, the result is clean, clear, and takes advantage of the full resolution of the DV frame. This method is recommended for users looking for the best possible quality.

How Final Cut Pro 1.2.5 handles 16:9 Video

As of version 1.2.5, Final Cut Pro has the ability to properly display anamorphically captured material at the correct 16:9 aspect ratio directly on your computer display without rendering. Transitions such as the "Oval" and "Star" iris are correctly shaped, and all geometry settings automatically take the 16:9 aspect ratio into account.

The Anamorphic Display information referred to in this section affects playback display on your computer monitor only. It does not affect DV or QuickTime rendering, and it does not alter the resolution of captured QuickTime clips in any way. All DV clips are still captured and output with a frame size of 720x480.

Figure 6 Final Cut Pro with 16:9 DV Clips Loaded Into Both the Viewer and Canvas

Importing Anamorphic 16:9 Clips from Tape

Final Cut Pro gives you a great deal of flexibility when it comes to importing Anamorphic 16:9 material for editing. Some cameras have the ability to embed information regarding the user's selected aspect ratio directly onto the videotape. When a user presses the "16:9 Wide" button on these cameras, the DV stream recorded to tape includes this information, and Final Cut Pro 1.2.5 will automatically detect this and mark the resulting

imported QuickTime clip as Anamorphic 16:9. This will happen regardless of whether or not the "Anamorphic 16:9" button is checked in the "Capture" Preferences tab.

Figure 7 The Anamorphic 16:9 checkbox in the Capture Preference Tab

Those using an Anamorphic Lens to achieve the 16:9 look, as previously described, are actually recording their footage at a 4:3 aspect ratio. As a result, it is not automatically identified as 16:9 material by Final Cut Pro. If you are using an Anamorphic Lens, checking the Anamorphic 16:9 option in the "Capture" Preferences tab marks all subsequently imported clips as Anamorphic 16:9.

Note: With this option turned on, all clips are marked as 16:9 regardless of whether or not they are actually supposed to be, so be careful to deselect this box when recording regular, non-anamorphic 4:3 material.

Switching a clip between Anamorphic 16:9 and Standard 4:3

Once a clip is imported, its aspect ratio can always be changed by going into the item properties for that given clip, and clicking the Anamorphic 16:9 button. This information is available only in Final Cut Pro, and is saved back to a QuickTime file by rendering it out from an appropriately configured sequence with 16:9 either enabled or disabled.

Figure 8 The Anamorphic 16:9 checkbox in the Item Properties Window

Importing Anamorphic 16:9 QuickTime Clips

If you are importing clips already stored on your hard drives, you can have Final Cut Pro 1.2.5 automatically check to see if they are set to a 16:9 aspect ratio by turning on the "16:9 Import Check" button in the "General" Preferences tab. This 16:9 information gets embedded into QuickTime files either by capturing video clips that have it from tape, or by rendering out a sequence set to be 16:9 anamorphic as a QuickTime file.

Figure 9 The 16:9 Import Check checkbox in the General Preferences Tab

Editing with Anamorphic 16:9 Sequences

When editing, the Viewer automatically detects which clips are marked as Anamorphic 16:9 and which are not, and adjusts accordingly. Sequence playback and clips displayed in the Canvas work differently. Sequences that are not set to Anamorphic 16:9 will need to render any 16:9 clips that are edited into them, even though they are displayed properly. To avoid this, always edit 16:9 material into a sequence specifically set to Anamorphic 16:9.

New 16:9 sequences can be created by changing the default preset in the "Sequence Presets" Preferences tab. Final Cut Pro 1.2.5 has additional presets that weren't available in version 1.2 or earlier. To change the default Preset for new sequences:

1. Select a new preset from the list shown in the "Sequence Presets" tab
2. Click the "Set Default" button
3. Click the "OK" button

Notice that the new default sequence has an icon indicating this to the left of it in the list. Any new sequences created are now created with these settings.

Figure 10 The NTSC and PAL 16:9 DV Presets (the Default 4:3 preset is shown on top)

Existing Sequences with no clips edited into them can be switched to 16:9 by opening up the Sequence Settings window. This is done by selecting the sequence to be modified and either selecting the Sequence>Settings menu item, or Control + Clicking the sequence icon to bring up the contextual menu, which also has a Sequence Settings menu item. Once the Sequence Settings window is open, Anamorphic 16:9 can be enabled or disabled through a checkbox.

Note: This should only be done prior to adding any 16:9 clips. If a 16:9 clip is edited into a 4:3 sequence, it will display properly but require rendering. If that sequence is then changed to 16:9 without first removing the edited clip, the clip will not look correct.

Figure 11 The Anamorphic 16:9 checkbox in the Sequence Settings

Exporting Anamorphic Video to Tape

When outputting an edited sequence using anamorphic video to tape, you have two choices, depending on what kind equipment you want to play back from:

1. You can simply output it as is, looking "squished" on a 4:3 monitor. This is the preferable option if you're planning on playing back your video on hardware that will compensate for the proper aspect ratio or if you're planning on transferring to film. High-end broadcast monitors can rescale for 16:9 at the push of a button, and some specialty widescreen monitors popular with home theater enthusiasts will do this as well.

2. If you're unsure who is going to be viewing the tape and you want undistorted playback on a standard 4:3 monitor, you can manually letterbox your video. This will require rendering your entire edited sequence, so allocate some time for this process. To letterbox your edited sequence:

   a) Open the 16:9 sequence in the Timeline.

   b) Create a new sequence that is not 16:9 anamorphic and open it in the Timeline.

   c) Drag the 16:9 sequence's icon from the Browser to the Overwrite area of the Edit Overlay in the Canvas.

   d) Render the new sequence, then print it to tape.

Exporting Anamorphic Video to QuickTime

Instead of outputting to tape, users may also render a QuickTime movie with a rectangular, 16:9 framesize. For examples of 16:9 framesize, see some of the movie trailers at http://www.quicktime.com/trailers/ . To export your edited sequence with a 16:9 rectangular frame size:

1. Choose "Export" from the File menu and "QuickTime" from the submenu.

2. Click the "Options" button

3. In the Video section, click "Size," then click "Use Custom Size"

4. Enter values for the width and height so the desired height is 9/16 of the desired width (to determine this value, multiply the width by 0.5625), then click OK.

Two example frame sizes using this ratio are:

   a) If you are exporting from the native DV-NTSC frame size of 720 x 480, set the output frame size to be 720 x 405.

   b) An example of a smaller 16:9 frame size would be 400 x 225

Further Resources

The following manufacturers supply anamporphic lenses. See their websites for more information about lens adaptors for your individual camera:

- Century Precision Optics - http://www.centuryoptics.com/
- SMS Productions - http://www.smsprod.com/products/lenses.html

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Published Date: Feb 20, 2012

Open Transport: TCP/IP Configuration

This article provides information for configuring Open Transport TCP/IP.
This article has been archived and is no longer updated by Apple.
Open Transport/TCP works over, but is not limited to, Ethernet, Token Ring, and AppleTalk (as MacIP). It also works over serial lines when using backward compatible MDEV support (for example, MacPPP and InterSLIP).

Open Transport/TCP is configured using the TCP/IP Control Panel. Configuration may be done manually, or through a BOOTP, DHCP, RARP, or MacIP server. The steps to follow using each of these methods are detailed below.

By default, the TCP/IP Control Panel comes up in basic mode. Advanced or administration mode may be entered via the Edit menu. These modes allow expert users additional choices as well as the ability to augment information returned from a configuration server or to fill in gaps in the returned information.

The TCP/IP Control Panel may be used at any time to reconfigure the system. However TCP will not notice the new configuration until it has unloaded from the system. By default, this takes about 2 minutes after the last application using TCP or UDP has gone away.

Figure 1: Open Transport TCP/IP control panel in Advanced mode.

Description of the fields in the TCP/IP Control Panel

Figure 1, above, shows the Open Transport TCP/IP control panel in the Advanced mode.

Connect via

This is where you select the interface the system is going to use. This can include, but is not limited to, Ethernet, Token Ring, AppleTalk (MacIP), and MacPPP.

Configure

This is where you select how the system will obtain its IP address. The choices are Manually, BootP, DHCP, and RARP.

IP Address

This is where you enter the systems IP address if you have configured it to obtain its address manually. If BootP, DHCP, or RARP were selected for the "Configure:" field, the text "<supplied by server>" will be displayed.

Domain name

This is the default domain name used for domain name searches. For example, if a domain name of "apple.com" is configured, a search for "scott" would initially search for "scott.apple.com." It is not always necessary to fill in this field when configuring from a BootP or DHCP server since it may be returned along with the IP address. It is not necessary to have a domain name entered in this field.

Admin domain

In Advanced User mode only, you may enter an Admin Domain. This is used to allow implicit searches. For example, if my domain is tech.support.apple.com, and my admin domain is set to apple.com, a search for the name "scott" would first look for scott.tech.support.apple.com, then for scott.support.apple.com, then for scott.apple.com. Implicit searching will not be done unless an Admin Domain is explicitly setup and the default domain is a subdomain of the Admin Domain (per RFC 1535). If the name "scott" is not found here and Search domains are present, they are searched as well.

Search domain names

In Advanced User mode only, you may enter Search domains. See the "Domain Name Resolver Information" for complete details on how searching and the DNR work.

Domain Name Resolver Information

When a client of the DNR requests a name-to-address mapping, the DNR checks for a "." at the end of the name. If it exists, the name is assumed to be fully qualified (see RFCs 1034 and 1035 for an explanation of the Domain Name System). Otherwise, if the name contains at least one "." internally, it is considered to be provisionally fully qualified. Otherwise, the name is assumed to be partially qualified, and the DNR will begin a search for that name in the domain name in the "Domain name:" field. If it is not found there, and there is an Admin domain configured, implicit

searches will take place as described in the "Admin domain" section. If the name is still not found, the Search domains are searched. For each search domain, the configured name servers are contacted in the order specified. If the name is resolved in the first search domain, that answer is returned. If an authoritative answer that the "name-does-not-exist" is returned, the DNR begins the search in the next configured search domain. The search continues through the domains, and if no match is found, the DNR will search the root domain if it makes sense to do so. The DNR has an overall timeout of 2 minutes after which it will abandon its search.

Subnet mask

This is for the subnet mask for the network the system is connected. For example, on a class C net which uses 4 bits of the host field for subnetting, the subnet mask should be entered as "255.255.255.240".

Router address

This is for the IP address of the default IP router located on the network the system is on.

Name server addr

This is for the IP address(es) of one or more Domain Name Servers.

Configuring Open Transport/TCP

Manual Configuration

To manually setup Open Transport/TCP, follow these steps:

1. Select the interface to use, or pick "AppleTalk (MacIP)" to run over AppleTalk on the interface selected in the AppleTalk control panel.

2. If an Ethernet interface is selected, a check box will appear offering the use of 802.3. By default, Open Transport/TCP uses Ethernet_II rather than 802.3.

3. Select "Manually" as the configuration method.

4. Fill in the IP address in dot notation (for example, 128.1.1.1).

5. Fill in the default domain extension to be used on name searches.

6. In Advanced User mode only, you may enter an Admin Domain. This is used to allow implicit searches.

7. Fill in the subnet mask in dot notation.

8. Fill in the IP address of the default IP router.

9. Fill in the IP address(es) of one or more Domain Name Servers.

10. In Advanced User mode only, additional search domains may be entered. See the preceding description of the Domain Name Resolver operation for details.

11. If a Hosts file is required, select it using the Hosts file button. For details about the Hosts file, see the description which follows.

DHCP Configuration

To use a DHCP server to setup Open Transport/TCP, follow these steps:

1. Select the interface to use in the AppleTalk control panel.

2. If an Ethernet interface is selected, a check box will appear offering the use of 802.3. By default, Open Transport/TCP uses Ethernet_II rather than 802.3.

3. Select "Using DHCP" as the configuration method.

4. In Advanced User mode only, you may enter an Admin Domain. This is used to allow implicit searches.

5. In Advanced User mode, a subnet mask may be entered but is not required. If a value is entered, it will be used if no subnet mask is returned from the DHCP server. Otherwise, any value entered is ignored.

6. In Advanced User mode, the manually entered IP addresses of routers are attached to the end of the possibly empty) list of IP routers returned by the DHCP server.

7. In Advanced User mode, the manually entered IP addresses of Domain Name Servers are attached to the end of the (possibly empty) list of Name Servers returned by the DHCP server.

8. In Advanced User mode only, additional search domains may be entered. See the preceding description of the Domain Name Resolver operation for details.

9. If a Hosts file is required, select it using the Hosts file button. For details about the Hosts file, see the description which follows.

DHCP Address Leases

DHCP provides a network administrator with the ability to configure a host's IP address either for an unlimited or for a limited period of time. The limited lease period is under the network administrator's control and is non-negotiable. Leases may, however, be renewed at the option of the configuring server.

Open Transport/TCP fully supports DHCP address leases. Should an interface's IP address lease expire, the interface will be closed down. However, Open Transport/TCP will automatically attempt to renew any address lease that reaches it's Renewal Interval, which defaults to half of the lease's lifetime, but may be configured to a different interval by the configuring server. Renewal will be attempted regardless of how many times the lease has already been renewed.

BootP Configuration

To use a BootP server to setup Open Transport/TCP, follow these steps:

1. Select the interface to use, or pick "AppleTalk (MacIP)" to run over AppleTalk on the interface selected in the AppleTalk control panel.

2. If an Ethernet interface is selected, a check box will appear offering the use of 802.3. By default, Open Transport/TCP uses Ethernet_II rather than 802.3.

3. Select "Using BootP " as the configuration method.

4. In Advanced User mode only, you may enter an Admin Domain. This is used to allow implicit searches.

5. In Advanced User mode, a subnet mask may be entered but is not required. If a value is entered, it will be used if no subnet mask is returned from the BOOTP server. Otherwise, any value entered is ignored.

6. In Advanced User mode, the manually entered IP address of the router is attached to the end of the (possibly empty) list of IP routers returned by the DHCP server.

7. In Advanced User mode, the manually entered IP addresses of Domain Name Servers are attached to the end of the (possibly empty) list of Name Servers returned by the DHCP server.

8. In Advanced User mode only, additional search domains may be entered. See the preceding description of the Domain Name Resolver operation for details.

9. If a Hosts file is required, select it using the Hosts file button. For details about the Hosts file, see the description which follows.

RARP Configuration

To use a RARP server to setup Open Transport/TCP, follow these steps:

1. Select the interface to use, or pick "AppleTalk (MacIP)" to run over AppleTalk on the interface selected in the AppleTalk control panel.

2. If an Ethernet interface is selected, a check box will appear offering the use of 802.3. By default, Open Transport/TCP uses Ethernet_II rather than 802.3.

3. Select "Using RARP" as the configuration method.

4. Fill in the default domain extension to be used on name searches.

5. In Advanced User mode only, you may enter an Admin Domain. This is used to allow implicit searches.

6. Fill in the subnet mask in dot notation.

7. Fill in the IP address of the IP router.

8. Fill in the IP address(es) of one or more Domain Name Servers.

9. In Advanced User mode only, additional search domains may be entered. See the preceding description of the Domain Name Resolver operation for details.

10. If a Hosts file is required, select it using the Hosts file button. For details about the Hosts file, see the description which follows.

MacIP Server Configuration

To use a MacIP Server to setup Open Transport/TCP, follow these steps:

1. Select "AppleTalk (MacIP)" as the interface to use. TCP will now run over AppleTalk on the interface selected in the AppleTalk control panel.

2. Select "Using MacIP Server" as the configuration method.

3. Select the zone the DDP/IP Gateway is in using the "Select Zone ╔" button.

4. Fill in the default domain extension to be used on name searches.

5. In Advanced User mode only, you may enter an Admin Domain. This is used to allow implicit searches.

6. If a Hosts file is required, select it using the Hosts file button. For details about the Hosts file, see the description which follows.

Hosts File

Open Transport/TCP supports a Hosts file that may be used to supplement and/or customize the Domain Name Resolver's initial cache of information. The Hosts file is found in the System's Preferences folder. This file is parsed when Open Transport/TCP is initialized. As in MacTCP, the supported Hosts file features follow a subset of the Domain Name System Master File Format (see RFC 1035 page 33).

Supported features include blank lines, comments (indicated by a semicolon), and data entry. Comments may begin at any location in a line; they may follow data entry on the same line. A comment extends from the semicolon to the end of the line. Data entry must follow the format:

```
<domain><rr>[<comment>]
```

where is an absolute or Fully Qualified domain name (which, however, need not be terminated by a dot, but must contain at least one dot internally) and where

```
<rr>=[<ttl>][<class>]<type><rdata> OR [<class>][<ttl>]<type><rdata>
```

The only class currently supported is IN (Internet Domain); ttl (time to live; indicates the record's configured lifetime) is in seconds; and type can be A (host address), CNAME (canonical name of an alias), or NS (name server). If ttl is not present the entry is assumed to have an infinite lifetime; this may also be indicated by specifying a ttl of minus-one (-1).

$INCLUDE and $ORIGIN are not supported.

Examples of valid data entry lines including comments:

apple.com	A	130.43.2.2	; address of host apple.com
foobar	CNAME	barfoo.apple.com	; canonical name for the host
			; whose local alias is "foobar"
mit.edu	86400 NS	achilles.mit.edu	; name server for mit.edu domain,
			; entry has a one-week lifetime

Open Transport/TCP's Hosts file support is somewhat more stringent than that of MacTCP. MacTCP permitted violation of the Fully Qualified requirement for <domain-name>, and this feature was often used to avoid the necessity for entering CNAME records by associating an address directly with a non-fully qualified name. For instance, this format:

charlie A 128.1.1.1

which was acceptable to the MacTCP DNR, is no longer permitted because of the use of domain search lists in Open Transport/TCP (charlie could potentially exist in any or all of the configured domains). If such a line exists in your hosts file, kOTBadNameError will be returned when the Hosts file is read. To accomplish the same effect, use this format instead:

charlie CNAME myhost.mydomain.edu
myhost.mydomain.edu A 128.1.1.1

This associates the local alias "charlie" with the fully qualified domain name "myhost.mydomain.edu" and resolves it to the address 128.1.1.1. Use of local aliases is limited to CNAME entries; NS and A entries must use fully qualified domain names.

In general, use of the Hosts file is discouraged, as it often simply wastes memory by permanently configuring data that may only rarely be accessed. It is also highly susceptible to misuse by users who try to configure far too much information internally in order to avoid accessing DNS servers. Besides tying up memory, this practice is exactly the reason that the Domain Name System was developed in the first place - to eliminate the performance degradation caused by use of enormous hosts files.

Should a Hosts file be used, every effort should be made to keep it as small as possible and to only include entries that will be accessed frequently.

Published Date: Feb 20, 2012

Power Mac G4 (Gigabit Ethernet): Computer Display Is Blank

The AGP video card in the Power Mac G4 (Gigabit Ethernet) computer may move slightly out of its slot during shipping, causing the screen to remain blank when the computer is turned on. This article explains how to reinsert the card to correct this issue.
This article has been archived and is no longer updated by Apple.

Symptom

The computer and display are turned on, but the screen is blank.

Product affected

- Power Mac G4 (Gigabit Ethernet)

Solution

Sometimes during shipping the AGP video card may move slightly out of its slot, causing the display to remain blank when turned on. To correct this, the card needs to be pressed firmly back into the AGP video slot.

Warning: Read and follow the ESD precautions outlined in the "Working Inside Your Computer" section of the "Setting Up Your Power Mac G4" owner's manual.

To reinsert the video card into its slot, follow these steps:

1. Shut down the computer.
2. Open the computer by pulling on the latch.

Figure 1 Latch location

3. Press down evenly on the video card in the AGP slot to make sure it is completely inserted.

Figure 2 Reinserting the card

4. Close the computer.

Note: A QuickTime movie showing the replacement of the video card is available at http://www.info.apple.com/installparts/. This movie may provide you with additional help in locating and reinserting the AGP video card.

Other steps to try

1. Verify the display's video cable is securely connected to the video card.
2. Verify the display is turned on.
3. Verify the display cable or the monitor power cord is plugged in to the monitor and a working power outlet.

If the symptom persists, contact an Apple Authorized Service Provider or Apple for further assistance.
Published Date: Feb 20, 2012

Apple Display Packaging Instructions

This article explains how to pack and send your display to Apple for repair.

Note: These steps should only be used once an Apple representative has provided you with authorization to send in your display for repair.

This article has been archived and is no longer updated by Apple.

Paperwork

A form is included in the express shipping package, which should contain the symptom your display exhibits. If a form is not in the express shipping package, write the symptom on a sheet of paper, and include it with the display.

By filling out this form, our technicians can more accurately identify and repair the display.

Apple Display

1. Place the display and form in the express delivery package.
Packaging instructions for the Apple Studio Display and the Apple Cinema Display are available at:

http://www.info.apple.com/support/packing/index.html

All Instructions are in PDF format. Some are also available as QuickTime movies.

2. Return the air-bill included with the express delivery package.
This step is critical. You must return the air-bill so Apple can track the shipment, and make sure it safely arrives at the repair center.

3. **U.S. customers**: Call FedEx (1-800-GO FED EX) to pick up your display.
Canadian customers: Call UPS at 1-866-876-5824 to get a waybill and schedule pick-up of the product. Provide the return address and billing account number:

Apple
7495 Birchmount Rd.
Markham, ON L3R 5G2
Account No: 0078R5

Important: The UPS waybill must include the account number, the dispatch number in the Description field, and you must mark "3rd Party" under the Payment field.

Please allow seven to ten days to complete the repair.

Published Date: Feb 20, 2012

WebObjects 4.5 Oracle Adaptor: Reconnecting After an Oracle Connection Failure

This article describes how to get WebObjects 4.5 Oracle Adaptor to recognize additional error codes, other than the standard six, so that it can detect a connection failure.
This article has been archived and is no longer updated by Apple.

Symptom

The automatic database reconnection feature in WebObjects 4.5 fails to reconnect a client to the host Oracle database.

Solution

There are only six predefined Oracle error codes recognized by WebObjects as connection failures. When any Oracle error code other than these six occurs, the OracleAdaptor method isDroppedConnectionException returns NO/False. By default, when isDroppedConnectionException returns NO, no reconnection is attempted, and the original exception is raised as usual.

For additional error codes to be recognized, they need to be added to the WebObjects Framework and recompiled.

Recognized Oracle Error codes

1. ORA-00028: your session has been killed
2. ORA-00030: user session ID does not exist
3. ORA-00051: time-out occurred while waiting for resource
4. ORA-00060: deadlock detected while waiting for resource
5. ORA-00099: timed out while waiting for resource, potential PDML deadlock
6. ORA-01012: not logged on

Additional information on Oracle error codes is available in Oracle documentation.

Adding Additional Error Codes

To change the default behavior, include this Objective C category to your project, and add the error code. Once the error code is added, Enterprise Object Framework (EOF) will attempt an automatic reconnection.

You must add the `OracleEOAdaptor.framework` to the list of frameworks in your project to recompile your project successfully.

```
------File OracleConnectionErrorAdditions.m----------------


#include <OracleEOAdaptor/OracleAdaptor.h>

@implementation
OracleAdaptor(OracleConnectionErrorAdditions)

- (BOOL)isDroppedConnectionException:(NSException
*)exception
{
   NSDictionary *userInfo = [exception userInfo];
   if (userInfo) {
       int errCode = [[userInfo
objectForKey:OracleErrorKey] intValue];
       // 00028 session killed
       // 00030 user session no longer exists
       // 00051 time out
       // 00060 deadlock
       // 00099 PDML deadlock
       // 01012 not logged on
       switch (errCode) {
           case 28:
```

```
            case 30:
            case 51:
            case 60:
            case 1012:
            case 99:
        // ADD YOUR ERROR CODE HERE. FOR EXAMPLE ORA-01041:
                  //     ORA-01041: internal error. HOSTDEF extension
does not exist

            case 1041:
                return YES;
                // Yes, the exception comes from a dropped connection
            default:
                return NO;
                // adaptor should NOT try to reconnect, and should re-raise the exception

        }
    }
    return NO;
}
@end
```

Published Date: Feb 20, 2012

AppleWorks 6: Locating Newsletter Templates

Creating and locating newsletter templates for AppleWorks 6 has changed from previous versions. Learn where to find newsletter templates.
This article has been archived and is no longer updated by Apple.
In AppleWorks 5 an assistant and stationary item helped in the creation of newsletters. In AppleWorks 6, no newsletter templates are shown when looking at the AppleWorks Templates available in Starting Points.

Additional templates are available from Apple through the Internet including newsletter templates.

Downloading New Templates

1. Connect to the Internet.
2. Open AppleWorks, click the Web tab in the Starting Points window.
3. Click the templates icon.

A window appears with a list of available template types. These include Just for Kids, Special Occasions, For Schools, For Home, For Business, For everyone, and AppleWorks Users Group. Newsletter templates are specifically available in the Just for Kids and For Schools areas.

Additional newsletter templates are available from the AppleWorks Educators' Resources Web site.

http://www.apple.com/education/k12/products/appleworks/ .

Published Date: Feb 20, 2012

Disk First Aid 8.6.1 software and information

This article contains the Disk First Aid 8.6.1 read me file and software links.
This article has been archived and is no longer updated by Apple.

Language/OS Required	Release Date	Version	Read Me	Software
North American English North American English Mac OS 9.x	2001-05-02	8.6.1		685 K
International English International English Mac OS 9.x	2001-05-02	8.6.1		685 K
français French Mac OS 9.x	2001-05-17	8.6.1		699 K
Deutsch German Mac OS 9.x	2001-05-17	8.6.1		681 K
Japanese Japanese Mac OS 9.x	2001-05-24	8.6.1	English	699 K

Hardware Requirements

- none

Software Requirements

- none

Earlier versions of this software may be available at http://download.info.apple.com/

For help with downloading, see article 75098 "Help: Downloading Software." All software available from this site is covered by a software license agreement included with this software.

English

About Disk First Aid 8.6.1

Disk First Aid is a utility that verifies and repairs some problems that may occur on Mac OS Extended format hard disk drives.

Use Disk First Aid if you have any of these problems with a Mac OS Extended format disk:

- When you attempt to install some software from other manufacturers, a message says incorrectly that the disk or volume is locked.
- Some file backup utilities don't recognize the disk or volume.
- You can't start up from a disk because it is extremely fragmented.

System Requirements

Disk First Aid 8.6.1 is intended for PowerPC-based Macintosh computers using the U.S. English version of Mac OS 9.x or later.

Disk First Aid 8.6.1 Enhancements

This version of Disk First Aid repairs certain types of master directory block damage on Mac OS Extended format volumes. The previous version of Disk First Aid identifies the issue but doesn't repair the damage.

Disk First Aid 8.6.1 also improves the compatibility of Mac OS Extended format hard disks with Mac OS X.

This version of Disk First Aid can repair more kinds of problems on a startup hard disk. However, Apple recommends that you start your computer from a different disk (such as a CD or floppy disk) before repairing the startup disk.

Frequently Asked Questions about Disk First Aid 8.6.1

- **Why does my desktop disappear when Disk First Aid 8.6.1 is running?**

  To repair some hard disks safely, Disk First Aid quits all applications, including the Finder. Once the repair is complete, you can quit Disk First Aid to see the desktop.

- **How do I know a hard disk is Mac OS Extended format?**

  Select the hard disk in the Finder and choose Get Info from the File menu. The format information specifies Mac OS Standard or Mac OS Extended.

- **Should I reformat my hard disk after repairing with Disk First Aid?**

  Usually this is not necessary. However, if the hard disk was damaged by an incompatible disk repair utility, Apple recommends that you reformat or initialize the hard disk to ensure the directory structure is not damaged.

  IMPORTANT: initializing erases all the data on the hard disk. Back up your important files first.

  When initializing, choose the low-level format option only if a regular format fails. Use the "zero all data" option only if you have security concerns and you want all traces of previous data removed from the hard disk. These options take longer than the regular format option.

- **Can I use my other disk utilities with a Mac OS Extended format hard disk?**

  Some disk utilities may not be compatible with Mac OS Extended format. Before you use a disk utility with a Mac OS Extended hard disk, please consult the documentation for the utility or contact the vendor for compatibility information.

---

franÃ§ais

Ã propos de S.O.S. Disque 8.6.1

S.O.S. Disque est un utilitaire qui vÃ©rifie et rÃ©pare certains problÃ¨mes pouvant survenir sur les disques durs au format Mac OS Ã©tendu.

Utilisez S.O.S. Disque si vous rencontrez l'un des problÃ¨mes suivants avec un disque dur au format Mac OS Ã©tendu :

- Lorsque vous essayez d'installer certains logiciels d'autres fabricants, un message indique de faÃ§on erronÃ©e que le disque ou volume est verrouillÃ©.
- Certains utilitaires de sauvegarde ne reconnaissent pas le disque ou volume.
- Vous ne pouvez pas dÃ©marrer un disque car il est trÃ¨s fragmentÃ©.

SystÃ¨me requis

S.O.S. Disque 8.6.1 est destinÃ© aux ordinateurs Macintosh PowerPC fonctionnant avec la version franÃ§aise de Mac OS 9.0.4 ou ultÃ©rieure.

AmÃ©liorations de S.O.S. Disque 8.6.1

Cette version de S.O.S. Disque rÃ©pare certains types de dommages du bloc dans le rÃ©pertoire principal sur des volumes Mac OS Ã©tendu. La version prÃ©cÃ©dente de S.O.S. Disque identifie le problÃ¨me mais ne permet pas de le rÃ©parer.

En outre, S.O.S. Disque 8.6.1 amÃ©liore la compatibilitÃ© des disques durs Mac OS Ã©tendu avec Mac OS X.

Bien que cette version de S.O.S. Disque 8.6 puisse rÃ©parer davantage de problÃ¨mes sur un disque de dÃ©marrage, Apple vous recommande de dÃ©marrer votre ordinateur Ã partir d'un disque distinct, tel qu'un CD ou une disquette, avant de rÃ©parer le disque de dÃ©marrage.

Questions frÃ©quemment posÃ©es Ã propos de S.O.S. Disque 8.6.1

- Pourquoi le bureau disparaÃ®t-il pendant le fonctionnement de S.O.S Disque 8.6.1 ?
  Pour rÃ©parer certains disques durs, S.O.S. Disque quitte toutes les applications, y compris le Finder. Une fois la rÃ©paration terminÃ©e, il suffit de quitter S.O.S. Disque pour faire rÃ©apparaÃ®tre le bureau.
- Comment reconnaÃ®tre un disque dur au format Mac OS Ã©tendu ?
  SÃ©lectionnez le disque dur dans le Finder, puis choisissez Lire les informations dans le menu Fichier. Les informations indiquent soit Mac OS standard, soit Mac OS Ã©tendu.
- Faut-il reformater un disque dur aprÃ¨s l'avoir rÃ©parÃ© Ã l'aide de S.O.S Disque ?
  Cela n'est en gÃ©nÃ©ral pas nÃ©cessaire. Toutefois, si le disque dur a Ã©tÃ© endommagÃ© par un utilitaire de rÃ©paration non compatible, Apple vous recommande de reformater ou de rÃ©initialiser ce disque afin de vous assurer que la structure de rÃ©pertoire n'est pas endommagÃ©e.

  IMPORTANT : l'initialisation efface toutes les donnÃ©es du disque ; sauvegardez prÃ©alablement tous vos fichiers.

Lors de l'initialisation, ne choisissez l'option de formatage de bas niveau qu'en cas d'Ã©chec du formatage normal. N'utilisez l'option "donnÃ©es Ã zÃ©ro" que si vous souhaitez, par mesure de sÃ©curitÃ©, effacer toutes traces des donnÃ©es antÃ©rieures. Ces options requiÃ¨rent plus de temps que les options normales.

- Puis-je utiliser d'autres utilitaires avec un disque au format Mac OS Ã©tendu ?
  Certains utilitaires de disque peuvent s'avÃ©rer incompatibles avec le format Mac OS Ã©tendu. Avant d'employer un utilitaire de disque avec un disque dur Mac OS Ã©tendu, veuillez consulter la documentation de l'utilitaire ou contacter le vendeur au sujet des informations de compatibilitÃ©.

Deutsch

Ãber Erste Hilfe 8.6.1

Erste Hilfe ist ein Dienstprogramm, das Probleme vom Volumes im Mac OS Extended Format Ã¼berprÃ¼ft und repariert.

Benutzen Sie Erste Hilfe, falls bei Ihnen eines der folgenden Probleme auftritt:

- WÃ¤hrend der Installation der Software eines anderen Herstellers erscheint fÃ¤lschlicherweise eine Meldung, daÃ das Zielvolume geschÃ¼tzt ist.
- Manche Backup-Programme erkennen die Festplatte oder ein Volume nicht.
- Sie kÃ¶nnen von einem Volume nicht starten, da es stark fragmentiert ist.

Systemvoraussetzungen

Erste Hilfe 8.6.1 ist fÃ¼r Macintosh Computer mit PowerPC Prozessor, die Mac OS 9.0.4 oder neuer benutzen.

Verbesserungen in Erste Hilfe 8.6.1

Diese Version von Erste Hilfe behebt verschiedene Probleme des Master Directory Blocks auf Mac OS Extended Volumes. FrÃ¼here Versionen von Erste Hilfe erkennen dieses Problem, kÃ¶nnen es aber nicht reparieren.

Erste Hilfe 8.6.1 verbessert auch die KompatibilitÃ¤t von Volumes im Mac OS Extended Format mit Mac OS X.

Diese Version von Erste Hilfe kann eine grÃ¶Ãere Anzahl an Problemen mit Startvolumes lÃ¶sen. Bevor Sie jedoch die Reparatur Ihres Startvolumes beginnen, sollten Sie Ihren Computer von einem anderen Volume starten (z.B. CD oder Diskette).

HÃ¤ufig gestellte Fragen Ã¼ber Erste Hilfe 8.6.1

- Warum verschwindet mein Schreibtisch, solange Erste Hilfe 8.6.1 lÃ¤uft?
  Um Volumes sicher zu reparieren, muÃ Erste Hilfe alle Programme inklusive dem Finder beenden. Wenn die Reparatur abgeschlossen ist, kÃ¶nnen Sie Erste Hilfe beenden, um den Schreibtisch zu sehen.
- Woher weiÃ ich, ob ein Volume im Mac OS Extended Format ist?
  WÃ¤hlen Sie im Finder das Volume aus und anschlieÃend im MenÃ¼ "Ablage" den Befehl "Information". Im Informationsfenster wird als Format entweder Mac OS Standard oder Mac OS Extended angezeigt.
- Sollte ich meine Festplatte neu formatieren, nachdem ich sie mit Erste Hilfe repariert habe?
  Normalerweise ist dies nicht notwendig. Wenn jedoch die Festplatte von einem nicht kompatiblen Programm fÃ¼r die Reparatur von Festplatten beschÃ¤digt wurde, sollten Sie die Festplatte neu formatieren oder initialisieren, um auszuschlieÃen, daÃ die Verzeichnisstruktur beschÃ¤digt wurde.

  WICHTIG: Beim Initialisieren werden alle Daten auf Ihrer Festplatte gelÃ¶scht, daher sollten Sie zuerst eine Sicherungskopie aller wichtigen Dateien erstellen.

  WÃ¤hlen Sie bitte nur dann die Option "Speichermedium formatieren" aus, wenn das normale Formatieren nicht funktioniert. WÃ¤hlen Sie nur dann die Option "Volumes mit Leerdaten Ã¼berschreiben", wenn Sie Sicherheitsbedenken haben und Sie alle Spuren der vorherigen Daten von Ihrer Festplatte lÃ¶schen mÃ¶chten. Diese Optionen benÃ¶tigen mehr Zeit als die normalen Formatierungsoptionen.
- Kann ich meine anderen Dienstprogramme fÃ¼r Festplatten mit Volumes im Mac OS Extended Format benutzen?
  Einige Dienstprogramme fÃ¼r Festplatten sind mÃ¶glicherweise nicht mit dem Mac OS Extended Format kompatibel. Bevor Sie ein Dienstprogramm fÃ¼r Festplatten mit einem Volume im Mac OS Extended Format benutzen, lesen Sie bitte die dazugehÃ¶rige Dokumentation oder wenden Sie sich an den HÃ¤ndler, um Informationen zur KompatibilitÃ¤t zu erhalten.

Published Date: Feb 20, 2012

iMac/Cube DVD-ROM Update: Additional Installation Messages

This article includes additional messages that could appear during the installation of the iMac/Cube DVD-ROM Update.

This article has been archived and is no longer updated by Apple.

Symptom

In the "About iMac/Cube DVD-ROM Update" document included in the DVD-ROM Update, only two possible installation messages are mentioned. However, there are eight messages that could appear during the installation process.

Solution

Messages that might appear are listed below.

Different version of Mac OS installed on computer than what is required for update:

- This DVD-ROM Update requires a US-version or an international English version Mac OS. Please choose a different destination disk, or perform a clean installation of a US-version Mac OS.

  Note: The message above appears in the US version of the DVD-ROM Update. Other localize languages have similar messages when the DVD-ROM Update version does not match the Mac OS version.
- This DVD-ROM Update requires a minimum of Mac OS 9.0.4 on the destination disk.

Different model of DVD-ROM drive installed than what is required for update:

- This DVD-ROM Update requires a supported DVD-ROM drive.
- This drive is not available on this system.

Macintosh model is not one requiring the DVD-ROM Update.

- This DVD-ROM Update requires a supported iMac or G4 Cube with a DVD-ROM drive.

DVD-ROM drive does not need to be updated, or has already been updated:

- This drive does not need this update.
- This drive has already been updated.

  Note: Both of these messages are documented in the "About iMac/Cube DVD-ROM Update" document.

Drive Error Message:

- This DVD-ROM drive is not able to be updated. Please contact an Apple Authorized Service Provider.

Published Date: Oct 10, 2016

WebObjects: WebObjects 4.5.1 Post-Installation Instructions

This document describes a number of procedures that should be followed after installing WebObjects 4.5.1 on specific platforms.

Note: This document has been superseded by **WebObjects 4.5.1 Update 2**, which includes all the fixes described below for both Mac OS X 10.0 and later and HP-UX.

This article has been archived and is no longer updated by Apple.

Mac OS X

Important: You must install WebObjects on the same partition that holds your Mac OS X installation. If you do not, WebObjects will not function properly.

There are several issues that are specific to WebObjects 4.5.1 for Mac OS X that arose after the completion of the initial release. Please read through the following discussion so that it is clear what needs to be done to complete your WebObjects 4.5.1 installation on this platform.

In the WebObjectsDeploy_Install.pdf and WebObjectsDev_Install.pdf Installation Guides on the WebObjects 4.5.1 for Mac OS X CD, reference is made to "Mac OS X Server 1.3". The version number is incorrect, and actually refers to Mac OS X Server 10.0.

After installing WebObjects 4.5.1 Developer for Mac OS X, you should download and install **WebObjects 4.5.1 Update 1**. This update is not needed on a Deployment system.

The WebObjects 4.5.1 Update 1 will

1. create the file /System/Library/WebObjects/Configuration/WebServerConfig.plist, which is needed to do a "split install" of your WebObjects application from ProjectBuilderWO on a developer system.

2. update precompiled headers.

3. create the missing documentation links mentioned in the Readme.rtf on the CD. Once this has been done, you can access WebObjects documentation by launching WebObjects Builder and selecting "WebObjects Builder Help" from the Help menu. Help Viewer will then launch and display a page similar to the main page of WOInfoCenter with links to the WebObjects developer's guide, tutorials, reference documentation, release notes, and more. If you prefer to read the documentation in your web browser, you can also access the same page at `/Developer/Documentation/WebObjects/WOHomePage.html`.

HP-UX

Two HP-UX specific problems in the WebObjects adaptors have been discovered in the WebObjects 4.5.1 release. These problems will only affect your deployment if you are running your web server on an HP-UX machine. If you use an HP-UX application server with the web server (and WebObjects adaptor) on another platform, you will not encounter these problems.

The changes required to fix these issues are detailed below. Customers using an HP-UX web server can make these changes and rebuild the WebObjects adaptors to work around these problems. Additionally, new adaptor binaries incorporating these changes will be distributed in a forthcoming WebObjects 4.5.1 update.

1. The adaptor will not talk to wotaskd or application instances.
(Apple reference #2676773) The solution is to replace the original line 62 of Adaptor/nbsocket.c

```
#define WA_wouldBlock(error) (error == EWOULDBLOCK)
```

with the following line

```
#define WA_wouldBlock(error) (error == EWOULDBLOCK || error == EAGAIN)
```

2. The adaptor does not do name lookups properly. (Apple reference #2678427) The solution is to replace the original lines 289 and 290 of Adaptor/hostlookup.c

```
host = (gethostbyname(name) == 0) ?
      &__host : NULL;
```

with the following single line

```
host = gethostbyname(name);
```

After making both of the above changes to the adaptor source, you will need to rebuild and reinstall the adaptor binaries. See `$NEXT_ROOT/Developer/Examples/WebObjects/Source/Adaptors/BuildingInstructions.html` and `$NEXT_ROOT/Developer/Examples/WebObjects/Source/Adaptors/InstallationInstructions.html` for instructions on how to do this.

Published Date: Feb 20, 2012

WebObjects 5: How to Use Oracle JDBC drivers

This document describes the Oracle JDBC drivers and how to use them with WebObjects 5.
This article has been archived and is no longer updated by Apple.

Applicable products

- WebObjects 5.0
- WebObjects 5.1
- WebObjects 5.2
- WebObjects 5.3

Types of JDBC Drivers

Only the thin JDBC driver has been qualified for Mac OS X, Windows 2000, and Solaris.

WebObjects 5.0 and WebObjects 5.1

- Oracle Thin JDBC driver 8.1.7.0.0

WebObjects 5.2

- Oracle Thin JDBC driver 8.1.7.0.0
- Oracle Thin JDBC driver 9.2.0.1.0

WebObjects 5.3

- Oracle Thin JDBC Driver 10.1.0.x

See technical document 72598 "**WebObjects Compatibility Guide**" for all other database JDBC support.

Where to Obtain Oracle JDBC Drivers

The Oracle JDBC drivers are available from Oracle's website (http://otn.oracle.com/software/content.html). You need an Oracle technet account to download the drivers. (You can set up an account on Oracle's website for free.)

Windows 2000

Download the thin JDBC drivers for both JDK 1.3.x and JDK 1.1.x.

The files are:

- For JDK 1.1.x , the thin driver is: **classes111.zip**
- For JDK 1.3.x, the thin driver is: **classes12.zip**

Mac OS X

Mac OS X 10.0.x

- Download the Oracle 8i 8.1.7 JDBC thin driver for Solaris (JDK 1.2.x only)(classes 12.zip).

Mac OS X 10.2

- Follow the instructions from the Oracle download site to download either the Oracle 8i or Oracle 9i thin JDBC driver for Mac OS X 10.2.

Please note that you should use the Oracle 9i thin JDBC driver when accessing the Oracle 9i database to avoid the possible ORA-00600 error.

Mac OS X 10.4

Follow the instructions from the Oracle download site to download the Oracle 10 g thin JDBC driver for JDK 1.4 (ojdbc14.jar).

Solaris 2.8

- Follow the instructions from the Oracle download site to download either the Oracle 8i or Oracle 9i thin JDBC driver.
- The Oracle 9i thin JDBC driver has been qualified for WebObjects 5.2 only.

Where to Install the Oracle JDBC drivers

This section contains the proper location for the Oracle JDBC drivers. The applicable platform is listed in bold.

1. The JDBC driver (classes 12.zip) must be installed where the Java VM can find it. The simplest procedure is to add the JDBC driver (zip file) to the Java VM's "extensions".

   (All Platforms)

   Examples

   Windows 2000
   The Java VM "extension" directory is generally C:\\jdk1.3.x\\jre\\lib\\ext\\ . However, the exact directory depends on where JDK 1.3.x is installed on your computer.

   Mac OS X - WebObjects 5.1 to 5.3
   Place the JDBC file in **`/Library/Java/Extensions`**

   Mac OS X - WebObjects 5.0 only
   Place the JDBC file in **`/Library/Java/Home/lib/ext/`**

   Solaris
   Place the JDBC file in **`/usr/java/jre/lib/ext`**

2. Install the JDK 1.1 driver in **`$NEXT_ROOT/Library/Java`** and modify the JavaConfig.plist file accordingly.

   Windows 2000 only

   When doing development on Windows 2000, the situation is somewhat more complicated. The WebObjects 5 runtime uses a Java 2 VM and requires a JDK 1.3.x compatible JDBC driver just like Mac OS X and other platforms. However, EOModeler uses the Java Bridge, which only supports JDK 1.1 on Windows and therefore requires a JDK 1.1 compatible driver. Consequently, in order to do development and testing on Windows 2000, two versions of a particular JDBC driver are needed. One that is JDK 1.3 compatible for the WebObjects 5 runtime, and another that is JDK 1.1 compatible for use by EOModeler and the Java Bridge.

   To use a JDBC 1.1 driver with EOModeler on Windows 2000, you should add it to the JavaConfig.plist. This is the Oracle driver **classes111.zip** in this case. If your WebObjects installation is not in **C:/Apple**, substitute the appropriate path below. The Unix notation of "/" for the directory separator is used in the samples

   a. Log in with an administrator account.
   b. Copy classes111.zip to `C:/Apple/Library/Java/`
   c. Edit the file `C:/Apple/Library/Java/JavaConfig.plist`
   d. Add `$NEXT_ROOT/Library/Java/classes111.zip` to the entry for the "DefaultClasspath". Items in the list should be separated by a semicolon ";". Use the term "$NEXT_ROOT" literally, following the pattern of the other entries.

   Note: If Windows is used only as a deployment platform, then the JDK 1.1 compatible driver is not needed.

Setting up the proper connection dictionary for EOModeler and Oracle JDBC drivers

The EOModeler login panel shows three textfields:

Username: Enter the username such as `scott`

Password: Enter the password such as `tiger`

URL: By definition, the JDBC URL has the following format:

`jdbc:oracle:drivertype:user/password@database`

drivertype - Is thin for the Oracle thin driver, or oci8 if you have downloaded the OCI driver that includes the jdbcoci8.dll file. The oci8 driver can access either an Oracle7 or an Oracle8 server.

user/password - Is not needed in the EOModeler URL textfield, since it is already specified in the two other textfields.

@database - For JDBC OCI drivers: An entry in the tnsnames.ora file.

For JDBC Thin: A string of the form **host:port:sid**

Example 1: Oracle JDBC Thin driver

Username: scott

Password: tiger

URL: jdbc:oracle:thin:@myServer:1521:myServerID

`myServer` is the hostname

`myServerID` is an Oracle sid defined in your **`tnsnames.ora`** file.

Note: If you installed the OCI client libraries on Windows, the tnsnames.ora file resides in: $ORACLE_HOME/network/admin

Troubleshooting connection errors

- If your connection dictionary is incorrect, you may see the following error:

  SQLException raised when connecting : java.sql.SQLException: ORA-06401: NETCMN: invalid driver designator

  Check if you have the proper drivertype in your URL, or if the @database entry matches an alias in your tnsnames.ora file, and so forth.

- **Windows 2000** - If you did not update your Default Classpath in the file JavaConfig.plist to include the classes111.zip (JDBC driver), you may see the following error:<

  JDBC connection failed for driver :'oracle.jdbc.driver.OracleDriver'. Driver not found in Java Runtime! Please verify your CLASSPATH environment variable. The current CLASSPATH for your application is :C:\\Apple\\Library\\Frameworks\\JDBCEOAdaptor.framework\\Resources\\Java\\.;/Library/Java; C:/Apple/Local/Library/Java;C:/Apple/Library/Java;C:/Apple/Library/JDK/lib/classes.zip; C:/Apple/Library/Frameworks/JavaVM.framework/Classes/awt.jar;C:/Apple/Library/JDK/lib/swingall.jar

- WebObjects 5.2 - If you use an old Oracle 8i JDBC driver to access an Oracle 9i database server, you may see the following error:

  ORA-00600: internal error code, arguments: [19944], [], [], [], [], [], [], []

  Make sure that you are using an Oracle 9i JDBC driver to access the Oracle 9i database server.

Published Date: Feb 20, 2012

WebObjects 5: How to Convert WebObjects 4.5 EOModel Files to WebObjects 5

This document describes how to convert WebObjects 4.5 EOModel files into a compatible format for WebObjects 5.
This article has been archived and is no longer updated by Apple.

Overview

WebObjects 4.5/4.5.1 provides a choice of adaptors depending on your development platform, such as Sybase, Infomix, Oracle, or FlatFile adaptor. In WebObjects 5, these model files need to be converted to a compatible format depending on the type of adaptor you have selected (JDBC or JNDI).

This document provides the steps needed to convert WebObjects 4.5 EOModel files into WebObjects 5 EOModel files for the JDBC adaptor and supported databases. See technical document 72598 "**WebObjects Compatibility Guide**" for additional information on the list of supported databases for each WebObjects version.

Setting up the New Connection Dictionary

The EOModeler should always start from a known good state before converting EOModels. The best way to do this is to quit the WebObjects 5 EOModeler, if open, before proceeding with the conversion steps listed below.

1. Open a 4.5 EOModel file with WebObjects 5 EOModeler.

   Important: Do not click on any item in the model file since the adaptor used in WebObjects 4.5 is not available in WebObjects 5. Otherwise, an alert will appear when you click on an item in the model. After closing the error panel, you can proceed with viewing other entities. Below is a typical error message:

   "Unable to load the OpenBaseLite adaptor: classForAdaptorNamed:: Unable to get the name of the class to instantiate an adaptor with the name OpenBaseLite. The possible causes for this error are: you don't have the adaptor installed on your system, you are on PDO and have not linked the adaptor into your application, or the info dictionary for this adaptor is corrupted."

2. Choose Model > Switch Adaptor.

3. Select JDBC from the list of adaptors.

4. Enter the JDBC connection dictionary information. For help setting the Oracle JDBC connection dictionary, see technical document 75145, "**WebObjects 5: How to use Oracle JDBC Drivers**". For other databases, consult your JDBC driver documentation.

5. Save the new model file.

6. Close the model file.

7. Verify the connection dictionary is set correctly.

Re-open the model file and choose Model > Set Adaptor Info.

WebObjects 5.0 Only

Do not use the inspector to see the connection dictionary on the root item in the entity list. If you do, you must quit EOModeler and re-open the model file before you can switch to a new adaptor, or set a new connection dictionary (Apple Reference 2700580). This issue only occurs in WebObjects 5.0, and has been corrected in WebObjects 5.0 Update 1 as well as WebObjects 5.1 and WebObjects 5.2.

Setting the Correct Attributes

After completing Step 1 in Setting up the New Connection Dictionary for each entity in the model file, use the Add Column pop-up menu in the Attributes window, and add the column "Value Class (Java)" and "Value Type" to make the Value Type and Value Class visible. The Value Type needs to be set for any object whose superclass is Number. For example, if the Java Class for the attribute is BigDecimal, then the JDBC Value Type should be set manually to B.

Additional reference:

For a complete discussion of value types, see (http://developer.apple.com/techpubs/webobjects/UsingEOModeler/4WorkingWithAttributes/chapter_4_section_11.html).

Known Issues With Attribute Settings

Converting Oracle CHAR types to JDBC

Check that EOModeler does not convert string attributes of CHAR types into VARCHAR2 or VARCHAR. In addition to the CHAR external type, you also need to manually set the JDBC value type to 'c'.

Converting Oracle9i TIMESTAMP type to JDBC (WebObjects 5.2 only)

Apple Reference 3157719

Using the Oracle 9.2.01 JDBC Driver, EOModeler incorrectly reverse engineers the TIMESTAMP external data type to an internal type `NSData`.

Manually fix this issue by using the following settings:

External type: TIMESTAMP

Internal type: NSTimestamp

Value type: T

Important: Installing WebObjects 5.2.1 resolves this issue. Using WebObjects 5.2.1, EOModeler can now correctly handle the Oracle 9i external time TIMESTAMP

Converting DATE's from OpenBase (in WebObjects 4.5/4.5.1) to JDBC

Apple Reference 2712976

WebObjects 5.0

When switching your adaptor from OpenBase to JDBC, make sure the external type for the date attributes are defined as "datetime". If they are not, make the appropriate change in the model and in the database. Otherwise, an INSERT operation will fail.

WebObjects 5.1 or WebObjects 5.2

This issue has been corrected in WebObjects 5.1 and 5.2. To convert DATES from OpenBase to JDBC, use the following settings:

External type: datetime

Internal type: NSTimestamp

Value type: T

External type: date

Internal type: NSTimestamp

Value type: D

Troubleshooting

If a WebObjects 4.5 model file fails to open with the WebObjects 5 EOModeler Tool

If WebObjects 4.5 or 4.5.1 Development Environment is available:

1. Open the model file using the EOModeler from WebObjects 4.5.
2. Switch the Adaptor type to "none"
3. Save the model file.
4. Open the modified model file using the EOModeler from WebObjects 5
5. Complete the conversion process described in sections Setting the Connection Dictionary and Setting the Correct Attributes.

Steps if only WebObjects 5 Development Environment is available:

Mac OS X

1. Locate the Model file in the Finder.
2. Choose Show Package Contents from shortcut menu. (Control-click the file's icon). A new Finder window appears with an index.eomodeld file.
3. Open the index.eomodeld file using TextEdit.
4. Locate the line that contains "adaptorName = your_old_adaptor".
5. Change your_old_adaptor to JDBC.
6. Save the file, then restart EOModeler. EOModeler can now open the modified model file.
7. Complete the conversion process described in sections Setting the Connection Dictionary and Setting the Correct Attributes.

Microsoft Windows 2000

1. Open the index.eomodeld file for your model using TextEdit.
2. Find the line that contains "adaptorName = your_old_adaptor".
3. Change your_old_adaptor to JDBC.
4. Save the file, then restart EOModeler. EOModeler can now open the modified model file.
5. Complete the conversion process described in sections Setting the Connection Dictionary and Setting the Correct Attributes.

Published Date: Feb 20, 2012

Canon Inc.: Support and Upgrades

This article contains support links and software upgrade links for Canon, Inc. products sold through the Apple Store.
Important: All non-Apple products sold through the Apple Store are supported by the vendor of the product, not by Apple.
This article has been archived and is no longer updated by Apple.

Company:	Canon Inc. http://consumer.usa.canon.com/ +1 757-413-2848

Product:	CanoScan N1240U
Product Description:	Scanner
Support Site:	Support Site
Product Updates:	http://consumer.usa.canon.com/techsupport/downloads/index.html
FAQ:	
Product:	CanoScan 670U
Product Description:	Scanner
Support Site:	Support Site
Product Updates:	http://consumer.usa.canon.com/techsupport/downloads/index.html
FAQ:	

Software Update Information

If you want to be notified automatically of software updates for this product, or other third-party products, you can either use the Version Tracker Web site at:

http://www.versiontracker.com

or the AppleUpdate Web site, which also tracks international updates, at:

http://AppleUpdate.com

Published Date: Feb 20, 2012

WebObjects 5: Technical Specifications

This document provides the technical specifications for WebObjects 5.

Additional information on the WebObjects is available at: http://www.info.apple.com/usen/webobjects/

This article has been archived and is no longer updated by Apple.

System Requirements

Development platforms

- Mac OS X 10.0
- Windows 2000 Pro

Deployment platforms

WebObjects applications are designed to work with any Java 2 Platform, Standard Edition 1.3 runtime environment, using JDBC 2.0 for universal database connectivity. The following platforms are fully qualified and supported:

- Mac OS X Server 10.0
- Windows 2000 Pro
- Solaris 8

Supported data sources

- Oracle 8i

Automated data access

Object-relational mapping

- Eliminates the need to write JDBC or SQL code

- Manages one-to-one, one-to-many, many-to-many, and inter-database relationships

- Automatically handles object fetching, caching, and committing

- Provides automatic transaction management, including support for undo, redo, commit, and rollback

- Allows you to embed referential integrity constraints directly into the model rather than depending on programmer conformance

Database independence

- Enables developers to replace the underlying database by simply updating the model, without changing any code

- Lets you customize the object model for a particular application without having to modify the database

- Supports the seamless incorporation of multiple databases into a single object model

XML interchange

- Allows your applications to easily consume and generate XML data streams

- Interoperates with other XML-based applications

- Lets you manage XML just like any other data source

- Generates dynamic SMIL for use in multimedia applications

Streamlined web-page generation

WebObjects template engine

- Allows the creation of virtually any form of markup: HTML, XML, SMIL, and others

- Hides the actual object model from the web designer, preventing scripting errors from corrupting the database

- Works with the bundled WebObjects Builder (which understands the object model), or with standard HTML authoring tools

Reusable components

- Integrates templates, mappings, and related code into a single reusable package
- Supports the updating of mappings independently of the web-page design
- Includes dozens of ready-to-use system components
- Allows you to easily create and reuse your own components

Built-in session management

- Eliminates the need to write your own session management code
- Does not require cookies on the user's system
- Allows developers to manage sessions at the object level rather than the HTTP level

Integrated tool support

Project Builder

- Provides a broad array of prebuilt application templates for rapid startup
- Includes powerful assistants for creating Direct to Web and Direct to Java Client applications
- When run on Mac OS X, supports CVS and graphical debugging

Direct to Web/Direct to Java Client

- Enables quick creation of front ends for browsing, searching, and editing any database
- Derives relevant entities and fields heuristically, directly from the object model
- Scalable user interface dynamically adjusts to any number of entries
- Lets you use a Java applet to easily customize the layout and appearance
- Simplifies maintenance by making it possible to reuse framework code rather than generating application-specific code

Enterprise Object Modeler

- Allows you to extract and view a schema from any JDBC database, and to write new schemas
- Lets you graphically view and edit entity-relationship diagrams
- Cleanly integrates business logic with fine-grained data objects

WebObjects Builder

- Lets you freely view and edit HTML in either markup or preview mode
- Makes it easy to quickly assemble prebuilt or custom WebObjects components into a single dynamic page
- Enables you to graphically map components onto the underlying object model

Interface Builder

- Helps you rapidly generate and test user interfaces in Swing (Java, cross-platform) and Cocoa (Objective-C or Java, MacOS X
- Allows you to graphically create and edit connections between user interface widgets and the underlying database objects
- Ensures an Aqua-compliant look and feel on Mac OS X

WebObjects Monitor

- Makes it possible to remotely view and manage application server instances
- Generates statistics of server usage patterns

Record and Playback Manager

- Lets you record web sessions and store them for testing purposes

- Permits the scheduling of a single playback or groups of playbacks for testing across multiple clients

- Allows you to view graphical displays of results

- Supports access from any web browser

Comprehensive desktop application support

Abstract interface management layer

- Automatically handles caching and synchronization of the user interface with the underlying frameworks

- Avoids database roundtrips for many operations by providing a local object store

- Supports both Swing (for Java 2) and Cocoa (for Mac OS X)

- Supports rich media types, including QuickTime movies and RTSP streams

Three-tier Java client support

- Delivers all data over the HTTP server for maximum reach and scalability

- Handles all session management, transport, and data access transparently with the underlying frameworks

- Gives you the optimal tradeoff between performance and security by letting you freely move business logic between a client and the application server

- Works with either browser-based applets or stand-alone Java applications

Two-tier Cocoa clients on Mac OS X

- Provides a fully native UI that's tightly integrated with Mac OS X technologies

- Includes sophisticated multilingual string manipulation using the Cocoa text engine

- Ensures that stand-alone applications access the database directly, without requiring a web server

Straightforward pure-Java deployment

Java 2 compatibility

- Runs on any Java 2, Standard Edition v1.3 virtual machine*

- Supports full access to all Java 2 APIs, including RMI/IIOP and JNDI

- Provides easy interoperability with other Java applications

*** Note:** WebObjects 5 is officially qualified for use only on Mac OS X, Windows 2000 Pro, and Solaris 8 using Oracle 8i with JDBC 2 and the Java 2 Platform, Standard Edition 1.3.

Flexible, low-cost licensing

- Requires only one license per machine, regardless of platform, speed, or number of processors

- Includes no restrictions on the number of transactions, application instances, or threads

- Each license includes full database connectivity and integration support

Reliable, scalable deployment services

- Lets you easily add servers using a variety of prebuilt scheduling mechanisms

- Includes no restrictions on the number of transactions, application instances, or threads

- Allows you to run both WebObjects 4.5.1 and WebObjects 5 applications on the same system

Published Date: Feb 19, 2012

WebObjects: Using WebObjects Log Files

This document explains how to read and use WebObjects 4.5.1 and WebObjects 5.0 log files using Solaris, Microsoft Windows NT or Windows 2000, and Mac OS X.
This article has been archived and is no longer updated by Apple.
Before you start: In order to access WebObject log files you need to have root or administrator access to the WebObjects application server.

The location of the wotaskd log file varies depending on the computer operating system and version of WebObjects used. The table below lists the location of the wotaskd log file.

	Windows 2000	Solaris	Mac OS X
WebObjects 4.5.1	Event Viewer	/tmp/wotaskd.log	/var/log/webobjects.log
WebObjects 5.0	Event Viewer	none by default. See "Creating a wotaskd log file on Solaris running WebObjects 5.0", below for how to specify.	/var/log/webobjects.log

Using tail (Solaris and Mac OS X)

The tail command is used to view the last lines of a file from a terminal window. This is helpful since WebObjects processes add the most recent information into the last lines of the log file. Three options are described in this section, tail, tail -f, and tail -N.

`tail`

Example: `tail webobjects.log`

If the tail command is used without any options, it displays the last ten lines of a text file on the computer monitor.

`tail -f`

Examples: `tail -f webobjects.log`

Solaris: `tail -f /tmp/wotaskd.log`
Mac OS X: `tail -f /var/log/webobjects.log`

When used with the -f option, tail continues to run and displays all output on the screen. The -f option is very useful when trying to determine when something is happening.

`tail -N`

Where `N` is a number of lines.

Examples: `tail -50 webobjects.log`

Solaris: `tail -50 /tmp/wotaskd.log`
Mac OS X: `tail -50 /var/log/webobjects.log`

The example above displays the last 50 lines of the log file on the computer monitor. It might be necessary to use the more command in conjunction with the line number option to ensure all the output is visible on the computer display. The space bar is used to display the next screen of output.

Example of using `tail` **with** `more`**:** `tail -50 webobjects.log | more`

Additional information on using the tail command is available in the tail manpage.

Example: `man tail`

Using the Event Viewer (Microsoft Windows NT and Windows 2000)

The Event Viewer is used on Microsoft Windows NT and Windows 2000 to view log files for running processes. However, the Event Viewer is accessed differently on Windows NT than on Windows 2000.

Microsoft Windows NT

1. Choose Programs -> Administrative Tools (Common) -> "Event Viewer" from the Start Menu.
2. Choose System from the Log Menu.
3. Double-click machd, nmserver, or pbs to view their contents

Microsoft Windows 2000

1. Choose Settings -> Control Panels
2. Open Event Viewer
3. Click the Tree tab
4. Select System Log
Several columns appear in the window.
5. Click Source to sort the Source column.
The source column contains the process that made the log entry.
6. Double-click machd, nmserver, or pbs to view their contents.

Creating a wotaskd log file on Solaris running WebObjects 5.0

By default, the output of `wotaskd` is redirected to `/dev/null` which means the output is not stored. In order to store the output of wotaskd, the output needs to be redirected to a file.

1. Edit /etc/rc2.d/S79WOServices
2. Locate the line of the file that starts `wotaskd`
3. Change the line from /dev/null to `/tmp/wotaskd.log`
This redirects the output of `wotaskd` to the `/tmp/wotaskd.log` file.

Example:

Before:

```
 "$WOSERVICE" -appPath "$WOTASKD" -WOPort "$PORT" >/dev/null 2>&1 &
```

After:

```
 "$WOSERVICE" -appPath "$WOTASKD" -WOPort "$PORT" >/tmp/wotaskd.log 2>&1 &
```

Important: You must restart wotaskd in order for this change to take effect.

The commands for stopping and restarting wotaskd on Solaris are:

```
/etc/rc2.d/S79WOServices stop
```

```
/etc/rc2.d/S79WOServices start
```

Published Date: Oct 10, 2016

LaserWriter Pro 810, 600, 630: Generating a Startup Page

This document explains how to generate a LaserWriter Pro 600, LaserWriter Pro 630, and LaserWriter 810 startup page. It also provides a sample startup page for the printers.

This article has been archived and is no longer updated by Apple.

Generating the Startup Page

- The startup page for the LaserWriter Pro series is automatic.
- Turning the printer off and then back on generates the startup page.
- The startup page can be disabled or enabled by using the Apple Printer Utility.

Figure 1 Startup page for the LaserWriter Pro 600 and 630.

Note: The model information and types of connections are different on the LaserWriter Pro 600 and 630 startup page.

Figure 2 Startup page of the LaserWriter Pro 810.

Published Date: Feb 20, 2012

LaserWriter 12/640, 12/600, 12/660, 16/600, 4/600 PS: Generating a Startup Page

This document explains how to generate a startup page for the LaserWriter 12/640 PS, Color LaserWriter 12/600 PS, Color LaserWriter 12/660 PS, and LaserWriter 4/600 PS printer. It also provides a sample startup page for the printers.

This article has been archived and is no longer updated by Apple.

Generating the Startup Page

- The startup page for the LaserWriter Pro series is automatic.
- Turning the printer off and then back on generates the startup page.
- The startup page can be disabled or enabled by using the Apple Printer Utility.

Figure 1 Startup page for the LaserWriter 12/640 PS

Note: The startup page is automatically generated, by default, on startup. See Related Documents for information on turning off the startup page.

Figure 2 Startup page of the Color LaserWriter 12/600 and 12/660 PS

Figure 3 Alternate startup page for the Color LaserWriter 12/600 PS and 12/660 PS

Notes:

1. The Color LaserWriter 12/600 PS and Color LaserWriter 12/660 PS startup pages are identical except for the model information and amount of RAM.

2. The Color LaserWriter 12/600 PS and Color LaserWriter 12/660 PS have more than one test page. You can select which page, if any, you want to print at startup using the Apple Printer Utility.

Figure 4 Startup page for the LaserWriter 16/600 PS.

Figure 5 Startup page for the LaserWriter 4/600 PS

Note: The LaserWriter 4/600 PS has no power switch, you must unplug the printer to generate a startup page.

Related documents

30783 LaserWriter 12/640: Disabling the Startup Page
20663 LaserWriter Printers: Renaming and Turning Off Startup Page

Published Date: Feb 20, 2012

WebObjects: Mac OS X 10.1 Compatibility Statement

This document contains the WebObjects and Mac OS X 10.1 compatibility statement.
This article has been archived and is no longer updated by Apple.

WebObjects and Mac OS X 10.1

Apple has released **WebObjects 5 Update 3** to enable users to upgrade their Mac OS X systems to Mac OS X 10.1 and continue using WebObjects 5. After upgrading the operating system to 10.1, you must also download and install the Mac OS X 10.1 Development Tools, which are available from **Apple Developer Connection**, before installing WebObjects 5 Update 3.

Due to several incompatibilities between Mac OS X 10.1 and WebObjects 4.5.1, you should not upgrade your WebObjects 4.5.1 systems from Mac OS X 10.0.4 at this time. Apple is hard at work on an update to WebObjects 4.5.1 that will resolve the known incompatibilities and allow developers to upgrade their WebObjects 4.5.1 systems to Mac OS X 10.1. This update is expected to be available soon.

Published Date: Oct 10, 2016

Macintosh Diagnostic Starter Kit: Test Disc 2 CD Not a Startup Disc

This document explains why Test Disc 2 of the Macintosh Diagnostic Starter Kit cannot be used as a startup disc.

This article has been archived and is no longer updated by Apple.

Symptom

Test Disc 2 of the Macintosh Diagnostic Starter Kit cannot be used as a startup disc.

Product affected

- Macintosh Diagnostic Starter Kit

Solution

Test Disc 2 is not designed to be used as a startup disc. It is designed to be used in conjunction with the MacTest Pro CD when testing a CD-ROM disc drive. Test Disc 2 cannot be used on itself or used as a startup disc. When running the CD-ROM test with MacTest Pro, you will be prompted for the Test Disk 2 CD to do further testing.

Published Date: Feb 20, 2012

WebObjects 5: WebObjects 5 Update 3 Overview

This document contains an overview and download information for Apple's Update 3 for WebObjects Release 5. This update corrects the known incompatibilities between WebObjects 5 and Mac OS X 10.1 and is required on that platform. This update should not be installed on Mac OS X versions earlier than 10.1.

The WebObjects Current Patch List, document 70037, contains information on all available patches and updates for all versions of WebObjects. Read this document if you're not sure which patches you need on your system.

Related Documents

70037 WebObjects Current Patch List

This article has been archived and is no longer updated by Apple.

IMPORTANT

WebObjects 5 Update 3 includes an API change which corrects an incompatibility between WebObjects 4.5(.1) and WebObjects 5. This change will also be made in future versions of WebObjects. Specifically, the return type of WORequest.formValueForKey() has been changed to Object. Due to the nature of Java, an application that uses this method which was built using a version of WebObjects 5 prior to Update 2 will generate exceptions if it is run on a system with WebObjects 5 Update 2 or later installed. These applications will need to be rebuilt with minor source code changes to run on systems with WebObjects 5 Update 2 or later installed. This change is further documented below as Apple Reference #2736189.

Language/OS Required	Release Date	Version	Read Me	Software
Any language (multicountry) Mac OS X 10.1 **Developer Update**	2001-10-22	1.0	English	Developer Update 14.6 MB
Any language (multicountry) Mac OS X 10.1 **Deployment Update**	2001-10-22	1.0	English	Deployment Update 10.6 MB

WebObjects 5 Update 3 for Mac OS X (Server) 10.1

Important: There are two mutually exclusive updates for this platform. If you have WebObjects 5 Developer installed on Mac OS X 10.1, you need WebObjects 5 Developer Update 3. If you have WebObjects 5 Deployment installed on Mac OS X Server 10.1, you need WebObjects 5 Deployment Update 3. You do not need both on any system.

This update includes all changes made in WebObjects 5 Updates 1 and 2. Therefore, you do not need to install either of the earlier WebObjects 5 updates before installing this one. If you already have one or both of the earlier updates installed on your system, you can install WebObjects 5 Update 3 on top of them.

This update is available through the Software Update feature of Mac OS X. If you use this method, only the proper update for the software which you have installed on your system will be visible and available for download. If you prefer to download and install the package manually, follow the instructions below.

Note: WebObjects 5 Deployment Update 3 requires Mac OS X Server 10.1 or later. WebObjects 5 Developer Update 3 requires Mac OS X 10.1 or later as well as the Mac OS X 10.1 Development Tools (Not the December 2001 Mac OS X 10.1 Developer Tools). If you have not yet updated to the correct version of Mac OS X (Server) and Tools, you must do so before installing WebObjects 5 Update 3. The Mac OS X 10.0.1 and Mac OS X 10.1 Development Tools images are still available on the Apple Developer web site.

Note: If you are creating a new Mac OS X WebObjects 5 development system, you should install the software in the following order:

1. Mac OS X 10.1
2. Mac OS X 10.1 Development Tools
3. WebObjects 5 Developer
4. WebObjects 5 Developer Update 3

If you are upgrading an existing Mac OS X 10.0.x WebObjects 5 development system, you should install the software in the following order:

1. Mac OS X 10.1 upgrade
2. Mac OS X 10.1 Development Tools
3. WebObjects 5 Developer Update 3

Important: Whether you are using Software Update or installing the update manually, you must be logged in as "root" user in order to perform the installation. Logging in as "Administrator", or authenticating as "root" is insufficient. Failure to follow this requirement will result in an installation failure. You must also ensure that no WebObjects or EOF applications are running during the installation of the update.

Manually Installing WebObjects 5 Developer Update 3 on Mac OS X 10.1

These instructions are for manually downloading and installing WebObjects 5 Developer Update 3. If you are installing using Software Update, see the section titled "WebObjects 5 Update 3 for Mac OS X 10.1", above.

Note: This update requires Mac OS X 10.1 or later. If you have not updated to this version of Mac OS X, you must do so before installing WebObjects 5 Update 3.

1. Download WO5MacOSXDevUpdate3.dmg.bin, the disk image containing the update installer for Mac OS X 10.1.

The update is available from:

FTP: ftp://ftp.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/webobjects/patches/5.0/WO5MacOSXDevUpdate3.dmg.bin

HTTP:
http://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/webobjects/patches/5.0/WO5MacOSXDevUpdate3.dmg.bin

Stuffit Expander should automatically expand the .bin, leaving WO5MacOSXDevUpdate3.dmg.

2. Double-click WO5MacOSXDevUpdate3.dmg.
Disk Copy will mount the update disk image as "WebObjects 5 Developer Update 3 for Mac OS X" on your Desktop.

3. Double-click the "WebObjects 5 Developer Update 3 for Mac OS X" icon to view the disk image in Finder.

4. Double-click on WO5MacOSXDevUpdate3.pkg.
The Authorization panel opens.

5. You need to install the update as root. If you do not have the Administrator password, see your system administrator. Click the lock icon at the bottom left of the panel to authenticate as the root user. Enter Name: "root" and Password: "<root password>", then click OK.

Important: You have to be logged in as "root" user in order to perform the installation. Logging in as "Administrator", or authenticating as "root" is insufficient. Failure to follow this requirement results in an installation failure.

6. Click Continue in the Introduction panel.

7. Read the software license agreement then click Continue.
To agree to the license and continue the installation, click Agree.

8. Select the volume containing Mac OS X and WebObjects 5 Developer, then click Continue.

9. Make sure that there are no WebObjects or EOF applications running.

10. Click Install to proceed with installation. The Installer window displays information about the progress of the installation, which may take several minutes.

11. Restart your computer.

Manually Installing WebObjects 5 Deployment Update 3 on Mac OS X Server 10.1

These instructions are for manually downloading and installing WebObjects 5 Deployment Update 3. If you are installing using Software Update, see the section titled "WebObjects 5 Update 3 for Mac OS X 10.1", above.

Note: This update requires Mac OS X Server 10.1 or later. If you have not updated to this version of Mac OS X Server, you must do so before installing WebObjects 5 Update 3.

1. Download WO5MacOSXDepUpdate3.dmg.bin, the disk image containing the update installer for Mac OS X Server 10.1.

The update is available from:

FTP: ftp://ftp.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/webobjects/patches/5.0/WO5MacOSXDepUpdate3.dmg.bin

HTTP:
http://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/webobjects/patches/5.0/WO5MacOSXDepUpdate3.dmg.bin

Stuffit Expander should automatically expand the .bin, leaving WO5MacOSXDepUpdate3.dmg.

2. Double-click WO5MacOSXDepUpdate3.dmg.
Disk Copy will mount the update disk image as "WebObjects 5 Deployment Update 3 for Mac OS X" on your Desktop.

3. Double-click the "WebObjects 5 Deployment Update 3 for Mac OS X" icon to view the disk image in Finder.

4. Double-click on WO5MacOSXDepUpdate3.pkg.
The Authorization panel will open.

5. You need to install the update as root. If you do not have the Administrator password, see your system administrator. Click the lock icon at the bottom left of the panel to authenticate as the root user. Enter Name: "root" and Password: "<root password>" and click the OK button.

Important: You have to be logged in as "root" user in order to perform the installation. Logging in as "Administrator", or authenticating as "root" is insufficient. Failure to follow this requirement will result in an installation failure.

6. Click the Continue button in the Introduction panel.

7. Read the software license agreement and then click the Continue button. To agree to the license and continue the installation, click the Agree button.

8. Select the volume that contains Mac OS X Server and WebObjects 5 Deployment and then click the Continue button.

9. Make sure that there are no WebObjects or EOF applications running.

10. Click the Install button to proceed with installation. The Installer window displays information about the progress of the installation, which may take several minutes.

11. Restart your computer.

Corrected in WebObjects 5 Update 3

OpenBase JDBC drivers installed in the wrong java home dir for Mac OS X 10.1

Apple Reference # 2737345

ISSUE:

Mac OS X 10.1 includes an updated Java 1.3.1 VM, which has its Java home extensions directory in a different location than the 1.3 VM included with Mac OS X 10.0.x. WebObjects applications can therefore not find the OpenBase JDBC drivers after installing WebObjects 5 on Mac OS X 10.1.

RESOLUTION:

During installation of this update, a post-install script copies the OpenBase JDBC drivers to the new 1.3.1 JVM extensions directory (/Library/Java/Extensions).

WOAssistant doesn't work on 10.1

Apple Reference # 2767516

ISSUE:

When creating a new project, the dialogs to add frameworks and models to the project did not function properly. The predefined lists could not be modified.

RESOLUTION:

The framework and model lists can now be modified as expected.

Creating Java Client application fails on 10.1

Apple Reference # 2768399

ISSUE:

Java Client projects cannot be created. The project setup fails, which appears in the GUI as though it never completes. (Project Builder does not hang.)

RESOLUTION:

This problem has been corrected.

Need updated java eopalette to work with 10.1

Apple Reference # 2779596

ISSUE:

There are incompatibilities in Interface Builder between Mac OS X 10.0.x and Mac OS X 10.1.

RESOLUTION:

The java eopalette has been upgraded to work with Interface Builder on Mac OS X 10.1.

WebObjects Builder broken after upgrading to 10.1

Apple Reference # 2780028

ISSUE:

The upgrade installer for Mac OS X 10.1 removes HTMLEditing.framework from the system. Since WebObjects Builder depends on this framework, it no longer runs. Upon launching WebObjects
Builder, you see the following error message:

```
dyld: /Developer/Applications/WebObjectsBuilder.app/Contents/MacOS/WebObjects Builder can't open library:

/System/Library/PrivateFrameworks/HTMLEditing.framework/Versions/A/HTMLEditing

(No such file or directory, errno = 2)
```

RESOLUTION:

The update installs the version of HTMLEditing.framework shipped with WebObjects 5.

Need correct version of genclasspath

Apple Reference # 2780497

ISSUE:

The version of /usr/lib/genclasspath included with the Mac OS X 10.1 Developer Tools does not work properly with WebObjects.

RESOLUTION:

The update installs the version of /usr/lib/genclasspath shipped with WebObjects 5.

Apache adaptor doesn't build on Mac OS X 10.1

Apple Reference # 2795562

ISSUE:

The Apache adaptor fails to build on Mac OS X 10.1 with an "Undefined symbols" link error. The error is related to the two level namespace changes in Mac OS X 10.1.

RESOLUTION:

Customers who need to rebuild the Apache adaptor can add the linker flag "-flat_namespace". This can be added in ProjectBuilderWO using the Build Attributes panel in the Project Inspector.

Corrected in WebObjects 5 Update 2

to-one and to-many browser icons look the same on Mac OS X

Apple Reference # 2704283

ISSUE:

It was difficult to distinguish to-one and to-many relationships in the variables browser of WebObjects Builder.

RESOLUTION:

The icons are now drawn with a more distinct appearance.

Truncated binding character does not display properly in Japanese environment

Apple Reference # 2704286

ISSUE:

Due to an incorrect setting of the system encoding, the character displayed in WebObjects Builder when a binding was too long was not the intended ellipsis, but a kanji character.

RESOLUTION:

The truncated binding character is now displayed as an ellipsis in a Japanese environment.

Adaptor XML parser can crash with bad syntax

Apple Reference # 2706425

ISSUE:

Certain textual formatting errors in the XML configuration file for the WebObjects adaptor can cause the adaptor to crash. (Note that wotaskd produces correct XML, so this only applies if a file is being used to configure the adaptor.)

RESOLUTION:

The XML parser has been modified to correctly handle the case that was causing the crash.

Error when adding a JavaClient palette element to a component

Apple Reference # 2709167

ISSUE:

Dragging a JavaClient palette element into a component results in an alert panel containing the message "This palette resource requires 'nil' which is not part of this project." The palette item does not get added to the component even after the 'Add framework' button is clicked in the alert panel.

RESOLUTION:

This problem has been corrected.

WebObjects Builder does not properly display Display Group array attributes

Apple Reference # 2717487

ISSUE:

Arrays of objects with attributes were sometimes displayed as a single object in Display Groups.

RESOLUTION:

Arrays are now handled properly in Display Groups.

WOActiveImage height and width attributes in wrong place

Apple Reference # 2718064

ISSUE:

For a WOActiveImage located outside of a form WebObjects uses the combination of an image and a hyperlink to provide the WOActiveImage functionality. Attributes of the WOActiveImage have to be set on either the image or the hyperlink. In the case of the height and width these attributes were set on the hyperlink component instead of the image, which caused sizing issues.

RESOLUTION:

Height and width are now set as image attributes.

NSArray's key value coding operators (@min, @max, etc.) don't work

Apple Reference # 2718082

ISSUE:

Using valueForKey()/valueForKeyPath() with @min or @max operators on NSArrays only worked with numbers.

RESOLUTION:

The operators were rewritten to work with more data types (numbers, timestamps, strings, and comparables where possible).

International characters are not passed correctly using WOFileUpload

Apple Reference # 2721949

ISSUE:

The form values passed as part of a mutipart/form-data form (FileUpload functionality) were not encoded properly.

RESOLUTION:

The form values passed as part of mutipart/form-data form are now encoded properly.

WOHTTPConnection returns a WOResponse with no associated real content when content-length=0

Apple Reference # 2722156

ISSUE:

WOHTTPConnection was HTTP/1.0 compliant. In HTTP/1.1, servers are allowed to skip the the content-length entry in the returned headers or even return content-length=0. These servers employ several different ways to allow the client to deduce the actual length, including chunking (Transfer-Encoding="chunked") and using the "multipart/byteranges" media type. Since WOHTTPConnection was HTTP/1.0 compliant, it couldn't figure out the actual content length and data.

RESOLUTION:

WOHTTPConnection is now HTTP/1.1 compliant. When you create a WORequest you should set the version to "HTTP/1.1".

Building frameworks for Deployment doesn't install Info.plist

Apple Reference # 2722167

ISSUE:

Building a WebObjects framework project with the Deployment build style results in a framework without a Resources/Info.plist file. This causes a null pointer exception in the app when trying to access the component in the framework.

RESOLUTION:

The Info.plist file is now correctly generated for framework projects.

Key value coding issues with booleans

Apple Reference # 2725731

ISSUE:

Some key value coding operations with boolean/Boolean methods/variables were not executed correctly and raised exceptions.

RESOLUTION:

Key value coding now properly handles boolean variables and methods..

EOModel objects not sorted correctly

Apple Reference # 2725732

ISSUE:

Most arrays of model objects (like entities, attributes, and relationships) were not sorted by name.

RESOLUTION:

Sorting has been fixed for model objects.

WODisplayGroup does not reset batch index count after fetch

Apple Reference # 2727686

ISSUE:

WODisplayGroup did not reset the batch index count after qualifying its datasource. This sometimes caused the display group to not show the fetched objects.

RESOLUTION:

The display group batch index count is now reset when the datasource is requalified.

Compiling does not re-compile changed source files

Apple Reference # 2730063

ISSUE:

Rebuilding a running application would fail to update the jar file on Mac OS X.

RESOLUTION:

Build scripts were using 'CpMac' instead of cp for certain file copies. 'CpMac' will not copy over files which are in use. The build scripts now use 'cp' instead, which does copy over files which are in use.

D2WQueryBoolean throws IllegalStateException

Apple Reference # 2730164

ISSUE:

D2WQueryBoolean is represented as a WOCheckBoxList, which was calling a deprecated API at creation time. The deprecated API then threw an exception.

RESOLUTION:

WOCheckBoxList no longer uses the deprecated API and therefore D2WQueryBoolean does not throw the IllegalStateException.

JSImageFlyover throws exception

Apple Reference # 2731214

ISSUE:

JSImageFlyover throws an exception "lookup of unknown key: 'uniqueID'" in the appendToRespose cycle.

RESOLUTION:

JSImageFlyover now works correctly.

NullPointerException in EODistributionContext

Apple Reference # 2732498

ISSUE:

EODistributionContext did not handle some notifications from other object stores well and raised NullPointerExceptions.

RESOLUTION:

The handling of notifications in EODistributionContext is now null-pointer safe.

EODatabaseContext sometimes incorrectly ignores the result of the delegate method subEntityForEntity

Apple Reference # 2735570

ISSUE:

When creating a fault for a destination entity that has subentities, EODatabaseContext sometimes ignores the result of the delegate method subEntityForEntity. This can lead to an unnecessary fetch to resolve the ambiguity about the exact entity for the fault.

RESOLUTION:

EODatabaseContext now uses the result of the delegate method subEntityForEntity to determine the final subentity for the destination object.

WORequest formValueForKey( ) should return Object, not String

Apple Reference # 2736189

ISSUE:

In some cases a form needs to return a value different than a String, e.g. in WOFileUpload. In such cases there is no way to get the proper value unless the type returned is Object.

RESOLUTION:

The return type for `WORequest.formValueForKey()` has been changed to Object. This change requires developers using the `formValueForKey()` method to modify their code. New methods have been added to allow developers to retrieve specific value types:

```
public String stringFormValueForKey( String aKey )

public Number numericFormValueForKey( String aKey, NSNumberFormatter numericFormatter )

public NSTimestamp dateFormValueForKey( String aKey, NSTimestampFormatter dateFormatter )
```

Applications which previously called `formValueForKey()` to retrieve a String value should be changed to call the new method `stringFormValueForKey()` instead.

Display Group Component lacks button icons

Apple Reference # 2745375

ISSUE:

The Display Group Assistant does not add all required graphics to the project.

RESOLUTION:

The Display Group Assistant now correctly adds all button graphics to the project.

IIS adaptor cannot upload a file larger than 64 KB

Apple Reference # 2747535

ISSUE:

Due to a problem in the native ISAPI call ReadClient, the WebObjects IIS adaptor could not upload a file larger than 64 KB.

RESOLUTION:

The IIS adaptor now works around the bug in ReadClient and can upload files larger than 64 KB.

Exception when using distributionContext binding on WOJavaClientApplet

Apple Reference # 2755813

ISSUE:

WOJavaClientApplets have a binding "distributionContext" which can be used to return a special EODistributionContext (or a subclass of it). There was a problem causing exceptions when this binding was used.

RESOLUTION:

The problem has been fixed and the distributionContext binding can now be used to create EODistributionContext instances.

Client arguments incomplete on client-side in Java Client

Apple Reference # 2765206

ISSUE:

Some arguments needed to initialize EOF completely were not sent to the client in some situations. Most applications were probably unaffected, but there might have been issues with temporary global IDs if many clients were used.

RESOLUTION:

The problem has been fixed and EOF is now completely initialized .

Launch scripts are generated badly on Windows

Apple Reference # 2769581

ISSUE:

If you build an application on Windows and transfer it to a Mac OS X system, it will not run because of the following two issues:

1. The launch script is not executable, and you will get a permission denied error.
2. The classpath file had Windows linebreaks (CTRL-Ms), and so wouldn't launch.

However, the reverse (moving an application from Mac OS X to Windows) works well.

RESOLUTION:

1. There is no way to guarantee that permissions are preserved when transferring files. The 'chmod' command can be used to make the launch script executable.
2. The Mac OS X launch scripts now strip out any CTRL-M characters from the classpath file.

EOModeler gives "No Reason Provided" when reverse engineering a database

Apple Reference # 2773149

ISSUE:

There is an issue with the version of OpenBase that ships with WebObjects 5 that wasn't handled in a robust manner.

RESOLUTION:

Tables are now correctly reverse engineered from OpenBase databases. However, relationships are not reverse engineered and will need to be created in EOModeler.

Can't update Oracle LOBs

Apple Reference # 2772901

ISSUE:

Inserting an Oracle CLOB or BLOB works. However, trying to update that LOB fails with an exception "com.webobjects.jdbcadaptor.JDBCAdaptorException: Expected a LOB count of 2 but could not fetch that many objects". This is caused by an error in the generated SQL statement that attempts to update the LOB.

RESOLUTION:

The update now generates the correct SQL statement so that the Oracle LOB will be updated as expected.

Sorting: JDK compareTo() not compatible with NSComparator

Apple Reference # 2727709

ISSUE:

NSComparator expects {-1,0,1}, but the JDK compareTo() methods return different values which more loosely conform to { < 0, 0, > 0 }. Developers attempting to use compareTo() while implementing methods used by NSComparator will experience incorrectly sorted results.

RESOLUTION:

NSComparator now accepts less well defined input.

Cannot use char with OpenBase > 254 characters

Apple Reference # 2750823

ISSUE:

The meta data (type information) WebObjects uses for OpenBase is incorrect. The precision for char types has been increased to 4096 (as supported in OpenBase v6.5.7).

RESOLUTION:

WebObjects now has the OpenBase metadata in a file which is current for OpenBase v6.5.7. The file is in `/System/Library/Frameworks/JDBCEOAdaptor.framework/Resources/Info-macos.plist` for EOModeler and `/System/Library/Frameworks/JavaJDBCAdaptor.framework/Resources/Info.plist` for WebObjects applications.

Fetching OpenBase metadata (type information) hangs

Apple Reference # 2750824

ISSUE:

OpenBase expects a non-standard commit() after an invocation of getMetaData() on its JDBC Connection class. Otherwise, a transaction is left open, which can later cause a client application to hang.

RESOLUTION:

WebObjects now has the OpenBase metadata in a file which is current for OpenBase v6.5.7. The file is in `/System/Library/Frameworks/JDBCEOAdaptor.framework/Resources/Info-macos.plist` for EOModeler and `/System/Library/Frameworks/JavaJDBCAdaptor.framework/Resources/Info.plist` for WebObjects applications.

Corrected in WebObjects 5 Update 1

WOB hangs after quitting ProjectBuilder

Apple Reference # 2695877

ISSUE:

Quitting ProjectBuilder with unsaved components open in WOB would result in WOB hanging.

RESOLUTION:

Quitting ProjectBuilder now has no effect on WOB.

WOB crashes after project manipulations in ProjectBuilder

Apple Reference #2695881

ISSUE

Under certain circumstances WOB could crash after receiving project update messages from ProjectBuilder.

RESOLUTION

This problem has been fixed.

Using lots of WOComponents from non-project frameworks like JavaWOExtensions.framework causes slow performance during rapid turnaround

Apple Reference #2695952

ISSUE:

The resource name/path caches used by rapid turnaround might be improperly invalidated in some cases, causing them to be refreshed too often. In the case of projects that use lots of reusable components, particularly those projects that link against many frameworks, these extra refreshes significantly slow performance. There is no such performance issue for deployed applications.

RESOLUTION:

Rapid turnaround performance in this configuration has been significantly improved.

Can't switch adaptor in EOModeler when the inspector window is open

Apple Reference #2700580

ISSUE:

If the inspector window has been opened, it will be impossible to switch the adaptor or set the adaptor info from the file menu. The inspector continually puts the old values back into the model.

RESOLUTION:

The connection dictionary inspector window now allows you to switch the adaptor and set adaptor info.

Dragging an Entity from EOModeler into WOB would not copy model correctly

Apple Reference #2700581

ISSUE:

Because WOB would not see the model in the project, it would attempt to add it multiple times. In certain circumstances the .eomodeld file could end up being deleted.

RESOLUTION:

WOB and ProjectBuilder now handle the .eomodeld correctly in this case.

ParseException while using EOQualifier.qualifierWithQualifierFormat()

Apple Reference # 2702519

ISSUE:

One would see an exception like:
[com.webobjects.eocontrol._private.ParseException] Encountered "and" at line 1, column 38. Was expecting: ")" .... This happened when trying to use a compound qualifier within a parenthetical expression.

RESOLUTION:

EOQualifier.qualifierWithQualifierFormat() now correctly handles this case.

Formatters were not created for Java Client detail relationship controls

Apple Reference # 2703810

ISSUE:

When the assistant on Mac OS X created a JavaClient nib, the formatter would not be applied to the detail-side controls of a master-detail relationship.

RESOLUTION:

Formatters are now created properly for master-detail relationship controls.

Prototypes do not work

Apple Reference # 2703989

ISSUE:

At runtime, a NullPointerException would be raised when a model using prototype attributes was loaded.

RESOLUTION:

Models with prototype attributes will now work as expected.

To-many relationships not displayed properly in WOB's variables browser

Apple Reference # 2704287

ISSUE:

To-many relationships in eomodels were not properly displayed as aggregate keys.

RESOLUTION:

WOB now displays these relationships accurately.

EOEditingContextDidSaveChanges notification has bad userInfo dictionary

Apple Reference # 2707102

ISSUE:

EOEditingContext mistakenly put the wrong objects in the userInfo dictionary for the notification.

RESOLUTION:

This has been corrected.

In some cases, one cannot catch an NSValidation.ValidationException

Apple Reference # 2707105

ISSUE:

In a few places within EOControl, validation exceptions were erroneously being placed within an NSForwardException instead of simply being rethrown.

RESOLUTION:

These validation exceptions are now simply rethrown.

An exception in an action causes a NullPointerException in the Exception Page display page itself.

Apple Reference # 2707125

ISSUE:

The exception display page failed to initialize its own state correctly.

RESOLUTION:

This has been corrected.

With entity inheritance, NullPointerException in EODatabaseContext.arrayFaultWithSourceGlobalID()

Apple Reference # 2708798

ISSUE:

In some situations while using entity inheritance, the EOGlobalID used for a fault would not become final when necessary, leaving it in an inconsistent state. Eventually, use of this EOGlobalID object would cause a crash.

RESOLUTION:

The EOGlobalID now becomes final appropriately.

Object graphs not kept in sync with entity inheritance in Java Client

Apple Reference # 2708954

ISSUE:

Due to a problem in the EODistribution layer, the client side of Java Client applications did not recognize inverse relationships of inherited entities correctly. As a result, methods like addObjectToBothSidesOfRelationshipWithKey were not functional on the client side.

RESOLUTION:

The EODistribution layer now correctly identifies inverse relationships even with entity inheritance.

Rapid turnaround does not work properly with frameworks

Apple Reference # 2709211

ISSUE:

WOB was not finding framework projects that were open in ProjectBuilder. This resulted in some keys and actions not showing up in the variables browser. The framework must be installed in the system and its project open in ProjectBuilder in order for WOB to find it.

RESOLUTION:

WOB now finds framework projects that are open in ProjectBuilder.

EOCustomObject does not work with deferred faulting

Apple Reference # 2709919

ISSUE:

Due to a problem in the EOAccess layer, using public accessor methods for to-one relationships (for example, public void setStudio(Studio value)) and deferred faulting (for example, subclasses of EOGenericRecord with explicit public accessors or subclasses of EOCustomObject with deferred faulting explicitly turned on) did not work and produced IllegalArgumentExceptions when objects were initialized. Also, if you have a relationship to an abstract entity, the object class representing that abstract entity in memory cannot be declared abstract (you can declare the entity abstract in the EOModel, but not the class used for that entity).

RESOLUTION:

This has been corrected, but you cannot use abstract classes for abstract entities.

EOCustomObject does not work with deferred faulting in Java Client

Apple Reference # 2709931

ISSUE:

Due to a problem in the client side EODistribution layer, using public accessor methods for to-one relationships (for example, public void setStudio(Studio value)) and deferred faulting (for example, subclasses of EOGenericRecord with explicit public accessors or subclasses of EOCustomObject with deferred faulting explicitly turned on) did not work and produced IllegalArgumentExceptions when objects were initialized. Also, if you have a relationship to an abstract entity, the object class representing that abstract entity in memory cannot be declared abstract (you can declare the entity abstract in the EOModel, but not the class used for that entity).

RESOLUTION:

This has been corrected, but you cannot use abstract classes for abstract entities.

Unable to create a WOCookie that expires when the browser window is closed

Apple Reference # 2712534

ISSUE:

The main non-deprecated WOCookie constructor (the one with six arguments) specifies timeouts, which specify values for the "max-age" header for a cookie. The "max-age" header doesn't support the old cookie feature wherein a cookie can be expired upon closing of a browser window. However, the old "expires" header does support the expire-on-browser-window-close behavior, in that a missing "expires" header indicates the behavior. Unfortunately, "max-age" supercedes the "expires" header (present or not) if the "max-age" header is present.

RESOLUTION:

In order to take advantage of the expire-on-browser-window-close feature, you must do the following. If you invoke the non-deprecated, six-argument WOCookie constructor (the one that uses an int timeout instead of an NSTimestamp date), specify a "-1" value for the timeout parameter. If you use the two-argument constructor, there's nothing more to do, because it already specifies a "-1" value for the timeout parameter. Then, as you did in previous WebObjects releases, ensure that you avoid calling setExpires on the WOCookie object you get back from the constructor, or make sure that you call "setExpires(null)" on the WOCookie object before using it. This will prevent the WOCookie object from generating either a "max-age" or an "expires" header, which will indicate the expiration behavior you desire. For example:
WOCookie cookie = new WOCookie ("cookieName", "cookieValue", "/", null, -1, false);
cookie.setExpires(null);

Client-side jars are not copied into doc root on Mac OS X Server

Apple Reference # 2719079

ISSUE:

Installing WebObjects 5 Deployment on Mac OS X Server installs the client-side jars and other files needed on the web server into a temporary directory on the system, but does not move them to the web server's doc root.

RESOLUTION:

WebObjects 5 Deployment Update 1 installs the updated client-side files that are part of the update into the temporary directory and then correctly moves all the files into the web server's doc root.

Published Date: Oct 10, 2016

WebObjects 4.5.1: WebObjects 4.5.1 Update 3 Overview

Note: This document has been superseded. Refer to article 70037: "**WebObjects Current Patch List**", for information on the most current updates for WebObjects. This article is provided here as a convenience to our customers who have not yet upgraded to the most current update.

This document contains an overview and download information for Apple's Update 3 for WebObjects Release 4.5.1. This update corrects the known incompatibilities between WebObjects 4.5.1 and Mac OS X 10.1 and is required on that platform. This update should not be installed on Mac OS X versions earlier than 10.1.

WebObjects 4.5.1 Update 3 includes all of the fixes from **WebObjects 4.5.1 Update 2**. If you have already installed WebObjects 4.5.1 Update 2, you can install Update 3 over your existing installation. If you have not installed Update 2, you do not need to install it prior to installing Update 3.

The **WebObjects Current Patch List**, document 70037, contains information on all available patches and updates for all versions of WebObjects. Please read this document if you're not sure which updates you need on your system.

This article has been archived and is no longer updated by Apple.
This update includes modified WebObjects HTTP Adaptor binaries. On Mac OS X (Server) 10.1 and later, the update installer automatically places the modified adaptor binaries in the appropriate Web server directory. The update also includes a complete set of updated adaptor source files to match the modified binaries.

If you attempt to rebuild the Apache adaptor, you will see an "Undefined symbols" link error related to the two level namespace changes in Mac OS X 10.1 (Apple reference #2795562). In order to build this adaptor successfully on Mac OS X 10.1, you will need to add the linker flag "-flat_namespace". This can be added in ProjectBuilderWO using the Build Attributes panel in the Project Inspector.

WebObjects 4.5.1 Update 3 for Mac OS X (Server) 10.1 and later

There are two mutually exclusive updates for this platform. If you have WebObjects 4.5.1 Developer installed on Mac OS X, you need WebObjects 4.5.1 Developer Update 3. If you have WebObjects 4.5.1 Deployment installed on Mac OS X Server, you need WebObjects 4.5.1 Deployment Update 3. You do not need both on any system.

This update is available through the Software Update feature of Mac OS X. If you use this method, only the proper update for the software which you have installed on your system will be visible and available for download. If you prefer to download and install the package manually, follow the instructions below.

Note: WebObjects 4.5.1 Developer Update 3 requires Mac OS X 10.1.1 or later plus the 10-19-01 Security Update as well as the Mac OS X 10.1 Development Tools. WebObjects 4.5.1 Deployment Update 3 requires Mac OS X Server 10.1.1 or later plus the 10-19-01 Security Update and the 10.1.1 Server Update. If you have not updated to the correct version of Mac OS X (Server), you must do so before installing WebObjects 4.5.1 Update 3.

If you are creating a new Mac OS X WebObjects 4.5.1 development system, you should install the software in the following order:

1. Mac OS X 10.1
2. Mac OS X 10.1 Development Tools
3. 10-19-01 Security Update
4. 10.1.1 Update
5. WebObjects 4.5.1 Developer
6. WebObjects 4.5.1 Developer Update 3

If you are upgrading an existing Mac OS X 10.0.x WebObjects 4.5.1 development system, you should install the software in the following order:

1. Mac OS X 10.1 upgrade
2. Mac OS X 10.1 Development Tools
3. 10-19-01 Security Update
4. 10.1.1 Update
5. WebObjects 4.5.1 Developer Update 3

Important: Whether you are using Software Update or installing the update manually, you must be logged in as "root" user in order to perform the installation. Logging in as "Administrator", or authenticating as "root" is insufficient. Failure to follow this requirement will result in an installation failure. You must also ensure that no WebObjects or EOF applications are running during the installation of the update.

Manually Installing WebObjects 4.5.1 Update 3 on Mac OS X (Server) 10.1

These instructions are for manually downloading and installing WebObjects 4.5.1 Update 3. If you are installing using Software Update, see the section titled "WebObjects 4.5.1 Update 3 for Mac OS X (Server) 10.1", above.

Note: The Developer update requires Mac OS X 10.1.1 or later plus the 10-19-01 Security Update as well as the Mac OS X 10.1 Development Tools. The Deployment update requires Mac OS X Server 10.1.1 or later plus the 10-19-01 Security Update and the 10.1.1 Server Update. If you have not updated to the correct version of Mac OS X (Server), you must do so before installing WebObjects 4.5.1 Update 3.

1. Download WO451MacOSXDevUpdate3.pkg.tar, the update installer for WebObjects 4.5.1 Developer on Mac OS X 10.1, or WO451MacOSXDepUpdate3.pkg.tar, the update installer for WebObjects 4.5.1 Deployment on Mac OS X Server 10.1.
The updates are available from:

FTP:

ftp://ftp.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/webobjects/patches/4.5.1/WO451MacOSXDevUpdate3.pkg.tar

HTTP:
http://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/webobjects/patches/4.5.1/WO451MacOSXDevUpdate3.pkg.tar

2. Untar the update package.
Your web browser or FTP client may perform this step for you.

3. Double-click on the update package you downloaded in step 1.
The Authorization panel will open.

4. You need to install the update as root. If you do not have the Administrator password, see your system administrator. Click the lock icon at the bottom left of the panel to authenticate as the root user. Enter Name: "root" and Password: "<root password>" and click the OK button.

Important: You have to be logged in as "root" user in order to perform the installation. Logging in as "Administrator", or authenticating as "root" is insufficient. Failure to follow this requirement will result in an installation failure.

5. Click Continue in the Introduction panel.

6. Read the software license agreement then click Continue.

7. To agree to the license and continue the installation, click Agree.

8. Select the volume that contains Mac OS X (Server) and WebObjects 4.5.1, then click Continue.

9. Make sure that there are no WebObjects or EOF applications running.

10. Click Install to proceed with installation.
The Installer window displays information about the progress of the installation, which may take several minutes.

11. Restart your computer.

Corrected in WebObjects 4.5.1 Update 3

wotaskd sometimes returns content length 0

Apple Reference 2744196

ISSUE:

On Mac OS X 10.1 wotaskd sometimes returns empty content for all requests, depending on how it is started.

RESOLUTION:

This problem has been corrected.

ObjC apps raise when running on Mac OS X 10.1

Apple Reference 2757892

ISSUE:

In Mac OS X 10.0.x, immutable collections in Foundation were implemented as mutable collections. In Mac OS X 10.1, the collection implementations were changed so that immutable collections were actually immutable. This change was incompatible with WebObjects 4.5.1.

RESOLUTION:

WebObjects.framework now uses a compatibility mode in Foundation in which all collections are mutable.

WebObjects Builder broken after upgrading to Mac OS X 10.1

Apple Reference 2782527

ISSUE:

The upgrade installer for Mac OS X 10.1 removes HTMLEditing.framework from the system. Since WebObjects Builder depends on this framework, it will no longer run. Upon launching WebObjects Builder, you will see the following error message:

dyld: /Developer/Applications/WebObjects Builder.app/Contents/MacOS/WebObjects Builder can't open library:
/System/Library/PrivateFrameworks/HTMLEditing.framework/Versions/A/HTMLEditing
(No such file or directory, errno = 2)

RESOLUTION:

The update installs the version of HTMLEditing.framework shipped with WebObjects 4.5.1.

"Save as" does not change the name in the title bar for a model

Apple Reference 2796022

ISSUE:

After performing a "Save as" operation, EOModeler does not change the name of the model in the window title bar.

RESOLUTION:

The window title bar now properly reflects the new name of the model.

WOSendMail calls obsolete methods on NSUserDefaults

Apple Reference 2798848

ISSUE:

WOSendMail calls several obsolete NSUserDefaults methods, which caused warning messages to be printed.

RESOLUTION:

WOSendMail no longer calls the obsolete methods.

wotaskd and Monitor run with unexpected defaults on Mac OS X 10.1

Apple Reference 2802265

ISSUE:

The user defaults system changed between Mac OS X 10.0.x and Mac OS X 10.1. This causes Monitor and wotaskd to run with an unexpected set of defaults.

RESOLUTION:

Monitor and wotaskd have been modified to work properly with the user defaults system on Mac OS X 10.1.

Corrected in WebObjects 4.5.1 Update 2

Wrong Swing method in IB code generation for NSTableView

Apple Reference 2453148

ISSUE:

Swing code generated by InterfaceBuilder improperly uses setWidth instead of setPreferredWidth for NSTableView.

RESOLUTION:

This has been corrected.

woservice has a small memory leak

Apple Reference 2491807

ISSUE:

woservice has a small memory leak each time it launches the application it watches.

RESOLUTION:

The leak has been removed.

WOSession leaks an ivar

Apple Reference 2503730

ISSUE:

WOSession leaked an ivar when deallocated.

RESOLUTION:

This has been corrected.

NSAttributeDictionary methods crash if +initialize hasn't completed

Apple Reference 2529298

ISSUE:

A multithreaded application can crash if NSAttributeDictionary methods are called before its +initialize method has finished executing.

RESOLUTION:

NSAttributeDictionary is now initialized early in the application's startup.

Snapshot ref counting problem when inserting into and deleting parent/child ECs

Apple Reference 2609375

ISSUE:

Certain sequences of operations involving nested editing contexts can cause problems with the snapshot reference count.

RESOLUTION:

Snapshot reference counts are now properly maintained. Correcting this problem required adding an instance variable to the EOEditingContext class, changing the size of an

EOEditingContext instance. This breaks binary compatibility for customers that subclass EOEditingContext and add ivars. Customers who do this must recompile.

direct action URL generation missing instance numbers

Apple Reference 2616937

ISSUE:

Under certain circumstances WebObjects would not include an instance number when generating a URL for a direct action. This could cause the WebObjects adaptor to load balance to a different instance which does not contain the user's session.

RESOLUTION:

URL generation for direct actions has been modified to preserve the instance number when appropriate.

Monitor/wotaskd could not tell the difference between Mac OS X Server 1.2 and Mac OS X Server 10.0.x

Apple Reference 2657074

ISSUE:

Monitor/wotaskd used a compile time method to determine the OS reported in Monitor's Hosts page. A Mac OS X 10.0.x machine was reported as Mac OS X Server.

RESOLUTION:

Mac OS X (Server) 10.0.x now reports the information in /System/Library/CoreServices/SystemVersion.plist. Mac OS X Server 1.2 will report as "Mac OS X Server".

Server-side WebAssistant launch line incorrect

Apple Reference 2661845

ISSUE:

If your DirectToWeb application uses '-D2WWebAssistantEnabled YES' as a command line argument rather than programmatically setting it after the application has finished launching, the port number will not yet be set and the server-side WebAssistant launch line will print with the incorrect port number -1, as in the following example:

```
appletviewer http://localhost:-1/cgi-bin/WebObjects/Administrate.woa/wa/D2WActions/openWebAssistant
```

RESOLUTION:

Specify a real port number in the appletviewer launch command, or specify a port at launch using the -WOPort <#> command line argument.

Adding an object to an owns relationship always puts it in the "inserted" list

Apple Reference 2663566

ISSUE:

Adding an object which has already been saved to an owns relationship always puts it in the list of 'inserted' objects. This creates an inconsistency when saving changes.

RESOLUTION:

EOControl has been modified to check whether the object is already in the editing context before adding it to the inserted list.

Sessionless direct action development apps inaccessible via web server

Apple Reference 2663739

ISSUE:

An instance of a sessionless direct action application does not include the instance id in the URL generated by WOHyperlink. As a result, this type of application is not accessible through the WebObjects web server adaptor when running as a development instance.

RESOLUTION:

URL generation has been modified to include the instance number for development instances.

Adaptor XML parser can crash with bad syntax

Apple Reference 2664670

ISSUE:

Certain textual formatting errors in the XML configuration file for the WebObjects HTTP adaptor can cause the adaptor to crash. (Note that wotaskd produces correct XML, so this only applies if a file is being used to configure the adaptor.)

RESOLUTION:

The XML parser has been modified to correctly handle the case that was causing the crash.

CreatePlots and LongRequest examples fail to clean or build on MOSXS 1.2

Apple Reference 2667045

ISSUE:

These two examples cannot be cleaned or built on Mac OS X Server 1.2 because the path to gnumake defined in PB.project is incorrect for this platform.

RESOLUTION:

The PB.project files for these two examples have been corrected.

NSUnarchive exception when running SetupWizard.app in the EOF Examples on MacOS X Server 1.2

Apple Reference 2673597

ISSUE:

The nibs in the EOF examples were corrupted in the shipping version of WebObjects 4.5.1.

RESOLUTION:

The update replaces the corrupted nibs with the correct files.

Time zone updates missing on Windows

Apple Reference 2678768

ISSUE:

Several files needed to resolve the issues originally resolved in WebObjects 4.0.1 Patch 2 and WebObjects 4.5 Update 3 (see Apple reference #2406610 in either update overview in the Knowledge Base for details) were omitted from WebObjects 4.5.1 on the Windows platform only.

RESOLUTION:

This update includes the missing files for Windows.

Update 4.5.1 adaptor to 5.0 GM version

Apple Reference 2691647

ISSUE:

Some changes were made to the WebObjects adaptor between the WebObjects 4.5.1 release and the WebObjects 5.0 release.

RESOLUTION:

This update includes all the source changes to the WebObjects adaptor up to the WebObjects 5.0 release. (This update also includes changes which were made after the WebObjects 5.0 release. These are documented separately.)

EOTextAssociation does not recognize Mac OS X rtf header "{\\\\rtf1" and throws an exception

Apple Reference 2695698

ISSUE:

New RTF data generated on Mac OS X 10.0.x uses the header "{\\\\rtf1" where previous WebObjects platforms used "{\\\\rtf0".

RESOLUTION:

EOTextAssociation has been updated to handle the new RTF signature properly.

WebObjects 4.5.1 adaptor source won't compile on MOSXS 1.2

Apple Reference 2696008

ISSUE:

The Mac OS X Server 1.2 installation includes sources for the WebObjects 4.0.1 adaptor. Installing the WebObjects 4.5.1 adaptor on a system with the 4.0.1 sources results in an incompatible mix of files from the two versions.

RESOLUTION:

This update removes any existing installed adaptor source on Mac OS X Server 1.2 and Mac OS X (Server) 10.0.x. The full WebObjects adaptor source is included in the update and installed on all platforms.

EOPalette raises when opening connection inspector

Apple Reference 2732969

ISSUE:

EOPalette sometimes raised an exception when the user selected the Connections inspector. This prevented the developer from changing or creating connections in existing nib files.

RESOLUTION:

This has been corrected.

Corrected in WebObjects 4.5.1 Update 1

WebObjects 4.5.1 Update 1 was applicable only to Mac OS X 10.0.x systems with WebObjects 4.5.1 Developer installed. It did the following:

- created the file /System/Library/WebObjects/Configuration/WebServerConfig.plist, which is needed to do a "split install" of your WebObjects application from

ProjectBuilderWO on a developer system.

- updated precompiled headers.
- created the missing documentation links mentioned in the Readme.rtf on the CD.

Published Date: Feb 19, 2012

WebObjects 5: Deployment License Key Is Not Recognized By Installation Script

Solaris, Linux and other UNIX-style platforms translate the file and directory names on the WebObjects Deployment CD-ROM to lower case when the CD is mounted. This prevents the installer script from finding the correct Java files it needs to verify the WebObjects license key. The installer script expects the files and directories to be mixed case (upper and lower case).
This article has been archived and is no longer updated by Apple.

Symptom

The installer script does not recognize a valid license key under Solaris, Linux or other UNIX-style platform.

Solution

Modify how the operating system mounts the CD-ROM, so that the file and directory names aren't translated. Instructions for modifying the operating system are listed below. If your Operating System is not listed below, consult your operating system's documentation for more information.

Solaris (2.8)

1. If the WebObjects 5 CD is in the CD-ROM drive, eject it.
2. Log in as root.
3. As root, edit `/etc/rmount.conf` and look for the heading `# Mount`
4. Add the option "nomaplcase" to the mount options:

```
# Mount
mount * hsfs udfs ufs -o nosuid,nomaplcase
```

5. Save the file
6. Reinsert the WebObjects 5 CD.
7. The installation should proceed normally.

Linux (RedHat >6.2)

1. If the WebObjects 5 CD is currently mounted, unmount it.
2. Log in as root.
3. As root, manually mount the CD adding "map=off" to the command:

```
# mount -t iso9660 -o ro,nosuid,map=off /dev/cdrom /mnt/cdrom
```

Note: Your options, devices, and mount points may be different according to your hardware configuration.

4. The installation should proceed normally.

Published Date: Feb 19, 2012

Knowledge Base: Language Codes Used

This document contains a explanation of the language codes used in the software download documents in the Knowledge Base.

This article has been archived and is no longer updated by Apple.

Language Codes

The Knowledge Base, with limited exceptions, uses standard ISO-639 language codes. Below is a list of the most common language codes used in the Knowledge Base.

Note: When a single software download can update any language a single letter, Z, is used as the language code.

Language	ISO-639 code	
English	EN	**EN-NA** is used for North American English **EN-Z** is used for International English
French (français)	FR	
German (Deutsch)	DE	
Spanish (Español)	ES	
Italian (Italiano)	IT	
Dutch (Nederlands)	NL	
Japanese	JA	
Norwegian (Norsk)	NO	
Swedish (Svensk)	SV	
Finnish (Suomi)	FI	
Danish (Dansk)	DA	
Brazilian/Portuguese (Portugues Brasileiro)	PT	
Chinese	ZH	**ZH-S** is used for Simplified Chinese **ZH-T** is used for Traditional Chinese
Korean	KO	

Country Codes

The Apple Specifications are published specifically for a country. ISO-1366 country codes are used for each country.

Note: In Europe specifications may be available in multiple languages for a given country.

Country	ISO-3166 code
Australia	AU
Austria	AT
Belgium	BE
Canada	CA
Denmark	DK
Finland	FI
France	FR
Germany	DE
Ireland	IE
Italy	IT
Japan	JP
Netherlands	NL
Norway	NO
South Africa	ZA
Sweden	SE
Switzerland	CH
United Kingdom	GB
United States	US

Published Date: Feb 20, 2012

WebObjects: How to Change Carriage Returns When Porting Applications

This document describes how to convert Windows to UNIX carriage returns when porting WebObjects applications.
This article has been archived and is no longer updated by Apple.
When building a WebObjects application developed on Microsoft Windows and ported to Solaris, sometimes compilation errors, link errors, or runtime errors result. One cause of these types of errors is Microsoft Windows form for indicating a carriage return, which differs from Solaris.

Determining the cause of compilation errors

If your projects build properly on Windows, but on Solaris produces errors like the following, the problem may be Windows-style carriage returns and end of file characters in your source or make files.

```
Undefined symbol   first referenced in file

ologof             /opt/Apple/Local/Library/Frameworks/OracleEOAdaptor.framework/libOracleEOAdaptor.so

.

.

.

ld: fatal: Symbol referencing errors. No output written to /users/install/apps/WOApp.woa/WOApp

make: *** [/users/install/apps/WOApp.woa/WOApp] Error 1
```

Evaluate any listed source files which you had previously edited on Windows and check all of your Makefiles for Windows style control characters such as carriage returns. Windows files and editing tools use carriage return (CR) + line feed (LF) to separate lines of ASCII Text. Solaris uses just line feed (LF).

When tools on Solaris encounter the carriage return characters, the tools can exhibit erratic behavior. You can determine if your files contain these CR characters after moving them to your Solaris system by issuing the following command:

```
cat -v filename
```

You could also open the suspect files in the vi editor to see if the carriage return characters appear.

When a Windows style carriage returns exist, `^M` appears at the end of every line. In order to properly compile your project, you need to strip these characters out of the file. You should run the Solaris dos2unix utility to remove the unwanted CR characters. Detailed information about the dos2unix utility is available on a Solaris computer in the dos2unix man page.

Here's an example of running the dos2unix command which copies all text except carriage returns and Windows end of file characters from *oldfilename* to *newfilename*.

```
dos2unix -ascii oldfilename newfilename
```

If you want to replace the file inline, you can issue the command as follows:

```
dos2unix -ascii filename filename
```

If you wish to run a recursive batch processing of dos2unix on all the files within a directory tree, cd to the directory containing your WebObjects application's PB.project file. Then issue the following command:

```
find . -type f -print | xargs -I {} dos2unix -ascii {} {}
```

Note: You may safely disregard the following warnings issued by the dos2unix command as it does its processing.

```
could not open /dev/kbd to get keyboard type US keyboard assumed

could not get keyboard type US keyboard assumed
```

Other factors can lead to build problems on Solaris including incorrect environment variables and improper installations of frameworks, but attempts to resolve those problems will be futile if your source and make files contain Windows-style carriage returns and end of file characters. After uploading your files from Windows to UNIX in ASCII mode, searching for and removing carriage returns from your source files and makefiles should be the next step you take in your efforts to resolve your build problems.

Published Date: Feb 20, 2012

iTunes: Unable to import copy-protected audio discs

This article has been archived and is no longer updated by Apple.

iTunes is unable to import ("rip") tracks from certain audio discs that have a copy protection system.

Copy protection or dirty or scratched disc?

There's not always an easy way to identify which discs have copy protection. So, verify that you can import tracks from other audio CDs with your CD/DVD drive. If you can import tracks from other CDs, make sure the disc is clean and free from debris and scratches. To clean, wipe the shiny surface with a soft, damp cloth, working from center to edge. If the disc is scratched, it may be unreadable.

Non-standard discs

Discs that adhere to the CD Digital Audio (CDDA) specification will usually display this logo on the disc or disc case:

If the disc does not have this logo, it may not conform to the CDDA standard. Reasons for this can include:

- The disc contains additional multimedia.
- The disc may have been created in a way that does not allow the audio portion to be imported into iTunes (a form of copy protection).
- The disc may contain a specific copyright protection mechanism to prevent reproducing the contents of the disc.

You should contact the manufacturer of the disc for additional assistance with these types of discs and for possible ways to import the audio files onto a computer or iPod.

Related documents

106882: Mac OS: Cannot Eject Copy Protected Audio Disc, Computer Starts Up to Gray Screen

Important: iTunes software may be used to reproduce materials. It is licensed to you only for reproduction of non-copyrighted materials, materials in which you own the copyright, or materials you are authorized or legally permitted to reproduce. If you are uncertain about your right to copy any material you should contact your legal advisor.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.
Published Date: Oct 10, 2016

PowerBook G3 Series: Computer Stops Responding When Using Zip Drive in Drive Bay

After updating to Mac OS 9.2.1 or later, inserting or accessing a Zip drive placed in a PowerBook G3 Series computer drive bay results in the computer no longer responding to mouse clicks or other input.

This article has been archived and is no longer updated by Apple.

Symptom

After updating to Mac OS 9.2.1 or higher, inserting or accessing a Zip drive placed in a PowerBook G3 series drive bay results in the computer no longer responding to mouse clicks or other input.

Solution

1. Open the Extensions Manager control panel.
2. Turn off the Iomega Driver extension.
3. Restart the computer.
4. Open the Iomega Guest application after inserting the drive or disk.

The Iomega Guest application is included as part of the IomegaWare software package, available from Iomega's Web site. (http://www.iomega.com/).

Published Date: Feb 20, 2012

WebObjects 4.5.1: WebObjects 4.5.1 Update 4 Overview

This document contains an overview and download information for Apple's Update 4 for WebObjects Release 4.5.1. Apple recommends that all users of WebObjects 4.5.1 install this update on all platforms.

WebObjects 4.5.1 Update 4 includes all of the fixes from all previous WebObjects 4.5.1 Updates. If you have already installed any WebObjects 4.5.1 Update, you can install Update 4 over your existing installation. If you have not installed any WebObjects 4.5.1 Update, you only need to install Update 4.

The **WebObjects Current Patch List**, document 70037, contains information on all available patches and updates for all versions of WebObjects. Please read this document if you're not sure which updates you need on your system.

This article has been archived and is no longer updated by Apple.
This update includes modified WebObjects HTTP Adaptor binaries. On Mac OS X (Server) 10.1 and later, the update installer automatically places the modified adaptor binaries in the appropriate Web server directory. On Mac OS X Server 1.2, Windows, Solaris, and HP-UX, an extra step is needed to use the new adaptor binaries after installing the update. After the update installer places the modified adaptor binaries in the WebObjects installation, you must manually install them in the correct location for the Web server being used. Refer to the WebObjects documentation for more detailed instructions on how to do this on your system. The update also includes a complete set of updated adaptor source files to match the modified binaries.

If you attempt to rebuild the Apache adaptor on Mac OS X (Server) 10.1.x, you will see an "Undefined symbols" link error related to the two level namespace changes in Mac OS X 10.1 (Apple reference #2795562). In order to build the adaptor successfully on Mac OS X 10.1, you will need to add the linker flag "-flat_namespace". This can be added in ProjectBuilderWO using the Build Attributes panel in the Project Inspector.

WebObjects 4.5.1 Update 4 for Mac OS X (Server) 10.1 and later (Software Update)

There are two mutually exclusive updates for this platform. If you have WebObjects 4.5.1 Developer installed on Mac OS X, you need WebObjects 4.5.1 Developer Update 4. If you have WebObjects 4.5.1 Deployment installed on Mac OS X Server, you need WebObjects 4.5.1 Deployment Update 4. You do not need both on any system.

This update is available through the Software Update feature of Mac OS X. If you use SoftwareÂ Update to install this update, only the proper update for the software which you have installed on your system will be visible and available for download. If you prefer to download and install the package manually, follow the instructions in the section titled "Installing WebObjects 4.5.1 Update 4 on Mac OS X (Server) 10.1 (Manual Download)", below.

Note: WebObjects 4.5.1 Developer Update 4 requires Mac OS X 10.1.3 or later plus the December 2001 Mac OS X Development Tools. WebObjects 4.5.1 Deployment Update 4 requires Mac OS X Server 10.1.3 plus the 10.1.2 Server Update or later. If you have not updated to the correct version of Mac OS X (Server), you must do so before installing WebObjects 4.5.1 Update 4.

If you are creating a new Mac OS X WebObjects 4.5.1 development system, you should install the software in the following order:

1. Mac OS X 10.1
2. Mac OS X 10.1.3 update
3. December 2001 Mac OS X Development Tools
4. WebObjects 4.5.1 Developer
5. WebObjects 4.5.1 Developer Update 4

If you are upgrading an existing Mac OS X WebObjects 4.5.1 development system, you should install the software in the following order:

1. Mac OS X 10.1.3 update
2. December 2001 Mac OS X 10.1 Development Tools
3. WebObjects 4.5.1 Developer Update 4

Important: Whether you are using Software Update or installing the update manually, you must be logged in as "root" user in order to perform the installation. Logging in as "Administrator", or authenticating as "root" is insufficient. Failure to follow this requirement results in a failed installation. You must also ensure that no WebObjects or EOF applications are running during the installation of the update.

Installing WebObjects 4.5.1 Update 4 on Mac OS X (Server) 10.1 (Manual Download)

These instructions are for manually downloading and installing WebObjects 4.5.1 Update 4. If you are installing using Software Update, see the section titled "WebObjects 4.5.1 Update 4 for Mac OS X (Server) 10.1 and later (Software Update)", above.

Note: WebObjects 4.5.1 Developer Update 4 requires Mac OS X 10.1.3 or later plus the December 2001 Mac OS X Development Tools. WebObjects 4.5.1 Deployment Update 4 requires Mac OS X Server 10.1.3 plus the 10.1.2 Server Update or later. If you have not updated to the correct version of Mac OS X (Server), you must do so before installing WebObjects 4.5.1 Update 4.

1. Download WO451MacOSXDevUpdate4.pkg.tar, the update installer for WebObjects 4.5.1 Developer on Mac OS X 10.1, or WO451MacOSXDepUpdate4.pkg.tar, the update installer for WebObjects 4.5.1 Deployment on Mac OS X Server 10.1.The updates are available from:

HTTP:

../WO451MacOSXDevUpdate4.pkg.tar

../WO451MacOSXDepUpdate4.pkg.tar

2. Untar the update package.
Your web browser may perform this step for you.

3. Double-click on the update package you downloaded in step 1.
The Authorization panel opens.

4. You need to install the update as root.
If you do not have the Administrator password, see your system administrator. Click the lock icon at the bottom left of the panel to authenticate as the root user. Enter Name: "root" and Password: "<root password>" and click the OK button.

Important: You have to be logged in as "root" user in order to perform the installation. Logging in as "Administrator", or authenticating as "root" is insufficient. Failure to follow this requirement will result in an installation failure.

5. Click Continue in the Introduction panel.

6. Read the software license agreement then click Continue.

7. To agree to the license and continue the installation, click Agree.

8. Select the volume that contains Mac OS X (Server) and WebObjects 4.5.1, then click Continue.

9. Make sure that there are no WebObjects or EOF applications running.

10. Click Install to proceed with installation.The Installer window displays information about the progress of the installation, which may take several minutes.

11. Restart your computer.

Installing WebObjects 4.5.1 Update 4 on Mac OS X Server 1.2

There are two mutually exclusive updates for this platform. If you have WebObjects 4.5.1 Developer installed, you need WebObjects 4.5.1 Developer Update 4. If you have WebObjects 4.5.1 Deployment installed, you need WebObjects 4.5.1 Deployment Update 4. You do not need both on any system.

1. Download WO451MOSXSDevUpdate4.pkg.tar, the update installer for WebObjects 4.5.1 Developer on Mac OS X Server 1.2, or WO451MOSXSDepUpdate4.pkg.tar, the update installer for WebObjects 4.5.1 Deployment on Mac OS X Server 1.2.The updates are available from:

HTTP:

../WO451MOSXSDevUpdate4.pkg.tar

../WO451MOSXSDepUpdate4.pkg.tar

2. Untar the update package.
Your web browser may perform this step for you.

3. Log in as root on your Mac OS X Server 1.2 system.

If you're not sure how to log in as root, see your system administrator.

4. Double-click on the update package you downloaded in step 1.

5. Click the Install button in the Installer package window.
An Install Package panel opens.

6. Make sure that there are no WebObjects or EOF applications running.

7. Click 'Install' in the Install Package panel and, when prompted for confirmation, click OK to proceed. The Installer window displays information about the progress of the installation, which may take several minutes.

8. If desired, manually install the updated .jar file needed to resolve "WOCollapsibleContent doesn't initialize correctly (Apple reference #2709677)" by copying them to your web server's document root as described in detail in the release note below.

9. When the installation completes, restart the computer.
Log out and use the reboot button on the login panel.

Installing WebObjects 4.5.1 Update 4 on Windows NT 4.0 or Windows 2000

There are two mutually exclusive updates for this platform. If you have WebObjects 4.5.1 Developer installed, you need WebObjects 4.5.1 Developer Update 4. If you have WebObjects 4.5.1 Deployment installed, you need WebObjects 4.5.1 Deployment Update 4. You do not need both on any computer.

1. Download WO451WinDevUpdate4.exe, the self-extracting update installer for WebObjects 4.5.1 Developer on Windows, or WO451WinDepUpdate4.exe, the self-extracting update installer for WebObjects 4.5.1 Deployment on Windows.
The updates are available from:

HTTP:

../WO451WinDevUpdate4.exe

../WO451WinDepUpdate4.exe

2. Log in as a user with Administrator privileges.

3. Make sure that there are no WebObjects or EOF applications running.

4. Double-click on the update installer you downloaded in step 1 to start the installation process.
A screen with information about this update appears.

5. Read the update information.

6. Click "Next" to continue.

7. The license agreement for this update appears.
To agree to the license and continue the installation, click "Yes".

8. The update will be installed on your computer and you will be asked if you want to restart.
Select "Yes, I want to restart my computer now" to restart your computer. There will be a brief delay while the WinZip self-extractor removes its temporary files.

9. If desired, manually install the updated .jar file needed to resolve "WOCollapsibleContent doesn't initialize correctly (Apple reference #2709677)" by copying them to your web server's document root as described in detail in the release note below.

Installing WebObjects 4.5.1 Update 4 on Solaris and HP-UX

1. Download WO451SolarisUpdate4.TAR.Z, the update installer for Solaris, and/or WO451HPUXUpdate4.TAR.Z, the update installer for HP-UX.
You will also need to download the update installation script, patcher.sh.
The updates are available from:

HTTP:

../WO451SolarisUpdate4.TAR.Z

../WO451HPUXUpdate4.TAR.Z

The installation script is available at:
../Enterprise/scripts/patcher.sh

After you have downloaded the files, the patcher.sh script needs its executable bit set. At the command prompt enter:

chmod 511 patcher.sh

2. Log in as root.

3. Make sure that there are no WebObjects or EOF applications running, including Monitor.

4. If a web server is running on the computer on which you are installing the update, stop it.

5. Stop WebObjects services (wotaskd and woservice) using the WOServices script.
At the command prompt enter:
cd $NEXT_ROOT/Library/WebObjects/Executables
./WOServices stop

These services will be restarted when you restart after installing the update.

6. To Install the update, cd to the directory containing the update and the patcher.sh installation script.
At the command prompt enter:

patcher.sh -install WO451SolarisUpdate2.TAR.Zorpatcher.sh -install WO451HPUXUpdate2.TAR.Z

For more information on using patcher.sh, at the command prompt enter:
patcher.sh -help

7. If desired, manually install the updated .jar file needed to resolve "WOCollapsibleContent doesn't initialize correctly (Apple reference #2709677)" by copying them to your web server's document root as described in detail in the release note below.

8. Restart your computer.

Corrected in WebObjects 4.5.1 Update 4

Test configuration data left in obj.conf file for the NSAPI adaptor

Apple Reference 2420536

ISSUE:

Some test configuration data was left in the sample obj.conf file for the NSAPI plugin adaptor.

RESOLUTION:

The extra text has been removed.

Monitor Adaptor settings are inconsistent between display, Monitor, and Adaptor

Apple Reference 2464532

ISSUE:

Adaptor settings in Monitor were displayed as integers but stored as decimals. They were then sent as decimals to the adaptor, where they were translated back to integers.

RESOLUTION:

Monitor now stores adaptor settings as integers.

ISAPI does not upload files larger than 64k

Apple Reference 2488931

ISSUE:

Some customers have reported receiving socket errors ("socket not connected") when attempting to upload large files using the ISAPI adaptor.

RESOLUTION:

The ISAPI adaptor has been modified to allow successful uploading of files larger than 64 KB.

Oracle adaptor raises with pessimistic locking

Apple Reference 2512093

ISSUE:

Fetching objects using pessimistic locking and then attempting to save changes to the fetched objects results in the Oracle adaptor raising an exception. The exception says "attempted to begin a transaction within a transaction".

RESOLUTION:

EOF has been modified to not begin a new transaction when saving changes to an object that was fetched with pessimistic locking enabled.

WOCollapsibleContent doesn't initialize correctly

Apple Reference 2709677

ISSUE:

WOCollapsibleContent's -isVisible method incorrectly initializes the visible state when dynamically bound.

RESOLUTION:

This problem has been corrected. This change affects the following file in the WODocument root:

```
$NEXT_ROOT/Library/WebObjects/WODocumentRoot/WebObjects/Java/woextensions.jar
```

This update places an upgraded version of this file in the WebObjects installation. To enable this fix for deployment this file must be manually replaced in the web server document root in the following location:

```
{web server doc root}/WebObjects/Java/woextensions.jar
```

WOMultiThreadedAdaptor hardcodes '256' rather than using FD_SETSIZE

Apple Reference 2730943

ISSUE:

WOMultiThreadedAdaptor uses a hardcoded '256' as a limit for the maximum number of simultaneous open connections, but uses select() along with the FD_SET and related macros to service the connections. On Windows the default FD_SETSIZE is less than 256, so it is possible that on a busy site some connections will be accepted but never serviced.

RESOLUTION:

On the Windows platform only the WebObjects framework has been modified to change the limit for the maximum number of simultaneous open connections to 64. On the other platforms the number remains unchanged at 256.

FD_xxx macros used without locks

Apple Reference 2730945

ISSUE:

The FD_SET and related macros are used by WebObject applications in servicing requests. When the application side adaptor is running multithreaded there may be synchronization issues in its use of these macros. (These issues are most likely to manifest as problems on Windows due to the way the macros are implemented on that platform.)

RESOLUTION:

Locking code has been added to the WebObjects framework to prevent data synchronization issues associated with the FD_xxx macros in the application side adaptor.

WONonBlockingAccept can return 0 on windows

Apple Reference 2730951

ISSUE:

Under heavy load on an MP Windows system, low level socket functions can be blocked because of interaction between the NT/MP code and the NIC. This can cause an incorrect value (0) to be returned from accept() to WebObjects applications.

RESOLUTION:

A Windows specific change has been made to the WebObjects framework to detect and work around this situation.

Monitor identified P4 processor as PowerPC (603e)

Apple Reference 2731079

ISSUE:

Wotaskd running on Microsoft Windows would report the processor as a PowerPC 603e when the real processor was a P4.

RESOLUTION:

This problem has been corrected.

HTTP Adaptors catch wrong error message on Microsoft Windows

Apple Reference 2751677

ISSUE:

The WebObjects adaptor uses the error codes EPIPE and EMSGSIZE when checking return values from certain system calls. These are incorrect on the Windows platform.

RESOLUTION:

The adaptor has been changed to use WSACONNECTABORTED and WSAEMSGSIZE on Windows instead.

WOHyperlink queryDictionary/fragmentIdentifier combo results in wrong HTML

Apple Reference 2789133

ISSUE:

In some circumstances the WebObjects framework generates URLs which have the query string and fragment identifier interchanged.

RESOLUTION:

This problem has been corrected.

WOAdaptor does not set request->content when request->method is not 'POST'

Apple Reference 2793625

ISSUE:

If the request method is other than 'POST' and the request content length is nonzero, the request content is not properly initialized. This can cause a web server crash.

RESOLUTION:

The request content is now properly initialized in this case.

Buffer overflow in WOAdaptors

Apple Reference 2795823

ISSUE:

The WebObjects adaptor code allocates a buffer which could be one byte too small. This could cause a one byte buffer overrun if a very long host name is used.

RESOLUTION:

This problem has been corrected.

Instance launched on the wrong host

Apple Reference 2796516

ISSUE:

There was a race condition where an incoming lifebeat could cause wotaskd to launch an instance on the wrong host.

RESOLUTION:

This problem has been corrected.

malloc off-by-one in adaptors

Apple Reference 2802333

ISSUE:

The WebObjects adaptor allocates a buffer which is one byte too small.

RESOLUTION:

This problem has been corrected.

Monitor becomes unusable when server is down

Apple Reference 2823824

ISSUE:

Several of Monitor's pages (Hosts, Applications, DetailPage) attempt to contact each host's wotaskd for each instance configured. This causes Monitor to be very slow to respond when a server is down.

RESOLUTION:

Monitor has been changed to cache the state of hosts and instances. The cache timeouts can be changed using the defaults mentioned below. During development you will likely want to set the timeouts to a lower value.

WOMonitorHostCacheTimeout	40 seconds by default
WOMonitorInstanceCacheTimeout	25 seconds by default

old Foundation version installed

Apple Reference 2830592

ISSUE:

Some installation configurations could result in an old version of Foundation being installed. See Apple Knowledge Base article 75198, "**WebObjects 4.5.1: Earlier Foundation Framework Installed In Certain Configurations**" for the details.

RESOLUTION:

The update for Windows Deployment installs the correct version of Foundation.dll. For other affected configurations, follow the instructions in the KBase article.

Corrected in WebObjects 4.5.1 Update 3

wotaskd sometimes returns content length 0

Apple Reference 2744196

ISSUE:

On Mac OS X 10.1 wotaskd sometimes returns empty content for all requests, depending on how it is started.

RESOLUTION:

This problem has been corrected.

ObjC apps raise when running on Mac OS X 10.1

Apple Reference 2757892

ISSUE:

In Mac OS X 10.0.x, immutable collections in Foundation were implemented as mutable collections. In Mac OS X 10.1, the collection implementations were changed so that immutable collections were actually immutable. This change was incompatible with WebObjects 4.5.1.

RESOLUTION:

WebObjects.framework now uses a compatibility mode in Foundation in which all collections are mutable.

WebObjects Builder broken after upgrading to Mac OS X 10.1

Apple Reference 2782527

ISSUE:

The upgrade installer for Mac OS X 10.1 removes HTMLEditing.framework from the system. Since WebObjects Builder depends on this framework, it will no longer run. Upon launching WebObjects Builder, you will see the following error message:

dyld: /Developer/Applications/WebObjects Builder.app/Contents/MacOS/WebObjects Builder can't open library:
/System/Library/PrivateFrameworks/HTMLEditing.framework/Versions/A/HTMLEditing
(No such file or directory, errno = 2)

RESOLUTION:

The update installs the version of HTMLEditing.framework shipped with WebObjects 4.5.1.

"Save as" does not change the name in the title bar for a model

Apple Reference 2796022

ISSUE:

After performing a "Save as" operation, EOModeler does not change the name of the model in the window title bar.

RESOLUTION:

The window title bar now properly reflects the new name of the model.

WOSendMail calls obsolete methods on NSUserDefaults

Apple Reference 2798848

ISSUE:

WOSendMail calls several obsolete NSUserDefaults methods, which caused warning messages to be printed.

RESOLUTION:

WOSendMail no longer calls the obsolete methods.

wotaskd and Monitor run with unexpected defaults on Mac OS X 10.1

Apple Reference 2802265

ISSUE:

The user defaults system changed between Mac OS X 10.0.x and Mac OS X 10.1. This causes Monitor and wotaskd to run with an unexpected set of defaults.

RESOLUTION:

Monitor and wotaskd have been modified to work properly with the user defaults system on Mac OS X 10.1.

Corrected in WebObjects 4.5.1 Update 2

Wrong Swing method in IB code generation for NSTableView

Apple Reference 2453148

ISSUE:

Swing code generated by InterfaceBuilder improperly uses setWidth instead of setPreferredWidth for NSTableView.

RESOLUTION:

This has been corrected.

woservice has a small memory leak

Apple Reference 2491807

ISSUE:

woservice has a small memory leak each time it launches the application it watches.

RESOLUTION:

The leak has been removed.

WOSession leaks an ivar

Apple Reference 2503730

ISSUE:

WOSession leaked an ivar when deallocated.

RESOLUTION:

This has been corrected.

NSAttributeDictionary methods crash if +initialize hasn't completed

Apple Reference 2529298

ISSUE:

A multithreaded application can crash if NSAttributeDictionary methods are called before its +initialize method has finished executing.

RESOLUTION:

NSAttributeDictionary is now initialized early in the application's startup.

Snapshot ref counting problem when inserting into and deleting parent/child ECs

Apple Reference 2609375

ISSUE:

Certain sequences of operations involving nested editing contexts can cause problems with the snapshot reference count.

RESOLUTION:

Snapshot reference counts are now properly maintained. Correcting this problem required adding an instance variable to the EOEditingContext class, changing the size of an EOEditingContext instance. This breaks binary compatibility for customers that subclass EOEditingContext and add ivars. Customers who do this must recompile.

direct action URL generation missing instance numbers

Apple Reference 2616937

ISSUE:

Under certain circumstances WebObjects would not include an instance number when generating a URL for a direct action. This could cause the WebObjects adaptor to load balance to a different instance which does not contain the user's session.

RESOLUTION:

URL generation for direct actions has been modified to preserve the instance number when appropriate.

Monitor/wotaskd could not tell the difference between Mac OS X Server 1.2 and Mac OS X Server 10.0.x

Apple Reference 2657074

ISSUE:

Monitor/wotaskd used a compile time method to determine the OS reported in Monitor's Hosts page. A Mac OS X 10.0.x machine was reported as Mac OS X Server.

RESOLUTION:

Mac OS X (Server) 10.0.x now reports the information in /System/Library/CoreServices/SystemVersion.plist. Mac OS X Server 1.2 will report as "Mac OS X Server".

Server-side WebAssistant launch line incorrect

Apple Reference 2661845

ISSUE:

If your DirectToWeb application uses '-D2WWebAssistantEnabled YES' as a command line argument rather than programmatically setting it after the application has finished launching, the port number will not yet be set and the server-side WebAssistant launch line will print with the incorrect port number -1, as in the following example:

```
appletviewer http://localhost:-1/cgi-bin/WebObjects/Administrate.woa/wa/D2WActions/openWebAssistant
```

RESOLUTION:

Specify a real port number in the appletviewer launch command, or specify a port at launch using the -WOPort <#> command line argument.

Adding an object to an owns relationship always puts it in the "inserted" list

Apple Reference 2663566

ISSUE:

Adding an object which has already been saved to an owns relationship always puts it in the list of 'inserted' objects. This creates an inconsistency when saving changes.

RESOLUTION:

EOControl has been modified to check whether the object is already in the editing context before adding it to the inserted list.

Sessionless direct action development apps inaccessible via web server

Apple Reference 2663739

ISSUE:

An instance of a sessionless direct action application does not include the instance id in the URL generated by WOHyperlink. As a result, this type of application is not accessible through the WebObjects web server adaptor when running as a development instance.

RESOLUTION:

URL generation has been modified to include the instance number for development instances.

Adaptor XML parser can crash with bad syntax

Apple Reference 2664670

ISSUE:

Certain textual formatting errors in the XML configuration file for the WebObjects HTTP adaptor can cause the adaptor to crash. (Note that wotaskd produces correct XML, so this only applies if a file is being used to configure the adaptor.)

RESOLUTION:

The XML parser has been modified to correctly handle the case that was causing the crash.

CreatePlots and LongRequest examples fail to clean or build on MOSXS 1.2

Apple Reference 2667045

ISSUE:

These two examples cannot be cleaned or built on Mac OS X Server 1.2 because the path to gnumake defined in PB.project is incorrect for this platform.

RESOLUTION:

The PB.project files for these two examples have been corrected.

NSUnarchive exception when running SetupWizard.app in the EOF Examples on MacOS X Server 1.2

Apple Reference 2673597

ISSUE:

The nibs in the EOF examples were corrupted in the shipping version of WebObjects 4.5.1.

RESOLUTION:

The update replaces the corrupted nibs with the correct files.

Time zone updates missing on Windows

Apple Reference 2678768

ISSUE:

Several files needed to resolve the issues originally resolved in WebObjects 4.0.1 Patch 2 and WebObjects 4.5 Update 3 (see Apple reference #2406610 in either update overview in the Knowledge Base for details) were omitted from WebObjects 4.5.1 on the Windows platform only.

RESOLUTION:

This update includes the missing files for Windows.

Update 4.5.1 adaptor to 5.0 GM version

Apple Reference 2691647

ISSUE:

Some changes were made to the WebObjects adaptor between the WebObjects 4.5.1 release and the WebObjects 5.0 release.

RESOLUTION:

This update includes all the source changes to the WebObjects adaptor up to the WebObjects 5.0 release. (This update also includes changes which were made after the WebObjects 5.0 release. These are documented separately.)

EOTextAssociation does not recognize Mac OS X rtf header "{\\\\rtf1" and throws an exception

Apple Reference 2695698

ISSUE:

New RTF data generated on Mac OS X 10.0.x uses the header "{\\\\rtf1" where previous WebObjects platforms used "{\\\\rtf0".

RESOLUTION:

EOTextAssociation has been updated to handle the new RTF signature properly.

WebObjects 4.5.1 adaptor source won't compile on MOSXS 1.2

Apple Reference 2696008

ISSUE:

The Mac OS X Server 1.2 installation includes sources for the WebObjects 4.0.1 adaptor. Installing the WebObjects 4.5.1 adaptor on a system with the 4.0.1 sources results in an incompatible mix of files from the two versions.

RESOLUTION:

This update removes any existing installed adaptor source on Mac OS X Server 1.2 and Mac OS X (Server) 10.0.x. The full WebObjects adaptor source is included in the update and installed on all platforms.

EOPalette raises when opening connection inspector

TA26815_WebObjects_WebObjects_Update_Overview.pdf

Apple Reference 2732969

ISSUE:

EOPalette sometimes raised an exception when the user selected the Connections inspector. This prevented the developer from changing or creating connections in existing nib files.

RESOLUTION:

This has been corrected.

Corrected in WebObjects 4.5.1 Update 1

WebObjects 4.5.1 Update 1 was applicable only to Mac OS X 10.0.x systems with WebObjects 4.5.1 Developer installed. It did the following:

- created the file /System/Library/WebObjects/Configuration/WebServerConfig.plist, which is needed to do a "split install" of your WebObjects application from ProjectBuilderWO on a developer system.
- updated precompiled headers.
- created the missing documentation links mentioned in the Readme.rtf on the CD.

Published Date: Oct 10, 2016

WebObjects 4.5.1: Earlier Foundation Framework Installed In Certain Configurations

Certain WebObjects 4.5.1 installation configurations contain an incorrect version of the Foundation framework. The incorrect version is the version that originally came with WebObjects 4.5. Several important issues in the Foundation framework were fixed in the WebObjects 4.5.1 release. The correct Foundation version is expected to be included in a future WebObjects 4.5.1 update for affected configurations. Affected customers can work around this issue until the updates are available by installing the correct version of Foundation as described below.

Note: WebObjects 4.5.1 Update 4 has been released. Update 4 installs the correct version of Foundation on Windows deployment. If you install Update 4 on your Windows computer you will not be affected by this issue. Refer to article 70037: "**WebObjects Current Patch List**", for information on the most current updates for WebObjects.

The installation configurations which are affected by this issue are:

- WebObjects Deployment on Windows
- A minimal WebObjects installation on Solaris

This issue does not occur in the other supported installation configurations for WebObjects 4.5.1:

- Mac OS X (Server) 10.0.3 or later
- Mac OS X Server 1.2
- WebObjects Developer on Windows
- A full WebObjects install on Solaris.

This article has been archived and is no longer updated by Apple.
There were several issues fixed in Foundation between WebObjects 4.5 and WebObjects 4.5.1. You can find them documented in the release notes
for **WebObjects 4.5 Update 3** (which includes all fixes in Updates 1 and 2) and **WebObjects 4.5.1**. The most serious and time-critical is described in the following release note and was originally fixed in WebObjects 4.5 Update 2:

> Adding days hangs at 1/1/2002
>
> Apple reference #2437169
>
> ISSUE:
>
> The NSCalendarDate method -dateByAddingYears:months:days:hours:minutes:seconds: could get stuck in an infinite loop for some values of the calculated resulting date.
>
> RESOLUTION:
>
> NSCalendarDate now correctly calculates the resulting date.

To avoid this issue on Solaris, simply do a full WebObjects installation and not a minimal installation. If you have an existing deployment system on which you did a minimal installation, you can correct the problem by extracting `Library/Frameworks/Foundation.framework/Versions/C/libFoundation.so.C` from the `wodev.TAR.Z` package inside the `Solaris/WebObjects` directory on your WebObjects 4.5.1 Deployment CD. You can also reinstall WebObjects 4.5.1 performing a full installation.

To make it easier to tell the right version from the wrong version, here are the pertinent details for each:

Incorrect Version: WebObjects 4.5 libFoundation.so.C: size = 2972836, date = Jan 24 2000

Correct Version: WebObjects 4.5.1 libFoundation.so.C: size = 2973980, date = Feb 22 2001

On Windows, an existing deployment system can be corrected by copying the `C:/Apple/Library/Executables/Foundation.dll` from a WebObjects 4.5.1 Developer system to your deployment system. Alternatively, you can install WebObjects 4.5.1 Developer on your deployment system. To make
it easier to tell the right version from the wrong version, here are the pertinent details for each:

Incorrect Version: WebObjects 4.5 Foundation.dll: size = 1818339, date = Jan 24 2000

TA26817_WebObjects_Earlier_Foundation_Framework_Installed_In_Certain_Configurations.p

Correct Version: WebObjects 4.5.1 Foundation.dll: size = 1818974, date = Feb 22 2001

This issue is expected to be corrected in a future update to WebObjects 4.5.1 Deployment. Once that update has been released, installing it will be the best way to correct this issue.

Published Date: Feb 19, 2012

WebObjects 5.1.2: Update Overview

This document contains an overview and download information for Apple's WebObjects 5.1.2 update. Apple recommends that all users of WebObjects 5.1 install this update on all platforms.

The **WebObjects Current Patch List**, document 70037, contains information on all available patches and updates for all versions of WebObjects. Read this document if you're not sure which update you need on your system.

This article has been archived and is no longer updated by Apple.
WebObjects 5.1.2 includes updated versions of several WebObjects class and jar files. Some WebObjects project types make copies of these files when the project is built. As a result, some projects may need to be rebuilt to take advantage of the issues addressed in the update. For example, when a JSP/Servlet war archive is created, several jars are copied into the war file. At least one jar (WOJSPServlet_client.jar, from the WOJSPServlet.framework) is always copied, and additional framework jars may be copied into the war as well, depending on the project. After installing WebObjects 5.1.2, either the application must be rebuilt (recreating the war archive), or the war archive must be manually updated, using the jar tool.

This update includes modified WebObjects client-side Java classes and jars. On Mac OS X Server and Microsoft Windows the update installer automatically places the modified classes and jars in your web server's document root directory. On Sun Solaris, the update installer places the modified classes in the WebObjects installation (in `$NEXT_ROOT/Library/WebObjects/WODocumentRoot/WebObjects`) but does not copy them to your web server's document root directory. To use the new files, you must install them in the correct location for the web server being used.

WebObjects 5.1.2 for Mac OS X (Server) 10.1.4

Important: There are two mutually exclusive updates for this platform. If you have WebObjects 5.1 Developer installed on Mac OS X 10.1.4, you need the WebObjects 5.1.2 Developer update. If you have WebObjects 5.1 Deployment installed on Mac OS X Server 10.1.4, you need the WebObjects 5.1.2 Deployment update. You do not need both on any system.

This update is available through the Software Update feature of Mac OS X. If you use this method, only the proper update for the software which you have installed on your system is visible and available for download. If you prefer to download and install the package manually, follow the instructions below.

Note: WebObjects 5.1.2 Deployment requires:

- Mac OS X Server 10.1.4 or later
- Mac OS X 10.1.4 Server Update
- April 2002 Security Update
- Java 1.3.1 Update 1

WebObjects 5.1.2 Developer requires:

- Mac OS X 10.1.4 or later
- December 2001 Mac OS X 10.1 Developer Tools
- April 2002 Security Update,
- Java 1.3.1 Update 1

If you have not yet updated to the correct version of Mac OS X Server, Developer Tools, and Java, you **must** do so before installing WebObjects 5.1.2. The Mac OS X 10.1.4 and December 2001 Mac OS X 10.1 Developer Tools images are available on the Apple web site.

If you are creating a new Mac OS X WebObjects 5.1 development system, you should install the software in the following order:

1. Mac OS X 10.1.4
2. December 2001 Mac OS X 10.1 Developer Tools
3. Java 1.3.1 Update 1
4. April 2002 Security Update
5. WebObjects 5.1 Developer
6. WebObjects 5.1.2 Developer

Manually Installing WebObjects 5.1.2 Developer on Mac OS X 10.1.4

These instructions are for manually downloading and installing WebObjects 5.1.2 Developer. If you are installing using Software Update, see **WebObjects 5.1.2 for Mac OS X Server 10.1.4**, above.

Note: WebObjects 5.1.2 Developer requires:

- Mac OS X 10.1.4 or later
- December 2001 Mac OS X 10.1 Developer Tools
- April 2002 Security Update,
- Java 1.3.1 Update 1

If you have not yet updated to the correct version of Mac OS X, Developer Tools, and Java, you **must** do so before installing WebObjects 5.1.2. The Mac OS X 10.1.4 and December 2001 Mac OS X 10.1 Developer Tools images are available on the Apple web site.

1. Download `WO51MacOSXDevUpdate2.pkg.tar`, the update package for Mac OS X 10.1.

The update is available from:

http://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/webobjects/patches/5.1/WO51MacOSXDevUpdate2.pkg.tar

Stuffit Expander should automatically expand the .tar file, leaving `WO51MacOSXDevUpdate2.pkg`.

2. Double-click WO51MacOSXDevUpdate2.pkg.
The Authorization panel opens.

Only an administrator can install the update.

3. Click the lock icon at the bottom left of the panel to authenticate for administrative access, then click OK.

4. Click Continue in the Introduction panel.

5. Read the software license agreement then click Continue.

6. To agree to the license and continue the installation, click Agree.

7. Select the volume containing Mac OS X and WebObjects 5.1 Developer, then click Continue.

8. Make sure that there are no WebObjects or EOF applications running.

9. Click Install to proceed with installation.
The Installer window displays information about the progress of the installation, which may take several minutes.

10. Restart your computer.

Manually Installing WebObjects 5.1.2 Deployment on Mac OS X Server 10.1.4

These instructions are for manually downloading and installing WebObjects 5.1.2 Deployment. If you are installing using Software Update, see **WebObjects 5.1.2 for Mac OS X Server 10.1.4**, above.

Note: WebObjects 5.1.2 Deployment requires:

- Mac OS X Server 10.1.4 or later
- Mac OS X 10.1.4 Server Update
- Java 1.3.1 Update 1

If you have not yet updated to the correct version of Mac OS X Server and Java, you must do so before installing WebObjects 5.1.2. The Mac OS X Server 10.1.4 image is available on the Apple web site.

1. Download `WO51MacOSXDepUpdate2.pkg.tar`, the update package for Mac OS X Server 10.1.

The update is available from:

http://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/webobjects/patches/5.1/WO51MacOSXDepUpdate2.pkg.tar

Stuffit Expander should automatically expand the .tar file, leaving `WO51MacOSXDepUpdate2.pkg`.

2. Double-click `WO51MacOSXDepUpdate2.pkg`.
The Authorization panel opens.

Only an administrator can install the update.

3. Click the lock icon at the bottom left of the panel to authenticate for administrative access, then click OK.

4. Click the Continue button in the Introduction panel.

5. Read the software license agreement and then click Continue.

6. To agree to the license and continue the installation, click Agree.

7. Select the volume that contains Mac OS X Server and WebObjects 5.1 Deployment and then click Continue.

8. Make sure that there are no WebObjects or EOF applications running.

9. Click Install to proceed with installation.
The Installer window displays information about the progress of the installation, which may take several minutes.

10. Restart your computer.

Installing WebObjects 5.1.2 on Windows 2000

Notes:

- During the installation, if you see panels indicating that certain files being replaced by the update are "locked", click Reboot to continue the installation. The files will then be replaced upon restarting.
- This update cannot be uninstalled alone. Once you have upgraded to WebObjects 5.1.2 you cannot revert to WebObjects 5.1. However, the entire WebObjects 5.1.2 installation can be uninstalled using the Add/Remove Programs control panel.
- The WebObjects 5.1.2 update includes updated reference documentation in the standard JavaDoc format for the changes to the NSTimeZone, NSTimestamp, and

NSTimestampFormatter classes. The files are placed in `$NEXT_ROOT\\Developer\\Documentation\\WebObjects\\Reference`.

1. Download `WO51WinUpdate2.exe`, the self-extracting update installer for Windows 2000.

The update is available from:

http://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/webobjects/patches/5.1/WO51WinUpdate2.exe

2. Log in as a user with Administrator privileges.

3. Make sure that there are no WebObjects or EOF applications running.

4. Double-click on the update installer, `WO51WinUpdate2.exe`, to start the installation process.
A screen appears with some information about this update.

5. After you have read the information screen, click Next to continue.
The license agreement for this update appears.

6. To agree to the license and continue the installation, click Yes.
The update will be installed on your system and you will be asked if you want to restart.

7. Select Yes, I want to restart my computer now to restart Windows.
The WinZip self-extractor automatically quits and removes its temporary files in about 20 seconds.

Installing WebObjects 5.1.2 on Solaris

1. Download `WO51SolarisUpdate2.TAR.Z`, the update installer for Solaris.

You will also need to download the update installation script, `patcher.sh`.

The update is available from:

http://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/webobjects/patches/5.1/WO51SolarisUpdate2.TAR.Z

The installation script is available at:

http://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/scripts/patcher.sh

After you have downloaded the files, the patcher.sh script needs its executable bit set. At the command prompt enter:

```
chmod 511 patcher.sh
```

2. Log in as root.

3. Make sure that there are no WebObjects or EOF applications running, including Monitor.

4. If a web server is running on the computer on which you are installing the update, stop it.

5. Stop WebObjects services (`wotaskd` and `woservice`) using the WOServices script. At the command prompt enter:

```
cd $NEXT_ROOT/Library/WebObjects/Executables
./WOServices stop
```

These services will restart when you restart the computer after installing the update.

6. To Install the update, cd to the directory containing the update and the patcher.sh installation script. Then at the command prompt enter:

patcher.sh -install WO51SolarisUpdate2.TAR.Z

For more information on using patcher.sh, at the command prompt enter:

patcher.sh -help

7. Copy the updated WODocument root to your web server's document root.

cp -r $NEXT_ROOT/Library/WebObjects/WODocumentRoot/WebObjects <webserver doc root>/WebObjects

8. restart your computer.

Corrected in WebObjects 5.1.2

NPE with a compound primary key whose value types are other than 'i'

Apple Reference 2838002

ISSUE:

In some circumstances, using a compound primary key with a value type other than 'i' would result in EOF replacing one component of the key with null.

RESOLUTION:

This issue has been corrected.

WOResourceManager generating incorrect URLs when WOApp accessed via web server

Apple Reference 2838073

ISSUE:

WOResourceManager generates incorrect URLs when an app started in ProjectBuilder is accessed via a web server. This can cause images to fail to load.

RESOLUTION:

This issue has been corrected. It only occurs if the app detects that its project is currently open in ProjectBuilder when the instance is launched. This issue does not affect deployed apps.

EOModeler fails to launch FileMerge when merging .java files (Windows)

Apple Reference 2851049

ISSUE:

EOModeler fails to merge .java files in FileMerge because FileMerge does not launch. Also, FileMerge fails to show differences when the path to the eomodel has a directory with a space in its name. This issue is specific to the Windows platform.

RESOLUTION:

This issue has been corrected.

EOModeler fails to overwrite existing .java file (Windows)

Apple Reference 2851267

ISSUE:

EOModeler fails to overwrite previously generated files when generating java files for an entity. This issue is specific to the Windows platform.

RESOLUTION:

This issue has been corrected. In addition, EOModeler now includes an option to merge any differences using FileMerge.

In-memory qualification returns too many objects

Apple Reference 2852347

ISSUE:

Qualification of in-memory objects returns objects with null values in addition to the desired objects.

RESOLUTION:

For EOQualifier on in-memory objects, the operators <, >, <=, and >= always return false if either operand is null. However, = and != treat null values as equal to null and return the appropriate result. EOSortingOrder treats null as negative infinity.

NPE in EOClassDescription when propagating deletes

Apple Reference 2856718

ISSUE:

If a to-many relationship was set to null, EOClassDescription throws a null pointer exception when propagating deletes through the to-many relationship.

RESOLUTION:

This issue has been corrected.

The command "opendiff" does not launch FileMerge (Windows)

Apple Reference 2869320

ISSUE:

On Windows the "opendiff" command will not launch FileMerge.

RESOLUTION:

This issue has been corrected.

"unable to increment snapshot count for object" exception in fetch

Apple Reference 2869648

ISSUE:

`EOEditingContext.objectsWithFetchSpecification()` fails sometimes with an exception similar to: java.lang.IllegalStateException: incrementSnapshotCountForGlobalID: com.webobjects.eoaccess.EODatabase - unable to increment snapshot count for object with global ID xxx - no snapshot exists.

RESOLUTION:

WebObjects 5.1.2 corrects one possible way this exception can occur. However, the issue remains under investigation.

NSTimeZone.setDefault() should accept java.util.TimeZone

Apple Reference 2881499

ISSUE:

NSTimeZone.setDefault() throws an IllegalArgumentException when passed a java.util.TimeZone.

RESOLUTION:

NSTimeZone.setDefault() has been modified to accept a java.util.TimeZone.

NSTimeZones hash to zero

Apple Reference 2894077

ISSUE:

All NSTimeZones hash to zero.

RESOLUTION:

This issue has been corrected.

NSTimestamp() creates an incorrect timestamp

Apple Reference 2894102

ISSUE:

If an NSTimestamp is created using NSTimestamp(int year, int month, int date, int hour, int minute, int second, TimeZone tz) with values which refer to a time before the reference date, the created NSTimestamp is off by one second.

RESOLUTION:

This issue has been corrected.

NSTimeZone.getGMT() should be public

Apple Reference 2894146

ISSUE:

NSTimeZone.getGMT() should be public.

RESOLUTION:

NSTimeZone.getGMT() is now public and returns an NSTimeZone corresponding to Etc/GMT (GMT) offset 0.

NSTimestamp throws when using custom Java time zone

Apple Reference 2894493

ISSUE:

NSTimestamp throws an exception when using a custom Java time zone like GMT+06:00.

RESOLUTION:

NSTimeZone now supports time zones of the form GMT[+|-]hh:mm. They can be generated using NSTimeZone.timeZoneForSecondsFromGMT(int secondsOffsetFromGMT).

NSTimestamp(System.currentTimeMillis(), 999999999) throws an exception

Apple Reference 2894495

ISSUE:

NSTimestamp(System.currentTimeMillis(), 999999999) throws an exception. This method should only throw an exception when the nanos argument is greater than 999999999.

RESOLUTION:

This issue has been corrected.

NSTImeZone.setDefault() to NSLocalTimeZone should throw

Apple Reference 2894496

ISSUE:

It should be invalid to set the default time zone to NSLocalTimeZone.

RESOLUTION:

NSTimeZone.setDefault() now throws an IllegalArgumentException when passed an NSLocalTimeZone.

NPE if you call hashCode() on an NSLocalTimeZone object

Apple Reference 2894498

ISSUE:

Calling hashCode() on an NSLocalTimeZone object results in a null pointer exception.

RESOLUTION:

NSLocalTimeZone.hashCode() now returns the hash code of defaultTimeZone().

NSTimestampFormatter.parseObject() cannot parse arbitrary GMT timezone strings

Apple Reference 2894500

ISSUE:

NSTimestampFormatter.parseObject() cannot parse arbitrary GMT timezone strings like "GMT+12:15".

RESOLUTION:

This issue has been corrected.

Some abbreviations don't have corresponding time zone.

Apple Reference 2894502

ISSUE:

Some abbreviations don't have a corresponding NSTimeZone.

RESOLUTION:

This issue has been corrected.

timeZoneForSecondsFromGMT doesn't deal with extra seconds

Apple Reference 2894503

ISSUE:

Any extra seconds that were not part of whole hours and minutes were included in the offset of the apolitical time zone created.

RESOLUTION:

Extra seconds are now rounded to the nearest minute. For example:

NSTimeZone.timeZoneForSecondsFromGMT(-30) = GMT-00:01 () offset -60
NSTimeZone.timeZoneForSecondsFromGMT(-29) = GMT-00:00 () offset 0
NSTimeZone.timeZoneForSecondsFromGMT(30) = GMT+00:01 () offset 60
NSTimeZone.timeZoneForSecondsFromGMT(29) = GMT+00:00 () offset 0

NSTimestampFormatter.parseObjectInUTC can fail

Apple Reference 2894504

ISSUE:

NSTimestampFormatter.parseObjectInUTC() fails when the parse position is not at the beginning of the string.

RESOLUTION:

This issue has been corrected.

Apolitical time zones always return a zero offset from GMT

Apple Reference 2894505

ISSUE:

NSTimeZone.getRawOffset() is returning zero for apolitical time zones like "Etc/GMT+9".

RESOLUTION:

Apolitical time zones now return their offset from GMT. Geopolitical time zones will return zero, as many do not have one generic offset.

NSTimeZone.getAvailableIDs() contains "Factory"

Apple Reference 2894507

ISSUE:

NSTimeZone.getAvailableIDs() returns an incorrect entry "Factory".

RESOLUTION:

This issue has been corrected.

Corrected in WebObjects 5.1.1

NSTimeZone : timeZoneFromSecondsFromGMT() returns no time zone even when value is valid

Apple Reference 2814979

ISSUE:

NSTimeZone.timeZoneFromSecondsFromGMT() returned null when the offset was a valid value for an apolitical time zone.

RESOLUTION:

If the seconds offset from GMT corresponds to a whole hour between 12 and -12 inclusive, this method reuses an existing, well-known, apolitical NSTimeZone object for that offset. Only whole hour offsets should by passed to this method in WebObjects 5.1.1.

NSPathUtilities.stringByDeletingLastPathComponent() returns incorrect result on Windows

Apple Reference 2822553

ISSUE:

On Windows, NSPathUtilities.stringByDeletingLastPathComponent() returns an incorrect result if the root directory is specified. For example, an input of "C:/" incorrectly returns "C:" rather than "C:/".

RESOLUTION:

This problem has been corrected.

NSTimestamp.microsecondOfSecond is off by a factor of 1000

Apple Reference 2837997

ISSUE:

In WebObjects 5.1, NSTimestamp.microsecondOfSecond() actually returns milliseconds.

RESOLUTION:

This problem has been corrected.

NSTimestampFormatter does not format NSTimestamp in the local time zone

Apple Reference 2838080

ISSUE:

In WebObjects 5.1, NSTimestampFormatter does not format NSTimestamp in the local time zone.

RESOLUTION:

NSTImestampFormatter now defaults to the local time zone.

WOEventDisplay gives an error screen when logging is on

Apple Reference 2844727

ISSUE:

Viewing the event display page can result in a ClassCastException.

RESOLUTION:

This problem has been corrected.

NSTimestamp does not have SUID for serialization

Apple Reference 2847504

ISSUE:

WebObjects 5.1 cannot read NSTimestamps serialized in WebObjects 5.0.

RESOLUTION:

The serialID in WebObjects 5.1.1 has been changed to match the serialID in WebObjects 5.0. In WebObjects 5.1.1, NSTimestamp will read WebObjects 5.0/5.1.1 serialized Timestamps and write WebObjects 5.1.1 NSTimestamps.

NSTimestamp data that was serialized using WebObjects 5.1 cannot be deserialized using WebObjects 5.1.1. However, data can be migrated using NSTimestampFormatter. A WebObjects 5.1 tool can use NSTimestampFormatter to convert NSTimestamps to Strings. Then a WebObjects 5.1.1 tool can use NSTimestampFormatter to convert the Strings back to NSTimestamps.

NSTimestampFormatter.parseObject creates incorrect timestamp

Apple Reference 2849628

ISSUE:

NSTimestampFormatter.parseObject creates an incorrect timestamp when the string being parsed does not use GMT for the time zone.

RESOLUTION:

This problem has been corrected. Please review any subclasses of NSTimestampFormatter you may have used to work around this problem in your WebObjects 5.1 applications.

NSTimeZone.localTimeZone() raises

Apple Reference 2849630

ISSUE:

Using NSTimeZone.localTimeZone() with NSTimestampFormatter raises an exception.

RESOLUTION:

This problem has been corrected.

backtracking page cache not working properly

Apple Reference 2849640

ISSUE:

Backtracking in a browser and repeating a request or reloading a previously generated page incorrectly causes the request/response loop to execute rather than simply returning the cached page. (See WOApplication.setPageRefreshOnBacktrackEnabled().)

RESOLUTION:

The page cache now functions properly. Additionally, a request's form values (if any) are now considered when determining whether to return a cached page. If the user backtracks and repeats a request with modified form values, the request/response loop will execute. However, with the current implementation, the responses for both sets of form values remain in the cache. If the user backtracks a second time and makes another request with the original form values, the request/response loop will not execute and the cached page will be returned.

The documentation for WOApplication.setPageRefreshOnBacktrackEnabled() is incorrect on one point. The documentation states "By default, this attribute is set to false." The default in WebObjects 5.1 is true.

WO5.1 Win2K Cannot Launch Apps

Apple Reference 2849676

ISSUE:

Launching WebObjects 5.1 applications on Windows 2000 with European localization can fail with an error similar to:

```
Configuring launch environment for HelloWorld...

443 was unexpected at this time.
```

RESOLUTION:

This is a problem in the application launcher .cmd file generated when the application is built. The WebObjects build tools have been modified to produce correct .cmd files. However, existing .cmd files must be regenerated to incorporate this change. If you are experiencing this problem you must rebuild your application after installing WebObjects 5.1.1.

NullPointerException in WO5.1 with many to many relationships

Apple Reference 2850322

ISSUE:

In WebObjects 5.1, if an EOModel defines a many to many relationship that is only modeled in one direction, an error occurs attempting to access the entity which does not have the relationship modeled.

RESOLUTION:

This problem has been corrected.

An optimistic locking failure can cause subsequent fetch failures

Apple Reference 2852342

ISSUE:

An exception can leave the JDBCChannel in a bad state. Thereafter, a SELECT query can be incorrectly sent via a JDBC executeUpdate() call, raising a JDBCAdaptorException.

RESOLUTION:

This problem has been corrected.

Opening Components in WOBuilder

Apple Reference 2863520

ISSUE:

WOBuilder sometimes fails to open a component when double clicking on a .wo in ProjectBuilder. WOBuilder displays the message "Failed to open component".

RESOLUTION:

This problem has been corrected.

EOModeler fails to overwrite existing *.java file

Apple Reference 2880006

ISSUE:

When generating java files for an entity, EOModeler fails to overwrite previously generated files.

RESOLUTION:

This has been fixed for WebObjects on Mac OS X. In addition, EOModeler now includes an option to merge any differences using FileMerge.

Published Date: Feb 19, 2012

AppleScript 1.7 for Mac OS X 10.1: Release Notes

This document contains the AppleScript 1.7 for Mac OS X 10.1 Release Notes.
This article has been archived and is no longer updated by Apple.

AppleScript 1.7 for Mac OS X 10.1 - Release Notes

FEATURES:

Program Linking. AppleScript Language Mac OS X version 10.0 through 10.0.4 did not support Program Linking. With Mac OS X version 10.1 and later, and AppleScript version 1.7 and later, Program Linking works between Mac OS X machines as well as between Mac OS 9 and Mac OS X machines.

When targeting applications running on a Mac OS X machine, you must use TCP/IP networking and addressing; AppleTalk is not supported. (In addition, AppleScript 1.7 now supports encoding the login name and password into the "eppc" URL.) For a Mac OS X machine to respond to Program Linking requests, "Allow Remote Apple Events" must be enabled in the Sharing panel of System Preferences.

SOAP and XML-RPC Support. AppleScript 1.7 for Mac OS X 10.1 can use Internet applications as targets of Tell blocks. The syntax is:

```
tell application "http://server.domain.com/application"
    call xmlrpc {methodName:"XMLRPCMethod", parameters: {"hello", 25}}
    -- or
    call soap {methodName:"SOAPMethod", ¬
        method namespace uri: "urn:xmethodsTest", ¬
        parameters: {{name:"Fred", age:32}}, ¬
        SOAPAction:"urn:xmethodsTest#Test"}
end tell
```

The URL for the application reference must be a correct URL for a SOAP (Simple Object Access Protocol) or XML-RPC (eXtended Markup Language Remote Procedure Call) Web server.

An alternate syntax is: `tell application "webapplication" of machine "http://server.domain.com"`

but this form will be converted to the form above when the script is compiled.

New Icons. AppleScript 1.7 includes new icons for script files, scripting additions, and applets and droplets in Mac OS X. You should note that the new icons for compiled and uncompiled script files are more similar in X than they were in 9; you can tell the difference by the word "TEXT" in the icon for uncompiled text. Note also that while scripting additions and script files will appear with new icons automatically after a 10.1 upgrade, applets and droplets will not get the new icons until they are opened in Script Editor 1.7 and re-saved.

File Extensions. Like most other Mac OS X functions, AppleScript now supports file extensions (as well as the historical file types) on all the file kinds it deals with. The file types for AppleScript are:

script text	.applescript
compiled script	.scpt
scripting addition	.osax
scripting dictionary	.asdictionary

Line Endings. Because many Mac OS X files use "UNIX-style" line endings (using the linefeed character, or ASCII character 10), AppleScript versions 1.7 and later explicitly support embedding the linefeed character in strings with \\n. Scripts that use this feature can be run on older versions of AppleScript, but if decompiled, the linefeed character will not be visible in the decompiled output (but will recompile correctly).

Applets. Prior to AppleScript 1.4.3, script applications (applets) were stored in a "universal" format that worked on both 680x0-based and Power PC-based Macintosh models. Because that format was 680x0-based, it would not work on Mac OS X, so a "Mac OS X applet" format was introduced in AppleScript 1.4.3. With improvements in Mac OS X since that time, it is now possible to produce a script application that works on 680x0-based, Power PC-based Mac OS 9, and Mac OS X configurations. Script Editor 1.7 again offers only one choice for saving script applications. Older formats continue to work on the configurations they were saved for.

Command-Line Tools. The osacompile and osascript tools now have an "include" option ('-i') that allows you to specify application terminology to be used when compiling the given scripts. This frees you from having to specify applications in Tell blocks in the script itself. You can also use this to specify the static terminology for an application with dynamic terms, so you can prevent that application from being launched when you compile the script.

TA26819_AppleScript_for_Mac_OS_X_Release_Notes.pdf

BUG FIXES:

AppleScript Language In AppleScript 1.5 through 1.6, a script's global variables could be lost under certain rare circumstances. If a script contains a Tell block that targets a variable, and that variable specifies an application that does not exist, the "Where is application <name>?" dialog would be presented when the script is executed. After that point, further references to global variables in the handler that included the Tell block would fail. This has been fixed in AppleScript 1.7 for Mac OS X and Classic.

In AppleScript 1.5 and 1.6 for Mac OS X, scripting additions behaved fundamentally differently than in Mac OS 9: they were only installed in certain applications that were AppleScript-aware. If a scripting addition command (such as 'display dialog') was sent to an application that was not AppleScript-aware, the event would instead be executed in the application running the script (e.g. Script Editor); that means the dialog would come up in the Script Editor layer, not the Tell target application. In AppleScript 1.7 in Mac OS 10.1, the scripting additions mechanism has been redesigned to behave more like Mac OS 9, and scripting addition commands sent to applications will be executed in the process space and window layer of the target application.

AppleScript 1.5 through 1.6 often launched applications unnecessarily in order to get their terminology, and often used the terminology of the script editing application (such as Script Debugger) instead of application terminology. This has been fixed in AppleScript 1.7.

In AppleScript 1.5 through 1.6 for Mac OS X, the version property of AppleScript or an application would be displayed as raw data rather than a string (unless the version property was explicitly converted to a string). This has been fixed in AppleScript 1.7.

In AppleScript 1.5 and 1.6 for Mac OS X, certain operations with 'file' object specifiers (e.g. "'file Mac OS X:Applications:Terminal.app:" as alias) would fail, when similar operations would succeed on AppleScript 1.3 through 1.6 for Mac OS 9. These operations now work in AppleScript 1.7 for Mac OS X. Note that, as always, while you can pass a 'file' object specifier as a parameter to an event, or perform certain operations on it (like assignment and coercion), simply evaluating "'file pathname"' is itself an AppleScript error.

AppleScript 1.5 and 1.6 for Mac OS X could not target Mac OS 9 control panels running in the Classic environment. This has been fixed in AppleScript 1.7. Note that the Classic environment only supports a small number of control panels from Mac OS 9 (such as the Launcher).

Accessing paragraphs of AppleScript strings did not work correctly in AppleScript 1.5 through 1.6 if the line endings were Windows-style (CRLF). The result would be only the first half of the text paragraphs, interspersed with an equal number of blank strings. This has been fixed in AppleScript 1.7 and later.

Occasionally with AppleScript 1.5 and 1.6, recompiling a script would get an End of File error reading an application's terminology. This has been fixed in AppleScript 1.7.

In AppleScript 1.6, under certain circumstances calling a handler in an applet that has not been launched could cause an "Cannot continue" error. This has been fixed in AppleScript 1.7 and later.

In AppleScript 1.6, Unicode text values stored in script properties of a saved script could not be reloaded reliably. This has been fixed in AppleScript 1.7.

In AppleScript 1.6, Unicode text received from certain applications that included a Unicode byte-order mark would behave incorrectly; the text would appear to begin with the Euro symbol, and some operations would fail. AppleScript 1.7 handles Unicode text with byte-order marks correctly.

In somewhat rare circumstances, comparing two references to the same file for equality can fail even if both references refer to the same file. This is true in AppleScript 1.0 through 1.6 and has been fixed in AppleScript 1.7.

Due to a problem in AppleScript's script parser, the language formations "isn't", "doesn't", and possessives ending with "'s" would all accept a vertical bar or a double-quote character in place of the "s" or "t" following the apostrophe. In AppleScript 1.7 and later, these constructions (for example, "doesn'|" or "AppleScript"' version") are correctly noted as syntax errors.

Script Applications ("applets") In AppleScript 1.5 and 1.6, a running AppleScript applet will become non-responsive to any events (except command-period) after processing more than one incoming event. This has been fixed in AppleScript 1.7.

Script Editor In Script Editor 1.6 for Mac OS X 10.0.0 through 10.0.4, you could not choose the Finder with the "Browse" option from the "Open Dictionary..." dialog box. This has been fixed by Standard Additions 1.7 on Mac OS 10.1.

In Script Editor 1.6 in Mac OS X, attempting to paste Unicode text into the script window would result in an error. This has been fixed in Script Editor 1.7.

In Script Editor 1.6, printing a script to the printer would result in random characters being printed in the place of the script file name. This has been fixed in Script Editor 1.7.

Under certain circumstances in Mac OS 10.0.0 through 10.0.4, double-clicking generic TEXT files in the Finder would cause them to be opened by the Script Editor. This has been fixed in Script Editor 1.7, which will now be chosen to open only AppleScript-generated script text files. Script Editor 1.7 can also open files with the file extension ".applescript" even if they have no file type.

Standard Additions All disks formatted as Enhanced Macintosh File System ("HFS Plus") are able to store files with file names greater than 32 characters and stored as Unicode text. When older software accesses such files, those names are represented in an encoded form (with something like "#28AF" in the name). With AppleScript 1.6 and earlier, the results of many Standard Additions commands (like 'path to', 'info for', and 'list folder'), as well as creation and display of alias objects, would require and return encoded names. In AppleScript 1.7, long and Unicode file names in aliases and for scripting additions are represented by styled or Unicode text. Encoded file names are no longer supported.

From AppleScript 1.1, the 'offset' scripting addition command has not worked correctly when the direct parameter is styled text. It also has not worked correctly with the newly-introduced Unicode text type. In Standard Additions 1.7 and later it produces correct results with both styled and Unicode text.

In versions of Standard Additions prior to 1.7, the 'choose URL' command's 'using editable URL' parameter was present in the Scripting Additions dictionary but was nonfunctional (URLs were always editable regardless of the setting of the parameter). It behaves correctly in Standard Additions 1.7 and later: if set to false, the user can choose a URL only by browsing, not by editing the URL in the text box.

The 'choose from list' command in Scripting Additions 1.4 through 1.6 allowed the scripter to create a situation where it would return an empty selection even if the scripter specifically disallowed that case. (This can be done by supplying a default item that does not appear in the list). In Scripting Additions 1.7 and later, the "OK" button will not be enabled in such cases.

In Mac OS X, the 'info for' scripting addition in Standard Additions 1.7 now returns additional record items that provide information about the file's extensions. The 'displayed name' item returns the name of the item as the user sees it in the Finder or file dialogs, and the 'name extension' item now returns the file extension (if any) that is on the indicated file (without the ".", which is considered a separator, and not part of either the name or the extension). Both of these fields (along with the 'name' field itself) are Unicode text values.

In Standard Additions 1.6 and earlier, the 'info for' scripting addition would fail if any piece of information in the requested file or directory was unavailable. On UFS (Mac OS X) disks and mounted NFS volumes, the file creation date is unavailable, and accessing it causes a -8850 error (in trying to convert it to Universal Time). Starting with Standard Additions 1.7, any missing piece of information in the 'info for' result is provided as the value 'missing value' without failure. In AppleScript 1.6 and earlier, magnitude comparisons (<, ≤, >, ≥) against the 'missing value' would signal a coercion error for most types; i n 1.7 and later, these comparisons always return 'false' without error. These two changes ensure that scripts that use 'info for' against UFS and NFS volumes do not fail, though they may not get correct results because any comparison to the creation date is always false.

In Standard Additions 1.6 on both Mac OS 9 and Mac OS X, the 'info for' scripting addition would return an error -1401 for a nonexistent file, rather than the normal -35 returned in previous versions. In Standard Additions 1.7 trying to get the info for a nonexistent file (or a file in a nonexistent directory or inaccessible disk) will return the -35 error.

The 'read' command in Scripting Additions 1.6 had specific problems with the "using delimiters" parameter: in previous versions, 'read f as list using delimiters {tab}' would return a list, but in AppleScript 1.6, it returns a list of one-item lists. In AppleScript 1.7 and later it behaves as it did prior to version 1.6

The 'read' command in Scripting Additions 1.6 had specific problems with the 'before' and 'until' parameters if used in conjunction with the 'as' parameter. Instead of returning a value of a given type, it would return random data or an error. This has been fixed in Scripting Additions 1.7 and later.

Mac OS 9.1 introduced the concept of a "package", that is, a file composed of a folder of several files and folders, which is treated as an integral file by the Finder and other applications. The 'info for' scripting addition in AppleScript 1.6 and earlier treated such packaged data application files as folders, not files, and would not return file- or application-related information about them. In Standard Additions 1.7 and later, getting the information for any directory (including package folders) returns an additional record item "package folder" (if this Boolean value is true, then the directory is a package), and the file's type and creator.

Standard Additions 1.5 through 1.6 changed the way that the random number seed worked in the 'random number' scripting addition. Older versions used the system clock as the seed value if no seed value (or a seed value of 0) was provided; Scripting Additions 1.5 and 1.6 always use a seed value of 0 in these cases. In Scripting Additions 1.7 the older behavior has been restored. In addition, the seed value is now taken from the 60Hz 'ticks' counter rather than the system clock, because the increased speed of new machines makes it more likely that two consecutive random number calls may receive the same system clock time as their seed value.

In Mac OS X 10.0 through 10.0.4, the 'choose file name' scripting addition in Standard Additions 1.6 would crash if given an empty string ("") as the default file name. This has been fixed in Standard Additions 1.7. In addition, on Mac OS X the default file name can be a Unicode string.

Command-Line Tools For the osacompile and osascript command-line tools, the requirement that they be invoked with full paths (i.e. /usr/bin/osacompile) has been eliminated. They can now be invoked with implicit paths like any other command-line tool.

In Mac OS X 10.0.0 through 10.0.4, the '-l' and '-d' options for the osalang tool did not work as documented. In Mac OS X 10.1 and later, -l prints the subtype, manufacturer, flags, and name; and -L also prints the description in parentheses after the name.

The osacompile and osascript tools previously had a limit of 32K of input text. This limit has been lifted in Mac OS 10.1.

The osacompile and osascript tools execute as background applications; they cannot involve any user interface. If you want to call 'display dialog', 'choose from list', or other user-interface scripting additions from a script being executed by osascript, you must enclose it in a Tell block targeting a running application (such as the Finder).

KNOWN PROBLEMS:

AppleScript In AppleScript 1.0 and later, when you save a script using the 'store script' command it saves the script's entire parentage chain (which includes the script that calls the 'store script' command). This results in a stored script size that is much larger than would be expected. This is necessary in order for the script to have access to its parent's properties, globals, and handlers.

AppleScript 1.1 and later has a 32,767-character limit on string literals at compile time. If you need to compile scripts that contain string literals longer than 32K, use concatenation.

In AppleScript 1.1 and later, comparing two strings for equality will fail if one string contains more than 32,767 characters, even if the strings are obviously different.

In AppleScript 1.2 and later, certain mathematical operations on a small percentage of real numbers will return unexpected results. This is because many exact decimal fractions cannot be represented accurately in binary numbers. For example, (2.32 * 100) div 1 will compute to 231 rather than 232.

AppleScript supports recursive lists and records, that is, lists or records that include themselves. These are of limited utility. While they are handled correctly inside AppleScript itself, they cannot be sent to other applications or scripting additions, or a Stack Overflow error will result.

AppleScript compiles 4294967296 as 0, and numbers larger than that to their value minus 4294967296. The workaround is to use real-number format (e.g. 4294967296.0) instead.

If a script sends a Quit event to an application, the application will be launched if it is not running and be told to quit immediately. To prevent this, check the Processes class of the Finder to see if the application is running before sending it the Quit event.

The values of a list can be filtered by type with the syntax <plural class> of <list> or every <class> of <list>, e.g "integers of {1, 2.0, 3, true, "string"}. This does not work, however, with the class 'class': "classes of {string, 2, integer, "goodbye"}" returns an empty list, not {string, integer} as expected.

In AppleScript 1.6 and later, compiling certain numbers in scientific notation (such as 1.0e-12) will decompile in decimal form (i.e. 0.000000000001).

If an application object has an illegal URL in its "machine" container (e.g. application "Finder" of machine "eppc:/www.apple.com" – notice only one "/"), the "machine" container will be omitted and the application object will target the local machine, not a remote machine.

Pathnames of 'alias' objects may have problems if they contain accented characters. They may fail to compile, or produce errors on attempting to

display them.

Script Editor In very rare circumstances, on some computers, Script Editor 1.6 and later will stop displaying results in the Results window after a multi-line result has been displayed. Quit the Script Editor and re-launch it to see results again.

When resizing a Script Editor script window in Mac OS X, the vertical line at the left of the window is not drawn correctly. Minimize and reopen the window to redraw it correctly.

In Mac OS X, if you change your primary Language preference in System Preferences while the Script Editor is open, the Script Editor will partially -- but not completely -- adopt the new language choice. It will be better if you quit the Script Editor and restart it, but only complete after you log out and log back in again.

If you are using the Event Log window to show event results, if the result of any event contains more than 20,000 characters, the script will terminate with an error -20013. Turn off 'Show Event Results' or close the Event Log.

Script Applications ("applets") AppleScript applets handle incoming events in a last-in, first-out manner. If an applet is executing a script in response to an incoming event, and receives another incoming event, the second event will be completed before execution of the first event resumes. This is necessary so that events generated by the applet's script itself can be processed, but this may have an effect on applications (such as web servers) that send events to applets. If an applet receives a lot of events in a short period of time, the earlier events may receive timeout errors while the later events are processed.

In Script Editor 1.7, editing an applet saved as a Classic script application ("applet") and re-saving it will change its format to a "universal" applet. It can then be run in either Mac OS 9, Classic, or Mac OS X, but by default if double-clicked it will run in Mac OS X. If the applet is intended to be run in Classic (for example, if it uses Classic scripting additions), it may not function correctly. To fix this, use the Finder's Get Info command and check the "Open in the Classic environment" check box in the General Information pane.

In AppleScript 1.6 for Mac OS X, the 'Disable Startup Screen' menu item in script applications does not work. Open the script application in the Script Editor and save it again, checking the "Never show startup screen" checkbox.

Scripting Additions The Keychain Scripting application has a 'volume' property that conflicts with the 'set volume' Scripting Addition command. To set the 'volume' property in Keychain Scripting, enclose the volume property reference in parenthesis:

```
tell application "Keychain Scripting"
    set (volume of AppleShare key 1 of current keychain) to "Matia"
end tell
```

In AppleScript 1.5 and later on Mac OS X, the 'choose application' dialog box does not handle application aliases and symbolic links well. They may show up in the 'choose application' dialog box but won't necessarily behave correctly if chosen.

In AppleScript 1.5 and later in Mac OS X, using the 'choose application' scripting addition (or choosing an application during compilation) can take a long time to come up if you are connected to a network with a large number of applications on remote servers.

The prompt in the 'choose from list' command does not display correctly if it is long or contains return characters.

The Standard Additions dictionary shows many possible parameters for the 'path to' command, some of which are only available on Mac OS 9 and others that are only available on Mac OS X. In addition, the command works on many other values ("four-character codes") that do not have terms defined for them.

When using the 'path to' scripting addition, if the request is for a system folder that does not exist, it will not be created; instead, the error 'Folder is not available in this operating system version' is returned.

When the direct parameter of the 'path to' scripting addition is an application object, the result is always the path to the current application, regardless of which application is indicated by the application object.

Using the 'mount volume' command with an AppleTalk server name in a 'on server' parameter does not work in this version of Mac OS X. To mount a

volume using AppleTalk, use the AppleTalk URL syntax: 'mount volume 'afp:/at/ServerName/VolumeName'. You can supply the user name and password either in their optional parameters, in the URL, or let the user enter them. Note that because this is a URL, you may need to percent-escape special characters (such as spaces and punctuation) in the server and volume names.

When using the 'mount volume' command with a stored password in the Keychain, note that in Mac OS 10.1 it presents a server login dialog with the name and password filled in; the user must click OK or press Enter to mount the volume and allow the script to proceed.

In Standard Additions 1.7, if you use the 'write' command to write to a file that does not exist without using 'open for access' beforehand, the error message "Can't make file <path> into a file" is displayed, instead of the more familiar and accurate "File not found" error.

The Apple event manager performs coercions incorrectly from large-magnitude real numbers to integers. For example, the statement:

```
tell application "Finder"
    get capacity of disk 1 as integer
end tell
```

will succeed if the disk is under 2GB in size, but will return exactly 2GB for all larger disks (when it should fail). This problem is seen primarily in applications that return values as real numbers and don't handle the 'as' parameter themselves (the Finder is one such application). If you do the conversion separately from the event that gets the value, AppleScript will signal an error if the value is out of range (AppleScript integers can only hold values up to 512M-1).

Published Date: Feb 20, 2012

AppleScript 1.8.1 for Mac OS X 10.1.2: Release Notes

This document contains the AppleScript 1.8.1 for Mac OS X 10.1.2 Release Notes.
This article has been archived and is no longer updated by Apple.

AppleScript 1.8.1 for Mac OS X 10.1.2 - Release Notes

AppleScript 1.8.1 for Mac OS X 10.1.2 is the version of AppleScript installed by Software Update 10.1.2 on Mac OS X systems. It is primarily intended for use in developing and running applications with AppleScript Studio.

The main features of this release are support for AppleScript Studio development and debugging, and access to UNIX functionality from any script.

This release also fixes 13 problems in AppleScript that are present in AppleScript 1.7 on Mac OS X.

Version 1.8 is installed by the December 2001 Developer Tools Update and is very similar to version 1.8.1. The only difference is that the problem of applets crashing when certain multimedia software is installed is fixed in version 1.8.1.

AppleScript 1.8.1 can use scripts developed for any version of AppleScript from 1.1 through 1.7, any scripting addition created for AppleScript 1.5 or later for Mac OS X, and any scriptable application for Mac OS 7.1 or later.

A script created with AppleScript 1.8.1 can be used by any version of AppleScript back to version 1.1, provided it does not use features of AppleScript, scripting additions, or scriptable applications that are unavailable in that version.

FEATURES:

Standard Additions

To provide better access to Mac OS X's underlying UNIX functionality from AppleScript, Standard Additions 1.8 adds a new command and extends the functionality of another.

The new do shell script command takes a string as its direct parameter and executes that string in a UNIX shell. The text can be anything from a single command with parameters to a long script. The results of the script execution ("standard out") are returned as the result of the command; if there is an error (or no output), the error output ("standard error") are returned as the error message and can be processed in an AppleScript on error handler.

Note that the environment in which a shell script is executed is a separate process in the user's process group, and does not have a terminal set up, so commands that require interaction (vi, top) will not function. There is no way at present to direct any information to "standard in" of a shell script.

Note also that do shell script uses the sh shell, which is different than the default tcsh shell used in the Terminal. command paths and environment variables are different in sh; you'll need to adjust your shell scripts accordingly.

The system attribute command has been extended to provide information on the user's environment variables. These are set up at user login time and cannot be altered. If the direct parameter to system attribute is a four-character Gestalt code, it is executed as in Standard Additions 1.7; if not, it attempts to get an environment variable by that name, returning either the value of the variable or an empty string. (Note that system attribute now will not fail with an error; it simply returns an empty string.) If called with no parameters, system attribute returns a list of all currently-defined environment variables.

AppleScript Language

The do shell script command and the scriptable Terminal allow AppleScript scripts to execute strings of text as UNIX shell scripts. Many interesting shell commands act on files, and require POSIX-style file paths as input parameters. To create POSIX-style file paths from AppleScript file objects, the property POSIX path has been added to the file and alias classes. (All file types, including file specification and file reference, support this property.) Its use is straightforward:

```
set this_file to choose file
POSIX path of this_file
```

The do shell script command and the scriptable Terminal allow AppleScript to execute UNIX shell scripts and get the results as strings of text. Frequently these strings are the pathnames of files in the UNIX format, i.e. starting at "root" with directory names separated by forward slashes. To convert these "POSIX paths" into an AppleScript file object, you can use the POSIX file object:

```
set this_path to "/etc/passwd" -- or any path returned from do shell script
set the new_path to POSIX file this_path
--> file "Mac OS X:etc:passwd"
```

AppleScript's default formatting has been changed in AppleScript 1.7 and later. If you have already used AppleScript on a given machine, you won't notice this change. The change will only be seen if you do any of the following:

1. choose "Use Default Formatting" from the "AppleScript Formatting..." dialog box in Script Editor
2. delete your AppleScript Preferences
3. set up a new user (or log in on a user account that has never used AppleScript)
4. do a clean operating system install without saving or retaining user preferences

BUG FIXES:

AppleScript Language

AppleScript 1.7 could not perform certain operations on file names or file paths that contain certain characters (such as accented characters like é). This has been fixed in AppleScript 1.8. [2816363]

In AppleScript 1.7, references to the process class of the Finder on a remote machine did not work. This has been fixed in AppleScript 1.8 and later. Note that you need to be running Mac OS X 10.1 or later on the target machine, and Mac OS X 10.1.2 or later on the machine executing the script. [2775419]

With AppleScript 1.6 and 1.7, applications that attempted to convert Unicode text to plain text would get an error (though AppleScript itself could perform such conversions successfully). This prevented older applications from being able to use information (such as file names) that is now supplied as Unicode text. This has been fixed in OpenScripting.framework version 1.8 and later. [2816500]

Certain development environments can create scripts whose parent is an application object, rather than a top-level script. Attempting to get any parent properties of such objects (including the information returned by OSAGetScriptInfo) would cause AppleScript to crash. This has been fixed in AppleScript 1.8. [2755096]

AppleScript Applications: Applets

In Mac OS X version 10.1 and 10.1.1, installing certain multimedia software (such as Roxio Toast or QuickTime 5) would cause all applets to crash on launching. This has been fixed with AppleScript 1.8.1 [2785067]

With AppleScript 1.7 in Mac OS 10.1, applets that are set to show their startup ("splash") screens occasionally failed to do so. This has been fixed in AppleScript 1.8. The applications do not need to be recompiled or re-saved. [2756226]

Standard Additions

In Standard Additions 1.7, if the path to command was requested to return the path of a folder that did not exist (such as scripting additions folder from local domain), it would fail. In previous versions, and now in 1.8 as well, it creates the folder and returns the path to the created folder. Note that if the user does not have authorization to create the folder (e.g. is not an administrator and requests a nonexistent folder in the System domain), the operation will still fail. [2751119]

In Standard Additions 1.7 and earlier for Mac OS X, the description of the choose application command stated that it allows users to choose a running application. On Mac OS X it allows users to choose any application, running or not. [2785713]

In Standard Additions 1.7, using the mount volume command with an AppleTalk server name in a on server parameter did not work. This has been fixed in Standard Additions 1.8. [2656820]

In Standard Additions 1.7, the store script command would crash if no in parameter was supplied. This has been fixed in Standard Additions 1.8. [2782590]

Previous versions of Standard Additions improperly list the parameters for the store script command. Both the direct parameter (the script) and the in parameter (the file) are optional. If the script is omitted, an empty script is stored in the file; if the in parameter is omitted, the user is prompted for a file name. [2784735]

The path to command in the Classic environment of Mac OS X 10.1.1 and earlier returns the path to the script when asked for the path to an application. This has been fixed in the Classic environment of Mac OS X version 10.1.2. [2747285]

The choose application command in the Classic environment of Mac OS X 10.1.1 and earlier fails with a memory full error (-108). This has been fixed in the Classic environment of Mac OS X version 10.1.2. [2804619]

Commands

The osacompile command would fail if provided with an -i parameter specifying a nonexistent file. In Mac OS X 10.1.2 it is more lenient and issues a warning, but continues compilation. [2796415]

KNOWN PROBLEMS:

Some applications that create and/or execute scripts (such as Script Debugger) will occasionally crash when trying to get certain information about a

script. If you need to use these applications, do not upgrade to AppleScript 1.8. [2811897]

AppleScript 1.7 could not open scripts saved on Mac OS 9 by any version of AppleScript if those scripts contained references to applications on remote machines. AppleScript 1.8 and later can open those scripts, but omits the first two characters of the host name in the application's URL. You must manually correct the application URL and recompile the scripts. [2781523]

On some rare occasions (often during recording), the name of an application in a tell statement is changed to "AEServer.". Change the name back to the original application name and recompile the script. [2822232]

AppleScript Studio applications occasionally crash while being debugged. [2793351]

In AppleScript 1.6 and earlier, the alias and file classes previously used Macintosh File System functionality to interpret pathnames. As a side effect, expressions like alias ":" and file (myPath & "::") would do interesting things, like return an alias to the directory containing the current application, or navigate up a file hierarchy. In AppleScript 1.7 and later, alias and file support long and Unicode file and path names, using Core Foundation functionality to interpret pathnames, with different side effects. On Mac OS X, alias ":" specifies the root directory, and on both Mac OS 9 and X, sequences of multiple colons are ignored. To get the path to the current application, use path to me; to navigate up a folder hierarchy, use the Finder's container property. [2833120]

The osascript command-line tool will truncate output text if it contains a null character. [2827241]

Developer Release Notes

In Mac OS X 10.1 through 10.1.1, scripting additions would have their initialization function called at application launch time, but their termination functions would not be called when the application quit. Scripting additions that used system resources would not get a chance to release those resources. In OpenScripting.framework version 1.8 and later, every scripting addition termination function is called when an application exits. [2811696]

Published Date: Feb 20, 2012

AppleScript 1.7 for Mac OS 9 and Classic: Release Notes

This document contains the AppleScript 1.7 for Mac OS 9 and Classic Release Notes.
This article has been archived and is no longer updated by Apple.

AppleScript 1.7 for Mac OS 9 and Classic - Release Notes

AppleScript 1.7 for Mac OS 9 and Classic is the version of AppleScript that is installed by Software Update 9.2.2 on Mac OS 9 systems. It is primarily intended for use in the Classic environment of Mac OS X, and for scripters who are expecting to migrate their scripts and applications to Mac OS X.

The main features of this release provide script interchangeability with AppleScript 1.7 on Mac OS X.

This release also fixes 29 problems in AppleScript that are present in AppleScript 1.6 on Mac OS 9.

AppleScript 1.7 can use scripts developed for any version of AppleScript from 1.1 through 1.6 on Mac OS 9 (and 1.5 through 1.8.1 on Mac OS X), any scripting addition created for AppleScript 1.1 or later (except scripting additions created exclusively for Mac OS X), and any scriptable application for Mac OS 7.1 or later.

A script created with AppleScript 1.7 can be used by any version of AppleScript from 1.1 through 1.8.1, provided it does not use features of AppleScript, scripting additions, or scriptable applications that are unavailable in that version.

FEATURES:

Standard Additions

In AppleScript 1.7 and later, AppleScript will load Standard Additions that are configured as "bundles" or "packages."

AppleScript Language

All Mac OS Extended ("HFS Plus") format disks can store files with file names in Unicode text and longer than 32 characters. When older software accesses such files, those names are represented in an encoded form (with something like "#28AF" in the name). With AppleScript 1.6 and earlier, the results of many Standard Additions commands (like path to, info for, and list folder), as well as creation and display of alias and file objects, required and returned encoded names. In AppleScript 1.7, all file names are represented as Unicode text. Encoded file names are no longer supported. *Note that the Finder in Mac OS 9 only supports encoded names, but the Finder in Mac OS X and Classic only supports long names.*

In most cases this change will be transparent, but some applications or scripting additions may not be able to understand the new data format. For such applications, use as alias when sending a file object to an application or scripting addition. You may also notice that file and alias pathnames are now displayed in the default application font instead of the "Values" style defined in AppleScript Formatting.

Because many Mac OS X files use UNIX-style line endings (using the linefeed character, or ASCII character 10), AppleScript versions 1.7 and later explicitly support embedding the linefeed character in strings by using the sequence "\\n". Scripts that use this feature can be run on older versions of AppleScript, but if decompiled, the linefeed character will not be visible in the decompiled output (but will recompile correctly).

Script Applications ("applets")

Prior to AppleScript 1.4.3, script applications ("applets") were stored in a "universal" format that worked on both 680x0-based and Power PC-based Macintosh models. Because that format was 680x0-based, it would not work on Mac OS X, so a "Mac OS X applet" format was introduced in AppleScript 1.4.3. With improvements in Mac OS X since that time, it is now possible to produce a script application that works on 680x0-based, Power PC-based Mac OS 9, and Mac OS X configurations. Script Editor 1.7 again offers only one choice for saving script applications. Older formats continue to work on the configurations they were saved for. Note that a "universal" applet will run native in Mac OS X when double-clicked in the Mac OS X Finder. If you would like it to be executed in the Classic environment (to take advantage of older Standard Additions, for example), set the "Open in the Classic environment" check box in its Finder Get Info panel.

BUG FIXES:

AppleScript Language

Certain operations in third-party script editors and debuggers are unstable with AppleScript 1.6 and earlier. AppleScript 1.7 for Mac OS 9 and Classic makes those debuggers more stable.

AppleScript 1.5.5 and 1.6 would fail when attempting to convert a file path string to a file specification, either by explicit coercion ("Macintosh HD:" as file specification) or as an object reference (file specification "Macintosh HD:"). This is fixed in AppleScript 1.7 and returns the generic file form (file "Macintosh HD:").

In AppleScript 1.6, conversions from Unicode text to plain text worked in AppleScript itself, but would not work if invoked by applications. This caused problems when sending Unicode text to applications that expected plain text. This has been fixed in AppleScript 1.7.

In AppleScript 1.6, Unicode text values stored in script properties of a saved script could not be reloaded reliably. This has been fixed in AppleScript 1.7.

In AppleScript 1.6, Unicode text received from certain applications that included a Unicode byte-order mark would behave incorrectly; the text would appear to begin with the Euro symbol, and some operations would fail. AppleScript 1.7 handles Unicode text with byte-order marks correctly.

AppleScript 1.6 on Mac OS 9 and Classic cannot get any information about process objects of the Finder on a Mac OS X machine. AppleScript 1.7 on Mac OS 9 and Classic can do this.

Accessing paragraphs of AppleScript strings did not work correctly in AppleScript 1.5 through 1.6 if the line endings were Windows-style (CRLF). The result would be only the first half of the text paragraphs, interspersed with an equal number of blank strings. This has been fixed in AppleScript 1.7 and later.

AppleScript 1.5 through 1.6 on Mac OS X often launched applications unnecessarily in order to get their terminology, and often used the terminology of the script editing application (such as Script Debugger) instead of application terminology. This has been fixed in AppleScript 1.7.

In AppleScript 1.5 through 1.6, a script's global variables could be lost under certain rare circumstances. If a script contains a tell block that targets a variable, and that variable specifies an application that does not exist, the "Where is application <name>?" dialog would be presented when the script is executed. After that point, further references to global variables in the handler that included the tell block would fail. This has been fixed in AppleScript 1.7.

In somewhat rare circumstances, comparing two references to the same file for equality can fail even if both references refer to the same file. This is true in AppleScript 1.0 through 1.6 and has been fixed in AppleScript 1.7.

AppleScript 1.6 for Mac OS 9 and AppleScript 1.7 for Mac OS X have different ways of storing the address of a remote machine using the "eppc://" URL type. A script that targets a remote application that was created on Mac OS X cannot be used by AppleScript 1.6 on Mac OS 9 or Classic, but can be used by AppleScript 1.7 for Mac OS 9 or Classic. Note that scripts created by AppleScript 1.1 through 1.7 on Mac OS 9 or Classic that target remote applications cannot be read by AppleScript 1.7 on Mac OS X at all, but can be read by AppleScript 1.8 on Mac OS X

Due to a problem in AppleScript's script parser, the language formations isn't, doesn't, and possessives ending with "'s" would all accept a vertical bar or a double-quote character in place of the s or t following the apostrophe. In AppleScript 1.7 and later, these constructions (for example, "doesn'|" or "AppleScript"' version") are correctly noted as syntax errors.

Script Editor

Script Editor 1.4.3 through 1.6 displayed an unhelpful error message if you attempted to print a script without first selecting a printer in the Chooser. Script Editor 1.7 displays a more descriptive message.

With Script Editor 1.4.3 through 1.6, using the "Paste Reference" menu item would not work properly if the Clipboard contained more than one selected Finder file. This has been fixed in Script Editor 1.7.

Script Editor 1.6, when trying to save a script that could not be compiled, would display an error message that read, "The %1$@ "%2$2" wouldn't compile; you won't be able to save it in compiled form, only as text." This has been fixed in Script Editor 1.7 to display the correct script name.

AppleScript Applications: Applets

In AppleScript 1.4.3 through 1.6, a running AppleScript applet would become non-responsive to any events (except command-period) after processing some incoming events. This has been fixed in AppleScript 1.7.

In AppleScript 1.6, under certain circumstances, calling a handler in an applet that has not been launched could cause a "Can't continue" error. This has been fixed in AppleScript 1.7 and later.

Standard Additions

In Standard Additions 1.6 and earlier, the info for scripting addition would fail if any piece of information in the requested file or directory was unavailable. On UFS disks (DVD-ROMs and certain Mac OS X disks) and mounted NFS volumes, the file creation date is unavailable, and accessing it causes a -8850 error (in trying to convert it to Universal Time). Starting with Standard Additions 1.7, any missing piece of information in the info for result is provided as the value missing value without failure. In AppleScript 1.6 and earlier, magnitude comparisons (<, =<, >, >=) against the missing value would signal a

coercion error for most types; in 1.7 and later, these comparisons always return false without error. These two changes ensure that scripts that use info for against UFS and NFS volumes do not fail, though they may not get correct results because any comparison to the creation date is always false.

In Standard Additions 1.6 on both Mac OS 9 and Mac OS X, the info for scripting addition would return an error -1401 for a nonexistent file, rather than the normal -35 returned in previous versions. In Standard Additions 1.7 trying to get the info for a nonexistent file (or a file in a nonexistent directory or inaccessible disk) will return the customary -35 error.

Mac OS 9.1 introduced the concept of a "package" application, that is, an application composed of a folder of several files and folders, which is treated as an integral application by the Finder and other files. The info for scripting addition in AppleScript 1.6 and earlier treated such packaged applications as folders, not files, and would not return application-related information about them. In Standard Additions 1.7 and later, getting the information for any directory (including package folders) returns an additional record item package folder; if this Boolean value is true, then the directory is a package, and the application's type and creator are provided in the record. Note that info for in Mac OS 9 cannot return the name extension and displayed name record items provided in Mac OS X.

In Standard Additions 1.6, canceling the dialog box presented by the choose application command does not return error -128, as it does in most other scripting additions. This has been fixed in Standard Additions 1.7.

The choose from list command in Standard Additions 1.4 through 1.6 allowed the scripter to create a situation where it would return an empty selection even if the scripter specifically disallowed that case. (This can be done by providing a default item that does not appear in the list). In Standard Additions 1.7 and later, the "OK" button will not be enabled in such cases.

In versions of Standard Additions prior to 1.7, the choose URL command's using editable URL parameter was present in the Standard Additions dictionary but was nonfunctional (URLs were always editable regardless of the setting of the parameter). It behaves correctly in Standard Additions 1.7 and later: if set to false, the user can choose a URL only by browsing, not by editing the URL in the text box.

From AppleScript 1.1, the offset of scripting addition command has not worked correctly when the direct parameter is styled text. It also has not worked correctly with the newly-introduced Unicode text type. In Standard Additions 1.7 and later it produces correct results with both styled and Unicode text. Note, however, that this introduced a problem in which offset of will not work correctly with styled text from some sources (notably the the clipboard command).

The read command in Standard Additions 1.6 had specific problems with the using delimiters parameter: in previous versions, read f as list using delimiters {tab} would return a list, but in AppleScript 1.6, it returned a list of one-item lists. In AppleScript 1.7 and later it behaves as it did prior to version 1.6.

The read command in Standard Additions 1.6 had specific problems with the before and until parameters if used in conjunction with the as parameter. Instead of returning a value of a given type, it would return random data or an error. This has been fixed in Standard Additions 1.7 and later.

Standard Additions 1.5 through 1.6 changed the way that the random number seed worked in the random number scripting addition. Older versions used the system clock as the seed value if no seed value (or a seed value of 0) was provided; Standard Additions 1.5 and 1.6 always use a seed value of 0 in these cases. In Standard Additions 1.7 the older behavior has been restored. In addition, the seed value is now taken from the 60Hz "ticks" counter rather than the system clock, because the increased speed of new machines makes it more likely that two consecutive random number calls may receive the same system clock time as their seed value.

In Standard Additions 1.5 and 1.6, the random number command generated numbers that were not evenly distributed across the range: the first and last values in the random number range would occur far less frequently than other numbers in the range. This has been fixed in Standard Additions 1.7.

In Standard Additions 1.6, the store script command would crash if no in parameter was supplied. This has been fixed in Standard Additions 1.7: if the in parameter is omitted, a Navigation dialog is presented and the file is saved in the file the user specifies.

Previous versions of Standard Additions improperly list the parameters for the store script command. Both the direct parameter (the script) and the in parameter (the file) are optional. If the script is omitted, an empty script is stored in the file; if the in parameter is omitted, the user is prompted for a file name.

DEVELOPER RELEASE NOTES:

Historically, when an application is sent an event that contains a whose clause, AppleScript includes a 'cons' attribute (enumConsiderations) that contains a list of AppleScript consideration enumerators that are currently ignored (such as case, application responses, etc.) This is incomplete,

awkward to traverse, and not useful to events that don1t include Whose clauses. As of AppleScript 1.7, every event sent by AppleScript to an application or scripting addition includes a 'csig' (enumConsidsAndIgnores) attribute whose value is a typeUInt32 bit field with bits set for every consideration or ignore currently in effect.

To support a wider variety of sources of script text, the compiler in AppleScript 1.7 and later now accepts all three prevalent styles of line endings: Macintosh style (carriage return, ASCII 13), UNIX style (linefeed, ASCII 10) and Windows style (CRLF, ASCII 13-ASCII 10). Decompiled source will continue to be Macintosh-style.

As of AppleScript 1.7, the keyAEKeyData field of object specifiers with keyAEDesiredClass of cFile or typeAlias is now typeUnicodeText, rather than typeChar. This allows us to store long Unicode names in object specifiers. All appropriate system coercion handlers have been changed to accommodate this, so coercing an object specifier to typeAlias, typeFSRef, typeFileSpecification, or typeFileURL will work correctly. If your code specifically unpacks an object specifier, and tries to get the keyAEKeyData as typeChar, automatic coercions will operate, but they may only produce characters in the current system script. For Mac OS 9.2.2 and later, you should update your applications or scripting additions to use the Unicode pathname APIs to the file system, and use the long Unicode path names provided in these object specifiers.

Bug Fixes (Developer)

The AppleScript component would be left in an indeterminate state after a call to OSASetProperty, and would often fail or crash on a subsequent operation. This has been fixed in AppleScript 1.7 for Mac OS 9 and Classic.

The return value from the OSAScriptError function historically returned an error range that was a record of two short integers. This was inaccurate for script text that was greater than 32K in length. AppleScript 1.7 and greater returns a record of two typeLongInteger values. Existing code that gets these values as typeLongInteger would have coerced too-small results and will now work correctly; older applications that expected short integers and only allocated sufficient space for them will continue to get erroneous results on long scripts, and should be revised to accommodate the new return value.

KNOWN BUGS IN APPLESCRIPT 1.7 FOR MAC OS 9 AND CLASSIC

AppleScript

If the clipboard contains text that is not styled, the the clipboard scripting addition command will return a styled text value that is malformed and causes the offset of command to crash. Convert the clipboard value to Unicode text before using the offset of command.

Certain AppleScript development environments can create scripts whose parent property is an application object, rather than a top-level script. Attempting to get any parent properties of such objects will cause AppleScript to crash.

There are some reports of serious performance degradation with some scripts and some applications in AppleScript 1.7 on Mac OS 9.2.2. Running the script in the Script Editor or a third-party editor, rather than in a script application or an application's own Script menu, often seems to restore expected performance.

Attempting to execute a script in Claris Emailer when running in the Classic environment will cause Claris Emailer to crash.

Operations on file and alias objects may fail if the name of any folder containing the designated file contains a non-English character (for example, Japanese text, accented characters, or certain symbols). Note also that for forward compatibility with Mac OS X, volume names are now case-sensitive in AppleScript. This is true in Mac OS X and is enforced in Mac OS 9 to maintain compatibility.

The Finder in Mac OS 9 returns values for special folders (desktop, system folder, etc.) that are incompatible with many commands in Standard Additions 1.7. To avoid this problem, either use the path to command to get references to these special folders, or coerce the Finder's references to aliases before using them with Standard Additions commands (or third-party scripting additions). For example:

```
tell application "Finder"
    info for desktop
end tell
```

should be changed to either:

```
info for (path to desktop folder)
```

or changed to:

```
tell application "Finder"
    info for alias desktop
end tell
```

AppleScript 1.7 will fail on its first attempt to access a process object of the Finder running on a remote Mac OS X machine. (It will succeed on remote Mac OS 9 machines, on local Mac OS X machines [e.g. from Classic to X], on any other property or element of the Finder other than process, and on

any process object after the first attempt).

In AppleScript 1.6 and earlier, the alias and file classes previously used Macintosh File System functionality to interpret pathnames. As a side effect, expressions like alias ":" and file (myPath & "::") would do interesting things, like return an alias to the directory containing the current application, or navigate up a file hierarchy. In AppleScript 1.7 and later, alias and file support long and Unicode file and path names, using Core Foundation functionality to interpret pathnames, with different side effects. On Mac OS X, alias ":" specifies the root directory, and on both Mac OS 9 and X, sequences of multiple colons are ignored. To get the path to the current application, use path to me; to navigate up a folder hierarchy, use the Finder's container property.

A Macintosh with Mac OS X installed that is booted into Mac OS 9 cannot run Mac OS X applications. If you try to open a script that targets a Mac OS X application in a tell block, it will display the "Where is application (name)?" dialog; if you select a Mac OS X application, AppleScript will fail with the error "File (name) not found." This error message is somewhat misleading; the actual error is that you selected a Mac OS X application that cannot be used on Mac OS 9.

Script Editor

The "Open Dictionary" menu command in Script Editor 1.7 will not display the iTunes 2 application. If you want to view the iTunes 2 dictionary, drag iTunes 2 (or an alias to it) and drop it on the Script Editor application icon.

Scripting Additions

In Standard Additions 1.7, if the path to command is requested to return the path of a folder that does not exist, it will fail. In previous versions it would create the folder and return the path to the created folder.

The dictionary entry for the choose application command erroneously lists a multiple selections allowed optional parameter. This parameter is available in Mac OS X only and is ignored in Mac OS 9.

The open for access command in Standard Additions 1.7 does not set the type and creator of newly-created files to type 'TEXT', creator 'ttxt', so the files cannot be read by most other applications or double-clicked in the Finder. In the following example, after creating file this_file, perform the following steps:

```
tell application "Finder"
    set file type of file this_file to "TEXT"
    set creator type of file this_file to "ttxt"
end tell
```

Published Date: Feb 20, 2012

Apple Pro Speakers: "Device Cannot Be Recognized" Alert

This document describes the alert message that appears when the Apple Pro Speakers are not fully inserted into the Apple Speaker sound output port

This article has been archived and is no longer updated by Apple.

Symptom

If the Apple Pro Speakers are not fully inserted into the Apple Speaker sound output port ("mini-jack"), an alert box with this message appears:

> "The device plugged into the Apple speaker mini-jack cannot be recognized. Remove the plug from the jack. Then plug it back in and make sure it is fully inserted."

Figure 1 Alert Message under Mac OS X 10.1.2

Figure 2 Alert Message under Mac OS 9.2.2

Solution

- Follow the instructions in the alert message and remove the speaker plug from the sound output port, then fully reinsert the plug.
- See technical document 31314 "**Apple Pro Speakers: No Sound From Speakers**" for further troubleshooting.

Published Date: Feb 19, 2012

APC: Support and Upgrades

This article contains the support link for APC products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company: APC

Product:

APC Back-UPS Pro USB 500

Product Description:

Battery backup and high performance surge suppression.

Product:

APC Professional SurgeArrest

Product Description:

Eight (8) surge protected outlets, phone/fax/modem protection

Support Web Site: SupportCenter

Published Date: Feb 19, 2012

Nikon: Support and Upgrades

This article contains support links and software upgrade links for Nikon products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company:	Nikon
Contact:	http://www.nikonusa.com/template.php?goingto=cu_contact1

Software Update Information

If you want to be notified automatically of software updates for this product, or other third-party products, you can either use the Version Tracker Web site at:

http://www.versiontracker.com

or the AppleUpdate Web site, which also tracks international updates, at:

http://AppleUpdate.com

Published Date: Feb 20, 2012

WebObjects: Third-Party Reference Books

A number of WebObjects reference books are available for sale at many booksellers. This document contains a list of titles and links to online booksellers where you can purchase them.
This article has been archived and is no longer updated by Apple.
For information beyond the scope of Apple's documentation, Mac Help, or Knowledge Base documents, please look into the titles listed below. More titles may be available. You can find these titles by clicking on the links of booksellers below. Some of these titles may not have been published yet.

Books about WebObjects

- Professional WebObjects 5.0 With Java by Thomas Termini et al. Published by Wrox Press, Inc.
- WebObjects 5 For Java: A Developer's Guide, by Jesse Feiler. Published by McGraw-Hill.
- WebObjects 5, by Röscheisen and Röscheisen. Published by Galileo Computing (Germany).
- WebObjects Developer's Guide, by Ravi Mendis. Published by Sams.
- WebObjects For Macintosh: Visual QuickPro Guide, by Josh Marker et al. Published by PeachPit Press.
- WebObjects Web Application Construction Kit, by George Ruzek. Published by Sams.
- Practical WebObjects, by Charles Hill and Sacha Mallais. Published by Apress.

Online book sellers

- Titles available at **amazon.com** (http://www.amazon.com/)
- Titles available at **Barnes & Noble** (http://www.bn.com/)
- Titles available at **Bookpool** (http://www.bookpool.com/)
- Titles available at **Chapters** (http://www.chapters.ca/)

Apple makes no endorsement, either expressed or implied, for any third-party products mentioned in this document. Apple offers these simply as additional resources for its customers.

Published Date: Feb 19, 2012

Final Cut Pro 3: Before You Install Final Cut Pro 3

This document contains the Before You Install Final Cut Pro 3 information.

This article has been archived and is no longer updated by Apple.

Before You Install Final Cut Pro 3

This document contains system requirements and things to do before you install the application. It also includes information on new features, how to access late-breaking news, where to start, and using the tutorials. For the latest information on product updates, tips and techniques, third-party software, and qualified third-party devices, visit the Final Cut Pro Web site at http://www.apple.com/finalcutpro

System requirements

You'll need the following hardware, software, and video equipment for Final Cut Pro:

Hardware and video equipment

- Power Macintosh G3/350 megahertz (MHz) or faster with built-in FireWire
- PowerBook G3/400 MHz or faster with built-in FireWire
- iMac 350 MHz or faster with built-in FireWire
- iBook (Dual USB) 500 MHz or faster with built-in FireWire
- A CD or DVD drive
- 256 MB random access memory (RAM) (384 MB or greater required for G4 Real-Time editing)
- A 6 gigabyte (GB), Audio/Video rated disk drive (20 GB or greater recommended)
- Dual-monitor support (optional)
- A Final Cut Pro-qualified video capture card for capturing video from an external source or exporting video to tape (optional)
- The correct FireWire or device control cable and any additional cables you may need for connecting your deck or camcorder to your computer
- A DV (digital video) source, such as a camcorder or deck, connected to your computer via a FireWire port (FireWire is also referred to as IEEE 1394 or Sony i.LINK.)
- An analog video source, a Final Cut Pro-qualified video capture card or device, and an adapter cable to connect the video source to your computer

Note: G4 Real-Time editing requires a single or dual-processor Power Macintosh G4 500 MHz or faster (PowerBook G4 667 MHz or faster recommended for real-time mobile DV editing). For more information about G4 Real-Time editing, see the Final Cut Pro Web site at www.apple.com/finalcutpro.

Software

- Mac OS 9.2.2 or Mac OS X 10.1.1 or later
- QuickTime 5.0.4 or later

Before you install Final Cut Pro

Important The French, German, and Japanese versions of Final Cut Pro are only supported on a matching localized French, German, or Japanese version of the Mac OS. Multiple localized versions of Final Cut Pro from different countries on a single system are not supported. For example, if your computer has the French version of the Mac OS installed on it, you cannot install both the French and German versions of Final Cut Pro. For more information, see the Final Cut Pro Web site at http://www.apple.com/finalcutpro

Make sure you do the following before you install the software:

- Turn off any virus protection and security software that you may have installed on your computer.
- Upgrade to Mac OS 9.2.2 or later
  Final Cut Pro for Mac OS 9 requires you to use the Software Update control panel to upgrade to Mac OS 9.2.2. If you don't have Mac OS 9, you need to install it on your computer before you can upgrade to Mac OS 9.2.2.
- Upgrade to Mac OS X 10.1.1 or later
  Final Cut Pro for Mac OS X requires that you upgrade to Mac OS X 10.1.1. This requires you to first upgrade to Mac OS X 10.1, then use the Software Update pane of the System Preferences to install the latest Mac OS X updates.
- Install QuickTime 5.0.4 and unlock QuickTime Pro
  QuickTime 5.0.4 is included on the Final Cut Pro CD for both Mac OS 9 and Mac OS X. See the "Final Cut Pro and QuickTime Pro Registration Numbers" document that came with Final Cut Pro or the installation chapter in Volume 1 of the manual for instructions on installing this software. To unlock QuickTime Pro, you need the registration number that's located on the front of the document.

Finding out about new features, late-breaking information, and an overview of the application

After you install Final Cut Pro, you can learn about new features and late-breaking information on known issues.

- To get the latest information about known issues with the application, choose Final Cut Pro Help from the Help menu and click "Late-breaking news."
- To find out about new features and enhancements, choose What's New? from the Help menu.
- To get a brief overview of the major tasks and windows in Final Cut Pro, choose Where Do I Start? from the Help menu.

Using the tutorials

There are several tutorials that come with Final Cut Pro. These are available in print in a separate book.

Using the documentation

The Final Cut Pro user's manual has been divided into three volumes for ease of use. Also included is a new features addendum, What's New in Final Cut Pro 3.

- Volume 1, Getting Started, Input, and Output, covers everything you need to know to set up your Macintosh with Final Cut Pro, capture video for use in your project, and output to a variety of formats.
- Volume 2, Editorial, focuses on basic and advanced editing techniques in Final Cut Pro, including transitions, trimming and working with audio.
- Volume 3, Effects and FXScript, covers Final Cut Pro's compositing tools, including motion settings, filters, generators, and how to use FXScript to create your own custom filters and generators.
- What's New in Final Cut Pro 3 covers new tools and commands that are available in Final Cut Pro 3.

Published Date: Oct 10, 2016

Mac OS X: USB Printer Drivers No Longer Available

Third-party inkjet drivers are no longer available from Apple.
This article has been archived and is no longer updated by Apple.
Mac OS X includes printer drivers for some popular USB inkjet printers. A printer driver update was available from Apple. However, this update is no longer available as the same or newer printer drivers are available directly from the printer manufacturer.

For additional printer drivers for Mac OS X, check with the manufacturer of your printer.

Some Printer Manufacturer's Web sites:

Canon: http://www.canon.com

Epson: http://www.epson.com

Hewlett-Packard: http://www.hp.com

Published Date: Feb 19, 2012

Macintosh: How to Connect Audio Devices to Your Computer

This document provides general guidelines on how to import audio from both digital and analog sources into your Apple computer.

This article has been archived and is no longer updated by Apple.

There are several ways to import audio from various sources into your computer. This document provides general guidelines on various methods.

Analog source versus digital source

Vinyl records, cassettes, microphones are examples of analog media and sources. Compact discs (CD), MiniDiscs (MD), and digital audio tapes (DAT) are examples of digital media. All of these can be imported into your computer using either an analog or digital signal depending on the equipment used. In this document CDs, MiniDiscs, and DATs will all be considered digital sources.

What You Need

Computer with sound input port ("microphone jack")

Required:

- proper cables
- audio software

Optional:

- USB, FireWire, PC Card, or PCI audio input device

Computer without sound input port ("microphone jack")

Required:

- proper cables
- audio software
- USB, FireWire, PC card, or PCI audio input device

Audio input devices

Some Macintosh models have a sound input port ("microphone jack"). This port can be used as an analog input. If you need to record higher quality audio, you will need to purchase a separate audio input device (also referred to as a sound card). For portable applications, there are PC cards available that allow both analog and digital signals to be recorded. USB audio devices and FireWire audio devices can be used on both portable and desktop Macintosh models. PCI audio cards can only be used in desktop Macintosh computers with PCI slots.

Cables

The type of connectors on the analog input device and what computer you have dictate what cable and/or adapters you need.Here are some examples

Cable	Source	Input device
3.5 mm stereo to RCA	headphone cassette player	PCI/FireWire/USB analog input
3.5 mm to 3.5 mm	headphone cassette player	Macintosh microphone input
RCA to RCA	stereo receiver aux output	PCI card analog input
SPDIF to SPDIF (Digital Coax - RCA)	DAT digital output	PCI/USB/FireWire digital input
TOS to TOS (Digital Optical)	MiniDisc optical output	PCI/USB/FireWire digital input

Audio Software

In order to import the audio onto your computer's hard disk, you need software that allows you to record the audio. If you purchased any type of audio input device, it probably came with audio software you can use. If not, you can get this type of software as shareware/freeware from many

Web sites, or you can purchase a commercial application.

Where to find additional information

Information on Hundreds of software titles and hardware products, including many audio related products, are available in the Macintosh Product Guide (http://guide.apple.com/).

Published Date: Oct 10, 2016

WebObjects 5: Reverse-Engineering Oracle Databases With EOModeler

This article has been archived and is no longer updated by Apple.

EOModeler's New Database Wizard lets you reverse-engineer a database, but gives no control over which tables are available. By default, only the user's tables can be selected. This document describes how to control which tables of an Oracle database are selectable, including views, aliases, and synonyms in schemas owned by other users.

Applicable products

- WebObjects 5.1
- WebObjects 5.2
- WebObjects 5.3

Important: This technique works only for WebObjects 5.1, 5.2 and 5.3. It does not work for WebObjects 5.0. Developers using WebObjects 5.0 must write a JDBC plugin. Details on writing a JDBC plugin are in Technical Note 2027 (http://developer.apple.com/technotes/tn/tn2027.html).

How to modify Java Properties

The version of EOModeler included with WebObjects 5.1 and later uses Java's properties mechanism to control the New Database Wizard's behavior.

Note: For more information about how WebObjects uses Java's properties, see this article). Look at the section titled "Accessing The Properties".
WebObjects 5.3 and later only: The EOModeler application resides under /Developer/Applications/WebObjects/ This article does not apply to the EOModeler plug-in used with Xdesign/Xcode.

Follow the steps below to modify the Java properties.

1. Quit EOModeler if it is open.
2. Copy the file `/System/Library/Frameworks/JDBCEOAdaptor.framework/Versions/Current/Resources/Properties` to your home directory.

   With Microsoft Windows, replace `/System` with the value of `$NEXT_ROOT`, usually `C:/Apple`.

3. Rename the new file WebObjects.properties.
4. Open WebObjects.properties in a text editor.
5. To show all tables owned by all users, change these lines:

   ```
   #  The default is to use the USER's schema
   #jdbcadaptor.oracle.wildcardPatternForSchema=null
   ```

   ... like this:

   ```
   #  Show everyone's tables (including SYSTEM)
   jdbcadaptor.oracle.wildcardPatternForSchema=%
   ```

6. To show all tables owned by the user STEVE, change these lines:

   ```
   #  The default is to use the USER's schema
   #jdbcadaptor.oracle.wildcardPatternForSchema=null
   ```

   ... like this:

   ```
   #  Show STEVE's schema instead of mine
   jdbcadaptor.oracle.wildcardPatternForSchema=STEVE
   ```

7. To list the tables using a custom SQL query, use the sqlStatementForGettingTableNames property. Here's an example that shows all non-system views and private synonyms. Change these lines:

   ```
   #  The default is to use JDBC API instead of executing a SQL statement.
   #jdbcadaptor.oracle.sqlStatementForGettingTableNames=null
   ```

   ... to this:

   ```
   # Use this SQL statement to determine table names
   jdbcadaptor.oracle.sqlStatementForGettingTableNames=SELECT DISTINCT OWNER || '.' ||
   TABLE_NAME FROM SYS.ALL_CATALOG WHERE OWNER NOT IN ('SYS', 'SYSTEM', 'PUBLIC') AND TABLE_TYPE IN ('VIEW', 'SYNONYM')
   ```

8. Save the WebObjects.properties file, and test the changes by opening EOModeler and creating a new model. Choose the JDBC adapter and proceed with the New Model Wizard until the list of tables appears.

Troubleshooting Tips

1. Make sure that your table names (entity names) are unique. Otherwise, EOModeler can generate errors, such as:

```
-[NSCFDictionary setObject:forKey:]: attempt to insert nil value
```

2. Check that your SQL statements are correct to avoid the following type of error:

```
EvaluateExpression failed: <OraclePlugIn$OracleExpression: <<.... >>
Next exception:SQL State:42000 -- error code: 936 -- msg: ORA-00936: missing expression
```

3. WebObjects 5.3: The Oracle Database can take a long time to fetch all tables when setting the following property:

```
jdbcadaptor.oracle.wildcardPatternForSchema=%
```

   During that time, the EOModeler application seems to be unresponsive (The "Force Quit" panel will show EOModeler as non-responding). Wait until the fetch completes, and EOModeler will return to the active state.

Published Date: Feb 19, 2012

WebObjects 5.1.1: WebObjects 5.1.1 Update Overview

This document has been obsoleted by a newer update. Refer to **WebObjects Current Patch List**, document 70037, for information on the most current updates for WebObjects. This document is still available in the Knowledge Base as a convenience to customers who have not yet upgraded to the most current update.
This article has been archived and is no longer updated by Apple.
WebObjects 5.1.1 includes updated versions of several WebObjects class and jar files. Some WebObject project types make copies of these files when the project is built. As a result, some projects may need to be rebuilt to take advantage of the issues addressed in the update. For example, when a JSP/Servlet war archive is created, several jars are copied into the war file. At least one jar (WOJSPServlet_client.jar, from the WOJSPServlet.framework) is always copied, and additional framework jars may be copied into the war as well, depending on the project. After installing WebObjects 5.1.1, either the application must be rebuilt (recreating the war archive), or the war archive must be manually updated, using the jar tool.

This update includes modified WebObjects client-side Java classes and jars. On Mac OS X (Server) the update installer automatically places the modified classes and jars in your web server's document root directory. On Solaris and Windows, the update installer places the modified classes in the WebObjects installation (in `$NEXT_ROOT/Library/WeObjects/WODocumentRoot/WebObjects`) but does not copy them to your web server's document root directory. To use the new files, you must install them in the correct location for the web server being used.

WebObjects 5.1.1 for Mac OS X (Server) 10.1.3

Important: There are two mutually exclusive updates for this platform. If you have WebObjects 5.1 Developer installed on Mac OS X 10.1.3, you need the WebObjects 5.1.1 Developer update. If you have WebObjects 5.1 Deployment installed on Mac OS X Server 10.1.3, you need the WebObjects 5.1.1 Deployment update. You do not need both on any system.

This update is available through the Software Update feature of Mac OS X. If you use this method, only the proper update for the software which you have installed on your system will be visible and available for download. If you prefer to download and install the package manually, follow the instructions below.

Note: WebObjects 5.1.1 Deployment requires Mac OS X Server 10.1.3 or later as well as the 10.1.3 Server Update and the Java 1.3.1 Update 1. WebObjects 5.1.1 Developer requires Mac OS X 10.1.3 or later as well as the December 2001 Mac OS X 10.1 Developer Tools and the Java 1.3.1 Update 1. If you have not yet updated to the correct version of Mac OS X (Server), Developer Tools, and Java, you must do so before installing WebObjects 5.1.1. The Mac OS X 10.1.3 and December 2001 Mac OS X 10.1 Developer Tools images are available on the Apple web site.

If you are creating a new Mac OS X WebObjects 5.1 development system, you should install the software in the following order:

1. Mac OS X 10.1.3
2. December 2001 Mac OS X 10.1 Developer Tools
3. Java 1.3.1 Update 1
4. WebObjects 5.1 Developer
5. WebObjects 5.1.1 Developer

Manually Installing WebObjects 5.1.1 Developer on Mac OS X 10.1.3

These instructions are for manually downloading and installing WebObjects 5.1.1 Developer. If you are installing using Software Update, see the section titled "**WebObjects 5.1.1 for Mac OS X (Server) 10.1.3**", above.

Note: WebObjects 5.1.1 Developer requires Mac OS X 10.1.3 or later as well as the December 2001 Mac OS X 10.1 Developer Tools and the Java 1.3.1 Update 1. If you have not yet updated to the correct version of Mac OS X, Developer Tools, and Java, you must do so before installing WebObjects 5.1.1. The Mac OS X 10.1.3 and December 2001 Mac OS X 10.1 Developer Tools images are available on the Apple web site.

1. Download `WO51MacOSXDevUpdate1.pkg.tar`, the update package for Mac OS X 10.1.

   `WO51MacOSXDevUpdate1.pkg.tar` is available from:

   http://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/webobjects/patches/5.1/WO51MacOSXDevUpdate1.pkg.tar

   Stuffit Expander should automatically expand the .tar file, leaving `WO51MacOSXDevUpdate1.pkg`.

2. Double-click `WO51MacOSXDevUpdate1.pkg`.

   The Authorization panel opens.

3. Only an administrator can install the update. Click the lock icon at the bottom left of the panel to authenticate for administrative access.
4. Click OK to proceed.

   The Introduction panel appears.

5. Click Continue.

   The Software License Agreement appears.

6. Read the software license agreement, then click Continue.

7. Click Agree to agree to the license and continue the installation.

8. Select the volume containing Mac OS X and WebObjects 5.1 Developer, then click Continue.

9. Make sure that there are no WebObjects or EOF applications running.

10. Click Install to proceed with installation.

    The Installer window displays information about the progress of the installation, which may take several minutes.

11. Restart your computer.

Manually Installing WebObjects 5.1.1 Deployment on Mac OS X Server 10.1.3

These instructions are for manually downloading and installing WebObjects 5.1.1 Deployment. If you are installing using Software Update, see the section titled "**WebObjects 5.1.1 for Mac OS X (Server) 10.1.3**", above.

Note: WebObjects 5.1.1 Deployment requires Mac OS X Server 10.1.3 or later as well as the 10.1.3 Server Update and the Java 1.3.1 Update 1. If you have not yet updated to the correct version of Mac OS X Server and Java, you must do so before installing WebObjects 5.1.1. The Mac OS X Server 10.1.3 image is available on the Apple web site.

1. Download `WO51MacOSXDepUpdate1.pkg.tar`, the update package for Mac OS X Server 10.1.

    The update is available from:

    http://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/webobjects/patches/5.1/WO51MacOSXDepUpdate1.pkg.tar

    Stuffit Expander should automatically expand the .tar file, leaving `WO51MacOSXDepUpdate1.pkg`.

2. Double-click on `WO51MacOSXDepUpdate1.pkg`.

    The Authorization panel opens.

3. Only an administrator can install the update. Click the lock icon at the bottom left of the panel to authenticate for administrative access.

4. Click OK to proceed.

    The Introduction panel appears.

5. Click Continue.

    The Software License Agreement appears.

6. Read the software license agreement, then click Continue.

7. Click Agree to agree to the license and continue the installation.

8. Select the volume that contains Mac OS X Server and WebObjects 5.1 Deployment, then click Continue.

9. Make sure that there are no WebObjects or EOF applications running.

10. Click the Install button to proceed with installation. The Installer window displays information about the progress of the installation, which may take several minutes.

11. Restart your computer.

Installing WebObjects 5.1.1 on Windows 2000

Notes:

- During the installation, if you see panels indicating that certain files being replaced by the update are "locked", choose the Reboot button to continue the installation. The files are replaced upon restarting.
- This update cannot be uninstalled alone. Once you have upgraded to WebObjects 5.1.1 you cannot revert to WebObjects 5.1. However, the entire WebObjects 5.1.1 installation can be uninstalled using the "Add/Remove Programs" control panel.

1. Download `WO51WinUpdate1.exe`, the self-extracting update installer for Windows 2000.

    The update is available from:

    http://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/webobjects/patches/5.1/WO51WinUpdate1.exe

2. Log in as a user with Administrator privileges.

Make sure that there are no WebObjects or EOF applications running.

3. Double-click **WO51WinUpdate1.exe** to start the installation process.

An informational screen about this update appears.

4. After reading the screen, click "Next" to continue.

The license agreement for this update will appear.

5. To agree to the license and continue the installation, click "Yes".

6. Copy the updated WODocument root in **$NEXT_ROOT/Library/WeObjects/WODocumentRoot/WebObjects** to your web server's document root.

The update will be installed on your system and you will be asked if you want to restart.

7. Select "Yes, I want to restart my computer now" to restart.

The WinZip self-extractor automatically quits and removes its temporary files in about 20 seconds.

Installing WebObjects 5.1.1 on Solaris

1. Download **WO51SolarisUpdate1.TAR.Z**, the update installer for Solaris, and download the update installation script, **patcher.sh**.

The updates are available from:

WO51SolarisUpdate1.TAR.Z

http://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/webobjects/patches/5.1/WO51SolarisUpdate1.TAR.Z

patcher.sh

http://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/scripts/patcher.sh

After you have downloaded the files, the **patcher.sh** script needs its executable bit set. At the command prompt enter:

```
chmod 511 patcher.sh
```

2. Log in as root.

3. Make sure that there are no WebObjects or EOF applications running, including Monitor.

4. If a web server is running on the computer on which you are installing the update, stop it.

5. Stop WebObjects services (wotaskd and woservice) using the WOServices script.

At the command prompt enter:

```
cd $NEXT_ROOT/Library/WebObjects/Executables
```

```
./WOServices stop
```

These services are restarted when you restart after installing the update.

6. To Install the update, cd to the directory containing the update and the **patcher.sh** installation script.

7. At the command prompt enter:

```
patcher.sh -install WO51SolarisUpdate1.TAR.Z
```

For more information on using **patcher.sh**, at the command prompt enter:

```
patcher.sh -help
```

8. Copy the updated WODocument root to your web server's document root.

```
cp -r $NEXT_ROOT/Library/WeObjects/WODocumentRoot/WebObjectsÂ <webserver doc root>/WebObjects
```

9. Restart your computer.

Corrected in WebObjects 5.1.1

NSTimeZone : timeZoneFromSecondsFromGMT() returns no time zone even when value is valid

Apple Reference 2814979

ISSUE:

NSTimeZone.timeZoneFromSecondsFromGMT() returned null when the offset was a valid value for an apolitical time zone.

RESOLUTION:

If the seconds offset from GMT corresponds to a whole hour between 12 and -12 inclusive, this method reuses an existing, well-known, apolitical NSTimeZone object for that offset. Only whole hour offsets should by passed to this method in WebObjects 5.1.1.

NSPathUtilities.stringByDeletingLastPathComponent() returns incorrect result on Windows

Apple Reference 2822553

ISSUE:

On Windows, NSPathUtilities.stringByDeletingLastPathComponent() returns an incorrect result if the root directory is specified. For example, an input of "C:/" incorrectly returns "C:" rather than "C:/".

RESOLUTION:

This problem has been corrected.

NSTimestamp.microsecondOfSecond is off by a factor of 1000

Apple Reference 2837997

ISSUE:

In WebObjects 5.1, NSTimestamp.microsecondOfSecond() actually returns milliseconds.

RESOLUTION:

This problem has been corrected.

NSTimestampFormatter does not format NSTimestamp in the local time zone

Apple Reference 2838080

ISSUE:

In WebObjects 5.1, NSTimestampFormatter does not format NSTimestamp in the local time zone.

RESOLUTION:

NSTImestampFormatter now defaults to the local time zone.

WOEventDisplay gives an error screen when logging is on

Apple Reference 2844727

ISSUE:

Viewing the event display page can result in a ClassCastException.

RESOLUTION:

This problem has been corrected.

NSTimestamp does not have SUID for serialization

Apple Reference 2847504

ISSUE:

WebObjects 5.1 cannot read NSTimestamps serialized in WebObjects 5.0.

RESOLUTION:

The serialID in WebObjects 5.1.1 has been changed to match the serialID in WebObjects 5.0. In WebObjects 5.1.1, NSTimestamp will read WebObjects 5.0/5.1.1 serialized Timestamps and write WebObjects 5.1.1 NSTimestamps.

NSTimestamp data that was serialized using WebObjects 5.1 cannot be deserialized using WebObjects 5.1.1. However, data can be migrated using NSTimestampFormatter. A WebObjects 5.1 tool can use NSTimestampFormatter to convert NSTimestamps to Strings. Then a WebObjects 5.1.1 tool can use NSTimestampFormatter to convert the Strings back to NSTimestamps.

NSTimestampFormatter.parseObject creates incorrect timestamp

Apple Reference 2849628

ISSUE:

NSTimestampFormatter.parseObject creates an incorrect timestamp when the string being parsed does not use GMT for the time zone.

RESOLUTION:

This problem has been corrected. Please review any subclasses of NSTimestampFormatter you may have used to work around this problem in your WebObjects 5.1 applications.

NSTimeZone.localTimeZone() raises

Apple Reference 2849630

ISSUE:

Using NSTimeZone.localTimeZone() with NSTimestampFormatter raises an exception.

RESOLUTION:

This problem has been corrected.

backtracking page cache not working properly

Apple Reference 2849640

ISSUE:

Backtracking in a browser and repeating a request or reloading a previously generated page incorrectly causes the request/response loop to execute rather than simply returning the cached page. (See WOApplication.setPageRefreshOnBacktrackEnabled().)

RESOLUTION:

The page cache now functions properly. Additionally, a request's form values (if any) are now considered when determining whether to return a cached page. If the user backtracks and repeats a request with modified form values, the request/response loop will execute. However, with the current implementation, the responses for both sets of form values remain in the cache. If the user backtracks a second time and makes another request with the original form values, the request/response loop will not execute and the cached page will be returned.

The documentation for WOApplication.setPageRefreshOnBacktrackEnabled() is incorrect on one point. The documentation states "By default, this attribute is set to false." The default in WebObjects 5.1 is true.

WO5.1 Win2K Cannot Launch Apps

Apple Reference 2849676

ISSUE:

Launching WebObjects 5.1 applications on Windows 2000 with European localization can fail with an error similar to:

```
Configuring launch environment for HelloWorld...

443 was unexpected at this time.
```

RESOLUTION:

This is a problem in the application launcher .cmd file generated when the application is built. The WebObjects build tools have been modified to produce correct .cmd files. However, existing .cmd files must be regenerated to incorporate this change. If you are experiencing this problem you must rebuild your application after installing WebObjects 5.1.1.

NullPointerException in WO5.1 with many to many relationships

Apple Reference 2850322

ISSUE:

In WebObjects 5.1, if an EOModel defines a many to many relationship that is only modeled in one direction, an error occurs attempting to access the entity which does not have the relationship modeled.

RESOLUTION:

This problem has been corrected.

An optimistic locking failure can cause subsequent fetch failures

Apple Reference 2852342

ISSUE:

An exception can leave the JDBCChannel in a bad state. Thereafter, a SELECT query can be incorrectly sent via a JDBC executeUpdate() call, raising a JDBCAdaptorException.

RESOLUTION:

This problem has been corrected.

Opening Components in WOBuilder

Apple Reference 2863520

ISSUE:

WOBuilder sometimes fails to open a component when double clicking on a .wo in ProjectBuilder. WOBuilder displays the message "Failed to open component".

RESOLUTION:

This problem has been corrected.

EOModeler fails to overwrite existing *.java file

Apple Reference 2880006

ISSUE:

When generating java files for an entity, EOModeler fails to overwrite previously generated files.

RESOLUTION:

This has been fixed for WebObjects on Mac OS X. In addition, EOModeler now includes an option to merge any differences using FileMerge.

Published Date: Feb 20, 2012

AirPort for Mac OS 9: Can‘t Update Base Station From Setup Assistant

After updating to AirPort 2.0.2 in Mac OS 9, you cannot update the AirPort Base Station from the AirPort Setup Assistant.
This article has been archived and is no longer updated by Apple.

Symptom

When using AirPort Setup Assistant after an update to AirPort 2.0.2 software, you see a message that "Your Base Station needs to be updated." When you click the Update button, you are returned to to the password entry dialog. The Assistant is stuck in a loop at this point, and you must quit it without completing the setup.

Note: This does not affect AirPort 2.0.2 software for Mac OS X.

Solution

Locate your copy of AirPort Admin Utility, and use it to connect to the base station. You will be prompted to update the base station then.

Note: The location of AirPort Admin Utility may vary, depending on the history of your system. If you don't know where it is, try using Sherlock to find it.
Published Date: Feb 20, 2012

Mac OS X: PDF Files Require User Password for Print Security

When adding document security features to an Adobe portable document format (PDF) document, always assign a user password to the document to ensure the effectiveness of the security.
This article has been archived and is no longer updated by Apple.

Symptom

PDF documents designed to have additional security features, such as not allowing printing, but without a user password assigned to them are not necessarily secure.

Solution

Add a user password to all secure documents.

The only way to ensure a PDF document with security features is always secure and cannot be modified is to add a user password. Any PDF document without a user password should not be used in situations where the security features need to be enforced.

Published Date: Feb 19, 2012

Mac OS X: About the "Install Mac OS 9 Drivers" Option in Disk Utility

Learn about the "Install Mac OS 9 Drivers" option in the Mac OS X Disk Utility.
This article has been archived and is no longer updated by Apple.
When formatting a hard disk using the Disk Utility application, there may be an option to "Install Mac OS 9 Drivers" under the Erase panel. **Note**: Disk Utility offers this option if the computer can start from Mac OS 9. If you don't see it in Disk Utility, your computer may start from Mac OS X only.

If you do not select this option when formatting a hard drive, the disk may not appear when the computer starts up from any version of the Mac OS other than Mac OS X. You should only deselect this option if the computer or hard disk is to be used exclusively with Mac OS X. Not selecting this option saves a small amount of drive space.

This option does not affect the availability or use of a disk with Classic in Mac OS X.

Published Date: Oct 10, 2016

WebObjects 5.1.3: Update Overview

This document contains an overview and download information for Apple's WebObjects 5.1.3 update. Apple does not recommend that all customers install this update. Only customers who are affected by one or more of the issues described below should install this update.

The **WebObjects Current Patch List**, document 70037, contains information on all available patches and updates for all versions of WebObjects. Read this document if you're not sure which update you need on your system.

Important: The information in Software Update which states this update is recommended for all WebObjects Developer users is incorrect. Follow the recommendations in this document about who should install this update.

This article has been archived and is no longer updated by Apple.
WebObjects 5.1.3 includes updated versions of several WebObjects class and jar files. Some WebObjects project types make copies of these files when the project is built. As a result, some projects may need to be rebuilt to take advantage of the issues addressed in the update. For example, when a JSP/Servlet war archive is created, several jars are copied into the war file. At least one jar (WOJSPServlet_client.jar, from the WOJSPServlet.framework) is always copied, and additional framework jars may be copied into the war as well, depending on the project. After installing WebObjects 5.1.3, either the application must be rebuilt (recreating the war archive), or the war archive must be manually updated, using the jar tool.

This update includes modified WebObjects client-side Java classes and jars. On Mac OS X Server and Microsoft Windows the update installer automatically places the modified classes and jars in your web server's document root directory. On Sun Solaris, the update installer places the modified classes in the WebObjects installation (in `$NEXT_ROOT/Library/WebObjects/WODocumentRoot/WebObjects`) but does not copy them to your web server's document root directory. To use the new files, you must install them in the correct location for the web server being used.

WebObjects 5.1.3 for Mac OS X (Server) 10.1.4

Important: There are two mutually exclusive updates for this platform. If you have WebObjects 5.1 Developer installed on Mac OS X 10.1.4, you need the WebObjects 5.1.3 Developer update. If you have WebObjects 5.1 Deployment installed on Mac OS X Server 10.1.4, you need the WebObjects 5.1.3 Deployment update. You do not need both on any system.

This update is available through the Software Update feature of Mac OS X. If you use this method, only the proper update for the software which you have installed on your system is visible and available for download. If you prefer to download and install the package manually, follow the instructions below.

Note: WebObjects 5.1.3 Deployment requires:

- Mac OS X Server 10.1.4 or later
- **Mac OS X 10.1.4 Server Update**
- **April 2002 Security Update**
- **Java 1.3.1 Update 1**

WebObjects 5.1.3 Developer requires:

- Mac OS X 10.1.4 or later
- December 2001 Mac OS X 10.1 Developer Tools
- **April 2002 Security Update**
- **Java 1.3.1 Update 1**

If you have not yet updated to the correct version of Mac OS X Server, Developer Tools, and Java, you must do so before installing WebObjects 5.1.3. The Mac OS X 10.1.4 and December 2001 Mac OS X 10.1 Developer Tools images are available on the Apple Developer's web site at: <http://www.apple.com/developer/>.

If you are creating a new Mac OS X WebObjects 5.1 development system, you should install the software in the following order:

1. Mac OS X 10.1.4
2. December 2001 Mac OS X 10.1 Developer Tools
3. Java 1.3.1 Update 1
4. April 2002 Security Update
5. WebObjects 5.1 Developer
6. WebObjects 5.1.3 Developer

Manually Installing WebObjects 5.1.3 Developer on Mac OS X 10.1.4

These instructions are for manually downloading and installing WebObjects 5.1.3 Developer. If you are installing using Software Update, see WebObjects 5.1.3 for Mac OS X Server 10.1.4, above.

Note: WebObjects 5.1.3 Developer requires:

- Mac OS X 10.1.4 or later
- December 2001 Mac OS X 10.1 Developer Tools
- **April 2002 Security Update**
- **Java 1.3.1 Update 1**

If you have not yet updated to the correct version of Mac OS X, Developer Tools, and Java, you must do so before installing WebObjects 5.1.3. The Mac OS X 10.1.4 and

December 2001 Mac OS X 10.1 Developer Tools images are available on the Apple Developer's web site at: <http://www.apple.com/developer/>.

1. Download **`WO51MacOSXDevUpdate3.pkg.tar`**, the update package for Mac OS X 10.1.

The update is available from:

http://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/webobjects/patches/5.1/WO51MacOSXDevUpdate3.pkg.tar

Stuffit Expander should automatically expand the .tar file, leaving **`WO51MacOSXDevUpdate3.pkg`**.

2. Double-click **`WO51MacOSXDevUpdate3.pkg`**.

The Authorization panel opens.

3. Only an administrator can install the update. Click the lock icon at the bottom left of the panel to authenticate for administrative access.

4. Click OK to proceed.

The Introduction panel appears.

5. Click Continue.

The Software License Agreement appears.

6. Read the software license agreement, then click Continue.

7. Click Agree to agree to the license and continue the installation.

8. Select the volume containing Mac OS X and WebObjects 5.1 Developer, then click Continue.

9. Make sure that there are no WebObjects or EOF applications running.

10. Click Install to proceed with installation.

The Installer window displays information about the progress of the installation, which may take several minutes.

11. Restart your computer.

Manually Installing WebObjects 5.1.3 Deployment on Mac OS X Server 10.1.4

These instructions are for manually downloading and installing WebObjects 5.1.3 Deployment. If you are installing using Software Update, see WebObjects 5.1.3 for Mac OS X Server 10.1.4, above.

Note: WebObjects 5.1.3 Deployment requires:

- Mac OS X Server 10.1.4 or later
- **Mac OS X 10.1.4 Server Update**
- **Java 1.3.1 Update 1**

If you have not yet updated to the correct version of Mac OS X Server and Java, you must do so before installing WebObjects 5.1.3. The Mac OS X Server 10.1.4 image is available on the Apple web site.

1. Download **`WO51MacOSXDepUpdate3.pkg.tar`**, the update package for Mac OS X Server 10.1.

The update is available from:

http://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/webobjects/patches/5.1/WO51MacOSXDepUpdate3.pkg.tar

Stuffit Expander should automatically expand the .tar file, leaving **`WO51MacOSXDepUpdate3.pkg`**.

2. Double-click **`WO51MacOSXDepUpdate3.pkg`**.
The Authorization panel opens.

3. Only an administrator can install the update. Click the lock icon at the bottom left of the panel to authenticate for administrative access.

4. Click OK to proceed.

The Introduction panel appears.

5. Click Continue.

The Software License Agreement appears.

6. Read the software license agreement, then click Continue.

7. Click Agree to agree to the license and continue the installation.

8. Select the volume containing Mac OS X and WebObjects 5.1 Developer, then click Continue.

9. Make sure that there are no WebObjects or EOF applications running.

10. Click Install to proceed with installation.

The Installer window displays information about the progress of the installation, which may take several minutes.

11. Restart your computer.

Installing WebObjects 5.1.3 on Windows 2000

Notes:

- During the installation, if you see panels indicating that certain files being replaced by the update are "locked", click Reboot to continue the installation. The files will be replaced upon restarting.
- This update cannot be uninstalled alone. Once you have upgraded to WebObjects 5.1.3 you cannot revert to WebObjects 5.1. However, the entire WebObjects 5.1.3 installation can be uninstalled using the Add/Remove Programs control panel.
- The WebObjects 5.1.3 update includes updated reference documentation in the standard JavaDoc format for the changes to the NSTimeZone, NSTimestamp, and NSTimestampFormatter classes. The files are placed in **`$NEXT_ROOT\\Developer\\Documentation\\WebObjects\\Reference`**.

1. Download **`WO51WinUpdate3.exe`**, the self-extracting update installer for Windows 2000.

The update is available from:

http://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/webobjects/patches/5.1/WO51WinUpdate3.exe

2. Log in as a user with Administrator privileges.

3. Make sure that there are no WebObjects or EOF applications running.

4. Double-click on the update installer, **`WO51WinUpdate3.exe`**, to start the installation process.

A screen appears with some information about this update.

5. After you have read the information screen, click Next to continue.

The license agreement for this update appears.

6. To agree to the license and continue the installation, click Yes.

The update will be installed on your system and you will be asked if you want to restart.

7. Select Yes, I want to restart my computer now to restart Windows.

The WinZip self-extractor automatically quits and removes its temporary files in about 20 seconds.

Installing WebObjects 5.1.3 on Solaris

1. Download **`WO51SolarisUpdate3.TAR.Z`**, the update installer for Solaris.

You will also need to download the update installation script, **`patcher.sh`**.

The update is available from:

http://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/webobjects/patches/5.1/WO51SolarisUpdate3.TAR.Z

The installation script is available at:

http://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/MultiCountry/Enterprise/scripts/patcher.sh

After you have downloaded the files, the patcher.sh script needs its executable bit set. At the command prompt enter:

```
chmod 511 patcher.sh
```

2. Log in as root.

3. Make sure that there are no WebObjects or EOF applications running, including Monitor.

4. If a web server is running on the computer on which you are installing the update, stop it.

5. Stop WebObjects services (**`wotaskd`** and **`woservice`**) using the WOServices script. At the command prompt enter:

```
cd $NEXT_ROOT/Library/WebObjects/Executables
./WOServices stop
```

These services will restart when you restart the computer after installing the update.

6. To Install the update, cd to the directory containing the update and the patcher.sh installation script. Then at the command prompt enter:

```
patcher.sh -install WO51SolarisUpdate3.TAR.Z
```

For more information on using patcher.sh, at the command prompt enter:

```
patcher.sh -help
```

7. Copy the updated WODocument root to your web server's document root.

```
cp -r $NEXT_ROOT/Library/WebObjects/WODocumentRoot/WebObjects <webserver doc root>/WebObjects
```

8. restart your computer.

Corrected in WebObjects 5.1.3

Unable to use redirects or return error codes for servlets

Apple Reference 2858300

ISSUE:

Status codes weren't being set properly for servlet applications.

RESOLUTION:

This issue has been corrected.

Deadlock with EOSharedEditingContext

Apple Reference 2861512

ISSUE:

A race condition can cause an application which uses EOSharedEditingContext to deadlock. This deadlock can occur when the shared editing context receives a change notification concurrent with access from another thread. The deadlock can be identified by threads being blocked with the following appearing in the backtrace:

```
java.lang.Object.wait (Native Method)
java.lang.Object.wait (Object.java:420)
com.webobjects.foundation.NSMultiReaderLock$ConditionLock.await (NSMultiReaderLock.java:503)
...
```

RESOLUTION:

The deadlock was caused by two lock primitives being locked in different order by different threads. For WebObjects 5.1.3 the deadlock has been addressed by merging the underlying locks and using a single locking primitive. With this change, holding a read or write lock on the shared editing context will block other threads in that application instance from performing EOF operations, and vice versa. Additionally, in WebObjects 5.1.3 multiple shared editing contexts use the same underlying lock object.

Note that in most cases it is not necessary to explicitly lock a shared editing context using `lockForReading()` or `lockForWriting()`. One case where it is necessary to lock the shared editing context in WebObjects 5.1.3 is if either of the EOSharedEditingContext methods `objectsByEntityName()` or `objectsByEntityNameAndFetchSpecificationName()` are used. In WebObjects 5.1.3 both of these methods return references to mutable collections which could change if the shared editing context is not locked. Customers using these methods should hold a read lock on the shared editing context while operating on these collections. However, applications which must lock the shared editing context should minimize the scope of the lock to avoid blocking other threads from using EOF. One strategy might be to hold a lock only long enough to copy the needed collection objects, then operate on the copy.

It is expected that the next release of WebObjects will include a different resolution for this problem which provides more concurrency and removes the requirement to explicitly lock the shared editing context. This issue is being tracked as Apple Reference 2948731 for the next WebObjects release. When the next version of WebObjects is released, refer to Apple Reference 2948731 in the release notes for more information.

Corrected in WebObjects 5.1.2

NPE with a compound primary key whose value types are other than 'i'

Apple Reference 2838002

ISSUE:

In some circumstances, using a compound primary key with a value type other than 'i' would result in EOF replacing one component of the key with null.

RESOLUTION:

This issue has been corrected.

WOResourceManager generating incorrect URLs when WOApp accessed via web server

Apple Reference 2838073

ISSUE:

WOResourceManager generates incorrect URLs when an app started in ProjectBuilder is accessed via a web server. This can cause images to fail to load.

RESOLUTION:

This issue has been corrected. It only occurs if the app detects that its project is currently open in ProjectBuilder when the instance is launched. This issue does not affect deployed apps.

EOModeler fails to launch FileMerge when merging .java files (Windows)

Apple Reference 2851049

ISSUE:

EOModeler fails to merge .java files in FileMerge because FileMerge does not launch. Also, FileMerge fails to show differences when the path to the eomodel has a directory with a space in its name. This issue is specific to the Windows platform.

RESOLUTION:

This issue has been corrected.

EOModeler fails to overwrite existing .java file (Windows)

Apple Reference 2851267

ISSUE:

EOModeler fails to overwrite previously generated files when generating java files for an entity. This issue is specific to the Windows platform.

RESOLUTION:

This issue has been corrected. In addition, EOModeler now includes an option to merge any differences using FileMerge.

In-memory qualification returns too many objects

Apple Reference 2852347

ISSUE:

Qualification of in-memory objects returns objects with null values in addition to the desired objects.

RESOLUTION:

For EOQualifier on in-memory objects, the operators <, >, <=, and >= always return false if either operand is null. However, = and != treat null values as equal to null and return the appropriate result. EOSortingOrder treats null as negative infinity.

NPE in EOClassDescription when propagating deletes

Apple Reference 2856718

ISSUE:

If a to-many relationship was set to null, EOClassDescription throws a null pointer exception when propagating deletes through the to-many relationship.

RESOLUTION:

This issue has been corrected.

The command "opendiff" does not launch FileMerge (Windows)

Apple Reference 2869320

ISSUE:

On Windows the "opendiff" command will not launch FileMerge.

RESOLUTION:

This issue has been corrected.

"unable to increment snapshot count for object" exception in fetch

Apple Reference 2869648

ISSUE:

`EOEditingContext.objectsWithFetchSpecification()` fails sometimes with an exception similar to:
java.lang.IllegalStateException: incrementSnapshotCountForGlobalID: com.webobjects.eoaccess.EODatabase - unable to increment snapshot count for object with global ID xxx - no snapshot exists.

RESOLUTION:

WebObjects 5.1.2 corrects one possible way this exception can occur. However, the issue remains under investigation.

NSTimeZone.setDefault() should accept java.util.TimeZone

Apple Reference 2881499

ISSUE:

NSTimeZone.setDefault() throws an IllegalArgumentException when passed a java.util.TimeZone.

RESOLUTION:

NSTimeZone.setDefault() has been modified to accept a java.util.TimeZone.

NSTimeZones hash to zero

Apple Reference 2894077

ISSUE:

All NSTimeZones hash to zero.

RESOLUTION:

This issue has been corrected.

NSTimestamp() creates an incorrect timestamp

Apple Reference 2894102

ISSUE:

If an NSTimestamp is created using NSTimestamp(int year, int month, int date, int hour, int minute, int second, TimeZone tz) with values which refer to a time before the reference date, the created NSTimestamp is off by one second.

RESOLUTION:

This issue has been corrected.

NSTimeZone.getGMT() should be public

Apple Reference 2894146

ISSUE:

NSTimeZone.getGMT() should be public.

RESOLUTION:

NSTimeZone.getGMT() is now public and returns an NSTimeZone corresponding to Etc/GMT (GMT) offset 0.

NSTimestamp throws when using custom Java time zone

Apple Reference 2894493

ISSUE:

NSTimestamp throws an exception when using a custom Java time zone like GMT+06:00.

RESOLUTION:

NSTimeZone now supports time zones of the form GMT[+|-]hh:mm. They can be generated using NSTimeZone.timeZoneForSecondsFromGMT(int secondsOffsetFromGMT).

NSTimestamp(System.currentTimeMillis(), 999999999) throws an exception

Apple Reference 2894495

ISSUE:

NSTimestamp(System.currentTimeMillis(), 999999999) throws an exception. This method should only throw an exception when the nanos argument is greater than 999999999.

RESOLUTION:

This issue has been corrected.

NSTImeZone.setDefault() to NSLocalTimeZone should throw

Apple Reference 2894496

ISSUE:

It should be invalid to set the default time zone to NSLocalTimeZone.

RESOLUTION:

NSTimeZone.setDefault() now throws an IllegalArgumentException when passed an NSLocalTimeZone.

NPE if you call hashCode() on an NSLocalTimeZone object

Apple Reference 2894498

ISSUE:

Calling hashCode() on an NSLocalTimeZone object results in a null pointer exception.

RESOLUTION:

NSLocalTimeZone.hashCode() now returns the hash code of defaultTimeZone().

NSTimestampFormatter.parseObject() cannot parse arbitrary GMT timezone strings

Apple Reference 2894500

ISSUE:

NSTimestampFormatter.parseObject() cannot parse arbitrary GMT timezone strings like "GMT+12:15".

RESOLUTION:

This issue has been corrected.

Some abbreviations don't have corresponding time zone.

Apple Reference 2894502

ISSUE:

Some abbreviations don't have a corresponding NSTimeZone.

RESOLUTION:

This issue has been corrected.

timeZoneForSecondsFromGMT doesn't deal with extra seconds

Apple Reference 2894503

ISSUE:

Any extra seconds that were not part of whole hours and minutes were included in the offset of the apolitical time zone created.

RESOLUTION:

Extra seconds are now rounded to the nearest minute. For example:

NSTimeZone.timeZoneForSecondsFromGMT(-30) = GMT-00:01 () offset -60
NSTimeZone.timeZoneForSecondsFromGMT(-29) = GMT-00:00 () offset 0
NSTimeZone.timeZoneForSecondsFromGMT(30) = GMT+00:01 () offset 60
NSTimeZone.timeZoneForSecondsFromGMT(29) = GMT+00:00 () offset 0

NSTimestampFormatter.parseObjectInUTC can fail

Apple Reference 2894504

ISSUE:

NSTimestampFormatter.parseObjectInUTC() fails when the parse position is not at the beginning of the string.

RESOLUTION:

This issue has been corrected.

Apolitical time zones always return a zero offset from GMT

Apple Reference 2894505

ISSUE:

NSTimeZone.getRawOffset() is returning zero for apolitical time zones like "Etc/GMT+9".

RESOLUTION:

Apolitical time zones now return their offset from GMT. Geopolitical time zones will return zero, as many do not have one generic offset.

NSTimeZone.getAvailableIDs() contains "Factory"

Apple Reference 2894507

ISSUE:

NSTimeZone.getAvailableIDs() returns an incorrect entry "Factory".

RESOLUTION:

This issue has been corrected.

Corrected in WebObjects 5.1.1

NSTimeZone : timeZoneFromSecondsFromGMT() returns no time zone even when value is valid

Apple Reference 2814979

ISSUE:

NSTimeZone.timeZoneFromSecondsFromGMT() returned null when the offset was a valid value for an apolitical time zone.

RESOLUTION:

If the seconds offset from GMT corresponds to a whole hour between 12 and -12 inclusive, this method reuses an existing, well-known, apolitical NSTimeZone object for that offset. Only whole hour offsets should by passed to this method in WebObjects 5.1.1.

NSPathUtilities.stringByDeletingLastPathComponent() returns incorrect result on Windows

Apple Reference 2822553

ISSUE:

On Windows, NSPathUtilities.stringByDeletingLastPathComponent() returns an incorrect result if the root directory is specified. For example, an input of "C:/" incorrectly returns "C:" rather than "C:/".

RESOLUTION:

This problem has been corrected.

NSTimestamp.microsecondOfSecond is off by a factor of 1000

Apple Reference 2837997

ISSUE:

In WebObjects 5.1, NSTimestamp.microsecondOfSecond() actually returns milliseconds.

RESOLUTION:

This problem has been corrected.

NSTimestampFormatter does not format NSTimestamp in the local time zone

Apple Reference 2838080

ISSUE:

In WebObjects 5.1, NSTimestampFormatter does not format NSTimestamp in the local time zone.

RESOLUTION:

NSTImestampFormatter now defaults to the local time zone.

WOEventDisplay gives an error screen when logging is on

Apple Reference 2844727

ISSUE:

Viewing the event display page can result in a ClassCastException.

RESOLUTION:

This problem has been corrected.

NSTimestamp does not have SUID for serialization

Apple Reference 2847504

ISSUE:

WebObjects 5.1 cannot read NSTimestamps serialized in WebObjects 5.0.

RESOLUTION:

The serialID in WebObjects 5.1.1 has been changed to match the serialID in WebObjects 5.0. In WebObjects 5.1.1, NSTimestamp will read WebObjects 5.0/5.1.1 serialized Timestamps and write WebObjects 5.1.1 NSTimestamps.

NSTimestamp data that was serialized using WebObjects 5.1 cannot be deserialized using WebObjects 5.1.1. However, data can be migrated using NSTimestampFormatter. A WebObjects 5.1 tool can use NSTimestampFormatter to convert NSTimestamps to Strings. Then a WebObjects 5.1.1 tool can use NSTimestampFormatter to convert the Strings back to NSTimestamps.

NSTimestampFormatter.parseObject creates incorrect timestamp

Apple Reference 2849628

ISSUE:

NSTimestampFormatter.parseObject creates an incorrect timestamp when the string being parsed does not use GMT for the time zone.

RESOLUTION:

This problem has been corrected. Please review any subclasses of NSTimestampFormatter you may have used to work around this problem in your WebObjects 5.1 applications.

NSTimeZone.localTimeZone() raises

Apple Reference 2849630

ISSUE:

Using NSTimeZone.localTimeZone() with NSTimestampFormatter raises an exception.

RESOLUTION:

This problem has been corrected.

backtracking page cache not working properly

Apple Reference 2849640

ISSUE:

Backtracking in a browser and repeating a request or reloading a previously generated page incorrectly causes the request/response loop to execute rather than simply returning the cached page. (See WOApplication.setPageRefreshOnBacktrackEnabled().)

RESOLUTION:

The page cache now functions properly. Additionally, a request's form values (if any) are now considered when determining whether to return a cached page. If the user backtracks and repeats a request with modified form values, the request/response loop will execute. However, with the current implementation, the responses for both sets of form values remain in the cache. If the user backtracks a second time and makes another request with the original form values, the request/response loop will not execute and the cached page will be returned.

The documentation for WOApplication.setPageRefreshOnBacktrackEnabled() is incorrect on one point. The documentation states "By default, this attribute is set to false." The default in WebObjects 5.1 is true.

WO5.1 Win2K Cannot Launch Apps

Apple Reference 2849676

ISSUE:

Launching WebObjects 5.1 applications on Windows 2000 with European localization can fail with an error similar to:

```
Configuring launch environment for HelloWorld...

443 was unexpected at this time.
```

RESOLUTION:

This is a problem in the application launcher .cmd file generated when the application is built. The WebObjects build tools have been modified to produce correct .cmd files. However, existing .cmd files must be regenerated to incorporate this change. If you are experiencing this problem you must rebuild your application after installing WebObjects 5.1.1.

NullPointerException in WO5.1 with many to many relationships

Apple Reference 2850322

ISSUE:

In WebObjects 5.1, if an EOModel defines a many to many relationship that is only modeled in one direction, an error occurs attempting to access the entity which does not have the relationship modeled.

RESOLUTION:

This problem has been corrected.

An optimistic locking failure can cause subsequent fetch failures

Apple Reference 2852342

ISSUE:

An exception can leave the JDBCChannel in a bad state. Thereafter, a SELECT query can be incorrectly sent via a JDBC executeUpdate() call, raising a JDBCAdaptorException.

RESOLUTION:

This problem has been corrected.

Opening Components in WOBuilder

Apple Reference 2863520

ISSUE:

WOBuilder sometimes fails to open a component when double clicking on a .wo in ProjectBuilder. WOBuilder displays the message "Failed to open component".

RESOLUTION:

This problem has been corrected.

EOModeler fails to overwrite existing *.java file

Apple Reference 2880006

ISSUE:

When generating java files for an entity, EOModeler fails to overwrite previously generated files.

RESOLUTION:

This has been fixed for WebObjects on Mac OS X. In addition, EOModeler now includes an option to merge any differences using FileMerge.

Published Date: Feb 19, 2012

Macintosh Server G4 (QuickSilver 2002): Only Ten Users Can Connect

Some Macintosh Server G4 (QuickSilver 2002) servers came with ten-user licenses instead of unlimited licenses.

This article has been archived and is no longer updated by Apple.

Symptom

Only ten users can connect simultaneously to a Macintosh Server G4 (QuickSilver 2002) over SMB or AFP.

Solution

Some Macintosh Server G4 (QuickSilver 2002) servers came with incorrectly printed software serial numbers. The sticker on the Mac OS X Server CD sleeve indicates the software serial number is an unlimited license, but it is actually a 10-client license.

If you experience this symptom, you can have a replacement serial number issued to you at the Mac OS X Server Serial Number Exchange Web site (http://depot.info.apple.com/macosxserversn/)

Published Date: Feb 20, 2012

Mac OS 9: Unable to Print With Extensis MenuFonts and Adobe Type Manager (ATM) Installed

Extensis MenuFonts may prevent the computer from printing if Adobe Type Manager (ATM) is also installed.
This article has been archived and is no longer updated by Apple.

Symptom

When you print, an alert box with one of these messages appears:

- No printer has been selected in the Chooser. Reselecting the printer in the Chooser does not resolve the issue.
- Error type -60
- Error type -23

Solution

Open the Control Panels folder to see if Suitcase 9 MenuFonts and Adobe Type Manager (ATM) are both installed. If so, there are two solutions.

- Use the Extensions Manager to disable the ~Suitcase 9 MenuFontsTM control panel, then restart the computer.
- Rename the ~Suitcase 9 MenuFontsTM control panel to include a space between the tilde and S characters.
  The resulting name will be: ~ Suitcase 9 MenuFontsTM

More information about this issue is available from Extensis' Web site:

http://www.extensis.com/support/oldproducts/suitcase9macfaq.html

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Published Date: Feb 19, 2012

Mac OS 9: How to Troubleshoot Software Update Control Panel

This document describes methods for troubleshooting issues related to the Software Update control panel.

This article has been archived and is no longer updated by Apple.

If you are not able to use the Software Update feature of Mac OS 9, try one or more of the following troubleshooting steps.

Install Software Update version 1.2

If you are not able to use the auto-update mechanism, check to see if you are using Software Update version 1.2 or later. Open the Software Update control panel and choose About Software Update from the Apple menu to confirm the version of Software Update installed. If version 1.2 or later is not installed, download and install Software Update 1.2 or later, which is available from Apple Software Downloads (http://www.apple.com/swupdates/).

Error message "Not able to run"

If the Software Update control panel reports that it is "not able to run", make sure that the following security extensions are installed in the Extensions folder of your System Folder. If these items are missing, you may need to re-install your system software:

- Security Cert Module
- Security Library
- Security Manager
- Security Policy Module
- Security Storage Module

Unable to connect to the Internet

If you see a message that the Software Update control panel is "not able to connect to the Internet", use a web browser to connect to the Apple web site at <http://www.apple.com> to make sure you have an active Internet connection before using Software Update.

If you are using a proxy server, Software Update may not be able to download and install updates. Download software updates from Apple Software Downloads instead (http://www.apple.com/swupdates/).

Software updates are listed, but do not download

Software Update will quit most open applications before downloading any updates. If you are using a login agent such as PPPoE, or another application that must be open in order to keep your Internet connection active, you may not be able to use Software Update. Download software updates from Apple Software Downloads instead (http://www.apple.com/swupdates/).

For more information, refer to technical document 60598: "**Mac OS 9: Using Software Update with VPN/Connection 'Keep-Alive' Agents**"

If you are using a proxy server, Software Update may not be able to download and install updates. Download software updates from Apple Software Downloads instead (http://www.apple.com/swupdates/).

Software downloads, but does not update

If Software Update is able to successfully connect to the Internet and display a list of updates, but the updates do not appear to install, try the following troubleshooting steps:

1. Make sure the file is downloading during the update process by clicking the "Show Detailed Progress" disclosure triangle in the Software Update progress dialog. If the updates are not actually downloading, see section above "Software updates are listed, but do not download".

2. Try rebuilding the Desktop to ensure that all of the Software Update components are properly recognized by the system software. For more information on rebuilding the desktop, see technical document 10182 "**Mac OS: Rebuilding Desktop File and Icon Recovery**."

3. Try downloading and installing one or more of the updates from the AppleCare Web site to see if the installer indicates a possible issue.

Published Date: Oct 10, 2016

iPhoto: Bound Books Limited to 50 Pages

When ordering an iPhoto book from Apple, do not include more than 50 pages.
This article has been archived and is no longer updated by Apple.

Symptom

When placing an order for an iPhoto book, one of the following alerts appears:

"You can purchase a bound book with at most 50 pages. You need to delete some pages or modify your layout."

"We've encountered a problem. Please try again later."

Solution

Bound Book

- Delete pages
- Change the layout to allow for more images per page

Other Options

- Print the book using your own printer
- Create a PDF (Portable Document Format) document

Books can be created with more than 50 pages, but you must use one of the two options listed above. Bound books ordered from Apple cannot exceed 50 pages.

Published Date: Oct 10, 2016

Apple DVI to ADC Adapter: Compatibility Table

Learn about the DVI Graphic cards, and displays that are compatible with the Apple DVI to ADC Adapter.
This article has been archived and is no longer updated by Apple.
x

Apple DVI to ADC Adapter Compatibility Table

		15" Studio	17" Studio (LCD model)	20" Cinema	22" Cinema	23" Cinema HD
MacBook and MacBook Pro	13-inch	x	x	x	x	x
	15-inch	x	x	x	x	x
	17-inch	x	x	x	x	
Mac mini	PowerPC based and Intel based	x	x	x	x[7]	x
Mac Pro	NVIDIA Quadro FX 4500	x	x	x	x	x
	ATI Radeon X1900 XT	x	x	x	x	x
	NVIDIA GeForce 7300 GT	x	x	x	x	x
PowerBook G4 (with DVI port)	12-inch	x	x	x	x	x
	15-inch	x	x	x	x	x
	17-inch	x	x	x	x	x
Power Mac	Radeon 9000 Pro	x	x	x	x	x
	Radeon 9700 Pro	x	x	x	x	x
	GeForce4 Titanium*	x	x	x	x	x
	Radeon 7000**	x	no	no	x	no
	Radeon 8500**	x	x	x	x	x
	RAGE 128 Pro	x	x	no	x	no
	Radeon PCI*	x	x	no	x	no
	Radeon AGP/PCI**	x	x	no	x	no

Product specifications are subject to change without notice.
* Sold as build-to-order solution.
** Sold by ATI.

Notes:

1. When using the DVI to ADC Adapter to connect the Apple Studio Display 17 LCD to an ATI Rage 128 Pro video card a minimum of Mac OS 9.2.2 or Mac OS X 10.1.3 or greater is required.
2. The DVI to ADC Adapter is compatible only with LCD displays. It is not compatible with the Apple Studio Display 17 (ADC), as this is a CRT display.
3. Power and sleep functions are NOT supported with the Apple DVI to ADC adapter when used with Intel based systems, iMac G5 systems, and Power Mac G5 (Late 2005) or later systems.
4. The only compatible resolution for an Apple Studio Display 17 LCD with the Apple DVI to ADC adapter and any video card is 1280 by 1024 pixels.
5. For controls such as brightness control and power and sleep functions, the USB cable from the Apple DVI to ADC adapter needs to be plugged in to the computer. If these functions are not operating as expected, check to make sure the USB cable is connected properly.
6. Some applications, including games, may automatically switch to other resolutions when they are opened. This will result in an unreadable image. Depending on the software, you might be able to return to the native resolution by pressing the escape ("Esc") key, quitting the application, or clicking the mouse. If you cannot return to the native resolution, restart the computer. If the software leaves the resolution scrambled after restarting, reset the NVRAM. If resetting the NVRAM does not work, do the following:
7. For complete Mac mini and Cinema Display 22-inch DVI to ADC compatibility, go here for more information.
8. You can find the Apple DVI to ADC Adapter in the Apple Online store.

Mac OS 9

- Drag the Monitors Preferences folder (located in the Preferences folder in the System folder) to the Trash.

Mac OS X

1. Drag the com.apple.windowserver.plist preference file (located in /Library/Preferences) to the Trash.
2. When you connect a compatible PowerBook computer to a compatible display using the DVI to ADC adapter, resolutions other than the native display resolution do not scale.
3. Some bundled display cards will not work with all ADC features when an display is connected using the Apple ADC to DVI Display Adapter. Some examples of features that may not work with bundled display cards include:
    - Starting up the computer by pressing the display's power button when the computer is off.

- Putting the computer to sleep by pressing the display's power button when the computer is on.
- Shutting down the computer by pressing the display's power button when the computer is in Open Firmware mode.

Workarounds

- Use the main power button on the computer.
- Choose Sleep from the Apple menu (Mac OS X) or the Finder's Special menu (Mac OS 9).
- If computer is started in Open Firmware mode, type "shut-down" then press Return.

Related Documents

75285 Apple DVI to ADC Adapter: Specifications

Published Date: Oct 10, 2016

Roxio: Support and Upgrades

This article contains support links and software upgrade links for Roxio products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company:	Roxio, Inc. support email: http://www.roxio.com/en/support/roxio_support/toast/toast_contact.html +1 408-367-5555

Product:	Toast / Toast with Jam
Product Description:	CD creation software
Support Site:	http://www.roxio.com/en/support/roxio_support/toast/toast_index.html
Product Updates:	http://www.roxio.com/en/support/roxio_support/software_updates.html
FAQ:	None

Software Update Information

If you want to be notified automatically of software updates for this product, or other third-party products, you can either use the Version Tracker Web site at:

http://www.versiontracker.com

Published Date: Feb 19, 2012

WebObjects 5: How to Connect to Sybase With EOModeler

This document explains how to install a Sybase JDBC driver and connect to the Sybase server with the EOModeler tool.
This article has been archived and is no longer updated by Apple.

Applicable products

- WebObjects 5.1
- WebObjects 5.2

Disclaimer for WebObjects 5.1: Sybase is not officially supported in WebObjects 5.1. This document only provides information on how to set up the connection panel in EOModeler so that you can connect to Sybase and reverse engineer an existing database with the EOModeler tool. Since Apple does not provide a Sybase plug-in, the JDBC adaptor functions like a generic JDBC adaptor.

To customize the JDBC adaptor, you can write a custom plug-in. See the Technical Note on how to write a JDBC plug-in at the URL:

http://developer.apple.com/technotes/tn/tn2027.html

Sybase server and JDBC driver used in this document:

- Sybase ASE version 12
- jconnect52.zip

Where to Obtain Sybase JDBC Drivers

The Sybase JDBC drivers are available from Sybase's Web site (http://www.sybase.com/). The files can be downloaded for free after you create a "MySybase" account.

Where to install the Sybase JDBC Driver

Assuming that you have downloaded the `jconnect52.zip` package, unzip the package and place the `jconn2.jar` file in the appropriate location.

Mac OS X

Place the Sybase `jconn2.jar` file into `/Library/Java/Extensions` or a directory listed in your `CLASSPATH`.

Windows 2000

1. Install the Sybase JDBC driver where the Java VM can find it.
The simplest procedure is to add the JDBC driver (`jconn2.jar`) to the Java VM's "extensions" directory. In Windows 2000, this directory is usually something similar to:
`C:\\jdk1.3\\jre\\lib\\ext\\`
The exact path depends on where JDK 1.3 is installed.

If preferred, the JDBC driver can be added to your `CLASSPATH`, either explicitly listing the jar file, or exploding the jar into a directory that is on the `CLASSPATH`.

2. For development or testing using Windows 2000, install the Sybase driver in `$NEXT_ROOT/Library/Java` and modify the `JavaConfig.plist` file accordingly.

If your WebObjects installation is not in `C:/Apple`, substitute the appropriate path in the instructions below.
Note: The UNIX notation of "/" for the directory separator is used in the instructions.

1. Log in with an administrator account.
2. Copy `jconn2.jar` to `C:/Apple/Library/Java/`
3. Edit the file `C:/Apple/Library/Java/JavaConfig.plist`
Add `$NEXT_ROOT/Library/Java/jconn2.jar` to the entry for the "DefaultClasspath". Items in the list should be separated by a semicolon ";".
Use the term "`$NEXT_ROOT`" literally, following the pattern of the other entries.

Specifying the URL and Driver in EOModler's connection panel

The URL should be of the format:

```
jdbc:sybase:Tds:<hostname>:<port#>
```

For example, to connect to a Sybase Server on myhost listening on port 4100, the URL will be:

```
jdbc:sybase:Tds:myhost:4100
```

You specify databases using the following URL syntax:

```
jdbc:sybase:Tds:<hostname>:<port#>/<database>
```

A character set can be specified using the following URL syntax:

```
jdbc:sybase:Tds:myServer:4100/testDB?charset=ascii_7
```

Enter the following into the Driver textfield in the EOModeler connection panel:

```
_Driver: com.sybase.jdbc2.jdbc.SybDriver
```

Note: The driver entry is needed for WebObjects 5.1 (all platforms) and WebObjects 5.2 (Windows 2000 only)

A typical JDBC Connection Panel in EOModeler looks like figure 1

Figure 1: Typical JDBC Connection Panel in EOModeler

Published Date: Feb 19, 2012

Macintosh: How to Upgrade from Mac OS X 10.0 to Mac OS X 10.1

This document explains how to upgrade from Mac OS X 10.0 to Mac OS X version 10.1.
This article has been archived and is no longer updated by Apple.
Mac OS X 10.1 is a reference release of Mac OS X. It is **not** available for download.

Mac OS X 10.2 is available for ordering from the Apple Store (http://store.apple.com/).

Updates to the reference release Mac OS 10.1 can be downloaded. See the related document section for a list of updates.

Related Documents

58070	Mac OS: What is a Reference Release
106713	Mac OS X 10.1: Chart of Available Software Updates
	http://www.apple.com/macosx/upgrade/

Published Date: Oct 10, 2016

AppleCare Protection Plan CD: Some CDs Contain Multiple Startup Volumes

Later versions (CD part 691-3597-A) of the AppleCare Protection Plan CD contains both Mac OS 9 and Mac OS X volumes. This enables customers to start up from either Mac OS 9 or Mac OS X.
This article has been archived and is no longer updated by Apple.

Multiple Startup Volumes

Later versions of the AppleCare contain both Mac OS 9 and Mac OS X enabling the AppleCare Protection Plan CD to be used as a startup disc in either operating system. This is sometimes referred to as a "dual-boot" CD.

Note: The versions of the operating system on some versions of the AppleCare Protection Plan CD may not start up all computers. For more information see technical document 25141: "**AppleCare Protection Plan CD: Cannot Start Up All Macintosh Computers**."

TechTool Deluxe

Versions of the AppleCare Protection Plan CD that can startup in either Mac OS 9 or Mac OS X contain a version of the TechTool Deluxe application that will work in either operating system with different interfaces depending on which operating system the computer is using. Both interfaces are compatible with Mac OS X.

Figure 1 - Mac OS 9.x TechTool application interfaces

Figure 2 - Mac OS X TechTool application interface

How to start up with different operating systems

Starting up with Mac OS 9

1. With the computer turned on and completely started up, insert the AppleCare Protection Plan CD.
2. Choose Restart from the Special menu.
3. Press and hold the C key.
4. Release the C key after the "happy Mac" face appears on screen.

   The computer continues starting up, and the CD window opens automatically when the desktop appears.
5. Double-click TechTool Deluxe in the open CD window.

Starting up with Mac OS X

1. Insert the APP CD into your computer.
2. Choose Restart from the Apple menu.
3. Press and hold down the Option key to open the Startup Manager.
4. Select the Mac OS X partition on the AppleCare Protection Plan CD from the Startup Manager screen
5. Click the right arrow button.
   TechTool Deluxe for Mac OS X loads directly bypassing the normal Finder desktop.

Figure 3 - Startup Manager screen

How to Use TechTool Deluxe

For directions on how to use the version of TechTool Deluxe that is on your AppleCare Protection Plan CD, follow the Quick Start Guide located

on that partition of your CD.

How to determine AppleCare Protection Plan CD version

See technical document 58739: "**AppleCare Protection Plan CD: Determining Version of TechTool Deluxe**."

Published Date: Feb 20, 2012

WebObjects 5: How to Rename a Project with Project Builder in Mac OS X

This document explains the process of renaming a WebObjects or Cocoa project with Project Builder in Mac OS X.
This article has been archived and is no longer updated by Apple.

Symptom

When renaming a WebObjects or Cocoa project using the Rename command from the Project menu in Project Builder, the resulting executable file may retain the original name of the project.

Solution

When renaming a WebObjects or Cocoa project with Project Builder in Mac OS X, the name must be changed in other places in addition to choosing Rename from the Project menu.

The developer document "**Discovering WebObjects for HTML**" outlines the initial steps in the renaming process. All the steps are listed below.

Assume you are starting with a project named "MyWOProject" and that you want to change its name to "MyNewWOProject".

1. Duplicate the "MyWOProject" directory and name it "MyNewWOProject".

2. Rename the MyWOProject.pbproj file inside the MyNewWOProject directory to MyNewWOProject.pbproj.

3. Open the MyNewWOProject project in Project Builder.

4. Rename the MyWOProject target MyNewWOProject
a) Click the Targets tab.
b) Select the MyWOProject target in the Targets list.
c) Choose Project->Rename.
d) Replace MyWOProject with MyNewWOProject.
e) Click the Files tab.

5. Choose Clean from the Build menu.
At this point, if you build the project, the file still has the name MyWOProject, as does the .woa directory and the URL for connecting to the application. A few more steps are necessary to complete the process.

6. Close the MyNewWOProject project in Project Builder or quit Project Builder, so that Project Builder will not attempt to prevent changes to the project files.

7. Open the MyNewWOProject/MyNewWOProject.pbproj/project.pbxproj file with a text editor.
This file is not immediately visible in the Finder, so choose from one of the following methods to open the project.pbxproj file:
a) From the Finder while pressing the CONTROL key, click on the MyNewWOProject.pbproj and select 'Show Package Contents' from the contextual menu.
b) Open project.pbxproj in a text editor.
c) Open a Terminal shell.
d) change directories (cd) to the MyNewWOProject.pbproj to get to the project.pbxproj file
e) Open project.pbxproj with a command-line text editor such as vi or emacs.

8. Replace all occurrences of MyWOProject in the project.pbxproj file with MyNewWOProject.
This updates CFBundleExecutable key, the NSExecutable key, the .woa directory, several intermediate build directories, some PRODUCT_NAME keys, and the application's jar files.
Important: Do not modify names of .java files.

9. Open MyNewWOProject in Project Builder.

10. Build and run the application.

The resulting executable file has the new name of MyNewWOProject.

Published Date: Feb 19, 2012

AirPort Base Station (Dual Ethernet): Unable to Use 10.0.x./24 DHCP Leases with AirPort 2.0.4

After installing AirPort 2.0.4, the AirPort Base Station (Dual Ethernet) is no longer able to establish a DHCP connection to an ISP using a 10.0.0/24 network range (and any related subnets).
This article has been archived and is no longer updated by Apple.

Symptom

The AirPort base station's DHCP client refuses DHCP leases in the 10.0.0.x network range after firmware version 4.04 is installed as part of the AirPort 2.0.4 software.

Note: This issue does not affect the AirPort Base Station (Graphite).

Solution

- Update the AirPort Base Station (Dual Ethernet) using the AirPort 4.0.6 firmware update.
  This firmware is included with the AirPort 2.1 software that comes with Mac OS X 10.2. It can also be manually downloaded.
  See Related Documents for a link to the AirPort 4.0.7 firmware update.

Related Documents

120121 AirPort 4.0.7 Firmware Update: Information and Download

Published Date: Feb 20, 2012

iPhoto: About the Location of Imported Photos

This document describes where iPhoto stores the files of imported photos.
This article has been archived and is no longer updated by Apple.
iPhoto stores all information inside the folder named iPhoto Library. This folder is located inside the Pictures folder, which is in each user's Home folder or directory.

To back up this data, copy the entire iPhoto Library folder inside the appropriate user's /Home/Pictures folder to a different hard disk volume or to a CD-R or DVD-R disc.

Published Date: Feb 20, 2012

Xserve: Won‘t Turn on After PCI Cards Are Installed

Some early short PCI cards can be inserted into the Xserve's PCI slots, but they will not work, and Xserve may not turn on.
This article has been archived and is no longer updated by Apple.

Symptom

Some early short PCI cards can be inserted into the Xserve's PCI slots, but they only partially fill the slot. Xserve will not turn on.

Solution

Inserting these cards may damage Xserve. Only use compatible PCI cards. If you do not know if the PCI card is compatible with Xserve, contact the card's manufacturer.

Important:

- The Xserve works with both 32-bit and 64-bit PCI cards at 33 MHz and 66 MHz, but requires 3.3 V universal cards.
- Do not install PCI cards, unless the cards physically fit. Different generations of PCI cards have different keys or "notches" in different positions on the PCI connector. The Xserve PCI connector is shown in figure 1.

Figure 1 PCI slot in the Xserve

The PCI connector on different PCI cards may have more "notches" than the Xserve PCI connector has keys. Ensure the PCI connector on such cards has two "notches" that match the keys on the Xserve PCI connector and that the card otherwise fits length-wise.

Published Date: Feb 20, 2012

Mac OS X 10.1: Opening WebObjects Applications Without a Network Connection

This document explains how to open a WebObjects application when no network connection is available in Mac OS X 10.1.
This article has been archived and is no longer updated by Apple.

Symptom

Project Builder opens an Internet Explorer window when opening a WebObjects application. If the computer is not connected to a network, the browser does not load the application because it is unable to find the server's address. A similar issue can arise if the computer has an incomplete network configuration.

Solution

Solution 1: Select an alternate default browser to open .html files

You must have another browser installed on your computer to use this solution (see note for browsers tested).

1. Using the Finder, navigate to the Sites folder under your home. Alternatively, search for any html file using Sherlock.
2. Select "index.html"
3. Choose Show Info from the File menu.
4. Choose "Open with application" from the pop-up menu.
5. Choose another browser and click Change All.
Mac OS X now opens all .html files with the browser you selected instead of Internet Explorer, and the application will load properly in Project Builder.

Note: The following browsers were tested: OmniWeb, Netscape 6, iCab. You can perform the test yourself. Start Web Sharing in the System Preferences and load "localhost" in your browser. When the computer is not connected to the network not alert box should appear.

Solution 2: Use an IP address

In Mac OS X, Internet Explorer can load local addresses with no network connection if a numerical address of "127.0.0.1" is used instead of "localhost".

1. Open the project in Project Builder
2. Select Targets from the vertical tabs on the left.
The list of targets features your application name, Application Server and Web Server.
3. Select your application.
4. Select the Executables tab from the target settings panel.
5. Add the launch arguments:
```
-WOAdaptorURL http://127.0.0.1/cgi-bin/WebObjects
```

Solution 3: Set a local name for your computer

This solution requires administrator privileges and some Unix command-line knowledge. If you don't feel comfortable with these, use one of the previous solutions. The terminal commands are listed in fixed width font.

If Project Builder already loads a host name other than "localhost", go directly to step 7.

1. Open Terminal and go to the /etc folder:
```
cd /etc
```
2. Make a backup copy of your hostconfig file: (use the administrator password)
```
sudo cp -i hostconfig hostconfig.old
```

3. Open the file for editing:
```
sudo pico hostconfig
```

4. Insert your computer name instead of -AUTOMATIC- in the line:
```
HOSTNAME=-AUTOMATIC-
```

5. Save (Control-X)the hostconfig file.

6. Restart your computer to update the network settings.

7. Open NetInfo Manager.

8. Authenticate using the Domain > Security menu.

9. Browse to /machines/localhost and duplicate the directory (Edit menu).

10. Write your computer name (same as step 4) in the "name" property of "localhost copy".

11. Save your local copy (Domain menu).

Project Builder will now use your computer name instead of "localhost" and the application will load properly.

Published Date: Feb 19, 2012

Xserve, Xserve (Slot Load): Starts Up in Open Firmware or Will Not Turn On

Xserve and Xserve (Slot Load) may start up to an Open Firmware prompt, or may not turn on.
This article has been archived and is no longer updated by Apple.

Symptom

The server starts up to an Open Firmware prompt, or it may not turn on (no power). In some cases, it may not recognize the drive bays or display any video on the monitor.

Solution

In a small number of servers, the ATA controller board may not be seated, or inserted, securely. Follow these steps:

1. Shut down the Xserve and disconnect the power cord.
2. Open the Xserve as described in the documentation that comes with it.
3. Remove the clips from the ATA controller board.
4. Remove the ATA controller board by lifting the controller board straight up from its connection to the main logic board and drive backplane.
5. Visually inspect the connectors on the ATA controller board, the logic board connector, and the mid plane board connector for damage and foreign material.
6. Reinstall the ATA controller board by aligning both the connector on the main logic board side and aligning the connector on the backplane side and pressing both edges in firmly and at the same time. Do not install the board one end or one side at a time.
7. Make sure the clips are fastened correctly.

Published Date: Feb 20, 2012

Xserve: WebObjects 5.1 Deployment Located on Mac OS X Server 10.1.5 CD

Xserve has WebObjects 5.1 deployment software preinstalled on the hard disk. If there is a need to reinstall the software, it located on the Mac OS X Server 10.1.5 CD.
This article has been archived and is no longer updated by Apple.

Symptom

You cannot find the WebObjects Deployment CD in Xserve's accessories.

Solution

The WebObjects Deployment software is located on the Mac OS X Server CD. There is not a separate WebObjects Deployment CD in the Xserve bundle.

To reinstall WebObjects Deployment, double-click WebObjects X Deployment.mpkg.

WebObjects X Deployment.mpkg is located in the WebObjects 5.1 Deployment folder within the Additional Installs folder. See figure 1.

Figure 1 WebObjects X Deployment.mpkg location on the Mac OS X Server CD

If you are remotely installing the path is:

```
/Volumes/Mac\\ OS\\ X\\ Server/Welcome\\ to\\ Mac\\ OS\\ X\\ Server/Additional\\
Installs/WebObjects\\ 5.1\\ Deployment/WebObjects_X_Deployment.mpkg.
```

Published Date: Feb 19, 2012

Apple DVI to ADC Adapter: Low-Level, High-Pitch Noise

This document describes an issue where the Apple DVI to ADC Adapter produces a low volume high-pitch noise which can be heard.

This article has been archived and is no longer updated by Apple.

Symptom

When the Apple DVI to ADC adapter is plugged into an AC outlet and the monitor is in sleep mode or off, you may hear a low-level, high-pitch noise coming from the adapter.

Solution

It is normal for you to hear the high-pitch noise when the monitor is in sleep mode or shut down. However, if this high-pitch noise is heard after the computer starts-up, or after waking from sleep, contact Apple support.

Published Date: Feb 19, 2012

Xserve: AGP Riser Card is not available as a separate part

The AGP riser card for Xserve is bundled with the ATI Radeon 8500 Graphics card.
This article has been archived and is no longer updated by Apple.
The AGP riser card for Xserve cannot be ordered separate of the ATI Radeon 8500 Graphics card.

The ATI Radeon 8500 Graphics card has been qualified by Apple for Xserve with the riser card. If you intend to use the AGP riser card with another graphics card, you need to contact the manufacturer of the card for compatibility information.

This information is only for G4-based Xserves as the Xserve G5 uses PCI-X rather than AGP.

Published Date: Feb 20, 2012

Xserve: How to Shut Down Xserve Remotely

This document describes how to shut down an Xserve server when there is no monitor or keyboard connected to it.
This article has been archived and is no longer updated by Apple.
Since many Xserve servers may not have a keyboard or monitor connected to them, this document explains how to shut down from a remote location.

- If you have a keyboard and monitor connected to the server:

  1. Choose Shut Down from the Apple menu.

  OR
- If you do not have a keyboard and monitor attached:

  1. Use the Server Monitor application from a remote admin station.
  When monitoring an Xserve the 'Info' tab displays a Shutdown button.

  OR
- If you don't have a keyboard and monitor set up and do not have a remote monitoring station:

  1. Open the Terminal application on an admin station.
  2. Log into the Xserve by typing: **ssh root@xxx.xxx.xxx.xxx**
  Replace all 'x' characters with your server's IP address
  3. Enter the root password.
  This changes the terminal prompt to show you are now connected to the remote Xserve.
  4. Type **shutdown -h now** to shut down the server.
  Xserve shuts down.

Published Date: Feb 20, 2012

Mac OS X Server 10.2: How to Set Up SSL for Mail Service

This document explains how to enable the mail service of Mac OS X Server 10.2 to make Secure Socket Layer (SSL) connections happen automatically.

This article has been archived and is no longer updated by Apple.

Summary

Setting up automatic SSL connections for the mail service of Mac OS X Server 10.2 requires these basic steps:

- Generate a Certificate Signing Request (CSR) and create a keychain.
- Obtain an SSL certificate from an issuing authority.
- Import the certificate into the keychain.
- Create a passphrase file.

Generating a CSR and Creating a Keychain

You generate a CSR and create a keychain by using the command-line tool certtool. A CSR is a file that provides information needed to issue an SSL certificate.

1. Log in to the server as root.

2. In the Terminal application, type the following two commands, pressing Return after each one:

cd /private/var/root/Library/Keychains/
/usr/bin/certtool r csr.txt k=certkc c

This begins an interactive process that generates a Certificate Signing Request (CSR) in the file **csr.txt** and creates a keychain named **certkc**.

3. In the New Keychain Passphrase dialog that appears, enter a passphrase or password for the keychain you are creating; enter the password or passphrase a second time to verify it; and click OK. Remember this passphrase, because later you must supply it again.

4. When '**Enter key and certificate label:**' appears in the terminal, type a one-word key, a blank space, and a one-word certificate label; then press Return:

For example, you could type your organization's name as the key and mailservice as the certificate label.

5. Type **r** and press Return when you see the following displayed in the Terminal window:

Please specify parameters for the key pair you will generate.

r RSA
d DSA
f FEE

Select key algorithm by letter:

6. Type a key size at the next prompt in the Terminal window, then press Return.

Valid key sizes for RSA are 512..2048; default is 512
Enter key size in bits or CR for default:

Larger key sizes are more secure, but require more processing time on your server. Key sizes smaller than 1024 are not accepted by some certificate issuing authorities.

7. Type **y** to confirm the algorithm and keysize at the next prompt (or type any other key to cancel the selection).

You have selected algorithm RSA, key size (size entered above) bits.
OK (y/anything)?

8. Type **b** when requested to specify how this certificate will be used, then press Return.

Enter cert/key usage (s=signing, b=signing AND encrypting):

9. Type **s** when requested to select a signature algorithm, then press Return.

...Generating key pair...

Please specify the algorithm with which your certificate will be signed.

5 RSA with MD5
s RSA with SHA1

Select signature algorithm by letter:

10. Type **y** when requested to confirm the selected algorithm, then press Return.

You have selected algorithm RSA with SHA1.
OK (y/anything)?

11. Enter a phrase or some random text at the next prompt, which is used as a challenge string, then press Return.

...creating CSR...
Enter challenge string:

12. The series of five prompts request the various components of the certificate's Relative Distinguished Name (RDN). Enter the correct information at each prompt, then press return after each entry.

For Common Name, enter the server's DNS name, such as server.example.com.
For Country, enter the country in which your organization is located.
For Organization, enter the organization to which your domain name is registered.
For Organizational Unit, enter something similar to a department name.
For State/Province, enter the full name of your state or province.

13. Type y to confirm the information you entered, then press Return (type any other key if the information is not correct).

Is this OK (y/anything)?

When '**Wrote (n) bytes of CSR to csr.txt**' appears, you have successfully generated a CSR and created the keychain that mail service needs for SSL connections.

Obtaining an SSL Certificate

You must purchase an SSL certificate from a certificate authority such as Verisign (http://www.verisign.com) or Thawte (http://www.thawte.com). You can do this by completing a form on the certificate authority's Web site. When prompted for your CSR, open the **csr.txt** file using a text editor, such as TextEdit, copy and paste the contents of the file into the appropriate field on the certificate authority's Web site.

When you receive your certificate, save it in a text file named **sslcert.txt**. You can do this with the TextEdit application. Make sure the file is plain text, not rich text, and contains only the certificate text.

Importing the Certificate Into the Keychain

To import SSL certificates into the keychain you created, use the command-line tool **certtool**.

1. Log in to the server as root.

2. Open the Terminal

3. Go to the directory where the saved certificate file is located.
For example, type **cd /private/var/root/Desktop** if the certificate file is saved on the desktop of the root user.

4. Type **certtool i sslcert.txt k=certkc** , then press Return:

Using certtool this way imports a certificate from the file named **sslcert.txt** into the keychain named **certkc**.

A confirmation that the certificate was successfully imported appears on the screen:

...certificate successfully imported.

Creating a Passphrase File

To create a Passphrase file, you will use TextEdit, then change the privileges of the file using the Terminal. Once this is done, mail service uses the passphrase file to unlock the keychain automatically.

1. Log in to the server as root (if you are not already logged in as root).

2. In TextEdit, create a new file and type the passphrase **exactly** as you entered it when you created the keychain. **Do not** press Return after typing the passphrase.

3. Make the file plain text by choosing Make Plain Text from the Format menu.

4. Save the file in the root keychain folder.
path: /private/var/root/Library/Keychains/.

5. Name the file **cerkc.pass.**

6. In the Terminal change the access privileges to the passphrase file so only root can read and write to this file.

Type the following two commands and press Return after each one:

cd /private/var/root/Library/Keychains/
chmod 600 certkc.pass

The mail service of Mac OS X Server 10.2 can now use SSL for secure IMAP connections.

7. Log out as root.

Notes

- If mail service is running, stop, then restart mail service to recognize the new certificate keychain.
- If you want to set up SSL for mail service on a server that doesn't have a display, follow the instructions above and then copy the keychain file "**certkc**" and the keychain passphrase file "**certkc.pass**" to the root keychain folder on the headless server.

Published Date: Oct 10, 2016

Final Cut Pro and Final Cut Express: Not Compatible With NetInfo Login

Installing, updating, or using Final Cut Pro or Final Cut Express while logged in to Mac OS X as a NetInfo user may cause issues. You must be logged in as a local user.

This article has been archived and is no longer updated by Apple.

Symptom

- You cannot install or update the application.
- An alert box with a message such as "File Error: Unknown Folder" or "Insufficient access privileges" appears.

Solution

Log in as a local user instead of as a NetInfo user.

Published Date: Oct 10, 2016

DVD@ccess: Macintosh Installer Read Me

This document contains the Read Me which accompanies the Macintosh version of the DVD@ccess Installer. The installer is not needed for computers using Mac OS X. The installer is included on DVD-Video discs which are created by DVD Studio Pro.

This article has been archived and is no longer updated by Apple.

DVD@ccess Mac Installer Read Me

Apple's DVD@ccess technology enables any Macintosh or Windows DVD player application to respond to web links included on a DVD-Video title.

If you add web links to a DVD project using DVD Studio Pro, the finished DVD will automatically include both Mac and Windows versions of the DVD@ccess installers. These installers are there so anyone wishing to play a title with web links can easily add the functionality to their playback computer.

To install the DVD@ccess software

1. Insert the finished DVD into the computer.
2. Open the DVD so you can view it's contents.
3. You will find a folder named "DVD@ccess", open it, then open the Mac folder.
4. Run the DVD@ccess Installer and follow the on-screen instructions.
5. Restart your computer to activate the DVD@ccess functionality.

Notes

- After installation, you can play your DVDs using any DVD playback application. When a web link is encountered during playback, the DVD@ccess
  software will automatically launch your browser and jump to the specified URL.
- The DVD@ccess functionality is built into recent versions of the Apple DVD Player application. It is not necessary to install the DVD@ccess software if your Mac is running version 2.4 or higher of the Apple DVD Player. (it doesn't hurt anything if you do install it on such systems).
- The software only needs to be installed once on a given computer; it is not tied to a specific DVD title.
- You can disable the DVD@ccess functionality at anytime by opening the DVD@ccess control panel and unchecking the "DVD@ccess Active" checkbox.
- DVD@ccess web links will only work properly if the playback computer has an internet connection. If a link does not work as expected, verify that you actually have a connection. (This does not apply to web links which reference local URLs, such as a file on the DVD or hard drive.)

Published Date: Oct 10, 2016

DVD@ccess: Microsoft Windows Installer Read Me

This document contains the Read Me which accompanies the Windows version of the DVD@ccess Installer. The installer is included on DVD-Video discs which are created by DVD Studio Pro.

This article has been archived and is no longer updated by Apple.

DVD@ccess Windows Installer Read Me

Apple's DVD@ccess technology enables Windows DVD player applications to respond to web links included on a DVD-Video title.

To install the DVD@ccess software

1. Insert the finished DVD into the computer.
2. Open the DVD so you can view it's contents.
3. You will find a folder named "DVD@ccess", open it, then open the PC folder.
4. Run the DVD@ccess Installer EXE and follow the on-screen instructions.
5. Restart your computer to activate the DVD@ccess functionality.

Notes

1. After installation, you can play your DVDs using any DVD playback application. When a web link is encountered during playback, the DVD@ccess software will automatically launch your browser and jump to the specified URL.
2. The software only needs to be installed once on a given computer; it is not tied to a specific DVD title.
3. You can disable the DVD@ccess functionality at anytime by opening the DVD@ccess control panel and unchecking the "DVD@ccess Active" checkbox.
4. DVD@ccess web links will only work properly if the playback computer has an internet connection. If a link does not work as expected, verify that you actually have a connection. (This does not apply to web links which reference local URLs, such as a file on the DVD or hard drive.)

Published Date: Oct 10, 2016

Final Cut Pro: Sony Digital Camera Compatibility

This document provides additional compatibility notes for Sony consumer and professional digital cameras when used with Final Cut Pro 4.

This article has been archived and is no longer updated by Apple.

This is document does not contain a full list of qualified devices, only additional information on certain models.

A complete list of qualified devices for the current version of Final Cut Pro can be found at the Apple web site (http://www.apple.com/finalcutstudio/resources/devicelist.php).

For a complete list for Final Cut Pro 3 see document 93261 "**Final Cut Pro 3: Camera Compatibility Information**."

For additional assistance with Sony digital cameras, see the **Sony web site)**.

Click for PAL Compatibility Chart

Note: Sony uses the term iLink to describe FireWire (IEEE-1394).

Sony Qualified DV Camcorders and VTRs

NTSC

Model	Device Protocol	Description and Notes
DCR-PC1	FireWire	
DCR-PC5	FireWire	When editing to tape: On Mac OS X the sequence comes in on time. On Mac OS 9.2.2 the sequence comes in up to 2 frames late.
DCR-PC10	FireWire	
DCR-PC100	FireWire	
DCR-PC101	FireWire	Playback offset should be set to -1.
DCR-PC110	FireWire	On Mac OS 9.2.2 the sequence comes in up to 2 frames late.
DCR-TRV7	FireWire	When batch capturing clips widely separated by timecode, you may receive an incorrect error message stating that Final Cut Pro was "...unable to find timecode..." Individually capture clips separated by 3 minutes or more when using this camera.
DCR-TRV8	FireWire	
DCR-TRV18	FireWire	
DCR-TRV27	FireWire	When editing to tape, sequence may come in 1-2 frames late.
DCR-TRV120	FireWire	When editing to tape: On Mac OS X the sequence comes in up to 2 frames early and duplicates the first frame for up to 3 frames. On OS 9.2.2 the sequence comes in up to 10 frames early and starts the sequence 3 frames late.
DCR-TRV230	FireWire	When editing to tape on Mac OS X: The sequence comes in 3 frames late.
DCR-TRV310	FireWire	
DCR-TRV510	FireWire	
DCR-TRV520	FireWire	
DCR-TRV7000	FireWire	
DCR-TRV900	FireWire	When editing to tape: The sequence can come in up to 2 frames late on both Mac OS X and OS 9.2.2
DHR-1000v	FireWire	When editing to tape: On Mac OS X the sequence comes in up to 2 frames late. On Mac OS 9.2.2 the sequence comes in up to 2 frames late.
DCR-VX2000	FireWire	When editing to tape: On Mac OS X the sequence comes in up to 2 frames late.
DSR-3DSR-15002	FireWire	Playback signal of DVCRO recorded tape is not available over FireWire.

DSR-11	FireWire	If the deck is switched from NTSC to PAL (or vice versa), you must restart the computer to reset the FireWire bus for the signal change to be recognized.
DSR-20	FireWire	When editing to tape: On Mac OS X the sequence comes in on time and duplicates the first frame for up to 2 frames. On Mac OS 9.2.2 the sequence comes in on time and duplicates the first frame for up to 2 frames.
DSR-25	FireWire	If the deck is switched from NTSC to PAL (or vice versa), you must restart the computer to reset the FireWire bus for the signal change to be recognized.
DSR-30	FireWire	When editing to tape, the sequence can come in up to 2 frames late on both Mac OS X and OS 9.2.2
DSR-45	FireWire	
DSR-PD100A	FireWire	
DSR-PD150	FireWire	Firewire On Mac OS 9.2.2 the sequence comes in up to 1 frame late.
DSR-1600	FireWire	
DSR-200	FireWire	
DVMC-DA2 (DV-Analog Box)	FireWire	If your device is only equipped with the LANC device control connection, LANC will not transmit timecode to Final Cut Pro. However, you may use the media converter functions to convert video for transmit over FireWire. Device control will be available when using LANC however, timecode will be omitted preventing usage of such functions as, Batch Capture, and Capture Clip. These functions require a timecode reference to operate.
GV-D300	FireWire	When editing to tape: On Mac OS X the sequence records to tape up to 2 frames later than the specified in point, with the recorded material being up to 1 frame later than the material in the sequence
GV-D900	FireWire	On Mac OS 9.2.2 the sequence comes in up to 2 frames late.

Sony Qualified DV Camcorders and VTRs

PAL

Model	Device Protocol	Description and Notes
DSR-11	FireWire	
DSR-25	FireWire	If the deck is switched from NTSC to PAL (or vice versa), you must restart the computer to reset the FireWire bus for the signal change to be recognized.
DSR-2000	FireWire	
DCR-PC2E	FireWire	This camera needs the DV Tuner 1 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro. These are included with Final Cut Pro installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 1" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should **not** be installed when using other DV devices, unless specified. No Media-In by design
DCR-TRV5E	FireWire	
DCR-TRV8E	FireWire	
DCR-TRV9E	FireWire	

TA26860_Final_Cut_Pro_Sony_Digital_Camera_Compatibility.pdf

Related Documents

75347 Final Cut Pro 2.0.2: Sony Digital Camera Compatibility

Published Date: Feb 20, 2012

iPhoto: "The music you selected cannot be opened" Alert

iPhoto may not play a previously selected music track during a slide show if the music file has been moved.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to play a slide show in iPhoto, an alert box with this message appears:

> "The music you selected cannot be opened."

Solution

If a music file has been moved in the Finder, iPhoto may not be able to locate it for a slide show. If iTunes 3 reorganized a music library, for example, the message will appear.

You can resolve this issue by reselecting the music file.

1. Select the photo album you want to use for your slide show.
2. Click Share in the iPhoto window.
3. Click Slide Show in the iPhoto window.
4. Choose Edit from the "Music" pop-up menu.
5. Select the track that is not playing correctly from the music list.
6. Click Delete.
7. Click Done.
8. Choose Other from the "Music" pop-up menu.
9. Locate the music file you want to use in the Open window.
10. Select the music file and click Open.
11. Click OK.

The slide show now works properly.

Published Date: Feb 20, 2012

Final Cut Pro 2.0.2: Sony Digital Camera Compatibility

This article has been archived and is no longer updated by Apple.

This document provides a compatibility chart of Sony consumer and professional digital cameras with Final Cut Pro 2.0.2.

For additional assistance with Sony digital cameras, see the Sony web site.

Click for PAL Compatibility Chart

Important: No further compatibility testing with video cameras and Final Cut Pro 2.0.2 is planned. If your camera is not listed here, check the Final Cut Pro 3.0 compatibility document (see Related Documents for link).

Note: Sony uses the term iLink to describe FireWire (IEEE-1394).

Sony Qualified DV Camcorders and VTRs

NTSC

Model	Device Protocol	Description and Notes
DCR-PC1	FireWire	
DCR-PC5	FireWire	When editing to tape: On Mac OS X the sequence comes in on time. On Mac OS 9.2.2 the sequence comes in up to 2 frames late.
DCR-PC10	FireWire	
DCR-PC100	FireWire	
DCR-TRV7	FireWire	When batch capturing clips widely separated by timecode, you may receive an incorrect error message stating that Final Cut Pro was "...unable to find timecode..." Individually capture clips separated by 3 minutes or more when using this camera.
DCR-TRV8	FireWire	
DCR-TRV10	FireWire	
DCR-TRV11	FireWire	
DCR-TRV17	FireWire	
DCR-TRV20	FireWire	
DCR-TRV120	FireWire	When editing to tape: On Mac OS X the sequence comes in up to 2 frames early and duplicates the first frame for up to 3 frames. On OS 9.2.2 the sequence comes in up to 10 frames early and starts the sequence 3 frames late.
DCR-TRV230	FireWire	When editing to tape on Mac OS X: The sequence comes in 3 frames late.
DCR-TRV310	FireWire	
DCR-TRV320	FireWire	
DCR-TRV530	FireWire	
DCR-TRV7000	FireWire	
DCR-TRV720	FireWire	
DCR-TRV730	FireWire	
DCR-TRV900	FireWire	When editing to tape: The sequence can come in up to 2 frames late on both Mac OS X and OS 9.2.2
DHR-1000v	FireWire	When editing to tape: On Mac OS X the sequence comes in up to 2 frames late. On Mac OS 9.2.2 the sequence comes in up to 2 frames late.
DCR-VX2000	FireWire	When editing to tape: On Mac OS X the sequence comes in up to 2 frames late.
DSR-11	FireWire	If the deck is switched from NTSC to PAL (or vice versa), you must restart the computer to reset the FireWire bus for the signal change to be recognized.

DSR-20	FireWire	When editing to tape: On Mac OS X the sequence comes in on time and duplicates the first frame for up to 2 frames. On Mac OS 9.2.2 the sequence comes in on time and duplicates the first frame for up to 2 frames.
DSR-30	FireWire	When editing to tape, the sequence can come in up to 2 frames late on both Mac OS X and OS 9.2.2
DSR-40	FireWire	All Edit to Tape functions must be used with Apple FireWire device control protocol. When using Black and Code, the deck will cue to PAUSE mode. You must hit stop manually on the deck to start Black and Code. Black and Code will start automatically. When editing to tape: On Mac OS X the sequence comes in on time and can duplicate the first frame up to 2 frames. On Mac OS 9.2.2 the sequence comes in on time and can duplicate the first frame up to 2 frames.
DSR-1500	FireWire	
DSR-1500a	FireWire	
DSR-PD100A	FireWire	
DSR-PD150	FireWire	Firewire On Mac OS 9.2.2 the sequence comes in up to 1 frame late.
DSR PD 1500AP	FireWire	With repeatedly opening the Log & Capture Window or Edit to Tape window, the FireWire connection can be lost. Turning the device off and then on again will fix the problem.
DSR-1600	FireWire	
DSR-1800	FireWire	
DSR-200	FireWire	
DVMC-DA2 (DV-Analog Box)	FireWire	If your device is only equipped with the LANC device control connection, LANC will not transmit timecode to Final Cut Pro. However, you may use the media converter functions to convert video for transmit over FireWire. Device control will be available when using LANC however, timecode will be omitted preventing usage of such functions as, Batch Capture, and Capture Clip. These functions require a timecode reference to operate.
DVMC-MS1	FireWire	
GV-D300	FireWire	When editing to tape: On Mac OS X the sequence comes in up to 2 frames late with the sequence being up to 1 frame late.

Sony Qualified DV Camcorders and VTRs

PAL

Model	Device Protocol	Description and Notes
DSR-11	FireWire	
DSR PD 150	FireWire	On Mac OS 9.2.2 the sequence can duplicate the first frame for up to 6 frames.
DSR-2000	FireWire	
DCR-PC2E	FireWire	This camera needs the DV Tuner 1 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro 2. These are included with Final Cut Pro 2 installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 1" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. No Media-In by design

DCR-TRV5E	FireWire
DCR-TRV8E	FireWire
DCR-TRV9E	FireWire
DCR-TRV900E	FireWire

Related Documents

75342 Final Cut Pro 3.0: Sony Digital Camera Compatibility

Published Date: Feb 20, 2012

Final Cut Pro 4: Canon Digital Camera Compatibility

This article has been archived and is no longer updated by Apple.

This document provides additional compatibility notes for Canon consumer and professional digital cameras when used with Final Cut Pro 4.

This is document does not contain a full list of qualified devices, only additional information on certain models. A complete list of qualified devices for the current version of Final Cut Pro can be found at the Apple web site (http://www.apple.com/finalcutpro/qualification.html). For a complete list for Final Cut Pro 3 see document 93261 "**Final Cut Pro 3: Camera Compatibility Information**."

For additional assistance with Canon digital cameras, see the Canon web site.

Digital Camera Products: (**http://www.canondv.com/**)

Click for PAL Compatibility Chart

Canon Qualified DV Camcorders and VTRs

NTSC

Model	Device Protocol	Description and Notes
Elura	FireWire Basic	This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro. These are included with Final Cut Pro installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. When editing to tape: On Mac OS X, the sequence comes in up to 4 frames early and duplicates the first frame for up to 18 frames. On Mac OS 9.2.2 the sequence comes in up to 1 frame early and duplicates the first frame for up to 8 frames.
Elura 2MC	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 6 frames early and duplicates the first frame for up to 19 frames. On Mac OS 9.2.2 the sequence comes in up to 6 frames early and duplicates the first frame for up to 16 frames.
Elura 20MC	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 7 frames early and duplicates the first frame for up to 15 frames. On Mac OS 9.2.2 the sequence comes in up to 7 frames early and duplicates the first frame for up to 14 frames.
Elura 40MC	FireWire Basic	With Edit To Tape this device will come in up to 6 frames early and dupe the first frame up to 19 frames.
GL1	FireWire Basic	This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro. These are included with Final Cut Pro installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. When editing to tape: On Mac OS X the sequence comes in up to 4 frames early and duplicates the first frame for up to 17 frames. On Mac OS 9.2.2 the sequence comes in up to 4 frames early and duplicates the first frame for up to 7 frames.
GL2	FireWire Basic	Note: Edit to Tape will be 6 frames early and duplicate the first frame of the sequence up to 18 frames.
Optura	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 3 frames early and duplicates the first frame for up to 10 frames. On Mac OS 9.2.2 the sequence comes in up to 3 frames early and duplicates the first frame for up to 11 frames.
Optura 100 MC	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 7 frames early and duplicates the first frame for up to 12 frames. On Mac OS 9.2.2 the sequence comes in up to 7 frames early and duplicates the first frame for up to 17 frames.

Optura Pi	FireWire Basic	Timecode refresh of DV tapes not recorded on the Optura Pi will stutter in Final Cut Pro 2.0 and on the Optura Pi LCD screen. This may result in dropped frame warnings, or timecode break detection warnings after capturing clips. Use only tapes that were recorded on the Optura Pi for editing. This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro. These are included with Final Cut Pro installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. When editing to tape: On Mac OS X the sequence comes in up to 2 frames late and duplicates the first frame for up to 6 frames. On Mac OS 9.2.2 the sequence comes in up to 2 fram es late and duplicates the first frame for up to 2 frames.
Optura Xi	FireWire Basic	This camcorder needs +7 frames added to the Edit In timecode with an observed accuracy of +/- 1 frame and requires a Device Control Preset Playback Offset Adjustment of -17 frames.
Ultura	FireWire Basic	This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro. These are included with Final Cut Pro installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. When editing to tape: On Mac OS X the sequence comes in up to 6 frames early and duplicates the first frame for up to 14 frames.
XL1	FireWire Basic	Requires FireWire Basic. When the Canon XL1 is editing to tape, it will come in up to 6 frames early, then duplicate that first frame up to 15 frames.
XL1s	FireWire Basic	Requires FireWire Basic. When the Canon XL1s is editing to tape, it will come in up to 6 frames early, then duplicate that first frame up to 15 frames.
ZR	FireWire Basic	When editing to tape: On Mac OS X, the sequence comes in up to 3 frames early and duplicates the first frame for up to 18 frames.Ã On OS 9.2.2 the sequence comes in up to 4 frames early and duplicates the first frame for up to 11 frames.
ZR10	FireWire Basic	Using Assemble Edit to print Final Cut Pro projects to tapes that have been continually used and worn may contain audio drops. If you experience this problem, use a new tape. When editing to tape: On Mac OS X the sequence comes in up to 2 frames late and duplicates the first frame for up to 4 frames. On Mac OS 9.2.2 the sequence comes in up to 4 frames late and duplicates the first frame for up to 2 frames.
ZR 20	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames. On Mac OS 9.2.2 the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames.
ZR25	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames. On Mac OS 9.2.2 the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames.

ZR30 M	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 6 frames early and duplicates the first frame for up to 22 frames. On Mac OS 9.2.2 the sequence comes in up to 6 frames early and duplicates the first frame for up to 30 frames.
ZR40	FireWire Basic	For optimum performance Canon recommends that the ZR-40 not be used simultaneously with other FireWire devices. When editing to tape, the camera may come in up to 6 frames early, and duplicate the first frame of the sequence up to 12 frames.
ZR45	FireWire Basic	For optimum performance Canon recommends that the ZR-45 not be used simultaneously with other FireWire devices. When editing to tape, the camera may come in up to 6 frames early, and duplicate the first frame of the sequence up to 12 frames.
ZR 60	FireWire Basic	This camcorder needs +6 frames added to the Edit In timecode with an observed accuracy of +/- 1 frame. A Device Control Preset Playback Offset Adjustment of -19 frames printed to tape with intermittent duplication of the first frame.

Canon Qualified DV Camcorders and VTRs

PAL

Model	Device Protocol	Description and Notes
DM-MV1	FireWire Basic	No Media-In by design.
DM-MV4i	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 6 frames early and duplicates the first frame for up to 13 frames. On Mac OS 9.2.2 the sequence comes in up to 6 frames early and duplicates the first frame for up to 13 frames.
DM-MV10	FireWire Basic	No Media-In by design.
DM-MV100	FireWire Basic	No Media-In by design.
DM-XL1	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 4 frames early and duplicates the first frame for up to 18 frames. On Mac OS 9.2.2 the sequence comes in up to 4 frames early and duplicates the first frame for up to 12 frames.
DM-XL1s	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 4 frames early and duplicates the first frame for up to 17 frames. On Mac OS 9.2.2 the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames.
DM-MV3i	FireWire Basic	This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro. These are included with Final Cut Pro installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. When editing to tape: On Mac OS X the sequence comes in up to 2 frames early and duplicates the first frame for up to 7 frames. On Mac OS 9.2.2 the sequence comes in up on time and duplicates the first frame for up to 8 frames.

DM-MV20i	FireWire Basic	This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro. These are included with Final Cut Pro installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. Needs CMP Overide and Tuner 2. When editing to tape: On Mac OS X the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames. On OS 9.2.2 the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames.
DM-MV200i	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 4 frames early and duplicates the first frame for up to 24 frames. On Mac OS 9.2.2 the sequence comes in up to 4 frames early and duplicates the first frame for up to 10 frames.
DM-MV300i	FireWire Basic	This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro. These are included with Final Cut Pro installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. When editing to tape: On Mac OS X the sequence comes in up to 2 frames early and duplicates the first frame for up to 7 frames. On Mac OS 9.2.2 the sequence comes in on time and duplicates the first frame for up to 8 frames.
MV450i	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 5 frames early and can start the sequence up to 5 frames late. On Mac OS 9.2.2 the sequence comes in up to 4 frames early and duplicates the first frame for up to 20 frames.
MVX1i	FireWire Basic	This camera occasionally dropps frames during batch capture on lower speed laptops (400 Mhz or lower). Additionally, while assemble editing on all cpus, the video consistently comes in 6 frames early. When editing to tape: On Mac OS X the sequence comes in up to 7 frames early and duplicates the first frame for up to 15 frames. On Mac OS 9.2.2 the sequence comes in up to 7 frames early and duplicates the first frame for up to 15 frames.
XM-1	FireWire Basic	This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro. These are included with Final Cut Pro installer and updater CDs. Once installed, locate the folder called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. When editing to tape: On Mac OS X the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames. On Mac OS 9.2.2 the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames. Edit to tape not functioning with some Macintosh models.

Related Documents

75350 Final Cut Pro 2.0.2: Canon Digital Camera Compatibility

Published Date: Feb 20, 2012

Final Cut Pro 2.0.2: Canon Digital Camera Compatibility

This document provides a compatibility chart of Canon consumer and professional digital cameras with Final Cut Pro 2.0.2.

This article has been archived and is no longer updated by Apple.

For additional assistance with Canon digital cameras, see the Canon web site.

Digital Camera Products: <**http://www.canondv.com**>

Click for PAL Compatibility Chart

Important: No further compatibility testing with video cameras and Final Cut Pro 2.0.2 is planned. If your camera is not listed here, check the Final Cut Pro 3.0 compatibility document (see Related Documents for link).

Canon Qualified DV Camcorders and VTRs

NTSC

Model	Device Protocol	Description and Notes
Elura	FireWire Basic	This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro 2. These are included with Final Cut Pro 2 installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. When editing to tape: On Mac OS X, the sequence comes in up to 4 frames early and duplicates the first frame for up to 18 frames. On Mac OS 9.2.2 the sequence comes in up to 1 frame early and duplicates the first frame for up to 8 frames.
Elura 2MC	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 6 frames early and duplicates the first frame for up to 19 frames. On Mac OS 9.2.2 the sequence comes in up to 6 frames early and duplicates the first frame for up to 16 frames.
Elura 40MC	FireWire Basic	With Edit To Tape this device will come in up to 6 frames early and dupe the first frame up to 19 frames.
GL1	FireWire Basic	This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro 2. These are included with Final Cut Pro 2 installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. When editing to tape: On Mac OS X the sequence comes in up to 4 frames early and duplicates the first frame for up to 17 frames. On Mac OS 9.2.2 the sequence comes in up to 4 frames early and duplicates the first frame for up to 7 frames.
GL2	FireWire Basic	Note: Edit to Tape will be 6 frames early and duplicate the first frame of the sequence up to 18 frames.
Optura	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 3 frames early and duplicates the first frame for up to 10 frames. On Mac OS 9.2.2 the sequence comes in up to 3 frames early and duplicates the first frame for up to 11 frames.

Optura Pi	FireWire Basic	Timecode refresh of DV tapes not recorded on the Optura Pi will stutter in Final Cut Pro 2.0 and on the Optura Pi LCD screen. This may result in dropped frame warnings, or timecode break detection warnings after capturing clips. Use only tapes that were recorded on the Optura Pi for editing. This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro 2. These are included with Final Cut Pro 2 installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. When editing to tape: On Mac OS X the sequence comes in up to 2 frames late and duplicates the first frame for up to 6 frames. On Mac OS 9.2.2 the sequence comes in up to 2 fram es late and duplicates the first frame for up to 2 frames.
Ultura	FireWire Basic	This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro 2. These are included with Final Cut Pro 2 installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. When editing to tape: On Mac OS X the sequence comes in up to 6 frames early and duplicates the first frame for up to 14 frames.
Vistura	FireWire Basic	
XL1	FireWire Basic	Requires FireWire Basic. When the Canon XL1 is editing to tape, it will come in up to 6 frames early, then duplicate that first frame up to 15 frames.
XL1s	FireWire Basic	Requires FireWire Basic. When the Canon XL1s is editing to tape, it will come in up to 6 frames early, then duplicate that first frame up to 15 frames.
ZR	FireWire Basic	When editing to tape: On Mac OS X, the sequence comes in up to 3 frames early and duplicates the first frame for up to 18 frames.Ê On OS 9.2.2 the sequence comes in up to 4 frames early and duplicates the first frame for up to 11 frames.
ZR10	FireWire Basic	Using Assemble Edit to print Final Cut Pro 2 projects to tapes that have been continually used and worn may contain audio drops. If you experience this problem, use a new tape. When editing to tape: On Mac OS X the sequence comes in up to 2 frames late and duplicates the first frame for up to 4 frames. On Mac OS 9.2.2 the sequence comes in up to 4 frames late and duplicates the first frame for up to 2 frames.
ZR20	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames. On Mac OS 9.2.2 the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames.
ZR25	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames. On Mac OS 9.2.2 the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames.
ZR30 M	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 6 frames early and duplicates the first frame for up to 22 frames. On Mac OS 9.2.2 the sequence comes in up to 6 frames early and duplicates the first frame for up to 30 frames.

Canon Qualified DV Camcorders and VTRs

PAL

Model	Device Protocol	Description and Notes
DM-MV1	FireWire Basic	
DM-MV10	FireWire Basic	No Media-In by design.
DM-MV100	FireWire Basic	No Media-In by design.
DM-XL1	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 4 frames early and duplicates the first frame for up to 18 frames. On Mac OS 9.2.2 the sequence comes in up to 4 frames early and duplicates the first frame for up to 12 frames.
DM-XL1s	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 4 frames early and duplicates the first frame for up to 17 frames. On Mac OS 9.2.2 the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames.
DM-MV20i	FireWire Basic	This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro 2. These are included with Final Cut Pro 2 installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. Needs CMP Overide and Tuner 2. When editing to tape: On Mac OS X the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames. On OS 9.2.2 the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames.
DM-MV200i	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 4 frames early and duplicates the first frame for up to 24 frames. On Mac OS 9.2.2 the sequence comes in up to 4 frames early and duplicates the first frame for up to 10 frames.
DM-MV30i	FireWire Basic	This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro 2. These are included with Final Cut Pro 2 installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified.
DM-MV300i	FireWire Basic	This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro 2. These are included with Final Cut Pro 2 installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. When editing to tape: On Mac OS X the sequence comes in up to 2 frames early and duplicates the first frame for up to 7 frames. On Mac OS 9.2.2 the sequence comes in on time and duplicates the first frame for up to 8 frames.
MV400i	FireWire Basic	
MV450i	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 5 frames early and can start the sequence up to 5 frames late. On Mac OS 9.2.2 the sequence comes in up to 4 frames early and duplicates the first frame for up to 20 frames.

MVX 1i	FireWire Basic	This camera occasionally dropps frames during batch capture on lower speed laptops (400 Mhz or lower). Additionally, while assemble editing on all cpus, the video consistently comes in 6 frames early. When editing to tape: On Mac OS X the sequence comes in up to 7 frames early and duplicates the first frame for up to 15 frames. On Mac OS 9.2.2 the sequence comes in up to 7 frames early and duplicates the first frame for up to 15 frames.
XM-1	FireWire Basic	This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro 2. These are included with Final Cut Pro 2 installer and updater CDs. Once installed, locate the folder called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. When editing to tape: On Mac OS X the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames. On Mac OS 9.2.2 the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames. Edit to tape not functioning with some Macintosh models.

Related Documents

75349 Final Cut Pro 3.0: Canon Digital Camera Compatibility

Published Date: Feb 20, 2012

Final Cut Pro: JVC Digital Camera Compatibility

This document provides additional compatibility notes for JVC consumer and professional digital cameras when used with Final Cut Pro 4.

This article has been archived and is no longer updated by Apple.

This is document does not contain a full list of qualified devices, only additional information on certain models. A complete list of qualified devices for the current version of Final Cut Pro can be found at the Apple web site (http://www.apple.com/finalcutpro/qualification.html). For a complete list for Final Cut Pro 3 see document 93261 "**Final Cut Pro 3: Camera Compatibility Information**."

For additional assistance with JVC digital cameras, see the JVC web site.

JVC Products: <**http://www.jvc.com/**>

JVC Qualified DV Camcorders and VTRs

NTSC

Model	Device Protocol	Description and Notes
DV600UA	FireWire	
GRDVL815U	FireWire Basic	
GRDVM55U	FireWire Basic	When editing to tape: The sequence comes in 1 frame late on both Mac OS X and OS 9.2.2
GRDVP3U	FireWire	
GRDVP7U	FireWire	
GY-DV550U	FireWire Basic	When editing to tape on Mac OS 9: The sequence comes in one frame late, and the first 12 frames are cut off. When editing to tape on Mac OS X: The sequence occasionally comes in one frame late, and the first 2 frames are cut off.
GY-DV700WU	FireWire	When editing to tape on Mac OS X: The sequence comes in one frame late,and the first 2 frames are cut off. When editing to tape on Mac OS 9: The sequence comes in one frame late, and the first 13 frames are cut off.
GR-D30U	FireWire	When using this camera Best Edited to Tape with a slug of 25 frames inserted in the sequence before the video.
GR-D90U	FireWire	When using this camera Best Edited to Tape with a slug of 25 frames inserted in the sequence before the video.

Related Documents

75352 Final Cut Pro 2.0.2: JVC Digital Camera Compatibility

Published Date: Feb 20, 2012

Final Cut Pro 2.0.2: JVC Digital Camera Compatibility

This document provides a compatibility chart of JVC consumer and professional digital cameras with Final Cut Pro 2.0.2.

This article has been archived and is no longer updated by Apple.

For additional assistance with JVC digital cameras, see the JVC web site.

Digital Camera Products: <**http://www.jcv.com**>

Important: No further compatibility testing with video cameras and Final Cut Pro 2.0.2 is planned. If your camera is not listed here, check the Final Cut Pro 3.0 compatibility document (see Related Documents for link).

JVC Qualified DV Camcorders and VTRs

NTSC

Model	Device Protocol	Description and Notes
DV600UA	FireWire	
GRDVL815U	FireWire Basic	
GRDVM55U	FireWire Basic	When editing to tape: The sequence comes in 1 frame late on both Mac OS X and OS 9.2.2
GRDV2000U	FireWire Basic	
GRDVL 120U	FireWire	
GRDVL 820U	FireWire	
GRDVP3U	FireWire	
GRDVP7U	FireWire	
GY-DV550U	FireWire Basic	When editing to tape on Mac OS 9: The sequence comes in one frame late, and the first 12 frames are cut off. When editing to tape on Mac OS X: The sequence occasionally comes in one frame late, and the first 2 frames are cut off.
GY-DV700WU	FireWire	When editing to tape on Mac OS X: The sequence comes in one frame late,and the first 2 frames are cut off. When editing to tape on Mac OS 9: The sequence comes in one frame late, and the first 13 frames are cut off.

Related Documents

75351 Final Cut Pro 3.0: JVC Digital Camera Compatibility

Published Date: Feb 20, 2012

Final Cut Pro 4.1: Third-Party Hardware Compatibility

This document provides additional compatibility notes for third-party hardware when used with Final Cut Pro 4.1

This article has been archived and is no longer updated by Apple.

This is document does not contain a full list of qualified devices, only additional information on certain models. A complete list of qualified devices for the current version of Final Cut Pro can be found at the Apple web site (http://www.apple.com/finalcutpro/qualification.html).

For additional assistance with any of the hardware listed below, see the individual hardware manufacturer's web site.

Third Party Hardware Qualified Equipment

Model	Description and Notes
AJA KonaSD	
AJA Kona HD	Currently not qualified on G5 or Panther with Final Cut Pro 4
Aurora Igniter RT	Currently not qualified on G5 or Panther with Final Cut Pro 4
Pinnacle Cinewave RT	
Pinnacle Cinewave RT Pro	
Pinnacle Cinewave HD	
Io Devices	
AJA Io	Currently not Qualified on the G5 or Panther. At times users may see incorrect device control errors reported after very large batch captures. A workaround can be to use a qualified serial adapter instead of the device control on the AJA Io.
Serial Device Control	
Gee-Three Stealth	Works with both Mac OS 9 and Mac OS X, but erroneously reports a break in timecode where there is none on the Power Mac G4 (Mirrored Drive Doors) computers.
Keyspan SX Pro Serial	Qualified for Mac OS X only.
Keyspan Miniport Replicator	Qualified for Mac OS X only.
Keyspan USB Serial Adaptor	Qualified for Mac OS X only.
Keyspan USB 4 Port Serial Adaptor	Qualified for Mac OS X only.

Related Documents

75354 Final Cut Pro 2.0.2: Third Party Hardware Compatibility

Published Date: Feb 20, 2012

Final Cut Pro 2.0.2: Third-Party Hardware Compatibility

This document provides a compatibility chart of third-party hardware that can be used with Final Cut Pro 2.0.2.

This article has been archived and is no longer updated by Apple.

For additional assistance with any of the hardware listed below, see the individual hardware manufacturer's web site.

Important: No further compatibility testing with video cameras and Final Cut Pro 2.0.2 is planned. If your camera is not listed here, check the Final Cut Pro 3.0 compatibility document (see Related Documents for link).

Third Party Hardware Qualified Equipment

Model	Description and Notes
Digital VooDoo D1 Desktop 64AV	
Pinnacle Systems CinéWave	
Matrox RT Mac	
Sony DVMC-DA2 (DV-Analog Box)	If your device is only equipped with the LANC device control connection, LANC will not transmit timecode to Final Cut Pro. However, you may use the media converter functions to convert video for transmit over FireWire. Device control will be available when using LANC however, timecode will be omitted preventing usage of such functions as, Batch Capture, and Capture Clip. These functions require a timecode reference to operate.

Related Documents

75347 "**Final Cut Pro 2.0.2: Sony Digital Camera Compatibility**"
75350 "**Final Cut Pro 2.0.2: Canon Digital Camera Compatibility**"
75352 "**Final Cut Pro 2.0.2: JVC Digital Camera Compatibility**"
75353 "**Final Cut Pro 3.0: Third Party Hardware Compatibility**"

Published Date: Feb 20, 2012

AppleWorks 6: Decreased image quality when printing

Images placed in an AppleWorks 6 document may appear blurry when printed if the image dimensions have been reduced in size.

This article has been archived and is no longer updated by Apple.

Symptom

A scaled picture in and AppleWorks drawing or word processing document is blurry when printed.

Solution

1. From the **File** menu, choose **Save As**.
2. From the **File Format** menu, choose **AppleWorks 5.0**.
3. Enter a new name in the "Save As:" text field.
4. Click Save.
5. Close the document.
6. Locate the copy of the document you just saved.
7. Double-click the document.
8. Print the document.

This document will be updated when additional information is available.

Published Date: Feb 19, 2012

Xserve: "A file of the same name already exists" alert appears when saving

This article has been archived and is no longer updated by Apple.

Upgrade to Mac OS X Server 10.2 if you are unable to save an existing file on Xserve.

Symptom

When saving an existing document on Xserve, an alert box with this message appears:

> "Could not save <filename> because a file of the same name already exists".

Note: This issue may occur when you connect to server using Apple File Protocol (AFP).

Solution

This issue is resolved in Mac OS X Server 10.2 or later.

Published Date: Oct 10, 2016

Mac OS X Server 10.2: How to Obtain Printed Copies of the Server Admin Guide

This document describes how to obtain a printed copy of the Mac OS X Server - Server Admin Guide, which is provided in electronic format.
This article has been archived and is no longer updated by Apple.
Apple provides an electronic version of the Mac OS X Server - Server Admin Guide in PDF format. Apple has partnered with Vervante to provide print copies of the Server Admin Guide for those who would like to purchase them. To purchase a copy of the printed guide

1. Go to Vervante's web site (http://www.vervante.com/).
2. Type into the search box the following the search string: V4081300160

Published Date: Feb 19, 2012

QuickTime 6: Apple DVD Player Stops Working on Power Macintosh G3 (Blue and White)

Installing QuickTime 6 on a Power Macintosh G3 (Blue and White) computer with Mac OS 9 installed may cause Apple DVD Player to stop working.
This article has been archived and is no longer updated by Apple.

Symptom

An alert box with this message appears when you open Apple DVD Player:

> "Apple DVD Player cannot open because the required hardware was not found".

Products Affected

- Power Macintosh G3 (Blue and White)
- QuickTime 6
- Mac OS 9
- DVD Player 1.2 and 1.3

Solution

Reinstall QuickTime 5. Follow the instructions in technical document 61621, "QuickTime 6: How to Revert to QuickTime 5".

Published Date: Oct 10, 2016

Xserve: Security Lock Does Not Lock Hard Drive Tray

Xserve's security lock does not prevent a hard drive tray latch from being pressed and opened. Xserve may stop responding if you eject a hard drive while the server is operating.
This article has been archived and is no longer updated by Apple.

Symptom

if you press the latch for the hard drive that is the startup disk, Xserve may stop responding ("hang", or "freeze").

Xserve loses access to the hard drive if you press the latch for a hard drive that is not the startup disk.

Note: Xserve's security lock does not prevent a hard drive tray from being pressed and opened.

Solution

Download and install Mac OS X Server 10.2.4 or later. You may use the Software Update feature of System Preferences, or download the software from Apple Software Downloads (http://www.apple.com/swupdates/). For more information on Mac OS X Server 10.2.4, see technical document 70171, "**Mac OS X Server Update 10.2.4: Information and Download**".
Published Date: Oct 10, 2016

Mac OS 9: "Apple DVD Player does not support the video card or settings used for the main screen" Alert

Some computers, when started up from Mac OS 9, may not be able to play a movie from a DVD-Video disc on an external display or TV.
This article has been archived and is no longer updated by Apple.

Symptom

An alert box with this message appears:

> "Apple DVD Player does not support the video card or settings used for the main screen".

Figure 1 Alert box

Solution

- If you're using Mac OS 9, disconnect the external display and adapter.
- Use Mac OS X. Mac OS X DVD Player allows you to play the movie on the external monitor.

Published Date: Oct 10, 2016

Xserve: Use Gigabit Ethernet Card Only in the AGP/PCI Slot

You should not move the optional Gigabit Ethernet Card for Xserve from the PCI/AGP slot to a PCI slot.

Note: The optional Gigabit Ethernet Card is installed at the factory in the PCI/AGP slot.

This article has been archived and is no longer updated by Apple.

Symptom

Data corruption may occur if the Gigabit Ethernet card is installed in either the upper or lower PCI slots.

Solution

To avoid possible data corruption, leave the optional Gigabit Ethernet Card in its factory-installed location (PCI/AGP slot).

This document will be updated with additional information as it becomes available.

Published Date: Oct 10, 2016

Mac OS X 10.2: Modem Country Setting Is Incorrect After Installing Mac OS X 10.2

After installing Mac OS X 10.2 the modem country setting in System Preferences is set to an incorrect location.
This article has been archived and is no longer updated by Apple.

Symptom

The Country Setting in the Modem tab of the Network preferences pane is different from what you selected during installation.

Solution

Change the modem country code in System Preferences.

1. Choose System Preferences from the Apple menu.
2. Choose Date & Time from the View menu.
3. Click the Time Zone Tab.
4. Make sure the Time Zone is set correctly.
   If the Time Zone is incorrect, click your part of the world, then choose a city in your time zone from the Closest City pop-up menu.
5. Choose Network from the View menu.
6. Select Internal Modem from the Show pop-up menu.
7. Click the Modem tab.
8. Ensure the Country Setting is correct.
   If the Country Setting is not correct, click Change and follow steps 3 through 8 again.

Note: Some areas do not have a country setting, so changing to that area does not affect the Country Setting. To avoid these issues, choose a location in the US or Canada.

Related Documents

106962 Mac OS X 10.2: How to Change Modem Country Setting

Published Date: Feb 19, 2012

Software Restore installer walkthrough movie (Mac OS X 10.2 through 10.3.1)

This article has been archived and is no longer updated by Apple.

This document contains a link to the Software Restore Installer Walkthrough QuickTime movie. This walkthrough applies to Mac OS X 10.2 through 10.3.1, as described here.

The QuickTime movie linked in this document provides a step-by-step walkthrough of the Software Restore Installer process (in Mac OS X 10.2 through 10.3.1).

QuickTime Movie (click to download):

1.4 MB

Published Date: Feb 19, 2012

iMac (17-inch Flat Panel): About the VGA Port

You can use the video mirroring feature of the iMac (17-inch Flat Panel) computer when a monitor is connected to the computer's mini-VGA monitor port.

This article has been archived and is no longer updated by Apple.

The iMac computer has a mini-VGA monitor port located on the rear of the computer in the I/O port area.

Figure 1. iMac (17-inch Flat Panel) rear I/O port area.

This port allows you to use the iMac's video mirroring feature with a compatible VGA monitor. Video mirroring allows you to see on a second monitor the same image you see on the iMac's flat-panel display. This feature does not allow you to extend the iMac desktop with the external monitor. An Apple VGA Display Adapter, part number M8639G/A (available separately), is required to plug in the monitor cable.

The video mirroring feature is 'plug and play'. Connect your monitor to the Apple VGA Display Adapter, then connect the Apple VGA Display Adapter to the mini-VGA port located on the back of the computer. When connecting the Apple VGA Display Adapater to the computer, the screen may refresh for an instant as the machine
reconfigures for video output.

Any VGA monitor that is compatible with these resolutions and frequencies can be used:

Resolution in Pixels	Frequency
640 by 480	60 Hz
800 by 600	75 Hz
1024 by 768	75 Hz

The computer will attempt to match the resolution of the built-in and external display. If there is no way to match, the computer will change both screen resolutions and may black out areas on the built-in display in order to compensate for the capabilities of the external display.

You can switch resolutions and frequencies in the Displays Preference Pane of Mac OS X System Preferences, or in the Monitor control panel of Mac OS 9.

For connecting displays that use another type of connector, or requires a resolution and frequency that is not compatible with the iMac, you can use a third-party scan converter in conjunction with the Apple VGA Display Adapter. To learn what scan converters are available for Macintosh systems, see the Macintosh Products Guide at (http://guide.apple.com/) for the latest devices.

Apple DVD Player for Mac OS X supports DVD playback through external video mirroring. DVD playback is automatically set to play on the external VGA display connected to the Apple VGA Display Adapter when opened. Apple DVD Player for Mac OS 9 does not support this feature. You should disconnect any external display when playing DVD video in Mac OS 9.

Important: The Apple VGA Display Adapter (M8639G/A) should not be confused with the Apple Video Adapter (M8734G/A). The Apple Video Adapter (M8734G/A) is **not compatible** with the iMac mini-VGA monitor port.

Related documents

75495 iMac (17-inch 1GHz): About the Video Out Port

88282 iMac (Flat Panel): About the VGA Port

Published Date: Feb 20, 2012

Macintosh Manager 2.2: Mac OS 8 Uses Different Documents Folder Than Mac OS 9

Files are saved in different locations when using Macintosh Manager 2.2 client and Mac OS 8.1 through Mac OS 9.2.2.

This article has been archived and is no longer updated by Apple.

Symptom

It may appear that a document has disappeared if you created and saved it when logged in from a computer using Mac OS 9 and then later logged in from a computer using Mac OS 8 (and visa-versa). No document loss has occurred, but in order to find the document you have to log in from a computer using the same version of Mac OS as the computer you used to create the document.

Solution

Update to Macintosh Manager 2.2.1 or later. It is available from Apple Software Downloads (http://www.apple.com/swupdates/).

Published Date: Oct 10, 2016

Power Mac G4 (Mirrored Drive Doors), (FW 800): Hard Drive Carrier May Have Hold Down Screws

Some Power Mac G4 (Mirrored Drive Doors) and Power Mac G4 (FW 800) computers come with a screw to hold down the ATA 100 drive carrier.

This article has been archived and is no longer updated by Apple.

The "Working Inside Your Computer" chapter of the Power Mac G4 Setup Guide describes and illustrates installing internal storage devices but it does not indicate a screw present on the tab securing the drive carrier to the chassis. If a screw is present holding down the ATA 100 drive carrier tab in your computer, be sure to remove the screw. See Figure 1.

Figure 1 Location of hold down screw

If the hard drive carrier hold down screw is present, be sure to remove it before you remove the ATA 100 drive carrier.

Reinstall the screw when the carrier is back in place.

Note: The Customer Installable Parts (CIP) ATA Hard Drive Replacement instructions correctly refer to the possible presence of the screw.

Related Documents

26262 Power Mac G4 (FW 800): CIP Instructions

26259 Power Mac G4 (Mirrored Drive Doors): CIP Instructions

Published Date: Oct 10, 2016

Mac OS X 10.2: How to Record Sound From Classic Applications

With Mac OS X 10.2 you can record sound from most Classic applications that manage sound input using the Sound Manager.
This article has been archived and is no longer updated by Apple.
With Mac OS X 10.2 you can record sound from most Classic applications that manage sound input using the Sound Manager.

To record sound using Classic applications:

1. Open System Preferences
2. Choose Sound from the View menu. The Sound preference pane opens.
3. Click the Input tab.
4. Choose a device for sound input (for example, the internal microphone)
5. Slide the Input volume to the level you want.
6. Record from the Classic application as you normally would.

Notes

1. Update to Mac OS X 10.2.4 or later to address an issue in which Classic applications that use voice-activated recording may not work.
2. Classic applications that use ASIO or specialized hardware for recording will not open in Mac OS X 10.2 in the Classic mode. These applications require you to start up the computer with Mac OS 9.

Published Date: Feb 19, 2012

Power Mac G4 (Mirrored Drive Doors): Results of Mixing PC2100 and PC2700 RAM

This document describes what happens if you install both PC2100 and PC2700 memory in either a 167 MHz or a 133 MHz system bus Power Mac G4 (Mirrored Drive Doors) computer.

Note: "PC2100" is the industry standard name for DDR-266 SDRAM used on a 133 MHz system bus.

"PC2700" is the industry standard name for DDR-333 SDRAM used on a 167 MHz system bus.

This article has been archived and is no longer updated by Apple.
The Power Mac G4 (Mirrored Drive Doors) computer comes in two different models. One has a 133 MHz system bus, which uses PC2100 RAM (memory). The other has a 167 MHz system bus, which uses PC2700 RAM. If you install the wrong RAM in the computer, it may not start up, or recognize the memory.

133 MHz System Bus Model

- When only PC2700 or a mix of PC2700 and PC2100 DIMMs is installed:
  The computer starts up normally and behaves as though PC2100 DIMMs are installed.
- When no memory is installed:
  The computer does not make a normal startup sound. Instead, you hear a single tone, and the LED on the front of the computer flashes continuously.

167 MHz System Bus Model

- When only PC2100 DIMMs are installed:
  The computer makes three single tones instead of the startup sound. The LED on the front of the computer flashes three times, and the computer does not startup.
- When a mix of PC2100 and PC2700 DIMMs is installed:
  The computer starts up normally, but neither the computer nor Apple System Profiler recognizes the PC2100 memory.
- When no memory is installed:
  The computer does not make a normal startup sound. Instead, you hear a single tone and the LED on the front of the computer flashes continuously.

Important: DDR-SDRAM is closely correlated with your computer's system bus speed. Use PC2100 DDR-SDRAM for 133 MHz system bus Power Mac computers and PC2700 DDR-SDRAM for 167 MHz system bus Power Mac computers. Do not try to install non-DDR memory into the Power Mac G4 (Mirrored Drive Doors) computer as it will not physically fit in the DIMM slots. If you do so, you could damage the logic board.
Published Date: Oct 10, 2016

Xserve: Power Consumption and Thermal Output (BTU) Information

This document provides power consumption and thermal output information for Xserve.
This article has been archived and is no longer updated by Apple.

Xserve single processor **Configuration**: 1 GHz G4 Processor, 256 MB RAM, 60 GB Apple Drive Module, (2) gigabit Ethernet ports, CD-ROM, VGA Display			
Power Consumption		**Thermal Output**	
Idle	**Max**	**Idle**	**Max**
116 W	133 W	396 BTU/hr	456 BTU/hr
Xserve dual processor **Configuration**: dual 1 GHz G4 Processor, 512 MB RAM, 60 GB Apple Drive Module, (2) gigabit Ethernet ports, CD-ROM, VGA Display			
Power Consumption		**Thermal Output**	
Idle	**Max**	**Idle**	**Max**
119 W	183 W	404 BTU/hr	624 BTU/hr

Note: Max in table is maximum processor utilization.

Published Date: Feb 20, 2012

Mac OS X 10.2 - Panasonic Set-Top DVD-R Discs Do Not "Mount" Properly

Update to Mac OS X 10.2.5 to address an issue in which DVD-R discs created using Panasonic E-20 and Panasonic E-30 Set-Top DVD recorders appear on the desktop but have no items and zero space available.
This article has been archived and is no longer updated by Apple.

Symptom

DVD-R discs created using Panasonic E-20 and Panasonic E-30 Set-Top DVD recorders appear on the desktop in Mac OS X 10.2, but appear to have no items and zero space available.

Solution

Update to Mac OS X 10.2.5.
Published Date: Feb 19, 2012

Macintosh Manager 2.2.1: About Macintosh Manager Document

This document contains the contents of the About Macintosh Manager document for Macintosh Manager 2.2.1.

This article has been archived and is no longer updated by Apple.

About Macintosh Manager 2.2.1

This document includes information about additional Mac OS client software for use with the Mac OS X Server v.10.2. The Macintosh Manager Installer installs Macintosh Manager 2.2.1 client software, a version of AppleShare Client, and Macintosh Manager 2.2.1 administration software.

Macintosh Manager is Apple's workstation management technology, providing network administrators with a centralized method of securing Mac OS workstations, controlling software access, and providing a consistent, personalized experience for users.

For more information about these software applications, refer to the "Mac OS X Server Administrator's Guide," the online Help for Macintosh Manager and Mac OS X Server Help.

Changes in Macintosh Manager 2.2.1

- Fixed a problem where Mac OS 8.x clients would save user's documents inside the `~/Library/Documents` folder instead of their usual `~/Documents` folder. This would prevent users from being able to access their documents from Mac OS 9 client workstations.

Changes in Macintosh Manager 2.2

- To provide compatibility with Mac OS X client applications that may share the same Mac OS X server, the location of preferences and other redirected folders in Macintosh Manager 2.2 has changed. Information was previously stored inside a Library folder on the server volume. Macintosh Manager 2.2 now stores client information inside a folder called Classic inside the current Library folder. Because it cannot be determined if existing preferences are being utilized by Mac OS X clients, no migration is available to previous versions of Macintosh Manager.
- When connected to the network and the idle lockout feature is activated, you can use server administrator passwords to log in. Note: Server administrator passwords should not be confused with Macintosh Manager administrator passwords.
- The workstation name is now displayed in the login window (as opposed to the Apple menu in previous versions), similar to what you see in a Mac OS X login window. Additionally, the optional banner message is displayed in a smaller font.
- It is now possible to use the Command-E to eject CDs and floppies from drives while login window is displayed.
- When you create new workgroups, the initial setting for where applications are found is now set to "Use local first." Using this setting can help decrease login times on workstations.
- A new option is available in the Privileges pane of the Workgroups pane of the Macintosh Manager administrator application that allows the administrator to lock the user's Library folder (and most folders within it). This prevents users from changing the Library folder or its contents. To maintain application compatibility, applications can still to write to the Library folder even if the lock mechanism is activated. The default for this option is Off.
- Energy Saver preferences are no longer supported by Macintosh Manager 2.2.
- When a user logs out, the confirmation window's default time for automatic logout has been changed from 90 seconds to 30 seconds.

Problems addressed in Macintosh Manager 2.2

- When a user enters the System Access workgroup, the Activity Log now indicates the user's name. Furthermore, each login to System Access will only generate one log entry instead of two (where one entry was for System Access and the other was for the user entering the Finder). These changes do not affect log entries generated by earlier client versions and do not affect users who enter the Finder using the Command-Shift-Esc key combination.
- A problem where the workstation would not respond for long periods of time after checking the workstation out and logging back in has been fixed.
- Blank passwords are not allowed when a user changes his or her own password.
- The progress bar is updated properly when importing users.
- A problem causing the "Enforce file level security" checkbox not to update properly when multiple records were selected has been fixed.
- Because drop boxes are not supported while a computer is checked out, a workstation will no longer attempt to create drop boxes when users log in.
- A problem where the user could move an item to the desktop even if the desktop was "locked" has been addressed. This problem was seen only on OS9 clients if the "File level security" option was turned off (this is the default setting.)

Known Issues in Macintosh Manager 2.2

The Connected Users report is limited to approximately 300 clients. This affects only the report that is generated; it does not affect the actual

number of simultaneous users connected to the server.

Local Preferences on Mac OS 9 Client Workstations

A new system extension introduced in Macintosh Manager 2.1.1 called MMLocalPrefs (located on the installer disk in the Macintosh Manager Parts folder) can be installed onto your Mac OS 9 client computer to enable a feature in which preferences for a logged in user are always accessed locally instead of redirected to the remote server volume. A copy of the extension must be manually installed onto every Mac OS 9 client workstation on which you want to enable the feature. It cannot be disabled on a per-user or per-workgroup basis and does nothing if installed on a Mac OS 8 workstation.

The new ability to have local preferences for Mac OS 9 workstations works in a similar fashion to what already exists today on a Mac OS 8 client workstation using Macintosh Manager and should be used when excessive network activity generated by some applications is mitigated by having the preferences accessed locally. If you use this feature, you may experience longer login and logout times because preferences are copied to the local workstation during these times. However, the exact amount of time required depends on many variables.

Because Mac OS 9 was designed for remotely directed preferences, it's possible that some applications will not behave normally. If this occurs, you should remove the MMLocalPrefs extension and restart your workstation. It is also recommended that you unlock the desktop if you have problems printing from workstations that use the MMLocalPrefs extension.

Note: The Check Out feature of Macintosh Manager does not use the new local preference feature of this version of Macintosh Manager but instead synchronizes only to the remote preferences folder. It is not recommended that you enable the Check Out feature on OS 9 client computers when you have installed the MMLocalPrefs extension.

Using the update package

If you are already using Macintosh Manager 2.0 or later on your client computers, you can use the auto-update package (instead of the Installer) to upgrade your clients to the latest version of Macintosh Manager.

To use the auto-update package, do the following:

1. Open the Macintosh Manager Installer disk image and locate the Update Package file inside the Update Package folder. Depending on the version of Macintosh Manager you are using, the name of this file may vary.

2. Copy the Update Package file to the top level of your Multi-User Items folder on the server. The Multi-User Items folder should be located inside the Macintosh Manager share point on the server.

Client workstations periodically monitor the folder for the update package. If the update package is found, the client will update the software automatically when the client workstation is at the login screen. After the software is updated, the client workstation will restart automatically.

After all your clients have been updated, it is recommended that you remove the update package file to prevent your clients from unnecessarily accessing the server.

System requirements

Macintosh Manager 2.2 administration software requires a computer with:

- Mac OS 9.2.2 or Mac OS X
- At least 64 MB of RAM

Macintosh Manager 2.2 client software requires a computer with:

- Mac OS 8.1 through 9.2.2

AppleShare Client software:

- AppleShare Client 3.8.7 requires a 68K computer running Mac OS 8.1 to 8.5
- AppleShare Client 3.8.8 requires a PPC computer running Mac OS 8.1 or later

Published Date: Feb 20, 2012

AppleScript Studio: Applications Using New Templates Won‘t Work on Earlier Versions of Mac OS X

Newly created AppleScript Studio applications built using AppleScript Studio 1.2 templates in Mac OS X 10.2 will not work on earlier versions of Mac OS X. This document describes how to correct this compatibility issue.
This article has been archived and is no longer updated by Apple.

Symptom

Newly created AppleScript Studio applications built using AppleScript Studio 1.2 templates in Mac OS X 10.2 won't work on earlier versions of Mac OS X.

Solution

The function call `ASKInitialize` in `main.m`, is only present in the Mac OS X 10.2 version of AppleScriptKit, so AppleScript Studio applications won't work on earlier versions of Mac OS X. A new version of `main.m` is provided below. Use this version to replace the contents of your existing `main.m` file. This changed versions of `main.m` checks for the existence of the function, then conditionally calls the `ASKInitalize` function.

`main.m` is normally located in the Other Sources folder, from the Files view of your project in Project Builder.

1. Copy the contents of `main.m` in this document, replacing the contents of your existing `main.m` file.
2. Replace the contents of main.m in the Project Templates folder, so all new projects created use the new version of main.m. Project Builder uses the templates when creating new projects.

Note: Previous applications built using prior versions of the AppleScript Studio templates will compile and work on computers using Mac OS X 10.1 through Mac OS X 10.2 when recompiled using the Mac OS X 10.2 development tools. However, some of the new Mac OS X 10.2 features cannot be used since an older version of `main.m` is used.

Location of main.m

You can find the `main.m` files in the following directories:

```
/Developer/ProjectBuilder Extras/Project Templates/Application/AppleScript Application
```

```
/Developer/ProjectBuilder Extras/Project Templates/Application/AppleScript Document-based Application
```

```
/Developer/ProjectBuilder Extras/Project Templates/Application/AppleScript Droplet
```

`main.m` will be changed in the next release of the developer tools.

main.m (new modified version)

```
#import <mach-o/dyld.h>

extern int NSApplicationMain(int argc, const char *argv[]);

int main(int argc, const char *argv[])
{
 if (NSIsSymbolNameDefined("_ASKInitialize"))
 {
  NSSymbol *symbol = NSLookupAndBindSymbol("_ASKInitialize");
  if (symbol)
  {
   void (*initializeASKFunc)(void) = NSAddressOfSymbol(symbol);
   if (initializeASKFunc)
   {
    initializeASKFunc();
   }
  }
 }

      return NSApplicationMain(argc, argv);
}
```

TA26892_AppleScript_Studio_Applications_Using_New_Templates_Wont_Work_on_Earlier_V

Note: This software code is considered an upgrade and its use is governed by the terms of the original **license agreement**.

Published Date: Feb 19, 2012

Final Cut Pro: Panasonic Digital Camera Compatibility

This document provides a compatibility chart of Panasonic consumer and professional digital cameras with Final Cut Pro 4.

This article has been archived and is no longer updated by Apple.

This is document does not contain a full list of qualified devices, only additional information on certain models. A complete list of qualified devices for the current version of Final Cut Pro can be found at the Apple web site (http://www.apple.com/finalcutpro/qualification.html). For a complete list for Final Cut Pro 3 see document 93261 "**Final Cut Pro 3: Camera Compatibility Information**."

For additional assistance with Panasonic digital cameras, see the Panasonic web site.

Panasonic Products: (**http://www.panasonic.com/**)

Panasonic Qualified DV Camcorders and VTRs

NTSC

Model	Device Protocol	Description and Notes
AG-DV2000	FireWire	
AG-DVX100	FireWire	This camera needs the DVX-100 Audio Sync Tool to ensure audio/video sync during capture. The script is included on the Final Cut Pro installer and updater DVDs. Once installed, locate the folder on the DVD called "Extras" and you will find "DVX-100 Audio Sync Tool". Drag the file into the Final Cut Pro Plugins folder before launching Final Cut Pro. This script should not be installed when using other DV devices, unless specified.
AJ-D250	FireWire Basic	The AJ-D250 requires a software upgrade to support the optional FireWire (IEEE 1394) interface. All VTRs shipped after September 2000 include this software upgrade. If you have an older deck, Panasonic will update the software for a flat fee of $150 at an authorized service center. Please contact Panasonic for additional details. The AJ-D250 will not accept DV video unless the sequence's audio is set to 48 kHz.
PV-DV100	FireWire Basic	This camera needs the DV Tuner 1 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro. These are included with Final Cut Pro installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 1" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should **not** be installed when using other DV devices, unless specified. When editing to tape: The sequence comes in on time with the sequence starting 22 frames late. Needs CMP Overide and Tuner 1.
PV-DV200	FireWire Basic	This camera needs the DV Tuner 1 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro. These are included with Final Cut Pro installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 1" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should **not** be installed when using other DV devices, unless specified.

PV-DV400	FireWire Basic	This camera needs the DV Tuner 1 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro. These are included with Final Cut Pro installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 1" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should **not** be installed when using other DV devices, unless specified. When editing to tape: The sequence comes in on time with the sequence starting 22 frames late.
PV-DV600	FireWire Basic	This camera needs the DV Tuner 1 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro. These are included with Final Cut Pro installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 1" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should **not** be installed when using other DV devices, unless specified.
PV-DV800	FireWire Basic	This camera needs the DV Tuner 1 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro. These are included with Final Cut Pro installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 1" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should **not** be installed when using other DV devices, unless specified. When editing to tape: The sequence comes in on time with the sequence starting 22 frames late.

Published Date: Feb 20, 2012

Internal Modems: How To Determine Model Installed

This document describes how to determine which modem is installed in your computer.
This article has been archived and is no longer updated by Apple.

How to Determine Modem Installed

1. Open a modem terminal window

Note: Detailed instructions for opening a modem terminal window are provided in the Section titled **Using AT Commands in Mac OS 9**, and **Using AT Commands in Mac OS X** in this document.

2. Type ATI12 in the terminal
The modem responds with one of three response codes responses depending on which modem is installed.

3. Look up the response code in the table below to determine which modem is installed in your computer.

Modem Response	Modem Installed	AT Commands Manual	Get Manual
S1	Internal Comm Modem	AT Commands	
D1	Internal USB Modem	AT Commands for the Apple Internal USB Modem	
Error	Earlier internal Modem	No specific manual available. If you need to use AT Commands with this modem, download and use the Internal Comm Modem manual; AT Commands. A few commands in this manual will not work with this type of modem, but most will.	

Using AT Commands in Mac OS 9

1. Open the Modem control panel.
Choose Null Modem 9600 from the Modem menu.

2. Close the Modem control panel.
A save dialog appears.

3. Save the changes to the Modem control panel.

4. Open Remote Access control panel.

5. Click Options.

6. Click the Protocol tab.

7. Select Connect to a command-line host:
If Use terminal window is not selected, also select that option.

8. Click OK

9. Enter any number or letter into the number and password area of the Remote Access control panel.
This enables the Connect button.

10. Click Connect.
A modem terminal window appears.

11. Type ATI12 into the terminal, then press return.

The modem result code is returned.

Using AT Commands in Mac OS X

The process for checking the country code under Mac OS X is similar to Mac OS 9.

1. Network system preference.
2. Click the Modem tab.
3. Choose Null Modem 9600 from the Modem menu.

4. Click the PPP tab in the Network system preference.
5. Click PPP options.
6. Select Connect using a terminal window (command line)
7. Click OK

8. Enter any number or letter into the number and password area of the Remote Access control panel.
9. Either open Internet Connect and click connect, or if the Modem status is available in the menu bar, choose connect.
A modem terminal window opens.
10. Type ATI12 into the terminal, then press return.
The modem result code is returned.

Published Date: Feb 20, 2012

Mac OS X Server 10.2 or earlier: How to Set Up NAT

Mac OS X has a preference pane that allows you to set up Internet Sharing, generally referred to as NAT (Network Address Translation), while Mac OS X Server does not. This document describes how to set up NAT using Mac OS X Server version 10.2 or earlier. When using Mac OS X Server 10.3 or later, use the options available in Server Admin to set this up.
This article has been archived and is no longer updated by Apple.
This document discusses advanced configuration of Mac OS X Server, and expects some basic familiarity with the BSD UNIX fundamentals of Mac OS X Server.

The easiest way to set up NAT is to create and run a simple shell script like the one listed in the script section of this document. If you are not familiar with creating and running shell scripts, you may wish to consider looking into third-party tools to configure NAT.

In addition to enabling NAT, you should enable DHCP on the interface you are sharing. You can use Server Settings/Server Admin to set up DHCP. Refer to Ch. 11 of the Admin Guide for more information on setting up DHCP.

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Shell Script

```
#!/bin/sh

/usr/sbin/natd -interface en0

/sbin/ipfw -f flush

/sbin/ipfw add divert natd all from any to any via en0

/sbin/ipfw add pass all from any to any
```

This script assumes the built-in Ethernet port (en0) is connected to the Internet, and the additional port (en1) is connected to the private networks. If you are using more ports, or are not sure which port has which identifier, type this command in the Terminal window:

```
ifconfig -a
```

The ifconfig command provides information on which ports are connected to which networks.

For more information on what the flags for natd in the script do, see the man page for natd. Using additional flags you can enable port forwarding and create other more advanced configurations.

Important: Since ipfw is used in the shell script, you should not use Server Setting's IP Firewall. Since the IP Firewall also uses ipfw, it will conflict with the shell script, and either disable NAT, or be ignored.

Hostconfig File

The file /etc/hostconfig needs to be changed to enable NAT. You should edit this file and change the following:

```
IPFORWARDING=-NO-
```

to

```
IPFORWARDING=-YES-
```

Creating a Startup Item

A NAT shell script is something that you may want to have run each time the Mac OS X Server starts up. For additional information on creating a startup item in Mac OS X Server, see the Apple developer Web site:

(http://developer.apple.com/documentation/MacOSX/Conceptual/BPSystemStartup/index.html)

Important: AppleCare does not offer any type of free technical support on setting up NAT on the command line or creating Startup Items. Contract based support for setting up NAT, creating Startup Items, and creating shell scripts is only included with Mac OS X Server Software

Support (http://www.apple.com/support/products/).

Related Documents

30821 TCP/IP: Setting Up A Private Network

58514 AirPort: What is Network Address Translation?

Published Date: Oct 10, 2016

PowerBook G4 (DVI): Hard Drive Makes Clicking Sound

Some internal 60 GB hard drives may make an audible clicking or "ticking" sound during frequent disk access.
This article has been archived and is no longer updated by Apple.

Symptom

Some internal 60 GB hard drives may make an audible clicking or "ticking" sound when the disk is accessed frequently.

Solution

This noise is normal and the drive is operating properly. While the noise is intermittent, it has no functional effect on the drive, and no repair or service is needed.

Published Date: Feb 20, 2012

Mac OS X Server 10.2: How to Set Up Print Load Balancing Using CUPS

This document describes how to set up print load balancing using the Common UNIX Printing System (CUPS) with Mac OS X Server 10.2.
This article has been archived and is no longer updated by Apple.

What is CUPS?

Common UNIX Printing System is based on Internet Printing Protocols (IPP) and works with PostScript and non-PostScript printers. A CUPS printer "class" is a virtual "queue". Its main purpose is to send print jobs to other print queues.

Although not a default feature of Mac OS X Server, a CUPS printer "class" may be configured to distribute print jobs among many printers balancing the print load across multiple printers. **Note:** Apple does not offer technical support for CUPS.

Setting up a CUPS printer class using Mac OS X Server

1. Create individual queues for each printer.

Note: These queues do not need to be shared in Server Settings since they will be shared in the printer class you are creating.

2. Open a Web browser locally on the server since CUPS by default does not allow remote web administration.

3. Go to the CUPS Web-admin site (http://127.0.0.1:631/).

4. Click "Do Administration Tasks".

5. Click Classes.

6. Click Add Class. The Class admin page appears.

7. Enter a name for the class (and optional location and description).

Note: Spaces are not allowed for class names.

Description is used as the queue name, so it helps to keep the description simple.
Location is the text that appears in Print Center on the Mac OS X 10.2 client.

8. Click Continue. The Class members page appears.

9. Select one or more of the printers in the list add them to the class.

10. Click Continue. The status page appears indicating if the class was added properly.

11. Use Server Settings to enable sharing for the printer class, which appears as another PostScript queue, and to set the sharing name and other Print Service attributes.

Notes about using CUPS

- If all the queues added to the class represent PostScript printers, then the class itself appears like another PostScript print queue. This queue can be shared in the Server Settings like an individual print queue.
- You can hold/release the class as a whole or hold/release individual queues attached to the class. Holding the class by itself does not actually hold any of the queues, it just stops jobs from being forwarded to the queues. Once a job is forwarded it falls under the control of the queue that's doing the actual printing (a subtle but important distinction). CUPS performs load balancing and determines which print queue to forward the job to.
- If one or more of the class's queues are held, the jobs are parceled out to the remaining active (non-held) queues. A class can be put on hold to temporarily stop jobs from being forwarded, regardless of hold state of each individual print queue. In this case, the class acts like a queue and maintains its own job list until released.

Additional information

You can get more information about CUPS by clicking Help on the CUPS Web-admin page.

The Common UNIX Printing System, CUPS, and the CUPS logo are the trademark property of Easy Software Products.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's

recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.

Published Date: Oct 10, 2016

PowerBook G3 (Bronze Keyboard): USB MIDI Interfaces Not Recognized After Sleep in Mac OS X

When you wake a PowerBook G3 (Bronze Keyboard) computer from sleep any MIDI interfaces connected to the computer will not be recognized.

This article has been archived and is no longer updated by Apple.

Symptom

The USB interface is no longer recognized by audio programs, and the interface appears multiple times in Audio MIDI Setup.

Solution

- Avoid letting the PowerBook sleep when USB MIDI interfaces are connected

  or
- Disconnect and reconnect the USB MIDI interface after waking from sleep

Published Date: Feb 20, 2012

Mac OS X 10.2: FireWire Target Disk Mode requires hot plugging for some computers

When connecting one Macintosh computer to another using FireWire Target Disk Mode, some computers may not appear until the FireWire cable is disconnected and connected again.
This article has been archived and is no longer updated by Apple.

Symptom

The computer in FireWire Target Disk Mode (the "target") does not appear on the host computer.

Solution

Connect the FireWire cable to the target computer after starting it up in FireWire Target Disk Mode.

If the cable was already connected, unplugging it from either computer and plugging it back in should allow the target computer's hard disk to appear on the host.

If the target computer is a Power Macintosh G4, a more current boot ROM may be available. First, determine what version of the boot ROM is on the target computer using Apple System Profiler.

The boot ROM version is listed in the Hardware Overview section.

Tip: Search the Knowledge Base to see if a more recent firmware version is available, and if so download and install it.

Related documents

58207 FireWire Ports: Specifications
93772 What is firmware?
58583 Macintosh: How to Use FireWire Target Disk Mode

Published Date: Oct 10, 2016

Mac OS X 10.2: Startup Delay When DCHP Server Uses 127.0.0.1/local as NetInfo Parent

There is a delay during startup if the DHCP server is configured to send 127.0.0.1 and local as the IP address and tag of the NetInfo parent system, and the client is set to bind to NetInfo via DHCP. There are also system.log entries from lookupd stating the RPC connection to 127.0.0.1 timed out.

This article has been archived and is no longer updated by Apple.

Symptom

There is a noticeable delay at startup. The progress window displays messages like "waiting for application services", or other similar messages.

Solution

Configure the DHCP server to give the correct information--or none if not using NetInfo parents.

To set the Mac OS X Server's DHCP Server do the following:

1. Open Server Settings or Server Admin depending on which version of the server is being used.
2. Click the Network tab.
3. Click the DHCP icon and select Configure DHCP/NetBoot from the pop-up menu.
4. Click the Subnets tab.
5. Double-click subnet to edit the subnet information.
6. Click the NetInfo tab.
7. Delete all information if not using NetInfo parents.
8. Click Save.

For third-party servers, this information is returned using DHCP options 112 and 113. Refer to the documentation provided with the third-party server for configuration information

You can also disable binding on the client if not using NetInfo parents.

1. Open the Directory Access application (/Applications/Utilities/)
2. Click the lock icon to authenticate if necessary.
3. Deselect NetInfo.
4. Click Apply.

Published Date: Feb 19, 2012

Mac OS X: Mail - Where Attachments Are Saved

This document describes where attachments are stored by the Mac OS X application Mail.
This article has been archived and is no longer updated by Apple.
In Apple's Mail application, files attached, or enclosed in email messages are stored as part of the messages. When a message is stored on an email server, the attachment, or enclosure is also stored on the email server. However, the attachment or enclosure may temporarily be stored on your computer's hard disk.

Since attachments are part of the message itself, if the message is stored on your computer's hard disk, then the it is also on the hard disk. If you delete the message, all of its attachments are also deleted.

Other email programs may use the downloads folder you set in the Web tab of the Internet pane in System Preferences. Mail does not use the downloads folder for attachments. However, you can save files there by pressing Control and clicking the enclosure.

For information on how to save an attachment in Mail, see document 107150 "**Mac OS X 10.2: How to Save Attachments in Mail**".

Published Date: Feb 19, 2012

Mac OS X: Mail - How to Send a Message at a Later Time

This document describes how to send an email message at a later time using the Mac OS X application Mail.
This article has been archived and is no longer updated by Apple.
Some email clients can queue messages for later delivery without trying to send them. This is useful if you do not have a constant connection to the Internet. The Mac OS X application Mail does not have a single-button way to do this. The following alternatives may work for you.

- Send the message immediately. If you have a modem connection, this may cause your modem to dial.
- Send the message when your computer is not connected to a network. After a slight delay, an alert box with this message appears:

  "Error This message could not be delivered and will remain in your Outbox until it can be delivered. The server "<name of mail server>" can not be contacted on port 25."

Figure 1 Cannot deliver message alert

Click Close Window. The message will be placed in your Outbox.

Published Date: Feb 19, 2012

WebObjects 5.1: How to Improve Performance of IIS Adaptor on Microsoft Windows

Under certain conditions, the IIS adaptor on Microsoft Windows experiences a degradation in performance. This document describes the issue in detail and provides source code that can be used to prevent it.
This article has been archived and is no longer updated by Apple.

Symptom

When using the IIS adaptor, the performance degrades under certain conditions. These conditions cause large amounts of memory to be allocated for each request resulting in poor response times and OutOfMemoryExceptions.

Note: This happens whenever the ISAPI adaptor is used, even when your applications are used on another computer with a different operating system.

Solution

- Upgrade to WebObjects 5.2.
- Use the code patch in this section to workaround the issue if you are using WebObjects 5.1 through 5.1.3.

Important: This patch is for Microsoft Windows only. Do not use this patch on other platforms.

How to apply the code patch

1. Locate the source code.
   Go to the directory and locate the Adaptor subproject at the following path:
   `$NEXT_ROOT/Developer/Examples/WebObjects/Source/Adaptors/Adaptor`
2. In the Adaptor subproject, locate the files **`request.h`** and **`request.c`**
3. Make the following code modifications to the files **`request.h`** and **`request.c`**

File request.h

In **`request.h`**, search for **`#include "WOURLCUtilities.h"`** and add the following line below it:

```
#include "wastring.h"
```

File request.c

In **`request.c`**, search for the beginning of the method '**`int req_sendRequest`**' (around line 217). Be careful not to delete this original method '**`int req_sendRequest`**'. Add the following code block before the original method '**`int req_sendRequest`**':

```
#ifdef WIN32
static void req_appendHeader(const char *key, const char *val, String *headers) {
  int valLength = strlen(val);
  while (val[valLength - 1] == '\\r' || val[valLength - 1] == '\\n') {
    valLength--;
  }
  str_append(headers, key);
  str_appendLiteral(headers, ": ");
  str_appendLength(headers, val, valLength);
  str_appendLiteral(headers, "\\r\\n");
}

int req_sendRequest(HTTPRequest *req, net_fd socket) {
  struct iovec *buffers;
  int bufferCount, result;
  String *headersString;

  buffers = WOMALLOC(3 * sizeof(struct iovec));

  headersString = str_create(req->request_str, 0);
  if (headersString) {
    st_perform(req->headers, (st_perform_callback)req_appendHeader, headersString);
  }
  buffers[0].iov_base = headersString->text;
  buffers[0].iov_len = headersString->length;
```

```
  buffers[1].iov_base = "\\r\\n";
  buffers[1].iov_len = 2;
  bufferCount = 2;
  if (req->content_length > 0) {
    bufferCount++;
    buffers[2].iov_base = req->content;
    buffers[2].iov_len = req->content_length;
  }
  result = transport->sendBuffers(socket, buffers, bufferCount);
  str_free(headersString);
  WOFREE(buffers);
  if (result == 0)
    result = transport->flush_connection(socket);
  else
    WOLog(WO_ERR, "error sending request");

  return result;
}
#else
// End of the code to be added to request.c
```

`After the #else` comes the original **`req_sendRequest`** method.

Go to the end of this method and insert **`#endif`** on the next line after the closing brace.

4. Compile the adaptor.

The makefile expects the OS environment variable to be either empty or contain the string 'WINDOWS'.

You can explicitly set the OS variable in a Bourne shell using the following:

```
cd $NEXT_ROOT/Developer/Examples/WebObjects/Source/Adaptors
set OS=WINDOWS
make clean
make
make IIS
```

Notes:

- The first **`make`** operation produces a file **`WebObjects.exe`** in the directory **`$NEXT_ROOT/Developer/Examples/WebObjects/Source/Adaptors/CGI`**
- The second **`make IIS`** operation produces the file **`WebObjects.dll`** in the directory **`$NEXT_ROOT/Developer/Examples/WebObjects/Source/Adaptors/IIS`**
- A warning appears stating **setupIOVec** is defined but not used. This warning can be ignored.

5. Install the modified adaptor.

After compilation, the two files **WebObjects.EXE** (located in **`$NEXT_ROOT/Developer/Examples/WebObjects/Source/Adaptors/CGI`**) and **WebObjects.DLL** (located in **`$NEXT_ROOT/Developer/Examples/WebObjects/Source/Adaptors/IIS`**) should be copied to the proper location. Change **`c:\\inetpub`** to match your system.

In a Bourne shell, do the following:

```
cd $NEXT_ROOT/Developer/Examples/WebObjects/Source/Adaptors

net stop w3svc

cp cgi/webobjects.exe c:/inetpub/scripts

cp iis/webobjects.dll c:/inetpub/scripts

net start w3svc
```

Stopping IIS before copying prevents possible sharing violations for the ISAPI adaptor since you cannot overwrite the file if it has already been loaded by IIS.

Published Date: Feb 19, 2012

AppleWorks 6: How to Use Text-to-Speech

This document describes how to use the Text-to-Speech feature in AppleWorks 6.

This article has been archived and is no longer updated by Apple.

How to Use Text-to-Speech with AppleWorks 6

1. Install Text-to-Speech, if it is not already installed.

    Notes
    - Text-to-Speech is installed by default in Mac OS X.
    - You must install Text-to-Speech in Mac OS 9 and earlier. Use the Custom installation option of the Mac OS Installer to install Text-to-Speech. Additional information on performing a custom installation is available in technical document 31288, "**Mac OS 9: Installing or Removing Individual Components**".

2. Add the Text-to-Speech button to the AppleWorks button bar.

    1. Open AppleWorks.
    2. Create a new Word Processing document.
    3. Control-click the Button Bar. A contextual menu appears.
    4. Choose Customize Button Bar. The Customize Button Bar dialog appears.
    5. Drag the Speak Text button from the Word Processing buttons to the Button Bar.

    Note: You may have to click the disclosure triangle next to Word Processing for the Speak Text button to appear.

    6. Click Done.

How to Speak Text

1. Select the text you want to speak in the Word Processing document.
2. Click the Speak Text button.
3. Click the Speak Text button again to stop the speech.

How to Change the Voice Used for Speech

Mac OS X

1. Open the Speech pane in System Preferences.
2. Click the Default Voice tab.
3. Select the voice you want to use from the voices.

Mac OS 9 and earlier

1. Open the Speech control panel.
2. Select Voice from the Options pop-up menu.
3. Select the voice you want to use from the voice pop-up menu.

Published Date: Feb 19, 2012

WebObjects 5.2: How to Correct the PATH Environment Variable in Windows

This document describes the steps necessary to correct the PATH environment variable when using WebObjects on the Windows 2000 Platform.
This article has been archived and is no longer updated by Apple.

Symptom

There are two known issues when WebObjects is installed on Microsoft Windows 2000.

1. PATH length is exceeded during the installation process.
The maximum length of 255 characters is exceeded resulting in the error message:
"The Path environment variable > 255 chars. This may prevent WebObjects from functioning correctly. The entire variable has been saved and can be edited in the registry at HKEY_LOCAL_MACHINE\\SYSTEM\\CurrentControlSet\\Control\\Session Manager\\Environment."

2. Location of JDK in the PATH environment variable.
Project Builder will not properly start an application if the JDK path is placed before the Windows system path.

While the Project Builder Panel displays:

> Starting MyApplication.woa
> Finished running MyApplication.woa

MyApplication.woa never starts.

Solution

Issue 1: Exceeding PATH length during installation

1. The WebObjects Installer always prepends the Apple paths to the existing PATH variable. This can result in the Windows system directories getting pushed out of the PATH, and the PATH length may exceed the maximum length of 255 characters.

2. With each repeated installation of WebObjects 5.2, the WebObjects Installer will keep prepending the Apple paths to the existing PATH variable. The consequence is that the PATH variable may contain many duplicate entries, and may exceed the maximum length of 255 characters.

Issue 2: JDK placement in the PATH

WebObjects applications will not work properly on Windows if the JDK path is placed before the Windows system paths.

For example, the following PATH causes issues such as preventing a WebObjects application from running inside ProjectBuilder:

```
%JAVA_HOME%\\bin;C:\\WINNT\\system32;C:\\WINNT;%NEXT_ROOT%\\Library\\Executables;
```

where `%JAVA_HOME%` is defined as `C:\\JDK13~1.1`

Workarounds

To work around these issues:

1. Check your PATH environment variable.
Choose Settings > Control Panel > System > Advanced > Environment Variables

2. Look at the contents of the PATH environment variable

3. Delete any duplicate entries to ensure that the maximum length is not exceeded

4. Verify that the Windows system path is placed before the JDK path.

Example, of a good working PATH:

```
%SystemRoot%\\system32;%SystemRoot%; C:\\JDK13~1.1\\bin;

%NEXT_ROOT%\\Library\\Executables;%NEXT_ROOT%\\bin;%NEXT_ROOT%\\Library\\JDK\\bin;
```

where `%SystemRoot%` is defined as `C:\\WINNT`

and `%NEXT_ROOT%` is defined as `C:\\Apple`

Published Date: Feb 19, 2012

DVD Player: "DVD Player encountered a serious error" Alert

If an earlier version of Developer Tools is installed in Mac OS X, an alert with error 1634955892 may appear when you open DVD Player.
This article has been archived and is no longer updated by Apple.

Symptom

When you open DVD player an alert appears with this message:

> "DVD Player encountered a serious error. Unknown error. [1634955892]" appears.

Solution

Rename or remove the earlier HIServices framework installed by the Developer Tools package. To rename the framework, enter the following commands into the Terminal:

```
cd /System/Library/PrivateFrameworks/
sudo mv HIServices.framework HIServices-old.framework
```

Published Date: Feb 19, 2012

Mac OS X: Some Key Commands May Not Work with KVM Switchbox

Some special key commands may not work if your keyboard is connected to your computer through a USB "KVM" (keyboard-video-mouse) switchbox.
This article has been archived and is no longer updated by Apple.

Symptom

Holding down special key combinations at startup, or pressing certain special keys (like the Eject key) do not work when the keyboard is connected to the computer through a KVM switchbox.

Solution

Connect the keyboard directly to a USB port on the computer.

Some or all of the following startup key commands may not work, depending on the model of KVM switchbox:

- C (start up from CD)
- Option (start up to Startup Manager)
- Command-Option-P-R (reset parameter memory--PRAM)
- Command-Option-O-F (start up into Open Firmware)

In addition, the Eject key may not eject optical media, and the F12 key may function in its place.

In some cases, using a KVM switchbox may cause the computer to start up into a default 800-by 600- pixel resolution.

Published Date: Feb 19, 2012

Mac OS X 10.2: Keyboard Shortcut May Conflict with Classic Applications

Using the keyboard shortcut Command-Option-Shift-Q immediately quits the Classic environment in Mac OS X 10.2 without warning.
This article has been archived and is no longer updated by Apple.

Symptom

Using the keyboard shortcut Command-Option-Shift-Q in Mac OS X 10.2 while using the Classic environment immediately causes the Classic environment, and any applications open it, to quit without warning.

Important: Any unsaved data in open Classic applications will be lost when the Classic environment quits.

Solution

Update to Mac OS X 10.2.5 or later for improved reliability.

You should avoid using the keyboard shortcut Command-Option-Shift Q when using Classic applications. To restart the Classic environment click Restart in the Classic preference pane.

Note: This only restarts the Classic environment, it does not restart the computer.
Published Date: Oct 10, 2016

Final Cut Pro 3: The 3.0.4 Updater Will Not Update Final Cut Pro 3.0.2f1

This article has been archived and is no longer updated by Apple.

The Final Cut Pro 3.0.4 updater will not update some copies of Final Cut Pro 3.0.2. This is due to installing an updater of the wrong language or if the Final Cut Pro 3.0.2 software has been mistakenly labeled as version 3.0.2f1.

Symptom

When you use the Final Cut Pro 3.0.4 updater, an alert with this message appears:

> "This is not a version of Final Cut Pro which can be updated. (err 2)"

Solution

- This error can occur when running the English 3.0.4 updater over a non-English installation of Final Cut Pro. If this is the case, download and install the updater in the same language of your existing installation.
- The error can also occur if installing over versions of Final Cut Pro mistakenly labeled 3.0.2f1.

Published Date: Feb 20, 2012

Mac OS X 10.2: How to Show Menu Bar Items

This document explains how to show additional items in the menu bar, such as displays, clock, or battery.
This article has been archived and is no longer updated by Apple.
Open the appropriate pane in System Preferences to show the following items in the menu bar. Where System Preferences is not used specific instructions are given.

- **AirPort**: In the Network pane of System Preferences, click the Airport tab, then select "Show AirPort status in menu bar".
  Note: Available only on AirPort-compatible Mac OS X computers.
- **AppleScript Script Menu**: Double-click Script Menu.menu, which is located in /Applications/AppleScript.
- **Battery:** In the Energy Saver pane of System Preferences select "Show battery status in menu bar".
  Note: Available only on portable Mac OS X computers.
- **Bluetooth**: In the Bluetooth pane's Settings tab, select "Show Bluetooth status in the menu bar".
  Note: Available only when compatible Bluetooth hardware is connected.
- **Clock**: In the Data & Time pane's Menu Bar Clock tab, select "Show the date and time in the menu bar".
- **Displays:** In the Displays pane of System Preferences, select "Show displays in menu bar".
- **Eject:** This item allows you to open or close the optical drive tray, which may be useful if you use a third-party keyboard and the F12 key does not open the tray. To show this menu bar item, do the following:
  1. Choose "Go to Folder" from the Finder's Go menu.
  2. Type or paste: /System/Library/CoreServices/Menu Extras
  3. In the Menu Extras folder, double-click "Eject.menu".
- **iChat:** In iChat, choose Preferences from the iChat menu, click Accounts, then select "Show status in menu bar".
- **IrDA**: In the Network pane of System Preferences, choose IrDA from the Show pop-up menu , click the IrDA Modem tab, then select "Show IrDA status in menu bar". If IrDA does not appear in the Show menu, select Network Port Configurations, then select IrDA.
  Note: Available only on portable Mac OS X computers that include an IrDA port.
- **Lock Screen:** In the Keychain application, choose View > Lock Screen.
- **PC Card**: This item appears in the menu bar when a compatible PC Card is present.
  Note: Available only for portable Mac OS X computers that include a PC Card slot.
- **PPP**: In the Internet Connect application, select "Show modem status in menu bar".
- **PPPoE**: In the Network pane of System Preferences, click the PPPoE tab, then select "Show PPPoE status in menu bar".
- **Volume**: In the Sound pane of System Preferences, select "Show volume in menu bar"

Note: In Mac OS X 10.2, when you locate a menu extra bundle in the Finder (as in the instructions for AppleScript and Eject above) it appears as a folder. The bundle will not open as a folder. Instead, double-clicking on the bundle will activate it.
Published Date: Feb 19, 2012

iCal 1.0.1 - Events Displayed at Incorrect Time in Certain Time Zones

iCal 1.0.1 may display events at the wrong time depending on the time zone set in System Preferences.

This article has been archived and is no longer updated by Apple.

Symptom

The time specified in the event inspector window does not match the time used to display the event in month, day, or week view.

This issue affects computers whose selected times zones include these cities:

- Australia: all cities but Perth
- New Zealand: Wellington
- Russia: Vladivostok, Magadan, Anadyr
- United States: Honolulu and Guam

Solution

Download and install iCal 1.0.2 or later from the iCal website (http://www.apple.com/ical/).

Published Date: Oct 10, 2016

iPhoto: Page Setup Scale Percentage Does Not Affect Prints

After selecting a photo to print, changing the Scale percentage in Page Setup does not affect the printout.
This article has been archived and is no longer updated by Apple.
Selecting a photo to print, choosing Page Setup, and changing the scale percentage does not affect the printout. It still prints full page.

This happens when using:

- iPhoto 1.0 and later

iPhoto does not use Page Setup scale percentage as a means of scaling printouts.

To achieve different single page print sizes, do the following:

1. From the **File** menu, choose **Print**.

2. From the **Presets** pop-up menu, choose **Standard**.
3. From the **Style** pop-up menu, choose **Standard Prints**.
4. Select the size of the printout using Size.

Other page setup values besides scale are used. It is important to select the correct printer type and paper size within page setup for best results when printing.

Note: If you select Preview from the Print dialog, the selected photo opens in Acrobat Reader or Preview where you can change the scale percentage in Page Setup.

Published Date: Oct 10, 2016

iPod: MP3Pro Files Play at Encoded Resolution

If MP3Pro sound files are played on the iPod, they playback at the encoded resolution.
This article has been archived and is no longer updated by Apple.

Symptom

Audio files compressed using the MP3Pro compressor, play back in a lower quality from an iPod.

Solution

Neither the iPod or iTunes works with the MP3Pro format, so audio is played back at the encoded resolution, which is compatible with standard MP3 devices.

MP3Pro Background

The MP3Pro compression format allows audio files to be encoded at a lower resolution, making the .mp3 file smaller in size. However, when played back on a device, or in an application that works with MP3Pro, the sound quality is perceived to be similar to the same file encoded at a higher resolution.

For example, an MP3 file encoded at 128 kilobits per second (kbit/s) using a standard MP3 compressor, such as iTunes, might be 1.6 MB in size. However, the same file encoded at 64 kbit/s using a standard MP3 compressor might only be 820 KB. The MP3Pro format allows a file to be compressed at 64 kbit/s, yet sound like it was encoded at 128 kbit/s when played back on a MP3Pro device or application. When the same file is played back without using MP3Pro, the file plays back in a "non-Pro" format at 64 kbit/s. This means the file sounds like a standard MP3 file encoded at 64 kbit/s file without any enhancements.

Published Date: Feb 20, 2012

Keynote 1.0: Cannot Open PowerPoint Show

This document explains the steps required to open a PowerPoint self-playing presentation, or "show".
This article has been archived and is no longer updated by Apple.

Symptom

You cannot select a PowerPoint show (a self-playing PowerPoint presentation) in the Open dialog.

Solution

PowerPoint presentations normally use a filename extension of **.ppt**. In order for Keynote to see and import the presentation properly, you must change the filename extension from **.pps** to **.ppt**.

Published Date: Oct 10, 2016

iChat: "Unable to log in to AIM proxy" Alert

iChat can be configured to use some proxy servers, but it must be configured separately from the proxy settings in System Preferences.

This article has been archived and is no longer updated by Apple.

Symptom

When going online in iChat an alert appears with this message:

> "Unable to log in to AIM proxy. Check the proxy settings in the Accounts section of iChat preferences."

Solution

iChat can use SOCKS 4, SOCKS 5 and HTTPS proxies.

To configure iChat to use such a proxy server:

1. Choose iChat > Preferences.
2. Click Accounts.
3. Click on the Server Settings button.

Note: iChat does not work with proxy servers that require authentication (user name and password.)

Published Date: Feb 19, 2012

Mac OS X 10.2: Streaming QuickTime Movies Do Not Preview in Finder

Selecting a QuickTime movie with streaming content in the Finder's Column view will not play a preview of the movie.
This article has been archived and is no longer updated by Apple.

Symptom

Selecting a QuickTime movie creates a 'preview' column with a movie control bar but no image in the Finder's Column view.

Solution

This occurs if the movie is a QuickTime Streaming movie. Only static QuickTime movies can be previewed in the Finder.

To view the movie, double-click the icon to open it in QuickTime player.

Published Date: Feb 19, 2012

Mac OS X 10.2: Use Grab Utility to Take Screenshots in Simple Finder

When using Simple Finder in Mac OS X 10.2, use the Grab utility instead of keyboard shortcuts to take screenshots.
This article has been archived and is no longer updated by Apple.

Symptom

Screenshots taken with keyboard shortcuts in Simple Finder are not saved in a location that is accessible to Simple Finder users.

Solution

The system administrator can allow Simple Finder users to use the Grab Utility. This utility allows Simple Finder users to save screenshots in their Documents folder.

Allowing the Grab utility for Simple Finder users

1. Log into the computer with an administrator account.
2. Open System Preferences.
3. Choose View > Accounts.
4. Select the user.
5. Click Capabilities.
6. Allow Grab in the Capabilities list. (The checkbox is under the Utilities disclosure triangle.)

Published Date: Feb 19, 2012

WebObjects: Direct Connect HTTP Server Does Not Serve All MIME Types

WebObjects applications using certain MIME types cannot serve these MIME types in Direct Connect mode. WebObjects returns the Main.wo component instead of the MIME type files when WebObjects application users try to access them.
This article has been archived and is no longer updated by Apple.

Symptom

1. Put a new MIME type file in your Web server document root.
2. Start the WebObjects application in direct connect mode on the proper port (port XXX).
3. Attempt to access the MIME file using the standard (http://localhost:XXX/MIMEfilename.yyy), where yyy is the MIME type's filename extension.

The application responds to that request by returning the main component, Main.wo.

Solution

WebObjects includes `MIME.plist` in the `JavaWebObjects.framework`, or in the `WebObjects.framework` in WebObjects 4.5.1 and earlier. The `MIME.plist` maps MIME file extensions to MIME file types. WebObjects applications in Direct Connect mode access the `MIME.plist` file, which instructs browsers how to treat data they are about to receive. The `MIME.plist` file is static and sometimes omits the MIME types that developers wish to use. Typically, new media types are introduced more frequently than WebObjects is updated. In order to use new media types, developers need to be able to introduce these new media types in their WebObjects applications.

Updating the MIME.plist

Developers can update MIME.plist with media types that are not already listed, so that WebObjects can serve the new media types. The steps for adding media types is listed in the subsections below. The example used Flash files, which are supported in WebObjects 5.2, but the steps are identical for adding other media types not listed in the `MIME.plist` file.

Developer Note: if a MIME type is missing from the MIME.plist, submit a bug report at (http://bugreport.apple.com), so the `MIME.plist` can be updated with new media types in future releases.

Adding Media Types in WebObjects 4.5.1 and Earlier on Mac OS X

These steps explain how to add support for Flash Files, but can used for other media types, too. Simply use the proper media type information in step 3.

1. Locate `/System/Library/Frameworks/WebObjects.framework/Resources/MIME.plist`
2. Either Open `MIME.plist` with a text editor **or**
Open MIME.plist with the Property List Editor application.
3. Add "swf" = "application/x-shockwave-flash" inside the braces.
Add this line between the '{' and the '}'.
4. Open the WebObjects application again, and it will serve the Flash files.

Adding Media Types in WebObjects 5.0 and later on Mac OS X

These steps explain how to add support for Flash Files, but can used for other media types, too. Simply use the proper media type information in step 3.

1. Locate `/System/Library/Frameworks/JavaWebObjects.framework/Resources/ MIME.plist`
2. Either Open `MIME.plist` with a text editor **or**
Open MIME.plist with the Property List Editor application.
3. Add "swf" = "application/x-shockwave-flash" inside the braces.
Add this line between the '{' and the '}'.

4. Open the WebObjects application again, and it will serve the Flash files.

Adding Media Types in WebObjects 4.5.1 and earlier on Microsoft Windows NT or Windows 2000

These steps explain how to add support for Flash Files, but can used for other media types, too. Simply use the proper media type information in step 3.

1. Locate `$NEXT_ROOT\\Library\\Frameworks\\WebObjects.framework\\Resources\\MIME.plist`
2. Open `MIME.plist` with a text editor
3. Add "swf" = "application/x-shockwave-flash" inside the braces.
Add this line between the '{' and the '}'.
4. Open the WebObjects application again, and it will serve the Flash files.

Adding Media Types in WebObjects 5.0 and Later on Microsoft Windows NT or Windows 2000

1. Locate $NEXT_ROOT\\Library\\Frameworks\\JavaWebObjects.framework\\Resources\\MIME.p list
2. Open `MIME.plist` with a text editor
3. Add "swf" = "application/x-shockwave-flash" inside the braces.
Add this line between the '{' and the '}'.
4. Open the WebObjects application again, and it will serve the Flash files.

Published Date: Feb 19, 2012

Mac OS X: QuarkXPress 5.01 Updater Slow to Finish

Quark has reported that using the QuarkXPress 5.01 Updater on a volume that contains Mac OS X may take up to two hours to complete (http://www.quark.com/products/xpress/501knownissues.html). This document offers a workaround.
This article has been archived and is no longer updated by Apple.

Symptom

The QuarkXPress 5.01 takes one or more hours to complete when updating the QuarkXPress application on a volume that contains many hundreds of other files and folders. While not specific to Mac OS X, this includes volumes on which Mac OS X is installed. The slowdown occurs whether the update is installed in Classic or in Mac OS 9.

Solution

Move the folder containing the QuarkXPress application to a different location on the volume.

1. Create a new folder at the root of the volume.
2. Give the folder a name such as " Applications" which begins with a space character.

   Important: Do not use quotations around the folder name.
3. Drag the folder containing the QuarkXPress application into the newly-created folder.
4. Open the QuarkXPress 5.01 Updater. Follow the update instructions provided by Quark, Inc.
5. After QuarkXPress is updated, drag the folder containing the QuarkXPress application where you'd like to keep it.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.

Published Date: Feb 19, 2012

Mac OS X: Grab Service Commands Dimmed in Finder

The Grab service does not allow you to take pictures from the Finder.
This article has been archived and is no longer updated by Apple.

Symptom

Grab is listed in Finder > Services, but all of its commands are dimmed.

Solution

Use the Grab application (/Applications/Utilities) to take pictures of windows or your desktop.

You can also use the keyboard shortcut Command-Shift-4 (selected regions), Command-Shift-3 (entire desktop) to save a picture on the desktop as a PDF file.

About Grab Services

Grab services are available in applications that support services and can accept the result of the service. In the case of the Grab service, TextEdit can use Grab when a document is open, since there is a place to put the resulting image. In the case of the Finder, it has no place to put the result without creating a new document, something a service is not able to do.
Published Date: Feb 19, 2012

Mac OS X 10.2.3: Read Before You Install

This document contains the contents of the Read Before You Install PDF file contained on the Mac OS X 10.2.3 DVD included with the iMac (17-inch 1 GHz), PowerBook G4 (12-inch), PowerBook G4 (17-inch), and Power Macintosh G4 (FW 800) computers.
This article has been archived and is no longer updated by Apple.

Read Before You Install

Use the Software Install and Restore DVD that came with your computer to install Mac OS X, Classic Support, or the applications that came with your computer. You can also use the DVD to restore your computer to its original factory settings.

If installing software onto a portable computer, it is advisable that your system be powered by the power adapter during the process to ensure an uninterrupted installation. If you need to restore the computer to original factory settings, back up all essential files prior to beginning the installation.

To install Mac OS X

1. Insert the Software Install and Restore DVD that came with your computer.
2. Double-click the Install Mac OS X icon.
3. Follow the onscreen instructions.
4. Select the destination disk for installation, and then click Options.
5. Continue following the onscreen instructions. If you would like to restore your computer to its original factory settings, select Erase and Install. In most cases, choose Mac OS Extended (HFS Plus).

To continue restoring your computer to the original factory settings, follow the below instructions below for installing Classic Support and applications.

Note: To run Mac OS 9 applications in the Mac OS X Classic environment, you will need to reinstall Classic Support. See the instructions below for installing Classic Support. To install Classic Support or the applications that came with your computer.

1. Insert the Software Install and Restore DVD that came with your computer.
2. Double-click the Install Applications & Classic Support icon.
3. Follow the onscreen instructions.

To restore the computer to the original factory settings, select Restore All.

Note: iCal, iPhoto, iTunes, iChat, and iMovie are part of Mac OS X. To install them, you must follow the instructions for installing Mac OS X.

Quitting the Installer

If you need to quit the Installer before the installation process is complete, choose Quit from the Installer menu and click Restart, then hold down the mouse or trackpad button to eject the Software Install and Restore DVD. You may be able to eject the DVD by pressing the eject button on a tray-loading optical drive or the Media Eject key on the keyboard. Your computer restarts using your current startup disk.

Note: If you have already clicked Upgrade or Install, wait until installation finishes. Erasing and formatting your disk

When you install Mac OS X, you can erase the destination disk. In the "Select a Destination" pane of the Installer, click the Options button. Select Erase and Install and then choose a format. In most cases, choose Mac OS Extended (HFS Plus).

You can also divide your hard disk into several partitions before you install Mac OS X. In the Installer menu, choose Open Disk Utility and click Partition. Partitioning the disk erases the entire hard disk, so be sure to back up your files first. To install Classic Support or the applications that came with your computer onto a specific partition, the partition must contain Mac OS X. You must start up the computer from that partition and then run the installation process.

Important: Do not choose UNIX File System (UFS) as the format for the destination disk unless you need to work with this format. If you choose UNIX File System, you must install Mac OS X, Classic Support and your Mac OS 9 applications on a Mac OS Extended format disk to use them with the Classic environment.

Upgrading your applications and other software

Use Software Update to download and install the latest software versions, drivers, and other enhancements from Apple. If you are connected to

the Internet, Software Update automatically alerts you when an update is available. You can also check for updates manually by choosing System Preferences from the Apple menu and then clicking Software Update.

For best results with Mac OS X, upgrade your applications to versions that are built for Mac OS X. Check the Mac OS X website for information about available Mac OS X applications:

- http://www.apple.com/macosx/

You should also check with developers for the latest versions of your applications.

Related Documents

107073 Mac OS X 10.2: Read Before Restoring Your Computer's Software

Published Date: Oct 10, 2016

Mac OS X Server 10.2.3: CUPS Print Server Can Sometimes Prevent Queue Processing

In certain circumstances, especially in environments with high print volumes, a condition can occur that prevents the CUPS Print Server from processing queued print jobs.
This article has been archived and is no longer updated by Apple.

Symptom

1. Print jobs do not process.

2. You may see an error such as this one in the CUPS error log:

W [15/Jan/2003:11:09:49 -0600] Possible DoS attack - more than 10 clients connecting from localhost!

Solution

1. Using Text Edit or command-line editor, make the following modifications to the **cupsd.conf** file located in: `/etc/cups/cupsd.conf`

Old cupsd.conf file:

```
#
# MaxClients: controls the maximum number of simultaneous clients that
# will be handled.  Defaults to 100.
#

# MaxClients 100
```

New cupsd.config file:

```
#
# MaxClients: controls the maximum number of simultaneous clients that
# will be handled. Defaults to 100.
#
MaxClients 500
MaxClientsPerHost 100
```

2. Restart the server after making the changes to ensure all configuration files are properly read and all related services are properly started.

Published Date: Oct 10, 2016

Power Mac G4 (FW 800): No Sound After Restart

If audio is set to maximum, there is no sound after you restart the Power Mac G4 (FW 800) computer.
This article has been archived and is no longer updated by Apple.

Symptom

The computer does not make any sound after it is restarted.

Solution

1. Mute the sound by pressing and releasing the mute key on the keyboard.
2. Turn the sound back on by pressing and releasing the mute key on the keyboard.

Note: Setting the audio level to something other than the maximum setting prevents this issue from occurring.

Published Date: Oct 10, 2016

Xserve (Slot Load), Xserve G5: Using the System Identifier button to activate a boot menu

Learn how to use the System Identifier button to activate a boot menu.
This article has been archived and is no longer updated by Apple.
You can use the system identifier button on the server's front panel to initiate a limited number of firmware commands to the system without connecting a keyboard or monitor to the server (Headless Booting). You enter each command with a combination of the system identifier button and a specific light on the front panel. The steps are listed below.

1. With the power off, hold in the system identifier button while you press the power button.

2. Continue holding in the system identifier button until the top row of blue lights blinks sequentially.
This indicates that the Front Panel Mode has been activated.

3. Release the system identifier button. The rightmost light in the bottom row turns on. Press the button to light the next light in the bottom row, moving from right to left. Press the button again to change lights. Press and release the System Identifier button one or more times to move the light from right to left in the bottom row of LEDs.

The lights in the bottom row indicate (from right to left) as follows. Rows in grey are available on Xserve G5, but not on previous models of Xserve.

LED	Description
Light 1 (far right):	Start up from system disk in CD drive (also, eject any disc in the optical drive).
Light 2:	Start up from a network server (NetBoot).
Light 3:	Start up from the internal drive (leftmost, if more than one drive).
Light 4:	Bypass the current startup disk and start up from any other available startup disk.
Light 5:	Begin Target Disk Mode (all drives, including the optical drive, will appear). Note: Drives connected to a Hardware RAID card or Fibre Channel card will not appear.
Light 6:	Restore the system's default settings (reset NVRAM).
Light 7:	Enter Open Firmware (if no keyboard is connected, this option will automatically redirect Open Firmware input and output to the serial port).
Light 8: (Xserve G5 only)	Initiate diagnostics mode.

1. When the light for the action you want is on, hold in the system identifier button for at least 2 seconds, until all lights in the top row are on.

Note: If the button is released during the countdown, the Select Mode is entered.

2. Release the button.

The top row of LEDs will light across from left to right, then all LEDs will turn off and the selected function will start. If the selected function was not successful in starting up, all LEDs will flash.

Important: To use the Front Panel Mode, turn off Open Firmware Security. (Unlock the server on the front of the Xserve.) When Open Firmware Security is on, the Front Panel Mode is disabled and is indicated by all LEDs displaying short flashes, after which the server continues with the normal startup process.

Using a Keyboard to perform firmware commands

If a keyboard is connected, you can hold down various key combinations during system startup to perform the same firmware options listed in the previous section of this document. Again, a row in grey indicates a light that is available only on the Xserve G5, not previous models.

LED	Description

Light 1 (far right):	C
Light 2:	N
Light 3:	D
Light 4:	Command-Shift-Option-Delete
Light 5:	T
Light 6:	Command-Option-P-R
Light 7:	Command-Option-O-F
Light 8: (Xserve G5 only)	Command-Option-D

Published Date: Oct 10, 2016

WebObjects 5.2: UTF-8 Exception in WebObjects Web Services

WebObjects 5.2 applications using Web Services frameworks, such as JavaWebServicesSupport.framework, generate WOResponses in the default system encoding of ISO8859_1 (ISO Latin 1) even if the responses contain UTF-8 encoded international characters.
This article has been archived and is no longer updated by Apple.

Symptom

When clients of WebObjects 5.2 Web Services applications submit forms with UTF-8 encoded international characters, WebObjects ignores the content encoding specified by the requests. WebObjects instead returns responses in the default ISO Latin 1 encoding. Web Services clients expecting a UTF-8 encoded response see an ISO Latin 1 encoded response, and can stop responding and produce a java.io.UTFDataFormatException when reading the SOAP envelope.

Sample error:

Error: java.io.UTFDataFormatException: Invalid byte 2 of 2-byte UTF-8 sequence.

Solution

Developers can implement a workaround to set the encoding to the appropriate UTF-8.

1. Override dispatchRequest() by adding the following code to your WOApplication subclass (your Application.java file):

```
public WOResponse dispatchRequest(WORequest aRequest) {
aRequest.setContentEncoding("UTF-8");
WOResponse aResponse = super.dispatchRequest(aRequest);
aResponse.setContentEncoding("UTF-8");
return aResponse;
}
```

2. Rebuild and rerun your WebObjects Web Services application.

Published Date: Feb 19, 2012

Xserve (Slot Load): Combo Drive Unable to Burn Verbatim 32x CD-R Media

A Combo drive can be added as an option when ordering an Xserve (Slot Load) computer. The Combo drive on Xserve (Slot Load) may not able to burn Verbatim 32x CD-R media.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to burning Verbatim 32X CD-R media an Error 3 occurs.

Solution

Use another media other than Verbatim 32x CD-R. Other Verbatim media do not have this issue and other brands of 32x media have been verified to burn correctly.

Verbatim 32x CR-R media was only made for a limited time and is not readily available. However, if you have this media, you should avoid using it with the Combo drive in an Xserve (Slot Load) computer.

Published Date: Feb 20, 2012

Mac OS X 10.2: Font Handling and Management Technology Brief

This document contains an overview of the Mac OS X font handling and management, and a link to the Mac OS X font handling and management technology brief PDF file.
This article has been archived and is no longer updated by Apple.

Overview of Mac OS X Font Handling

From professional type controls to unlimited open fonts, from cross-platform portability to international language support-these are just a few reasons Mac OS X is the ultimate creative platform. Among other things, it opens the door to powerful new ways of using and managing fonts.

Mac OS X incorporates a new font architecture free from limitations in other operating systems. As a result, Mac OS X provides the most comprehensive support for font formats of any platform. It delivers powerful tools for font organization and navigation. It offers enhanced character coverage for truly professional typesetting. And it enables smooth cross-platform and cross-media portability.

Mac OS X Font Overview

Technology Overview			
Language	**Part No.**	**Description**	**Manual**
English	L25032B	**Using and Managing Fonts in Mac OS X** From professional type controls to unlimited open fonts, from cross-platform portability to international language support—these are just a few reasons Mac OS X v10.2 is the ultimate creative platform. Among other things, it opens the door to powerful new ways of using and managing fonts.	

Additional information

Mac OS X - Features - Fonts (http://www.apple.com/macosx/features/fontbook/)

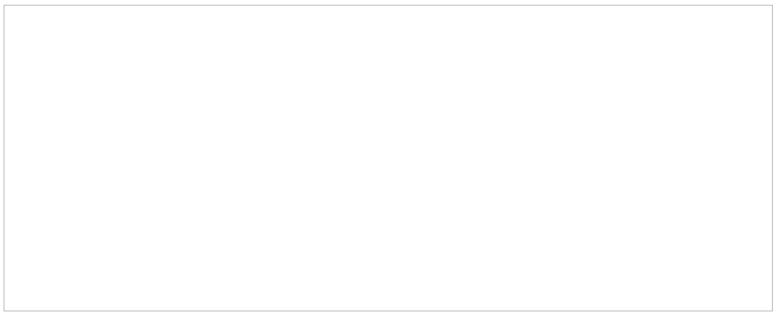
Published Date: Feb 20, 2012

iMac (17-inch 1GHz), iMac (USB 2.0): About the Video Out Port

You can use the video mirroring feature of the iMac (17-inch 1GHz) and iMac (USB 2.0) computers when a display is connected to the video out port.

This article has been archived and is no longer updated by Apple.

The iMac (17-inch 1GHz) and iMac (USB 2.0) computer has a video out port located on the rear of the computer.



1 - Video out	2 - USB	3 - FireWire	4 - Power Plug	5 - Modem
6 - Ethernet	7 - Speaker Mini Jack	8 - Headphone	9 - Audio line in	

Figure 1 iMac (17-inch 1 GHz) or iMac (USB 2.0) rear I/O ports

The video out port allows you to use video mirroring with a compatible VGA display using the Apple VGA Display Adapter (M8639G/A). You can also use video mirroring with a television or projector using S-video or composite connectors when you use the Apple Video Adapter (M9109G/A). Video mirroring allows you to see the same image that is on the iMac's flat-panel display on a second monitor, television or projector. This feature does not allow you to extend the iMac desktop with the external monitor. Both the Apple VGA Display Adapter (M8639G/A) and the Apple Video Adapter (M9109G/A) are available separately, and are required to plug in the monitor, S-video, or composite cable.

The video mirroring feature is "plug and play." Simply connect a VGA display to the Apple VGA Display Adapter, television, or projector to the Apple Video Adapter, then connect the Apple VGA Display Adapter or Apple Video Adapter to the video out port located on the back of the computer. When connecting the adapter to the computer, the screen may refresh momentarily as the iMac reconfigures itself for the new video output.

The computer tries to match the resolution of the built-in and external display. If there is no match, the computer changes both screen resolutions and may black out areas on the built-in display in order to compensate for the capabilities of the external display.

In Mac OS X, you can switch resolutions and frequencies for both the iMac flat-panel display and the external display, television, or projector using Displays pane of System Preferences.

DVD Player in Mac OS X allows video mirroring when playing a movie from a DVD-Video disc. You can view the movie image on the external VGA display, television, or projector connected to the Apple VGA Display Adapter or Apple Video Adapter, as well as on the iMac flat-panel display.

Related documents

75369 iMac (17-inch Flat Panel): About the VGA Port

88282 iMac (Flat Panel): About the VGA Port

Published Date: Feb 20, 2012

WebObjects 5: "java.lang.OutOfMemoryError" Exception

This document explains how to prevent a WebObjects application from running out of memory.
This article has been archived and is no longer updated by Apple.

Symptom

A WebObjects application may stop responding ("crash" or "hang") with a "java.lang.OutOfMemoryError" exception if the application is particularly large, maintaining a large number of active sessions, or caching too many database objects.

Solution

Assuming the memory usage of the application cannot be reduced (by limiting the number of active sessions, limiting database fetches, and so forth), the exception can be prevented by allowing the Java VM to use more RAM. Unlike other application processes, Java applications are launched with an option specifying the maximum allowed RAM usage. The default maximum is 64 MB.

Use the Java command-line option `-Xmx` to change the maximum RAM usage. There are three places where this can be set:

Method 1: Use Project Builder.

This method only affects applications launched from within Project Builder.

1. Under the Targets tab, select the application executable.
2. Under Launch Arguments, click the "+" icon to add an argument.
3. Enter: `-Xmx128m`

Method 2: Use Project Builder.

This method affects applications launched from within Project Builder, applications launched from the command-line, and applications launched from Monitor.

1. Under the Targets tab, select the main (first) target.
2. Under Settings, select Expert View.
3. Set **JVM_OPTIONS** to `-Xmx128m`
4. Save and rebuild the project.

Method 3: Use the Monitor (JavaMonitor) application.

This method only affects applications launched from Monitor.

1. Click the Applications tab.
2. Click the Config icon next to the application.
3. Under Additional Arguments, enter `-Xmx128m`
4. Click **Push All**.

About -Xmx128m

The option `-Xmx128m` sets the maximum RAM usage to 128 MB, but is only an example. Experiment with different values to find what gives the best performance. Setting the value too high may cause temporary slowdowns during garbage collection or disk paging. Some applications may benefit from setting the minimum RAM usage equal to the maximum. You can do this by setting the Java VM options to `-Xms128m -Xmx128m`.

These techniques may be used to set certain other Java VM options as well. Any option beginning with `-X` or `-D` may be specified. For more information on available arguments, see the Java runtime documentation (http://java.sun.com/j2se/1.3/docs/tooldocs/solaris/java.html#options).

Published Date: Feb 19, 2012

Xserve (Slot Load): Frequently Asked Questions (FAQ)

This document contains frequently asked questions (FAQ) about Xserve (Slot Load), with answers to those questions.
This article has been archived and is no longer updated by Apple.

Questions answered in this document:

1. What is Xserve (Slot Load)?
2. What is the maximum hard drive capacity of Xserve (Slot Load)?
3. What Apple Drive Modules (ADM) are offered with Xserve (Slot Load)?
4. Are Xserve (Slot Load) Apple Drive Modules compatible with Xserve and Xserve RAID?
5. Can the Xserve (Slot Load) serve as a host to Xserve RAID?
6. What is the maximum memory capacity?
7. What ports are available?
8. How many PCI slots are available?
9. What is the serial port intended for?
10. What is the power consumption and BTU information for Xserve (Slot Load)?
11. What is the RAID inbox CD for?
12. What graphics cards are available from Apple for Xserve (Slot Load)?
13. Which mounting racks can the Xserve (Slot Load) be installed in?
14. Does the Xserve (Slot Load) have redundant power supplies?

Question 1: What is Xserve (Slot Load)?

Answer: Xserve (Slot Load) is a rack-optimized 1U server with 4 hard drive bays.

Question 2: What is the maximum hard drive capacity of Xserve (Slot Load)?

Answer: With four Apple Drive Modules of 180 GB each (ATA/100), the total capacity is up to 720 GB.

Question 3: What Apple Drive Modules (ADM) are offered with Xserve (Slot Load)?

Answer: Standard configurations ship with 60 GB 7200 rpm ATA/133 ADM and offer 2 MB of cache. CTO options include the 60 GB ADM and a 180 GB 7200 rpm ATA/100 ADM with 8 MB of cache.

Question 4: Are Xserve (Slot Load) Apple Drive Modules compatible with Xserve and Xserve RAID?

Answer: The 180 GB ADM is compatible with Xserve and Xserve RAID.

Question 5 : Can the Xserve (Slot Load) serve as a host to Xserve RAID?

Answer: Yes, with the Apple Fibre Channel PCI card installed in the upper PCI slot of the dual PCI riser card.

Question 6: What is the maximum memory capacity?

Answer: The Xserve (Slot Load) supports up to 2 GB of memory in four DIMM slots, using PC2700 DDR SDRAM (333 MHz).

Question 7: What ports are available?

Answer: On the back panel are two (2) FireWire 800, two (2) USB, and one (1) DB-9 (RS-232) ports. A single FireWire 400 port is available on the front panel.

Question 8: How many PCI slots are available?

Answer: There are two full-length 64-bit, 66 MHz PCI slots and one (1) half-length 32-bit, 66 MHz combination PCI/AGP slot. So, if no AGP video card is installed a total of three PCI slots are available.

Question 9: What is the serial port intended for?

Answer: The DB-9 (9-pin) serial port allows administrators access the system through a serial console session using UNIX commands.

Question 10: What is the power consumption and BTU information for Xserve (Slot Load)?

Answer: The power consumption and BTU information is available in technical document 86251 "**Xserve (Slot Load): Power Consumption and Thermal Output (BTU) Information** ".

Question 11: What is the RAID inbox CD for?

Answer: If the Xserve (Slot Load) is acting as a host to Xserve RAID, the CD contains applications that need to be installed in order to configure, manage, and monitor the Xserve RAID.

Question 12: What video graphics cards are available from Apple for Xserve (Slot Load)?

Answer: Xserve (Slot Load) includes an ATI graphics card with VGA support, which is installed in the lower dual PCI slot. As a CTO option, Apple offers the ATI Radeon 8500 graphics card (bundled with AGP riser card), which has to be installed in the PCI/AGP combo slot.

Question 13: Which mounting racks can the Xserve (Slot Load) be installed in?

Answer: The server fits EIA-310-D-compliant, industry-standard 19-inch (483 mm) wide racks, including four-post racks (24 inches (607 mm), 26 inches (660 mm), and from 29 to 36 inches (734 mm to 914 mm) deep) and two-post Telco racks (center-mount brackets included).

Question 14: Does the Xserve (Slot Load) have redundant power supplies?

Answer: No.

Published Date: Oct 10, 2016

Xserve and Xserve (Slot Load): Startup Delay With SCSI or Fibre Channel PCI Card Installed

When a SCSI or Fibre Channel PCI card is installed in an Xserve or Xserve (Slot Load) and no boot path has been selected, a startup delay of up to 7 minutes may occur.
This article has been archived and is no longer updated by Apple.

Symptom

When a SCSI or Fibre Channel PCI card is installed, and no boot path has been selected, the server does not start up for up to 7 minutes, or longer. If a display is connected, a flashing question mark appears on screen during this delay.

Solution

Important: This symptom does not indicate a hardware issue.

There are two solutions to this issue.

Change the Startup Volume

1. Wait for the Xserve to startup.
2. Select a valid startup volume in the Startup Disk pane of System Preferences.
3. Use the `setstartupdisk` command as discussed in the Setting Up Mac OS X Server for Xserve manual.

Remove the SCSI or Fibre channel card

If the issue still persists, remove the SCSI and/or Fibre channel cards and test.

If the issue persists after removing the SCSI or Fibre channel card, there may be another issue. Additional troubleshooting documents that may help you are listed below.

Additional information

When the Startup Disk Preference Pane is used to select a valid startup volume, this information is written to firmware as a boot path. If a boot path on the server is missing and one of the cards mentioned above is installed, the BPS (Boot Path Search) will search through all possible SCSI IDs and LUNs looking for a startup device.

Related documents

51795 Xserve Manuals
58042 Macintosh: Flashing Question Mark at Startup
51839 Mac OS X Server for Xserve: Solving Startup Problems
106712 Mac OS X: Troubleshooting Permissions Issues

Published Date: Feb 20, 2012

Apple Cinema Display (20-inch): Using with Mac OS 9

The Apple Cinema Display 20-inch feature set is fully supported in Mac OS X. If you wish to use the Apple Cinema Display (20-inch) with Mac OS 9, you can, but some features may not be available.
This article has been archived and is no longer updated by Apple.
The Apple Cinema Display (20-inch) system requirements state that it must be used with Mac OS X10.2 or later. When you use this display with Mac OS X and the Classic environment in Mac OS X, the full range of the display's features are available.

When Mac OS 9 is used as the startup system, the display can be used, but some features, including changing the brightness settings or using the launch button to open the Monitors control panel, are not available.

To change the display's brightness, or to make other settings, open the Monitors control panel.

If you have installed an Nvidia graphic adapter you must also install the Mac OS 9 Nvidia software.

Software	Software Update Link
Nvidia Driver Update 3.0 v1.1	120110
Nvidia Graphics Firmware Updater	120168

System requirements

A full description and system requirements for the Apple Cinema Display (20-inch) are available on the Apple displays website (http://www.apple.com/displays/).

Published Date: Oct 10, 2016

WebObjects 5.3: Using Java 1.4 With Mac OS X After J2SE 5.0 Update 4 Is Installed

This article has been archived and is no longer updated by Apple.

After you install J2SE 5.0 on Mac OS X, it becomes the default virtual machine (VM) for all applications, including WebObjects applications. This document explains how to use the version 1.4.2 VM.

There are two ways to specify that a WebObjects application should use the earlier 1.4.2 VM.

To Develop with JVM 1.4.2

Use this method on a project under development. This changes the Java compiler, debugger, and VM used by Xcode.

1. Double click the default (main) target from Xcode Targets. This target will probably have the same name as your project.
2. In the Target view, select the 'Pure Java Specific' entry under the 'Info.plist Entries' --> 'Simple View'
3. In the detail view, with the 'Target VM Version' pop-up menu, select the setting '1.4*'
4. Rebuild the project.

To Deploy applications with JVM 1.4.2

Use this method on an application that is already deployed . This changes the Java VM used at runtime.

1. Stop all instances of the application if they are running.
2. Find your application's .woa file in the Finder.
3. Control-click the .woa file to display the shortcut menu, and choose Show Package Contents .
4. Open the file MacOSClassPath.txt in a text editor. (It's located at: `Contents/MacOS/MacOSClassPath.txt`)
5. Replace the single word java on the first line with the full path to the 1.4.2 Java VM.

   ```
   # JVM == /System/Library/Frameworks/JavaVM.framework/Versions/1.4.2/Commands/java
   ```

6. Re-launch the application.

Xcode generates (overwrites) the MacOSClassPath.txt file during compilation, so this process must be repeated if the application is rebuilt.

Important: WebObjects 5.3.1 and earlier has not been qualified with J2SE 5.0 Update 4. Apple does not support using this combination.

Important: WebObjects 5.3 is available only via Apple Downloads.

Published Date: Oct 10, 2016

Mac OS X 10.2: Volume or Flash Card Does Not Appear in the Finder

In some cases, MS-DOS or Microsoft Windows-formatted volumes, including some Compact Flash Media, do not appear in the Finder.
This article has been archived and is no longer updated by Apple.

Symptom

- MS-DOS or Microsoft Windows-formatted volumes (smaller than 128 GB) do not appear in the Finder.
- Compact Flash cards in a digital camera or card reader connected to the computer are available to iPhoto and Image capture, but do not appear in the Finder.

Solution

If the volume or flash card is 128 GB or larger, stop here and see technical document 107483 **"Mac OS X 10.2: MS-DOS Disk Does Not Appear in Finder"** instead.

An invisible file in the /Volumes directory is preventing the volume or card from appearing in the Finder. Delete this file to make the card appear.

Warning: This document describes how to delete an invisible file by entering commands in the Terminal application. If you are unfamiliar with Terminal and UNIX-like environments, you should proceed with caution. Entering commands incorrectly may result in data loss or unusable system software.

1. Insert the Compact Flash card in the camera or card reader, or try to get the Windows-formatted volume to appear in the Finder.

2. Open Terminal (/Applications/Utilities).

3. Type: `ls -a /Volumes`

4. Press Return. The contents of the /Volumes directory appear. This should work even though the volume or media does not appear in the Finder.

Example: The directory should looks something like this:

. .. .DS_Store ._Unlabeled Unlabeled

In this example, the file named "._Unlabeled" is the invisible file preventing the volume or Compact Flash card named Unlabeled from appearing in the Finder. The files in your /Volumes directory may be named something else, but look for two nearly identical volume names with one having the addition
of ._ at the beginning of the file name.

5. Type: `sudo rm <filename>`

Be sure to replace `<filename>` with the name of the volume or Compact Flash card that begins with "._".

Example: Using the files from the example in step 3, type the following in Terminal: `sudo rm /Volumes/._Unlabeled`

6. Press Return.

7. Type an administrator account password when prompted.

8. Type: `diskutil unmount <diskname>`

9. Be sure to replace `<diskname>` with the name of the volume or Compact Flash card. This ejects the volume or Compact Flash card from the file system.

10. If you are using a flash card, remove the Compact Flash card from the reader or disconnect the camera from the computer.

11. Reinsert the Compact Flash card or reconnect the camera, or try to use the volume in the Finder.

Published Date: Oct 10, 2016

Disk First Aid: Purpose

This article describes the Disk First Aid utility program and what it can do.
This article has been archived and is no longer updated by Apple.
Disk First Aid is a utility program that verifies the directory structure of any Mac OS Standard (HFS) or Mac OS Extended (HFS Plus) format disk.

If imperfections are found within a disk (or "volume"), Disk First Aid can be used as a first step to correct them. If Disk First Aid cannot be used to correct imperfections, other utility programs or repair methods may be used. The following table lists conditions that can be repaired using Disk First Aid:

- Disk volume
- Extent B-tree
- Extent File
- Catalog B-tree
- Catalog File
- Catalog Hierarchy
- Volume Info
- Search for locked volume name

You can save the results of a verification or repair scan as a SimpleText document.

Disk First Aid cannot scan for deleted files or folders on a volume. There are third-party products that perform these tasks, however.

For related information on Disk First Aid and Mac OS disks, please see the following articles:

Article 13628: "**Disk First Aid: What to do When It Finds an Error**"
Article 19516: "**Mac OS: Technical Overview of Disk Volume Structures**"

Published Date: Feb 20, 2012

LaserWriter: Connecting to a Macintosh via Serial Cable

If a user has a single Macintosh and a LaserWriter, is it necessary to connect the two using LocalTalk connectors, or would a serial connection like the Peripheral 8 cable work? Would there be any drawbacks to this?
This article has been archived and is no longer updated by Apple.
It is possible to connect a Macintosh to a LaserWriter and print using a serial cable in many instances, but Apple recommends the use of properly terminated LocalTalk cabling to ensure a working connection. The RS-422 (serial) port on LaserWriters manufactured after the LaserWriter Plus is normally used for LocalTalk and can be identified by its mini-circular 8 port.

Here is a partial list of LaserWriter printers Apple supports using a Peripheral 8 serial cable.

LaserWriter Pro 600
LaserWriter Pro 630
LaserWriter Pro 810
LaserWriter Select 300
LaserWriter Select 310 (This print only supports a Macintosh serial cable)
LaserWriter Select 360
Personal LaserWriter LS
Personal LaserWriter 300
LaserWriter 4/600 PS
LaserWriter 16/600 PS

Consult your LaserWriter User's Guide, it contains connection instructions. If your LaserWriter printer supports serial printing, instructions are provided.

The one drawback to a serial connection on LaserWriter printers designed for LocalTalk is that you lose access to other network services since the LocalTalk port is being used by the serial cable.

Note: Reference the User's Guide for correct printer port settings. You may have to change the pushwheel number or the dip switches.

The finished goods part number for the Peripheral 8 serial cable is M0197, the service part number is 590-0522.
Published Date: Feb 20, 2012

Surge Protectors: Purpose and Selection

Do you have any tips on protecting Macintosh analog boards against electrical surges?
This article has been archived and is no longer updated by Apple.
The usual techniques for protecting any computer product apply. Surges are the biggest cause of product failure.

Background

Electrical power surges can and do occur in all environments. In some areas, they occur regularly. In some cities, the power is very stable, while in others, the power can cut off two or three times a day, if only for a second. Even within cities or neighborhoods, there are variations.

Other factors that contribute to power fluctuations and surges include:

- Quality of the building's wiring
- Number of electrical devices
- Overloaded circuits
- Circuitry and wiring design

All of the above have a bearing on how often a particular system is prone to sustaining damage from electrical surges or spikes, brownouts, or blackouts.

At times, you may encounter situations where power surges produced damage to a system connected to a surge protector. Unfortunately, not all surge protectors give the same amount of protection.

Systems protected with surge protection devices still may sustain varying degrees of damage (from a slow leak on a chip that caused intermittent failures for months, to an outright failure, to melted chips). For example, a lightning strike 2,000 miles away from your system may be able to electronically zap a system through the phone lines. In one known case, the surge carried through the modem, into the computer, damaging the logic board, disk-drive controller board, modem, and two peripheral cards.

Which surge protection device should you buy? How much protection does a device really provide? Can it protect your system in view of your particular environmental condition?

Surge Protector Selection Tips

A single-line surge protector usually protects between hot and neutral wires. This provides minimal protection, which may be adequate for areas and environments that are very stable.

A three-line surge protector protects between:

- Hot and neutral wires
- Hot and ground wires
- Neutral and ground wires

It also has a separate fuse for each line. This offers better protection than the previously mentioned devices.

Don't forget about surge protection to your phone line, if you have a modem connected!

Surges attack over four electrical pathways: hot, neutral, ground, and via phone lines. Protecting only one can leave you vulnerable to damage. On a single-fuse system, if a surge takes out the fuse, all three sources of protection are nullified. In a three-line surge protector with three fuses, if a spike or surge takes out the first fuse, or catches only the "leading edge" of a surge, the second circuit takes over to block or reroute the surge with the third circuit absorbing the remainder.

The effectiveness of three-line protectors also depends on the construction of the device. This includes the speed with which it works and the voltages it can handle, block, or absorb. Price alone is not a reliable indicator, and not everyone needs the same type of device.

There are far more sophisticated systems for surge protection than those mentioned here. These include systems providing emergency power backup, which can cost many hundreds and thousands of dollars. The type of protection your equipment requires must be examined on a case-by-case basis.

Getting Selection Help

To determine your needs, see a qualified expert. Your electric company can conduct measurements to determine electrical activity. Have a consulting electrical engineer or electrician check your electrical environment to determine power loads and the necessary level of protection. Then,

the consultant can advise you of appropriate surge-protection requirements.

Published Date: Feb 20, 2012

Macintosh: How to Print the Screen

How do you print a screen on a Macintosh computer?
This article has been archived and is no longer updated by Apple.

1. Take a screen snapshot by pressing the Command, Shift, and 3 keys on the keyboard. This creates a picture of the screen called "Picture 1" that is stored on your hard disk.
2. Open the file called "Picture 1".
3. Choose Print from the File menu.

Published Date: Feb 20, 2012

Mac OS 9: Installing, Deleting, And Repairing Custom Icons

This article describes how to create folders that use custom icons and how to repair folders when a folder's icon becomes doesn't work or is deleted, or when a folder loses its link to an ICON file. It also describes how to delete custom icons from files and folders.
This article has been archived and is no longer updated by Apple.
The Mac OS let you modify the existing icons any non-system file, folder, or volume. These are called custom icons. They are saved into a file's resource fork, and an attribute bit is set to alert the Finder to display a custom icon. Folders and volumes do not have resource forks, however, so custom icons are saved instead to an invisible file named ICON. This file is located at the root level of the folder or volume.

Creating a Folder That Uses a Custom Icon

Follow these steps to create a folder that uses a custom icon:

1. Select the graphic to use for an icon. An icon in the Get Info window of any document is one possible source. You can also use a graphic application to create your own.
2. Copy the graphic to the Clipboard by choosing Copy from the Edit menu.
3. In the Finder, select the icon you want to change.
4. Choose Get Info from the File menu.
5. Ensure that the Locked box in the lower-left corner of the Get Info window is not checked. You cannot customize the icon of a locked file.
6. Click the icon at the upper-left of the Get Info window or press the Tab key to select it.
7. Choose Paste from the Edit menu.
8. Click the Close box to close the Get Info window.

If the selected graphic is bigger than the icon in the Get Info window, it automatically shrinks to fit.

Deleting Custom Icons

To delete a custom icon, do the following:

1. In the Finder, select the file.
2. Choose Get Info from the File menu. An information window will appear.
3. Click the icon in the top left portion of the window.
4. A rectangle/outline will appear around the custom icon.
5. Press the Delete key to delete the custom icon.

Custom Icon Repair

Sometimes custom icons created for files, folders, or hard disks no longer work or are deleted. If the link between the folder or volume and the ICON file is lost, the Finder may display a generic document icon in place of the custom icon. When attempting to edit this icon through Get Info, you get an error message saying that the item cannot be found. If you have a missing custom icon on a folder, follow these steps:

1. Create a new folder.
2. Copy the folder's contents into the new folder.
3. Drag the empty folder to the Trash.
4. Give the new folder a custom icon by following the steps in the preceding section.

Published Date: Feb 20, 2012

Display Monitors and Geometric Distortion

This article explains why computer monitors experience geometric distortion, and describes possible solutions.
This article has been archived and is no longer updated by Apple.

Overview

The earth's magnetic field often distorts a monitor's visible raster, which is the lighted portion of the display. A monitor properly adjusted at the factory may appear significantly different when it is set up in its new environment. The raster may be tilted, off-center, or various forms of distortion such as soft corners or raster edges that may not be perfectly straight.

The influence of the earth's magnetic field is not peculiar to Apple monitors. All monitors are affected to some degree. The distortion depends on the location of the monitor. This can be demonstrated by moving the monitor to another location or by rotating it 90 degrees. The movement may either improve or worsen the shape and position of the raster. Usually, the effects of the earth's magnetic field are primarily cosmetic. The active area of the screen, where work is actually performed, is still very usable.

Below are some tips to help you determine whether a monitor exhibiting geometric distortion needs to be repaired or is simply being influenced by some environmental interference.

Change Location

If your monitor has a distorted raster, move the monitor to another location and note any changes in the display. If the display changes when the monitor is moved or rotated, the monitor's environment is the source of the distortion. Servicing the monitor will make no difference.

Remove Metal Objects From the Area

Operating a monitor near large metal objects such as desks, file cabinets, or bookshelves may worsen the situation. If possible, rearrange the work area so that large metal objects are as far from the monitor as possible.

Look for Other Environmental Influence

If the raster jitters, or has bars or lines in the display, this may indicate another type of environmental interference. If the monitor is close to another monitor, electrical appliance, or other electronic gear, turn off the power to the other unit(s) to see whether the monitor returns to normal operation.

Fluorescent lighting fixtures are also common sources of external interference. The lights can arc internally (although the lights don't flicker) and cause interference with the monitor. In these cases, turn off the lights momentarily to see whether the display distortion stops.

How To Verify Environmental Interference as the Cause of Distortion

The best way to verify environmental interference as the cause of the distortion is to remove the unit from the building and check for the same symptoms at another location. If it is intermittent, look for electric devices that operate intermittently. These include, but are not limited to, coffeemakers, copy machines, refrigerators and other household appliances.

Caution

You can compensate for some of the geometric distortions mentioned by performing various monitor adjustments. However, Apple does not recommend these corrections. Remember that the monitor left the factory within specification. Although a particular environment can distort a properly adjusted monitor, by adjusting the monitor to suit a particular environment, you are actually changing the monitor's correct factory settings.

If the monitor is moved, or the environment in which it operates is changed (including everything from rearranging furniture to the construction of a nearby building), the resulting geometric distortion could be worse because the monitor is no longer set to its factory specifications.

Published Date: Feb 20, 2012

Things that can keep your PowerBook or iBook from going to sleep

The following activities may prevent a PowerBook or iBook computer from sleeping unless a low-power condition occurs:
This article has been archived and is no longer updated by Apple.

- The PowerBook or Energy Saver control panel Sleep slider selections are set to "Never."
- The serial driver is open and active.
- File sharing is turned on.
- AppleTalk is active (even if the computer is not logged on to a file server, and even if the computer is not connected to an AppleTalk network). Check the AppleTalk control panel or the Chooser to determine whether AppleTalk is active on your computer.
- An internal modem's auto-answer function is on.
- Some third-party applications keep the computer busy, not allowing idle processor time for sleep to occur.
- If you have any System 7.5 Apple Guide help file windows open.
- The CSW 4000 Series Background extension. Use the Extensions Manager control panel to turn off the CSW 4000 Series Background extension. This disables background printing but allows the PowerBook or iBook to sleep normally.
- Version 1.0.3 or earlier of the PowerBook control panel. In this case, the computer does not sleep automatically after the "System Sleeps" time interval has elapsed. (You can still put the computer to sleep by selecting Sleep from the Special menu or closing the computer's cover.)

Additional Troubleshooting Tips for PowerBook 5300 and PowerBook 190

There is a known issue with the password security feature on the PowerBook 5300 and 190 series computers. If you open the Password Security control panel and password security is turned on and it is set to "ask for password on wake", the PowerBook does not sleep. One workaround is to turn off the "ask for password on wake" feature. If this is done, the PowerBook can be put to sleep. This issue can be resolved by installing the System 7.5 Update 2.0 (or later system software), which includes the Password Security 1.0.3 control panel.

Check to make sure that there are no extensions or control panels in the System Folder that may be causing the computer to assume that the system is busy. (For example, the FocalPoint II INIT has been shown to cause this; others may also.)

Make sure there are no applications currently running that would keep the system busy. (For example, Microsoft Word's automatic repagination option keeps the system awake.)

An extension called Insomnia came on the Install Me First disk with some versions of the system software. If this extension is mistakenly put into the Extensions folder in the active System folder on the hard disk, the PowerBook does not go to sleep. It should be removed from the hard disk. Insomnia is an extension that keeps the PowerBook from going to sleep during the installation process when starting from the Install Me First disk.

Published Date: Feb 20, 2012

Mac OS: Why the Clean Up Command Leaves Gaps Between Icons

Why is it that when I use the Finder's "Clean Up by Name" command, with the Option key held down, the result is often large gaps between the icons in the window?

This article has been archived and is no longer updated by Apple.

This is a feature of the Finder that was first introduced with System 7. It prevents the overlapping of long filenames so you can read each icon's complete name, regardless of its length.

The Mac OS allows a long filename on an icon to run into the next spot on the grid rather than placing another icon there. The Finder skips one spot on the grid and places the next icon in the next available spot. This creates extra space between icons. The Finder does this regardless of the "Always snap to grid" choice in the Views control panel. If you don't like the extra space, you can manually place the icons where you want them. Alternatively, try shortening the name of the file or folder that is causing the gap.

Published Date: Feb 20, 2012

Mac OS: Troubleshooting a File that Won‘t Go Away

This article discusses steps to erase a file that cannot be emptied from the Trash.
This article has been archived and is no longer updated by Apple.

Symptom

A message says that a file cannot be emptied from the Trash. If a file cannot be emptied from the Trash it may be that the file is locked, or a sign of serious directory damage.

Solution

Try these steps to empty the Trash:

- Hold down the Option key while emptying the Trash.
- Start up the computer with extensions off and empty the Trash.
- Start up the computer from the Mac OS disc and empty the Trash.
- Verify and repair the disk with Disk First Aid or other appropriate repair utility.

If the file is locked, hold down the Option key while choosing Empty Trash from the Special menu. If it is a hard disk error, it is important to repair the issue since it may become worse and other files may be damaged or lost.

To repair the hard disk's directory structure, start up the computer from the Mac OS disc and verify or repair the hard disk with Disk First Aid. If Disk First Aid finds an error but is unable to repair it, consider backing up the hard disk and reinitializing it with Drive Setup or other appropriate utility.

There is one more technique you can try, but depending on the cause of the issue, it may not work. If the following steps don't help, or if the issue reappears, you should initialize the hard disk to completely correct the issue.

The following file and folder names are not important, just the concept.

1. Create a folder on the desktop called Test.
2. Drag the file in question from the Trash to the Test folder.
3. Open the application program used to create the file. (If you do not have the original application, use SimpleText.)
4. Create a new file, and save it to the desktop with the same name as the problematic file.
5. Drag the file you just saved from the desktop to the Test folder. You are prompted to replace the file. Replace it. This should eliminate the file.

If this technique does not work, and emptying the Trash still does not erase the file, back up hard disk and reinitialize it using Drive Setup or other appropriate disk formatting utility.

Published Date: Feb 19, 2012

Mac OS: Installing Fonts and Sounds

This article offers several methods for adding fonts and sounds to Mac OS.

This article has been archived and is no longer updated by Apple.
The methods described below are applicable to all versions of System 7, Mac OS 8, and Mac OS 9.

There are three ways to install fonts and alert sounds. The first of these is the easiest and is the preferred method. With all three methods, it is best to first quit all applications before making any changes/additions to the system's fonts or alert sounds.

Method One (preferred)

1. Drag the font or sound onto the closed System Folder icon.
2. A dialog box appears asking you to confirm the action. Click OK. The files are moved to the correct location(s).

Method Two

- Drag fonts onto the closed Fonts folder. The Fonts folder is inside the System Folder.
- Drag sounds onto the closed System file. (See Note 1.)

Method Three (sounds only)

- Drag the sound into the window of the opened System file. (The System file can be opened as if it were a folder.)

Notes:

1. If you don't get a confirming alert message after dragging a sound onto the System file icon, the sound is probably the wrong resource type and was put into the System Folder instead of the System file. Open the System Folder and see if the sound was left sitting inside the System Folder instead of being installed in the System file. If that happens, Method One may work.

Published Date: Feb 20, 2012

Mac OS 9: System Startup Stops ("Freezes") at Happy Mac

Disk First Aid 8.6 or later resolves a situation in which a Mac OS 9 computer stops responding ("freezes") at the Happy Mac icon during the system startup process.
This article has been archived and is no longer updated by Apple.

Symptom

The computer stops responding ("freezes") at the Happy Mac icon during the system startup process.

This occurs most often in configurations that involve AppleShare IP Servers acting as Macintosh Manager Servers. However, it can happen to any computer with a hard disk that was initialized using the version of Drive Setup included with Mac OS 9.0 through 9.0.4, or by choosing the Erase Disk command from the Special menu. Normally the issue occurs on computers with a very large number of files (greater than 100 000); and it may occur after large numbers of files were moved, copied, or deleted.

Solution

Repair the affected volume with Disk First Aid version 8.6 or later. If you reinitialize the hard disk using the Erase Disk option in the Special menu, be sure to use Disk First Aid afterwards to repair the volume.

You may download Disk First Aid 8.6.1 from software download document 75102: "**Disk First Aid 8.6.1: Software and Information**"
Published Date: Feb 19, 2012

Mac OS: How to Set up Extended Desktop and Turn on Video Mirroring

This document explains how to set up an extended desktop and turn on video mirroring.
This article has been archived and is no longer updated by Apple.

Extended desktop

When more than one monitor is connected to your computer, the desktop area can be extended to create a larger work area. To use this feature, your computer must generally have two or more video cards installed. (Some Apple computers can work with two monitors without requiring an additional video card. Check the documentation that came with your computer.)

The Mac OS automatically recognizes when two or more monitors are connected to the computer. You can choose which monitor has the menu bar, and you can arrange the logical desktop space to match the physical placement of the monitors (which one is on the left or right, for example).

To make these settings:

1. Open the Monitors control panel (Mac OS 9) or the Displays pane of System Preferences (Mac OS X).
2. Click Arrange.
3. Follow the on-screen instructions.

Figure 1 Mac OS 9 Monitors control panel

Figure 2 Mac OS X Displays pane of System Preferences

Video mirroring

The video mirroring feature allows you to see the same screen on two different monitors. This is particularly useful in a classroom or presentation setting where you need to be in front of an audience that is watching one screen, and you are watching the other.

To use this feature, your computer must generally have two or more video cards installed. (Some Apple computers can work with two monitors without requiring an additional video card. Check the documentation that came with your computer.)

In Mac OS 9, choose Turn Video Mirroring On from the Video Mirroring portion of the Control Strip.

Figure 3 Video Mirroring portion of the Control Strip

Follow these steps to turn on video mirroring in Mac OS X:

1. Open System Preferences.
2. Click Displays.
3. Click the Arrange tab (if necessary).
4. Click Mirror Displays to enable this option.

Published Date: Feb 20, 2012

Macintosh Computers and LaserWriters: Noise Levels

This article provides information about noise levels from Macintosh computers and Apple LaserWriter printers.
This article has been archived and is no longer updated by Apple.
Acoustic noise is usually perceived as being how 'loud' a machine appears to a listener. To compare the 'loudness' of products, the International Standards Authority (ISO) has produced a number of specifications (including ISO 7779 and ISO 9295) that define acoustic noise terminology and how it can be measured, and a specification (ISO 9296) defining how the measured values should be declared in a consistent way. ISO has not, however, laid down any acoustic noise limits that IT Equipment (ITE) should meet; this has been left to government and commercial authorities to set.

The specifications describe two measures of acoustic noise, Sound Power and Sound Pressure. Sound Power is effectively the total 'loudness' of a device while Sound Pressure is the measure of noise at a point in space. For Sound Power and all Sound Pressure positions, there are two measurement modes; idle, where the ITE is turned on and operational but not doing useful work; and operational, where the ITE is doing useful work (e.g. disk access). Sound Power is not affected by a change in environment whereas Sound Pressure is affected, since extraneous acoustic noise will affect the measurement.

Acoustic noise is measured by sound pressure meters (it measures all sound coming from the ITE and all other influences, whether audible or not), and is statistically adjusted, called 'A-weighting', to relate it to the audible hearing range. These values are expressed as decibels (dBA).

Noise Levels, Macintosh Computers				
	Sound Power		Sound Pressure at 25 cm	
Model	**Operational**	**Idle**	**Operational**	**Idle**
iBook	42 dBA	34 dBA	37 dBA	29 dBA
iMac	44 dBA	43 dBA	32 dBA	31 dBA
iMac (Slot loading)	39 dBA	35 dBA	31 dBA	27 dBA
PowerBook G3 Series (Bronze keyboard)	49 dBA	36 dBA	41 dBA	23 dBA
Power Macintosh G3 desktop enclosure	44 dBA	42 dBA	36 dBA	34 dBA
Power Macintosh G3 (Blue and White)	45 dBA	42 dBA	30 dBA	29 dBA
Power Mac G4	51 dBA	48 dBA	44 dBA	39 dBA
Notes * All sound pressure values were measured 25 cm from the front of each computer. * The hard drive noise levels vary within the same model from the same company and may result in slightly different results than that reported above.				

LaserWriters	Standby	Printing
LaserWriter, LaserWriter Plus	< 45 dB	< 50 dB
LaserWriter II	< 50 dB	< 60 dB
Personal LaserWriter	< 40 dB	< 54 dB
Personal LaserWriter 300/320	36 dB	46 dB
LaserWriter Select 300	36 dB	43 dB
LaserWriter Select 360	36 dB	47 dB
LaserWriter Pro 600/630	34 dB	49 dB
LaserWriter 4/600	36 dB	46 dB
LaserWriter 16/600	34 dB	52 dB
LaserWriter Pro 810	40 dB	53 dB
LaserWriter 12/640 PS	31 dB	50 dB
Color LaserWriter 12/600 PS	45 dB	55 dB
LaserWriter 8500	~35 dB	~50.5 dB

Published Date: Feb 20, 2012

Newer Technology: Support and Upgrades

This article contains support links and software upgrade links for a Newer Technology product sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company:	**Newer Technology**
Company Web Site:	http://www.newertech.com/

Product:	**FireWire 2 Go**
Product Description:	Type II CardBus FireWire card for Macintosh PowerBook G3 Series with CardBus bay.
Product Support Site:	http://www.newertech.com/support/index.html
Product Updates Site:	http://www.newertech.com/support/index.html
Technical Support	
Telephone:	888.656.8324
email:	http://www.newertech.com/support/webtech.html
FAQ:	http://www.newertech.com/products/firewire/firewire2go/index.html

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker web site at: http://www.versiontracker.com

Published Date: Feb 20, 2012

ABL Electronics: Support and Upgrades

This article contains support links and software upgrade links for ABL Electronics products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company: **ABL Electronics Corporation**
Company Web Site: http://www.ablcables.com/

Product:	ABL Electronics USB A to B type 6 FT cable
Product Description:	USB cable 6 FT (1.8 Metres) with Type A connector on one end and Type B connector on the other end of the cable.
Technical Support	
email:	**sales@ablcables.com**

Product:	FireWire S400 4 Pin/6 Pin 15 FT cable
Product Description:	IEEE 1394 FireWire cable 15 FT (4.6 Metres) with 4 Pin connector on one end and 6 Pin connector on the other end of the cable.
Technical Support	
email:	**sales@ablcables.com**

Product:	FireWire S400 6 Pin/6 Pin 15 FT cable
Product Description:	IEEE 1394 FireWire cable 15 FT (4.6 Metres) with 6 Pin connector on both ends of the cable.
Technical Support	
email:	**sales@ablcables.com**

Product:	8 Pin serial cable
Product Description:	8 Pin serial cable
Technical Support	
email:	**sales@ablcables.com**

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker web site at:
http://www.versiontracker.com

Published Date: Feb 20, 2012

IBM: Support and Upgrades

This article contains support links and software upgrade links for IBM products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company: **IBM**
Company Web Site: http://www.ibm.com/

Product:	IBM ViaVoice
Product Description:	Speech recognition software
Product Support Site:	http://www-4.ibm.com/software/speech/support/
Product Updates Site:	http://www-4.ibm.com/software/speech/support/

Technical Support

Telephone: US - 919.517.0222 (30 days)
US - 900.555.2582 (Pay-per-minute)
Canada - 416.383.7607 (30 days)
email: **Vvmacus@uk.ibm.com**
FAQ: http://www-4.ibm.com/software/speech/support/faqvvmac.html

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker web site at: http://www.versiontracker.com

Published Date: Feb 20, 2012

MacSoft: Support and Upgrades

This article contains support links and software upgrade links for MacSoft products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company:	**MacSoft**
Company Web Site:	http://www.wizworks.com/macsoft/
General Help Section: (non-Product specific)	http://www.wizworks.com/macsoft/mactech/gen_01.html

Product:	Age of Empires
Product Description:	Strategy Game
Product Support Site:	http://www.wizworks.com/macsoft/mactech/ageofempires.html
Product Updates Site:	http://www.wizworks.com/macsoft/mactech/ageofempires_ftp.html
Technical Support	
email:	http://www.wizworks.com/cgi-bin/formmailw.pl?init=1&GameName=Age+of+Empires+-+Mac
Hints:	http://www.wizworks.com/macsoft/mactech/ageofempires_hints.html

Product:	Civilization Call to Power
Product Description:	Strategy Game
Product Support Site:	http://www.wizworks.com/macsoft/mactech/CivCall_faq.html
Product Updates Site:	http://www.wizworks.com/macsoft/mactech /CivIICall_ftp.html
Technical Support	
email:	http://www.wizworks.com/cgi-bin/formmailw.pl?init=1&GameName=Civilization+II+-+Call+to+Power+-+Mac
Hints:	http://www.wizworks.com/macsoft/mactech/CivIICall_hints.html

Product:	Civilization II Gold
Product Description:	Strategy Game
Product Support Site:	http://www.wizworks.com/macsoft/mactech/CivIIGold.html
Product Updates Site:	http://www.wizworks.com/macsoft/mactech/CivIIGold_ftp.html
Technical Support	
email:	http://www.wizworks.com/cgi-bin/formmailw.pl?init=1&Gamename=Civilization+II+Gold+Edition-+Mac
Hints:	http://www.wizworks.com/macsoft/mactech/CivCall_hints.html

Product:	Falcon 4.0
Product Description:	Combat Flight Simulator Game
Product Support Site:	http://www.wizworks.com/macsoft/mactech/falcon40.html
Product Updates Site:	http://www.wizworks.com/macsoft/mactech/falcon40_ftp.html
Technical Support	
email:	http://www.wizworks.com/cgi-bin/formmailw.pl?init=1&GameName=Falcon+4.0

Product:	Tom Clancy's Rainbow Six
Product Description:	Action/Strategy Game
Product Support Site:	http://www.wizworks.com/macsoft/mactech/rainbowsix.html
Technical Support	
email:	http://www.wizworks.com/cgi-bin/formmailw.pl?init=1&Gamename=Rainbow+Six+-+Mac

Product:	Total Annihilation
Product Description:	Strategy Game
Product Support Site:	http://www.wizworks.com/macsoft/mactech/totalamac.html
Product Updates Site:	http://www.wizworks.com/macsoft/mactech/totalamac_ftp.html
Technical Support	

email: http://www.wizworks.com/cgi-bin/formmailw.pl?init=1&Gamename=Total+Annihilation+-+Mac
Hints: http://www.wizworks.com/macsoft/mactech/totalamac_hints.html

Product:	Unreal Tournament
Product Description:	Action Game
Product Support Site:	http://www.wizworks.com/macsoft/mactech/utmac_faq.html
Product Updates Site:	http://www.wizworks.com/macsoft/mactech/utmac_ftp.html

Technical Support

email: http://www.wizworks.com/cgi-bin/formmailw.pl?init=1&Gamename=Unreal+Tournament+-+Mac
Hints: http://www.wizworks.com/macsoft/mactech/utmac_hints.html

Product:	Seventeen Style Studio
Product Description:	Experiment with cosmetics and accessories on your computer.
Product Support Site:	http://www.wizworks.com/macsoft/mactech/seventeen.html
Product Updates Site:	None

Technical Support

email: http://www.wizworks.com/cgi-bin/formmailw.pl?init=1&Gamename=Seventeen+Style+Studio+-+Mac

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker web site at: http://www.versiontracker.com

Published Date: Feb 20, 2012

Bungie: Support and Upgrades

This article contains support links and software upgrade links for Bungie products sold through the Apple Store.

Note: Apple support for third-party products sold through The Apple Store varies by country.

This article has been archived and is no longer updated by Apple.

Company:	**Bungie**
Company Web Site:	http://www.bungie.com/

Product:	Myth - The Total Codex
Product Description:	Action/Strategy Game Collection
Product Support Site:	http://www.bungie.com/support/
Product Updates Site:	http://www.bungie.net/downloads/patches.shtml

Technical Support

Telephone: 312.255.9600
email: **macsupport@bungie.com**

Software Update Information

If you want to be notified automatically of software updates for this product, use the Version Tracker web site at: http://www.versiontracker.com

Published Date: Feb 20, 2012

PowerBook (FireWire): Issue With Target Disk Mode

I'm trying to connect my PowerBook (FireWire) to another computer through FireWire Target Disk Mode (TDM). However, the PowerBook hard disk never appears on the desktop of the host computer.
This article has been archived and is no longer updated by Apple.
Make sure you are following the directions in the following article:

Article 58583: "**PowerBook (FireWire): FireWire Target Disk Mode.**"

Most importantly, the host computer must have Mac OS 8.6 or later and FireWire 2.3 or later installed.

If you are still unable to get the PowerBook hard disk to appear on the desktop of the host computer, you may be running into an issue with FireWire TDM that requires a software update. To remedy this issue, use the Software Update control panel to download and install Mac OS 9 Update (9.0.4) on the host computer. You can also download the update from Apple Software Updates at http://www.apple.com/swupdates/ .

For more information on the Software Update Control Panel, please see the following article:

Article 60504: "**Mac OS 9: How To Use The Software Update Control Panel**."
Published Date: Feb 20, 2012

AirPort Software Base Station (Mac OS 9): Sharing an Internet Connection over Ethernet

This article explains how to share an Internet connection (modem or Ethernet) from an AirPort Software Base Station to client computers that are not equipped with AirPort.
This article has been archived and is no longer updated by Apple.

Sharing a modem Internet connection

If you use PPP as your connection to the Internet, client computers connected to a Software Base Station using Ethernet can be configured using the DHCP server on the Software Base Station computer.

Settings in the AirPort application on the Software Base Station computer

In the Network pane of the Software Base Station panel, select the checkbox for "Also support Ethernet client computers using NAT." This turns on DHCP services as well as NAT (Network Address Translation) and routing for the Ethernet connection.

Note: Versions of AirPort software earlier than 1.3 say "Also provide IP addresses on Ethernet" in the Network pane.

Settings in the TCP/IP Control Panel on the client computers

Select "Using DHCP Server" from the Configure pop-up menu. This instructs the client computer to obtain an IP address from the DHCP server on the Software Base Station computer.

Sharing an Ethernet Internet connection

If you use Ethernet as your connection to the Internet, client computers connected using Ethernet to a Software Base Station must be manually configured. The DHCP server on the Software Base Station cannot be used to provide an IP address to the client computers.

Settings in the AirPort application on the Software Base Station computer

In the Network pane of the Software Base Station panel, select the checkbox for "Also support Ethernet client computers using NAT." This only enables the routing service and NAT over Ethernet and does not provide DHCP services.

Note: Versions of AirPort software earlier than 1.3 say "Also provide IP addresses on Ethernet" in the Network pane.

Settings in the TCP/IP Control Panel on the client computers

1. Set the computers to use a manually assigned IP address by selecting the option to Configure: Manually.
2. Enter an IP address in the range of `10.0.2.51` to `10.0.2.254` in the IP Address field.
3. Enter `255.255.255.0` in the Subnet mask field.
4. Enter `10.0.2.1` in the Router address field.
5. Enter the IP address of the name server in the Name Server addr. field. This IP address is usually provided to you by your Internet service provider.

Notes:

Software base station is not a feature of Mac OS X. For related information, see technical document 106507: "**Mac OS X 10.1: AirPort Software Base Station Is Not an Included Feature**"

Wireless Internet access requires an AirPort Card, AirPort Base Station, and an Internet service provider, for which fees may apply. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access**."

Published Date: Feb 20, 2012

QuickTime Streaming Server: Making PlaylistBroadcaster Open and Start at Server Startup

I have three separate playlists that I would like to have start up automatically when my Mac OS X Server is starting up. How can I do this?
This article has been archived and is no longer updated by Apple.
Below is the text of the startup script that runs at Mac OS X Server startup. As you can see, it is the script that launches QuickTime Streaming Server (QTSS) the first time.

```
File:  /private/etc/startup/1900_QuickTime
========================================
#!/bin/sh

. /etc/rc.common

if [ "${QTSSERVER}" = "-YES-" ]; then
   ConsoleMessage "Starting QuickTime streaming server"

   /usr/sbin/QuickTimeStreamingServer
fi
```

Modify this script in the 'if' portion. Add the absolute path to a shell script that starts up your playlist broadcasters. The line should go after "/usr/bin/QuickTimeStreamingServer".

```
File:  /private/etc/startup/1900_QuickTime
========================================
#!/bin/sh

. /etc/rc.common

if [ "${QTSSERVER}" = "-YES-" ]; then
   ConsoleMessage "Starting QuickTime streaming server"

   /usr/sbin/QuickTimeStreamingServer
   /path/to/shell/script/start_3_playlist_broadcasters
fi
```

Note: Paths to the actual hinted media files in the playlist and broadcast config files should not be relative, but should be absolute because the playlists themselves will be running at startup time, and not necessarily from their own local subdirectories.
Published Date: Feb 20, 2012

iMovie 1.0.2: Read Me

This article comprises the Read Me for iMovie version 1.0.2. This software was released by Apple on 28 April 2000 and is available for downloading from the Apple Web site. Use the following URL to access the download:

http://www.apple.com/imovie/download/

Description
iMovie is an application that integrates digital video (DV) capture, scene editing, titling, transition effects, and audio to create broadcast-quality movies.

Requirements

- A Power Mac G4 or PowerBook FireWire
- Mac OS 9.0.4 or later
- QuickTime 4.1 or later
- 64 megabytes (MB) of random-access memory (RAM)
  iMovie requires a minimum of 16 MB of free memory.
- A CD or DVD drive
- 2 gigabytes (GB) of available hard disk space highly recommended
- A display that supports 800 x 600 resolution and thousands of colors (1024 x 768 and millions of colors recommended)
- A built-in FireWire (IEEE 1394) port
- A 4-pin to 6-pin FireWire cable (for use with DV camcorders)

This article has been archived and is no longer updated by Apple.

About iMovie 1.0.2

Welcome to iMovie, an application that integrates digital video (DV) capture, scene editing, titling, transition effects, and audio to create broadcast-quality movies.

For the latest news and information about iMovie including a list of camcorders and DV devices that work with iMovie, go to the iMovie World Wide Web site at www.apple.com/imovie

The following topics are covered in this document:

- System requirements
- Installing iMovie
- Using iMovie
- Hardware compatibility
- Third-party software
- Solving problems

System Requirements

- A Power Mac G4 or PowerBook FireWire
- Mac OS 9.0.4 or later
- QuickTime 4.1 or later
- 64 megabytes (MB) of random-access memory (RAM)
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- A built-in FireWire (IEEE 1394) port
- A 4-pin to 6-pin FireWire cable (for use with DV camcorders)

Installing iMovie

Double-click the iMovie Installer icon and follow the onscreen instructions. The application and components will be placed in a folder named iMovie at the top level of your hard disk.

Using iMovie

- When you open iMovie for the first time, click Create a New Project and follow the onscreen instructions.

For optimal performance

- Quit any other applications. iMovie should be the only application open.
- Do not switch monitor resolutions while rendering is in progress.

File formats supported

You can import the following file formats:

- Still images: PICT, JPEG, GIF, BMP, and Photoshop
- Audio files: AIFF, MP3, CD audio tracks

You can export the following file formats:

- QuickTime movies
- Still images: PICT and JPEG
- Video to DV tape

Note: iMovie does not work with clips that have a 16:9 aspect ratio.

Important: Do not unplug DV devices during import or export processes.

Fonts supported

The titling feature in iMovie supports TrueType, as well as AdobeTM PostScriptTM, fonts.

Capturing live video from a camcorder

If you want to capture live video into iMovie from your DV camcorder, Apple recommends that you have a tape in your camcorder.

To capture live video from a camera, follow these steps:

1. Switch the camera to Camera mode and set the Lock/Standby switch to Standby.
Note: If you have a tape in the camcorder and video is not playing through to iMovie, make sure the tape's write-protection tab is unlocked.

2. Make sure the camera's Demo mode is disabled.
Some cameras switch to a Demo mode when left on Standby without a tape inserted. Check for a Demo function in your camcorder's settings menu and disable it.

Important: Capture video to projects on local hard disks. Do not capture video to projects saved on a server. Video cannot be reliably captured over a network to projects saved on a server.

Renaming clips

You can rename clips within iMovie. However, do not change the names of clips in your project folder. This will break links to the media in your project file.

Maximum movie and clip size

The maximum length of a movie is limited only by the available disk space on your computer. There is no limit to the number of clips that can be combined to create a single movie. However, the maximum file size of an individual movie clip is 2 GB. If you exceed this 2 GB limit during an extended duration capture, iMovie will continue the capture into a second clip.

Doing other work while rendering

You can continue working in a project while rendering transitions or titles. Performance may decrease if you have more than two render processes running simultaneously.

Emptying the Trash resets the Undo command

If you empty the Trash in iMovie, you will not be able to undo any actions taken before emptying the Trash.

About audio

This version of iMovie fixes an audio problem that introduced distortion in loud audio levels coming from the camcorder.

Changing the sound input device

Do not change the sound input device while iMovie is running. iMovie uses an external or built-in microphone as the sound input device to record your voice. To change the sound input device, quit iMovie, then select the desired device in the Sound control panel or the Control Strip.

Hardware Compatibility

Using DV devices

iMovie will not work with more than one DV device connected to your computer via FireWire.

Using additional storage devices

iMovie requires hard disks with fast transfer and access rates. If you're using additional storage devices, make sure you use drives with a sustained transfer rate of 3.6 MB or higher.

The following storage devices do not meet the minimum transfer rate or capacity requirements to work with iMovie:

- SuperDisk drives
- Floppy disk drives
- Zip drives
- AppleShare or IP-mounted file servers

Tips for using certain camcorders

Using Canon camcorders

If you cannot pause the camcorder during rewind or fast-forward in iMovie, press the Stop button instead of the Pause button.

Using Panasonic camcorders

If you try to export to tape and the camcorder LCD flashes the message "Check DV Input," then goes into Record/Pause mode but doesn't start recording, do the following:

1. Stop the camcorder and cancel the export.
2. Add a few extra seconds of black before the recording, or increase the time to wait for the camcorder in the Export Movie window.
3. When you export to tape, watch for black frames being sent to the camcorder on the LCD then press the Still button on the camcorder's VTR controls to begin recording.

Using the Sharp VL-PD3

If you attempt to export to tape and the camcorder goes into Record/Pause mode, but never actually starts recording, do the following:

1. Stop the camcorder and cancel the export.
2. Add a few extra seconds of black before the recording, or increase the time to wait for the camcorder in the Export Movie window.
3. When you export to tape, press the Play button on the camcorder's VTR controls to begin recording.

Third-Party Software

Using QDesign Music Codec 2 Professional Edition sound compression

If you plan to use this sound compression software with iMovie, you must first export a movie through QuickTime Player using this codec and register the software with its serial number. You can then export movies with QDesign Music Codec 2 sound compression through the Expert export settings in iMovie.

Solving Problems

Video standard of the camcorder doesn't match the video standard of a project

Before you create a project, connect the camcorder to your computer and turn the camcorder on. If you are using a PAL-format DV camcorder, iMovie will recognize the device and create the project in PAL format.

Performance is slow or a message says memory is low

- Quit any applications running in the background.
- Increase the amount of memory allocated to iMovie by doing the following:
    1. Quit iMovie.
    2. Locate the iMovie application (not the alias) and click its icon once.
    3. From the File menu, choose Get Info.
    4. Choose Memory from the Show pop-up menu.
    5. Increase the number in the Preferred Size field to 30720, then close the window and restart iMovie.

A message says the device is too slow

If you're using a FireWire storage device and a message says the device is to slow, you may need to update the device driver software. Go to the manufacturer's Web site and download the latest device driver. Install the driver software and restart your computer, then restart iMovie. For more information, contact the device's manufacturer.

No video appears on the monitor when capturing video in Camera mode

If you can control your camcorder within iMovie using Camera mode, but are not receiving any video on the computer's monitor while your camcorder is still on, disconnect the FireWire cable from the computer, then reconnect the cable.

A discrepancy occurs between the playhead reading at the end of a clip and the clip's duration

There is a one-frame difference between the duration of a clip and the playhead reading when the playhead is parked on the last frame. This is normal and will not affect your project.

You can't export a movie to a PAL camcorder

If you cannot record to your PAL camcorder, contact the manufacturer and check the specifications for your device. Certain PAL devices have FireWire (IEEE 1394) input disabled.

Audio dropout happens in movies that are exported to tape

If you experience audio dropout in a movie that you have exported to tape, return to your project and lower the volume level of the affected clip with the volume slider in the Audio Viewer. Then re-export your movie.

You can't delete iMovie resource files

If you experience trouble deleting iMovie resource files, do the following:

1. Select the file you want to delete.
2. Choose Get Info from the File menu.
3. Make sure there is no checkmark in the Locked checkbox.
4. Drag the file to the Trash.
5. Choose Empty Trash from the Special menu.

Published Date: Feb 20, 2012

About AppleShare IP Web & File 6.3.2

This article provides the Read Me for AppleShare IP Web & File 6.3.2.
This article has been archived and is no longer updated by Apple.
AppleShare IP Web & File 6.3.2 has been replaced by a newer software version and is no longer available. This document is provided for those who may still be using the software.

For recent downloads, refer to the Apple Downloads page at
http://www.apple.com/support/downloads/ and search AppleShare IP.

For related information, refer to article 106121: "AppleShare IP 6.3.x: Installing Downloadable Updates"

Description

AppleShare IP Web & File 6.3.2 fixes a potential security problem in the Web server in versions of AppleShare IP 6.1 and later. When an invalid range request is made to the Web server by a client computer, the Web server can return an extra 32 kilobytes (kb) of data.

Requirements

To upgrade to AppleShare IP Web & File 6.3.2, you must have an iMac, Power Macintosh, Macintosh Server, or Workgroup Server with a PowerPC G4, G3, 604e, 604, 603e 6500 series, or 601 microprocessor that has the following installed:

- Mac OS 9.0.4 (If you have a Macintosh Server G4 with Mac OS 9.0.3 installed, you do not need to upgrade to Mac OS 9.0.4.)
- AppleShare IP version 6.3.1

Note: If you have AppleShare IP 6.1, 6.2 or 6.3, first upgrade to Mac OS 9.0.4 and AppleShare IP 6.3.1 before you install AppleShare IP Web & File 6.3.2.

About AppleShare IP Web & File 6.3.2

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About AppleShare IP Web & File 6.3.2

AppleShare IP Web & File 6.3.2 fixes a potential security problem in the Web server in versions of AppleShare IP 6.1 and later. When an invalid range request is made to the Web server by a client computer, the Web server can return an extra 32 kilobytes (kb) of data.

Requirements for running the update

To upgrade to AppleShare IP Web & File 6.3.2, you must have an iMac, Power Macintosh, Macintosh Server, or Workgroup Server with a PowerPC G4, G3, 604e, 604, 603e 6500 series, or 601 microprocessor that has the following installed:

- Mac OS 9.0.4 (If you have a Macintosh Server G4 with Mac OS 9.0.3 installed, you do not need to upgrade to Mac OS 9.0.4.)
- AppleShare IP version 6.3.1

Note: If you have AppleShare IP 6.1, 6.2 or 6.3, first upgrade to Mac OS 9.0.4 and AppleShare IP 6.3.1 before you install AppleShare IP Web & File 6.3.2.

Installing AppleShare IP Web & File 6.3.2

To install AppleShare IP Web & File 6.3.2:

1. Open the Extensions folder within the System Folder on your server and drag the old version of the "AppleShare IP Web & File" extension to the trash.
2. Drag the "AppleShare IP Web & File" icon from the AppleShare IP Web & File 6.3.2 package into the Extensions folder.
3. Restart your computer.

Published Date: Feb 20, 2012

POP Mail Collection Relies on Header Information

When a mail server collects mail using POP (Post Office Protocol), it relies on the recipient's name being in the mail header. If the mail server cannot find a local recipient in the email header, it will send the mail to the Postmaster. Email sent through mailing lists and or as a blind carbon copy (BCC) are two common situations where the intended recipient is not listed in the email header.
This article has been archived and is no longer updated by Apple.
The list of addresses included in the header fields (To: and CC:) are not used by an SMTP (Simple Mail Transfer Protocol) server to route mail to the final destination. The purpose of these fields is purely for display, and to allow email clients to reply, and perform other functions that have nothing to do with mail routing.

Mail routing is achieved through a set of SMTP commands that a client sends to a server (or that one server sends to another server). These commands are separate from the message headers and body. Blind carbon copy, for example, is implemented by using the SMTP commands to route mail to the destination addresses, but not printing the BCC address anywhere in the message text itself. That way, the user receives the mail, but there is no evidence in any of the emails that this happened. The only evidence that the user received the mail would be located in the SMTP logs on a mail server. Similarly, mailing lists have the list address--not the individual user's address--printed as the destination in the header.

Once mail is delivered to a POP mailbox, the information contained in an SMTP stream is lost. If the header text of the email does not contain the recipient information, the mail server has no way to regain that lost information to determine the true recipient of the message. When this happens, the mail server routes the mail to the local "Postmaster" account.

Some mailing lists work correctly even if the mail appears to be addressed to the list, and not the user. These lists add additional fields in the header indicating the true destination of the email. In addition to addresses listed in "To:" and "CC:", the mail server looks for the following headers to find the destination:

- X-Real-To:
- Envelope-To:
- X-POP3-Rcpt:

To see if you are experiencing this issue, you can inspect your full email header (most email clients have a "View Header" feature). Look for a local user account listed in the "To:" and "CC:" fields or any of the fields mentioned above. If you see no email address for your server listed, or if you see a local address in a field other than those mentioned above, then the mail server is behaving correctly in delivering this mail to the Postmaster.

This limitation of the POP collection method can lead to the symptom described in article 86029: "**AppleShare IP 6.x: Some Mail is Misrouted to Postmaster**"

Published Date: Feb 20, 2012

QuickTime Streaming Server 2.0.1: Read Me

This article comprises the Read Me for QuickTime Streaming Server version 2.0.1. This software was released by Apple on 03 May 2000. It is available for download from the Apple Software Updates Web site at http://www.apple.com/swupdates/.
This article has been archived and is no longer updated by Apple.

Description

QuickTime Streaming Server streams QuickTime-compatible media to client applications that support QuickTime, including a Web browser with the QuickTime plug-in.

Requirements

- Power Macintosh G4, Power Macintosh G3, Macintosh Server G3, and Macintosh Server G4. The iMac, iBook, and PowerBook are not supported as QuickTime Streaming Servers.
- The latest version of Mac OS X Server must be installed. Refer to the Apple Support site: www.apple.com/support for information on obtaining this release.
- At least 64 MB of random-access memory (RAM). If you anticipate heavy traffic on your server, Apple recommends 512 MB of RAM and 350 MHz or higher processor speed, 3 Ultra Wide SCSI drives, and an Ethernet card with DEC chip driver.

About QuickTime Streaming Server 2.0.1

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What's New With QuickTime Streaming Server 2.0.1

QuickTime Streaming Server 2.0.1 addresses several product and Open Source issues and provides general product enhancements such as:

- improved audio and video sync for streams broadcasted using the Playlist Broadcaster.
- improved logging of client error messages.
- improved server CPU performance when serving non-optimized hinted QuickTime movies.

It also fixes this problem:

- Unwanted clicks on audio tracks, especially when a file isn't optimized for streaming.

System Requirements

- Power Macintosh G4, Power Macintosh G3, Macintosh Server G3, and Macintosh Server G4. The iMac, iBook, and PowerBook are not supported as QuickTime Streaming Servers.
- The latest version of Mac OS X Server must be installed. Refer to the Apple Support site: www.apple.com/support for information on obtaining this release.
- At least 64 MB of random-access memory (RAM). If you anticipate heavy traffic on your server, Apple recommends 512 MB of RAM and 350 MHz or higher processor speed, 3 Ultra Wide SCSI drives, and an Ethernet card with DEC chip driver.

Installing and Setting Up QuickTime Streaming Server Software

To install and set up QuickTime Streaming Server software, follow these steps:

1. When updating from a previous version of QuickTime Streaming Server you must stop streaming service and quit QuickTime Streaming Server Admin.

2. From the WorkSpace Manager, double-click the QTSS_2.0.1.tar file. Don't try to use the tar command in Terminal.app to extract the

file. It will not install the files properly.

3. Click the Unarchive button.

4. Double-click the QTSSInstaller.assistant icon.

5. Follow the onscreen instructions. Once you've answered the license agreement, you will need to switch to the Installer application which has launched and opened as a background window. Bring the window to the foreground before you continue.

6. Follow the onscreen instructions to complete the installation.

7. Choose Server Administration from the Apple menu, then choose QuickTimeStreamingAdmin.

8. Choose Settings from the Server menu to start configuring your server.

For help on using QuickTimeStreamingAdmin and setting up your server to stream hinted media, choose QuickTime Streaming Help from the Help menu. You can also access streaming help by choosing "Streaming media" from the Server Administration Help table of contents.

Modifying Configuration Files

If you enter a string that includes spaces in a configuration file, you must put quotations marks around the string.

For example, "My Streaming Server" instead of My Streaming Server.

Technical Specifications

- Clients: Streams media to any computer that has QuickTime 4 or later installed. You can download QuickTime client software from the QuickTime Web site at: www.apple.com/quicktime.
- Concurrent connections: Serves up to 2000 users.

Support

Web Sites

Check these Web sites for tips, solutions to problems, or any patches that may become available after the release of the software:

- QuickTime Streaming Server Web site: www.apple.com/quicktime/servers
- Apple Support Web site: www.apple.com/support
- QuickTime Streaming Server Support Web site: http://www.info.apple.com/support/macosxserver/qtss.html

For information on using the QuickTime Proxy Server refer to the QuickTime Streaming Server Support Web site.

QuickTime Streaming Server Mailing List

To receive information about QuickTime Streaming Server updates, join the QuickTime Streaming Server mailing list. Through the list you can share experiences, questions, and comments with others who use the software. Apple employees may monitor the list, but Apple does not guarantee that questions sent to this list will be answered. For more information about joining the mailing list, see the Apple mailing lists Web site at www.lists.apple.com.

Open Source

The Darwin Streaming Server, which is the complete Open Source code for the QuickTime Streaming Server, is server technology that allows you to stream QuickTime media to clients across the Internet using industry-standard RTP and RTSP protocols. For information about the Darwin Streaming Server project, see Apple's Open Source Web site at: www.publicsource.apple.com.

Using QuickTime Player

- The demo version of QuickTime Player provided on your Mac OS X Server computer does not support streaming, hinting, or authoring, so you may be unable to view some QuickTime media using this version of QuickTime Player. To view QuickTime streaming media, you need version 4.0 or later of the QuickTime client software running on Mac OS or Windows. To utilize the authentication features of QuickTime Streaming Server, you need QuickTime Player 4.1 or later. You can download the latest version of QuickTime client software from the QuickTime Web site at: www.apple.com/quicktime.

Published Date: Feb 20, 2012

USB Printer Sharing: Using an Internet Location File

This article explains how to use a Internet Location File with USB Printer Sharing.
This article has been archived and is no longer updated by Apple.

USB Printer Sharing and Routed Networks

USB Printer Sharing uses an industry standard protocol called SLP (Service Location Protocol) to locate shared printers on an IP (Internet Protocol) network. A router can be configured to block all SLP traffic or to block SLP multicast. In either case, USB Printer Sharing will not be able to locate printers that are shared on the other side of the router. In order to use USB Printer Sharing to print through a router that does not pass SLP traffic, you must create a Internet Location File of the shared printer. You use this Internet Location File on the client computer as a link to the shared printer on the other side of the router. For example, PPP (point-to-point protocol) does not pass SLP traffic, so you can not locate printers shared with USB Printer Sharing over a dialup connection.

Using a Internet Location File

After you share a printer from a host computer with USB Printer Sharing, you can create a link to that printer that can be used to access the shared printer from computers that are unable to look up the printer using NSL. To create and use a Internet Location File that links to a shared printer:

1. Open the USB Printer Sharing control panel on the host computer (the computer sharing the printer).

2. Select the My Printers tab.

3. Drag the name of the shared printer out to the desktop.

Doing this creates a printer Internet Location File. See Figure 1.

Figure 1: Internet Location File

4. Transfer the printer Internet Location File to the client computer (Using email, ftp, removable media, etc.)

5. Open the USB Printer Sharing control panel on the client computer.

6. Turn on USB Printer Sharing by clicking the Start button in the Start/Stop tab.

7. Select the Network Printers tab.

8. Drag the printer Internet Location File into the Network Printers tab.

At this point, the USB Printer Sharing control panel on the client computer attempts to initiate an IP connection with the host computer (this can take a few minutes). If the client computer is able to make an IP connection with the host computer, the name of the shared printer appears in the Network Printers tab on the client computer. If the name of the shared printer does not appear in the in the Network Printers tab, it is an indication that the client computer is not able to initiate an IP connection with the host computer.

Published Date: Feb 20, 2012

USB Printer Sharing: Usage and Compatibility

This article contains usage and compatibility information about USB (Universal Serial Bus) Printer Sharing.

This article has been archived and is no longer updated by Apple.

Usage

USB Printer Sharing was designed for small work group environments and is not intended to provide the same complex functionality found on some high-end print spoolers.

Compatibility

The following is a list of compatible printers. Please check with the printer vendor for current compatibility information.

PostScript Printers:

All USB PostScript printers compatible with Desktop Printer Utility 1.2 and LaserWriter 8.7 are compatible with USB Printer Sharing 1.0. This includes USB PostScript printers from Canon, GCC, Hewlett-Packard, Lexmark, Tektronics and Xerox.

Ink Jet Printers:

Alps:

- Please contact Alps for current compatibility information.
  http://www.alpsusa.com/

Brother:

- Please contact Brother for current compatibility information.
  http://www.brother.com

Canon:

- Please contact Canon for current compatibility information.
  http://www.canon.com/
  http://www.canon.co.uk/

Epson

- Please contact Epson for current compatibility information.
  http://www.epson.com/

Hewlett-Packard:

- Please contact Hewlett-Packard for current compatibility information.
  http://www.hp.com/

Lexmark:

- Please contact Lexmark for current compatibility information.
  http://www.lexmark.com

Oki Data:

- Please contact Oki for current compatibility information.
  http://www.okidata.com/

Additional compatibility information is available here:

- http://www.allusb.com/USBPrinterSharing.html

TA26977_USB_Printer_Sharing_Usage_and_Compatibility.pdf

Published Date: Feb 20, 2012

AirPort Admin Utility 1.2: Network Tab Explained

The Network tab in AirPort Admin Utility 1.2 changed to increase functionality, and to allow for different network configurations. This article explains the features of the revised Network tab.
This article has been archived and is no longer updated by Apple.
The following is a detailed explanation of each option in the Network Tab of the AirPort Admin Utility version 1.2.

Figure 1 AirPort Admin Utility 1.2 Network Tab

Distribute IP addresses

When you select "Distribute IP addresses", options such as DHCP (Dynamic Host Configuration Protocol) and NAT (Network Address Translation) are available. These options are explained in this article.

When this checkbox is unselected, the base station acts as a bridge. This makes the base station pass network traffic from the wireless network to the wired network without manipulation. When you configure the base station to join your two networks in this way, your wireless client computers must each have TCP/IP (Transmission Control Protocol/Internet Protocol) configurations that are valid for the wired network.

Note: You can set up bridging as a troubleshooting step if you think that your Internet Service Provider's (ISP) network does not work with some feature of the base station.

For more information on bridging see article 58597: "**AirPort Base Station: Configuring As A Bridge**".

Share a single IP address (using DHCP & NAT)

This is one of two options you can choose when you select the Distribute Internet Protocol Addresses checkbox.

When you select "Share a single IP Address (using DHCP & NAT)", the Base Station receives an IP Address from your ISP. The Base Station shares this IP address with the wireless clients through NAT. For more information on NAT see article 58514: "**AirPort: What is Network Address Translation?**". When you select this option, the AirPort Base Station also acts as a DHCP server and distributes IP Addresses in the range of 10.0.1.2 to 10.0.1.50.

Note: NAT and DHCP are enabled on the wireless interface of the base station only. Configuring the base station to use NAT and provide DHCP service on the Ethernet interface is discussed below.

Ethernet client computers also share a single IP address (using NAT)

When you select "Ethernet client computers also share a single IP address (using NAT)", it enables NAT on the Ethernet network to which the AirPort Base Station is connected. Some cable and DSL (Digital Subscriber Line) ISPs use a 10.0.1.2-10.0.1.254 addressing scheme, so you should leave this checkbox unselected if you use cable or DSL as your ISP.

Note: If your cable or DSL ISP uses IP addresses outside the 10.0.1.2-10.0.1.254 range, you may not cause any issues with their network if you use this option, but you should contact your ISP before you enable this option.

When you leave this checkbox unselected, only the wireless clients share a single IP Address and use the NAT function of the Base Station.

Important: If you leave "Enable DHCP server on Ethernet" unselected, you must manually configure the TCP/IP settings for the client computers on the wired network as follows:

- IP Address: `10.0.1.x` (where `x` is a number in the range 51 - 254).
- Subnet mask: `255.255.255.0`
- Router address: `10.0.1.1`
- Name server addr: Use the DNS address appropriate for your ISP, i.e. the settings that are being used by the base station.

Share a range of IP addresses (using only DHCP)

This is one of two options you can select when you select the Distribute IP (Internet Protocol) Addresses checkbox.

When you select "Share a range of IP addresses (using only DHCP)", the Base Station is not performing NAT, but instead is distributing a range of IP addresses that are valid for the network to which the base station is connected.

Enable DHCP server on Ethernet

When you select "Enable DHCP server on Ethernet" it enables DHCP services from the Base Station on Ethernet. This checkbox should **not** be

selected if you already have a DHCP Server on your Ethernet network, or if you have a cable modem. This can cause unexpected behavior, including computers losing their connections to the Ethernet network.

Note: Some cable modem ISPs may not be affected by this option. Contact your ISP for more information. Most DSL ISPs are not affected by this option. If you encounter strange behavior, disable this option and see if the behavior persists. Contact your ISP for more information.

When you leave this checkbox unselected, the Base Station provides DHCP services to only the wireless clients.

Note: When you leave this checkbox unselected, you can still take advantage of NAT by manually configuring the TCP/IP settings for the client computers on the wired network. Refer to the section above.

Enable AirPort to Ethernet bridging

When you select "Enable AirPort to Ethernet bridging", all traffic is moved between the wired and wireless side. When this is not selected, for example, a wired client of an AirPort Base Station could not see a wireless client of the base station in the Chooser.

For related information, please see:

Article 106021: "**AirPort: How to Set Up Bridging When Using a Cable Modem**"

Article 106016: "**AirPort: How to Set Up File Sharing Between AirPort and Ethernet Computers**"

Note: Wireless Internet access requires an AirPort Card, AirPort Base Station, and an Internet service provider, for which fees may apply. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access.**"

Published Date: Feb 20, 2012

Mac OS: Launcher Extends Below Bottom of Screen

This article describes an issue where the Launcher window extends beyond the bottom of the screen.
This article has been archived and is no longer updated by Apple.

Symptom

The Launcher window extends below the bottom of the screen.

Solution

When a control panel is opened, the Finder adds a resource to the control panel that stores its window position. This is so that the control panel window will open in the same place the next time the control panel is opened.

The addition of this resource to the Launcher can cause the Launcher to function incorrectly. To correct this, follow these steps:

1. Start up the computer from the Mac OS Install disc.
2. Find the Launcher Items folder in the System Folder of the hard disk.
3. Drag the Launcher Items folder out of the System Folder to the hard disk. **Do not throw it away.**
4. Locate the Launcher Preferences in the Preferences folder, which is in the System Folder on the hard disk.
5. Drag the Launcher Preferences file to the Trash.
6. Locate the Launcher in the Control Panels folder, which is in the System Folder on the hard disk.
7. Drag the Launcher to the Trash.
8. Perform a custom installation of the Launcher from the Mac OS Install disc. (See Note 1.)
9. Open the Control Panels folder in the System Folder on the hard drive and select Launcher.
10. Choose Get Info from the File Menu.
11. Choose General Information from the pop-up menu.
12. Click Locked. Selecting the Locked option prevents the Finder from modifying the file.
13. Start up the computer from the hard disk.
14. Open the Launcher.
15. Close the Launcher.
16. Drag the Launcher Items folder from the hard disk back into the System Folder on the hard disk.

Notes

1. For more information on performing a custom installation, please see the following articles:

Article 31288: "**Mac OS 9: Installing or Removing Individual Components**"
Article 50055: "**Miscellaneous Manuals**". Select Troubleshooting Handbook - Reinstalling Your Computer Software.

Published Date: Feb 20, 2012

Identifying the ports of iBook computers

This article has been archived and is no longer updated by Apple.

Learn about the external ports and connectors for your iBook, with pictures and descriptions.

Because port arrangement varies between iBook models, it is necessary to know which model you have.

iBook models included in this article:

- iBook
- iBook (FireWire)
- iBook (Dual USB)
- iBook (Late 2001)
- iBook (14.1 LCD)
- iBook (16 VRAM)
- iBook (14.1 LCD 16 VRAM)
- iBook (Opaque 16 VRAM)
- iBook (32 VRAM)
- iBook (14.1 LCD 32 VRAM)
- iBook (800 MHz 32 VRAM)
- iBook (900 MHz 32 VRAM)
- iBook (14.1 LCD 900 MHz 32 VRAM)
- iBook G4
- iBook G4 (14-inch)
- iBook G4 (Early 2004) (both sizes)
- iBook G4 (Late 2004) (both sizes)
- iBook G4 (Mid 2005) (both sizes)

Below is a picture of the left side of the original iBook:

Input/output ports on left side of original iBook computers
A Internal 56 Kbps modem
B 10/100 Base-T Ethernet
C USB (Universal Serial Bus) 1.1 port
D Sound output

Below is a picture of the right side of the iBook:

The power adapter port is on the right side of the iBook. When the battery is charging, the power adapter port glows amber. It glows green when the battery is fully charged.

Note: The underside of the iBook contains two charging contacts. For more information on these charging contacts, please see article 58438: "**iBook: Description of Charging Contacts on Underside**."

Below is a picture of the left side of an iBook (FireWire) computer:

Input/output ports on left side of iBook (FireWire) computers, from rear to front:
Internal 56 Kbps modem
10/100 Base-T Ethernet
USB 1.1 port
FireWire 400 port

Sound output

For more information on the sound out and composite video out port, see the following articles:

Article 88041 : "**iBook (FireWire): How to Select a Compatible Composite Video Resolution**"
Article 88040: "**iBook (FireWire): Composite Video Cable Not Interchangeable**" Below is a picture of the left side of the iBook (Dual USB) computer:

Input/output ports of iBook (Dual USB), iBook (Late 2001), and iBook (14.1 LCD) computers

A Kensington security slot
B Internal 56 Kbps modem
C 10/100 Base-T Ethernet
D FireWire 400 port
E two USB 1.1 ports
F RGB video output port
G Audio/video port
H Reset button

Below is a picture of the left side of the iBook (16 VRAM) computer:

The reset button has been removed from the left side panel on iBook (16 VRAM) and later computers. It has been replaced by a keyboard shortcut. To perform a hard reset, simultaneously press Control-Option-Shift-power. For more information on the reset function, see technical document 14449, "**PowerBook and iBook: Resetting Power Management Unit (PMU)**".

Input/output ports of iBook (16 VRAM), iBook (14.1 LCD 16 VRAM), iBook (Opaque 16 VRAM), iBook (32 VRAM), iBook (14.1 LCD 32 VRAM), iBook (800 MHz 32 VRAM), iBook (900 MHz 32 VRAM), iBook (14.1 LCD 900 MHz 32 VRAM), iBook G4, iBook G4 (14-inch), both sizes of iBook G4 (Early 2004), both sizes of iBook G4 (Late 2004), and both sizes of iBook G4 (Mid 2005) computers

1 Internal 56 Kbps modem
2 10/100 Base-T Ethernet
3 FireWire 400 port
4 two USB 1.1 ports (iBook (Early 2004) and iBook (14-inch Early 2004) computers have two USB 2.0 ports)
5 Video output port
6 Sound output port

The power adapter port is on the right side of the iBook (Dual USB) and later iBook computers.

Published Date: Feb 20, 2012

.Mac: How to Add Photos to Messages Sent With WebMail

This document explains how to include a photo in messages sent from Mac.com addresses when using the WebMail service.

This article has been archived and is no longer updated by Apple.

When logged in to Mac.com WebMail, follow these steps:

1. Click on Preferences from any Mac.com WebMail page
2. Click the Photo checkbox to enable that option.
3. Click Choose (located below "Insert Photo Here").
4. Click Browse, navigate to the image you'd like to use, and select it.
5. Click Apply.
6. When you are returned to the Preferences page, click Save (at the bottom of the page).

You can use any square GIF or JPEG image. For the best possible results, use iPhoto or another photo editing application to create a 64- by 64-pixel image.

If you select a new photo signature but you don't see it in the Preferences page, you may need to clear your browser's cache. Once this is done, click Reload or Refresh to refresh the Preferences page and view your updated photo signature.

If recipients can't see your photo, make sure they are using either Mac.com WebMail or the Mac OS X Mail application and that your Photo preference is enabled. The photo seen by a recipient is determined by the state of your preferences at the time they download/view the message, not at the time that you send the message.

Published Date: Oct 10, 2016

.Mac Backup requires membership

If you see an alert telling you that Backup requires a .Mac membership, it could be caused by a network issue, the files you are backing up, or software you have installed.

This article has been archived and is no longer updated by Apple.

Home network

If you have a home network, simplify it by connecting the computer you are using directly to the modem, then try to back up from there. If you are able to do so successfully, some element of your network may be causing the disconnect.

Proxy servers

Contact your ISP to see if it uses proxy servers, which may prevent the Backup application from communicating with the iDisk servers.

Specific files

It is possible that a certain file may be causing the issue.

1. Open Backup.
2. Choose a single item to back up, such as a single QuickPick or your Address Book contacts.
3. Click Backup Now.

   If the error still occurs, continue to the next troubleshooting section. If the file backs up OK, you have found the cause. It's one of the files you are backing up. Try adding more items that you want to back up, and test again. Keep trying until you isolate the item causing the issue. If you create a new file with that data, it will usually resolve the situation and allow you to back up the data.

Norton Internet Security Software

If you have Norton Internet Security Software installed, see Symantec's article on this topic.

Keychain settings

There may be a conflicting or damaged entry in your Keychain.

1. Open Keychain Access. It's in the Utilities folder (/Applications/Utilities).
2. Delete all items whose kind is .Mac password.
3. Open System Preferences and reenter your account information in the appropriate section.

If deleting the Keychain entry does not fix the issue, use Keychain First Aid. Keychain First Aid is available from the Window menu in Mac OS X 10.3, and for Mac OS X 10.1 through 10.2.8, you can download it.

Published Date: Oct 10, 2016

Backup: Requires Internet Connection and .Mac Membership When First Opened

.Mac authentication is only required the first time Backup is opened, and when you back up to iDisk.

This article has been archived and is no longer updated by Apple.

.Mac membership authentication takes place when you first open Backup in order to make sure you have a valid .Mac membership. .Mac membership authentication is also required when you back up to your iDisk.

If you change the backup destination to CD/DVD after authenticating your .Mac membership, the next time you open Backup the authentication process is not required. You don't even need to be online to back up to CD/DVD. However, if the destination is changed back to iDisk, you will be required to authenticate your .Mac membership again.

Note: If you open Backup after the first authentication, you will see an alert box with this message: "iDisk Server is Unreachable. The iDisk server is either unavailable or unreachable. Please try again later." The options are to select "Open Network Prefs" or "OK". If you click "OK", Backup will open with CD/DVD selected.

Related Documents

86096 .Mac: User Name Required to Restore Files Using Backup

Published Date: Oct 10, 2016

.Mac: Backup "You have already backed up another Macintosh using this .Mac account..." Alert

Backup is intended to back up files from one computer to one iDisk at a time. If you try to back up two computers to one iDisk, the alert described in this document appears.
This article has been archived and is no longer updated by Apple.

Symptom

The an alert box with this message appears:

> "You have already backed up another Macintosh using this .Mac account. The information in the iDisk Backup folder from the other computer will be completely erased. Do you want to continue?"

Solution

Backup is intended to back up files from one computer to one iDisk at a time. To back up more than one computer at a time, use one of the following solutions:

- Restore currently backed up files from iDisk to the original computer before continuing.
- Back up to optical media (such as a CD-R/CD-RW or DVD-R disc) instead.
- Before backing up, transfer files that are to be backed up from multiple computers to a single computer, then use Backup to archive the files on that computer.
- Drag files you want to back up to a different folder on the iDisk, such as the Documents folder.
- Use a different .Mac account and iDisk for each computer.

Warning: If you have the same user short name on more than one computer, this alert message will not appear. However, even if it does not, you must not attempt to back up multiple computers to the same iDisk. This may result in unpredictable behavior, including either undesired overwriting of previously stored data or failure (without warning) to save the new data.

Related Documents

86101 .Mac: CD-R / DVD-R Drive Compatibility with Backup
106824 Mac OS X: How to Change User Short Name

Published Date: Oct 10, 2016

.Mac Backup: Some Preference Files Cannot Be Backed Up Because of Incorrect Permissions

Backup cannot back up certain Preference files.
This article has been archived and is no longer updated by Apple.

Symptom

When using the Backup application to try to back up the Preferences folder, an alert appears with this message:

> "Error reading file '/Users/user_name/Library/Preferences/com.apple.preference_name.plist'.
> There was an error reading this file from disk."

The only option is to click OK. Clicking OK results in an unsuccessful backup.

Solution

Some files in a user's Preferences folder may be created with permissions set incorrectly. These permissions prevent Backup from reading preference files with this permissions issue.

As a workaround, you can selectively choose not to back up these files.

1. Drag the Preferences folder from your Home directory into the Backup window.
2. Open the Info drawer so you can deselect individual files. Select the folder, click the Info button, and deselect the files (see Figure 1.)

Figure 1 Backup Info Drawer

Note: Two files that may cause this issue are:

- com.apple.loginwindow.plist
- com.apple.NetInfoManager.plist

You may modify permission settings by entering commands in the Terminal application. Users who are unfamiliar with Terminal and UNIX-like environments should proceed with caution. The entry of incorrect commands may result in data loss and/or unusable system software. Improper alteration of permissions can result in reduced system security and/or exposure of private data. For further information, see technical document 106712, "**Mac OS X: Troubleshooting Permissions Issues**".
Published Date: Oct 10, 2016

iMac (Slot Loading) and Mac OS X 10.2: Screen Effects Stops Responding

After installing Mac OS X 10.2 on an iMac (Slot Loading) computer, Screen Effects may stop responding ("freeze") as it is being configured, or after some period of use.
This article has been archived and is no longer updated by Apple.

Symptom

Screen Effects may stop responding:

- while changing preferences from one screen effect preview to another
- after an extended period of use
- while configuring screen effects

Solution

Update to Mac OS X 10.2.3.

You can update from a previous version of Mac OS X 10.2 by using Automatic Software Update. For more information on this feature, see technical document 106704, "**Mac OS X: How to Update Your Software**". Because some updates are prerequisites for others, you may need to use Software Update more than once to get all desired updates.

An installer is also available from Apple Software Downloads (http://www.apple.com/swupdates/).

Published Date: Feb 19, 2012

iTunes: "None of the items in this playlist can be burned to CD" Alert

AIFF or Audible files cannot be burned to CD as MP3 files.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to burn a CD from a playlist that includes AIFF, Audible.com files, or an audio stream, an alert box with this message appears:

> "None of the items in this playlist can be burned to CD."

Solution

AIFF or Audible files cannot be burned to CD as MP3 files. You must burn them as AIFF or as Audio CDs. To choose Audio CD as the format for burning:

1. Choose Preferences from the iTunes menu for Mac or the Edit menu for Windows.
2. Click Advanced.
3. Click Burning in the toolbar.
4. Click "Audio CD" to enable that option.
   Audio streams (including radio stations in iTunes) cannot be recorded and cannot be burned to any type of disc.

Notes

1. Audible.com allows for a single set of Audio CDs to be created from their purchased content.

2. iTunes software may be used to reproduce materials. It is licensed to you only for reproduction of non-copyrighted materials, materials in which you own the copyright, or materials you are authorized or legally permitted to reproduce. If you are uncertain about your right to copy any material, you should contact your legal advisor.

Published Date: Oct 10, 2016

Mac OS X 10.2: SD/MMC Camera Only Available in "Disk Drive" Mode

Some cameras that use SD/MMC storage can be connected to your Macintosh in two different modes: as a camera, or as a disk drive. In some cases, after using the camera in "Disk Drive" mode, it will no longer be available if you switch to "Digital Camera" mode.
This article has been archived and is no longer updated by Apple.

Symptom

In some cases, after using the camera in "Disk Drive" mode and switching it to "Digital Camera" mode, it may no longer be recognized by Image Capture or iPhoto. This may also occur if you have used the SD/MMC storage card in a FireWire or USB card reader connected to your Macintosh, and then return the card to the camera in "Digital Camera" mode.

Note: Even if iPhoto or Image Capture do not recognize the camera, the pictures on the storage card remain intact. No data has been lost.

Solution

Continue to use the camera in "Disk Drive" mode, and it will remain available in Image Capture and iPhoto.

To restore the card to its original state:

1. Download all images to your Macintosh. Either connect the camera directly while in "Disk Drive" mode, or place the SD/MMC storage card in a FireWire or USB card reader, then download the pictures using Image Capture or iPhoto.
2. After the pictures are downloaded, use the camera to reformat the card.

Important: Reformatting the card will erase all images stored on it.

Additional information

The camera uses different protocols to communicate with your Macintosh in the different modes, but the camera can be recognized by Image Capture and iPhoto in either mode. The only visible difference is the camera appears on the Desktop when it is connected in "Disk Drive" mode.
Published Date: Feb 19, 2012

Apple Remote Desktop: Cannot Connect to Configured Mac OS X Server 10.2

If an Apple Remote Desktop client is a Mac OS X Server hosting Password Server, special configuration may be necessary. Apple Remote Desktop needs to be configured for a user in the server's local domain. That user account must be set to use a Basic password.
This article has been archived and is no longer updated by Apple.

Symptom

When you use Remote Desktop admin on a remote computer, errors occur when you try to add the client server.

Solution

1. Use Workgroup Manager on the server to create a new account in the Local domain.
2. Click the Advanced tab
3. Set this new local user to use a Basic password.
4. Configure the Remote Desktop preference pane to use the new user you just created.

Published Date: Oct 10, 2016

Macintosh: Apple-Branded SCSI PCI Cards

This document lists the Apple-branded SCSI PCI cards, and the computers in which they could be bundled. It does not detail information for SCSI cards that came in computers prior to the Power Macintosh G3 computer.

This article has been archived and is no longer updated by Apple.

SCSI PCI Card	Computer
Apple Single-channel U1 SCSI card	Power Macintosh G3 Desktop
	Power Macintosh G3 Mini Tower
	Macintosh Server G3
Apple Single-channel SCSI card (Ultra2 LVD)	Power Macintosh G3 (Blue and White)
	Macintosh Server G3 (Blue and White)
Apple Dual-channel SCSI card (Ultra2 LVD) Version 1	Power Macintosh G3 (Blue and White)
	Macintosh Server G3 (Blue and White)
Apple Dual-channel SCSI card (Ultra2 LVD) Version 2	Power Mac G4 (AGP Graphics)
	Macintosh Server G4
	Macintosh Server G4 (Gigabit Ethernet)
Apple Ultra160 SCSI (Dual Channel) card	Power Mac G4 (Gigabit Ethernet)
	Macintosh Server G4 (Gigabit Ethernet)
	Power Mac G4 (QuickSilver 2002)
	Macintosh Server G4 (QuickSilver 2002)
Apple Dual Channel Ultra-3 LVD SCSI card	Macintosh Server G4 (Digital Audio)
	Power Mac G4 (Digital Audio)
	Power Mac G4 (QuickSilver)
	Macintosh Server G4 (QuickSilver)
	Power Mac G4 (Mirrored Drive Doors)
	Macintosh Server G4 (Mirrored Drive Doors)
Apple Ultra 160 SCSI (Single Channel) card	Xserve
Apple Ultra SCSI PCI card Rev 1	Power Macintosh G3 (Blue and White)
	Macintosh Server G3 (Blue And White)
	Macintosh Server G3 with Mac OS X Server 1.x
	Power Mac G4 (PCI Graphics)
	Power Mac G4 (AGP Graphics)
Apple Ultra SCSI PCI card Rev 2	Power Mac G4 (AGP Graphics)
	Macintosh Server G4
	Power Mac G4 (Gigabit Ethernet)
	Macintosh Server G4 (Gigabit Ethernet)
Apple Ultra SCSI PCI card Rev 3	Power Mac G4 (Digital Audio)
	Macintosh Server G4 (Digital Audio)
	Power Mac G4 (Gigabit Ethernet)
	Macintosh Server G4 (Gigabit Ethernet)
	Power Mac G4 (QuickSilver)
	Macintosh Server G4 (QuickSilver)
	Power Mac G4 (QuickSilver 2002)
	Macintosh Server G4 (QuickSilver 2002)
	Power Mac G4 (Mirrored Drive Doors)
	Macintosh Server G4 (Mirrored Drive Doors)

Published Date: Oct 10, 2016

SuperDrive: Important Information About Using With High-Speed Media

This document contains important information about using high-speed discs (4x DVD-R and 2x DVD-RW) with the Apple SuperDrive.
This article has been archived and is no longer updated by Apple.
All SuperDrive-equipped Macs are compatible with 1x and 2x DVD-R discs (media).

The DVD Forum has released specifications for high-speed media for DVD recording (4x for DVD-R and 2x for DVD-RW). One of Apple's suppliers, Pioneer Electronics, Inc., has advised Apple that some of its DVD-R/CD-RW drives (including some Apple SuperDrives) are unable to recognize high-speed media, and that using this media may permanently damage the drive.

Apple, the industry leader in providing affordable and easy-to-use DVD authoring systems, provides a quick and easy way for customers to update their computer's SuperDrive. Apple is making automatic and manual updates available for both Mac OS 9 and Mac OS X before high-speed media becomes widely available. This firmware update enables the SuperDrive to read from and write to high-speed media, but it does not increase the drive's speed; the updated 2x SuperDrive writes to high-speed media at 1x, so you should continue using 2x DVD-R media for best performance. This update also enables you to eject discs that do not comply with the audio CD specification, or that have mastering errors.

Note: All SuperDrive-equipped Macs are compatible with 1x and 2x DVD-R media.

Which Macintosh computers require this update?

- The following SuperDrive-equipped computers may require this update (see below for information on how to determine if your computer needs this update):
    - iMac (Flat Panel) with SuperDrive
    - Power Mac G4 (Digital Audio) with SuperDrive
    - Power Mac G4 (QuickSilver) with SuperDrive
    - Power Mac G4 (QuickSilver 2002) with SuperDrive
- The following SuperDrive-equipped computers include the latest update. They can read from and write to high-speed media. (No update is needed):
    - iMac (17-inch Flat Panel)
    - eMac with SuperDrive
    - Power Mac G4 (Mirrored Drive Doors) with SuperDrive
    - PowerBook G4 (1GHz/867MHz) with SuperDrive
- All Macs with SuperDrive being manufactured as of late 2002 can read from and write to high-speed media, and do not need to be updated.
- For computers that require the update, you can automatically update the SuperDrive via the automatic Software Update feature (for both Mac OS 9 and Mac OS X) to work with high-speed media.
- If you have turned off automatic Software Update, or if you have an environment that doesn't allow automatic Software Update to work, you can download a manual update from Apple's website (see installation instructions below).
- Computers that do not have a SuperDrive, or that have a SuperDrive from a vendor other than Pioneer do not need to be updated.

How can I tell if I need this update?

If you have an iMac (17-inch Flat Panel), eMac with SuperDrive, Power Mac G4 (Mirrored Drive Doors) with SuperDrive, or PowerBook G4 (1GHz/867MHz) with SuperDrive you do not need this update. Your computer's SuperDrive is already compatible with high-speed media. Computers that do not have a SuperDrive do not need this update.

Follow these steps to determine if your computer's SuperDrive needs to be updated:

1. Choose Apple System Profiler from the Apple menu (Mac OS 9), or open it from the Utilities folder (Applications/Utilities) in Mac OS X.
2. Click the Devices and Volumes tab. Locate the CD-RW/DVD-R device listing.
3. Click the disclosure triangle to the left of the device listing to get more information.

- If the Vendor Identification field names a manufacturer other than Pioneer, you don't need this update.
- If the Vendor Identification field names Pioneer as the manufacturer, your drive may need the update.
    - For drives with the Product Identification DVR-104, no update is required if the Device Revision number is A227 or higher.
    - For drives with the Product Identification DVR-103, no update is required if the Device Revision number is 1.90 or higher.

How do I get this update?

To download and install this update via the automatic Software Update feature in Mac OS X, choose System Preferences from the Apple menu, choose Software Update from the View menu, then click Check Now. In Mac OS 9, open the Software Update control panel and click Update Now. Then follow the onscreen instructions to install the update.

- The SuperDrive update for iMac for Mac OS X is available as an automatic Software Update. A manual installer for iMac for Mac OS X is also available from software download document 120161: "**iMac SuperDrive Update for Mac OS X: Information and Download**".
- The SuperDrive update for Power Mac for Mac OS X is available as an automatic Software Update. A manual installer for Power Mac for Mac OS X is also available from software download document 120166: "**PowerMac SuperDrive Update for Mac OS X: Information and Download**".
- The SuperDrive Update for iMac for Mac OS 9 is available as an automatic Software Update. A manual installer for iMac for Mac OS 9 is also available from software download document 120170: "**iMac SuperDrive Update for Mac OS 9: Information and Download**".
- The SuperDrive update for Power Mac for Mac OS 9 is available as an automatic Software Update. A manual installer for Power Mac for Mac OS 9 is also available from software download document 120172: "**PowerMac SuperDrive Update for Mac OS 9X : Information and Download**".

If you feel that you may have damaged your SuperDrive by using high-speed media, contact Apple, or an Apple Authorized Service Provider.

Apple does not provide technical support for third-party DVD-R devices. Contact the manufacturer of your drive for more information. Apple's updater only updates internal Apple-branded SuperDrives that need an update.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 10, 2016

SuperDrive: Important Information About Using With High-Speed Media

This document contains important information about using high-speed discs (4x DVD-R and 2x DVD-RW) with the Apple SuperDrive.
This article has been archived and is no longer updated by Apple.
All SuperDrive-equipped Macs are compatible with 1x and 2x DVD-R discs (media).

The DVD Forum has released specifications for high-speed media for DVD recording (4x for DVD-R and 2x for DVD-RW). One of Apple's suppliers, Pioneer Electronics, Inc., has advised Apple that some of its DVD-R/CD-RW drives (including some Apple SuperDrives) are unable to recognize high-speed media, and that using this media may permanently damage the drive.

Apple, the industry leader in providing affordable and easy-to-use DVD authoring systems, provides a quick and easy way for customers to update their computer's SuperDrive. Apple is making automatic and manual updates available for both Mac OS 9 and Mac OS X before high-speed media becomes widely available. This firmware update enables the SuperDrive to read from and write to high-speed media, but it does not increase the drive's speed; the updated 2x SuperDrive writes to high-speed media at 1x, so you should continue using 2x DVD-R media for best performance. This update also enables you to eject discs that do not comply with the audio CD specification, or that have mastering errors.

Note: All SuperDrive-equipped Macs are compatible with 1x and 2x DVD-R media.

Which Macintosh computers require this update?

- The following SuperDrive-equipped computers may require this update (see below for information on how to determine if your computer needs this update):
    - iMac (Flat Panel) with SuperDrive
    - Power Mac G4 (Digital Audio) with SuperDrive
    - Power Mac G4 (QuickSilver) with SuperDrive
    - Power Mac G4 (QuickSilver 2002) with SuperDrive
- The following SuperDrive-equipped computers include the latest update. They can read from and write to high-speed media. (No update is needed):
    - iMac (17-inch Flat Panel)
    - eMac with SuperDrive
    - Power Mac G4 (Mirrored Drive Doors) with SuperDrive
    - PowerBook G4 (1GHz/867MHz) with SuperDrive
- All Macs with SuperDrive being manufactured as of late 2002 can read from and write to high-speed media, and do not need to be updated.
- For computers that require the update, you can automatically update the SuperDrive via the automatic Software Update feature (for both Mac OS 9 and Mac OS X) to work with high-speed media.
- If you have turned off automatic Software Update, or if you have an environment that doesn't allow automatic Software Update to work, you can download a manual update from Apple's website (see installation instructions below).
- Computers that do not have a SuperDrive, or that have a SuperDrive from a vendor other than Pioneer do not need to be updated.

How can I tell if I need this update?

If you have an iMac (17-inch Flat Panel), eMac with SuperDrive, Power Mac G4 (Mirrored Drive Doors) with SuperDrive, or PowerBook G4 (1GHz/867MHz) with SuperDrive you do not need this update. Your computer's SuperDrive is already compatible with high-speed media. Computers that do not have a SuperDrive do not need this update.

Follow these steps to determine if your computer's SuperDrive needs to be updated:

1. Choose Apple System Profiler from the Apple menu (Mac OS 9), or open it from the Utilities folder (Applications/Utilities) in Mac OS X.
2. Click the Devices and Volumes tab. Locate the CD-RW/DVD-R device listing.
3. Click the disclosure triangle to the left of the device listing to get more information.

- If the Vendor Identification field names a manufacturer other than Pioneer, you don't need this update.
- If the Vendor Identification field names Pioneer as the manufacturer, your drive may need the update.
    - For drives with the Product Identification DVR-104, no update is required if the Device Revision number is A227 or higher.
    - For drives with the Product Identification DVR-103, no update is required if the Device Revision number is 1.90 or higher.

How do I get this update?

To download and install this update via the automatic Software Update feature in Mac OS X, choose System Preferences from the Apple menu,

choose Software Update from the View menu, then click Check Now. In Mac OS 9, open the Software Update control panel and click Update Now. Then follow the onscreen instructions to install the update.

- The SuperDrive update for iMac for Mac OS X is available as an automatic Software Update. A manual installer for iMac for Mac OS X is also available from software download document 120161: "**iMac SuperDrive Update for Mac OS X: Information and Download**".
- The SuperDrive update for Power Mac for Mac OS X is available as an automatic Software Update. A manual installer for Power Mac for Mac OS X is also available from software download document 120166: "**PowerMac SuperDrive Update for Mac OS X: Information and Download**".
- The SuperDrive Update for iMac for Mac OS 9 is available as an automatic Software Update. A manual installer for iMac for Mac OS 9 is also available from software download document 120170: "**iMac SuperDrive Update for Mac OS 9: Information and Download**".
- The SuperDrive update for Power Mac for Mac OS 9 is available as an automatic Software Update. A manual installer for Power Mac for Mac OS 9 is also available from software download document 120172: "**PowerMac SuperDrive Update for Mac OS 9X : Information and Download**".

If you feel that you may have damaged your SuperDrive by using high-speed media, contact Apple, or an Apple Authorized Service Provider.

Apple does not provide technical support for third-party DVD-R devices. Contact the manufacturer of your drive for more information. Apple's updater only updates internal Apple-branded SuperDrives that need an update.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 10, 2016

PowerBook G4 (DVI): European Models Don‘t Accept the First Restore CD

Some computers in Europe came with the wrong preloaded software. Affected computers start up with iSelect rather than xSelect. This means they can't use the Software Restore CD set.
This article has been archived and is no longer updated by Apple.

Symptom

The computer does not accept the first Restore CD when you start it up the first time. This makes it impossible to use the Software Restore CD set.

Solution

Start up the computer using the first Mac OS X 10.2 Install CD and perform a clean installation. Be sure to use the "Erase hard disk" option.

If you wish to install Mac OS 9 and other bundled software (such as additional applications) after completing the clean install, continue with the installation by following these steps:

1. Restart from the Mac OS X System folder on the hard disk.
2. Insert the first Restore CD.
3. Double-click the Software Restore icon. The Software Restore process starts automatically.
4. Follow the instructions provided throughout the process to restore all desired software.

Note: A clean installation of Mac OS X 10.2 takes about 50 minutes, while installing both the operating system and other bundled software may take up to 90 minutes.
Published Date: Feb 20, 2012

Mac OS X 10.2: How to Save Custom Terminal Window Settings as a File

This document explains how to save custom Terminal window settings as files.
This article has been archived and is no longer updated by Apple.
You can save custom Terminal window settings as .term files, which are stored in XML format.

Follow these steps to save Terminal window settings as a file:

1. Configure the Terminal window as desired (color, font, size, and so forth).
2. Choose Save from the File menu.
3. Type a unique filename.
4. Choose where you want to save the file. You may save it in the default location (~/Library/Application Support), or in a different location, such as the desktop or your Documents folder. The filename extension ".term" is automatically appended to the filename.

Important: The saved file stores window settings, but not window contents. Instead, choose "Save Text As" from the File menu to save text.

To use a saved .term file, you may double-click it, or choose Open from the File menu in Terminal.

Advanced: executing a command while file opens

To execute a specific command when opening a .term file, add an XML tag to the file with a text editing application such as TextEdit.

For example, if you want connect to a remote server via ssh, add the following to the .term file:

```
<key>ExecutionString</key>
<string>ssh_login_name@domain_or_address</string>
```

Note: This document applies to the Terminal application, located in /Applications/Utilities.
Published Date: Feb 19, 2012

Mac OS X: How to change the Terminal shell

This advanced document explains how to change the shell used in the Terminal application.
This article has been archived and is no longer updated by Apple.
Important: This is an advanced topic. You should use this information only if you are comfortable using Terminal and understand the concept of shells.

The default shell (or command-line interface) used in Mac OS X 10.0 through 10.2.8 is tcsh (with 10.3 and 10.4 it's bash). With Mac OS X 10.2 or later, other interactive shells are included, such as bash and zsh.

To **temporarily** change your shell, type the name of the shell, such as: bash

To revert to the tcsh shell, close the Terminal window and open a new one.

To **permanently** change your default Terminal shell:

1. Choose **Preferences** from the **Terminal** menu.
2. Select the option "Execute this command (specify complete path):"
3. Change the selected text entry from /bin/tcsh to reflect a different Terminal shell, such as:

   /bin/bash
   /bin/csh
   /bin/zsh
   /bin/zsh-4.0.4 (Mac OS X 10.2.8 or earlier)
   /bin/zsh-4.1.1 (Mac OS X 10.3 or later)
   /bin/ksh (Mac OS X 10.4 or later)

4. Close the Terminal Preferences window.
5. Quit and open Terminal again. The first and subsequent new Terminal windows open with the shell that you designated in Preferences.

Related Documents

107106	Mac OS X 10.2: Tab Completion and Aliases in Terminal Differ From Earlier Versions
43139	Useful Mac OS X Terms: What is BSD?

Published Date: Oct 10, 2016

Power Mac G4 SuperDrive Update: Drive Read/Write Lights Do Not Work After Update

The drive activity indicator lights on SuperDrives with the Pioneer DVR-103 mechanism do not work after you update the firmware using the Power Mac SuperDrive Update.
This article has been archived and is no longer updated by Apple.

Symptom

The read/write indicator lights (LED) on SuperDrives are hidden behind the case plastics of Power Mac G4 computers. On SuperDrive DVR-103 mechanisms with firmware versions 1.22 or 1.33, the drive activity lights are faintly visible behind the plastics. After installing the Power Mac SuperDrive Update available, the drive activity lights no longer work.

Solution

This is expected behavior for any version of the firmware later than version 1.33. It does not affect the SuperDrive's ability to read and write media.

For more information about the SuperDrive Firmware Update, see document 86130, "**SuperDrive: Important Information About Using With High-Speed Media**".
Published Date: Oct 10, 2016

Power Mac G4 (Mirrored Drive Doors) and (QuickSilver 2002) Education Model: About Cable Select and Adding Third-Party Drives

This document discusses the cable select feature of Power Mac G4 (Mirrored Drive Doors) and the education model of Power Mac (QuickSilver 2002) computers, and how it can be used to add drives from third-party manufacturers.
This article has been archived and is no longer updated by Apple.
The Power Mac G4 (Mirrored Drive Doors) and education model of Power Mac G4 (QuickSilver 2002) computers work with ATA and ATAPI internal storage devices that are set for cable select mode.

The cable select feature forces the device to set its ID as either master or slave, based upon its position on the ATA/ATAPI cable:

- If the device is attached to the end of the cable, then it identifies itself as a master.
- If the device is at the middle cable position, then it identifies itself as a slave.

Since cable select mode forces the drive to set its ID based upon its position on the cable, hard drives and optical drives can be easily configured.

When installing additional ATA and ATAPI drives from another manufacturers, check the documentation that came with the drive, or check with the manufacturer to find out how to set the drive to the cable select mode.

Note: For the cable select setting to work properly, the cables you use must work with the cable select feature. For this reason, the original Apple cables that came with the computer should be used when installing additional drives. Some cables made by other manufacturers may not correctly work with the cable select mode.
Published Date: Oct 10, 2016

PowerBook G4 (1 GHz/867 MHz): Using the Software Install and Restore DVD

Use the software install and restore disc that came with your computer to install Mac OS X, Mac OS 9, and the applications that came with your PowerBook G4 (1 GHz/867 MHz) computer.
This article has been archived and is no longer updated by Apple.

To install Mac OS X

1. Back up essential files, if possible.
2. Insert the software install and restore disc that came with the PowerBook G4 (1 GHz/867 MHz) computer.
3. Click the Install Mac OS X icon.
4. Follow the onscreen instructions.
5. After selecting the destination disc for installation, click Options and continue following the onscreen instructions.

To install Mac OS 9 and the applications that came with your computer

1. Back up essential files, if possible.
2. Insert the software install and restore disc that came with the PowerBook G4 (1 GHz/867 MHz) computer.
3. Click the Install Applications & Mac OS 9 icon.
4. Follow the onscreen instructions.

Note: iPhoto, iTunes, and iMovie are part of Mac OS X. To install them, you must follow the directions for installing Mac OS X.

Related Documents

86246 PowerBook G4 (12-inch): Using the Software Install and Restore DVD
42929 Software Restore: How to Use Restore Discs With Mac OS X 10.2

Published Date: Oct 10, 2016

PowerBook G4 (1 GHz/867 MHz): Using the Software Install and Restore DVD

Use the software install and restore disc that came with your computer to install Mac OS X, Mac OS 9, and the applications that came with your PowerBook G4 (1 GHz/867 MHz) computer.
This article has been archived and is no longer updated by Apple.

To install Mac OS X

1. Back up essential files, if possible.
2. Insert the software install and restore disc that came with the PowerBook G4 (1 GHz/867 MHz) computer.
3. Click the Install Mac OS X icon.
4. Follow the onscreen instructions.
5. After selecting the destination disc for installation, click Options and continue following the onscreen instructions.

To install Mac OS 9 and the applications that came with your computer

1. Back up essential files, if possible.
2. Insert the software install and restore disc that came with the PowerBook G4 (1 GHz/867 MHz) computer.
3. Click the Install Applications & Mac OS 9 icon.
4. Follow the onscreen instructions.

Note: iPhoto, iTunes, and iMovie are part of Mac OS X. To install them, you must follow the directions for installing Mac OS X.

Related Documents

86246 PowerBook G4 (12-inch): Using the Software Install and Restore DVD
42929 Software Restore: How to Use Restore Discs With Mac OS X 10.2

Published Date: Oct 10, 2016

Power Mac G4 Cube: iMovie Doesn‘t Play Movies

If the external USB speakers for the Power Mac G4 Cube computer are not connected, iMovie may not play movies.
This article has been archived and is no longer updated by Apple.

Symptom

When you click the Play button, the movie or clip does not play. When you click the Play Full Screen button a black or blue screen appears.

Solution

Make sure that the external USB speakers (such as the ones included with the Power Mac G4 Cube) are connected during playback.

Related documents

93340 "**iMovie 3: Unable to Play or Import Clips on Power Mac G4 Cube**"

Published Date: Feb 20, 2012

Apple System Profiler: Modems Reported as V.90 Instead of V.92

On computers with Mac OS X 10.2.2 and v.92-capable modems, Apple System Profiler incorrectly reports the modem as v.90.

This article has been archived and is no longer updated by Apple.

Symptom

In Mac OS X 10.2.2, Apple System Profiler identifies v.92 modems as v.90 modems.

Solution

Apple is working on updating the Apple System Profiler application to properly recognize and report v.92 modems.

Published Date: Feb 19, 2012

VGA Monitors: Which Macintosh Models Are Compatible, Part 2

This article has been archived and is no longer updated by Apple.

This article explains which Macintosh computers introduced since November 1997 work with VGA monitors.

For computers introduced before November 1997, see "VGA Monitors: Which Macintosh Models are Compatible".

Most Macintosh computers work with VGA monitors, including:

Desktop Computers

- Power Macintosh G3 - all models
- Power Macintosh G3 (Blue and White)
- Power Mac G4 - all models
- Power Mac G5 - all models
- iMac DV models for video mirroring
- iMac (Flat Panel) - all models for video mirroring (with included adapter)
- iMac G5 - all models for video mirroring (with included adapter)
- eMac - all models for video mirroring

PowerBook Computers

- PowerBook G3
- PowerBook G3 Series
- PowerBook G3 Series (Bronze keyboard)
- PowerBook (FireWire)
- PowerBook G4 - all models (some require adapter)
- iBook (Dual USB) and later - all models (require adapter)

Making the Connection

To connect a VGA monitor to the computer's video port, an adapter may be required. Some adapters, such as those required for use with an iBook, may have been provided with the computer or may be available for purchase from the Apple Store. Third-party cable vendors may also have these adapters available for purchase. Some computers use a VGA-style connector and do not need an adapter. Refer to your computer's owner guide or Mac OS Help for additional information on connecting a VGA monitor to your computer. For information on display adapters, see "Display Adapter Table".

VGA monitors may have variances when purchased from different VGA monitor vendors. It is best to test a monitor for compatibility with your Macintosh before making a purchase decision. VGA monitors also have different image quality specifications. There may be significant differences between different models of monitor.

Published Date: Feb 19, 2012

QuickBooks: Requires Registration With Intuit

QuickBooks New User Edition 5.0 for Mac, which is included with PowerBook G4 (12-inch) and (17-inch) computers sold in North America, must be registered with Intuit.

This article has been archived and is no longer updated by Apple.

Symptom

QuickBooks New User Edition 5.0 for Mac, which is included with PowerBook G4 (12-inch) and (17-inch) computers, must be registered with Intuit. You can open QuickBooks 25 times without registering, but if you try to open it after that, a dialog with this message appears: "QuickBooks New User Edition 5.0 for Mac requires you to register before your 25th use of this". See Figure 1.

Figure 1 Expired trial dialog box

Products affected

- QuickBooks New User Edition 5.0 for Mac
- PowerBook G4 (12-inch) sold in North America
- PowerBook G4 (17-inch) sold in North America

Solution

To register QuickBooks, call Intuit at 1-800-924-3894.

Online support is available at Intuit's website (http://www.intuit.com/support).

Important: Mention of third-party websites and products is for informational purposes only and constitutes neither an endorsement nor a recommendation. Apple assumes no responsibility with regard to the selection, performance or use of information or products found at third-party websites. Apple provides this only as a convenience to our users. Apple has not tested the information found on these sites and makes no representations regarding its accuracy or reliability. There are dangers inherent in the use of any information or products found on the Internet, and Apple assumes no responsibility in this regard. Please understand that a third-party site is independent from Apple and that Apple has no control over the content on that website.

Published Date: Feb 19, 2012

PowerBook G4, iBook: Combo Drive Does Not Write CD-R Media at Maximum Speed

Combo drives in PowerBook G4 and iBook computers write for a longer time than expected, or do not offer the maximum write speed specified for the drive.

This article has been archived and is no longer updated by Apple.

Symptom

The computer does not write CD-R discs at the maximum speed, even though the discs are labeled as being capable of writing at higher speeds.

Solution

Use CD-R discs that are capable of writing at 16x speed. The 16x or maximum option should be selected, if available, prior to inserting a blank disc. If so, the Combo drive is behaving correctly.

Combo drives included with iBook and PowerBook computers can detect imbalances in the disc that are caused by poor production quality or the presence of labels and ink on the disc's surface. These imbalances can cause write errors. When blank discs are initialized, if imbalances are detected the writing speed is slowed to between 4x and 8x write speeds (depending on the magnitude of the imbalance) in order to reduce the potential for write errors.

Published Date: Oct 10, 2016

Mac OS 9.2, Power Mac G4: About This Computer Displays Inaccurate Memory Allocations

When more than 1.5 GB RAM is installed in certain Power Mac G4 computers, the About This Computer memory usage window displays inaccurate information, such as the Mac OS taking a large amount of RAM.
This article has been archived and is no longer updated by Apple.

Symptom

When more than 1.5 GB RAM is installed in certain Power Mac G4 computers, the About This Computer window displays inaccurate memory usage information.

Solution

Mac OS 9 makes use of up to 1.5 GB of RAM. To make use of more than 1.5 GB RAM, use Mac OS X.

Related Documents

42939	Power Mac G4: Some Programs May Need to Be Updated to Work With More Than 1.5 GB of RAM
107338	Mac OS X: Process Viewer Displays Incorrect "% Memory" Values if 2.0 GB of RAM Is Installed

Published Date: Feb 19, 2012

FireWire 800: Some Sony Cameras Do Not Register When Connected to Macintosh

Some Sony DFW-VL500 cameras may not register as connected when they are, in reality, connected to the computer's FireWire 800 port.

This article has been archived and is no longer updated by Apple.

Symptom

A Sony DFW-VL500 camera does not register as connected to the FireWire bus when it is connected to a Macintosh computer's FireWire 800 port.

Solution

- Connect the camera to the computer using the FireWire 400 port.

or

- Connect another FireWire 800 device to the computer and connect the Sony camera to the other device.

Published Date: Oct 10, 2016

Bluetooth: Macintosh Computers With Built-In Bluetooth

This article has been archived and is no longer updated by Apple.

Learn which Macintosh computers are available with built-in Bluetooth modules.

Any Macintosh computer with Mac OS X 10.2 or later and a USB port is Bluetooth capable. Bluetooth software is built in to Mac OS X 10.2 and later, and you can buy a USB Bluetooth adapter if Bluetooth isn't already built-in.

Some Macintosh computers come with a built-in Bluetooth interface:

- PowerBook G4 (12-inch) - all models
- PowerBook G4 (15-inch FW 800) and later models
- PowerBook G4 (17-inch 1.33GHz) and later models
- MacBook Pro (15-inch) and later models
- MacBook Pro (17-inch) and later models
- MacBook - all models
- iMac G5 - all models
- iMac (Early 2006)
- iMac (17-inch Late 2006)
- iMac (20-inch Late 2006)
- iMac (24-inch)
- Mac mini - some models
- Mac mini (Late 2005) - some models
- Mac mini (Early 2006) - some models
- Mac mini (Late 2006)

Others have the built-in Bluetooth interface available as a customizable option from the Apple Store:

- Power Mac G4 (FW 800)
- iMac (17-inch 1GHz)
- iMac (USB 2.0)
- eMac (USB 2.0)
- eMac (2005)
- Power Mac G5 and later models
- iBook G4 and iBook G4 (14-inch) and later models

For more information on the Bluetooth technology, see What is Bluetooth?.

Published Date: Oct 10, 2016

Mac OS X 10.2: "Ignore trackpad when mouse is present" Doesn‘t Work As Expected

The Mouse preference pane option to "Ignore trackpad when mouse is present" for PowerBooks and iBooks may not work when non-Apple mice or newer models of Apple mice are connected to the computer.

This article has been archived and is no longer updated by Apple.

Symptom

The trackpad continues to work even though the "Ignore trackpad when mouse is present" option is enabled and a mouse is connected.

Solution

If you are using a third-party mouse and have installed software for it, the driver may not recognize this setting in the Mouse preference pane. In these cases you should contact the vendor of the mouse.

If you are using a later model Apple Pro Mouse (including all white optical mice and black optical mice with white cables), this setting may not work. If available, you can use an earlier Apple mouse to avoid the issue.

Published Date: Feb 19, 2012

Power Mac G4 (FW 800), PowerBook G4 (17-inch): WiebeTech DriveDock Hard Drives May Not Appear On Desktop

WiebeTech FireWire 400 external hard drives may not appear on the desktop.

This article has been archived and is no longer updated by Apple.

Symptom

When connected to the FireWire 400 port, a WiebeTech DriveDock drive may not appear on the desktop if an especially long or thin FireWire cable is used--even if it complies with the IEEE 1394 specification.

Note: This issue also occurs on the FireWire 800 port if a FireWire 400 to FireWire 800 adapter cable is used to connect a WiebeTech FireWire drive to the FireWire 800 port.

Solution

You should use the shortest (1m or less), thickest (approximately 4.5mm) FireWire cable available. WiebeTech is aware of this issue. Future models of their FireWire drives should not have this issue.

For more information regarding this issue, please contact WiebeTech at:

Mail Address	WiebeTech LLC 4153 N. Parkwood Wichita, KS 67220 USA
Email	sales@wiebetech.com
Telephone	316.744.8722 Direct Line 316.744.1398 Fax
European Sales	euro@wiebetech.com
Website	http://www.wiebetech.com/

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Published Date: Oct 10, 2016

Power Mac G4 (FW 800): Apple Pro Speakers Not Recognized at Startup or Wake From Sleep

When you restart or wake the computer, an alert message says the speakers are not recognized, but they seem to work correctly.
This article has been archived and is no longer updated by Apple.

Symptom

A limited quantity of Power Mac G4 (FW 800) computers may display this message after the computer starts up or wakes from sleep:

> "Speaker Connection - The device plugged into the Apple speaker mini-jack cannot be recognized. Remove the plug from the jack. Then plug it back in and make sure it is fully inserted."

Figure 1 Alert message

Note: While the computer may exhibit this alert message, the Apple Pro Speakers work correctly.

Solution

1. Close the alert by clicking OK.
2. Make sure the speaker connector is fully inserted into the Apple Speaker sound output port.
3. Restart the computer. If the message reappears after the computer has restarted, the logic board may need to be replaced.
Note: It may take up to nine seconds for this message to appear after the computer has started up.
4. If the message reappears after restarting the computer, contact a local Apple Authorized Service Provider to determine whether the logic board needs to be replaced.

Published Date: Oct 10, 2016

Power Mac G4, Power Mac G5: Computer restarts after being shut down

This article has been archived and is no longer updated by Apple.

A Power Mac G4 (Mirrored Drive Doors), Power Mac G4 (FW 800) or Power Mac G5 computer may restart after the computer has been shut down when it is connected to certain third-party VGA and DVI displays using the DVI connector on the computer.

Symptom

The computer restarts after it is shut down. This occurs when certain third-party VGA and DVI displays are connected to the computer's digital video interface (DVI) port.

This does not affect displays that use the Apple Display Connector (ADC).

Solution

Although rare, some third-party displays deviate significantly from the industry design standards for the implementation of the DDC (Display Data Channel) clock signal.

If your computer restarts after shutdown or wakes after being put to sleep with certain displays connected to the DVI port, these symptoms can be prevented by connecting the display to the video card's ADC port instead of the DVI port.

It may be necessary to purchase an ADC to VGA or ADC to DVI adapter cable. Companies offering ADC to VGA or ADC to DVI adapters include:

Product	Company	Website
VGA Extractor for ADC	Dr. Bott, LLC	http://www.drbott.com/
ADC to VGA Adapter	Gefen Inc.	http://www.gefen.com/
ADC to DVI Adapter	Apple Computer	http://store.apple.com/

Once you have an adapter:

1. Disconnect the display and any adapters from the DVI port on the back of the computer.
2. Connect the appropriate ADC to VGA or ADC to DVI adapter to the ADC port on the back of the computer.
3. Connect the display to the adapter cable.
4. Turn on the computer and verify that it starts up correctly.
5. Choose Shut Down or Sleep from the Apple menu and verify that the computer responds correctly.

   Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 10, 2016

Number of bullets don‘t match characters in .Mac password

When you type your .Mac (pronounced "dot Mac") password in System Preferences, it seems to save it with too many dots or bullets.
This article has been archived and is no longer updated by Apple.
You'll see ten bullets or dots in the .Mac password field in System Preferences regardless of the number of actual characters in your password.

This is an intentional security measure. If someone else looks at your settings, they won't know how many characters are in your password because the field always shows ten dots, no matter how long or short your password is.

Related documents

107097 Mac OS X 10.2: Won't Save .Mac Password

Published Date: Feb 20, 2012

Desktop Macintosh: Power, Reset, and Interrupt Buttons, Part 2

This article has been archived and is no longer updated by Apple.

General Information: Power Buttons
The power button on modular Macintosh models is typically located on the back of the computer close to the right or left side (depending on the model).

Power buttons come in different shapes and sizes. Some are push buttons (round or square), which may be plain, or may include a sideways triangle or a circle with a small straight line inside. Others are toggles, which include a 1 and a 0 (1=On, 0=Off).

General Information: Reset and Interrupt Buttons
The reset and interrupt buttons are located in different areas on different models. Refer to model-specific descriptions below.

The reset button is marked with a small triangle as shown below. Pushing the reset button restarts the computer.

The interrupt button is marked with a circle; if the button is large enough there is a crooked line in the circle, as shown below. It is used by software programmers when writing applications and debugging them.

In some more recent systems, there may not be unique reset or interrupt buttons. In some systems, the power button doubles as a reset and/or interrupt button. Refer to model-specific descriptions for details.

Reset button icon

Interrupt button icon

Keyboard Commands

If the computer does not have a reset button, press the Command-Control-power keys instead.

If the computer does not have an interrupt button, press the Command-power keys instead.

Professional Models

Model	Power Button Location	Reset/Interrupt Location
Power Macintosh G3 Desktop Power Macintosh G3 Mini Tower	Front panel	Use keyboard commands
Power Macintosh G3 All-In-One	Rear panel	Use keyboard commands
Power Macintosh G3 (Blue and White) Power Mac G4 (PCI Graphics) Power Mac G4 (AGP Graphics)	Front panel	Front panel or use keyboard commands
Power Mac G4 (Gigabit Ethernet) Power Mac G4 (Digital Audio) Power Mac G4 (QuickSilver) Power Mac G4 (QuickSilver 2002)	Front panel	Front panel reset button
Power Mac G4 Cube	Top of computer	Underside of computer
Power Mac G4 (Mirrored Drive Doors) Power Mac G4 (FW 800)	Front panel	Use keyboard commands
Power Mac G5 (all models)	Front panel	See document 88330

Consumer Models

Model	Power Button Location	Reset/Interrupt Location
iMac 233 MHz iMac 266 MHz iMac 333 MHz	Front panel	Insert paperclip in reset/interrupt holes on right side of computer
iMac (Slot Loading) iMac (Summer 2000) iMac (Early 2001) iMac (Summer 2001)	Front panel	Right side of computer

iMac (Flat Panel) iMac (17-inch Flat Panel) iMac (17-inch 1GHz) iMac (USB 2.0)	Back left side of computer	See document 88330
eMac eMac (ATI Graphics) eMac (USB 2.0)	Front panel	See document 88330

Note: The parenthetical product descriptions (Summer 2000) and (Summer 2001) refer to the summer of the Northern Hemisphere.

Published Date: Oct 10, 2016

Mac OS X and PowerBook G4 (12-inch): Dutch DVD Player Help Alert Messages

If Dutch is the preferred language on the PowerBook G4 (12-inch) computer, DVD Player Help may display alert messages saying that the requested information is not found or that there was a "problem" connecting to the Internet.
This article has been archived and is no longer updated by Apple.

Symptom

When you try to use the DVD Player Help, an alert box appears. The text varies depending on whether the computer is connected to the Internet.

- If the computer is not connected to the Internet, the alert text reads:
  "Waarschuwing: Deze informatie bevindt zich op het internet. Wilt u verbinding maken met het internet en deze informatie bekijken?" (See Figure 1.)
  ("The requested information is on the internet. Do you want to connect to the internet to retrieve it?")

Figure 1 Alert Text if Not Connected to the Internet

- If the computer is connected to the Internet, the alert text reads:
  "Waarschuwing: De verzochte informatie is niet gevonden of er heeft zich een probleem voorgedaan bij het maken van een internetverbinding. Probeer het opnieuw of controleer uw internet- en netwerkinstellingen." (See Figure 2.)
  ("The information you were looking for was not found or there was a problem connecting to the internet. Check your Internet and Network settings.")

Figure 2 Alert Text if Connected to the Internet

Solution

These alert messages can be ignored. To access the DVD Player Help, do the following:

- If the computer is not connected to the Internet, press the Annuleer (Cancel) button in the alert message.
- If the computer is connected to the Internet, press the OK button in the alert message.

Published Date: Feb 20, 2012

Macintosh: Apple Internal Modem Cannot Establish or Maintain Connection to Some Scandinavian ISPs

Some Apple internal modems cannot establish or maintain a connection to some Scandinavian Internet service providers (ISPs).

This article has been archived and is no longer updated by Apple.

Symptom

The computer's built-in Apple modem tries to connect to an ISP but disconnects during negotiation or shortly after the connection is made.

ISPs affected

- Rix Telecom
- Telenordia (university users only connecting using phone number 08-58722255)
- Sonera
- Song network
- RSLcom
- Suomen_2G

Solution

For computers with Mac OS X 10.2:

Update to Mac OS X 10.2.5 or later.

For computers with Mac OS 9, Mac X 10.0 or 10.1:

The modem update at http://www.asia.apple.com/modemupdater/ was originally developed for Australian customers, but it may resolve your connection issues.

If the above fixes do not resolve the issue, try this step regardless of which version of the Mac OS you are using:

In Mac OS X:

1. Choose Apple menu > System Preferences.
2. Choose View > Network.
3. Choose Internal Modem from the Show pop-up menu.
4. Click the Modem tab
5. Choose Apple Internal 56K Modem (v.34) from the Modem pop-up menu.

In Mac OS 9:

1. Open the Modem control panel
2. Choose Apple Internal 56K Modem (v.34) from the Modem pop-up menu.

Changing the script to Apple Internal 56K Modem (v.34) may resolve the issue, but be aware that it will slightly reduce the modem connection speed.

This document will be updated as more information becomes available.

Note: This issue applies only to the ISPs listed above. For regular modem troubleshooting, see technical document 106748, "**Mac OS X: Troubleshooting a Dial-Up/PPP Internet Connection**".

Published Date: Feb 20, 2012

Using the Software Install and Restore DVD with PowerBook G4 (12-inch)

This article has been archived and is no longer updated by Apple.

Use the software install and restore disc that came with your computer to install Mac OS X, Classic Support, or the applications that came with your PowerBook G4 (12-inch) computer. You can also use the DVD to restore your computer to its original factory settings.

When installing software onto a portable computer, make sure the power adapter is connected during the process to ensure an uninterrupted installation.

If you need to restore the computer to original factory settings, back up all essential files prior to beginning the installation.

To install Mac OS X

1. Insert the software install and restore disc that came with the PowerBook G4 (12-inch) computer.
2. Double-click the Install Mac OS X icon.
3. Follow the onscreen instructions.
4. Select the destination disc for installation, and then click Options.
5. Continue following the onscreen instructions. If you would like to restore your computer to its original factory settings, select Erase and Install. In most cases, choose Mac OS Extended (HFS Plus). To continue restoring your computer to the original factory settings, follow the instructions below for installing Classic Support and applications.

Note: To use Mac OS 9 applications in the Mac OS X Classic environment, you will need to reinstall Classic Support. See the instructions below for installing Classic Support.

To install Classic Support or the applications that came with your computer

1. Insert the software install and restore disc that came with your computer.
2. Double-click the Install Applications & Classic Support icon.
3. Follow the onscreen instructions. If you would like to restore the computer to the original factory settings, select Restore All.

Note: iCal, iPhoto, iTunes, iChat and iMovie are part of Mac OS X. To install them, you must follow the instructions for installing Mac OS X.

Quitting the Installer

If you need to quit the Installer before the installation process is complete, choose Quit from the Installer menu and click Restart, then hold down the mouse or trackpad button to eject the Software Install and Restore disc. You may be able to eject the disc by pressing the eject button on a tray-loading optical drive or the Media Eject key on the keyboard. Your computer restarts using your current startup disk.

Note: If you have already clicked Upgrade or Install, wait until installation finishes.

Erasing and formatting your disk

When you install Mac OS X, you can erase the destination disk. In the "Select a Destination" pane of the Installer, click the Options button. Select Erase and Install and then choose a format. In most cases, choose Mac OS Extended (HFS Plus).

You can also divide your hard disk into several partitions before you install Mac OS X. In the Installer menu, choose Open Disk Utility and click Partition. Partitioning the disk erases the entire hard disk, so be sure to back up your files first. To install Classic Support or the applications that came with your computer onto a specific partition, the partition must contain Mac OS X. You must start up the computer from that partition and then run the installation process.

Important: Do not choose UNIX File System (UFS) as the format for the destination disk unless you need to work with this format. If you choose UNIX File System, you must install Mac OS X, Classic Support and your Mac OS 9 applications on a Mac OS Extended format disk to use them with the Classic environment.

Upgrading your applications and other software

Use Software Update to download and install the latest software versions, drivers, and other enhancements from Apple. If you are connected to the Internet, Software Update automatically alerts you when an update is available. You can also check for updates manually by choosing Apple menu > System Preferences and then View > Software Update.

For best results with Mac OS X, upgrade your applications to versions that are designed for Mac OS X. Check the Mac OS X website for information about available Mac OS X applications (http://www.apple.com/macosx/). You should also check with developers for the latest versions of your applications.

Related Documents

86153	PowerBook G4 (1 GHz/867 MHz): Using the Software Install and Restore DVD
42929	Software Restore: How to Use Restore Discs With Mac OS X 10.2

Published Date: Oct 10, 2016

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For best results with Mac OS X, upgrade your applications to versions that are designed for Mac OS X. Check the Mac OS X website for information about available Mac OS X applications (http://www.apple.com/macosx/). You should also check with developers for the latest versions of your applications.

Related Documents

86153	PowerBook G4 (1 GHz/867 MHz): Using the Software Install and Restore DVD
42929	Software Restore: How to Use Restore Discs With Mac OS X 10.2

Published Date: Oct 10, 2016

Xserve (Slot Load): Power Consumption and Thermal Output (BTU) Information

This document provides power consumption and thermal output information for Xserve (Slot Load) computers.
This article has been archived and is no longer updated by Apple.

Xserve (Slot Load) single processor "minimum" configuration **Configuration**: 1.33 GHz G4 Processor, 1 GB RAM, 60 GB Apple Drive Module, (2) gigabit Ethernet ports, CD-ROM, VGA Display			
Power Consumption		**Thermal Output**	
Idle	**Max**	**Idle**	**Max**
92 W	94 W	314 BTU/h	321 BTU/h
Xserve (Slot Load) single processor "maximum" configuration **Configuration**: 1.33 GHz G4 Processor, 1 GB RAM, one 60 GB and three 120 GB Apple Drive Modules, (2) gigabit Ethernet ports, ATI Radeon 7500 Graphics card (ADC/VGA), CD-ROM, 2 PCI cards			
Power Consumption		**Thermal Output**	
Idle	**Max**	**Idle**	**Max**
145 W	187 W	496 BTU/h	639 BTU/h
Xserve (Slot Load) dual processor "minimum" configuration **Configuration**: Dual 1.33 GHz G4 Processor, 1 GB RAM, 60 GB Apple Drive Module, (2) gigabit Ethernet ports, VGA display, CD-ROM			
Power Consumption		**Thermal Output**	
Idle	**Max**	**Idle**	**Max**
133 W	134 W	453 BTU/h	459 BTU/h
Xserve (Slot Load) dual processor "maximum" configuration **Configuration**: Dual 1.33 GHz G4 Processor, 1 GB RAM, one 60 GB and three 120 GB Apple Drive Modules, (2) gigabit Ethernet ports, ATI Radeon 7500 Graphics card (ADC/VGA), CD-ROM, 2 PCI cards			
Power Consumption		**Thermal Output**	
Idle	**Max**	**Idle**	**Max**
188 W	244 W	642 BTU/h	833 BTU/h

Notes:

1. Max in table is maximum processor utilization.

2. 180GB Apple Drive Modules use the same power consumption and thermal output as 120GB modules.

Published Date: Oct 10, 2016

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Power Consumption		**Thermal Output**	
Idle	**Max**	**Idle**	**Max**
188 W	244 W	642 BTU/h	833 BTU/h

Notes:

1. Max in table is maximum processor utilization.

2. 180GB Apple Drive Modules use the same power consumption and thermal output as 120GB modules.

Published Date: Oct 10, 2016

Xserve RAID: How to Install Active Transceivers in the Host Computer

This document explains how to install Active Transceivers on the host side and avoid communication errors.
This article has been archived and is no longer updated by Apple.

Symptom

Communication errors may occur if an Active Transceiver is installed after the host computer has completed starting up.

Solution

At system startup, the Fibre Channel card determines which transceiver is connected. If there is no module connected, it defaults to Passive Transceiver. If an Active Transceiver is connected after the server starts up, the amplitude is too high for the transceiver, which can result in communication errors with the Fibre Channel devices. Follow these steps to avoid this issue.

Proper Installation of the Active Transceiver

1. Turn off the host computer.
2. Install the Apple Fibre Channel PCI card.
3. Install the Active SFP Transceiver module into one of the SFP ports on the Fibre Channel card.
4. Turn on the host computer.

Published Date: Feb 20, 2012

Xserve RAID: Frequently Asked Questions (FAQ) (2 of 2)

This document contains frequently asked questions (FAQ) regarding Xserve RAID, with answers to those questions. Additional documents are listed at the bottom of this document.
This article has been archived and is no longer updated by Apple.
Questions answered in this document:

1. What are the two Fibre Channel ports on the Xserve RAID used for?
2. At what speed do the Fibre Channel ports transfer data?
3. Which Fibre Channel card for the host computer is available from Apple?
4. Which computers can act as host to the Xserve RAID?
5. In what slot of the Xserve must the Apple Fibre Channel card be installed?
6. In what slot of the Power Mac G4 computer can the Apple Fibre Channel card be installed?
7. In what slot of the Power Mac G5 computer can the Apple Fibre Channel card be installed?
8. How many ports are on the Apple Fibre Channel card?
9. One Xserve RAID can be connected directly to either one or two hosts. How do you connect to one host?
10. How many Xserve RAID arrays can you see from the one host?
11. How do you connect two hosts to an Xserve RAID?
12. How many Xserve RAID arrays can you see from each of two hosts?
13. How do you connect the Xserve RAID to a hub or switch?
14. What kind of Fibre Channel cable comes with the Apple Fibre Channel PCI card?
15. What type of Fibre Channel cable can be used?

Question 1: What are the two Fibre Channel ports on the Xserve RAID used for?

Answer: The two Fibre Channel ports are used to connect the Xserve RAID to the host computer(s), thereby achieving Fibre Channel speed for data transfer.

Question 2: At what speed do the Fibre Channel ports transfer data?

Answer: The Fibre Channel ports transfer data at up to 2 Gb/s (gigabits per second). The controller will auto-negotiate itself to a lower speed in the event that the link partner is configured for 1 Gb/s operation.

Question 3: Which Fibre Channel card for the host computer is available from Apple?

Answer: The Apple Fibre Channel PCI card is a 64-bit, 66 MHz card with dual SFP 2 GB Fibre Channel ports; compatible with 64-bit, 33 MHz slots.

Question 4: Which computers can act as host to the Xserve RAID?

Answer: The Xserve RAID can be hosted by Xserve and Power Mac G4 computers with 800 MHz or faster microprocessor speed running Mac OS X 10.2.4 or Mac OS X Server 10.2.4.

Question 5: In what slot of the Xserve must the Apple Fibre Channel card be installed?

Answer: In G4-based Xserves, the Apple Fibre Channel card has been EMI certified for use in the top PCI slot only. In Xserve G5, the Apple Fibre Channel card can be installed in either of the two PCI slots.

Question 6: In what slot of the Power Mac G4 computer can the Apple Fibre Channel card be installed?

Answer: The card can be installed in any of the PCI slots on the Power Mac G4 computer.

Question 7: In what slot of the Power Mac G5 computer can the Apple Fibre Channel card be installed?

Answer: The card can be installed in any of the PCI or PCI-X slots (depending on purchased configuration) on the Power Mac G5 computer.

Question 8: How many ports are on the Apple Fibre Channel card?

Answer: There are two ports on the Apple Fibre Channel card.

Question 9: One Xserve RAID can be connected directly to either one or two hosts. How do you connect to one host?

Answer: Use two Fibre Channel cables from the host computer to the Xserve RAID. Connect one port on the host Fibre Channel card to the port on one of the Xserve RAID controller modules. Connect the other port on the host Fibre Channel card to the port on the second controller module.

Question 10: How many Xserve RAID arrays can you see from the one host?

Answer: A single host can see up to six arrays per Xserve RAID--three per side.

Question 11: How do you connect two hosts to an Xserve RAID?

Answer: Install a host Fibre Channel card in each host computer and use one Fibre Channel cable from each host to the Xserve RAID. Connect one Fibre Channel cable to the port on one Xserve RAID controller module. Connect the other Fibre Channel cable to the port on the second controller module.

Question 12: How many Xserve RAID arrays can you see from each of two hosts?

Answer: Two hosts can see up to three arrays per host.

Question 13: How do you connect the Xserve RAID to a hub or switch?

Answer: To connect the Xserve RAID to a hub or switch, install a Fibre Channel card in a host and use one Fibre Channel cable from the host to the hub or switch. If you use two cables to connect the Fibre Channel card to the hub or switch, you may see two images (duplicates) of all devices on the hub or switch.

Question 14: What kind of Fibre Channel cable comes with the Apple Fibre Channel PCI card?

Answer: The Apple Fibre Channel PCI card ships with two 2.9 m Copper Fibre Channel SFP to SFP (small form factor pluggable) interconnect cables. See 32493 for more information.

Question 15: What type of Fibre Channel cable can be used?

Answer: Both copper and optical Fibre Channel cable can be used. Be aware that connectors on hubs and switches may differ from connectors on the cable provided with the Xserve RAID.

Related documents

86255 Xserve RAID: Frequently Asked Questions (FAQ) (1 of 2)

Published Date: Oct 10, 2016

Xserve RAID: Importance of Installing Backup Battery Modules

This document contains information that highlights the importance and advantage of installing the optional Backup Battery Modules in Xserve RAID.
This article has been archived and is no longer updated by Apple.
Backup Battery Modules (also called Cache Backup Battery Modules) are highly recommended to prevent data loss in the event of power failure and should be considered mandatory for business-critical data.

The Backup Battery Modules are redundant hot-swappable modules that provide power to the RAID controller cache for up to 72 hours in the event of an input power failure. When power is restored, Xserve RAID flushes the data protected in the RAID controller cache to the hard drives, preventing loss of the last transaction's data.

Note: Without a UPS connected to at least one of the power supplies, the Cache Backup Battery modules will backup the controller cache, but you could experience data loss if you do not set the Drive Write Cache to Off.
Published Date: Oct 10, 2016

iMac (17-inch 1GHz): Memory Specifications

This document explains what type and speed of memory (RAM) is used in iMac (17-inch 1GHz) computers.

This article has been archived and is no longer updated by Apple.

iMac (17-inch 1GHz) computers only work with PC2100, 2.5V, 266 MHz DDR SDRAM. The maximum installed RAM that can be used is 1 GB. RAM modules of 128 MB, 256 MB and 512 MB can be used in both slots.

There are two RAM slots in the iMac (17-inch 1GHz) computers. They are:

- A user-accessible 200-pin SO-DIMM slot
- An internal (factory-installed) 184-pin DIMM slot

The Apple System Profiler will show the two different types of slots and what amount of RAM is installed there.

The user-accessible slot requires PC2100 266 MHz speed DDR SDRAM SO-DIMMs. When installing larger 256 MB or 512 MB DIMMs in this slot, use low-profile SO-DIMMs.

Always follow the installation instructions for memory and AirPort Extreme Card as written. They are available in technical document 26264, "**iMac (17-inch 1GHz): Customer-Installable Parts Instructions**". Never try to remove screws that are not listed in the upgrade instructions.

Warning: While you may add or change memory in the SO-DIMM slot, do not try to access the factory-only memory slot. Special seals and tools are required to access and reseal the computer successfully. If the computer is incorrectly resealed, it will be damaged. Any necessary repairs would not be covered under warranty.

The services of an Apple Authorized Service Provider or Apple itself is required to install additional memory into the factory-only accessible memory slot. The service and support information that came with your computer provides instructions on locating an Apple Authorized Service Provider or contacting Apple for this service.

When installing any additional memory you risk damaging your computer. Carefully follow all instructions to avoid damage to your computer when installing memory into the SO-DIMM slot. Any damage resulting from your installation is not covered by the limited warranty on your computer. See an Apple Reseller or Apple Authorized Service Provider for additional information about this or any other warranty question. Apple does not provide telephone support for memory upgrades.

Related documents

86227 iMac (17-inch 1GHz): Technical Specifications
75310 iMac (17-inch Flat Panel): Technical Specifications
88297 iMac (Flat Panel): Technical Specifications
88298 iMac (Flat Panel): Memory Specifications
58007 iMac (All Models): Memory Specifications and Upgrades

Published Date: Oct 10, 2016

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88298 iMac (Flat Panel): Memory Specifications
58007 iMac (All Models): Memory Specifications and Upgrades

Published Date: Oct 10, 2016

How to turn off the PowerBook G4 (17-inch), (15-inch FW 800) ambient light sensor automatic brightness adjustment

Learn how to activate and deactivate the automatic brightness adjustment of the display backlight and keyboard illumination on some PowerBook G4 (15-inch FW 800) and later models of 15-inch PowerBook as well as all models of 17-inch PowerBook G4.

This article has been archived and is no longer updated by Apple.

There is no single control to deactivate the Ambient Light Sensor (ALS) system. The automatic adjustment of the display and keyboard are set independently.

Follow these steps to turn the automatic display brightness feature on or off:

1. From the **Apple** menu, choose **System Preferences.**
2. From the **View** menu, choose **Displays**.
3. Click the "Automatically adjust brightness as ambient light changes" checkbox.

Follow these steps to turn the automatic keyboard brightness feature on or off:

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **Keyboard.**
3. Click the "Illuminate keyboard in low light conditions" checkbox.

You can also turn on or off the keyboard illumination feature by pressing the F8 key. This selection appears in the Keyboard pane of System Preferences.

These keys only respond in this way when the ALS is turned on. If you press the keyboard illumination control keys (F8, F9 and F10) and you see a dimmed graphic with the prohibitory sign (see below), the sensed ambient light is not low enough for the keyboard illumination to work.

Note: Not all 15-inch models of PowerBook G4 include the backlit keyboard and ambient light sensor. To determine if your model includes these features see if the F8, F9, and F10 keys have the ambient light sensor icons printed on them.

If these icons are not printed on the keys, then these features are not present in your model.

Published Date: Oct 10, 2016

About Adjusting Brightness on Ambient Light Sensor (ALS)

This document describes the brightness adjustments for the PowerBook G4 (17-inch), PowerBook G4 (17-inch 1.33GHz), PowerBook G4 (17-inch 1.5GHz), PowerBook G4 (15-inch FW 800), or PowerBook G4 (15-inch 1.5/1.33GHz) computer's Ambient Light Sensor (ALS).

This article has been archived and is no longer updated by Apple.

On these PowerBook G4 computers, several function keys serve as shortcuts to adjust the brightness of the display and the keyboard illumination. F1 dims the display and F2 brightens the display. F9 dims the keyboard illumination and F10 brightens the keyboard illumination.

When the Ambient Light Sensor (ALS) is on, the function keys associate the current brightness setting to the current sensor reading.

If you use Mac OS X 10.3, the default settings for Exposé also use the F8, F9 and F10 keys. If your computer has an Ambient Light Sensor and is also running Mac OS X 10.3, hold down the "fn" key with the function key in order to activate the Exposé functions.
You can also remap the keys for the Exposé features by using the Exposé pane of System Preferences.

Since the system is automatic, as the ambient light changes, the display and keyboard illumination levels vary from the base level you established. As ambient light levels grow brighter or dimmer, the keyboard and display change from the level you selected to compensate for the brighter or dimmer setting. They return to the originally selected brightness when the ambient light level is the same as when you originally set the controls.

When the ALS is not turned on for displays, the brightness control keys (F1 or F2) work as on previous PowerBook computers, setting a fixed brightness of the display backlight.

Unlike the display brightness keys, the keyboard brightness can only be adjusted when the ALS is engaged with the keyboard illuminated (as in a dimly lit room). If you press the keyboard illumination control keys (F8, F9 or F10) at any other time, you will see a dimmed graphic with the prohibitory sign (see Figure 1) to remind you that the ambient light is not low enough for the keyboard illumination to have activated.

Alert that ALS cannot be configured

Notes:

1. Artificially activating the keyboard backlight by covering the sensors may not produce the desired results. The keyboard illumination is not normally visible in ambient lighting conditions brighter than a dimly lit room.
2. Not all PowerBook G4 (15-inch FW 800) models include the backlit keyboard and ambient light sensor. To determine if your model includes these features see if the F8, F9, and F10 keys have the ambient light sensor icons printed on them.

F8, F9 and F10 keys on keyboard

If these icons are not printed on the keys, then these features are not present in your model.

Published Date: Oct 10, 2016

About the PowerBook G4 (17-inch) and (15-inch FW 800) ambient light sensor (ALS)

Learn how the Ambient Light Sensor (ALS) feature of the PowerBook G4 (17-inch) or PowerBook G4 (15-inch FW 800) computer automatically controls the display and keyboard brightness.

This article has been archived and is no longer updated by Apple.

The ambient light-sensing (ALS) system automatically adjusts the brightness of your display and keyboard illumination according to the light available in your current environment.

Display and keyboard can be independently disconnected from ALS, so it will not automatically adjust their brightness. For more information, see "**PowerBook G4 (17-inch), (15-inch FW 800): How to Turn Off Ambient Light Sensor (ALS) Automatic Brightness Adjustment**".

Multiple sensors are used to approximate the ambient light. The brightness of both the display and keyboard backlights are adjusted, based on this approximation.

The display and keyboard brightness can be adjusted to match the ambient light level. This setting is not static like previous display backlight settings. The brightness level indicators will vary based on the measured ambient light. For more information, see "**PowerBook G4 (17-inch), (15-inch FW 800): About Adjusting Brightness on Ambient Light Sensor (ALS)**".

When the Ambient Light Sensor (ALS) feature is on and the display or keyboard backlight brightness is adjusted manually, the relative brightness over the entire ambient light response curve is similarly adjusted.

Note: Not all PowerBook G4 (15-inch FW 800) models include the backlit keyboard and ambient light sensor. To determine if your model includes these features see if the F8, F9, and F10 keys have the ambient light sensor icons printed on them.

F8, F9 and F10 keys on keyboard

If these icons are not printed on the keys, then these features are not present in your model.

Published Date: Feb 19, 2012

PowerBook G4 (17-inch): How to Run Apple Hardware Test

This document explains how to use Apple Hardware Test on a PowerBook G4 (17-inch) computer.
This article has been archived and is no longer updated by Apple.
With PowerBook G4 (17-inch) computers, Apple Hardware Test (AHT) is included on the same DVD disc you use to install or restore software. This DVD is named "PowerBook G4 17 inch Software Install and Restore".

Running Apple Hardware Test

To use AHT on your PowerBook G4 (17-inch) computer, follow these steps:

1. Insert the disc named "PowerBook G4 17 inch Software Install and Restore" into the computer.
2. Choose Apple menu > Restart, and hold the Option key while the computer starts up. The startup manager appears (Figure 1).
3. Click the Apple Hardware Test volume in the startup manager.

Figure 1 Startup manager

4. Click the arrow that points to the right.
5. Follow the onscreen instructions.

Published Date: Oct 10, 2016

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Figure 1 Startup manager

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5. Follow the onscreen instructions.

Published Date: Oct 10, 2016

PowerBook G4 (17-inch), MacBook Pro, and MacBook Pro (17-inch) displays open to approximately 130 degrees

This article has been archived and is no longer updated by Apple.

The displays of MacBook Pro, MacBook Pro (17-inch), PowerBook G4 (17-inch), PowerBook G4 (17-inch 1.33GHz) and PowerBook G4 (17-inch 1.5GHz) computers open to a maximum angle of approximately 130 degrees.

You can adjust the angle of the built-in display to minimize glare and reflections from overhead lights and windows. Do not force the display if you meet resistance. The displays on these computers are designed to open to a maximum angle of approximately 130 degrees. This is because these computers use a different hinge from other PowerBook G4 models.

Published Date: Oct 10, 2016

PowerBook G4 (17-inch), (17-inch 1.33GHz): About the FireWire Ports

This document discusses the two FireWire ports on the PowerBook G4 (17-inch) and PowerBook G4 (17-inch 1.33GHz) computers.
This article has been archived and is no longer updated by Apple.
The PowerBook G4 (17-inch) and PowerBook G4 (17-inch 1.33GHz) computers include one FireWire 400 port and one FireWire 800 port. They are located on the right side of the computer. The connectors are not identical, and require different cabling. As well as each port having its own cable, an adapter cable can be used to allow the FireWire 800 port to connect to FireWire 400 devices.

Figure 1 Location of FireWire ports

1	FireWire 400
2	FireWire 800

Power considerations

The two ports share a single power supply that provides up to 7 W of power per port. They are on the same FireWire bus. You can connect to up to 62 FireWire devices to them simultaneously. If you connect a bus-powered FireWire device to the computer while it is operating from battery power, the battery will empty sooner. This decreases the amount of time the computer can run on battery power.

FireWire target disk mode

Both the FireWire 400 and FireWire 800 ports can be used with FireWire target disk mode. For more information on target disk mode, see technical document 58583, "**Macintosh: How to Use FireWire Target Disk Mode**".

Published Date: Oct 10, 2016

Audio cables aren‘t completely recessed in aluminum models of PowerBook G4

This article has been archived and is no longer updated by Apple.

When you insert an audio cable (headphones, external speakers, connection to stereo system) into the audio line-in or headphone ports on aluminum PowerBook G4 computers, a small gap may be noticeable between the connector and the side of the computer's case. This gap is normal and assures electrical separation for optimum performance from these two sound ports.

You may see this in any of the aluminum models:

- PowerBook G4 (17-inch)
- PowerBook G4 (17-inch 1.33GHz)
- PowerBook G4 (17-inch 1.5GHz)
- PowerBook G4 (17-inch 1.67GHz)
- PowerBook G4 (15-inch FW800)
- PowerBook G4 (15-inch 1.5/1.33GHz)
- PowerBook G4 (15-inch 1.67/1.5GHz)
- PowerBook G4 (12-inch)
- PowerBook G4 (12-inch DVI)
- PowerBook G4 (12-inch 1.33GHz)
- PowerBook G4 (12-inch 1.5GHz)

Published Date: Oct 10, 2016

PowerBook G4 (17-inch), (15-inch FW 800): Keyboard Illumination Turns Off When Idle

If you leave your PowerBook G4 (17-inch) or (15-inch FW 800) computer idle, the keyboard illumination will turn off after a certain period of time.
This article has been archived and is no longer updated by Apple.
If you select the option "Illuminate keyboard in low light conditions" in the Keyboard pane of System Preferences, the computer will turn on the keyboard's illumination in low light conditions.

If the computer is idle for a certain number of minutes, the keyboard's illumination turns off. You can set the amount of time before the illumination is turned off in the Keyboard pane of System Preferences. Drag the slider under "Turn off when keyboard is not used for:" to the amount of time you wish to use.

Note: Not all PowerBook G4 (15-inch FW 800) models include the backlit keyboard and ambient light sensor. To determine if your model includes these features see if the F8, F9, and F10 keys have the ambient light sensor icons printed on them.

Figure 1 F8, F9 and F10 keys on keyboard

If these icons are not printed on the keys, then these features are not present in your model.

Published Date: Oct 10, 2016

PowerBook G4 (17-inch): About the PC Card Slot

This document discusses the PC Card slot in the PowerBook G4 (17-inch) computer, what types of cards it can use, and how to eject a PC Card.

This article has been archived and is no longer updated by Apple.

Compatibility

The PowerBook G4 (17-inch) computer comes with one PC Card slot that can accept one Type I or one Type II card. It does not accept Type III cards.

You can use cards that comply with the 16-bit PC Cards and 32-bit CardBus Cards standards. Cards can be removed and replaced while the computer is in use.

Important: The Apple AirPort Card and AirPort Extreme Card are not PC Cards or CardBus cards. Do not insert them into the PowerBook G4 (17-inch) computer's PC Card slot.

Ejecting

To eject a PC Card:

1. With the computer turned on, drag the card's icon to the Trash.
2. Push the PC Card eject button once to release it.
3. Push the eject button again to eject the card.
4. Pull the card out of the slot.

Published Date: Oct 10, 2016

PowerBook G4 (17-inch), (17-inch 1.33GHz): Serial Number Location

This document explains where to find the serial number on PowerBook G4 (17-inch) and PowerBook G4 (17-inch 1.33GHz) computers.

This article has been archived and is no longer updated by Apple.

The configuration information, serial number, Ethernet ID, AirPort Extreme ID, and Bluetooth ID are all located on a label on the bottom of the computer's battery bay. To see the label, remove the battery from the computer. See Figure 1.

Figure 1 Serial Number Label in Battery Bay

The serial number can also be found by choosing Apple menu > About This Mac, and clicking the version number twice. For more information on viewing the serial number this way, see technical document 106486, "**Mac OS X 10.1: About This Mac Window Provides Computer Serial Number**".

For more information on removing the battery, see technical document 88059, "**PowerBook G4 to PowerBook G4 (17-inch): How to Remove or Install the Battery**".

Related Documents

88060 "**PowerBook G4: How to Find the Serial Number**"

86408 "**PowerBook G4 (12-inch): Serial Number Location**"

Published Date: Feb 20, 2012

Xserve (Slot Load): When to Use the Optical Drive Protector

This document explains when to use the optical drive protector included with the Xserve (Slot Load) server.
This article has been archived and is no longer updated by Apple.
The Xserve (Slot Load) server has a slot-loading optical drive. This drive requires extra attention when the server is installed in or removed from a rack.

When you first remove the server from its original packaging materials, you'll notice that the optical slot on the server's front panel has a protector installed. This protector prevents damage to the section of the front panel above the CD slot.

Important: Do not dispose of this protector. You may need to use it in the future.

In general, avoid applying pressure to this area of the server's enclosure.

Make sure the protector is in place under these or similar circumstances:

- When shipping the server in its shipping box.
- When installing the server in a rack (using the provided installation template).
- When removing the server from a rack.
- When installing additional servers above or below the server in a rack.
- When repairing the server.

Note: The protector must be removed in order to insert or remove a disc from the optical drive. If a disc is in the drive, eject it before installing the protector.
Published Date: Feb 20, 2012

PowerBook G4 (17-inch), (17-inch 1.33GHz): Sound Specifications

This document discusses the sound specifications of the PowerBook G4 (17-inch) and PowerBook G4 (17-inch 1.33GHz) computers.
This article has been archived and is no longer updated by Apple.
The PowerBook G4 (17-inch) and PowerBook G4 (17-inch 1.33GHz) computers have an audio line-in port, headphone port, and an integrated microphone.

The audio line-in port is a stereo 3.5 mm mini-phono jack that allows the connection of a line-level microphone or other audio equipment.

The headphone port also uses a 3.5 mm mini-phono jack and provides enough current to drive a pair of low-impedance headphones. It can support external speakers (which may require external power) or other sound output devices.

The integrated microphone is located underneath the left speaker grill near the Tab key.

The computer includes two stereo speakers located beneath the speaker grills.

Published Date: Oct 10, 2016

PowerBook, iBook: Trackpad Is Too Responsive or Does Not Move the Cursor

If you find the pointer on your PowerBook iBook computer moves as you type, or if you find that the cursor does not move when you use the trackpad, you may need to check the computer's palm rejection feature.

This article has been archived and is no longer updated by Apple.

Symptom

- The pointer moves as you type, or the cursor does not move when you use the trackpad.

Solution

The PowerBook and iBook computers, depending on the operating system they are running, may have an advanced palm rejection feature, which is designed to minimize accidental trackpad input while typing.

Turning on this feature on prevents the pointer from moving as you type. If you need to use the trackpad and the keyboard at the same time, turn this feature off.

Follow these steps if the pointer moves as you type:

1. Choose Apple menu > System Preferences.
2. Choose View > Keyboard&Mouse. (Some versions of the operating system may have this called Mouse.)
3. Select the Trackpad tab.
4. Select the option called either "Ignore trackpad while typing" or "Ignore accidental trackpad input".

Figure 1 Trackpad tab of Keyboard&Mouse preferences

When this option is selected, the pointer will not move if you accidentally brush the sides of the trackpad with your wrist as you type. To use the trackpad immediately after typing, touch the middle section of the trackpad.

If the cursor does not move while using the trackpad, verify that only one part of the finger is touching the trackpad or deselect this option.

For other troubleshooting steps for a nonresponsive trackpad, see technical document 17228, "**PowerBook: Jumpy or Erratic Trackpad**" and 58389, "**PowerBook and iBook: Trackpad Does Not Respond**".

Published Date: Feb 19, 2012

PowerBook G4 (17-inch): Apple System Profiler Reports "Slot-B" PCI Device

Apple System Profiler may say that there is a "Slot-B" device in the Devices and Volume tab for the PowerBook G4 (17-inch) or PowerBook G4 (17-inch 1.33GHz) computer. This document explains what the "Slot-B" device is.

This article has been archived and is no longer updated by Apple.

On a PowerBook G4 (17-inch) or PowerBook G4 (17-inch 1.33GHz) computer, Apple System Profiler may report the name of the AirPort Extreme Card as "SLOT-B".

The AirPort Extreme Card in these computers is a card on the PCI bus based on the 802.11g draft specification. Notice that the Card Name field on the SLOT-B bus is "pci80211".

The AirPort Extreme Card is a 54 Mbit/s wireless Ethernet solution that comes standard with the PowerBook G4 (17-inch) computer.

Figure 1 Devices and Volumes tab with "Slot-B"

Published Date: Oct 10, 2016

Xserve (Cluster Node): Frequently Asked Questions (FAQ), Part 1 of 2

This document contains frequently asked questions (FAQ) regarding Xserve (Cluster Node), with answers to those questions.
This article has been archived and is no longer updated by Apple.
Questions answered in this document:

1. What is Xserve (Cluster Node)?
2. What market is the Xserve (Cluster Node) aimed at?
3. What does clustering enable me to do?
4. What are the differences between Xserve (Slot Load) and Xserve (Cluster Node)?
5. Can the Xserve (Cluster Node) be used as a server?
6. What is the hard drive capacity of the Xserve (Cluster Node)?
7. Are Xserve (Cluster Node) Apple Drive Modules compatible with those in the Xserve and Xserve (Slot Load)?
8. Can the Xserve (Cluster Node) serve as a host to the Xserve RAID?
9. What is the maximum memory capacity of the Xserve (Cluster Node)?
10. What ports are available on the Xserve (Cluster Node)?

Question 1: What is Xserve (Cluster Node)?

Answer: The Xserve (Cluster Node) is a 1U rack-mounted server tailored for use in computational clusters and distributed applications.

Question 2: What market is the Xserve (Cluster Node) aimed at?

Answer: The Xserve (Cluster Node) is aimed at creative, higher education, and life science communities.

Question 3: What does clustering enable me to do?

Answer: You can save a great amount of time by dividing one large problem into smaller parts, which can then be computed simultaneously on clusters. Examples of large problems include looking for a specific gene sequence or 3D rendering.

Question 4: What are the differences between Xserve (Slot Load) and Xserve (Cluster Node)?

Answer: The following table outlines the major differences between the Xserve (Cluster Node) and the Xserve (Slot Load):

Xserve (Cluster Node)	**Xserve (Slot Load)**
one hard drive bay	four hard drive bays
one gigabit Ethernet interface - on logic board only	two gigabit Ethernet interfaces - one on logic board, one on card installed in PCI/AGP slot
no graphics card	one ATI card, optional AGP 4x card
no optical drive	CD-ROM or Combo Drive
no connectivity to PCI/AGP slot	one half-length combination PCI/AGP slot
10-user license of Mac OS X Server	Unlimited-Client Edition of Mac OS X Server

See http://www.apple.com/xserve/specs.html for more information.

Question 5: Can the Xserve (Cluster Node) be used as a server?

Answer: Yes, the Xserve (Cluster Node) can be used as a server. However, this configuration was specially optimized for computing cluster tasks and the differences between Xserve (Slot Load) and Xserve (Cluster Node) should be kept in mind.

Question 6: What is the hard drive capacity of the Xserve (Cluster Node)?

Answer: There is one hard drive bay that comes with a 60 GB Apple Drive Module (ADM). The 180 GB ADM can also be used in this server and can be purchased as a separate kit from Apple.

Question 7: Are Xserve (Cluster Node) Apple Drive Modules compatible with those in the Xserve and Xserve (Slot Load)?

Answer: Yes.

Question 8: Can the Xserve (Cluster Node) serve as a host to the Xserve RAID?

Answer: Yes. Apple does not offer the Apple Fibre Channel PCI card as a configurable option for the Xserve (Cluster Node), but the Fibre Channel PCI card can be purchased as a separate kit from Apple.

Question 9: What is the maximum memory capacity of the Xserve (Cluster Node)?

Answer: 2 GB of 333 MHz Double Data Rate (DDR) memory.

Question 10: What ports are available on the Xserve (Cluster Node)?

Answer: The back panel of the Xserve (Cluster Node) has two FireWire 800 ports, two USB 1.1 ports, and one DB-9 (RS-232) port. The front panel has one FireWire 400 port.

Related Documents

86302 Xserve (Cluster Node): Frequently Asked Questions (FAQ), Part 2 of 2

Published Date: Oct 10, 2016

Xserve (Cluster Node): Frequently Asked Questions (FAQ), Part 1 of 2

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5. Can the Xserve (Cluster Node) be used as a server?
6. What is the hard drive capacity of the Xserve (Cluster Node)?
7. Are Xserve (Cluster Node) Apple Drive Modules compatible with those in the Xserve and Xserve (Slot Load)?
8. Can the Xserve (Cluster Node) serve as a host to the Xserve RAID?
9. What is the maximum memory capacity of the Xserve (Cluster Node)?
10. What ports are available on the Xserve (Cluster Node)?

Question 1: What is Xserve (Cluster Node)?

Answer: The Xserve (Cluster Node) is a 1U rack-mounted server tailored for use in computational clusters and distributed applications.

Question 2: What market is the Xserve (Cluster Node) aimed at?

Answer: The Xserve (Cluster Node) is aimed at creative, higher education, and life science communities.

Question 3: What does clustering enable me to do?

Answer: You can save a great amount of time by dividing one large problem into smaller parts, which can then be computed simultaneously on clusters. Examples of large problems include looking for a specific gene sequence or 3D rendering.

Question 4: What are the differences between Xserve (Slot Load) and Xserve (Cluster Node)?

Answer: The following table outlines the major differences between the Xserve (Cluster Node) and the Xserve (Slot Load):

Xserve (Cluster Node)	**Xserve (Slot Load)**
one hard drive bay	four hard drive bays
one gigabit Ethernet interface - on logic board only	two gigabit Ethernet interfaces - one on logic board, one on card installed in PCI/AGP slot
no graphics card	one ATI card, optional AGP 4x card
no optical drive	CD-ROM or Combo Drive
no connectivity to PCI/AGP slot	one half-length combination PCI/AGP slot
10-user license of Mac OS X Server	Unlimited-Client Edition of Mac OS X Server

See http://www.apple.com/xserve/specs.html for more information.

Question 5: Can the Xserve (Cluster Node) be used as a server?

Answer: Yes, the Xserve (Cluster Node) can be used as a server. However, this configuration was specially optimized for computing cluster tasks and the differences between Xserve (Slot Load) and Xserve (Cluster Node) should be kept in mind.

Question 6: What is the hard drive capacity of the Xserve (Cluster Node)?

Answer: There is one hard drive bay that comes with a 60 GB Apple Drive Module (ADM). The 180 GB ADM can also be used in this server and can be purchased as a separate kit from Apple.

Question 7: Are Xserve (Cluster Node) Apple Drive Modules compatible with those in the Xserve and Xserve (Slot Load)?

Answer: Yes.

Question 8: Can the Xserve (Cluster Node) serve as a host to the Xserve RAID?

Answer: Yes. Apple does not offer the Apple Fibre Channel PCI card as a configurable option for the Xserve (Cluster Node), but the Fibre Channel PCI card can be purchased as a separate kit from Apple.

Question 9: What is the maximum memory capacity of the Xserve (Cluster Node)?

Answer: 2 GB of 333 MHz Double Data Rate (DDR) memory.

Question 10: What ports are available on the Xserve (Cluster Node)?

Answer: The back panel of the Xserve (Cluster Node) has two FireWire 800 ports, two USB 1.1 ports, and one DB-9 (RS-232) port. The front panel has one FireWire 400 port.

Related Documents

86302 Xserve (Cluster Node): Frequently Asked Questions (FAQ), Part 2 of 2

Published Date: Oct 10, 2016

Xserve (Cluster Node): Frequently Asked Questions (FAQ), Part 2 of 2

This document contains frequently asked questions (FAQ) regarding Xserve (Cluster Node), with answers to those questions.
This article has been archived and is no longer updated by Apple.
Questions answered in this document:

1. How many PCI slots are available on the Xserve (Cluster Node)?
2. What is the serial port intended for?
3. What are the configurable options for the Xserve (Cluster Node)?
4. Are there any graphics cards available for the Xserve (Cluster Node)?
5. Are there any optical drives available for the Xserve (Cluster Node)?
6. Which mounting racks can the Xserve (Cluster Node) be installed in?
7. Does the Xserve (Cluster Node) have redundant power supplies?
8. How do I install software or restore the OS without a CD-ROM?
9. What applications can run on the Xserve (Cluster Node)?
10.

Question 1: How many PCI slots are available on the Xserve (Cluster Node)?

Answer: There are two 64-bit, 66 MHz PCI slots available on the Xserve (Cluster Node). Note that the AGP/PCI combination slot is not available on this product.

Question 2: What is the serial port intended for?

Answer: The DB-9 (9-pin) serial port allows administrators to access the server through a serial console session using UNIX commands.

Question 3: What are the configurable options for the Xserve (Cluster Node)?

Answer: RAM is offered as a configurable option for the Xserve (Cluster Node). Although there are no other configurable options, two kits are available for purchase from Apple--the 180 GB Apple Drive Module (ADM) and the Apple Fibre Channel card.

Question 4: Are there any graphics cards available for the Xserve (Cluster Node)?

Answer: Apple does not offer a graphics card, but there are third-party options available.

Question 5: Are there any optical drives available for the Xserve (Cluster Node)?

Answer: Apple does not offer an optical drive, but there are third-party options available.

Question 6: Which mounting racks can the Xserve (Cluster Node) be installed in?

Answer: The Xserve (Cluster Node) fits in EIA-310-D-compliant, industry-standard 19-inch (483 mm) wide racks, including four-post racks (24 inches (607 mm), 26 inches (660 mm), and from 29 to 36 inches (734 mm to 914 mm) deep) and two-post Telco racks (center-mount brackets are included).

Question 7: Does the Xserve (Cluster Node) have redundant power supplies?

Answer: No.

Question 8: How do I install software or restore the operating system without a CD-ROM?

Answer: There are several ways to install or restore software, including the following:

- Start up from the provided CD using a FireWire optical drive.
- Use FireWire Target Disk Mode and perform the installation from the host computer.
- Insert the 60 GB ADM into another Xserve to perform the installation.
- Use Apple's NetBoot and Network Install technology built into Mac OS X Server 10.2 to perform the installation from another server.

Question 9: What applications can be used on the Xserve (Cluster Node)?

Answer: Any application that can be used with Mac OS X Server work with Xserve (Cluster Node). Be aware, however, that this configuration is designed to be accessed remotely through connections such as SSH, or by software applications that communicate directly to the server over the network (with no graphics card). If you are not sure whether your application can be used in a "headless" configuration (without a display), check with the software publisher.

TA27055_Xserve_Cluster_Node_Frequently_Asked_Questions_FAQ_Part_of_.pdf

Related documents

86300 Xserve (Cluster Node): Frequently Asked Questions (FAQ), Part 1 of 2

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.

Published Date: Oct 10, 2016

Xserve, Xserve (Slot Load): Apple System Profiler Lists Fibre Channel PCI Card Twice

When an Xserve or Xserve (Slot Load) server has a Fibre Channel PCI card installed, you may see the Fibre Channel PCI card listed twice in Apple System Profiler. The card otherwise appears to function as expected.
This article has been archived and is no longer updated by Apple.

Symptom

When an Xserve or Xserve (Slot Load) server has a Fibre Channel PCI card installed, you may see the Fibre Channel PCI card listed twice in Apple System Profiler. The card otherwise appears to function as expected.

Solution

This symptom does not indicate a hardware issue. This is expected behavior for the Apple Fibre Channel PCI card, as the card is listed once per channel.
Published Date: Oct 10, 2016

PowerBook G4 (17-inch), (15-inch FW 800): How the Ambient Light Sensor Works

This document describes how the ambient light sensor (ALS) feature of the PowerBook G4 (17-inch) or PowerBook G4 (15-inch FW 800) computer automatically controls the display and keyboard brightness.
This article has been archived and is no longer updated by Apple.
Two light sensors located under the speaker grills measure the amount of ambient light in your environment. Based on these measurements, the PowerBook G4 (17-inch) or PowerBook G4 (15-inch FW 800) computer can adjust the display's brightness and turn on the keyboard's illumination.

The display brightness and illuminated keyboard features can be turned on or off independently of each another. For more information on turning off the ALS, see technical document 86270, "**PowerBook G4 (17-inch), (15-inch FW 800): How to Turn Off Ambient Light Sensor (ALS)**".

Although both of these features are automatic, you can always remain in control. By pressing the function keys F1 and F2, you can adjust the display's brightness level. Once you find a level you like, the computer associates your selection with the current ambient light level. Using this selection, the computer automatically adjusts the display's brightness as light levels change. To change this selection, simply press F1 and F2 and associate another brightness level with another ambient light measurement. To turn this feature off, see technical document 86270: "**PowerBook G4 (17-inch), (15-inch FW 800): How to Turn Off Ambient Light Sensor (ALS)**".

The keyboard backlight works in a similar way. It turns on when the ambient light is low enough for the backlight to be useful. Once you are in an environment dark enough for the feature to turn on, press the F8, F9, and F10 keys to adjust the associated keyboard backlight level. As the ambient light level increases, the keyboard backlight increases until it reaches its maximum setting then turns off when there is enough room light. For more information, see technical document 86270: "**PowerBook G4 (17-inch), (15-inch FW 800): How to Turn Off Ambient Light Sensor (ALS)**".

Note: Not all PowerBook G4 (15-inch FW 800) models include the backlit keyboard and ambient light sensor. To determine if your model includes these features see if the F8, F9, and F10 keys have the ambient light sensor icons printed on them.

Figure 1 F8, F9 and F10 keys on keyboard

If these icons are not printed on the keys, then these features are not present in your model.

Published Date: Oct 10, 2016

PowerBook G4 (12-inch) feels warm to the touch

The left palm rest and bottom of a PowerBook G4 (12-inch) computers can become warm after extended periods of use.
This article has been archived and is no longer updated by Apple.
After extended periods of use, the surfaces of the PowerBook G4 (12-inch) computers can become warm. As with all Apple products, the PowerBook G4 (12-inch) computer was designed to comply with safety agency specifications. The internal fan in the PowerBook G4 (12-inch) computers was designed to turn on within a temperature range that is selected to ensure both proper operation of the computer, and that no surface temperature should present a safety issue.

Follow these suggestions to reduce the computer's operating temperature:

- When using your PowerBook G4 (12-inch) computer, place it on a hard surface such as a desktop or tray. A hard surface dissipates heat better than a soft surface. Do not place it on a soft surface such as a towel or pillow. This may block air flow under the computer and prevent enough heat from dissipating.
- To reduce the computer's operating temperature, change the Processor Performance setting:
    1. From the **Apple** menu, choose **System Preferences**.
    2. From the **View** menu, choose **Energy Saver**.
    3. Click Show Details, if necessary.
    4. Click the Options tab.
    5. Choose Reduced from the Processor Performance pop-up menu.
- To further reduce the computer's operating temperature, change settings to make the hard disk sleep when it is not being used:
    1. From the **Apple** menu, choose **System Preferences**.
    2. From the **View** menu, choose **Energy Saver**.
    3. Click Show Details, if necessary.
    4. Click the Sleep tab
    5. Select the "Put the hard disk to sleep when possible" option.

Note: The PowerBook G4 (12-inch) and PowerBook G4 (12-inch DVI) computer complies with the safety standard for Safety of Information Technology Equipment, IEC 60950. This safety standard has been adopted by many countries and is referred to as UL 60950 in the United States, CSA 60950-00 in Canada, EN60950 in Europe, and ASNZ3260 in Australia and New Zealand.
Published Date: Oct 10, 2016

PowerBook G4 (17-inch), (15-inch FW 800): Illuminated Keyboard Does Not Respond When Pressing F8, F9 or F10

When you press F8, F9 or F10 on your PowerBook G4 (17-inch) or PowerBook G4 (15-inch FW 800) computer to change the keyboard illumination settings, you may see a prohibitory sign.
This article has been archived and is no longer updated by Apple.

Symptom

When you press F8, F9 or F10 on your PowerBook G4 (17-inch) or PowerBook G4 (15-inch FW 800) computer to change the keyboard illumination settings, you may see a prohibitory sign., as seen in Figure 1.

Figure 1 Prohibitory Sign Seen When Pressing F8, F9 or F10

Solution

If you see the dimmed graphic with the prohibitory sign when attempting to change the keyboard illumination settings, the sensed ambient light is not low enough for the keyboard illumination to be active.
Keyboard illumination cannot be adjusted until it is active. To adjust the keyboard illumination, take the computer into an environment that is dark enough to activate the feature. Then use the F8, F9 and F10 keys to make adjustments. For more information on this feature, see technical document 86270, "**PowerBook G4 (17-inch), (15-inch FW 800): How to Deactivate Ambient Light Sensor (ALS) Automatic Brightness Adjustment**".

Note: Not all PowerBook G4 (15-inch FW 800) models include the backlit keyboard and ambient light sensor. To determine if your model includes these features see if the F8, F9, and F10 keys have the ambient light sensor icons printed on them.

Figure 1 F8, F9 and F10 keys on keyboard

If these icons are not printed on the keys, then these features are not present in your model.

Published Date: Oct 10, 2016

Xserve: How to find the serial number

Learn how to find the serial number of your Xserve computer.

This article has been archived and is no longer updated by Apple.

You can find your serial number in several places:

- In Mac OS X
- On the surface of the computer
- On the original product packaging
- On the original receipt (or invoice)
- Online at My Support Profile (available in the U.S. and Canada)

In Mac OS X

On most computers with Mac OS X, you can find the serial number in the About This Mac window.

On the surface of the computer

You can find the serial number for an Xserve computer within the model's configuration label, which is located on the computer's back panel in a pull out tab (shown below).

On the original product packaging

If you have the product's original packaging, there's a label on the original packaging box that lists the serial number, MAC addresses, and other info.

On the original receipt (or invoice)

Some retailers may include the serial number of your Xserve computer on the receipt.

Online at My Support Profile

If you used your Apple ID to register or purchase your Xserve computer, you may find the serial number listed in My Support Profile (available in the U.S. and Canada). Log in with your Apple ID and find your product in the "My Products" box on the main page:

Note: You may have more than one Apple ID and not realize it. For more information, visit My Apple ID and click "Find out."

Published Date: Oct 10, 2016

Xserve and Xserve (Slot Load): Starting Up From a Mac OS X Server CD Takes Several Minutes

It may take four to eight minutes or more for an Xserve or Xserve (Slot Load) to complete the startup process when starting up from a Mac OS X Server CDs, which is included or purchased separately.
This article has been archived and is no longer updated by Apple.

Symptom

An Xserve or Xserve (Slot Load) server requires four to eight minutes, or longer, to start up from a Mac OS X Server CD. The startup time may increase when large amounts of memory (RAM) or PCI cards are installed, or when other devices are connected to the server.

Solution

This is expected behavior; it does not indicate an issue with the server or the CD.

Additional information

The startup process that is used when starting up from a Mac OS X Server Installer CD is different from the the process used when starting up from a Mac OS X Installer CDs. The Server Installer CD performs additional operations that are required to support the advanced features offered by the server configuration; one of these operations is copying the system from the CD to a RAM disk to allow for remote installation.
Published Date: Oct 10, 2016

Power Mac G4 (Mirrored Drive Doors), Power Mac G4 (FW 800): Power Button May Require Firm Push

Some Power Mac G4 (Mirrored Drive Doors) and Power Mac G4 (FW 800) computers' power buttons may require a firm push.
This article has been archived and is no longer updated by Apple.

Symptom

Some Power Mac G4 (Mirrored Drive Doors) and Power Mac G4 (FW 800) computers' power buttons may require a firm push.

Solution

As a workaround, press the power button in its upper left quadrant to turn on the computer. The activator is directly behind this area.

Figure 1 Where to press power button

Published Date: Oct 10, 2016

Macintosh: FireWire Hard Disk Does Not Appear in Finder If Connected to Computer Before AC Power

A FireWire hard drive that is not bus-powered may not appear on the desktop or in the Finder if it is connected to the computer before it is connected to an AC power source.

This article has been archived and is no longer updated by Apple.

Symptom

A FireWire drive that is not bus-powered does become available or appear on the desktop ("mount").

Solution

Connect the drive to an AC power source before connecting it to the computer.

If the issue has already occurred, unplug both the FireWire cable and the AC power, then plug in AC power before reconnecting the FireWire drive.

Additional information

In affected hard drives, the controller logic in the drive activates when the drive is plugged into the computer. The controller logic looks for, but does not find, the drive mechanism as soon as the drive is connected to the computer. The drive mechanism only runs from AC power, so until the drive is connected to an AC power source, the drive mechanism will be inactive. The controller continues to fail to find the drive mechanism even after the drive has been connected to an AC power source.

Published Date: Oct 10, 2016

PowerBook G4 (17-inch), (17-inch 1.33GHz): Using the Security Cable Lock Slot

This document discusses the correct security system size to use when securing the PowerBook G4 (17-inch) or PowerBook G4 (17-inch 1.33GHz) computer.
This article has been archived and is no longer updated by Apple.
The PowerBook G4 (17-inch) or PowerBook G4 (17-inch 1.33GHz) computer includes a security cable lock slot on the left side of the computer.

Figure 1 Security cable lock slot

To use a third-party security system, choose one that does not apply pressure to the AC adapter when both are connected to the computer. This pressure can cause stress to the computer's AC power port.
Published Date: Oct 10, 2016

PowerBook G4 (17-inch): Does Not Start Up From Drive Using Magma PCI Chassis

The PowerBook G4 (17-inch) computer cannot start up from a hard drive in a Magma PCI chassis connected to the computer through the PC card slot.

This article has been archived and is no longer updated by Apple.

Symptom

The hard drive does not appear as a startup disk.

Solution

This document will be updated as more information becomes available.

Published Date: Oct 10, 2016

Xserve, Xserve (Slot Load): SFP Cable Connectors Can Seem Difficult to Disconnect

This document explains how to remove the SFP cables from the Fibre Channel socket of the Xserve or Xserve (Slot Load).
This article has been archived and is no longer updated by Apple.

Symptom

The SFP cable connectors are difficult to disconnect.

This happens when the Apple Fibre Channel PCI card is installed in the server's upper dual PCI slot, which is the slot that is qualified for the Apple Fibre Channel PCI card.

Solution

If the release tab is too close to the chassis to be released by hand, insert a small flat tool (such as a flat-head screwdriver) and use it to depress the tab, then remove the cable.

Additional information

The release tab on the SFP cable connector is located very close to the chassis when the Apple Fibre Channel PCI card is installed in the upper PCI slot of the dual PCI riser card. The limited space can make it difficult to press the tab on the connector to release the cable.
Published Date: Oct 10, 2016

Mac OS X 10.2.6: Unable to Log In After Installing Security Update 2003-06-09

After installing Security Update 2003-06-09 (version 1.0), you may be unable to log in by clicking the Log In button
This article has been archived and is no longer updated by Apple.

Symptom

When you try to log in, the window shakes and the password field becomes blank after clicking the Log In button. This occurs when the login window displays accounts in list view (the default setting).

Solution

Install Security Update 2003-06-09 (version 2.0).

As a workaround, type your account password and press Return instead of clicking the Log In button.
Published Date: Oct 10, 2016

Xserve RAID: Only Fibre Channel Link Light Is On After Resetting Controller

If you hold the reset button too long during the reset procedure, the controller may stop responding.
This article has been archived and is no longer updated by Apple.

Symptom

Only the Fibre Channel link light is on (both on the front and on the back of the Xserve RAID). In RAID Admin, the controller is amber, the corresponding blower is off, and the corresponding Ethernet link is down.

This occurs when the controller has just been reset and the reset button was pressed too long.

Solution

1. Use RAID Admin to turn off the Xserve RAID.
2. If cache backup batteries are installed, pull them slightly out of the RAID.
3. Disconnect the power cables from both power supplies.
4. After 10 to 20 seconds, reconnect the power cables and start the Xserve RAID.
5. All LEDs on both controllers should turn back on. Wait for RAID Admin to update status until you see all modules are working again. This process can be expedited by quitting and reopening the RAID Admin application.
6. Reinstall the cache backup batteries.

Published Date: Oct 10, 2016

PowerBook G4 (17-inch): External Speaker Noise During Sleep

When a PowerBook G4 (17-inch) computer is in sleep, external amplified speakers connected to the computer may make a static noise.
This article has been archived and is no longer updated by Apple.

Symptom

External amplified speakers connected to the computer make a static noise when it is in sleep.

Solution

Use one of these workarounds:

- Turn down the volume on the external speakers.
- Disconnect the external speakers.
- Unplug the external speakers' AC power source.

Published Date: Oct 10, 2016

Xserve RAID: "RAID Controller Not Ready" Message in RAID Admin

This document discusses possible causes of the message "RAID Controller not ready" in RAID Admin.
This article has been archived and is no longer updated by Apple.

Symptom

RAID Admin reports "RAID Controller not ready".

If you troubleshoot by swapping each controller module into the other module's slot, the symptom follows the controller module, not the slot.

Solution

Follow these steps to fix or isolate the issue. Check in between steps to see if the issue was resolved, or if you need to continue to the next step. Be sure to give RAID Admin enough time to update status before moving to the next step.

1. Quit the RAID Admin application and open it again. If the message does not reappear, it was caused by a refresh issue that did not update the message field.
2. Remove the Xserve RAID from the monitoring list and add it again. You may find that the Xserve RAID has acquired a new DHCP address (if set to DHCP) that would account for the connection failure. Rediscover the Xserve RAID and add it back to the monitoring list. If the Xserve RAID has the same IP address, removing and adding it back to the monitoring list may still be a helpful step to perform.
3. Look in the Component tab for the Xserve RAID having a component issue. If one of the controller modules has a warning, go to the System menu and restart that controller's coprocessor. This step does not take your data offline.
4. Quit the RAID Admin application. Pull both cache backup batteries slightly out from the Xserve RAID. Shut the RAID down, if possible, by holding the power button for five seconds.

   Warning: This step causes the RAID to go offline. Be sure any other computers are disconnected from RAID volumes when you perform this step.
   If the power button does not shut the RAID down, you will need to disconnect both power cables. After ten seconds, use the power button to turn on the RAID. After the RAID is on and the status LEDs on the front are solid green, the cache backup batteries may be reinstalled. Open the RAID Admin application and test the issue again.

If none of the steps listed above resolves the issue, contact Apple for further assistance.

Additional information

The "RAID Controller not ready" message is a general communications alert, which can indicate different causes.

The most common cause is that the RAID controller is restarting. This message is normal to see temporarily if the controller is restarting. The message only indicates an issue if the message is persistent.

This message does not in any way affect the data on the hard disks. In most cases the data on the hard disks is still accessible; only in very rare cases will the data be offline.
Published Date: Oct 10, 2016

iBook (Dual USB) and Later: Resolving a "Clicking Speaker" Issue After Installing Mac OS X 10.2.5 or 10.2.6

Mac OS X 10.2.8 addresses an issue if your iBook (Dual USB) or later computer makes an audible clicking sounds from the speakers or headphones with Mac OS X 10.2.5 or 10.2.6.
This article has been archived and is no longer updated by Apple.

Symptom

In some cases, the speakers or headphones (if headphones are plugged in) may make audible clicking sounds. This could happen after updating to Mac OS X 10.2.5 or 10.2.6.

Solution

Download and install Mac OS X 10.2.8 to address this issue. See technical document 106704, "**Mac OS X: How to Update Your Software**," for more information.

Published Date: Feb 19, 2012

eMac (ATI Graphics): External Ports and Connectors

This document discusses the external ports and connectors on the eMac (ATI Graphics) computer.

This article has been archived and is no longer updated by Apple.

Figure 1 External ports and connectors on the eMac (ATI Graphics) computer

Note: All ports and connectors discussed in this document are located on the I/O panel on the right side of the computer.

Headphone

Mini-headphone jack (headphones not included.)

The headphone jack provides enough current to drive a pair of low-impedance headphones. Headphones should have an impedance not lower than the recommended minimum impedance of 32 Ω. Headphones with lower impedance can be used, but with some degradation in performance.

Audio Input Jack

Analog audio input minijack; up to 16-bit stereo and 44.1 kHz sampling rate.

The external sound input jack is a 3.5 mm mini phone jack. The sound input jack accepts line-level stereo signals. It also accepts a stereo miniplug-to-RCA cable adapter for connecting stereo equipment to the computer.

USB

Total of five USB 1.1 compliant ports: three on the computer (shared on two 12 Mbit/s (megabits per second) controllers); two on the keyboard, which contains a USB hub.

The USB ports use USB Type A connectors, which have four pins each.

The USB ports support both low-speed and high-speed data transfers, at up to 1.5 Mbit/s and 12 Mbit/s, respectively. High-speed operation requires the use of shielded cables.

FireWire

Two 400 Mbit/s FireWire (IEEE 1394) ports (actual rates will vary); 8 W shared.

When the computer is on, the power pin provides a maximum voltage of 24 V (no load) and up to 8 W total power (shared by both connectors). Zero voltage is present at the power pin when the computer is in Sleep mode or when it is off.

The eMac computer supports Target Disk Mode (TDM).

Modem

Built-in 56 kbit/s V.92 modem. Actual modem speeds lower; speed depends on connection rate and other factors.

The telephone connector for the modem is an RJ-11 connector on the I/O panel.

The modem has the following features:

- Modem bit rates up to 56 kbit/s (supports V.92, V.90, and K56flex modem standards)
- Group 3 fax modem bit rates up to 14.4 kbit/s

The modem appears to the system as a serial port that responds to the typical AT commands. The modem provides an analog sound output for monitoring the progress of the modem connection.

10/100 BASE-T Ethernet

The eMac has a built-in 10/100 Mbit/s Ethernet port. The eMac computer can be connected to an Ethernet cable from a hub, switch, or router, or to another Macintosh computer using a crossover or patch cable. The connected device can be either a 10BASE-T or a 100BASE-TX device; the port automatically detects which type of device is connected.

Video Out Port

Mini-VGA output port (requires VGA display adapter). The mini-VGA output port supports only video mirroring. The external devices displays an image identical to that shown on the built-in display.

The external monitor supports only the display resolutions that are available on the internal monitor.

An adapter is available to convert the eMac's mini-VGA output port to S-video and composite video.

Power Button

This button is used to turn the computer on, turn the computer off, or reset the computer.

Published Date: Feb 20, 2012

Apple Cinema HD Display: How to Remove Adhesive Residue

The Apple Cinema HD Display is packaged with a protective film wrapped around the lower area of the front bezel. In the unlikely event that some of the adhesive residue remains after the protective film is removed, follow the steps in this document to remove the adhesive.
This article has been archived and is no longer updated by Apple.
The Apple Cinema HD Display is packaged with a protective film wrapped around the lower area of the front bezel. In rare cases the protective film may be difficult to remove in one piece, and may leave behind an adhesive residue that is hard to remove using the normal cleaning recommendations for Apple products. For normal cleaning methods, see technical document 30889, "**Translucent Plastics: How to Clean**".

Follow these steps to remove the residue:

1. Make sure the material you are trying to clean is the residue left behind from the protective film and not something else. Fingerprints, sticky residue from candy, and many other common materials can be easily cleaned using a damp, lint-free cloth.
2. For cleaning the adhesive left behind from the protective film, use "Goo Gone", produced by Magic American Corporation based in Cleveland, Ohio. (http://www.magicamerican.com/products_gg.aspx).
3. Apply a small amount of Goo Gone to a clean lint-free cloth. If too much cleaning solution is used, it may migrate into any gaps in the case plastics.
4. Gently rub the lint-free cloth over the areas that have the adhesive residue until all of the adhesive has been removed.
5. Gently polish the affected areas with a clean, lint-free cloth to remove any remaining cleaning solution residue.

Important: Information about products not manufactured by Apple is provided for information purposes only. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 10, 2016

Mac OS X: Apple Fibre Channel and SCSI PCI Card Can Prevent Deep Sleep

If the Apple Fibre Channel PCI card or other Apple SCSI PCI cards are installed in a computer, the computer cannot enter deep sleep mode.
This article has been archived and is no longer updated by Apple.

Symptom

When the Apple Fibre Channel PCI card or another SCSI PCI card is installed in a Power Mac G5, Power Mac G4, or Xserve, the system does not sleep. Therefore, your system will not go into low-power mode during long periods of inactivity. Because the Power Mac G5, Power Mac G4 or Xserve is unable to sleep, the fans may appear to run excessively.

Solution

This is expected behavior. The fact that the system does not sleep causes no harm to the system or its components.

1. Open System Preferences.
2. Select Energy Saver.
3. Move the computer sleep slider to "Never", so that the computer does not attempt to sleep.

Related Documents

86407 About "Sleep" and "Deep Sleep"

Published Date: Oct 10, 2016

About "Sleep" and "Deep Sleep"

"Sleep" and "deep sleep" are used to refer to low-power modes of the computer.

This article has been archived and is no longer updated by Apple.

When you select the Sleep command in Mac OS (or when the computer goes to sleep as a result of Energy Saver settings), as many components as possible will enter a low-power mode.

If all hardware components and connected peripherals are in a low-power mode, your computer is in "deep sleep". However, not all hardware components and peripherals are capable of running in a low-power mode.

If one or more hardware components or peripherals does not enter a low-power mode, your computer may simply sleep.

Related documents

25801 Energy Saver: About sleep and idle modes in Mac OS X
106790 Mac OS X: About Energy Saver Options

Published Date: Oct 10, 2016

Power Mac G5: External Antenna Required for AirPort or Bluetooth Reception

To use Bluetooth and AirPort on a Power Mac G5, you must connect the external antennas.
This article has been archived and is no longer updated by Apple.

Symptom

A Power Mac G5 computer does not detect an AirPort network or Bluetooth device, even though the base station or device is well within range.

Solution

Make sure you have the appropriate external Bluetooth and/or AirPort antennas properly connected at the rear of the computer. The AirPort antenna is included with the Power Mac G5 and is compatible with the AirPort Extreme card. The Bluetooth antenna is only included if you purchased Bluetooth as a CTO option from Apple.
Third-party devices may include their own antennas.

Antenna description:

- The Bluetooth antenna is a short cylindrical antenna.
- The AirPort antenna is larger and resembles a capital "T".

Warning: The FCC rules require that the operator or a nearby person be more than one centimeter (0.4 inches) away from the AirPort Extreme antenna during transmission. In addition, the AirPort Extreme antenna must not be co-located with any transmitter or antenna other than Apple Bluetooth antenna model A1067.
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Published Date: Oct 10, 2016

Install Power Mac G5 air deflector properly

The Power Mac G5 will run at a reduced speed if the air deflector is not installed properly.

This article has been archived and is no longer updated by Apple.

After working inside a Power Mac G5 computer, make sure the air deflector is firmly in place. If it is missing or slightly ajar, the computer will run at a reduced speed.

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Published Date: Oct 10, 2016

Power Mac G5: How to Identify External AirPort and Bluetooth Antennas

This article has been archived and is no longer updated by Apple.

Most Power Mac G5 computers include at least one external antenna, for AirPort. You also receive an antenna for Bluetooth if you ordered that configuration. You can identify antennas using the pictures presented here.

Power Mac G5 (Late 2005) models have their AirPort and Bluetooth antennas integrated into the enclosure, and do not use the external antennas described in this article.

AirPort antenna

The AirPort antenna, shown below, is shaped like a capital "T" . Once connected, it can be rotated to provide the best signal to the computer.

Bluetooth antenna

The Bluetooth antenna, shown below, is a small cylindrical antenna that provides reception for Bluetooth devices.

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Published Date: Oct 10, 2016

Power Mac G5: Optical Audio Port Specifications

This document contains specifications for the optical digital audio ports introduced in the Power Mac G5 computer.
This article has been archived and is no longer updated by Apple.
Power Mac G5 computers have two optical audio ports of a type new to Macintosh. They allow you to connect a variety of audio equipment using digital optical (a.k.a. "Toslink") cables. Cables with Toslink connectors are the style compatible with the Power Mac G5 computer. These optical audio ports allow the transfer of stereo audio or encoded 5.1 audio (commonly found on DVD movies).

Figure 1 Optical Audio Ports

The specifications for these ports are:

Data format: Sony/Phillips Digital Interface (S/PDIF) protocol (IEC60958-3)
Connector type: Toslink optical (IEC60874-17)
Bits per sample: 16-bit or 24-bit

Optical digital audio out

Note: Specifications are based on a typical situation with playback of a 1KHz, -1dBFS 24-bit sine wave, 44.1Khz output sample rate, unless otherwise specified below.

Output sample rate: 32 kHz, 44.1 kHz or 48 kHz
Signal-to-noise ratio: Greater than130 dB
Total harmonic distortion + noise: Less than -130 dB (0.00001 percent)

Optical digital audio in

Note: Specifications are based on a typical situation with playback of a1KHz, -1dBFS 24-bit sine wave, unless otherwise specified below.

Fsi-input sample rate (external clock mode): 32 kHz, 44.1 kHz or 48 kHz
Fsi-input sample rate (internal clock mode): 16 kHz to 96 kHz
Signal-to-noise ratio (external clock mode): Greater than130 dB
Signal-to-noise ratio (internal clock mode, 16 kHz < Fsi < 96 kHz): Less than -112 dB
Total harmonic distortion + noise (external clock mode): Less than -130 dB (0.00001%)
Total harmonic distortion + noise (internal clock mode, 16 kHz < Fsi < 96 kHz): Less than -112 dB (0.0003%)

Published Date: Oct 10, 2016

Power Mac G5: ATA Parallel-to-Serial Adapters Not Supported

Parallel-to-Serial ATA adapters made by third-party vendors do not work with Power Mac G5 computers.
This article has been archived and is no longer updated by Apple.

Symptom

A Parallel ATA hard drive attached to a Power Mac G5 computer via an adapter does not work.

Solution

Power Mac G5 computers have only Serial ATA busses. There are third-party adapters to connect Parallel ATA hard drives to Serial ATA busses, but these adapters are not supported for use on the Power Mac G5 computer. If you wish to upgrade your hard drive or add a second hard drive, you should use only native Serial ATA hard drives.

A native Serial ATA hard drive has the Serial ATA data and power connector on the hard drive and does not require the use of adapters or special cables.

Published Date: Oct 10, 2016

Power Mac G5: Cannot Use Apple Pro Speakers

Apple Pro Speakers do not work with Power Mac G5 computers.

This article has been archived and is no longer updated by Apple.

The Power Mac G5 computer does not have the digital audio connector that is required to use Apple Pro Speakers. Power Mac G5 computers have both analog audio and optical S/PDIF connectors instead.

Published Date: Oct 10, 2016

Power Mac G5: System Audio Muted When DVD Player Open

If DVD Player is open with AC3 audio selected, other kinds of audio (such as system beeps) may not be heard.

This article has been archived and is no longer updated by Apple.

Symptom

System beeps and other audio alerts are not audible.

This occurs when DVD Player is open and the option for AC3 audio selected, whether or not a disc is inserted or playing.

Solution

Quit DVD Player to hear other system audio.

To learn how to change the audio options for DVD Player, see technical document 86438: "**Power Mac G5: Selecting Audio Output for a DVD Movie**".

Published Date: Oct 11, 2016

Power Mac G5: Do Not Use Installation Disc with Other Computers

The version of Mac OS X 10.2.7 (G5) included with Power Mac G5 computers is specific to those computers. The included software installation disc cannot be used to start up any other Macintosh computers.
This article has been archived and is no longer updated by Apple.

Symptom

Other computers are unable to start up from the software installation disc that comes with the Power Mac G5.

Solution

The version of Mac OS X 10.2.7 (G5) that ships with Power Mac G5 computers is made specifically for those computers and will not install on any other computers.
This means that Mac OS X 10.2.7 (G5) also should not be used in image mastering or for NetBooting other computers.

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Published Date: Oct 11, 2016

Power Mac G5 audio output options

Learn about the two audio output options when playing a DVD movie on a Power Mac G5 computer, and how to select them.
This article has been archived and is no longer updated by Apple.
Depending on the equipment you have, you can select one of two types of audio output when playing a DVD movie:

System Sound Output, the default format, outputs analog audio that plays on your computer's built-in speakers, stereo headphones, or other audio device.

Digital Out outputs digital audio and doesn't use the built-in speakers at all. It works with devices that support the S/PDIF format. Digital Out allows you to use a home theater system to play back 5.1 audio. If you use Digital Out, the volume slider is always at maximum and grayed out, because the volume is controlled by the receiver or speakers rather than by the computer.

To use Digital Out, your audio equipment must support S/PDIF. You might need to install drivers required by your audio device. Contact the manufacturer of your audio device to determine whether you need to install drivers.

To choose the type of audio output you want to use within DVD Player:

1. If you want to use digital audio, first connect your audio device to your computer.
2. Choose Preferences from the DVD Player menu and click Disc.
3. Choose the type of audio output you want from the Sound Type pop-up menu.

To choose the type of audio output you want to use from System Preferences:

1. If you want to use digital audio, first connect your audio device to your computer.
2. Open System Preferences and select Sound.
3. Click Output and select your preferred output method.

If you choose Digital Out Output, DVD Player uses the digital output device you choose regardless of the settings in the Sound pane of System Preferences. In fact, the volume setting on the computer will be ignored as the digital sound out volume is controlled by the audio device.

If you choose System Sound Output, DVD Player uses the audio output selected in the Sound preferences pane.

Published Date: Oct 11, 2016

Xserve: Initial IP Address of Vixel 335 Fibre Channel Switch From Apple Store

Some of the Vixel 335 Fibre Channel switches shipped from the Apple Store included incorrect information about the initial IP address the switch is configured with. This document provides the correct initial IP information for these switches.
This article has been archived and is no longer updated by Apple.
Vixel 335 Fibre Channel switches purchased from Apple have the following initial IP configuration:

IP Address: 169.254.10.10
Subnet Mask: 255.255.0.0
Gateway Address: 0.0.0.0

To connect to the switch and make changes, you need to configure the administration computer to be on the same subnet as the switch's initial IP settings.
Published Date: Oct 11, 2016

Xserve (Slot Load), PowerBook G4 (12-inch): Cannot Eject Audio CD

Some Xserve (Slot Load) servers and PowerBook G4 (12-inch) computers may not eject audio CDs from their combo drives.
This article has been archived and is no longer updated by Apple.

Symptom

Neither pressing the eject key nor holding the mouse button during startup will cause your audio CD to eject.

Note: This happens with audio CDs that are in undamaged, working condition.

Solution

Use the firmware update that has been released to fix this issue. You can download and install the updater from Software Dowload document 120212, "**Slot Combo Drive Update: Information and Download**", or you can use the Software Update feature of System Preferences.

Note: If you have a slot-load optical drive that still has an audio CD in it and you are unable to eject the disc, you will not be able to run the firmware update. It is essential that the audio CD be removed before the firmware updater is run. If you cannot remove the disc, please contact a service provider for assistance.

Published Date: Oct 11, 2016

Xserve RAID: Fibre Channel Utility Reports No Fibre Channel Card Available

The Apple Fibre Channel Utility may report that no Apple Fibre Channel card is available.
This article has been archived and is no longer updated by Apple.

Symptom

The Fibre Channel Utility reports that there is no Fibre Channel card installed.

This happens after you install the the "FibreChannelDriverUpdate.pkg" on the computer with the card, and the computer is restarted.

Solution

Follow these steps:

1. Open the Terminal utility.
2. Type the following at the prompt: sudo touch /System/Library/Extensions/
3. Press return.
4. Type your administrator password.
5. Press return.
6. Restart the computer.

Published Date: Oct 11, 2016

Macintosh: USB 2.0 Specifications and Information

Specifications of the USB 2.0 ports included with some Macintosh computers.

This article has been archived and is no longer updated by Apple.

USB ports on the computer

Certain Macintosh models have up to three built-in USB Type A ports that comply with USB 2.0 specifications. Each built-in USB port can provide a data transfer rate of 480 megabits per second (Mbit/s).

You can connect either USB 1.1 or USB 2.0-compliant devices to the computer's USB 2.0 ports.

As with USB 1.1, you can connect up to 127 devices on each USB controller. You can use Apple System Profiler to identify which devices share the same USB controller.

The data transfer rates each port uses depends on whether the communication occurs at low-speed, mid-speed or high-speed. These rates are:

- Low-speed: 1.5 Mbit/s
- Full-speed: 12 Mbit/s
- High-speed: 480 Mbit/s

USB ports on the keyboard and display

The USB ports on your Apple Pro Keyboard or Apple Pro Keyboard (2003) are USB 1.1 compliant ports, allowing a 1.5 Mbit/s or 12 Mbit/s data transfer rate. Apple displays that have USB hubs (any monitor that uses an ADC connector) are also USB 1.1 compliant.

A USB 2.0-compliant device connected to the ports on the keyboard or a display do not operate at high speed. The device may operate at full speed (12 Mbit/s) if it has that capability.

Published Date: Feb 20, 2012

Apple Printers: Printer Supplies

Many manufacturers, other than Apple, offer ink and toner cartridges that are compatible with Apple printers.

This article has been archived and is no longer updated by Apple.

The following table provides a listing of compatible printer supplies. Additional offerings may be available from other companies.

Apple	Canon Brand				
Apple Product	**Canon Product**	**Europe Product Code**	**USA Product Code**	**Japan**	**Asia Pacific**
Ink Jet Cartridges					
Color StyleWriter 2200 - Black Ink Cartridge M3909G/A	BC-10	0905A002AA	0905A003AA/AB	0905A001AA	0905A004AA
Color StyleWriter 2200 - Black In Tank (3pk) M3910G/A	BCI-10	0956A002AA	0956A003AA	0956A001AA	0956A004AA
Color StyleWriter 1500 - Color Ink Cartridge M4609G/A	BC-05	0885A002AA	0885A003AA	0885A001AA	0885A004AA
Color StyleWriter 1500 - StyleWriter Ink Cartridge M8041G/C	BC-02	0881A002AA	0881A003AA	0881A001AA	0881A004AA
Color StyleWriter 2400/2500 - Black Ink Tank M3330G/A	BCI-21BK	0954A002AA/BA/CA	0954A003AA/BA	0954A001AA	0954A004AA
Color StyleWriter 2400/2500 - Color Ink Cartridge M3328G/A	BC-21e	0899A002AA	0899A003AA	0899A001AA	0899A004AA
Color StyleWriter 2400/2500 - Color Ink Tank M3329G/A	BCI-21CL	0955A02AA/BA/CA	0955A003AA/BA	0955A001AA	0955A04AA
Color StyleWriter 2400/2500 - High Performance Black Ink M3240G/A	BC-20	0895A002AA	0895A003AA	0895A001AA	0895A004AA
Color StyleWriter Pro- Black Ink Tank M3822G/A	BJI-201HC	0946A001AA/0949A002AA	0946A003AA	0946A001AA	0946A001AA
Color StyleWriter Pro- Yellow Ink Tank M1951G/A	BJI-201Y	0949A001AA/0949A002AA	0949A003AA	0949A001AA	0949A001AA
Color StyleWriter Pro- Cyan Ink Tank M1949G/A	BJI-201C	0947A001AA/0947A002AA	0947A003AA	0947A001AA	0947A001AA
Color StyleWriter Pro- Magenta Ink Tank M1950G/A	BJI-201M	0948A001AA/0948A002AA	0948A003AA	0948A001AA	0948A001AA
Toner Cartridges					
LaserWriter IISC, IINT, IINTX, IIf, IIg M6002	EP-S	1524A003AA	1524A002AA	1524A001AA	1524A001AA
Personal LaserWriter LS, SC, NT, NTR M0089LL/A	EP-L	1526A003AA	1526A002AA	1526A001AA	1526A001AA
LaserWriter 600/630, 16/600 PS M2473G/A	EP-E	1538A003BA	1538A002BA	1538A001BA	1538A001BA
Personal LaserWriter 300, 320, LaserWriter 4/600 PS M2045G/A	EP-P	1529A003BA	1529A002BA	1529A001BA	1529A001BA

Color LaserWriter 12/600 PS and 12/660 PS M3756G/A	EP-H(Black)	1505A001AA	1505A002AA	1505A001AA	1505A001AA
Color LaserWriter 12/600 PS and 12/660 PS - Cyan M3757G/A	EP-H(Cyan)	1504A001AA	1504A002AA	1504A001AA	1504A001AA
Color LaserWriter 12/600 PS and 12/660 PS - Magenta M3760G/A	EP-H(Magenta)	1503A001AA	1503A002AA	1503A001AA	1503A001AA
Color LaserWriter 12/600 PS and 12/660 PS - Yellow M3758G/A	EP-H(Yellow)	1502A001AA	1502A002AA	1502A001AA	1502A001AA
Color LaserWriter 12/600 PS and 12/660 PS - OPC M3761G/A	EP-H(Drum)	1501A001AA	1501A002AA	1501A001AA	1501A001AA

Color LaserWriter Miscellaneous Consumables

Apple Kit	Product Code	Product
Color LaserWriter 12/600 PS and 12/660 PS - Maintenance Kit M3867G/A	RG5-1511	FIXING ASS'Y, 100-120V
	RG5-1156	TRANSFER DRUM CLEANING ASS'Y
	RB1-4515	FILTER, AIR
	RB1-4578	FILTER, OZONE
	RG5-1152	SEPARATION CORONA ASS'Y
Color LaserWriter 12/600 PS and 12/660 PS - Fuser Oil M3755G/A	0654A006AA	Silicon Oil Bottle S-H1

Compatible non-Apple Toner Cartridges

Apple Product	IBM Product	GCC Product
LaserWriter Select 300/310/360 M1960G/A	n/a	Elite 600
LaserWriter 12/640 PS M4683G/A	Network Printer 12, P/N 63H3005	Elite 12 Series
LaserWriter 8500 M5893G/A	Info Printer 20, P/N 90H0748	Elite XL 20

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.

Published Date: Feb 19, 2012

What to do if your Apple Keyboard becomes unresponsive

This article has been archived and is no longer updated by Apple.

If you have an original Power Mac G5 and are using the Apple Pro Keyboard (2003) that came with it, you may experience an occasional issue where your keyboard may not respond to your input. You might find that you can't enter text, or that a device connected to the keyboard's USB port, such as a mouse, doesn't work.

If this happens to you, unplug the keyboard from the computer and then plug it in again. This should make it work as expected. To prevent this from happening again, make sure that you have the keyboard connected directly to the computer—not through a USB hub or display. Also make sure that you've updated the computer's system software to Mac OS X 10.2.8 or later.

Published Date: Feb 19, 2012

Macintosh: File System Specifications and Terms

This document explains: the limitations of the Mac OS Standard format (HFS), the practical limits after which performance suffers, and the Mac OS Extended format (HFS Plus).
This article has been archived and is no longer updated by Apple.
This document explains some of the terminology involved when speaking about volumes and the file system. It also explains why different formats on different hard drives can cause small files to take up more space on a larger drive than they do on a smaller drive. For more information on Mac OS Extended Format, and Volume and file limits in Mac OS 9, please see the following technical documents:

Document 30344: "**Mac OS: About Mac OS Extended Format**"
Document 24601: "**Mac OS Extended Format: Volume and File Limits**"

Mac OS Standard Format Specifications
Before discussing hard drive block allocation, and the intricacies of determining allocation block sizes and such, let's first review the Macintosh Standard format, sometimes called HFS.

Below are some specifications and associated terminology used to describe the Macintosh Standard format structure.

Volume
A volume is either a full disk, or a section of a disk, partitioned into separate parts. If you partition a single drive then each partition is considered a volume.

- The maximum volume size under System 6 and System 7 is 2 GB. System 7.5 increased that limit to 4 GB and System 7.5.2 (and later) increases that limit to 2 TB on some computers, including:

  - any computer that came with System 7.5.2 or newer.
  - any Macintosh computer with PCI slots.

- The maximum number of volumes is theoretically limited to 173 due to the maximum number of open files in the Mac OS. Since there are other files that are opened when the computer boots up, the actual maximum will vary depending upon how many other files are open by the operating system.
- The maximum file size is 2 GB.
- The maximum number of files on a volume is 65,536.
- The maximum number of files in a folder is 32,767.
- The maximum size of the data fork in a file is 2 GB.
- The maximum size of the resource fork in a file is 16 megabytes.

Note that AppleShare, including Personal File Sharing, has its own volume size limitations. For more information, please see technical document 15460: "**AppleShare File Server: Chart Of All Limitations**"

Logical block
A logical block is a unit of drive space composed of up to 512 bytes. A logical block is numbered from 0 to n, n being the last block on the volume - not necessarily the hard disk. Take the volume size, divide it by 512 bytes, and you have the number of logical blocks.

Allocation block
An allocation block is a unit of storage on a volume, composed of one or more logical blocks. The larger the volume, the more logical blocks comprise one allocation block. The maximum number of allocation blocks per volume is 65,536; most volumes have slightly less.

In both the Macintosh and DOS environments, the maximum number of blocks on a driver is 65,536 because both operating systems address the allocation blocks with a 16-bit address. Drives larger than 512 MB cannot use a block size of 8K or less because there just aren't enough addresses. Thus, if a 2 GB drive is one Macintosh partition, the smallest file size allowed is 32K. (If you save a SimpleText file with one character in it, it would take up 32K of disk space.) This means that the size of your hard drive determines the minimum size of each file.

A non-empty file fork always occupies at least one allocation block, no matter how many bytes of data the file fork contains. If the data fork and resource fork of a file contain data, the file uses two allocation blocks. If all the files are only one allocation block long, then there can be as many files on the volume as there are allocation blocks for the volume. However, when a file is longer than one allocation block, the total number of possible files decreases. For example, on a volume with 65,535 allocations block, you can have:

- 65,536 files, each 1 allocation block long.
- 32,768 files, each 2 allocation blocks long.
- 2048 files, each 32 allocation blocks long.
- 1024 files, each 64 allocation blocks long.

All of the numbers above refer to the System's record structures. Other elements place tighter restrictions on the actual number of usable files in the root directory. The Standard File dialog uses the List Manager. The List Manager has a limit of 32K of data, which is somewhere between 800 and 900 files. Though more files can be handled in a directory, the List Manager will only display the first 32K.

A second element concerns the performance of the Finder when approaching 800 to 900 files per directory. Even simple operations, such as moving the icon of a file, tend to slow down considerably when this number of files exists in a directory. This limitation changes depending on the speed of the individual Macintosh model.

Determining Allocation Block Size
Follow these steps to calculate the allocation block size:

1. Take the size of the drive in megabytes and multiply it by 2000 (there are 2000 disk blocks in 1 MB of disk space).
2. Divide that number by 65,536, since the Macintosh cannot have more than 65,536 allocation blocks.
3. Round this number up and multiply it by 512.

The result is the number of bytes in the allocation block. Here is an example using a 230 MB drive:

- 230 x 2000 / 65536 = 7.019
- 7.019 rounded up = 8
- 8 x 512 = 4096 bytes

So what does this mean to you? The larger the hard drive, the larger the allocation block size, and the more space that is wasted on small files. If you have a large drive with a lot of small files, the hard drive space is being used less efficiently than if most of your files average 32K in size.

Note: Since drives come from different manufacturers, it is possible to get different values. This is because a 500 MB drive is not exactly 500 MB but is usually somewhat larger. This could result in different logical block sizes than those listed in the chart (see Allocation Block Size Table below), but the difference should not be more than +/- 512 bytes. This difference is most noticeable on the larger drives. For example, the 500 MB drive actually calculates to 8192 bytes but the 500 MB drive in some Macintosh computers is actually 540 MB, which has a logical block size of 8704, as listed in the chart.

Allocation Block Size Table
Here is a complete list of allocation block sizes for the various volume sizes, based on the formula described above:

Volume Size	Allocation Block Size	Minimum file size
0-32 MB	1 logical block	0.5K
33-64 MB	2 logical blocks	1.0K
65-96 MB	3 logical blocks	1.5K
97-128 MB	4 logical blocks	2.0K
129-160 MB	5 logical blocks	2.5K
161-192 MB	6 logical blocks	3.0K
193-224 MB	7 logical blocks	3.5K
225-256 MB	8 logical blocks	4.0K
257-288 MB	9 logical blocks	4.5K
289-320 MB	10 logical blocks	5.0K
321-352 MB	11 logical blocks	5.5K
353-384 MB	12 logical blocks	6.0K
385-416 MB	13 logical blocks	6.5K
417-448 MB	14 logical blocks	7.0K
449-480 MB	15 logical blocks	7.5K
481-512 MB	16 logical blocks	8.0K
513-544 MB	17 logical blocks	8.5K
545-576 MB	18 logical blocks	9.0K
577-608 MB	19 logical blocks	9.5K
609-640 MB	20 logical blocks	10.0K
641-672 MB	21 logical blocks	10.5K
673-704 MB	22 logical blocks	11.0K
705-736 MB	23 logical blocks	11.5K
737-768 MB	24 logical blocks	12.0K
769-800 MB	25 logical blocks	12.5K
801-832 MB	26 logical blocks	13.0K
833-864 MB	27 logical blocks	13.5K
865-896 MB	28 logical blocks	14.0K
897-928 MB	29 logical blocks	14.5K
929-960 MB	30 logical blocks	15.0K
961-992 MB	31 logical blocks	15.5K
993-1024 MB	32 logical blocks	16.0K

1025-1056 MB	33 logical blocks	16.5K
1057-1088 MB	34 logical blocks	17.0K
1089-1120 MB	35 logical blocks	17.5K
1121-1152 MB	36 logical blocks	18.0K
1153-1184 MB	37 logical blocks	18.5K
1185-1216 MB	38 logical blocks	19.0K
1217-1248 MB	39 logical blocks	19.5K
1249-1280 MB	40 logical blocks	20.0K
1281-1312 MB	41 logical blocks	20.5K
1313-1344 MB	42 logical blocks	21.0K
1345-1376 MB	43 logical blocks	21.5K
1377-1408 MB	44 logical blocks	22.0K
1409-1440 MB	45 logical blocks	22.5K
1441-1472 MB	46 logical blocks	23.0K
1473-1504 MB	47 logical blocks	23.5K
1505-1536 MB	48 logical blocks	24.0K
1537-1568 MB	49 logical blocks	24.5K
1569-1600 MB	50 logical blocks	25.0K
1601-1632 MB	51 logical blocks	25.5K
1633-1664 MB	52 logical blocks	26.0K
1665-1696 MB	53 logical blocks	26.5K
1697-1728 MB	54 logical blocks	27.0K
1729-1760 MB	55 logical blocks	27.5K
1761-1792 MB	56 logical blocks	28.0K
1793-1824 MB	57 logical blocks	28.5K
1825-1856 MB	58 logical blocks	29.0K
1857-1888 MB	59 logical blocks	29.5K
1889-1920 MB	60 logical blocks	30.0K
1921-1952 MB	61 logical blocks	30.5K
1953-1984 MB	62 logical blocks	31.0K
1985-2016 MB	63 logical blocks	31.5K
2017-2048 MB	64 logical blocks	32.0K
2049-2080 MB	65 logical blocks	32.5K
2081-2112 MB	66 logical blocks	33.0K
2113-2144 MB	67 logical blocks	33.5K
2145-2176 MB	68 logical blocks	34.0K
2177-2208 MB	69 logical blocks	34.5K
2209-2240 MB	70 logical blocks	35.0K
2241-2272 MB	71 logical blocks	35.5K
2273-2304 MB	72 logical blocks	36.0K
2305-2336 MB	73 logical blocks	36.5K
2337-2368 MB	74 logical blocks	37.0K
2369-2400 MB	75 logical blocks	37.5K
2401-2432 MB	76 logical blocks	38.0K
2433-2464 MB	77 logical blocks	38.5K
2465-2496 MB	78 logical blocks	39.0K
2497-2528 MB	79 logical blocks	39.5K
2529-2560 MB	80 logical blocks	40.0K
2561-2592 MB	81 logical blocks	40.5K
2593-2624 MB	82 logical blocks	41.0K
2625-2656 MB	83 logical blocks	41.5K
2657-2688 MB	84 logical blocks	42.0K
2689-2720 MB	85 logical blocks	42.5K
2721-2752 MB	86 logical blocks	43.0K
2753-2784 MB	87 logical blocks	43.5K
2785-2816 MB	88 logical blocks	44.0K
2817-2848 MB	89 logical blocks	44.5K
2849-2880 MB	90 logical blocks	45.0K
2881-2912 MB	91 logical blocks	45.5K
2913-2944 MB	92 logical blocks	46.0K
2945-2976 MB	93 logical blocks	46.5K
2977-3008 MB	94 logical blocks	47.0K
3009-3040 MB	95 logical blocks	47.5K
3041-3072 MB	96 logical blocks	48.0K
3073-3104 MB	97 logical blocks	48.5K

3105-3136 MB	98 logical blocks	49.0K
3137-3168 MB	99 logical blocks	49.5K
3169-3200 MB	100 logical blocks	50.0K
3201-3232 MB	101 logical blocks	50.5K
3233-3264 MB	102 logical blocks	51.0K
3265-3296 MB	103 logical blocks	51.5K
3297-3328 MB	104 logical blocks	52.0K
3329-3360 MB	105 logical blocks	52.5K
3361-3392 MB	106 logical blocks	53.0K
3393-3424 MB	107 logical blocks	53.5K
3425-3456 MB	108 logical blocks	54.0K
3457-3488 MB	109 logical blocks	54.5K
3489-3520 MB	110 logical blocks	55.0K
3521-3552 MB	111 logical blocks	55.5K
3553-3584 MB	112 logical blocks	56.0K
3585-3616 MB	113 logical blocks	56.5K
3617-3648 MB	114 logical blocks	57.0K
3649-3680 MB	115 logical blocks	57.5K
3681-3712 MB	116 logical blocks	58.0K
3713-3744 MB	117 logical blocks	58.5K
3745-3776 MB	118 logical blocks	59.0K
3777-3808 MB	119 logical blocks	59.5K
3809-3840 MB	120 logical blocks	60.0K
3841-3872 MB	121 logical blocks	60.5K
3873-3904 MB	122 logical blocks	61.0K
3905-3936 MB	123 logical blocks	61.5K
3937-3968 MB	124 logical blocks	62.0K
3969-4000 MB	125 logical blocks	62.5K
4001-4032 MB	126 logical blocks	63.0K
4033-4064 MB	127 logical blocks	63.5K
4065-4096 MB	128 logical blocks	64.0K

Volume Organization of Macintosh Standard Format
The first two logical blocks (labeled 0 and 1) of a volume are the boot blocks. This is where the information for mounting the volume is stored.

The third logical block (labeled 2) is the Master Directory Block, or MDB for short. This block contains part of the data structure of a flat directory volume. It contains the volume information and the volume allocation block map. This block is where the information for the hard disk, such as number of files in the directory and the last time the drive was initialized, is stored.

Logical blocks 3 to x (see the following table) contain the volume bitmap. This block is a data structure containing a sequence of bits, one bit for each allocation block. The volume bitmap stores a reference to every piece of data that is in the allocation blocks and indicates whether the block is allocated or free for use. Volume bitmaps exist both on hierarchical directory volumes and in memory.

Volumes may have as few as 32,768 allocation blocks and as many as 65,536 allocation blocks. This table defines what logical block the volume bitmap ends on based on the number of allocation blocks:

.	Allocation Blocks	Last Volume Bitmap Logical Block
.		
.	> 61,440	18
.	> 57,344	17
.	> 53,248	16
.	> 49,152	15
.	> 45,056	14
.	> 40,960	13
.	> 36,864	12
.	> 32,768	11

Allocation blocks begin after the volume bitmap. Contained in the allocation blocks are the catalog, extents and data files.

The catalog file is a list of all files and folders stored in a volume. The catalog file maintains the relationships between the files and directories on a hierarchical directory volume. It corresponds to the file directory on a flat directory volume. The catalog file is organized and accessed using a B-tree structure. The files are arranged in alphabetical order evenly balanced on the tree so that finding a "Z" doesn't take any longer than finding an "A". This structure is the glue that keeps the catalog file together.

The extents tree file contains the locations of all the files on a volume (An extent is a series of contiguous allocation blocks). The extents tree file is where the information (such as where to find file, and how many extents a file is divided into) about the data files you have created is stored. Any given file you create may be broken up into multiple extents. When extents are linked together, behind the scenes, with information from the extents tree file, the appearance is of one data file.

The next, and largest, section of the volume contains all the actual data files and applications which are referenced using the above files.

The next to last block on the hard disk contains the alternate master directory. This alternate is a backup to the MDB kept on logical block 2. It is used when the file manager determines that the MDB is corrupt and needs to be rewritten with the correct information.

The very last block is empty. It is used to check for bad sections of the hard disk.

What You Can Do
So, can you do anything to decrease the file size on a large hard drive? One solution is to partition larger drives into smaller partitions, or logical drives, each with a maximum of 65,536 blocks.

Apple's Drive Setup can be used to partition qualified Apple hard drives and some removable devices as listed in the Drive Setup Guide file. Unsupported hard drives will show up in the device list by name, however, if you select an unsupported hard drive you will get the message, "Cannot modify a disk in an unsupported drive."

Drive Setup is supported on all of the Power Macintosh computers. This includes the original Power Macintosh computers and the new PCI-based Power Macintosh computers. Drive Setup is also compatible with 68040 and 68LC040 processor-based systems that have IDE drives installed. Drive Setup is not supported with the Power Macintosh Upgrade Card. Drive Setup 1.0.2 is available from online services.

There are third parties that offer a solution for creating multiple Macintosh partitions on Macintosh systems not supported by Drive Setup. A few are:

- Hard Disk Toolkit (HDT) by FWB Software, Inc.
- Silverlining by La Cie Ltd.
- Micronet Utility by MicroNet Technology
- MicroTech Utility by MicroTech International
- Drive 7 by Casa Blanca Works, Inc.

Mac OS Extended Format
In 1998, concurrent with the release of Mac OS 8.1, Apple released a new file system format known as Mac OS Extended Format (sometimes referred to as HFS Plus). For more information on Mac OS Extended Format, please see the following technical documents:

30344: "**Mac OS 8.1: About Mac OS 8.1 Extended Format**"
24601: "**Mac OS Extended Format: Volume And File Limits**"

This document provides information about a non-Apple product. Apple, Inc. is not responsible for its content. Please contact the vendor for additional information. Document 17159: "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.

Published Date: Feb 20, 2012

Bluetooth: How to Delete a Paired Device

This document explains how to delete a Bluetooth device from the list of devices paired with your computer.

This article has been archived and is no longer updated by Apple.

You can delete a paired device in Bluetooth preferences. Follow these steps:

1. Choose Apple menu -> System Preferences.
2. Click Bluetooth.
3. Click Devices.
4. Select the device you want to delete from the Bluetooth Devices listing.
5. Click the Delete Pairing button.
6. Click Delete or "Disconnect and Delete".

To use this device with your computer again, use the Bluetooth Setup Assistant to pair them again.
Note: Some Bluetooth devices (such as keyboards and mice) are designed to be paired and used with one computer at a time. If you pair your keyboard or mouse with another computer, delete the pairing with the original computer first. This will ensure that the device only attempts to operate with the intended computer.

Published Date: Feb 20, 2012

Apple Wireless Mouse: About the Red Light

By viewing the red light on the bottom of the Apple Wireless Mouse, you can determine whether the mouse is turned on and correctly paired with your computer.

This article has been archived and is no longer updated by Apple.

The light can be in four modes. Find your mouse's light in the list below to determine what state your mouse is in.

Solid red light - Paired
A solid red light means the mouse is turned on and paired with a computer. The red light will also stay solid if the mouse is being moved.

Slowly flashing red light (blink, blink, pause) - Can't Find Computer
If the light is slowly flashing on and off, this means the mouse is looking for a computer to pair with. For more information, see technical document 86468, "**Bluetooth: How to Set Up Your Apple Wireless Mouse**".

Quick flashing red light - Saving Power
If you do not move the mouse for one second, it will go into a low power mode (indicated by a quick-flashing red light). The quick flashes may slow down over the next few seconds - these different flash speeds indicate various levels of low power mode.

No light - No Power to Mouse or Mouse is Asleep
If you've turned on the mouse and the light doesn't turn on, try moving the mouse on an opaque surface. Make sure the host computer is not asleep either. If the light still doesn't turn on, the battery levels may be too low to power the mouse. Replace the mouse's batteries. See technical document 86472, "**Apple Wireless Mouse: How to Install or Replace Batteries**".

If the light doesn't turn on after you change the batteries, the mouse may need to be repaired. Call Apple for instructions on this.

Published Date: Feb 20, 2012

Desktop computers: Troubleshooting wireless keyboard and mouse issues in Mac OS X v10.5

Some desktop computers with wireless keyboards or mice are shipped with the devices pre-paired and the batteries pre-installed. As long as the wireless devices are powered on when the computer starts up, no additional steps should be necessary to make them work.

This article has been archived and is no longer updated by Apple.

If one or both of the wireless devices do not function as expected, use the information below to identify and resolve the issue.

Note: These instructions work with Mac OS X v10.5 Leopard. For troubleshooting wireless keyboard and mouse issues in Mac OS X v10.6 Snow Leopard, see Desktop computers: Troubleshooting wireless mouse and keyboard issues.

Make sure the wireless keyboard and mouse are turned on

If the system has already started up and the keyboard or mouse indicator light is flashing, the keyboard or mouse is "discoverable" by the computer and may not currently be paired with the computer. For more information on pairing wireless devices refer to How to set up your Apple Wireless Keyboard.

Reset the Bluetooth device
First try turning your device off and then on again. Once powered on, the wireless device will remain in the "discoverable" mode for three minutes. For more info refer to Enabling discoverable mode.

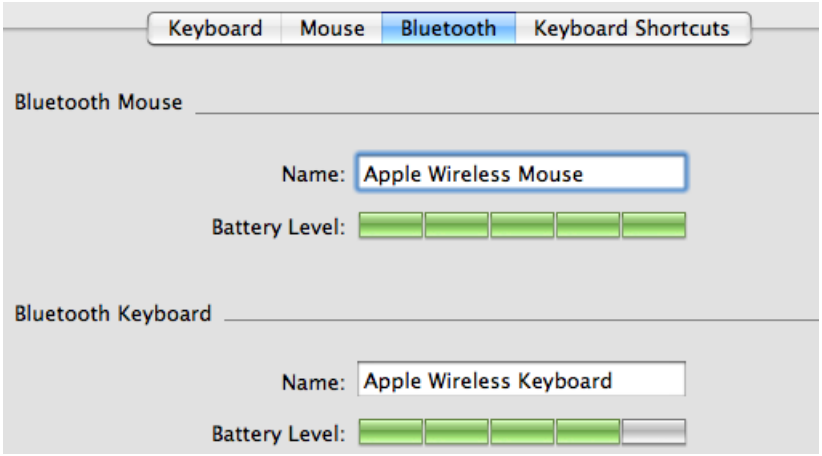
Restart the computer
Try restarting your computer to see if that addresses the issue. If not, try shutting down your computer, waiting a minute, and then starting it back up again.

Check battery levels

Your Mac will inform you when you should replace the batteries in the keyboard and mouse. You can also manually check the battery level of the Apple Wireless Keyboard and Apple Wireless Mouse by following these steps:

1. Choose **System Preferences** from the **Apple (□)** menu.
2. Choose **Keyboard & Mouse** from the **View** menu.
3. Select the Bluetooth tab.

Note: The battery indicator does not show battery levels of non-Apple Bluetooth mice and keyboards. If you don't see a battery indicator, make sure you are using an Apple Wireless Mouse or Keyboard.



Check for signal interference
Because Bluetooth works by transmitting signals through the air, some things can interfere with the wireless connection. Avoid situations in which metal objects come between the device and the computer. Don't put the computer under a metal desk or locked away behind a metal cabinet. Keep cordless phone base stations, microwave ovens, and other electrical devices that operate on a 2.4 GHz bandwidth away, and make sure that the wireless device and computer aren't more than 30 feet apart from each other.

Published Date: Sep 3, 2016

Helpful?

Yes No

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Power Mac G5, Apple Hardware Test 2.1: Interpreting Certain Error Messages

Learn how to interpret three Apple Hardware Test (AHT) 2.1 errors: "2FAN/4/x: Fan For BACKSIDE", "2FAN/4/x: Fan For SLOT", and "2STH/x/x: xxxx AMB".
This article has been archived and is no longer updated by Apple.

Symptom

Two error codes in Apple hardware Test (AHT) 2.1 may indicate an error when there is no error:

2FAN/4/x: Fan For BACKSIDE
(The "x" will be a number.)
This error code usually means the fan behind the drive bay has failed. This fan is a "blower" type fan, located behind the drive bay fan. The drive bay fan is located between the hard drive and the SuperDrive.

2FAN/4/x: Fan For SLOT
(The "x" will be a number.)
This error code usually means the slot fan has failed. The slot fan is located in front of the PCI slots near the front of the computer and just under the SuperDrive.

2STH/x/x: xxxx AMB
(The "x" will be a number and "xxxx" will identify a sensor.)
This error code usually means an ambient thermometer sensor has failed.

Solution

When you see "2FAN/4/x: Fan For BACKSIDE" or "2FAN/4/x: Fan For SLOT", there's probably nothing wrong with the fans. To make sure the fans are working:

1. Remove the outer door, leaving the inner air deflector in place.
2. Look at the slot fan to see if it is working. (Compare the fan appearance when the computer is turned off, and when the computer is turned on. If the fan "disappears" when the computer is on, it is working.)
3. If the fan is not working, take the computer to an Apple Authorized Service Provider for repairs.
4. Apple Hardware Test 2.1 has been updated to 2.1.1 and contains a revised fan test. Contact Apple Support to get the updated version.
5. When you get the updated Apple Hardware Test, check the fans in your computer to make sure they're working.

When you see "2STH/x/x: xxxx AMB", there's probably nothing wrong with the ambient sensors.

1. Apple Hardware Test 2.1 has been updated to 2.1.1 and contains a revised ambient thermometer test. Contact Apple Support to get the updated version. It is expected to be available by mid November 2003.

2. When you get the updated Apple Hardware Test, check the ambient sensors in your computer to make sure they're working.

If other error codes appear, your computer may need to be repaired. See the AppleCare Service and Support documentation that came with your Power Mac G5 or go to the Apple Support website for service options (http://www.apple.com/support/).

Published Date: Oct 11, 2016

Apple Wireless Mouse: Passkey Alert When Pairing

When you pair your Apple Wireless Mouse and your computer, you see an alert asking for a passkey.

This article has been archived and is no longer updated by Apple.

Symptom

You see this alert:

> "Enter a passkey to pair with your mouse.
> "A passkey is needed to complete a pairing between this computer and the mouse. This number will only be used once. You do not need to remember this number. When asked, you will be provided with this number to enter on your (null)."

Figure 1 "Passkey" alert

This alert appears if your computer does not meet the system requirements to use the mouse.

Solution

1. Make sure your computer has Mac OS X 10.2.6 or later installed. See technical document 106704, "**Mac OS X: How to Update Your Software**".
2. Install the software from the disc that came with your Apple Wireless Mouse. For more information, see technical document 86468, "**Bluetooth: How to Set Up Your Apple Wireless Mouse**".

Related documents

86493, "**Apple Wireless Keyboard and Mouse: About the Bluetooth Firmware Update**"

Published Date: Feb 20, 2012

Mac OS X: Remaining Battery Time Is Inaccurate

Some iBook and PowerBook computers may not accurately report the remaining battery time in the menu bar.
This article has been archived and is no longer updated by Apple.

Symptom

The estimated remaining battery time that appears in the menu bar is less than the actual usage you get from the battery.

Solution

Download and install Mac OS X 10.2.8 or later. You can get the update using the Software Update feature in System Preferences.

1. Connect to the Internet.
2. From the Apple menu, choose System Preferences
3. From the View menu, choose Software Update.
4. Click the Check Now button. Software Update checks for new software you can install on your computer.
5. If a new Mac OS X update is not recommended, you already have the latest update. Stop here.
6. If a Mac OS X update appears, click the Install button. Software Update downloads and installs the software.
7. When the installation is complete, click the Restart button to restart your computer.

To see which version of Mac OS X is on your computer:

1. From the Apple menu, choose About This Mac. A new window appears.
2. Look at the version number (for example, "10.2.8"). It appears below the Mac OS X logo.

Figure 1 About This Mac window

3. Click the version number. The Build version appears.

Figure 2 Build version

If you have Mac OS X 10.2.8 (Build 6R65), you should install the latest update.

Published Date: Oct 11, 2016

PowerBook G4 (12-inch): Adapters and Resolutions

Learn about the different style video output ports offered for the PowerBook G4 (12-inch), PowerBook G4 (12-inch DVI), PowerBook G4 (12-inch 1.33GHz) and PowerBook G4 (12-inch 1.5GHz) computers as well as the resolutions that work with them. For iBook adapters, see technical document 88396, "**iBook: Adapters and Resolutions**".
This article has been archived and is no longer updated by Apple.

Video Adapter

The Apple Video Adapter has an S-video connector as well as a composite video style connector, which is a convenient way to connect the PowerBook to a television or a video projector.

The Apple Video Adapter does not work with earlier iBook computers with an VGA output port, and will not work with the iMac (Flat Panel) computer's VGA output port. This adapter is included with the PowerBook G4 (12-inch) computer.

Compatible computers

- iBook (16 VRAM)
- iBook (14.1 LCD 16 VRAM)
- iBook (Opaque 16 VRAM)
- iBook (32 VRAM)
- iBook (14.1 LCD 32 VRAM)
- PowerBook G4 (12-inch)

Resolutions

NTSC Resolutions

- 640 by 480 60 Hz (NTSC)
- 800 by 600 60 Hz (NTSC)
- 1024 by 768 60 Hz (NTSC)

PAL Resolutions

- 640 by 480 50 Hz (PAL)
- 800 by 600 50 Hz (PAL)
- 1024 by 768 50 Hz (PAL)

Apple Mini-DVI to DVI Adapter

The Apple Mini-DVI to DVI Adapter allows the PowerBook G4 (12-inch DVI), PowerBook G4 (12-inch 1.33GHz) or PowerBook G4 (12-inch 1.5GHz) to be connected to a display with a standard DVI-D connector. This adapter can also be used to connect an Apple flat-panel display with an ADC connector with the help of the Apple DVI to ADC Adapter (sold separately).

The Apple Mini-DVI to DVI Adapter does not work with PowerBook G4 (12-inch) computers, and will not work with the iMac (Flat Panel) computer's VGA output port. This adapter is included in the box with PowerBook G4 (12-inch DVI), PowerBook G4 (12-inch 1.33GHz) and PowerBook G4 (12-inch 1.5GHz) computers.

Compatible computers

- PowerBook G4 (12-inch DVI)

- PowerBook G4 (12-inch 1.33GHz)
- PowerBook G4 (12-inch 1.5GHz)

Resolutions

- 640 by 480 pixels at 60 Hz
- 800 by 600 pixels at 75 Hz
- 1024 by 768 pixels at 75 Hz

Apple Mini-DVI to VGA Adapter

The Apple Mini-DVI to VGA Adapter allows the PowerBook G4 (12-inch DVI), PowerBook G4 (12-inch 1.33GHz) or PowerBook G4 (12-inch 1.5GHz) to be connected to a VGA display.

The Apple Mini-DVI to VGA Adapter does not work with PowerBook G4 (12-inch) computers, and will not work with the iMac (Flat Panel) computer's VGA output port. This adapter is included in the box with PowerBook G4 (12-inch DVI), PowerBook G4 (12-inch 1.33GHz) and PowerBook G4 (12-inch 1.5GHz) computers.

Compatible computers

- PowerBook G4 (12-inch DVI)
- PowerBook G4 (12-inch 1.33GHz)
- PowerBook G4 (12-inch 1.5GHz)

Resolutions

- 640 by 480 pixels at 60 Hz
- 800 by 600 pixels at 75 Hz
- 1024 by 768 pixels at 75 Hz

Apple Mini-DVI to S-Video/Composite Adapter

The Apple Mini-DVI to S-Video/Composite Adapter has an S-video connector as well as a composite video style connector, which is a convenient way to connect the PowerBook G4 (12-inch DVI), PowerBook G4 (12-inch 1.33GHz) or PowerBook G4 (12-inch 1.5GHz) to a television or a video projector.

The Apple Mini-DVI to S-Video/Composite Adapter does not work with PowerBook G4 (12-inch) computers, and will not work with the iMac (Flat Panel) computer's VGA output port. This adapter does not come with the PowerBook G4 (12-inch DVI), PowerBook G4 (12-inch 1.33GHz) or PowerBook G4 (12-inch 1.5GHz) computer, but can be purchased from the Apple Store.

Compatible computers

- PowerBook G4 (12-inch DVI)
- PowerBook G4 (12-inch 1.33GHz)
- PowerBook G4 (12-inch 1.5GHz)

Resolutions

NTSC Resolutions

- 640 by 480 60 Hz (NTSC)
- 800 by 600 60 Hz (NTSC)

- 1024 by 768 60 Hz (NTSC)

PAL Resolutions

- 640 by 480 50 Hz (PAL)
- 800 by 600 50 Hz (PAL)
- 1024 by 768 50 Hz (PAL)

Published Date: Oct 11, 2016

Installer Fails With 2 GB or More of RAM

Some installers may not work properly if the computer has 2 GB or more of RAM installed.

This article has been archived and is no longer updated by Apple.

Symptom

You try to install software on a computer with 2 GB or more of RAM, but an alert with this message appears:

> "The software to be installed requires 8 MB of total machine memory (RAM), which this computer does not have."

Solution

Be sure you are using an up-to-date installer. Most of the installers with this issue have been updated and work as expected. Contact the developer of the software directly to determine the latest version of the installer.

Published Date: Oct 11, 2016

Power Mac G5: How to Identify 3.3 V and 5 V PCI Cards

Learn how to differentiate 3.3-Volt (V) and 5-Volt PCI cards.
This article has been archived and is no longer updated by Apple.
The Power Mac G5 computer only works with 3.3 V PCI cards. Some older PCI cards require 5 V and cannot be used with the Power Mac G5. The Power Mac G5 computer is designed to the PCI-X 2.1 specification, which requires 3.3 V signaling.

The older 5 V cards are keyed differently from 3.3 V cards and will not fit into the computer's PCI slot. Figures 1 and 2 show the differences between these cards. Figure 1 shows compatible and incompatible cards: cards that look like those illustrated on the left side of Figure 1 are 3.3 V and are electrically compatible. Cards that look like those illustrated on the right side of Figure 1 are 5 V and are not compatible with a Power Mac G5 computer.
Figure 2 shows the four key variations that are accepted in Power Mac G5 PCI slots.

Figure 1 PCI cards and slots: left - 3.3 V; right - 5 V

Figure 2 PCI cards supported by the Power Mac G5
(Image courtesy of TMC Technology: http://www.tmc-uk.com/)

Published Date: Oct 11, 2016

Power Mac G5: Leave the Door Shut When the Computer Is On

For best performance, you should leave your Power Mac G5 computer's door shut when it's in use.

This article has been archived and is no longer updated by Apple.

Your Power Mac G5 was designed to be used with the outer access panel (door) in place at all times. The outer and inner doors work together to direct airflow to cool the components inside the computer, as well as block electromagnetic interference, as required by the FCC. Using the computer with the door open changes the airflow, which can prevent the computer from performing as expected.

Published Date: Oct 11, 2016

About DVI Adapters

Learn about Apple and non-Apple DVI adapters.

This article has been archived and is no longer updated by Apple.

Using a DVI (digital video interface) adapter, you can connect an external display to a Mac with a DVI monitor port, such as the PowerBook G4 (DVI).

A variety of Apple DVI adapters are available to use with your computer and monitor. You can buy them from the Apple Store (http://www.apple.com/store), or your Apple reseller. To be sure you have the right adapter, see technical document 33001, "**Monitor and Display Adapter Table**".

Other companies also make DVI adapters. Some non-Apple adapters may not work exactly the same way the Apple adapters do. For example with a non-Apple adapter, when you disconnect your monitor while the computer is turned on, the Mac OS may not be able to tell you've disconnected the monitor until you put the computer to sleep and wake it up again, or until you select "Detect Displays" from the Displays pane of System Preferences.

Published Date: Feb 20, 2012

Mac OS X: Tip - Automatic Energy Saver Preferences

Learn about the Automatic option in Energy Saver preferences and when to use it.
This article has been archived and is no longer updated by Apple.
When using professional applications, games with intensive video processing, or other applications that use the microprocessor intensively, the Automatic option in Energy Saver may not provide the best microprocessor performance. If you know you are going to be placing a significant demand on the microprocessor, change your Energy Saver setting to "Highest", as seen in Figure 1.

Figure 1 Energy Saver Settings

Published Date: Oct 11, 2016

Apple Hardware Test 2.0.1: PowerBook G4 (15-inch FW 800) and (17-inch 1.33GHz) Read Me

The PowerBook G4 (15-inch FW 800) and (17-inch 1.33GHz) Install and Restore DVD contains Apple Hardware Test.

This document contains the Read Me that is included with Apple Hardware Test 2.0.1.

This article has been archived and is no longer updated by Apple.

About Apple Hardware Test

Apple Hardware Test diagnoses and detects problems with your computer's internal hardware components, such as the logic board, memory, modem, video RAM, and AirPort Extreme Card. It does not check external hardware components, such as USB or FireWire devices, nor does it check for operating system (OS) or software-related problems, such as application or extension conflicts.

You can start up your computer with Apple Hardware Test in the Software Install and Restore DVD even if the machine will not start up under the Mac OS.

Version 2.0.4 of Apple Hardware Test for PowerBook is distributed with the 15-inch and 17-inch Apple PowerBook G4 computers introduced in 2003. It will not work with any other computer.

Using Apple Hardware Test
Before using Apple Hardware Test, disconnect all external devices with the exception of keyboard, mouse, display, and speakers. You should also disconnect the Ethernet network cable. Print out these instructions before proceeding with the following steps.

1. Restart your computer from the Software Install and Restore DVD, holding down the Option key while the computer restarts. Continue to hold down the Option key until a list of available bootable devices appears.

2. Select Apple Hardware Test and click the right arrow. The Loading icon then appears. Loading takes about 45 seconds.

3. When the Apple Hardware Test main screen appears, follow the onscreen instructions.

If Apple Hardware Test detects a problem, it displays an error code. Make a note of the error code before pursuing support options. If Apple Hardware Test does not detect a hardware failure, the problem may be software related.

Known Issues
If your PowerBook has more than 512 MB of RAM, the Extended Test may take significantly more time than indicated on the screen.

Your PowerBook can use memory modules or DIMMs even when the Power On SelfTest, which runs when the machine is turned on, detects part of a module as being bad. When you start up your computer, Apple Hardware Test reports failed memory modules in the Hardware Tests panel.

While the video RAM is being tested, it is normal for the screen to appear blank or turned off for extended periods of time, depending on how much video RAM is installed.

Recommendations for Resolving Problems with Your Computer

- Turn the computer off and on properly.

  You can often eliminate problems by turning off your computer as recommended. To turn off your computer, choose Shut Down from the Apple (□) menu. Do not turn off the computer by turning off the switch on a power strip or by pulling the computer's power plug. Restart your computer by pressing the power button. To restart your computer when it is on, choose Restart from the Apple (□) menu.

- Check cables, peripherals, and controls.

  To see if cables or peripherals are causing conflicts with your system, shut down your computer. Disconnect the cables and peripherals,

such as printers, scanners, cameras and external mass storage devices. Then reconnect the cables and peripherals and restart your system. You can also adjust the controls on your monitors and other peripherals.

- Start up from the Software Install and Restore DVD that came with your computer.

  Start your system from the Software Install and Restore DVD by holding down the C key until you see the Apple logo. If the system works properly when started (booted) from the Software Install and Restore DVD, the problem may be related to the software installed on your computer.

- Refer to Mac Help and the Internet for assistance.

  Mac Help, located in the Help menu, includes a wealth of technical information. The AppleCare Knowledge Base and other resources for technical help and support are available 24 hours a day at www.apple.com/support.

- Reinstall the Mac OS.

  In many cases, a clean installation of the Mac OS fixes recurring problems. Make sure you back up the data on your hard drive before reinstalling the OS. Follow the instructions in the Read This First document in the Software Install and Restore DVD to reinstall the Mac OS.

- Contact AppleCare Service and Support for assistance.

  If the above steps don't resolve the problem, please review the service and support material that came with your computer for information on contacting AppleCare.

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July 2003

Published Date: Feb 19, 2012

Xserve: Won‘t Start Up, Activity Lights Flash Three Times

Learn what it means if the activity lights flash three times when you try to start up your server.
This article has been archived and is no longer updated by Apple.

Symptom

The server does not start up; the activity lights flash three times when you try to start the server.

Solution

When the activity lights flash three times, this means that incompatible RAM is probably installed.

Install the correct memory:

Server	SDRAM type
Xserve	PC2100 DDR
Xserve (Slot Load)	PC2700 DDR
Xserve (Cluster Node)	PC2700 DDR

Check the installed memory

1. If the SDRAM appears to be the correct type, check the server using Apple Hardware Test. If the test finds bad memory, replace it (one DIMM at a time) with known good SDRAM and repeat the test until it reports that every DIMM is OK.
2. If all DIMMs are known good memory and the issue still occurs, the logic board may need to be replaced.

Note: When installing the replacement logic board, make sure the ports and ID button on the back of the board align with the opening in the chassis.

Published Date: Feb 20, 2012

Xserve: Won‘t Start Up, Activity Lights Flash Four Times

Learn what it means if the activity lights flash four times when you try to start up your server.
This article has been archived and is no longer updated by Apple.

Symptom

The server does not start up; the activity lights flash four times when you try to start the server.

Solution

When the activity lights flash four times, this means that none of the RAM banks passed memory testing.

Install the appropriate memory:

Server	SDRAM type
Xserve	PC2100 DDR
Xserve (Slot Load)	PC2700 DDR
Xserve (Cluster Node)	PC2700 DDR

Check the installed memory

1. If the SDRAM appears to be the correct type, check the server using Apple Hardware Test. If the test finds bad memory, replace it (one DIMM at a time) with known good SDRAM and repeat the test until it reports that every is DIMM OK.
2. If all DIMMs are known good memory and the issue still occurs, the logic board may need to be replaced.

Note: When installing the replacement logic board, make sure the ports and ID button on the back of the board align with the opening in the chassis.

Published Date: Feb 20, 2012

Xserve: Won‘t Start Up, Activity Lights Flash Five or Six Times

Learn what it means if the activity lights flash five or six times when you try to start up your server.
This article has been archived and is no longer updated by Apple.

Symptom

The server does not start up; the activity lights flash five or six times when you try to start the server.

Solution

When the activity lights flash five or six times, this means that the server's ROM may be bad.

Try each of these steps in order, testing in between steps to see if the server starts:

1. Remove the processor module and reinsert it securely.
2. Replace the processor module.
3. Replace the logic board.

Note: When installing the replacement logic board, make sure the ports and ID button on the back of the board align with the opening in the chassis.

Published Date: Feb 20, 2012

AppleShare Admin: What To Do If You Lose the Password

If I have lost or forgotten the Administrator's password on an AppleShare file server, what do I do?
This article has been archived and is no longer updated by Apple.
If you have forgotten the Admin key, refer to the following sources:

Warning: All of the procedures listed below require a back-up copy of the "Users & Groups" file. Be sure that you have a back-up copy of this file before starting the procedure.

AppleShare 1.0 or 1.1 File Server
See page 137, chapter 6, in the "AppleShare Administrator's Guide." Below is the information referenced in the "AppleShare Administrator's Guide":

You have forgotten the Admin key

If you forget the Admin key that you use while opening AppleShare Admin and don't have it written down, you'll have to:

1. Use the AppleShare Server Installer disk to start up the server's Macintosh Plus.

2. While in the Finder, locate the Users & Groups file in the Server Folder of the startup volume, drag it to the Trash, and choose Empty Trash from the Special menu.

3. Open the AppleShare Admin application.

4. Select the same startup volume that you had before.

5. When you're asked to select a Users & Groups file, select the backup copy of the Users & Groups file. Click Volume until you see the disk name. Click Eject to insert another disk. If necessary, open any folders in the list until you see the backup copy of the file. Select the file and click Open.

6. When asked, type the server name and the new Admin key.

7. Continue to follow the procedure for preparing the server.

AppleShare 2.0 or 2.0.1 File Server
See page 204, chapter 7, in the "AppleShare File Server Administrator's Guide." Below is the information referenced in the "AppleShare Administrator's Guide":

You've forgotten the Admin key

If you forget the Admin key that you use to open AppleShare Admin and don't have a written copy, you'll have to use the following procedure.

1. Use the Server Administration disk to start up the server's Macintosh.

2. While in the Finder, locate the Users & Groups file in the Server Folder of the startup volume, and then drag it to the Trash and choose Empty Trash from the Special menu.

3. Open the AppleShare Admin application.

4. Prepare the same startup volume you had before.

5. When you're asked to select a Users & Groups file, select the backup copy of the Users & Groups file. Click Volume until you see the disk name. (If necessary, click Eject and then insert another disk.) Open any necessary folders in the list until you see the backup copy of the file. Select the file and click Open.

6. When asked, type the new Admin key.

7. Continue to follow the procedure for preparing the server.

AppleShare 3.0 or 3.0.1 File Server

See page 147, chapter 8, in the "AppleShare Server 3.0 Administrator's Guide." Below is the information referenced in the "AppleShare Administrator's Guide":

You've forgotten your Admin key

The Admin key is stored in the Users & Groups Data File. If you forget the Admin key, drag the Users & Groups Data File out of the Preferences folder to the root level of the System Folder. Then restart the Admin program. In a moment the program will ask you to provide a new file server name and Admin key. Enter the same file server name, and a new Admin key.

AppleShare 4.0 File Server
See page 107, chapter 6, in the "AppleShare Administrator's Guide" (p/n 030-4205-A), or see page 93, chapter 5, in the "AppleShare Administrator's Guide" (p/n 030-6925-A) Also remember the serial number. Below is the information referenced in the "AppleShare Administrator's Guide":

You've forgotten your Admin Key.

The Admin Key is stored in the Users & Groups Data File. If you forget the Admin Key, quit the AppleShare Admin and AppleShare File Server programs. Then drag the Users & Groups Data File out of the Preferences folder to the System Folder. Then restart the Admin program. In a moment the program will ask you to provide a new file server name and Admin Key. Enter the same file server name, and a new Admin Key.

Following this procedure assigns a new Admin Key and creates a new Users & Groups Data File in the Preferences folder. All of the original user and group accounts, passwords, and access privileges for shared volumes are copied from the old Data File in the System Folder. You can now delete the old Data File.

AppleShare Pro File Server
See page 106, chapter 6, in the "AppleShare Pro Administrator's Guide." Below is the information referenced in the "AppleShare Administrator's Guide":

You've forgotten your Admin Key.

The Admin Key is stored in the Users & Groups Data File. If you forget the Admin Key, quit the Admin program (and File Server program, if necessary). Then drag the Users & Groups Data File out of the Preferences folder to the top level of the System Folder. Do not drag it out of the System Folder. (Use the System Folder alias to open the System Folder.) Then restart the Admin program. In a moment the program will ask you to provide a new file server name and Admin Key. Enter the same file server name, and a new Admin Key.

Following this procedure merely assigns a new Admin Key. All of the original user and group accounts, passwords, and access privileges for shared volumes are retained. After you've restarted the Admin program, you can throw away the copy of the Users & Groups File you moved from the Preferences folder. It is replaced by a new one within the Preferences folder.

AppleShare IP 5.x
The information is on page 278 of the "AppleShare IP 5.0 Administrator's Manual"

AppleShare IP 6.x
The information is in the "ASIP 6.x Tutorial" on the AppleShare CD. See the section "Troubleshooting Web & File Services."

Published Date: Feb 20, 2012

iBook, Mac OS X 10.3: Cannot Calibrate Display

You may find your iBook display does not calibrate if you are running Mac OS X 10.3 or Mac OS X 10.3.1.
This article has been archived and is no longer updated by Apple.

Symptom

The display contrast may be high on some early iBook computers when running Mac OS X 10.3 or 10.3.1 or when started up from the Mac OS X 10.3 Install CD. The display could be described as looking "washed out" or the text as looking "blocky" (not smoothed).

Only "Generic RGB Profile" and "sRGB Profile" appear in Display preferences. When you click Calibrate, this message appears: "Can not calibrate the display. The factory profile for the display could not be found."

Solution

Update to Mac OS X 10.3.2 or later.
Published Date: Oct 11, 2016

Apple Displays: About Wall, Desk, and Rack Mounts

Find out what options are available for mounting Apple LCD displays to a desk, wall, or an equipment rack.
This article has been archived and is no longer updated by Apple.
Apple does not make alternate mounting systems for these displays:

- Apple Studio Display 17 (LCD)
- Apple Cinema Display
- Apple Cinema Display 20-inch
- Apple Cinema HD Display

Third-party companies make alternate mounting products for Apple displays. Two companies are listed below. This list is not all-inclusive. For more options, see the Macintosh Products Guide (http://guide.apple.com/).

- Innovative Office Products (http://www.lcdarms.com/)
- Ergotron (http://www.ergotron.com/)

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Published Date: Oct 11, 2016

iMac (USB 2.0), PowerBook G4 (12-inch), PowerBook G4 (12-inch DVI), iBook G4: Audio CD or Disc Image Does Not Appear in Mac OS X 10.3

Audio CDs and disc images may not mount on a computer running a version of Mac OS X 10.3.

This article has been archived and is no longer updated by Apple.

Symptom

Audio CDs do not appear when you insert them into the drive. Other CDs and DVDs seem to work normally.

You may also notice that disc images do not appear, and double-clicking the disk image results in an error code -536870208.

Solution

Update to Mac OS X 10.3.2 or later.

Published Date: Oct 11, 2016

Apple Hardware Test: Power Mac G4 - Memory Identified as PC2600

If you run Apple Hardware Test on a Power Mac G4 (Mirrored Drive Doors) computer, the test may identify the memory as "PC2600" instead of "PC2700".

This article has been archived and is no longer updated by Apple.

Symptom

Apple Hardware Test identifies the computer's memory as "PC2600" rather than "PC2700".

Solution

There is nothing wrong with your computer's memory. This issue is addressed in Apple Hardware Test 1.2.7. If you have version 1.2.6 and are experiencing this issue, contact AppleCare for a replacement disc.

Published Date: Feb 19, 2012

Mac OS X: Longer Startup Time After Installing Mac OS X 10.3.2 Update

In some cases, your computer may take longer to start up after installing Mac OS X 10.3.2 Update. This can happen if you update to Mac OS X 10.3.2 incrementally (from Mac OS X 10.3.1, for example), but does not happen if installing from a Mac OS X version 10.3.2 Install disc.
This article has been archived and is no longer updated by Apple.
Download and install Mac OS X 10.3.3 Update or later to address this issue.

If you're not ready to update, these tips can help:

If the computer's startup time is longer, follow these steps:

1. Open the Terminal (/Applications/Utilities/).
2. Type the following (on a single line). Alternatively, copy the text below and paste it into Terminal.

   ```
   sudo cp -p /System/Library/Extensions/BootCache.kext/Contents/Resources/BootCacheControl /usr/sbin/
   ```

   Note: There is a space before "/usr/sbin/".

3. Press Return.
4. When prompted, enter your admin password.

   Important: If the following message appears in Terminal, verify that step 2 was performed correctly. If so, you do not need to use these steps because your computer is not affected by this issue.

   Message: "cp: /System/Library/Extensions/BootCache.kext/Contents/Resources/BootCacheControl: No such file or directory"

5. Restart your computer.

Note: The first startup after this will still be longer. Subsequent startups will be faster.

This document will be updated as more information becomes available.
Published Date: Oct 11, 2016

Mac OS X: Longer Startup Time After Installing Mac OS X 10.3.2 Update

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   sudo cp -p /System/Library/Extensions/BootCache.kext/Contents/Resources/BootCacheControl /usr/sbin/
   ```

   Note: There is a space before "/usr/sbin/".

3. Press Return.
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   Important: If the following message appears in Terminal, verify that step 2 was performed correctly. If so, you do not need to use these steps because your computer is not affected by this issue.

   Message: "cp: /System/Library/Extensions/BootCache.kext/Contents/Resources/BootCacheControl: No such file or directory"

5. Restart your computer.

Note: The first startup after this will still be longer. Subsequent startups will be faster.

This document will be updated as more information becomes available.
Published Date: Oct 11, 2016

PowerBook G4 Trade-In Program

This document contains the text of the PowerBook G4 Trade-In Program PDF.
This article has been archived and is no longer updated by Apple.

PowerBook G4 Trade-In Program

This offer is available to selected individual owners of PowerBook G4 or PowerBook G4 (Gigabit Ethernet) computers in the United States. This offer is not open to resellers or distributors.

For a limited time only, customers considering upgrading their current PowerBook G4 or PowerBook G4 (Gigabit Ethernet) to a new 15" or 17" PowerBook G4 computer through Apple, can receive a $700 discount towards the purchase if they send in their current unit to Apple.

This offer is good while supplies last, however, the Program will end on March 27, 2004, and all customers wishing to participate must provide Apple with details of their new product purchase on or prior to that date.

All purchases must be paid for via major credit card only (Visa, MasterCard, American Express). Debit cards and check cards have daily spending limits, which may substantially delay the processing of the order. Apple is unable to accept credit cards issued by banks outside of the country of origin.

The discount applies only to purchases made through Apple on one of the following products:

- (Qty 1) M8980LL/A, PowerBook G4 15.2TFT/1GHz/256/60G/Combo/BT/56K
- (Qty 1) M8981LL/A, PowerBook 15.2TFT/1.25GHz/512(2 SO-DIMMS) /80G/SuperDrive/AIRPT/BT/56K
- (Qty 1) M9110LL/A, PowerBook G4 17TFT/1.33GHz/512DDR/80G/SuperDrive/56K/AIRPT/BT

To accept the offer and be eligible for the discount, customers must send in their computer and it must be received at Apple's warehouse within thirty (30) days from the date credit card details for the new computer purchase are provided to Apple. The main components on the customer's computer (i.e. LCD display, hard disk drive, optical drive and main logic board) must not be damaged or otherwise inoperable, and the computer as a whole must not be damaged as a result of misuse, such as physical abuse or liquid spills. All PowerBook computers received by Apple that are eligible under the Program become the property of Apple and will not be returned.

Data backup and restoration from the current PowerBook is the customer's responsibility. Data can be backed up via the Internet, removable disk storage, networks, etc. Any add-ins made to the customer's computer must be removed before sending the PowerBook to Apple. Apple will not be responsible for transferring add-ins, such as additional RAM, to the new machine, nor will Apple be responsible for returning add-ins to the customer. If add-ons, such as additional RAM or larger hard drives are removed, the computer should be replaced with the components that came in the original configuration.

Apple will cover the cost of shipping, including facilitating the shipment of the customer's computer to Apple. The shipping address to which the new product is sent must be within the continental United States, Alaska, and Hawaii. No shipments can be made to post office boxes, APO addresses, United States territories, or addresses outside the United States. All new Apple hardware products carry a one-year Limited Warranty against defects in materials and workmanship. You may review a copy of the One-Year Limited Warranty offered with new products, together with all applicable sales terms to the purchase by visiting:

http://store.apple.com/Catalog/US/Images/salespolicies.html

This offer is not valid in conjunction with any other Apple offer or promotion, except as otherwise specifically permitted by the terms and conditions of such other offer or promotion. This offer is void where prohibited or restricted by law. Apple reserves the right to change the Terms and Conditions or end the offer at any time without notice. Apple is not responsible for any additional equipment sent to Apple that is not required under the terms of the offer, nor is it responsible for any equipment missing from the shipping package sent to Apple.

If you are interested in participating in this program, please call AppleCare at 800-APL-CARE (800-275-2273).
Published Date: Feb 20, 2012

PowerBook G4 (15-inch FW 800) and (17-inch 1.33GHz): How to Run Apple Hardware Test

Learn how to use Apple Hardware Test on a PowerBook G4 (15-inch FW 800) or (17-inch 1.33GHz) computer.
This article has been archived and is no longer updated by Apple.
If you have a PowerBook G4 (15-inch FW 800) or (17-inch 1.33GHz) computer, Apple Hardware Test (AHT) is included on the same DVD disc you use to install or restore software. It is named "PowerBook G4 15-inch and 17-inch Software Install and Restore".

Running Apple Hardware Test

To use AHT on your PowerBook G4 (15-inch FW 800) or (17-inch 1.33 GHz) computer, follow these steps:

1. Insert the disc named "PowerBook G4 15-inch and 17-inch Software Install and Restore" into the computer.
2. Click on the Apple icon in the menu bar and choose Restart.
3. Press the Option key as the computer starts up. The startup manager appears (Figure 1).
4. Click the Apple Hardware Test volume in the startup manager.

Figure 1 Startup manager

5. Click the arrow that points to the right.
6. Follow the onscreen instructions.

Published Date: Feb 20, 2012

PowerBook G4 (15-inch FW 800): Sound Specifications

Learn about the sound specifications for the PowerBook G4 (15-inch FW 800) computer.
This article has been archived and is no longer updated by Apple.
The PowerBook G4 (15-inch FW 800) computer has an audio line-in port, headphone port, integrated microphone, two stereo speakers, and a midrange-enhancing speaker.

The audio line-in port is a stereo 3.5 mm mini-phono jack that allows the connection of a line-level microphone or other audio equipment.

The headphone port also uses a 3.5 mm mini-phono jack and provides enough current to drive a pair of low-impedance headphones. It can support external speakers (which may require external power) or other sound output devices.

The integrated microphone is located underneath the left speaker grill near the Tab key.

The PowerBook G4 (15-inch FW 800) computer includes two stereo speakers, located beneath the speaker grills on each side of the keyboard.

The PowerBook G4 (15-inch FW 800) computer also has a midrange-enhancing speaker, designed to produce a separate channel of midrange sound. The midrange speaker is located underneath and to the left of the space bar. There are no settings in the Sound pane of System Preferences to adjust the midrange speaker independently. Increasing and decreasing the system volume changes both the stereo speakers and the midrange speaker at the same time.
Published Date: Feb 20, 2012

Xserve: Rack mount solutions

This article has been archived and is no longer updated by Apple.

Learn about supported and unsupported rack mount solutions for Xserve, Xserve (Slot Load), Xserve G5, and Xserve (Late 2006).

Some rack manufacturers advertise and sell racks for use with Xserve that mount the server vertically. This configuration has not been tested and may cause thermal or other unexpected issues.

To avoid thermal issues, it is important that the Xserve, Xserve (Slot Load), Xserve G5 and Xserve (Late 2006) have unrestricted front-to-back airflow. You can monitor the temperature of your Xserve from the Server Monitor software, which also displays the status of the fans.

Supported rack solutions for the Xserve, Xserve (Slot Load), and Xserve G5 include EIA-310-D-compliant, industry-standard 19-inch wide racks, including four-post racks (24 inches , 26 inches , and from 29 to 36 inches deep) and two-post Telco racks (center-mount brackets included).

Supported rack solutions for the Xserve (Late 2006) include most EIA-310-D-compliant, industry-standard 19-inch wide, four-post racks and cabinets (24 to 36 inches deep). The standard quick-deployment rails support square-hole racks and eliminate the need for cage nuts, while quick-deployment rails supporting threaded (10/32") racks are available as a configurable option.

Published Date: Feb 20, 2012

PowerBook G4 (17-inch 1.33GHz): White Lines on External Display

Update to Mac OS X 10.2.8 or later if you see white lines on an external display connected to the computer.
This article has been archived and is no longer updated by Apple.

Symptom

Flashing vertical lines or short, white, flashing horizontal lines appear on a display connected to the computer.

This might happen if the computer's built-in display is closed, and you're playing some types of games on an external display.

Solution

Download and install Mac OS X 10.2.8 or later. It is available in Software Update preferences, or from Apple Downloads (http://www.apple.com/swupdates/).

Published Date: Feb 20, 2012

PowerBook G4 (17-inch 1.33 GHz): Internal Microphone Not Working on Battery Power

Update to Mac OS X 10.2.8 or later if the computer's internal microphone does not work when running on battery power.
This article has been archived and is no longer updated by Apple.
In some versions of Mac OS X 10.2, the PowerBook G4 (17-inch 1.33 GHz) computer's internal microphone does not work when the computer is running on battery power.

Download and install Mac OS X 10.2.8 or later, which allows the microphone to work on battery power. It is available in Software Update preferences, or from Apple Downloads (http://www.apple.com/swupdates/).
Published Date: Feb 20, 2012

Apple Wireless Keyboard: Creating a Passkey

Learn about pairing an Apple Wireless Keyboard with a passkey.

This article has been archived and is no longer updated by Apple.

If you pair your Apple Wireless Keyboard in Bluetooth preferences rather than in the Bluetooth Setup Assistant, you will be asked to create a passkey.

Choose any combination of numbers, but do not use letters in your passkey.

For more information on pairing your Apple Wireless Keyboard, see technical document 86467, "**Bluetooth: How to Set Up Your Apple Wireless Keyboard**".

Published Date: Feb 19, 2012

Xserve G5: How to Remove Lower Fibre Channel Connector

Learn how to remove the SPF cable connector in the Xserve G5 lower fibre channel position.

This article has been archived and is no longer updated by Apple.

If the release tab on the fibre cable connector is too close to the Xserve G5 chassis to be released by hand, insert a small flat tool (such as a flat-head screwdriver) to gently depress the tab, then remove the cable.

Published Date: Feb 20, 2012

Xserve RAID: No Status During Rebuilds

Find out how RAID Admin behaves while a RAID set is being initialized or rebuilt.

This article has been archived and is no longer updated by Apple.

While a RAID set is being initialized, rebuilt, repaired, or verified on Xserve RAID or Xserve RAID (SFP), RAID Admin may not be able to give timely status updates of the arrays and drives for that controller. Stale data will be displayed in RAID Admin until RAID Admin is able to refresh the information.

When disk activity decreases, regular status updates will resume.

Published Date: Feb 20, 2012

Xserve RAID: Third-Party Certified Product Support Contact Information

Find a supplemental list of Xserve RAID certified third-party vendors.
This article has been archived and is no longer updated by Apple.
If you're looking for support beyond that provided by Apple, check the list of Xserve RAID certified third-party vendors at the Xserve Raid website (http://www.apple.com/xserve/raid/certifications.html) and the list below.

Fibre Channel Controller Cards (HBAs)

LSI Logic: http://www.lsilogic.com/
Support: http://www.lsilogic.com/support/index.html
U.S. support telephone: 1-800-633-4545 (8:30 a.m. to 5:30 p.m. Eastern time)

ATTO: http://www.attotech.com/
Support email: techsupp@attotech.com
U.S. office telephone: (716) 691-1999 ext. 242

Emulex: http://www.emulex.com/
Support: http://www.emulex.com/ts/index.jsp
U.S. support telephone: 1-800-854-7112
Support email: tech.support@emulex.com

Operating Systems

Xserve RAID is Windows 2000 Server and Windows 2000 Professional certified

Windows Server 2003 Support: http://www.microsoft.com/windowsserver2003/support/default.mspx
Certification information

Linux

Red Hat: http://www.redhat.com/
Support: http://www.redhat.com/apps/support/

Yellow Dog Linux: http://www.terrasoftsolutions.com/ or http://www.yellowdoglinux.com/
Support: http://www.yellowdoglinux.com/support/

2 GB Fibre Channel Switches

QLogic: http://www.qlogic.com/
Support: http://www.qlogic.com/support/
Support contact information: Switch, HBA and Host Chip Technical Support
(SANbox, SANblade QLA & ISP products)
Support email: support@qlogic.com
U.S. support telephone: + 1 952-932-4040

Brocade: http://www.brocade.com/
Support: http://www.brocade.com/support/index.jsp
North America, Europe, Middle East, Africa support email: support@brocade.com

Vixel (Emulex): http://www.vixel.com/ or http://www.emulex.com/
Note: Apple provides warranty support for Vixel switches sold through the Apple Store. Emulex has acquired Vixel as of November 2003 and maintains their former product lines.

Volume Management Solutions

VERITAS: http://www.veritas.com/
Support: http://support.veritas.com/

U.S. support telephone: 1-800-342-0652

Chaparral: http://www.chaparralnet.com/
Support: http://www.chaparralnet.com/supp/index.shtml

Candera: http://www.candera.com/
Support email: support@candera.com
U.S. support telephone: 1-800-CANDERA (1-800-226-3372)

Published Date: Feb 20, 2012

iMac G5 Support Resources

This article has been archived and is no longer updated by Apple.

Thank you for purchasing the iMac G5 from Apple! We're thrilled to welcome you to the iMac G5 family. We've assembled a wealth of awesome resources to help you get the most out of your new computer.

iMac Support Site
Apple's award-winning iMac service and support website is a one-stop-shop filled with the best information for new iMac owners.

- Learn how to add memory or an AirPort card to your iMac.
- Troubleshoot an issue.
- Learn more about the software that came with your iMac G5.
- Join Apple's discussion board just for iMac G5 owners.
- Download a replacement copy of your iMac manual.

Go to the iMac service and support website

iMac Discussion Boards
Our iMac G5 discussion boards are filled with Mac experts. Ask a question, answer a question or simply read what other iMac G5 users have to say.

Visit the iMac G5 discussion boards

Mac OS X Support Site
Every iMac G5 includes Apple's operating system, Mac OS X. Learn more about the operating system using our Mac OS X support site. It's here to help you get the most out of your computer... Learn how to:

- fix printing issues
- get your Internet connection working
- send and receive e-mail
- burn a CD of music or files
- start up and shut down successfully

Check out the Mac OS X support site

Make an appointment to get help from a Genius
Apple Store experts can answer your questions, offer advice and solutions, handle repairs, and provide technical support. Apple provides hardware service for eligible warranty repairs within the product's first year of ownership. Find a store and make a reservation through the online Apple Store Concierge. Reservations are strongly recommended.

Find your local Apple retail store

Online help
The onscreen Mac Help Center answers thousands of "how-do-I?" questions. All of the iMac onscreen help is also available through our iMac G5 support website!

Published Date: Oct 11, 2016

Power Mac G4 Cube: Modem doesn‘t make sounds when connecting

It's normal if your Power Mac G4 Cube computer's modem doesn't make any sounds when connecting to the Internet with Mac OS X 10.3
This article has been archived and is no longer updated by Apple.
The computer's modem made sounds in Mac OS 9 when it connected to the Internet. In Mac OS X 10.3, it's normal if the modem doesn't make any sounds when connecting.

Even though you don't hear the connection, you can see its progress in these ways:

- Open the Internet Connect application when you make a connection. The status appears in the lower part of the window.
- You can also see the connection status in the menu bar. Open Internet Connect and click the option labeled ""Show status while connecting".

Published Date: Feb 20, 2012

Xserve G5: No boot and no video after power interruption

If an Xserve G5 appears to be on but you see no startup flash and no video, the server may need the power to be disconnected for a few seconds.
This article has been archived and is no longer updated by Apple.

Symptom

After a brief power interruption, the server's fans are spinning and the power indicator shows the server is on, but you don't see any video and didn't see the startup flash from the indicator LEDs.

Solution

1. Disconnect the Xserve's power cable.
2. Wait 10 seconds.
3. Reconnect the power cable and turn the server on.

This symptom does not indicate an issue with the server and does not require hardware repair. The Xserve's power management architecture requires 5 to 10 seconds to reset.

Published Date: Feb 20, 2012

Xserve G5: No network connection with Ethernet cable only in upper port

Use the lower built-in Ethernet port of an Xserve G5 before you use the upper built-in Ethernet port.
This article has been archived and is no longer updated by Apple.

Symptom

With the Ethernet cable attached to the upper built-in Ethernet port, the Xserve G5 does not establish a network connection. For example, Startup Disk preferences shows no NetBoot volume.

Products affected

- Xserve G5

Solution

Move the Ethernet cable from the upper built-in Ethernet port to the lower built-in Ethernet port.

The architecture of the Xserve G5 requires the lower Ethernet port to be connected to the network before the upper Ethernet port is used. This is not an issue if an optional Ethernet PCI card is used.

This symptom does not indicate an issue with the server and does not require hardware repair.
Published Date: Oct 11, 2016

Xserve G5: Power consumption and thermal output (BTU) information

Learn power consumption and thermal output information for Xserve G5.
This article has been archived and is no longer updated by Apple.

Xserve G5 (single processor)
"Minimum" configuration: Single 2.0 GHz G5 Processor, single 80 GB Apple Drive Module, 512 MB ECC RAM (2x256 MB DIMMs), no PCI cards

Power Consumption		Thermal Output	
Idle	**CPU Max**	**Idle**	**CPU Max**
130 W	170 W	444 BTU/h	580 BTU/h

Xserve G5 (single processor)
"Maximum" configuration: Single 2.0 GHz G5 Processor, three 250 GB Apple Drive Modules, 8 GB ECC RAM (8x1 GB DIMMs), no PCI cards

Power Consumption			Thermal Output		
Idle	**CPU Max**	**CPU+Disk Max**	**Idle**	**CPU Max**	**CPU+Disk Max**
155 W	200 W	210 W	529 BTU/h	683 BTU/h	717 BTU/h

Xserve G5 (dual processor)
"Minimum" configuration: Dual 2.0 GHz G5 Processors, single 80 GB Apple Drive Module, 1 GB ECC RAM (2x512 MB DIMMs), no PCI cards

Power Consumption		Thermal Output	
Idle	**CPU Max**	**Idle**	**CPU Max**
160 W	240 W	546 BTU/h	819 BTU/h

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Power Consumption			Thermal Output		
Idle	**CPU Max**	**CPU+Disk Max**	**Idle**	**CPU Max**	**CPU+Disk Max**
190 W	280 W	290 W	649 BTU/h	956 BTU/h	990 BTU/h

Xserve G5 (Cluster Node)
"Minimum" configuration: Dual 2.0 GHz G5 Processors, single 80 GB Apple Drive Module, 512 MB ECC RAM (2x256 MB DIMMs), no PCI cards

Power Consumption		Thermal Output	
Idle	**CPU Max**	**Idle**	**CPU Max**
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"Maximum" configuration: Dual 2.0 GHz G5 Processors, single 80 GB Apple Drive Module, 8 GB ECC RAM (8x1 GB DIMMs), no PCI cards

Power Consumption		Thermal Output	
Idle	**CPU Max**	**Idle**	**CPU Max**
161 W	252 W	550 BTU/h	860 BTU/h

Notes

- Power consumption data (Watts) is measured from the wall power source and includes all power supply and system losses. Additional correction is not needed.
- "CPU Max" is defined as running a compute-intensive test application that maximizes processor usage and therefore power consumption.
- "Drive Max" is defined as running a test application that generates continuous input/output to a RAID set consisting of all internal disks in the system.
- These numbers reflect a 23° C (73.4° F) ambient running environment. Increased ambient temperatures will require faster fan speeds which will increase power consumption. At 35° C (95° F), 50 W should be added to reflect increased power consumption.
- These numbers reflect no PCI cards installed. A PCI video card will increase power consumption by 10 W.

Last Modified: Feb 20, 2012

Additional Product Support Information

Xserve G5: Power consumption and thermal output (BTU) information

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- These numbers reflect no PCI cards installed. A PCI video card will increase power consumption by 10 W.

Published Date: Oct 11, 2016

Xserve RAID, Xserve RAID (SFP): Moving RAID sets

Learn important information about minimizing the risk of data loss when moving RAID sets.

This article has been archived and is no longer updated by Apple.

If, for any reason, you need to move one or more created RAID sets from one Xserve RAID to another or from one side of an Xserve RAID to the other, follow these steps to minimize the risk of data loss.

Warning: Only move RAID sets after following these instructions. These steps must be performed on both the source and target RAIDs.

1. Back up the data on the source Xserve RAID.
2. Number the drives in each RAID set to ensure the correct positioning when moved to the target RAID.
3. Inform any clients that the volumes will be unavailable for a period of time.
4. Unmount the volumes from any client computers.
5. Power off the Xserve RAIDs.
6. Remove the power cables from the back of the Xserve RAIDs (both source and target).
7. Move the drives to the new location, making sure the positioning corresponds with the numbers on the drives (see step 2).
8. When all drives are transferred, connect the power cord to the target Xserve RAID.
9. Power on the Xserve RAID.

Published Date: Feb 20, 2012

About ECC memory errors

Learn about ECC memory and what to do if you experience ECC errors.

This article has been archived and is no longer updated by Apple.

Xserve G5 uses DDR400 (PC3200) unbuffered, unregistered ECC (Error Correction Code) memory. Xserve G5 is the first generation of Xserve that uses ECC memory and the Memory tab in Server Monitor now contains ECC-related information.

The version of Server Monitor that comes with Xserve G5 has an additional information field for each of the installed memory cards (DIMMs). This field denotes the number of single-bit (recoverable) ECC errors. If any of the DIMMs in the Memory tab's pop-up menu have a status indicator that is not colored green, this indicates that the DIMM has encountered ECC errors. Single-bit ECC errors are corrected by the ECC circuitry and cause no loss of data or system availability. A summation of the state of all DIMMs is shown in the main status line for a given server.

Server Monitor will also detect multiple-bit errors, but a multiple-bit error will cause a Mac OS X kernel panic. Information will be stored in the Server Monitor logs after the server is restarted. If this happens, you should replace the failing DIMM.

If you see more than four ECC errors in 48 hours, it may be a sign of an impending DIMM failure. Before replacing the DIMM, shut down the server and reseat the DIMM.

Often, a DIMM that is not fully seated will cause failures due to thermal effects on the DIMM connector. If the failures recur, the DIMM is probably about to fail and should be replaced at your earliest convenience.

Published Date: Oct 11, 2016

Xserve RAID: No power

Learn about an issue that can cause an Xserve RAID not to start up properly.
This article has been archived and is no longer updated by Apple.

Symptom

The LEDs respond as follows:

- Power supply LEDs flash green as normal in Standby mode.
- The power on LED over the right power supply doesn't flash when ready to power on. It also does not start up the Xserve when you push it.
- The LEDs on the front of the Xserve RAID are all dark.

Products affected

- Xserve RAID
- Xserve RAID (SPF)

Solution

1. Open the CIP instructions for "Cables, Midplane Board-to-rear" and follow instructions 1 through 13 for removing the RAID from the rack and removing the top cover.
2. Locate the ribbon cable connected to the Rear Power Button Board, as seen in the lower right corner of this picture.

3. Reseat the ribbon cable at the Rear Power Button Board.

Published Date: Feb 20, 2012

Xserve G5: "Display_ProbeForDevices" error appears in Xserve Remote Diagnostics 1.0

When you run Xserve Remote Diagnostics 1.0, you might see the message "Display_ProbeForDevices returned error -3." appear in the "Probing for hardware" section of the report.

This article has been archived and is no longer updated by Apple.

This does not indicate an issue with your Xserve G5. It simply means that the diagnostic software is looking for specific video cards and displays that are not present. The Xserve G5 may not have a certain video card or display the diagnostics expect to see, the Xserve G5 may be running "headless", or an unsupported video card or display may have been detected.

Published Date: Oct 11, 2016

Xserve G5: "Probing Network" error appears in Xserve Remote Diagnostics 1.0

When you run Xserve Remote Diagnostics 1.0, you might see the message "Probing Network returned error 2" appear in the "Probing for hardware" section of the report.

This article has been archived and is no longer updated by Apple.

This does not indicate an issue with your Xserve G5. It simply means the diagnostic software is looking for specific Ethernet controllers that are not included with the Xserve G5.

Published Date: Oct 11, 2016

Xserve G5: "CPU.G5.CPU Slot Number Verify" error appears in Xserve Remote Diagnostics 1.0

Learn what to do if you get a "CPU.G5.CPU Slot Number Verify" error when you run Xserve Remote Diagnostics.
This article has been archived and is no longer updated by Apple.
When you run Xserve Remote Diagnostics 1.0, you might see a message similar to this:

```
00:03:93:F5:1D:C8 03/30/04 12:11:15 Testing [00000005] CPU.G5.CPU Slot Number Verify
00:03:93:F5:1D:C8 03/30/04 12:11:15 CPU 0 Slot number is invalid!
00:03:93:F5:1D:C8 03/30/04 12:11:15 FAILED, result:7 "CPU Slot Number Verify failed
```

This does not indicate an issue with your Xserve G5.

This alert is caused by a reporting issue in the software.

You can either ignore the "failure" or turn off the "CPU.G5.CPU Slot Number Verify" test by following these steps:

1. Optionally, start by making a backup copy of the test definition file that you will be modifying. Two files have the same test - **quick.tdf** and **extended.tdf**. Copies of these files are found in ~/Library/Application Support/xrdiags/.
2. Using a text editor such as TextEdit, open either or both of the test definition files mentioned in step 1 (quick.tdf and extended.tdf).
3. Navigate to the line of the file that looks like the following:

   In quick.tdf:

   ```
   TEST    1       FALSE   "CPU.G5"        QUICK   OF      SA      3
   [commodity-type='CPU_',model="970+"]    "CPU Slot Number Verify"
   "Verify the CPU slot number in the cpuid rom and the physical MLB slot match and is valid."     ""      ""      ""
   ```

   In extended.tdf:

   ```
   TEST    1       FALSE   "CPU.G5"        EXTENDED   OF      SA      3
   [commodity-type='CPU_',model="970+"]    "CPU Slot Number Verify"
   "Verify the CPU slot number in the cpuid rom and the physical MLB slot match
   and is valid."     ""      ""      ""
   ```

4. Either delete the line in its entirety, or simply add a hash mark (#) to the beginning of the line, to comment the line out. For example:

   ```
   #TEST    1       FALSE   "CPU.G5"        QUICK   OF      SA      3
   [commodity-type='CPU_',model="970+"]    "CPU Slot Number Verify"
   "Verify the CPU slot number in the cpuid rom and the physical MLB slot match and is valid."     ""      ""      ""
   ```

5. Save changes and close the document. That step will no longer be included the next time Xserve Remote Diagnostics are run.

This document will be updated when more information becomes available.

Published Date: Oct 11, 2016

Xserve G5: Adding a video card

Xserve G5's default configuration does not have a video card. Learn what your options are if you did not order the Xserve G5 with a video card, but want one later.

This article has been archived and is no longer updated by Apple.

The default configuration of the Xserve G5 does not include a video card. To receive a video card with your Xserve G5, add it to the configuration on the Apple Store when you order the Xserve.

If you already have the Xserve G5 and you want to add a video card, contact a third-party vendor. Apple does not offer the video card as a separate retail kit.

Published Date: Oct 11, 2016

Video distortion when using 3D graphics on iBook G4 (Early 2004)

This article has been archived and is no longer updated by Apple.

Some iBook G4 (Early 2004) computers may show visible distortions or color shifts in moving patches of the screen while running 3D-intensive applications or games.

If this happens, your computer does not need service. Just update your computer using the iBook G4 Graphics Update. This should resolve the issue.

Published Date: Feb 19, 2012

Disk Utility: Error -9977 when setting up hard drives as members of an AppleRAID set

Learn about the error -9977 when creating an AppleRAID set, and a workaround to avoid the issue.

This article has been archived and is no longer updated by Apple.

Symptom

An error -9977 may appear when using Disk Utility or diskutil to set up hard drives as part of an AppleRAID set.

Products affected

- Any system with multiple hard drives attached
- Disk Utility or diskutil

Solution

1. Erase the individual volumes before creating the RAID set.

   Warning: Always back up data you wish to keep before initializing a hard disk. Initialization erases all data on the hard disk.

2. After erasing the volumes, the new file system can be successfully created and mounted.

When this issue occurs, the RAID set may appear to have been created and to be valid, but the file system is not valid. The file system is reported as ISO 9660.

Tip: If you are adding a drive to be rebuilt into a degraded mirrored RAID set and the replacement drive used to be part of the same or another RAID set, it must be erased before it can be added to the mirrored RAID set.

Published Date: Feb 20, 2012

Identifying 5400 RPM hard drives in PowerBook G4 computers

Some PowerBook G4 computers were ordered configured with an optional 80 GB 5400 RPM hard drive, instead of the default 4200 RPM hard drive. To identify your computer's hard drive speed, follow these steps.

This article has been archived and is no longer updated by Apple.

For Mac OS X 10.3

1. Click the Finder icon in the Dock.
2. From the **Go** menu, choose **Utilities**.
3. Open System Profiler.
4. In the Contents list, click ATA under the Hardware heading, as shown here.

5. In the ATA Device Tree window, click ATA-6 Bus.
6. In the ATA-6 Bus field, look at the Model line. Check to see if the drive's model number is listed here. If so, your computer has the 5400 RPM drive.

5400 RPM hard drives:

- HGST - HTS548080M9AT00
- Toshiba - MK8026GAX

Published Date: Feb 19, 2012

Installing software on an eMac (USB 2.0) that doesn‘t have an optical drive

This article has been archived and is no longer updated by Apple.
There are several ways you can install software on a computer that has no optical drive:

- Connect an external FireWire or USB optical drive to the computer and use it to install software.
- If your eMac is connected to a network, you can install software remotely from. Learn how to browse for shared computers and file servers on your network.
- If you use Mac OS X Server to administer your network, you can install software remotely using Mac OS X Server. If you or your network administrator want to learn more about this feature of Mac OS X Server, click here.
- You could connect an external, compatible optical drive, such as a LaCie FireWire Combo Drive DVD-ROM/CD-RW (finished goods number T9502ZM/A).

Published Date: Feb 20, 2012

Mac OS X Server: Software serial number not accepted

If you are entering your Mac OS X Server serial number and you see a message that says the serial number is not accepted or not recognized, make sure you are entering "`ick`", not "`lck`".

This article has been archived and is no longer updated by Apple.

A common cause for this alert is misreading the letter "i" as "L" in the serial number.

Published Date: Feb 19, 2012

Xserve Remote Diagnostics 1.0 displays IP of DHCP server

In some situations, Xserve Remote Diagnostics may show the IP address of the DHCP server, rather than the IP address of the computer hosting the diagnostic software.
This article has been archived and is no longer updated by Apple.

Symptom

On an admin computer running Xserve Remote Diagnostics 1.0, whenever any Xserve G5 connects to the admin computer to be diagnosed, information is displayed on the Xserve G5 about the specific NetBoot server from which the diagnostics software was loaded. For example, the line may look like this:

```
00:03:93:F5:1D:28 04/06/04 14:43:55 Booted from: 17.254.0.91
```

However, if the remote Xserve G5 is commanded into diagnostics mode from the admin computer, the information displayed about the specific NetBoot server that is hosting the diagnostics may show the DHCP server's IP address rather than the NetBoot server's IP address.

Products affected

- Xserve G5
- Xserve Remote Diagnostics v 1.0

Solution

This incorrect information does not indicate a problem with your Xserve G5, computer or network.

This document will be updated as more information becomes available.
Published Date: Feb 20, 2012

Resetting the Xserve G5 PMU

Here you can learn how to reset PMU in an Xserve G5.
This article has been archived and is no longer updated by Apple.

What is the PMU?

The PMU (Power Management Unit) is a microcontroller chip that controls all power functions for the server. The PMU is essentially a computer within a computer. Its function is to:

- tell the server to turn on, turn off, sleep, wake, idle, and so forth.
- manage system resets from various commands.

How to reset the PMU

Warning: Be very careful when handling the logic board. The PMU is very sensitive and touching the circuitry on the logic board can cause the PMU to crash. If the PMU crashes and is not reset, the battery life is significantly diminished. Many system issues can be resolved by resetting the PMU chip. When you have a server that fails to power up and software issues have been eliminated as a possible cause, follow these steps before replacing any modules.

1. Disconnect the power cord and check the battery in the battery holder. The battery should read between 3.3 and 3.7 Volts. If the battery measures outside of this range: replace it, wait ten seconds, and then proceed to step 2. If the battery voltage measures within this range: go directly to step 2.
2. Press and release the PMU reset button once and then proceed to step 3. Do not press the PMU reset button a second time, as it could crash the PMU chip.

3. Wait ten seconds before connecting the power cord and powering on the server. If the server powers on, go to step 4. If the server does not power on, there is something else wrong with the server. Verify the voltage on the power supply.
4. Run Xserve Remote Diagnostics to verify the system.

The procedure outlined above resets the server's real-time clock (RTC). After resetting the PMU, be sure to reset the server's time and date.

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Published Date: Feb 20, 2012

Don‘t put USB 1.1 and USB 2.0 hubs in the same chain

Some USB devices don't work when connected through a mixture of USB 2.0 hubs (high-speed) and USB 1.1 hubs (full- or low-speed).

This article has been archived and is no longer updated by Apple.

An external hard drive may not mount, for example, or printing may stop in the middle of a job or not print at all.

If you experience this issue, change the configuration of the USB chain so that you are not mixing speeds. Connect a high-speed hub directly to the computer, and connect high-speed devices to it. Do the same for your full-speed/low-speed hub and devices.

If you have to chain hubs, be sure to chain only hubs of the same type. Note, for example, that USB keyboards with built-in hubs (such as the Apple Pro Keyboard) are full-speed/low-speed hubs. So for best performance the keyboard should be plugged directly into the computer or into another full-speed/low-speed hub.

To determine which type of hub you have, open System Profiler from the Applications folder. When you plug the device in, it will appear in the Devices & Volumes section with information about the speed of the device.

Published Date: Feb 20, 2012

Changing time zones of iCal published calendars

When you publish an iCal calendar, the events you've created appear using the time zone set in Date & Time preferences. If you change time zones, follow these steps to make sure the published calendar reflects the new time zone:

This article has been archived and is no longer updated by Apple.

1. Open iCal.
2. Export the calendar to the desktop by choosing **Export** from the **File** menu.
3. Unpublish and delete the calendar in iCal. (Don't worry. It's saved on the desktop.)
4. Double-click the icon of the calendar you saved on the desktop and add it back as a new calendar.
5. Publish this "new" calendar.

Published Date: Oct 11, 2016

PowerBook G4 audio line in port requires a powered signal

The PowerBook G4 audio line in port takes signals from audio equipment, including line-level devices such as amplified or self-powered microphones, and is specifically designed for high-level audio signal such as the signal from a powered microphone.
This article has been archived and is no longer updated by Apple.
If you use a nonpowered microphone with the audio line in port, it will result in a very low volume signal, or possibly no signal at all.

Third-party options, such as Griffin Technology's iMic, allow the use of many mic-level sound input devices with your computer.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Feb 20, 2012

Xserve G5: Won‘t start up, power light flashes once

Learn what it means if the power light flashes once when you try to start up your server. You can also learn about when the power light flashes two, three, or four times.
This article has been archived and is no longer updated by Apple.

Symptom

The server does not start up; the power light flashes once when you try to start the server. The flash repeats every 5 seconds.

Products affected

- Xserve G5

Solution

When the power light flashes once, this means that the server doesn't recognize any installed RAM, or that no RAM is installed.

Install memory

If no SDRAM is installed, install the appropriate memory:

Server	SDRAM type
Xserve G5	PC3200 DDR

Check the installed memory

1. Check that the memory is installed in pairs, as described in the User's Guide.
2. Remove the RAM, firmly reinsert it, and try starting the server again.
3. Try removing the memory in pairs and testing again, to isolate any possible bad DIMMs.
4. If all DIMMs are known good memory and the issue still occurs, the logic board may need to be replaced.

Note: When installing the replacement logic board, make sure the ports and ID button on the back of the board align with the opening in the chassis.
Published Date: Oct 11, 2016

Xserve G5: Won‘t start up, power light flashes twice

Learn what it means if the power light flashes twice when you try to start up your server.
This article has been archived and is no longer updated by Apple.

Symptom

The server does not start up; the power light flashes twice when you try to start the server. The flashes repeat every 5 seconds.

Products affected

- Xserve G5

Solution

When the power light flashes twice, this means that incompatible RAM is probably installed.

Install memory

Install the correct memory:

Server	SDRAM type
Xserve G5	PC3200 DDR

Check the installed memory

1. Check that the memory is installed in pairs, as described in the User's Guide.
2. Try removing the memory in pairs and testing again, to isolate any possible bad DIMMs.
3. If all DIMMs are known good memory and the issue still occurs, the logic board may need to be replaced.

Note: When installing the replacement logic board, make sure the ports and ID button on the back of the board align with the opening in the chassis.

Published Date: Oct 11, 2016

Xserve G5: Won‘t start up, power light flashes three times

Learn what it means if the power light flashes three times when you try to start up your server.
This article has been archived and is no longer updated by Apple.

Symptom

The server does not start up; the power light flashes three times when you try to start the server. The flashes are repeated every five seconds.

Solution

When the power light flashes three times, this means that none of the RAM banks passed memory testing.

Install memory

Install the appropriate memory:

Server	SDRAM type
Xserve G5	PC3200 DDR

Check the installed memory

1. Check that the memory is installed in pairs, as described in the User's Guide.
2. Try removing the memory in pairs and testing again, to isolate any possible bad DIMMs.
3. If all DIMMs are known good memory and the issue still occurs, the logic board may need to be replaced.

Note: When installing the replacement logic board, make sure the ports and ID button on the back of the board align with the opening in the chassis.
Published Date: Oct 11, 2016

Xserve G5: Won‘t start up, power light flashes four times

Learn what it means if the power light flashes four times when you try to start up your server.
This article has been archived and is no longer updated by Apple.

Symptom

The server does not start up; the power light flashes four times when you try to start the server. The flashes repeat every 5 seconds.

Products affected

- Xserve G5

Solution

When the power light flashes four times, this means that the server's ROM may be bad.

Try each of these steps in order, testing in between steps to see if the server starts:

1. Remove the processor module and reinsert it securely.
2. Replace the processor module.
3. Replace the logic board.

Note: When installing the replacement logic board, make sure the ports and ID button on the back of the board align with the opening in the chassis.

Published Date: Oct 11, 2016

How to use Forward Delete on an iBook or PowerBook

Have you ever needed a Forward Delete key as well as a normal Delete key? Extended keyboards include such a key, and you can get the same behavior from your iBook or PowerBook keyboard.

This article has been archived and is no longer updated by Apple.

While PowerBook and iBook computers do not have a unique Forward Delete key, you can delete the character to the right of your cursor by pressing fn-Delete (function-Delete).

Computers with a fn (function) key include the PowerBook G3 Series, PowerBook (FireWire), all PowerBook G4 models and all iBook models.

Published Date: Oct 11, 2016

Power Mac G5 (June 2004), (Late 2004): Power consumption and thermal output (BTU) information

Learn power consumption and thermal output information for Power Mac G5 (June 2004) and Power Mac G5 (Late 2004) computers.
This article has been archived and is no longer updated by Apple.
Standard Configurations of Power Mac G5 (June 2004):

Dual 1.8GHz PowerPC G5
900 MHz frontside bus/processor
512K L2 cache/processor
256 MB DDR400 SDRAM, expandable to 4GB SDRAM
80GB Serial ATA drive
8x SuperDrive
3 PCI slots
NVIDIA GeForce FX 5200 Ultra
64MB DDR video memory
56K internal modem

Dual 2.0GHz PowerPC G5
1 GHz frontside bus/processor
512K L2 cache/processor
512 MB DDR400 SDRAM, expandable to 8GB SDRAM
160GB Serial ATA drive
8x SuperDrive
3 PCI-X slots
NVIDIA GeForce FX 5200 Ultra
64MB DDR video memory
56K internal modem

Dual 2.5GHz PowerPC G5
1.25 GHz frontside bus/processor
512K L2 cache/processor
512 MB DDR400 SDRAM, expandable to 8GB SDRAM
160GB Serial ATA drive
8x SuperDrive
3 PCI-X slots
ATI Radeon 9600 XT
128MB DDR video memory
56K internal modem

All configurations of Power Mac G5 (June 2004)

Power Consumption			Thermal Output		
Idle	**Max**	**Fully Loaded Max**	**Idle**	**Max**	**Fully Loaded Max**
120 W	406 W	604 W	410 BTU/h	1386 BTU/h	2060 BTU/h

Standard Configuration of Power Mac G5 (Late 2004):

Single 1.8GHz PowerPC G5
600 MHz frontside bus
512K L2 cache
256 MB DDR400 SDRAM, expandable to 4GB SDRAM
80GB Serial ATA drive
8x SuperDrive
3 PCI slots
NVIDIA GeForce FX 5200 Ultra
64MB DDR video memory
56K internal modem

Power Mac G5 (Late 2004)

Power Consumption			Thermal Output		
Idle	**Max**	**Fully Loaded Max**	**Idle**	**Max**	**Fully Loaded Max**
120 W	160 W	552 W	409 BTU/h	545 BTU/h	1882 BTU/h

- Max is the maximum that can be expected with the default configurations listed above.

- Fully Loaded Max is the maximum that can be expected when the computer is fully loaded with PCI cards, memory, and hard drives.
- Power numbers are input power to the AC, not output power. These numbers were derived from these considerations:
  240 W for processor and DC-DC
  10 W for optical drive
  15 W for hard drive
  25 W for graphics card
  20 W for main logic board
  80% efficiency

Published Date: Oct 11, 2016

Apple Cinema Display (20-inch DVI), Apple Cinema HD Display (23-inch DVI), Apple Cinema HD Display (30-inch DVI): Update to Mac OS X 10.3.5 for full feature selection

Are you having trouble finding the Options tab in Displays preferences?
This article has been archived and is no longer updated by Apple.
If you can't find the Options tab, you may need to open Software Update and update your computer to Mac OS X 10.3.5 or later.

The displays work without the Mac OS X 10.3.5 update. Installing the update simply enables additional features.

Published Date: Oct 11, 2016

Installing the VESA mount on an Apple Cinema Display (20-inch DVI), Apple Cinema HD Display (23-inch DVI), or Apple Cinema HD Display (30-inch DVI)

There's an optional VESA mount adapter available for the Apple Cinema Display (20-inch DVI), Apple Cinema HD Display (23-inch DVI), and Apple Cinema HD Display (30-inch DVI).

This article has been archived and is no longer updated by Apple.

The VESA mount adapter allows compatible displays to be used with a variety of alternate mounting solutions, such as wall mounts and zero-footprint articulating arms based on the VESA flat panel mounting interface (FPMI). Instructions and a hex tool for removing the desktop stand provided with the display are provided with the adapter. You can also get the installation instructions here.

The Apple flat-panel display with the VESA mount adapter uses a 100 mm mounting surface and, when attached, complies with the VESA MIS-D, 100, C version of the specification.

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Published Date: Feb 19, 2012

Processor speeds and bus speeds of Macintosh computers

Learn the bus speeds for each model of Macintosh computer from the Power Macintosh G3 and later. (For computers manufactured earlier than seven years ago, see document 17121.

This article has been archived and is no longer updated by Apple.

The table below contains the name, processor speed, and bus speed for each Macintosh computer manufactured in the last seven years.

Computer	Processor Speed	Bus Speed
Power Macintosh G3		
Power Macintosh G3 Mini Tower	233 MHz, 300 MHz	66 MHz
Power Macintosh G3 Desktop	233 MHz, 300 MHz	66 MHz
Power Macintosh G3 All-in-One	233 MHz, 266 MHz	66 MHz
Power Macintosh G3 (Blue and White)	350 MHz, 400 MHz, 450 MHz	100 MHz
Power Mac G4		
Power Mac G4 (PCI Graphics)	350 MHz, 400 MHz	100 MHz
Power Mac G4 (AGP Graphics)	350 MHz, 400 MHz, 450 MHz, 500 MHz	100 MHz
Power Mac G4 Cube	450 MHz	100 MHz
Power Mac G4 (Gigabit Ethernet)	400 MHz, dual 450 MHz, dual 500 MHz	100 MHz
Power Mac G4 (Digital Audio)	466 MHz, 533 MHz, dual 533 MHz, 733 MHz	133 MHz
Power Mac G4 (QuickSilver)	733 MHz, 867 MHz, dual 800 MHz	133 MHz
Power Mac G4 (QuickSilver 2002)	800 MHz, 933 MHz, dual 1 GHz	133 MHz
Power Mac G4 (Mirrored Drive Doors)	dual 867 MHz, dual 1 GHz, dual 1.25 GHz	133 MHz (dual 867 MHz) or 167 MHz
Power Mac G4 (FW 800)	1 GHz, dual 1.25 GHz, dual 1.42 GHz	133 (1 GHz) or 167 MHz
Power Mac G4 (Mirrored Drive Doors 2003)	1.25 GHz, dual 1.25 GHz	167 MHz
Power Mac G5		
Power Mac G5	1.6 GHz, 1.8 GHz, dual 2.0 GHz	800 MHz, 900 MHz, or 1 GHz per processor
Power Mac G5 (June 2004)	dual 1.8 GHz, dual 2.0 GHz, dual 2.5 GHz	900 MHz, 1 GHz, or 1.25 GHz per processor
Power Mac G5 (Late 2004)	1.8 GHz	600 MHz
Power Mac G5 (Early 2005)	dual 2.0 GHz, dual 2.3 GHz, dual 2.7 GHz	1 GHz, 1.15 GHz, or 1.35 GHz per processor
Mac mini (with G4 processor)		
Mac mini	1.25 GHz, 1.42 GHz	167 MHz
iMac (with G3 processor)		
iMac 233 MHz	233 MHz	66 MHz
iMac 266 MHz	266 MHz	66 MHz
iMac 333 MHz (Five Flavors)	333 MHz	66 MHz
iMac (Slot Loading)	350 MHz, 400 MHz	100 MHz
iMac (Summer 2000)	350 MHz, 400 MHz, 450 MHz, 500 MHz	100 MHz
iMac (Early 2001)	400 MHz, 500 MHz, 600 MHz	100 MHz

iMac (Summer 2001)	500 MHz, 600 MHz, 700 MHz	100 MHz
iMac (with G4 processor)		
iMac (Flat Panel)	700 MHz, 800 MHz	100 MHz
iMac (17-inch Flat Panel)	800 MHz	100 MHz
iMac (17-inch 1GHz)	1 GHz	133 MHz
iMac (USB 2.0)	1 GHz, 1.25 GHz	167 MHz
iMac (with G5 processor)		
iMac G5	1.6 GHz, 1.8 GHz	533 MHz, 600 MHz
eMac (with G4 processor)		
eMac	700 MHz, 800 MHz	100 MHz
eMac (ATI Graphics)	800 MHz, 1 GHz	133 MHz
eMac (USB 2.0)	1.25 GHz	167 MHz
PowerBook G3		
PowerBook G3	250 MHz	50 MHz
PowerBook G3 Series	233 MHz, 292 MHz	66 MHz or 83 MHz
PowerBook G3 Series (Bronze Keyboard)	333 MHz, 400 MHz	66 MHz
PowerBook (FireWire)	400 MHz, 500 MHz	100 MHz
PowerBook G4		
PowerBook G4	400 MHz, 500 MHz	100 MHz
PowerBook G4 (Gigabit Ethernet)	550 MHz, 667 MHz	100 MHz or 133 MHz
PowerBook G4 (DVI)	667 MHz, 800 MHz	133 MHz
PowerBook G4 (1 GHz/867 MHz)	867 MHz, 1 GHz	133 MHz
PowerBook G4 (15-inch FW 800)	1 GHz, 1.25 GHz	167 MHz
PowerBook G4 (15-inch 1.5/1.33GHz)	1.33 GHz, 1.5 GHz	167 MHz
PowerBook G4 (12-inch)	867 MHz	133 MHz
PowerBook G4 (12-inch DVI)	1 GHz	133 MHz
PowerBook G4 (12-inch 1.33GHz)	1.33 GHz	167 MHz
PowerBook G4 (17-inch)	1 GHz	167 MHz
PowerBook G4 (17-inch 1.33GHz)	1.33 GHz	167 MHz
PowerBook G4 (17-inch 1.5GHz)	1.5 GHz	167 MHz
iBook G3		
iBook	300 MHz, 366 MHz	66 MHz
iBook (FireWire)	366 MHz, 466 MHz	66 MHz
iBook (Dual USB)	500 MHz	66 MHz
iBook (Late 2001)	500 MHz, 600 MHz	66 MHz or 100 MHz
iBook (14.1 LCD)	600 MHz	100 MHz
iBook (16 VRAM)	600 MHz, 700 MHz	100 MHz
iBook (14.1 LCD 16 VRAM)	700 MHz	100 MHz
iBook (Opaque 16 VRAM)	700 MHz	100 MHz
iBook (32 VRAM)	800 MHz	100 MHz
iBook (14.1 LCD 32 VRAM)	800 MHz	100 MHz
iBook (Early 2003)	800 MHz, 900 MHz	100 MHz
iBook G4		
iBook G4	800 MHz	133 MHz
iBook G4 (14-inch)	933 MHz, 1 GHz	133 MHz
iBook G4 (Early 2004)	1 GHz	133 MHz
iBook G4 (14-inch Early 2004)	1 GHz, 1.2 GHz	133 MHz

iBook G4 (12-inch Late 2004)	1.2 GHz	133 MHz
iBook G4 (14-inch Late 2004)	1.33 GHz	133 MHz

Published Date: Feb 19, 2012

Apple Hardware Test gives "2CPU/10/9 CPU0" or similar alert on Power Mac G5 (June 2004)

Have you gotten an alert that says "2CPU/10/9 CPU0" or something similar when running Apple Hardware Test? Learn why you may not need to worry about it.

This article has been archived and is no longer updated by Apple.

If you run Apple Hardware Test version 2.2.2 or earlier on a Power Mac G5 (June 2004) computer with either dual 1.8 GHz G5 microprocessors or dual 2.0 GHz G5 microprocessors, you may see an alert like the one above. It might be slightly different - the digit shown as 9 above may be a different number, or "CPU0" may be "CPU1".

If you see this alert, ignore it. A newer version of Apple Hardware Test, version 2.2.4, is expected to fix this and is expected to be made available soon. This article will be updated with more information as soon as the new version is available.

Published Date: Feb 20, 2012

Xserve G5: Verifying compatibility and installing Hardware RAID PCI card

An Xserve G5 must meet minimum software requirements for the Hardware RAID PCI card to work properly. Follow the steps below to help ensure that data is not inadvertently deleted.
This article has been archived and is no longer updated by Apple.
This procedure also provides support for booting from volumes attached to the Hardware RAID PCI card.

1. Update to BootROM 5.1.7f1, available here. It is essential to update the Xserve G5 from the BootROM version 5.1.6f3 it shipped with.
2. Update your Xserve G5 to Mac OS X Server 10.3.5, available here.
3. Back up all the data on all drives. Installing the Hardware RAID PCI card requires you to erase the data on all three disks. For example, use Disk Utility to move data from the internal disks to an image on external media, or use a third-party backup utility to maintain permissions while transferring the data. The key to successfully backing up a volume is to maintain these permissions.
4. Create a method for booting your server that does not involve the three internal drives. This can be done by installing Mac OS X 10.3.5 on an external FireWire drive, SCSI drive, or using a NetBoot image.
5. Install the card using the instructions enclosed with the card.
6. Boot the server and verify the card and drives are connected correctly by typing the following commands in the Terminal application:

   ```
   megaraid -showadapter
   ```

   ```
   megaraid -showdevices
   ```

   If your card does not appear, type the following command:

   ```
   sudo touch /System/Library/Extensions
   ```

   Then restart your Xserve.

   Important: Your old drive partitions may now appear, but the partitions are no longer valid since the drive geometry has changed. Do NOT use your previously formatted drive partitions attached to your newly installed Harware RAID PCI card. You must reformat your drives before you can use the drives.

   This is important because the Hardware RAID card uses the space on the drive differently than the original formatting of the drive, which will result in the following:

   - The logical size of the drive will be different when used by the Hardware RAID card, and it is possible that some filesystem data structures or other data may be lost.
   - The partition map will become no longer valid such that Disk Utility will report problems and HFS+ journals will not be able to be replayed.
7. Type the terminal command:

   ```
   megaraid -destroyconfig
   ```

   This will erase the Hardware RAID PCI card metadata and the metadata stored on the drives.
8. Create your RAID set with the following command:

   `megaraid -create` [and your options]
9. Restore your boot drive and data.

Published Date: Oct 11, 2016

About the iMac G5 Sound Output port

Learn about the Sound Output port of your iMac G5.

This article has been archived and is no longer updated by Apple.

The iMac G5 can use the following connectors for sound output through the Headphone Out/Optical Audio Out port located on the right side of the back of the computer:

- 3.5mm metal analog mini-jack
- 3.5mm plastic optical mini-jack to Toslink cable

These cables are available from the Apple Store.

Note: If you connect or disconnect the audio cable while sound is playing, there may be a delay transferring the sound to the new destination speakers. If you are playing a QuickTime movie while doing so, you may need to pause and restart your movie to ensure proper sync between audio and video.

Published Date: Oct 11, 2016

iMac G5: Loose power cord could cause power loss

This article has been archived and is no longer updated by Apple.

To avoid a sudden loss of power, be sure that the power cord is fully inserted into the power cord receptacle on the back of your iMac G5. Loss of power occurs most often when you reposition the iMac, or if the power cord gets tugged. The ring on the power cord should sit flush with the back of the iMac case. Also be sure that the power cord isn't tangled with other cables or objects.

The pictures below show a correctly installed power cord and an incorrectly installed power cord.

Correctly-seated power cord

Improperly-seated power cord

If your iMac continues to experience a sudden loss of power and shuts down unexpectedly, try removing the cosmetic trim ring attached to the end of the power cord. The trim ring is circular and can be removed easily by holding the power cord as shown below, while gently pulling the trim ring away from the power connector. Once the trim ring works free, slide it down the power cord where it will be out of the way. The power cord trim ring is not necessary for iMac operation.

Published Date: Oct 11, 2016

Mac OS X: Video distortion when scrolling through windows

This article has been archived and is no longer updated by Apple.

When you scroll through some application windows in Mac OS X, the contents in the window may become slightly distorted. This can occur when using certain ATI video cards.

The distortion can be described as ripples, waves, visual tears, or horizontal lines, and the distortion location and intensity can change, depending on the size of the window and the speed at which you scroll. The distortion only appears inside of a window—never outside—and it disappears when you stop scrolling.

Important: This does not indicate a hardware issue that requires repair, nor is software troubleshooting necessary.

Why does this happen?

Safari, some games, and some multimedia applications that display animated content may turn off "coalesced updates" to improve performance. This can lead to the visual symptoms described above. Coalesced updates that are designed to eliminate visual "tearing" or other display artifacts can reduce display performance.

This document will be updated as more information becomes available.

Important: Information about products not manufactured by Apple is provided for information purposes only and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Published Date: Oct 11, 2016

Apple System Profiler: Reports Slow Memory

This article describes a situation where Apple System Profiler reports slow memory in computers with multiple PC-100 RAM modules.
This article has been archived and is no longer updated by Apple.

Symptom

When two SO-DIMM modules with different CAS Latency values are installed, Apple System Profiler reports that one of the SO-DIMMs installed is slow.

Affected Products

- All Apple products with PC-100 or PC-133 RAM (PowerBook G3 (FireWire), Power Mac G4)

Solution:

Apple System Profiler identifies the RAM as either PC-100-222S, or PC-100-322S. These memory modules meet Apple's memory specification for PC-100 memory. The PC-100-322S has a CAS latency rating of 3 rather than 2. This will not impact the performance of the computer.

If Apple System Profile identifies the RAM as PC-100-333S, it is actually PC-66 memory or an earlier form of PC-100 memory that is not qualified for use in the PowerBook (Firewire).

Note: If both memory modules are the same speed, it is only reported once.

Future revisions of Apple System Profiler will not report slow memory if both memory modules meet the memory specification for Apple computers.

Published Date: Feb 20, 2012

AppleShare IP 6: Mail Service FAQ Part 2

This document contains frequently asked questions (FAQ) regarding AppleShare IP 6 Mail Service, with answers to those questions.

For the first part of this FAQ, see technical document 24568: "**AppleShare IP 6: Mail Service FAQ Part 1"**

This article has been archived and is no longer updated by Apple.

Questions answered in this document:

1. Why do users get warning messages when mail has been delayed?
2. What is the size limit of enclosures the Mail Server can handle?
3. How can I troubleshoot mail delivery issues?
4. What do I do when the Mail Server cannot startup due to a database error?
5. Can I use the ASIP Mail Tool while the Mail Server is running?
6. How do you set up a mail server on a separate server using only one serial number?
7. Does installing the mail portion of ASIP on a separate computer turn off Mac OS File Sharing (ie Personal File Sharing)?
8. How do I setup a connection to my ISP to retrieve mail if I have an intermittent connection?
9. What else can I do if I have an intermittent connection?
10. Why does the Mail Server make connections to the external network outside the designated schedule?

Question 1: Why do users get warning messages when mail has been delayed?

Answer: The mail server will send an email warning to the sender whenever a mail message has gone undelivered on the server for a default value of 4 hours. The amount of time before the warning is sent can be adjusted in the "Mail Server Settings"; "Mail Out" panel. This feature can also be turned off. When users receive the warning message they do not need to resend the original message.

Question 2: What is the size limit of enclosures the Mail Server can handle?

Answer: The AppleShare IP 6 Mail Server does not limit the file size it sends or receives by default. If you would like to place a limit on the maximum messages size go into the "Mail Server Settings" ; "Mail In" panel and click the checkbox for "Maximum Message size", then set your value. All messages that are sent to the server that are over this size limit are then refused.

Question 3: How can I troubleshoot mail delivery issues?

Answer: Confirm that your network's router or internet gateway allows incoming and/or outgoing SMTP mail delivery. Make sure that your DNS is available and that your MX-records or aliases are setup correctly for your host name. Look at the server and error logs for messages which might indicate what the issue is.

Question 4: What do I do when the Mail Server cannot startup due to a database error?

Answer: Restore your mail database from a backup, or run the ASIP Mail Tool to verify the contents of the database. The database may become unusable if the computer stops responding or from a power loss.

Question 5: Can I use the ASIP Mail Tool while the Mail Server is running?

Answer: No. Both the mail server and mail admin need to be quit before running the ASIP Mail Tool.

Question 6: How do you set up a mail server on a separate server using only one serial number?

Answer: Create the user accounts on your primary ASIP server.

1. Enable mail for each user you wish to have an email account.
2. Create any groups you would like to use.
3. Once you have all your accounts ready, create a copy of your Users & Groups Data File making sure to keep the name of the file the same.
4. Place your copied Users & Groups Data file onto the new computer.
5. Install the Mail AND Web/File servers onto the new computer.
6. Reboot the computer with the shift key down to disable all extensions.
7. Place the Users & Groups Data File from the old computer into the Preferences folder of the new computer. This will overwrite the old file--that is OK.
8. Reboot the computer normally.
9. Open AppleShare Easy Setup and use the same serial number as the old computer.
10. Open Web & File Admin to verify that all your accounts are available with the correct mail settings.

Your new server is now ready to run the mail server, be sure to change any DNS settings to reflect the new IP address of the mail server. An

alternative to the above steps is to create an export user file from the old computer and import the users into the new computer. Information on importing and exporting users can be found in the Import/Export Users FAQ.

Question 7: Does installing the mail portion of ASIP on a separate computer turn off Mac OS File Sharing (ie Personal File Sharing)?

Answer: The separate mail server has to use the AppleShare IP Users & Groups file and registry. These items are not compatible with Personal File Sharing. Therefore, you cannot use Personal File Sharing on a standalone ASIP Mail server.

Question 8: How do I setup a connection to my ISP to retrieve mail if I have an intermittent connection?

Answer: You will need to activate and schedule Remote Mail Polling (ETRN) for the Host file of the ISP:

1. Verify with your ISP that they can support ETRN requests.

2. Ask your ISP to set themselves up as a "backup" mail server to your domain name of "company.com". They'll need to modify the MX-List for "company.com" but they should know what to do.

3. Ask the ISP for the name of the mail server which they have specified as a backup for your mail server, for the purposes of this example we'll call that mail server "mail.myisp.net"

4. Launch ASIP Mail Server & Mail Admin. After both are up and running bring up the host list window in Mail Admin.

5. In the host list window click on the "Create New Host" button. When the "name" dialog comes up, enter the name of your ISP's mail server from step #3 "mail.myisp.net".

6. When this entry shows up in the list, highlight it and click "Edit Host" button in the Host List window.

7. In the Edit hosts Window for the ISP mail server, click the "Schedule" Tab:

   - a) from the pop-up menu select "Set Allowed Connection Times".
   - b) setup a schedule of allowed connection times on the 7 day 24 hour panel. Green means allowed to connect at that time, grey means do not connect at that time.
   - c) click the "Remote Mail Polling (ETRN)" checkbox in the lower right hand corner.

Those are the major steps you have to take. The ASIP 6 Mail Server will now "poll" your ISP's mail server during allowed connection times and ask it to send any mail waiting for your domain name.

Question 9: What else can I do if I have an intermittent connection?

Answer:

- Forward all your outgoing mail via your ISP's SMTP mail server.
- Tell your AppleShare IP Mail Server its name for aliases or private IP networks (such as with the Vicom Gateway or other PPP dialup IP gateways).
- Set up a default schedule for all outgoing mail.

Forwarding all your remote mail through one SMTP mail server:

When running with a dialup connection, it is sometimes useful to have all your outgoing mail sent to one SMTP mail server, so that your AppleShare IP mail server doesn't waste time sending mail to various mail server's all over the internet (which may be down or unreachable at the time your server is connected). Forwarding all your mail to another SMTP mail server with a full time internet connection is a method of offloading mail delivery to another server which has the bandwidth and the time to complete the message delivery process.

1. Launch Mail Admin, with the ASIP Mail Server running
2. From the "Server Menu" choose "Mail Server Settings"
3. Click the "Mail Out" Tab.
4. Click the "Relay all SMTP mail via" check box
5. In the text field next to the check box enter the name of your ISP's mail server.
6. Click "Save" & close the window.

All outgoing mail will now be forwarded to the designated SMTP mail server to complete the delivery process. Setting this option has no effect on mail that is being delivered to your local users, it will only affect mail that has to be delivered to other mail servers.

Tell your AppleShare IP Mail Server its name for aliases or private IP networks (such as with the Vicom Gateway or other PPP

dialup IP gateways).

1. Launch Mail Admin, with the ASIP Mail Server running.
2. Determine the domain name(s) that your ISP has registered for your company or mail server. These are the name(s) other people will use to send you mail.
3. Open the Host List window in Mail Admin.
4. Click the "New Host" button in the Host List window.
5. Enter the name of your mail server from step two.
6. Select the host you just created when it appears in the list.
7. Click the "Edit Host" button.
8. Click the "Mail Out" tab.
9. Click the "Relay all SMTP mail via" check box.
10. Enter the private-IP address of your ASIP mail server in the text box.
11. Click "Save".
12. Repeat starting at step 4 for each additional name your want your mail server to "know about".

Setup a default schedule for all outgoing mail

1. Launch Mail Admin, with the ASIP Mail Server running.
2. Open the Host List window in Mail Admin.
3. From the "Server" menu choose "Edit Default Host Profile..."
4. Click each of the four tabs "Mail In", "Mail Out", "Schedule", and "Network".
5. Make sure all settings are the way you want them for all outgoing mail. In particular make sure to setup the schedule that you want mail to be sent with.
6. Click "Save".

Now whenever mail is sent by your users to any other internet mail server, the outgoing mail will "wait" until an allowed connection time to be sent. Using this in combination with the global server setting to relay all outgoing mail via one server is a powerful combination, which will hold all your outgoing mail until an allowed connection time, and then when a connection is allowed all the mail will be sent to one SMTP server all at once.

Note: Changing default settings does not modify the preferences or schedule for any host that already exists in the host list window. If you want these preexisting hosts to have the current default settings, then you must manually edit each of the hosts in the window. Or as a trick, if all the existing hosts have zero messages waiting to be sent, then you can simply delete them. When they get recreated by the mail server, they will get a new "copy" of the current default host settings with the appropriate schedule and preferences.

Question 10: Why does the Mail Server make connections to the external network outside the designated schedule?

Answer: The Mail Server may establish a connection outside a designated schedule if a DNS lookup is needed for a new host. This may occur if a DNS lookup has not happened in a long time. If you are using your ISP's DNS server and you are using a dial-up connection, when the mail server makes a DNS request it will bring up the connection to query the ISP's DNS server. You can prevent this from happening by:

- Setting up a DNS system on your local network
- Expand the time allowed to connect to the external network.

Published Date: Feb 20, 2012

AppleShare IP 6: Web Service FAQ, Part 2

This article contains the following frequently asked questions (FAQ) about AppleShare IP 6 Web Service, with answers to those questions.

For the first part of this article, see

Article 24556: "**AppleShare IP 6: Web Service FAQ, Part 2"**

This article has been archived and is no longer updated by Apple.

Questions answered in this article:

1. Can you run additional HTTP applications on the same computer as the AppleShare IP Web Server, such as FileMaker Pro 4.0?
2. Can you run streaming video on the AppleShare IP Web Server?
3. How do you set secure administrator access to the Web Server for plug-in configuration?
4. How do you set MIME types for a plug-in?
5. Does AppleShare IP 6 provide remote administration support? I see a checkbox for it.
6. Does the AppleShare IP 6 web server work with alias resolution?
7. Under what condition(s) can the error log stop recording error conditions?
8. Can I upload files to the AppleShare IP 6 Web server?
9. How do I set the default web page for At Ease for use with the At Ease Web Plug-in?

Question 1: Can you run additional HTTP applications on the same computer as the AppleShare IP Web Server, such as FileMaker Pro 4.0?

Answer: Yes. Other HTTP apps use different web ports.

Question 2: Can you run streaming video on the AppleShare IP Web Server?

Answer: Yes. With Quicktime 3.0 installed (browser plugins), you can access and run .MOV files. This also requires that the client is running Quicktime 3.0.

Question 3: How do you set secure administrator access to the Web Server for plug-in configuration?

Answer: First, please check with your plug-in developer documentation for specific instructions for that plug-in. Basically the standard setup is as follows:

1. If you access and configure the plug-in by a URL such as "

```
http://yourserver.com/admin.xxxx
```

", create a folder at the Web Server root level.

2. In the Web & File Administration, select this folder.

3. Set the privileges for a registered user (admin).

4. When you access that URL location, you will be prompted for your username and password. Once you type in this information, you can proceed to configure the plug-in.

Question 4: How do you set MIME types for a plug-in?

Answer: Most of the time plug-ins register their own MIME types (which are viewable in the plug-in messages file or in LogDoor). If your plug-in uses a suffix like .XXXX, you can set it up under Server Menu's Web MIME option. First Create New Type; select "Execute..." action and select your plug-in in it's folder. Enter the suffix (such as .XXXX); file type and creator type can both be set to *. The MIME type can be text/html for standard web pages. Check the plug-in developer documentation for specific instructions for that plug-in.

Question 5: Does AppleShare IP 6 provide remote administration support? I see a checkbox for it.

Answer: At this time, remote web administration is not available.

Question 6: Does the AppleShare IP 6 web server work with alias resolution?

Answer: Yes. Place the alias in the directory for the web page that is referenced. You will need to place a link to the alias on your web page. If the alias resolves to an item in a secure folder, the client will have to provide a username and password in order to access that item.

Question 7: Under what condition(s) can the error log stop recording error conditions?

Answer: This can occur if you have run out of hard disk space.

Question 8: Can I upload files to the AppleShare IP 6 Web server?

Answer: Yes. You can edit files and then upload them to replace the same filename currently stored on the AppleShare IP 6 Web server. You will need to be a registered User on the Web server. The User must have read-write privileges set for the folder where the file resides. In addition, the Upload plug-in is required and is installed by the AppleShare IP installer. On the computer that has the files to be uploaded to the server, open a Web browser program and type the following in a browser's URL address box:

- To upload into current Web Folder:

  ```
  http://yourservername/.upload
  ```

- To upload into a specific directory:

  ```
  http://yourservername/folderA/.upload
  ```

  Note: Netsape Navigator only uploads the data fork of a file. Internet Explorer encodes all files using MacBinary and uploads both the data and resource forks.

Question 9: How do I set the default web page for At Ease for use with the At Ease Web Plug-in?

Answer: Follow the same instructions for selecting your default html page in the Web & File Admin program. The At Ease Web Plug-in requires QuickTime to be installed on the server. If QuickTime is not installed, a user may get this message when trying to visit your Web site:

404 Not Found No such object exists on this server.

/Plug-Ins/AtEaseWebPlugIn/ae.wae.

The At Ease Web Plug-in uses QuickTime to convert the PICT icons on documents to JPEGs before displaying them to the client.

Published Date: Feb 20, 2012

AppleShare IP 6: AppleShare Client FAQ Part 2

This article contains the following frequently asked questions (FAQ) about the AppleShare Client software used with AppleShare IP 6, with answers to those questions.

For the first part of this article, see

Article 24558: **"AppleShare IP 6: AppleShare Client FAQ Part 1"**

This article has been archived and is no longer updated by Apple.

Questions answered in this article:

1. While connecting via TCP over PPP, I use AppleShare Client to connect to a server via Server IP Address, if I receive "Server not responding" message, what do you recommend I do?
2. Can I use a remote server alias from a Macintosh client to connect to my AppleShare IP 6 Server?
3. Since the AppleShare Client uses TCP/IP to connect to the Server, why can't I connect to my Sun, NT server, or whatever using TCP/IP?
4. Sometimes my computer stops responding when I log on via Chooser, select a volume from the volume list and click OK. Any workaround?
5. My alias to an AppleShare IP server volume will not work over TCP/IP. Why is that?
6. How can I make sure that my AppleShare Client computer connects to my server at startup using TCP/IP?
7. How does the AppleShare Client software decide to use AFP over TCP/IP when connecting to a server?
8. I can't log on to an AppleShare IP server while connected to a different AppleShare IP. I get an "Already Connected" dialog and the AppleShare client shows the first AppleShare IP server's volumes, not the new server's login dialog.
9. Is AppleShare Client 3.8 compatible with RunShare?

Question 1: While connecting via TCP over PPP, I use AppleShare Client to connect to a server via Server IP Address, if I receive "Server not responding" message, what do you recommend I do?

Answer: If you are receiving "Server not responding" errors when connecting via TCP over PPP, use the AppleShare Client Setup utility to increase the TCP Lookup Timeout from 20 seconds to the time it takes your PPP link to come up plus 20 seconds.

Question 2: Can I use a remote server alias from a Macintosh client to connect to my AppleShare IP 6 Server?

Answer: If you are receiving "Server not responding" errors when connecting via TCP over PPP, use the AppleShare Client Setup utility to increase the TCP Lookup Timeout from 20 seconds to the time it takes your PPP link to come up plus 20 seconds.

Lock the remote server's alias via its Get Info window. This will ensure that the connection information is stored correctly for the dial-up procedure. If you don't do this, you may lose this information and may not be able to access the remote server properly.

Refer to the "AppleShare Client Setup" accessible through the AppleShare IP web page in the Downloads section.

Question 3: Since the AppleShare Client uses TCP/IP to connect to the Server, why can't I connect to my Sun, NT box, or whatever using TCP/IP?

Answer: The Server must support the AFP over TCP/IP protocol, not just TCP/IP.

Question 4: Sometimes my computer stops responding when I log on via Chooser, select a volume from the volume list and click OK. Any workaround?

Answer: Try disabling the Apple Menu Options control panel on the client computer.

Question 5: My alias to an AppleShare IP server volume will not work over TCP/IP. Why is that?

Answer: If a user makes an alias to an AppleShare IP volume and uses TCP/IP to connect to that volume, both TCP/IP and AppleTalk must be active on the user's computer. Due to a limitation in the Alias Manager, AppleTalk must be active to resolve the alias.

Question 6: How can I make sure that my AppleShare Client computer mounts my server at startup using TCP/IP?

Answer: Make sure that the "Load Only When Needed" option is unchecked in the TCP/IP Control Panel Options window.Â Discard the "AppleShare Prep" file in the System folder's preferences folder. Log into the server via the Chooser again in order to recreate your startup mounts over TCP/IP. If neither of the above work, try turning on Virtual Memory.Â Open Transport may not have loaded TCP/IP due to lack of memory.

Question 7: How does the AppleShare Client software decide to use AFP over TCP/IP when connecting to a server?Â

Answer: The AppleShare client first sends a message over to the server using AppleTalk to find out if it can use TCP/IP (this command also returns the IP address of the server). The client then uses this information to establish a connection to the server over TCP/IP. Since the client obtains the IP address directly from the server, there may be issues setting up proxy services for AFP over TCP.

Question 8: I can't log on to an AppleShare IP server while connected to a different AppleShare IP. I get an "Already Connected" dialog and the AppleShare client shows the first AppleShare IP server's volumes, not the new server's login dialog.

Answer: Have the AppleShare IP server administrator check to make the sure that the server's serial number is unique. The AppleShare Client uses a server's serial number to distinguish between multiple AppleShare IP servers. What this means, in practice, is that, if you have logged into a AppleShare IP server, you cannot log into a different AppleShare IP server with the same serial number. The AppleShare Client will get the "Already Connected" dialog instead of the newly selected AppleShare IP server's login dialog. Startup mounting will behave oddly as well.

Question 9: Is AppleShare Client 3.8 compatible with RunShare?

Answer: It is compatible with RunShare v3.0 or later.

Published Date: Feb 20, 2012

iMac Discussion Board: Frequently Asked Questions (2 of 2)

This document contains frequently asked questions (FAQ) regarding iMac, with answers to those questions, and information regarding technical issues that may be encountered with an iMac. Additional iMac Discussion FAQs are listed at the end of this technical document.
This article has been archived and is no longer updated by Apple.
Questions answered in this document:

1. Some of my menu options, such as Sleep, Restart, Get Info, and View Options are no longer listed. What is causing this symptom?
2. What type of random-access memory (RAM) and video random-access memory (VRAM) do I need for my iMac?
3. How do I upgrade the memory in my iMac?
4. Why is there a hole in the iMac I/O door?
5. My iMac modem dials automatically. How do I get it to stop?
6. How do I change my default browser and email application?
7. How do I register the ClarisWorks application that came with my iMac?
8. What books do you recommend to learn about Macintosh computers in general, Mac OS, and iMac?
9. Certain CD-ROM discs make a vibrating noise when used in my iMac. What is causing this noise and how can I eliminate it?
10. I am having some difficulty in connecting to my Internet service provider (ISP). Sometimes I connect successfully, but the connection is dropped after a few minutes. What can I do to resolve this issue?
11. I get intermittent situations where my iMac stops responding and I receive type xx errors. What should I do?
12. Where can I get the software updates mentioned here?

Question 1: Some of my menu options, such as Sleep, Restart, Get Info, and View Options are no longer listed. What is causing this symptom?

Answer: Refer to the following technical documents:

- technical document 30157: "**Mac OS 8: No Sleep Choice in Special Menu**"
- technical document 58047: "**Mac OS 8.5: Keyboard Commands Disabled by Simple Finder**"

Question 2: What type of random-access memory (RAM) and video random-access memory (VRAM) do I need for my iMac?

Answer: Refer to the following technical documents:

- technical document 58007: "**iMac: Type of Memory to Order to Upgrade RAM and VRAM**"
- technical document 43011: "**iMac: About Memory, DRAM and Video Memory Configurations**"

Question 3: How do I upgrade the memory in my iMac?

Answer: Refer to the following technical documents:

- technical document 58466: "**iMac (Slot Loading): Memory: Specifications and Upgrades**"
- technical document 43012: "**iMac: Installing Memory (1 of 2)**"
- technical document 43013: "**iMac: Installing Memory (2 of 2)**"

Question 4: Why is there a hole in the I/O door?

Answer: The hole is for using a finger to open the door.

- technical document 58055: "**iMac: Hole in I/O Door Not For Cables**"

Question 5: My modem dials automatically. How do I get it to stop?

Answer: There are numerous settings to automate a connection to the Internet. Most settings are listed in the following technical document:

- technical document 24877: "**Modem Dials Automatically**"

Question 6: How do I change my default browser and email application?

Answer: Apple recommends using the Internet control panel.

- technical document 58041 "**iMac: Changing Internet Settings and Applications**"

If you choose to use Internet Config instead of the Apple Internet control panel use the latest version of Internet Config.

Review the following technical documents for further tips:

- technical document 24679: "**Mac OS 8.5: Internet Control Panel or Internet Config?**"
- technical document 24676: "**Mac OS 8.5: Mac OS Help Crashes With Type 3 Error**"
- technical document 58168: "**Mac OS 8.5: Error Opening Internet Control Panel or File Exchange**"

- technical document 24736: "**Sherlock: Internet Config Conflict**"

Question 7: How do I register the ClarisWorks application that came with my iMac?

Answer: technical document 30702: "**iMac: ClarisWorks Registration Information**"

Question 8: What books do you recommend to learn about Macintosh computers in general, Mac OS, and iMac?

Answer: Your local book store has many excellent books covering those subjects. Here are a few books recommended by other Macintosh users.

- "The Little Mac Book"
- "Sad Macs, Bombs, and Other Disasters : And What to Do About Them"
- "Beyond the Little Mac Book"
- "The Little iMac Book"
- "The Macintosh Bible (Bible Series)"
- "Mac OS 8.5 for Dummies (For Dummies)"
- "The Complete Idiot's Guide to Macintosh OS 8.5"
- "Mac Answers!"

Here are some iMac-specific titles:

- "The iMac for Dummies"
- "Sam's Teach Yourself iMac in 10 Minutes"
- "The iMac Book "
- "Quick Start Your iMac Training CD - Macintosh (1 of 1) Vol. 1"

Question 9: Certain CD-ROM discs make a vibrating noise when used in my iMac. What is causing this noise and how can I eliminate it?

Answer: It is normal to get a slight vibrating noise with certain CD-ROM discs when using a high-speed CD-ROM drive like the drive in the iMac. The artwork on a CD-ROM disc may cause the CD's center of gravity to be slightly off center. Because the CD is spinning at such a fast rate, the CD will wobble, which in turn causes a slight vibration. This is perfectly normal and does not damage your computer or CD-ROM drive in any way.

If you are using a CD with a removable, sticky label, remove the label prior to using the CD.

Also install iMac CD Update 2.0. This software update improves the way the CD-ROM drive handles unbalanced CD-ROM discs. It may reduce the amount of vibration for most CD-ROM discs.

The software is available from the Apple Software Updates Web site at http://www.apple.com/swupdates.

- technical document 20233: "**Macintosh Computers: 8x-Speed (or faster) CD-ROM Drive & Vibration**"

Question 10: I am having some difficulty in connecting to my Internet service provider (ISP). Sometimes I connect successfully, but the connection is dropped after a few minutes. What can I do to resolve this issue?

Answer: Refer to the following technical documents:

- technical document 30893: "**iMac: Troubleshooting Modem Not Responding Error**"
- technical document 24789: "**iMac: Troubleshooting "No Dial Tone"**"
- technical document 24803: "**iMac: Troubleshooting Unreliable Modem Connections**"
- technical document 58046: "**iMac: ISP Compatibility With v.90 Specification**"
- technical document 30734: "**V.90 Protocol: Connectivity Discussion**"
- technical document 24482: "**56Kbps Modems: Getting the Fastest Connection**"

Question 11: I get intermittent situations where the computer stops responding and I receive type xx errors. What should I do?

Answer: For information on troubleshooting these situations, refer to page 9 of the Emergency Handbook provided with your iMac. Also refer to technical document 16473: "**Mac OS: Troubleshooting Startup Problems**"

Question12: Where can I get the software updates mentioned here?

Answer: The following technical document can help you locate the Apple software updates mentioned here 14724: "**Where To Find Apple Software Updates**" Lists online services for free Apple software updates. To locate iMac specific updates search "iMac."

Part 1 of this FAQ can be found in technical document 30808: "iMac Discussion Board: Frequently Asked Questions (1 of 2)

Published Date: Feb 20, 2012

AppleShare IP 6: Server and Client Requirements

This article provides the server and client requirements for Appleshare IP 6.
This article has been archived and is no longer updated by Apple.

Server Requirements:

- Any Power Macintosh or Apple Macintosh Servers based on PowerPC 601, 604, 604e, or G3 processors. The Power Macintosh 6500 series (603e processor), has also been tested and qualified as an ASIP server.
- Mac OS 8.1 or later with Open Transport 1.3 or later, and OpenDoc 1.2.1.
- 48 MB of RAM with virtual memory turned on (64MB with VM turned off.)

All AppleShare IP services do not need to run on the same computer. In fact, it is recommended that certain services be divided amongst different computers for optimum performance.

Web, File, FTP and SMB services are all provided by the Web & File Server application and must run on the same system.

ASIP Print Server can run independently of other services. (Personal File Sharing cannot be enabled on the Print Server, since the Users & Groups Data File is modified for use with the Print Server.)

ASIP Mail Server can run independently of other services.

MacDNS can run independently of all ASIP services. System requirements are a 68020 processor or Power PC processor, 1500K of free memory, a TCP/IP connection with static IP address, System 7 or later (7.5.3 recommended), MacTCP 2.0.6 or OT 1.1 or later.

Client Requirements:

For logging onto the file server via Appletalk:

- Macintosh Clients

  Recommended: Mac OS 8.1, Open Transport 1.3, AppleShare client 3.8. The AppleShare client 3.8 has minimum system requirements of System Software version 7.6 and OT 1.1.2.

  Older versions of AppleShare client software will provide basic functionality, but may not support new features, such as the ability to cancel a connection that is taking too long (3.8 required), to connect via AFP over TCP/IP (3.7 required), or to receive messages from the server (3.0 required).

- Windows Clients

  Windows 3.x and 95 clients need an AppleTalk file sharing client (such as CopsTalk or MacLAN Connect).

For logging onto the file server via TCP/IP

- Macintosh Clients

  Recommended: Mac OS 8.1, Open Transport 1.3, AppleShare client 3.8.

  Minimum: System Software 7.5.3, Open Transport 1.1.2, AppleShare Client 3.7.

For logging onto the file server via SMB:

- Windows Clients

  Windows 95/98
  Windows NT 3.5.1/4.0/5.0
  Windows for Workgroups 3.1.1

- Unix clients

  Samba

  AppleShare IP only supports SMB via TCP/IP.

For accessing Web or FTP services:

- All Clients:

  Your favorite Web browser or FTP client. There are no special requirements for accessing ASIP servers.

For printing using AppleTalk:

- Macintosh clients:

  LaserWriter driver 7.x or 8.x for Macintosh clients.

- Windows Clients

  An AppleTalk LW driver. (As of this writing, Windows NT printer drivers do not support printing to a secure queue. See the Related Topic on Print Server security for a more detailed explanation.)

For printing using TCP/IP:

- Macintosh Clients:

  Desktop Printer Utility version 1.0 or greater (installed with Mac OS 8.1, and with LW Driver 8.5.1.)

- Non-Mac Clients:

  Most LPR clients are compatible.

For accessing mail:

- All clients

  Third-party mail clients that support either POP3 or IMAP.

Published Date: Feb 20, 2012

PowerBook G3 Series: Design Elements FAQ, Part 2

This article contains the following PowerBook G3 Series frequently asked questions (FAQ) regarding its design elements, with answers to those questions.

Note that they pertain to the PowerBook G3 Series models that were released in September, 1998.

For Part 1 of this article, see Article 24613: "**PowerBook G3 Series: Design Elements FAQ, Part 1**"

See also the following Frequently Asked Questions articles pertaining to the September 1998 models of the PowerBook G3 Series computer:

Article 24608: "**PowerBook G3 Series: General FAQ**"
Article 24610: "**PowerBook G3 Series: Battery FAQ**"
Article 24611: "**PowerBook G3 Series: Features, Configurations, Performance FAQ**"
Article 24612: "**PowerBook G3 Series: Memory FAQ**"
Article 24614: "**PowerBook G3 Series: Video, Graphics, And Sound FAQ**"
Article 24615: "**PowerBook G3 Series: DVD, CD-ROM, and Hard Drive FAQ**"
Article 24616: "**PowerBook G3 Series: Communications FAQ**"

This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. How much does the PowerBook G3 Series computer weigh?
2. What are the overall dimensions of the PowerBook G3 Series computer?
3. Does the PowerBook G3 Series computer's trackpad have "tap, double tap" functionality?
4. Does the PowerBook G3 Series computer's panel come off?
5. Is there a docking station for the PowerBook G3 Series computer?
6. Does the PowerBook G3 Series computer have a fan?
7. Why is the palm rest area of a PowerBook G3 Series computer so big?
8. What interfaces does the PowerBook G3 Series computer have?

Question 1: How much does the PowerBook G3 Series computer weigh?

Answer: The system weight varies depending on the screen and expansion bay modules. Here are the weights for the three screen types with a battery in one expansion bay and a CD-ROM module in the other expansion bay:12.1-inch screen: 7.2 pounds; 14.1-inch screens: 7.8 pounds.

Question 2: What are the overall dimensions of the PowerBook G3 Series computer?

Answer:

Width: 12.7 inches (32.3 cm)

Height: 2.0 inches (5.1 cm; 5.3 cm for the 14.1-inch model)

Depth: 10.4 inches (26.4 cm)

Question 3: Does the PowerBook G3 Series computer's trackpad have "tap, double tap" functionality?

Answer: Yes, you activate it through the Trackpad control panel.

Question 4: Does the PowerBook G3 Series computer's panel come off?

Answer: Neither the top nor the bottom panel, where you see the Apple logo, comes off. These panels provide rigidity for the system.

Question 5: Is there a docking station for the PowerBook G3 Series computer?

Answer: Apple will not be providing a docking station or port replicator for the PowerBook G3 Series. Newer Technologies (www.newertech.com) has announced their G3 BookEndz port replicator for the PowerBook G3.*

Question 6: Does the PowerBook G3 Series computer have a fan?

Answer: Yes, it does have a fan, but the system is designed with many heat dissipation features and it is unlikely that the fan will turn on unless the system is in extreme temperature situation.

Question 7: Why is the palm rest area of a PowerBook G3 Series computer so big?

Answer: Apple has advocated a keyboard-forward design in the PowerBook for a long time. Because of the overall dimensions of the new system, we had more room to create a larger palm rest area below the keyboard. This helps users place their hands in a more comfortable typing position.

Question 8: What interfaces does the PowerBook G3 Series computer have?

Answer: It includes Apple Desktop Bus (ADB), high-speed serial (RS-422), SCSI (HDI-30), 10BASE-T Ethernet (RJ-45), 24-bit video output (VGA-style connector), S-video output (14.1-inch configurations only), 16-bit stereo input/output, power adapter port, modem (RJ-11), infrared connectors (4 -Mbps IrDA), and two Type I or Type II or one Type III PC or CardBus cards slots (supports Zoomed Video in lower slot).

***Note**: This article contains information about third party products. This article is provided for informational purposes only and Apple makes no guarantees about the information contained in this article. Furthermore, Apple technical support does not supply support for the use of third party products)

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, read article 24604: "**PowerBook G3, G3 Series: Identifying Different Versions**"

Published Date: Feb 20, 2012

PowerBook G3 Series: Video, Graphics, And Sound FAQ, Part 2

This article contains the following PowerBook G3 Series frequently asked questions (FAQ) regarding video, graphics, and sound, with answers to those questions.

Note that they pertain to the PowerBook G3 Series models that were released in September, 1998.

For Part 1 of this article, see Article 24614: **"PowerBook G3 Series: Video, Graphics, And Sound FAQ, Part 1"**

See also the following Frequently Asked Questions articles pertaining to the September 1998 models of the PowerBook G3 Series computer:

Article 24608: "**PowerBook G3 Series: General FAQ**"
Article 24610: "**PowerBook G3 Series: Battery FAQ**"
Article 24611: "**PowerBook G3 Series: Features, Configurations, Performance FAQ**"
Article 24612: "**PowerBook G3 Series: Memory FAQ**"
Article 24613: "**PowerBook G3 Series: Design Elements FAQ**"
Article 24615: "**PowerBook G3 Series: DVD, CD-ROM, and Hard Drive FAQ**"
Article 24616: "**PowerBook G3 Series: Communications FAQ**"

This article has been archived and is no longer updated by Apple.
Questions answered in this article:

1. Who makes the displays for PowerBook G3 Series computers?
2. Are the possible resolutions displayed when you connect a video output device to PowerBook G3 Series computers?
3. Is the sound output of PowerBook G3 Series computers comparable to that of the PowerBook 3400, which had four speakers?
4. Do PowerBook G3 Series computers have a subwoofer like the PowerBook 3400?
5. Can you add speakers or a microphone to PowerBook G3 Series computers?
6. How does the mute button work on PowerBook G3 Series computers?
7. If you activate the mute button, do PowerBook G3 Series computers mute the system startup sounds?

Question 1: Who makes the displays for PowerBook G3 Series computers?

Answer: As a general rule, we do not reveal the names of our commodities vendors. However, rest assured that we source products from the top vendors in the industry and our 14-inch display has been recognized as one of the sharpest and brightest available.

Question 2: Are the possible resolutions displayed when you connect a video output device to PowerBook G3 Series computers?

Answer: Yes, if you open the resolution panel in the control strip, you will see the possible resolutions.

Question 3: Is the sound output of PowerBook G3 Series computers comparable to that of the PowerBook 3400, which had four speakers?

Answer: Yes, the sound is comparable, and many of our customers have indicated that the sound is even better.

Question 4: Does a PowerBook G3 Series computer have a subwoofer like the PowerBook 3400?

Answer: No, it does not have a subwoofer.

Question 5: Can you add speakers or a microphone to PowerBook G3 Series computers?

Answer: Yes, you can attach speakers or a microphone to the PowerBook G3 Series computer via the stereo input and output ports located next to the power adapter plug on the back right-hand side of the computer. An external audio source may be used if it generates line-level output. To input sound from audio equipment with line-level output, you may need the appropriate adapters, which are available from most electronic stores. The Apple PlainTalk Microphone may be used with the PowerBook G3 Series but the Apple Omni Microphone is not compatible with this computer.

Question 6: How does the mute button work on PowerBook G3 Series computers?

Answer: The mute button, located just above the keyboard, works just like a light switch. You turn it on or off with one touch.

Question 7: If you activate the mute button, do PowerBook G3 Series computers mute the system startup sounds?

Answer: Yes.

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, read article 24604: "**PowerBook G3, G3**

Series: Identifying Different Versions"

Published Date: Feb 20, 2012

AppleWorks 6: Using DataViz Translators

This article explains how to use the DataViz translators with AppleWorks 6.
This article has been archived and is no longer updated by Apple.
While AppleWorks 6.0 and AppleWorks 6.0.4 do not include the DataViz MacLinkPlus translators, they are available with the AppleWorks 6.1 Update.

These translators allow you to open, import, and save documents in additional file formats. Only those file formats for which you have the appropriate translator can be opened, imported, or saved.

You can download the AppleWorks 6.1 Updater from the Apple Software Updates Web site at http://www.apple.com/swupdates.

Published Date: Feb 20, 2012

Power Mac G4 Cube: Troubleshooting: Power: Power Button Lights Up, But Computer Does Not Turn On

The DC-to-DC converter card in the Power Mac G4 Cube computer may move slightly out of its connector during shipping, causing the computer not to turn on when the power button is touched. This article explains how to reinsert the card to correct this issue.
This article has been archived and is no longer updated by Apple.

Symptom

The computer's power button lights up when touched, but goes out as soon as you remove your finger, and the computer does not turn on.

Note: You may also notice the Power Mac G4 Cube starting up or shutting down by itself.

Product affected

Power Mac G4 Cube

Solution

Sometimes the DC-to-DC converter card may move slightly out of its connector during shipping, causing the computer not to turn on when the power button is touched. To correct this, the card needs to be pressed firmly back into its slot.

Warning: Read and follow the ESD precautions outlined in the 'Working Inside Your Computer' section of the "About the Power Mac G4 Cube" owners manual.

To reinsert the DC-to-DC converter into its connector, follow these steps:

1. Shut down the computer.
2. Remove all cables connected to the computer.
3. Remove the computer's core from the its enclosure by turning it upside-down on a soft surface, and pushing down on the latch.

Figure 1. Removing core

4. Turn the computer so the video card is on top.
5. Find the DC-to-DC converter card (pictured below in Figure 2).
6. Push down on the card to ensure it is securely in its connector.

Figure 2. Pushing the DC-to-DC converter

7. As shown in the photo, make sure the latch on the connector the card sits in is secure in the notch of the card.

Figure 3. Latch on connector

8. Reinsert the core back into the enclosure, and push down on the latch until it locks into place.
Note: The core fits into the enclosure only one way. The ports should face the back of the enclosure.

Figure 4. Reinserting core

9. Turn on the computer.

For further troubleshooting, refer to the troubleshooting section in the "About the Power Mac G4 Cube" owners manual.

TA27233_Power_Mac_G_Cube_Troubleshooting_Power_Power_Button_Lights_Up_But_Com

Published Date: Feb 20, 2012

iBook (FireWire) and iBook (Dual USB): Composite Video Cable Not Interchangeable With Similar Cables

The composite video cable used with the iBook (FireWire) and iBook (Dual USB) computers is not interchangeable with similar cables that come with some video cameras.
This article has been archived and is no longer updated by Apple.
A cable similar to the composite video cable used with the iBook computer is available from electronics vendors and is included with some video camcorders.

Figure 1 Apple A/V cable

These cables are not interchangeable with the Apple A/V cable for use with the iBook (FireWire) or iBook (Dual USB). Using a third-party cable with these computers will likely result in a distorted audio signal and no video output to the external monitor.

Related Documents

88041	iBook (FireWire): How to View Video On an External Monitor or TV
32129	iBook (16 VRAM): Does Not Wake From Sleep When Connected to a Monitor Using RGB Video Cable
88396	iBook: Adapters and Resolutions
88395	iBook: About the Video Adapter

Last Modified: Feb 20, 2012

Additional Product Support Information

iBook (FireWire) and iBook (Dual USB): Composite Video Cable Not Interchangeable With Similar Cables

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88396 iBook: Adapters and Resolutions

88395 iBook: About the Video Adapter

Published Date: Feb 20, 2012

iBook (FireWire): How to View Video On an External Monitor or TV

You can use the composite video out port of an iBook (FireWire) computer to view video on an external television or monitor. This article explains how to select a composite video resolution that is compatible with your TV or monitor.
This article has been archived and is no longer updated by Apple.
You can use the composite video out port of an iBook (FireWire) computer to view video on an external television or monitor. Follow these steps to select a composite video resolution that is compatible with your TV or monitor:

1. Connect the composite video cable to the composite video out port.

2. Connect the composite video cable to a television or monitor.

3. Open the Monitors control panel.

4. Click Monitor. The following choices are available in the Resolution section:

640 x 480, 60 Hz (simulscan NTSC)
800 x 600, 60 Hz (simulscan, NTSC)
640 x 480, 50 Hz (simulscan PAL)
800 x 600, 50 Hz (simulscan, PAL)
640 x 480
800 x 600

5. Click the appropriate resolution and standard (NTSC or PAL) for your TV or monitor.

Figure 1 TV Monitor Control Panel

6. If the image on the TV or monitor is rolling the resolution or standard you selected is not compatible with the TV or monitor. Select a different resolution or standard until you find one that works.

Note: The simulscan options allow you to view the same image on the television or monitor that you see on the iBook's screen.

Published Date: Feb 20, 2012

Power Mac G4 Cube: Troubleshooting: Power: Random Activation of the Power Button

This article describes how a small number of Power Mac G4 Cube computers may self-activate the power switch.
This article has been archived and is no longer updated by Apple.

Power Switch Information

The power button of the Power Mac G4 Cube computer is designed to function by sensing changes of static capacitance when a finger touches it. Pressing the power button when:

- the computer is off will turn it on.
- the computer is on and awake will put it to sleep.
- the computer is on and in sleep mode will awaken it.
- the computer is on and awake or in sleep mode will cause the computer to shut down if held for at least five seconds.

Symptom

A small number of Power Mac G4 Cube computers may exhibit the following symptoms without user interaction:

- If the computer is on, it may turn off or go to sleep.
- If the computer is off, it may turn on or wake up.

Solution

If your computer is experiencing any of the above symptoms, try the following steps:

1. Make sure the computer is on a sturdy, flat surface.
2. Make sure there is nothing on the top of the Power Mac G4 Cube computer.
3. Check the settings in the Energy Saver control panel. The computer may be in sleep mode according to these settings.
4. Verify the power adapter is plugged securely into the Power Mac G4 Cube computer.
5. Verify the A/C power cord is plugged securely into the wall socket and the power adapter.
6. Remove and reinstall the DC-to-DC Converter card.

   For assistance with this step, review article 88037: "**Power Mac G4 Cube: Power Switch Lights up, but Computer Does Not Turn On**".

7. The computer may require the replacement of the power button gasket. Contact Apple to determine if a gasket replacement is appropriate for your computer.

If following the above steps do not solve the issue, contact Apple for further troubleshooting assistance.

Visit the AppleCare Web site for directions on how to contact Apple at http://www.apple.com/support/products/overview.html
Published Date: Feb 20, 2012

Power Mac G4 Cube: Troubleshooting: Power: Random Activation of the Power Button

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5. Verify the A/C power cord is plugged securely into the wall socket and the power adapter.
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7. The computer may require the replacement of the power button gasket. Contact Apple to determine if a gasket replacement is appropriate for your computer.

If following the above steps do not solve the issue, contact Apple for further troubleshooting assistance.

Visit the AppleCare Web site for directions on how to contact Apple at http://www.apple.com/support/products/overview.html
Published Date: Feb 20, 2012

iBook (FireWire): Does Not Operate When the Computer Is Closed

The iBook (FireWire) computer does not operate when the computer is closed.
This article has been archived and is no longer updated by Apple.
Some PowerBook computers are able to operate when the computer is closed and a monitor, mouse and keyboard are connected to them.

Although you can connect a keyboard, mouse and TV or monitor to an iBook (FireWire) computer, it was not designed to operate when closed. If you try to use the iBook (FireWire) computer in this way, the computer will wake up when you connect a USB keyboard, the desktop will show on the external monitor, but it will immediately go back to sleep.

Published Date: Feb 20, 2012

Apple Hardware Test (iBook): Mouse Does Not Function on iMac

The mouse does not function if Apple Hardware Test (iBook) 1.1 is used on an iMac computer with a tray-loading CD-ROM drive.
This article has been archived and is no longer updated by Apple.

Symptom

The mouse does not function if you start up an iMac computer with a tray-loading CD-ROM drive using the Apple Hardware Test (iBook) 1.1 CD, and you can't choose to restart or shut down.

Solution

Press Shift-R to restart or Shift-S to shut down.

Note: Apple Hardware Test (iBook) 1.1 only works with the Apple iBook (FireWire) computer.

Published Date: Feb 20, 2012

iMac: Static From Speakers During Dial-Up Connection

This article explains why static may be heard from iMac computers when making a dial-up connection.
This article has been archived and is no longer updated by Apple.

Symptom

After making a dial-up connection you hear a static noise coming from the computer's speakers. The sound input source has changed to Internal Modem.

Solution

1. In Mac OS 9, change the built-in input source from Internal Modem to Sound In using the Sound Strip portion of the Control Strip, or the Sound control panel.
2. Lower the computer's sound volume.
3. If you are using Internet Connect in Mac OS X 10.0, update to Mac OS X 10.1.

Notes

1. The parenthetical product descriptions (Summer 2000) and (Summer 2001) refer to the summer of the Northern Hemisphere.
2. The built-in sound input changes from the computer's current setting to Internal Modem when a dial-up connection is made so you can hear the modem connecting. This is normal. After disconnecting from the dial-up connection, the sound input source reverts to the previous setting.

Published Date: Feb 20, 2012

PowerBook G4, PowerBook G4 (17-inch,) MacBook Pro: How to Remove or Install the Battery

- **Last Modified:** December 21, 2006
- **Article:** TA27241

- **Old Article:** 88059

This document explains how to remove or install a PowerBook G4, PowerBook G4 (Gigabit Ethernet), PowerBook G4 (DVI), or PowerBook G4 (1 GHz/867 MHz) computer's battery.

Products Affected

MacBook Pro, PowerBook G4

Notes:

- MacBook Pro, PowerBook G4 (17-inch), and PowerBook G4 (17-inch 1.33GHz) computers have a different battery location.
- These instructions do not apply to PowerBook G4 (12-inch) computers. For information on removing or installing a PowerBook G4 (12-inch) battery, see PowerBook G4 (12-inch): How to Replace the Battery.

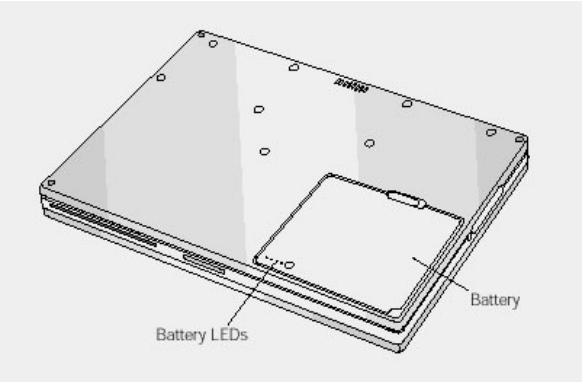

Figure 1 Battery location

Note: Appearance of computer may vary based on model.

To remove the battery

1. Shut down the computer.
2. Turn the computer over.
3. Locate the battery release latch(es).

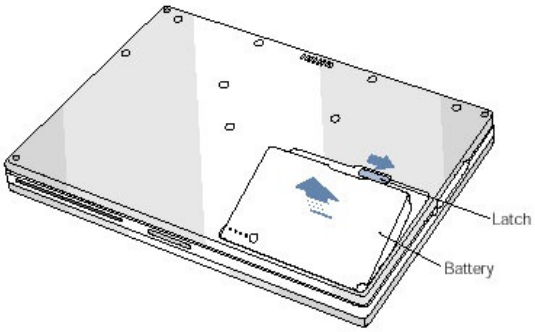

Figure 2 Removing the Battery on a PowerBook G4 Through PowerBook G4 (1 GHz/867 MHz) Computer

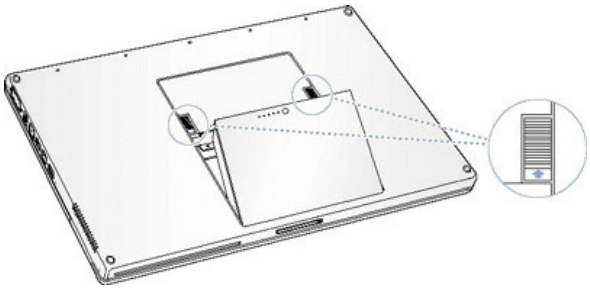

Figure 3 Removing the Battery on a PowerBook G4 (17-inch) and PowerBook G4 (17-inch 1.33GHz) Computer

4. Slide the latch down and gently remove the battery.

To insert the battery

PowerBook G4 through PowerBook G4 (1 GHz/867 MHz)

1. Insert the battery into the battery bay at an angle with the battery's LED side first.
2. Firmly press down on the battery until the battery's latch sets.

MacBook Pro, PowerBook G4 (17-inch) and PowerBook G4 (17-inch 1.33GHz)

1. Insert the battery into the battery bay at an angle with the battery's LED side last, as seen in Figure 3.
2. Firmly press down on the battery until the battery's latch sets.

To change the battery while the computer is asleep

If your battery runs low while you are working, you can put your computer to sleep and replace the battery with a charged one. The internal backup battery provides enough power to maintain the contents of memory (RAM) for about one minute. **Note:** This will not work if you are using Mac OS X 10.0.

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PowerBook G4: How to Find the Serial Number

- **Last Modified:** January 08, 2007
- **Article:** TA27242

- **Old Article:** 88060

This article explains how to find the serial number on each model of PowerBook G4 computer.

Products Affected

PowerBook G4

To find the serial number using software

On most computers with Mac OS X you can find the serial number in the About This Mac window. See technical document 106486, "**Mac OS X 10.1: About This Mac Window Provides Computer Serial Number**".

To find the serial number located on the computer

If the computer is **not** on, you have to open the computer's battery bay to find the serial number. For instructions on how to remove the computer's battery please see article 88059: "**PowerBook G4: How to Remove or Install the Battery.**"

The PowerBook G4's serial number and Ethernet ID (also called a MAC address) are located on the bottom of the unit, underneath the battery, in the battery bay along one of the sides. See Figure 1.

Figure 1 Location of serial number and Ethernet ID.

Related Documents

86294: "**PowerBook G4 (17-inch): Serial Number Location**"

86408: "**PowerBook G4 (12-inch): Serial Number Location**"

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TA27242_PowerBook_G4_How_to_Find_the_Serial_Number.pdf

PowerBook G4: Hard Drive Installation and Screw Type

- **Last Modified:** January 08, 2007
- **Article:** TA27243

- **Old Article:** 88067

This article corrects a misprint in the "Removing the Internal Hard Disk" section of some copies of the PowerBook G4 User Manual.

Products Affected

PowerBook G4

In some copies of the PowerBook G4 User Manual, the "Removing the Internal Hard Disk" section has a misprint.

Step 7 reads:

"With a Phillips screwdriver (size 1), remove the two screws that secure the hard disk carrier and then gently remove the hard disk."

The actual screw type is a Torx 8, not a Phillips (size 1).

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WebObjects 4.5: How To Interpret the WOStats Page

- **Last Modified:** July 13, 2007
- **Article:** TA27246

- **Old Article:** 88074

This article discusses the meaning of the statistics shown on the WOStats page in WebObjects 4.5.

Products Affected

WebObjects

The WOStats page is useful for seeing many statistics about a WebObjects application. You can view this page in two ways. The first is through a URL such as this one:

> **http://myhost/cgi-bin/WebObjects/Myapp.woa/wa/WOStats**

where Myhost is replaced by your local host and Myapp is replaced by your application name. When using this URL, an instance is selected based on your server's load balance scheme.

The second way is to choose a specific instance by using a URL like this one:

> http://myhost/cgi-bin/WebObjects/Myapp.woa/X/wo/WOStats

where X is the number of the instance for which you want to view statistics.

For more information on accessing the WOStats page see the WOInfoCenter.

Application Statistics

Figure 1 Application Statistics

- Transaction: a transaction is one request-response loop.
- Average Transaction Time: the average time for one request-response loop to be completed.
- Average Idle Time: the time the application spends not performing request-response loops.
- Moving Average: a moving average is an average for a given sample size. The sample size is the number of transactions used to calculate the average. In Figure 1, the moving average uses a sample size of 100 transactions.
- Moving Average Transaction Time: average time for one request-response loop to be completed within the sample size.
- Moving Average Idle Time: the time the application spends not performing request-response loops within the sample size.

Session Statistics

Figure 2 Session Statistics

- Session Rate: This is the number of sessions that have timed out during the life of the application.
- Sample Size for Moving Avg: the sample size used in this section of the WOStats page.
- Avg. Transactions Per Session: average number of transactions performed in a given session.
- Current Active Sessions: the number of sessions currently active.
- Moving Avg. Session Life: the average time that a session lasts in seconds within the given sample size.
- Avg Session Life: the average time that a session has lasted in seconds while the application has been running.
- Moving Avg Transactions Per Session: average number of transactions performed in a session within the given sample size.
- Total Sessions Created: total number of sessions that this instance has created.
- Peak Active Sessions: maximum number of sessions active at one time during the life of the application.
- Peak Concurrent Session at: time and date that the peak number of session occurred.

Memory Usage (bytes) and Avg. Memory Usage Per Session (bytes)

The terms used in section of the WOStats page vary by deployment platform. See the documentation included with the operating system for a definition of these terms. Virtual and Resident memory are the terms used on Mac OS X Server.

- Memory Usage: the memory used by the instance

Figure 3 Memory Usage

- Avg. Memory Usage Per Session: the average memory used by a session in this instance. This is calculated by finding the difference between the memory footprint of the application when it starts and what it is currently. (A session is not created until a user accesses the application.) It is important to note that the first session will use more memory than other sessions because it allocates shared objects like database connections. Subsequent sessions will not consume as much memory as the first.

Figure 4 Avg. Memory Usage Per Session

Components

This section lists the components in the application, the number of times they have been served (accessed), and the time it has taken to serve each component.

Figure 5 Component Action Statistics

Direct Action Statistics

This section lists the Direct Actions in the application, the number of times they have been served (accessed), and the time it has taken to serve the Direct Action.

Figure 6 Direct Action Statistics

Detailed Statistics

Detailed Statistics shows what components are being used in relation to the other components, and how many times a component has been served. This allows the administrator to quickly see what parts of the application are being used more than others, and may help in tuning the application's performance.

Figure 7 Detailed Statistics

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AirPort, AirPort Extreme: Computer Stops Responding at System Startup Time

- **Last Modified:** May 31, 2007
- **Article:** TA27248

- **Old Article:** 88076

This article describes and provides a workaround for a startup issue that can be caused when an AirPort card is incorrectly installed.

Products Affected

Power Mac G5, AirPort, iBook, Power Mac, iMac, eMac, PowerBook G4, PowerBook G3

Symptom

A computer with an AirPort card installed stops responding or "freezes" when it is turned on.

Solution

This symptom can occur if the AirPort card is not completely inserted into its connector.

For more information on properly installing an AirPort card, please see the following technical documents:

58535: "**iBook: Installing AirPort Card**"
58536: "**Power Mac G4 (AGP Graphics): Installing AirPort Card**"
58685: "**Power Mac G4 Cube: How to Install an AirPort Card**"
88058: "**PowerBook G4: How to Install an AirPort Card**"
26261: "**PowerBook G4 (12-inch): Customer Installable Parts**"
26268: "**PowerBook G4 (17-inch): Customer Installable Parts**"
86622:"**PowerBook G4: Troubleshooting Poor AirPort Extreme Performance or Issues Starting Up**"

To see a QuickTime movie about installing an AirPort card in an iBook, please see: http://www.info.apple.com/support/ibook/installairport.html

The two most common mistakes in installing an AirPort card are:

1. not completely inserting the card into its connector
2. inserting the card upside down

- Make sure the card is inserted firmly enough to allow the support clasp to secure the card into place.
- Make sure the AirPort card has been installed correctly. In G3 iBooks, the serial number side faces upward. The AirPort card is keyed to go into the slot one way. However, it is possible to force the card into the slot incorrectly, thus causing the computer to stop responding when it is turned on.

Correcting these mistakes should remedy the issue, although inserting the card upside down can result in bent pins inside the AirPort slot.

Note: Wireless Internet access requires an Internet service provider (fees may apply) and AirPort (or AirPort-compatible) wireless Ethernet card and base station. Some ISPs are not compatible with AirPort. For more information, see article 106590: "**AirPort: Requirements for Wireless Internet Access".**

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PowerBook G4: Battery Fails to Charge

- **Last Modified:** December 20, 2005
- **Article:** TA27249

- **Old Article:** 88077

Products Affected

PowerBook G4

If you have a titanium PowerBook G4 with a round "puck" adapter, the battery will not charge unless the AC adapter is correctly inserted. It's possible to insert the adapter in such a way that it gets caught on the hinge and won't charge the battery.

(If you aren't sure which power adapter you have, click here for an article that shows pictures of each style. This article only applies to the round silver adapters. For help troubleshooting white "brick" style adapters, click here.)

Pay special attention when you insert the PowerBook G4 computer's AC adapter plug. When you insert the plug, make sure its nub (used to secure the plug to the circular AC Adapter) is in a horizontal position and not in a vertical position.

When you insert the plug you may feel some resistance as if the plug can go no further, but the metal part of the plug may not be fully inserted. The pictures below show an incompletely inserted plug and a properly inserted plug.

WRONG - not inserted far enough into socket

RIGHT - plug fully inserted

Press in until all of the metal on the tip of the plug is in the socket, as shown above.

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PowerBook G4: Computer Shuts Down Unexpectedly

- **Last Modified:** July 01, 2004
- **Article:** TA27261

- **Old Article:** 88095

A PowerBook G4 computer may randomly or unexpectedly shut down or shuts off if the reset button is pressed or if the battery is not correctly inserted.

Products Affected

PowerBook G4

Symptom

The computer shuts down when:

- It is running and the display is opened or closed.
- It is running and is picked up or handled.
- It is sleeping and the display is opened.

Solution

- Verify the reset button is not depressed (see Figure 1).

Figure 1 Reset button in normal position

If it is depressed (see Figure 2), press a paper clip on the center of the button to dislodge it, ensure the button moves freely in the opening.

Figure 2 Reset button depressed

- Verify the battery is firmly inserted, and the battery latch is engaged.
- If the issue continues after checking the position of the button and the battery, contact Apple for further technical assistance.

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Archived - AppleWorks 6.0.4: May Quit Unexpectedly When Opened in Mac OS X

If you open AppleWorks 6.0.4 in Mac OS X, the application may unexpectedly quit when attempting to create a new paint document or when checking spelling.

Products Affected

AppleWorks, Mac OS X 10.0

This article has been archived and is no longer updated by Apple.

Symptom

After opening AppleWorks 6.0.4 and clicking on the Paint module in the Starting Points palette, AppleWorks 6.0.4 quits unexpectedly. This may also occur when checking spelling.

Solution

This is a known issue with AppleWorks 6.0.4 when running natively in Mac OS X. This issue has been addressed in AppleWorks 6.1. You can locate the AppleWorks 6.1 Updater at the Apple Software Updates Web site (http://www.apple.com/swupdates/).
If the update is not yet available for your localized version of AppleWorks 6.0.4, it is possible to work around the issue by forcing AppleWorks to run in Classic. To do this, follow these steps:

1. Locate the AppleWorks 6.0.4 application.
2. Click the application's icon to select it.
3. Choose Show Info from the File menu.
4. Click to enable the "Open in the Classic Environment" option.

The next time you open AppleWorks 6.0.4 it will open in the Classic environment and should work as expected.

Note: The preview version of AppleWorks 6.1 for Mac OS X is only available for the North American English version of AppleWorks. Versions of AppleWorks 6.1 that are localized for other regions will open in the Classic environment under Mac OS X by default.

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- **Last Modified:** Feb 19, 2012
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PowerBook G4: Troubleshooting: Fax Software Is Not Working

- **Last Modified:** July 01, 2004
- **Article:** TA27272

- **Old Article:** 88113

This article describes how to troubleshoot the symptom of fax software not working on a PowerBook G4 computer.

Products Affected

PowerBook G4

Symptom

Fax software is not working.

Solution

The PowerBook G4 comes with FaxSTF software installed. Apple does not provide support for this software. Please refer to the Smith Micro web site at http://smithmicro.com/support/

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AppleWorks 6.1 for Mac OS X, Public Preview: Data May Be Lost When Saving Documents to an AFP File Server

- **Last Modified:** October 04, 2008
- **Article:** TA27274

- **Old Article:** 88118

Documents saved directly to an Apple File Protocol (AFP) file server, like your iDisk, from the Public Preview of AppleWorks 6.1 for Mac OS X may become unusable.

Products Affected

AppleWorks

Symptom

When you open a file an alert box appears with a message that says "Unexpected End of File". The file will never open.

Solution

This issue only occurs when saving documents directly to remote volumes connected over AFP. Save your documents to the computer's hard disk first, then copy them to the file server.

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TA27275_Wayback_Machine.pdf

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INTERNET ARCHIVE

iBook (Dual USB): Mac OS X May Not Recognize External Monitor

- **Last Modified:** September 18, 2003
- **Article:** TA27276

- **Old Article:** 88123

This article discusses using external monitors with the iBook (Dual USB) computer running Mac OS X.

Products Affected

Mac OS X 10.0, iBook, Displays

Symptom

After connecting a monitor to the RGB video-out port of an iBook (Dual USB) computer running Mac OS X, the iBook does not recognize the monitor.

Solution

Install the Mac OS X 10.0.4 update. See article 75141: "**Mac OS X (10.0.4) Combined Update Information and Software**" for more information about this update.

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iBook keyboard layout

- **Last Modified:** September 15, 2005
- **Article:** TA27279

- **Old Article:** 88132

Products Affected

iBook

Learn how the white iBook G3 and iBook G4 computers' keyboard layout differs from that of previous iBook computers.

The white iBook G3 and iBook G4 computers have a different keyboard layout from previous models of iBook.

White iBook G3 and iBook G4 computer keyboard layout differences:

- The layout is more symmetrical than the previous version.
- There are two Command keys, one on either side of the space bar.
- The Enter key is smaller.
- There is one Option key, to the left of the space bar.
- The keyboard latches are now located before the F1 key and after the F11 key.
- The Mute function key has been moved to F3.

For increased stability and better seating of the keyboard, engage the locking mechanism located between the F5 and F6 keys.

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TA27279_iBook_keyboard_layout.pdf

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iBook (Dual USB): Using PowerBook G4 Adapter

- **Last Modified:** January 08, 2007
- **Article:** TA27280

- **Old Article:** 88133

You can use the PowerBook G4 AC Adapter with the iBook (Dual USB) computer.

Products Affected

iBook

The iBook (Dual USB) AC Adapter and the PowerBook G4 AC Adapter have the same electrical specifications.

You can use the PowerBook G4 AC Adapter with the iBook (Dual USB) computer. However, there is a small plastic "nub" on the PowerBook G4 AC Adapter tip that holds in the tip when the cable is wound. When a PowerBook G4 adapter is used with the iBook (Dual USB) computer, this nub can get in the way of the optical drive when ejecting a disc, as shown in Figure 1.

Figure 1 Optical drive blocked by adapter nub

When using the PowerBook G4 adapter with the iBook (Dual USB) computer, make sure that the nub does not block the optical drive. See Figure 2 for correct adapter placement.

Figure 2 Adapter nub in the proper position.

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iBook (Dual USB) and later: How to find the Serial Number

- **Last Modified:** January 08, 2007
- **Article:** TA27282

- **Old Article:** 88138

Products Affected

iBook G4, iBook

This document explains how to find the serial number on each model of white iBook. For other iBooks, see document 86321, "Locating your iBook Serial Number".

To find the serial number using software

On most computers with Mac OS X you can find the serial number in the About This Mac window. See technical document 106486, "About This Mac Window Provides Computer Serial Number".

To find the serial number located on the computer

These models of white iBook are covered in this document:

- iBook (Dual USB)
- iBook (Late 2001)
- iBook (14.1 LCD)
- iBook(16 VRAM)
- iBook (14.1 LCD 16 VRAM)
- iBook (Opaque 16 VRAM)
- iBook (32 VRAM)
- iBook (14.1 LCD 32 VRAM)
- iBook (800 MHz 32 VRAM)
- iBook (900 MHz 32 VRAM)

- iBook (14.1 LCD 900 MHz 32 VRAM)
- iBook G4
- iBook G4 (Early 2004)
- iBook G4 (Late 2004)
- iBook G4 (Mid 2005)

For most of these models, the serial number may be located under the keyboard or in the battery bay. For iBook G4 (Late 2004) and most iBook G4 (Mid 2005) models, the serial number is located under the keyboard, but **not** in the battery bay. Instructions for both of these locations are listed below.

Under the keyboard

1. If the computer is on, shut it down and leave the lid open.
2. Remove the computer's keyboard. For more information on how to do this, see technical document 111917, "Keyboard Replacement Instructions".
3. The serial number and Ethernet ID (also called a MAC address) are located underneath the keyboard on the upper ledge. The Ethernet ID is located on the left side of the ledge, and the serial number is to the right.

In the battery bay

1. If the computer is on, shut it down and close the lid.
2. Turn the computer over so you are looking at the battery door.
3. Remove the battery door. For more information on how to do this, see technical document 88121, "Replacing the Battery".
4. The serial number is located on the bottom of the bay for any white iBook EXCEPT the iBook G4 (Late 2004) and most iBook G4 (Mid 2005) models.

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AppleWorks 6: Cannot Locate the Microsoft Word and Excel Translators After AppleWorks 6.1.2 Update

- **Last Modified:** May 04, 2004
- **Article:** TA27285

- **Old Article:** 88150

Learn where to find Microsoft Word and Excel translators after installing the AppleWorks 6.1.2 Update.

Products Affected

AppleWorks

After installing the AppleWorks 6.1.2 Update, you cannot read and write Microsoft Word and Excel files.

If you have recently performed a clean installation and a Previous System Folder exists on your startup volume at the time you run the AppleWorks 6.1.2 Update, the translator files will be installed there instead of in your active System Folder.

Follow these steps to utilize the translators:

1. Use Sherlock to locate the MacLinkPlus for AppleWorks extension and drag it on top of the active System Folder. It will automatically be routed to the Extensions folder.

MacLinkPlus AppleWorks extension

2. Use Sherlock to locate the file DVZ C++.PPC.DLL that is in a folder named Translators. This folder is in a folder named AppleWorks. Drag this AppleWorks folder from its current location to the Application Support folder within the active System Folder.

Sherlock search for DVZ C++.PPC.DLL

3. Locate the AppleWorks folder in the Preferences folder of the active System Folder and drag it to the Trash.

Dragging folder to the Trash

4. Restart your computer.

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Apple Pro Keyboard: Media Eject Key Ejects All CD/DVD Discs

- **Last Modified:** December 16, 2003
- **Article:** TA27289

- **Old Article:** 88156

The Media Eject Key on the Apple Pro Keyboard puts away and ejects all CD/DVD disc that appear on the desktop.
The Apple Pro Keyboard requires Mac OS 9.1 for the Media Eject Key to function on a Macintosh computer.

The Media Eject Key puts away and ejects all CD or DVD volumes that appear on the desktop, or are otherwise available to the computer. This includes internal CD/DVD drives as well as external USB or FireWire CD/DVD drives. Examples of media are:

- CD-ROM disc
- DVD-ROM disc
- DVD-RAM disc

Note: If multiple drives are connected with a disc in them that appears on the desktop, pressing the Media Eject Key puts away and ejects all discs.

The Media Eject Key does not eject Zip disks (external or internal) or other removable media that are not CD/DVD volumes.

Related Articles

58652 Apple Pro Keyboard: System Requirements

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Mac OS X: How to Add Hosts to Local Hosts File

- **Last Modified:** September 28, 2005
- **Article:** TA27291

- **Old Article:** 88158

This advanced document explains how to configure host information in cases where you do not have a domain name server (DNS) on the network, but need to resolve hostnames. For example, when two computers are connected with a crossover cable or a standalone hub and need to resolve hostnames, but one of the computers does not support Bonjour (formerly "Rendezvous," also known as Multicast DNS).

Products Affected

Mac OS X 10.2, Mac OS X 10.0

Mac OS X 10.2 or later

Edit the /private/etc/hosts file. For more information on how to use the hosts file, open Terminal and type: man hosts

Note: Editing this file requires root privileges.

Mac OS X 10.0 through 10.1.5

1. Open /Applications/Utilities/NetInfo Manager.
2. To allow editing the NetInfo database, click the padlock in the lower left corner of the window.
3. Enter your Admin password and click OK.
4. In the second column of the browser view, select the node named "machines." You will see entries for -DHCP-, broadcasthost, and localhost in the third column.
5. The quickest way to create a new entry is to duplicate an existing one. So select the "localhost" item in the third column.
6. Choose Duplicate from the Edit menu. A confirmation alert appears.
7. Click Duplicate. A new entry called "localhost copy" appears, and its properties are shown below the browser view.

8. Double-click the value of the ip_address property and enter the IP address of the other computer.
9. Double-click the value of the name property and enter the hostname you want for the other computer.
10. Click the serves property and choose Delete from the Edit menu.
11. Choose Save from the File menu. A confirmation alert appears.
12. Click Update this copy.
13. Repeat steps 6 through 12 for each additional host entry you wish to add.
14. Choose Quit from the NetInfo Manager menu. You do not need to restart the computer.

Note: If you have a number of hosts that you wish to add, you can use the niload command to add them. The file needs to be a standard UNIX hosts file. For instance, if you have a hosts file named "hosts.txt" you can enter the following command in Terminal to load the hosts into your local NetInfo database:

```
sudo niload hosts . < hosts.txt
```

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AirPort: AirPort Base Station Does Not Work and Has Blinking Lights

- **Last Modified:** July 01, 2004
- **Article:** TA27292

- **Old Article:** 88159

This document explains what you should do if your AirPort Base Station does not respond to wired or wireless connections, a situation in which blinking amber (yellow or orange) lights (LEDs) may be visible on the base station.

Products Affected

AirPort

Symptom

Cannot connect to the base station using the AirPort Admin utility. The base station does not respond to Ethernet or wireless connections, and may have blinking amber (yellow or orange) lights.

Solution

Perform a hard reset of the base station, then reload the base station software. See technical document 58613, "**AirPort Firmware v1.0, 1.3 & 2.0: AirPort Base Station (Graphite) Forced Reload or Reset".**

Note: In addition to this solution, you need to be sure that you have connected properly to your base station and have configured the connecting computer(s) properly. Technical document 106858, "**AirPort: Troubleshooting Outline**" contains additional information that may be useful isolating your symptom to a hardware issue.

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Network Assistant 4.0.x: Using Apple Network Assistant on an AirPort Network

- **Last Modified:** November 17, 2003
- **Article:** TA27294

- **Old Article:** 88165

This article explains how to set up computers with AirPort and Network Assistant.

Symptom

Using Network Assistant to observe or control client computers connected via an AirPort Base Station can result in a black screen or a communication error in the Workstation Status window.

Solution

- Make sure that all of the AirPort clients and Base Stations are updated to AirPort 1.3.1 or later and that all Network Assistant clients are updated to the latest versions of Network Assistant software, AirPort software, and the Mac OS.
- Configure the Network Assistant admin to "Only send changes made by QuickDraw" client computers when sharing screens. To select this option, choose Preferences from the Setup menu and enable the option to "Only send changes made by QuickDraw."

Figure 1 Preferences window

- Do not connect the Network Assistant admin workstation to you network via AirPort. Connect it directly to the Ethernet network to which your AirPort Base Station(s) is connected.
- Configure your AirPort Base Station to a Base Station Density of "High" and increase the multicast rate to 11 Mb using the AirPort Admin Utility. See Note 1.

Notes

1. Enabling the Base Station Density and multicast rate settings will limit the effective range of each AirPort Base Station's network and will decrease the effective distance that a client can be from that Base Station to less than 50 m.
2. Wireless Internet access requires an AirPort Card, AirPort Base Station, and an Internet service provider, for which fees may apply. Some ISPs are not compatible with AirPort. For more information, see technical document 106590: "**AirPort: Requirements for Wireless Internet Access.**"

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Mac OS 9: Modem Makes No Sound

- **Last Modified:** November 17, 2003
- **Article:** TA27295

- **Old Article:** 88166

This article provides a workaround for an internal modem that does not make audible dialing or handshaking sounds.

Products Affected

Mac OS 9.2

Symptom

The internal modem makes no sound.

Solution

These solutions assume the speakers work and that you hear sounds from other sources such as an audio CD.

Mac OS 9.0 - 9.0.4

1. Open the Modem control panel.
2. Make sure the Sound option is on.
3. Open the Sound control panel.
4. Click Input.
5. Click Built-in.
6. Choose Internal Modem as the Input Source.
7. Click "Play sound through output device" to enable that option.

Mac OS 9.1

1. Open the Modem control panel.
2. Make sure the Sound option is on.
3. Open the Sound control panel.

4. Click the Input tab.
5. Select Internal Modem.
6. Click "Play sound through output device" to enable that option.

If following these steps do not resolve the issue, reset the computer's parameter RAM (PRAM).

Related Documents

31321	Mac OS 9.1: No Sound From Internal Modem When Network Setup Extension Is Disabled
43079	Modem: Troubleshooting References
58044	iMac: No Sound or Startup Chime Heard
2238	Macintosh: How to Reset PRAM and NVRAM

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Languages

iBook (Dual USB): Computer Stops Responding After Waking From Sleep

- **Last Modified:** October 04, 2008
- **Article:** TA27297

- **Old Article:** 88175

Activating some Mac OS X screen savers can cause the iBook (Dual USB) computer to stop responding after waking from sleep.

Products Affected

Mac OS X 10.0, iBook

Symptom

After waking from sleep, a gray or black screen appears, and the computer stops responding . This appears to occur if the screen saver was active before the computer went into sleep mode. It may also occur if the screen saver is activated after the computer has been in sleep.

Solution

Install Mac OS X 10.1.

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iTunes: Working with ID3 Tags

- **Last Modified:** June 27, 2007
- **Article:** TA27299

- **Old Article:** 88186

Products Affected

Mac OS X 10.0, iTunes

This article explains how to update ID3 tags on MP3 files that contain no information, partial, or incorrect information in iTunes.

Symptom

iTunes contains no information, partial, or incorrect information in some of the fields (Song, Artist, Year, Album, Track Number, Genre)

Solution

If you want to change information in one of the ID3 Tags fields in the Library or a playlist, follow these steps:

1. Select a song by clicking it within iTunes. If you wanted to change the info for more than one song (batch), select all of the files you want to have similar information by holding down the Command key, and clicking each song to be changed.
2. Choose Get Info from the File menu, or use Command-I. This opens the iTunes Song Information window.
3. Click the "Tags" tab.
4. The Song Name field is next to the iTunes MP3 icon.
5. In the "Tags" window you can make changes to all fields shown.

Note: The Song Name field must contain information. (The Song Name field is located next to the iTunes MP3 icon.)

An alternative is to use a utility such as ID3X.

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Related Articles

25293 MP3 ID3 Tags: What Are They?

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Languages

- English
- □□□

iBook (Dual USB): External Monitor Flickers at 1024 by 768 Resolution

- **Last Modified:** October 04, 2008
- **Article:** TA27302

- **Old Article:** 88200

This document describes an issue with using external non-DDC monitors with iBook (Dual USB) computers, and provides a workaround.

Products Affected

iBook

Symptom

An external monitor connected to the computer flickers when used at 1024 by 768 resolution.

Solution

To avoid the flicker:

- Use a monitor with a Display Data Channel (DDC). Some earlier monitors may not have this feature.
- Choose a smaller resolution in the Monitors control panel, or the Monitor Resolution portion of the Control Strip.

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PowerBook: Periodic CD/DVD Drive Noise

- **Last Modified:** September 16, 2003
- **Article:** TA27303

- **Old Article:** 88203

This document describes an issue with CD or DVD drives in PowerBook computers and provides a workaround.

Products Affected

Mac OS 9.2, PowerBook, PowerBook G3

Symptom

After upgrading to Mac OS 9.2.1 the CD or DVD drive periodically resets itself even if there is no disc in the drive. The reset lasts only about a second and is accompanied by a slight vibration and noise.

Products Affected

- PowerBook G3
- PowerBook G3 Series
- PowerBook G3 Series (Bronze Keyboard)
- PowerBook (FireWire)
- Mac OS 9.2.1

Solution

Download and install Authoring Support 1.1.3 or later from Apple Software Downloads (http://www.apple.com/swupdates/).

-or-

Turn off the SDAP Authoring Support extension.

1. Open the Extensions Manager control panel.
2. Click the checkbox to turn off the SDAP Authoring Support extension.

Note: This extension is not needed on this computer model unless you are using a third-party CD-RW expansion bay device.
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Apple LCD Displays: How to Connect a Display With ADC to a DVI Port

- **Last Modified:** December 02, 2003
- **Article:** TA27307

- **Old Article:** 88216

This document lists third-party solutions for connecting an Apple LCD display with an Apple Display Connector (ADC) to a computer with a Digital Video Interface (DVI) port.

Products Affected

Power Mac, Displays

If you have one of these LCD displays, you may be able to connect it to a Power Mac G4 computer with a DVI port.

- Apple Cinema Display HD (ADC)
- Apple Studio Display LCD (ADC)
- Apple Studio Display 17 (LCD)
- Apple Cinema Display (ADC)

You may use the Apple DVI to ADC Adapter to connect an Apple LCD display with an ADC to a computer with a DVI port. The Apple DVI to ADC Adapter is available at the Apple Store (http://store.apple.com).

You may also check with the following companies for a possible solution.

- Gefen Inc. (http://www.gefen.com/)
- Dr. Bott (http://www.drbott.com/)

Note: The listing of these third-party manufacturers is for informational purposes only, and constitutes neither an endorsement nor a recommendation of these products.

Article 17159: "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Related Articles

17159 Locating Vendor Information

58842 Apple Displays: Do Not Use Display Cable Extensions

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AppleWorks 6.2: Mac OS X 10.1 Compatibility Issues

- **Last Modified:** December 16, 2003
- **Article:** TA27308

- **Old Article:** 88219

This document explains some incompatibilities with AppleWorks 6.2 and Mac OS X 10.1, and provides a workaround.

Products Affected

AppleWorks, Mac OS X 10.0

Symptom

One or more of the following symptoms appear after you upgrade to Mac OS X 10.1:

- If you open the Style window a second time AppleWorks unexpectedly quits.
- The Find/Change window may not appear or only partially appears when invoked.
- Palettes may not draw properly when monitor bit depth is set to thousands of colors.
- AppleWorks pauses and the spinning disc cursor appears for a brief period.

Solution

AppleWorks 6.2 and Mac OS X 10.1 are not compatible. Download and install the latest AppleWorks update, which is available from http://www.apple.com/swupdates/ and corrects these and other issues.

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PowerBook G4: Hard Disk Does Not Appear on Desktop of FireWire Target Disk Mode Host Computer

- **Last Modified:** December 16, 2003
- **Article:** TA27311

- **Old Article:** 88224

The hard disk of a PowerBook G4 computer does not appear on the desktop or in the Finder of a host computer when it is connected using FireWire Target Disk Mode.

Products Affected

PowerBook G4

Symptom

The hard disk of a PowerBook G4 computer does not appear on the desktop or in the Finder of a host computer when it is connected using FireWire Target Disk Mode.

Solution

Update the host computer to Mac OS X 10.1.1 or later.

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Mac OS X: Speech Recognition Does Not Work on Some Computers

- **Last Modified:** September 17, 2003
- **Article:** TA27313

- **Old Article:** 88229

Speech Recognition does not work on some computers with Mac OS X 10.1.

Products Affected

Mac OS X 10.1, Mac OS X 10.0, iBook, PowerBook G4

Symptom

Speech Recognition does not work on some computers when using the built-in microphone and Mac OS X 10.1. Even though Speech Recognition can be turned on in the Speech preferences pane, speakable items do not work.

Solution

Update to Mac OS X 10.1.2 or later. Use the Software Update pane of System preferences, or download the update from Apple Software Downloads (http://www.apple.com/swupdates/).

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TA27313_Mac_OS_X_Speech_Recognition_Does_Not_Work_on_Some_Computers.pdf

PowerBook G4 (Gigabit Ethernet): Rechargeable Battery LEDs Flicker While Charging

- **Last Modified:** December 16, 2003
- **Article:** TA27315

- **Old Article:** 88232

The slight flickering of the PowerBook G4 (Gigabit Ethernet) computer's battery LEDs is normal.

Products Affected

PowerBook G4

While the PowerBook G4 Rechargeable Battery (M8511) is being charged, the battery LEDs appear to flicker. The smart battery turns off the LEDs momentarily to improve its power reading accuracy. This is the normal operation for this battery.

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PowerBook G4 (Gigabit Ethernet): Volume Control Unresponsive Past Midpoint

- **Last Modified:** December 16, 2003
- **Article:** TA27318

- **Old Article:** 88236

The volume control may seem unresponsive on a PowerBook G4 (Gigabit Ethernet) computer running Mac OS 9.2.1 when you move it past the midpoint.

Symptom

The volume doesn't change when you move the volume control slider past the midpoint in the Sound portion of the Control Strip or the Sound control panel.

Products Affected

- PowerBook G4 (Gigabit Ethernet)
- Mac OS 9.2.1

Solution

Apple is seeking a solution to this issue. The maximum volume can be reached by moving the volume slider slightly above midpoint. Moving the slider above that point has no effect.

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TA27318_PowerBook_G4_(Gigabit_Ethernet)_Volume_Control_Unresponsive_Past_Midpoint.

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AppleWorks 6: Stops Responding or Quits When Checking Spelling

- **Last Modified:** March 30, 2004
- **Article:** TA27321

- **Old Article:** 88247

AppleWorks may stop responding or quit when you check spelling in a word processing document that contains a spreadsheet frame.

Products Affected

AppleWorks, Mac OS 9.2, Mac OS X 10.2, Mac OS X 10.1, Mac OS X 10.0

AppleWorks may stop responding or unexpectedly quit when you check spelling in a word processing document that contains a spreadsheet frame. This issue does not occur with text or table frames.

This happens when using:

- AppleWorks 6.1.2 for Mac OS 9
- AppleWorks 6.2 for Mac OS X

This symptom will not occur if you enter the spreadsheet frame before you check spelling.

1. Double-click the spreadsheet frame to enter it for editing.
2. Check spelling.

Note: When you enter a frame, the menus and tools change to those of that type of frame. Refer to AppleWorks Help for additional information about selecting and editing frames.

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iBook: Pressing F12 Does Not Open Disc Tray

- **Last Modified:** July 01, 2004
- **Article:** TA27327

- **Old Article:** 88267

The tray of the optical disc drive may not open if you have disabled the F12 eject media key.

Products Affected

Mac OS 9.2, iBook

Symptom

The tray of the optical disc drive does not open when you press the F12 eject media key.

Solution

Make sure the F12 key is set up to eject the drive tray.

1. Open the Keyboard control panel.
2. Click Function Keys. The Function Keys window appears.
3. Make sure the "Enable Hot Function Keys" and "Use F1 through F12 as Hot Function Keys" options are enabled, or "checked". See Figure 1.

Figure 1 Function Keys window

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TA27327_iBook_Pressing_F12_Does_Not_Open_Disc_Tray.pdf

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Mac OS X 10.1: Cannot Install 10.1.5 (or other "10.1.x") Update

- **Last Modified:** September 17, 2003
- **Article:** TA27330

- **Old Article:** 88279

Some software updates are prerequisites for others. If you cannot install an update, check to be sure you have installed software in the correct order.

Products Affected

Mac OS X 10.1, Mac OS X 10.0

Symptom

You cannot install the Mac OS X Update 10.1.1, 10.1.2, 10.1.3, 10.1.4, or 10.1.5.

Solution

Updates to Mac OS X 10.1 must be applied in a specific order. The Software Update feature of System Preferences automatically enforces this order. To learn more about the Automatic Software Update feature, see technical document 106704: "**Mac OS X: How to Update Your Software**"

However, you may need guidance when using standalone installers. To view the required sequence of software updates, see technical document 106713, "**Mac OS X: Chart of Available Software Updates**". For example, to update from Mac OS X 10.1 to 10.1.5, you would install these software updates in this order:

1. Security Update 7-18-02 for v 10.1

2. Mac OS X Update Combo 10.1.5

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Power Mac G4 (QuickSilver): Takes Several Minutes to Sleep or Wake From Sleep

- **Last Modified:** September 17, 2003
- **Article:** TA27331

- **Old Article:** 88280

A small number of Power Macintosh G4 (QuickSilver) computers may take several minutes to sleep or wake from sleep.

Products Affected

Power Mac

Symptom

When you choose Sleep from the Special menu (Mac OS 9) or Apple menu (Mac OS X) the computer takes several minutes to go to sleep. It also takes several minutes to wake from sleep.

Solution

Download and install the Power Mac G4 CD-RW Firmware Update. You can use the Software Update feature of Mac OS to download the installer, or you may download it from software download 120029: "**Power Macintosh G4 CD-RW Firmware Update: Information and Download**".

If, when you open or "run" he installer, an alert box appears with a message that says the drive is not supported or compatible, it does not mean something is wrong with the drive. The update is simply not needed or the drive has already been updated.

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iMac (Flat Panel): Apple System Profiler and Memory

- **Last Modified:** July 01, 2004
- **Article:** TA27339

- **Old Article:** 88328

This document explains why Apple System Profiler reports PC-133 memory as PC-100.

Products Affected

Mac OS 9.2, Mac OS X 10.1, Mac OS X 10.0, iMac

Symptom

PC-133 memory is seen as PC-100 in the Built-in memory section of Apple System Profiler in Mac OS X 10.1 and Mac OS 9.

Solution

There is nothing wrong with the memory. While the iMac (Flat Panel) computer comes with PC-133 memory, the memory bus is 100 MHz, which causes Apple System Profiler to report the memory as PC-100.

You can verify the correct speed and latency of SDRAM installed in the factory slot by starting up the computer using Apple Hardware Test.

1. Restart your computer while holding down the C key until the "Loading" icon appears, then release the C key.
2. Click the Hardware Profile tab.
3. Under the Memory section in the upper right corner of the Hardware Profile, select the Memory slot you wish to profile. Memory #1 is the user-accessible slot. Memory #2 is the factory installed slot.

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Languages

- English
- 日本語

Apple LCD Displays: About the Two-Port Self-Powered USB Hub

- **Last Modified:** September 17, 2003
- **Article:** TA27342

- **Old Article:** 88359

This documents shows where the two-port self-powered USB hub is located on Apple LCD displays.

Products Affected

Displays

The two-port self-powered USB hub on the following displays is located on the back of the display, left of the display stand.

- Apple Cinema Display (20-inch)
- Apple Cinema Display
- Apple Cinema HD Display
- Apple Studio Display 17
- Apple Studio Display 15

Figure 1 Location of USB ports

Related Articles

58676 Power Mac G4 Cube: Connect USB Speakers to Computer or Display
60915 Apple Displays: USB Ports Do Not Work

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Apple Cinema HD Display: No Startup Sound When USB Speakers Are Connected

- **Last Modified:** July 09, 2004
- **Article:** TA27343

- **Old Article:** 88363

If you plug USB speakers into the USB ports on the Apple Cinema HD Display, you will not hear the startup sound when you start up a Power Mac G4 Cube computer.

Products Affected

Power Mac, Displays

Symptom

If you plug USB speakers into the USB ports on the Apple Cinema HD Display, you will not hear the startup sound when you start up a Power Mac G4 Cube computer. All other sounds play as expected.

Products affected

- Power Mac G4 Cube
- Apple Cinema HD Display

Solution

Disconnect USB speakers from the Apple Cinema HD Display and plug them directly into the USB ports of the Power Mac G4 Cube computer.

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About the PowerBook G4 and iBook Apple Video Adapter

- **Last Modified:** September 15, 2005
- **Article:** TA27346

- **Old Article:** 88395

Learn about the Apple Video Adapters used with PowerBook G4 and iBook computers.

Products Affected

iBook G4, iBook, PowerBook G4

The Apple Video Adapter allows you to connect a television or projector to your PowerBook G4 or iBook computer. The adapter has a composite video port and an S-video output port. See Figure 1. You connect the adapter to your computer using the RGB style connector. See Figure 2.

Figure 1: Composite video port is on the left, S-video output port on the right

Figure 2: RGB style connector on the other end of the adapter

This video adapter does not work with earlier iBook computers that have an RGB output port, and will not work with the original iMac (Flat Panel) computer's RGB output port. The iMac (17-inch 1GHz) and iMac (USB 2.0) computers are compatible with this adapter.

This adapter does not come with the iBook (16 VRAM) or iBook (14.1 LCD 16 VRAM) computers, but may be purchased from The Apple Store (http://www.apple.com/store/).

With the release of the PowerBook G4 (12-inch), Apple has revised the Apple Video Adapter. This Apple Video Adapter looks similar to the earlier Apple Video Adapter.

The later Apple Video Adapter model number is M9109, while the earlier Apple Video Adapter model number is M8734. Apple will no longer sell the earlier Apple Video Adapter.

It is important to use only the later Apple Video Adapter with the PowerBook G4 (12-inch), iBook G4, and iBook G4 (14-inch) computers. If you use the earlier Apple Video Adapter, the video is diminished. This diminished video could be described as out of focus and being slightly blurry.

The later Apple Video Adapter works correctly with all the previous iBooks that can use the earlier Apple Video Adapter.

This video adapter does not work with earlier iBook computers that have an RGB output port, and will not work with the iMac (Flat Panel) computer's RGB output port.

The following is a list of compatible resolutions through each port on the Video Adapter:

NTSC Resolutions

- 640 by 480 60 Hz (NTSC)
- 800 by 600 60 Hz (NTSC)
- 1024 by 768 60 Hz (NTSC)

PAL Resolutions

- 640 by 480 50 Hz (PAL)
- 800 by 600 50 Hz (PAL)
- 1024 by 768 50 Hz (PAL)

Related Documents

88041	iBook (FireWire): How to View Video On an External Monitor or TV
32129	iBook (16 VRAM): Does Not Wake From Sleep When Connected to a Monitor Using RGB Video Cable
88396	iBook: Adapters and Resolutions
88040	iBook (FireWire) and iBook (Dual USB): Composite Video Cable Not Interchangeable With Similar Cables

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Locate the eMac serial number

- **Last Modified:** April 14, 2004
- **Article:** TA27347

- **Old Article:** 88397

Learn how to locate the serial number on an eMac, eMac (ATI Graphics) or eMac (USB 2.0) computer.

Products Affected

eMac

There are three ways to locate your eMac computer's serial number.

About This Mac (Mac OS X)

1. Choose About This Mac from the Apple menu.
2. Double-click Version. The computer's serial number appears.

Apple System Profiler

1. Click Finder in the Dock.
2. Choose Applications from the Go menu. A Finder window appears with a list of applications.
3. Locate and open the Utilities folder in the Applications folder.
4. Open Apple System Profiler. A window with information about your computer appears. The computer's serial number is located at the top of this window.

Inside the optical drive (CD or DVD) door

The serial number is located inside the optical drive door.

The serial number can be seen if you eject the optical drive tray by pressing the Eject key on the keyboard.

TA27347_Locate_the_eMac_serial_number.pdf

Eject key

Hold the door open with your left hand while pressing the Eject key on the keyboard again. The tray will retract and the serial number will be visible on the back of the drive door.

Serial number on optical drive tray

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SMART: A Brief Description

- **Last Modified:** June 25, 2004
- **Article:** TA27350

- **Old Article:** 88410

This document briefly describes Self-Monitoring, Analysis, and Reporting Technology (SMART).
Self-Monitoring, Analysis, and Reporting Technology (SMART) is used to monitor and communicate the status of hard disk performance, and in some cases whether a hard drive failure is anticipated.

SMART-enabled devices monitor data such as disk calibration, CRC errors, disk spin up time, rotational speed of the disk, distance between the head and the disk, and temperature.

By regularly sampling and comparing data, SMART-enabled devices can determine the 'health' of a hard drive, which in turn can provide predictive capabilities (called Predictive Failure Analysis or PFA).

Related Documents

152349: Mac OS X 10.3 Help: Replacing a disk before it fails

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Power Mac G4 (QuickSilver 2002): Install Later NVIDIA GeForce4 Ti Drivers to Improve Performance

- **Last Modified:** July 01, 2004
- **Article:** TA27353

- **Old Article:** 88424

Install later drivers to improve the performance of the NVIDIA GeForce4 Ti graphic card.

Products Affected

Power Mac

To improve performance of the NVIDIA GeForce4 Ti graphic card, you should install the drivers listed below.

Mac OS 9

Download and install the NVIDIA Driver Update 3.0 or later for Mac OS 9. It is available from Apple Software Downloads (http://www.apple.com/swupdates/).

Mac OS X

Download and install Mac OS 10.1.5 or later. It is available from the Software Update preference pane, or as a standalone installer from Apple Software Downloads (http://www.apple.com/swupdates/).

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Languages

- English
- 日本語

Xserve: Qualification Information for SCSI PCI Cards

- **Last Modified:** October 04, 2008
- **Article:** TA27354

- **Old Article:** 88429

This document provides information on the compatibility of SCSI PCI cards for use in Xserve.

Products Affected

Xserve

The Apple Ultra 160 SCSI (Single Channel) PCI card, which is available as a configure to order option from the Apple Store, is the only Apple SCSI card that is qualified with Xserve. The SCSI connector is VHDCI 68 (Very High Density Cable Interconnect - 68 pins) and require a compatible cable.

SCSI cards sold or bundled with other Apple computers have not been qualified by Apple for use in Xserve.

Contact the manufacturer of your third-party card to determine if their product works with Xserve.

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Archived - Xserve: Apple Display Power Buttons Do Not Turn On Xserve

If an Apple display with Apple Display Connector (ADC) is connected to an Xserve using an Apple DVI to ADC adopter, the power button on the display does not turn on the Xserve

Products Affected

Xserve

This article has been archived and is no longer updated by Apple.

Symptom

Pressing the power button on the display does not turn on Xserve.

Solution

Press the power button on the front of the Xserve.

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- **Last Modified:** Feb 19, 2012
- **Article:** TA27355

- **Views:**

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Languages

English

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Archived - Xserve: Ethernet Cable Difficult to Disconnect

This document explains how to remove the Ethernet cable from the Ethernet socket.

Products Affected

Xserve

This article has been archived and is no longer updated by Apple.

Symptom

When an Ethernet card is installed in the lower PCI slot on the Xserve, the cable may seem difficult to insert and remove.

Solution

The tab on the Ethernet cable connector may be covered by the chassis when the connector is installed in the lower PCI slot or the Combo slot. This can make it hard to press the tab on the connector to release the cable.

To remove the cable:

1. Insert a small, flat tool (such as a flat-nosed screwdriver) and depress the tab.

Note: Apple installs the video card in the lower PCI slot to make it easier for customers to install and use their own PCI cards in the top slot.

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- **Last Modified:** Feb 19, 2012
- **Article:** TA27356

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Languages

English

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Xserve: How to Remotely Erase (Reformat) a Hard Disk

- **Last Modified:** December 08, 2003
- **Article:** TA27357

- **Old Article:** 88441

This document describes how to remotely reformat Xserve's hard disk.

Products Affected

Xserve

Follow the steps outlined below if you wish to reformat Xserve's hard disk, and you do not have physical access to the server.

Important: You must have the server's IP address and Admin (or root) password before performing this procedure. Xserve's default password is the first 8 characters of its serial number.

Follow these steps:

1. Log in to Xserve.
2. Type: `mount`
3. Press Return. A list of volumes that are available to the file system appears. Look for the volume that is at the root level "/". This is the server's startup volume.
For example: "/dev/rdisk0s10".
Note: You cannot reformat the startup volume.
4. Type: `umount <insert volume name>`

   For example: `umount Scratch`

5. Press Return. This makes the volume unavailable to the file system, or "unmounts" it, which is required prior to reformatting it.
6. Type: `newfs_hfs -v <insert volume name> <insert BSD device name>`

   For example: `newfs_hfs -v Scratch /dev/disk0s11`

7. Press Return. The disk is reformatted.
8. Type: shutdown -r now
9. Press Return. Xserver restarts.

Warning: Reformatting or reinitializing the hard disk erases all information stored on it. Make sure you have a backup of all files you may have created and any preinstalled software that came with Xserve.

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ATI Radeon 8500 Graphics Card: Technical Specifications

- **Last Modified:** July 09, 2002
- **Article:** TA27358

- **Old Article:** 88442

This document contains the technical specifications for the ATI Radeon 8500 Graphics card.

System requirements

- AGP 4X, 2X - capable Macintosh
- Mac OS 9.2.1 or Mac OS 10.1
- QuickTime 5.0 or later
- OpenGL 1.2.2 or later

Connectors

- 15-pin VGA
- DVI-I
- S-video out

Specifications

- Radeon 8500 graphics accelerator
- 64 MB Double Data Rate (DDR) graphics memory

Display configurations

- CRT monitor
- Digital flat panel monitor
- TV
- CRT monitor and TV
- CRT monitor and CRT monitor
- Digital flat panel and TV
- CRT monitor and digital flat panel monitor

Display support

- DDC 2b/2b+ monitor support
- VESA display power management support
- Separate horizontal and vertical synchronization at tTTL levels

Features

- Full Open GL Support
- TRUFORM
- SMARTSHADER
- SMOOTHVISION (FSSA)
- HYPER Z ll
- CHARISMA ENGINE ll
- PIXEL TAPESTRY ll
- VIDEO IMMERSION ll
- High performance memory support
- Dual display support
- Integrated Transformation, Clipping and Lighting
- Twin cache architecture
- SuperScalar rendering
- Single-pass multi-texturing
- True color rendering
- Triangle setup engine
- Texture cache
- Bi-linear/Tri-linear filtering
- Line anti-aliasing
- Full-scene anti-aliasing
- Texture compositing
- Texture decompression
- Specular highlights
- Perspectively correct texture mapping
- Mip-mapping
- Z-buffering and Double-buffering
- Emboss, Dot Product 3 and Environment bump mapping
- Spherical, Dual-Paraboloid and Cubic environment mapping
- Fog effects, texture lighting, video textures, reflections, shadows, spotlights, LOD biasing and texture morphing

The following tables list the resolutions supported by the ATI Radeon 8500 Graphics card on the monitors indicated:

Resolutions on Apple Studio Display LCD
640 by 480
800 by 600
1024 by 768

Resolutions on Apple Studio Display 17 (LCD)
640 by 480
640 by 480 (stretched)
640 by 512
800 by 600
800 by 600 (stretched)
800 by 640
1024 by 768
1024 by 768 (stretched)
1024 by 820
1280 by 1024

Resolutions on Apple Cinema Display
640 by 480
640 by 480 (stretched)
800 by 500
800 by 512
800 by 600
800 by 600 (stretched)
1024 by 656
1024 by 768
1024 by 768 (stretched)
1024 by 820
1280 by 1024
1600 by 1024

Resolutions on Apple Cinema Display HD

640 by 480
640 by 480 (stretched)
800 by 500
800 by 600
800 by 600 (stretched)
960 by 600
1024 by 640
1024 by 768
1024 by 768 (stretched)
1280 by 800
1280 by 960
1280 by 960 (stretched)
1344 by 840
1920 by 1200

Resolution on CRT Displays	Refresh rate (Hz)
512 by 384	60
640 by 480	120
640 by 870	75
800 by 600	120
1920 by 1200	85
832 by 624	75
1024 by 768	120
1152 by 870	75
1280 by 1024	75
1600 by 1024	85
1600 by 1200	76
1600 by 1344	85
1792 by 1344	75
1856 by 1392	75
1920 by 1080	72
1920 by 1200	76
1920 by 1440	75
2048 by 1536	75

Related Articles

17159 Locating Vendor Information

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Xserve: How to Locally Erase (Reformat) a Hard Disk

- **Last Modified:** January 08, 2008
- **Article:** TA27360

- **Old Article:** 88444

This document describes how to locally reformat Xserve's hard disk.

Products Affected

Xserve

Follow the steps outlined below if you wish to reformat Xserve's hard disk, and you have physical access to the server.

Important: In order to follow these steps, you must have physical access to Xserve. You cannot perform this procedure remotely. A a keyboard and monitor must be connected to the server before you begin.

1. Start up Xserve from the Installation CD or DVD first and open Disk Utility from the first Installation screen.
2. Click the Erase tab from the Disk Utility screen.
3. Select appropriate options from this screen and click OK to begin reformatting the hard disk.

Warning: Reformatting or reinitializing the hard disk erases all information stored on it. Make sure you have a backup of all files you may have created and any preinstalled software that came with Xserve.

TA27360_Xserve_How_to_Locally_Erase_(Reformat)_a_Hard_Disk.pdf

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Languages

Xserve: How to Start Up Xserve Using an External Drive

- **Last Modified:** October 04, 2008
- **Article:** TA27361

- **Old Article:** 88445

Products Affected

Xserve

This document describes how to start up Xserve using an external drive.

Starting up Xserve from an external drive is useful when you need to run diagnostics or isolate internal CD-ROM or DVD drive issues.

Important: In order to start up the server from an external drive, you must have:

- another FireWire drive or system, such as an external FireWire hard drive, or a Macintosh computer that is capable of starting up using Target Disk Mode (for example a PowerBook or iBook)
- a version of Xserve software (Mac OS X Server 10.1.5) capable of starting up Xserve already installed on the external drive
- a keyboard and display connected to server
- physical access to the server
- a keyboard to locally select a volume

How to start up Xserve using an external drive

1. Make sure that Xserve is turned off.
2. Connect a FireWire cable between the external FireWire drive or computer and Xserve.
3. Hold down the 'T' key on the keyboard of external FireWire-capable computer while it starts up to put it into FireWire Target Disk Mode.
4. Turn on Xserve while holding down the 'Option' key on Xserve's keyboard. The Startup Manager appears.
5. Select the appropriate drive you wish to start up from in the Startup Manager window, then click the right arrow button.
6. Xserve should start up to the external FireWire drive or computer.

How to start up Xserve using an external drive remotely

1. Open the Terminal application on a remote computer.
2. Log in as an Admin user on the Xserve.
3. Type: `bless -folder /Volumes/<your drive name/System/Library/CoreServices -setOF`
4. Press Return.
5. Type: `Reboot`
6. Press Return. Xserve should start up from the external FireWire drive or computer.

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Mac OS X Server 10: Unable to Connect to Server Using ssh After Erase/Reinstallation

- **Last Modified:** April 12, 2004
- **Article:** TA27368
- **Old Article:** 88461

An Administrator may not be able to connect to the server using ssh after the server software has been reinstalled due to hard drive replacement or for another reason.

Products Affected

Mac OS X Server 10.3, Mac OS X Server, Mac OS X 10.0

Symptom

The administrator can no longer administer the server remotely using ssh, and receives warnings about a possible attack. In the warning, the administrator sees reference to the RSA key no longer matching. The warning text also includes these lines:

> WARNING: REMOTE HOST IDENTIFICATION HAS CHANGED!
> IT IS POSSIBLE THAT SOMEONE IS DOING SOMETHING NASTY!
> Someone could be eavesdropping on you right now (man-in-the-middle attack)!

Solution

This is normal behavior and is to be expected. The issue occurs when the RSA key fingerprint on the server and your admin computer no longer match. Follow these steps to correct this issue:

1. On the admin computer (Mac OS X client computer), choose Go to Folder from the Finder's Go menu.
2. Type in the path name to your home folder adding /.ssh to the end of the path. example:

   `/Users/username/.ssh` where `username` is your short name.

3. Inside the .ssh folder, open the known_hosts file.
4. Locate the Servers IP and or its fully qualified Domain name and delete it and the associated characters.Example:

   ```
   example.example.com,192.104.192.118 ssh-rsa
   AAAAB3NzaC1yc2EAAAABIwAAAIEAutfhNudfF+zZ00dyrU5O7/Y1wYh+khVJTSlNLqFROuvkmsB39Y8/q47cQzdFqRfxsAlirDQKWW2xfr8qAKormuz7fT7so1myuanG24IYPwWmnZc
   ```

   Note: These characters can wrap to several lines.

5. Save and close the file.
6. Log in to the Server via shh. You will see the following message:

   ```
   The authenticity of host 'example.example.com (192.104.192.118)' can't be established. RSA key fingerprint is (followed by a large
   Hexadecimal number) Are you sure you want to continue connecting (yes/no)?
   ```

7. Type `yes`. You will then see this alert message, followed by a password prompt:

   ```
   Warning: Permanently added 'example.example.com,192.104.192.118' (RSA) to the list of known hosts.
   ```

8. Type in your administrator's password.

You are now logged in to the server. Your admin computer and the Servers RSA keys now match again.

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Xserve: Status Light Overview

- **Last Modified:** September 17, 2003
- **Article:** TA27369

- **Old Article:** 88463

This document provides an overview of the Xserve status lights, what the lights indicate, and what action is appropriate.

Products Affected

Xserve

The Xserve's status lights are shown in the figure and table below.

Figure 1 Location of Xserve status lights.

Indicator	Color	Description
Power	White	On and OK
Security Lock	Yellow	Lock is engaged
System Identifier	Yellow	Indicates that someone has toggled it on or that the server has a hardware issue; check the server monitor application for more information.
Ethernet (lower LED is built-in; Upper LED is network card)	Green	Link
	No light	No connection
System Activity	Blue	Two rows of eight LEDs: on servers with one processor, rows of lights work in tandem; on dual-processor servers, rows operate independently of each other.
Drive module (Upper LED)	Green	Powered and running
	Yellow	Warning condition; check the server monitor application for more information.
	Red	Urgent issue or failure; check the server monitor application for more information.
Drive module (Lower LED)	No light	Drive can be removed
	Flashing blue	Disk activity; do not remove drive

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TA27369_Xserve_Status_Light_Overview.pdf

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Languages

Your USB printer doesn't appear in Print Center or is listed as unsupported

- **Last Modified:** October 04, 2008
- **Article:** TA27370

- **Old Article:** 88465

Learn what to do if USB printer connected to the computer is not listed in the Print Center, or if the Type appears as "Driver Not Installed" when adding a USB printer. This document applies to Mac OS X 10.2.8 or earlier.

Products Affected

Mac OS X 10.0, Mac OS X 10.2

This document applies if you open Print Center, click Add, select USB, and:

- The connected printer's name does not appear.
- A question mark is on the printer's icon.
- Print Center lists it as unsupported, or Type appears as "Driver Not Installed" when adding the printer.

Some printers may use custom input-output modules in the Print Center's "Printer List" pop-up menu, such as Epson AppleTalk. You may need to select one of these custom options in order to add your printer. It is also possible that your printer may be seen in the pop-up menu individually. These modules may appear in the "Printer List" pop-up menu like this:

To check the Print Center's "Printer List" pop-up menu for your specific printer:

1. Open Print Center (/Applications/Utilities/).
2. Click Add Printer in the Print Center.
3. Select the appropriate connection method from the pop-up menu (for example, USB, EPSON USB, Epson AppleTalk, and so forth).
4. When you see the printer's name in the pop-up menu, select it.
5. Click Add Printer.

If you cannot find the printer you want to add in the list of connection methods, verify that:

- The printer's software has been installed.
- You are choosing the right connection type for your printer.
- The printer is connected to your computer, plugged in, and turned on. If you have selected the right connection type for your printer from the pop-up menu within the Printer List window, and the printer is reported as unsupported or driver not installed, check for an updated software version at the manufacturer's website or the Mac OS X downloads page.

Related documents

106707 Mac OS X: How to Add a Printer to the Printer List
25662 Mac OS X 10.3: Some Included Epson Drivers Aren't Installed

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

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Macintosh: Clipboard Uses Application's Memory Partition

- **Last Modified:** June 08, 2007
- **Article:** TA27379

- **Old Article:** 9167

With Mac OS 9 and earlier, the Clipboard uses an application program's available memory. Therefore, you cannot copy data to the Clipboard that uses more memory than is available within the application.

Products Affected

Mac OS 9.2, Mac OS 8.6, Mac OS 8, Mac OS 8.1, Mac OS 8.5

When data is copied to the Clipboard, the information is stored within the application program's memory partition. An "out of memory" message when copying data to the Clipboard indicates that there is not enough memory available in the application's memory partition to perform the operation. Consider this simple example:

An application has been assigned a 5 MB memory partition, and uses 2 MB to open and operate. Therefore, 3 MB remains available for data and documents. If a document is opened that uses 2 MB of the application's available memory, then 1 MB is all that is available for use by the Clipboard. Attempting to copy more than 1 MB of data to the Clipboard while using this application results in an "out of memory" error message.

Follow these steps to see how Clipboard usage affects an application's memory:

1. Open your application.

2. Open a document with a large amount of data (a complex image, or a lengthy text passage, or a video clip).

3. Choose Finder from the Application menu.

4. Choose About This Computer from the Apple menu (see Figure 1). Position this window so that it is still visible when using your application.

Figure 1 About This Computer

5. Notice the memory usage bar for your application program. The filled-in portion of the bar represents the amount of memory currently being used by the application. (Choose Show Balloons from the Help menu, then point to the memory usage bar for an exact number.)

6. Choose your application from the Application menu.

7. Select a large amount of data in the document that you have opened.

8. Choose Copy from the Edit menu of your application. Notice how the memory bar changes; the Clipboard is using the application's memory to perform the operation.

You can increase the memory available to an application (and therefore to the Clipboard when using that application) by assigning more memory to the application. Mac OS Help, available on your Macintosh, can guide you through this process. Or, see article 18278: "**Mac OS: Assigning More Memory to an Application Program**"

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iMovie 3: Trash Does Not Empty

- **Last Modified:** November 12, 2007
- **Article:** TA27380

- **Old Article:** 93001

When you empty the Trash in some iMovie projects, the Trash may initially indicate it is empty, but may again indicate there are items in it the next time you open the project.

Products Affected

iMovie

Symptom

When you empty the Trash in an iMovie 3 project, the Trash indicator initially reads as 0 KB. When you reopen the project later, the items you previously emptied return, and the Trash indicator is greater than 0 KB.

Solution

Update to iMovie 3.0.3 or later.

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iMovie: Titles or Still Pictures Appear Pixelated

- **Last Modified:** April 03, 2007
- **Article:** TA27381

- **Old Article:** 93002

To minimize pixelation in iMovie, update to iMovie 3.0.3 or later and QuickTime 6.3 or later.

Products Affected

iMovie, QuickTime

Some pixelation within iMovie is expected. For best results, update to iMovie 3.0.3 or later and QuickTime 6.3 or later. (Pixelation is when the picture looks blocky, blurry, or grainy.)

The Preview window within iMovie is an approximation of final output. Pixelation in the preview window and in full-screen preview within iMovie is normal. However, pixelation should not be visible when the project is output to DV tape or DVD.

For best results, make sure any still images you import into your iMovie project are at least 640- x 480-pixels in size.

You may be able to achieve sharper output to QuickTime by using the Expert export options in the QuickTime pane of the Share panel, rather than using the QuickTime presets provided by iMovie. MPEG-4 for example, can provide a small file with a high quality, sharp output.

Follow the steps for the version of iMovie you have.

iMovie 3.0.3 or earlier

1. From the **File** menu, choose **Export**.
2. From the **Export** pop-up menu, choose **QuickTime**.
3. From the **Formats** pop-up menu, choose **Expert Settings**.
4. Click the Export button.
5. Enter a name for your output file, and select a save location.
6. from the **Export** pop-up menu, choose **Movie to MPEG-4**
7. From the **Use** pop-up menu, choose one of the following qualities:
    - LAN/Intranet is lowest compression/highest quality
    - Dial-up is highest compression/lowest quality

iMovie 4 or later

1. From the **File** menu, choose **Share**.
2. Click the QuickTime icon.
3. From the pop-up menu, choose **Expert Settings**
4. Click the Share button.
5. Enter a name for your output file, and select a save location.
6. from the **Export** pop-up menu, choose **Movie to MPEG-4**
7. From the **Use** pop-up menu, choose one of the following qualities:
    - LAN/Intranet is lowest compression/highest quality
    - Dial-up is highest compression/lowest quality

If you don't see an MPEG-4 option, check to make sure you have updated to the latest version of QuickTime. You can also experiment with the different Expert Settings options to find the quality and compression combination that works best for your purposes.

High Quality option

For projects output to QuickTime, the compression format you select for the final output may cause some pixelation in the QuickTime movie. You may also want to set the high quality flag on the movie to improve image clarity on playback in QuickTime Player.

Note: These steps require QuickTime Pro for QuickTime 6 or earlier, which you can purchase at the QuickTime website. If you have QuickTime 7, QuickTime Pro is not required.

To turn on the high quality option in QuickTime Player:

QuickTime 7 (without QuickTime Pro)

1. Open QuickTime Player.
2. From the **QuickTime Player** menu, choose **Preferences**.
3. Click the General button.
4. Check the "Use the high quality video setting when available" checkbox.

5. Close the Preferences window.

QuickTime 7 (with QuickTime Pro)

1. Open the QuickTime movie you created in QuickTime Player.
2. From the **Window** menu, choose **Show Movie Properties**.
3. Click to select the Video Track.
4. Click the Visual Settings tab.

5. Click to check the option for "High Quality".
6. Close the properties window.
7. Save your movie to record the change in playback quality (Command-S).

QuickTime 6 or earlier (with QuickTime Pro)

1. Open the QuickTime movie you created in QuickTime Player.
2. From the **Movie** menu, choose **Get Movie Properties**.
3. From the **Movie** pop-up menu in the Properties window, choose **Video Track**.
4. From the other pop-up menu in the Properties window, choose **High Quality**.

5. Click to check the option for "High Quality Enabled".
6. Close the properties window.
7. Save your movie to record the change in playback quality (Command-S).

Related documents

24787: Digital Video: Movies Look Bad When Played Back on Mac and/or TV
Adjusting the playback quality of your movie

Related Terms: pixelate, pixelated, blocky, poor, fuzzy, quality,

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iTunes 4: How to Keep the Music Store From Appearing

- **Last Modified:** February 02, 2004
- **Article:** TA27382
- **Old Article:** 93003

Learn how to keep the Music Store from appearing in the iTunes Source list.

Products Affected

iTunes Store, iTunes

Following these steps to hide the Music Store from the iTunes Source list.

1. Open iTunes.
2. From the **iTunes** menu, choose **Preferences** (Windows: From the **Edit** menu, choose **Preferences**).
3. Deselect the "Show iTunes Music Store" option.
4. Click OK to close the Preferences window.

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iSync 1.5: How to back up and restore your data

- **Last Modified:** January 05, 2007
- **Article:** TA27383

- **Old Article:** 93004

Products Affected

.Mac, iSync

This document explains how to use iSync 1.5 to back up data that you sync.

iSync provides an easy way to back up and restore synchronized data. The Back Up My Data command in the Devices menu creates a copy of the data from the last sync. When you choose this command, iSync creates a duplicate of the Last Sync Data. The Backup folder content changes when you choose the Back Up My Data command and there are changes to your data. You can also use the Revert to Backup and Revert to Last Sync commands to restore your data.

You can use Address Book's Backup command and iCal's Export command, too. If you're a .Mac (pronounced "dot Mac) member, you can use the Backup application that comes with your membership to back up your Address Book and iCal data. For more information, search Mac Help for "backing up Address Book" or iCal Help for "exporting." For information about joining .Mac, visit the Mac.com website (http://www.mac.com) or see the .Mac Learning Center.

To back up your data using iSync

1. Open iSync.
2. From the **Devices** menu, choose **Back Up My Data**. The latest version of your application data is now backed up.

Note: You will not see any notification that a backup has been performed.

To restore your data from the most recent backup

1. Open iSync.
2. From the **Devices** menu, choose **Revert to Backup**. You will be warned that any changes made to the computer or any device since the backup will be lost.
3. Click the Revert to Backup button to continue. Your data will be restored from the most recent backup. Should you wish to not proceed with the Revert to Backup, click Cancel. Clicking Cancel will not change your data.

If you are registered with .Mac, this will also restore your backed up application data to .Mac. After this, you could restore any other computers syncing with the same .Mac account.

To Restore your data from the most recent sync

1. From the **Devices** menu, choose **Revert to Last Sync**. You will be warned that any changes made to the computer or any device since the last synchronization will be lost.
2. Click the Revert to Last Sync button to continue. Your data will be restored from the most recent sync. Should you wish to not proceed with the Revert to Last Sync, click Cancel. Clicking Cancel will not change your data.

Related documents

61821 iSync: How to Avoid Data Loss

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iTunes 4: Troubleshoot Purchased Songs From the iTunes Store

- **Last Modified:** May 07, 2007
- **Article:** TA27385

- **Old Article:** 93011

This document discusses possible issues that might occur when purchasing songs from the iTunes Store.

Products Affected

iTunes Store, iTunes

If you're not able to buy music from the iTunes Store, check the following:

- Make sure there isn't an issue with the information in your Apple ID account. To verify or correct your Apple ID information follow these steps:
  1. Open iTunes.
  2. Sign in to the iTunes Store.
  3. Click the Account button and view your account information.
  4. Click Edit Account Info and Edit Billing Info and verify that the information is accurate and complete.

- Make sure you don't have any previous purchases that could not be processed using the information in your Apple ID. If you see a message that you need to contact Apple Support to correct an issue with a previous purchase, you won't be able to buy any music until you correct the issue as indicated in the message.
- Make sure the iTunes Store is available in your country. For more information, visit **http://www.apple.com/itunes/** .
- Make sure there's nothing wrong with your Internet connection. Visit a different website to verify your connection. If you are able to connect to other sites, there may be an issue with the iTunes Store. Try visiting the store again later.

For additional assistance see the iTunes Customer Service page and select the appropriate topic (select your country first on the right side). If necessary, you can submit a question to the iTunes Customer Service team.

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Languages

- Deutsch
- English
- Français
- 日本語

iTunes 4: How to View Album Artwork

- **Last Modified:** December 17, 2003
- **Article:** TA27386

- **Old Article:** 93018

This document explains how to view album artwork in iTunes 4.

Products Affected

iTunes Store, iTunes

If you've purchased music from the iTunes Store or added any artwork to the songs in your library, you may be able to see artwork for the currently playing or selected song:

- To see the currently selected or currently playing song's artwork (if available), click the Artwork button in the lower-left corner of the iTunes window. **Note**: If the song has more than one piece of artwork associated with it, you can click the arrows that appear to see additional artwork.
- Click the song artwork in the iTunes window to see the expanded artwork. **Note**: The zoom button in the expanded artwork window toggles the artwork between 100 percent and 150 percent.
- To switch between seeing the art for the currently playing song and the art for the currently selected song (if available), click Now Playing or Selected Song (whichever is visible) above the artwork area. If you don't see the Now Playing or Selected Song titles, click the Artwork button in the lower-left corner of the iTunes window.
- To see the artwork in its own window, double-click the song artwork.

Note: The artwork button is disabled when the iTunes Store is selected.
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- Very helpful
- Solved my problem

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QuickTime 6.2 or later required for other applications to play purchased music

- **Last Modified:** October 10, 2005
- **Article:** TA27389

- **Old Article:** 93022

QuickTime 6.2 or later is required for iPhoto and iMovie to play music purchased from the iTunes Store.

Products Affected

iMovie, iPhoto, iDVD, iTunes Store, QuickTime, iTunes

Songs purchased from the iTunes Store play in iTunes but do not play in the iPhoto Slide Show or in iMovie. An alert with a message like this may also appear: "Error during audio playback. The file "/Users/karine/Music/iTunes Music/12 Hound Dog.m4p could not be played because it could not be found; QuickTime couldn't parse it (-2048)".

This happens when using:

- iTunes 4
- iPhoto
- iMovie
- iDVD
- QuickTime 6.1.1 and earlier

The solution is to download and install QuickTime 6.2 or later. The latest version of QuickTime is available from the QuickTime website. iPhoto and iMovie require QuickTime 6.2 to use songs purchased from the iTunes Store.

TA27389_QuickTime_6-2_or_later_required_for_other_applications_to_play_purchased_music

Related documents

93052 QuickTime: About the QuickTime 6.2 Update

300456 iMovie may not import protected AAC content correctly

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iTunes: iTunes Store - Purchasing songs with 1-Click

- **Last Modified:** February 19, 2007
- **Article:** TA27390

- **Old Article:** 93024

Learn how to purchase songs using 1-Click in the iTunes Store.

Products Affected

iTunes Store, iTunes

If you're connected to the Internet and have an Apple Account, you can buy individual songs or entire albums from the iTunes Store.

By default, music is purchased using 1-Click. With 1-Click, the music you buy is immediately charged to the credit card listed on your Apple Account, downloaded into your iTunes library, and placed in a Purchased Music playlist.

To buy a song or album with 1-Click:

1. From the **iTunes** menu, choose **Preferences**. (Windows: From the **Edit** menu, choose **Preferences**).
2. Click the Store button at the top of the window.
3. Make sure "Buy and download using 1-Click" is selected and click OK.
4. Click iTunes Store in the Source list, then find the song or album you want to buy.
5. Click Buy Song or Buy Album.

Important: Once you click "Buy Song" or "Buy Album" you have purchased the music. You cannot undo the purchase.

Related documents

302392 How to back up your media in iTunes
93063 iTunes: How to copy music between authorized computers
93027 iTunes Store: Contacting billing support
93014 About iTunes Store authorization and deauthorization
93011 iTunes 4: Troubleshooting Purchasing Songs From the iTunes Store
93010 Seeing your iTunes Store purchase history and order numbers

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iTunes: Some AAC files won't play

- **Last Modified:** May 15, 2007
- **Article:** TA27391

- **Old Article:** 93025

Products Affected

iTunes Store, iTunes

Learn why an AAC format file may not play in iTunes 4 or later.

There are some reasons why a song in AAC format may not play in iTunes 4 and later.

- If you can't play a song (AAC format) that you purchased from the iTunes Store, you may have exceeded the number of computers you can use to listen to your music purchases. The limit is five for digital rights management (DRM) protected music.
- If you're listening to a shared library or playlist, iTunes skips any purchased music in the list (if your computer is not authorized to play the music). To listen to a purchased song in a shared library or playlist, double-click the song. If your computer is not authorized to play songs purchased by the person who is sharing the song, you'll need to enter that person's Apple ID and password to hear the song.
- AAC-encoded songs that were not created with iTunes or downloaded from the iTunes Store, may not play in iTunes. Use iTunes 4 or later to encode the song from an audio CD.

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TA27391_iTunes_Some_AAC_files_wont_play.pdf

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iTunes: iTunes Store Connection Speed

- **Last Modified:** February 19, 2007
- **Article:** TA27392

- **Old Article:** 93026

This document discusses the network capabilities recommended for downloading and previewing songs in the iTunes Store.

Products Affected

iTunes, iTunes Store

For best results, your network connection should be able to download at 128 kilobits per second (kbit/s) or faster, particularly when listening to previews of songs. A DSL, cable modem, or local area network (LAN) Internet connection is recommended.

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iTunes Store: Contacting billing support

- **Last Modified:** July 01, 2005
- **Article:** TA27393

- **Old Article:** 93027

Products Affected

iTunes Store, iTunes

If your purchase history seems to be incorrect, or you believe you've been charged for a song you didn't buy, go to the iTunes Store Customer Service website.

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- Solved my problem

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iTunes Store: All Sales Are Final

- **Last Modified:** February 19, 2007
- **Article:** TA27394

- **Old Article:** 93029

This document outlines the sales policy for the iTunes Store.

Products Affected

iTunes Store, iTunes

With the iTunes Store, all sales are final. As soon as you click the Buy button (using either 1-Click or the Shopping Cart) your music purchases are charged to the credit card on your Apple Account. You cannot cancel a purchase or receive a refund for a purchase. See the iTunes Terms of Sale for additional information.

Related Documents

302392	How to back up your media in iTunes
93063	iTunes: How to copy music between authorized computers
93027	iTunes Store: Contacting billing support
93014	About iTunes Store authorization and deauthorization
93011	iTunes 4: Troubleshooting Purchasing Songs From the iTunes Store
93010	Seeing your iTunes Store purchase history and order numbers

TA27394_iTunes_Store_All_Sales_Are_Final.pdf

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iTunes: About iTunes Store Parental Advisories

- **Last Modified:** September 21, 2006
- **Article:** TA27395

- **Old Article:** 93031

Products Affected

iTunes Store, iTunes

This document describes the Parental Advisory Label that appears on some selections available in the iTunes Store.

Advisory for Internet radio: The stations available using the iTunes radio do not originate from Apple. Some may broadcast material for mature audiences, such as songs with explicit lyrics and comedy broadcasts with adult themes and situations.

Advisory for the iTunes Store: The following is derived from the Recording Industry Association of America Parental Advisory website. The Parental Advisory is a notice to consumers that recordings identified by this logo may contain strong language or depictions of violence, sex, or substance abuse. Parental discretion is advised.

The use of the Parental Advisory Label is not a determination of whether a recording is or is not appropriate for particular listeners. Rather, the non-removable label is a "heads up" to parents (and consumers, retailers, and wholesalers) that parental discretion is advised when purchasing the particular recording for children or when listening to the recording in the home.

The following issues may have been considered in making a determination regarding application of the label.

- Whether, in light of contemporary cultural morals and standards and the choices and views of individual parents, the recording might be one that parents may not want their child to listen to.
- Context is obviously important: Some words, phrases, sounds, or descriptions might be offensive to parents if spotlighted or emphasized, but might not offend if merely part of the background or not a meaningful part of the lyrics.
- The context of the artist performing the material, as well as the expectations of the artist's audience, is also important. In addition to profanity, "depictions of violence, sex, or substance abuse" must be considered when making a determination regarding the application of the Parental Advisory Label.
- Lyrics are often susceptible to varying interpretations. Words can have different meanings. Also, words cannot be viewed in isolation from the music that accompanies them. Lyrics when accompanied by loud and raucous music can be perceived differently than the same lyrics

when accompanied by soft and soothing music.

Labeling is not a science; it requires sensitivity and common sense. Context, frequency, and emphasis are obviously important; isolated or unintelligible references to certain material might be insufficient to warrant application of the label.

These guidelines apply to the case of a single track commercially released as well as to full albums (whether released in the form of a CD, cassette or any other configuration) and videos.

For more information on parental controls, please see "iTunes: Using Parental Controls."

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iTunes 4: About iTunes Store Song Bitrate

- **Last Modified:** December 09, 2003
- **Article:** TA27396

- **Old Article:** 93034

This document describes the bitrate for the songs available from the iTunes Store.

Products Affected

iTunes Store, iTunes

Purchased songs are encoded using MPEG-4 Advanced Audio Coding (AAC) format, a high-quality format that rivals CD quality.

Songs purchased and downloaded from the iTunes Store are AAC Protected files and have a bitrate of 128 kilobits per second (kbit/s).

The purchased song should sound as good as or better than a 160 kbit/s MP3 file. Because the bit rate is lower, though, the AAC file takes less disk space than the MP3 file.

Related documents

93013 iTunes 4: AAC and MP3 Codecs Compared
93012 iTunes 4: About Advanced Audio Coding (AAC)

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TA27396_iTunes_4_About_iTunes_Store_Song_Bitrate.pdf

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QuickTime: About the QuickTime 6.0.3 Update For Mac OS 9

- **Last Modified:** September 17, 2003
- **Article:** TA27397

- **Old Article:** 93038

The QuickTime 6.0.3 Update updates and enhances QuickTime for Mac OS 9 and Classic. This software updates QuickTime 6.0, or 6.0.1, or 6.0.2 to QuickTime 6.0.3.

Products Affected

Mac OS 9.2, QuickTime

Installation

QuickTime 6.0.3 for Mac OS 9 is only available as a standalone installer. **Note**: The QuickTime Updater application will not update to this version.

The standalone installer is available from the QuickTime website (http://www.apple.com/quicktime/).

Enhancements included with the 6.0.3 update

- Allows text files larger than 32 KB to be imported.
- Improves playback of movies under Classic in Mac OS X

Enhancements included with the 6.0.2 update

- Enhances the security of QuickTime software updates and downloads
- Improves the stability and performance of exporting audio
- Enhances the performance of MPEG-4 playback
- Improves MPEG-4 recording and streaming

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iTunes 4: Encode From Original Masters

- **Last Modified:** September 17, 2003
- **Article:** TA27398

- **Old Article:** 93040

Converting a file from one compressed format to another compressed format can lead to quality loss.

Products Affected

iTunes

Compression algorithms such as MP3 and AAC are intended for use with original source material (audio CD, tape, LP, or AIFF file). They are typically not intended for recompressing a file that was already compressed. A loss of quality can occur if you convert any sound file from one compressed format to another.

If you want to convert your library from MP3 to AAC, for example, you will gets best results by re-encoding songs and other sound files from the original source media.

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iMovie 3.0.3: Pressing the Delete Key Doesn't Delete Clips or Audio

- **Last Modified:** November 18, 2003
- **Article:** TA27413

- **Old Article:** 93149

If your computer's keyboard has an F13 key, press Backspace instead of Delete to deleting audio or video clips in iMovie 3.0.3.

Products Affected

iMovie

Symptom

The "del" key below F13 will not work with iMovie.

Solution

For most keyboards, pressing the Delete key located below the F11 and F12 keys removes audio or video clips from your iMovie project.
If your keyboard doesn't have a Delete key, or if pressing the Delete key doesn't work, press the Backspace key instead.

Additional information

The "del" key is sometimes referred to as the "Forward Delete" key.

This document contains information from the iMovie 3.0.3 Late Breaking News

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Languages

- English
- 日本語

Final Cut Pro 4: Late-Breaking News

- **Last Modified:** June 13, 2007
- **Article:** TA27416

- **Old Article:** 93157

This document contains late-breaking information about Final Cut Pro. For the latest information about product updates, tips and techniques, and qualified third-party devices, visit the Final Cut Pro website (http://www.apple.com/finalcutpro/).

Products Affected

Final Cut Pro

Late-Breaking Features

Automatic Naming of Captured Clips No Longer Uses Zeroes
Automatic naming of captured clips in Final Cut Pro 4 has been updated to remove extra zeroes from the beginning of a clip number. For example, in previous versions of Final Cut Pro, a series of clips would automatically be named and numbered as follows: Untitled 0001, Untitled 0002, Untitled 0003. The extra zeroes in front of the number ensured that the clips would remain in sequential order once the clips reached 0010 and 0100 respectively. Final Cut Pro 4 no longer requires the extra zeroes in order to sort effectively. Now, clips are automatically named and numbered as follows: Untitled 1, Untitled 2, Untitled 3.

Additional Settings Available in the Batch Capture Window
In the Batch Capture window, when you select the Use Logged Clip Settings checkbox, additional settings are included for the captured clips:

- Image and Gain settings (for analog capture)
- Capture settings from the Capture pop-up menu
- Audio settings from the Audio Format pop-up menu

Note: These settings are found in the Clip Settings tab of the Log and Capture window. New Sequences Are Created With One Video and Four Audio Tracks New sequences are now created by default with one video and four audio tracks. You can change this in the Timeline Options tab of the User Preferences window.

Creating Duplicate Master Clips in the Browser
To create a new master clip instance of a clip in the Browser, press Option while dragging a clip from the Timeline into the Browser, then press Command. When you see a cursor with M+ next to it, this indicates that a new master clip is being created; you can release the keys.

Using the Timecode Print Filter
When you use the Timecode Print filter, and choose Reader from the Mode pop-up menu in the Filters tab, the media/source timecode is displayed. This filter is located in the Effects tab of the Browser, within the Video Filters bin, in the Video Filter bin.

New Filters Improve Chroma Keying With DV-25, DVCPRO-50, and Uncompressed Video
Two new color filters (in the Key bin within the Video Filters bin) are available to aid in chroma keying video clips in Final Cut Pro. The Color Smoothing - 4:1:1 filter improves the quality of chroma keys performed with DV-25 video clips. The Color Smoothing - 4:2:2 filter improves the quality of chroma keys performed with DVCPRO-50 and 8- and 10-bit uncompressed 4:2:2 video clips.

To improve the quality of your chroma key, apply the appropriate smoothing filter to the clip you want to chroma key first. As you add additional keying filters, make sure that the Color Smoothing filter you've used remains the first one in the video section of the Filters tab.

Note: These filters may, in some instances, also be used to smooth out diagonal "stairstepping" that can occur in video clips with areas of high-contrast color.

Applying Filters to Multiple Tracks
When you apply a filter to a clip in a sequence, it's applied to all clips in tracks that have Auto Select turned on, just as if you'd used the Range Selection tool. However, filters are applied to the entire clip regardless of whether In and Out points are set.

Add Edit Command Works on Auto Select Tracks
The Add Edit command (Control-V) in the Sequence menu works like the Razor Blade tool, adding an edit point to all clips in the Timeline at the current position of the playhead. This command works on all tracks with Auto Select turned on.

Using the Make Independent Clip Command
As a result of the relationship between master and affiliate clips, changes made to certain properties of a master clip, such as Clip Name, Reel Name, or Timecode are automatically made to all affiliated clips within the current project. These same changes, if made to an affiliate clip, are also made to that clip's master clip, as well as to all other affiliated clips in the current project.

The online or offline state of clips is also automatically updated among all affiliated clips in a project, all at once. Suppose you open a project in which all the clips are offline. Relinking that project's master clips in the Browser automatically relinks all the affiliate clips that appear in each of that project's sequences. Depending on your project, you may choose to sever an affiliate clip from its master. This prevents the affiliate clip from updating with its master clip and other affiliate clips.

To make an affiliate clip in a sequence independent:

- Control-click the affiliate clip in the Timeline, then choose Make Independent Clip from the shortcut menu. Your affiliate clip is now an independent clip. Any changes you make to this clip do not affect the master clip.

New Dynamic Trimming Option Added to Trim Edit Window
The Trim Edit window now has a Dynamic checkbox that you can use to toggle dynamic trimming on and off, without having to go to the User Preferences window. This checkbox is located at the bottom of window, between the -1 and +1 Trim buttons.

New Sequence Audio Option For Trimming
You can now choose if want to hear a sequence's audio when doing a trim edit. The Trim with Sequence Audio checkbox is located in the General tab of the Preferences window, below the Dynamic Trimming option; this option is enabled by default. If the checkbox is enabled, you hear the sequence audio when trimming; if the checkbox is disabled, you hear the linked audio (similar to earlier versions of Final Cut Pro).

Asymmetrical Trimming
Asymmetrical trimming allows you to ripple edit opposing video and audio edit points in opposite directions to create split edits. Asymmetrical trimming can be done either in the Timeline or in the Trim Edit window. To trim an edit asymmetrically:

1. Select the Ripple tool.
2. Hold down the Option key, then click the In point of an incoming video clip to select it. Holding down the Option key while selecting an edit point selects only that point, ignoring any other items linked to that clip.
3. Hold down the Command key, then click the Out point of an outgoing audio clip. Holding down the Command key while selecting an edit point allows you to add edit points to the current selection without deselecting previously selected edit points. Note: In this example, Command-clicking the Out point of a stereo pair audio clip results in adding both audio items to the selection. You can also Command-Option-click a single audio item to add it to the selection individually, without including other audio items linked to it. This can be especially useful for clips in which many audio items are linked to a single video item in the Timeline.
4. Use the Ripple tool to trim the above selection.

Each opposite set of edit points moves in opposite directions, allowing you to create a split edit. A/V sync is maintained.

Removing Subclip Limits Affects All Affiliate Clips
As a result of the relationship between master and affiliate clips, changes made to certain properties of a master clip or subclip are automatically made to all affiliated clips within the current project. The same is true of subclips and any affiliates associated with them.

In particular, if you extend the In and Out points on a subclip to those of the original master clip, your subclip now has all of the media in the original master clip. Therefore, if you remove the limits from one subclip, Final Cut Pro removes the limits from all other subclips associated with it.

Duplicate Frame Detection Over Transitions
When Show Duplicate Frames is turned on in a sequence's settings, duplicate frames that occur over the duration of a transition between two clips are indicated by white dots to the left and/or right of that transition. The side of the transition the dots appear on indicates the clip or clips that use duplicate frames.

Figure 1 The white dots indicate duplicate frames used in a transition.

If you use a clip more than once within a single edited sequence, the duplicated frames are marked by a colored bar appearing at the bottom of the clip's video item in the Timeline.

Figure 2 The red bars indicate duplicate frames used within a sequence.

However, if the duplicated frames fall outside the boundaries of the clip in the Timeline or fall within a transition, a special indicator-four white dots-appears where the duplicate frames are located. When you zoom out, the white dots decrease in range from four to zero, depending on the zoom level.

Additional Options in the Track Layout Menu in the Timeline
The Track Layout menu now includes five additional options. These options can also be set in the Timeline Options tab of the Sequence Settings window.

- Show Video Filmstrips
- Show Audio Waveforms
- Show Through Edits
- Show Duplicate Frames
- Show Clip Labels

To choose an option in the Track Layout menu:
Open the Track Layout menu (the arrow next to the Track Height control), then choose an option. A checkmark next to a setting indicates that it is on. Choose the option again to remove the checkmark.

Command Key Gears Down Faders and Panning Sliders in the Audio Mixer Tab
Holding down the Command key while moving faders and panning sliders gears down their motion, allowing you to make more precise changes.

Indicator Colors for Mute Button, Mute Control, and Solo Button
The mute buttons for each channel in the Audio Mixer and the mute control in the Timeline editing controls are light amber when mute is enabled. The solo button is dark red when turned on. When you solo a track, the mute controls of all non-soloed tracks are automatically turned light amber; this way, you can tell which tracks are soloed and which are muted, if other tracks are not displayed in the Timeline window.

Ability to Export 16-Bit or 24-Bit Resolution OMF Files
You can now export OMF files at either 16-bit or 24-bit resolution, which is useful if your project includes 24-bit OMF files. Choose File > Export > Audio to OMF, and in the OMF Audio Export dialog, choose an option from the Sample Size pop-up menu-16-bit or 24-bit. If you choose to export as 24-bit files, keep in mind that these OMF files are large due to the wider data format and Final Cut Pro has a 2 GB limit for OMF files.

Display of Items in the Render Manager
Items in the Render Manager are now displayed in three groups: audio, audio mixdown (sequence level audio render files), and video.

Display of Real-Time Effects in Bold
The effects that appear in bold depend on the video format used by the currently selected sequence. Video formats that have higher system requirements for real-time playback result in fewer effects displaying in bold.

New DV Sequences Created With White Setting
DV sequence presets in Final Cut Pro 4 use a default white point setting of White instead of Super-White. (There are several DV sequence presets that use Super-White; these are labeled as such.)

Master Comment Information Can Be Included in EDLS
When you export an EDL, you can now choose to export Master Comments 1-4 or Comment A-B in the EDL Export dialog. These appear as notes in the EDL, letting offline editors give notes to the online editor about complicated entries on the list.

Late-Breaking Issues
Changes in the Final Cut Pro 4 Tutorials
In the "Distributing Media" section of the Final Cut Pro Tutorials , the instructions for exporting a QuickTime movie on page 114 are incorrect. For correct instructions on how to export a QuickTime movie, see the Final Cut Pro User's Manual or Final Cut Pro Help.

Interface Name Changes
The following names of interface items have changed.

Former name	New name	Found
External Video tab	A/V Devices tab	Audio/Video Settings window
External Video	Video Playback	Audio/Video Settings window, Summary tab
External Audio	Audio Playback	Audio/Video Settings window, Summary tab

Media Time	Source Time	Timecode Duration and Current Timecode fields in Canvas and Viewer
Image Sequence	Layered Graphic Sequence	Item Properties window, Format tab, Type entry
23.976 fps	23.98 fps	Sequence Settings window, Timeline Options tab, Editing Timebase pop-up menu
Insert Settings tab	Mastering Settings tab	Edit to Tape window
Record Settings option	Record to Tape option	RT pop-up menu in the Timeline
Duplicate Frames option	Dupe Frames option	Timeline shortcut menu for a clip with duplicate frames
Current w/o FX option	Current w/o Filters option	Frame Viewer pop-up menu in the Frame Viewer tab of the Tool Bench window

Menu Command Name and Location Changes
The following menu commands have changed names and in some cases, locations.

Formerly found and named	Now found and named
Mark>Go To>Match Frame	View>Match Frame>Source File View>Match Frame>Master Clip
File>Export> Movie	File>Export>QuickTime Movie
File>Export>QuickTime Movie	File>Export>Using QuickTime Conversion

Changes to the RT Pop-Up Menu in the Timeline
One menu option has been added and one renamed in the RT pop-up menu in the Timeline.

- Safe RT: This real-time effects playback mode ensures that no frames will be dropped during real-time effects playback. If you choose Unlimited RT instead, you increase the number of real-time effects that can be played back, at the expense of potentially dropping frames during playback.
- Record to Tape section: The Record Settings option in the RT pop-up menu has been renamed Record to Tape.

3:2 Pull-Down Pattern Setting Renamed to 2:3:2:3
Pull-down insertion is a method of converting 23.98 fps video to the NTSC standard of 29.97 fps video. The 3:2 pull-down pattern setting in the Playback Control tab of the System Settings window is now labeled 2:3:2:3 to be more specific about what is actually happening. Because it's the most commonly supported pull-down pattern for NTSC devices, it is the default.
Note: These options are only available when you are editing a sequence with a 23.98 fps timebase.

Pull-Down Pattern Settings With 24P
If you are editing a 23.98 frames per second (fps) DV sequence and you change the pulldown pattern in the Playback Control tab of the System Settings window and the pattern does not change, you must choose High from the Video Quality pop-up menu in the Playback Control tab. Even then, some slower systems may be limited to 2:2:2:4, which is indicated in the RT pop-up menu in the Timeline.
Note: The pull-down capabilities for a particular sequence are based on system performance. Check the RT pop-up menu in the Timeline for the capabilities of a particular sequence.

Changes in the Audio Mixer Interface

- The Master audio meters in the Master pane of the Audio Mixer have numeric values from +12 decibels (dB) to -96 dB.
- There are no clip indicators on audio meters in the Track Strips pane of the Audio Mixer.
- The Record Audio Keyframes setting is now a button in the button bar of the Audio Mixer window. Click it to toggle the setting on (green) and off (gray).

Default Location of Easy Setup Files
By default, the files for Easy Setups you create are stored in the following location: Library/Application Support/Final Cut Pro System Support/Custom Settings.

New Location for Third-Party Presets
To install third-party preset files or use preset files that you've moved, you must drag the desired preset files to the following folder:
`Library/Application Support/Final Cut Pro System Support/Plugins.`

The next time you open Final Cut Pro, the presets will be available in the Audio/Video Settings window.

New Location for Locked Presets
Presets are stored with the Easy Setup they are used with. If you want to lock a preset that you've created, you can make a custom Easy Setup and store it in the folder where locked Easy Setups are located. To lock a preset that you've created, as part of a custom Easy Setup, drag your custom Easy Setup from
`Library/Application Support/Final Cut Pro System Support/Custom Settings`
to
`Library/Application Support/Final Cut Pro System Support/Plugins.`

Note: You must quit Final Cut Pro and reopen the application for the preset to appear locked in one of the preset tabs in the Audio/Video Settings window.

About Audio Units Plug-ins
Audio Units plug-ins that do not support mono-to-mono processing will not load in Final Cut Pro. Audio Units plug-ins that do not support the "TailTime" property will load and will be adjustable in real time when low quality is selected for audio playback, but will always require rendering at medium or high quality. Custom Audio Units interfaces are not supported.

Opening Projects Created in Earlier Japanese Versions of Final Cut Pro
If you want to use a project that you created in an earlier Japanese version of Final Cut Pro, you must have Japanese specified as the primary language in the Language pane of the International pane in System Preferences. This ensures that the system encoding is Japanese.

Master/Affiliate Relationships Don't Automatically Work in Imported iMovie Projects
When you first open an iMovie project into Final Cut Pro, there is no master/affiliate clip relationship in the newly created project. Once you import an iMovie project, there are two ways to correctly create the master/affiliate relationships in the sequence: using the Media Manager, or using the Create Master Clips command.
To import and correctly establish master/affiliate relationships in an iMovie project:

1. Choose File>Open, navigate to where the iMovie project is located on your computer, then click Choose.
2. To use the Media Manager:
    1. Click the tab in the Browser corresponding to the imported iMovie project, then select the sequence in the project.
    2. Choose File>Media Manager.
    3. In the Media Manager, choose the following options, then click OK.
        - Media pop-up menu: Use existing
        - Delete unused media checkbox: Off
        - Duplicate selected sequence and place into a new project: On
    4. In the Save dialog, enter a name for the new project, choose a location, then click Save. A new bin is created which contains the master clips. All master/affiliate relationships will work properly in the new project you created. You can discard the originally imported iMovie project file.
3. To copy and paste and use the Create Master Clip command:
    1. Double-click the sequence to open it in the Timeline, then Choose Edit>Select All to select all clips in the sequence. Note: Don't select the sequence itself (in the Browser), or you'll end up with a nested sequence.
    2. Choose Edit>Copy to copy all the clips.
    3. Choose File>New>Sequence to create a new sequence.
    4. Double-click the sequence to open it in the Timeline, then choose Edit>Paste to paste all the clips into the new sequence.
    5. In the Browser, select the new sequence, then choose Tools>Create Master Clips.

A new bin is created which contains the master clips. All master/affiliate relationships will work properly in the new project you created. You can discard the

originally imported iMovie project file.

Sequences Not Flagged as Anamorphic When Importing iMovie Projects
If you import an iMovie project with anamorphic clips, those clips do not appear as anamorphic. For the clips to appear properly, you must change the anamorphic setting in the sequence. To change imported iMovie clips to anamorphic:

1. Open the imported sequence in the Timeline.
2. Choose Edit>Select All, then choose Edit>Cut.
3. Choose Sequence>Settings.
4. In the General tab, select the Anamorphic 16:9 checkbox, then click OK.
5. Choose Edit>Paste to paste the clips into the anamorphic sequence.

Opening Items Into the Viewer When the Playhead Sync Pop-Up Menu Is Set to Open
When you choose the Open setting in the Playhead Sync pop-up menu in the Viewer, the playhead in the Viewer is locked to the playhead in the Canvas whenever a sequence clip is opened into the Viewer, so that both playheads scrub together, displaying the same frame. As the playhead moves through your sequence, the clip that appears at the current position of the playhead is automatically opened into the Viewer.

The order in which items open into the Viewer has changed. Final Cut Pro looks first for a video item on an Auto Select track, from top to bottom tracks, then for an audio item on an Auto Select track (bottom to top), then for a video item on any video track (top to bottom), then finally, an audio item on any track (bottom to top).

If you place the playhead over a gap, no new slug is opened into the Viewer. The Viewer displays the last clip opened.

Opening Multichannel Clips Into the Viewer
If the In and Out points of a merged or linked clip's audio don't match, and you double-click the clip in the Timeline, only the individual item you clicked opens into the Viewer. If you are in the Browser and open the same merged clip into the Viewer, all linked video and audio items open simultaneously in individual tabs in the Viewer.

Field Dominance of Sequences With Progressive Scan Clips Must Be Set to None
Whenever you capture clips from progressive scan sources (such as cameras with a progressive scan mode), the field dominance of these clips should be set to None in the Format tab of the Item Properties window. You must also must make sure that all sequences you edit progressive scan clips into have their field dominance set to None. This prevents artifacts from occurring in motion effects that you apply to these clips.

Multiple Edits Window Layout Removed From Arrange Submenu
Final Cut Pro comes with a set of predefined screen layouts. These layouts determine the size and location of the four main windows in Final Cut Pro (the Browser, Viewer, Canvas, and Timeline), along with the Tool palette and audio meters.

To choose a screen layout, Choose Window > Arrange, then choose an option from the submenu. The Multiple Edits layout has been removed from the submenu and is no longer available.

Using Imported Clips and Sequence Settings
The following information is an update to the section, "Using Imported Clips and Sequence Settings" found in the Final Cut Pro User's Manual, Volume I, page 372. When you view the clip
in the Canvas, there's a black border around it because the Canvas is set to properly view clips at 720 x 480. (The manual incorrectly stated the resolution of 720 x 486.)

Sync Adjust Movies Over Preference Has Been Removed
The Sync Adjust Movies Over preference available in earlier versions of Final Cut Pro has been removed from the General tab of the User Preferences window. The A/V sync of all captured clips in Final Cut Pro 4 is automatically maintained no matter which video device you capture from.

RT Scrubbing Command Removed From the Sequence Menu
The RT Scrubbing command available in the Sequence menu of earlier versions of Final Cut Pro has been removed. Improved performance makes it no longer necessary.

Viewing Item Properties for Clips
The Item Properties window provides you with information for an individual clip. Three tabs in this window-Format, Timing, and Logging Information-allow you to view or change various properties of a clip.

In the Browser, you can only view the Item Properties of one clip at a time. If you select more than one clip, you'll only see information for the first clip. However, in the Timeline, you can select multiple clips and view all of their Item Properties in the same window.

To view Item Properties:

1. Do one of the following:
    - Select a clip in the Browser.
    - Select one or more clips in the Timeline.

2. Do one of the following:
    - Choose Edit>Item Properties, then choose an option from the submenu.
    - Control-click the clip, then choose Item Properties from the shortcut menu.

Keyboard Shortcuts for Play Every Frame Command
In the Viewer and Canvas, you can choose to play every frame of a clip. To do this using keyboard shortcuts, press Option-\\ or Option-P.

Tracks Are Not Added to the Timeline When Using the Edit Overlay in the Canvas or Keyboard Shortcuts
When you use the Edit Overlay in the Canvas or press a keyboard shortcut to perform an edit, no tracks are added to the Timeline. If a clip that you want to edit into the Timeline has more tracks than are currently present in the Timeline, you must create the necessary number of additional tracks before you can edit the clip in. If you don't, the additional tracks are not edited into the Timeline. You can also drag a clip to the audio tracks area to create an additional track.

Timecode Navigation and Shortcuts
There are several ways to enter and navigate using timecode. You can move the playhead to a specific frame by entering a complete timecode number in the Current Timecode field in the Canvas or Viewer, then press Return or Enter. You don't need to click in the field to enter a new timecode; simply enter the timecode.

To avoid typing zeroes when moving by larger amounts, type a period instead. And instead of moving the playhead to an absolute timecode number, you can move it relative to its current position by pressing the + and - keys. For example, to move the playhead 1 minute and 20 frames back from the current position, type

```
-01.20.
```

Note: The period automatically adds 00 to the minutes and seconds field.

Marking and Matching Controls
The marking and matching controls in the Canvas shown in the Final Cut Pro User's Manual, Volume II, page 105, are called out incorrectly. These controls are used to place sequence In and Out points, markers, and keyframes in the current sequence. You can also use the Match Frame control to do match frame editing in the Canvas and Viewer. The correct location of each control is shown below.

Figure 3 Mark In (A), Mark Out (B), Add Marker (C), Add Keyframe (D), Match Frame (E), Mark Clip (F)

Editing Information for a Marker
The following is an update replacing the information found in the Final Cut Pro User's Manual, Volume II, pages 274 and 275 regarding renaming and moving markers.

If you want to edit information for a marker, either the name or the position by entering new timecode, press Command-Option-M to open the Edit Marker dialog for the nearest preceding marker to the playhead (not the nearest marker).

Scrolling Vertically Through a Zoomed-In Timeline
If you're using a PowerBook computer, Shift-Page Up and Shift-Page Down do not scroll horizontally through the Timeline; instead, they scroll vertically.

Using Keyboard Shortcuts to Zoom In and Out of the Timeline
Pressing Option-+ (plus) or Option-- (minus) zooms in or out of the contents of the Timeline, as long as the Browser is not the active window.

Mute Overrides Solo in the Timeline and Audio Mixer Tab
If a track's solo control is already turned on, turning on mute overrides the solo status of that track and the track is silenced.

Determining the Duration of a Gap in the Timeline
The following is an update replacing the information found in the Final Cut Pro User's Manual, Volume II, page 262.

To determine the duration of a gap in the Timeline:

1. Make the track with the gap the destination track.
2. Lock all audio tracks or make sure Auto Select is turned off for all other tracks.
3. Position the playhead in the gap.
4. Do one of the following:
    - Choose Mark>Mark Clip.
    - Click the Mark Clip button in the Canvas.
    - Press X. The gap's duration appears in the Timecode Duration field in the Canvas.

Changing the Label of a Clip Changes Labels of All Affiliated Clips
If you use labels to identify and sort your clips in the Browser, the clips' names are highlighted in the color that matches each label. Using keyboard shortcuts, you can change the labels of clips directly in the Timeline. Changes made to the label of any clip are also applied to all of that clip's affiliated clips.

Playhead Sync Pop-Up Menu Uses Icons
The Playhead Sync pop-up menu in both the Viewer and Canvas has options listed in text, but displays the selected option with an icon, with a different icon for each option.

Keyboard Shortcut for Deselect All Has Changed
The default keyboard shortcut for Deselect All is now Shift-Command-A (not Command-D).

Assigning or Changing Destination Tracks Using the Shortcut Menu
There are several ways to assign a destination track in the Timeline or change destination track assignments. One of these is to choose an option from the shortcut menu, using the Control key. (This replaces information in the Final Cut Pro 4 User's Manual, which states that Command-clicking will display the shortcut menu.)

To assign a destination track in the Timeline:

- Control-click a Source control, then choose a new destination track from the shortcut menu.
- Control-click a destination control, then choose a Source control to assign to it from the shortcut menu.

To change destination track assignments:

- Control-click a Source control in the Timeline, then choose a track from the shortcut menu.
- Control-click a Destination control, then choose a Source control from the shortcut menu.

Timecode Overlays Information
Video and audio timecode overlays are shown at the bottom (not the center) of the Canvas and Viewer. This includes the time code for every clip in the Timeline that intersects the current position of the playhead. The column on the left shows video and the column on the right displays audio.

Drop Frame Timecode Not Available for 23.98 fps Sequences
Selecting the Drop Frame checkbox in the Timeline Options tab of the Sequence Settings window makes your timecode drop frame. This option is not available for PAL sequences or 23.98 fps sequences.

DV Timecode Is Not Always Drop Frame
DV timecode is not always drop frame only. DV timecode is always non-drop frame for 25 frames per second (fps) (PAL) and 23.93 fps (24P) recording. All DVCPRO, most DVCAM, and some DV cameras allow you to choose drop or non-drop frame timecode in their menus. For more information, see the documentation that came with your equipment.

Linking Clips in the Timeline Prior to Creating a Merged Clip
When creating a single merged clip by dragging multiple items from the Timeline into the Browser, all clips to be merged need to be selected and linked in the Timeline before they are dragged into the Browser. If you don't link them in the Timeline first, each unlinked clip will appear as a separate item when the group is dragged into the Browser.

Note: Only one video and up to 24 audio items can be linked together in the Timeline in preparation for making a merged clip.

Finding Master Clips
You may find it necessary to find the master clip in the Browser that is affiliated with a particular clip in the Timeline. You can do so using the Master Clip command.

To find an affiliate clip's master clip:

1. Select a clip in the Timeline.
2. Choose View>Match Frame>Master Clip. The master clip is automatically highlighted in the Browser.

Locating a Match Frame
Finding a match frame can be useful if you want to quickly reedit a clip that's already been edited into your sequence, or if you need to quickly access a sequence clip's master clip to edit another part of it into your program.

To open a sequence clip's master clip into the Viewer using the Match Frame option:

1. Position the playhead in the Canvas or Timeline on the clip you want to copy into the Viewer, at the specific frame that you want to locate.
2. Make sure the track that contains the clip you want to match is the destination track.

Audio Sync Tool for the Panasonic DVX-100
To address the way the Panasonic DVX-100 handles audio/video sync, the DVX-100 Audio Sync Tool plug-in is available in the DV Camera Tuner Scripts folder on the Final Cut Pro 4 installation DVD. If you're working with clips captured from the Panasonic DVX-100, you should move this plug-in to the following location:
Library/Application Support/Final Cut Pro System Support/Plugins

When the DVX-100 Audio Sync Tool plug-in is installed, a new menu item appears in the Tools menu, Offset Audio Sync.

To use the Offset Audio Sync tool:

1. In the Browser, select any clips you captured that were recorded with the DVX-100.
2. Choose Tools>Offset Audio Sync. The audio of all selected clips will be offset 2 frames later than the video to adjust their sync.

Note: Adjustments made to clips using the Offset Audio Sync command are only saved in the Final Cut Pro project file where the adjustment was made. The corresponding source media on disk is unaffected.

Using the Solo Item Command to Disable Multiple Audio Clips
The following is an update replacing the information found in the Final Cut Pro User's Manual, Volume II, page 264. The Solo Item command disables all unselected audio clips in the Timeline that appear in other tracks at the position of the playhead. (An audio clip can be enabled and disabled using the Enable command in the Modify menu.)

To disable multiple clips simultaneously:

1. In the Timeline, position the playhead on the audio clip you want to solo.
2. Select the audio clip that you want to keep enabled.
3. Do one of the following:
    - Choose Sequence>Solo Selected Item(s).
    - Press Control-S. All audio clips on tracks other than the audio clip you selected are disabled.

4. Choose Sequence>Solo Selected Item(s) again to re-enable the disabled audio clips.

Outputting Timecode During a Print to Video Operation to the DVX-100
Drop frame timecode is always written to an unstriped blank tape whenever you output video from Final Cut Pro using the Print to Tape command with the Panasonic DVX-100 camera, regardless of what timecode is set in your sequence.

To output a sequence with non-drop frame timecode:

1. Turn off 1394 TC Regen in the DVX-100 menu settings. See the documentation that came with the Panasonic DVX-100 for more information.
2. Stripe the tape you want to output to using the Black and Code control in the Edit to Tape window.

Edit to Tape Audio Insert Pop-Up Menu Has New States
Audio channels that are available to be recorded to can be enabled and disabled individually, or all at once. To record-enable an audio track, choose it from the Audio Insert pop-up menu and a checkmark appears next to it. Choose it a second time to remove the checkmark and disable the track.

Eight audio channel indicators in the Audio Insert pop-up menu indicate which audio tracks are being output. The color of an audio channel indicator indicates its state. The colors have changed. The following is an update replacing the audio channel indicators listed in the Final Cut Pro User's Manual.

- Yellow: Indicates the audio track is available.
- Gray: Indicates the audio track is unavailable.

Changes to Automatic Rendering
The following information replaces that found in the Final Cut Pro 4 User's Manual, Volume I, page 160.

The Auto Render preference allows you to take advantage of idle computer time when you're not editing to render open sequences in the Timeline. Three options determine what parts of your opened sequences are rendered and when: Start Render After, Which Sequences, and Render Real-Time Sequences. When the number of minutes specified in the Start Render After field has elapsed with no user activity, a progress dialog appears indicating the following sequence of events:

1. If Autosave is selected, the project is automatically saved prior to rendering.
2. All selected regions of the currently open sequence are rendered in this order: red, yellow, dark yellow, and orange video, then red audio (for playback).
3. Second, all red video sections are rendered.
4. All red audio (for playback) sections are rendered.
5. All yellow and dark yellow sections are rendered.
6. All orange video sections are rendered.
7. If the Render Real Time Segments option has been selected, all item render audio and green sections of the Timeline are rendered.
8. If the Which Sequences pop-up menu is set to Open Sequences, then steps 2 through 7 are followed for each open sequence. The project is automatically autosaved after each render.

Edit to Tape Window Has New Icons
In the Video tab of the Edit to Tape window, two icons have changed. The Insert Timecode icon is now a yellow round clock icon, similar to the Timecode Duration and Current Timecode icons found in the Viewer and Canvas. The Insert Video icon is now a yellow frame of film with no letters.

Support for Audio Interfaces With Multiple Input Channels
During capture, Final Cut Pro only supports the first two channels of audio interfaces with multiple input channels. Any additional channels do not appear in the Audio/Video Settings window, and appear to have fewer output channels than they really support.

Despite this, the actual number of audio output channels supported by your audio interface is available for playback, Edit to Tape, and Print to Video operations. Audio outputs in sequences may be assigned to a maximum of 24 audio channels. In this situation, you may get a warning dialog improperly stating that the output

map you've selected for this sequence contains more channels
than the output device. If you know your audio interface supports the appropriate number of audio channels, you can ignore this alert.

Rendering Nested Audio
When you add a nested audio sequence to a sequence in the Timeline and then render it, audio levels of individual channels are not reflected during playback in the Audio Mixer. A rendered nested audio sequence is mixed down to a stereo pair. Final Cut Pro 4 saves processing at the track level by reading the output only. This is also why you can't perform mixer automation within a rendered nested audio sequence.

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Final Cut Pro 4: About What's New

- **Last Modified:** June 14, 2007
- **Article:** TA27417

- **Old Article:** 93158

This is an overview of the new features in Final Cut Pro 4.

Products Affected

Final Cut Pro

What's New in Final Cut Pro 4

This is an overview of the new features in Final Cut Pro 4. For more information on these features and their use, see the Final Cut Pro 4 User's Manual or Final Cut Pro Help.

Improvements for Setup

Missing scratch disk warning

You are now warned when scratch disks become unavailable. This can happen for a number of reasons: They might be turned off, disconnected, or temporarily unmounted. If the scratch disk folder you selected has been moved, deleted, or renamed, Final Cut Pro might not be able to find the scratch disk. The next time you open Final Cut Pro, if the scratch disk can't be found, a dialog appears with three options:

- Quit
- Set Scratch Disks : Choose a new scratch disk
- Check Again : Allows you to reconnect or start up your scratch disk, wait for it to mount, and then proceed as usual.

New screen layouts

There are several new screen layouts, including:

- Audio Mixing: This places the Viewer, Canvas, and Tool Bench at the top of the screen. The Tool Bench window contains the Audio Mixer tab. The Browser and Timeline are on the bottom, with the Tool palette and audio meters to the right of the Timeline.
- Multiple Edits: This layout only appears if your screen resolution is set to 1280 x 854 or higher. This layout is useful for comparing three clips in a sequence in a row for color correction. At the top of the screen, from left to right, are the Viewer; a Tool Bench window with a Frame Viewer tab showing the previous edit point; the Canvas; and another Tool Bench window with a Frame Viewer tab showing the next edit point. The Browser and Timeline are on the bottom, with the Tool palette and audio meters to the right of the Timeline.

Other improvements to screen layouts include the following:
You can now create and save multiple-monitor screen layouts.
Screen layouts are now resolution specific; a new screen layout's minimum required resolution is the resolution your monitor was set to when that layout was created.

Interface Enhancements

Customizable keyboard shortcuts

All commands in Final Cut Pro can be assigned to customizable keyboard shortcuts using the Keyboard Layout window by choosing Tools>Keyboard Layout>Customize. The default keyboard shortcut layout can be changed at any time to better suit your needs. For example, if your style of editing requires a

particular set of commands that isn't readily available by default, you can modify the default keyboard layout with your own set of commands.

You can also create different keyboard layouts for different tasks, switching between them at will. For example, you may find it useful to create different keyboard layouts for editing, color correction, and audio mixing.

Customizable button bars in each window

Shortcut buttons can be created and placed along the top of the main windows in Final Cut Pro-the Browser, Viewer, Canvas, Timeline, and any Tool Bench windows. You can then click any of the shortcut buttons in this button bar to perform commands, instead of entering key combinations or using menus.

Resize multiple Final Cut Pro windows simultaneously

You can now place the pointer at the intersection of two or more windows in Final Cut Pro and resize all of them simultaneously when the Resize Window pointer appears. To resize multiple windows in Final Cut Pro, move the pointer over the border between the windows you want to resize. When the pointer changes to the Resize Window pointer, drag the border in the desired direction to resize the appropriate windows. The windows on either side of the border are resized accordingly.

Resize individual tracks in the Timeline
You can change the size of individual tracks in the Timeline by dragging a track's boundary in the Timeline patch panel:

- If it's a video track, drag the upper boundary of the track in the Timeline patch panel.
- If it's an audio track, drag the lower boundary of the track in the Timeline patch panel.

Save custom Timeline track layouts
Once you've created a custom track layout for your sequence, you can save it for future use. Saved custom track layouts appear in the Track Layout menu, and can be applied to any sequence that's open in the Timeline. Up to 40 custom track layouts can appear in the menu at once.

Assign destination tracks for editing using the new Timeline patch panel
Many editing operations in Final Cut Pro require you to use the Source controls in the Timeline to assign destination tracks to determine where edited, duplicated, or moved clips will appear. Source and Destination controls are located in the Timeline patch panel, at the left of the Timeline window.

When you open a clip or sequence into the Viewer, a number of Source controls appear in the Timeline patch panel and correspond to the number of video and audio items that make up that clip, or the number of tracks that appear in that sequence. For example, if you open a clip into the Viewer that contains one video and four audio items, one video and four audio Source controls appear in the Timeline patch panel.

A merged clip may consist of 1 video and up to 24 audio items, so typically as many as 25 Source controls will appear in the Timeline. You can also open a sequence into the Viewer, in which case as many as 99 video and 99 audio tracks can appear in the Timeline, depending on how many tracks there are in the sequence. Whenever you open a new clip or sequence into the Viewer, the number of Source controls in the Timeline patch panel updates to reflect the number of video and audio items in the new clip or sequence.

Auto Select controls in the Timeline
Enabling the Auto Select controls of specific tracks in the Timeline allows the contents of those tracks to be selected via In and Out points in the Timeline or Canvas, just as if you'd used the Range Selection tool. When In and Out points are defined in the Timeline, operations such as the Copy command and lift edits are limited to the selected regions of tracks that have Auto Select turned on.

When one or more Auto Select controls are enabled, regions of clips in the Timeline defined by In and Out points are highlighted, which indicates that these regions can be operated upon.

Mute and solo controls in the Timeline
Click a track's mute button to turn off audio playback for that track. The mute button affects monitoring during playback only. When a track is muted, it isn't audible during playback, but is still output during Print to Video and Edit to Tape operations, or when exported to an audio or movie file.

Click a track's solo button to mute all tracks that don't also have solo enabled. For example, if you click the solo button on track A1, and it's the only track with solo selected, all other audio tracks are muted. If you enable the solo button on multiple tracks, all tracks with solo enabled play back, while all other tracks are muted. Like the mute button, the solo button affects monitoring during playback only. If solo is enabled on at least one track in a sequence, tracks that don't have solo enabled are not audible during playback, but are still output during Print to Video and Edit to Tape operations, or when exported to an audio or movie file.

New Timeline zoom functionality
Timeline zoom functionality has been improved. You can zoom into the Timeline in any of the following ways:

- Drag the thumb tabs on either side of the Zoom slider to adjust both ends of your view at the same time. If the playhead is visible, it stays centered during the zoom. If the playhead is not visible, the visible area of the Timeline stays centered.
- Hold down the Shift key while you drag one of the thumb tabs to zoom in or out of your sequence from the selected end of the Zoom slider, while keeping the other thumb tab locked in place. This also moves the visible area of the Timeline in the direction you're dragging as you zoom.
- Click or drag the Zoom control to view the Timeline at a different time scale while keeping either the playhead or the current area of the Timeline centered. Clicking to the right of the control zooms out to show more of your sequence; clicking to the left zooms in to show more detail.

Custom column layout menu in the Browser
You can create customized column layouts for your own specific uses, and save these arrangements as custom layouts for easy access at any time. The custom column layouts you save appear in the shortcut menu that appears when you Control-click any column heading in the Browser except the Name column.

New Preferences

New organization of preferences
All preferences have been reorganized into two windows-User Preferences and System Settings.

Memory usage settings
Two sliders in the Memory & Cache tab of the System Settings window allow you to decide how much of the available RAM in your computer to use when working in Final Cut Pro. Your computer's available RAM is defined as the amount of RAM not used by Mac OS X and other currently open applications. By limiting the amount of RAM Final Cut Pro uses, you can maintain Final Cut Pro's performance by preventing Mac OS X from using virtual memory unnecessarily. This is especially important when multiple applications are open at the same time.

Additional Timeline display options
There are several new display options for the Timeline in the Timeline Options tab of the User Preferences window, including:

- **Show Duplicate Frames**: Select this option to mark clips that are used more than once within a single edited sequence. Colored bars appear at the bottom of the clip's video item in the Timeline if that clip has been used more than once. You can adjust the parameters that determine when duplicate frames indicators appear in the General Preferences tab.
- **Show Audio Controls**: Select this option to display the mute and solo buttons to the left of each audio track in the Timeline. By default, these controls are hidden. Audio controls can also be displayed using the Audio Controls button in the Timeline.
- **Video and audio keyframe editor**: The keyframe editor shows you keyframe graphs for motion effects or parameters of filters applied to clips in your sequence. These graphs are identical to those found in the keyframe graph area of the Motion and Filters tabs in the Viewer. You can edit keyframes in the keyframe editor using the Selection and Pen tools. The keyframe editor can only display the keyframe graph of one effect parameter at a time.
- **Video and audio speed indicators**: Speed indicators show you the speed of clips in your sequence using tic marks. The spacing and color of these tic marks indicate the speed and playback direction of your clips. The speed indicators of clips in the Timeline update in real time as you make variable speed adjustments to clips in your sequence, showing you exactly how you're altering a clip's timing. There are no user-adjustable controls in the speed indicator area.

Audio Outputs tab
The Audio Outputs tab contains a list of presets that allow you to define the number of audio output channels that are available to your sequence via external audio interfaces connected to your computer. The selected audio output preset is automatically assigned to all new sequences and projects you create. Each sequence in your project has its own individual audio output settings. After a sequence has been created, any future changes to its audio output settings must be made in the Audio Outputs tab of the Sequence Settings window.

Real-Time and Rendering

Unlimited RT
Selecting the Unlimited RT option in the RT pop-up menu in the Timeline allows Final Cut Pro to play additional real-time effects that exceed your computer's real-time playback capabilities. Unrestricted real-time playback allows you play more effects, but increases the likelihood that your sequence will drop frames during playback. This mode is useful for getting a real-time preview of complex effects compositions.

RT pop-up menu in the Timeline
The Real-Time Effects (RT) pop-up menu allows you to adjust the playback quality of real-time effects in Final Cut Pro. Using the options in this menu, you can decide which is more important to you-visual playback quality, or maximizing the available effects that can be played back in real time.

For example, if it's more important to you to be able to view your program at the highest quality, you should deselect the Unlimited RT option and select the High playback option in this menu. This ensures that your program's video quality is always as high as possible, and that no frames are dropped during playback. The tradeoff in this case is that the number of simultaneous real-time effects that can be played back is reduced.

If you'd rather lower the playback quality of your video in order to increase the number of real-time effects that can be played back, you can select the Unlimited RT and Low playback quality options to maximize your computer's playback performance.

When you want to output your program to video, you can choose whether to render the effects that won't output at full quality in real time, or output them at the reduced quality you've selected in order to avoid rendering.

Note: Final Cut Pro always warns you before outputting video to tape at reduced quality when you use the Print to Video and Edit to Tape commands.

Software-based real-time effects can be output using FireWire and other built-in video interfaces
All real-time effects can be output to an external video monitor using FireWire or the built-in video output of a Macintosh PowerBook G4. This is true whether you're using OfflineRT or DV source media in your projects. Outputting real-time effects to video using FireWire is a processor-intensive operation, requiring a very fast computer. Outputting this way will significantly reduce the maximum number of effects that your computer can play in real time.

Real-time pull-down insertion for 24 fps sequences
If you're editing 24 fps video, Final Cut Pro can play back and export your DV or OfflineRT sequence with 3:2 pull-down added. This lets you output 24 fps video to 29.97 fps using FireWire or the built-in video output of a Macintosh PowerBook G4 for viewing or exporting to tape, all in real time.

Improved management of audio and video render cache files
Audio and video render cache files are handled differently, eliminating the need to rerender effects in many instances:

- Audio and video render cache files are now managed separately. Modifying video edits and making changes to video effects that overlap audio effects no longer affects rendered audio render cache files, and vice versa.
- Audio and video render cache files are preserved when clips are duplicated or copied and pasted.
- New item-level rendering of audio clips allows you to preserve audio cache files for audio effects and rendered resampling while making changes to volume and panning levels.

Real-time effects playback and rendering options
Three new tabs allow you to control real-time effects playback and rendering in your projects:

- The Render Control tab in the User Preferences window allows you to enable and disable the most processor-intensive effects in Final Cut Pro. Changing the settings in the Render Control tab of the User Preferences window changes the default Render Control options that all new sequences are created with. To change the Render Control settings for existing sequences, alter these settings in your sequence's Sequence Settings window.
- All settings in the Playback Control tab in the System Settings window remain the same for all sequences and projects opened on that computer. These settings also appear in the RT pop-up menu in the Timeline. Using these settings, you can decide which is more important to you-visual playback quality, or maximizing the available effects that can be played back in real time.
- The Effect Handling tab in the System Settings window allows you to set how real-time effects are processed for clips compressed using a real-time-capable codec. This includes clips captured and compressed using the DV, DVCPRO-50, and Photo JPEG codecs. Such clips, by default, can play back software-based real-time effects applied directly in Final Cut Pro. If a third-party capture card capable of real-time effects processing is installed that can process these codecs, you can reassign real-time effects handling to your hardware, instead.

Auto-rendering
The Auto Render preference allows you to take advantage of idle computer time when you're not editing-such as during a coffee break or lunch-to render open sequences in the Timeline. Options in the General tab of the User Preferences window allow you to define how long to wait before rendering, which sequences to render, and whether or not to render real-time effects in the selected sequences.

Support for 10-bit video processing
Final Cut Pro now supports 10-bit video processing for selected filters and transitions.

Capture/Output

Automatic timecode break handling during capture
New timecode break handling allows Final Cut Pro to automatically capture over timecode breaks without interruption. You can now capture the footage from an entire tape, skipping every timecode break on the tape. The "On timecode break" pop-up menu in the General tab of the User Preferences window gives you three ways to avoid capturing media with timecode breaks:

- **Make New Clip**: This is the default option. Video that has already been captured before the break in timecode is saved as a single clip, with its Out point set to the frame occurring immediately before the dropped timecode instance. Final Cut Pro then automatically continues capturing video after the dropped timecode frame as a second media file. When this option is selected, clips captured after timecode breaks are named with the original name plus a dash and the number of the clip. For example, if the first captured clip's name is "Cats Playing," then the second clip's name is set to "Cats Playing-2." This is a good setting if you are batch capturing an entire tape at once. For example, suppose you are capturing the entire contents of a 60-minute tape that had four timecode breaks. Instead of making you restart capture every time a timecode break is detected, Final Cut Pro captures all media from the tape as five clips, skipping every timecode break and ensuring that the timecode of all captured media is frame-accurate and in sync.
- **Abort Capture**: If this option is selected, capture is stopped whenever a timecode break is detected. All media captured before the timecode break has frame-accurate timecode and is preserved. The resulting open media clip is saved to the Browser.
- **Warn After Capture**: If this option is selected, timecode breaks are reported after capture and the media file with the timecode break is preserved. It is unwise to use such a clip unless you have no choice, because timecode breaks result in incorrect timecode from the timecode break forward, and will impair your ability to accurately recapture your media.

Capturing audio and video to separate files now creates true merged clips
When you capture video and audio to separate files, two sets of media source files are saved on your hard disk, but the clips appear in your project as merged clips. Capturing your video and audio as separate files allows you to divide the workload between two scratch disks, maximizing the performance of each scratch disk you're using so that you can capture your video at the highest possible data rate. Video and audio media files that have been captured separately are no longer dependent on one another.

Advanced pull-down removal
Select the "Remove Advanced Pulldown (2:3:3:2) From MiniDV Sources" setting of your capture preset if you're capturing from a DV format source that used the 2:3:3:2 pull-down method to capture 24P video. You want to remove the 2:3:3:2 pull-down to eliminate the redundant frame fields created by the pull-down so that you can edit true 24 (actually 23.98) fps progressive video.

Pull-down insertion
If you're editing a sequence with a 23.98 fps timebase and you want to output to an NTSC device via FireWire, you can choose one of three pull-down insertion patterns from the RT pop-up menu in the Timeline. Pull-down insertion is a method of converting 23.98 fps video to the NTSC standard of 29.97 fps video. Depending on the speed of your computer, you can select from 3:2, 2:3:3:2, or 2:2:2:4 pull-down.

Control the quality of effects being output to video
When outputting a sequence with draft-quality proxy effects to video, you can choose whether to render the effects that won't output at full quality in real time, or output them at the reduced quality you've selected in order to avoid rendering by choosing Use Playback Settings from the RT pop-up menu in the Timeline.

Capturing audio using house sync
When capturing audio intended to be synchronized to video from a separate source, it's important that your device-controllable audio deck be synchronized to your computer via a common video timing signal, such as a blackburst generator (also referred to as house sync). This is true even if you're capturing your audio via a dedicated audio capture interface. This can be accomplished by connecting a blackburst generator to both the genlock connector (also called external sync) of your audio deck and to the genlock connector of an external video capture interface connected to your computer. When capturing audio from a genlocked audio deck, you need to select "Sync audio capture to video source if present" in the General tab of the User Preferences window.

Support for separate video and audio capture interfaces

You now have the ability to specify separate video and audio capture interfaces in the A/V Devices tab of the A/V Settings window.

Support for multichannel audio output
Final Cut Pro supports audio output via up to 24 outputs using Mac OS X-compatible audio interfaces. The Audio Outputs tab of the Sequence Settings window allows you to define the number of audio output channels that are available to tracks in your sequence via the external audio interface connected to your computer. All audio tracks in a sequence can be assigned to specific pairs of audio outputs using the shortcut menu in each audio track header in the Timeline.

Support for multichannel audio during Edit to Tape operations
Using a Mac OS X-compatible audio interface, you can now output up to eight audio channels while using the Edit to Tape command. The number of audio tracks that can be recorded to when using the Edit to Tape command depends on the number of audio tracks your video or audio recording device supports. When using a video or audio interface capable of outputting more than two channels of audio, you need to manually choose an appropriate audio track configuration based on the video or audio recording device you're recording onto. You can specify this configuration by selecting or creating a device control preset, and setting the Audio Mapping pop-up menu in the Device Control Preset Editor to the appropriate configuration for your recording device. The Audio Mapping pop-up menu does not automatically detect the number of audio tracks your video or audio recording device is capable of recording to. You need to choose a configuration based on your recording device's capabilities.

Clip Handling

Support for merged clips using separate video and audio source media
A merged clip is one that links to more than one source media file on disk. For example, a merged clip might link to both a QuickTime video file and a separate audio file. Merged clips allow you to synchronize the audio and video items of footage shot via dual system recording. Instead of syncing your video and audio onto tape prior to capturing, you can capture your audio and video separately, and then merge them together in Final Cut Pro.

You can sync a video clip with up to 12 stereo or 24 mono audio clips (merged clips can contain a total of 1 video and 24 audio items) using their timecode, In points, or Out points. After a group of clips has been synchronized in preparation to create a merged clip, select them all and choose Modify>Merge Clips.

New master/affiliate clip relationships within a project
Final Cut Pro 4 introduces master/affiliate clip relationships for clips used in a project. The first instance of a clip that is captured or imported into a project is a master clip. Editing a master clip into a sequence or duplicating it in the Browser results in the creation of a sequence clip or duplicate clip that is an affiliate of the original master clip. A relationship exists between the original master clip in the Browser and all edited or duplicated affiliates of that clip that appear in every sequence and in every bin of that project. For any group of affiliated clips in a project, there is only one master clip.

As a result of the relationship between master and affiliate clips, changes made to certain properties of a master clip, such as Clip Name, Reel Name, or Timecode, are automatically made to all affiliated clips within the current project. These same changes, if made to an affiliate clip, are also made to that clip's master clip, as well as to all other affiliated clips in the current project.

The online or offline state of clips is also automatically updated among all affiliated clips in a project, all at once. Suppose you open a project in which all the clips are offline. Relinking that project's master clips in the Browser automatically relinks all the affiliate clips that appear in each of that project's sequences, as well.

New commands, including Reveal Master Clip, Duplicate as New Master Clip, and Make Independent Clip, allow you to manage these clip affiliations. The Match Frame command opens a clip's affiliated master clip from the Browser.

Improvements to the Media Manager
Two new options give you more control over operations performed by the Media Manager.

- Include affiliate clips outside selection: You can choose whether or not to include additional marked master clip media and other affiliated clips in the selected Media Manager operation. How much extra media will be included depends on whether or not the "Duplicate selected items and place into a new project" option is selected.
  Including affiliate clips may dramatically increase the amount of media included by the Media Manager operation, but it will ensure that you include the maximum amount of useful footage by including master clip media that
  - is marked by an In point, Out point, or both
  - falls between two unconnected clips derived from the same master clip
  - appears as an affiliate clip in another sequence
- Base media file names on: This pop-up menu lets you determine how clips are named when they're segmented as a result of the "Delete unused media" option. Since the clip names used in your project do not necessarily match the name of the source media files on disk (you may have renamed them manually, for example), you can specify which names to use. You have two options:
  - Existing file names: Filenames of clips created by the Media Manager are based on the source media files on disk.
  - Clip names: Filenames of clips created by the Media Manager are based on the names you've given the clips inside your project.

Improvements to the Item Properties window
The Item Properties window has been updated. Three tabs in this window-Format, Timing, and Logging Information-allow you to view or change various properties of a clip. The Item Properties window can now show information for a group of linked clips in a sequence, merged clips, and groups of sequence clips that have been opened simultaneously.

Improved item linking in the Timeline
You can now link up to 1 video item and 24 audio items in the Timeline.

Additional support for modification of timecode in source media files
You can modify the Reel, Timecode, Aux 1, and Aux 2 timecode tracks directly in a clip's source media file on disk.

Editing

Dynamic trimming in the Trim Edit window
A new Dynamic Trimming option in the General tab of the User Preferences window allows editing in the Trim Edit window using the J, K, and L keys.

Dupe detection
You can now turn on the Show Duplicate Frames option in the Timeline Options tab of the Sequence Settings window. This option marks clips that are used more than once within a single edited sequence with colored bars appearing at the bottom of the clip's video item in the Timeline. Two options in the General tab of the Preferences window, Dupe Detection Handle Size and Dupe Detection Threshold, affect when and how duplicate frames indicators appear in the Timeline.

- Dupe Detection Handle Size: Adds frames to the beginning and end of the clip regions which are used for comparison, to determine whether or not to display duplicate frames indicators. This can be used to take into account the extra frames that must be used for physically cutting and cementing pieces of negative that are necessary for film matchback, to prevent you from accidentally including frames that can't really be used. By default, this is set to 0.
- Dupe Detection Threshold: Allows you to set a minimum number of frames that must be duplicated before a duplicate frame's indicator will appear. By default, this is set to 0 so that all instances of duplicated frames are indicated. You can set it as high as 99 frames (3 to 4 seconds, depending on the frame rate), in which case there would have to be a minimum of 99 consecutive duplicated frames before a duplicate frames indicator would appear.

Auto Select controls in the Timeline
Enabling the Auto Select controls of specific tracks in the Timeline allows the contents of those tracks to be selected via In and Out points in the Timeline or Canvas, just as if you'd used the Range Selection tool. When In and Out points are defined in the Timeline, operations such as the Copy command and lift edits are limited to the selected regions of tracks that have Auto Select turned on. When one or more Auto Select controls are enabled, regions of clips in the Timeline defined by In and Out points are highlighted, which indicates that these regions can be operated upon.

Editing clips from one sequence to another
Instead of nesting one sequence inside of another, you can edit the content of sequence A into sequence B-placing all of sequence A's clips directly into the Timeline of sequence B exactly as they appear in sequence A-using the Command key. Hold down the Command key while dragging sequence A into the Canvas to edit the clips contained by sequence A into sequence B.

Asymmetrical trimming
Asymmetrical trimming allows you to ripple edit opposing video and audio edit points in the Timeline to create split edits. Using the Ripple tool, you can Option-click to select an outgoing video edit point, then Command-click an opposite incoming audio edit point. When you use the Ripple tool to trim these selected points, they move in opposite directions, allowing you to create a split edit. For more information, see Late-Breaking News available via the Help menu.

Viewing media time or clip time in the Viewer
You can view the timecode of a clip in the Viewer using Source Time or Clip Time. Choosing Source Time guarantees that the current timecode displayed represents the timecode associated with that frame in your source media file. For example, if you change the speed of a clip to 50 percent, you effectively double the number of frames in that clip. With Source Time selected, each duplicated frame shows the correct timecode number of the frame in the media file it came from. Displaying Source Time is also useful for showing timecode with a timebase that doesn't match that of your sequence. For example, if a 29.97 fps clip is set to display the timecode from a 24 fps Aux 1 timecode track, choosing Source Time will accurately present these values in the Viewer. Source Time is always displayed in the Viewer and Browser in italics. If you choose Clip Time, the timecode displayed in the Viewer is incremented from the first timecode value in the clip forward, regardless of whether the timecode is correctly representing the current frame.

To choose Source Time or Clip Time, Control-click in the current timecode window of the Viewer, then choose a display method from the shortcut menu.

Ganging the Viewer and Canvas using the Playhead Sync pop-up menu
You can lock the playhead in the Viewer to the playhead in the Canvas so that they move together while scrubbing through clips. This is known as ganging. Ganging allows you to trim a clip in the Viewer by a duration specified by some event in the Timeline, such as the duration of an actor's action, the length of a clip, or the distance between two markers.

Ganging is especially useful when you're modifying clips with color correction filters applied. When adjusting color correction filters, you want to see the Color Correction tab in the Viewer that corresponds to the clip in the Canvas so that you're adjusting the right clip. Ganging lets you do this.

You use Playhead Sync pop-up menu to choose from four different ganging options:

- **Off**: Disables Viewer/Canvas ganging. The Viewer and Canvas playheads move independently of one another. This is the default behavior.
- Follow: The playhead in the Viewer is locked to the playhead in the Canvas whenever a sequence clip is opened into the Viewer, so that both playheads scrub together, displaying the same frame. For example, moving the Timeline playhead to the 20th frame of a clip in your sequence also moves the Viewer playhead to the 20th frame of that sequence's clip if it is also opened in the Viewer.
- **Open**: This option is identical to Follow, except that as the playhead moves through your sequence, the clip that appears at the current position of the playhead is automatically opened into the Viewer. For example, moving the Timeline playhead from clip A in your sequence to clip B opens clip B into the Viewer, with the playheads in the Viewer and in the Canvas both ganged to the same frame. The tab currently selected in the Viewer remains the selected tab, even though a new clip has been opened into it. The Open ganging option is useful when adjusting multiple clips that have color correction filters applied to them-as you move the playhead from clip to clip, the Color Correction tab updates to reflect the settings applied to whichever clip is at the current position of the playhead.
- **Gang**: When this option is selected, the offset between the current position of the playhead in the Canvas and the current position of the playhead in the Viewer is maintained as both playheads move together. This mode is useful for editing operations in which you want to mark In or Out points using durations defined by items or markers in the Timeline as your reference.

Audio

Audio Mixer tab in the Tool Bench
A new Audio Mixer tab in the Tool Bench has controls comparable to those of an automated hardware mixing console. Each audio track in the currently selected sequence is represented by a track strip, complete with solo and mute buttons, a stereo panning slider, and a volume fader. You can make fine adjustments to the audio in your program by manipulating these graphical controls in real time while you listen to your program play back. Final Cut Pro records the gestures you make with the mixing controls, adjusting the levels of clips in your sequence accordingly. Adjusting the levels of your tracks this way as you listen to them play back allows you to create mixes more quickly than does directly manipulating a track's volume overlays. The Audio Mixer tab has the following controls:

- track strip controls allowing real-time mixing and automation recording for volume and panning levels
- mute and solo monitoring controls
- master level, master mute, and mixdown controls
- individual track audio meters
- master output meters showing mixed levels for each assigned audio output
- controls to show and hide individual track strips
- up to four different mixer views, each with a different set of visible track strips
- the ability to turn on and off keyframe recording

Real-time automation recording
When the Record Keyframes checkbox in the Audio Mixer tab or in the General tab of the User Preferences window is selected, Final Cut Pro records all changes you make to audio controls during playback as keyframes in the corresponding parameter overlay of the audio clip you are adjusting. This is referred to as recording mixer and effects automation. You can record automation in real time during playback for

- volume and panning levels using the fader and pan controls in the Audio Mixer tab
- audio effects parameters using audio filter controls in the Filters tab of the Viewer

Keyframe thinning
A new Audio Keyframe Thinning pop-up menu in the General tab of the User Preferences window allows you to control how detailed keyframe automation is when recorded using the Audio Mixer or audio filter controls. There are three choices:

- **All**: Records the maximum number of keyframes possible while you move a track strip's fader or panning slider. The end result is a precise re-creation of the levels you set using the Audio Mixer. The drawback to this option is that you might end up with an extremely dense cluster of keyframes in the audio level overlays of the affected clips that can be difficult to edit later.
- **Reduced**: Reduces the number of recorded keyframes that are created when you move a track strip's fader or panning slider. The resulting level or panning overlay in the Timeline or Viewer is an accurate reproduction of the levels you set, but is easier to edit using the Selection or Pen tool.
- **Peaks Only**: Records only the minimum number of keyframes necessary to approximate the levels you recorded when moving a track strip's fader or panning slider. Keyframes recorded using the Peaks Only option reflect only the highest and lowest levels that were recorded. This is primarily useful when you want to record a minimum number of keyframes to edit later in the Timeline or Viewer.

Support for multichannel output and Mac OS X-compatible audio interfaces
New support is available for specifying Mac OS X-compatible audio interfaces for capture and output in the Audio/Video Settings window. New settings in the Audio Outputs tab of the Sequence Settings window allow you to define the number of audio output channels that are available to assign to audio tracks from your sequence, using whichever external audio interface or third-party video capture card is connected to your computer. By default, a stereo preset is enabled, and will work with the audio output built in to your computer, as well as with most DV camcorders and third-party video capture interfaces. If you have a more sophisticated audio interface specified in the Audio/Video Settings window that supports more than two channels of audio output, you can create a new preset to define these additional audio output channels.

Export multiple audio outputs to AIFF files
The Export Audio to AIFF(s) command in the File>Export submenu gives you the opportunity to export every audio output channel that's defined in the Audio Outputs tab of your sequence's settings as a separate AIFF file. You also have the option of saving each exported AIFF file at 24-bit resolution, which is useful because Final Cut Pro mixes the audio in your program at 32-bit internal resolution, even if your source audio is 16 bit. Since all audio calculations are made with higher precision to maximize the quality of your program's audio, using this command to export your audio preserves this quality.

New support for Audio Units
Final Cut Pro includes a set of Audio Units filters that you can use to adjust your audio clips. The Audio Units format is the standard Apple audio plug-in format for Mac OS X applications.

Third-party Audio Units are also available; before purchasing third-party Audio Units filters for use with Final Cut Pro, check with the third-party manufacturer to make sure they're compatible. Currently, Final Cut Pro only works with Audio Units filters that are capable of accepting mono audio as input, and can output a mono signal. Also, certain Audio Units filters that don't support certain properties required by Final Cut Pro for real-time playback will require rendering before playback. For information on how to install third-party audio filters, see the information that accompanied them.

Effects

New real-time variable speed effects
You can now apply variable speed to a clip. Also referred to as time remapping, this allows you to dynamically alter the speed of a clip, alternating among a range of speeds, in forward or reverse motion, throughout any duration you specify. Variable speed allows you to create sophisticated motion effects in which subjects appear to smoothly shift across a variety of different speeds, with hard or gradual transitions between each change. Speed changes you apply to clips in your sequence play back in real time. There are two ways you can make variable speed adjustments: m Timeline: One of the simplest ways to make variable speed changes is to use the Time Remap tool in the Tool palette to make adjustments to clips directly in the Timeline. As you work with this tool, an outline of your clip appears that shows you which source frame in the clip is being remapped to what time. Optionally, you can choose to display speed indicators and a keyframe

graph underneath that clip's track in the Timeline, to help you see what you're doing. m Time graph: You can also add, subtract, smooth, and adjust time remap keyframes using the time graph of the keyframe editor in the Timeline or in the Effects tab of a clip in the Viewer. Speed indicators in the Timeline Speed indicators underneath each track in the Timeline can be displayed, and show you the speed of clips in your sequence using tic marks. The spacing and color of these tic marks indicate the speed and playback direction of your clips. The speed indicators of clips in the Timeline update in real time as you make variable speed adjustments to clips in your sequence, showing you exactly how you're altering a clip's timing. There are no useradjustable controls in the speed indicator area. More real-time filters and motion effects Many more of the Final Cut Pro video filters, audio filters, and transition effects have been optimized to work in real time. New Timeline keyframe editor Keyframe editor areas can be displayed underneath each track in the Timeline. The keyframe editor shows you keyframe graphs for motion effects or parameters of filters applied to clips in your sequence. These graphs are identical to those found in the keyframe graph area of the Motion and Filters tabs in the Viewer. You can edit keyframes in the keyframe editor using the Selection and Pen tools. The keyframe editor can only display the keyframe graph of one effect parameter at a time. Keyframe graphs displayed in the keyframe editor are color-coded: motion parameter graphs are blue (matching the color of the blue motion bar), filter parameter graphs are green (matching the color of the green filter bar), audio levels are pink, and panning levels are purple.

New Frame Viewer tabs
Frame Viewer tabs in Tool Bench windows can be used to visually compare multiple frames from the same sequence. This is particularly useful when performing a color comparison of multiple clips in the same setting where the lighting attributes may have changed. In Final Cut Pro, you can open as many Frame Viewer tabs in as many Tool Bench windows as necessary to compare as many frames as you need. If you've arranged multiple Frame Viewers to accomplish a specific task, you can save your custom configuration by choosing Window>Arrange>Save Window Layout. For more information about saving window layouts, see the Final Cut Pro User's Manual or Final Cut Pro Help, Volume I, Chapter 4, "The Final Cut Pro Interface."

You can set a Frame Viewer tab to display the current frame, adjacent edit points, or the In and Out points in the Canvas and Timeline. You can also compare two frames within a single Frame Viewer tab using the split-screen buttons. You can split the screen either vertically or horizontally, or create a rectangular region showing the split as a picture-in-picture. You can configure the Frame Viewer to display those individual frames that are most useful for making comparisons in your project.

Improvements to the Color Corrector and Color Corrector 3-way filters
Additional features have been added to the Color Corrector and Color Corrector 3-way filters.

- The Hue Matching controls provide a way to adjust the color balance of the current clip, based on a specific hue, to match a similar hue in another clip. A common example of when you might use the Hue Matching controls is to match the flesh tones of an actor in two different shots that have different lighting.
- New Edge Thin and Softening controls in the Limit Effect section of the Color Corrector and Color Corrector 3-way filters allow you to make fine adjustments.

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Languages

- English
- 日本語

Compressor: Late Breaking News

- **Last Modified:** October 04, 2008
- **Article:** TA27418

- **Old Article:** 93159

Learn about the important late-breaking information for Compressor.

Products Affected

Final Cut Pro

Late-Breaking News About Compressor

For the latest information about product updates, tips and techniques, and qualified third-party devices, visit the Compressor website at http://www.apple.com/finalcutpro/compressor.html.

Circular Watermarks Look Elliptical With MPEG-2 Presets
If you have an image of a circle that you want to use as a watermark, it may end up looking elliptical. This is caused by a conflict between different pixel types-square and non-square- that are used between the source and output formats. To avoid this, when making the circle image, reshape it to approximate an ellipse. It will then be reshaped back into a circle.

Some Letters Appear Distorted When Using the Text Overlay Filter With MPEG-2 Presets
When using the Text Overlay filter with MPEG-2 presets, some letters-such as P and L-may not look correct. This is caused by a conflict between different pixel types-square and non-square- used between the source a
nd output formats. There is currently no work around for this situation.

Incorrect Preset Names Appear for Source Media Files Dragged From the History Drawer
If you drag a submitted job from the History drawer to the Batch table for resubmission, the Preset column displays the output filename of the media file as well as the preset name. This applies to presets for all encoders, but it has no impact on the resulting output media file.

Media File Codecs May Be Unrecognized When Working With Third-Party Codecs
Compressor supports any of the QuickTime codecs. However, if you attempt to transcode a file whose codec is not installed, you may see strange drawing behavior throughout the application. Typically, parts of your monitor are drawn in black, and movies don't appear in the Preview window. Make sure you have the proper codec installed for your source media file.

To see which codec was used to create your source media file:

1. Open your source media file in QuickTime Player.
2. Choose Window>Show Movie Info.
3. Click the More Info disclosure triangle and view the Format line. The Format line displays the codec name as well as the original frame size and depth format. Once you see which codec is used by your source media file, you can check to see if Compressor will recognize it.

To see whether Compressor will recognize your source media file's codec:

1. Open Compressor.
2. Either select an existing QuickTime preset or create a QuickTime preset.
3. Click the Video Settings button in the QuickTime Encoder pane to open the Compression Settings dialog.
4. Open the Codec pop-up menu at the top of the dialog and view the codecs listed.

If you don't see your source media file's codec listed, Compressor will not recognize your source media file.

Remote Destination User Names
If you are creating a remote destination, be sure to use UNIX-acceptable characters. User names containing characters inadmissible in UNIX filenames will not be recognized by Compressor.

Presets and Preset Groups Must Be Deleted One at a Time
Compressor only allows you to delete one preset or preset group at one time. If you select more than one preset or preset group, the Remove button becomes dimmed.

Presets Can Only Be Added to a Preset Group One at a Time
If you want multiple presets in a preset group, you must drag them from the Presets table to the preset group one at a time.

Presets Can Only Be Duplicated One at a Time
You cannot select multiple presets and duplicate them at the same time; the Duplicate button becomes dimmed. You must duplicate presets one at a time.

Presets Cannot Be Dragged Out of Preset Groups
Once you have dragged a preset into a preset group, you cannot drag it out again; however, you can drag it to another preset group. You can delete a preset from any group using the Remove button or Delete key.

No Notification Notice Is Given Before Deleting Presets or Preset Groups
There is no confirmation message when deleting a preset or preset group after you click the Remove button or press the Delete key.

Some Final Cut Pro Output Media Files Are Saved to the Root Boot Partition
If you are using Compressor to transcode a Final Cut Pro project and you choose Source as your destination, your resulting file(s) are saved to the root boot partition of your computer rather than to the source location.

Output Filename Identifiers in Droplets Appear in Symbol Format
Unlike the plain English filename identifier format used in the Destinations window, the Droplet window uses the % symbol followed by a letter to create filename identifiers.

The following symbols are listed with their identifiers:

- %B: Source file name
- %T: Preset file name
- %D: Date
- %E: Source file extension

iDisk Cannot Be Used as a Destination
If you want to save the output media file to a mounted iDisk volume, first save it to another destination, and then drag it to the mounted iDisk volume after it has been transcoded.

Important Information Regarding MPEG-2 Files Generated by Compressor and DVD Studio Pro

Timecode
DVD Studio Pro 1.5.2 doesn't recognize imported MPEG-2 files generated from Compressor when the timecode wraps in the following way for the following broadcast formats:

- NTSC: From 23:59:59:29 to 00:00:00:00
- PAL: From 23:59:59:24 to 00:00:00:00
- 24P: From 23:59:59:23 to 00:00:00:00

If your source media file is of a duration that you know will cause a timecode wrap to 00:00:00:00 and you intend to export the MPEG-2 output

media file to DVD Studio Pro 1.5.2, select the "Choose start timecode" checkbox in the MPEG-2 Encoder Video Format pane in the Presets window, and enter the timecode 00:00:00:00 in the related "Choose start timecode" field.

Chapter Markers
Chapter markers set in Final Cut Pro and transcoded in Compressor, or set directly in Compressor, will not be present in the imported MPEG-2 data in versions earlier than DVD Studio Pro 2. However, I-frames will be set where chapter markers were named. If you are using a version earlier than DVD Studio Pro 2, you have the following options:

Final Cut Pro native projects
You have the following options for Final Cut Pro native projects:

- Export QuickTime Movie: To preserve chapter markers, choose File>Export>QuickTime Export, and choose Compression Markers from the pop-up menu. You will not get the high quality and encoding options that Compressor provides, but you will keep your chapter markers.
- Export Using Compressor: If quality and encoder controls are important to your project, choose File>Export>Using Compressor to export your MPEG-2 media file. If you are using a version earlier than DVD Studio Pro 2, you can manually set the chapter markers directly in DVD Studio Pro.

Compressor native projects
You can set chapter markers using the Compressor Preview window, but they will not be preserved when exported to versions earlier than DVD Studio Pro 2. I-frames will be preserved. If you are using a version prior to DVD Studio Pro 2, you can manually set the chapter markers directly in DVD Studio Pro.

- Add DVD Studio Pro meta-data checkbox: Selecting this checkbox allows Compressor to parse specific MPEG-2 authoring information during the transcoding process to accelerate the import process into DVD Studio Pro 2. However, these MPEG-2 files will be incompatible with DVD Studio Pro 1.5 or earlier. Leaving the checkbox unselected means the information will be parsed later in DVD Studio Pro.

Note: MPEG-2 streams with additional DVD Studio Pro meta-data are only compatible with DVD Studio Pro 2 (or later). MPEG-2 streams processed with this checkbox selected will not be compatible with versions prior to DVD Studio Pro 2.

Reduced Bit Rate Recommended When Transcoding Certain Source Media Files
When transcoding MPEG-2 files using source media files at or near 120 minutes in duration as well as using AIFF to transcode audio, it is recommended that you reduce the bit rate of the 120-minute MPEG-2 presets slightly. Reducing the bit rate to 3.3 Mbps is recommended.

MPEG-2 Automatic Field Dominance Ordering Inconsistent
If you are using the Automatic Field Dominance setting in the MPEG-2 Video Format pane, the auto-detection mechanism sometimes picks the wrong field order (top or bottom). Autodetection chooses the correct field order when the source media file is using the DV codec, but with many other codecs it chooses the wrong field order (all of the Compressor default MPEG-2 settings use Automatic Field Dominance). To correct this inconsistency, create a new preset or duplicate an existing one, and set the field dominance to either "Top first" or "Bottom first" (rather than Automatic) to correspond to the field dominance of the source media file you want to transcode.

Transcoding With Compressor in Final Cut Pro
When you submit a Final Cut Pro project for transcoding, Final Cut Pro begins to render and transcode frames via Compressor. You have the option to pause or cancel this process in Final Cut Pro. The recommended method for pausing a Final Cut Pro to Compressor job is to use the Stop button in the Batch Monitor toolbar. The recommended method for stopping a Final Cut Pro to Compressor job is to use the Delete button in the Batch Monitor toolbar.

Changes in Network State May Affect Compressor's Ability to Submit Batches
If you change your network state while Compressor is running, you may find the Batch Window Submit button becomes disabled after the network state has changed. For example, moving your PowerBook from a corporate Ethernet network to a wireless network, or unplugging your laptop from a network to take it on the road, may result in this issue. This is easily resolved by quitting Compressor and reopening the application. If the problem persists, it is recommended that you restart your computer.

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Languages English

Archived - QuickTime 6.3: MPEG-2 Playback Component for Mac OS X Requires Update

In Mac OS X, after updating to QuickTime 6.3, you should also update the MPEG-2 Playback Component
This article has been archived and is no longer updated by Apple.
To be compatible with QuickTime 6.3, the MPEG-2 Playback Component (version 6.0) also needs to be updated.

The MPEG-2 Playback Component (version 6.3) is available to past purchasers via the QuickTime software update and within the Apple Store account used to purchase the MPEG-2 Playback Component.

Automated Software Update Installation (Mac OS X)

1. Choose Apple menu > System Preferences.
2. Choose View > QuickTime.
3. Click the Update tab.
4. Click Update Now.

Last Modified: Feb 19, 2012

iTunes 4.5 - Proxy Support

- **Last Modified:** May 01, 2004
- **Article:** TA27425

- **Old Article:** 93169

Learn about the proxy server support for iTunes 4.5.

Products Affected

iTunes Store, iTunes

iTunes 4.5 supports more types of proxy servers than previous versions.

Proxy Server Types that work with the iTunes Store

- Web proxy servers (HTTP)
- Secure Web proxy (HTTPS)
- SOCKS proxy servers
- HTTP/HTTPS proxy servers that require authentication
- Proxy bypass lists
- Proxy auto-configuration (PAC) files (Requires Mac OS X 10.3.2 on Mac)

Proxy Server Types that work with Internet lookup of Audio CD information (CDDB)

- Web proxy servers (HTTP)
- HTTP/HTTPS proxy servers that require authentication

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Languages

Final Cut Pro: Quits When Opened With Some Third-Party Audio Units Installed

- **Last Modified:** April 28, 2006
- **Article:** TA27428

- **Old Article:** 93177

Some third-party Audio Units could cause Final Cut Pro to quit unexpectedly when you open it.

Products Affected

Final Cut Pro 5.X, Final Cut Studio, Final Cut Pro

Symptom

The application unexpectedly quits when you open it.

This happens when third-party Audio Units are installed.

Solution

Remove the suspect third-party Audio Unit from the folder it is installed in. They are usually installed in these folders:

- /Library/Audio/Plug-Ins/Components
- ~/Library/Audio/Plug-Ins/Components

Check the Audio Unit's documentation for additional information about their specific installation folders.

Related Terms:crash launch

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TA27428_Final_Cut_Pro_Quits_When_Opened_With_Some_Third-Party_Audio_Units_Installe

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iSync doesn't sync with a Symbian OS phone after pairing

- **Last Modified:** July 27, 2005
- **Article:** TA27429

- **Old Article:** 93179

Products Affected

Mac OS X 10.2, Mac OS X 10.3, Mac OS X 10.4, iSync

When you try to sync your Symbian OS-based phone with your Mac using iSync (after successfully pairing it with your Mac), you may encounter one of the following messages or situations:

> "Could not establish connection to [name of the device]"
> "Can't synchronize contacts to [name of the device]: device is not available"
> Can't install iSync Agent due to a "security alert"

If this happens to you, here are some troubleshooting tips.

Note: iSync 2.0 is included with Mac OS X 10.4 Tiger.

Troubleshooting tips and tricks for iSync version 2.0 only (1.5 tips below)

- **Make sure you have enough free memory on your phone**
  When you first connect your phone to use with iSync, make sure you have enough free memory on the phone. If your phone's memory is full or nearly so, issues may occur. iSync will tell you if there is not enough free space to install iSync Agent ("iSync could not copy iSync Agent to your phone")—if you ignore this message or click Retry, all of your data might not sync (see "Make more memory available" below to resolve the issue).

- **Make more memory available**
  If you're short on memory, you can free some up by deleting unused or unwanted files from your phone. You should also turn your phone off and back on after you delete stuff.

Some of the unused or unwanted files you might want to consider are contacts, calendars, text messages that you no longer need, email, pictures, sounds, and movies. For example, after you install the iSync Agent and read the message that iSync sends to it, you can delete that message to free up about 200 KB of phone memory.

- **Reinstall iSync Agent**
  If you didn't successfully install iSync Agent due to low memory, follow these steps (after freeing up some memory) to ensure that all your data syncs:
  1. Select your phone in iSync, then choose **Remove Device** from the **File** menu.
  2. Turn your phone off and then back on.
  3. Locate iSync Agent on your phone (if it's there) and delete it(1).
  4. In iSync, choose **Add Device** from the **File** menu.
  5. Follow the onscreen instructions in iSync and on your phone to set up what content to sync.
  6. When setting up the phone, from the "For first sync" pop-up menu, choose "merge" or "erase" (your choice). Remember that selecting erase will erase any calendar and contact data currently on the phone and replace it with what is currently in Address Book and iCal.
  7. Sync!

     Tip: If you remove your phone from the list of devices in iSync, then quickly add it back and send iSync Agent to your phone again, you may see this alert message on your phone: "A problem occurred during the uninstallation." If this happens, wait 5 minutes before sending the agent to the phone again.

  Note: When memory is full on your phone, iSync Agent may close the connection but not mention that memory is full, which may cause some information to not sync. If you're phone is short on memory, try syncing an Address Book group with fewer contacts or fewer pictures (or, of course, freeing up even more memory on your phone). Don't forget to turn your phone off and then back on afterwards.

- **Make sure iSync Agent is installed correctly**
  If you installed iSync Agent after adding your phone to iSync and saw an "Installation Complete" message at the end of the installation (which includes opening the iSync Agent message on your phone and following its instructions), it should be installed correctly. If you don't see this message, iSync Agent may not be installed correctly. Follow the steps in "Reinstall iSync Agent," above.

  Tip: If you can't get the iSync Agent to install on your phone due to a "security" alert, check the phone's security settings to make sure they will allow application installation. Some phone models from certain providers come preset with security settings that could prevent you from installing iSync Agent or other applications. For example: On a Nokia 6630, go to Tools > Manager > Options > Settings > Software Installation, then set this option to ON. After installation of the iSync agent, you can turn this option off again if you prefer.

  These settings can vary from phone-to-phone. Consult the documentation that came with your phone for more information.

Troubleshooting tips and tricks for iSync version 2.0 and 1.5

- **Verify that Bluetooth is turned on**
  Sometimes Bluetooth on your Symbian OS phone may inexplicably get turned off. If your phone isn't syncing, try turning your phone off and then back on. Then confirm that Bluetooth is on before trying to sync again.

- **Try syncing again**
  If you see an alert message that says, "Cannot connect to the devices. Can't connect to channel on devices (Server might be down)" after installing iSync Agent, wait one minute, and then try syncing again.

- **Avoid syncing with third-party applications on the phone**
  It's OK if you use third-party syncing applications other than iSync on your phone. Just remember not to run them when iSync is syncing. Some might not work with iSync.

- **Authorize connection settings on the phone**
  Each time you sync with a Symbian OS-based phone via Bluetooth, you'll need to reply to an authorization message on the phone, even if the phone is properly paired. You might miss this message on the phone. If you miss or reject these messages, iSync may not operate correctly and display this message:

  "Agent not running on the device"

  To avoid having to reply to the phone's authorization messages, authorize your computer to communicate with your phone in your phone's Bluetooth settings. Check the documentation that came with the phone for more information.

  To see if this is an issue, open iSync and click Sync Now. Watch the phone closely. If the authorization window appears, grant the authorization.

- **Update the phone's firmware**
  Some phones may require that you update its software to function properly. Contact the phone manufacturer or service provider about

update availability and service options. Be sure that you try switching the phone off and then back on to see if it resolves the communication issue. You may need to do this each time you sync the phone.

- **Check your Bluetooth adapter**
  If you're using a Bluetooth adapter, some of them (including any D-Link DBT-120 USB Bluetooth adapter prior to revision B2) do not work with simultaneous multiple connections. This means you cannot use more than one Bluetooth device at the same time. Other applications, such as Address Book, HotSync Manager, Ericsson Clicker, or any other application communicating over Bluetooth, could also interfere with iSync.

  If you have lots of Bluetooth devices, you can check out what's going on in the Bluetooth preference pane in System Preferences. Devices that appear in bold are active. If more than one device is active, try deactivating all other devices except for your phone, then try to sync again.

  Some Bluetooth adapters may not be available after restarting your computer. In most cases, disconnecting and reconnecting the adapter will make it active again.

Troubleshooting tips and tricks for iSync 1.5 only

- **Check for personal firewalls**
  A personal firewall limits access to your computer through network connections on certain ports. See "iSync 1.1: Some Phones May Not Sync if Firewall Is On" for more information.

1. For additional information on how to remove applications from your phone, please consult the documentation that came with your phone. **Note**: If you are attempting to uninstall iSync Agent from a Sony P900 phone and are unable to remove it successfully, consider performing a master reset of the phone. Keep in mind that this will erase all of your contacts, calendar items, and other personal data on your phone—please consider backing up this data first. Consult the documentation that came with your phone for more information.

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iSync: Use Caution Before Choosing Reset All Devices Command

- **Last Modified:** February 04, 2004
- **Article:** TA27430

- **Old Article:** 93182

To avoid data loss, use caution before choosing the Reset All Devices command in iSync.

Products Affected

iSync

The Reset All Devices command in iSync can be a useful tool to resolve differences between data on your computer and other devices. However, care must be exercised when using this feature.

When you choose Reset All Devices, data on your synced devices (mobile phone, Palm, iPod, and so forth), is erased and replaced with data from Address Book and iCal. This data can come from the computer or your .Mac (pronounced "dot Mac") account.

Important: Any information on the device that is **not** in Address Book or iCal is erased when you choose the Reset All Data command.

Other information may also be lost if it is not synced, such as voice dial tags, speed dial information, custom ring tags, and so forth.

For this reason, compare data on the computer with data on your synced devices before choosing the Reset All Devices command.

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Final Cut Pro 4: Compressor - Crop Fails if Video Track 1 Is Not the Destination Track or Is Locked

- **Last Modified:** October 23, 2006
- **Article:** TA27431

- **Old Article:** 93184

Compressor will not be able to complete a crop operation on the video if the V1 track is not the destination track, or if it is locked in Final Cut Pro 4.

Products Affected

Final Cut Pro

Symptom

The crop settings made in the Compressor Preview window are not applied.

Parts of the resulting video clip are black.

Solution

Update to Compressor 1.0.1 or later. Use either the Software Update option in System Preferences or see "**Final Cut Pro 4.1**" for the update.

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Languages

- Deutsch
- English
- Français

Some Address Book fields don't sync with Sony Ericsson P800 via iSync

- **Last Modified:** October 04, 2008
- **Article:** TA27434

- **Old Article:** 93190

If you have already synced contacts to your P800 mobile phone from another source, like Microsoft Outlook on a PC, some of the fields may not sync to Address Book when you use iSync.

Products Affected

iSync

If you have lost data on your P800 because of this, you may be able to recover most, if not all, of your contact information by recovering the information from the application you used before iSync.

After the data has been restored, follow these easy steps to use the P800 with iSync:

1. Deselect the option to only synchronize contacts with phone numbers in the phone settings of iSync. This prevents iSync from ignoring contacts without phone numbers. However, this will prevent iSync from removing the contacts with unrecognized information from the phone. You may still have contacts in Address Book that do not have the same information as on the P800. See Additional Information below.
2. After the initial sync with iSync, verify the data integrity. For contacts that do not have the same information in Address Book and the P800, enter the correct information in Address Book.
3. It is very important not to use the Reset All Devices or Revert to Last Sync commands in iSync until you verify that the data is the same on the phone and in Address Book. If you use either command before this is completed, you could lose your contact information.
4. Once you have verified the data on the phone and Address Book are the same, click Sync in iSync.

You can now sync without worrying about data loss.

Tip: You should only sync a device using iSync. Do not also sync it with other applications on a Mac or Windows-compatible computer.

Additional Information

This happens because the data from the other application is not in a format recognized by iSync. iSync recognizes data that comes from the phone, or is in that same data format. If it is not in that format, such as information from PC Microsoft Outlook, iSync will not recognize the proper fields.

A contact may sync to Address Book with no phone numbers even if the contact has numbers on the P800. If you sync a second time with the option to "Only sync contacts with phone numbers" selected, the contact will be deleted from your P800 because, according to Address Book, the contact has no phone number data. This can also occur if you manually import vCards exported from a program such as Microsoft Outlook.

Rate this article:

- Not helpful
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TA27434_Some_Address_Book_fields_dont_sync_with_Sony_Ericsson_P800_via_iSync.pdf

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How to contact Apple about offering your music through the iTunes Store

- **Last Modified:** April 09, 2007
- **Article:** TA27435

- **Old Article:** 93191

Learn how to contact Apple if you would like to have your music added to the iTunes Store.

Products Affected

iTunes Store, iTunes

Go to the iTunes Music Marketing page for information on adding your music to the iTunes Store.

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iTunes 4: "Unsupported Compression Scheme" Message

- **Last Modified:** September 18, 2003
- **Article:** TA27436

- **Old Article:** 93192

Some noncompliant proxy servers do not correctly pass CDDB (CD database) information. This can cause an "Unsupported Compression Scheme" message to appear.

Products Affected

iTunes

Symptom

When iTunes checks the Internet for a CD's title and track names, this message appears: "Unsupported Compression Scheme"

Solution

Either discontinue using the proxy server or contact the proxy server administrator for assistance.

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iChat AV: External Mic May Be Needed With Some iMac Models

- **Last Modified:** December 18, 2003
- **Article:** TA27439

- **Old Article:** 93204

Use an external microphone with some iMac models for best results.

Products Affected

iMac, iChat

Symptom

The sound volume is low when in a video conference.

This happens when using the built-in microphone with certain iMac computers.

Solution

Connect and use an external microphone when using iChat AV with an iMac (with CRT display).

If using an iSight camera, use the iSight's built-in microphones.

Related documents

58669 "**iMac: How To Differentiate Between Models (CRT)**"

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Archived - LiveType: Frequently Asked Questions (FAQ)

Learn about solutions to common issues for LiveType included with Final Cut Pro 4.

Products Affected

Final Cut Pro

This article has been archived and is no longer updated by Apple.

Questions answered in this document:

1. Some fonts appear to shake in the preview movie.
2. My images appear pixelated.
3. LiveType doesn't open anymore.
4. The motion is not smooth on my NTSC monitor.
5. When I bring titles into my nonlinear editor (NLE) or compositing program, the characters appear squashed or the aspect is wrong.
6. A keyframe is "stuck" at the beginning or end of an effect, and I can't select it, move it, or delete it.
7. When I apply an effect with a glow or shadow change, I don't see a change in the Live Wireframe Preview in the Inspector.
8. When I change certain attributes of a track, they don't seem to have any effect.
9. I can't select an element or character.
10. I keep accidentally selecting the texture, image, or movie I created on a track as a background image.
11. When I have a lot of elements in the Canvas, everything slows down.
12. The .afp characters I created appear squashed or out of their proper aspect ratio when typed into the Canvas.
13. How can I create smaller .afd files?
14. The proxy images (.afps) for each character I created are blank.
15. The .afp characters I created don't rest on the track.
16. I created a LiveFont, but the characters type out with odd spacing in LiveType.

Question 1: Some fonts appear to shake in the preview movie.

Answer: Because LiveType uses a small sampling for low-quality previews, some images may be missing pixel data that provides smoother movement. Increase your quality settings in the Project Properties dialog to produce smooth results.

Question 2: My images appear pixelated.

Answer: If you render a preview, your movie is displayed in low resolution and appears a bit pixelated. Also, if you size your elements beyond their original size, some pixelization may occur.

Question 3: LiveType doesn't open anymore.

Answer: It is possible to save a set of default settings that prevents LiveType from opening. Try erasing your default settings file: \\Library\\Preferences\\LiveType Pro Defaults.dat. Your configuration reverts to the original LiveType settings. This is essentially the same as choosing LiveType > Settings > Clear Settings within the application.

Question 4: The motion is not smooth on my NTSC monitor.

Answer: Use the fielding option for the smoothest motion.

Question 5: When I bring titles into my nonlinear editor (NLE) or compositing program, the characters appear squashed or the aspect is wrong.

Answer: Make sure to set the project properties in LiveType according to the size and pixel aspect your NLE uses. Some NLEs require the correct frame size even if the title doesn't use the entire frame. Square pixels take a value of 1, and NTSC pixels take a value of .9.

Question 6: A keyframe is "stuck" at the beginning or end of an effect, and I can't select it, move it, or delete it.

Answer: Try increasing the Timeline zoom, to see whether you can select and drag the keyframe away from the beginning or end of the effect. Because the beginning and ending keyframes cannot be deleted, it is possible to slide an internal keyframe to the far end of the effect so that it cannot be moved, regardless of the Timeline magnification.

To remedy this, do the following:

1. Select the beginning or ending keyframe that's obscuring the other keyframe.
2. From the **View** menu, choose **Go To** and the choose **Next Keyframe** (or **Previous Keyframe**) to select the "lost" keyframe.
3. Choose Edit > Cut.
4. Move the playhead and from the Edit menu, chose **Paste**.

Question 7: When I apply an effect with a glow or shadow change, I don't see a change in the Live Wireframe Preview in the Inspector**.**

Answer: The wireframe boxes in the preview show the basic shape of each glyph, and aren't changed by Style settings. Other preview options, such as a RAM preview or preview movie, reveal shadows and glows.

Question 8: When I change certain attributes of a track, they don't seem to have any effect.

Answer: Because effect parameters override track parameters, you may be trying to adjust a parameter that is being overridden. Disable the effects associated with that track to see whether the attributes become active again. If so, the solution is to change the effect parameters.

Question 9: I can't select an element or character.

Answer: Make sure that Lock Position is not selected in the Layout menu. When you add a texture or background movie, it is locked by default.

Also, you may be clicking an element that uses the entire Canvas. Try zooming out to view beyond the edge of the Canvas to reveal its bounding box.

Consider the layer order, too, when you want to select an element on the Canvas. If one element gets in the way of selecting another, use the Timeline to select the track underneath, and highlight glyphs in one of the text-entry boxes in the Inspector.

Question 10: I keep accidentally selecting the texture, image, or movie I created on a track as a background image.

Answer: From the **Layout** menu, choose **Lock Position** to prevent the element from being selected.

Question 11: When I have a lot of elements in the Canvas, everything slows down.

Answer: See Chapter 8 of the LiveType for Final Cut Pro 4 manual, "Previewing and Fully Rendering Your Titling Movie," for ways to optimize preview performance.

Question 12: The .afp characters I created appear squashed or out of their proper aspect ratio when typed into the Canvas.

Answer: Set the aspect value in the FontScript to the same pixel aspect as the movies you have created. Square pixels take a value of 1, and NTSC pixels take a value of .9.

Question 13: How can I create smaller .afd files?

Answer: You can set the RGB and Alpha values in the FontScript to a lower number to obtain more compression. Also, try reducing the number of frames in your movies. You can consider lowering the recommended 800 x 800 resolution of your font. If you know that you'll never go beyond a size of 250 points, you can generate the font at 400 x 400, reducing your file size substantially.

Question 14: The proxy images (.afps) for each character I created are blank.

Answer: This probably indicates that a proper alpha channel was not used when creating your character movies, and LiveType is displaying the entire frame as blank.

Another scenario could be that your .afd component is installed, and that your first frame contains no pixels, so all you need to do is play the movie or move your playhead forward in the Timeline.

Question 15: The .afp characters I created don't rest on the track.

Answer: Your Lowerleft values are not correct.

Question 16: I created a LiveFont, but the characters type out with odd spacing in LiveType.

Answer: Your width settings for each character do not match in the FontScript.

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- **Last Modified:** February 19, 2012
- **Article:** TA27442

- **Views:**

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Languages

English

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iChat AV: Only right speaker makes sound during audio or video chats

- **Last Modified:** January 31, 2008
- **Article:** TA27443

- **Old Article:** 93214

Products Affected

iSight, Mac OS X 10.4, Mac OS X 10.3, Mac OS X 10.2, iChat

PowerBook G4, iBook, and MacBook Pro computers only make sound through the right speaker, and the volume may seem lower. This prevents feedback through the built-in microphone. This document applies to iChat AV, Mac OS X 10.2.5 or later, and iSight or any FireWire IIDC compatible video camera.

To hear sound from both channels, use headphones or external speakers (such as USB speakers).

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iMovie: "Your project is unreadable" Message

If an iMovie project file becomes unusable, you may see a message that says "Your project is unreadable."

Products Affected

iMovie

This article has been archived and is no longer updated by Apple.

Symptom

When you try to open a project, this message appears: "Your project is unreadable."

Solution

If the project file is unreadable, you may be able to recover it using the methods below.

Method 1 (for all versions of iMovie)

1. Create a new project in iMovie.
2. Drag the contents of the Media folder of the original project folder into the shelf of the new project.
3. Re-assemble the project by dragging clips from the shelf to the timeline.

Method 2 (for iMovie 3 or higher)

1. Open the iMovie project folder in the Finder and locate the reference .mov file at the root level of the project folder.
2. Create a new project in iMovie.
3. Drag the .mov file from the original project folder into the new iMovie project timeline to import the original project contents as a single clip.

Warning: If you use this method to recover your project, do not delete the original project folder or the items in it. The reference movie relies on these files.

Related documents:

93296: iMovie: How to Save Projects to Another Hard Disk

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- **Last Modified:** February 19, 2012
- **Article:** TA27447

- **Views:**

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  (1 Responses)

TA27447_iMovie_Your_project_is_unreadable_Message.pdf

Languages

English

iChat AV: System requirements

- **Last Modified:** March 29, 2004
- **Article:** TA27456

- **Old Article:** 93245

Learn about the system requirements for iChat AV.

Products Affected

iChat

For audio

- Mac OS X 10.2.5 or later (Mac OS X 10.3 or later for iChat AV 2.1 or later)
- Any PowerPC G3 microprocessor or later
- iSight, or any microphone
- 56 kbit/s modem connection

For video

- Mac OS X 10.2.5 or later (Mac OS X 10.3 or later for iChat AV 2.1 or later)
- PowerPC G5, PowerPC G4, and 600 MHz or faster PowerPC G3 microprocessors
- iSight or any FireWire based camera
- Cable, DSL, or other broadband Internet connection

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iSync: Does Not Sync With Data on SIM Card

- **Last Modified:** November 14, 2003
- **Article:** TA27457

- **Old Article:** 93248

iSync is designed to synchronize data from a mobile phone's memory. It does not synchronize with data stored on a phone's subscriber identity module (SIM) card.

Products Affected

iSync

Symptom

Some of the contacts on your phone are not copied from the phone to the Address Book application.

Solution

iSync is designed to synchronize with the data in the phone's memory and will not synchronize with the data stored on the phone's SIM card.

Some mobile phones allow you to move contacts between the phone's memory and the SIM card. This permits you to move the data with the SIM card to another phone. Consult your phone's documentation for information about how to copy or move contacts from the SIM card to the phone's memory to synchronize this data using iSync.

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Final Cut Pro and Final Cut Express: Custom Window Layouts Don't Appear

- **Last Modified:** October 04, 2008
- **Article:** TA27458

- **Old Article:** 93249

Three issues can cause custom layouts not to appear in the Window > Arrange menu.

Products Affected

Final Cut Pro, Final Cut Express

Symptom

Custom window layouts don't appear in the Window > Arrange menu.

There are three issues that can cause custom layouts not to appear:

1. The Dock was made larger or was moved after a layout was created .
2. Final Cut Pro or Final Cut Express window(s) spanned across monitors on a dual-monitor system when you saved the layout.
3. You logged in as a NetInfo user.

Solution

Try the following for issue 1:

- From the **Apple** menu, choose **Dock**, and the choose **Turn Hiding On** (Option-Command-D).
- If the Dock has been resized or moved, create a new layout.
- If the Dock has been resized or moved from the **Window** menu, choose **Restore Window Layout** and then save new the readjusted layout with same name.

Try the following for issue 2:

- Never save a window layout that overlaps another Final Cut Pro or Final Cut Express window or overlaps monitors.
- From the **Window** menu, choose **Restore Window Layout** and then save new readjusted layout with same name.

Try the following for issue 3:

- From the **Window** menu, choose **Restore Window Layout**.

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Languages

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- English
- Français
- 日本語

iChat's picture-in-picture and Snapshot is "mirrored"

- **Last Modified:** July 24, 2007
- **Article:** TA27459

- **Old Article:** 93252

Products Affected

iSight, iChat

Views from your iSight camera appear flipped or reversed to you, like a mirror image. These views include:

- In the "Preview" window in Preferences under the Video tab
- The picture-in-picture view while in a conference
- The Snapshot
- The preview in the First Time User interface

This is by design. The effect is similar to what you would see if you were looking into a mirror.

Your image will appear in its natural, unreversed state to those with whom you chat.

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iPhoto: Color, Black and White Prints Appear Garbled or Distorted

- **Last Modified:** November 18, 2003
- **Article:** TA27460
- **Old Article:** 93253

Prints you order through iPhoto may appear garbled or distorted if you imported the photos in CMYK or grayscale format.

Products Affected

iPhoto

Symptom

Prints you ordered using iPhoto are garbled or distorted. See Figures 1 and 2 below. The photos appear normally in iPhoto.

This happens if you import files from photo editing applications, such as Photoshop, that can export in CMYK or grayscale format.

Figure 1 Black and white photo imported in grayscale

Figure 2 Color photo imported in CMYK

Solution

Import images from other applications only in JPEG format with RGB color. iPhoto requires RGB color to format the image for uploading when ordering prints or books.

Additional Information

In some cases the print order may be automatically canceled; however, if the print order is printed and shipped, the final prints will appear garbled

or distorted. Photos imported directly from cameras should not be affected by this issue since RGB JPEG is the standard export format for most digital cameras.

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LiveType: Blank Templates Do Not Appear in Template Browser

- **Last Modified:** July 07, 2003
- **Article:** TA27461

- **Old Article:** 93256

When previewing templates in LiveType's Template Browser, the category named Blank does not appear as suggested in LiveType Help.

Products Affected

Final Cut Pro

Symptom

When previewing templates in LiveType's Template Browser, the category named Blank does not appear as suggested in LiveType Help.

Solution

The Blank category is not included in LiveType 1.0.

As an alternative, Page 34 of LiveType Help explains how to create your own template categories which may be used as starting points.

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Languages

ARCHIVE

Final Cut Pro 4: Out of Memory Alert With Digidesign Audio Cards

- **Last Modified:** February 16, 2011
- **Article:** TA27464

- **Old Article:** 93260

This article has been archived and is no longer updated by Apple.

Final Cut Pro may report an out of memory alert when opened if a Digidesign audio card is installed.

Products Affected

Final Cut Pro

Symptom

When opened, Final Cut Pro displays an "out of memory" alert and then quits.

Solution

In the Sound pane of the Mac OS X System Preferences, switch the sound output device to "Built-in audio controller."

If the issue persists, remove the Digidesign audio card.

Updating to Mac OS X 10.3 Panther should also address this.

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Final Cut Pro 3: Camera Compatibility Information

- **Last Modified:** May 30, 2007
- **Article:** TA27465

- **Old Article:** 93261

This document lists device compatibility information intended to assist you in selecting appropriate equipment to use with Final Cut Pro 3.x.

Products Affected

Final Cut Pro

The following information is intended to assist you in selecting appropriate equipment to use with Final Cut Pro 3.x.

For the current version of Final Cut Pro HD, download the list from here:
http://www.apple.com/finalcutstudio/resources/devicelist.php

For Final Cut Pro 4.0 - 4.1.1 click here

Canon NTSC Format		
Cameras and Devices	**Device Protocol**	**More Info**
Canon Elura	FireWire Basic	more info
Canon Elura 2MC	FireWire Basic	more info
Canon Elura 20MC	FireWire Basic	more info
Canon Elura 40MC	FireWire Basic	more info
Canon Gl1	FireWire Basic	more info
Canon Gl2	FireWire Basic	more info
Canon Optura	FireWire Basic	more info
Canon Optura 100 MC	FireWire Basic	more info
Canon Optura 200 MC	FireWire Basic	
Canon Optura Pi	FireWire Basic	more info
Canon Ultura	FireWire Basic	more info
Canon Vistura	FireWire Basic	
Canon XL1	FireWire Basic	more info
Canon XL1s	FireWire Basic	more info
Canon ZR	FireWire Basic	more info
Canon ZR 10	FireWire Basic	more info
Canon ZR 20	FireWire Basic	more info
Canon ZR 25	FireWire Basic	more info
Canon ZR 30 M	FireWire Basic	more info
Canon ZR 30 MC	FireWire Basic	

Panasonic NTSC Format		
Cameras and Devices	**Device Protocol**	**More Info**
Panasonic AG-DV2000	FireWire	
Panasonic AJ-D250	FireWire Basic	more info
Panasonic PV-DV100	FireWire Basic	more info
Panasonic PV-DV200	FireWire Basic	more info
Panasonic PV-DV400	FireWire Basic	more info
Panasonic PV-DV600	FireWire Basic	more info
Panasonic PV-DV800	FireWire Basic	more info

Sony NTSC Format		
Cameras and Devices	**Device Protocol**	**More Info**
Sony DCR-PC1	FireWire	
Sony DCR-PC5	FireWire	more info
Sony DCR-PC10	FireWire	
Sony DCR-PC100	FireWire	
Sony DCR-PC101	FireWire	more info
Sony DCR-PC110	FireWire	
Sony DCR-TRV7	FireWire	more info
Sony DCR-TRV8	FireWire	
Sony DCR-TRV18	FireWire	

Canon ZR 40	FireWire Basic	more info
Canon ZR 45	FireWire Basic	more info
Canon ZR50MC	FireWire Basic	more info

JVC NTSC Format		
Cameras and Devices	**Device Protocol**	**More Info**
JVC BRDV 3000U	FireWire	
JVC GYDV 300UZ	FireWire	
JVC DVP7u	FireWire	
JVC GR DV 30u	FireWire	
JVC GR DV 90u	FireWire	more info
JVC GR-DVL120	FireWire	more info
JVC GR-DVL815U	FireWire Basic	
JVC GR-DVL820	FireWire	
JVC GRDVM55U	FireWire Basic	more info
JVC GRDVP3U	FireWire	
JVC GRDVP7U	FireWire	
JVC GY-DV300U	FireWire	
JVC GY-DV600UA	FireWire	
JVC GY-DV550U	FireWire Basic	more info
JVC GY-DV700WU	FireWire	more info

Sony DCR-TRV20	FireWire	
Sony DCR-TRV27	FireWire	
Sony DCR-TRV120	FireWire	more info
Sony DCR-TRV230	FireWire	more info
Sony DCR-TRV900	FireWire	more info
Sony DCR-TRV7000	FireWire	
Sony DCR-VX2000	FireWire	more info
Sony DHR-1000v	FireWire	more info
Sony DSR-11	FireWire	more info
Sony DSR-20	FireWire	more info
Sony DSR-25	FireWire	
Sony DSR-30	FireWire	more info
Sony DSR-45	FireWire	
Sony DSR-1500	FireWire	
Sony DSR-1500a	FireWire	
Sony DSR-2000	FireWire	
Sony DSR - PDX 10	FireWire	
Sony GV-D300	FireWire	more info
Sony GV-D900	FireWire	more info
Sony PD100A	FireWire	
Sony PD150	FireWire	more info

Canon PAL Format		
Cameras and Devices	**Device Protocol**	**More Info**
Canon DM-MV1	FireWire Basic	
Canon DM-MV3i	FireWire Basic	more info
Canon DM-MV4i	FireWire Basic	more info
Canon DM-MV10	FireWire Basic	more info
Canon DM-MV20i	FireWire Basic	more info
Canon DM-MV30i	FireWire Basic	more info
Canon DM-MV100	FireWire Basic	more info
Canon DM-MV200i	FireWire Basic	more info
Canon DM-MV300i	FireWire Basic	more info
Canon DM-XL1	FireWire Basic	more info
Canon DM-XL1s	FireWire Basic	more info
Canon MV450i	FireWire Basic	more info
Canon MVX 1i	FireWire Basic	more info
Canon XM-1	FireWire Basic	more info

Sony PAL Format		
Cameras and Devices	**Device Protocol**	**More Info**
Sony DCR-PC2E	FireWire	more info
Sony DCR-TRV5E	FireWire	
Sony DCR-TRV8E	FireWire	
Sony DCR-TRV9E	FireWire	
Sony DCR-TRV900E	FireWire	
Sony DSR-11	FireWire	
Sony DSR-25	FireWire	more info
Sony DSR-45P	FireWire	
Sony DSR-1500AP	FireWire	more info
Sony DSR-2000	FireWire	more info
Sony DSR - PDX 10-P	FireWire	

3rd Party Hardware (Final cut Pro 3.0.4 for OS X)				
Descriptions of Devices	**RT Effects**	**OfflineRT**	**Driver/Firm**	**More Info**
AJA Kona SD 8-bit	√		2.3	more info
Aurora IgniterRT	√	√	5.2	
Pinnacle Systems CinéWave RT	√		3.0	
Pinnacle Systems CinéWave RT Pro	√		3.0	
Pinnacle Systems CinéWave HD			3.0	

Serial Adapters		
Descriptions of Devices	**Mac OS**	**More Info**
Gee-Three Stealth	Mac OS X & Mac OS 9	more info
Keyspan SX Pro Serial	Mac OS X	more info
Keyspan Miniport Replicator	Mac OS X	more info
Keyspan USB Serial Adaptor	Mac OS X	more info
Keyspan USB 4 Port Serial Adaptor	Mac OS X	more info

DV Converters		
Descriptions of Devices	**NTSC/PAL**	**More Info**
Formac Studio	Both	
Sony DVMC-DA2	NTSC	more info

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iPhoto: "Unreadable Files" Alert

- **Last Modified:** June 11, 2007
- **Article:** TA27468

- **Old Article:** 93275

An alert may appear while importing pictures that says there was an unreadable file and that some of the pictures were not imported because they were an unrecognized file type or the files may not contain valid data.

Products Affected

iPhoto

Symptom

While importing pictures into iPhoto an alert appears with this message:

> "Unreadable Files: The following files could not be imported (they may be an unrecognized file type or the files may not contain valid data)"

Figure 1 Unreadable file alert

A list of files that were not imported appears as part of the alert.

This happens If you try to import items that are not pictures, or files that are damaged, or when the computer's hard disk is full.

Solution

1. If only some or none of the photos were imported, make sure they are actually photos. Note which files were not imported. If possible, open them with another application, such as Preview, which can open the same type of image files that iPhoto can. If the file cannot be opened in another graphics application, then it is probably not a graphic file, or the file is damaged.

   If any of the photos were taken with a QuickTake 100 or 150 camera, see technical document 61047: "**Mac OS X: Unable to Open QuickTake 100, 150 Pictures**".

2. This alert also appears when there is no available disk space. Verify the available disk space on the startup disk by selecting the disk icon in the Finder and choosing File > Get Info. The amount of free space on the disk appears next to Available (see Figure 2).

Figure 2 Available disk space in Get Info

If there is minimal space available on the hard disk , drag files or applications you no longer need to the Trash and empty the Trash. Make sure any important files are backed up prior to deleting them.

If importing files from a hard disk, see technical document 61015: "**iPhoto: About Importing Pictures From Hard Disk and Available Space**"

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iPhoto, Aperture: Minimum Picture Resolution For Ordering Quality Prints

- **Last Modified:** November 27, 2006
- **Article:** TA27470

- **Old Article:** 93279

This document lists the minimum picture resolution needed for specific print sizes when ordering prints through iPhoto or Aperture.

Products Affected

iPhoto

For quality prints, these are the minimum resolutions for the following print sizes when ordering prints through iPhoto or Aperture.

Print Size (inches)	Pixel Dimensions
Wallet	450 x 300
4x6	900 x 600
5x7	1050 x 750
8x10	1500 x 1200
16x20	1600 x 2000
20x30	1600 x 2400

Higher resolutions than these will generally result in higher quality prints at a given size.

Related documents

61025 "**iPhoto: Warning Icon When Building Book or Ordering Prints**"

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iPhoto, Aperture: How to Use a Coupon or Promotional Offer

- **Last Modified:** June 12, 2007
- **Article:** TA27473

- **Old Article:** 93285

This document explains how to use a coupon or promotional offer when placing a photo order.

Products Affected

Aperture, iPhoto

Before submitting the final photo order, you have the option to enter a promotional offer or coupon code.

To use the offer:

1. Access the order panel (in iPhoto or Aperture):
    - In iPhoto:
        1. Select your book, card, or calendar in the source list.
        2. Choose the **Buy Book**, **Buy Card** or **Buy Calendar** button from the bottom of the iPhoto window or select an image or images in the Library and choose **Order Prints**.
    - In Aperture:
        1. Select your book in the Project Panel.
        2. Select the **Buy Book** button from the bottom of the Aperture window or select an image or images and choose **Order Prints** from the **File** menu.
2. Choose the **Use Coupon** button.
3. Enter the promotional code in the coupon code field and click the Validate button.
4. Once the code is validated, you can select the previously-grayed **Use Coupon** button.

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LiveType: Installing and Managing LiveFont and Object Data

- **Last Modified:** October 04, 2008
- **Article:** TA27475

- **Old Article:** 93294

Some data used by LiveType has considerable storage requirements and may not need to be installed in all cases. It is not automatically installed when installing Final Cut Pro 4.

Products Affected

Final Cut Pro

When you install Final Cut Pro 4, LiveType is installed, too. Additional data for LiveType, such as LiveFonts and Objects, though, are not automatically installed because of the disk space they require. If you do not install the packages from the two LiveType Data discs after installing Final Cut Pro and restarting your computer, you may see a message titled "Missing LiveType Data" and a list of files that are not installed (see Figure 1) while working in LiveType.

Figure 1 Missing LiveType Data message

If you choose the first option, "Install missing LiveType Data now," LiveType will prompt you to insert the LiveType Data discs, and will install the necessary data on your computer's hard disk. Additionally, if you select the "as Aliases" and "Install missing LiveType Data now" options, LiveType will create aliases on your computer's hard disk instead of the actual data, and ask you where you want to save the data. This can be useful if you do not wish to have the LiveType data stored on your computer's hard disk due to the considerable storage space needed for this information.

If you choose the second option, "Use Poster Frames for Tracks with missing Data," LiveType will make due without the necessary data and render your project with just a single proxy frame that represents the LiveFont or Object. This can be useful while developing your LiveType project, but may not be desirable for final output. If you choose this option, the poster frame will be static--LiveFonts and Objects will not be animated as usual.

Another method of managing the storage requirements for LiveFonts and Objects is to install them only as needed, and then remove them after rendering to free up disk space on your computer's hard disk. Here's a typical workflow using this option:

1. Create your project as you normally would. When you are ready to render, continue to the next steps.
2. Select the LiveFonts used in your project from the list in the Media Browser.
3. In the lower-left corner of the Media Browser, there are two small buttons.
4. Click the one on the left to install the selected LiveFonts (Figure 2).
5. Perform steps 2 through 4 for Objects in your project.
6. When all LiveFonts and Objects used in your project have been installed, you're ready to render.
7. Optionally, after you have completed and rendered your project, you can remove the installed items by selecting them as above then

using the other button in the lower-left corner of the Media Browser to remove them from your hard disk.

You can tell which Objects and LiveFonts are installed by checking the Installed column in the Media Browser. In some cases, it may be necessary to quit and reopen LiveType after installing LiveFonts or Objects before their Installed status changes in the Media Browser.

Figure 2 Install and Uninstall buttons in Media Browser

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iSight: Video Editing Software Stops Responding When Two Cameras Are Connected

- **Last Modified:** October 04, 2008
- **Article:** TA27477

- **Old Article:** 93300

Video editing applications such as Final Cut Pro, Final Cut Express, and iMovie can stop responding (or "hang") if both an iSight camera and a DV video camera are connected when you open the application.

Products Affected

Final Cut Pro, iSight, iChat, iMovie

Symptom

The application stops responding, and the pointer turns into a progress indicator (looks like a spinning disc or beach ball).

Solution

Update to Mac OS X 10.2.8 or later.

See document 25525, "**Mac OS X: About the Mac OS X 10.2.8 Update (Combo)**" for Mac OS X 10.2.8. Mac OS X 10.3 Panther can be purchased from the **Apple Store**.

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Languages English

Archived - DVD Studio Pro: Themes and Button Shapes Disappear During Simulation of an iDVD Project

When a menu has never been opened or rendered in iDVD, the information in the project file is incomplete. The drop zone artwork or shapes will not be imported.
This article has been archived and is no longer updated by Apple.

Symptom

Menus lack backgrounds and shapes when viewing an imported iDVD project in the DVD Studio Pro 2 Simulator.

This can occur if the menu was created but never viewed in iDVD.

Solution

Render the menu and restart the simulation.

To render the menus, open the project in iDVD and individually open and view all menus that are in the project. Changing the menus is not necessary, they only need to be opened and viewed.

Save the project in iDVD and reimport the project into DVD Studio Pro. It should now simulate correctly.

Last Modified: Feb 19, 2012

Additional Product Support Information

- DVD Studio Pro
- DVD Studio Pro

Languages

ARCHIVE

Final Cut Pro 4, Soundtrack: "-4960 Error" When Opening the Application

- **Last Modified:** February 16, 2011
- **Article:** TA27482

- **Old Article:** 93311

This article has been archived and is no longer updated by Apple.

Soundtrack and Compressor may not open if complete identity information is not present in the Address Book database.

Products Affected

Final Cut Pro, Soundtrack Pro

Symptom

You see an alert message that contains "Error -4960" when opening Soundtrack and Compressor, which are part of Final Cut Pro 4.
or
Soundtrack or Compressor quit unexpectedly when opened.

This can happen if the registration phase of the setup assistant is skipped.

Solution

Update to Soundtrack 1.1. The update can be obtained via the Software Update pane in System Preferences.

If you are not able to update, follow these steps:

1. Open the Address Book program (located in the Applications folder)
2. From the **Card** menu, choose **Show My Card**, or from the Card menu, choose **This is My Card** to identify or designate your identity card.
3. Edit your identity card to have a state/province/region name that is two or more characters in length.
4. Quit Address Book.

Note: If you have multiple street addresses in your Address Book identity card, be sure to fill in the state (or "province", "region", etc) field for each address.

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TA27482_Final_Cut_Pro_4_Soundtrack_-4960_Error_When_Opening_the_Application.pdf

Languages

ARCHIVE

Final Cut Pro 4: How to Update to 4.1

- **Last Modified:** February 16, 2011
- **Article:** TA27486

- **Old Article:** 93321

This article has been archived and is no longer updated by Apple.

This document describes how to update to Final Cut Pro 4.1.

Products Affected

Final Cut Pro

To update from Final Cut Pro 4.0 to Final Cut Pro 4.1, follow these steps:

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **Software Update**.
3. Click Update Now.
4. In the Software Update window, select the items you want to install, then click Install.

   Note: Before you can see the Final Cut Pro 4.0.1 updates, you must first install the Pro Applications Support package, then repeat step three again. Updates for Compressor, Soundtrack, Cinema Tools, and LiveType are also available.

5. Enter an administrator account password when prompted.
6. After the update is complete, restart the computer.

The Final Cut Pro updates can also be downloaded from the Final Cut Pro download page (http://www.apple.com/finalcutpro/download/).

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Final Cut Pro 4: Irregular Audio Rates and A/V Sync in DV Clips

- **Last Modified:** June 14, 2007
- **Article:** TA27490

- **Old Article:** 93326

This document discusses why a DV clip may have an audio rate that differs slightly from the expected rate.

Products Affected

Final Cut Pro

Many DV camcorders and decks record audio at sample rates other than the true sample rates of 32 kHz or 48 kHz. Variations in equipment from different manufacturers can result in slight but significant variances from these standard sample rates.

The QuickTime DV capture tools expect the sample rate of an incoming DV stream to contain locked audio at a sample rate of exactly 32k or 48k. When this rate differs, the audio and video will drift out of sync after several minutes of playback. While not perceptible on short clips, longer clips will generally display a visible drift in A/V sync after 15 minutes or so, depending on the difference between the expected and actual sample rates.

In previous versions of Final Cut Pro, the "Sync Adjust Movies Over [n] Minutes" option could be enabled in the preferences, triggering an adjustment in the audio sample rate based on the amount of audio recorded to disk during capture.

In Final Cut Pro 4, this preference has been replaced by automatic audio rate analysis, specific to DV media. This new rate analysis mechanism accurately determines the real sample rate, as recorded by the camera/deck, by examining the DV stream directly. For media captured in Final Cut Pro 4, this analysis is performed during capture, with the resulting media file updated to permanently reflect the actual sample rate. DV media files captured in previous versions of Final Cut Pro will be analyzed when imported or opened, with the actual sample rate used within Final Cut Pro; but no changes are written to the media file itself.

Note: This rate adjustment will not have any effect on loss of A/V sync caused by capturing over a segment of blank or bad tape.

Related Documents

93327 "**Final Cut Pro 4: A/V Sync Issues With Capturing DV Clips Over Blank or Bad Tape**"

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Final Cut Pro 4: A/V Sync Issues When Capturing DV Clips Over Blank or Bad Tape

- **Last Modified:** December 02, 2003
- **Article:** TA27491

- **Old Article:** 93327

Capturing over a segment of blank or bad tape will effect the A/V sync of captured DV clips in Final Cut Pro.

Products Affected

Final Cut Pro

Users may notice issues with A/V sync capturing from DV tape using FireWire, when the tape in question has blank areas, or is degraded to the point where it cannot be read by a deck or camera. When a capture spans one of these breaks in content (e.g. recorded media / blank tape / recorded media) the sync between the audio and video following the break will generally be offset by the duration of the break.

While capturing DV media over FireWire using Final Cut Pro, QuickTime will extract the audio data from the incoming DV data stream, writing it to disk in parallel with the video data as a part of a standard QuickTime movie. This process necessitates that audio and video are processed separately once the DV data stream has reached the computer, and assumes that a consistent stream is received during capture.

When capturing from a DV tape, most FireWire/DV decks and cameras will temporarily stop sending data over FireWire when they encounter blank or unreadable tape, resuming transmission when valid data is encountered once again. This is different than capturing over a traditional video connection (composite, component, SDI, etc..), where the source device is required to output a constant video signal, generated from any data read from the source tape, or using an internal signal generator when no data is present.

During this pause in transmission for DV/FireWire devices, audio continues to be processed/generated by QuickTime, but video does not. This results in the sync between the audio and video being offset by the amount of time that the source deck or camera stopped transmitting data.

It is because of this behavior that capturing over blank or bad tape using DV/FireWire devices is not supported. To work around this situation, it is suggested that the segments between the blank/bad tape sections be captured individually. Alternatively, the bad tape in question can be dubbed to another tape using a traditional video connection (composite, component, SDI, etc...) to generate empty media for the blank or bad segments of tape.

Related Documents

93326 "**Final Cut Pro 4: Irregular Audio Rates and A/V Sync in DV Clips**"

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iDVD: How Much Video Can I Put on a DVD-R Disc?

Different versions of iDVD allow different lengths of video to be included on a disc.

Products Affected

iDVD

This article has been archived and is no longer updated by Apple.

Digital video stored on DVD-Video discs is encoded in the MPEG-2 format. This is true for DVDs made with iDVD as well as retail DVDs. The MPEG-2 format offers excellent video quality while compressing the DV format files of your iMovie projects to fit into a smaller space.

The quality of the MPEG-2 encoder has increased with each version of iDVD, allowing better quality and better compression. This means you can fit more video on the same size DVD-R discs with later versions of iDVD as illustrated in this table:

iDVD Version	Encoder Comparison
iDVD 6	Up to 2 hours
iDVD 5	Up to 2 hours
iDVD 4	Up to 2 hours
iDVD 3	Up to 1.5 hours
iDVD 2	Up to 1 hour
iDVD 1	Up to 1 hour

iDVD has built-in support for a wide variety of DVD media formats — including DVD-R, DVD-RW, DVD+R, DVD+RW, and DVD+R DL.

- DVD-R: Can be used only once. This is the recommended media for iDVD, since it's compatible with most DVD players and computers on the market today. It can hold about 4.38 gigabytes (GB).
- DVD+R: Can be used only once. These discs, too, can hold about 4.38 GB.
- DVD-RW: Can be used more than once. RW stands for "rewritable." These discs can hold about 4.38 GB.
- DVD+RW: Can be used more than once. These can hold about 4.38 GB. These discs may not be viewable in all DVD players.
- DVD+R DL (Double Layer): Can store almost twice as much content as single-layer discs, but cannot be viewed in older DVD players.

As you author your DVD's menus, tracks, and other features, iDVD keeps track of the disc space that will be used. It counts not only the video used in your movie tracks but also space needed by menus, images, and audio used in your project. Motion menus take up much more disc space than still menus.

If you are interested in authoring DVDs with more encoding flexibility and more customization options, consider Apple's professional authoring solution, DVD Studio Pro (http://www.apple.com/dvdstudiopro).

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Related documents

301557: iDVD: Burning Double-Layer DVDs

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- **Last Modified:** February 19, 2012
- **Article:** TA27492

- **Views:**

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Languages

English

Soundtrack: Quits Unexpectedly on Power Mac G5

Soundtrack may quit unexpectedly when certain actions are performed after opening the Preferences pane.

Products Affected

Final Cut Pro, Soundtrack Pro

This article has been archived and is no longer updated by Apple.

Symptom

Soundtrack unexpectedly quits.

This happens if you do one of these actions after opening the Preferences pane:

- Create a new document.
- Open a previously saved document.
- Click the Record Transport button.

Note: This issue only occurs on the Power Mac G5. "Mac OS X 10.2.7 (G5)" is available only with Power Mac G5 computers and cannot be installed on other computers.

Solution

Update to Soundtrack 1.1. The update can be obtained via the Software Update pane in System Preferences.

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- **Last Modified:** February 19, 2012
- **Article:** TA27493

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Languages

English

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Archived - iMovie: Unable to Play or Import Clips on Power Mac G4 Cube

iMovie cannot play or import clips from a DV camera if there aren't any speakers connected to your Power Mac G4 Cube computer.

Products Affected

iMovie

This article has been archived and is no longer updated by Apple.
Symptom

You can't play or import clips from a DV camera or other device.

Solution

1. Quit iMovie if it is open.
2. Make sure the speakers that came with your computer, or other USB speakers, are connected to the computer.
3. Open iMovie and try importing again.

If you are still unable to play or import clips, check the following:

- Make sure your computer's firmware is up-to-date. See technical document 75129, "**Power Mac G4 Cube Firmware Update 4.1.9 :Information and Software**".
- Make sure the DV camera or other device can be used with iMovie 3. A list of cameras that work with iMovie is available from the iMovie website (http://www.apple.com/imovie/compatibility/camcorder.html).

Related documents

86155 "**Power Mac G4 Cube: iMovie 2 Doesn't Play Movies**"
88338 "**Macintosh: FireWire Ports or Third-Party Devices No Longer Work Correctly**"
43000 "**iMovie: Cannot See or Control Camera**"

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- **Article:** TA27496

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Languages

English

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TA27496_iMovie_Unable_to_Play_or_Import_Clips_on_Power_Mac_G4_Cube.pdf

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DVD Studio Pro 2: Late-Breaking News

- **Last Modified:** April 11, 2004
- **Article:** TA27497

- **Old Article:** 93343

Learn about important late-breaking information for DVD Studio Pro 2.

Products Affected

DVD Studio Pro

For the latest information about product updates, tips and techniques, and qualified third-party devices, visit the DVD Studio Pro website at http://www.apple.com/dvdstudiopro/.

General Information

Missing Fonts Automatically Replaced
If you open a DVD Studio Pro project that uses a font that is not on the computer you are opening it on (either because the font was deleted or the project was created on a different computer), any items using the missing font have a different font substituted with no warning.

There are three items in a DVD Studio Pro project that utilize fonts: a menu's text objects, a button's text, and text-based subtitles.

Using FireWire Drives
For best results, make sure that the external FireWire drive you are using is connected to your computer and turned on before you open DVD Studio Pro. While writing data, do not disconnect your FireWire drive from your computer. This will disrupt the process and result in a write failure.

Getting Consistent Colors With Still Assets
The colors in the still assets you use in your project are affected by the Display Profile you choose in your computer's System Preferences (in the Displays pane in the Color tab). To make sure the colors in the still assets more closely match the color profile applied to the video assets, and match other computers running DVD Studio Pro, choose the Generic RGB Profile in the Color tab, and set the Colors to Millions in the Display tab.

Asset Information

Deleting the MPEG Folder While Encoding Can Cause Problems Later

If, while DVD Studio Pro is encoding an asset, you delete the MPEG folder that it creates to hold the asset, DVD Studio Pro may stop responding when you later build your project.

Video and Audio Lengths of a QuickTime Asset May Appear to Be Different
When you import a QuickTime asset that contains both video and audio, you may find that their lengths, as shown in the Assets tab, do not match exactly. This is often due to the DVD-Video specification's frame rate for the supported audio formats not dividing evenly into the video frame rate. This does not affect the lip sync between the audio and video streams or their playback, and is purely cosmetic.

Using AAC Audio Files From the Apple iTunes Store
DVD Studio Pro is able to import and use AAC format audio files purchased from the Apple iTunes Store as long as the computer you are using them on is authorized to use them. If you import iTunes Store files that the computer is not authorized to use, DVD Studio Pro will play silence when it encounters those files. Additionally, if you select and try to play a iTunes Store file that the computer is not authorized to play in the Audio tab of the Palette, DVD Studio Pro will play silence.

Projects With Missing Parse Files Must Reparse While Opening
When you open a project that uses assets requiring parse files, DVD Studio Pro checks to see if the files are available. If not, it creates them as part of the project-opening process; in these cases, the project takes longer to open. It is not uncommon for the parse files to be left behind when moving a project and its assets from one computer to another. Creating the parse files can take from a few seconds to several minutes, depending on the number and length of the assets used in the project. A progress bar indicates the completion status of the parse file.

720 x 486 NTSC Still Assets Are Scaled
If you import 720 x 486 still assets, commonly referred to as CCIR NTSC or D-1, DVD Studio Pro scales them vertically to a height of 430 lines. You can work around this issue by either scaling or cropping the assets to 720 x 480 with a graphics program.

Missing Assets Do Not Automatically Relink While the Project Is Open
If your project has missing assets, their names and the names of any elements that use them appear in red in the Assets and Outline tabs. If you correct the reason that the assets are missing-for example, you connect the FireWire drive that contains them to your system- their names in the Assets tab turn black, indicating they are now available to be relinked. You must either use the Relink window or close and reopen the project to relink the assets.

Mask Edges May Be Visible in Shapes You Create
If you make the thumbnail image mask layer (the first layer) of a shape the same size as the shape's graphics layer (the second layer), you may see some of the mask layer around the edges of the graphics layer. This is because the shape's graphics layer is processed differently than the mask layer. You can work around this issue by making the mask layer slightly smaller than the graphics layer. Note: The thumbnail image mask layer is only required if you intend to show an asset in the shape. If you do not intend to show an asset in the shape, you can leave this layer empty (but the layer must still be there).

Using Shape Layers for Drop Shadows
When you activate drop shadows on a button or drop zone using a shape, DVD Studio Pro uses the first two layers of the shape's PSD file to define the shape of the drop shadow. These are the layers that define the image thumbnail area and the shape's visible graphic.

Single Layer Shape Files Are Not Supported
All shape files you import must have at least two layers. If you import a shape file that has a single layer, a gap appears in the Palette where the shape should appear. You cannot select the shape or delete it within DVD Studio Pro.

To delete a single layer shape file, do one of the following:

- If the shape was not imported as a project-only shape, use a Finder window to locate the shape's file in the [root]/Library/Application Support/DVD Studio Pro/Shapes folder and delete it.
- If the shape was imported as a project-only shape, you only have to delete the original shape file from its original location. (When a shape is imported as a project-only shape, a reference is added to the project, defining the shape's location.)

16-Bit RGB and All CMYK PSD File Formats Are Not Supported
DVD Studio Pro does not support 16-bit RGB or any CMYK format PSD files. Since Adobe Illustrator files are imported into Photoshop as 16-bit CMYK files, you need to change their mode in Photoshop to 8-bit RGB before saving them as a PSD file for importing into DVD Studio Pro.

Markers in MPEG Files Encoded With DVD Studio Pro 2 Do Not Appear in Earlier Versions of DVD Studio Pro
The markers in MPEG files encoded with DVD Studio Pro 2 are not compatible with earlier versions of DVD Studio Pro. You need to manually add the markers to the files if you want to import them into the earlier version of DVD Studio Pro.

Reference QuickTime Movies With Missing Assets That You Cannot Locate Must Be Cancelled Multiple Times
If you import a reference QuickTime movie (that relies on a master movie for its content), and you cannot locate its master movie, you must cancel the QuickTime search three times before the search is terminated, and DVD Studio Pro displays an asset import error dialog.

Segmented MPEG Files Do Not Import Correctly
The segmented MPEG files created by some third-party encoders do not import correctly into DVD Studio Pro. Some encoders segment their large encoded files into 1 GB files. When imported into DVD Studio Pro, only the first 1 GB segment is imported. You need to append the files into a single file before importing the asset into DVD Studio Pro. There are several third-party applications that can be used to append a segmented MPEG file into a single file.

Existing Clips in Tracks Automatically Use the Reencoded Version of an Asset
If you reencode an asset that has already been assigned as a clip to a track, the track automatically uses the newly encoded version. If you change the bit rate before reencoding, the original bit rate-encoded version of the asset is still available, and can be reused.

Viewer Information

Some Assets Show Field-Based Artifacts
Some assets, most commonly 16:9 PAL assets, show field-based artifacts when playing in the Viewer tab. You can improve their playback by choosing Show Single Field from the Viewer tab's Settings pop-up menu.

Display Condition Information

Last Chapter Played Setting Reliable When Assigned to Menus
When using the Last Chapter Played setting for display conditions assigned to a track or story, you will get unreliable playback on some DVD players. The Last Chapter Played setting can be used reliably with display conditions assigned to menus.

Display Conditions Using the Subtitle Stream Number Only Work With the Subtitle Stream Set to View
When you configure a display condition for a track or story that uses the subtitle stream number option, the display condition will work correctly only if the subtitle stream is set to be viewed. For example, if you configure a menu's button to use subtitle stream S1 and a track has a display condition configured for subtitle stream S1, the display condition will only work correctly if you also select the subtitle stream's View checkbox in the Button Inspector.

Some DVD Players Do Not Allow Parental Level in Display Conditions
Some DVD players do not process the parental level option correctly when used in a display condition, allowing content to play that should be disallowed.

Menu Information

Text Justification Can Be Overridden If Set With Keyboard Shortcuts
If you use keyboard shortcuts to set the justification of text in text objects or buttons, the text justification will be overridden if you change the text later. For example, if you create a text object on a menu, type two lines of text, press Shift-Command-], and deselect the text object, the two lines of text will right-justify. If you then select a word in one of the lines and change its color, font, or spelling, the text jumps back to its original justification (as controlled by the Text Object Inspector). You can work around this issue by using the justification controls in the Text Object or Button Inspector to set the text justification.

Not All Shapes Support Button Highlights
Not all of the shapes supplied with DVD Studio Pro support highlights. Some shapes are intended to be used with drop zones, and do not include the highlight layer used by buttons.

Item Descriptions for Menus Do Not Retain Their Languages
If you create a menu that supports multiple languages and export an item description for it, the item description will not contain any language attributes. For example, if you configure a menu to support three languages, with each language having different backgrounds and text objects, and export the menu as an item description, the item description will only retain the background for the first language and any buttons that have been configured. All text will be deleted (although the text objects will remain).

Applying Different Templates to Different Languages on the Same Menu Is Not Supported
When working with a menu that supports multiple languages, you can get inconsistent results if you apply different templates to each of the languages within that menu. Since each language version of a menu must have the same number of buttons, drop zones, and text objects, and they must be in the same locations, applying a template that configures these items forces all other language versions in that menu to conform to this template's layout. It is recommended that you apply a template to the first language and then manually modify the other languages as necessary.

Last Letter in Italicized Text May Be Partially Clipped
When you add italicized text to a text object or button in the Menu Editor, it is possible that the last character may be partially clipped. Whether or not this happens depends on what the last letter is and the font you are using. You can work around this issue by adding one or more spaces to the end of the text.

Overly Large Font Size Can Make a Text Object Disappear
If you set the font size so large that the text does not fit vertically on the screen, the text object disappears. As long as you still have the text in the text object selected, you can enter a smaller font size and the text will reappear. If it is not selected, you can choose Edit>Select All to select it (and all other items on the menu) and enter a smaller font size. (If there are other text objects, this change will also affect their font size.)

Button Assets Do Not Automatically Update
If a button's asset is automatically set after a Drop Palette action, such as dragging a track to a button in the Menu Editor, the button's asset does not automatically update if you later change the asset used by that track. You must manually choose the button's asset if you want it to match the new one used in the track.

Changing the Simple Highlight Color in Apple Templates Can Create Bad Edges
The Apple templates use the same highlight color for all four of the color mapping settings for the template's buttons. Since the template reduces the opacity for the dark gray and light gray color mapping settings, the buttons have pseudo anti-aliased edges. The Apple templates are also set to the simple overlay mode.

When you change a highlight color in the simple overlay mode, you only change one of the four color mapping settings (the black one), which can lead to a situation where the primary highlight color has been changed while the other highlight colors, generally only seen on the button's edges, retain the original color. For example, if the template uses a red highlight color and you use the simple overlay mode to change the color to blue, the button's new blue highlight color will have red edges.

To avoid having different highlight colors appear on the button edges when modifying the Apple templates, select the Advanced overlay mode in the Color Settings tab in the Menu Inspector, and set all four of the color mapping colors to the same color.

Premastering Information

CMF Format DVDs Cannot Be Burned on Systems With an Adaptec SCSI Card
DVD Studio Pro is unable to burn CMF format DVDs on an authoring DVD-R drive connected to your system using an Adaptec SCSI card. Systems with an Adaptec SCSI card are able to burn non-CMF and DDP discs as well as write any of the supported formats to a DLT drive. Systems with Apple-approved ATTO SCSI cards are able to burn CMF format DVDs on an authoring drive.

Region Code Information

Unreliable With General Media Discs
If you change the region code settings and burn a DVD using general media, some DVD players that should be prevented from playing it will play the disc. This issue does not occur with replicated discs originated from either general or authoring media.

Video Bit Rates That Are Too High Are Allowed When Using Multiple Streams
DVD Studio Pro allows video clips with bit rates that exceed the maximum allowable bit rate to be used when creating a project with multi-angle or mixed-angle tracks. When creating multi-angle or mixed-angle tracks, the maximum allowable video bit rate for clips in a track is reduced, depending on how many additional video streams you add. If the bit rate is left too high, some DVD players may have trouble playing the DVD smoothly. See the DVD Studio Pro 2 User's Manual for more information.

Project Import From iDVD and Earlier Versions of DVD Studio Pro Information

Slideshows Created in iDVD Drop Zones Only Display the First Slide
If you import an iDVD project that contains a drop zone configured as a slideshow and has multiple slides assigned to it, DVD Studio Pro will only show the slideshow's first slide in the drop zone.

Default Highlighted Button Can Change in iDVD Menus
When you import an iDVD project, you may find that the button that is highlighted by default on some menus may change. During the project import, DVD Studio Pro numbers the buttons on each menu and highlights button 1 by default. You can assign any button on a menu to be the default button in the Menu tab in the Menu Inspector.

Script Information

GPRM-Based Jump Command Only Allows Selection of Specific Parts of an Element
When configuring a GPRM-based jump command in a script, you should not be able to choose specific parts of an element with the Jump To pop-up menu. For example, you should be able to choose menu 1, but not button 3 of menu 1. (The selected GPRM is intended to choose the specific button in this case.) If you choose a specific part of an element from the Jump To pop-up menu with the GPRM Based checkbox selected, only the element is used and the specific part you chose is replaced by the value supplied by the selected GPRM.

Simulator Information

Simulator Displays Subtitles That Cross Chapter Markers
Subtitles cannot appear across chapter markers, and DVD Studio Pro automatically trims the subtitles accordingly during the build process. However, if you simulate a track that has a subtitle that extends across a chapter marker, the subtitle will continue to appear. Be sure to build your project and test the subtitles using a DVD player so that you are not surprised by a subtitle that gets trimmed unexpectedly.

Simulator Changes Subtitle Streams Incorrectly
In the Simulator, if you change subtitle streams while playing a track, the current subtitle from the new subtitle stream appears immediately, even if

it is in the middle of the subtitle text. The proper behavior, as happens with DVD players, is for the DVD not to change subtitle streams until the current subtitle clip ends, and not to show a subtitle from the new stream until a new subtitle clip starts on that stream.

Slideshow Information

Minimum Slide Duration
Each slide in a slideshow must have a duration of at least 12 frames if you are using the NTSC video standard, or 10 frames if you are using the PAL video standard. You are not warned of this requirement until you build your project. The most common way to encounter this problem is to use a very short overall audio file and select the "Fit to audio" setting in the Slideshow Editor.

Subtitle Information

Characters on a Right-Justified Subtitle May Be Cropped on the Right Edge
If you create a subtitle and set the text to be right-justified, the character on the right edge may get partially cropped. This issue does not exist with the left- and center-justified settings. If you require right-justified subtitles, you can use the left or center settings and manually position the subtitle along the right edge.

Stream Selection on Buttons Over Video
When configuring a button that is part of a buttons over video subtitle clip, you are not able to set the stream selections unless the button's target is set to "not set" or to a marker within that subtitle's track. If you need the button to jump to a specific stream on a different track, you can create a script that jumps as needed, and have the button jump to that script.

Track Editor Information

Zooming the Timeline to Fit the Selected Clip
You can zoom the timeline to fit the selected clip by pressing Shift-Option-Z. (The manual has the incorrect keyboard shortcut listed.)

Adding Chapter Markers Between Still Images and Video Clips in Tracks
To ensure proper builds, insert a chapter marker between each still and motion video clip within a track.

A.Pack Information

Having Too Many Jobs in an A.Pack Batch List Causes an Error Dialog
When you configure a large batch list, you may get an error dialog stating that there are too many files open. The number of jobs you can have in a batch list depends on their audio coding mode (two channel or 5.1 channel, for example) and the other applications that are open on your computer. In some cases, the error dialog may not appear until you start encoding the batch list. You can work around this issue by encoding your audio in smaller batch lists.

File Suffixes to Indicate the Channel Are Interpreted as the File Creator
Suffixes, such as .L for left front and .C for center front, are needed by A.Pack to differentiate the channels when using the drag-and-drop method to assign the files in A.Pack. In Mac OS X, the suffixes are interpreted as information about the file creator. As a result, the files that make up the different channels can be associated with various Mac OS X applications based on the suffix. This has no effect on the decoding of the files.

Compressor Information

In addition to the following topics, see the Late-Breaking News file in the Compressor documentation folder.

Encoding for Quicker Import Into DVD Studio Pro
When using Compressor to encode your video assets for use in DVD Studio Pro 2, you can speed up the importing process by selecting the "Add DVD Studio Pro meta-data" checkbox in the Compressor Extras pane in the Encoder pane (in the Presets window) before encoding them. This sets the Compressor encoder to include the parsing information in the encoded file, which makes the file usable as soon as you import it into DVD Studio Pro. **Note**: Selecting this checkbox makes the encoded file incompatible with earlier versions of DVD Studio Pro.

Using Markers Automatically Generated by Final Cut Pro
You can set the preset you are using in Compressor to either use or ignore the compression markers that Final Cut Pro adds to transitions when exporting a movie. In addition to any markers you manually set in Final Cut Pro, compression markers are added to its exported file at each transition. These markers can be used by Compressor to force I-frames at places that can greatly benefit from them (since transitions generally indicate a sudden change of video content) and result in a better encoded file.

The drawback is that the I-frames inserted at these automatic markers make it difficult to use the encoded file as part of a multi-angle or mixed-angle track.

Select the "Include chapter markers only" checkbox in the Compressor Extras pane in the Encoder pane (in the Presets window) to set Compressor to only process the markers (chapter and compression) you manually add in Final Cut Pro. Deselect this setting to allow Compressor to process both the markers you manually add and the markers Final Cut Pro automatically adds.

DVD Studio Pro only processes the markers you manually add in Final Cut Pro.

DVD@CCESS Information

DVD@CCESS Web Link Utility May Not Start Automatically on All Windows XP Computers
The Windows-based DVD@CCESS web link utility may not start automatically on all Windows XP computers if the computer is restarted. In a few cases, an error dialog appears, saying that Windows could not locate the necessary files. You are able to manually start the DVD@CCESS web link utility by double-clicking the DVDAccess.exe file, located in the /Program Files/Apple Computer/DVD@ccess folder.

DVD@CCESS Does Not Work Automatically With Plug-in Drives on Some Windows Computers
Web links on DVDs located in plug-in drives, such as FireWire and USB drives, work on Windows 2000 and Windows XP computers, but do not work on Windows 98, Windows SE, or Windows ME computers, until you relaunch or deactivate/reactivate DVD@CCESS.

Web Links May Open in the Same or New Windows
If you're using Netscape Navigator 6.x as your default web browser in Windows or the Mac OS, or Safari in the Mac OS, each time you activate a DVD@CCESS web link, it opens in a new browser window. With Internet Explorer and older versions of Netscape Navigator, DVD@CCESS links open in the same browser window.

DVD@CCESS Does Not Work With WinDVD 2.x DVD Players on Some Windows Computers
WinDVD 2.x versions (2.1 and 2.2) don't work with DVD@CCESS links on Windows 2000, Windows XP, or Windows NT computers.

Using CoolDVD With DVD@CCESS Links
A specific web link can only be activated once using CoolDVD 1.1 on Windows 2000 and Windows XP computers. Currently this problem does not exist in the latest version of CoolDVD.

DVD@CCESS Actions Assigned to Still Menus Play Erratically on Some Windows Players
DVD@CCESS actions assigned to still menus can play erratically on some Windows XP computers using the Media Player and on most Windows computers using Power DVD. In some cases, a DVD@CCESS action assigned to a different menu may be activated, or the action may be activated only the first time a menu is accessed. To work around this issue, you can create all menus with DVD@CCESS actions as motion menus.

Filenames Not Conforming to the 8.3 Filenaming Convention May Not Work With Some Windows Computers
Links that access files on the DVD disc itself (for example, file:///NameofDVD/xxx.xxx) and that contain names exceeding the 8.3 filenaming convention, may not be accessible on Windows NT 4 computers.

Copying a .VOB File Causes DVD@CCESS Links to Activate
Copying a .VOB file from a DVD (to a hard disk, for example) causes your default web browser to open and connect to all the URLs embedded in the DVD title. This happens because DVD@CCESS runs and reads all data from the DVD.

DVD@CCESS Links May Affect Playback When Activating
When DVD@CCESS opens a URL in a web browser, the level of performance and smoothness of video playback depend on your computer. The playback of video on a slower computer may be slightly interrupted when DVD@CCESS opens a URL.

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iTunes: How to Use the "Copy to Play Order" Command

Learn how to use the "Copy to Play Order" command with a shuffled playlist.
This article has been archived and is no longer updated by Apple.
If you like the way iTunes has shuffled the play order of one of your play lists, you can use the "Copy to Play Order" shortcut menu command to make the shuffled play order the permanent play order.

To use this command, Control-click one of the songs in the playlist, and choose "Copy to Play Order" from the shortcut menu. **Tip**: These steps also apply to a playlist you have reordered directly (by clicking on one of the column headers like Artist or Album).

Important: This command will only appear if a playlist has been shuffled or reordered.

Figure 1 "Copy to Play Order" in the shortcut menu

Related documents

93099 "iTunes 4: How to Play Songs Repeatedly or Randomly"

Last Modified: Feb 19, 2012

Additional Product Support Information

Languages

iTunes for Windows: "You must purchase a new QuickTime Pro key to regain QuickTime Pro functionality" Message

- **Last Modified:** May 16, 2007
- **Article:** TA27501

- **Old Article:** 93351

A new QuickTime Pro key will be required if you're installing over QuickTime Pro.

Products Affected

QuickTime, iTunes

Symptom

When you install QuickTime or iTunes for Windows, these messages appear:

> "An older version of QuickTime Pro was detected on this machine. If you proceed with this installation you must purchase a new QuickTime Pro key to regain QuickTime Pro functionality." (Figure 1)

Figure 1 Warning message

> "Are you sure you want to proceed with the installation of QuickTime?" (Figure 2)

Figure 2 Confirmation of installation

Solution

Take advantage of all the great features of QuickTime Pro and buy an upgrade from the QuickTime website, or the Apple Store. You can continue the installation without purchasing a QuickTime Pro key, but you will no longer have access to the QuickTime Pro features.

Note: If you cancel the installation, you will not be able to use iTunes, the iTunes Store, or any of the other features of QuickTime, including MPEG-4 video and AAC audio.

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iTunes for Windows: Installing Additional Plug-ins

In addition to the iTunes Visualizer, you can install and use non-Apple Visualizer plug-ins.

Products Affected

Windows OS, Windows Vista, Windows XP, iTunes

This article has been archived and is no longer updated by Apple.
iTunes Visualizer gives you a full-color creative light show with the click of a button. You can also install your own visual effects plug-ins to use with iTunes. **Note:** Plug-ins are for either the Mac OS X or Windows version of iTunes. Be sure to use the Windows plug-ins for the Windows version of iTunes.

To install a plug-in in Windows Vista:

1. Open /Users/username/AppData/Roaming/Apple Computer.
2. Open the iTunes folder.
3. Drag the plug-in to the iTunes Plug-ins folder. Note: You may need to create an iTunes Plug-ins folder here if no previous system-wide plug-ins have been installed. To create a new folder, on the File menu, click New Folder. Rename the folder "iTunes Plug-ins" without the quotes.

To install a plug-in in Windows XP and 2000:

1. Open the My Documents folder (Click Start, and point to My Documents).
2. Open the My Music folder.
3. Open the iTunes folder.
4. Drag the plug-in to the iTunes Plug-ins folder. **Note:** You may need to create an iTunes Plug-ins folder here if no previous system-wide plug-ins have been installed. To create a new folder, on the File menu, click New Folder. Rename the folder "iTunes Plug-ins" without the quotes.

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- **Last Modified:** February 19, 2012
- **Article:** TA27502

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Languages

English

iTunes for Windows: How to tell if you have a drive that can burn a CD

Learn how to tell if your computer has a drive that can burn a CD.

This article has been archived and is no longer updated by Apple.

To determine if the drive of your Windows Vista PC can burn a CD, click here.

Learn how to tell if your Windows XP PC has a drive that can burn a CD.

If you are not sure if your computer's CD or DVD drive can make or "burn" a CD-R disc, there are a few ways to find out.

You can also check the properties of the drive in Windows Explorer:

1. Open the My Computer window (Click the **Start** button, then point to **My Computer**.
2. Under Devices with Removable Storage, locate your CD or DVD drive.
3. Right-click on your drive and choose Properties from the shortcut menu (or left-click once to select the drive and from the File menu, choose Properties).

If there is a Recording tab in the Properties window that appears, your computer's drive can burn a CD. See Figure 1. Tip: The "Enable CD recording on this drive" option does not need to be checked for iTunes to burn a disc. This options affects Desktop CD recording only.

If there is no Recording tab in the Properties window that appears, your computer's drive cannot burn a CD. See Figure 2.

Typically, you can upgrade the CD drive in your computer to one that can burn discs. Contact the manufacturer or a computer reseller for more information.

Related Documents

iTunes for Windows: Unable to Burn a CD

Published Date: Oct 7, 2016

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All Products...

Languages

- Deutsch
- English
- Français
- 日本語
- □□□

iTunes for Windows: System Requirements

- **Last Modified:** September 01, 2006
- **Article:** TA27504

- **Old Article:** 93361

Products Affected

iTunes Store, iTunes

Visit the iTunes download page to see the current system requirements. Any operating systems not specifically listed on the iTunes download page are not supported.

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QuickTime Streaming Server and Darwin Streaming Server: iTunes Store Files Cannot Be Added to a Playlist

- **Last Modified:** July 13, 2007
- **Article:** TA27505

- **Old Article:** 93370

iTunes Store files are protected and may not be streamed in QuickTime Streaming Server or Darwin Streaming Server.

Products Affected

iTunes Store, QuickTime

Symptom

When selecting files to add to a playlist, protected AAC files purchased from the iTunes Store do not appear in the list.

Solution

Use one of these formats for QuickTime Streaming Server or Darwin Streaming Server:

- Streaming MP3 files in music playlists
- Unprotected AAC files in movie playlists (the movie must have a hint track).

Additional information

Protected AAC files have the filename extension ".m4p". Unprotected AAC files from iTunes have the filename extension ".m4a".

See technical document 42644, "**QuickTime Pro: How to Prepare a Movie for Streaming**" for information on how add a hint track to an unprotected AAC file using QuickTime Pro. You can also use QuickTime Streaming Server Publisher, new in QuickTime Streaming Server 5, to automatically add a hint track to an unprotected AAC file. See the **QuickTime Streaming Server** webpage for additional information.

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Languages

Audio MIDI Setup: MIDI Configurations Are Lost

- **Last Modified:** October 04, 2008
- **Article:** TA27506

- **Old Article:** 93372

Some non-Apple drivers may not store the previously saved configuration for all devices.

Products Affected

Mac OS X 10.0, Mac OS X 10.3

Symptom

MIDI settings you previously made are lost when you reopen Audio MIDI Setup.

Solution

Audio MIDI Setup queries the drivers for all connected audio devices in order to determine the previously saved configuration. Some non-Apple (third-party) drivers may not store the previously saved configuration for all devices. Contact the vendor of your audio device for an updated driver.

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Final Cut Pro 4: Some TrueType Fonts Don't Appear

- **Last Modified:** October 04, 2008
- **Article:** TA27508

- **Old Article:** 93375

Some TrueType fonts may not appear in the Final Cut Pro 4 text generators.

Products Affected

Final Cut Pro

Symptom

Some installed TrueType fonts are not listed.

This occurs with the following text generators:

- Crawl
- Lower 3rd
- Outline Text
- Scrolling Text
- Text
- Typewriter

Solution

Update to Final Cut Pro 4.1. The update can be obtained via the Software Update pane in System Preferences.

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TA27508_Final_Cut_Pro_4_Some_TrueType_Fonts_Dont_Appear.pdf

iSight: About Speech Recognition

- **Last Modified:** January 08, 2004
- **Article:** TA27509

- **Old Article:** 93378

iSight's built-in microphone works great for iChat AV or any application that can record sound, but it cannot be used for speech recognition.

Products Affected

iSight

Symptom

iSight does not work with the Apple Speakable Items speech recognition system.

Solution

You can use iSight with Apple Speakable Items in Mac OS X 10.3 or later.

To take advantage of Apple Speakable Items in Mac OS 10.2:

1. Use the computer's built-in microphone, or connect a compatible USB or line-in microphone.
2. From the **Apple** menu, choose **System Preferences.**
3. From the **View** menu, choose **Speech.**
4. Click the Listening tab.
5. Choose your microphone from the Microphone pop-up menu.

Related documents

61479 "**Mac OS X: Speech - About Using Spoken Commands**"
61484 "**Mac OS X: Speech - How to Give Spoken Commands**"

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TA27509_iSight_About_Speech_Recognition.pdf

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Final Cut Pro 4: How to delete the preference files

- **Last Modified:** June 07, 2004
- **Article:** TA27510

- **Old Article:** 93385

Learn how to resolve issues caused by unusable preference files in Final Cut Pro 4.

Products Affected

Final Cut Pro

When troubleshooting Final Cut Pro, one step you can take is to delete the Final Cut Pro preference files. Doing this restores Final Cut Pro to the default settings and behavior. These files contains user preferences for scratch disk settings, capture settings, window layouts, and so forth.

To delete the Final Cut Pro 4 preferences files, do the following:

1. Quit Final Cut Pro 4.
2. Click the Finder icon in the Dock.
3. From the **Go** menu, choose **Go to Folder**.
4. Type: `~/Library/Preferences/` **Note**: The tilde "~" refers to your home directory. For more information see "Mac OS X: Using Your Home Directory".
5. Click Go.
6. Drag the file named "com.apple.FinalCutPro.plist" to the Trash (Figure 1).
7. Double-click the folder named "Final Cut Pro User Data".
8. Drag the file named "Final Cut Pro 4.0 Preferences" to the Trash (see Figure 2).
9. Drag the file named "Final Cut Pro POA Cache" to the Trash (Figure 2).
10. Open Final Cut Pro.

Important: Do not delete any of the other files in the Final Cut Pro User Data folder.

Figure 1 The Final Cut Pro plist file

Figure 2 Final Cut Pro 4.0 Preferences and Final Cut Pro POA Cache files

Once this process is completed Final Cut Pro reverts to its installed defaults. Reset all of your desired application preferences to match what they were before--in particular your Scratch Disk Preferences, keyboard mappings, and the selected Sequence Settings.

Back up configured preference files

To avoid recreating all your custom settings in the event you have to delete the preference files again, follow these steps to save a clean copy of the file:

1. Make a backup copy of the "Final Cut Pro Preferences" and the "com.apple.FinalCutPro.plist" files immediately after it is configured for the first time.
2. Put the backup copy of the files in a safe place.

If you have to delete the preference files again, you can simply replace them with the backup copy of the saved, clean files. This preserves your desired preference settings, while eliminating any unwanted behaviors that may have been caused by a faulty Final Cut Pro Preferences file.

Note: It is not necessary to back up the Final Cut Pro POA Cache file.

Related document
93832: "Final Cut Pro HD 4.5: How to Delete the Preference Files"
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iTunes for Windows: How to make iTunes the default application for music and audio files

- **Last Modified:** February 02, 2006
- **Article:** TA27514

- **Old Article:** 93397

Learn how to make iTunes the default application for many Internet music and audio formats.

Products Affected

iTunes

iTunes can play many types of audio files available on the Internet. Using Windows, you can select iTunes as the default application to open audio files.

For a complete list of the kinds of audio files iTunes can play, see, "iTunes: Compatible Audio File Types".

There are two ways that iTunes for Windows can be configured as the default application. The preferred way is to configure using iTunes preferences. The other is to use the Set Program Access and Defaults program.

Changing the default media application

Using iTunes

1. Open iTunes.
2. From the **Edit** menu, choose **Preferences**.
3. Click the Advanced button and then click the General tab.
4. Click "Use iTunes as the default player for all audio files" to select this option.

Note: Deselecting this option tells Windows to use the default application you used before iTunes.

Using Set Program Access and Defaults application

1. Click the **Start** button, point to **All Programs**, then click **Set Program Access and Defaults**

   The Set Program Access and Defaults window appears.

2. Click the arrow to the right of Custom.

3. Under the "Choose a default media player:" heading, click iTunes.

4. Click **OK**.

Note: To make a different application the default media player, follow these same steps and select the application you want to use.

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Languages

- English
- 日本語

iTunes for Windows: Songs Play Faster Than Normal on Some Dell Computers

- **Last Modified:** October 04, 2008
- **Article:** TA27515

- **Old Article:** 93402

You may need to update your Dell computer's sound card drivers so iTunes can play songs at the right speed.

Products Affected

iTunes

Symptom

Songs play at a faster than normal speed. This includes songs played from audio CDs as well as songs in your iTunes library.

Solution

Contact Dell for updated sound card drivers. With the updated drivers, songs play at their normal speed.

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iTunes for Windows: Shared Music Library Doesn't Load

- **Last Modified:** December 09, 2003
- **Article:** TA27516

- **Old Article:** 93404

You may not be able to listen to shared music if your computer is using more than one network connection at the same time.

Products Affected

iTunes

Symptom

When you click a shared music library in the Source list, the status area at the top of the iTunes window says the library is loading, but its contents never appear.

This happens if your computer is using more than one network connection at the same time. For example, you may be using both an Ethernet and wireless network connection.

Solution

Turn off one of your active network connections.

1. Click the **Start** button, then point to **Control Panel**.
2. Click Network and Internet Connections.
3. Click Network Connections.
4. Right-click the network interface you want to disable.
5. Choose **Disable** from the shortcut menu that appears.
6. Click the **Start** button, then point to **Turn Off Computer**.
7. Click Restart.

Note: If you need to use the network interface that was disabled, follow these steps again, but in Step 5 choose Enable instead of Disable.

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TA27516_iTunes_for_Windows_Shared_Music_Library_Doesnt_Load.pdf

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Languages

- Deutsch
- English
- Français
- 日本語

QuickTime 6.4: How to get the updated MPEG-2 Playback Component

- **Last Modified:** May 14, 2004
- **Article:** TA27517

- **Old Article:** 93407

An updated version of the MPEG-2 Playback Component is required for use with QuickTime 6.4 on Mac OS X.

Products Affected

DVD Studio Pro, Final Cut Pro

If you purchased the MPEG-2 Playback Component from the Apple Store online or received it with Final Cut Pro 4 or DVD Studio Pro 2, you are eligible to receive an updated version for free. Based upon how you received your copy of the MPEG-2 Playback Component, please follow the appropriate directions below to receive the updated software.

Apple Store
If you purchased your MPEG-2 Playback Component from the Apple Store, follow these instructions to download the update:

1. Connect to the Apple Store (http://www.apple.com/store/). If you are not in the United States, choose your country's Apple Store from the menu at the bottom of the page.
2. Click "Your Account" in the store menu bar at the top right of the page.
3. Enter your Apple ID and password.
4. Click "Software Download Purchases". You will see a link to the QuickTime 6 MPEG-2 Playback Component.
5. Click the link to download and install the updated version.

Final Cut Pro 4 and DVD Studio Pro 2
If you received your MPEG-2 Playback Component as part of Final Cut Pro 4 or DVD Studio Pro 2, an update is available via Software Update in System Preferences.

Note: This update works with both QuickTime 6.3 and QuickTime 6.4.

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TA27517_QuickTime_6-4_How_to_get_the_updated_MPEG-2_Playback_Component.pdf

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Archived - Keynote 1.1.1: Read Before You Install

Keynote 1.1.1 is an update for computers with Mac OS X 10.2.8 or Mac OS X 10.3 or later.

Products Affected

Keynote, Mac OS X 10.3

This article has been archived and is no longer updated by Apple.

Requirements

- Keynote 1.0 or 1.1
- Power Mac G3, G4 or G5, PowerBook G4, eMac, iMac or iBook with 500 MHz or faster processor (Power PC G4 recommended)
- Mac OS X 10.2.8 or later (Mac OS X 10.3 Panther recommended)
- 128 MB of RAM (512 MB recommended)
- 8 MB of video memory (32 MB recommended)
- 1 GB of available disk space
- QuickTime 6.3 or later is recommended

Where to download

If your system meets the requirements above, Keynote 1.1.1 is available via the Software Update pane in System Preferences.

What's new in Keynote 1.1.1

If you are using Keynote on a computer with Mac OS X 10.2.8 or later installed, you must install the Keynote 1.1.1 update. The update delivers enhanced features and improved reliability of the Keynote application.

Installing Keynote

Keynote must be installed on your startup volume (the partition of your hard disk that contains a System folder for Mac OS X version 10.2.8 or later). During installation, files related to the Keynote application are placed on your hard disk in the following locations:

A sample document is placed in the folder

> [hard disk]/Library/Application Support/Keynote/Samples.

Image Library documents are placed in the folder

> [hard disk]/Library/Application Support/Keynote/Image Library.

More information

For more information on Keynote, visit **http://www.apple.com/keynote/**. For a comprehensive guide to using Keynote, check out the "Keynote User's Guide."

Keynote also provides onscreen instructions. To access onscreen instructions, from the **Keynote Help** menu, choose **Help**. Click Contents to browse a list of topics or type your question in the Search field and press Return.

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- **Last Modified:** Feb 19, 2012
- **Article:** TA27525

- **Views:**

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Languages

English

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iPod (with Dock Connector): Battery Depleted After Pausing Voice Recording

- **Last Modified:** October 04, 2008
- **Article:** TA27526

- **Old Article:** 93442

If you press pause while recording audio, iPod's battery may be depleted if you don't subsequently stop recording.

Products Affected

iPod

Symptom

iPod's battery is depleted even though you haven't used iPod very much. The last thing you did was pause a voice recording.

Solution

Pausing voice recording can quickly deplete iPod's battery. Turn off voice recording when you've finished instead of pausing.

Do one of the following:

- Press Menu to exit the Voice Memo screen.
- Select Resume and then Pause again.

Either of these allows the hard drive to turn off or "spin down". Selecting Stop and Save also allows the hard drive to spin down.

This document will be updated as more information becomes available.

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Keynote: How to Print Slides Containing Semi-Opaque Objects

- **Last Modified:** October 04, 2008
- **Article:** TA27527

- **Old Article:** 93450

Learn how to print Keynote slides that contain semi-opaque objects.

Products Affected

Keynote

When printing a presentation in Keynote, slides that contain semi-opaque objects will not print as they appear on the screen. Follow these steps to print Keynote slides that contain semi-opaque objects while preserving their transparency. **Note**: Using these steps will result in a lower quality printout than printing from Keynote directly. Use it only if preserving transparency of a slide is important.

Take a screen capture of the slide.

1. Open the Keynote presentation.
2. Select the slide from the Slides list.
3. Press Command-Shift-4 on your keyboard. The mouse cursor changes into an area selection tool.
4. Put the center of the area selection tool in one of the corners of the slide in Keynote.
5. Click and hold the mouse button.
6. Drag the area selection tool to the opposite corner of the slide.

Print the screen capture

1. Look for a new file on your desktop named "Picture x" where "x" is a number. **Note**: The number will be incremented by one every time you take another screen capture.
2. Double-click the file.
3. From the **File** menu, choose **Print**.

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DVD Studio Pro 2: How to Uninstall

- **Last Modified:** May 06, 2004
- **Article:** TA27528

- **Old Article:** 93452

Learn how to uninstall DVD Studio Pro 2.

Products Affected

DVD Studio Pro

To uninstall DVD Studio Pro 2, drag each of its files to the Trash. All of the folders (directories) and files installed as part of DVD Studio Pro 2 are listed in the table below.

For easy access, use the Finder's Go to Folder command. From the **Go** menu, choose **Go to Folder**, enter the directory name, and click Go.

Directory Name	File Name
/Applications/	A.Pack.app
	Compressor.app (see note below)
	DVD Studio Pro.app
/Applications/Utilities/	Batch Monitor.app
/Library/Application Support/	DVD studio Pro (Folder)
/Library/Application Support/ProApps/	DVD Studio Pro System ID
/Library/Frameworks/	AECore.framework (see note below)
	Compressor.framework (see note below)
	MediaServerAPI.framework (see note below)
	Qmaster.framework (see note below)
/Library/Receipts/	APack.pkg
	Compressor.pkg (see note below)
	DSPExtras.pkg
	DVDStudioPro2.pkg
	DVDStudioPro202Update.pkg (if 2.0.2 updater was run)
	ProAppRuntime.pkg
	QTProMedia.pkg (see note below)
	QuickTimeMPEG2.pkg (see note below)
/Library/StartupItems/	Qmaster (see note below)
/private/etc/	qmaster (see note below)
/System/Library/QuickTime/	QTMPEGExport.component (see note below)
	QuickTimeMPEG2.component (see note below)
	QuickTimeProMedia.component (see note below)
/usr/sbin/	qmasterd (see note below)
	qmasterqd (see note below)
~/Library/Application Support/	DVD Studio Pro
~/Library/Preferences/	com.apple.dvdstudiopro.plist

Note: If you have installed Final Cut Pro 4, Shake 3, QuickTime Pro, or QuickTime MPEG Component, do not remove the files noted above.

Related documents

107005 Mac OS X 10.2: How to Find Items on the Hard Disk

TA27528_DVD_Studio_Pro_2_How_to_Uninstall.pdf

106237 Mac OS X: Unable to Delete, Unlock, Modify, or Copy an Item

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You can't import or play music from an audio CD in iTunes for Windows

- **Last Modified:** May 31, 2007
- **Article:** TA27529

- **Old Article:** 93453

Learn troubleshooting steps to take if audio CDs or songs imported from audio CDs won't play.

Products Affected

iTunes

Try the steps below if iTunes for Windows recognizes an audio CD but won't play it, or doesn't play songs you import from an audio CD. In some cases iTunes appears to import songs from the audio CD, but the created tracks contain no music and have a time of 0:00.

1. Update iTunes

Download and install the latest version of iTunes for Windows.

2. Deslect "Use error connection when reading audio CDs"

1. Open iTunes.
2. From the **Edit** menu, choose **Preferences**.
3. Click the Advanced tab then click the Importing tab.
4. Deselect the option to "Use error correction when reading audio CDs" if it is selected.

5. Click OK.

3. Check for software updates

Microsoft or your computer's manufacturer may have released updated software. Check to see if there are updates to Windows or to the software that controls the drive. Check your computer manufacturer's website for updates, particularly for updates to the CD or DVD drive. If you bought the drive separately from the computer, check the drive manufacturer's website. In some cases, drivers for other devices (such as video and sound cards) could affect how the CD or DVD drive works. Make sure all video and sound card drivers are the most recent versions.

4. Check for firmware updates

From time to time manufacturers publish updates to a CD or DVD drive's internal software (known as firmware). Check your computer manufacturer's website for firmware updates first. This is important because the internal drives used by some companies (including Dell) require special firmware. If an update is not available from the computer manufacturer, check with the company that made the drive. In some cases, firmware for other devices (such as video and sound cards) could affect how the CD or DVD drive works. Make sure all video and sound cards have the latest firmware also.

Important: Use special care when installing firmware updates. Incorrectly installing a firmware update could damage the drive and make it unusable. Always check with the computer manufacturer first before checking with the drive manufacturer.

5. Try different drive

If you have more than one optical drive, try using iTunes with each drive.

If you are still unable to play or import from audio CDs after you try these steps, your optical drive may not work with iTunes.

6. Run CD Diagnostics in iTunes

Click here for more information.

This document will be updated as more information becomes available.

Related documents

93647 "iTunes for Windows: Only First Audio CD Is Recognized"
93444 "iTunes for Windows: Does Not Recognize Audio CDs"
107958 "Importing Windows Media Audio files with iTunes for Windows"

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iMovie: Using FileVault Can Affect Performance

- **Last Modified:** November 12, 2003
- **Article:** TA27532

- **Old Article:** 93460

Learn how to use iMovie with FileVault, a feature of Mac OS X Panther.

Products Affected

iMovie, Mac OS X 10.3

FileVault is a feature of Mac OS X 10.3 that allows you to secure access to your home folder through the use of encryption. When FileVault is turned on, files in your home folder are encrypted and decrypted as needed.

Using iMovie when FileVault is turned on may reduce iMovie performance if the project is saved in the encrypted directory (usually your home folder).

For best results when using FileVault, move your iMovie project folder outside your home folder, such as /Users/Shared/, or to another hard disk.
Note: You must move the entire project folder out of your home folder.

After you have finished editing the project, you can drag its folder back into your home directory.

If you don't move your iMovie project folder out of your home directory, you may experience these issues:

- Recording a voiceover in iMovie results in the alert message, "The disk responded slowly."
- Video imported from a DV device has dropped frames, or iMovie unexpectedly stops importing video.

Related documents

106167 Mac OS X: Using Your Home Directory
106419 Mac OS: About Folders, Directories, and Pathnames

TA27532_iMovie_Using_FileVault_Can_Affect_Performance.pdf

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iPod (with Dock Connector): Operational Sounds May be Recorded by Microphone

- **Last Modified:** July 01, 2004
- **Article:** TA27539

- **Old Article:** 93472

When recording a voice memo with the Belkin iPod Voice Recorder, the normal sounds iPod makes when you use it may also be recorded.

Products Affected

iPod

The normal sounds iPod makes when you use it may be picked up by the microphone when you record a voice memo. This includes the sounds the hard disk makes, actions such as pressing buttons, engaging or disengaging the hold switch, or using the touchwheel. These sounds may be more noticeable when there is very little battery charge remaining.

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Languages

- English
- 日本語

QuickTime: Exporting AVI Files Larger Than 1 GB

- **Last Modified:** October 04, 2008
- **Article:** TA27544

- **Old Article:** 93490

Applications that use QuickTime may not be able to export AVI format movies that are greater than about 1 GB in size.

Products Affected

Final Cut Pro, QuickTime, Final Cut Express, Windows OS, iMovie

Symptom

After exporting an AVI file larger than 1 GB, the file size appears correct, but the movie stops playing when it reaches the 1 GB point.

Solution

QuickTime can open large AVI files, but does not export AVI files larger than about 1 GB. Export the file using the MPEG-4 or QuickTime Movie formats instead.

This document will be updated when additional information is available.

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iMovie 5 and earlier: Importing Files Larger Than 2 GB

- **Last Modified:** May 25, 2007
- **Article:** TA27545

- **Old Article:** 93494

Products Affected

iMovie

iMovie (versions 1-5) can import files up to 2 GB in size.

Using the Import command in iMovie's File menu, you can import QuickTime or DV files that are up to 2 gigabytes (GB) in size. If you try to import larger files, iMovie may unexpectedly quit, or you may see a message that says the file is too big or an alert stating the "file could not be imported: (-40)".

With QuickTime Player Pro, you can split a large file into two or more smaller ones that iMovie can import. QuickTime Pro is available from the Apple Store.

See "QuickTime Pro: How to Edit Portions of a Movie" for steps on how to split a large file using QuickTime Pro.

Related documents

60562: "Files split at 1.9 GB (about 9 minutes) when capturing clips in iMovie 5 or earlier "

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iMovie: Fast User Switching and DV Camera Control

- **Last Modified:** February 03, 2005
- **Article:** TA27546

- **Old Article:** 93495

If Fast User Switching in Mac OS X 10.3 is enabled, make sure other users have logged out of their account if you can't use a camera connected to the computer.

Products Affected

Mac OS X 10.3, iMovie

If you can't control a DV camera connected to the computer, or if iMovie doesn't recognize it, other users may be logged in and accessing the camera in iChat, iMovie, or another video application. Make sure other users have logged out of their accounts.

Note: Switching users while importing footage may cause the import to stop.

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Final Cut Pro 4.1: Timeline Copy and Paste Follows Auto Selected Tracks

Learn how copying and pasting clips has changed in Final Cut Pro 4.1.

Products Affected

Final Cut Pro

This article has been archived and is no longer updated by Apple.

In earlier versions of Final Cut Pro, clips pasted in the Timeline are placed in the currently selected*destination tracks*. In Final Cut Pro 4.1, clips pasted in the Timeline are placed according to track Auto Select controls.

When clips are pasted in the Final Cut Pro 4.0.2 Timeline, the following rules apply:

- The currently selected destination tracks determine where clips are pasted.

Linked video and audio clips are pasted in corresponding video and audio pairs: Video track V1 corresponds to audio tracks A1 and A2, video track V2 corresponds to audio tracks A3 and A4, and so on. For example, if you set track V2 as the video destination track, the linked audio clips are pasted automatically in tracks A3 and A4.

When clips are copied in the Final Cut Pro 4.1 Timeline, only clips on the auto-selected tracks are copied to the clipboard. If no tracks are auto-selected, selected clips on all tracks are copied.

When clips are pasted in the Final Cut Pro 4.1 Timeline, they are placed according to auto-selected tracks, not destination tracks, and the following Auto Select rules apply:

- If there are no auto-selected tracks, tracks V1 and A1 are used by default.

- When pasting multiple clips, the relative track placement of the copied clips is always maintained. For example, two video clips copied from tracks V1 and V3 will maintain the one-track gap between them when pasted. Audio track clip relationships are maintained similarly, and they are independent from video track clip relationships.

Note:he examples above show that only one auto-selected audio track is necessary to determine where the audio pair will be pasted. The same is true when pasting multiple video clips.

- The lowest numbered auto-selected tracks are used. For example, if tracks V2, V3, A3, and A4 are auto-selected, tracks V2 and A3 are used.

- Pasting linked video and audio clips requires both auto-selected video and audio tracks. If only one type of track is auto-selected, Final Cut Pro automatically determines the other track: Video track V1 corresponds to audio tracks A1 and A2, video track V2 corresponds to audio tracks A3 and A4, and so on. For example, if you auto select track V2 (and no audio tracks), linked audio clips will be pasted automatically in audio tracks A3 and A4. Auto-selecting specific tracks overrides this rule.

Tips for Faster Copying and Pasting
Since the lowest numbered auto-selected video and audio tracks determine where clips will be pasted in the Timeline, you can save time by choosing only one video and audio auto-selected track.

To auto select a single video or audio track:

- Option-click the Auto Select control for the single track you want to auto select.

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- **Last Modified:** February 19, 2012
- **Article:** TA27547

- **Views:**

  7413

- **Rating:**
  - 3.0/5 Stars

  (8 Responses)

Languages

English

FireWire: External Drive Data Transfers Slow During Video Conference

- **Last Modified:** June 11, 2007
- **Article:** TA27548

- **Old Article:** 93498

Transfer rates for external FireWire drives may slow down while video conferencing with a FireWire camera such as the iSight.

Products Affected

iSight

Because the computer gives video and audio data priority over file transfers, data transfer rates will slow down when transferring large files from the computer's internal drive to an external FireWire drive while an iSight (or any third-party FireWire camera) is previewing or streaming video in a chat.

To avoid this situation, don't transfer large files to an external FireWire drive when you are using a FireWire camera to stream video.

Rate this article:

- Not helpful
- Somewhat helpful
- Helpful
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- Solved my problem

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DVD Studio Pro 2.0.5 Enhancements

- **Last Modified:** March 15, 2004
- **Article:** TA27549

- **Old Article:** 93500

Learn about enhancements in DVD Studio Pro 2.0.5.

Products Affected

DVD Studio Pro

The DVD Studio Pro 2.0.5 update is strongly recommended for all users of DVD Studio Pro 2 creating DVD-9 projects. This update improves the placement of the dual-layer break point.

For additional information regarding the full contents of this update, please refer to the DVD Studio Pro Late-Breaking News located in the Help menu.

Previous DVD Studio Pro 2 Enhancements
The following enhancements were included in earlier DVD Studio Pro 2 updates.

PAL Projects Using the 2.0.3 Release
The DVD Studio Pro 2.0.3 release introduced an issue in PAL projects using still images. Still menus, slideshows or tracks containing stills, are being scaled incorrectly in PAL projects. NTSC projects are not affected by this issue.

Note: When PAL projects with still images are played back from the Simulator, they will appear to be scaled correctly. However, when played back in a DVD player, any still images in the project will appear incorrectly scaled and cropped.

Additional MPEG-2 Resolutions Now Supported
DVD Studio Pro now supports the cropped D-1, 1/2 D-1, and SIF MPEG-2 video resolutions.

Following is a list of supported MPEG-2 video resolutions:

- Full D-1: 720 x 480 NTSC, 720 x 576 PAL
- Cropped D-1: 704 x 480 NTSC, 704 x 576 PAL (matches analog blanking)
- 1/2 D-1: 352 x 480 NTSC, 352 x 576 PAL
- SIF (Standard Interface Format): 352 x 240 NTSC, 352 x 288 PAL

There are several things to be aware of when using these resolutions in a track:

- While a project can contain a combination of the three supported video resolutions, all video clips within a track must use the same video resolution. For example, if you have a full D-1 and a 1/2 D-1 video asset, they cannot be used within the same track, but could be used within separate tracks in the same project.
- The embedded MPEG encoder only encodes with the full D-1 resolution. When you add QuickTime assets to a track, the entire track must only contain full D-1 resolution clips.
- Still images are encoded as full D-1 MPEG-2 assets. Any tracks you add still images to must only contain full D-1 resolution clips.

When creating standard menus, you can assign assets using any of the three supported video resolutions to drop zones and buttons. Since menus are rendered as part of the build process, you can mix video resolutions as required in your menus.

Trimming Clips Precisely Is Now Easier
If you decide to trim a track's clip by entering a new Clip Start Time in the Clip Inspector, the clip's Duration setting automatically changes to accommodate the new start time. Earlier versions of DVD Studio Pro 2 required you to first enter a shorter duration before entering a new start time.

Subtitle Clips Can Now Cross Markers
Subtitles that cross chapter markers are now automatically split into multiple subtitle clips at each marker when you build your project. The DVD-Video specification does not allow subtitles to extend across chapter markers. By splitting a single long subtitle clip at each chapter marker as part of the build process, DVD Studio Pro allows you to create the impression of one long seamless subtitle clip.

Illegal Still Clip Lengths Disallowed
DVD Studio Pro now restricts the minimum still image clip length to 15 frames in NTSC projects, and to 12 frames in PAL projects. These minimums also apply to stills within a slideshow.

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Final Cut Pro 4.1: "Out of Memory" Error With Less Than 384 MB of RAM

- **Last Modified:** December 04, 2003
- **Article:** TA27550

- **Old Article:** 93501

If you try to use Final Cut Pro 4.1 on a computer that has less than 384 MB of memory installed, an "Out of Memory" message will appear.

Products Affected

Final Cut Pro

Final Cut Pro 4 requires 384 MB of RAM, and 512 of RAM for RT Extreme. Using the program on a computer that has less than 384 MB of memory installed will result in "Out of Memory" message when you open a sequence.

To resolve this issue, upgrade the computer's RAM to at least 384 MB. 512 MB of RAM is required to use RT Extreme effects and to use Soundtrack.

Complete system requirements for Final Cut Pro 4 can be found on the Final Cut Pro Technical Specifications page (http://www.apple.com/finalcutpro/specs.html).

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iPod software 2.1: About Windows ME Support

- **Last Modified:** June 07, 2007
- **Article:** TA27553

- **Old Article:** 93506

Products Affected

iPod, iPod, Windows OS

To use an iPod that has iPod 2.1 or later software with Microsoft Windows ME, you'll first need to restore iPod to a previous version of the software.

Windows ME works with iPod software 1.3 through 2.0.2. Windows ME does not work with iPod software 2.1 or later or with iPod mini software 1.0 or later.

To use an iPod that has iPod software 2.1 with Windows ME, restore your iPod using the original CD that came with it.

If your iPod is repaired, chances are it will come back with the latest version of iPod software. In this case, you'll need to restore it to a previous version.

Note: iTunes for Windows (and iPod models that come with iTunes) only work with Windows Vista, Windows XP, and Windows 2000.

Related documents

61688 "Identifying different iPod models"
iTunes System Requirements

TA27553_iPod_software_2-1_About_Windows_ME_Support.pdf

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DVD Studio Pro 2.0.4: About Dual-Layer Break Points

- **Last Modified:** February 13, 2004
- **Article:** TA27556

- **Old Article:** 93514

Learn about how DVD Studio Pro has changed the default dual-layer break point flag starting with the DVD Studio Pro 2.0.3 update and how to modify the default setting.

Products Affected

DVD Studio

DVD Studio Pro has changed the behavior of the dual-layer break point starting with version 2.0.3. It now forces a pause during playback of DVD-9 projects while the DVD player switches to the second layer. While this change to a non-seamless dual-layer break point will increase compatibility of your DVD project with DVD players, you may still wish to use the seamless method.

To override the default and create DVD-9 projects with seamless dual-layer break points:

1. Open Terminal (Applications/Utilities).
2. Type "`defaults write com.apple.dvdstudiopro SeamlessLayerBreak YES`" at the command prompt and press Return. (With this setting, DVD Studio Pro versions 2.0.3 and later will create a DVD-9 with no pause when switching layers, but it may be incompatible with some players.)

To return to the default and create DVD-9 projects with non-seamless dual-layer break points:

1. Open Terminal (Applications/Utilities).
2. Type "`defaults write com.apple.dvdstudiopro SeamlessLayerBreak NO`" at the command prompt. (With this setting, DVD Studio Pro versions 2.0.3 and later will create a more compatible DVD-9 with a slight pause when switching layers. This is the default setting.)

To verify the setting:

1. Open com.apple.dvdstudiopro.plist in ~/Library/Preferences/ with a text editor. **Note**: The Tilde (~) represents your home directory.
2. Search for "SeamlessLayerBreak".

    - If the value for "SeamlessLayerBreak" is set to "YES", seamless dual-layer break points will be used.
    - If the value for "SeamlessLayerBreak" is set to "NO", non-seamless dual-layer break points will be used.

Note: The Seamless/Non-Seamless flag is set only during the DDP or CMF formatting process.
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Songs from iTunes Store do not copy to your iPod

iTunes does not copy purchased songs to your iPod if its software is too old.

Products Affected

iPod, iTunes, iTunes Store

This article has been archived and is no longer updated by Apple.
If either of the following occurs, download and install the latest software for your iPod.

- Songs you purchased from the iTunes Store don't appear on your iPod.
- When you update the music library on your iPod, this message appears:

  "Some of the songs in the iTunes music library, including the song "<song name>", were not copied to the iPod "<iPod name>" because they cannot be played on an iPod."

Tip: This can also occur if the computer you are using is not authorized to play the songs you purchased. Try to play one of the songs on the computer. The song will either play or you will be prompted to authorize it.

Related documents

60984: iPod and iPod mini: How to Find Software Version
93014: iTunes 4: About iTunes Store Authorization and Deauthorization
93867: Some songs in your iTunes library aren't copied to your iPod

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- **Last Modified:** February 19, 2012
- **Article:** TA27559

- **Views:**

  105298

- **Rating:**
  - 2.0/5 Stars

  (129 Responses)

Languages

English

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iPod (with Dock Connector): About Locked Photos and the Belkin iPod Media Reader

- **Last Modified:** July 01, 2004
- **Article:** TA27560

- **Old Article:** 93523

If you select the "erase card" option when you copy files to your iPod, photos you locked on your camera are erased.

Products Affected

iPod

When you transfer photos from a memory card to your iPod, all the photos on the card are erased if you select the "erase card" option. This includes photos you may have locked or protected with the camera. There should be nothing to worry about. All the photos that were on the memory card are on your iPod.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

Document 17159, "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.

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iPod (with Dock Connector): Voice Memo Name Does Not Exactly Match Time Created or Modified

- **Last Modified:** December 15, 2003
- **Article:** TA27561

- **Old Article:** 93526

The time stamp of an iPod voice recording may differ from the modified or created times that the computer's operating system shows for that file.

Products Affected

iPod

The filename of the recording is created when the recording screen on iPod appears. The file's creation date is set approximately two minutes into the recording when the file is first written to iPod's hard disk. The file's modification date is the time when the file was last changed, typically the time the recording ended.

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Soundtrack 1.1: Late-Breaking News

- **Last Modified:** December 09, 2003
- **Article:** TA27563

- **Old Article:** 93533

This document contains late-breaking information about Soundtrack 1.1.

Products Affected

Soundtrack Pro, Final Cut Pro

Late-Breaking News About Soundtrack

This document contains late-breaking information about Soundtrack. For the latest information about product updates, tips and techniques, and qualified third-party devices, visit the Soundtrack website at **http://www.apple.com/soundtrack**.

Exporting Projects and Tracks
When exporting a project mix or a track, the length of the export file runs from the beginning of the playback region to the end of the playback region if a playback region exists. If no playback region exists, the export file runs from the beginning of the project to the end of the last audio clip in the project. If the project contains effects that produce sound beyond the end of the last audio clip, then the export file will extend beyond the last audio clip until the effects stop generating sound.

Duration of Exported QuickTime Files
When exporting a project to a QuickTime movie file, the export file runs from the beginning of the project to either the end of the video file or the end of the last audio clip in the project, whichever is later. The complete video is exported, even if it runs past the end-of-project marker. If the project contains effects that produce sound beyond the end of the last audio clip, then the export file will extend beyond the last audio clip until the effects stop generating sound.

Projects exported to QuickTime are exported at a bit depth of 16 bits, whether the Export Bit Depth setting in the Project pane of the Preferences window is set to a bit depth of 16 bits or 24 bits. QuickTime is limited to an export bit depth of 16 bits.

Some video files with a .mov extension, particularly video files created using some versions of iMovie 3, may not be in a standard QuickTime movie format. If you try to export a project with a video file, and see an alert that the video is not a standard QuickTime movie, export the video from another application such as Final Cut Pro or QuickTime Pro to create a standard QuickTime movie of the file before exporting to QuickTime in Soundtrack.

Long Audio Files May Cause Performance Problems
Adding audio files of more than several minutes' length, or recording audio continuously for several minutes or more, may cause performance problems or result in the application quitting unexpectedly. Previewing extremely long audio files may cause a delay while the file is read into memory. If you experience problems caused by either adding extremely long audio files or recording for long periods of time, installing additional RAM in your computer may help.

Deleting Files in a Project
When a media file has been added to the Timeline of a project, and you move the file to the Trash, and then close the project, the file cannot be deleted from the Trash. An alert appears, saying that the file is still in use. To delete the file, quit Soundtrack, and then empty the Trash.

Similarly, when an audio file has been opened in Soundtrack Loop Utility, and you move the file to the Trash and then close the Soundtrack Loop Utility window, the file cannot be deleted from the Trash. An alert appears, saying that the file is still in use. To delete the file, quit Soundtrack Loop Utility, and then empty the Trash.

Placing Beat, Time, and Scoring Markers
If a beat marker or a time marker is placed at the same position as a Final Cut Pro scoring marker, the beat or time marker cannot be moved or deleted. Video Files Located on a Server May Lose Synchronization During Recording When you record audio in a project that contains a video file, if the video file is located on a server, the video's audio may not be synchronized with the project while recording. You may also experience Write errors while recording. To eliminate the problem, download the video file to your computer's hard disk. Similarly, it is generally not a good idea to use a server as your Recording Sessions Location found in the Recording tab of Soundtrack Preferences.

Importing a Video File With Audio Tracks
When you import a video file into a Soundtrack project, and the video file contains multiple audio tracks, only the first audio track is imported into the project.

Using Small Screen Resolutions
Soundtrack is intended to be used at a screen resolution of 1024 X 768 pixels or higher. If your computer is set to a screen resolution smaller than 1024 X 768, layouts may not display correctly, and changing the layout may cause unpredictable screen behavior.

Using Ripple Delete, Ripple Cut, and Paste Insert Commands With Timeslices
In addition to cutting, copying, pasting, and deleting Timeslices, you can also perform a ripple delete, ripple cut, and paste insert of Timeslices. When you cut or delete a Timeslice, a gap is left in the project Timeline where the deleted content existed. When you ripple cut or ripple delete a Timeslice, the gap is closed; the content to the right of the Timeslice selection moves to close the gap.

When you paste a cut or copied Timeslice, the pasted content is inserted into the Timeline at the position of the playhead and replaces any content that already exists at the playhead location. When you use a paste insert on a cut or copied Timeslice, the pasted content is inserted into the Timeline at the position of the playhead; content to the right of the playhead moves over to make room for the Timeslice being paste inserted.

Changing the Levels of Multiple Tracks at the Same Time
Pressing the Command key while dragging a track's volume slider changes the volume for that track and any other selected track. Each track's volume is changed at the same time, by the same amount. For instance, if you Command-drag a track's volume slider, increasing the volume by 3 decibels (dB), the volume for all selected tracks increases by 3 dB. This allows you to make changes to multiple track volumes at the same time.

Making Volume Envelope Adjustments
If you select a volume envelope, you can adjust all envelope points of a track by a specific decibel value. Choose Edit > Adjust Volume Envelope, then enter a new value in the decibel field. Positive numbers raise the volume, and negative numbers lower it.

Note: Adjustments made to the entire volume envelope that place the audio above +6 dB or below -96 dB will cause the volume envelope to change shape. If you make a volume adjustment that changes the shape of the volume envelope, a warning appears, allowing you to cancel the action.

Mute Always Overrides Solo
When both the Mute and the Solo buttons are selected simultaneously, Mute will always override Solo. For instance, if you have multiple percussion tracks soloed, you can mute one track or multiple tracks to hear individual volume levels in relation to each other. As you unmute each track, those percussion tracks will still be soloed.

Solo Doesn't Affect Preview
If you solo a track, Preview will still play. This allows you to preview different drum loops with a soloed guitar, for example.

Viewing a File's Information Within a Track
Soundtrack allows you to view a file's information within a track. Control-click a selected audio region, then choose Show File Information from the shortcut menu. The same information can also be found in the Media Manager.

Playing a Project From the Beginning
If you want to play your project from the beginning, press Shift-Return. If you have set up a playback region and the playhead is within it, the playhead moves to the start of the playback region. Otherwise, it moves to the start of the project when the playhead is before the playback region, and to the start of the playback region when the playhead is after the playback region.

Changing the Speed of Audio Loops
You can quickly change the speed of multiple audio loops by Control-clicking an audio region, then choosing Clip Speed and the new speed from

the shortcut menu. To return to the original loop's speed, choose Clip Speed > Normal from the shortcut menu.

Using Undo in Soundtrack Loop Utility
When you choose Edit > Undo in Soundtrack Loop Utility, the text is removed from the current and previously selected text fields.

Create Support Profile Has Been Added to the Help Menu
There are certain support situations in which AppleCare may require information about both your computer and how this particular application is configured. Choosing Help > Create Support Profile creates a file that contains the necessary information and can be emailed to AppleCare. You would not normally use this feature unless directed to by an AppleCare representative.

New Apple Applications Page for Pro Apps Developers
The Apple Developer Connection website has launched a new page, Apple Applications, that is a one-stop destination for developers creating content or extensions for Pro Applications. On this page, developers can find late-breaking news of interest and technical resources such as developer documentation, special articles, and SDKs. Developers can also sign up for a new Pro Apps Developer mailing list. The URL is http://developer.apple.com/appleapplications.

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Languages

Final Cut Pro 4: LiveType - Backward Compatibility

- **Last Modified:** October 04, 2008
- **Article:** TA27564

- **Old Article:** 93538

Older versions of LiveType cannot open projects created in newer versions of LiveType.

Products Affected

Final Cut Pro

Differences in project files make it so that projects created in newer versions of LiveType may not work with older versions. For instance, a project created in LiveType 1.2 is not supported by LiveType 1.0.

Tip: Only edit LiveType projects with the same version of the software in which it was created, or later.

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Languages English

Archived - DVD Studio Pro 2: Using .CC Files

DVD Studio Pro may not accept closed caption files with the filename extension ".cc".

This article has been archived and is no longer updated by Apple.

Page 519 of the DVD Studio Pro User's Manual mistakenly states, "DVD Studio Pro supports closed caption files in the ".cc" and ".scc" formats".

To use closed caption files in DVD Studio Pro 2, change the filename extension from ".cc" to ".scc".

Example: Rename "Movie_Captions.cc" to "Movie_Captions.scc".

Last Modified: Feb 19, 2012

Additional Product Support Information

- DVD Studio Pro
- DVD Studio Pro

iDVD: "Multiplexer Preparation Error"

- **Last Modified:** June 08, 2007
- **Article:** TA27570

- **Old Article:** 93553

If there isn't enough room on your computer's hard disk, a multiplexer preparation error may appear when you try to burn a DVD.

Products Affected

iDVD

Symptom

The following message appears when you try to burn a DVD:

> "Multiplexer preparation error: Not enough free disk space for encoding the remaining assets."

Solution

Before burning your iDVD project, make sure there is at least 10 GB of hard disk space available on your Mac OS X startup volume. This will ensure that there is enough space for the elements of your iDVD project to be encoded into the DVD-Video format. It will also keep your hard disk from becoming completely full, which could degrade its performance.

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Final Cut Pro 4: General Error With a Red Screen in Canvas Window

Batch capture clips longer than 15 minutes instead of using Capture Now if you intend to apply speed.

Products Affected

Final Cut Pro

This article has been archived and is no longer updated by Apple.

Symptom

A General Error appears and the Canvas window is red.

This happens after you apply speed to a clip captured via Capture Now that is more than 15 minutes long.

Solution

To avoid this, recapture the affected clips using batch capture.

1. Select the clips in the Browser.
2. From the **Modify** menu, choose **Make Offline**. The Make Offline dialog appears.
3. Select "Delete Them from the Disk" and click OK.
4. Conduct a batch capture of the same clips in order to acquire fresh media for the same media start and media end points.

Rate this article:

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- Helpful
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- **Last Modified:** February 19, 2012
- **Article:** TA27571

- **Views:**

  7067

- **Rating:**
  - 2.0/5 Stars

  (11 Responses)

Languages

English

iPod mini: Frequently Asked Questions

Learn about iPod mini and where to get more information.

Products Affected

iPod

This article has been archived and is no longer updated by Apple.

Question 1: What are the system requirements for iPod mini?

Answer: See "iPod System Requirements".

Question 2: How is iPod mini different from other iPods?

Answer: iPod mini is designed to hold 1000 of your favorite songs and go everywhere you go. iPod is designed to hold your entire music collection - up to 10,000 songs - and go anywhere you go.

iPod mini has the same software features as iPod, except support for voice recording and photo storage. If you require those features, purchase iPod rather than iPod mini.

Question 3: Can I use older technology, such as peripherals, cards, software, and accessories, with this new product?

Answer: See "iPod mini: About Using Older Accessories"

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- **Last Modified:** February 19, 2012
- **Article:** TA27580

- **Views:**

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- **Rating:**
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Languages

English

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Languages

- English
- 日本語

GarageBand: "Error while trying to synchronize Audio and MIDI"

- **Last Modified:** October 04, 2008
- **Article:** TA27582

- **Old Article:** 93573

Plugging and unplugging audio devices to the computer's audio input port can cause an error.

Products Affected

GarageBand

Symptom

This message appears during audio playback:

> "Error while trying to synchronize Audio and MIDI"

In some cases the error will continue to appear even after clicking Continue.

This can occur if you plug and unplug an audio device into the computer's audio input port several times while audio is playing.

Solution

If this happens, stop playback, and start it again.

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TA27582_GarageBand_Error_while_trying_to_synchronize_Audio_and_MIDI.pdf

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GarageBand: Set the Song's Key Before Recording MIDI

Make sure to set a song's key before recording any MIDI notes.

Products Affected

GarageBand

This article has been archived and is no longer updated by Apple.
GarageBand creates new songs with a default key of C. If you decide to change the key later, all of your MIDI notes will be transposed to the new key. To avoid having to transpose your software instruments, be sure to set the song's key before recording anything.

To change the song's key:

1. Click the Track Info button to open the Track Info window.
2. From the pop-up menu at the top of the window, choose **Master Track**.
3. From the **Key** pop-up menu, choose a new key.

If you've already recorded a track in the wrong key, use the Transpose slider in the Track Editor to adjust the pitch of the region.

Rate this article:

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- Very helpful
- Solved my problem

- **Last Modified:** February 19, 2012
- **Article:** TA27585

- **Views:**

  6806

- **Rating:**
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  (3 Responses)

Languages

English

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GarageBand: Won't open if date is incorrect

- **Last Modified:** July 27, 2004
- **Article:** TA27586

- **Old Article:** 93578

GarageBand will not open if the computer's date is set incorrectly.

Products Affected

GarageBand

Symptom

The GarageBand icon bounces a few times in the Dock and then disappears.

Solution

This document will be updated when additional information is available.

TA27586_GarageBand_Wont_open_if_date_is_incorrect.pdf

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iPod: Tip - Installing Griffin iTrip Frequencies in iTunes for Windows

- **Last Modified:** January 08, 2007
- **Article:** TA27587

- **Old Article:** 93579

Products Affected

iPod

Learn how to install the iTrip frequencies in iTunes for Windows.

The iTrip for Windows installer may say that MusicMatch is required to use iTrip, but you can use iTunes for Windows. For complete steps on installing iTrip, see the Griffin Technology support website: http://www.griffintechnology.com/support/itrip/

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Languages

- English
- 日本語

GarageBand: About Exporting Songs With Unicode Characters in Mac OS X 10.2

- **Last Modified:** May 18, 2004
- **Article:** TA27591

- **Old Article:** 93588

In Mac OS X 10.2, GarageBand cannot export a song to iTunes if the song title includes Unicode characters such as those you'd use with the Kotoeri or Traditional Chinese input methods.

Products Affected

GarageBand, iTunes

Symptom

When exporting a song to iTunes, nothing happens.

This happens if the song title contains Unicode characters such as those you'd use with the Kotoeri or Traditional Chinese input methods.

Solution

Update to GarageBand 1.1 or later to resolve this.

Rate this article:

- Not helpful
- Somewhat helpful
- Helpful
- Very helpful
- Solved my problem

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GarageBand: Supported Audio Formats

- **Last Modified:** January 16, 2004
- **Article:** TA27592

- **Old Article:** 93589

Learn about the audio formats supported in GarageBand.

Products Affected

GarageBand

For Recording
GarageBand supports recording at 16 bit/44.1 kHz. Other formats, such as 48 kHz audio, are not supported for recording. GarageBand will change the format for the selected audio device if possible.

For Importing
You can import AIFF and WAV files as long as they are 16 bit. If you import an MP3 file, it will be converted and stored in your project as an AIFF file.

Rate this article:

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Languages

- English
- 日本語

GarageBand: Pitch and Tempo Change With Sample Rates Other Than 44.1 kHz

- **Last Modified:** October 04, 2008
- **Article:** TA27595

- **Old Article:** 93595

Pitch and tempo will change when the output device sample rate is changed to something other than 44.1 kHz.

Products Affected

GarageBand

Symptom

Pitch and tempo change when the output device sample rate is changed to something other than 44.1 kHz.

Solution

This document will be updated when additional information is available.

Rate this article:

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iMovie 4: System Requirements

- **Last Modified:** October 04, 2008
- **Article:** TA27598

- **Old Article:** 93598

Learn about the system requirements for using iMovie 4.

Products Affected

iMovie

The system requirements for iMovie 4 are:

- Power Macintosh, Power Mac, PowerBook, iMac, eMac, or iBook with a G3 processor or better, at 400 MHz or faster.
- Mac OS X 10.2.6 or later.
- QuickTime 6.4 or later.
- FireWire port.
- 256 megabytes (MB) of random-access memory (RAM).
- 2 gigabytes (GB) of free hard disk space.
- Screen resolution of 1024 x 768 or higher.

Related documents

93537 "**iMovie 4: Some Titles Plug-ins Require at Least 16 MB of Video Memory**"

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iPhoto: Camera's Orientation May Not Be Respected on Import

iPhoto and Image Capture may not recognize instructions or tags from certain cameras that tell iPhoto to rotate an image when it's imported.

Products Affected

Mac OS X 10.3, iPhoto

This article has been archived and is no longer updated by Apple.

Symptom

Photos imported into iPhoto or Image Capture are not automatically rotated when you import them.

Solution

Download and install Mac OS X 10.3.3 Update or later to avoid this issue.

If you're not ready to install, these tips can help:

After importing your photos, rotate them in iPhoto or Image Capture.

Alternatively, if the camera or its memory card appears on Desktop, you can drag the photos in the Finder to the iPhoto window. This will import the photos and rotate the images automatically if you've rotated them on the camera.

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- **Last Modified:** February 19, 2012
- **Article:** TA27603
- **Views:**

  7850

Languages

English

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"Attached iPod model is not supported by this application" alert

- **Last Modified:** January 08, 2007
- **Article:** TA27605

- **Old Article:** 93613

Products Affected

iPod mini, iPod, iPod

If your iPod mini came preinstalled with iPod mini Software 1.2 or later or your iPod (Click Wheel) came with iPod Software 3.0.2 or later, you cannot use an iPod Updater prior to iPod Updater 2004-11-15. If you try to, you will see the following alert:

> The attached iPod model is not supported by this application.

If you recently purchased a new iPod, make sure that you install the software from the CD that came with your iPod, or check iPod downloads for the latest updater. If you try to use the original iPod mini Software 1.0 Updater on an iPod that isn't an iPod mini, you will get the same alert.

Find out which iPod model you have and the latest version of iPod Software that is available for it.

Rate this article:

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Archived - Using an iPod with a Click Wheel

Products Affected

iPod, iPod (5th generation), iPod mini, iPod nano, iPod photo

This article has been archived and is no longer updated by Apple.

Newer iPod models have a "Click Wheel." If you're not sure what your iPod model you have or if it has a Click Wheel, check this document. You use the Click Wheel to scroll through menus and playlists. In addition to scrolling, you use the Click Wheel's buttons, Menu, Play/Pause, Previous/Rewind, and Next/Fast-forward to navigate between menus and play songs.

Click wheel

To scroll through menus and lists, move your thumb or finger lightly around the Click Wheel. To activate a button, press its label. The buttons on the Click Wheel are not touch-sensitive buttons. The buttons are located underneath the Click Wheel and are activated when you press down on the desired label on the Click Wheel. If you are having difficulty, be sure you are pressing along the edge of the wheel and not near the center.

In the middle of the Click Wheel is the Center button. The Center button is not part of the Click Wheel. Press the Center button to select the highlighted option on the iPod screen. The Center button is not a touch-sensitive button.

When backlighting is turned on, only the display is illuminated, not the buttons like earlier iPod models.

Note: If the Click Wheel stops responding, do not touch the Click Wheel for a couple of seconds and it should start responding as normal.

Rate this article:

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- **Last Modified:** Feb 19, 2012
- **Article:** TA27606

- **Views:**

  39052

- **Rating:**
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  (79 Responses)

Languages

English

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GarageBand 1: Optimizing Performance

- **Last Modified:** June 07, 2005
- **Article:** TA27607

- **Old Article:** 93618

GarageBand performance depends on your computer's processor speed, the amount of memory installed, the speed of your hard disk, and the complexity of the song you are playing. Performance can affect whether a song plays and how many tracks, instruments, notes, and effects it can have.

Products Affected

GarageBand

While a song is playing, the playhead changes color from yellow through orange to red to show how much of your computer's processing power is being used to play the song. Yellow indicates moderate processor use, orange indicates high processor use, and red indicates that the song is close to not being able to play completely. If this occurs, a dialog will appear.

To optimize performance, try one or more of the following:

- Quit other open applications.
- Mute some tracks in the song.
- Turn off some effects, especially more complex effects such as Amp Simulation.
- If the song uses many Software Instrument tracks, convert some Software Instrument regions to Real Instrument regions. To learn how, see the "Tips" page.
- Open System Preferences, click the Energy Saver tab, click the Options button, then choose "Highest" from the Processor Performance pop-up menu. Click the Sleep button, then turn off "Put hard disk(s) to sleep when possible."
- Choose GarageBand > Preferences, click the Audio/MIDI tab, then click the "Maximum number of simultaneous tracks" button in the "Optimize for" section.
- Choose GarageBand > Preferences, then click the Advanced tab. Choose lower settings from the "Real Instrument Tracks", "Software Instrument Tracks"or "Voices per instrument" pop-up menus in the Advanced pane.
- FileVault can cause reading data from your Home directory to be significantly slower. To improve performance, open System Preferences, click the Security tab, and turn off FileVault, or move and keep your songs outside of your Home directory.
- Your computer can read data more quickly from its hard disk than from removable media, such as a CD or DVD. Copy songs to your computer's hard disk before playing them.
- Some external hard disks may read data more quickly than your internal hard disk. If you have a high-speed external hard disk, try copying

songs to it before playing.

Note: Certain links that this article refers to may not be available in this context; please consult the relevant product Help guide page on your computer for full access to these links.

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About the Apple In-Ear Headphones

- **Last Modified:** June 13, 2007
- **Article:** TA27608

- **Old Article:** 93619

Learn about the Apple In-Ear Headphones.

Products Affected

iPod

In-Ear Headphones

The Apple In-Ear Headphones are an optional accessory you can use with all iPod models and any computer or audio equipment that has a 3.5 mm stereo minijack.

The earbud-style headphones included with iPod should not be confused with the Apple In-Ear Headphones.

Ear Caps

The Apple In-Ear Headphones come with three sets of ear caps. Each set is a different size: small, medium, or large. The size of each cap (S, M, or L) is marked in small print on a tab inside the cap. The size you install on the headphones depends on the size of your ear canal. The medium-size ear caps are preinstalled at the factory.

Three different sizes of ear caps

To attach a different size ear cap:

1. Pull the ear cap off of the headphone base.
2. Align the tab inside the new ear cap with the groove on the headphone base.

3. Push the ear cap onto the base.

(A) Size tab (B) Groove

Storage Case

The Apple In-Ear Headphones come in a special storage case. It's designed to properly store the ear caps, headphones, and cable.

In-Ear headphones storage case

To remove the headphones from the case, take off the plastic top.

To properly store the headphones in the storage case, wind the cable around the side of the case.

Side view with headphones cable wound around the case

Irritation

Some individuals may be sensitive to silicone rubber used in the ear caps. If rash or other skin conditions develop, discontinue use. If the condition persists, consult a physician.

Related document

93655: iPod In-Ear Headphones: Tip - Getting Optimal Audio Quality

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Archived - Inserting iPod mini into its belt clip and armband

Be sure to snap iPod mini into the belt clip and armband. Don't slide it into place.
This article has been archived and is no longer updated by Apple.
To use the iPod mini belt clip or the iPod mini armband, snap iPod mini into the case by pressing on one side and then the other. Do not slide it down.

Snap iPod mini into the case
Last Modified: Feb 19, 2012

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All Products...

Languages

- English
- 日本語

GarageBand: iTunes opens in Classic when you export

- **Last Modified:** May 18, 2004
- **Article:** TA27611

- **Old Article:** 93622

Learn how to prevent iTunes from opening in Classic when exporting from GarageBand.

Products Affected

GarageBand, iTunes

Symptom

When you export a song to iTunes from GarageBand, an earlier version of iTunes opens in Classic.

Solution

Update to GarageBand 1.1 or later to prevent this from occurring.

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iTunes 4: Join CD Tracks Command Is Dimmed

- **Last Modified:** January 23, 2004
- **Article:** TA27612

- **Old Article:** 93624

The Join CD Tracks command in iTunes is dimmed if you select files in the library, noncontiguous tracks on an audio CD, or when the audio CD is sorted by something other than track number (like Album or Artist).

Products Affected

iTunes

Symptom

The Join CD Tracks command in the Advanced menu is dimmed.

Solution

1. Make sure you have selected tracks on an audio CD and not files that are already in your library.
2. Make sure the songs you selected on the Audio CD are contiguous. See Figure 1.
3. Make sure the audio CD is sorted by track number in ascending order. To do this, click the column header for the leftmost column in iTunes until it is blue and contains a triangle that points up. See Figure 1.

Figure 1 Contiguous tracks selected on a CD with tracks sorted in ascending order

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TA27612_iTunes_4_Join_CD_Tracks_Command_Is_Dimmed.pdf

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iLife: System Requirements

- **Last Modified:** October 25, 2007
- **Article:** TA27615

- **Old Article:** 93634

Products Affected

iLife '08, iWeb, iPhoto, GarageBand, iDVD, iTunes

Access the system requirements to install and use the applications with different versions of iLife.

- iLife ’08 system requirements
- iLife ’06 system requirements
- iLife ’05 system requirements
- iLife ’04 system requirements

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Languages

- English
- 日本語

iDVD 4: Slideshow Audio Using Playlist Repeats First Song

- **Last Modified:** October 04, 2008
- **Article:** TA27617

- **Old Article:** 93646

On burned discs, a slideshow will repeat the first song of an iTunes playlist instead of playing the whole list.

Products Affected

iDVD, iTunes

Symptom

If you use an iTunes playlist to accompany your slideshow it will play the songs in their correct order in Preview mode, but incorrectly repeats the first song on the burned disc.

Solution

Please update to iDVD 4.0.1 or later. This update is also available through Software Update in System Preferences.

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iTunes for Windows: Only First Audio CD Is Recognized

- **Last Modified:** January 27, 2004
- **Article:** TA27618

- **Old Article:** 93647

Find out what to do if iTunes only recognizes the first audio CD you put in the computer's drive.

Products Affected

iTunes

Symptom

iTunes only recognizes first audio CD you put in the computer's drive. Other CDs don't appear in iTunes.

Solution

1. Click the Start button then point to Run.
2. In the Run window, type "msconfig" in the Open field.
3. Click OK.
4. Click the Startup tab in the System Configuration Utility window.
5. Locate the item from the list named "Shwicon2k" and deselect it.
6. Click OK.
7. Restart the computer. Upon restart, this message appears: "You have used the System Configuration Utility to make changes to the way Windows starts."
8. Click the "Don't show this message or launch the System Configuration Utility when Windows starts" checkbox.
9. Click OK.

Related documents

93453 "**iTunes for Windows: Can't Import or Play Music From Audio CD**"
93444 "**iTunes for Windows: Does Not Recognize Audio CDs**"

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DVD Studio Pro 2: About Aligning Text With Keyboard Shortcuts

- **Last Modified:** January 27, 2004
- **Article:** TA27620

- **Old Article:** 93653

Learn how to keep text in objects or buttons justified when you change the text using keyboard shortcuts.

Products Affected

DVD Studio Pro

If you use keyboard shortcuts to set the alignment of text in text objects or buttons, the text alignment will be overridden if you change the text later.

For example, if you create a text object on a menu, type two lines of text, press Shift-Command-], and deselect the text object, the two lines of text will right-align. If you then select a word in one of the lines and change its color, font, or spelling, the text changes back to its original alignment (as controlled by the Text Object Inspector). You can work around this issue by using the alignment controls in the Text Object or Button Inspector instead of keyboard shortcuts.

This document will be updated when additional information is available.

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Languages

iDVD 4: Disc doesn't burn on dual processor Power Mac G5 computers

- **Last Modified:** October 04, 2008
- **Article:** TA27629

- **Old Article:** 93665

iDVD 4 may not successfully burn a disc on dual processor Power Mac G5 computers if Best Performance is selected in iDVD preferences.

Products Affected

iDVD, Power Mac G5

Please update to iDVD 4.0.1 or later. This update is also available through Software Update in System Preferences.

After you have updated to iDVD 4.0.1, it may be necessary to delete encoded assets from your iDVD 4 project.

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iPhoto: Tip - How to Remove a Photo From a Smart Album

Learn how to remove a photo from a Smart Album.

Products Affected

iPhoto

This article has been archived and is no longer updated by Apple.
Until you remove a photo from a Smart Album, you won't be able to delete it. This might appear to be an issue when:

- Dragging the photo to the Trash icon in the iPhoto window, or by pressing Command-Delete.
- Clicking the Trash button during a Smart Album slideshow. (The button appears to respond, but the photo isn't deleted.)

To remove a photo from a Smart Album, change the criteria used to define the album, or edit the photo so that it no longer meets the album's criteria.

For example, change the photo's rating so it no longer matches the rating threshold for the album.

If you want to remove a photo from the Library, and not just an album, select the photo and press Command-Option-Delete. This will move the photo to the Trash and remove it from all albums (including Smart Albums).

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- **Last Modified:** February 19, 2012
- **Article:** TA27631

- **Views:**

  34184

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iTunes: About Adding Artwork to WAV Files

- **Last Modified:** February 06, 2004
- **Article:** TA27633

- **Old Article:** 93672

The WAV file format doesn't allow you to add artwork in iTunes.

Products Affected

iTunes

To add artwork to a WAV file, convert it to a different format that supports artwork, such as MP3 or AAC. You can do this in iTunes. See technical document 93123, "**iTunes 4: How to Convert a Song to a Different File Format**", for assistance in converting a file.

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iPod: Tip - See your contacts faster

- **Last Modified:** November 18, 2005
- **Article:** TA27637

- **Old Article:** 93676

Products Affected

iPod photo, iPod nano, iPod mini, iPod, iPod, iPod (5th generation)

Contacts on your iPod are saved as vCards (.vcf files). For best performance, save all of your contacts in a single vCard instead of saving a card per contact. Each contact will still appear individually, but your iPod will be able to open the contacts much faster.

Check the documentation that came with your contact software, or call the software publisher to see how to save all your contacts in a single vCard.

Tip: If you use iSync, all your contacts are saved to iPod in a single vCard.

Related documents

93678: iPod: Importing Contacts and Appointments
61754: iSync: About Synchronizing Data With iPod, Duplicate Information

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TA27637_iPod_Tip_-_See_your_contacts_faster.pdf

DVD Studio Pro 2 - Too many combined chapters and end actions in movie

- **Last Modified:** October 04, 2008
- **Article:** TA27638
- **Old Article:** 93681

In addition to the limit of 99 chapter markers per track, DVD Studio Pro 2 has a combined limit of 106 chapter markers and individual chapter end jump settings per track. This is normally not an issue except in special cases where the author decides to set an end jump for each chapter marker.

Products Affected

DVD Studio Pro

If your track has 54 chapter markers, each configured with an end jump, the result is a combined 108 markers and jump settings, which causes an error message to appear when you build the project. Since setting end jumps on chapter markers prevents the track from playing seamlessly from start to end, you can instead divide the track into two tracks, each containing a portion of the markers, avoiding the 106 setting limit.

Why Would You Do This?

You might use chapter markers with end jumps set to "edit" a track into multiple small clips. If you configure a menu button to jump to a specific chapter marker, the track starts playing at that point. Once the next marker is reached, the end jump directs the DVD player back to the menu, resulting in only a small portion of the track playing.

The advantage of this is that you can easily configure a track to play as short clips and not worry about running into the 99 tracks, stories, and slideshows per project limit. The disadvantage is that you cannot play the track from start to end. As soon as the first marker that has its end jump set is reached, the player jumps to that setting.

Using Stories

You can accomplish a similar result by creating a story that plays only from one chapter marker to the next. The disadvantage of doing this is that if you have a lot of these that you want to configure, you will quickly run into the 99 tracks, stories, and slideshows per project limit.

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iDVD 4/5: Where are the older themes?

- **Last Modified:** May 25, 2005
- **Article:** TA27640

- **Old Article:** 93686

Themes from iDVD 1 and iDVD 2 are not included in iDVD 4 or iDVD 5 unless you upgrade from iDVD 3.

Products Affected

iDVD

If you upgrade from iDVD 3 to iDVD 4 or later, the themes from iDVD 1 and iDVD 2 are copied to the new version of iDVD. You can use them in your iDVD 4 or iDVD 5 projects.

If iDVD 3 is not installed on your computer when you install iDVD 4/5, or if you changed the name or location of iDVD 3 before installing, the older themes from iDVD 1 and iDVD 2 will not be available. You'll still be able to open projects created in iDVD 1 and iDVD 2, but they will use the iDVD 4 or 5 default theme. Copying the themes is not an option due to changes with menus that occurred in iDVD 3.

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QuickTime for Windows 6.5: "No Disk, Please Insert Disk In Drive D" Message

Products Affected

QuickTime, iTunes

This article has been archived and is no longer updated by Apple.

Find out what to do if a message asks you to insert a disk when you open QuickTime Player.

Symptom

This message appears when you open QuickTime Player: "No Disk, Please Insert Disk In Drive D".

Solution

Clear your list of recently viewed movies. To do so, follow these steps:

1. Open QuickTime Player.
2. From the **File** menu, choose **Open Recent**, then choose **Clear Menu**.

This may also occur after installing iTunes for Windows (which also installs QuickTime). Use the same steps as above to resolve this.

Rate this article:

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- **Last Modified:** July 28, 2011
- **Article:** TA27641

- **Views:**

  24601

- **Rating:**
  - 3.0/5 Stars

  (62 Responses)

Languages

English

Final Cut Pro 3: Canon Digital Camera Compatibility

- **Last Modified:** February 18, 2004
- **Article:** TA27643
- **Old Article:** 93692

This document provides additional compatibility notes for Sony consumer and professional digital cameras when used with Final Cut Pro 3.

Products Affected

Final Cut Pro

This is document does not contain a full list of qualified devices, only additional information on certain models. For a complete list for Final Cut Pro 3 see document 93261 "**Final Cut Pro 3: Camera Compatibility Information**." A complete list of qualified devices for the current version of Final Cut Pro can be found at the Apple web site (http://www.apple.com/finalcutpro/qualification.html).

For additional assistance with Canon digital cameras, see the Canon web site.

Digital Camera Products: (**http://www.canondv.com/**)

Click for PAL Compatibility Chart

Canon Qualified DV Camcorders and VTRs

NTSC

Model	Device Protocol	Description and Notes
Elura	FireWire Basic	This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro 2. These are included with Final Cut Pro 2 installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. When editing to tape: On Mac OS X, the sequence comes in up to 4 frames early and duplicates the first frame for up to 18 frames. On Mac OS 9.2.2 the sequence comes in up to 1 frame early and duplicates the first frame for up to 8 frames.
Elura 2MC	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 6 frames early and duplicates the first frame for up to 19 frames. On Mac OS 9.2.2 the sequence comes in up to 6 frames early and duplicates the first frame for up to 16 frames.
Elura 20MC	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 7 frames early and duplicates the first frame for up to 15 frames. On Mac OS 9.2.2 the sequence comes in up to 7 frames early and duplicates the first frame for up to 14 frames.

Elura 40MC	FireWire Basic	With Edit To Tape this device will come in up to 6 frames early and dupe the first frame up to 19 frames.
GL1	FireWire Basic	This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro 2. These are included with Final Cut Pro 2 installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. When editing to tape: On Mac OS X the sequence comes in up to 4 frames early and duplicates the first frame for up to 17 frames. On Mac OS 9.2.2 the sequence comes in up to 4 frames early and duplicates the first frame for up to 7 frames.
GL2	FireWire Basic	Note: Edit to Tape will be 6 frames early and duplicate the first frame of the sequence up to 18 frames.
Optura	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 3 frames early and duplicates the first frame for up to 10 frames. On Mac OS 9.2.2 the sequence comes in up to 3 frames early and duplicates the first frame for up to 11 frames.
Optura 100 MC	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 7 frames early and duplicates the first frame for up to 12 frames. On Mac OS 9.2.2 the sequence comes in up to 7 frames early and duplicates the first frame for up to 17 frames.
Optura Pi	FireWire Basic	Timecode refresh of DV tapes not recorded on the Optura Pi will stutter in Final Cut Pro 2.0 and on the Optura Pi LCD screen. This may result in dropped frame warnings, or timecode break detection warnings after capturing clips. Use only tapes that were recorded on the Optura Pi for editing. This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro 2. These are included with Final Cut Pro 2 installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. When editing to tape: On Mac OS X the sequence comes in up to 2 frames late and duplicates the first frame for up to 6 frames. On Mac OS 9.2.2 the sequence comes in up to 2 fram es late and duplicates the first frame for up to 2 frames.
Ultura	FireWire Basic	This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro 2. These are included with Final Cut Pro 2 installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. When editing to tape: On Mac OS X the sequence comes in up to 6 frames early and duplicates the first frame for up to 14 frames.
XL1	FireWire Basic	Requires FireWire Basic. When the Canon XL1 is editing to tape, it will come in up to 6 frames early, then duplicate that first frame up to 15 frames.
XL1s	FireWire Basic	Requires FireWire Basic. When the Canon XL1s is editing to tape, it will come in up to 6 frames early, then duplicate that first frame up to 15 frames.
ZR	FireWire Basic	When editing to tape: On Mac OS X, the sequence comes in up to 3 frames early and duplicates the first frame for up to 18 frames.Ê On OS 9.2.2 the sequence comes in up to 4 frames early and duplicates the first frame for up to 11 frames.
ZR10	FireWire Basic	Using Assemble Edit to print Final Cut Pro 2 projects to tapes that have been continually used and worn may contain audio drops. If you experience this problem, use a new tape. When editing to tape: On Mac OS X the sequence comes in up to 2 frames late and duplicates the first frame for up to 4 frames. On Mac OS 9.2.2 the sequence comes in up to 4 frames late and duplicates the first frame for up to 2 frames.
ZR 20	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames. On Mac OS 9.2.2 the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames.
ZR25	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames. On Mac OS 9.2.2 the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames.

ZR30 M	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 6 frames early and duplicates the first frame for up to 22 frames. On Mac OS 9.2.2 the sequence comes in up to 6 frames early and duplicates the first frame for up to 30 frames.
ZR40	FireWire Basic	For optimum performance Canon recommends that the ZR-40 not be used simultaneously with other FireWire devices. When editing to tape, the camera may come in up to 6 frames early, and duplicate the first frame of the sequence up to 12 frames.
ZR45	FireWire Basic	For optimum performance Canon recommends that the ZR-45 not be used simultaneously with other FireWire devices. When editing to tape, the camera may come in up to 6 frames early, and duplicate the first frame of the sequence up to 12 frames.

Canon Qualified DV Camcorders and VTRs

PAL

Model	Device Protocol	Description and Notes
DM-MV1	FireWire Basic	
DM-MV4i	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 6 frames early and duplicates the first frame for up to 13 frames. On Mac OS 9.2.2 the sequence comes in up to 6 frames early and duplicates the first frame for up to 13 frames.
DM-MV10	FireWire Basic	No Media-In by design.
DM-MV100	FireWire Basic	No Media-In by design.
DM-XL1	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 4 frames early and duplicates the first frame for up to 18 frames. On Mac OS 9.2.2 the sequence comes in up to 4 frames early and duplicates the first frame for up to 12 frames.
DM-XL1s	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 4 frames early and duplicates the first frame for up to 17 frames. On Mac OS 9.2.2 the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames.
DM-MV3i	FireWire Basic	This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro 2. These are included with Final Cut Pro 2 installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. When editing to tape: On Mac OS X the sequence comes in up to 2 frames early and duplicates the first frame for up to 7 frames. On Mac OS 9.2.2 the sequence comes in up on time and duplicates the first frame for up to 8 frames.
DM-MV20i	FireWire Basic	This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro 2. These are included with Final Cut Pro 2 installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. Needs CMP Overide and Tuner 2. When editing to tape: On Mac OS X the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames. On OS 9.2.2 the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames.
DM-MV200i	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 4 frames early and duplicates the first frame for up to 24 frames. On Mac OS 9.2.2 the sequence comes in up to 4 frames early and duplicates the first frame for up to 10 frames.
DM-MV300i	FireWire Basic	This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro 2. These are included with Final Cut Pro 2 installer and updater CDs. Once installed, locate the folder on the CD called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. When editing to tape: On Mac OS X the sequence comes in up to 2 frames early and duplicates the first frame for up to 7 frames. On Mac OS 9.2.2 the sequence comes in on time and duplicates the first frame for up to 8 frames.

MV450i	FireWire Basic	When editing to tape: On Mac OS X the sequence comes in up to 5 frames early and can start the sequence up to 5 frames late. On Mac OS 9.2.2 the sequence comes in up to 4 frames early and duplicates the first frame for up to 20 frames.
MVX 1i	FireWire Basic	This camera occasionally dropps frames during batch capture on lower speed laptops (400 Mhz or lower). Additionally, while assemble editing on all cpus, the video consistently comes in 6 frames early. When editing to tape: On Mac OS X the sequence comes in up to 7 frames early and duplicates the first frame for up to 15 frames. On Mac OS 9.2.2 the sequence comes in up to 7 frames early and duplicates the first frame for up to 15 frames.
XM-1	FireWire Basic	This camera needs the DV Tuner 2 and CMP Override Scripts to optimize device control over FireWire with Final Cut Pro 2. These are included with Final Cut Pro 2 installer and updater CDs. Once installed, locate the folder called "Extras" and you will find "DV Tuner 2" and "CMP Override". Drag these two files into the Final Cut Pro Plugins folder before launching Final Cut Pro. These Scripts should NOT be installed when using other DV devices, unless specified. When editing to tape: On Mac OS X the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames. On Mac OS 9.2.2 the sequence comes in up to 6 frames early and duplicates the first frame for up to 15 frames. Edit to tape not functioning with some Macintosh models.

Related Documents

75350 Final Cut Pro 2.0.2: Canon Digital Camera Compatibility

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iMovie: Tips to improve performance

- **Last Modified:** November 12, 2007
- **Article:** TA27648

- **Old Article:** 93699

Products Affected

iMovie

Try some of these tips to improve the time it takes iMovie to open, if iMovie is slow to respond to clicking or dragging, or if video or audio in the playback window is jumpy.

Install the latest software

Periodically, Apple releases updates to iMovie, QuickTime, and the Mac OS. Make sure you've installed the latest versions of this software. The Software Update feature in Mac OS X makes downloading and installing the latest updates a snap. Of course, the latest version of QuickTime is always available from the QuickTime website.

Make sure your computer meets the system requirements

Each version of iMovie has different requirements. Make sure your computer is able to take advantage of iMovie's features.

- iMovie 2
- iMovie 3
- iMovie 4
- iLife '05 and iLife '06

Only render one clip at a time

Rendering clips takes a lot of processing power. If iMovie seems unresponsive, consider waiting until a clip is finished rendering before continuing or rendering another clip. You could also render clips in small batches to improve responsiveness.

Change playback quality

If you are using iMovie 4 or later, consider changing the playback quality setting in iMovie preferences.

Note: If you are using an older computer, try turning off the option "Keep playhead centered during playback" in the playback pane of iMovie preferences by following these steps:

1. In iMovie choose iMovie>Preferences.
2. Select the playback pane.
3. Deselect the "Keep playhead centered during playback" checkbox.

Turn off Audio Waveforms

If you are using iMovie HD 5 or later, consider turning off "Show Audio Waveforms" from the View menu to free up processing power.

Don't store your project in a folder that uses FileVault

If you are using Mac OS X 10.3 or later, make sure the project you are working on isn't saved in a folder that's protected by FileVault.

Quit unused applications and users

Quit any open applications you're not using. If Fast User Switching is on, consider logging out other users.

Check the disk

Open Disk First Aid. Check the startup disk, and the disk where the project is saved.

Use Disk Utility to Repair Permissions on the startup disk.

Check for plug-ins

Check to see if there are any plug-ins in this directory: ~/Library/iMovie/. If so, remove them. Reopen iMovie and see if performance is improved. If this resolves the issue, contact the plug-in's developer for more information.

Check also for non-Apple plug-ins in /Library/QuickTime/ and ~/Library/QuickTime/ . Try moving any non-Apple items out of this folder and relaunch iMovie. Some older third party QuickTime plug-ins may interfere with iMovie operation. If this resolves the issue, check with the plug-in manufacturer to see if an update to the plug-in is available.

Copy the project to the computer's hard disk

If your project is saved on an external hard drive, try copying the project folder to the computer's hard disk (if there is room) and open it from there. See if this improves performance.

Rebuild the project

If you are only experiencing the issue in one project, consider rebuilding it.

Defragment the disk

If you have access to a disk defragmenting utility, consider defragmenting the drive where the project is located.

Project length

- If you are only experiencing the issue in one project, consider rebuilding it.
- The longer and more complicated the project, the more RAM, disk space and processor power the project may require. Try splitting lengthy projects into multiple shorter projects if you are using an older Macintosh and notice a degredation in performance with lengthy projects.
- Using other suggestions in this article (such as changing the playback quality setting) may also make a difference without having to limit your project length.

Working with HD footage

High Definition footage (HDV 720p or 1080i) requires extra CPU performance to play and edit. Make sure your computer meets the system requirements for HD editing (1 GHz G4 or faster) if you are attempting to work with HD footage.

Related document

TA27648_iMovie_Tips_to_improve_performance.pdf

303529: iMovie: How to move clips from one project to another
42964: iMovie: "Disk Responded Slowly" Alert

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Languages

- English
- 日本語

GarageBand 1.0.1: About ReWire

- **Last Modified:** October 04, 2008
- **Article:** TA27649

- **Old Article:** 93700

Learn about the ReWire capabilities added to GarageBand 1.0.1.

Products Affected

GarageBand

The ReWire protocol is a software interface between sequencer and audio applications. Through ReWire, a host application can use a client application as an external instrument.

With version 1.0.1 and later, GarageBand acts as a ReWire host, allowing you to easily sync other third-party software that supports ReWire as a client.

Open the ReWire client application after you've opened GarageBand. The ReWire client automatically syncs to GarageBand's transport controls. The output level of the client application determines the input level of that signal in GarageBand.

When you export to iTunes the GarageBand song and the third-party ReWire client audio outputs will be bounced (merged) into a single mix.

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GarageBand: "Error code 727 was returned by the CoreAudio driver" message

In Mac OS X 10.2 through 10.2.8, this message may appear when you wake the computer from sleep: "Error code 727 was returned by the CoreAudio driver".
This article has been archived and is no longer updated by Apple.
You can safely ignore this message.
Last Modified: Feb 19, 2012

Additional Product Support Information

Install iSight Updater 1.0.2 for best performance with iPod or other FireWire drives

- **Last Modified:** June 11, 2007
- **Article:** TA27653

- **Old Article:** 93705

For best performance in Mac OS X, install iSight Updater 1.0.2 if you also use iPod mini, or more than one FireWire drive, including an iPod.

Products Affected

iSight, iPod

iSight Updater 1.0.2 is available from Apple Downloads.

Installing this update can prevent these symptoms if you use iPod mini, or more than one FireWire drive (including other iPod models):

- There are interruptions in the video (including frame loss or "tearing").
- The video is too dark.
- iPod mini responds slowly.
- Other FireWire drives stop responding, disconnect, or slow down.

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Languages

Using multi-layered Photoshop files in Final Cut Pro and Final Cut Express

- **Last Modified:** October 04, 2008
- **Article:** TA27654

- **Old Article:** 93707

Learn how to work with multi-layered Photoshop files in Final Cut Pro and Final Cut Express.

Products Affected

Final Cut Pro, Final Cut Express

Final Cut Pro and Final Cut Express treat multi-layered Photoshop files like sequences. When placed into a sequence, these clips are scaled, but the aspect ratio is not automatically adjusted. Also, additional steps are required to change the duration of imported multi-layered Photoshop files.

Multi-layered Photoshop files do not automatically adjust aspect ratio when you add them to the timeline. Also, clip duration may not be extended beyond the initial import setting.

When editing multi-layered Photoshop files into the timeline, you may need to adjust the Scale and Aspect Ratio.

1. Open the clip in the viewer.
2. Select the Motion tab.
3. To match the frame size of the sequence, adjust the Aspect Ratio under the Distort option and adjust the Scale under the Basic Motion option.

After importing a multi-layered Photoshop file the duration cannot be extended. Instead, you can adjust the duration of stills before importing the file:

1. From the **Final Cut Pro** or **Final Cut Express** menu, choose **User Preferences**.
2. Change the Still/Freeze Duration to the desired length of the clip.
3. Import the multi-layered Photoshop file.

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iPod appears on the Mac OS X desktop but not in iTunes

- **Last Modified:** February 18, 2008
- **Article:** TA27658
- **Old Article:** 93718

Products Affected

iPod photo, iPod mini, iPod, iPod

This document applies to Macs. If you are using Mac OS X 10.3.4 or later, go here. If you have a PC with Windows, click here.

Make sure to use the right cable when you connect iPod or iPod mini to your Mac.

iPod models that have a dock connector may come with two cables:

- Dock Connector to FireWire cable
- Dock Connector to USB cable

Use the Dock Connector to FireWire cable to connect iPod or iPod mini to your Mac.

If you have Mac OS X 10.3.4 or later installed, you can use the Dock Connector to USB cable. With earlier Mac OS X versions, the iPod will not appear in iTunes if you use this cable.

iPod mini (Second Generation) comes with a Dock Connector to USB cable. Click here for more information.

For additional information see

300873 "iPod mini (Second Generation): Temporary delay in appearing in iTunes when large battery icon is visible"
32491 "Connecting iPod to your computer"
61937 "iTunes: iPod does not appear in Source list"

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Languages

ARCHIVE

iTunes updated iPod, but where's the music?

- **Last Modified:** August 08, 2011
- **Article:** TA27659

- **Old Article:** 93719

This article has been archived and is no longer updated by Apple.

Products Affected

iPod, iPod mini, iPod nano, iPod photo, iPod, iPod (5th generation)

If iTunes updated your iPod's music library but you don't see any music, don't worry. It's all neatly organized for you just a few clicks away.

To find all the songs on your iPod, go to the main menu and select Browse. Voila. Here are all your songs neatly organized by album, artist, and so forth, just like your music library in iTunes. Select an album or artist and listen to your favorite tunes.

You can create a list of songs, called a "playlist" to organize your favorite songs. You can even have iTunes make playlists for you using the Smart Playlists feature. Once you've created a few playlists, connect iPod to your computer and iTunes will update it. Now, when you click Playlists on your iPod you'll see your favorite songs and won't have to find them by browsing through your whole music library.

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Final Cut Pro and Final Cut Express: Reformat DOS-formatted hard drives before saving

- **Last Modified:** May 19, 2006
- **Article:** TA27660

- **Old Article:** 93720

Products Affected

Final Cut Express, Final Cut Pro

With earlier versions of Final Cut Pro and Final Cut Express, project files should be saved to a Mac OS Extended format hard disk.

Some hard drives are preformatted as DOS. If you try to save a Final Cut Pro or Final Cut Express project file to a DOS-formatted drive, the operation may appear to be successful, but the project file will be empty. For this reason, you should reformat these drives as Mac OS Extended format using Apple's Disk Utility software, which is available in the Utilities folder.

Warning: Reformatting or reinitializing your hard drive erases all information on your disk. Make sure you have a backup of all files you may have created and any preinstalled software that came with your drive.

To see what format your hard drive is:

1. Click the Finder icon in the Dock.
2. From the **File** menu, choose **New Finder Window**.
3. Click your hard drive icon.
4. From the **File** menu, choose **Get Info**.

Products affected

- Final Cut Pro 4.5 and earlier
- Final Cut Express HD (3.0) and earlier

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iPod mini shows "OK To Disconnect" screen until you disconnect it

Products Affected

iPod

This article has been archived and is no longer updated by Apple.
iPod mini's screen says OK to Disconnect until you disconnect the cable connecting it to the computer, or remove it from the dock.

Version 1.2 of the iPod mini software features improved disconnect performance. Update your iPod mini with the iPod Updater 2004-11-15 or later available here.

Rate this article:

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- Somewhat helpful
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- Solved my problem

- **Last Modified:** February 19, 2012
- **Article:** TA27661

- **Views:**

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Languages

English

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iPod mini restarts when connecting to and disconnecting from your computer

- **Last Modified:** November 17, 2004
- **Article:** TA27662

- **Old Article:** 93722

Products Affected

iPod

iPod mini restarts when you connect and disconnect it from your computer. You briefly see the Apple logo on the screen before you see the main menu.

Version 1.2 of the iPod mini software features improved disconnect performance. Update your iPod mini with the iPod Updater 2004-11-15 or later available here

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iPod mini wakes up when you connect headphones or the remote control

- **Last Modified:** March 02, 2004
- **Article:** TA27663

- **Old Article:** 93723

iPod mini wakes from sleep when you plug headphones or a remote control into it.

Products Affected

iPod

This is normal behavior.
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- English
- Français
- 日本語

Final Cut Pro 4: LiveType - Unable to open project, movie file cannot be found

- **Last Modified:** April 29, 2004
- **Article:** TA27665

- **Old Article:** 93726

A LiveType project might not open as expected if it contains a reference movie (not self-contained) that is missing one or more of its source files.

Products Affected

QuickTime, Final Cut Pro

Movie files from Final Cut Pro or from QuickTime can be either self-contained or reference movies. If a movie is self-contained, all of the video needed to play it is contained within the file itself. If the movie is a reference file, it is not self-contained. It relies on movie files stored elsewhere for playback.

An issue may arise if you add a reference movie to a LiveType project, then delete one of the source files the reference movie relies on.

This can also occur if your LiveType project includes a movie exported from Final Cut Pro that has rendered material in it, and that render data has been re-rendered, effectively deleting the original render file.

In such cases, when you open your LiveType project, you may see a message similar to this:

If you click Cancel, the alert will come back in a moment, and you will not be able to open the project.

This behavior is addressed in the LiveType 1.2 Update. Please update to LiveType 1.2.

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Languages

- English
- 日本語

AirPort: How to tell which AirPort software version is installed on a computer

- **Last Modified:** August 24, 2005
- **Article:** TA27673

- **Old Article:** 93738

It's easy to tell which version of AirPort client software is installed on your computer. You can find the latest AirPort software versions on the AirPort support page.

Products Affected

AirPort

Below are two different ways you can do this. Depending on where you look, the same version number may be presented two or three different ways, so please understand that "4.2", "420", and "420.8" may all refer to the same software version.

Method 1: AirPort menu

You could Option-Click the AirPort menu, then choose About AirPort.

Note: The graphic shows AirPort 4.2 versions for an AirPort Extreme-enabled computer. An AirPort-enabled computer would display slightly different versions. The highest AirPort version that you may use and the appearance of your screen will also vary between Mac OS X versions such as 10.2 and 10.4.

Method 2: Installed Updates list

The Software Update preference pane includes a list of installed updates.

1. Open System Preferences.
2. Select the Software Update pane.
3. Click the Installed Updates tab.
4. Click the Name column heading to sort by name, as shown below.

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TA27673_AirPort_How_to_tell_which_AirPort_software_version_is_installed_on_a_computer.p

Don't use iPod as a startup disk

- **Last Modified:** March 10, 2004
- **Article:** TA27674

- **Old Article:** 93739

Though your computer might recognize iPod as a possible startup disk, Apple does not support using it as a startup disk.

Products Affected

iPod

You can store all kinds of files on iPod, even system software, but you shouldn't use iPod as a startup disk.

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Uninstalling Final Cut Pro 3 in Mac OS X

- **Last Modified:** March 15, 2004
- **Article:** TA27676

- **Old Article:** 93742

Under certain circumstances you might have to uninstall Final Cut Pro. There are several files associated with Final Cut Pro that must be deleted from the computer to ensure that the software is completely removed.

Products Affected

Final Cut Pro

Tip: After completing the steps below and when Final Cut Pro has been reinstalled, the first time you open Final Cut Pro you will be prompted to enter the serial number. Make sure you have the serial number for Final Cut Pro before starting any step listed in this article.

If you have any custom settings you will want to save them prior to performing any of the steps listed below.

You will need to delete these items:

- Final Cut Pro System Support (folder)
- Final Cut Pro (application)
- Final Cut Pro User Data (folder)
- com.apple.finalcutpro.plist (file)

To uninstall, delete the following items by dragging them to the Trash. **Note**: You may prefer to access these locations via the Finder's Go to Folder feature. From the **Go** menu, choose **Go to Folder** and enter the Directory name. Before starting, quit Final Cut Pro if it is open.

Location	File/Folder to Delete
/Applications	Final Cut Pro
~/Library/Preferences *	Final Cut Pro User Data com.apple.FinalCutPro.plist
/Library/Application Support	Final Cut Pro System Support
*** Note**: The tilde "~" refers to your home directory.	

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Backing up Custom Settings and Window Layouts in Final Cut Pro 3

- **Last Modified:** February 16, 2011
- **Article:** TA27677

- **Old Article:** 93743

This article has been archived and is no longer updated by Apple.

You can easily back up any Custom Settings and Window Layouts you've created by following these steps.

Products Affected

Final Cut Pro

You'll want to back up these items:

- Custom Settings (folder)
- Window Layouts (folder)
  Tip: The Window Layouts folder is not created until you make a Custom Window Layout.

1. Quit Final Cut Pro if it is open.
2. Find the Custom Settings Folder and the Window Layouts folder. They are in your home directory:
   ~/Library/Preferences/Final Cut Pro User Data/Custom Settings

   Tip: The tilde "~" refers to your home directory.
3. Once you've found the folder(s) make a copy of them. Press the Option key as you drag the folder(s) to the desktop.
4. If you plan to erase your hard disk, be sure to copy these folders to another disk.
5. To use the backup copies of the folder(s), drag them back to the Final Cut Pro User Data folder (~/Library/Preferences/Final Cut Pro User Data). Remember that the folders original names are Custom Settings and Window Layouts. If the folder names have been changed in any way, correct them using the right names.

   When you drag the folders back to their original location a message will appear that says "An item named "Folder Name" already exists in this location. Do you want to replace it with the one that you're moving?" Click Replace.
6. Open Final Cut Pro and use any custom settings to make sure they are available.

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Archived - Sharing your iPhoto albums through a firewall

Other people might not be able to see your shared iPhoto albums if a firewall is on.

Products Affected

iPhoto

This article has been archived and is no longer updated by Apple.
When you try to share an album from iPhoto 4 or later, this message appears:

> "Other users will not be able to access your shared photos because port 8770 is being blocked by your firewall software. Please disable the firewall for this port and restart iPhoto."

You can disable the firewall completely, or you can open the port that allows iPhoto to share while keeping the firewall active.

To open the iPhoto sharing port in firewall (8770):

1. From the **Apple** menu, choose **System Preferences**.
2. From the **View** menu, choose **Sharing**.
3. Click the Firewall tab.
4. Click the New button.
5. Choose **Other** from the **Port Name** pop-up menu.
6. Type: 8770
7. Press Tab.
8. Type: iPhoto Sharing
9. Click OK.

Related documents

106439: "Well Known" TCP and UDP Ports Used By Apple Software Products"

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- **Last Modified:** Feb 19, 2012
- **Article:** TA27679

- **Views:**

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- **Rating:**
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TA27679_Sharing_your_iPhoto_albums_through_a_firewall.pdf

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iPod: "iPod Software Not Installed" Message When iPod is Connected to PC

- **Last Modified:** March 18, 2004
- **Article:** TA27682

- **Old Article:** 93754

The message "An iPod has been detected, but the iPod software is not installed. Please install the iPod software from the CD that came with your iPod or download it from www.apple.com" appears on the screen of a Windows PC when you connect an iPod.

Products Affected

iPod

iTunes is not the only software you need to use an iPod. If the iPod or iPod mini is new or has been configured to be used with a Mac, you will need to do one of the following:

- Install the iPod software from the CD that came with the iPod and connect the iPod when prompted to do so by the installer.
- Download and install the correct version of the iPod Updater for your iPod and restore the iPod.

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TA27682_iPod_iPod_Software_Not_Installed_Message_When_iPod_is_Connected_to_PC.pd

Apple Lossless compressor no longer available after upgrading to Mac OS X 10.3.3

- **Last Modified:** October 04, 2008
- **Article:** TA27684

- **Old Article:** 93757

If you install the QuickTime 6.5.1 update before the Mac OS X 10.3.3 update, the Apple Lossless codec will disappear from the list of available compressors for audio export in the QuickTime Movie Sound Settings Export Options dialog.

Products Affected

QuickTime, Mac OS X 10.3

To avoid this, install the Mac OS X 10.3.3 update before updating to QuickTime 6.5.1.

If you have updated and are missing the Apple Lossless codec, reinstall QuickTime 6.5.1 or later. It's available from the QuickTime website.

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Languages

- English
- 日本語

iPhoto may update picture thumbnails

- **Last Modified:** October 04, 2008
- **Article:** TA27685

- **Old Article:** 93759

When you update to iPhoto 4 or later, iPhoto may ask you to update the library's thumbnails when you open the application.

Products Affected

iPhoto

This is normal. Updating rebuilds the thumbnail files for improved quality and reliability with the newer version of iPhoto. If you choose not to update the thumbnails, you will be prompted again the next time you open iPhoto.

iPhoto libraries burned to CD or DVD are not affected by this change.

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DVD Studio Pro 2: Simulator changes subtitle streams incorrectly

- **Last Modified:** March 19, 2004
- **Article:** TA27687

- **Old Article:** 93761

In the Simulator, if you change subtitle streams while playing a track, the current subtitle from the new subtitle stream appears immediately, even if it is in the middle of the subtitle text.

Products Affected

DVD Studio Pro

The proper behavior, as happens with DVD players, is for the DVD not to change subtitle streams until the current subtitle clip ends, and not to show a subtitle from the new stream until a new subtitle clip starts on that stream.

This document will be updated when additional information is available.

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Archived - GarageBand: Unable to trim the start of regions created with Software Instruments

GarageBand does not allow you trim the beginning of a Software Instrument region beyond the first MIDI data event.
This article has been archived and is no longer updated by Apple.
You record a region using any of the Software Instruments in GarageBand. If you then try to "trim" the beginning of the region to coincide with the first note played, or the downbeat of the measure, you are unable to drag the left edge of the region to the first note of music. You may either be able to trim a part of the region or not to be able to trim at all.

This is because GarageBand does not allow removal of MIDI data from the beginning of a region using the trim function. The region can be resized as long as there is no MIDI data in the area before the desired starting point.

The solution is to split the region at the beginning of the note data and then delete the first segment.
Last Modified: Feb 19, 2012

DVD Studio Pro 2: Use English font name for STL import

- **Last Modified:** April 08, 2004
- **Article:** TA27692

- **Old Article:** 93773

Use the English name of a font when creating an STL file for import into DVD Studio Pro so that it will be correctly recognized.

Products Affected

DVD Studio Pro

DVD Studio Pro 2 allows you to import STL files for subtitles (see page 386 of the DVD Studio Pro 2 User's Manual). When the font names are entered in the STL file, it is important to reference them by their English names.

For instance, instead of:

$FontName =

Use:

$FontName = MS Gothic

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How to remove a project and related media in Final Cut Pro 4

You can remove a Final Cut Pro project, including linked media from the hard drive.

Products Affected

Final Cut Pro

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Warning: This document discusses permanently deleting files from your hard disk. Following these steps will result in the permanent removal of a Final Cut Pro project and related media (even if that media is used in other projects or elsewhere). Only follow these steps once you have finished your work and if you are absolutely certain you want to permanently erase the project and associated media. Read all of the steps involved before performing any of them. These steps will not affect the Final Cut Pro application, other applications, or your Mac OS X system. Apple is not responsible for accidental loss of your media, work, or time.

A typical Final Cut Pro project is a collection of many files, including render files, captured media files, and the project file. Follow these steps to remove them from your hard disk.

Render Files

1. Open your project in Final Cut Pro.
2. From the **Tools** menu, choose **Render Manager**.
3. Click to select the checkbox in the Remove column next to the name of the project you wish to remove. **Important**: Do not select other projects or those projects' render files will be removed as well.
4. Click OK to delete the render files.

Media Files in the Browser

1. Click in the Browser window to make it active.
2. Select everything you want to delete. In many cases you will want to select everything (from the **Edit** menu, choose **Select All**). **Important**: If the Browser contains clips, images, audio or anything else that is used in another project, or is used by another application (a photo that you are also using in a DVD project, for example), do not select those items, as you will not want them to be deleted.
3. From the **Modify** menu, choose **Make Offline**.
4. Click to select the "Move Them to the Trash" button.
5. Click OK.
6. Close your Final Cut Pro project. It is not necessary to save your project at this point, as you will have to recapture all your video anyway if you chose to work on it again in the future.

The Project File
The Final Cut Pro project file is essentially a record of your edits and logging information. This file is typically small and may be archived for future use. If you captured your project's video clips using Log and Capture, you may use the project file to recapture them from tape in the future. If you do not wish to keep your project file, drag it to the Trash after you have quit Final Cut Pro.

Freeing Up Hard Disk Space

1. After performing the steps above, click the Finder icon in the Dock.
2. From the **Finder** menu, choose **Empty Trash** to delete the items that were moved into the Trash. This will permanently delete the items and will free up the hard disk space they occupied.

For more information about managing Final Cut Pro media, projects and tools, open Final Cut Pro and from the **Help** menu, choose **Final Cut Pro Help**. This help is a searchable version of the Final Cut Pro User's Manual.

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- **Last Modified:** February 19, 2012
- **Article:** TA27694

- **Views:**

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- **Rating:**
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AppleWorks 6 for Mac OS X: Don't move or rename open documents

Changes made to an AppleWorks document are not saved if you move or rename the document in the Mac OS X Finder while the document is open in Appleworks.

Products Affected

AppleWorks

This article has been archived and is no longer updated by Apple.
Save your document and either close it or quit AppleWorks before renaming or moving a document in the Mac OS X Finder.
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- **Last Modified:** February 19, 2012
- **Article:** TA27696

- **Views:**

  2325

- **Rating:**
  - 2.0/5 Stars

  (2 Responses)

Languages

English

GarageBand: Recovering from moved or deleted support files

- **Last Modified:** April 09, 2004
- **Article:** TA27697

- **Old Article:** 93782

GarageBand stores important information in its Application Support folder. Learn what can happen if you move or delete items in this folder and how to recover.

Products Affected

GarageBand

In most cases, you should not delete, edit, or move the folders and files inside /Library/Application Support/GarageBand. Doing so can result in the application not indexing or finding loops until it is reinstalled.

- If the "Apple Loops" or "Instrument Library" folders (or the content inside) have been removed, the software must be reinstalled.
- If the "Apple Loops Index" folder has been removed, you can create a new folder with the same name in the same location, and then reindex your loops by dragging them into GarageBand's Loop Browser.
- If only the content of the "Apple Loops Index" folder has been removed, you will need to reindex your loops by dragging them into GarageBand's Loop Browser.

TA27697_GarageBand_Recovering_from_moved_or_deleted_support_files.pdf

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Archived - iPhoto: How to create a custom constrain value

Products Affected

iPhoto

This article has been archived and is no longer updated by Apple.

Learn how to use a custom constrain value with the crop feature of iPhoto.

You can crop a picture by using a custom constrain value. Note that this constrain value is a ratio (such as 2x3), and is not a specific pixel value (such as 1024x768).

To do this in iPhoto 5 and later, choose **Custom** from the **Constrain** pop-up menu in the Edit window.

To do this in iPhoto 4 and earlier, edit your photo in a separate Edit window. Control-click on the photo and from the pop-up menu, choose **Edit in separate window**.

The toolbar of the Edit window includes fields for entering custom constrain values.

If you do not see the toolbar, check the following:

- From the **Window** menu, choose **Show Toolbar**.

If you see the toolbar, but don't see the custom constrain options, you can easily add them.

1. From the **Window** menu, choose **Customize Toolbar**.
2. Add the Custom field to the toolbar by dragging it to the toolbar.
3. Click Done.

Alternatively, you can set iPhoto to always open photos in the separate Edit window when double-clicked:

1. From the **iPhoto** menu, choose **Preferences**.
2. In the General pane, select the option **Opens photo in Edit window** from Double-click photo. In iPhoto 2, select the option **Opens in separate window**.

3. Click the close button.

When a photo is double-clicked from Organize view, it should now open in a separate Edit window within iPhoto.

Rate this article:

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- Very helpful
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- **Last Modified:** Feb 19, 2012
- **Article:** TA27698

- **Views:**

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- **Rating:**
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TA27698_iPhoto_How_to_create_a_custom_constrain_value.pdf

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Final Cut Pro: PSD files should not contain ImageReady data

- **Last Modified:** April 13, 2004
- **Article:** TA27699

- **Old Article:** 93784

Importing PSD files into Final Cut Pro may result in distorted images if the files contain ImageReady data such as animation or rollovers.

Products Affected

Final Cut Pro

PSD images with ImageReady data such as animation and rollovers will not display correctly in Final Cut Pro.

To correct these images:

1. Open the PSD file in Photoshop.
2. From the **File** menu, choose **Save As** to save a new PSD file.
3. Import the new PSD file into Final Cut Pro.

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TA27699_Final_Cut_Pro_PSD_files_should_not_contain_ImageReady_data.pdf

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Improved volume control in iTunes 4.5

iTunes 4.5 has logarithmic volume leveling. What does this mean to you?
This article has been archived and is no longer updated by Apple.
This makes it easier to adjust the volume throughout the entire range of the slider because the volume slider behaves more like the volume knob on a stereo.

The volume slider in previous version of iTunes adjusted the volume in a linear way. But human hearing doesn't work that way. Human hearing is logarithmic, so small changes to the volume slider on one end make a big difference in the volume, while big changes to the volume slider on the other end make little change.

The maximum volume remains the same as with iTunes 4.2.
Published Date: Feb 19, 2012

Languages

ARCHIVE

About the Digital Cinema Desktop Preview feature in Final Cut Pro HD

- **Last Modified:** July 28, 2011
- **Article:** TA27705

- **Old Article:** 93797

This article has been archived and is no longer updated by Apple.

Learn about setting up Apple Studio and Apple Cinema Displays for previewing Canvas and/or Viewer video while editing with Final Cut Pro HD.

Products Affected

Final Cut Pro, Final Cut Pro 5.X

The Digital Cinema Desktop Preview feature provides a convenient and cost effective way to play Standard Definition and High Definition video from Final Cut Pro HD. Using an Apple Studio Display or an Apple Cinema display for Digital Cinema Desktop Preview allows editors to view video playback in addition to using a traditional NTSC/PAL Broadcast monitor during the editing process.

Digital Cinema Desktop Preview Set-Up
For a full diagram of external audio and video monitoring, please refer to Chapter 7 of the "New Features in Final Cut Pro HD" document available from the Help menu in Final Cut Pro.

Although this setup works for any video format, it can be particularly useful when editing high definition video that would otherwise require a fairly expensive HD monitor. Progressive video formats such as 720p are well suited for monitoring on a computer display. If you are doing critical online editing or color correction, you may still want to use an external CRT video monitor, especially when your final output is interlaced broadcast video.

Digital Cinema Desktop Preview supports video playback for single, dual and triple monitor configurations. There are various modes for each option:

Main
The video is not scaled unless it is too large to fit on the display. If the video signal is larger than the display, it is scaled to fit on the display. Pros: The video always maintains proper aspect ratio and does not exhibit scaling artifacts due to magnification. Cons: Some formats, especially SD formats, may look very small when displayed on large computer displays.

Full-Screen
The video is scaled to fit the display in at least one dimension. If the aspect ratio of the video signal and the computer display do not match, the video on the display is letterboxed (black on top and bottom) or pillarboxed (black on sides) as necessary. Pros: This format gives you the biggest picture possible and maintains the proper aspect ratio. Cons: Scaling artifacts may be noticeable when viewed up close.

Raw (1:1)
This mode shows the video data with as little processing as possible. This can be useful for engineering evaluations of the image. No scaling is done whatsoever. Pros: More accurate assessments of video quality can be made. Cons: Not useful for general viewing. No scaling or pixel aspect ratio adjustments are made, even when the video is larger than the display. For example, a 720p frame (1280 x 720) showing in raw mode on an 800 x 600 display only shows 800 x 600 of the image.

To view Final Cut Pro video output on a computer display connected to your computer

1. From the **Final Cut Pro** menu, choose **A/V Settings**.
2. Click the A/V Devices tab.
3. Choose one of the display options from the **Playback Output Video** pop-up menu.

Digital Cinema Desktop Preview for Presenting Full-screen Video Monitoring on the Main Computer Display
In addition to viewing Canvas or Viewer video on a second computer display connected to your computer, you can now present video on the main display. A third monitor may also be connected to better view the information contained in the Browser window. The main computer display is the display that normally shows the menu bar for applications. This feature is particularly useful for systems with a single computer display (such as PowerBooks and high definition video editing systems with a single Cinema Display).

Regardless of how many monitors you have connected, you can always choose to monitor on the main display. Video presented on the main display is always shown in full-screen mode. In full-screen mode, the video is scaled to fit the display in at least one dimension. If the aspect ratio of the video signal and the computer display do not match, the video on the display is letterboxed (black on top and bottom) or pillarboxed (black on sides) as necessary. This is identical to full-screen mode on a second monitor. For more information about monitoring on a computer display, see New Features in Final Cut Pro HD 4.5.

To view Final Cut Pro video output on the main computer display connected to your computer:

1. From the **Final Cut Pro** menu, choose **A/V Settings**.
2. Click the A/V Devices tab.
3. From the **Playback Output Video** pop-up menu, choose **Desktop Cinema Display - Full Screen [Main]**.
4. From the **View** menu, choose **External** and then choose **All Frames** from the submenu, or press Command-F12.

Supported Formats

- DV100 (DVC Pro HD)
- DV50 (NTSC PAL)
- DV25 (NTSC PAL)
- Offline RT (Photo JPEG)
- Apple Uncompressed (8-bit, 10-bit)

Tips for Using Digital Cinema Preview
Regular editing commands still work when full-screen video is presented on the main display. This means you can still mark In and Out points, use JKL-playback, and so on. For a list of shortcut keys: From the **Tools** menu, choose **Keyboard Layout** and then choose **Customize** from the submenu, or see the Final Cut Pro 4 Quick Reference Card.

Command-F12 is the default shortcut key for turning external video monitoring on and off. When full-screen video is presented on the main display, the menu bar cannot be seen, so it is important to learn the shortcut key.

To turn off full-screen video presented on the main display:
Press Command-F12 or press the Escape key.

Directly monitoring video on a computer display does not introduce video latency. Therefore, Final Cut Pro ignores the frame delay offset setting when you monitor your video on a computer display (as opposed to an output that has inherent video latency, such as FireWire DV or a third-party video card).

Due to the refresh rate of LCD computer monitors, 1080i 60 and 720p 60 material may exhibit some temporal artifacts during playback.

Video playback to a traditional CRT NTSC or PAL monitor differs from playback to LCD Cinema Display. CRT monitors scan entire fields of pixels to create a frame's worth of lines. LCD Cinema displays, use phosphors rather than pixels and scan entire frames at one time. Therefore LCD Cinema Displays have a longer "decay" period between each frame when compared to lines being scanned on a CRT. At times, the same video image will be visible on screen for a period of up to four to seven frames.

Interlaced material is being scanned at the frame rate versus field rate thus when viewing 1080i 60 and 720 p 60 both fields are being drawn simultaneously which may result in visual interlacing.

Computer Displays operate in RGB color space versus YUV color space (used by a NTSC/PAL Broadcast monitor) therefore, some effects may appear differently between output to tape and what was previewed on the computer display.

Monitor resolution must be adjusted prior to launching Final Cut Pro HD.

Turning on may restrict the number of RT effects available in timeline (however their RT status will not change in the Effects menu/Effects folder in Browser)

Currently third-party video capture cards and their accompanying codecs are not compatible with Digital Cinema Desktop Preview feature.

Refrain from clicking on the monitor upon initially enabling Digital Cinema Desktop Preview (especially in Single User mode).

Exposé is not supported with Digital Cinema Desktop Preview.

Graphics files 1920x1200 and larger will not always display properly.

Digital Cinema Desktop Preview must be disabled when performing ETT and P2V.

The screen saver needs to be shut off for the computer monitor being used for Digital Cinema Desktop Preview.

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Archived - Sharing large music libraries doesn't work in iTunes 4.5

With iTunes 4.5, you probably won't be able to listen to someone else's shared music (also using iTunes 4.5) if the library is too large. You'll see the "Loading <shared music name>" message in iTunes stays, but the shared library won't appear.

Products Affected

iTunes

This article has been archived and is no longer updated by Apple.
Update to the latest version of iTunes to prevent this from occurring.

With iTunes 4.5, the solution is to ask your friend to create a playlist in iTunes that contains a smaller subset of her music, and share it instead.

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- **Last Modified:** Feb 19, 2012
- **Article:** TA27707

- **Views:**

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- **Rating:**
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Languages

English

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Archived - Pictures look blurry in iPhoto

iPhoto 2 or later can smooth the appearance of a photo that's not viewed at 100 percent. In some cases a smoothed picture may appear "blurry" if you view it at less than 100 percent.
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If this happens, don't worry. It won't affect your print or book orders or printouts on your printer. For the display appearance you try one or more of these steps:

- In Organize view, try adjusting the zoom slider to a larger or smaller view.
- In Edit view, resize the iPhoto window to a larger size, if possible. Alternatively, try configuring iPhoto to edit photos in a separate window or follow these steps to view a photo in a separate window:
  1. Control-click the photo and select "Edit in separate window" option from the shortcut menu.
  2. Zoom to 100 percent by clicking the zoom buttons in the toolbar of the separate window. (The current zoom level is displayed in the title bar of the window.)

- Consider setting iPhoto preference to view photos in another application when you double-click them. **Note**: Preview may have similar issues when the picture is not viewed at 100 percent.

Last Modified: Feb 19, 2012

Additional Product Support Information

- iPhoto
- iPhoto

Final Cut Pro HD: DCD video is distorted with some formats

- **Last Modified:** May 10, 2004
- **Article:** TA27710

- **Old Article:** 93808

When using certain video formats, output using the Digital Cinema Desktop feature appears distorted, with tints of pink, blue, or green.

Products Affected

Final Cut Pro

This can happen in Final Cut Pro HD (4.5) when using OfflineRT at a quality higher than 35%, or MJPEG formats with third-party video cards.

If you're using Apple's OfflineRT format, the solution is to set the quality to 35% in the General tab of the Sequence Settings window.

This document will be updated as more information becomes available.

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Final Cut Pro 4 won't quit when DCD is selected

- **Last Modified:** May 12, 2004
- **Article:** TA27711

- **Old Article:** 93809

You might not be able to quit Final Cut Pro 4 if Final Cut Pro HD is also installed on the computer and you've chosen to use Digital Cinema Desktop in the Audio/Video Settings window.

Products Affected

Final Cut Pro

If you try to quit when there are unsaved changes in your project, a warning dialog appears, but you cannot click any of the buttons and must force quit Final Cut Pro.

Digital Cinema Desktop is installed by and works with Final Cut Pro HD. Even though it can appear as an option in Final Cut Pro 4, it will not work and should not be used.

To return the program to its normal state, follow these steps:

1. Open Final Cut Pro.
2. From the **Final Cut Pro** menu, choose **Audio/Video Settings**.
3. In the General tab, set Video Playback to None.

TA27711_Final_Cut_Pro_4_wont_quit_when_DCD_is_selected.pdf

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Final Cut Pro HD: Do not capture DV100 footage with mixed frame rates

When capturing DV100 video (such as DVCPRO HD) in Final Cut Pro HD, be sure that the clip you are capturing uses a consistent frame rate.

Products Affected

Final Cut Pro

This article has been archived and is no longer updated by Apple.

Capturing DV100 clips with different frame rates results in a captured clip that Final Cut Pro HD interprets as having the frame rate of the footage on the tape when the capture began. For example, you may have a tape with camera-generated bars and tone at 720p60 followed by footage shot at 720p24. Even though the majority of the footage is 720p24, the clip will be recognized as 720p60. This will happen even if the first few frames of the tape are different from the rest.

Instead, be sure to capture DV100 clips with only one frame rate. You can capture other parts of the tape separately and render them into your sequence if necessary.

Note: This information does not apply to variable frame rate footage taken with a VFR-capable camera. In these cases, you can use a hardware or software frame rate converter to convert the media to other formats.

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- **Last Modified:** February 19, 2012
- **Article:** TA27715

- **Views:**

  1659

- **Rating:**
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  (5 Responses)

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Checking for iDVD chapters using QuickTime Player

- **Last Modified:** May 20, 2004
- **Article:** TA27720

- **Old Article:** 93824

iDVD lets you import a movie from Final Cut Pro or Final Cut Express with chapter markers. The result of this is that a Scene Selection menu is created in iDVD so that you can select a chapter and jump directly to it.

Products Affected

Final Cut Express, iDVD, Final Cut Pro

If you've exported a movie with chapter markers from Final Cut Pro or Final Cut Express, but don't see any chapters (or a Scene Selection menu) in iDVD, you can check the file you exported in QuickTime Player. To see if the movie has any chapter markers, open it in QuickTime Player and look in the lower right corner, as seen here.

You should see a small pop-up menu showing the chapter names. If you don't see the chapter names here, iDVD won't be able to make chapters.

Related documents

42973: Final Cut Express & Final Cut Pro: How to export a movie with chapter markers for iDVD
50168: iDVD: How to Save a Movie in Final Cut Pro or iMovie to Export to iDVD

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Languages

LiveType's Media Browser window won't open

- **Last Modified:** October 04, 2008
- **Article:** TA27721

- **Old Article:** 93825

LiveType's Media Browser window may not open if malformed or damaged fonts are installed.

Products Affected

Final Cut Pro

When LiveType opens, it reviews the fonts installed on your computer. If LiveType encounters fonts that are malformed or have file issues, the LiveType Media Browser window might not open.

You can use Mac OS X's Font Book application to examine the fonts installed on your computer. Font Book is located in the Applications folder. Open it and check to see if there are any fonts that have question marks in place of a correct name, as seen here:

The solution is to update to Mac OS X 10.3.5. This update is available in Software Update in System Preferences and can also be downloaded from here.

If you're not ready or able to update, you can remove the font to keep it from interfering with LiveType. To do this, select the font as seen above, then choose **Remove Font** from the **File** menu.

If you have downloaded a font but not yet installed it, and you want to make sure it will be OK it before you install it, follow these steps:

1. Locate the font on your Desktop (or wherever you saved it). It will look something like this:

2. Double-click the file. Font Book opens the font and shows a preview. In the images below, you can see that the malformed or damaged font (on the top) shows question marks for its font name and family name. This font file will likely cause issues if installed:

   This image is an example of a font that will not cause the symptom described above:

Rate this article:

TA27721_LiveTypes_Media_Browser_window_wont_open.pdf

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Languages

iTunes 4.5 unexpectedly quits when accessing some Internet radio streams

- **Last Modified:** June 09, 2004
- **Article:** TA27725

- **Old Article:** 93831

If the Web address (or "URL") of an Internet radio stream does not start with "http://", iTunes 4.5 unexpectedly quits when it opens the stream.

Products Affected

iTunes

An affected stream may have worked with iTunes 4.2. This can happen with iTunes 4.5 for Mac OS X and for Windows.

Update to iTunes 4.6 to prevent this from occurring.

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Final Cut Pro HD 4.5: How to delete the preference files

- **Last Modified:** June 07, 2004
- **Article:** TA27726

- **Old Article:** 93832

Learn how to resolve issues caused by unusable preference files in Final Cut Pro HD.

Products Affected

Final Cut Pro

When troubleshooting Final Cut Pro HD, one step you can take is to delete the Final Cut Pro preference files. Doing this restores Final Cut Pro HD to the default settings and behavior. These files contains user preferences for scratch disk settings, capture settings, window layouts, and so forth.

To delete the Final Cut Pro HD preferences files, do the following:

1. Quit Final Cut Pro HD.
2. Click the Finder icon in the Dock.
3. From the **Go** menu, choose **Go to Folder**.
4. Type: `~/Library/Preferences/` **Note**: The tilde "~" refers to your home directory. For more information see "Mac OS X: Using Your Home Directory".
5. Click Go.
6. Drag the file named "com.apple.FinalCutPro.plist" to the Trash.
7. Double-click the folder named "Final Cut Pro User Data".
8. Drag the file named "Final Cut Pro 4.5 Preferences" to the Trash.
9. Drag the file named "Final Cut Pro POA Cache" to the Trash.
10. Open Final Cut Pro HD.

Important: Do not delete any of the other files in the Final Cut Pro User Data folder.

Once this process is completed Final Cut Pro HD reverts to its installed defaults. Reset all of your desired application preferences to match what they were before--in particular your Scratch Disk Preferences, keyboard mappings, and the selected Sequence Settings.

Back up configured preference files

To avoid recreating all your custom settings in the event you have to delete the preference files again, follow these steps to save a clean copy of the file:

1. Make a backup copy of the "Final Cut Pro 4.5 Preferences" and the "com.apple.FinalCutPro.plist" files immediately after it is configured for the first time.
2. Put the backup copy of the files in a safe place.

If you have to delete the preference files again, you can simply replace them with the backup copy of the saved, clean files. This preserves your desired preference settings, while eliminating any unwanted behaviors that may have been caused by a faulty Final Cut Pro preferences file.

Note: It is not necessary to back up the Final Cut Pro POA Cache file.

Related document
93385: "Final Cut Pro 4: How to delete the preference files"
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Finding the DVD Studio Pro registration number

- **Last Modified:** October 04, 2008
- **Article:** TA27730

- **Old Article:** 93838

The 11-digit registration number for DVD Studio Pro is located on the front page of the booklet titled "Installing Your Software", as shown here.

Products Affected

DVD Studio Pro

You use this number to register your professional software product with Apple via the Internet. This number is required when you call AppleCare Technical Support.

Important: The registration number is different from the software serial number you use to activate and serialize your professional software product. Both the registration number and software serial numbers are important. Keep them in a safe place for future reference.

DVD Studio Pro includes 90 days of free telephone support, which includes help installing and opening your Apple Professional Software Product, and with basic troubleshooting.

Note: In the United States, Canada, Europe and Japan, Apple products come with 90 days of free telephone support. In other countries, availability of support, duration of the complimentary support period, telephone numbers, and hours of operation may vary and are subject to change. Telephone call charges may apply.

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Finding the Final Cut Pro 4 registration number and the serial number

The 11-digit registration number for Final Cut Pro 4 and Final Cut Pro HD 4.5 is located on the front page of the booklet titled "Installing Your Software", as shown here.

Products Affected

Final Cut Pro

This article has been archived and is no longer updated by Apple.

You use this number to register your professional software product with Apple via the Internet. This number is required when you call AppleCare Technical Support.

The serial number is printed on the same page of the Installing Your Software guide below the registration number. This is a 28 digit combination of numbers and letters in this format:
X-NNN-XXX-NNN-XXX-NNN-XXX-NNN-XXX-NNN

If your serial number isn't being accepted by the program, take note of the following and try again:

- Make sure you are reading from the original serial number label that came with the product.
- Enter your first and last name, and verify there are no mistakes in the serial number field.
- Make sure you enter a zero and not an O, a 1 and not a lowercase L, where appropriate
- The dashes in the serial number are required.
- Make sure there are no spaces before or after the serial number.
- If you purchased an upgrade version of Final Cut Pro, you may also be asked to enter the serial number for your previous version of Final Cut Pro.
- There is also a 20-digit serial number for QuickTime Pro included with Final Cut Pro. Make sure you are using the correct serial number. Click here for help entering the QuickTime Pro serial number.

Important: The registration number is different from the software serial number you use to activate and serialize your professional software product. Both the registration number and software serial numbers are important. Keep them in a safe place for future reference.

Final Cut Pro includes 90 days of free telephone support, which includes help installing and opening your Apple Professional Software Product, and with basic troubleshooting.

Note: In the United States, Canada, Europe and Japan, Apple products come with 90 days of free telephone support. In other countries, availability of support, duration of the complimentary support period, telephone numbers, and hours of operation may vary and are subject to change. Local telephone call charges may apply.

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- **Last Modified:** July 28, 2011
- **Article:** TA27731

- **Views:**

  17136

- **Rating:**
  - 3.0/5 Stars

  (17 Responses)

Maximum memory usage in Final Cut Pro is 2.5 GB

- **Last Modified:** February 06, 2009
- **Article:** TA27734

- **Old Article:** 93844

Products Affected

Final Cut Pro 5.X, Final Cut Studio, Final Cut Pro, Final Cut Pro 6.x

On a computer with more than 4 GB of RAM installed, you may notice that Final Cut Pro allows a maximum memory allocation of 2.5 GB.

This is what you'll see in the Memory & Cache tab of the System Settings window:

Why can't Final Cut Pro use more than 4 GB of RAM?

Mac OS X is, at present, a 32-bit addressable operating system. This means that any single program running on the computer can take at most 2^32 bytes, or 4 GB, of memory. Final Cut Pro is subject to this ceiling just as any other program would be and is restricted to allocating no more than a total of 4 GB of RAM.

Why can't I allocate more than 2.5 GB of RAM to Final Cut Pro?

The memory available for allocating in the Memory & Cache tab of the System Settings window includes memory directly used by Final Cut Pro, but the program loads many other frameworks, libraries, and drivers, which may also allocate memory. Although this memory isn't directly allocated by the program itself, the allocation still falls into Final Cut Pro's address space and contributes to the 4 GB limit. Final Cut Pro reserves 1.5 GB of RAM for these frameworks, libraries, and drivers and so only allows a maximum of 2.5 GB to be allocated by the user.

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Archived - Multisession burn option not available in all applications

With Mac OS X 10.3 and later, you can use Disk Utility to burn appendable or "multisession" CD-R discs. For help using this feature, see "Recording on a CD-R disc more than once."

Products Affected

Mac OS X 10.3, Mac OS X 10.4, iPhoto

This article has been archived and is no longer updated by Apple.

Other applications that can burn discs (such as iPhoto) don't yet use this feature, even if it appears, albeit dimmed, in their interfaces.

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- **Last Modified:** Feb 19, 2012
- **Article:** TA27735

- **Views:**

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Languages

English

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Upgrading to QuickTime Pro

- **Last Modified:** May 29, 2007
- **Article:** TA27738

- **Old Article:** 93858

When you purchase QuickTime Pro from the Apple Store, a Web order number and an activation key appear on the order confirmation webpage. They are also included in the confirmation email sent to you after your purchase.

Products Affected

QuickTime

Please print both of these, if possible. They are your only reference to the key if data on your computer is lost for any reason.

A QuickTime 6 Pro key activates the pro features in QuickTime 6.0 or later. If you have an earlier version of QuickTime, you will need to download the current version of QuickTime and use a QuickTime 6 Pro key to access QuickTime 6 Pro features.

Tip: The key activates features that have already been installed. There is no QuickTime Pro CD to wait for or additional software to download with this purchase.

If you need QuickTime 6, a free download is available from the QuickTime download page.

Related documents

58453: QuickTime Pro Key: Getting a Lost Key Resent
61654: QuickTime 6: About QuickTime Pro Keys

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Final Cut Pro HD: Modifying timecode on the current frame

- **Last Modified:** June 14, 2004
- **Article:** TA27739

- **Old Article:** 93863

Learn about an issue with modifying the timecode of the clip's current frame.

Products Affected

Final Cut Pro

Symptom

After modifying the timecode of a clip with the "Frame To Set" pop-up menu set to "Current," the timecode of the clip's current frame changes to an unexpected value.

Products affected

- Final Cut Pro HD 4.5

Solution

1. Calculate what the new start timecode would be for the clip.
2. Use Modify Timecode for the first frame instead of the current frame.

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Copying large files to an iPod formatted for Windows

- **Last Modified:** August 24, 2004
- **Article:** TA27741

- **Old Article:** 93866

If your iPod's hard disk is formatted to work with Windows, the size of largest file you can copy to it is 4 gigabytes (GB). If you try to copy a larger file, it won't work.

Products Affected

iPod

This is because the FAT32 file system--the Windows hard disk format used for iPod--limits files to 4 GB. This limitation does not apply to an iPod formatted for Mac, which uses the Mac OS Extended (HFS Plus) file system. Its file size limit is much larger, in case you were wondering.

If you're just trying to copy a file to iPod, try using some compression software to make the file size smaller than 4 GB.

If you have a song that's larger than 4 GB, here are a couple to things you can do:

- Convert the song to a compressed format (AAC, MP3) so that it is less than 4 GB in size.
- Reimport the song from the original source in smaller pieces (by tracks).

You can read more about the FAT32 file system in the Microsoft Knowledge Base.

Related documents
61672: iPod: How to determine iPod's hard disk format

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Languages

ARCHIVE

Connecting SCSI devices to your Mac

- **Last Modified:** October 04, 2008
- **Article:** TA27743

- **Old Article:** 9387

This article has been archived and is no longer updated by Apple.
SCSI (pronounced SKUH-zee) stands for Small Computer System Interface. It is a standard method for connecting computers and peripheral devices like hard disk drives, CD-ROM drives, printers, and scanners. SCSI ports, cables, and terminators are usually labeled with the SCSI icon which looks like a diamond-shaped G.

This article covers the following topics:

Overview
The Connection
Basic Vocabulary
SCSI Termination
Terminator Types

The SCSI Chain
Making The SCSI Chain Work
Setting Up A SCSI Chain
Connecting SCSI Cables
Terminating The SCSI Chain
Hints And Help

PowerBook Requirements

Apple Cable Part Numbers

Where To Get More Information

Overview

The Connection

Most storage devices, such as hard drives, CD-ROM drives, and scanners are connected to the Macintosh using SCSI. The 25-pin port is located on the back of your desktop Macintosh. You can recognize the SCSI port by the diamond-shaped SCSI icon above it. (On PowerBook models the port is a 30-pin square connector.) Peripheral devices typically have a 50-pin Centronics connector on them (it is longer and wider than the SCSI port on your Macintosh).

Your Macintosh can have a total of seven SCSI devices connected to it (the Workgroup Server 95 can have up to 20 devices). If you have System 7.5 and use the SCSI Manager 4.3, you can have up to 14 SCSI devices, 7 per bus on the Quadra 900 and 950 and the Power Macintosh 8100/8150/9150. Internal hard drives, internal CD-ROM drives, and other internal storage devices are included in this limit of seven

devices. This does not include floppy drives, which are not SCSI devices.

Basic Vocabulary

SCSI bus The electronic path on which data travels.

SCSI device A computer or peripheral that can communicate on a SCSI bus. A SCSI device can be internal (such as an internal hard drive) or external (such as an external hard drive, printer, CD-ROM drive, or scanner).

SCSI chain A series of SCSI devices connected by SCSI cables. A SCSI chain can have up to seven SCSI devices.

SCSI ID number A number from 0-7 used by the computer to identify and distinguish between SCSI devices. The SCSI ID identifies each device no matter where it is physically connected in the SCSI chain. The SCSI ID number also determines which one goes first when devices compete for the use of the SCSI bus. The higher the number, the higher the priority on the SCSI bus. Though since the Macintosh is the only device "competing" for the bus, the ID number as a priority is basically irrelevant.

SCSI terminator A piece of hardware that acts as a resistor to reduce interference along the SCSI bus. SCSI devices chained together form an electronic signal path. At the end of the path, signals tend to "bounce" back up the SCSI path and cause interference. This interference can cause difficulties with your Macintosh and/or one or more of your SCSI devices.

SCSI Termination

The most important thing to understand about using SCSI devices is proper termination. SCSI devices chained together form an electronic signal path. At the end of the path, signals tend to bounce back up the SCSI path and cause interference. This interference can cause difficulties with your Macintosh and/or one or more of your SCSI devices.

Terminating a SCSI bus preserves high transmission speeds, and if the terminator is properly placed, cleans up the signal along the entire length of the line. Terminators also provide a reasonable degree of electrical noise immunity. The most important reason to terminate a SCSI bus is that termination is required for the bus to work! A bad signal anywhere on the chain can cause all of the SCSI devices, in some cases the Macintosh itself, not to function properly.

Terminator Types

Physically, terminators generally take three forms. Electrically, these types of terminators are equivalent and vary only in where and how they are installed.

On-Device Terminators

These are known as resistor packs (or sips or dips). You only remove them to add a second drive or to add a drive to a system where the main logic board is terminated. They reside on the SCSI device itself and are almost always removable. Always note the orientation of the resistor packs before attempting to remove them! They are polarized and must not be inserted backwards. Some newer drives have resistors permanently mounted on the drive. On these drives, there is a jumper to enable or disable termination.

External Terminator Blocks or Plugs

These are short plug-like devices and are inserted between an external hard drive's SCSI connector and the SCSI cable, or on the second connector if one exists. Don't confuse these with the ON-DRIVE terminators. ON-DRIVE literally means on the drive mechanism -- not on the external connector. Never use the external terminator when the drive inside a cabinet has terminators installed on it.

Main logic board terminators

These may look like a SIMM or a narrow plug. They are used only when there is no internal hard drive in the Macintosh. Main logic board terminators are inserted into the 50 pin SCSI connector on the Macintosh main logic board where the cable for an internal drive would normally connect. These main logic board terminators are keyed (a polarity notch) and must never be inserted backwards!

The Quadra 800/900/950 have a terminator on the internal drive cable itself. This means that internal SCSI devices should not be terminated.

Switched Termination

Some SCSI peripheral vendors also use switched termination. This means they have a type of switch that controls whether or not the device is terminated. The terminator is actually one of the first two types mentioned, but is controlled electronically with a switch.

The SCSI Chain

Making The SCSI Chain Work

There are several key points you need to keep in mind to make sure that all of your SCSI devices work correctly:

Keep connected SCSI devices powered while your Macintosh is on

Even if you do not plan to use a device, you still must power it on. This ensures a proper SCSI signal path. It is okay to power the devices on at the same time as your Macintosh, but some devices need to be powered on before your Macintosh, consult the manual that came with your SCSI device.

Only terminate the first and the last device
In most cases, only the first and last SCSI device should be terminated. If the Macintosh has no internal hard disk drive (or other SCSI device) installed, then a main logic board terminator should be installed. Macintosh computers sold without internal hard drives include this terminator, and many third party hard drive vendors sell them if you need one. If there is not an internal SCSI device, and if there is not an internal terminator present, then the first external device should be terminated.

There are a few exceptions. If the bus is short (generally 18 inches or less) then it is best to terminate just one end. Also, if the total cable length between all devices is greater than 10 feet, the cable might need to be terminated at the 10 foot point in addition to each end. When daisy chaining three or more SCSI devices, the total bus length often exceeds the 10 foot specification and may require three terminators in the chain to work properly. Do not add the third terminator unless you are having difficulties and you have checked all other possible causes.

Never terminate the same device twice
Some devices which supply termination power (TERMPWR) to the SCSI bus can cause difficulties if they are used on the internal bus of the Power Macintosh 8100/8150/9150. Any drives attached to this bus should be configured with TERMPWR disabled, regardless of whether they are terminated or not.

Only use a black terminator where specified
The black terminator should only be used when a Macintosh IIfx is the host Macintosh and for connecting hard drives to the LaserWriter IIf/IIg and the LaserWriter Pro 630. This black terminator differs (electrically) only slightly from the gray terminator; it does not differ physically other than color. Its purpose is to compensate for some changes in the SCSI chip used in these devices.

Always use high quality cables
Use cables that are double-shielded (foil and braid), such as Apple SCSI cables. Never use simple printer type RS232 cables, which are commonly used with DOS/Windows printers. Make sure the connector hoods (or shrouds) are each connected to the shield braid. Poor quality cables are often the case of seemingly mysterious SCSI difficulties.

Keep total length of all cables used under 20 feet
A longer SCSI chain is susceptible to interference and possible data loss or corruption. Keeping the length under 20 feet maximizes signal integrity.

Keep cables between devices as short as possible.
Generally 18 to 24 inches is best, but never exceed 6 feet or you will most likely have difficulties. PowerBook computers, some scanners, and possibly other devices refuse to work with cables over 24 inches in length.

Avoid mixing brands, types, or styles of cables
Each cable has a different type of construction, impedance, and wire placement, which can result in bus reflections. In mixed cable configurations some devices may simply not work even if all other guidelines are followed.

Check all SCSI devices have a unique SCSI ID number
A number from 0-6 is used by the Macintosh to identify and distinguish between SCSI devices. The number 7 is always reserved for the Macintosh itself. Other devices include a factory set default, as this table indicates:

Common SCSI ID Number Assignments

SCSI ID	Device
0	Commonly used for an internal hard drive, if present
3	External Apple CD-ROM drives (see note)
3	Internal Apple CD-ROM drives (see note)
5	Apple scanners
7	Reserved for the Macintosh
8 and 9	Always invalid number selections but may appear as options on some third-party devices

Note: If two devices have the same ID number, one or both may not start up, or they may damage files if they try to send data at the same time. Device manufacturers use many ways to set the SCSI ID number, including thimble, push switch, DIP switches, jumpers, and software. Check each device's documentation to see how to set its ID.

Power off all devices prior to changing SCSI chain configuration
Always turn off the Macintosh and all peripherals before attaching or detaching any cables or devices or changing SCSI ID numbers. Doing otherwise could cause permanent physical damage to your computer or SCSI devices as well as the loss of important data. Attach the proper cables to their devices. Use the thumbscrews and metal clamps on the cables to maintain a tight, reliable connection. Do not over-tighten.

Use the same driver software for all storage devices
If you have several storage devices from different vendors, you may encounter driver-level conflicts. Since device drivers load into memory when the Macintosh is turned on, they can generate conflicts similar to INIT or extension conflicts. To eliminate these conflicts, you should reformat all of your SCSI storage devices with the same formatting software. Apple's formatting software, Apple HD SC Setup, only works with devices sold by Apple, so this isn't usually an option. However, there are several third parties that make "universal" formatters (such as Drive 7, Hard Disk Tool Kit, and Silverlining) that format most of the storage devices available for the Macintosh.

SCSI Manager 4.3
SCSI Manager 4.3 adds several new features to the SCSI architecture of the Macintosh. These features include SCSI 2 compliance, concurrent asynchronous I/O, and disconnect and reconnect. These new features can improve the performance of the SCSI bus. SCSI Manager 4.3 is supported on all Power Macintosh, and 68040 Macintosh computers, except for the Macintosh 630 family and 68040 PowerBook.

SCSI Manager 4.3 is part of the ROM in all Power Macintosh and Quadra AV computers. Other 68040 Macintosh computers require the SCSI Manager 4.3 system extension.

Use a bootable floppy or CD for testing
Since System file corruption and extension conflicts can cloud the troubleshooting process, it is a good idea to make a bootable floppy to test SCSI difficulties. Configure the start-up disk with minimal drivers and extensions. The CD which came with your computer is also a good tool for troubleshooting.

Check the drive with a utility
Use Apple Disk First Aid or another utility to verify the integrity of a SCSI storage device. You will likely have to start your Macintosh from a different drive than the one you are checking to repair it if difficulties are encountered. The Disk Tools or Utilities floppy disk or startup CD that you received with your Macintosh can be used.

When troubleshooting, isolate devices
If you have followed all the rules without success, start to isolate devices. See if each one individually works correctly. If it does, then start to build the SCSI chain one device at a time. There may be a specific bad device, cable, terminator, connector, or software driver causing the difficulty.

Reformat the storage device
Corrupt drivers cannot usually be detected by diagnostic utilities. If you are unable to get a particular device to work by itself, reinstalling the driver (Update in Apple HD SC Setup) will often help. In rare cases you may wish to consider reformatting to be sure the driver is good.

Setting Up A SCSI Chain

Setting up a chain of SCSI devices consists of:

- Setting SCSI ID numbers (also called SCSI addresses).
- Connecting SCSI cables.
- Terminating the SCSI chain.

The first task, setting SCSI ID numbers takes three steps:

1. Make sure your Macintosh and all SCSI devices are powered OFF. SCSI IDs should never be changed with the devices on.
2. Check all SCSI devices on the SCSI chain to make sure that each has a unique SCSI ID number. (The Macintosh is always 7, so that it has the highest priority; an internal hard drive, if present, is usually 0.) Do not set duplicate numbers. If two devices have the same ID number, one or both may not start up, or they may damage files if they try to send data at the same time.
3. Reset the SCSI ID numbers if necessary. There are four methods that device manufacturers use to set the SCSI ID number: thumb wheel, switch, DIP switches, or software.

Connecting SCSI Cables

There are three types of SCSI cables:

- System cable (Macintosh to SCSI device)
- Peripheral interface cable (SCSI device to SCSI device)
- Cable extender (extends the SCSI cable length)

Follow these steps to connect your SCSI cables:

1. Identify your cables before beginning.
2. Turn off the computer and all peripherals before attaching cables and/or devices.
3. Attach the proper cables to their devices. Use no more than 20 feet of cable; otherwise, SCSI signals deteriorate, causing unreliable

operation. Use the metal clamps and thumbscrews on the cables to maintain a tight, reliable connection. Do not over tighten.

Terminating The SCSI Chain
Improper termination can cause damage to SCSI circuits inside your Macintosh, corrupt files, keep your Macintosh from starting up, and/or cause intermittent failures.

Choose the correct terminator type
Terminators are of two colors: gray and black. Use the gray one when any Macintosh except the Macintosh IIfx is used. Use the black one when a Macintosh IIfx is used.

The black terminator is also used when connecting a hard drive to some Apple LaserWriter printers. Consult your printer manual to verify which terminator you should use. Currently only the LaserWriter IIf/IIg and the LaserWriter Pro 630 require the black terminator.

Turn off the computer and all peripherals before changing terminators
The risk of damaging either the peripheral or the host computer is quite high if termination is changed while either device is powered on.

The Macintosh has an internal hard drive
If the Macintosh in the SCSI chain DOES have an internal hard drive, terminate only the other end of the SCSI chain. (All Apple internal SCSI hard drives have built-in terminators).

The Macintosh does not have an internal hard drive
If a Macintosh in the SCSI chain DOES NOT have an internal hard drive and DOES NOT have a terminator on the internal ribbon cable or on the logic board, terminate both ends of the SCSI chain.

Peripheral SCSI Chain Needs Its Own Termination
If you have a hard drive connected to a printer (to store fonts for example) which is connected to your Macintosh computer through LocalTalk or some other network connection, that hard drive is on a separate chain from the SCSI port on your Macintosh computer. Therefore, the hard drive connected to your printer must have its own termination. The terminator on your Macintosh computer's SCSI chain will not terminate this completely separate chain.

The Macintosh has a third party SCSI device
If you have a third-party (non-Apple) SCSI device, check the manual to find out if it is internally terminated. If the device is not internally terminated, follow the directions in the 2nd, 3rd, and 4th items directly above under the section "Terminating the SCSI Chain."

If the SCSI device is internally terminated, you have two choices:

- Put the device at the end of the SCSI chain
- Remove the termination from the device

(Check the device's manual to find out if termination can be removed, and if so, how it is done.)

Hints and Help

Set Higher Priorities to Startup Devices
In general, assign the higher priorities to startup devices. For example, an external hard drive that is used as the startup disk should be set to number 6 or 5.

Set Lower Priorities to Seldom Used Devices
After assigning priorities to startup devices, set other ID numbers according to how often they are used. For example, a tape backup that is only used occasionally should be set to a lower numbers, such as 2 or 1.

Use Factory Settings as a Guideline
Use the factory settings as a guideline for setting SCSI ID number priorities. For example, if you have a SCSI device that has an ID number of 1, but you already have a device using this number, set it to another low number, such as 2 or 3.

PowerBook Requirements
All the preceding rules apply to PowerBook computers. In addition, some PowerBook computers may require special attention. Consider these points:

All PowerBook models manufactured from the 3400 series to current provide internal termination
These include the following PowerBook Models: 3400, 2400, PowerBook G3, and PowerBook G3 Series. Because previous PowerBook models are not internally terminated they require a pass-through terminator between the HDI-30 SCSI System Cable and the first SCSI device, and another terminator at the end of the SCSI chain. However, depending on the device, you may or may not need a terminator. This depends on

whether the device supplies termination power or not.

PowerBook computers do not supply termination power
Using a terminator may keep the PowerBook from either booting, or seeing the external SCSI device. Depending on the device, you may or may not need a terminator. This depends on whether the device supplies termination power. If you use a terminator, be sure you place it at the very end of the SCSI chain.

Termination is supplied by the internal hard drive
PowerBook computers depend on the internal hard drive to supply termination so that they are properly terminated when placed in SCSI disk mode. In SCSI disk mode the PowerBook is just another hard drive in the SCSI chain because all other subsystems have been shut down. Therefore, when a PowerBook is in SCSI disk mode, it should be the last device in the SCSI chain.

Only one PowerBook can be in SCSI disk mode on a SCSI bus
If you have two PowerBook computers and other devices on the chain, one PowerBook must be the very last device in the SCSI chain (in SCSI disk mode) and the second PowerBook must be at the beginning of the chain. In this situation, one PowerBook is the CPU and the other is in SCSI disk mode.

PowerBook SCSI cables are different
Note the difference between the disk adapter cable (used only for SCSI disk mode) and the system cable (used to connect external devices to the PowerBook). The only true difference between these two cables is an extra pin in the adapter cable, which triggers SCSI disk mode in the machine.

Not all PowerBook computers support SCSI disk mode
Consult your owners manual to determine if yours does. As of this writing, all PowerBook computers except the 140, 145, 145B, 150, and 170 support SCSI Disk Mode.

Apple Cable Part Numbers

- SCSI System Cable, M0206
- HDI-30 SCSI System Cable, M2538LL/A
- HDI-30 SCSI Disk Adaptor Cable, M2539LL/A
- SCSI Peripheral Interface Cable, M0207
- SCSI Cable Extender, M0208LL/B
- SCSI Cable Terminator, M3503LL/A
- SCSI Cable Terminator II (black), M5871G/A

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iTunes Store receipt displays incorrectly in some email programs

- **Last Modified:** July 02, 2004
- **Article:** TA27745

- **Old Article:** 93873

If your iTunes Store receipt doesn't display correctly in your email application, you can view your purchase history in iTunes.

Products Affected

iTunes Store, iTunes

For example, the itemized list section of iTunes Store receipt emails can look like this when viewed in Eudora:

If this is the case, try another email application or go to the iTunes Store to check your purchase history.

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Languages

- English
- 日本語

European New Music Tuesday subscribers receive U.S. edition

- **Last Modified:** July 02, 2004
- **Article:** TA27747

- **Old Article:** 93875

If you use the iTunes Store in the UK, Germany, or France and subscribed to the New Music Tuesday, you may be receiving the New Music Tuesday mailing for the United States instead.

Products Affected

iTunes Store, iTunes

To correct this, unsubscribe from the U.S. newsletter by clicking here, then click on the country below to subscribe to the newsletter for your country.

- UK
- France
- Germany

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BMW iPod Adapter FAQ

- **Last Modified:** June 01, 2007
- **Article:** TA27749

- **Old Article:** 93879

Thinking about getting the iPod adapter for your BMW? Find out the answers to some frequently asked questions.

Products Affected

iPod

Questions answered in this document

Availability and description

1. When is the BMW iPod Adapter available?
2. Where can I purchase the BMW iPod Adapter and how much does it cost?
3. Does the BMW iPod Adapter include an iPod or iPod mini?
4. What is the BMW iPod Adapter?
5. How does the BMW iPod Adapter work?
6. Which vehicles support the BMW iPod Adapter?
7. Which iPod models are compatible?
8. What are the available functions?

Using the BMW iPod Adapter

9. Can I leave my iPod or iPod mini in the car at all times?
10. How will the adapter show up on the BMW's radio?
11. What are the advantages of using the BMW iPod Adapter over other types of adapters?
12. What will the BMW's audio system display when playing a song?
13. Can I browse iPod or iPod mini by artists, song title, album, or genre using the radio controls?
14. How do I make a BMW playlist in iTunes?
15. What happens if I don't have a BMW playlist for one of the numbered presets on my BMW audio system?
16. What if there are no songs in one of the BMW playlists?
17. Does the BMW iPod Adapter recognize iPod's "On-The-Go" playlist?
18. How do I connect the iPod or iPod mini to the BMW iPod Adapter?
19. How do I know if the iPod and the BMW are communicating?
20. Can I play iPod immediately after connecting to the BMW iPod Adapter?
21. What does it mean if my BMW audio system's interface is displaying "CD 9-99"?
22. How do I play one of the BMW Playlist on the iPod or iPod mini?
23. How do I play all the audio tracks on iPod or iPod mini?
24. Where can I get more information on the BMW iPod Adapter?

Availability and description

1. **Question**: When is the BMW iPod Adapter available?
   Answer: The BMW iPod Adapter will be available on July 12, 2004.

2. **Question**: Where can I purchase the BMW iPod Adapter and how much does it cost?
   Answer: You should contact your BMW dealership for information regarding cost of the BMW iPod Adapter and installation cost.

3. **Question**: Does the BMW iPod Adapter include an iPod or iPod mini?
   Answer: No. It must be purchased separately.

4. **Question**: What is the BMW iPod Adapter?
   Answer: It's an adapter, neatly concealed behind the radio with the cable in the glovebox, that connects an iPod or iPod mini to the BMW audio system

and allows you to select your music using the vehicle's radio and steering wheel controls.

5. **Question**: How does the BMW iPod Adapter work?
   Answer: The iPod adapter translates commands between the BMW audio system and the iPod. The adapter allows your iPod or iPod mini to take the place of a BMW CD Changer, although there will be differences in operation that are noted in BMW's iPod Adapter Owner's Manual.

6. **Question**: Which vehicles support the BMW iPod Adapter?
   Answer: For information on which vehicles support the BMW iPod Adapter, go to the website iPodyourBMW or check with your BMW dealership.

7. **Question**: Which iPod models are compatible?
   Answer: Any iPod model with a dock connector is compatible, running iPod mini version 1.1 or greater, or iPod Software version 2.2 or greater software.

8. **Question**: What are the available functions?
   Answer: Supported functions include:
   - Playback up to 5 unique BMW playlists, which you have created in iTunes.
   - Playback of all the music content on iPod or iPod mini.
   - Scan each track in a playlist or all tracks in iPod or iPod mini for 10 seconds each.
   - Repeat the current track being played (not available on Z4 or Z3).
   - Shuffle for the current selected BMW playlist or the entire iPod or iPod mini music contents.
   - Next and Previous Track.
   - Fast Forward, and Fast Backward to skip through a track at a high speed.

Using the BMW iPod Adapter

9. **Question**: Can I leave my iPod or iPod mini in the car at all times?
   Answer: The interior of your car can reach extreme temperatures that could damage your iPod or iPod mini. Do not operate your iPod or iPod mini in temperatures below 32° F (0° C) or above 95° F (35° C) or store it where temperatures could drop below -4° F (-20° C) or exceed 113° F (45° C).

10. **Question**: How will the adapter show up on the BMW's radio?
    Answer: The BMW radio will display "CD" when using the BMW iPod Adapter

11. **Question**: What are the advantages of using the BMW iPod Adapter over other types of adapters?
    Answer: The iPod adapter offers the following benefits:
    - Charging of the internal battery for iPod and iPod mini.
    - Controlling iPod or iPod mini via vehicle radio and steering wheel controls.
    - Direct audio interface with the BMW vehicle audio system for optimal audio playback from the iPod or iPod mini.

12. **Question**: What will the BMW's audio system display when playing a song?
    Answer: Just like a CD Changer, the BMW audio system's interface will display the track number. It will not display the name of the artist, song title, or album title of the song that is currently playing.

13. **Question**: Can I browse iPod or iPod mini by artists, song title, album, or genre using the radio controls?
    Answer: No, when connected through the adapter, you cannot browse iPod or iPod mini songs by artist, song title, album or genre.

14. **Question**: How do I make a BMW playlist in iTunes?
    Answer:
    Here's some examples of acceptable names for a BMW playlist:

    - BMW1 - Rock
    - BMW3_Jims Mix
    - BMW2 highway mix

    To create a BMW playlist:

    1. Open iTunes.
    2. From the **File** menu, choose **New Playlist**.
    3. As in the examples above, name the playlist "BMW#XXX", where # is a number (1 to 5) and "XXX" is anything you want to follow. "BMW" must be in capital letters, and there can be no spaces between "BMW" and the number. Incorrect examples:
       - Bmw1
       - BMW_1
       - BMW 1
       - BMW6 (acceptable format, but can only use presets 1-5)
    4. Add songs from the iTunes library to the playlist.
    5. Synchronize the playlist to iPod or iPod mini.

    When your iPod or iPod mini is connected to your BMW vehicle, the iPod adapter scans all available BMW playlists. Playlists are allocated to preset buttons on the BMW's audio system in the following manner:
    Preset 1: "BMW1..."

Preset 2: "BMW2..."
Preset 3: "BMW3..."
Preset 4: "BMW4..."
Preset 5: "BMW5..."

Example Playlist in iTunes:

15. **Question**: What happens if I don't have a BMW playlist for one of the numbered presets on my BMW audio system?
Answer: You simply won't have a playlist available for the corresponding button. Example: Without a playlist named "BMW5...", preset button 5 selects nothing.

16. **Question**: What if there are no songs in one of the BMW playlists?
Answer: If there are no audio tracks in a playlist, the BMW audio system won't recognize the playlist.

17. **Question**: Does the BMW iPod Adapter recognize iPod's "On-The-Go" playlist?
Answer: No.

18. **Question**: How do I connect the iPod or iPod mini to the BMW iPod Adapter?
Answer: It's important to follow the directions in the BMW iPod Adapter's Owner's Manual. Turn your BMW radio ON before connecting your iPod or iPod mini. Turn your BMW radio OFF before disconnecting.

19. **Question**: How do I know if the iPod and the BMW are communicating?
Answer: A few moments after connecting iPod or iPod mini to the BMW iPod Adapter, the iPod's display should read "BMW OK to disconnect."

20. **Question**: Can I play iPod immediately after connecting to the BMW iPod Adapter?
Answer: After the "BMW OK to disconnect" message appears on the iPod, press the MODE button on the BMW audio system until "CD" appears in the display. After successful connection and synchronization, the radio will display one of the following "CD -" or "CD 0-." Synchronization timing may vary according to the number of playlists on your iPod or iPod mini. Please wait until the radio display indicates that the iPod or iPod mini is successfully connected to your iPod adapter before starting playback.

21. **Question**: What does it mean if my BMW audio system is displaying "CD 9-99"?
Answer: It may mean the iPod or iPod mini was disconnected from the BMW iPod Adapter during playback. This remains for about 10 seconds, then the radio will automatically change to AM/FM mode. You may also see this message if you try to select iPod mode too soon after connecting the iPod (see previous question). After a few moments the display will transition to "CD-" or "CD 0-."

22. **Question**: How do I play a BMW Playlist on the iPod or iPod mini?
Answer: To play a BMW Playlist on the iPod or iPod mini, select one of the BMW audio system's first five preset buttons. After a few seconds the playlist will begin playing, and the playlist number and track number will appear in the audio system's display.

23. **Question**: How do I play all the audio tracks on iPod or iPod mini?
Answer: Select the number six preset button on the BMW's audio system. When playing all the audio tracks on the iPod or iPod mini the BMW's audio system will display the playlist as number zero or blank.

24. **Question**: Where can I get more information on the BMW iPod Adapter?
Answer: By visiting your local BMW dealership or the website iPodyourBMW.

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Support

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TA27749_BMW_iPod_Adapter_FAQ.pdf

Archived - Xserve G5: Xserve Remote Diagnostics appears to stop functioning with Apple Fibre Channel PCI card installed

When using Xserve Remote Diagnostics to diagnose an Xserve G5 that has an Apple Fibre Channel PCI card installed, the application may appear to stop functioning while obtaining information about the hardware installed in the Xserve G5.

Products Affected

Xserve

This article has been archived and is no longer updated by Apple.

Symptom

On the admin computer, you will see the message "Probing the hardware...", and nothing else will appear. The CPU indicator lights on the Xserve G5 will stop flashing in the normal pattern used by Xserve Remote Diagnostics.

If there is a display attached to the Xserve G5 when Xserve Remote Diagnostics appears to stop functioning, you may see alert information on the display such as "Write to location ZERO detected, location ZERO was originally 0", followed by some program trace information.

Products affected

- Xserve G5 with Apple Fibre Channel PCI card

Solution

This issue is caused by incorrect reporting in the Xserve Remote Diagnostics software and does not indicate an issue that would require hardware replacement.

There are two easy ways to work around this:

- Disconnect the Fibre Channel cables from the Apple Fibre Channel PCI card, or
- Power on the Xserve RAID that is connected to the Apple Fibre Channel PCI card.

Tip: If Xserve Remote Diagnostics has stopped functioning, you should quit Xserve Remote Diagnostics by typing Control-C or Command-period, and you should power off the Xserve G5 currently being diagnosed, before correcting the problem.

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- **Last Modified:** February 19, 2012
- **Article:** TA27751

- **Views:**

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Final Cut Pro HD: Keyframes are not pasted when you choose Paste Attributes

- **Last Modified:** May 24, 2006
- **Article:** TA27752

- **Old Article:** 93882

Products Affected

Final Cut Pro 5.X, Final Cut Studio, Final Cut Pro

When you paste the attributes of one clip onto another, keyframes are not pasted, even though you selected the checkbox for Filters.

Normally, the Paste Attributes command is valuable for selectively copying attributes from one clip to another without having to open clips in the Viewer, eliminating the need to repeat steps when applying identical effects to multiple clips.

If you select the Filters checkbox, the filters for the copied clip are pasted as specified, but any keyframes added to the clip are not pasted.

One workaround is to drag the filter from a clip in the Effects tab of the Viewer onto the clip where you want the keyframes, as pictured here:

In this example, the filter and its keyframes are copied from Clip001 to Clip002. One drawback to this workaround is that the timing of the keyframes is not scaled, so this may only be practical for clips that have identical durations.

This behavior was improved in Final Cut Pro versions after Final Cut Pro HD (4.5).

In Final Cut Pro 5.0 and 5.1, keyframes from the Motion tab are pasted if selected, and the timing of the keyframes is scaled for parameters in the Motion tab, if Scale Attribute Times is selected. Filter keyframes are also pasted, but their timing will not be scaled. The Scale Attribute Times setting does not apply to the timing in Filters.

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Ejecting iPod during sync may cause iTunes for Windows to "freeze"

- **Last Modified:** July 20, 2004
- **Article:** TA27756

- **Old Article:** 93886

Trying to eject your iPod while it is syncing may cause iTunes to stop responding, and your PC may not eject your iPod.

Products Affected

iPod

This can happen in iTunes 4.6 on Windows XP or Windows 2000 with an iPod (with Dock Connector) or iPod (Click Wheel) when connected using USB 2.0.

To prevent this from happening, cancel the sync before trying to eject iPod or wait until the sync is complete.

If this has already happened and iTunes has stopped responding, follow these steps:

1. Open Windows Task Manager by pressing the Control-Alt-Del keys.
2. Click the Applications tab.
3. Select iTunes in the list of tasks.
4. Click the End Task button at the bottom of the Task Manager window.
5. Open iTunes.
6. Click the "Safely Remove Hardware" button in the system tray to eject iPod.

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What is iPod Software 3.0?

- **Last Modified:** October 12, 2004
- **Article:** TA27757

- **Old Article:** 93887

The Read Me for iPod Updater 2004-07-15 mentions iPod Software 3.0.

Products Affected

iPod

The iPod Software in this case is the software that runs on the iPod, not the iPod Updater. iPod Software 3.0 is installed by "iPod Updater 2004-07-15" and is only for iPod (Click Wheel). iPod Updater 2004-07-15 also includes software for all other iPods.

Starting with iPod Updater 2004-04-28 and later, you can see which versions of iPod software gets installed for each respective iPod. To do this, open iPod Updater.

On a Mac:

- From the **File** menu, choose **About iPod Updater**.

In Microsoft Windows:

- Right-click on the iPod Updater window's title bar.

You can always find the latest version of the iPod Updater at the iPod download page.

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TA27757_What_is_iPod_Software_3-0.pdf

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Use only DVD-R discs with iDVD 4

- **Last Modified:** July 19, 2004
- **Article:** TA27759

- **Old Article:** 93890

iDVD 4 requires DVD-R discs for burning.

Products Affected

iDVD

A number of different recordable DVD media types are available. When you use iDVD 4, only use DVD-R type discs. DVD+R, DVD+RW, DVD-RW, and DVD-RAM discs are not supported with iDVD 4 or with previous versions of iDVD.

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iPod (Click Wheel) USB cable is incorrectly labeled "PC Only"

- **Last Modified:** July 21, 2004
- **Article:** TA27760

- **Old Article:** 93891

The USB cable included with your iPod (Click Wheel) may be incorrectly labeled as "USB 2.0 PC only".

Products Affected

iPod

The label should just say "USB 2.0".

The cable works equally well with Macs that have Mac OS X 10.3.4 or later.

For more information, see Should I use FireWire or USB to connect iPod with my Mac?

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Saving your On-The-Go playlists

- **Last Modified:** July 27, 2004
- **Article:** TA27763

- **Old Article:** 93908

Want to make a playlist away from your Mac or PC? Queue up as many songs as you like on iPod or iPod mini. When you create a list of songs on your iPod, the songs appear in an On-The-Go playlist. iTunes saves playlists to your computer next time you autosync.

Products Affected

iPod

Make sure to save the playlist after you create it on your iPod. While there is a Save Playlist command, you need to play a song--any song--for iPod to save the list to its hard disk. If you don't save the playlist by playing a song, it could be lost if you don't use iPod for more than 36 hours.

The On-The-Go playlist is a feature that can be used with any iPod that includes a Dock Connector. This includes iPod (with Dock Connector), iPod mini, and iPod (Click Wheel). The Save Playlist feature is available only on iPod (Click Wheel).

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Disk mode icon redraws slowly on your iPod (Click Wheel)

- **Last Modified:** July 22, 2004
- **Article:** TA27765

- **Old Article:** 93912

When your iPod (Click Wheel) is in disk mode and you're using it to copy or save files, updates to the screen may slow down.

Products Affected

iPod

This is normal and does not mean something is wrong with your iPod's software or hardware.

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Motion: Replace Media File in Media tab replaces audio-video file with video only

- **Last Modified:** August 10, 2004
- **Article:** TA27766

- **Old Article:** 93913

The Canvas contains a file that includes both audio and video. You try to replace it with a file that only contains video by clicking the "Replace Media File" button.

Products Affected

Motion

The file that contains the audio and video is replaced by the file with video only.

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iPod Software 3.0: Reset All Settings does not reset audiobook playback speed

- **Last Modified:** January 08, 2007
- **Article:** TA27769

- **Old Article:** 93918

iPod Software 3.0 has a feature that allows you to adjust the playback speed of an audiobook to faster or slower than normal.

Products Affected

iPod

The Reset All Settings option on the iPod resets all the different settings on iPod back to their default settings. However, the Reset All Settings does not reset the audiobook playback speed.

The default setting for this is Normal. To change this setting back to the default: On the iPod choose Settings > Audiobooks > Normal.

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iPod (Click Wheel): Windows CD Installer says "iPod Needs To Be Reformatted"

- **Last Modified:** August 10, 2004
- **Article:** TA27770

- **Old Article:** 93919

If you're installing the Windows software that came with your iPod (Click Wheel), you might one or both of these messages at the end of the installation: "iPod Not Readable" or "iPod Needs To Be Reformatted".

Products Affected

iPod

If you already clicked Configure at the beginning of the installation, this step is not required. You can simply click Finish to restart your computer.

Don't worry if you already clicked Update instead of Finish. It does the same thing as Configure at the beginning of the installation.

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Motion: Color value change of LiveFont in Canvas results in inaccurate values

- **Last Modified:** August 10, 2004
- **Article:** TA27771

- **Old Article:** 93920

Learn about an issue that can occur when making color changes to a LiveFont object in Motion.

Products Affected

Motion

Symptom
When you change the color of a LiveFont object, the color well in the Dashboard or the Style pane of the Inspector updates correctly. However, the LiveFont object in the Canvas does not accurately reflect the color change.

Products affected

- Motion

Solution
If you have Final Cut Pro 4 or Final Cut Pro HD (4.5) or later, use LiveType to create the same LiveFont text with color changes.

This document will be updated when additional information is available.

Rate this article:

- Not helpful
- Somewhat helpful
- Helpful
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Home > Support

Visit the Apple Store online (1-800-MY-APPLE), visit a retail location, or find a reseller.

TA27771_Motion_Color_value_change_of_LiveFont_in_Canvas_results_in_inaccurate_values

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iPod (Click Wheel) pauses when headphone connector is unplugged

- **Last Modified:** July 29, 2004
- **Article:** TA27772

- **Old Article:** 93921

Getting a surprise pause when you unplug something?

Products Affected

iPod

iPod (Click Wheel) pauses playback when anything connected to the headphone jack (such as headphones or the remote) is removed. Pressing the Play button will resume playback.

Rate this article:

- Not helpful
- Somewhat helpful
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Archived - Motion QuickTime requirements

Some Motion 1 documentation mistakenly indicates that the minimum requirement is QuickTime 6.5.
This article has been archived and is no longer updated by Apple.
Motion 1 actually requires QuickTime 6.5.1 or later. Motion 2 requires QuickTime 7 or later.
Last Modified: Feb 19, 2012

Languages

Motion: Compressor Export - Only Video is Selected

- **Last Modified:** October 04, 2008
- **Article:** TA27774

- **Old Article:** 93925

When a preset is selected in the Compressor Export Options window, only the video preset will be applied in Compressor, even when Video and Audio is selected in the Include pulldown menu.

Products Affected

Motion

This document will be updated when additional information is available.

Rate this article:

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Archived - iTunes for Windows: Installers may offer Repair or Remove options

Some iTunes for Windows installers may offer to repair or remove iTunes. This includes some on CDs bundled with products such as iPod or AirPort Express.

Products Affected

AirPort, iPod, iTunes

This article has been archived and is no longer updated by Apple.
This is normal behavior and happens when the version you are installing matches the version you already have installed.

Because the installer may install some extra software for the product you purchased, simply click Repair to be sure you have everything you need to get started.

Rate this article:

- Not helpful
- Somewhat helpful
- Helpful
- Very helpful
- Solved my problem

- **Last Modified:** Feb 19, 2012
- **Article:** TA27779

- **Views:**

  26679

- **Rating:**
  - 2.0/5 Stars

  (81 Responses)

Languages

English

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See all questions on this article See all questions I have asked

Which Belkin card readers work with my iPod?

- **Last Modified:** August 03, 2004
- **Article:** TA27780

- **Old Article:** 93935

So you want a Belkin card reader to use with your iPod? Find out which readers from the Apple Store are compatible with your iPod.

Products Affected

iPod

The Photo Import option is available on iPod software 2.1 and later, which includes iPod (Dock Connector) and iPod (Click Wheel) models. It does not include iPod mini.

iPod (Dock Connector) can use:

- Digital Camera Link for iPod
- iPod Media Reader

iPod (Click Wheel) can use:

- iPod Media Reader

If you're not sure which iPod you have, click here. Check with Belkin for the latest information on product compatibility.

Important: Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

TA27780_Which_Belkin_card_readers_work_with_my_iPod.pdf

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How iTunes remembers audio CDs

- **Last Modified:** May 08, 2007
- **Article:** TA27785

- **Old Article:** 93952

Ever wonder how iTunes knows the name of the audio CD you just put in? Or why it may not remember the name of some burned CDs? If so, then read on.

Products Affected

iTunes, Windows Vista, Windows XP, Windows OS

Remembering purchased audio CDs
When you insert a store-bought audio CD into your computer, iTunes goes online to the CDDB and finds the CD and track names based on the lengths of each track and the overall length of the CD. iTunes then saves this information for the CD into the "CD Info.cidb" file. It's saved here:

Mac OS X: /Users/username/Library/Preferences
Windows Vista: /Users/username/AppData/Roaming/Apple Computer/iTunes Windows XP and 2000: \\Documents and Settings\\username\\Application Data\\Apple Computer\\iTunes

Each time you reinsert that CD into the same computer while logged in as the same user, iTunes will "remember" the information without having to look it up on the Internet again.

Remembering audio CDs you burn
iTunes also adds an entry to the "CD Info.cidb" file every time you burn an audio CD. This is how iTunes "remembers" the CD and track names for every mix CD you burn. The CD and track names are not burned anywhere onto the CD itself. If you insert the burned audio CD into another computer, the CD will appear as "Audio CD" with generic track names. The one exception to this rule is if you burn the tracks from a particular audio CD exactly as they are on a store-bought audio CD. Since the track length and the overall CD length is the same as the store-bought album, iTunes finds the information for the store-bought album when it looks the CD up online.

Remembering CD information you enter manually
If you enter a CD's track names manually, iTunes also saves this information in the "CD Info.cidb" file.
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Languages

Windows PC does not start up when iPod is connected

- **Last Modified:** July 06, 2006
- **Article:** TA27786

- **Old Article:** 93953

Products Affected

iPod photo, iPod nano, iPod shuffle, iPod mini, iPod, iPod, iPod (5th generation)

If your Windows-compatible PC won't start up until you disconnect your iPod, the computer's BIOS[1] may be configured to start from a FireWire or USB drive.

If this is the case, you will see a black screen with a flashing white cursor at the top of the screen. Once you disconnect iPod, the computer starts up normally.

This can happen if:

- Your Windows PC is capable of starting up from FireWire or USB drives.
  and
- The BIOS of your Windows PC has been configured to look for an external startup disk before looking for an internal startup disk.

The simplest solution is to disconnect the iPod from its cable or dock.

If you want to know more about why this occurs and another option to resolve it, keep reading.

Windows PCs have something called "boot order" that is configurable in the computer's BIOS ("boot" is an alternate name for a computer's startup process). The computer scans connected disks, in the specified boot order, for a compatible operating system to start up from.

A few examples of possible boot orders are:

- Floppy disk, CD-ROM, primary hard disk
- CD-ROM, primary hard disk, external hard disk
- Primary hard disk, floppy disk, CD-ROM, external hard disk

While iPod can be used as a hard disk in disk mode, it cannot be used as a startup disk.

What happens when a startup drive doesn't have an operating system?

What happens depends on the particular drive:

- When a PC checks a floppy disk and does not find a valid operating system, it typically prompts you to remove it before it can go to the

next device in the boot order.
- When a PC checks a CD-ROM and does not find a valid operating system, it typically skips over it to the next device in the boot order without an error.
- When a PC checks an external disk for a compatible operating system, however, it typically does not say when none is found, nor does the PC automatically skip to the next disk in the boot order.

How can I start up without disconnecting my iPod?

If you do not start up your computer from an external hard disk, one solution is to change your BIOS settings so that the internal hard disk is before any external hard disks in the boot order. Note that changing the BIOS may not help the issue and you may still need to disconnect the iPod at startup.

Another solution may be to disable your computer's ability to start up from FireWire and USB drives. Information on how to modify the BIOS settings of your specific PC should be available from your computer's manufacturer. If your PC is custom-built, you will need to consult the documentation that came with your logic board or look online at the logic board manufacturer's website.

Notes

1. BIOS is an acronym for basic input/output system and it lies in between the operating system and the computer's hardware and helps the hardware and software work together.

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- Helpful
- Very helpful
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Where's the iPod About screen, and what's in it?

- **Last Modified:** January 08, 2007
- **Article:** TA27791

- **Old Article:** 93961

Products Affected

iPod photo, iPod nano, iPod mini, iPod, iPod, iPod (5th generation)

All iPods (except iPod shuffle) can display status information on the iPod "About" screen. To access this screen, choose **Settings > About** from the main menu.

The "About" screen displays the following information:

- **Name of iPod**
- **Songs:** The number of songs currently stored on iPod.
- **Videos:** The number of videos currently stored on iPod[1].
- **Photos:** The number of photos currently stored on iPod[2].
- **Capacity:** The size of the hard drive in bytes. Click here for more information on how the capacity is calculated.
- **Available:** How much space is available on iPod
- **Version:** The installed version of iPod Software
- **S/N:** The serial number of iPod.
- **Model:** The iPod model number
- **Format:** This option appears if iPod has been formatted for use with Windows-based computers.

Notes

1. This applies to iPod models that can display video.
2. This applies to iPod models with a color display.

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TA27791_Wheres_the_iPod_About_screen_and_whats_in_it.pdf

What's New in DVD Studio Pro 3.0.2

- **Last Modified:** November 05, 2004
- **Article:** TA27792

- **Old Article:** 93962

Products Affected

DVD Studio Pro

The DVD Studio Pro 3.0.2 update includes the enhancements listed here.

Improved Double-Layer Compatibility
DVD Studio Pro 3.0.2, together with Mac OS X v10.3.6 or later, now support burning and reading from double-layer DVD recorders and media (DVD+R DL). DVD+R DL media makes it possible for you to store nearly twice as much data on a single-sided DVD (8.54 GB) compared to standard DVDs (4.7 GB).

DVD+R DL media makes it possible to burn a dual-layer project to a disc, with the project's dual-layer break point controlling when the double-layer drive switches from the first to the second layer.

To burn dual-layer projects to your double-layer drive, your system must have:

- DVD Studio Pro 3.0.2
- Mac OS X v10.3.6 or later
- The latest updates for your double-layer DVD recorder from your drive's manufacturer.

Enhanced Simulator
The Simulator is enhanced in the following ways:

- The Simulator toolbar button always launches the Simulator based on the first play setting. The Simulator is disabled if there is no first play item.
- Choosing File > Simulate or pressing Command-Option-O launches the Simulator based on the currently selected item in the Graphic or Outline tabs, or the currently active editor (Menu, Track, Slideshow, Story, or Script). If either the Graphic or Outline tab is currently active without any items selected, the Simulator launches based on the first play setting.
- You can now use the same background video on multiple menus with different loop points and AC-3 audio files.
- Enhancements to the Slideshow Editor.
- Improvements regarding importing Motion and LiveType projects.
- The menu backgrounds and overlays used when creating 16:9 menus are now scaled correctly in the Menu Editor and on burned discs.
- Improvements to the building and formatting processes.

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Support

TA27792_Whats_New_in_DVD_Studio_Pro_3-0-2.pdf

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Languages

- English
- 日本語

ARCHIVE

Motion: Use field rendering when importing a project into DVD Studio Pro and Final Cut Pro

- **Last Modified:** February 16, 2011
- **Article:** TA27793

- **Old Article:** 93963

This article has been archived and is no longer updated by Apple.

To be sure fields are used from Motion projects, use field rendering. To do that: From the **View** pull-down menu of the Motion Canvas, choose **Field Rendering**. You may need to make another change to your Motion project and then save to have this change take effect.

Products Affected

Final Cut Pro, Motion, DVD Studio Pro

If you don't choose Field Rendering, Motion projects with fields set in the project properties will not pass those fields along when imported into DVD Studio Pro or Final Cut Pro. This will not be evident until the disc is burned or is output to a DV file. In these cases, the project either will not encode or will render with field interlacing.

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Xserve G5: "Storage.Fixed.SMART Test Result Status" error appears in Xserve Remote Diagnostics 1.0

Learn what to do if you get a "Storage.Fixed.SMART Test Result Status" error when you run Xserve Remote Diagnostics.
This article has been archived and is no longer updated by Apple.
When you run Xserve Remote Diagnostics 1.0, you might see a message similar to this:

```
00:03:93:F5:19:F4 08/30/04 16:39:13 Testing [0000000A] Storage.Fixed.SMART Test Result Status
00:03:93:F5:19:F4 08/30/04 16:39:13 FAILED, result:6 "Error Writing to Device"
```

or

```
00:03:93:F5:19:F4 08/30/04 16:39:13 Testing [0000000A] Storage.Fixed.SMART Test Result Status
00:03:93:F5:19:F4 08/30/04 16:39:13 FAILED, result:14 "(null)"
```

This message may appear if the mass storage device being tested is the Xserve RAID. You can determine which mass storage device is being tested by matching the number shown in square brackets [0000000A] with the information shown in the DEVICE SUMMARY.

For example :

```
00:03:93:F5:19:F4 [0000000A] ? ? HDD 00:03:93:F5:19:F4 commodity-type : MASS 00:03:93:F5:19:F4 vendor : ?
00:03:93:F5:19:F4 model : ? 00:03:93:F5:19:F4 type : HDD 00:03:93:F5:19:F4 interface : SCSI 00:03:93:F5:19:F4
capacity : 555 00:03:93:F5:19:F4 location : SLOT-2, Channel: 2, ID: 0, LUN: 0 00:03:93:F5:19:F4 version : 1.16
00:03:93:F5:19:F4 bsd-name : ? 00:03:93:F5:19:F4 is-boot-drive : FALSE
```

The above example indicates a Xserve RAID device (shown as a SCSI device, even though the individual hard drives are connected using an ATA or SATA interface).

This does not indicate an issue with your Xserve G5 or Xserve RAID. This alert is caused by a reporting issue in the software.
You can either ignore the "failure" or turn off the "Storage.Fixed.SMART Test Result Status" test by following these steps:

1. Optionally, start by making a backup copy of the test definition file that you will be modifying. Two files have the same test - quick.tdf and extended.tdf. Copies of these files are found in ~/Library/Application Support/xrdiags/.
2. Using a text editor such as TextEdit, open either or both of the test definition files mentioned in step 1 (quick.tdf and extended.tdf).
3. Navigate to the line of the file that looks like the following: In quick.tdf:

   ```
   TEST 1 FALSE "Storage.Fixed" QUICK OF SA 19 [commodity-type='MASS',type="HDD"] "SMART Test Result Status"
   "SMART Threshold Exceeded Limits Results" "" "" ""
   ```

   In extended.tdf:

   ```
   TEST 1 FALSE "Storage.Fixed" EXTENDED OF SA 19 [commodity-type='MASS',type="HDD"] "SMART Test Result
   Status" "SMART Threshold Exceeded Limits Results" "" "" ""
   ```

4. Either delete the line in its entirety, or simply add a hash mark (#) to the beginning of the line, to comment the line out. For example:

   ```
   #TEST 1 FALSE "Storage.Fixed" QUICK OF SA 19 [commodity-type='MASS',type="HDD"] "SMART Test Result
   Status" "SMART Threshold Exceeded Limits Results" "" "" ""
   ```

5. Alternatively, you may correct the test definition so that the test is only run on devices connected with an ATA or SATA interface. Do this by duplicating the test definition line, and adding the additional `,interface="ATA"` or `,interface="SATA"` parameter inside the square brackets, as shown below. Please note, there should be no white space between the parameters. For example :

   ```
   TEST 1 FALSE "Storage.Fixed" QUICK OF SA 19 [commodity-type='MASS',type="HDD",interface="ATA"] "SMART
   Test Result Status" "SMART Threshold Exceeded Limits Results" "" "" "" TEST 1 FALSE "Storage.Fixed" QUICK
   OF SA 19 [commodity-type='MASS',type="HDD",interface="SATA"] "SMART Test Result Status" "SMART Threshold
   Exceeded Limits Results" "" "" ""
   ```

6. Save changes and close the document. The incorrect tests will no longer be included the next time Xserve Remote Diagnostics are run.

This document will be updated when more information becomes available.

Last Modified: Feb 19, 2012

Additional Product Support Information

About Xserve G5 Firmware Update Version 5.1.7f1

- **Last Modified:** September 11, 2004
- **Article:** TA27804

- **Old Article:** 93980

The update includes changes for initializing and running your Xserve G5. It provides enhanced reliability during reboot sequences as well as support for the Xserve G5 PCI Hardware RAID Card. This firmware update is required for Xserve G5 customers who wish to install the Xserve G5 PCI Hardware RAID Card kit and is strongly recommended for all Xserve G5 systems with earlier firmware versions.

Products Affected

Xserve

The Xserve G5 Firmware Update 5.1.7f1 will run only on Xserve G5 systems. This updater can be run remotely (using SSH) as the root user or locally from the Finder if your system has a video card and you have a keyboard and monitor connected to the system. In either case, you must have physical access to the server at the time of the update. The system must be unlocked and an Open Firmware password must not be active at the time of the update.

To upgrade the firmware on your Xserve G5, follow the steps below. You can print these instructions so they are available while you upgrade your firmware. (The first set of instructions covers updating the firmware using a remote computer. The second set covers updating locally.)

Updating the Xserve G5 firmware using a remote computer

1. If you downloaded the update using the Software Update Preference Pane or softwareupdate command line tool, the Xserve G5 Firmware Update application is located in /Applications/Utilities. If you downloaded the update from Apple's web site, copy the Xserve G5 Firmware Update from the disk image you downloaded to the /Applications/Utilities folder on the startup disk of the Xserve G5 system to be updated.

   Type the command below to copy the update file:

   ```
   % sudo cp -R /Volumes/{Path to Updater}/Xserve\\ Firmware\\ Updater /Applications/Utilities/
   ```

2. Notify all users of the server that services will be interrupted briefly and the server will be restarted. (The system must be restarted to complete the firmware update and any users logged into the server will be disconnected.)

3. Stop all services that are running using the Server Admin application. (Do not restart the server.)

4. From a remote computer, use the Terminal application to log into the Xserve G5 system as root user using SSH. (See Mac Help if you need instructions.)

5. Run the updater by typing the following command:

   ```
   % /Applications/Utilities/Xserve\\ Firmware\\ Updater.app/Contents/MacOS/Xserve\\ Firmware\\ Updater -r
   ```

   If your system's firmware needs to be updated the Xserve G5 Firmware Updater will display instructions (in English, in the Terminal window) and shut down your system. If your firmware is up to date or if an error occurs, that information will be sent to the Terminal window.

6. Indicate your approval by typing "y" in the Terminal window to proceed with the update.

7. Once the Xserve G5 system has shut down, press and hold the power button until the blue system activity lights flash repeatedly; then release the power button.

   When you release the power button, the update starts automatically. Do not interrupt or power off the system while it is updating the firmware.

8. After the update is complete, your system shuts down but will restart automatically after a short pause.

Once the computer has restarted you can run the Xserve G5 Firmware Updater again to verify that the firmware was successfully updated; or check the firmware revision using Apple System Profiler (system_profiler command in Terminal). Your Xserve G5 should be at firmware revision 5.1.7f1. (If your Xserve G5 is still at firmware revision 5.1.6 or 5.1.7f0, repeat the firmware update procedure.)

Updating the Xserve G5 firmware locally, using a connected keyboard and monitor

1. If you downloaded the update using the Software Update Preference Pane or softwareupdate command line tool, the Xserve G5 Firmware Update application is located in /Applications/Utilities. If you downloaded the update from Apple's web site, copy the Xserve G5 Firmware Update from the disk image you downloaded to the /Applications/Utilities folder on the startup disk of the Xserve G5 system to be updated.

2. Notify all users of the server that services will be interrupted briefly and the server will be restarted. (The system must be restarted to complete the firmware update and any users logged into the server will be disconnected.)

3. Stop all services that are running using the Server Admin application. (Do not restart the server.)

4. Open the firmware updater.

5. Click Shut Down in the Firmware Update window to turn off your computer. Wait for your computer to shut down, saving changes if necessary.

6. Once the Xserve G5 system has shut down, press and hold the power button until the blue system activity lights flash repeatedly; then release the power button.

   When you release the power button, the update starts automatically. Do not interrupt or power off the system while it is updating the firmware. A status bar shows the progress of the update.

7. After the update is complete, your system shuts down but will restart automatically after a short pause. A message reports that your computer's firmware has been successfully updated to version 5.1.7f1. If you do not see this message or the update version is not 5.1.7f1, repeat the update procedure.

For more information, go to www.apple.com/support and search for Xserve.

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TA27804_About_Xserve_G5_Firmware_Update_Version_5-1-7f1.pdf

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iMovie 4: How to Export as DV-PAL

- **Last Modified:** March 14, 2005
- **Article:** TA27805

- **Old Article:** 93981

To export as DV-PAL, see Exporting your movie for viewing in a PAL or NTSC format, and choose DV-PAL in step 6.

Products Affected

iMovie

What not to do
This sequence of events may be confused with the correct action and thus is notable for the undesired result: Starting with a PAL imported video in iMovie 4, choose **Share** from the **File** menu, then choose the **Full Quality DV** preset. When you do that, the export is exported to PAL-DVCPRO.
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Making a numbered list that spans multiple slides in Keynote

Do you have a numbered bullet list that's too long to fit one slide? No problem--use this trick to continue the list on the next slide.

Products Affected

Keynote

This article has been archived and is no longer updated by Apple.
Let's say your last list item in slide one is number six, so you want to pick up with seven.

1. Bullet the rest of the list items in slide two.

2. Select all the bulleted items in slide two.
3. Open the Inspector, and select the Text pane.
4. From the pop-up menu below Bullets and Numbering, select Text Bullet.
5. Adjust the size to 100 percent.
6. Select the first item on slide two (the seventh item in your list).
7. Click on the Inspector.
8. Enter the number seven and a period (7.) in the Text field at the bottom of the Inspector.

9. Repeat steps seven and eight for all of the bulleted items on slide two.

Rate this article:

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- Very helpful
- Solved my problem

- **Last Modified:** February 19, 2012
- **Article:** TA27806

- **Views:**

  4090

- **Rating:**
  - 5.0/5 Stars

  (3 Responses)

Languages

English

Languages

ARCHIVE

Final Cut Pro HD won't open or unexpectedly quits after a Software Update

- **Last Modified:** February 16, 2011
- **Article:** TA27807
- **Old Article:** 93984

This article has been archived and is no longer updated by Apple.

If Final Cut Pro HD unexpectedly quits on you after using Software Update, a few short steps should fix it up.

Products Affected

Final Cut Pro

Warning: This document describes how to enter commands in the Terminal application. Users unfamiliar with Terminal and UNIX-style environments should proceed with caution. The entry of incorrect commands may result in data loss and/or unusable system software.

1. Save any files or work you may have open, because you'll need to restart the computer after these steps.
2. Open Terminal (found at /Applications/Utilities/).
3. Type

   ```
   sudo update_prebinding -root / -force
   ```

4. Press Return.
5. Enter your password when prompted.
6. The prebinding operation may take a few minutes. When it is complete, a new command-line prompt will appear. When this happens, please quit Terminal and restart your computer.

Final Cut Pro HD should now open normally.

This document will be updated when more information becomes available.

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iPod: clicker settings return to default

- **Last Modified:** March 03, 2005
- **Article:** TA27809

- **Old Article:** 93987

The clicker setting in the iPod (Click Wheel) and iPod mini resets to the default (playing through the iPod speaker) when the iPod goes into deep sleep after 36 hours of inactivity.

Products Affected

iPod mini, iPod, iPod

For more information about deep sleep click here.

To change the clicker setting back to your previous setting choose Settings > Clicker from the main menu and then select either Off, Headphones, or Both.

This article will be updated when new information becomes available.
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Power Mac G5 sleeps randomly during use

- **Last Modified:** May 24, 2005
- **Article:** TA27810

- **Old Article:** 93988

Products Affected

Power Mac G5

Some Power Mac G5 computers may go to sleep unexpectedly while you're using them. The computer will operate normally for several minutes, and then go to sleep for no apparent reason. You may be able to wake the computer, but it may go to sleep unexpectedly again. You may also notice that the fans ramp up to a higher speed shortly before the computer sleeps.

If this occurs, update the computer to Mac OS X 10.3.8 or later. If the issue still persists after updating, contact Apple using the phone number listed in your inbox materials.

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Power Mac G5 1.6 GHz: Kernel panic, USB, or other issues after installing firmware 5.1.5f1

Some 1.6 GHz Power Mac G5 computers don't work properly with Uniprocessor Firmware Update 5.1.5f1. However, Firmware Update 5.1.5f2 fixes these issues.

Products Affected

Power Mac G5

This article has been archived and is no longer updated by Apple.

Here are the issues you might see on a 1.6 GHz Power Mac G5:

- A kernel panic.
- A USB input device, such as a mouse or keyboard, becomes unresponsive.
- Bluetooth USB modules don't respond five minutes after starting up.
- Interruptions in iTunes audio playback.
- Disconnecting and reconnecting affected devices does not help.
- If you have any non-Apple memory (RAM), removing it usually stops the issue.

To resolve the issue, download and install the Power Mac G5 Uniprocessor Firmware Update (v5.1.5f2).

Important: Before updating, shut down the computer, then temporarily remove any non-Apple memory (RAM).

Once you have successfully applied the Firmware Update, you can reinstall any extra RAM.

Tip: To learn more about working with RAM, see the Power Mac G5 Do-It-Yourself Memory website.

If issues occur regardless of which RAM is installed (including just the Apple RAM that came with the computer), you can take your computer to an Apple Authorized Service Provider or Apple retail store for assistance.

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- **Last Modified:** February 19, 2012
- **Article:** TA27812

- **Views:**

  14130

- **Rating:**
  - 3.0/5 Stars

  (131 Responses)

Languages

English

Archived - Silentype: Pinouts (10/94)

This article documents the pinout configuration and signal name for the Apple SilenType printer.

This article has been archived and is no longer updated by Apple.
DB-9
Connector Signal Name
---
1 Shield Ground
2 +5 volts
3 Logic Ground
4 Serial Data
5 Machine Status
6 +12 volts
7 Power Ground
8 Store Clock
9 Shift Clock

The Silentype Printer needs its own specially designed interface card, or an Apple III with the built in Silentype port. It is not possible to connect it to any other type of interface card.

Article Change History:
12 Oct 1994 - Reviewed for technical accuracy.

Support Information Services
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- **Last Modified:** February 19, 2012
- **Article:** TA27850

- **Views:**

  384

- **Rating:**
  - 5.0/5 Stars

  (4 Responses)

Macintosh Classic II: Math Co-Processor Card Availability

Can I put a math co-processor in a Macintosh Classic II?

This article has been archived and is no longer updated by Apple.
Though Apple has no plans to produce such a card such, the Macintosh Classic II has a processor-direct slot (PDS) for which third-parties could produce a math co-processor card.

Check periodically the Redgate library on AppleLink for a current product list of available cards.

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- **Last Modified:** February 19, 2012
- **Article:** TA27883

- **Views:**

  839

- **Rating:**
  - 3.0/5 Stars

  (2 Responses)

Archived - Apple IIc: How to Determine If It Needs UniDisk ROM Upgrade

I have an Apple IIc, and I want to purchase a UniDisk 3.5 to use with it. My dealer said that some of the earlier Apple IIc computers need a ROM upgrade to support the UniDisk 3.5.

How can I determine if my Apple IIc needs the upgrade without bringing it to the dealer?
This article has been archived and is no longer updated by Apple.
Check your Apple IIc serial number. The Apple IIc systems that require the ROM upgrade for UniDisk 3.5 support are those with serial numbers lower than F6051GFA2S4000.

Another way to determine if your Apple IIc needs the ROM upgrade is to go into BASIC and type "PR#7" and press Return. If the Apple IIc responds with "AppleTalk Offline", you have the new ROM. If it tries to start up an external drive or returns "Check Disk Drive", you have the old ROM.

Your Apple service provider will perform the ROM upgrade free of charge.
Last Modified: Feb 19, 2012

System 7 Tune-Up 1.1.1: Availability, Installation

- **Last Modified:** April 29, 1999
- **Article:** TA27936

- **Old Article:** 10150

What version of System 7 Tune-Up should I use, and how should I install it?
What Version To Use

Use version 1.1.1 of System 7 Tune-Up. System 7 Tune-Up 1.1 was released and then recalled because it caused unpredictable system behavior in low-memory situations.

When To Install System 7 Tune-Up

If you use System 7.0 or System 7.0.1, Apple recommends installing System 7 Tune-Up 1.1.1. System 7.1 incorporates the functionality of System 7 Tune-Up 1.1.1, so there is no need to install it.

Availability

System 7 Tune-Up 1.1.1 is posted on AppleLink; follow this path:

Software Sampler
Apple SW Updates
Macintosh
System Software
System 7 Tune-Up 1.1.1

Installation Notes

Apple recommends installing System 7 Tune-Up 1.1.1 on all Macintosh systems running system software version 7.0 or 7.0.1. The components of System 7 Tune-Up 1.1.1 were rolled into system 7.1. Therefore, it isn't necessary to install the Tune-Up into any release of system software after that version.

If you upgrade a Macintosh with System 7 Tune-Up installed to System 7.1, the Installer will disable the Tune-Up software, but won't remove it. To save disk space, delete the Tune-Up file from your Extensions folder in the System Folder.

Before installing System 7 Tune-Up 1.1.1 on your Macintosh, read the entire Read Me file on the Tune-Up disk or the System 7 Tune-Up Version 1.1.1 Installation Instructions included in the Tune-Up 1.1.1 package.

To ensure proper software installation, Apple always recommends installing system, printer, or network software, including System 7 Tune-Up 1.1.1, via the Installer. There are only a few unusual circumstances when you wouldn't use the Installer.

Be sure to install the System 7 Tune-Up software last. System 7 Tune-Up was released AFTER AppleTalk Remote Access, and it contains newer System 7 resources (System 7 tuner, LaserWriter, StyleWriter 7.2.2, File Sharing Extension 7.2, Chooser 7.1, and various system software patches). If you don't install System 7 Tune-Up last, AppleTalk Remote Access will install older versions of some of these resources. Shared computers may not appear in the Chooser.

During System 7 Tune-Up installation, AppleTalk is set to "Inactive" in the Chooser. You need to set AppleTalk to "Active" in the Chooser, and restart your Macintosh. Then you'll be able to open the Network control panel, and avoid the message that "AppleTalk Remote Access has not been properly installed" when you try to use it.

The first time you start your computer with Extensions on WITH Tune Up 1.1.1 installed, the System 7 Tuner installs an INIT resource into the System file. You can only see this INIT resource with a tool like ResEdit. After that first install, you can boot with Extensions off and you are still protected from the disappearing folder problem. The INIT loads from the System file regardless of whether Extensions are on, BUT the System 7 Tuner MUST be in the Extensions folder. If you throw away your system and reinstall, you will be unprotected until you start up with Extensions on WITH Tune Up 1.1.1 installed.

System 7 Tune-Up 1.1.1 installs these files:

* System 7 Tuner 1.1 extension (new for version 1.1.1)
* LaserWriter 7.1.1 driver (new for version 1.1)
* StyleWriter 7.2.2 driver (no change)
* Chooser 7.1 (no change)

Article Change History:
23 September 1993 - Revised: added information on when to install System 7 Tune-Up.
8 July 1993 - Revised: consolidated information from other articles.
8 February 1993 - Reviewed for technical accuracy.

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Archived - System 7.x.x: AppleTalk and ADSP Versions

What versions of AppleTalk and ADSP are included with System 7 and later versions of System software? Are there any newer versions available? If so, what benefits do they provide?
This article has been archived and is no longer updated by Apple.
AppleTalk version 56 (part of System 7), the ADSP stack is integrated with the rest of the AppleTalk stack.

The AppleTalk versions for System software 7.x.x are as follows:

* System 7 and System 7.0.1 come with AppleTalk v56. System 7 Tune-Up 1.1.1 does not change the version of AppleTalk installed.
* System 7.1 comes with AppleTalk v57.0.4.
* Both System 7 Pro and System 7.1.2 come with AppleTalk version 58.1.1.
* System 7.5 comes with AppleTalk version 58.1.3

The latest version of AppleTalk is v58.1.6 and is available on the PowerBook 190 and 5300 series computers. The latest Network Software Installer (NSI) is 1.5.1 which installs AppleTalk v58.1.5. AppleTalk v58.1.5 should be used except for the PowerBook 190 and 5300 series, or PCI-based Power Macintosh computers (7200, 7500, 8500, 9500) which requires Open Transport. (Search on Network Software Installer for specific content information.)

Below is a history of AppleTalk and ADSP version since System 7.0.

AppleTalk v57.0.1 and ADSP v57.0.1 changes
---
* Added support for multiple DDP addresses on a single computer.
* Some code was changed to be MC68040 friendly for the new Macintosh Quadra systems.
* Minor modifications to retry timer handling were made in both NBP and ATP. This should reduce traffic due to retransmissions on slower network links (2400 to 19.2KB serial lines).
* The Network Control Panel no longer allows you to select LocalTalk if the printer port is already open by another application.
* Reliability and performance of LocalTalk on Macintosh Plus systems has been improved.

AppleTalk v57.0.3 and ADSP v57.0.3 changes
---
* Improved support for MC68040-based computers.
* Support for the Macintosh PowerBook power-down modes.
* Smaller RAM footprint in the system heap.
* Performance improvements to the AppleTalk Transaction Protocol (ATP) to reduce network traffic when used with links such as AppleTalk Remote Access using 9600-bps modem.
* AppleTalk Data Stream Protocol (ADSP) and AppleTalk Session Protocol (ASP) now support AppleTalk Remote Access. Sessions with computers on the remote end of a phone connection will be torn down when the phone connection is broken.
* A bug was fixed in ATP which could cause an AppleShare client or file server to "hang" if any data wasn't received in the first attempt.

AppleTalk v57.0.4 and ADSP v57.0.4 changes
---
* A fix for a bug in ATP that could cause incoming GetRequest packets with a checksum to be dropped. This affects machines running fileshare if the client is sending packets with DDP checksums.
* A fix for ADSP so that an openRetries count of 255 actually means "infinite retries", as specified in the documentation, rather than 255.
* Improved performance under VM (virtual memory)
* Improved File share and AppleShare performance over LocalTalk.

AppleTalk v58 and ADSP v58 changes
---
* Adds support (instrumentation) for SNMP. Also includes continuing support for Apple's Router.

AppleTalk version 58.1.1 (NSI 1.4.1-no change to ADSP)
---
* A problem that existed with the LocalTalk SNMP byte counting code that would cause an occasional bus error was fixed. It was wrongly assumed that was ALWAYS a WDS pointer and that address was used to calculate the byte counts.
* Check for Slotless networking devices when coming out of sleep for the PowerBook Duos.
* Lap Manager only intercepts packets for SAP 0xAA or 0x00. An attempt will be made to deliver any packet for a destination SAP that is not 0xAA or 0x00 to the SAP listener. If no SAP listener is found, then the packet will be ignored. A check in LLCAttach was added for duplicate SAP or SNAP addresses. If so, then an error is returned.

AppleTalk version 58.1.4 changes
---

* The LAP Manager was fixed to avoid sending corrupted TEST and XID response packets in certain heavy traffic situations.

AppleTalk version 58.1.5 changes
---
* An address-mapping problem that could cause slowdowns in EtherTalk or TokenTalk networks was fixed.
* The LAP Manager was fixed to avoid sending corrupted TEST and XID response packets in certain heavy traffic situations.
* A bug that passed a corrupted length indication to multi-node clients was fixed.
* A VM problem that could cause hangs was fixed (this could also have occurred when Ram Doubler was active).
* A LocalTalk problem on Power Macintosh computers was fixed that prevented LaserWriter Bridge from working properly.
* An additional LocalTalk problem on Power Macintosh computers was fixed that caused slow performance when both LocalTalk and GeoPort were in use.

AppleTalk version 58.1.6 changes
---
* Included support for built-in infrared technology (IRTalk) found on the PowerBook 190 and 5300 series computers.
Last Modified: Feb 19, 2012

Additional Product Support Information

ARCHIVE

Macintosh: Mini DIN-8 to DB-9 Adapter Pinouts (10/94)

- **Last Modified:** October 12, 1994
- **Article:** TA27966

- **Old Article:** 1019

This article has been archived and is no longer updated by Apple.

This adapter cable is used to connect DB-9 cables to devices with Mini DIN-8 ports (such as on the Macintosh Plus or newer).

Circular 8 Signal DB-9
1 HSKo (+12V) 6
2 HSKi 7
3 TXD- 5
4 GND 3,1*
5 RXD- 9
6 TXD+ 4
7 No Wire
8 RXD+ 8

* Pins 1 and 3 on the DB-9 end are jumpered together.

The pins on the male end of the circular 8 connector are numbered as shown:

6 7 8
3 4 5
1 2

NOTE: The Macintosh Plus peripheral adapter cable is stamped with the number 590-0341; when reordering, however, be sure to use the cable's service part number, which is 699-0430 (older cables may be referred to as 699-0372).

Article Change History:
12 Oct 1994 - Reviewed for technical accuracy.

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Quadra 900, 950, AWS 95, WS 9150: Security Keyswitch

This article discusses the security keyswitch on the Quadra 900, 950, Workgroup Server 95, and Workgroup Server 9150.

This article has been archived and is no longer updated by Apple.
The Quadra 900, 950, Workgroup Server 95, and Workgroup Server 9150 come with a security keyswitch that allows owners to limit access to the computer.

The keyswitch has three positions: OFF, ON, and SECURE. The key can be removed while the switch is in any of the three positions. The operation of the keyswitch is designed to provide a first level of security for users who wish to use it, without being inconvenient for those who don't.

Keyswitch OFF Position

When the keyswitch is in the OFF position, the computer can't be turned on. Moving the keyswitch from either the ON or SECURE position to the OFF position turns the computer off.

Warning: Turning the keyswitch to OFF when the computer is running turns the power off immediately-- the system software doesn't have a chance to close files. If the computer is turned off by turning the keyswitch to OFF, data can be lost.

Keyswitch ON Position

When the keyswitch is in the ON position, the user controls the power the same way as on any other computer in the Macintosh II, Quadra, and Power Macintosh family. The computer can be turned on from the keyboard and turned off with the Shut Down menu item.

Keyswitch SECURE Position

When the keyswitch is in the SECURE position, the ADB devices and floppy disk drive are disabled. For example, the keyboard does not generate characters, or the mouse moves but no menus can be pulled down. Also, when power is applied to the computer while the keyswitch is in the SECURE position, the computer automatically starts up.

The SECURE position is intended for situations involving remote access, or in which the computer is a network server. In the SECURE position, the computer will automatically power on if power is disrupted (the power cable is removed, or power goes out).

Lost Keys

You should make several copies of the key immediately and place them in a secure location. Most key shops have blanks for the type of key used in the 900/950/AWS95/WS9150.

If the key is lost, you can take the computer to a locksmith shop and have them create a new key. If this option is not viable, an entire replacement lock assembly can be ordered from any Apple Authorized Service Provider. The part number is 705-0175.

Note: For security reasons Apple will not replace individual keys.

Published Date: Feb 19, 2012

Apple III Port C: RS-232-C Pinouts & Configuration (10/94)

- **Last Modified:** October 12, 1994
- **Article:** TA27977

- **Old Article:** 1021

This article has been archived and is no longer updated by Apple.

The following table explains how use System Utilities to configure the driver for the RS-232 port (Serial Interface and Serial Card III). Remember to set the slot number on the Serial Card III driver.

Data Configuration Blocks:

Data Configuration
Block Address: $00
Baud rate:
110 $03
134.5 $04
300 $06
600 $07
1200 $08
1800 $09
2400 $0A
4800 $0C
9600 $0E

Data Configuration
Block Address: $00 $01
Data Format:
Bits Parity
8 none $00
7 odd $22
7 even $26
7 MARK $2A
7 SPACE $2E
6 odd $42
6 even $46
6 MARK $4A
6 SPACE $4E

Data Configuration * * *
Block Address: $00 $01 $02 $03 $04 $05 $06 $07 $08 $09 $0A $0B
Comm Protocol:

none $00
XON/XOFF $80 $13 $11 $DF $84 $00
ENQ/ACK $40 $05 $06 $50 $00
ETX/ACK $40 $03 $06 $50 $00
HW Handshake $00 $DF $84 $80

* $02 - Delay after CR
* $03 - Delay after LF
* $04 - Delay after FF

Delays (bytes $02, $03, and $04)

Using this driver to connect to a printer may require that you set delay times while the printer advances to a new line or the top of a new page. These delays are given in the range $00...$FF characters. The RS-232 driver will wait for the time taken to transmit the amount of character specified before it sends the following character.

Pinouts:

DB-25
Connector Signal Name
1 ..... Shield Ground
2 ..... Transmit Data (Tx)
3 ..... Receive Data (Rx)
4 ..... Request to send (RTS)
5 ..... Clear To Send (CTS)
6 ..... Data Set Ready (DSR)
7 ..... Signal Ground
8 ..... Data Carrier Detect (DCD)
20 ..... Data Terminal Ready (DTR)

Serial Card III has a modem eliminator button; when this button is "in", the above pinouts are correct. If the button is "out", this has the effect of a modem eliminator cable being installed. (For more information on modem eliminator cables, search this database for MODEM AND ELIMINATOR.)

Article Change History:
12 Oct 1994 - Reviewed for technical accuracy.

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Macintosh Quadra 950: SCSI Support

This article describes SCSI support in the Macintosh Quadra 950.
This article has been archived and is no longer updated by Apple.
As in the Macintosh Quadra 900, the SCSI bus in the Macintosh Quadra 950 is divided into internal and external buses, each controlled by its own identical IC -- an NCR 53C96 device. Therefore, the internal and external SCSI buses are logically connected through software, but are electrically separate. The goal of this design was to develop a combination of controller, cabling, and termination for the internal SCSI devices which permits data transfer rates approaching the NCR 53C96 controller limit of 6 MB/s. The cabling and termination of the internal SCSI bus are optimized so that the 53C96 that controls the internal bus can support data transfers at a faster rate: up to 5 MB/s with existing faster third-party hard drives. The improved SCSI performance will result in increased system responsiveness when accessing large amounts of data on a fast hard drive.

The internal SCSI channel also supports an active termination which improves SCSI bus signal quality and reliability through improved transmission line and terminator design. This means that only one terminator is needed at the end of the external SCSI chain. The external channel's termination also offers a more uniform impedance and cleaner termination scheme. However, because external cabling and termination are less predictable, performance on the external bus could be lower than the internal. Electrically isolating the two channels ensures that changes in external cabling and termination don't impact the performance of the internal devices.

Even though the internal and external SCSI chains are physically different, they are still logically the same, and can therefore, like all Macintosh systems, accommodate up to seven SCSI devices. You must make sure that every device has a different SCSI ID number, regardless of which SCSI chain the device is connected to. You cannot use SCSI ID 7, and SCSI ID 0 is usually reserved for the internal hard disk. The added value of the Macintosh Quadra 950 dual-controller design is that the internal hard drive(s) performance won't be affected by problematic devices (like a scanner) attached to the external SCSI connector. Improvements in signal quality on the SCSI bus results in higher SCSI reliability.

Published Date: Feb 19, 2012

Additional Product Support Information

Macintosh Quadra 950: Integrated Circuits

The circuitry of the Macintosh Quadra 950 computer has many new features along with older features it shares with the Macintosh IIci and IIfx computers. Certain components appeared for the first time in the Macintosh Quadra 900, and are therefore present in the Quadra 950 as well:

- The MC68040 microprocessor
- Several new custom ICs
- The built-in video hardware
- The 68040 PDS slot.

This section describes the circuit design of the Macintosh Quadra 950.
This article has been archived and is no longer updated by Apple.
There are three buses in the Quadra 950 computer:

- System bus

- I/O bus

- NuBus

The system bus connects directly to the pins of the MC68040 microprocessor and runs at the processor's clock rate of 33 MHz. The system bus is a high performance bus, with the capability to read burst-read and burst-write. Five controller ICs are connected to the system bus:

- Orwell, the custom memory controller

- YANCC, the NuBus controller

- DAFB, the frame-buffer controller

- The two 53C94 SCSI controllers

The I/O bus in the Quadra 950 computer is similar to the I/O bus in the Macintosh IIfx computer. The I/O bus in the Quadra 950 computer runs at a clock rate of 25 MHz. The controller ICs that are connected to the I/O bus include new custom ICs along with ICs originally designed for the Macintosh IIfx, such as the IOPs.

The NuBus runs at a clock rate of 10 MHz and includes several features of NuBus '90, including a clock signal at 20 MHz between cards, which is twice the normal rate. This clock rate doesn't apply from card to CPU.

Integrated Circuits (ICs)

The Quadra 950 incorporates all of the same ICs that the Quadra 900 did, many Apple custom ICs, and some new ASICs.

The Apple custom ICs that the Quadra 950 computer shares with earlier Macintosh models include:

- AC/DC: a custom Color Look-Up Table and Digital-to-Analog Converter (CLUT/DAC) IC developed by Apple and used in the Macintosh Display Cards 4*8, 8*24, and 8*24 GC, but improved in the Quadra 950.

- DFAC (Digitally Filtered Audio Chip): the sound input and filter IC first used in the Macintosh LC

- IOP: the I/O processors first used in the Macintosh IIfx

- SWIM: the IC that supports the SuperDrive disk drive

The Apple custom ICs that are newly designed for the Quadra 950 computer are:

- BATMAN: a custom IC (replaces the Apple Sound Chip) that acts as a sound amplifier

- SPORTY: a custom IC that provides sound output functions

- CABOOSE: a custom processor that manages system power, the real-time clock, and parameter RAM

- DAFB (Direct Attach Frame Buffer): an IC that connects directly to the system bus and controls the video RAM or frame buffer

- ORWELL: a custom IC that connects to the system bus and controls burst-mode data transfers to the main RAM

- JDB (Junction Data Bus): one of two ICs making up the I/O Adapter, connecting the data signals from the system bus and the I/O bus

- RELAYER: one of two ICs making up the I/O Adapter, controlling the bus buffers and proving bus arbitration logic

- YANCC (Yet Another NuBus Controller Chip): a custom IC that controls the NuBus interface

Third-party ICs include:

- SCSI interface ICs: two NCR 53C96

- Sonic: the DP83932 Ethernet controller IC made by National Semiconductor

- Two VIAs similar to those in earlier members of the Macintosh II family

I/O bus adapter ICs: JDB and Relayer

The I/O bus attaches local I/O devices to the system bus in a way that is flexible and highly compatible with previous Macintosh systems, and is fully buffered from the system bus to reduce capacitive loading. By putting Relayer and JDB between the system bus and I/O bus, none of the 040 signals go directly to the I/O chips, thus reducing the loading on the 040 bus signals, and increasing speed and reliability. The I/O bus hardware protocols are a subset of the 68030 bus protocols.

The two-chip set consisting of the Relayer and JDB provide a transparent connection between the system bus and the I/O bus. The I/O bus enables the Quadra 950 computer to use the same I/O device controllers used in the Macintosh IIfx. The I/O bus clock runs at 24.28 MHz and is completely asynchronous to the system bus clock.

This two-chip setup allows any system bus master such as the 040, a NuBus master card, or a master device on the PDS to request bus access and transfer data to slaves located on the I/O bus. It also allows I/O bus masters like SONIC to access main memory which is located on the system bus. This improves the overall speed of the system by isolating the faster bus (system bus) from the slower bus (I/O bus).

The I/O bus adapter is made up of two ICs: JDB and Relayer. Two ICs are used because of the high pin count required.

The functions of the Relayer IC include:

- Generating chip select and DSACK signals for devices on the I/O bus

- Converting timing signals between the system bus and the I/O bus

- Arbitrating between the system bus and the I/O bus

- Acting as watchdog for bus activity and time out

- Controlling the address-bus transceiver ICs

- Generating the clock signal for the VIA ICs

The functions of the JDB IC include:

- Controlling the data path (dynamic bus sizing and data byte lane routing)

- Synchronizing and distributing the reset signals

The ICs making up the I/O bus adapter contain no programmable registers and don't require support from the system software.

Memory Controller IC: Orwell

The Orwell IC connects to the system bus and provides control and timing signals for RAM and ROM. The Orwell IC supports all types of MC68040 memory access, including burst modes. Orwell allows all memory to be marked cache-able, which means cache-inhibit isn't asserted.

When the computer is reset, the Orwell IC maps ROM addresses into memory beginning at address $0000 0000 and disables the system RAM. As soon as the ROM code addresses the normal ROM space ($4000 0000), the Orwell IC automatically remaps the ROM to its normal addresses and restores RAM addressing starting at $0000 0000. The microprocessor always starts upon reset at address 0. At that time there is nothing in RAM (which resides at address 0 after reset). Therefore, ROM code needs to be accessed, and since its normal addressing starts at $4000 0000, it's remapped down so the processor has some code to fetch upon reset. This is the same process in every Macintosh II.

RAM Control

The Orwell IC controls four banks of dynamic RAM. Each bank accepts standard 80ns SIMMs containing 1MB, 4MB, and perhaps 16MB (256K and 2MB aren't supported), giving total memory sizes from 8MB to 16MB for each bank (256MB if 16MB SIMMs work). Therefore, the Quadra 950 could have a total of 64MB when using the SIMMs currently available.

16MB SIMMs haven't been thoroughly tested on the Quadra 950, and therefore can't be listed as a possible configuration. The Quadra 950 can also use 60ns SIMMs, but Orwell is programmed for 80ns DRAM, so a 60ns SIMM wouldn't improve the speed. If one slot in a given bank is

filled, then all slots in the bank must be populated.

Note: When large amounts of DRAM are installed, the memory check upon startup is lengthy and can cause users to think that the computer isn't functioning. There is no software indication that the computer is running memory checks.

The Orwell IC contains registers that the system software uses to set the starting address of each bank of memory. At startup, the system software determines the sizes of the banks and assigns the bank starting addresses so that the banks occupy contiguous memory spaces, unlike that of the Macintosh IIci and IIsi, which have split memory maps.

ROM

The ROM in the Quadra 950 is soldered directly to the main logic board, and consists of two 4MBit ROMs at 150ns (each ROM is a 256K x 16 device)=1MB ROM. As with all instructions, ROM can be cached in the 040. The memory controller, Orwell, supports burst access to the ROM via the 68040 fake burst mechanism. This means that Orwell asserts Transfer Burst Inhibit (TBI) with TA for accesses to ROM, which can't be "bursted." This allows the 040 to try a burst, and then notice that it must do the accesses in four individual long words.

SCSI Controller ICs

In the Quadra 950, the SCSI bus is divided into internal and external buses, each controlled by its own NCR 53C96 device. The internal and external SCSI buses are logically connected, but electrically separate. The external bus is electrically isolated from the internal bus so that changes in external cabling and termination have no effect on the performance of the internal SCSI devices.

The cabling and termination of the internal SCSI bus are optimized so that the 53C96 that controls the internal bus can support data transfers at a faster rate -- up to 5MB/s (the maximum the chip can transfer is 6MB/sec). Earlier Macintosh computers were capable of a 3MB/s transfer rate.

NuBus Controller IC: YANCC

In the Quadra 950 computer, the interface between the system bus and the NuBus comprises three chips: the YANCC IC and two 16-bit transceiver ICs that are the same as the ones in the Macintosh IIci.

The YANCC IC maps certain system bus cycles to NuBus cycles and certain NuBus cycles to system bus cycles. The features of the YANCC IC include:

- Support for all types of single data transfers in either direction

- A buffer, one long word deep, for appended writes from the MC68040 to the NuBus

- Support for block move transfers between NuBus masters and main memory

- Support for pseudo-block transfers between the MC68040 and NuBus slaves

- Support for some new functions defined in the NuBus '90 specification

Unlike the NuBus controllers in previous Macintosh computers, the YANCC IC generates an interrupt when there is an error involving the write buffer. Software controls this interrupt by means of a control and status register in the YANCC.

Video Frame-Buffer Controller IC: DAFB

The built-in video hardware in the Quadra 950 computer provides high- performance graphics on all current Macintosh monitors. The video hardware is built around a video frame buffer controlled by the DAFB IC.

The video frame buffer comprises four banks of video RAM (VRAM); two of which are soldered onto the logic board. This minimum configuration (1MB soldered on) supports 16 bits per pixel on all Apple monitors up to 16 inch, and 8 bits per pixel on all Apple monitors. The basic VRAM configuration supports 24 bits per pixel on the 12-inch RGB monitor. The standard 1MB VRAM also supports NTSC and PAL monitors, using Apple convolution as well as VGA monitors. By installing VRAM SIMMs into the other two banks (four 256K VRAM SIMMs), the user can expand the frame buffer to support 24 bits per pixel for the 13-inch and 16-inch monitors.

Because the frame buffer in the Quadra 950 computer is connected directly to the system bus, which is now even faster than the Quadra 900, it speeds up all applications, even those that don't use QuickDraw. Given the faster clock speed, and the removal of wait states in the VRAM timing, the Quadra 950 frame buffer can perform graphic operations, such as scrolling, up to 50% faster than the Quadra 900 frame buffer.

The control registers in the DAFB IC and the frame-buffer VRAM are mapped into the memory locations that were assigned to NuBus slot $9 in earlier models.

Sound ICs: DFAC, Batman, and Sporty

The Quadra 950 computer uses a new sound system. Its features are similar to the features of the sound interface in the Macintosh LC and the IIsi. The features of the Quadra 950 sound interface include:

- ASC compatibility

- Ability to play 8-bit sound files

- 8-bit sound input

- Lower noise and distortion analog circuitry

Four Apple custom ICs provide the sound interface:

- DFAC: provides sound input and an anti-aliasing filter

- Batman: an updated version of the Apple Sound Chip

- Sporty: a custom IC that replaces the two Sony sound ICs

- External digital-to-analog converter (DAC)

The Digitally Filtered Audio Chip (DFAC) is an Apple custom IC that is also used in the Macintosh LC. The DFAC IC includes the anti-aliasing filter and analog-to-digital converter (ADC) for sound input. It also contains a digital filter for conditioning output data before it is sent to the DAC. The DFAC serializes the sound input information and sends it to Batman, where it is put into a FIFO, which software can read.

The Batman sound chip provides ASC compatibility and includes several important new features such as support for sound input, support for an external D/A converter, and large FIFOs which buffer playback and sound input samples. Batman doesn't support the wave table function which was available in the original ASC (this feature was not widely used and should only cause very limited compatibility problems). The Batman transfer acknowledge is generated by Relayer.

For sound output, an external DAC provides higher-quality sound than that generated by the PWM system used in earlier Macintosh models. The Sporty custom IC replaces the two Sony ICs used in earlier models and provides better sound quality (that is, less noise and distortion). Like the Sony ICs it replaces, the Sporty IC also contains digital attenuators. A separate amplifier with power output of 2 watts drives the larger speaker used in the Quadra 950 computer.

Last Modified: Feb 19, 2012

Additional Product Support Information

Macintosh Quadra 950: Expansion Slots

The Macintosh Quadra 950 computer has five NuBus slots and one PDS (processor-direct slot) line with NuBus slot $E and uses the same opening in the back. The use of a PDS card precludes the use of a NuBus card in slot $E.

This article has been archived and is no longer updated by Apple.

NuBus slots

NuBus in the Quadra 950 provides all the benefits found in the Quadra 900:

- Provides higher power

- Accommodates oversized NuBus cards

- Supports some of the NuBus '90 features

Higher Power

The power supply in the Quadra 950 computer is designed to provide additional current on the +5V outputs for the NuBus slots, compared with the current specified in "Designing Cards and Drivers for the Macintosh Family," second edition. The Quadra 950 has enough power to support a total of two 25-watt cards and three 15-watt cards.

Oversized NuBus Cards

Each NuBus slot can accommodate either a standard NuBus card or an oversized card. The oversized card is the same length as a standard NuBus card, but it is 2 inches taller. Each NuBus slot in the Quadra 950 computer includes a card guide; to install an oversized card, the user removes the card guide.

NuBus '90 Features

NuBus '90 is the 1990 proposal for revision of the IEEE standard for the NuBus (IEEE STD R1196-R-1990). Apple has a representative on the panel designing the new standards, and has had since its inception. The specifications for NuBus '90 are incomplete and still under development, but Apple has implemented the portion of the specifications that are completed. Apple will be updating the implementation as the specifications expand and stabilize. The NuBus slots in the Quadra 950 computer provide the following new features described in that proposal:

- Low current at +5 V is available on the new STDBYPWR pin when main power is off and the AC cord is plugged in.

- New signals /TM2, /CLK2X, and /CLK2XEN support block transfers at double the standard rate (20 MHz). The Quadra 950 computer allows double-rate block transfers between NuBus cards, but doesn't support double-rate transfers to or from the main memory (this remains at 10 MHz).

- NuBus '90 defines new signals SB0 and SB1 for a serial bus on the formerly reserved pins A2 and C2. The serial-bus signals are bused and terminated, but the main circuit board doesn't drive them.

- NuBus '90 defines new signals /CM0, /CM1, /CM2, and /CBUSY to support a cache coherency protocol. Pins on the NuBus connector are assigned to those signals, but the Quadra 950 system doesn't support them.

Processor-Direct Slot

For maximum performance, the processor-direct slot (PDS) is connected directly to the MC68040 microprocessor by way of the system bus. Possible applications for a PDS expansion card include cache memory, a video frame buffer, a DMA-based I/O controller, expansion memory, or even an additional MC68040 microprocessor. When a PDS card is installed, slot $E is unavailable for a NuBus card.

A PDS card can have memory locations in the upper part of the RAM memory space or in the space assigned to NuBus slot $E. If the card uses slot $E addresses, it must decode all addresses in both the slot space and the super slot space, responding to any access to an unused location with a TEA on the processor bus to indicate an illegal address.

A typical PDS card maps into the NuBus space and works with the system software's Slot Manager. Such a card must contain a NuBus declaration ROM and must notify the NuBus controller that it is using the NuBus space by asserting (pulling low) the signal /PDS.SLOT.E.EN on the PDS connector.

WARNING: A PDS expansion card for the Quadra 950 computer must be designed to work with the MC68040 microprocessor; PDS cards designed for computers that use the MC68020 or the MC68030 won't work in the Quadra 950 computer.

A PDS card for the Quadra 950 computer has the same dimensions as a NuBus card and can include a back-panel connector. When the PDS card is installed, it occupies NuBus slot $E, reducing the number of available NuBus slots from five to four. Any PDS card designed to operate in the Quadra 950 must be capable of meeting the 33 MHz timing specification for the Motorola 68040. This requires shorter output delay times than the 25 MHz timing. Otherwise, PDS connector pinouts, size and placement are identical among the Macintosh Quadra 900, 700, and 950.

IMPORTANT: The signals on the PDS connector are connected directly to the MC68040 with no buffers. Therefore the address, data, and clock lines on a PDS card must present capacitive loads of not more than 40 pF. The control lines must present capacitive loads of not more than 20 pF.

Last Modified: Feb 19, 2012

Additional Product Support Information

Archived - AppleTalk Remote Access: Sample V.32bis Script with Comments

I have a new V.32bis modem that I want to use with AppleTalk Remote Access (ARA), but there's no script on the application disk that I can use with it.
This article has been archived and is no longer updated by Apple.
The following AppleTalk Remote Access (ARA) script for the Telebit T3000 modem is a good example of how to write a script for any given V.32bis modem.

- **Notes**
  This discussion assumes that you have access to the documentation for AppleTalk Remote Access and that you are familiar with the command syntax and scripting basics.
- The command syntax is in the AppleTalk Remote Access Modem Scripting Language Guide.
- You can order the guide from APDA at: 800-282-2732 (USA), 800-637-0029 (Canada), or 408-562-3910 (International).

```
! "Telebit T3000 Modem 11/11/91"
! 11/14/91 - Added a ton o' comments
! 11/23/91 - Cleaned up comments a little bit more,
! and added S11=50.
! 12/2/91 - Took S11 back out.
! 12/9/91 - Added the pinouts for the RTS/CTS cable to the comments
! Since you have to make a hardware handshaking cable.
! 1/16/92 - Add a bunch more comments about the cable.
! 3/30/92 - Added comments about the hang up sequence.
! 3/31/92 - Added sbreak in hangup sequence to speed things up.
! 3/31/92 - Added S38=3 to help ensure that the modem will be
! able to transmit all the data in its buffer (including
! the disconnect command for the remote modem!) before
! it hangs up.
! 4/2/92 - Changed S38 to 255. See notes below.
! 4/2/92 - Changed S51 to 254 in hang up sequence since 19200 is
! our DTE speed.
!
! Note the cable requirements when using a V.32bis modem. Since a lot
! of people do not have this cable, you should not use this approach when
! scripting for V.32 or slower modems.
!
! The cable requirement for using a V.32bis modem with AppleTalk Remote
! Access is a hardware handshaking cable. The Macintosh can be overrun
! with data when the modem is in high speed mode with compression enabled.
! If a standard cable is used, ARA senses it and doesn't allow the modem
! to connect at the high speed. It automatically drops down to 9600 bps.
!
! The correct cables can be purchased from many of the modem vendors.
!
! Cable needed to use AppleTalk Remote Access with V.32bis modems:
! Din-8 DB-25
! ----- -----
! 1 (DTR) 4,20 (RTS, DTR)
! 2 (CTS) 5 (CTS)*
! 3 (TxD-) 2 (TD)
! 4 (SG) 7 (SG)
! 5 (RxD-) 3 (RD)
! 6 (TxD+) Not Connected
! 7 (GPi) 8 (DCD)
! 8 (RxD+) 7 (SG)
!
! *Normally 2 (CTS) <-!6 (DSR) on other Macintosh cables.
!
!- One consequence of using this cable is that DSR (or DCD) from the modem
! is no longer connected to the Macintosh. This does not let your
! Macintosh communications software use the DSR (or DCD) signal to detect
```

```
! carrier loss. And, since the Macintosh Serial driver does not support
! the GPi input...you are sort of stuck, unless your communications
! software does use the GPi input, or Apple builds GPi support into the
! serial driver.
!
!- Since DTR and RTS are connected together, the modem must be configured
! to ignore DTR (usually the &D0; command) when using this cable with
! other communications applications. Otherwise, when RTS handshaking from
! the Macintosh is used, the modem will drop connection the first time the
! Macintosh de-asserts RTS.
!
!- If there is a need to use DTR to make the modem disconnect, RTS
! handshaking cannot be used to control the flow of data from the modem to
! the Macintosh. CTS handshaking (from the modem to the Macintosh) is
! available. This is what ARA does so it can force the modem to hang up,
! and at the same time the modem can signal the Macintosh to stop sending
! data. This assumes that the Macintosh will always be able to accept
! data from the modem. This will not be true if the Macintosh is talking
! to the modem at 57.6KBps with V.32bis & V.42Bis. There will be times
! when the Macintosh will need to signal the modem to stop sending data.
!
! In summary, with this cable:
!
! If you want to use RTS hardware handshaking, you cannot use DTR to
! control the modem. You will have to resort to other methods to coerce
! the modem to disconnect.
!
! If you want to control the modem with DTR, you cannot use RTS hardware
! handshaking so the Macintosh must be able to accept data from the modem
! at all times, or can recover if data is lost.
!
! In either case you can use CTS hardware handshaking so the modem can
! signal the Macintosh to discontinue sending data.
!
@ORIGINATE
@ANSWER
!
! Talk to the modem at 19,200 bps. The T3000 should auto-baud this
! unless the user has locked the port to a particular speed. If it
! is locked to a different speed, the user will need to change that.
!
serreset 19200, 0, 8, 1
!
! The idea here is to get the modem into a known state, and then change
! only the registers that are necessary to support the connection. Most
! of the time AT&F; will be sufficient, but some modems allow the user to
! change the F0 parameters. There isn't much that can be done to prevent
! this, but if the modem has any pre-configured configurations, and one of
! them sets hardware handshaking, use it.
!
! Recall the factory configuration
! F9 is the built in pre-configured setting for CTS/RTS handshaking on the
! T3000. Since it's possible for the user to modify F0 parameters, this is
! a little safer.
!
! AT&F9; sets:
! &C1; - DCD is on after connect
! &D2; - DTR on/off disconnects
! S58=2 - Use RTS/CTS flow control in full-duplex mode
! S61=1 - Go into command mode when receiving break from DTE (see
! @HANGUP for why the script cares about this).
!
! Every time the script needs to send commands to the modem, the strategy
! is: Clear all matchstrings, look for specific responses, and loop around
! a couple of times. Later in the script, certain loops pause 50-70
```

```
! seconds, such as when the script dials a number and is waiting for a
! connection. Other times, the script pauses 3-5 seconds and loops around.
! When the script is sending commands to the modem, it should expect to
! see a response within a couple of seconds, so it's best to look quickly
! and exit with an error in a reasonable amount of time so the users do
! not wait a for a long time before they are notified that they may need
! to power-cycle/reset the modem. When the script is dialing out over a
! telephone system or PBX, it needs enough time to make a connection. In
! short, if it's communicating to a modem, loop in 3-7 second increments.
! If the script is waiting for something other than a modem response (like
! a completed connection or terminal server) it may need 60-70 seconds.
!
! If the defaults cannot be set, jump down to label 59, which exits and
! asks the user to check out the modem. If an AT&F; command will not be
! accepted, the modem may be hung and needs to be manually reset.
!
settries 0
matchclr
@LABEL 1
matchstr 1 4 "OK\\13\\10"
write "AT&F9;\\13"
matchread 30
inctries
iftries 2 59
! Modem is not responding, reset and send a break
DTRClear
pause 5
DTRSet
SBreak
jump 1
!
! The script was able to get the modem into a default factory state. Now
! set the basic hardware type configuration such as command echo, hardware
! handshaking, and DTR control. If the &F9; command had not set up
! handshaking this is where it would be done. It's not desirable to
! create one long command string with everything on it because some modems
! cannot handle a long command string, and long strings are harder to
! debug. It's easy to enter an incorrect S-register value. For the most
! part, the following commands are probably common across a lot of modems,
! but always look up the commands in the modem manual.
!
! Next, Set up the configuration: drop connection after losing DTR
! Turn off auto answer and command echo.
!
! &D3; - DTR on/off resets modem
! S0=0 - Don't answer calls
! E0 - Turn command echo off
!
@LABEL 4
matchclr
pause 5
matchstr 1 5 "OK\\13\\10"
write "AT&D3S0;=0E0\\13"
matchread 30
jump 59
!
! Now that the modem hardware & flow control parameters are set, make sure
! any protocol negotiation is disabled, and issue any modem specific
! features here. Make sure that MNP4/V.42, and MNP5-10/V.42bis
! negotiations are disabled. By the way, some V.32/V.32bis modems have an
! option to disable Trellis error control, which is part of the physical
! layer modulation. This is not the same as MNP/V.42, and you do not want
! to disable it!
!
! Make sure that the modem is configured so it does NOT require error
```

```
! control to complete a link. ARA 1.0 does all error correction/data
! compression in software. All ARA wants is the fastest raw data pipe it
! can get. If the script spends time trying to negotiate some error
! control, the modems and/or Remote Access may time out.
!
! Also note the S38 configuration. It is noted later in the script that
! it is desirable to ensure that the modem's buffer has transmitted all of
! its data before it actually hangs the modem up. This ability appears to
! be implemented on a lot of modems.
!
! This set of commands is going to be implemented differently on different
! vendors V.32bis modems. In this example, Telebit uses S registers.
! Other modems may use S registers (but different registers), or \\
! commands, or % commands; you get the idea. (Did I mention that you
! really, really want to have your modem manual handy?)
!
! It is important that the modem is configured so that it returns
! the connected speed, NOT the DTE speed. The script needs to know what
! the real line speed is in order to set ARA's internal timers. Some
! modems don't have the option to display the line speed. In that case
! the performance of the connection may not be optimal.
!
! Next, disable MNP and error control
! Turn on internal buffering (for V.32bis), set the delay before
! disconnect, and extended result codes (CTS/RTS flow control was set when
! we issued &F9;, so it is not necessary to do it again).
!
! S180=0 - Turn off all error detection/correction (ARA does MNP and
! compression itself. It needs these turned off in the modem).
! S181=1 - Turn *on* DTE <-> line buffering if there is no error control.
! Since the modem will be talking to the
! Macintosh at 19,200 bps no matter what speed
! it connects at, this needs to be on.
! S38=255 - Wait until the modem's buffer is clear OR the other modem
! disconnects after an ATH is issued before dropping the line.
! This is done to ensure that all any data in the modem's buffer
! has been transmitted to the remote modem before it
! disconnects. If the remote connection does not receive the
! disconnect packet (usually the last one sent) it could take up
! to 45 seconds for the remote connection to timeout and
! disconnect.
! X2 - Issue extended result codes. This will display busy, connect XXX,
! and so on. X2 will say "CONNECT XXX" Where XXX is the line speed
! (as opposed to DTE speed). This is so ARA can determine what speed
! the modems are communicating at for timing.
!
@LABEL 5
pause 5
matchstr 1 6 "OK\\13\\10"
write "ATS180=0S181=1S38=255X2\\13"
matchread 30
jump 59
!
! The modem should now be properly configured. Now check to see if the
! user has turned off the modem speaker. If they have, send an additional
! command to turn it off.
!
! If speaker on flag is true, jump to label 8. Otherwise turn off the
! speaker.
!
@LABEL 6
ifstr 2 8 "1"
pause 5
matchstr 1 8 "OK\\13\\10"
write "ATM0\\13"
```

```
matchread 30
jump 59
!
! The modem is ready so enable answering, or originate a call.
!
@LABEL 8
pause 5
ifANSWER 30
note "Dialing ^1" 3
write "ATDT^1\\13"
!
! Be aware that different modems will have different format strings
! to return connection results. You need to understand the different
! possible strings and set this area (and then answer area at label 31) to
! the appropriate value. Also, remember that the modem was configured to
! return the connect speed if possible (The X2 command up at label 5).
! It's also useful if the modem can return busy, no dialtone, etc. since
! the script will be able to exit quicker and let the user know what is
! going on.
!
! Also note that the script waits at the bottom of label 9 for a 70
! seconds, rather then looping around. Why? Well, if the script
! re-issues the dial command too soon, that would cause the modem to hang
! up. At this point the script should wait a reasonable amount of time
! for one of these strings to return from the modem and take the
! appropriate action.
!
@LABEL 9
matchstr 1 11 "CONNECT 1200\\13\\10"
matchstr 2 12 "CONNECT 2400\\13\\10"
matchstr 3 13 "CONNECT 4800\\13\\10"
matchstr 4 19 "CONNECT 7200\\13\\10"
matchstr 5 14 "CONNECT 9600\\13\\10"
matchstr 6 20 "CONNECT 12000\\13\\10"
matchstr 7 18 "CONNECT 14400\\13\\10"
matchstr 8 50 "NO CARRIER\\13\\10"
matchstr 9 50 "ERROR\\13\\10"
matchstr 10 52 "NO DIALTONE\\13\\10"
matchstr 11 53 "BUSY\\13\\10"
matchstr 12 54 "NO ANSWER\\13\\10"
matchread 700
jump 59
!
! All that is done for different connect speeds is to issue a
! "CommunicatingAt" command. Remember, the interface speed is locked
! to 19,200 bps so the script doesn't want to reset the serial speed after
! it connects.
!
! CommunicatingAt tells ARA what the actual line speed is so that it
! can set its timers appropriately. I guess performance would be
! sub-optimal if this is not set...
!
@LABEL 11
note "Communicating at 1200 bps." 2
CommunicatingAt 1200
jump 15
!
@LABEL 12
note "Communicating at 2400 bps." 2
CommunicatingAt 2400
jump 15
!
@LABEL 13
note "Communicating at 4800 bps." 2
CommunicatingAt 4800
```

```
jump 15
!
@LABEL 19
note "Communicating at 7200 bps." 2
CommunicatingAt 7200
jump 15
!
@LABEL 14
note "Communicating at 9600 bps." 2
CommunicatingAt 9600
jump 15
!
@LABEL 20
note "Communicating at 12000 bps." 2
CommunicatingAt 12000
jump 15
!
@LABEL 18
note "Communicating at 14400 bps." 2
CommunicatingAt 14400
jump 15
!
! Set CTS handshaking ON in the serial port (that's the 1 in the HSReset
! command below)
!
! The modems have connected, so enable hardware handshaking on the serial
! port. If the script is answering a telephone call, just exit right away
! and starting communicating. If the script is dialing out, give the
! other end some time (3 seconds in this example) to get ready to talk to
! this modem. Exit 0 tells Remote Access that the script was successful
! in attempting a connection.
!
@LABEL 15
HSReset 0 1 0 0 0 0
ifANSWER 16
pause 30
@LABEL 16
exit 0
!
! Notice that the @ANSWER label is actually a comment here, and that
! @ORIGINATE and @ANSWER start at the same place. What's the point of
! having separate entry points if they are not used? Well, in the case of
! modems, when they dial out or wait for a call, the setup is usually the
! same. One reason for separate entry points is when the script is not
! directly talking to a modem, but maybe to a PBX or terminal server. It
! may be necessary to have completely different configuration for
! answering and originating connections.
!
! @ANSWER
! Set up the modem to answer the telephone.
!
@LABEL 30
write "ATS0=1\\13"
matchstr 1 31 "OK\\13\\10"
matchread 30
jump 59
!
! What is userhook 1 doing in label 32? Here's the idea: Either this
! script controls a server that is waiting to answer the telephone, or
! it's waiting for a callback to a connection that was initiated.
! AppleTalk Remote Access does a "passive" listen on the serial port (via
! the Serial Port Arbitrator) so that other communications applications
! can use the serial port when ARA is not using it. When a call comes in
! for a server or callback, there will be about 5-14 seconds while the
! modems negotiate the connection. What would happen if a communications
```

```
! application on this Macintosh wanted to use the serial port during that
! time? Both connections would fail. The userhook 1 command tells ARA to
! mark the serial port in use. When that happens, applications that want
! to use the serial port will be told it's busy, and the incoming
! connection can complete. With that in mind, the strategy below is:
! When the modem receives a ring, jump to label 32, issue the userhook 1
! command, then jump back up to label 31, wait for the connect result code
! and continue processing the script.
!
@LABEL 31
matchstr 1 32 "RING\\13\\10"
matchstr 2 11 "CONNECT 1200\\13\\10"
matchstr 3 12 "CONNECT 2400\\13\\10"
matchstr 4 13 "CONNECT 4800\\13\\10"
matchstr 5 19 "CONNECT 7200\\13\\10"
matchstr 6 14 "CONNECT 9600\\13\\10"
matchstr 7 20 "CONNECT 12000\\13\\10"
matchstr 8 18 "CONNECT 14400\\13\\10"
matchstr 9 50 "NO CARRIER\\13\\10"
matchstr 10 50 "ERROR\\13\\10"
matchstr 11 52 "NO DIALTONE\\13\\10"
matchstr 12 53 "BUSY\\13\\10"
matchstr 13 54 "NO ANSWER\\13\\10"
matchread 700
jump 31
!
@LABEL 32
userhook 1
note "Answering phone..." 2
jump 31
!
! These are some common error messages when the line is busy, no dialtone,
! etc. They are documented in the Scripting Language Guide. When the
! script exits with a code other than zero, Remote Access knows that the
! connection failed, and will inform the user with a dialog.
!
! 50: error messages
!
@LABEL 50
exit -6021
!
@LABEL 52
exit -6020
!
@LABEL 53
exit -6022
!
@LABEL 54
exit -6023
!
@LABEL 59
exit -6019
!
! Hang up the modem
! Note: Why try to enter command mode and hang up the line with ATH, when
! de-asserting DTR will always work, and it is used as a last resort
! anyway? If DTR is used immediately, the modem will hang up
! immediately. This can have the ill effect of hanging up before
! all the data in the modem's internal transmit buffer has been
! sent. It is very desirable to have the last byte of data sent
! make it out of the modem and across the phone line. Typically,
! the last packet sent is the disconnect packet, and if the other
! side misses this packet, it may have to wait up to 45 seconds to
! hang up.
!
```

```
@HANGUP
@LABEL 60
settries 0
HSReset 0 0 0 0 0 0
@LABEL 61
!
! Here's the basic logic for hanging up: If the modem can be configured
! to enter command mode when it receives a short break, send a short
! break. Send an ATH to hang the line up (and if possible up in the
! configuration, set the modem to attempt to send all the data in the
! buffer before it disconnects). If that fails, it must still be on
! line, so send the escape sequence to try to drop into command mode.
! Don't issue a short break again since it did not work the first time.
! If that fails, de-assert DTR which should force the modem to hang up
! (make sure the cable is wired properly for this option!).
! If +++ worked, don't send a short break again; flush the serial port
! buffer in case the ATH failed due to any stray data hanging around.
!
! How was this sequence determined? Trial and error. Different vendors'
! modems behave differently when disconnecting. Some modems will not
! enter command modem during a disconnect, and the only option is to
! de-assert DTR to force them to reset. That's why DTR resets the modem
! instead of just disconnecting it! Experiment with this sequence to make
! it function, but it should work with the majority of the modems
! available.
!
! Now, since the Telebit modems will drop into command mode when they
! receive a short break (S61=1), issue one here. This will speed up the
! disconnect sequence by about 5-6 seconds. Then continue on with normal
! AT disconnect processing.
!
Sbreak
!
! Wait a brief amount of time (1/2 second in this case) so the modem will
! be ready to accept the ATH command. Pause 1 actually seems to work ok,
! but it's set to 5 just to be safe.
!
pause 5
write "ATH\\13"
matchclr
matchstr 1 63 "NO CARRIER\\13\\10"
matchstr 2 63 "OK\\13\\10"
matchstr 3 63 "ERROR\\13\\10"
matchread 30
inctries
iftries 3 63
! no response, try escape sequence
write "+++"
matchclr
matchstr 1 62 "OK\\13\\10"
matchread 15
!
! No Response from modem, toggle DTR
!
DTRClear
pause 5
DTRSet
jump 61
!
@LABEL 62
! Pause 1 second to ensure we meet the escape time delay
pause 10
Flush
write "ATH\\13"
matchstr 1 63 "OK\\13\\10"
```

```
matchstr 2 63 "NO CARRIER\\13\\10"
matchstr 3 63 "ERROR\\13\\10"
matchread 30
jump 61
!
! Now that the modems have disconnected, and the script has possibly reset
! the modem, restore the factory settings. Remember, the script may have
! hung up the modem in order to get ready for a callback, or it wants to
! get ready to wait to answer a call again.
!
! recall the factory settings. Use &F9; again (see note at top of script)
!
@LABEL 63
matchclr
matchstr 1 64 "OK\\13\\10"
pause 15
write "AT&F9;\\13"
matchread 30
!
! Now turn off auto answer if it was turned on to answer a call. If this
! script controls a server, the @ANSWER sequence will be called by ARA.
! One other thing to watch out for here is that some modems expect to
! talk to the DTE at the last connected speed. If this is a V.32bis
! modem and it just finished a connection with a 2400 baud modem, it
! doesn't necessarily want to talk at 2400 the next time! Some modems
! don't exhibit this behavior, so play with it and see what happens.
! Finally, since it successfully hung up, exit the script with a result
! code of 0 to let Remote Access know everything worked.
!
! Turn off auto answer, set S51 so modem will check interface speed on next
! connection. If this is not done, the modem will not try to autobaud,
! with the result being it exits the script with an error.
!
! S51=254 - Autobaud (19200 bps default)
! S0=0 - Don't try to answer the phone
!
@LABEL 64
pause 5
matchstr 1 65 "OK\\13\\10"
write "ATS51=255S0=0\\13"
matchread 20
!
@LABEL 65
exit 0
```

For more information about using V.32bis modems with AppleTalk Remote Access, use "AppleTalk Remote Access AND V.32bis" as a search string.

Rate this article:

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- Somewhat helpful
- Helpful
- Very helpful
- Solved my problem

- **Last Modified:** February 19, 2012
- **Article:** TA28000

- **Views:**

279

- **Rating:**
  - 3.0/5 Stars

(5 Responses)

ImageWriter I: Pinouts & Switch Settings (6/94)

This article describes the switch settings and pinouts for the ImageWriter printer.

This article has been archived and is no longer updated by Apple.
Switch Settings:

Switch SW1
1 2 3 4 5 6 7 8
Character Sets:
English (US) Off Off Off
Italian On Off Off
English (UK) On On Off
German Off Off On
Swedish On Off On
French Off On On
Spanish On On On
Page length:
72 line On
66 line Off
Eighth Data Bit:
Ignore On
Recognize Off
Character Pitch:
Pica Off Off
Elite On Off
Ultracondensed Off On
Elite Proportional On On
Auto linefeed after CR:
Enable On
Disable Off
1 2 3 4 5 6 7 8

Switch SW2
1 2 3 4
Baud Rate:
300 Off Off
1200 On Off
2400 Off On
9600 On On
Data Protocol:
XON/XOF On
DTR Off

Off - Open
On - Closed

Pinouts:

(Order numbers A9M0303P and A9M0305P)

DB-25
Connector Signal Name
1 ..... Frame Ground
2 ..... Transmit Data (Tx)
3 ..... Receive Data (Rx)
4 ..... Request to send (RTS)
7 ..... Signal Ground
14 ..... Fault
20 ..... Data Terminal Ready (DTR)

Pin Out Explanation

Pin 1 (FG) is used to provide a common ground reference for the electronics in both the ImageWriter and the device it is connected to. This pin is sometimes not connected. If there is an intermittent problem which can be cured by turning the IW off and on again, check the cable to see if pin 1 is connected.
Pin 2 (TD) conveys serial data sent from the ImageWriter (EXAMPLE: If the IW's DIP switches are set for XON/XOFF flow control protocol then this line would send characters to the connected device to tell it when to start and stop transmission. This is one of the pins that may need to be crossed over if the peripheral device is a DTE. A modem eliminator cable can perform this crossover.

Pin 3 (RD) receives serial data sent from the device the ImageWriter is connected to. This is one of the pins that may need to be crossed over if the other device is a DTE. A modem eliminator can perform this crossover.

Pin 5 (RTS) is asserted whenever the ImageWriter is powered on.

Pin 7 (SG) provides a common electrical ground level that the devices can reference the RS232 signals to. This pin should always be connected.

Pin 14 (Fault) notifies the device connected to the ImageWriter that the ImageWriter has been deselected (the SEL lamp goes out). This can be due to normal events such as you pressing the SEL switch or paper running out or it can be due to a problem such as the ImageWriter's microprocessor experiencing a glitch.

Pin 20 (DTR) becomes active when the ImageWriter is ready to go on line. If the IW's DIP switches are set for the DTR flow control protocol, this line will go on and off to tell the connected device when to start and stop transmission. This is one of the pins that may need to be crossed over if the device connected is a DTE. The modem eliminator cable can perform this crossover.

Article Change History:
24 Jun 1994 - Added pinout descriptions to article, revised formatting.

Support Information Services
Published Date: Feb 19, 2012

AppleLine: How To Use With an Apple IIe or Apple IIc (10/94)

The following information has only been partially verified for the 3274-2.2 ROMs. Though this setup should work with the newer ROMs, this has not been confirmed.

This article has been archived and is no longer updated by Apple.
Hardware Configuration:

Apple IIe
Super Serial Card in Slot 2. The jumper block should be set to terminal.
Straight thru cable - 590-0037
or
Apple IIc
Apple IIc-ImageWriter/Scribe printer cable.

Gender changer - 590-0214
Appleline - 699-0239 with version 2.2 of the ROMs.
Appleline wall mounting power supply - 970-0950
(optional - Loop Back Connector - 970-0879)

Software Configuration:

ProDOS 1.1.1
Apple Access II v 1.1
Set Access II as follows:
Terminal Characteristics
"Set ANSI Mode"
"Do NOT Send LF After CR" - for Supervisor mode
or
"Send LF After CR" - for 'On-Line' mode
"7 Bits per Character"
"Enable XON/XOFF"
"Normal Video"
"Full Duplex"
"No Wraparound"
Set Speed - "2400 baud"
Set Parity - "Even"

Appleline Configuration:

Terminal Type....."VT100"
Baud Rate....."2400"
Parity....."Even"
Autobaud....."Enabled"
Speed Indicator....."Disabled"
Modem type....."Local Connect"
Auto Logoff....."Disabled"
Special Terminal Capability..."None"
24/25 Line Automatic Toggle..."Disabled"

Notes

1- Set Access II for 2400 baud. 4800 & 9600 seem to overrun it.

2- The autobaud sequence is OpenApple-B Return (OA-B Return).

3- If you use 8 bits per character, set parity to None in Access II and on the Appleline.

For more information on VT-100 keypad sequences, see Apple Access II

(030-0923-A, copyright 1983), Appendix i, pp 165-166.

4 - The mapping for an Apple IIe or IIc running Access II to IBM 3278 Keys is as follows (not checked):

3278 Key	Press
PF1	Esc 1
PF2	Esc 2
PF3	Esc 3
PF4	Esc 4
PF5	Esc 5
PF6	Esc 6
PF7	Esc 7
PF8	Esc 8
PF9	Esc 9
PF10	Esc 0
PF11	Esc - (minus)
PF12	Esc =
PF13	Esc !
PF14	Esc @
PF15	Esc #
PF16	Esc $
PF17	Esc %
PF18	Esc ^
PF19	Esc &
PF20	Esc *
PF21	Esc (
PF22	Esc)
PF23	Esc _ (underscore)
PF24	Esc +
* NEW LINE	OA-Return
ENTER	Return
TAB	Tab
BACK-TAB	Control-OA-K
HOME	Control-\\
LEFT CURSOR	Left-Arrow or Control-H
RIGHT CURSOR	Right-Arrow or Control-U
DOWN CURSOR	Down-Arrow or Control-J
UP CURSOR	Up-Arrow or Control-K
PA1	Esc [
* PA2	Esc]
* DUP	Control-OA-U
* FM	Control-Y
ATTN	Control-A
* SYS REQ	Control-B
* CURSR SEL	Control-D
CLEAR	Control-E
ERASE INPUT	Control-L
ERASE EOF	Control-F
* PRINT	Control-P
* IDENT	Control-V
* TEST	Control-T
RESET	Control-R
a DEV CNCL	Control-R

INSERT Control-]
b DELETE Delete

* NOT TESTED

- According to the documentation (See Appleline Users Manual, Appleline Part II: Guide to Lisa, Chapter 2, p65) Control-X should give a DEV CNCL function, but where DEV CNCL is needed (according to the systems types there) Control-R works. This is the same code as is used for the RESET function.

- According to the documentation (See Appleline Users Manual, Appleline Part II: Guide to Lisa, Chapter 2, p65) Control-underscore should work. Instead it locks Appleline.

Article Change History:
12 Oct 1994 - Reviewed for technical accuracy.

Support Information Services
Last Modified: Feb 19, 2012

Additional Product Support Information

Macintosh PC Exchange: Workaround to Get AFE to Recognize DOS

- **Last Modified:** October 04, 2008
- **Article:** TA28021

- **Old Article:** 10303

This article has been archived and is no longer updated by Apple.

When I have Macintosh PC Exchange installed (or DOS mounter, AccessPC, and so on), Apple File Exchange (AFE) or MacLink Plus PC don't recognize DOS disks as DOS disks. Because Macintosh PC Exchange makes a PC disk appear as a Macintosh disk, AFE thinks it's a Macintosh disk and won't display the MS-DOS menus.

This is how we would expect AFE and Macintosh PC Exchange to behave.

The workaround for AFE is as follows:

1) Insert the MS-DOS disk.

2) From the "Mac to Mac" menu, select the "Other translations..." menu item.

3) Select the translator you want to use.

4) Make sure the "Add" radio button is selected and click "OK".

5) Repeat the process for all of the translators you want to use.

This will add the translator(s) to the "Mac to Mac" menu. Now all you have to do is select the translator(s) so it's checked in the menu and you will be able to use it.

Alternatively, you can disable Macintosh PC Exchange during the session with Apple File Exchange or MacLink Plus PC.

Article Change History
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01 Sep 1994 - Reviewed for technical accuracy, revised formatting.
11 Dec 1992 - Revised to add alternative method.

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Macintosh: PDS Expansion Slot Differences

Are all Processor Direct Slot (PDS) connectors in various Macintosh models different? If so, what are the differences?
This article has been archived and is no longer updated by Apple.
Macintosh computers use two main types of hardware expansion:
* A single processor-direct expansion slot
* NuBus expansion slots

A single PDS is used by the Macintosh SE, SE/30, LC, LC II, Portable.

Models that provide both PDS and NuBus slots are the Macintosh IIci, IIfx, Quadra 610 (smaller, 7-inch NuBus slot), 650, 700, 800, 900, and 950, the Power Macintosh 7100 series, and Power Macintosh 8100 series.

Note: The Macintosh Classic, Classic II, and PowerBook computers have no hardware expansion slots, although they do provide for internal memory expansion.

A PDS implementation brings the microprocessor address, control, and data lines, along with clock, power, and a few model-specific signals, to a single expansion connector on the main logic board. Apple uses the PDS expansion interface on compact, or small-footprint Macintosh computers such as the Macintosh SE, the SE/30, LC, or any design for which NuBus is inappropriate. The Macintosh II class of computers, such as the IIfx and the Quadras, also include a PDS connector, but their primary means of expansion is the NuBus interface.

Apple attempts to limit the number of PDS configurations available without compromising the Macintosh design, but since the PDS expansion interface is an extension of the microprocessor, the configuration of the slot connector will change whenever a newer, more powerful microprocessor is used.

68000 and 68020 PDS Interfaces
The Macintosh SE was the first Macintosh offering a PDS expansion. The SE uses a 96-pin expansion connector. The 96-pin expansion connector on the Macintosh Portable is physically identical to that of the SE, but the pinouts and signals available are different. The 68020 PDS interface in the LC is also a 96-pin connector that is physically identical to that in the SE and Portable; however, the pinouts and signals are different.

68030 PDS
Both the SE/30 and the IIfx have 120-pin connectors. Once a PDS adapter card is installed in the IIsi, it also provides a 120-pin PDS expansion connector. Whereas most of the signals on the 68030 PDS connector are the same on all models, a few signals are computer-specific. Therefore, PDS cards developed to take advantage of computer-specific signals may not work in other "030" Macintosh computers.

Macintosh LC and LC II
The 68020 PDS in the Macintosh LC uses a Euro-DIN 96-pin connector, as does the 68030 PDS in the LC II and the LC III. The PDS in LC-class models are electrically and physically identical.

The PDS used in the Macintosh 630 family is similar to that used in the LC, many PDS cards designed for the LC family will work in a Macintosh 630 class computer with the exception of the IIe Card.

68040 PDS
The 68040 PDS in the Macintosh Quadra is a 140-pin connector. The Macintosh Quadra's PDS cards aren't compatible with other Macintosh computers, and vice versa. The connectors are physically different, and the signals and logic were designed to support the 68040.

AV Macintosh computers
The 660AV and Quadra 840AV do not have a PDS connector. The 660AV has only a NuBus adapter slot.

Macintosh 630 family computers
The Macintosh 630 family, including the LC 630 and the Performa 63x computers, have three unique internal expansion slots. They include:

* One 114-pin LC compatible PDS
* One 112-pin communication port for modem and ethernet
* One 60-pin video-in slot for real time video display, capture and overlay

To verify that a particular third-party product is compatible with a specific Macintosh, we recommend you check with the supplier of that product.
Additional technical information on PDS is documented in these manuals:

Designing Cards and Drivers for the Macintosh Family
Guide to the Macintosh Family Hardware

Last Modified: Feb 19, 2012

Additional Product Support Information

Archived - Apple File Exchange: Contrasted to File System Translators

What are the technical differences between translating AppleWorks files with AFE, and using the GS/OS HFS FST to copy them to an HFS disk? I tried this, and got the following results:

AFE:
Type:1A__
Creator: pdos
1 resource, type pdos, size 10 bytes, ID 0

HFS FST
Type: p___
Creator: pdos
No resource fork present.

The purpose of this is to translate some AppleWorks files into GreatWorks or ClarisWorks using the XTND translators. If I translate them with AFE, everything works as intended. Why doesn't it work with the HFS FST, and why didn't the creators of the FST make it produce the same results as the previous translation standard (AFE)?
This article has been archived and is no longer updated by Apple.
The most important difference between AFE and any FST is that AFE is a file CONTENT translator, while FST (File System Translator) is a file SYSTEM translator.

A file translator does the following:

* Changes any filetype-specific information.
* Translates the specific information into a different layout.
* Adds any needed datatypes or header information.
* Possibly eliminates unneeded data.

This is specific to content of individual files, such as converting AppleWorks documents to ClarisWorks documents.

FST, on the other hand, translates the file system, including the following:

* Directory structures
* Subdirectory structures
* File types
* Block structures
* Other elements of the filing system

An FST DOESN'T translate the contents of an individual file. An FST DOES allow a foreign file system to reside on a native computer. For example, the Apple IIGS Finder desktop can display Macintosh HFS diskettes.

The results obtained are in line with each of the procedures. Translating the file contents from ProDOS to Macintosh OS requires adding some items, such as the resource fork and a specific file type. Generally a program that translates the contents of a file will also add a file type. This often allows double-clicking the translated file to open the file and application.

The contents of a file aren't touched when copying a file while an FST is in use. In the case presented, the 'p___' type is a generic type representing "some type of (unknown) ProDOS file."

AFE is an appropriate procedure for translating the contents of a file from one application format to another application format. FST is an appropriate method for allowing a disk from one operating system to mount while using a different operating system.

Thinking of FSTs as the "current translation standard" and AFE as the "previous translation standard" is an incorrect approach to understanding the purpose of these two entirely different operations. The creators of FST didn't have anything close to AFE in mind when they began to design their product. Their intention was to translate the filing system information, not the file contents. AFE was designed to translate the file contents, not the system of filing.

Rate this article:

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- Solved my problem

- **Last Modified:** February 19, 2012
- **Article:** TA28032

- **Views:**

  184

- **Rating:**
  - 5.0/5 Stars

  (1 Responses)

Macintosh PC Exchange: Mapping Database Files (9/94)

- **Last Modified:** September 02, 1994
- **Article:** TA28104

- **Old Article:** 10444

Does Macintosh PC Exchange's extension mapping capability include the ability to map database files?

My guess is that I can set it up to open FileMaker, 4D, and so on, for files with the extension .dbf. But will it work? Are there applications on both or all three platforms (Macintosh, DOS, Windows) that will recognize and properly open files with this extension in the same way that Excel, Lotus, and so on, can open WKS files?

The facility of mapping file types to a complementary file type on the Macintosh doesn't make Macintosh PC Exchange a file translation utility. You must be careful to specify the correct type of document that the Macintosh application will support. If you are unsure of which document type, use TEXT or launch the application and then choose the Open command from the File menu.

To our knowledge, FileMaker Pro version 2, Omnis 7, and FoxBase can open the data files of their equivalent Windows or DOS applications.

Article Change History:
02 Sep 1994 - Reviewed for technical accuracy, revised formatting.

Support Information Services
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MacTerminal 3.0: Installation with System 7.0.1

I attempted to install MacTerminal 3.0 on a Macintosh II running System 7.0.1. This was a version I received about a year ago, that didn't mention System 7. All examples and instructions were keyed to System 6.

During the first floppy disk installation procedure, it flagged the Communications Toolbox as already existing on the target disk. But when installing the second floppy, it complained because it didn't find a Communications Toolbox folder where it expected to find or put various tools unique to MacTerminal 3.0.

I created a Communications Toolbox folder in my System Folder, and manually copied the tools from the floppy disk. This didn't work when I tried to run the application -- it simply said it couldn't find any tools.

How do I resolve this problem?

This article has been archived and is no longer updated by Apple.

Here's how to install MacTerminal 3.0 on System 7.x:

The Installer on Disk 1 of the MacTerminal 3.0 package installs the Macintosh Communications Toolbox. Since the Macintosh Communications Toolbox is built into System 7.x, you don't need to run the Installer.

1) Remove the Communications folder you created manually. In System 7.x, the Communications Tools reside in the Extensions folder in the System Folder. Drag these Tools from Disk 2 directly to the Extensions folder, or to a closed System Folder, and System 7.x will put the Tools in the Extensions folder.

2) Create a new folder called MacTerminal 3.0 on your hard disk, and drag the MacTerminal application and sample session documents from the MacTerminal disk to this new folder.

Published Date: Feb 19, 2012

Apple III: Printer Driver Data Configuration Block

This article has been archived and is no longer updated by Apple.

NOTE: All values are in hexadecimal.

0 1 2 3 4
Baud rate:
110 03
134.5 04
300 06
600 07
1200 08
1800 09
2400 0A
4800 0C
9600 0E
Data format:
7 data/odd parity 22
7 data/even parity 26
7 data/mark parity 2A
7 data/space parity 2E
8 data/no parity 00
6 data/odd parity 42
6 data/even parity 46
6 data/mark parity 4A
6 data/space parity 4E
Delay after CR:
*
Delay after LF:
*
Delay after FF:
*
0 1 2 3 4

* In character times; may be any value from $00 to $FF.

Last Modified: Feb 19, 2012

Apple III: RS-232 Driver Data Configuration Block

This article has been archived and is no longer updated by Apple.
NOTE: All values are in hexadecimal.

0 1 2 3 4 5 6 7 8 9 A B
Baud rate:
110 03
134.5 04
300 06
600 07
1200 08
1800 09
2400 0A
4800 0C
9600 0E
Data format:
7 data/odd parity 22
7 data/even parity 26
7 data/mark parity 2A
7 data/space parity 2E
8 data/no parity 00
6 data/odd parity 42
6 data/even parity 46
6 data/mark parity 4A
6 data/space parity 4E
Delay after CR:
*
Delay after LF:
*
Delay after FF:
*
Communications protocol:
None 00
XON/XOFF 80
ENQ/ACK or ETX/ACK 40
Control character 1:
XOFF 13
ENQ 05
ETX 03
Control character 2:
XON 11
ACK 06
Maximum XON/XOFF buffer level:
**
Minimum XON/XOFF buffer level:
**
Data block length for ENQ/ACK or ETX/ACK:
**
Hardware handshake:
Enabled 80
Disabled 00
0 1 2 3 4 5 6 7 8 9 A B

* In character times; may be any value from $00 to $FF.

** May be any value from $00 to $FF; defaults are $DF for byte 8, $84 for byte 9, and $50 for byte A.

Last Modified: Feb 19, 2012

Additional Product Support Information

SNA■ps: Compatibility with Other Apple Products

What is the compatibility of SNA*ps with other Apple products?
This article has been archived and is no longer updated by Apple.
SNA*ps stands for Systems Network Architecture protocols and service, and is a family of applications that provide Macintosh users with integrated access to IBM mainframe (System/370 and System/390) and mid-range (AS/400 only) systems. SNA*ps 3270 or SNA*ps 5250 is end-user application software that presents the user with one or more 3270 or 5250 terminal sessions. It's designed to present the user with a text-based interface to applications, data, and services. The SNA*ps Gateway is server software that provides a network access to IBM mainframe and mid-range systems. It's designed to serve as an IBM gateway for multiple Macintosh computers attached to AppleTalk networks.

The SNA*ps 3270 application, which is included in both the SNA*ps 3270 and SNA*ps 3270 GC (gateway client) packages, will run on the Macintosh Plus and later systems. The SNA*ps Gateway application runs on one of the three Apple NuBus cards, and so requires any Macintosh II or Quadra system that incorporate NuBus. One caveat: the SNA*ps 3270 application includes support for certain connections (CUT and NLCA) on the Apple Coax/Twinax Card, which also requires a Macintosh II or Quadra computer.

The SNA*ps 5250 application software works with the Apple Token Ring 4/16 NB Card or Apple Serial NB Card installed in any Macintosh II or Quadra (NuBus capable) computer and supports directly connected or AppleTalk distributed 5250 sessions. SNA*ps 5250 sessions are distributed over AppleTalk allows SNA access for any Macintosh system connected to an AppleTalk network. SNA*ps 5250 also supports TCP/IP connections to an AS/400 for display support only. SNA*ps 5250 was recently enhanced to support AppleTalk Direct to the AS/400 using the IBM supplied AppleTalk ADSP stack.

SNA*ps requires Macintosh system software 7.0 or later.

A/UX doesn't support the SNA*ps 3270, SNA*ps 5250 and SNA*ps Gateway software at this time.

Ethernet supports SNA*ps, but only for connections between Macintosh clients and SNA*ps Gateways over AppleTalk networks. Ethernet is also supported to the AS/400 using the AppleTalk Direct solution. The connection between the SNA*ps Gateway and the mainframe currently must be either coax, SDLC, or Token Ring.

SNA*ps will run on the Apple TokenTalk NB Card (Apple's earlier 4M/bps Token Ring product) for SNA*ps 3270 GC via AppleTalk, SNA*ps 3270 single user full function SNA product (up to 5 sessions), and the SNA*ps 5250 single user full function SNA product (up to 5 sessions). Since you can't expand the MCP RAM on the TokenTalk NB Card beyond 512K, it is NOT recommended to run the SNA*ps Gateway products. Also, because of RAM limitations neither SNA*ps 3270 single user or SNA*ps 5250 single user products can run at the same time as TokenTalk.

SNA*ps will run on the Apple Token Ring 4/16 NB Card and an Apple Serial NB Card, and as a rule of thumb, a Serial or Token Ring card running SNA*ps gateways need 1MB. If multiple host connections are used (for example more than one host AS/400 and 3270 mainframe) at the same time than 2.5MB is suggested.

SNA*ps supports IBM's NetView network management. The NetView alerts supported are listed in Appendix E of the SNA*ps 3270 User's Guide (packaged with SNA*ps 3270 and SNA*ps 3270 GC). You can print directly from the IBM mainframe to a local Apple (or compatible) printer. The SNA*ps 3270 single user, SNA*ps 3270 GC, SNA*ps 5250 single user, and SNA*ps 5250 GC packages include an application called SNA*ps Print which allows you, for example, to send host output directly to a LaserWriter attached to your AppleTalk network.

The following is a partial list of third-party client software that can use the SNA*ps Gateway to access IBM hosts:

* Legent Corp. MacXCOM6.2
* ConnectivitÄ "Both."
* Tangram Systems AM:PM
* ASC asc3270
* Andrew Corp. TokenAxcess
* CEL Software Blacksmith
* Data Access Language (DAL) clients such as Brio DataPrism and DataPivot
* Microsoft Excel
* ACI US, Inc. 4th Dimension
* Fairfield Software ClearAccess
* Andyne GeoQuery

You can develop custom applications that use the SNA*ps Gateway services in C, Pascal, or Assembler. The SNA*ps Gateway supports both 3270, 5250 and APPC client application developments through Applications Programming Interfaces (API). These APIs are available from Wall Data directly. You can purchase the SNA*ps APPC Developer's Kit v1.0 and Apple 3270/5250 Developer's Kit v2.0.

To locate a vendor's address and phone numbers, use the vendor name as a search string.
Last Modified: Feb 19, 2012

Additional Product Support Information

System 7: Key Combination Shortcuts and Tips

- **Last Modified:** October 04, 2008
- **Article:** TA28141

- **Old Article:** 10517

This article has been archived and is no longer updated by Apple.

This article includes (in alphabetical order) the keyboard/mouse combinations you can use with System 7.5. Many of these tips are documented in Finder Shortcuts, under Balloon Help.

Note: This article applies mainly to System 7 and the computers that would likely be running this version of system software. For additional (and newer) information, see the following Tech Info Library articles:

- Article 24881: "**Macintosh: Using Command-Option-Shift-Delete To Start Up From CD**"
- Article 58068: "**Mac OS 8.5: Keyboard Shortcuts**"

Alphabetize Icons in a Window

1. Activate the window you want to alphabetize.
2. Choose "By Name" from the "View" menu.
3. Choose "Select All" from the "Edit" menu.
4. Drag all files to the icon that represents the active window.
5. Choose "By Icon" from the "View" menu.

Bypass Set Start-up Device
To bypass the currently selected start-up device (except on a Quadra 700), start or restart the computer while holding down the Command-Option-Shift-Delete keys.

Cancel a Print or Copy Job
To cancel a print or copy job Command-. (period) keys.

Change "About This Macintosh"
To change the menu entry from "About this Macintosh" to "About the Finder" hold down Option while choosing the About document under the Apple menu in the Finder.

Clean Up Icons
Move all icons to nearest point on the grid and use one of these methods:

- Select Clean Up Window from the Special menu.
- Hold down the Option key and choose Clean Up By Name from the Special menu (this function alphabetizes and aligns icons to the grid and each other, the same as the previously explained Alphabetize Icons in a Window tip).

Note: Available in icon views only.

Align icon to grid
Hold down the Command key and drag then release the icon.

Close All Windows at Startup
To close all open windows on the desktop at startup, hold down the Option key. The folders remain closed on subsequent startups, unless you open them in the Finder.

Copy Selected Item to Clipboard

Use one of these methods:

- Select Copy from the Edit menu.
- Press the Command-C keys.

Cut Selected Item to Clipboard
Use one of these methods:

- Select Cut from the Edit menu.
- Press the Command-X keys.

Diacritical Marks (Typing)

Character	Key Sequence	Example
Grave Accent	Option-`-(any character)	lèvre
Acute Accent	Option-e-(any character)	école
Umlaut	Option-u-(any character)	fühlen
Circumflex	Option-i-(any character)	maître
Tilde	Option-n-(any character)	mañana
Cedilla	Option-c	façade

Note: With the exception of the Cedilla (which is a specific character), diacritical marks can be applied to almost any character. The correct sequence is to press the Option key and the key that activates the accent mark. The accent mark is applied to the next key pressed after this sequence.

Dialog Boxes (Using Functions)
Scroll through list in Open Dialog Box, use one of these methods:

- Click on the Up or Down arrows in the scroll bar.
- Use the Up or Down arrow keys on the keyboard.

Find a File Quickly in an Open Dialog Box
Type in the name of the file.

Note: The Delay until Repeat control in the Control Panel determines how many characters may be entered for a File search.

Select the First File in an Open Dialog Box
Use the Left or Right arrow keys on the keyboard.

Select the Last File in an Open Dialog Box
Press the tilde (~) key.

Switch Drives in an Open or Save Dialog Box
Use one of these methods:

- Click on Drive in the dialog box window.
- Press the Tab key.

Switch Keyboard Layout

- Press Command-Option keys. This causes the keyboard control panel under System 7 to switch between different keyboard layouts. System 7.5 installs many international keyboard layouts automatically when an easy install is performed.

Move Up File Hierarchy in an Open or Save Dialog Box
Click on the current disk icon or click on the directory name icon at the top of the dialog box to display the file hierarchy and select the one you want.

- Press the Command-Up arrow keys to move closer to the top-level directory.
- Press the Command-Down arrow keys to open a selected folder.

Disable Virtual Memory
Hold down the Command key at startup. Do not release the key until startup is complete.

Note: This disables virtual memory, but loads any system extensions. When you restart your Macintosh, virtual memory is turned on again.

Duplicate Item
Click on the item you want to duplicate and use one of these methods:

- Choose Duplicate from the File menu.
- Hold down the Option key and drag the icon to another folder.
- Press the Command-D keys.

Easy Access (Activating/Deactivating)

- Easy Access is a function designed especially for the disabled. This function lets you lock modifier keys (Command, Control, Option, Shift, Clear) without having to hold them down. Easy Access must be installed in the System Folder - Control Panels folder.
- **Activate Easy Access**
  Without moving the mouse, press the Shift key five (5) times.

Deactivate Easy Access

1. Without moving the mouse, press the Shift key five (5) times.
2. Press any two modifier keys simultaneously.
3. Press the modifier key(s) you want to use (do not press modifier keys simultaneously unless you want to deactivate Easy Access).
4. Press a nonmodifier key to activate a function.
5. Press the modifier key once to activate it for one function (the U icon should now appear with an arrow above it).
6. Press the modifier key twice to lock it down for more than one function (the U icon should now be filled with an arrow above it).
7. If the modifier key is locked, pressing it again unlocks it.

Eject Floppy Disk
Use one of these methods:

- Press the Command-Y keys or choose Put Away in the File menu.
- Drag the floppy disk icon to the Trash.
- Choose Restart or Shut Down from the Special menu.
- Start or restart the computer, and hold down the mouse button.
- Press the Command-Shift-1 keys to eject internal floppy drive 1.
- Press the Command-Shift-2 keys to eject internal floppy drive 2 or an external floppy drive.
- Press the Command-Shift-0 keys to eject any other floppy disk drives.
- Press the Command-E keys or choose Eject Disk from the Special menu - if no disks are selected, these function ejects all floppy disks. These functions leave a "greyed out" floppy disk icon on the desktop.

Last Resort
If the disk will not eject you can insert a straightened paper clip into the hole located on the right front of the floppy drive. However, this may damage the floppy drive.

Erase Disk
The Erase Disk command under the Special menu erases any selected disk except a write protected (locked) disk or the disk that contains the active operating system.

Erase Floppy Disk
To erase the selected floppy disk use one of these methods:

- Select Erase Disk from the Special Menu.
- Hold down the Command-Option-Tab keys while inserting the disk.

Extension Manager (System 7.5)
To bring up the Extension Manager at startup hold down the Space Bar.

Force Quit an Application
Press the Command-Option-Esc from within the application.

Use this feature with extreme caution. You should definitely not rely on this as a usual way to quit an application. It is useful in the event that you have unsaved work in other applications when your current application hangs. By using this feature, you can return to the Finder and save the work in your other applications. You should restart your computer after using this feature.

Get Info (Using Functions)

Information
Select the icon and then use one of these methods:

- Choose Get Info from the File menu.
- Hold down the Command-I keys.

Lock Item
Check or uncheck the Locked box in the lower left corner Get Info dialog box.

Change Application Memory Size
Click in the box located next to Preferred Size in the Get Info dialog box and enter the desired size.

Note: This function sets the amount of RAM that is allocated to an application when it is launched. It should not be set below the Suggested Memory Size number.

Hide Current Application When Switching to Next
Hold down the Option key while switching applications.

Keypad Mouse (Activate/Deactivate)
To set the keypad to control mouse movement, press the Command-Shift-Clear keys.

- The 1, 2, 3, 4, 6, 7, 8, 9, keys control movement and direction of the pointer.
- The 5 key is the mouse button.
- The 0 key locks the mouse button.
- The decimal point key unlocks the mouse button.

Note: This function does not work on a PowerBook without the Mouse Keys extension because there is no keypad.

New Folder Creation
Use one of these methods:

- Choose New Folder from the File menu.
- Press the Command-N keys.

Open a File or Folder
Click on the item you want to open and use one of these methods:

- Select Open from the File menu.
- Double-Click on the item you want to open.
- Press the Command-O keys.
- Press the Command-Down Arrow keys.

Paste From the Clipboard
After a Copy or a Cut, use one of these methods to Paste:

- Choose Paste from the Edit menu.
- Press the Command-V keys.

Postscript File Dump
This function lets you dump postscript files to disk rather than to the printer. The Postscript Files are labeled as Postscript X (where X is a number from 0 to 9). Background Printing must be turned off.

Note: This is for LaserWriter driver's previous to 6.3. Version 6.3 and higher support printing to a PostScript file

Postscript File Dump With Laserprep
Use one of these methods:

- Select Print from the File menu.
- Press Command-P. When the print dialog box appears, click OK. Immediately after clicking OK, press the Command-F keys.

Postscript File Dump Without Laserprep
Use one of these methods:

- Select Print from the File menu.
- Press Command-P. When the print dialog box appears, click OK. Immediately after clicking OK, press the Command-K keys.

Print
Use one of these methods:

- Select Print from the File menu.
- Press the Command-P keys.

Note: The command key function is not available at the Finder level.

Put Away Items
Choose Put Away in the File menu to place a selected item(s) back into its folder.

Quit
Use one of these methods:

- Select Quit from the File menu.
- Press the Command-Q keys.

Note: This command is not available from the Finder level. It is used to quit from an application.

Rebuild the Desktop

Hard Drive
Start or restart the computer while holding down the Command-Option keys.

Floppy Disk
Insert the floppy disk while holding down the Command-Option keys.

Note: If the floppy disk is the start-up disk, start or restart the computer while holding down the Command-Option keys.

Screen Dump
The files are saved to disk as Picture X (where X is a number from 0 to 9).

Pict File Screen Dump
Press the Command-Shift-3 keys.

Screen Dump to Imagewriter
Press the Command-Shift-4 keys.

Dump of Active Window to Imagewriter
Press the Command-Shift-Caps Lock-4 keys.

Note: The Imagewriter dumps do not work on networked printers.

Select All Items in the Active Window
Press the Command-A keys.

Startup From CD-ROM
Hold down the letter c key (lower-case only).

On a Power Macintosh or Macintosh 630 family (Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, LC 630, and Quadra 630) computer, this directs the computer to startup from the CD-ROM drive instead of the hard drive or floppy.

Switch Startup Disk

1. Open the Startup Control Panel.
2. Select the device you want to use as your startup device.

Trash (Move Something To)
Drag the selected icon to the Trash Can

Delete Files Without Warning/Delete Locked Files
Hold down the Option key and drag a file to the Trash.

Turn Off Extensions (7.x)
Hold down the Shift key at startup until you see Welcome to Macintosh. Extensions off.

This disables, for this startup only, any items that load at startup, such as system extensions, control panels, or chooser extensions. It also disables virtual memory, and background printing with PrintMonitor, and turns the Disk Cache down to 16K (the minimum). It also prevents launching any items in the Startup Items folder.

Undo (the Last Editing Operation)
Use one of these methods:

- Choose Undo from the Edit menu.
- Press the Command-Z keys.

Windows (Manipulating)
To change size of awindow use one of these methods:

- Drag the size box.
- Click the zoom box to expand or reduce the size of a window.

Close Active Window
Use one of these methods:

- Choose Close from the File menu.
- Click the active window's close box.
- Press the Command-W keys.

Close All Windows
Use one of these methods:

- Hold down the Option key and choose Close from the File menu
- Hold down the Option key and click the active window's close box.
- Press the Command-Option-W keys.

Move Inactive Window
Hold down the Command key and drag on the inactive window's title bar.

Return to the Finder With No Windows Open
Hold down the Option key while starting or quitting from an application.

Reset the PRAM (7.x)
This operation resets parameters stored in Parameter RAM (PRAM).

Hold down the Command-Option-P-R keys during the restart sequence. Your computer beeps for a normal startup and then beeps again. When you hear the second beep, you may release the keys.

Many default settings for the Macintosh, such as serial port speeds, default application font, mouse scrolling rate, and so on, are stored in PRAM. It is sometimes useful to reset the PRAM to clear these settings and reset them to default values. Reselect any customized values for these settings.

After this operation, you may want to check your General control panel settings. If you have more than 8 MB RAM, also check your Memory control panel settings.

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ARCHIVE

PowerBook: What To Do When It Won't Run On the Battery

- **Last Modified:** May 19, 1999
- **Article:** TA28156

- **Old Article:** 10572

This article has been archived and is no longer updated by Apple.
This article discusses why a PowerBook may not run on the battery, but will operate normally when plugged into AC power.

Products Affected

PowerBook, PowerBook G3

With the exception of the PowerBook models specifically mentioned below, the following troubleshooting information is relevant to all PowerBook models.

- Ensure battery is fully charged by using the proper power adapter for your PowerBook computer. If it is not charging, try a different AC outlet.
- Reseat battery to ensure it is making good, solid contact with PowerBook.
- Reset power manager. See TIL article 14449: "**PowerBook: Resetting Power Manager**".
- Try a different battery.
- If PowerBook provides multiple battery bays, try the battery in a different bay.
- Replace battery.

Additional troubleshooting for specific PowerBook models

PowerBook 100

- Check that the storage switch on the back of the computer next to the power connector is in the up position. This switch disables all battery power, but will allow you to use the unit with AC power.
- A fuse on the logic board may blow if the lithium batteries aren't removed before the unit is taken apart. It's also important that the unit is completely reassembled before the batteries are reinstalled. The logic board can be shorted out quite easily since the keyboard is a part of

the circuit. The symptom of the failure is that the PowerBook will run on the AC Adapter, but not on the battery.
- A blown fuse may be linked to a damaged or defective power adapter. In particular, the black insulating "O" ring on the tip of the adapter may be damaged and shorting out against the logic board. Replacement of the power adapter and the main logic board will fix the problem.

PowerBook 140, 160, 170, and 180

- On these computers, a blown fuse may be linked to a damaged or defective power adapter. In particular, the black insulating "O" ring on the tip of the adapter may be damaged and shorting out against the logic board. Replacement of the power adapter and the main logic board will fix the problem.

PowerBook 150

- The PowerBook 150 will show similar symptoms as the PowerBook 140 and 170 with a blown fuse. The unit will run with the AC Adapter connected but not from battery only. Additionally, the unit will not run from AC Adapter power if the battery is removed. Check the logic board fuse if it fails to run from battery.

PowerBook Duo

- Ensure the proper software is installed for the battery you are using. See TIL article 15315: "**PowerBook Duo: Battery Types and Compatibility**".

PowerBook 3400

- Have the battery gasket installed if necessary. See TIL article 30148: "**PowerBook 3400: Battery Gasket Installation**".
- The batteries for the 190, 3400, 5300, and PowerBook G3 all look similar but are not interchangeable. Refer to TIL article 24361: "**PowerBook G3, 3400, 5300, 190: Battery Interchangeability**".

PowerBook G3 Series

- Perform the PowerBook G3 Series battery adjustment. See TIL article 22211: "**PowerBook G3 Series: Battery Adjustment**".

The PowerBook G3 Series computers use Lithium Ion (LiIon) batteries that charge whenever the external AC adapter is connected. LiIon batteries have battery level indicator lights that tell whether the battery is fully charged, three-fourths charged, one-half charged, one-fourth charged, or empty. If one light is blinking then the battery is completely drained and need to be recharged. If all four lights are blinking then there maybe a problem with the battery.

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AirPort 1.3: Using Computer-to-Computer Mode (IBSS)

- **Last Modified:** September 18, 2003
- **Article:** TA28186

- **Old Article:** 106140

You may quickly create a small network of AirPort-equipped computers without the use of a base station. AirPort 1.3 is also the first version of AirPort software to implement the IBSS standard.

Products Affected

AirPort

Computer-to-Computer mode allows you to quickly create a small network between two or more AirPort-equipped computers. Other IEEE 802.11-compliant devices may also join the network. A Computer-to-Computer network does not require an AirPort Base Station. If you have difficulties with larger numbers of devices joining a Computer-to-Computer network, you should set up one computer as a Software Base Station or get an AirPort Base Station.

Note: AirPort 1.2 and later provide software base station capability. A preview version of the Software Base Station was included with AirPort 1.1.

AirPort 1.3 meets IBSS standard

AirPort 1.3 should work with IBSS networks created by non-Apple devices. The Independent Basic Service Set (IBSS or "Ad Hoc network") is a collection of stations that are able to communicate with each other directly in a manner defined by IEEE standard 802.11b. In an IBSS network, there is no central collection point for data packets. IBSS networks can be created at any time and by any station. After a station creates an IBSS network, other stations may join it. The IBSS network exists as long as one of the stations that created or joined the IBSS is still available. If one of the IBSS peer stations is a router and the other peers have the router set as their default gateway, then wireless packets have the means to enter

and leave a wired network.

Setting up a Computer-to-Computer network

1. Choose the AirPort application from the Apple Menu
2. Choose Create Computer to Computer network from the Choose Network menu. A dialog box appears.
3. Enter the name of the network you want to create.

Figure 1 Computer-to-Computer dialog box

4. Click More Options if you wish to assign your Computer-to-Computer network a password or change the channel frequency away from the default of channel 1.

Figure 2 More Options

5. Your Computer-to-Computer network then becomes available to AirPort and compatible third-party devices within range of your computer, usually about 50 m.

Notes

1. If you are using a compatible third-party wireless device that has the ability to change channel frequency, check to be sure it is set to same channel as the computer that started the network.
2. In Computer-to-Computer mode, the signal strength meter in the AirPort portion of the Control Strip will always show three green dots.
3. If you are unable to use AirPort to access another AirPort-equipped computer, check to be sure that:
   - The TCP/IP and AppleTalk control panels on both computers are set to AirPort.
   - The target computer has started a Computer-to-Compter network, as illustrated in the AirPort application and Control Strip.
   - The computers are within range of each other (typically up to 50 m).
   - There are no sources of interference within range, such as a microwave oven or 2.4 GHz cordless phone.
   - File Sharing is turned on in both computers' File Sharing control panels if you wish to connect with the Chooser or Network Browser.
4. If you do not set up a password for your Computer-to-Computer network, the security of your computer is dependent upon the File Sharing privileges. If you have Guest access turned on, anyone with an AirPort equipped computer in a 50 m range could connect to your computer. A network without a password is not encrypted.
5. Wireless Internet access requires an AirPort Card, AirPort Base Station, and an Internet service provider, for which fees may apply. Some ISPs are not compatible with AirPort. America Online (AOL) works with AirPort software version 2.0 or later. For more information on AOL compatibility, see technical document 106591: "**AirPort: How to Use with AOL**." Range may vary with site conditions.

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Archived - Mac OS X 10.0: Cannot Move a Queued Print Job to a Different Printer

A pending or unsuccessful print job may not be moved between printers in Print Center.
This article has been archived and is no longer updated by Apple.

Symptom

You are unable drag a pending or unsuccessful print job from one Print Center printer to another.

Solution

1. Select a different printer in Print Center.
2. Select the application from which you printed.
3. Print the job to the newly selected printer.

Last Modified: Feb 19, 2012

Additional Product Support Information

Mac OS X 10.0: Yellow Text While Starting up in Verbose Mode or Single-User Mode

- **Last Modified:** November 16, 2003
- **Article:** TA28194

- **Old Article:** 106193

You see yellow text when starting up in verbose mode or single-user mode.

Products Affected

Mac OS X 10.0

Symptom

Some of the text that appears in verbose mode or single-user mode is yellow.

Solution

You may safely ignore the yellow text unless you are a software developer. If you do not develop software, verbose and single-user modes are only needed when you are troubleshooting the computer for a startup issue.

A software developer working on a kext (kernel extension) should use the information in the yellow text to address potential issues with the kext.

TA28194_Mac_OS_X_10-0_Yellow_Text_While_Starting_up_in_Verbose_Mode_or_Single-Us

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TA28198_Mac_OS_X_10-0_Alert_Message_-9781_When_Printing.pdf

Languages English

Archived - Mac OS X 10.0: Alert Message -9781 When Printing

If you choose not to install the BSD Subsystem in a custom installation of Mac OS X, this alert appears when trying to use a network printer.
This article has been archived and is no longer updated by Apple.

Symptom

When trying to print to a network printer from any application, an alert box appears with the -9781 error code.

Solution

Use your Mac OS X 10.0 Installation CD to install the BSD Subsystem (BSD.pkg).
Last Modified: Feb 19, 2012

Additional Product Support Information

Languages English

Archived - Mac OS X 10.0: Show Info Does Not Update Available/Used Disk Space Immediately

Log out and log back in to see an update to available/used disk space in Show Info.
This article has been archived and is no longer updated by Apple.

Symptom

The Show Info window does not immediately update the amount of available/used disk space after you add or delete files.

Solution

Apple is aware of this issue.

As a workaround:

- Choose Log Out from the Apple menu.
- Log back in to the computer.

The available/used disk space will be updated.
Last Modified: Feb 19, 2012

Additional Product Support Information

Archived - Mac OS X 10.0: Restart File Sharing to Make AppleTalk Name Appear on Network

For your AppleTalk name to appear in the Chooser, you must stop and restart Sharing after turning on AppleTalk.

Products Affected

Mac OS X 10.0

This article has been archived and is no longer updated by Apple.

Symptom

Your computer appears in the Network Browser but not in the Chooser.

Solution

After making AppleTalk active, stop and restart Sharing in the System Preferences application.

For more information on this topic, please see:

Article 106260: "**Mac OS X 10.0: Computer Does Not Appear on Network**"

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- **Last Modified:** Feb 19, 2012
- **Article:** TA28202

- **Views:**

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Languages

English

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ARCHIVE

Mac OS X 10.0: Does Not Label or Sort by Label

- **Last Modified:** September 18, 2003
- **Article:** TA28205

- **Old Article:** 106273

This article has been archived and is no longer updated by Apple.
You can select Label in View Options, but you cannot sort by Label or label items in the Mac OS X Finder.

Products Affected

Mac OS X 10.0

Symptom

1. Mac OS X offers Label in View Options but does not have a feature for applying labels to items.

2. If you select Label in View Options and try to sort by Label, the Mac OS X Finder does not recognize labels applied by Mac OS 9.x or earlier.

Solution

At this time, Mac OS X does not include a feature for applying labels.

If you try to sort by Label, the computer will actually sort by Name.

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Mac OS X 10.0: Theater Mode Extension May Prevent Use of Other Applications

Opening a Classic application that uses the Mac OS 9 Theater Mode extension (such as QuickTime Player 4.1.2) may interfere with the use of other Classic applications.
This article has been archived and is no longer updated by Apple.

Symptom

Other Classic applications do not open as expected after using a Classic application that calls on the Mac OS 9 Theater Mode extension. QuickTime Player 4.1.2 uses the Theater Mode extension.

Solution

Mac OS X 10.1 resolves this issue. Users of Mac OS X 10.0 to 10.0.4 can use the QuickTime 5 Player included with Mac OS X.

If the issue occurs with a different Classic application, disable the Theater Mode extension using the Extensions Manager control panel in Classic. You must then restart Classic.

Note: The Theater Mode extension is only present on computers that use it.
Last Modified: Feb 19, 2012

Additional Product Support Information

ARCHIVE

Darwin/QuickTime Streaming Server 3: System Requirements

- **Last Modified:** November 16, 2003
- **Article:** TA28214

- **Old Article:** 106314

This article has been archived and is no longer updated by Apple.
This article describes system requirements for QuickTime Streaming Server 3.

Products Affected

Mac OS X Server 10.3, QuickTime

QuickTime Streaming Server 3

QuickTime Streaming Server 3 requires Mac OS X Server 10.0.3 or later.

Apple does not provide technical support for running QuickTime Streaming Server 3 on Mac OS X Server 1.x.

For Mac OS X Server system requirements, please see technical document 106430: "**Mac OS X Server: System Requirements and Recommended AppleShare Client Software**"

Darwin Streaming Server 3

For Darwin Streaming Server 3 system requirements, please see:

Open Source Streaming Server
http://www.publicsource.apple.com/projects/streaming/

TA28214_DarwinQuickTime_Streaming_Server_3_System_Requirements.pdf

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Mac OS X: Computer Name Appears Multiple Times in Connect to Server Dialog

Under certain circumstances, a computer using Mac OS X 10.0 through 10.1.5 with file sharing turned on appears more than once in the Connect to Server dialog of another Mac OS X computer.
This article has been archived and is no longer updated by Apple.

Symptom

A computer's name appears more than once in the Connect to Server dialog (Figure 1).

Figure 1 Connect to Server dialog

The symptom occurs when the IP address of the sharing computer is changed. When it advertises itself with its new IP address, it does not remove the advertisement for the old IP address.

Solution

This issue is resolved in Mac OS X 10.2 and later. To work around the issue in earlier versions, you may delete "slp.regfile" on the sharing computer.

At the sharing computer, follow these steps:

1. Open the Terminal application.
2. Type: `sudo rm /var/slp.regfile`
3. Press Return.
4. Type the Admin user password and press Return.
5. Restart the computer.

This symptom will recur if the IP address changes. You may repeat these steps as needed.
Last Modified: Feb 19, 2012

Additional Product Support Information

Mac OS X Server 10.0: Full Distinguished Name Required for Authenticated LDAP Access

This article describes the required formatting needed for the "name" field when using authenticated access to an LDAPv2 server in the Directory Setup application.
This article has been archived and is no longer updated by Apple.
Directory Setup offers an option to "Use the name and password below," or authenticated access, when setting up LDAPv2. This option requires you to enter the full Distinguished Name.

To access this feature:

1. Open Directory Setup.
2. Select LDAPv2.
3. Click Configure.
4. Select a directory in Configure LDAPv2 window and click Edit, or click New.
5. Click the Access tab.

If you click the radio button to select "Use the name and password below," the name required is the full Distinguished Name appropriate for your directory. An example name, if you were using Windows 2000 for authentication, might be:

cn=Administrator, cn=Users, dc=bh212, dc=yourdomain, dc=com

Depending on your setup, these values will vary.
Last Modified: Feb 19, 2012

Additional Product Support Information

Mac OS X 10.0: Apple System Profiler "Update" Commands Do Not Work

- **Last Modified:** September 18, 2003
- **Article:** TA28247

- **Old Article:** 106402

Most Apple System Profiler menu commands are dimmed after using the "Update all information" or Update System Profile commands.

Products Affected

Mac OS X 10.0

Symptom

After choosing Update all information or Update System Profile from the Commands menu, all items in the File, Edit, and Commands menus are dimmed.

Solution

1. Choose Quit from the Apple System Profiler menu.
2. Reopen the application.

This issue may be avoided by updating to Mac OS X 10.1.

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ARCHIVE

AppleTalk Remote Access: Initiating a Telnet Session

- **Last Modified:** December 04, 1998
- **Article:** TA28248

- **Old Article:** 10642

This article has been archived and is no longer updated by Apple.
Can I use Telnet across AppleTalk Remote Access? Do I need MacTCP on both computers, and will dynamic addressing work?
Yes, Telnet sessions can be initiated from a remote Macintosh using AppleTalk Remote Access and MacTCP. MacTCP only needs to be on the remote Macintosh; the host Macintosh only acts as an AppleTalk bridge. MacTCP behaves as if it were on LocalTalk; dynamic addressing does work.

For more details, read the following article:
Tech Info Library Article 9638" "**AppleTalk Remote: Troubleshooting Inability to Reach TCP/IP Host**"
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Languages

- English
- 日本語

ARCHIVE

Mac OS X Server 1.0 to 1.2: System Requirements

- **Last Modified:** April 11, 2005
- **Article:** TA28250

- **Old Article:** 106430

This article has been archived and is no longer updated by Apple.
Use of Mac OS X Server requires computer hardware with the amounts of RAM and hard disk space described in this document. Other considerations, as noted, may apply to your setup.

Note: This document applies only to server versions 1.0 to 1.2v3. Information about versions 10.0.3 to 10.2.8 formerly located in this document has been moved to document **107685**.

Products Affected

Mac OS X Server 10.3, Mac OS X Server

Computers

This table lists computers that are compatible with Mac OS X Server by version.

Computer Model	Mac OS X Server Version		
	1.2v3 See Note 1	1.2	1.0 to 1.0-2
Power Macintosh G3 All-In-One	yes	yes	yes
Power Macintosh G3 Mini Tower	yes	yes	yes
Power Macintosh G3 Desktop	yes	yes	yes
Macintosh Server G3	yes	yes	yes
Power Macintosh G3 (Blue and White)	yes	yes	yes
Macintosh Server G3 (Blue and White)	yes	yes	yes
Power Mac G4 (PCI Graphics)	yes	yes	no
Power Mac G4 (AGP Graphics)	yes	yes	no
Power Mac G4 (Gigabit Ethernet)	yes	no	no
Power Mac G4 (Digital Audio)	no	no	no
Power Mac G4 (QuickSilver)	no	no	no
Power Mac G4 (QuickSilver 2002)	no	no	no
Macintosh Server G4 - See Note 2.	yes	yes	no
Power Mac G4 Cube (all models)	no	no	no
iMac (all models)	no	no	no
eMac (ATI Graphics)	no	no	no
eMac (original model)	yes	yes	no
iBook (all models)	no	no	no
PowerBook (all models)	no	no	no

Important: Only the computers explicitly marked "yes" meet the system requirements for Mac OS X Server. Apple provides technical support **only** for hardware-software combinations that appear on this list. You can use the **Apple Spec Database** to match your computer with its full model name, such as "Power Mac G4 (Gigbit Ethernet)." Mac OS X Server 1.x is not compatible with any computer released in or after January, 2001.

Notes

1. The ATTO UL3D SCSI card is not supported in Mac OS X Server 1.2v3.
2. This refers to Macintosh Server computers concurrent with or earlier than the latest Power Mac G4 hardware generation indicated for a particular version of Mac OS X Server, for example: "(AGP Graphics)" or "(QuickSilver)."

Use on Unsupported Computers

Because software developers sometimes must use older computers with developer releases or need to demonstrate their software using PowerBook computers, Apple has allowed for Mac OS X Server to be installed on certain unsupported computers. Services are only qualified for use on the supported computers listed above by version. If you use Mac OS X Server in an unsupported configuration in a production server environment, performance, reliability, and functionality may all be significantly degraded.

Memory (RAM)

The RAM amounts listed are the minimums required by each version of Mac OS X Server. More RAM may be required for certain services, to support a large number of clients, or for best performance.

Server Software	RAM Required
Mac OS X Server 1.0 to 1.0-2	64 MB
Mac OS X Server 1.2	64 MB
Mac OS X Server 1.2v3	64 MB

Hard disk space

The available disk space amounts listed are the minimums required by each version of Mac OS X Server. More available disk space may be required for certain services, to support a large number of clients, or for best performance.

Server Software	Available Hard Disk Space
Mac OS X Server 1.0 to 1.0-2	1 GB
Mac OS X Server 1.2	1 GB
Mac OS X Server 1.2v3	1 GB

Mac OS X Server 1.0 to 1.2v3: Limitations

Mac OS X Server versions 1.0 to 1.2v3 include the following limitations:

- The DVD drive may be used only with CD-ROM discs (no DVD-RAM).
- If starting up from a SCSI disk, Mac OS X Server can start up only from a disk connected to the first SCSI card.
- FireWire does not work.
- Software RAID does not work.
- Mac OS X Server can detect USB devices on only one of your computer's USB ports at a time. To use a USB mouse, connect it to your keyboard. When using a display that has an ADC (Apple Display Connector), connect your keyboard to USB port 1 on the computer. The USB ports on the display will not work. You cannot plug and unplug the keyboard or mouse while the computer is turned on.
- Mac OS X Server works only with built-in video and Apple-supplied video cards.

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Archived - Mac OS 9.2.1: Installs QuickTime 5, Which May Require a New QuickTime Pro Key

Mac OS 9.2.1 installs QuickTime 5. Earlier QuickTime Pro keys do not work with QuickTime 5.

Products Affected

Mac OS 9.2, QuickTime

This article has been archived and is no longer updated by Apple.
Symptom

Your QuickTime Pro key does not enable Pro features.

Solution

Your QuickTime Pro key was purchased too long ago to work with QuickTime 5.

To enable QuickTime Pro features:

- Purchase a new QuickTime Pro key from The Apple Store (http://www.apple.com/store/), or
- Reinstall QuickTime 4 and use your existing Pro key.

The Mac OS 9.2.1 installation includes QuickTime 5. Some earlier QuickTime Pro keys do not work with QuickTime 5 requiring that you either purchase a new QuickTime Pro key or reinstall QuickTime 4 for Pro features.

You should use QuickTime 5 with Mac OS 9.2.1 as Apple has tested the two together. However, you may reinstall QuickTime 4.1.2.

QuickTime Download area
http://www.apple.com/quicktime/download/support/

For more information, see technical document 31335: "**QuickTime 5: Not All Keys Enable Pro Features**"
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- **Last Modified:** Feb 19, 2012
- **Article:** TA28253

- **Views:**

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Languages

English

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Mac OS X 10.1, AppleWorks 6: Windows Appear Small or Off Screen

- **Last Modified:** September 17, 2003
- **Article:** TA28264

- **Old Article:** 106515

After updating to Mac OS 10.1, windows and palettes in AppleWorks 6 may appear either small or off screen.

Products Affected

AppleWorks, Mac OS X 10.0

Symptom

Windows and palettes in AppleWorks 6 are drawn either small or off screen.

Solution

Download and install AppleWorks 6.2.2 or later from Apple Software Downloads (http://www.apple.com/swupdates/).

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TA28264_Mac_OS_X_10-1_AppleWorks_6_Windows_Appear_Small_or_Off_Screen.pdf

ARCHIVE

Mac OS 9: USB Audio Skips When Copying Files to or From a Zip Disk

- **Last Modified:** November 15, 2003
- **Article:** TA28269

- **Old Article:** 106533

This article has been archived and is no longer updated by Apple.
USB audio may skip and stutter when copying files to or from a Zip disk.

Products Affected

Mac OS 9.0, Mac OS 9.1, Mac OS 9.2

Symptom

When copying files to or from a Zip drive on a computer with USB speakers, audio playback skips and stutters. The behavior is most apparent when the Finder Copy window is the active window.

Solution

- Use a USB Zip drive.

or

- Upgrading to Mac OS X resolves this issue.

The software driver for the Zip disk causes audio playback through USB speakers to skip. Iomega is aware of this issue and is investigating possible solutions for Mac OS 9 users of Zip devices.

You can minimize the behavior during file copies to and from the Zip drive by clicking in another window to make it active, instead of the Finder Copy window.

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System 7.1: PowerBook and Macintosh Portable Installer Scripts

Will system software version 7.1 include custom installer scripts for the entire Macintosh PowerBook series? Or, will we have a similar situation to the PowerBook 145 introduction that is discussed in article "PowerBook 145: Peculiarities With System Software Version 7.0.1"?

This article has been archived and is no longer updated by Apple.
System software version 7.1 will include custom installer scripts for these PowerBook and Portable products:

* Macintosh Portable
* Macintosh PowerBook 100
* Macintosh PowerBook 140/145
* Macintosh PowerBook 170

The new PowerBook products being introduced in fall 1992 each include an "Install Me First" disk (referred to as a "System Enabler") with system software version 7.1 installation disks.

This System Enabler disk includes minor changes to the system software shipped with the new product that are specific to that product.

See these related TIL articles for more details:

PowerBook 145: Peculiarities With System Software Version 7.0.1
System Software: "Install Me First" Disk and System Enablers

Support Information Services
Published Date: Feb 19, 2012

ARCHIVE

Mac OS X 10.1: Euro Appears in Different Locations on French and French-Numerical Keyboard Layouts

- **Last Modified:** September 18, 2003
- **Article:** TA28280

- **Old Article:** 106565

This article has been archived and is no longer updated by Apple.
The euro sign appears in different locations in the French and French-numerical keyboard layouts.

Products Affected

Mac OS 9.2, Mac OS X 10.1, Mac OS X 10.0

Symptom

The keyboard shortcut for the euro sign differs on the French and French-numerical keyboard layouts. On the French keyboard layout it is Option-$. On the French-numerical keyboard layout it is Shift-Option-R. The euro sign is printed on the keycap of the key with the dollar sign ($) on the French keyboard.

Solution

Apple is aware of this issue. This is the expected behavior for these versions of Mac OS X.

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Mac OS X 10.1.1: Desktop Area Underneath and Bordering the Dock is Reserved

- **Last Modified:** November 15, 2003
- **Article:** TA28283

- **Old Article:** 106587

Mac OS X 10.1.1 prevents desktop icons from being placed underneath or against the Dock. The reserved area depends on the size and location of the Dock.

Products Affected

Mac OS X 10.0

Symptom

Items cannot be placed under or against the Dock. Doing so results in the item(s) being relocated to a location other than that expected.

Solution

This is a feature of Mac OS X 10.1.1.

The reserved area corresponds to the size and location of the Dock. You can move or resize the Dock to change the reserved area. You can adjust the Dock in System Preferences.

For the most consistent experience, do not place items near the Dock.

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ARCHIVE

AirPort 2.0: How to Connect to a LEAP-Enabled Wireless Network

- **Last Modified:** November 14, 2003
- **Article:** TA28291

- **Old Article:** 106626

This article has been archived and is no longer updated by Apple.
With AirPort 2.0 software, you can connect to a LEAP-enabled wireless network as described in this document.

Products Affected

AirPort

AirPort 2.0 software works with LEAP (Lightweight Extensible Authentication Protocol), a client-side authentication protocol developed by Cisco.

AirPort-equipped clients using the AirPort 2.0 software may access 802.11 wireless networks that require LEAP for login.

To connect to a LEAP network:

You select a LEAP-enabled network as you would any other. The difference is in how you enter the password. When prompted for the password, enter the LEAP user name and LEAP password separated by a solidus (/), or "slash." Enclose this in angle brackets. For example, if your user name is "clarice" with a password of "secret," you would enter:

<clarice/secret>

Notes

1. The opening and closing angle brackets are required.
2. AirPort 2.0 works with both the Draft 8 and Draft 10 versions of Cisco LEAP.
3. AirPort software does not save your LEAP user name and password for future login.
4. You must reconnect to the network after restarting your computer or waking it from sleep.
5. To prevent confusion, do not use the LEAP password format on a non-LEAP network.
6. LEAP is a client-side authentication method designed to be used with third-party base stations only.

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TA28291_AirPort_2-0_How_to_Connect_to_a_LEAP-Enabled_Wireless_Network.pdf

ARA: Turn On AppleTalk in Chooser After Installing ARA

- **Last Modified:** December 20, 1999
- **Article:** TA28305

- **Old Article:** 10670

Upon initial installation of AppleTalk Remote Access (ARA), AppleTalk is turned off in the Chooser. When new users select ARA, they get a message saying that ARA wasn't correctly installed or is corrupted and they should re-install. Repeated installation efforts give the same results. The dialog is persistent whether it's a brand new installation or an existing (and previously working ARA) setup.

The real problem is that AppleTalk is turned off, and you must turn on AppleTalk in the Chooser for ARA to work at all.

Does Apple plan to change the dialog box to instruct users to turn AppleTalk on?
This problem will be fixed in the next release of AppleTalk Remote Access. The error dialog will say something about going into the Chooser and turning on AppleTalk.

Note: You can also use the Always AppleTalk software which is part of the PowerBook File Assistant collection of software. This allows a System 7.1 user to switch between AppleTalk being active and inactive without restarting the computer.

Cause of Incorrect Messages in Several Utilities

The problem is that the 7.0 Tune Up doesn't load enough of AppleTalk to let anyone know that AppleTalk is turned off. As a result, ARA and several other network utilities are unable to function, and display a false error message.

There is a way to tell whether AppleTalk can be turned on. The revised meaning of the Gestalt 'atkv' selector is that if the selector is present, it returns the "available" version of AppleTalk. If the selector isn't present, then AppleTalk isn't available.

Note: Tthis differs from the 'atlk' selector, which returns zero if AppleTalk is currently off, and the AppleTalk version if AppleTalk is currently on. But this only tells you the current state; it doesn't tell you if AppleTalk COULD be turned on in the Chooser without restarting.

AppleTalk Remote Access calls gestalt with the 'atkv' selector to make sure that the correct AppleTalk is installed. But, there is no 'atkv' selector because Tune Up prevented the AppleTalk boot code (which installs the selector) from running. ARA then complains that your software is incorrectly installed if the selector is not present. At the time ARA was released, this was the correct behavior. Since Tune Up has come along, the rules have changed. Now the lack of an 'atkv' selector means that AppleTalk can't be turned on without restarting.

Another aspect of the problem is that when the LAP manager loads, it checks PRAM to see if AppleTalk has been configured. If these bits in PRAM have never been configured or if PRAM has been "zapped," the LAP manager would believe that AppleTalk was turned off. If PRAM is zapped, then the AppleTalk status setting may be left in an indeterminate state. There was a change, beginning with AppleTalk 57 on how the setting in PRAM is interpreted:

AppleTalk Version <57 >=57

PRAM setting ON ON ON
PRAM setting indeterminate ON OFF
PRAM setting OFF OFF OFF

Therefore if you ever zapped PRAM, the AppleTalk status setting may have been left in an indeterminate state. AppleTalk Remote Access updates AppleTalk to version 57.0.1, and displays the "improperly installed" message because it determines that AppleTalk is turned off.

(PowerBook users don't know any of this. Their computers come with Tune Up pre-installed and AppleTalk off.)

Other utilities and applications will also suffer from the problem. The Network control panel, MacTCP, and DAL with Tune Up installed and AppleTalk off all suffer from the same problem and the user is presented with a similar "not installed correctly" message.

* MacTCP gives the error -43 (driver not installed).

* DAL will just not connect to any of its servers or the DAL installation checker will show no network adaptor (drivers) cards.

* The Apple Internet Router give the error message "The router software was damaged or incorrectly installed. Please re-install the router."

The Solution

AppleTalk version 57.0.4 fixes these problems for most cases.

* If PRAM is unconfigured, it no longer believes that AppleTalk is off, instead it believes it is on.

* The Network control panel now displays a more appropriate message telling users that AppleTalk is turned off instead of telling them that their software has been incorrectly installed.

* Future revisions of AppleTalk Remote Access and Apple Internet Router will have more meaningful error messages.

* In System 7.1 MacTCP, LAT, and DAL will load whether AppleTalk has been turned on or off.

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Archived - QuickTime Streaming Server: How to Bind QTSS to a Single IP Address on a Computer That Is Multihoming

You may edit the streamingserver.xml file to bind QuickTime Streaming Server to a single IP address on a Mac OS X computer that is multihoming.
This article has been archived and is no longer updated by Apple.
Follow these steps to bind QuickTime Streaming Server to a single IP address:

1. Stop the QuickTime Streaming Server process.
2. Locate the file "streamingserver.xml".
In QTSS 3: /etc/streaming/streamingserver.xml
In QTSS 4: /Library/QuickTimeStreaming/Config/streamingserver.xml
3. Open the file in TextEdit or another text editing application.
4. Find the following line: <PREF NAME="bind_ip_addr" >0</PREF>
5. Replace the 0 in this line with the IP address to which you would like to bind QuickTime Streaming Server. For example:
<PREF NAME="bind_ip_addr" >192.168.1.1</PREF>
6. Save the file.
7. Restart the computer.
8. Start the QuickTime Streaming Server process.

Last Modified: Feb 19, 2012

Additional Product Support Information

- QuickTime
- QuickTime
- Mac OS X Server 10.3
- Mac OS X Server 10.3

Archived - Mac OS X Server 10.0, 10.1: "5015 error" Alert Message When Saving Newly Created Users

This article has been archived and is no longer updated by Apple.

While editing or creating users in the Users and Groups module of Server Admin, an alert box with a "5015 error" message appears. This document explains how to resolve this issue.

Symptom

In the Server Admin application, an alert box with a "5015 error", "error of type 5015", or similar message appears.

Solution

This may occur if the "tim" value is out of synchronization with the "tim" database. Mac OS X Server uses the "tim" value during the authentication process when Windows file sharing users connect.

Warning: Resolution of this issue includes editing the NetInfo database. Be sure to follow the directions precisely. Incorrectly editing the NetInfo database may render the server software unusable, requiring that you reinstall or restore from backup.

Follow these steps to resolve this issue:

1. Open NetInfo Manager at the server (/Applications/Utilities).
2. Click the padlock to make changes, then authenticate using your Admin user name and password.
3. From the second Directory Browser column, select Users.
4. From the third Directory Browser column, select root.
5. Note that the root user's properties then become visible in the pane below.
6. Locate the property "tim_password", then double-click its value. This inserts the cursor into the value's text field.
7. Highlight the value text, then press the Delete key.
8. Press the Tab key.
9. Choose Save from the Domain menu.
10. When prompted to Confirm Modification, click "Update this copy".
11. Quit NetInfo Manager.
12. Open Server Admin.
13. Choose Show Users & Groups list from the Users & Groups module.
14. Select the checkbox for Show System Users & Groups.
15. Select the user named System Administrator.
16. Click Edit.
17. Enter a password for this user (see Note, below).
18. Click Save.

Note: These steps change the root password of the server. If the password you enter in Step 17 is different from the original password entered in Setup Assistant, the result is that the original Admin user and the root user have different passwords, which by default are the same on Mac OS X server. For more on the default behavior of the root and Admin passwords, and how it differs from Mac OS X client, see technical document 106361, "**Mac OS X 10.0, 10.1: Password Does Not Work As Expected After a Change**".

When hosting a NetInfo domain

If you are hosting a network domain, You may need to repeat these steps for the network domain. To access the network domain in NetInfo Manager, you would click Open Parent Domain at the beginning of Step 3. This button's icon is a blue globe with an arrow. In step 13, you would choose the desired domain from the Show Users and Groups List submenu.
Last Modified: Feb 19, 2012

Additional Product Support Information

Mac OS 9: Computer Stops Responding While Printing

- **Last Modified:** September 09, 2003
- **Article:** TA28343

- **Old Article:** 106914

This document discusses how to troubleshoot a printing issue that causes the computer to stop responding (a "hang" or "freeze") while printing.

Products Affected

Mac OS 9.2, Mac OS 9.1, Mac OS 9.0

Symptom

When you choose the Print command, or while printing, the computer stops responding.

Solution

The troubleshooting steps for a printing issue that occurs while printing are the same as those for a printer that will not print. You must be sure that the printer is connected correctly, does not have power issues, and has software that is compatible and properly installed. You may also need to perform other Mac OS troubleshooting, including hardware isolation. See technical document 106912, "**Mac OS 9: How to Troubleshoot a Printer**".

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Mac OS X 10.1.5: Time to Shut Down Increases When SCSI Drives Are Connected

- **Last Modified:** October 04, 2008
- **Article:** TA28353

- **Old Article:** 106954

This article has been archived and is no longer updated by Apple.
With Mac OS X 10.1.5, the time required to shut down the computer increases when SCSI drives are connected.

Products Affected

Mac OS X 10.0, Mac OS X 10.1

Each attached SCSI drive may increase the time required to shut down. The computer should shut down properly in a short time.

Note: This issue does not occur when logging out or restarting.

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Mac OS X 10.2: Address Book - Cannot Delete Person in Card Only View

You must switch to the Card and Column view to use the Delete Person command.

Products Affected

Mac OS X 10.2

This article has been archived and is no longer updated by Apple.

Symptom

The Delete Person command is dimmed if a card is opened in the Card Only view.

Solution

Follow these steps to delete the card:

1. Choose View > Card and Columns.
2. Select a different card in the Name column.
3. Reselect the card you wish to delete.
4. Choose View > Delete Person.

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- **Last Modified:** August 05, 2011
- **Article:** TA28356

- **Views:**

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- **Rating:**
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Languages

English

Mac OS X 10.2: Expected, User-Defined Windows (SMB) Computer Name Does Not Appear in Connect to Server Dialog

- **Last Modified:** September 09, 2003
- **Article:** TA28373

- **Old Article:** 107085

Because SMB (Windows File Sharing) prefers DNS service to the user-defined computer (host) name in Mac OS X 10.2 or later, you may not see the expected computer name.

Products Affected

Mac OS X 10.2, Mac OS X 10.0

Symptom

In the Connect to Server dialog, computers are listed with names that look like:

- dhcp192.168.10.12
- h2n1079p2

The name that you entered for the computer, such as "Melindas-Computer", does not appear.

Solution

If DNS reverse lookup is available on your network, computer names are derived from it when using the Connect To Server command to browse the network neighborhood (SMB workgroup). Your computer's DNS name is listed as the Network Address in the Sharing preference pane.

The format these names take depends on how your DNS administrator has set up the DNS naming structure. They may be generic port names or IP addresses, as in the examples above. Alternatively, they may be actual names similar to what you might choose for yourself, such as "melindas-computer.example.com". You may ask your DNS administrator to assign more desirable host names, rather than generic names.

TA28373_Mac_OS_X_10-2_Expected_User-Defined_Windows_(SMB)_Computer_Name_Doe

If DNS reverse lookup is not available for the sharing computers, Mac OS X will find the user-defined SMB workgroup name for the computer.

You cannot set Mac OS X 10.2 to prefer user-defined names to DNS names.

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TA28374_Mac_OS_X_10-2_(Japanese)_Cannot_Type_Japanese_Text_in_Address_Book.pdf

Archived - Mac OS X 10.2 (Japanese): Cannot Type Japanese Text in Address Book

The text typed in the Address Book may disappear when using the Kotoeri, ATOK, or EGBRIDGE input methods.
This article has been archived and is no longer updated by Apple.

Symptom

1. Kotoeri and EGBRIDGE: When you type a character in a text field and press delete to erase the character (or press Esc (Escape) to cancel text entry), the text field disappears.

2. ATOK: When you type Japanese text in the text field in Address Book and press Return to confirm, the text field, and all text you typed in the field disappears.

Solution

Update to Mac OS X 10.2.4 or later.
Last Modified: Feb 19, 2012

Additional Product Support Information

ARCHIVE

Mac OS X Server 10.2 (Japanese): Cannot Log in via Open Directory Assistant on Remote Computer

- **Last Modified:** September 17, 2003
- **Article:** TA28380

- **Old Article:** 107126

This article has been archived and is no longer updated by Apple.
To log in (authenticate) to the server via Open Directory Assistant on a remote computer that has Japanese as its preferred language, Japanese must also be the preferred language for the server during its initial configuration.

Products Affected

Mac OS X Server 10.3, Mac OS X 10.2

Symptom

If you open the Open Directory Assistant (ODA) application program on a remote client that has Japanese set as its preferred language, ODA cannot connect to the server.

Solution

When the preferred language of a remote computer that is used for administration is set to Japanese, the server must also have had Japanese selected during its initial configuration. Computers sold with Mac OS X Server preinstalled have English selected as the preferred language.

You may prevent or resolve this by changing the preferred language on the server to Japanese. If the server has a monitor and keyboard connected, you may use System Preferences at the server to change the language, then rerun the Server Assistant. You can do this from the affected remote computer by using the "languagesetup" command-line tool.

To perform these steps from a remote computer, follow these steps:

1. Start up the server.
2. Open Server Assistant.
3. Click Configure, then Continue.
4. Confirm the IP address of the server.
5. Open the Terminal (/Applications/Utilities/).
6. At the prompt, type: `ssh -l root <ip_address>`

Note: Where the example says "<ip address>", you would type the actual IP address of the server. An actual entry might look like:

```
ssh -l root 10.0.1.2
```

7. Press Return.
8. If prompted to create an RSA key, type "yes" and press Return.
9. Type: `languagesetup`
10. Press Return. You will be prompted to select a language.
11. Type: `2`
12. Press Return.
13. Type: `exit`
14. Press Return.
15. Quit Terminal.
16. Go back to Server Assistant, and continue configuring the server.

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Mac OS X Server: Memory Leak in Workgroup Manager

- **Last Modified:** November 05, 2003
- **Article:** TA28382

- **Old Article:** 107132

Workgroup Manager can use a growing amount of memory if left open for an extended period of time. This is sometimes called a "memory leak".

Products Affected

Mac OS X Server 10.3

Symptom

Workgroup Manager uses a growing amount of memory.

Solution

Do not leave Workgroup Manager open for an extended period of time (more than 48 hours). If you have left Workgroup Manager open for an extended period of time, quit and reopen Workgroup Manager.

Note: The effect of the memory leak can be lessened by setting the Auto-refresh value in Workgroup Manager Preferences to a higher value. The default is 300 seconds.

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Archived - Mac OS X: Availability of Microsoft Internet Explorer 5.2.2 Update

This document explains where to find Microsoft Internet Explorer 5.2.2 for Mac OS X 10.1.5 or later.
This article has been archived and is no longer updated by Apple.
For Mac OS X 10.2 or later, use the Software Update preference pane to download and install this update.

For Mac OS X 10.1.5, download the update from Microsoft (http://www.microsoft.com/mac/DOWNLOAD/IE/ie5_osx.asp) . Installation instructions are available at this location as well.

More information about this update is available at address above.

Information about products not manufactured by Apple is provided for information purposes only, and does not constitute Apple's recommendation or endorsement. Please contact the vendor for additional information.

You should seek additional support information from documents included with third-party software, from Web-based help at the software manufacturer's Web site, or by contacting the third-party's support personnel when applicable.

Document 17159: "**Locating Vendor Information**" can help you search for a particular vendor's address and phone number.
Last Modified: Feb 19, 2012

Additional Product Support Information

Languages

- English
- 日本語

Mac OS X Server 10.1: Web Server Access Log Shows IP Address of Server, Not of Clients

- **Last Modified:** September 17, 2003
- **Article:** TA28394

- **Old Article:** 107198

This document explains why the Web Server access logs may show the server's IP address instead of the clients', and explains how to resolve this.

Products Affected

Mac OS X Server 10.3

Symptom

When reading the access logs, you see the server's IP address instead of the clients'.

Solution

This issue is caused by the Performance Cache. When active, Performance Cache uses port 80 and passes requests to Apache on port 16080, which means that logging remote hosts logs the server's IP address. To turn the cache off, follow these steps:

1. Go to the Web Services configuration in the Server Admin.
2. Click the Sites tab.
3. Select your site, and then click Edit.
4. In the window that appears, deselect the checkbox for Enable Performance Cache.

For more information, see technical documents:

106407: "**Mac OS X Server 10: Web Service Uses Ports 80 and 16080 by Default**"
107017: "**Mac OS X Server 10.2: About the Web Service access_log Format**"
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Mac OS X Server 10.2: No Blank Image Option in Network Image Utility

- **Last Modified:** October 14, 2003
- **Article:** TA28404

- **Old Article:** 107305

The Mac OS X 10.2 Server Admin Guide makes reference to a feature that does not exist. There is no Blank Image option available in the Network Image Utility.

Products Affected

Mac OS X Server 10.3

Page 511 of the 10.2 Server Admin Guide makes reference to a feature that does not exist. There is no Blank Image option available in the Network Image Utility when creating a NetBoot or Network Install image.

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Mac OS X Server 10.2: Server Does Not Appear in List When Configuring Group Volumes

- **Last Modified:** October 14, 2003
- **Article:** TA28405

- **Old Article:** 107306

When configuring a Group Volume within Workgroup Manager, the server does not appear in the list to be selected.

Products Affected

Mac OS X Server 10.3

Symptom

When configuring the Group Volume feature in Workgroup Manager, the server does not appear in the list to be selected.

Solution

In Mac OS X Server 10.2.3 or later, configuration of Group Volumes/Directories has been improved to more clearly convey how to use this option. See technical document 107265, "**Mac OS X Server: About the Mac OS X Server 10.2.3 Update**".

For versions 10.2 to 10.2.2:

To make your server appear in this list, the /Groups share point must be configured for automatic connection. However, it is not necessary to select your server from the list. Instead, you may enter the DNS name or the IP Address for the appropriate server.

Note: Automatic connection (automounting) is not required to use Group Volumes and may not be the preferred option. If this is the case, manually enter the DNS name or the IP Address of the server in the "Server" field. The fully qualified domain name is not required, you may enter just the hostname.
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Mac OS X Managed Client: How to Differentiate Between a Group and a Workgroup

- **Last Modified:** September 15, 2003
- **Article:** TA28406

- **Old Article:** 107309

This document explains how to tell a "group" from a "workgroup."

Products Affected

Mac OS X Server 10.3

Page 128 of the 10.2 Server Admin Guide states:

> "When you define preferences for a group it is known as a workgroup. A workgroup provides you with a way to manage the working environment of group members."

This is important, since some features only work with workgroups. An example when logging in as a Mac OS X client is that users are only able to select workgroups for preference management; groups are not available for selection. This example is explained in technical document 107308, "**Mac OS X Server 10.2: Managed Clients Cannot Select a Workgroup While Logging In**".

Though a user logging in from a managed Mac OS X client can select only one workgroup at a time, that user can belong to multiple groups on the server for purposes of file system privileges or email use.

To determine whether a group is a workgroup or not, check each of the different managed preference options in Workgroup Manager. If any of the preference options are managed, it's a workgroup. If nothing is managed, it's a group.

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Mac OS X Server 10.2: Configuring as Authentication "Child" Does Not Stop Password Server

- **Last Modified:** October 14, 2003
- **Article:** TA28407

- **Old Article:** 107315

The configuration of Mac OS X Server as a "child" server that gets authentication information from a different "parent" server does not in itself stop the password service on the child server. The configuration in question occurs when you select password information option "obtained from another system" in Open Directory Assistant. This document explains how you should configure the server to get authentication information from another server.

Products Affected

Mac OS X Server 10.3

Symptom

Password service continues on your server after you configure it to authenticate to another (parent) server.

Solution

If you would like to change your configuration from being a password server to obtaining password information from another password server, follow these steps:

1. Open the Open Directory Assistant.
2. In the Security panel, select the option for password information to be "stored and accessed locally in user records."
3. Save this setting and restart the server.
4. Open the Open Directory Assistant.
5. Select the option for password information to be "obtained from another system."
6. Save this setting and restart the server.

After following these steps, the Password Server process should not be running on the original server.

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Mac OS X Server 10.2: Setup Assistant Does Not Recognize Certain Volume Names When Connecting Remotely

- **Last Modified:** September 09, 2003
- **Article:** TA28408

- **Old Article:** 107316

When connecting to a server remotely, Setup Assistant does not recognize volume names that contain an apostrophe, or that have a space at the end of the name.

Products Affected

Mac OS X Server 10.3

Symptom

Setup Assistant does not recognize your volume name.

Solution

Rename the affected volumes so that they do not contain an apostrophe or a trailing space.

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Mac OS X Server 10.2: Server Status Does Not Display All Status Items After Language Change

- **Last Modified:** September 09, 2003
- **Article:** TA28410

- **Old Article:** 107342

Server Status items may not be displayed completely after installing Mac OS X Server 10.2 in one language and subsequently changing the language setting in the International preference pane.

Products Affected

Mac OS X Server 10.3

Symptom

After connecting to a Mac OS X 10.2 server using the Server Status application, it is possible to experience incomplete or Status: "Not available".

Solution

This happens because the language for the list of servers in Server Status is only designated when the server is added. To resolve the issue:

1. Remove the server at issue from the list in Server Status.
2. Change the language in the International preference pane.
3. Add the server back into the Server Status list after changing the desired language.

Advanced alternative

1. Quit Server Status.
2. At the computer on which Server Status is being used, delete the file:

~/Library/Preferences/com.apple.ServerStatus.plist

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Mac OS X Server 10.2.3 or Later: Admin Tools Installation Requires Mac OS X 10.2.3 or Later Client

- **Last Modified:** September 09, 2003
- **Article:** TA28411

- **Old Article:** 107349

The Admin Tools installation CD for Mac OS X Server 10.2.3 or later will not install on Mac OS X Server. It checks the destination disk for the presence of the non-server (client) version of the Mac OS X 10.2.3 or later operating system. Installation on Mac OS X Server 10.2.3 or later requires the use of of the appropriate version of the Mac OS X Server Installation CD.

Products Affected

Mac OS X Server 10.3

Symptom

You cannot use the Admin Tools CD to install on the server. You see a message that "Mac OS X Client" or Mac OS X Server 10.2.3 is required for installation.

Solution

This installation will not occur if you try to reinstall the Admin Tools on a Mac OS X Server 10.2.3 or later volume. If you need to reinstall the Admin Tools on a Mac OS X Server 10.2.3 or later volume, use the Mac OS X Server 10.2.3 or later installation CD.

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Mac OS X 10.2.3 and Later: Some Window Buttons Lack Drop Shadow, Appear Countersunk

- **Last Modified:** September 09, 2003
- **Article:** TA28413

- **Old Article:** 107350

Applications with brushed-metal appearance themes may incorporate slight changes to the close (red), minimize (yellow), and maximize (green) buttons that you may use to manipulate windows. The buttons appear countersunk (rather than raised) and thus do not have drop shadows.

Products Affected

Mac OS X 10.2, Mac OS X 10.0, iChat, iSync, iCal

Symptom

The close, minimize, and maximize buttons in certain applications' windows have a new appearance. They appear countersunk (rather than raised) and thus lack drop shadows.

Solution

This is deliberate design change. Not all brushed-metal-themed applications will automatically inherit this change (such as iTunes). No troubleshooting is necessary.

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Mac OS X Server: How to Forward "Unknown" Mail to a Different User or Users

- **Last Modified:** September 17, 2003
- **Article:** TA28416

- **Old Article:** 107373

When the server receives mail addressed to unknown local users, it may be forwarded to a specified user or users. This document explains how to set that up.

Products Affected

Mac OS X Server 10.3

Mail service can be configured to forward mail addressed to unknown local users. To do so, follow these steps:

1. In Server Settings, click the Internet tab.
2. Choose Mail Service > Configure Mail Service.
3. Click the Messages tab.
4. Select the "Forward mail addressed to unknown local users" checkbox.
5. Add the short name of the user or group you wish to receive the mail (see Note).

Note: If you want multiple users to receive the forwarded mail, you must enter the name of a group to which they belong. If you do not already have a suitable group, use Workgroup Manager to create a group that contains these users.

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Mac OS X 10.2: OBEXAgent Unexpectedly Quits During Login

- **Last Modified:** September 09, 2003
- **Article:** TA28417

- **Old Article:** 107377

OBEXAgent may unexpectedly quit when logging into Mac OS X 10.2. This document explains how to resolve the issue.

Products Affected

Mac OS X 10.2, Mac OS X 10.0

Symptom

When starting up, restarting, or logging into Mac OS X 10.2, the file "OBEXAgent.crash.log" is created at ~/Logs/CrashReporter. It is displayed on the screen if Console is set to automatically display crash logs.

Solution

Drag this file to the Trash:

/Applications/Extras/Bluetooth/OBEXAgent

It is no longer needed in Mac OS X 10.2.

Alternately, you can also remove OBEXAgent from the Login Items pane of System Preferences.

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TA28417_Mac_OS_X_10-2_OBEXAgent_Unexpectedly_Quits_During_Login.pdf

Mac OS X Server: Cannot NetBoot From 10.2 Image When Client Has Only Internal SCSI Hard Drive(s)

- **Last Modified:** September 10, 2003
- **Article:** TA28420

- **Old Article:** 107384

If you try to NetBoot a computer that has only an internal SCSI hard drive (no ATA/IDE) from a Mac OS X 10.2 NetBoot image, the computer may shut down during the attempt.

Products Affected

Mac OS X Server 10.3, Mac OS X 10.2, Mac OS X 10.0

Symptom

A client computer that only has an internal SCSI hard disk drive installed cannot NetBoot. The computer may shutdown during the startup process.

Solution

Mac OS X Server 10.2 does not support NetBoot for clients that have only an internal SCSI hard disk drive. There are two alternative solutions you may consider:

1. Add an internal ATA hard disk drive to the computer, so that it may NetBoot, or,

2. Use Workgroup Manager instead. This provides Mac OS X client management features similar to those used in NetBoot, but while starting up from the internal drive.

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ARCHIVE

Mac OS X 10.2: Find by Content Returns 100 Results Maximum

- **Last Modified:** November 14, 2003
- **Article:** TA28425

- **Old Article:** 107413

This article has been archived and is no longer updated by Apple.
When using the "content includes" feature of the Find command, a maximum of the first 100 matches are displayed. (This refers to the Find command located in the File menu of the Finder.)

Products Affected

Mac OS X 10.2, Mac OS X 10.0

Symptom

A "content includes" search never returns more than 100 matches.

Solution

The results of a content search are limited to a maximum of 100 items. Other types of searches do not have this limit. To work around the issue try these techniques:

- Search again with more specific search terms. For example, instead of searching for "Apple" search for "Apple Computer".
- Search again in a more specific volume or folder. For example, choose"Specific places" instead of "Everywhere" and add your Documents folder into the "Specific Places" list.

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Apple Font Pack

- **Last Modified:** October 04, 2008
- **Article:** TA28426

- **Old Article:** 10742

This article has been archived and is no longer updated by Apple.
The Apple Font Pack, a retail software product, includes a selection of TrueType fonts from leading type vendors. The Apple Font Pack addresses the typographic needs of mainstream customers. It requires minimal system overhead, and makes fonts easy to use with one-click installation and a booklet to educate customers on how to effectively use type to create compelling documents. It is available through authorized resellers.

Contents

The Apple Font Pack contains:

* 25 new Apple fonts, all from leading type foundries. These are listed below.

* 18 of the fonts Apple has been shipping with the LaserWriter and StyleWriter printers.

* The Apple LaserWriter Driver and LaserWriter Font Utility software for using the fonts with Apple and third-party PostScript laser printers.

The Apple Font Pack, added to the 21 fonts that come with System 7, brings Apple's font offering for the Macintosh computer to 64.

Enhanced LaserWriter Printers

The 25 new fonts will also be added to the library of fonts included with Apple's network printers: the LaserWriter IIf, LaserWriter IIg, and Personal LaserWriter NTR. This boosts the font offering to 64 for customers using any Macintosh computer with these printers.

Compatibility and Configurations

The Apple Font Pack requires a Macintosh personal computer running System 7. The LaserWriter IIf, LaserWriter IIg, and Personal LaserWriter NTR printer font sets are compatible with Macintosh computers running System 6.0.7 or System 7. Once installed, the fonts are compatible with any Macintosh printer or output device, and with third-party printers.

The 25 New Apple Fonts
---
* AGFA Division of Miles, Inc.
Delphian
Nadianne
Nadianne Bold
Oxford

* Bigelow & Holmes, Inc.
Lucida Bright
Lucida Bright Bold
Lucida Bright Italic
Lucida Bright Bold Italic

* Bitstream, Inc. (all licensed to ITC)
ITC Garamond Narrow
ITC Garamond Narrow Bold
ITC Garamond Narrow Italic
ITC Garamond Narrow Bold Italic

* Font Bureau, Inc.
Zeal

* International Typeface Corporation
ITC Machine
ITC Lubalin Graph
ITC Lubalin Graph Bold
ITC Lubalin Graph Oblique
ITC Lubalin Graph Bold Oblique

* Linotype-Hell
Helvetica Black
Helvetica Black Oblique
Helvetica Compressed
Helvetica Compressed Oblique

* Monotype Typography
Old English
Swing Bold
Onyx

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Mac OS X: Unexpected Mouse or Keyboard Behavior While Classic is Starting

- **Last Modified:** September 17, 2003
- **Article:** TA28431

- **Old Article:** 107448

The Advanced section of the Classic preference pane allows you to select a key combination for use while Classic is starting. If a key combination is selected there, Classic will register the keys as being down until Classic is finished starting. This may cause unexpected behavior if another program needs keyboard input before Classic is finished starting.

Products Affected

Mac OS X 10.1, Mac OS X 10.0

Symptom

While Classic is starting, it stops at a MacsBug screen or seems to be ignoring keyboard input.

Solution

When Classic is starting, you may bypass the selected key combination by pressing and releasing each selected key. After the keys are manually pressed, Classic treats them as if they are no longer pressed.

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Mac OS X Server 10.2: NetBoot Does Not Work for Mac OS 9 Clients

- **Last Modified:** September 10, 2003
- **Article:** TA28441

- **Old Article:** 107504

Mac OS 9 NetBoot no longer works after installing the NetBoot software included with Mac OS X Server 10.2.

Products Affected

Mac OS X Server 10.3

Symptom

The NetBoot software installation is successful, but Mac OS 9 client computers cannot start up via NetBoot.

Solution

Restart the server. The Installer does not force the server to restart, but NetBoot will not work until the AppleFileServer process is restarted.

If the part number of the NetBoot installation CD is 0Z691-3990-A (printed on the CD), there is an additional issue in that the images are not installed with the proper type and creator. This CD is included with Xserve computers that included Mac OS X Server 10.2. Follow these additional steps to correct this issue:

1. Log in with the root account. If you need help with this step, see technical document 106290, "**Mac OS X: About the root User and How to Enable It**".
2. Open the Script Editor application (/Applications/AppleScript/).
3. Enter the following into the script window:

```
on open filelist

    repeat with x in filelist
```

```
        tell application "Finder"
            set file type of x to "dimg"
            set creator type of x to "ddsk"
        end tell
    end repeat
end open
```

4. Save the script as an application.
5. Navigate to:

/Library/NetBoot/NetBootSP0/MacOS92Default.nbi

6. Drag "NetBoot HD.img" and "Applications HD.img" onto the application created in step 4.
7. Delete all the client shadow files, if any. They are located at:

/Library/NetBoot/NetBootClients<X>

This is true for all Mac OS Extended format (HFS Plus) volumes, where "<X>" is a number.

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Archived - Mac OS X Server 10.2: Specify Protocol When Configuring a Group Folder

When configuring a Group Folder using the Advanced option, you must specify the protocol to be used.

Products Affected

Mac OS X Server 10.3

This article has been archived and is no longer updated by Apple.
When configuring a Group Folder using the Advanced option, you must specify the protocol to be used in the URL field. Apple Filing Protocol (AFP) is the preferred protocol to use.

For example, the following URL is incomplete:

server.example.com/Groups

This example is complete:

afp://server.example.com/Groups

Note: The full path the share point is required when configuring a Group Folder using the Advanced option. For more information, see technical document 107510, "**Mac OS X Server 10.2: Group Folders Require Full Path**".
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- **Last Modified:** Feb 19, 2012
- **Article:** TA28444

- **Views:**

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Languages

English

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Mac OS X Server 10.2: "dsimportexport" Imports But Does Not Export

- **Last Modified:** October 14, 2003
- **Article:** TA28452

- **Old Article:** 107528

The "dsimportexport" command does not have the ability to export data from a Directory Service database. It will import information as documented.

Products Affected

Mac OS X Server 10.3

Symptom

The Mac OS X Server Administrator Guide and help files state that the dsimportexport command will import and export data. In reality, it will only import.

Solution

Use Workgroup Manager to export information stored in Directory Service databases.

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TA28452_Mac_OS_X_Server_10-2_dsimportexport_Imports_But_Does_Not_Export.pdf

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Mac OS X 10.2.5: Files Unusable After Copy via AFP

- **Last Modified:** October 14, 2003
- **Article:** TA28455

- **Old Article:** 107541

Files written, cached, or explicitly saved by a Mac OS X 10.2.5 client to an Apple Filing Protocol (AFP) server may become unusable under certain circumstances. Update to Mac OS X 10.2.6 or later to prevent this issue.

Products Affected

Mac OS X 10.2

Symptom

Files written via AFP no longer work as expected.

Note: Examples of AFP connections are Apple File Service, Personal File Sharing, and AppleShare. Copies performed in the Mac OS X Finder are not likely to be affected.

Solution

Update to Mac OS X 10.2.6 or later.

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Mac OS X Server 10.2 or Later: How to Limit QuickTime Streaming to Selected IP Addresses

- **Last Modified:** September 10, 2003
- **Article:** TA28460
- **Old Article:** 107563

If your server has multiple IP addresses, you can limit QuickTime Streaming Server to a specific IP address or addresses.

Products Affected

Mac OS X Server 10.3, QuickTime

In the default configuration, QuickTime Streaming Server is available on all configured interfaces and IP addresses. A multi-port server would have QuickTime Streaming Server available to clients connecting to any interface. The server can be configured to serve from one or more specified IP addresses by using the "bind_ip_addr" property in the QuickTime Streaming Server configuration file. Follow these steps:

1. Open this file in a text editor: /Library/QuickTimeStreaming/Config/streamingserver.xml

Note: If you need help with this step, see technical document 106619, "**Mac OS X Server: How to Locate and Edit Configuration Files**".

2. Find the line:

```
<PREF NAME="bind_ip_addr" >0</PREF>
```

3. Edit the line to look like this:

```
<LIST-PREF NAME="bind_ip_addr" >
  <VALUE>10.1.1.1</VALUE>
  <VALUE>10.1.1.2</VALUE>
</LIST-PREF>
```

Note: You would replace the two IP addresses in the entry above with the two actual addresses that you wish to bind to. Use of two addresses is only an example. You could bind to more or fewer by adding or deleting an address line in the entry above. Do not include localhost (127.0.0.1) in this list, because DSS always binds to localhost by default, in addition to the listed IP addresses in the bind_ip_addr pref. Changes take effecrt when you restart the server.

You do not have to kill and restart the server if you make changes to the rtsp_port pref or the bind_ip_addr pref. The server will dynamically stop listening on old ports and IP address and start listening on the new ones if you send kill -HUP (SIGHUP). You must send kill using the root account, so you may use su or sudo. Example syntax would be:

```
sudo kill -HUP <pid>
```

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Archived - Mac OS X Managed Client: Simple Finder Requires Authentication to Access Group Folder

Accounts that are configured to use the Simple Finder see an authentication dialog when selecting the Group Folder.

Products Affected

Mac OS X Server 10.3

This article has been archived and is no longer updated by Apple.

Symptom

An Apple Filing Protocol (AFP) authentication dialog appears when selecting the Group Folder.

This happens to accounts that are configured to use the Simple Finder.

Solution

If you want the Group Folder to automatically appear at login, use the Finder instead of Simple Finder.

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- **Last Modified:** Feb 19, 2012
- **Article:** TA28461

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Mac OS X Server 10.2: NFS Export to Subnet Fails When Incorrect Addressing Is Used

- **Last Modified:** October 24, 2003
- **Article:** TA28484

- **Old Article:** 107677

After configuring an NFS export to subnets, clients will only be able to mount when the network administrator has implemented a proper address scheme for the clients. This includes assigning a proper subnet range of IP addresses and an appropriate subnet mask to the clients.

Products Affected

Mac OS X Server 10.3

Symptom

After configuring an NFS export to subnets, clients are unable to successfully mount them.

Solution

The network administrator must be sure the network's IP addressing scheme is designed and implemented correctly. Client computers must be assigned an address that is part of a proper subnet range, and be given a correct subnet mask.

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Macintosh IIvx: Displays Larger than 14 Inches

Why doesn't the Macintosh IIvx support monitors larger than 14 inches?
This article has been archived and is no longer updated by Apple.
The Macintosh IIvx (Performa 600) has internal video support for the 12-inch, 13-inch, 14-inch, and VGA (Video Graphics Array) displays. However, the internal video doesn't support monitors greater than 14 inches.

Macintosh IIvx video logic is based on the Macintosh LC II. Time to market urgency made major alterations of the Macintosh LC ASIC impossible.

Customers must purchase an appropriate NuBus Card such as the Macintosh Display Card 8*24 to drive their larger monitors.
Published Date: Feb 19, 2012

Mac OS X Server 10.2: Server Status Does Not Connect After Changing Language Preference

- **Last Modified:** October 24, 2003
- **Article:** TA28486

- **Old Article:** 107681

If you save your Server Status connections in a keychain, the saved connections may not work after changing the preferred language in International preferences (from Japanese to English, for example).

Products Affected

Mac OS X Server 10.3

Symptom

Server Status does not reconnect after changing the preferred language in International preferences.

Solution

Re-enter the connection information for each saved server.

Rate this article:

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- Helpful
- Very helpful
- Solved my problem

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Macintosh IIvx: Hardware and Software Compatibility

- **Last Modified:** October 04, 2008
- **Article:** TA28497

- **Old Article:** 10778

This article has been archived and is no longer updated by Apple.
This article lists hardware and software products that are compatible with the Macintosh IIvx.

Developer	Product	Versions
Abacus Concepts	SV4.0	4.0
Abacus Concepts	SV SE + Graphics	1.04
Abacus Concepts	MacSpin	3.01
Abacus Concepts	SuperAnova	1.11
Abacus Concepts	StatView II	1.04
Abacus Concepts	StatView Student	1.0
Adobe Systems Inc.	Adobe Type Manager	3.0
Adobe Systems Inc.	Type 1 Fonts	5.0
Adobe Systems Inc.	Premiere	1.0
Aladdin Systems, Inc.	StuffIt Lite	3.0.1
Aladdin Systems, Inc.	StuffIt Deluxe	3.0.1
Aladdin Systems, Inc.	StuffIt SpaceSaver	1.0.1
Aladdin Systems, Inc.	Popcorn	1.0.1
Aldus Consumer Div.	Gallery Effects/Classic Art Vol. 1	1.0
Aldus Consumer Div.	Personal Press(TM)	2.0
Aldus Corporation	PageMaker SRD	4.0
Aldus Corporation	Persuasion	2.1
Aldus Corporation	Freehand	3.1
Aldus Corporation	PageMaker	4.2a
Aldus Corporation	Persuasion SRD	2.0
Amtex Software Corp.	Tristan Pinball	1.04
Andrew Corp.	Boxer	
Andrew Corp.	NetAxcess	
Andrew Corp.	MacTwin	
Andrew Corp.	TokenAxcess	
Andrew Corp.	TwinAxcess Link	1.0607
Andyne Computing Limited	GQL	3.0
Articulate Systems	Voice Navigator II	2.2
Articulate Systems	Voice Navigator Software	2.3
Articulate Systems	Voice Record	2.1
Articulate Systems	Voice Impact	
Articulate Systems	Voice Impact Pro	
Ashlar Incorporated	Ashlar Vellum 3D	2.12
Attain Corporation	In Control	1.0/English
Attain Corporation	In Control	1.1/English
Attain Corporation	In Control	1.0/German
Avatar Corporation	MacMainFrame	5.0
Berkeley Systems	After Dark	2.0w
Brio Technology	Data Pivot	1.1

Brio Technology	Data Prism	1.8.1
Br┐derbund Software	Carmen, America's Past	1.0
Br┐derbund Software	Carmen, World Deluxe	1.0
Br┐derbund Software	Carmen, Europe	1.2
Br┐derbund Software	Carmen, USA	1.2
Br┐derbund Software	Carmen, World	1.3
Br┐derbund Software	Carmen, Time	1.2
Br┐derbund Software	Algebra	1.0
Br┐derbund Software	Kid Pix	1.2
Br┐derbund Software	Kid Pix Companion	1.0
Br┐derbund Software	Bannermania	1.1
Br┐derbund Software	Geometry	1.3
Br┐derbund Software	Patton Strikes Back	1.0
Br┐derbund Software	Spelunx	1.0
Br┐derbund Software	Spelunx	1.0
Br┐derbund Software	The Playroom	2.0
Br┐derbund Software	TypeStyler	2.01
Br┐derbund Software	Type	1.0
Br┐derbund Software	Just Grandma & Me CD-ROM	1.1
Caere Corporation	OmniPage Direct	1.0
Casady & Greene	Mission Thunderbolt	1.0.6
Casady & Greene	Glider	4.0.6
Casady & Greene	Crystal Quest	2.0.03
Casady & Greene	Pararena	2.0
Casady & Greene	Mission Starlight	1.1.6a
Casady & Greene	Sky Shadow	1.1.6
Chancery Software	MacSchool	3.1
Chancery Software	PrÄcis	1.0
Concentrix Technology	Connections	2.1
Contact Software	ACT	1.0B16
Corel Corporation	Corel Draw for Macintosh	1.0
Dantz Development Corp.	DiskFit Pro	1.1
Dantz Development Corp.	Retrospect	1.3
Dantz Development Corp.	Retrospect Remote	1.3
Dantz Development Corp.	DiskFit Pro/Kanji	1.0
Davidson & Associates	Kidworks 2	1.0
Davidson & Associates	Headline Harry	1.1
Daystar Digital, Inc.	Powercache	
Daystar Digital, Inc.	RAM Powercard	
Deneba Software	Canvas English, French, German, Swedish, Spanish, Italian, Japanese	3.04
Digital Comm.	IRMA Workstation for the Mac	2.1.1
Digital Comm.	IRMALAN Client for the Macintosh	2.1.1
Digital Comm.	IRMA Graphics for the Macintosh	2.1.0
Digital Comm.	MacIRMA	2.1.2
DiVA Corporation	DiVA VideoShop	1.0
Drew Pictures	Iron Helix	1.0
E-Machines	E-Machines Control Panel	3.51
E-Machines	E-Machines Ethernet driver	1.2
E-Machines	E-Machines Ethernet driver	1.1
EduCorp	Educorp	7.0
EduCorp	Educorp CD Sampler	2.0
EduCorp	Digital Video Library	1.0
EduCorp	Africa Wildlife	
EduCorp	Sound F/X	
EduCorp	World Travel v.1	
EduCorp	USA Travel	
EduCorp	Aquatic Art	
EduCorp	DTP	2.0
EduCorp	Swimsuit	
EduCorp	Graphic Designs	
EduCorp	Olivid	3.0
EduCorp	People Business	
EduCorp	Antique Toys	
EduCorp	Donatelli Portfolio	

EduCorp	Heavenly Bodies v.1	
EduCorp	People at Leisure	
EduCorp	Heavenly Bodies v.2	
EduCorp	Mister X	
EduCorp	International Graphic Library	
EduCorp	Spaceship Warlock	
EduCorp	Encyclopedia of Living World	
EFI	Cachet	1.0.1
EnerAnalytics	Mirror Quick!	1.0
Farallon Computing	NetAtlas	1.1A7
Farallon Computing	TrafficWatch	1.0A9
Farallon Computing	CheckNet	2.0
Farallon Computing	NetStats	1.0
Farallon Computing	LWStats	1.03
Farallon Computing	NodeHint	1.03
Farallon Computing	StarCommand	3.1
Farallon Computing	Liaison	3.0.4
Farallon Computing	TB2	4.0.3
Farallon Computing	TB2/Japanese	4.0.3
Farallon Computing	TB2 Remote	3.
Farallon Computing	Kanji TB2	4.0.3
Frame Technology Corporation	FrameMaker	3.0
FTL Games	OIDS	1.3
Great Plains Software	Great Plains Accounting	6.1
Great Plains Software	Great Plains Accounting Client Server	6.1
Grolier Electronic Publishing	New Grolier Multimedia Encyclopedia	4.od84
Gryphon Software	Morph	1.0
Gryphon Software	Morph	1.0.1
Gryphon Software	Morph	1.1
Hayes Microcomputer Products	SmartCom for the Mac	1.0B
Hayes Microcomputer Products	HayesConnect	3.0C
Hayes Microcomputer Products.	SmartCom II for the Mac	3.4A
HyperGlot Software	Berlitz Think and Talk French	1.0
HyperGlot Software	Berlitz Think and Talk German	1.0
HyperGlot Software	Berlitz Think and Talk Spanish	1.0
HyperGlot Software	Berlitz Think and Talk Italian	1.0
HyperGlot Software	Learn to Speak French	1.0
HyperGlot Software	Learn to Speak Spanish	1.0
HyperGlot Software	Learn to Speak English from Spanish	1.0
HyperGlot Software	Learn to Speak English from French	1.0
HyperGlot Software	Learn to Speak English from Japanese	1.1
HyperGlot Software	Learn to Speak English from Italian	1.0
HyperGlot Software	Learn to Speak English from Portugese	1.0
HyperGlot Software	Learn to Speak English from English	1.1
Image Club Graphics, Inc	ArtRoom CD ROM	5.0
Image Club Graphics, Inc	DarkRoom CD ROM	1.0
Image Club Graphics, Inc	Art & Type Vendor CD ROM	1.6
Image Club Graphics, Inc	LetterPress CD ROM	2.0
Image Club Graphics, Inc	Evolution	2.0.2
Image Club Graphics, Inc	Typeface Library	
Image Club Graphics, Inc	DigitArt	
Image Club Graphics, Inc	CG Interactive	1.0
Imagine That, Inc.	Extend	2.0
In-Line Design	Darwin's Dilemma 2.0	2.01
In-Line Design	Tesserae	1.04
In-Line Design	3 in Three	1.2
In-Line Design	Swamp Gas-USA	1.02
In-Line Design	Mutant Beach	1.02
In-Line Design	Tesserae/Italian	1.04
In-Line Design	Tesserae/French	1.04
Insignia Solutions	Universal SoftPC	2.52
Interactive Media Corp.	Media Cataloger	1.0
Interactive Media Corp.	Special Delivery	1.0
Kurta Corporation	Penworks ADB	7.0.1
Kurta Corporation	Xactaline	1.0.1

Language Systems	FORTRAN	3.0.1
Language Systems	Soft Polish	1.1
Lapis Technology	Display Server	
Lapis Technology	Color Server 16-16	
Lapis Technology	Color Server 21	
Lotus Development Corporation	Lotus 1-2-3	1.1
LucasArts	Monkey Island	1.0
LucasArts	Loom	1.0
LucasArts	Pipe Dream	1.0
LucasArts	Indiana Jones 3	1.0
MacroMedia	SoundEdit Pro/French	1.0
MacroMedia	SoundEdit Pro	1.0
MacroMedia	Director	3.1
MacroMedia	ClipMedia	
MacroMedia	ModelShop II	1.2
MacroMedia	Swivel 3D Pro	2.0.4
MacroMedia	Life Forms	1.0.1
MacroMedia	SoundEdit Pro/German	1.0
MacroMedia	Authorware Professional	1.7.1
Maxis	SimLife	0.92
Maxis	SimAnt	1.0
Maxis	RoboSport	1.0
Maxis	SimEarth	1.0
Maxis	SimCity	1.4
MicroNet	MicroNet SCSI Utility	5.3.6
Microsoft	Microsoft Project	3.0
Microsoft	Microsoft Excel	4.0
Microsoft	Microsoft Word	4.0
Microsoft	Microsoft Word	5.0
MicroTech Int, Inc.	Nova Hard Drive	
MicroTech Int, Inc.	Europa Hard drive	
MicroTech Int, Inc.	HD Formatter	3.59
MicroTech Int, Inc.	Europa Formatter	3.59
Mitem	MitemView 3.0	3.0.1
MotionWorks	ProMotion	1.0.2
MotionWorks	ADDMotion II	2.0
MotionWorks	PrimeTime	1.0
Mountain Lake Software	MakeTest	2.0b17
MySoftware Company	MyDataBase	2.1.4
MySoftware Company	MyMail List	3.0
MySoftware Company	MyLabel Designer	1.0
Neon Software, Inc.	NetMinder Ethernet	2.2B
Nisus Software Inc.	Nisus XS	3.11
Nisus Software Inc.	Qued/M	2.5
Nisus Software Inc.	Nisus Compact	3.3
Nisus Software Inc.	Nisus	3.06
Nisus Software Inc.	Nisus International/Arabic	3.5
Nisus Software Inc.	Nisus International/Czech	3.5
Nisus Software Inc.	Nisus International/Hebrew	3.5
Nisus Software Inc.	Nisus International/Hungarian	3.5
Nisus Software Inc.	Nisus International/Polish	3.5
Nisus Software Inc.	Nisus International/Russian	3.5
Nisus Software Inc.	Nisus International/Finnish	3.5
Nisus Software Inc.	Nisus International/Japanese	3.5
Nisus Software Inc.	Nisus International/Korean	3.5
No Hands Software	Magnet	1.0re1
Opcode Systems	AudioShop	1.03
Passport Designs	Alchemy	2.5.2
Passport Designs	Audio Trax	1.0.1
Passport Designs	Encore	2.5.2
Passport Designs	Encore/Japanese	2.5.2
Passport Designs	Midi Player	1.0.1
Passport Designs	Music Time	1.0
Passport Designs	Master Tracks Pro 5	5.0.2
Passport Designs	Trax	2.2

PLI	PLI Formater on PL240Tybo	
Portfolio Systems	Dynodex	3.0
Power Up! Software	Address Book Plus	2.0.1
Power Up! Software	Calendar Creator	1.0.1
Power Up! Software	Fast Forms	2.0
Power Up! Software	Letter Writer Plus	1.0.2
RasterOps	24 STV	
RasterOps	24 XLTV	
RasterOps	24 MxTV	
RasterOps	MediaTime	
RasterOps	24 XLi	
RasterOps	Graphic System software	1.66
RasterOps	Accelerator	3.0
RasterOps	Accelerator	2.93
Ray Dream Inc.	Add Depth	1.0
S.S.A.	Panzer Battles	1.3.3
S.S.A.	Halls of Montezuma	1.3.3
S.S.A.	Rommel	1.3.3
Satori Software	Components General Ledger	1.02
Satori Software	Components Accounts Receivable	1.04
Satori Software	Components Accounts Payable	1.04
Satori Software	Comp. Accts Job Cost Time Billing	1.04
Scholastic Software	Bank Street Writer	1.0.5
Scholastic Software	SuperPrint	1.1
Scholastic Software	SuperPrint Bilingual Ed. English, Spanish	1.1
Scholastic Software	Operation Frog	1.0
Scholastic Software	Point of View	2.0
Shana Corporation	Informed Designer	1.3
Shana Corporation	Informed Manager	1.3
Shana Corporation	Informed Number Server	1.0.1
Shana Corporation	Informed Revision Distributor	1.0
Shana Corporation	Informed Autoform	1.2.2
Sun Select (Formerly Sitka)	MacTOPS	3.1.1
Softsync/BLOC Publishing	Accountant Inc (multiuser)	3.5b1
Softsync/BLOC Publishing	Accountant Inc	3.0.1
Softsync/BLOC Publishing	Accountant Inc.(multiuser)	3.5b2
Spectrum Holobyte	SuperTetris B & W	1.0
Spectrum Holobyte	Faces B & W	1.0
Spectrum Holobyte	Faces Color	1.0
SSI	Dark Queen	
Storm Technology	PictureDecomPress	2.0.4
Storm Technology	PicturePress	2.0.4
Symmetry Software	Mariah	1.1.3
Symmetry Software	Acta 7	1.0.3
Systat, Inc.	Systat	5.2.1
Systat, Inc.	Systat FPU	5.2.1
T/Maker	Writenow	3.0
Team Building Technologies	Agent DA	2.1
Team Building Technologies	Agent DA/French	2.1
The Voyager Company	A Silly Noise	1.0
The Voyager Company	A World Alive	1.0
The Voyager Company	Amanda Stories	1.0
The Voyager Company	Baseball's Greatest Hits	1.0
The Voyager Company	Beethoven:Symphony No 9, CD Companion	2.0
The Voyager Company	Mozart: The "Dissonant" Quartet, CD Companion	1.0
The Voyager Company	Shubert: "The Trout Quintet", CD Companion	1.0
The Voyager Company	Stravinsky: The Rite of Spring, CD Companion	1.0.2
The Voyager Company	Eadweard Muybridge: A Videodisc Companion	1.0
The Voyager Company	Expanded Books	1.2.3
The Voyager Company	Exotic Japan	1.0

The Voyager Company	I Photograph to Remember	1.0
The Voyager Company	Louvre Vol. 1:Painting and Drawing: A Videodisc Companion	1.0.2
The Voyager Company	Louvre Vol. 2:Sculpture and Objets d'Art: A Videodisc Companion	1.0
The Voyager Company	Louvre Vol.3: Antiquities: A Videodisc Companion	1.0
The Voyager Company	Louvre Compendium	1.0
The Voyager Company	Orsay Museum: A Videodisc Companion	1.0
The Voyager Company	Last Chance to See	1.0
The Voyager Company	You Can't Get There From Here	1.0
The Voyager Company	Poetry in Motion	1.0
The Voyager Company	I Photograph to Remember/Spanish	1.0
The Voyager Company	To New Horizons	1.0
The Voyager Company	Michelangelo: Self-Portrait: A Videodisc Companion	1.0
The Voyager Company	The National Gallery of Art: A Videodisc Companion	2.0
The Voyager Company	Regard for the Planet: A Videodisc Companion	1.0
The Voyager Company	Salamandre: A Videodisc Companion	1.0
The Voyager Company	Van Gogh Revisited: A Videodisc Companion	2.0
The Voyager Company	Videodisc Accessory Series	1.4
The Voyager Company	Voyager VideoStack	2.2
The Voyager Company	Voyager CD AudioStack	1.2
The Voyager Company	Voyager Expanded Book Toolkit	1.0
Trans Par Software	TurboWriter-TC	2.0
Vividus	Cinemation	1.0
Wings for learning	Explorer: Waves	1.2
Wings for learning	Explorer: Electro Dynamics	1.2
Wings for learning	Explorer: Ripple Tank	1.2
Wings for learning	Learn About Animals	1.0
Wings for learning	Blockers & Finders	1.0
Wings for learning	Story Book Theatre	1.0.2
Wings for learning	MediaText	1.2
Wings for learning	Field Trip into the Sea	1.2
Wings for learning	1-2-3 Sequence Me	1.0
Wings for learning	Memory Building Blocks	1.0
Wings for learning	GroupWRITER	1.0
Wings for learning	Geometric Support: Triangles	1.0
Wings for learning	Geometric Support: Quadrilaterals	1.0
Wings for learning	Hot Dog Stand	1.0
Wings for learning	Muppets on Stage	1.0
Wings for learning	Data Models	1.0
Wings for learning	Statistics Workshop	1.0
Wolfram Research	Mathematica Enhanced	2.1
Wolfram Research	Mathematica Standard	2.1

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Languages

ARCHIVE

MacTCP 1.1: Internet Address Range 192.0.0.rrr Reserved

- **Last Modified:** October 04, 2008
- **Article:** TA28508

- **Old Article:** 10794

This article has been archived and is no longer updated by Apple.

I have a problem with MacTCP 1.1 and applications based on MacTCP, such as NCSA Telnet 2.5 and Oracle for Macintosh OS.

My network number was 192.0.0.rrr; that's the default class C network in MacTCP. Changing the network number made everything work properly.
This isn't a bug. According to RFC 1166 (page 47), internet addresses in the range 192.0.0.rrr are reserved. MacTCP knows this, doesn't allow this address to be used, and issues a "bad ip or LAP configuration error" (error id = -23001).

Addresses in the range 192.0.0.rrr are valid, but they are reserved.

MacTCP, MacTCP 1.1.1 inclusive, does have a problem in that it doesn't allow the use of internet addresses in the range 192.0.1.rrr. We have reported this problem to the MacTCP engineering team.

For a complete list of assigned and reserved internet addresses, please see pages 7 through 100 of RFC 1166.

Rate this article:

- Not helpful
- Somewhat helpful
- Helpful
- Very helpful
- Solved my problem

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iLife '04 updates you need for iTunes 4.7.1 or QuickTime 6.5.2

- **Last Modified:** June 29, 2007
- **Article:** TA28511

- **Old Article:** 107969

After upgrading to iTunes 4.7.1, you will need QuickTime 6.5.2 to use iTunes Store content outside of iTunes. iLife '04 applications also need to be updated to the versions listed below or later.

Products Affected

iMovie, iPhoto, GarageBand, iDVD, iTunes

If you have iLife '05, then these updates aren't necessary. Check Software Update to see if there are any updates available for iLife '05 applications.

iTunes 7.x is now available and requires QuickTime 6.5.2 or later.

To be sure you can use all iLife applications and features, simply update your QuickTime software and all iLife applications to these versions or later:

iDVD 4.0.1
http://www.apple.com/support/downloads/idvd401.html

iMovie 4.0.1
http://www.apple.com/support/downloads/imovie401.html

iPhoto 4.0.3
http://www.apple.com/support/downloads/iphoto.html

iTunes 4.7.1
http://www.apple.com/itunes/download

Note: Updates to these applications are offered at no charge for iLife '04 licensees.

Rate this article:

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Apple File Exchange and Macintosh PC Exchange: A Comparison

- **Last Modified:** November 04, 1992
- **Article:** TA28512

- **Old Article:** 10797

This article provides an overview of Apple File Exchange and Macintosh PC Exchange, and compares the two products.

Apple File Exchange Overview

Apple File Exchange is a file translation utility that converts a file from one format to another. For example, Apple File Exchange can take a DOS-formatted file and translate it to a Macintosh format. The file can then be opened by Macintosh applications designed to read the format into which the file has been translated.

Macintosh PC Exchange Overview

Macintosh PC Exchange is a software product that lets Macintosh computers, running System 7 and equipped with an Apple SuperDrive or a third-party 5.25-inch MS-DOS-compatible disk drive, easily read, write, and format DOS disks. DOS files appear on the Macintosh desktop just like Macintosh documents, and can be opened, saved, renamed, moved, copied, or deleted. The DOS file format is in no way altered by Macintosh PC Exchange. The application that you specify to open a DOS file must be able to read that DOS file format.

Apple File Exchange and Macintosh PC Exchange: A Comparison

Macintosh PC Exchange is an easier and more intuitive method for opening DOS-format disks. Macintosh PC Exchange also lets the Finder handle DOS files in the same manner as Macintosh files. The main differences between Macintosh PC Exchange and Apple File Exchange are:

* Macintosh PC Exchange is activated when you start up your Macintosh and automatically recognizes a DOS-format disk when it's inserted in an Apple SuperDrive. Apple File Exchange is a separate utility that must be manually launched every time you want to read a DOS disk.

* Macintosh PC Exchange lets you manipulate DOS files in the Finder, just like other Macintosh documents. It also lets you pre-assign the application to open when you double-click a DOS file. Apple File Exchange cannot automatically launch an application when a DOS file is double-clicked.

* Apple File Exchange comes with three special translator files that let you translate documents between Macintosh and DOS file formats. Macintosh PC Exchange doesn't contain any document translation capabilities.

Rate this article:

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- Solved my problem

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iPod mini: Conflicting "do not disconnect" and "connect" messages during a software update

Products Affected

iPod, iPod mini

This article has been archived and is no longer updated by Apple.

Under certain circumstances, you may see the "do not disconnect" screen on your iPod mini, while the updater application on your computer is telling you to connect the iPod mini to AC power to complete the upgrade process.

This can happen in this situation:

- The iPod mini already has iPod software 1.1 installed.
- It is connected to a Windows PC via USB.
- You try to restore it with the same 1.1 software, which is included in iPod Updater 2004-04-28.

The solution is to disconnect the USB and connect to AC power to complete the upgrade process. (The message on the iPod mini is incorrect.)

Related documents
93492 "iPod: How to Safely Disconnect"

Rate this article:

- Not helpful
- Somewhat helpful
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- **Last Modified:** February 19, 2012
- **Article:** TA28513

- **Views:**

  8313

- **Rating:**
  - 2.0/5 Stars

  (1 Responses)

Languages

English

Apple IIe Card: Requires SW Ver. 2.2.1 with System 7.1 (7/94)

If I upgrade my Macintosh LC II with an Apple IIe Card to System 7.1, what version of software do I need for the Apple IIe Card?

This article has been archived and is no longer updated by Apple.
To use the Apple IIe Card on a Macintosh LC II, Macintosh LC III, or Performa 400 series running System 7.1 or System 7.1P, you need version 2.2.1 of the Apple IIe Card software. You should upgrade to version 2.2.1 ONLY if you are using System 7.1.

Any error listed "Error Type 1" through an "Error Type 4", an error 10019, a "defective card error", and/or a partial screen in the IIe mode are indicators of the incorrect version of the IIe Card software.

You can purchase a software upgrade kit to upgrade older Apple IIe card software.

Note

You can use the Apple IIe Card software version 2.2 with the original Macintosh LC, but it's not required.

Article Change History:
06 Jul 1994 - Reviewed for technical accuracy.
23 Nov 1993 - Revised to add current version of software.
12 Jul 1993 - Revised to add Macintosh Performa 400 series.

Published Date: Feb 19, 2012

System 7.1: Use MacTCP 1.1.1 or Later

- **Last Modified:** May 23, 2001
- **Article:** TA28530

- **Old Article:** 10810

I upgraded from System 7.0 to 7.1. Virtual memory worked fine in the past. But now, after enabling Virtual Memory, the system bombs on restart with an error message that the System File is damaged, and to use the Installer to fix it. Reinstalling doesn't help, but turning Virtual Memory off lets the system boot normally.

The Read Me file with System 7.1 says that I must upgrade to MacTCP 1.1.1. How do I get MacTCP 1.1.1?
The system file isn't really damaged. MacTCP 1.1 will cause this message to appear if it's installed. MacTCP isn't fully compatible with System 7.1, and you should upgrade to version 1.1.1 or later.

If you have MacTCP 1.1 or earlier installed on your Macintosh, remove it from your System Folder before you upgrade to System 7.1. The system will crash when you start up if you don't do this.

Which Version of MacTCP should I use?

Both MacTCP 1.1.1 and later are compatible with System 7.1.

MacTCP 1.1.1 and later versions offer better support for larger "Hosts" files and for extension products, such as:

* AppleTalk Remote Access (ARA)
* Serial Line IP (SLIP)
* Point-to-Point Protocol drivers (PPP)

As of November 1993, the current version of MacTCP is 2.0.4.

Changes to the Distribution and Update Process

With the release of MacTCP 1.1.1 and later versions, there are some changes in the distribution and update process. Depending on how you obtained earlier versions, the method of obtaining new versions varies:

* Current MacTCP site license users receive the MacTCP 1.1.1 update free of charge. Developers with MacTCP commercial distribution licenses and customers with MacTCP internal use licenses have been sent updates. Developers or customers with these licenses, who haven't yet received their update, should contact Apple Software Licensing.

* Purchasers of the single user license of MacTCP 1.1 from APDA can obtain the MacTCP Developer Upgrade Kit (R0446LL/A) for a fee from APDA. The upgrade kit is only for MacTCP 1.1 customers who don't presently have a MacTCP commercial distribution license or internal site license.

* Customers who received MacTCP as part of MacX will be updated through MacX 1.2 update programs. You can order the MacX 1.2 update see your local dealer. This upgrade is for MacX 1.0, 1.1, or 1.1.7 and A/UX customers. Proof of purchase is required.

* MacTCP 2.0.2 is available on the price list as TCP/IP Connection for the Macintosh, or TCP/IP Administration for the Macintosh.

* MacTCP 2.0.4 is an update in a patch to update MacTCP 2.0.2.

* Purchasers of a commercial retail product that included MacTCP should contact the product's developer for details of any updates they may offer.

To locate a vendor's address and phone numbers, use the vendor name as a search string.

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System 6.0.8L: ReadMe File (8/95)

System 6.0.8L was a limited maintenance release of system software for markets in Apple Pacific. It was engineered to address some special needs for those markets that did not have access to System 7 at the time.

The following is the Read Me file included with the software.

This article has been archived and is no longer updated by Apple.
UPDATE

SYSTEM SOFTWARE VERSION 6.0.8L

For the Macintosh Classic II and Macintosh PowerBook 100

What is version 6.0.8L?

System software version 6.0.8L allows you to use System 6 on your computer while sharing a network with System 7 users. As the L in the version number indicates, this software runs on a limited number of computers. It is primarily intended for the Macintosh Classic II and Macintosh PowerBook 100. However, it also runs on the Macintosh Classic, Macintosh LC, and Macintosh LC II. System software version 6.0.8L does not work on any other Macintosh computers.

Before you install version 6.0.8L

Before using the Installer program to install system software version 6.0.8L, be sure to remove any virus detection or security programs from your System Folder. After you have installed version 6.0.8L, you can reinstall those programs. If you are running system software version 7.0 or later on your computer, you should start up your computer using the 6.0.8L System Startup floppy disk and remove the System 7 System Folder from your hard disk before installing version 6.0.8L on your hard disk.

If you install a version earlier than 6.0.8L

If, after having installed version 6.0.8L on your hard disk, you decide to install an earlier version of system software, you must first remove the version 6.0.8L System Folder from your hard disk.

Sharing a LaserWriter on a network

If you upgrade to system software version 6.0.8L and you are on a network of shared LaserWriter printers, everyone on your network should upgrade to version 6.0.8 or 6.0.8L, or to System 7. If someone prefers not to upgrade their system software, they should at least install the new printing software using the Customize option in the Installer program found on the 6.0.8L System Startup disk. If someone prints on a network with a version of printing software earlier than 6.0.8, the printer must stop and "initialize" for that earlier version each time it's used. This slows down the printing process for everyone.

Using a Personal LaserWriter LS

In order to print with a Personal LaserWriter LS, you will need to upgrade your Personal LaserWriter LS driver to version 7.1.1 or greater. To obtain an upgrade for this driver, call the toll-free Apple software upgrade line, 800-947-5176, or pick up a mail-in upgrade coupon from your Apple dealer.

Using a LaserWriter IIsc

The Personal LaserWriter SC printing software replaces the earlier LaserWriter IIsc software. When you upgrade your system software to version 6.0.8L, the Installer automatically replaces the LaserWriter IIsc software with the Personal LaserWriter SC software. The new software works with both the Personal LaserWriter SC and the LaserWriter IIsc.

Differences between System 6 and System 7

A number of things in system software version 6.0.8L work differently than they do in System 7. Some System 7 features are not available in System 6. Some System 7 features are different from equivalent features in System 6.

These are System 7 features that do not exist in version 6.0.8L:

- the Help menu

- the Views control panel

- outline views of folders

- keyboard navigation in the Finder

- aliases

- file sharing

- virtual memory

- stationery pads

- custom icons

- Startup Items and Apple Menu Items folders

- automatic updating with publish and subscribe

- labels for icons in list views

- the ability to open and save documents on the desktop using the Open and Save dialog boxes

These are System 7 features that work differently in version 6.0.8L:

- the Application menu (in System 6 you use the MultiFinder icon instead)

- the System Folder's organization of files

- desk accessories

- fonts and sounds

- control panels

- the Find command (in version 6.0.8L you use the Find File desk accessory instead)

- the timing of when the Trash is emptied

Where to get a manual for System 6

To get complete documentation for system software version 6.0.8L, you can ask your Apple dealer for a copy of the Macintosh Reference (part number 030-4015-B). Your dealer can order that book for you. The Macintosh Reference and this update together contain all of the information you need to use system software version 6.0.8L.

Apple Computer Inc., 1992

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Article Change History:
17 Aug 1995 - Changed title, reformatted, added Read Me information.

Support Information Services

Last Modified: Feb 19, 2012

Additional Product Support Information

Mac/PC Exchange: Not Recognizing DOS Disks

- **Last Modified:** November 29, 1992
- **Article:** TA28565

- **Old Article:** 10878

My Macintosh with Mac/PC Exchange installed won't recognize DOS disks.
The computer ejects the disk or wants to initialize it.
Remove Virus Blockade which interferes with the operation of the
PC/Exchange control panel.

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A/UX: "bad sblock magic number" Error When Backing Up

- **Last Modified:** November 11, 1992
- **Article:** TA28609

- **Old Article:** 10944

When creating a backup of an A/UX filesystem, I get the following message:

DUMP: bad sblock magic number
DUMP: The ENTIRE dump is aborted.
The dump.bsd command takes as its last argument the raw device file, rather than a block device (directory name). For all filesystems except the root filesystem, dump.bsd will look up the block device in /etc/fstab and use the raw device file listed there.

This error can be reproduced as follows:

```
# dump.bsd 0f /dev/null /
DUMP: Date of this level 0 dump: Wed Oct 21 12:29:00 1992
DUMP: Date of last level 0 dump: the epoch
DUMP: Dumping / to /dev/null
DUMP: bad sblock magic number
DUMP: The ENTIRE dump is aborted.
```

Replacing the block device with the raw device in the example above will allow the dump.bsd command to execute correctly:

```
# dump.bsd 0f /dev/null /dev/rdsk/c0d0s0
DUMP: Date of this level 0 dump: Wed Oct 21 12:43:56 1992
DUMP: Date of last level 0 dump: the epoch
DUMP: Dumping /dev/rdsk/c0d0s0 to /dev/null
DUMP: mapping (Pass I) [regular files]
DUMP: mapping (Pass II) [directories]
DUMP: dumping (Pass IV) [regular files]
```


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Configuring the ImageWriter to an Apple III or III+ (10/94)

The following information shows how to configure an Apple /// and an ImageWriter II printer.

This article has been archived and is no longer updated by Apple.

Interface:

You may use either the .PRINTER driver or the .RS232 driver. The appropriate data configuration blocks for these drivers are:

.PRINTER: [0E] [00] [00] [00] [00]
.RS232: [0E] [00] [00] [00] [00] [00] [13] [11] [DF] [84] [50] [80]

Cables:

Modem Eliminator Cable (Part #590-0166)
Serial and Communications Cable (Part #590-0037)

Printer Switch Settings:

8 7 6 5 4 3 2 1
SW1: | | |X| | | | |
|X|X| |X|X|X|X|X|

4 3 2 1
SW2: | | |X|X|
|X|X| | |

NOTE: These switch settings are for the U.S. character set, 66-line page length, 8 data bits, elite pitch, no auto-LF after CR, 9600 baud, DTR data protocol. If you wish to change any of these settings, you must make corresponding changes in the data configuration block for whatever printer driver you're using.

Search on "Imagewriter and switches" and/or "driver data configuration" for more information on configuring.

Article Change History:
17 Oct 1994 - Reviewed for technical accuracy, revised formatting.

Support Information Services
Last Modified: Feb 19, 2012

Additional Product Support Information

Macintosh PC Exchange: Symptoms of INIT Conflicts

- **Last Modified:** April 30, 1993
- **Article:** TA28613

- **Old Article:** 10953

What kind of symptoms are usually associated with INIT conflicts when using Mac PC Exchange?

Here are some typical symptoms of INIT conflicts:

* System won't mount a correctly formatted DOS disk without being told that it's unreadable.

* Can't open the Macintosh PC Exchange control panel to make changes.

* System freezes when mounting a correctly formatted DOS disk.

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Macintosh PC Exchange: PC Icon on a Hard Disk

- **Last Modified:** April 30, 1993
- **Article:** TA28614

- **Old Article:** 10954

When I place the PC file onto the hard disk, I'm unable to assign a creator/type. The file always shows up as a PC icon and never takes on the icon of the application it's assigned to.

The assignment of the suffix to a creator/type applies to files that are on MS-DOS floppy disks only. Macintosh PC Exchange's creator/type selector won't access files you mount via a network, removable hard disk, or optical disk.

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Macintosh PC Exchange: Apple 5.25-Inch Disk Drive

- **Last Modified:** April 30, 1993
- **Article:** TA28615

- **Old Article:** 10955

I have a Macintosh LC with an Apple 5.25-inch disk drive attached. When I put a ProDOS or MS-DOS disk in the drive, the computer doesn't mount it to the Desktop. Why ?

A Macintosh LC uses an Apple 5.25-inch disk drive in Apple IIe mode only. Macintosh PC Exchange is only active in Macintosh mode, and therefore won't be active. A Macintosh LC in Apple IIe mode won't recognize MS-DOS disks, and a Macintosh LC in Macintosh mode won't recognize ProDOS disks. When in Apple IIe mode, it should recognize ProDOS disks.

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Macintosh PC Exchange: Losing Diacritical Marks

- **Last Modified:** April 30, 1993
- **Article:** TA28616

- **Old Article:** 10956

When I convert a foreign word processor or text file (German, Spanish, French), from a DOS application to the Macintosh application, the special accent characters change or disappear from the document. Why does this happen, and what can I do to resolve the problem?

Because Macintosh PC Exchange isn't a language translator, it's up to the specific Macintosh application to support the extended ASCII character set of the PC application. Be sure to use an application that supports these diacritical marks, so you won't lose them during the DOS-to-Macintosh translation of the document.

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Macintosh PC Exchange: RESOURCE.FRK File Seen on PC

- **Last Modified:** December 11, 1992
- **Article:** TA28619

- **Old Article:** 10960

After using Macintosh PC Exchange, I see a RESOURCE.FRK file when I put it into the PC. The PC didn't generate this. What is it, and why is it there?

Macintosh PC Exchange creates a directory on the PC disk. Macintosh PC Exchange then installs resources to hold the information the same way it makes the Desktop files for the Macintosh volumes. This is normal and should be left alone if the disk will be used by the Macintosh. If you erase this file, Macintosh PC Exchange will recreate it the next time you insert the disk into a Macintosh.

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PowerBook: Recharging Batteries

- **Last Modified:** September 08, 2006
- **Article:** TA28622

- **Old Article:** 10970

This article discusses proper methods for recharging PowerBook batteries.

Products Affected

PowerBook

All PowerBook models do not use the same kind of battery; it's important to know which type of battery you're using in order to recharge it properly.

It is also important to use the AC Adapter which came with your computer to ensure the maximum amount of power is available for charging and use. Using an alternative charger may extend charge times or cause damage to your PowerBook.

If your PowerBook will not recharge the battery, first ensure the AC adapter is plugged into a working outlet. If you have another charger, try it to see if the charging status changes. If not, it is possible that the battery itself is damaged. An Apple Authorized Service Provider can perform additional diagnosis to determine if the battery, AC adapter, or PowerBook itself is causing the trouble.

Apple uses four different types of batteries for PowerBook computers. PowerBooks since the PowerBook G3 use a Lithium Ion battery. To learn which type of battery is installed in an earlier PowerBook, read article 16168: **"PowerBook: Battery, Recharger & AC Adapter Identification"**

- Sealed Lead Acid (SLA)
- Nickel Cadmium (NiCad)
- Nickel Metal Hydride (NiMH)
- Lithium Ion (LiIon)

Each type of battery requires a different recharging technique to ensure maximum battery life.

Sealed Lead Acid
Recharge sealed lead acid batteries whenever they become depleted and never fully discharge the battery. Lead acid batteries should always be kept fully charged.

If a lead acid battery becomes fully discharged, it may experience sulfation. Sulfation occurs when the lead electrodes inside the battery convert to lead sulfate. This destroys the battery making it unable to hold a charge.

Nickel Cadmium
Recharge nickel cadmium batteries when they become depleted. Apple recommends fully discharging and recharging the battery approximately every 90 days.

Nickel cadmium batteries are subject to an issue known as "memory effect." If a NiCad battery is only partially discharged then recharged many times, it will begin to "remember" the level it was discharged to and won't fully recharge.

Here's an example: Let's assume your PowerBook battery has a normal capacity of 2.5 hours and you use your PowerBook for 1 hour a day, then recharge the battery overnight. After a period of time, approximately between 30-90 days, you'll discover that your battery now has a capacity of a little over an hour, instead of 2.5 hours.

The only way to recover the battery's full capacity is to fully discharge it, then fully recharge it.

Nickel Metal Hydride
Recharge nickel metal hydride batteries when they become depleted. Fully discharge and recharge the battery approximately every 30 days.

Nickel metal hydride batteries are also subject to "memory" and should be treated like nickel cadmium batteries.

How to fully discharge NiCad and NiMH Batteries
The best way to fully discharge NiCad or NiMH PowerBook batteries is to use your PowerBook normally, but to ignore the low-power messages that appear on the screen. Be sure, however, to save your work frequently. When the computer goes to sleep automatically, recharge the battery completely before using that battery again.

Length of time to recharge
Allow plenty of time to recharge a battery. It may take six to eight hours to completely charge a battery on some PowerBook models, longer if you're using the computer.

When you use the power adapter to run the computer and recharge the battery simultaneously, the battery may not be completely recharged during your work session. It's a good idea to leave the adapter plugged in overnight occasionally to assure that the battery is fully charged.

Here are some ways to recharge a fully depleted battery, from fastest to slowest:

- In an external recharger (one battery)
- In the computer while shut down
- In the computer in sleep mode
- In the computer while working

Lithium-ion
You can recharge Lithium-ion batteries anytime the battery meter reads less then 95%.
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Macintosh Quadra 700, 900: Built-In Video

- **Last Modified:** October 04, 2008
- **Article:** TA28634

- **Old Article:** 10992

This article has been archived and is no longer updated by Apple.
This article, by the designer of the Macintosh Quadra's video hardware, discusses a number of general Quadra video topics.
The Quadras were designed with a flexible video hardware section to support a wide variety of displays. Since the purchaser of one of these systems is paying for a frame buffer on the logic board (whether (s) he wants it or not), and since the Quadras were designed to be high-performance machines, the frame buffer was designed to be both very flexible (to support most displays a user may want to use) and to be high performance (to match the computer's capabilities).

Obviously, every display made by every third-party monitor vendor can't be supported by the built-in video, but the Quadras do support a much wider range of displays at a higher level of performance than any previous Macintosh. The Quadra 700 and 900 support pixel depths ranging from 1 to 32 bits per pixel (bpp), Apple displays ranging from the 512 x 384 12-inch color monitor through the 1152 x 870 21-inch color monitor, pixel clocks ranging from 12 to 100 MHz, and a variety of industry standards such as VGA, SVGA, NTSC, and PAL. The Quadra video port produces RS-343 RGB, and provides horizontal, vertical, and composite sync outputs.

Composite or S-video output is not provided, but can be accomplished by use of an external RGB-to-composite encoder. The Quadra 700 and 900 also support Apple convolution for flicker-reduction on interlaced displays (i.e., NTSC and PAL) at up to 8 bpp. The Quadras automatically detect the type of display attached to the video connector via three 'sense' pins on the video connector. Depending on the wiring of these three pins, software in ROM configures the video hardware for one of the supported display types. (A full description of sense pin wiring and supported display types is in another article.)

The Quadra series provides the highest built-in video performance of any Macintosh to date. In a (very) simplified graphics model, we could say that performance depends on two main factors: processor horsepower and the bandwidth the processor has into frame buffer memory. These systems already have a fast processor-- the 68040-- which runs standard 32-bit QuickDraw.

To provide high bandwidth into frame buffer memory, dedicated video RAM (VRAM) was used for the frame buffer, and that VRAM was placed directly on the 68040 processor's local bus. This provides the 68040 the same access time into frame buffer memory that it has into main system RAM. (Transfer rates can exceed 40MB/sec.) In addition, memory options such as fast page mode are supported, which can improve graphics performance for operations such as scrolling, offscreen-to-onscreen pixmap transfers, etc.

In several cases the design was optimized for high performance over low cost. A good example of this is 32 bpp operation on Apple's standard 13-inch RGB monitor at 640 x 480 resolution (and this also applies to VGA and NTSC), which is probably the most common color monitor in use on the Macintosh. The actual number of memory bytes needed to support 24 bpp is 640 x 480 x 3 = 921,600. This would seem to fit within 1MB of memory (as is true with the Macintosh Display Card 8*24), but the Quadras actually require 2MB of VRAM for this mode.

The 8*24 card supports 24 bpp at 640 x 480 by using a storage mode called 'chunky planar' to use all its 1MB of VRAM. However, this results in having to perform three separate memory accesses for each 24-bit pixel read from or written to the frame buffer. (This is done in hardware, so software only performs a single read or write.) On a NuBus video card, this inefficiency is partly masked by the synchronization delays which occur at the processor-bus/NuBus interface. However, when frame buffer memory is placed directly on the processor bus, this approach results in a nearly 3x performance degradation.

This was judged unacceptable for the Quadras. Each 24-bit pixel occupies one longword (4-bytes) in VRAM, so the Quadras actually provide 32 bpp for the 640 x 480 resolution. This pushes the memory requirement for this mode over the 1MB boundary (640 x 480 x 4 = 1,228,800 bytes). Performance is improved still more by another frame buffer architectural feature. Frame buffer memory in the Quadras is organized into 4 'banks' of 512 K per bank. As mentioned earlier, Quadra VRAM can operate in fast page mode. In addition, each bank of VRAM operates in fast page mode independent of the other 3 banks. This causes in-page 'hits' to increase, and improves the effective bandwidth into the frame buffer. Also, at 32 bpp, 640 x 480 resolution, each row is set to 4096 bytes, or 1024 32-bit pixels. Each successive row is assigned to a different VRAM bank (modulo 4).

This memory organization commonly improves performance during certain performed graphics operations such as vertical scrolling.

In any design there are several tradeoffs to be made, and this is certainly true for the frame buffer in the Quadras. While the video does operate at 32 bpp on up to 16-inch displays, it does not support 21-inch displays at this pixel depth since this would have greatly raised the cost of the main logic board. (Memory capacity and bus bandwidths would essentially have to double, and this would be expensive.) It does support NTSC and PAL timing, but does not provide a composite video output. While it is much faster than any non-accelerated video card, there are accelerated video cards that are faster (and more expensive).

A separate graphics processor was not added primarily for cost reasons. However, a graphics processor such as the 29000 RISC chip on the Display Card 8*24 GC can only speed up the graphics operations that it was designed to know about. If an application program bypasses QuickDraw (which is what most Macintosh graphics accelerators are designed to speed up), a graphics accelerator will not improve performance, and can actually cause a performance degradation.

Overall, the Macintosh Quadra video provides a reasonable compromise of cost, performance, and features, which provide the video needed by most Macintosh users at a reasonable price.

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SNMP Technical Introduction, Part 2 of 3

- **Last Modified:** November 24, 1992
- **Article:** TA28649

- **Old Article:** 11016

This is the second of three articles that introduce SNMP (Simple Network Management Protocol). This article describes SNMP's history, management model, and architecture.

SNMP History

Simple Network Management Protocol (SNMP) originated in the Internet community as a means for managing TCP/IP networks and Ethernet networks.

Every large network sooner or later displays a need for management and control, and the worldwide TCP/IP Internet is no exception.

In November 1987, a working group of the Internet Engineering Task Force (IETF) submitted a proposal to address some of these needs. They defined the Simple Gateway Management Protocol (SGMP), an early attempt at TCP/IP Internet management, and the forerunner of SNMP. SGMP is similar to SNMP in design and architecture, however syntax differences make the two incompatible.

In August 1988, the same four authors enhanced their proposal, and submitted a draft standard (Request For Comments 1098 entitled "A Simple Network Management Protocol"). RFCs are a method of defining and discussing enhancements to the Internet.

One of the main design criteria was simplicity. Another was to make the monitoring and control capabilities quite extensive. Due to the variety of devices on the Internet, the authors wanted to create an architecture independent of any specific host/gateway architecture.

In April 1989, RFC 1098 became an Internet Recommended Standard, and was rapidly implemented on the worldwide Internet.

SNMP's appeal broadened rapidly beyond the Internet community. SNMP attracted users looking for a proven and readily available way to manage their networks. SNMP's monitoring and control mechanisms operate

completely independent of the TCP/IP protocol. SNMP requires only the datagram transport mechanism to operate. It can be implemented over any network media or protocol suite, including AppleTalk.

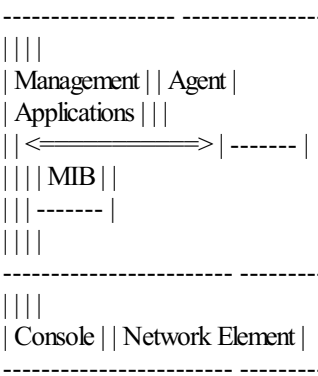
In May 1990, RFC 1098 was re-released, with typographical errors corrected, and a rewritten status section. RFC 1157 is the basis for Apple's network management strategy.

The Management Model

A network management system contains three main components:
* Several network elements, or nodes, which need to be managed.
* At least one management station used to administer the network.
* A management protocol that is used to communicate between the nodes and the manager.

SNMP Architecture

The SNMP architecture conforms to this management model. It defines these three major components: managed nodes (network elements), at least one network management station (console), and a protocol to communicate between the two. The diagram below displays this relationship in SNMP.



Network Elements (Nodes)
Network elements are devices such as hosts, gateways, terminal servers, and desktop computers. They are also known as managed nodes, nodes, or "entities." Network Elements can also be hubs or multiplexors. Although simple in concept, the network elements actually perform most of the work in SNMP, and contain all the information a management console needs to perform its function.

Consoles
Consoles are the management stations. They execute management applications to monitor and control network elements. They display, often graphically, the state of the current network and any alarms present.

The Protocol
SNMP is used to communicate management information between the network management stations and the agents in the network elements.

Inside the Network Element (Node)
Agents. Network Elements have agents responsible for performing the functions requested by the network management stations. Agents do the real work in SNMP management. Agents execute commands issued by the console, as well as reporting on unusual events.

Agents control and provide access to a Management Information Base (MIB), which contains the information to respond to console requests and updates.

Overview of the MIB

SNMP depends on the relationship between the console, agents, and the MIBs and agent controls.

The MIB contains groups, which are collections of objects.

Objects define data types, such as text strings, counters, gauges, time ticks, addresses, and integers. Each object has a unique name. (The naming convention used is discussed in the next section.)

The data fields that objects define are called variables. These are the fields where the actual data or value is stored. Each variable also has a unique name, using the same convention as the objects.

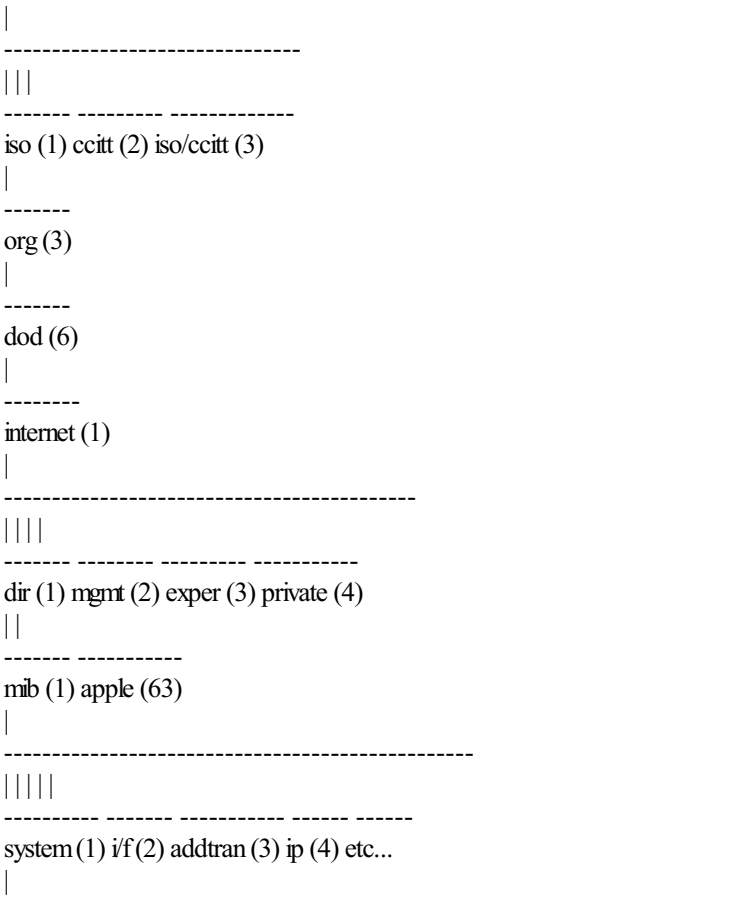
MIBs are encoded using OSI's Abstract Syntax Notation One (ASN.1). This language is used to define the objects in the MIB. ASN.1 is an international standard, implemented by most of the world's computer manufacturers. ASN.1 encoding makes the MIB platform independent.

The Structure and Representation of MIB Objects and Variable Names

Names used for MIB objects and their variables are taken from the object identifier namespace, administered by ISO and CCITT. The key idea behind the object identifier is to provide an environment in which all possible objects can be uniquely named.

Authority for parts of the namespace is subdivided at each level, allowing individual groups to assign names without consulting a central authority for each assignment.

This tree structure is used to identify each and every MIB object, and in fact they are accessed programmatically using this structure.



sysDesc (1)

In the figure above, each item has a number associated with it. These numbers correspond to specific paths to locate information in an SNMP network element, and give each object a unique name. For example, the unique name for the object that contains the system description (machine type) of the network element is described as:

iso.org.dod.internet.mgmt.mib.sys.sysDesc

The number representation of the above map is:

1.3.6.1.2.1.1.1

SNMP consoles actually use the number string to address the objects in the packets that travel the network, and in the programs used to construct the packets. Although this number string addresses the object, it is not enough to address the first variable containing the data or value, which is the number the console really wants.

There are no zeros on the map because a zero is used to reference the actual data (value) of a variable.

To obtain a value from the object named sysDesc, add a zero to the number string. Therefore, a Get command would use 1.3.6.1.2.1.1.1.0 to obtain this value. An example of a response would be the text string "Macintosh IIx."

A significant benefit of this architecture is that it allows the development of consoles that can manage the products of many different vendors -- because all the objects are unique. Generic SNMP consoles, which often know little or nothing about specific manageable network devices, incorporate, or are able to import, MIBs because the coding and data representation rules are standardized, and the object names are preassigned and unique.

One of the main features of SNMP is allowing vendor-specific implementations of the MIB. Non-standard, vendor-specific MIBs would come under the Enterprise branch of the object identifier namespace. Organizations, such as Apple, can apply to the Internet Activities Board (IAB) for specific Enterprise numbers to keep their MIBs unique. Apple Computer's Enterprise number is 63, and over 100 other companies have applied for unique numbers, to provide an indication of how many vendor-specific MIBs will be implemented over time.

Consoles can compile imported MIBs and issue commands to agents. These consoles then display, often graphically, the information returned by the agents. Because these generic consoles are not product specific (MIBs are) they can even be used to manage network products that ship after the console itself is sold.

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TA28649_SNMP_Technical_Introduction_Part_2_of_3_(TIL11016).pdf

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AppleCD 300: New Features Require Application Support

- **Last Modified:** December 08, 1992
- **Article:** TA28667

- **Old Article:** 11038

How do I access the CD+G, CD+MIDI, and CD-XA file formats of the AppleCD 300 family of CD players? When I play a CD+G compact disc, the audio portion plays easily, but the graphics never appear.

The ability to access the various CD formats provided in the AppleCD 300 family requires a software application that can send the appropriate instructions to the AppleCD 300.

The same situation exists with the ability to play standard audio CDs on an Apple CD-ROM drive: you must have CD Remote (or a similar piece of software) to allow an Apple CD-ROM drive to play audio CDs. The general principle is that if a software application does not support a particular feature, that feature is unavailable.

At the announcement of the AppleCD 300, there are no available applications that provide access to the CD+G, CD+MIDI, and CD-XA features of the AppleCD 300 series.

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Macintosh: 16-bit to 8-bit Audio Conversion

- **Last Modified:** December 08, 1992
- **Article:** TA28668

- **Old Article:** 11039

I'm recording some voice audio files to be played back into MacroMind Director. I record them in 16-bit audio with digidesign's AudioMedia card. I convert the files to 8-bit audio with MacroMedia's SoundEdit Pro. The converted sound is very low quality.

I realize that 8-bit has a smaller dynamic range than 16-bit, but the noise added isn't just a steady noise. The noise is a hissing sound that seems to rise and fall with the speakers voice.

Is this sound degradation expected? Are other programs or sound formats better at converting 16-bit to 8-bit audio? Are there any steps I can take to reduce this noise?
Downsampling (moving from 16-bit to 8-bit and moving from 44.1 KHz to 22 KHz) is strictly a software operation. Therefore, it's the method of changing from one bit-per-sample/sample rate format to another that is introducing the noise.

Downsampling only the bits (16-bit to 8-bit) is generally not the part of the sequence that introduces the most noise. Although, any method of changing the bit-per-sample count will cause a change of character in the sound. The conversion from 44.1 KHz sampling rate to a 22 KHz rate creates the most opportunity for major introduction of noise. The downsampling of sample rates is more an art than a pure science; thus, different programs could easily produce quite different results.

We discussed the issue of using SoundEdit Pro for this procedure with the MacroMedia Tech Support group. They suggested that the downsampling take place within the software package where the sampling originated. For example, if the original digital recording is in AudioMedia's Sound Designer, downsample in Sound Designer. Then use the resulting sound file in SoundEdit Pro and MacroMind Director.

Degradation should be expected during the downsampling. The exact form it takes will be based on which hardware/software elements are used to perform the task. Many sound engineers who must work with 8-bit sound record the

original digital recording in 8-bit. This provides far less room for error than recording in 16-bit sound and then converting to 8-bit.

The introduction of noise isn't related to the file format, unless compression (that is, MACE) is used when the file is saved. Compression can easily add noise, and should be expected when compressing.

To locate a vendor's address and phone numbers, use the vendor name as a search string.

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Macintosh: Fonts and System File Memory Allocation

Why doesn't deleting 600K of fonts make my system file allocate 600K less memory? When I look at "About this Macintosh" the system file has allocated only 100K less memory than before deleting the fonts.

This article has been archived and is no longer updated by Apple.

The system usually loads fonts into memory when an application uses the fonts. So even though you removed 600K of fonts, the fonts you weren't using weren't loaded into memory and have no impact on memory allocated for the system file.

Published Date: Feb 19, 2012

Archived - MS-DOS External 5.25-inch Floppy Drives: Macintosh Compatibility

01/21/93 - REVISED
* To include information about Macintosh
MS-DOS compatible floppy drives

Are MS/DOS external 5.25-inch floppy drives compatible with Macintosh computers?

This article has been archived and is no longer updated by Apple.
No, MS-DOS external 5.25-inch floppy drives are not compatible with Macintosh computers. An MS-DOS external 5.25-inch floppy drive is a device that attaches to a MS-DOS computer and reads 5.25-inch diskettes.

Macintosh computers must receive information on mounted disks. A key system call that gathers this information, DiskInPlace, is not supported by MS-DOS floppy drives.

Also, MS-DOS external floppy drives do not have the same pinouts as Macintosh drives.

There are Macintosh-compatible external floppy drives which DO attach to some Macintosh computers and read 5.25-inch MS-DOS diskettes. These floppy drives are designed to connect to Macintosh computers, not to MS-DOS computers. Two examples are:
* the Apple PC 5.25 Floppy Drive, made by Apple Computer
* the DaynaFile, made by Dayna Communications.

Last Modified: Feb 19, 2012

Additional Product Support Information

System 7: Performa Versions Compared

This article describes the progressive changes made to system software versions 7.0.1, 7.0.1P, 7.1, 7.1P, 7.1P1, 7.1P2, 7.1P3, 7.1P5, 7.1P6, and System 7.5.
This article has been archived and is no longer updated by Apple.

SYSTEM SOFTWARE VERSION 7.0.1

Here are the features of system software version 7.0.1 that 7.0 doesn't have:

Extensions

* Memory - Included RAM Disk, and updated virtual memory and RAM Cache to work with new RAM disk.
* Portable - Removed screen brightness and contrast sliders, and RAM disk.
* Brightness - A simple slider to control screen brightness. * Network - Support for on-board Sonic Ethernet for the Quadra family.
* Battery - Updated to work with PowerBook family.
* Caps Lock - Indicator panel available only on PowerBooks.
* File Sharing - Internal file sharing buffer increased from 4K to 5K.
* Cache Switch - For Quadras to disable or enable 68040 cache.
* A/ROSE and DAL - 68040 compatibility changes.
* HD SC Setup - Format-time mode select change.

System File

* Operating System
* Keyboard patch wakes up sleeping Macintosh Apple Keyboard II (Macintosh Classic) keyboards.
* Support for 53C96 SCSI chip in Quadras and PowerBooks 140 and 170, and for PowerBooks 140 and 170 power manager.
* Minor changes to LocalTalk (for 68040), Gestalt 'Iram', 'ram', and 'kbd' selectors (for RAM disk), _hwPriv CPU cache management and dispatch routines, keyboard maps (for PowerBook).
* Startup code can inhibit 68040 cache when Cache Switch cdev is set. * Bitmap system fonts marked purgeable.
* ToolBox
* SANE performance improved via backpatching.
* Disk Initialization Package prevents RAM disks from being formatted as MFS volumes.
* Notification Manager calls IdleUpdate when NMInstall called (on portables) to wake the system.
* Powerdown messages on Quadra 900 and RAM disk.
* Support for Quadra and PowerBook sound hardware. * Backlight driver upgraded to work with PowerBook family.
* SetHandleSize fixed for all 32-bit memory managers.

General

* Reduction in overall size of run time system heap.
* Installer script file revisions for new systems.

SYSTEM SOFTWARE VERSION 7.0.1P

System 7.0.1P is system software for the Performa 200 and 400. It's a modification of system software version 7.0.1 that makes changes to the Macintosh, simplifying the interface for new users. A control panel extension installs the system changes. This version uses the control panel portion of the file as a pseudo-Finder enhancement, for a push-button application launcher.

Here are the modifications:

* Generalized reference to the computer Instead of "About this Macintosh..." the Apple menu reads "About this Computer..." The window doesn't identify the specific model. Applications can use a Gestalt selector to determine whether 7.0.1P is running.
* Push-button program launching When a Performa starts up, the Launcher control panel opens on the desktop (like a small version of At Ease) with an icon for each installed application. You can launch an application with a single click.
* Layer hiding When launching an application, the Finder layer is hidden, giving the illusion that only one application is open at a time. Clicking on the desktop won't bring the Finder to the front. You can still switch applications through the Application menu.
* Default folders The internal disk on a Performa is configured with an Applications folder and a Documents folder on the desktop. The standard Save As dialog box is modified to always default to saving in the Documents folder. This keeps all documents together rath
er than with the application that created them.
* Color default On color-capable Performas, the default Monitors setting is 8-bit color.
* Changes in desktop pattern A modified General control panel replaces the standard desktop pattern editor with a pop-up menu containing a variety of 16x16 desktop patterns.
* Includes At Ease 1.0 Lets adults share the computer, and makes it easy for children to launch applications.
* Backup & Restore This provides an easy way to create a set of backup disks, and to restore the contents of the hard disk if necessary.

SYSTEM SOFTWARE VERSION 7.1

System software version 7.1 has the system enabler that supports the Macintosh IIvx and IIvi. It has the features described for 7.0.1 (minus DAL

and SANE backpatching), with the following additions:

* WorldScript software This simplifies language script support. * New control panels These allow customizing formats for dates, times, numbers, and text behavior (for example, sort and case conversion). Here's a list of the new control panels:

* Date & Time
* General Controls
* Numbers
* Text Control
* PowerBook

* Improvements made by System 7 Tune-Up 1.1.1 These improvements include resolving the problem of disappearing folders and files, and installing LaserWriter driver version 7.1.1.
* The QuickTime software extension This provides multimedia capability.
* Font folder This folder within the System Folder provides a single place to store all fonts.
* System Enablers These provide compatibility between Macintosh CPU hardware and system software. The Install Me First disk adds a software module, and not a whole new system.

SYSTEM SOFTWARE VERSION 7.1P
System software version 7.1P was created to support the Macintosh Performa 600 (but works with all Performa models). It has the features described for 7.1 and 7.0.1P, with the following exceptions:

* Includes Macintosh PC Exchange and the Apple IIe ProDOS extension. * Removes Apple File Exchange.

SYSTEM SOFTWARE VERSION 7.1P1
System software version 7.1P1 supports all the Macintosh Performa models, and has all the features described for 7.1, 7.0.1P, and 7.1P with the following exceptions: * Memory control panel The RAM disk memory could be set too high in version 7.1P. A change in the Memory control panel prevents this.
* Installs CD-ROM 4.0.2 and StyleWriter II drivers
* Pre-configures At Ease icons The application buttons appear automatically and don't require manual placement.
* System enabler modification There have been reports that the floppy drive sometimes won't eject disks. A modification to the system enabler corrects this.
* Minor interface changes There are a few cosmetic changes, like moving the Mouse Basics icon to the far left side of the screen.
* Serial driver for communications

SYSTEM SOFTWARE VERSION 7.1P2
System software version 7.1P2 supports all the Macintosh Performa models, and has all the features described for 7.1, 7.0.1P, 7.1P, and 7.1P1, with the following modifications:

* Eliminates the system freeze when you click on the sea horse in Mouse Practice. This was corrected by reducing the application preferred memory size from 5000K to 2500K.
* Allows setting Monitors control panel to any number of colors or black and white selection. The 7.1P1 version reset the system to 256 colors upon restart.
* Control panels "exercised" (opened and closed) during Custom Mac process

Many control panels normally have compressed resources. This makes it easier to fit all the necessary files on system software floppy disks. Once a control panel is opened, the resources are decompressed, and then written back to disk decompressed. This process can take quite a bit of time (minutes, on a Performa 400), and is most visible with the Monitors control panel.

If a user shuts down their system while the decompressed resources are being written back to disk, it can lead to problems. By providing users with control panels which already have decompressed resources, it should speed things up, reducing the risk that a customer might think something is wrong and want to shut down their system improperly.
* The Read Me document now very clearly provides information about the importance of the proper shut down procedure.

SYSTEM SOFTWARE VERSION 7.1P3
System software version 7.1P3 supports all the Macintosh Performa models, and has all the features described for 7.1, 7.0.1P, 7.1P, 7.1P1, and 7.1P2 with the following modifications:

* Includes a Shut Down desk accessory to make it easier to shut down, no matter what application is open. User studies showed that many users were confused about having to "go to the Finder" in order to shut down.
* Detects, during the startup process, if an improper shut down occurred. If it occurs (dirty bit was set), a dialog warns to always shut down properly.
* Performa control panel provides System Folder protection, preventing the user from deleting, renaming, or removing items from the System Folder. This feature is on by default, but can be turned off via the Performa control panel. * Performa Macintosh Basics provide detailed information about the importance of the proper shut down procedure.

* System and Finder version numbers changed to 7.1P3.
* FKEY 3 saves the PICT as a SimpleText file type instead of a TeachText file.
* Apple Restore 1.3 runs only if you start up with the Utilities disk. Provides additional room for error dialogs.
* Slight change in the patterns of General Controls 7.1P3.
* Launcher 2.0P version number change. Changed the icons for the Launcher Items folder and the Launcher. Finalized the About Box.
* Balloon help added to Performa 1.0. Replaced two check boxes for the documents saving options with three radio buttons in the Performa window. Performa control panel icon changed. Performa control panel checks for System 7.x before opening; if it detects a non-supported system, it passes an error to the Finder which displays a message. Displays an alert if Performa control panel is open even though INITs aren't properly installed.
* Finder Layer hiding, an extension in the Performa control panel, modified to never bring At Ease to the front. This solves problems where user launches a desk accessory from the Finder and is switched to At Ease when the desk accessory closes. Now it always goes back to the Finder.
* SimpleText 7.1P changed the minimum and preferred memory partition size from 256K to 512K to solve some problems with Photo CD and large images.

SYSTEM SOFTWARE VERSION 7.1P5
System software version 7.1P5 supports all the Macintosh Performa models, and has all the features described for 7.1, 7.0.1P, 7.1P, 7.1P1, 7.1P2, and 7.1P3 with the following modifications:

* Mouse Basics, Mouse Practice, Performa Basics, Sharing Your Computer, Why Back Up, 800-SOS-APPL, DOS Compatibility and Helpful Tips are compressed using Application VISE 2.1.1. This results in the fulfillment kit fitting on eight disks plus the Utilities disk versus nine disks plus Utilities.
* An alias to AppleCD Audio Player is in the Apple Menu.
* Includes the latest LaserWriter 300 and StyleWriter II drivers.
* Apple Restore 1.3 When Restore finishes (because all software is installed or the user quit early) the last dialog has a restart button instead of asking for the Utilities disk. This forces a restart, causing a rebuild of the desktop.
* Rolled in all Apple HD SC Setup 7.2.1 fixes.
* General controls 7.1P3 desktop default pattern is second instead of third pattern.
* Performa 1.0 fixed this bug: when saving a document in an open application with the Performa control panel window open, Performa preference settings reverted to saved settings.
* Cleaned up the "not shut down correctly" dialog in the shut down check, an extension in the Performa control panel.
* The standard file patch, an extension in the Performa control panel, now resolves aliases most of the time. When aliases don't resolve, an 'X' appears over the Performa icon during startup.
* Added a file icon for the desk accessory called Shut Down 1.0P.

SYSTEM SOFTWARE VERSION 7.1P6
System software version 7.1P6 supports all the Macintosh Performa models, and has all the features described for 7.1, 7.0.1P, 7.1P, 7.1P1, 7.1P2, and 7.1P3 with the following modifications:

* Backup Partition Software-automatically detects corrupted system folders When a bad System Folder is detected, the user is given the option to re-load another System Folder into their system.
* CD ROM Support-supports the AppleCD 300+, an all other Apple drives
* New Instructional Products Suite-adds a searchable hypertext glossary. It also provides paths for electronic as well as phone-based third party support.
* HyperCard 2.2 Player-Includes a number of HyperCard stacks to provide additional functionality, and supports sales of the HyperCard 2.2 development kit.
* Improved incorrect shut-down dialog.

**Improvements to Apple Backup and Apple Restore.
* Inclusion of the '040 cache switch-provides compatibility with certain '040 cache incompatible programs, such as the current version of Prodigy.
* Optimus Support
* Bug fixes to improve reliability.

System 7.5
System 7.5 is qualified for all 680x0 based Performa computers with at least 4MB of memory (8MB for PowerTalk or QuickDraw GX), and at least 8MB for any PowerPC based Performa computer (16MB for PowerTalk or QuickDraw GX).

SOFTWARE BUNDLE
The software bundle for the Performa 550 has dozens of updates including:

* ClarisWorks 2.1-Supports PowerTalk and has bug fixes
* ClarisWorks Education Sample files-Allows us to use this bundle for the Educator Advantage Program
* Mario Teaches Typing 1.3.1

Fixes crashing Performa bug and sound manager problems

* American Heritage Dictionary Font Fix
* Quicken 4 Release 6

Fixes recalculation and other bugs

* New ClarisWorks Tour
* To receive upgrade kits from Global Village has been revised to eliminate the confusing dialog box at install time.

This 694-0261 bundle is qualified to be used for the Marts/Catalog 410 and 466, and the CE/MM 460 and 475, the Performa 550 with the CD 300+. (M1982LL/A,M1985LL/A, M2156LL/A M1904LL/A, M2147LL/B) as well as the all Performa 570 series computers.

New bundles will be built at the end of February to support the rest of the Performa line. (M2157LL/A, M2154LL/A, M1981LL/A, M2155LL/A) In addition, these other bundles will have updated copies of Mavis Beacon Typing, DateBook Pro, TouchBase Pro, and DataViz translators.
Last Modified: Feb 19, 2012

Additional Product Support Information

PowerBook 100 External SuperDrive: Specifications

- **Last Modified:** October 04, 2008
- **Article:** TA28745

- **Old Article:** 11154

This article has been archived and is no longer updated by Apple.

This article gives technical specifications for the Macintosh HDI-20 External 1.4MB Floppy Disk Drive (PowerBook 100 External SuperDrive).

Recording Media
---
* Disk diameter: 3.5 inches (9.0 cm)
* Recording surfaces: 2
* Tracks per inch: 135 (5.31 per mm)
* Number of cylinders: 80

Capacity
---
* Formatted data:
1.4MB (MFM)
800K (GCR)
720K (MFM)
* Unformatted data: 1 or 2MB

Drive Characteristics
---
* Seek time (track-to-track): 3 milliseconds
* Settle time: 18 milliseconds
* Drive startup time: 800 milliseconds

Head Position Accuracy
---
* 30 micrometers

Interface
---
* Connects directly to the Macintosh PowerBook 100 HDI-20 floppy drive port, via the drive's attached interface cable.

Environment
---
* Operating temperature: 50 to 122í F (10 to 50í C)
* Relative humidity: 5% to 90% noncondensing
* Storage temperature: -40 to +149í F (-40 to +65í C)

System Requirements
---
* Macintosh PowerBook 100

Dimensions and Weight
---
* Height: 1.1 inches (28 mm)
* Width: 4.5 inches (115 mm)
* Depth: 7.0 inches (174 mm) not including attached interface cable
* Weight: 1.5 lb. (.68 kg)

Article Change History:
27 August 1993 - Revised storage temperature

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ColorSync Software: Overview

- **Last Modified:** June 12, 2000
- **Article:** TA28746

- **Old Article:** 11155

This article provides an overview of the ColorSync software.
ColorSync is an extension to QuickDraw. It facilitates color conversion from the color space (method of mathematically describing a color) of one device to the color space of another device. It does this while maintaining consistent visual representation. In simple terms, ColorSync displays and prints the same image that it scanned.

The Major Difficulties in Reproducing Color
The physics of color presents a technical barrier, since delivering colored light is very different from delivering colored ink. Colors are described in device-dependent terms:

- RGB (Red, Green, Blue) for monitors and most scanners
- CMYK (Cyan, Magenta, Yellow, and Black) for most printers

Device-dependent descriptions cause the same blend on one monitor to display a very different color on a different monitor. While it is possible to map an RGB value to a CMYK value for a given pair of devices, this is not a practical solution because changing the devices changes the mapping, and therefore the result.

Different devices (scanner, monitor, printer) have different capabilities in delivering color. A color possible on one device may not be possible on another. Every device produces a different range of colors, or color gamut. The scanner, display, and printer each have a different color gamut. Colors that all three devices can produce present no issue. But colors that only one or two devices can generate require color matching.

The perceived color given by a specific value of RGB for an individual monitor can vary. Any RGB to CMYK mapping is not accurate over time. The solution for this issue is commonly called calibration.

Colorsync Architecture
ColorSync is a system extension that provides color matching capabilities to the existing QuickDraw graphics model. It provides three important features:

System-Level Support for Color Matching
All applications and peripherals can take advantage of it. All applications and imaging peripherals use the same scheme for color matching.

Support for Existing Applications
Some existing applications get color-matched printing without waiting for revised applications. ColorSync provides some new calls that enable applications to match to the display as well. This completes the entire picture -- matched input, display, and output.

Opportunities for Third Parties to Add Value
ColorSync uses the Component Manager, which lets third-party developers add value to the color-matching system. This was developed in conjunction with QuickTime to link a series of Apple or third-party color management resources and utilities.

How Colorsync Solves Color Matching Issues

Device-Independent Color
ColorSync was developed to solve the issues related to device-dependent color such as RGB and CMYK. ColorSync attempts to consistently represent colors (visually very similar or identical) across the three color gamuts. ColorSync uses device profiles to determine what colors a device can display, print, or scan (device color gamut).

ColorSync translates the colors that the originating device created for an image into a device-independent, and human perception-based color space, CIE XYZ. From the CIE-XYZ color space, ColorSync then translates the image into the color space of the destination device.

ColorSync uses the Apple Color High-Resolution RGB monitor as the default system profile or space. If you have a different monitor, you should use the ColorSync profile for that monitor in order for ColorSync to work properly. The ColorSync profile creates a device-independent color definition while maintaining compatibility with QuickDraw, which is RGB-based. You can select any monitor that has a profile installed.

Applications
There are three levels of ColorSync application support:

Support Level	Description
Printing Fidelity	Making the standard Macintosh call, DrawPicture, enables matching the source image to the printer. Applications that support this call provide printing functionality without revision.
Display Fidelity	ColorSync can correct for the display if the source is a scanner or a different monitor. The ColorPicker shows two gamuts, and you can choose those available on the monitor and printer or other display.
Preview Function	ColorSync lets applications offer a preview function that indicates those colors not possible on a particular device. Users can check documents before printing.

Device Profiles and Drivers
ColorSync allows characterizations of each device in terms of the CIE XYZ color space. These characterizations are called profiles. This allows making comparisons between any pair of ColorSync devices in terms of the common space.

Color Matching with ColorSync CMMs (Color Matching Methods)
CMMs give the best possible match when the exact match is not available. ColorSync uses the device profiles to determine if a device can display or print a certain color. If a color is outside the color gamut of a device, ColorSync determines a best-match color within that device's gamut. It uses a simple look-up table or an algorithmic calculation to do this. The table look-up method is much faster than the algorithmic method.

The algorithmic method gives better color matching, and offers four options:

Option	Description
Perceptual	This maintains perceptual differences. Colors are interpreted relative to the destination device's white point. This option is usually best for photographic scanned images.
Colorimetric	This maintains individual colors at the expense of their relative values. It is usually best for spot colors.
Saturation	This maintains the levels of color saturation. It sacrifices contrast to maintain color saturation. It is usually best for computer-generated graphics.
Faster Matching	This offers a good compromise between photographs and computer-generated images, and takes less time.

ColorSync attempts to provide a base level of color matching with the smallest possible memory footprint (about 70K). Some print jobs require higher quality color matching. More sophisticated color management schemes can replace ColorSync's color matching method and hook into ColorSync via the Component Manager. This process lets other color management products integrate into the system software via ColorSync.

ColorSync still translates the image's colors into the device-independent color space. However, ColorSync then calls the substituted color matching method to translate the image into the color space of the destination device.

Color Calibration
The ColorSync Color Management extensions support the calibration systems available from third-party developers (such as SuperMac, Radius, and Raster Ops). You can periodically update the profile to compensate for differences from the standard profile.

This article was published in the "Information Alley": Volume II, Issue 4, Page 11
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Apple Color Printer: Cleaning Nozzles, Printing Test Pages

- **Last Modified:** May 25, 2001
- **Article:** TA28748

- **Old Article:** 11159

This article describes the Menu choices you have when you clean the nozzles and print test pages on the Apple Color Printer.
Here's how to enter the Apple Color Printer's Menu:

Press the On Line button to turn off the green light. You can then move back and forth through the Menu items using the < and > keys. If you press the Enter button while any of these Menu items are displayed, you see the choices you have under that item. You can move back and forth through the choices in the Menu sublevels using the < and > keys. Press the Exit button to move up a level in the menu.

There are two different sets of cleaning choices available at each Menu sublevel, depending on whether the Apple Color Printer is in Normal or Service/Factory Mode.

These are the test print and cleaning choices available at each Menu sublevel in Normal Mode:

TEST PRINT
- TEST PRINT A Bubble jet head check pattern
- TEST PRINT B Bubble jet head/main unit precision check pattern 1

Note: Test Print B is only available after a print job is sent to the printer.

CLEANING
- CLEANING A Same as user CLEANING A
- CLEANING B For checking ink passage pressure at factory

IMPORTANT: The Service/Factory Mode Cleaning D uses large quanties of ink. Only use Cleaning D if the other cleaning methods fail to adequately clean the nozzle.

These are the cleaning choices available at each Menu sublevel in Service/Factory Mode:

- BLACK OFFSET
- CYAN OFFSET
- MAGENTA OFFSET
- YELLOW OFFSET
- DIRECTION OFFSET

TEST PRINT
TEST PRINT A Bubble jet head check pattern
TEST PRINT B Bubble jet head/main unit precision check pattern 1
TEST PRINT C Printing Position check
TEST PRINT D Same as B, but pattern 2
HEAT RUN Printer mechanism check (paper feed and carriage driven without printing)
CENTER HEAD Moves print head to center for removal You turn off the power to exit this mode.

CLEANING
- CLEANING A Same as user CLEANING A
- CLEANING B For checking ink passage pressure at factory
- CLEANING C For filling system with ink
- CLEANING D FLUSHING raises the temperature of the print head, uses 3.5 grams of ink, and takes 4 minutes.

To enter the Service/Factory Mode, follow these steps:

1) Hold both arrow keys down and turn the power on.
2) When you see the first rectangle on the display, release the arrow keys and press the ON LINE key.
3) While holding the ON LINE key down, press the ENTER key twice and release all keys.

You will now be able to access the choices in the Service/Factory Menu.

Cleaning the Nozzles
If streaks or other unpleasant artifacts start appearing in printed documents, cleaning the nozzles may improve printing. The following control panel steps initiate the nozzle cleaning process:

1) Press the On Line button. The green light goes out.
2) Press the Menu button two times in succession to cycle through these displayed modes:

- Printing Mode
- Cleaning

3) Press the Enter button two times in succession to cycle through these displayed modes:

- Cleaning-A
- 08-Cleaning

The cleaning process begins and completes in a few moments. When the cleaning is complete, the display shows Cleaning-A.

4) Press the On Line button. Display shows 00 Ready.

If issues persist after two or three uses of the Cleaning-A process, two other methods provide more thorough cleaning (and use a much larger quantity of ink). You can find more detailed instructions for Cleaning-B and Flushing functions in the "Apple Color Printer User's Guide."

Printing Test Pages
To print the Test Page A, follow these steps:

1) Press the On Line button. The green light goes out.
2) Press the Menu button three times to cycle through these displayed modes:

- Printing Mode
- Cleaning
- Test Print

3) Press the Enter button twice to cycle through these displayed items:

- Test Print-A
- 01-Test Print

The test page is printed. When the nozzle test is complete, the display shows Test Print-A.

4) Press the On Line button. Display shows 00 Ready.

To print Test Page B, follow these steps:
1) Press the On Line button. The green light goes out.
2) Press the Menu button three times to cycle through these displayed items:

- Printing Mode
- Cleaning
- Test Print

3) Press the Enter button. Display shows Test Print-A.

4) Press the Menu button. Display shows Test Print B.

5) Press the Enter button. Display shows 01-Test Print.
- The test page is printed. When the page is printed, the display shows Test Print-B.

6) Press the On Line button. The display shows 00 Ready.

Note: Test Print B is not available until a print job has been sent to the printer.

To print the Nozzle Check page, follow these steps:
1) Press the On Line button. The green light goes out.

2) Press the Menu button three times to cycle through these displayed items:

- Printing Mode
- Cleaning
- Test Print

3) Press the Enter button. Display shows Test Print-A.

4) Press the Menu button twice to cycle through these displayed items:

- Test Print B
- Nozzle Check

5) Press the Enter button. Display shows 01-Test Print.
- The test page is printed. When the nozzle check is complete, the display shows Nozzle Check.

6) Press the On Line button. Display shows 00 Ready.

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RAM Speed and CPU Speed: How They're Related

- **Last Modified:** January 12, 1993
- **Article:** TA28757

- **Old Article:** 11171

How are RAM speed and CPU speed related?

RAM and CPU speed are related by cycle time and wait states.

Cycle Time

Cycle time is the minimum time it takes the processor to "turn around," or complete execution of an instruction.

On a 25 MHz CPU, the clock generates 25,000,000 pulses per second. That is to say, each pulse comes every 1/25,000,000 second (or after 25,000,000 pulses, one second has elapsed).

One divided by 25,000,000 means each pulse lasts 40 nanoseconds (4.0 x 10 EE-8). So, if the processor were running at top speed, it could write a value to RAM, change it in one cycle, and rewrite it 40 nanoseconds later. In this system, the RAM would have to be able to respond within 40ns, or 40ns RAM. However, 40ns RAM is hard to make and expensive, so someone had the idea to let the processor go fast for everything else it does, but to slow down accesses to RAM.

Wait State

Thus was born the idea of the wait state, in which the processor spins its wheels for one, two, or more cycles, to give the RAM a chance to catch up. So in our mythical 25 MHz machine described above, one wait state would mean we could use plentiful and cheap 80ns RAM. Two wait states would permit 120ns RAM, and so on.

Some designs are easy, and use a fixed number of wait states -- but not the Macintosh. Depending on what activity is being done and whatever else is going on, the Macintosh can impose a variable number of wait states.

Generally, though, if you use the calculation above with recent designs, you can assume one wait state and get the RAM speed.

(1 divided by clock speed) x 2 = ___ ns)

Wait states are not free, however. While the processor is spinning its wheels, that fast CPU and support hardware you paid for is useless. For this reason, cache RAM, which is very fast, can be used to eliminate or reduce wait states to the processor, and then the cache controller is used to write to slower main RAM. Also, though this refers to writes, the same applies to reads.

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TA28757_RAM_Speed_and_CPU_Speed_How_Theyre_Related_(TIL11171).pdf

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Archived - Communications ToolBox: Basic Connectivity Set 1.1.1

This article describes the Communications ToolBox, Basic Connectivity Set 1.1.1 (released on January 4, 1993), which has a new XMODEM Tool and Serial
Tool. The disk image is posted on Apple Support website, Apple Software Updates.
This article has been archived and is no longer updated by Apple.
The Communications ToolBox, Basic Connectivity Set 1.1.1 contains a revised XMODEM Tool with many important bug fixes, and a new Serial Tool. It's readily available to those needing it, as it is posted on the internet.

Users of the XMODEM tool can also contact the manufacturer of their application -- the one that provided the original XMODEM tool -- for an Update.

Officially, Apple has shipped the Communications ToolBox, Basic Connectivity Set with only one retail product -- MacTerminal 3.0 -- and through APDA.

Many third parties, for example Microsoft, Claris, Pacer, and White Pine, have distribution licenses for the software. They are bound by contract to make
the software available to their customers (but not necessarily free of charge).

Installation Instructions

If you received an image file, create an install disk. Then with the Basic Connectivity Set install disk:

- On Macintosh computers running System 7, drag the Communications ToolBox tools from the Basic Connectivity Set disk into the (closed) System Folder. When a dialog box tell you the tools need to be installed in the Extensions folder, click yes.
- On Macintosh computers running System 6, locate the Communications Folder stored in the System Folder. Drag the Communications ToolBox tools from the Basic Connectivity Set disk into this folder.

Bug Fixes and Features

Here are the features of the new software on the disk.

XMODEM Tool 1.1

XMODEM Tool 1.1 has been improved over the XMODEM Tool 1.0.2 in the following ways:

- Improved reliability. The XMODEM Tool 1.1 is less susceptible to protocol violations, line-noise, and corrupted bytes.
- Performance increase of up to 400%.
- In a few cases when transferring files with XMODEM Tool 1.0.2, the tool would not wait correctly for the receiver to acknowledge the successful receipt of a block. XMODEM Tool 1.1 fixes this problem.
- In System 7, support for creating a new folder when saving a downloaded file using Straight XMODEM or XMODEM Text transfers.
- With the XMODEM Tool 1.0.2, a dialog claiming that there wasn't enough disk space to receive a file would appear when receiving with the MacBinary method, IF the actual data received wasn't MacBinary. Now when non-MacBinary data arrives, the transfer switches to Straight XMODEM.

Serial Tool 1.0.2
When using the Serial Port Arbitrator included with AppleTalk Remote Access, a Serial Tool 1.0.1 dialog box would inform the user that the selected serial port was in use, even when no other service was using the port. The only way to override the "busy port" dialog was to hold down the Option key.

The Serial Tool 1.0.2 properly allows the access to the serial port when the Serial Port Arbitrator is installed and the serial port is not in use by another service.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

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- **Last Modified:** Feb 19, 2012
- **Article:** TA28771

- **Views:**

  112

ARCHIVE

Apple IIe Enhancement Kit: Technical Benefits

- **Last Modified:** August 13, 1997
- **Article:** TA28815

- **Old Article:** 1127

This article has been archived and is no longer updated by Apple.
This article documents the benefits of the Apple IIe Enhancement Kit.

```
The Apple IIe Enhancement improves the performance of the Apple IIe by replacing four chips on the main
circuit board.

The Enhancement has four major benefits:

 1. Apple IIc compatibility:

      Users can take advantage of software developed for the Apple IIc.

 2. Product line consistency:

      Apple II software can be used on both the Apple IIe and IIc.

 3. The MouseText character set makes it easy for developers to create
    software that uses pull-down menus, windows, and icons.

 4. Easier programming for users:

      a. Accepts BASIC commands in both upper- and lowercase
      b. Additional instructions in the 65C02
      c. Mini-assembler for machine language programs.

The Apple IIe Enhancement Kit, Order A2M2052, is available from Apple Authorized Dealers for users who wish to
upgrade their systems.
```

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TA28815_Apple_IIe_Enhancement_Kit_Technical_Benefits_(TIL01127).pdf

Archived - PowerBook 100: Backup Battery Life

How long do the PowerBook 100's backup batteries last under normal circumstances, when the main battery is not installed?

Products Affected

PowerBook

This article has been archived and is no longer updated by Apple.
This depends on system load, temperature, and the history of the backup battery. Remember, the only purpose of the backup battery is to supply the PowerBook 100 with enough power to preserve the data in memory during the short time it takes to change the main battery. It is not recommended for any other purpose.

Support Information Services
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- **Last Modified:** February 19, 2012
- **Article:** TA28856

- **Views:**

  294

Macintosh Operating System: Maximum Volume Size

- **Last Modified:** August 18, 1998
- **Article:** TA28860

- **Old Article:** 11333

We have been seeing some strange results when trying to use volumes larger than 2 GB. What is the maximum volume size supported by the Macintosh operating system?
A set of modifications to the Finder and HFS were implemented to raise the maximum volume size of 2 GB to 4 GB. This was done by treating volume sizes as unsigned values. The exact upper limit is 4063 MB. System 7.5.2 (and newer) increases this limit to 2 terabytes on some computers, including:

- any system that shipped with System 7.5.2 or newer.
- any Macintosh system with PCI slots.

It is not necessary to have SCSI Manager 4.3 installed to take advantage of the larger volume sizes.

Note that AppleShare, including Personal File Sharing, has its own volume size limitations. For more information, please see the following Tech Info Library article:

Article 15460: "**AppleShare File Server: Chart Of All Limitations**"

With versions of the Macintosh operating system previous to System 7.5 we recommend making the volume sizes slightly less than 2 GB to ensure that you do not run into any limitations.

This means that if you have a hard disk drive with a formatted capacity larger than the 2 GB, you must partition it into multiple volumes smaller than 2 GB. We have found that a partition size at least 1 MB smaller than 2 GB seems to work acceptably.

Possible symptoms of volumes equal to, or larger than the 2 GB limit include:

- Negative file sizes
- Inability to copy files because "More space is needed" even though plenty of space is available.
- Similar symptoms on Novell (or other) servers when the volumes published over the network are larger than 2 GB.

This is a hard limitation. There are no workarounds other than partitioning the drive into multiple volumes or updating your computer and any client computers that may log on to the volume to System 7.5.x or newer.

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Centris 610 & 650, Quadra 800: Custom ICs

There are three new custom ICs introduced with the Centris 610, Centris 650, and Quadra 800:
* DJMEMC: Dale & Jay's Most Excellent Memory Controller
* IOSB: Input/Output Subsystem Buffer
* KIWI: NuBus Controller

These three ICs integrate functions provided by the ten custom ICs found on the Quadra 700 logic board. This article describes each of these ICs in detail.

The information in this article relative to the Centris 610 and Centris 650 is also relevant to the Quadra 610 and Quadra 650.
Cet article a été archivé et ne sera plus mis à jour par Apple.
Note: The Centris 610, Centris 650, and Quadra 800 also include a number of ICs developed for previous Macintosh models. Although not described in this article, they are:

* DFAC: Sound - Input and File
* MC68040: Microprocessor
* AC843: CLUT/DAC
* Antelope: Low cost CLUT/DAC
* MCCS142235: Active SCSI Terminator
* DP8534: Video timing generator
* SONIC: Ethernet controller
* 53C96: SCSI controller

DJMEMC (Dale and Jay's Most Excellent Memory Controller)

DJMEMC is a very large-scale IC that combines functions performed by multiple devices in previous Macintosh designs. DJMEMC attaches to the system bus and provides the control and timing signals for the RAM, ROM, and VRAM. It also controls the logic that controls the system bus arbitrations that provide the video timing and control signals. In summary, key functions provided by the DJMEMC are:

* Address decode
* Bus arbitrator
* Configuration register
* DRAM/ROM controller

* System bus interface
* Video timing
* VRAM controller

DJMEMC also includes a complete video frame buffer controller for a VRAM-based frame buffer which supports high performance graphics. Essentially, all of the DAFB frame buffer controller used in the Quadra 700, 900, and 950 have been incorporated into DJMEMC. Therefore DJMEMC is capable of supporting all of the display options and configurations supported by the Quadra 700, 900, and 950. This frame buffer also makes use of two new devices: the National DP8534 clock generator, and the Antelope CLUT/DAC. The 8534 (not compatible with the DP8531 used by the earlier Quadra computers) generates all video clock frequencies needed, up to and including 100 MHz. Antelope is a significantly cost-reduced version of the AAC, and does not include support for 24 bpp or Apple convolution. Antelope is pin- and software-compatible with the AAC used by the Quadra 950.

IOSB (I/O Subsystem Buffer)

IOSB performs some of the functionality found in the JDB/Relayer two-chip set used in the Quadra 700, 900, and 950 -- and also integrates a number of the discreet components which were located on the Quadra 700, 900, and 950 I/O bus.

The key functions of the IOSB ASIC are:
* Byte steering
* Bus sizing
* Alternate I/O bus masters
* Device decode logic
* CPU ID register
* Sound
* VIAs
* SWIM2

* Power on circuit
* System watchdog timeout
* Interrupts

Byte Steering: The 68040 does not support data steering. However, the 68030 allows 8-bit and 16-bit slaves to attach to a given byte lane and indicate their port size during cycle acknowledge. Hardware in the 68030 bus interface did the appropriate byte steering. This allows S/W to do byte accesses to consecutive bytes in 8-bit devices like the SCC without any external logic. In order to maintain compatibility with existing software, the IOSB ASIC does byte steering for 68040 accesses to I/O bus peripherals.

Bus Sizing: The 68040 does not support dynamic bus sizing; it expects accesses to 8-bit and 16-bit ports to be of the appropriate size, that is access.B for 8-bit ports and access.W for 16-bit ports. However, the 68030 allows 8-bit and 16-bit slaves to attach to a given byte lane and indicate their port size during cycle acknowledge. The hardware inside the 68030 does the appropriate number and type of bus cycles to fulfill the request. This allows long word accesses to 8-bit devices, like the SCC. To maintain compatibility with existing software, IOSB does dynamic bus sizing for 68040 accesses to I/O bus peripherals.

Alternate I/O Bus Masters: IOSB allows the SONIC Ethernet controller to be a bus master on the System bus. SONIC drives the System bus snoop control bits (SC1 and SC0) directly, while IOSB drives the TT control lines. The status of these bits is determined by a register within SONIC, and should be initially configured not to snoop.

IOSB does not support true burst transfers to the I/O bus. If a System bus master attempts to burst data to or from an I/O bus slave, IOSB will invoke a 68040 fake burst. This allows use of the MOVE16 instruction for I/O bus data. IOSB itself does not initiate burst cycles on the System bus.

Device Decode Logic: IOSB provides device selects according to the memory maps shown earlier. It provides chip select for all I/O bus devices (that is, Ethernet PROM, patch ROM, SCC, SCSI, and SONIC) and internal IOSB cells (that is, VIAs, SWIM2, sound, and ADB). Note that DJMEMC and KIWI provide their own chip selects.

Sound: IOSB provides a variation of the sound controller used in the Sonora ASIC (used on the Macintosh LC III). However, instead of using DRAM or VRAM for sound I/O buffers, IOSB will internally provide 3K of internal static RAM.

Separate 1-Kbyte buffers are provided for left sound output, right sound output, and mono sound input. Since a sound output buffer is not reused for sound input, IOSB will be capable of providing simultaneous stereo sound output while recording from the sound input port. Sound buffers internal to IOSB are required for maximum software compatibility with Apple and third-party sound drivers.

VIAS:IOSB includes two VIAs, similar to the original Macintosh II. The VIA clock is generated within IOSB. VIA1 is the same VIA cell used in VISA, V8, Sonora, and PSC. It has full Macintosh VIA capabilities. VIA2 is a variation of the cell used in VISA, V8, etc.... This is not a complete VIA, but performs all the functions required from VIA2 (mostly interrupt support and some read/write port bits).

SWIM2:IOSB contains the SWIM2 floppy disk controller. It has full Macintosh SWIM2 capabilities, and is capable of supporting a 2.88MB floppy format.

Power-On Circuit: The Centris 610, Centris 650, and Quadra 800 use the same power-on logic as the Macintosh IIci. However, the portions of the power-on circuitry that do not run off the +5V trickle supply have been moved into the IOSB ASIC to reduce component count on the motherboard.

System Watchdog Timeout: IOSB includes timeout logic that monitors system bus activity and terminates faulty cycles with a bus error indication. This timer does not run when an access is made to a NuBus device; it assumes that the NuBus controller will include a timer which handles the (longer) NuBus timeout period (25.6 ?sec).

IOSB also maintains a watchdog timer for the entire system, including NuBus. This timeout has a longer period than previous timers, and prevents "hanging" while waiting for a response from a damaged or non-existent device. For instance, this timer would catch PDS cards that do not respond to all accesses to NuBus slot E space (see YANCC description for more information on PDS decoding).

Interrupts: IOSB will terminate all 68040 interrupt acknowledge cycles with autovector indication. Like the Quadra 700, 900, and 950, the Centris 610, Centris 650, and Quadra 800 allow separate mappings for different operating systems.

IOSB also provides for multiple modes of operation to support the use of IOSB in future CPUs, and to provide a failsafe mechanism in case of problems during development. These options include:

* Internal/external sound (allows use of the EADSC for higher quality sound output)
* Internal/external SWIM

KIWI

The KIWI ASIC provides the interface between the System bus and NuBus. It combines the functions that were provided by the YANCC ASIC, two bus transceivers, and several discrete driver chips. KIWI provides a complete 68040 bus interface on one side and a complete NuBus interface on the other.

Key functions provided by the KIWI ASIC are:
* Support for all types of single transfers
* One longword deep buffer
* Support for block move transfers for NuBus masters accessing memory on the motherboard
* Pseudo-block transfers from the 68040 to NuBus slaves
* Several of the new functions being defined by NuBus 90 spec

Date de publication : Feb 19, 2012

DAL: Informix and LIKE Function SQL Queries

- **Last Modified:** October 04, 2008
- **Article:** TA28886

- **Old Article:** 11364

This article has been archived and is no longer updated by Apple.

I am running DAL on a Sun server, using the Pacer technology. I am trying to query the database, but I'm having difficulty translating the SQL queries for an Informix database into a DAL-compatible SQL query.

The query is:

SELECT <whatever> from <table> where acctkey[4,6]="680"

For example - check the 3 characters in the acct code from position 4 to 6 and see if they match 680. How would I do this in DAL?
The way to do this query in DAL is the same as the DB2 ANSI-standard query using the LIKE function. DAL follows the ANSI-standard, and when there is no standard defined it follows DB2's format.

For this query the LIKE function is the appropriate command. The LIKE function allows you to substitute either:

* An underscore character ("_") for EACH position in which you will accept any character before your desired string

* A single percent sign ("%") for a string of ANY LENGTH that you will accept before and/or after your desired string

In the case of your example (We spaced between the underscore characters to make the point about the number of positions before your desired character string compare):

select <whatever> from <table> where acctkey like '_ _ _ 680%';

This means: select when the value of positions 4, 5 & 6 of the account key = 680, and I don't care what follows position 6. In reality the command would look like:

select <whatever> from <table> where acctkey like '___680%';

If you wanted to search for "680" in any position the command would be:

select <whatever> from <table> where acctkey like '%680%';

DAL will translate this "standard format" query into the appropriate format for the individual DBMS. So this should work for Informix since it supports the positioned query (where acctkey[4,6] ="680").

We don't have access to an Informix database at this time, so we can't verify it against Informix, but we feel confident that the LIKE function will be translated properly. We did test with both Sybase and Rdb and it worked fine.

Be aware that you should put the "%" behind the desired compare string in the LIKE clause unless you are searching for the last positions in the field. If the compare doesn't work for you without the "%", add it and try the SQL statement again.

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Centris 610, 650 & 660AV: Differences

What are the major differences between the Macintosh Centris 610, the Centris 650 and the Centris 660AV?

The information in this article relative to the Centris 610 and Centris 650 is also relevant to the Quadra 610 and Quadra 650.
This article has been archived and is no longer updated by Apple.

The major differences between the Centris models are:

Feature:	Centris 610:	Centris 650:	Centris 660AV:
Processor	MC68040 @20 MHz	MC68040 @25 MHz	MC68040 @25 MHz
DRAM Expansion	4 MB to 68 MB	4 MB to 132 MB	8 MB to 68 MB
DRAM Slots	2 slots	4 slots	2 slots
DRAM Speed	80 ns(nanoseconds)	80 ns	70 ns
DRAM SIMM Sizes#	4,8,16 & 32 MB	4,8,16 & 32 MB	4,8,16 & 32 MB
DRAM SIMM Type	72-pin	72-pin	72-pin
Ethernet	Optional	Optional	Standard
FPU	None	Optional	Standard
ROM Size	1 MB	1 MB	2 MB
Maximum VRAM	1 MB (512K stnd)	1 MB (512K stnd)	1 MB (I MB stnd)
VRAM Slots	1 slot	1 slot	1 slot
VRAM Speed	80 ns(nanoseconds)	80 ns	80 ns
NuBus Slots	1!	3	1*
PDS Slot%	Yes	Yes	Yes

Notes:
Composite SIMMs are not supported.
! With optional Centris 610 NuBus Adapter Card installed.
* With optional Centris 660AV NuBus Adapter Card installed.
% On the Centris 610 and 660AV models, the PDS Slot is the Expansion
Slot - it can either be used as PDS slot or as a NuBus slot with the appropriate NuBus Adapter Card installed.

The Macintosh Centris 610 and 660AV share the same type of enclosure (form factor) which is a flat, rectangular "pizza" box. The Macintosh Centris 650 uses a Macintosh IIvx style desktop box.

Additionally, the Macintosh Centris 660AV boasts a number of additional features not found in the Centris 610 & 650 including:

* An on-board DSP (Digital Signal Processor) Chip
* GeoPort Communications Architecture
* Composite and S-Video input and output ports
* Sound input and output ports

Last Modified: Feb 19, 2012

Additional Product Support Information

Centris 610 and 650: Floating-Point Unit Upgrades

The Macintosh Centris 610 and the Centris 650 4/80 configuration come with an FPU. Can I upgrade these Centris models with an FPU? Are there any compatibility problems if my Centris doesn't have an FPU?

Some configurations of the Quadra 650 have an FPU standard, those that do not can be upgraded as per below. The Quadra 610 is the same as the Centris 610.
This article has been archived and is no longer updated by Apple.

FPU Upgrades

You can upgrade the Macintosh Centris 610 or 650 with an FPU, but Apple doesn't provide or support such an upgrade. You must rely on third-party companies who can remove the 68LC040 from its socket and replace it with a 68RC040. Since Apple doesn't intend to offer an upgrade, we can't guarantee that the processor will remain a socketed component.

Compatibility without an FPU

There aren't very many compatibility problems with non-FPU systems. While the addition of an FPU allows certain types of applications to execute faster, these applications tend to be more technical in nature. Business applications -- such as spreadsheets, databases and word processors -- don't require an FPU to run.

Most applications check to see if there's an FPU present. If one doesn't exist, they emulate the floating point instructions in software. There are a few applications that expect or require an FPU. These applications will present problems and we anticipate most software developers will revise these products.

Published Date: Feb 19, 2012

Macintosh: Pre-System 7.x Font Sizes

I am using System 6.0.x and noticed that some of my fonts are now showing a different memory size. Why?
This article has been archived and is no longer updated by Apple.
When using the Font D/A Mover, you may notice that some fonts show a different memory size, depending on what version of system file you are accessing. The fonts distributed by Apple have not actually changed in size; rather, a FOND resource was added to the System file with the introduction of the LaserWriter Plus. When the Font D/A Mover calculates the size of a font in bytes, the FOND resource for that font is also included. If you need to know a font's actual size, use ResEdit and do a Get Info for the font.

Notes:
1. ResEdit is a resource editor by Apple Computer, Inc. It allows you to make modifications to files. This application is a developer tool and Apple Computer does not provide support for ResEdit or applications modified using ResEdit.

2. Font D/A Mover is only required with versions of the Mac OS prior to System 7.x.
Last Modified: Feb 19, 2012

Additional Product Support Information

ARCHIVE

Color Classic, LC 520: Power Switches

- **Last Modified:** November 09, 1999
- **Article:** TA28915

- **Old Article:** 11447

This article has been archived and is no longer updated by Apple.
I just pulled my new Color Classic out of the box, plugged it in, and turned it on but it didn't power up.

Also, can I shut off the dialog box that comes up once I hit the Power key on the keyboard?

When the Color Classic and the LC 520 first come out of the box and the power switch on the rear is turned on, the computer doesn't start up. To turn on the computer, just press the power key on the keyboard. Most power-on and -off operations should be done from the keyboard.

You need to use the power switch in the back of the Color Classic and the LC 520 only to prepare them for:

- Long-term storage
- Removal of the logic board. (If you forget to turn this switch off before removing the logic board, there is a danger of shorting something out, because power will still be active on the board.)

To shut down the Color Classic or the LC 520, press the power key on the keyboard.

For data security reasons, we thought it was best that the dialog appear each time the keyboard button is pressed. The dialog box cannot be disabled.

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Archived - Macintosh LC III: Using with a VGA Monitor

This article describes how to connect a VGA monitor to a Macintosh LC III.
This article has been archived and is no longer updated by Apple.
To connect a VGA monitor to the Macintosh LC III video port, a cable with the following configuration is required.

```
Macintosh LC III
DB-15                                       VGA Connector
-------------                               --------------

 2  ------------------- Red Video ------------  1
 1  ------------------- Red Ground -----------  6
 9  ------------------- Blue Video -----------  3
13  ------------------- Blue Ground ----------  8
 5  ------------------- Green Video ----------  2
 6  ------------------- Green Ground ---------  7
15  ------------------- Hsync ---------------- 13
12  ------------------- Vsync ---------------- 14
14  ------------------- Sync Ground ---------- 10
10  ---------------- |
 7  ---------------- |Connect 7 & 10 so the sense pin ID will equal VGA
```

A few issues to remember when connecting VGA monitors to the Macintosh LC III:

* VGA monitors may have variances when purchased from different VGA monitor vendors. Test a particular monitor for compatibility with the Macintosh LC III before buying.

* VGA monitors from different vendors have different image quality specifications. There may be significant differences between Apple-brand monitors and VGA monitors. Look at the monitors side-by-side before buying.

* When a VGA monitor is connected as described above, the resolution is 640 x 480.

* The bit depth supported depends on the amount of VRAM installed. The Macintosh LC III ships with 512K of VRAM in one VRAM SIMM socket and is expandable to 768K.
Last Modified: Feb 19, 2012

Additional Product Support Information

ARCHIVE

System Enablers: Current Versions & Change History

- **Last Modified:** October 20, 2000
- **Article:** TA28948

- **Old Article:** 11491

This article has been archived and is no longer updated by Apple.
This article lists the current versions and the change history of the Macintosh system enablers.
In the past, when Apple released new computers, the system software was revised. To get around this problem, system enablers were written which contained information necessary for newer computers to start up. All Apple computers released since system software 7.1 (September 1992) require a system enabler to start up.

A universal enabler was developed that supports all computers released before System 7.5. This enabler shipped with System 7.5.

Computers listed in this article do not require an enabler if they use system software versions 7.5.3 and later.

Current Macintosh system enablers

Note: The Plus, SE, SE/30, Classic, Classic II, LC, LC II, LC 580, Mac II, IIx, IIcx, IIsi, IIci, IIfx, PB 100/140/145/170, Quadra 700, 900, and 950 do NOT need a System Enabler. Also, the Performa 200, 400, 405, 430, and 410 do NOT require a system enabler.

CPU	Enabler	Current Version	Note
Centris 610	System Enabler 040	1.1	D
Centris 650	System Enabler 040	1.1	D
Centris 660AV	System Enabler 088	1.2	D
Color Classic	System Enabler 401	1.0.5	D
IIvi	System Enabler 001	1.0.1	D
IIvx	System Enabler 001	1.0.1	D
LC III	System Enabler 003	1.1	D
LC 475	System Enabler 065	1.2	D
LC 520	System Enabler 403	1.0.2	D
LC 550	System Enabler 403	1.0.2	D
LC 575	System Enabler 065	1.2	D
LC 630	System Enabler 405	1.0	D
PowerBook 150	PowerBook 150 Enabler	1.1	D
PowerBook 160	System Enabler 131	1.0.3	A
PowerBook 165	System Enabler 131	1.0.3	A
PowerBook 165c	System Enabler 131	1.0.3	A
PowerBook 180	System Enabler 131	1.0.3	A
PowerBook 180c	System Enabler 131	1.0.3	A
PowerBook 190	PowerBook 5300/2300/190 Enabler	1.2.4	F
PowerBook 520	PowerBook 500 Series Enabler	1.0.2	D
PowerBook 520c	PowerBook 500 Series Enabler	1.0.2	D
PowerBook 540	PowerBook 500 Series Enabler	1.0.2	D
PowerBook 540c	PowerBook 500 Series Enabler	1.0.2	D
PowerBook 5300	PowerBook 5300/2300/190 Enabler	1.2.4	F
PowerBook Duo 210	PowerBook Duo Enabler	1.0	B
PowerBook Duo 230	PowerBook Duo Enabler	1.0	B
PowerBook Duo 250	PowerBook Duo Enabler	1.0	B
PowerBook Duo 270c	PowerBook Duo Enabler	1.0	D

PowerBook Duo 280	PowerBook Duo Enabler	2.0	C
PowerBook Duo 280c	PowerBook Duo Enabler	2.0	C
PowerBook Duo 2300	PowerBook 5300/2300/190 Enabler	1.2.4	F
Quadra 605	System Enabler 065	1.2	D
Quadra 610	System Enabler 040	1.1	D
Quadra 630	System Enabler 405	1.0	D
Quadra 650	System Enabler 040	1.1	D
Quadra 660AV	System Enabler 088	1.2	D
Quadra 800	System Enabler 040	1.1	D
Quadra 840AV	System Enabler 088	1.2	D
Macintosh TV	System Enabler 404	1.0	D
Performa 600	System Enabler 304	1.0.1	D,L
Performa 450, 460, 466/7	System Enabler 308	1.0	D
Performa 475, 476, 575, 577/8	System Enabler 364	1.1	D
Performa 550, 560	System Enabler 332	1.1	D
Performa 630, 635CD	System Enabler 405	1.0	D
Performa 611x	Requires System 7.5		D
Performa 5200 Series	System Enabler 406	1.0	G
Performa 5300 Series	System Enabler 406	1.0	G
Performa 6200 Series	System Enabler 406	1.0	G
Performa 6300 Series	System Enabler 406	1.0	G
Performa 6400	System Enabler 410	1.1	H
Power Macintosh 4400/200	System Enabler 827		J
Power Macintosh 5200/75	LC System Enabler 406	1.0	G
Power Macintosh 5300/100	LC System Enabler 406	1.0	G
Power Macintosh 5400 Series	System Enabler 410	1.1	H
Power Macintosh 5500/225	System Enabler 411		I
Power Macintosh 6500/225	System Enabler 411		I
Power Macintosh 6500/250	System Enabler 411		I
Power Macintosh 6100/60	PowerPC Enabler	1.0.2	D
Power Macintosh 7100/66	PowerPC Enabler	1.0.2	D
Power Macintosh 8100/80	PowerPC Enabler	1.0.2	D
Power Macintosh 8100/110	PowerPC Enabler	1.1.1	E, G
Power Macintosh 6100/66	PowerPC Enabler	1.1.1	E, G
Power Macintosh 7100/80	PowerPC Enabler	1.1.1	E, G
Power Macintosh 8100/100	PowerPC Enabler	1.1.1	E, G
Power Macintosh Upgrade	PowerPC Upgrade Card Enabler	1.0.1	D
Power Macintosh 9500/120	System Enabler 701	1.1	F, G
Power Macintosh 9500/132	System Enabler 701	1.1	F, G
Power Macintosh 7200/75	System Enabler 701	1.1	F, G
Power Macintosh 7200/90	System Enabler 701	1.1	F, G
Power Macintosh 7500/100	System Enabler 701	1.2	F, G
Power Macintosh 8500/120	System Enabler 701	1.2	F, G
Power Macintosh 7300/180	System Enabler 702		I
Power Macintosh 7300/200	System Enabler 702		I
Power Macintosh 8600/200	System Enabler 702		I
Power Macintosh 8600/250	No Enabler Needed		K
Power Macintosh 8600/300	No Enabler Needed		K
Power Macintosh 9600/200	System Enabler 702		I
Power Macintosh 9600/200MP	System Enabler 702		I
Power Macintosh 9600/233	System Enabler 702		I

Notes:

A - System Enabler 131 replaces System Enabler 111 and System Enabler 121.

B - Express Modem users should also install the Duo Battery Patch (extension).

C - Requires System Software 7.1.1 or later. System Software 7.1.1 and PowerBook Duo Enabler 2.0 ship with the PowerBook Duo 280 and 280c.

D - No system enabler is required for this Macintosh under System 7.5 or later.

E - Power Macintosh 6100/66, 7100/80, 8100/100, and 8100/110 require System 7.5 and Finder 7.5.1 or later.

F - Requires System Software 7.5.2 or later.

G - No system enabler is required for this Macintosh under System 7.5.3 or later.

H - No system enabler is required for this Macintosh under System 7.5.5 or later.

I - These computers shipped with 7.5.5 and require the enabler with it. These do not support Mac OS 7.6. They do support Mac OS 7.6.1.

J - The Power Macintosh 4400/200 shipped with 7.5.3 and requires the enabler with it. It does not support Mac OS 7.6. They do support Mac OS 7.6.1.

K - These Power Macintosh shipped with 7.6.1 and do not require an enabler. They do not support Sys 7.6 or earlier but will support Mac OS 8.

L- The Performa 600 requires System Enabler 304 to run Performa System Software (7.1Px) and Macintosh System Enabler 001 to run Macintosh System Software (7.1).

Enabler Change History

PowerBook 150 Enabler
1.1 - First release.

PowerBook 500 Series Enabler
1.0.2 - First release.

PowerBook 5300/2300/190 Enabler
1.0.2 - First release.

1.0.8 - Added support for NiMH batteries.

1.1 - Reference release for 5300 and 190 builds.

1.2 - Reference release for 2300 builds.

1.2.1 - Fixed several issues on PowerBook 5300/2300/190 computers.

1.2.4 - System software enhancements improving reliability and performance

PowerBook Duo Enabler
1.0 - First release. Replaced System Enabler 201.

2.0 - Includes support for type III batteries, better support for dual monitors, and multiple resolution support for color displays. Added support for PowerBook Duo 280 and 280c.

Note: No longer available from Apple Software Updates.

PowerPC Enabler
1.0 - First release.

1.0.1 - Fixes some video and serial communications problems.

1.0.2 - Improved Energy Star compatibility for certain monitors connected to the built-in video port.

1.1 - Manufacturing release only.

1.1.1 - Added support for speed bumped Power Macintosh. Requires Finder 7.1.5.

PowerPC Upgrade Card Enabler
1.0 - First release.

1.0.1 - Includes Communications Toolbox 1.1

System Enabler 001
1.0 - First release.

1.0.1 - Improved support for high speed serial communications and improved accuracy of the system clock. Also addressed a rare problem where floppies may not be ejected properly at shutdown.

System Enabler 003
1.0 - First release.

1.1 - Updated in System Update 3.0. Minor bug fix for compatibility.

System Enabler 040
1.0 - First release.

1.1 - Added support for Quadra 610 and Quadra 650.

System Enabler 065
1.0 - First release for Macintosh LC 475 and Macintosh Quadra 605.

1.1 - Added support for Macintosh LC 575.

1.2 - Minor bug fix for compatibility.

System Enabler 088
1.0 - First release.

1.0.1 - Required for System 7 Pro 7.1.1 support.

1.1 - Added support for Quadra 660AV.

1.2 - Corrects problems with serial port, involving printing to LaserWriter 310 Select and crashing in certain instances when receiving a fax while network traffic is high.

System Enabler 131
1.0 - First release to support the PowerBook 180c. Replaced System Enabler 121 (supporting 165c) as well as System Enabler 111 (supporting 160 & 180).

1.0.2 - Corrected a problem involving the serial driver. If a user has the serial driver open, but is not transmitting, and then puts the PowerBook to sleep, any attempt to transmit on waking would cause the system to hang.

1.0.3 - Added support for the PowerBook 165.

System Enabler 401
1.0.4 - First release.

1.0.5 - Fixed a problem involving erratic mouse movement with Apple II mouse-based applications running on the Apple IIe card installed in the PDS.

System Enabler 403
1.0 - First release for Macintosh LC 520.

1.0.1 - Manufacturing release only.

1.0.2 - Added support for Macintosh LC 550.

System Enabler 404
1.0 - First release.

System Enabler 405
1.0 - First release.

System Enabler 406
1.0 - First release.

System Enabler 701
1.0 - First release for Power Macintosh 9500; requires System Software 7.5.2.

1.1 - New enabler for Power Macintosh 9500 and Power Macintosh 7200 only; requires System Software 7.5.2.

1.2 - New enabler for Power Macintosh 7500 and Power Macintosh 8500 only; requires System Software 7.5.2.

Where to find system enablers
This article can help you locate the software update mentioned here:

- Article 14724: "**Where To Find Apple Software Updates**" - Lists online services for free Apple software updates.

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TA28948_System_Enablers_Current_Versions_&amp_Change_History.pdf

Macintosh PC Exchange: Manual Correction (2/93)

- **Last Modified:** February 16, 1993
- **Article:** TA28984

- **Old Article:** 11544

Page 14 of the Macintosh PC Exchange manual states that you can create a mapping for a DOS file with "no suffix". However, if you try to do this, you get the message "To complete the assignment, the DOS suffix must be specified". Is the manual incorrect?

The Macintosh PC Exchange manual is incorrect: it is not possible to create a mapping for a DOS file without the three-character extension, referred to in the Macintosh PC Exchange manual as a "suffix".

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Archived - Font Pack: Some Fonts Give Double Image in Bold (2/93)

Some fonts in the Apple Font Pack print out a double image when in the bold style. The fonts we've seen with this problem don't have an explicit "bold" version. Two examples we have verified are Onyx and Oxford. The double exposure is easier to see at larger point sizes.

The workaround is not to use bold styles for these fonts, since there isn't a bold version defined for them.

This article has been archived and is no longer updated by Apple.
When font developers consider creating a separate glyph set for bold and italic, they base their decision on aesthetics. If a particular font (for example, Symbol, Oynx, Oxford, Chicago...) doesn't look pleasing to the eye when in bold or italics, the developer doesn't create a separate TrueType font face.

When there's no collection of glyphs in a particular typeface and style, QuickDraw must add any additional stylistic variations needed. The default bolding function works very well on many fonts. However, this function doesn't produce an aesthetically pleasing look (that is, the edges aren't mitered) on ornate fonts. The look is very apparent when the text is produced at larger sizes or when sent to high resolution raster output devices.

Because Apple doesn't want to limit the user's choices, the user isn't prevented from using the bold style by a grayed out menu selection. Therefore, the user can decide whether the look of the bold font is appropriate.

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- **Last Modified:** Feb 19, 2012
- **Article:** TA29001

- **Views:**

  210

System 7, Mac OS 8: Limitations of the Finder

- **Last Modified:** May 05, 2000
- **Article:** TA29003

- **Old Article:** 11574

This article gives the limitations of the Finder in System 7 and Mac OS 8.

Finder Limits

- Number of open files: 346
- Number of Apple Menu Items: 52 (More items can added, but only 52 appear in the Apple Menu.)
- Number of files supported by the Desktop: Unlimited (limited to the available disk space -- see Mac OS Standard format limit)
- Number of applications in memory: The Finder does not limit applications, but available RAM does
- Number of volumes available on the Desktop: 32
- Number of items in a folder by list view: Up to 32 000 depending on the computer and RAM. (See the note at the bottom of this article.)
- Number of resources in the System File: 32 767 or 16 MB
- Number of System Extensions or Control Panels that can be loaded into memory: The Finder does not limit these, but hard disk space and RAM can limit them
- RAM allocated to an application with Finder = 999 999 K
- The Finder supports 24-bit color, but icons are only 8-bit
- QuickDraw supports 48-bit color, but the current operating system maximum is 32-bit color
- Disk cache: 32 KB per megabyte of installed RAM

Mac OS Standard Format Limits

- 64K items or 65 536 items per volume
- The maximum length of a pathname under the Finder--including the Volume and Folder--is 255 characters, including colons

For example: InternalHD:Folder1:Folder2:Filename = 35 characters

"Inside Macintosh, Volume IV" states that there is no limit to levels of subdirectories. Because of pathname limitations, it is not always possible to specify a file using its full pathname.

This limitation has nothing to do with the Finder; it is a limitation of the file system.

Note: With System 7.x, attempting to view many files in one window, something between 500 to 1500 files, creates very slow opening times and dropout viewing issues. The specific number depends on RAM and computer. With Mac OS 8.x, it is possible to view as many as 32 766 files, though it is dependent upon RAM available, and performance is significantly degraded.

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Archived - Macintosh: ROM Size for Various Models

This article lists the ROM size for various Macintosh models. Additional information on Macintosh ROMs can be found in article 2532: "**Macintosh Computers: ROM Version Numbers**".
This article has been archived and is no longer updated by Apple.
Note: After May 25, 1999, this article will not be updated. Product specific information on Macintosh ROM can be obtained from the Developer Note for a particular product. You can view and download Developer Notes from the following Web site: **http://developer.apple.com/hardware/**.

Macintosh Model	ROM Size
Macintosh 128	64K
Macintosh 512K	64K
Macintosh 512Ke	128K
Macintosh Plus	128K
Macintosh SE (both 800K & FDHD)	256K
Macintosh Classic (4-chip and 2-chip)	512K
Macintosh SE/30	256K
Macintosh Classic II	512K
Macintosh Color Classic	1024K

Macintosh II Models	ROM Size
Macintosh II	256K
Macintosh IIx	256K
Macintosh IIcx	256K
Macintosh IIci	512K
Macintosh IIfx	512K
Macintosh IIsi	512K
Macintosh IIvi/IIvx	1024K

Macintosh LC Models	
Macintosh LC	
Macintosh LC II	512K
Macintosh LC III	1024K
Macintosh LC 475	1024K
Macintosh LC 520/550	1024K
Macintosh LC 575	1024K
Macintosh LC 580	1024K
Macintosh LC 630	1024K
Macintosh TV	1024K

Macintosh Performa Models	
Macintosh Performa 200	512K
Macintosh Performa 400/405/410/430	512K
Macintosh Performa 450/460/466/467	1024K
Macintosh Performa 475/476	1024K
Macintosh Performa 550/560	1024K

Macintosh Performa 575/577/578	1024K
Macintosh Performa 580	1024K
Macintosh Performa 600	1024K
Macintosh Performa 630/631/635/636/637/638/640	1024K
Macintosh Performa 5200/5210/5215/5220	4096K
Macintosh Performa 5260	4096K
Macintosh Performa 5300	4096K
Macintosh Performa 6100 Series	4096K
Macintosh Performa 62xx	4096K
Macintosh Performa 6300	4096K
Macintosh Performa 6320	4096K
Macintosh Performa 6400 series	4096K
Macintosh Performa 6360	4096K
Macintosh Performa 6290	4096K
Macintosh Quadra Models	
Macintosh Quadra 605	1024K
Macintosh Centris/Quadra 610	1024K
Macintosh Quadra 630	1024K
Macintosh Centris/Quadra 650	1024K
Macintosh Quadra 700	1024K
Macintosh Quadra 800	1024K
Macintosh Quadra 900	1024K
Macintosh Quadra 950	1024K
Macintosh Centris/Quadra 660AV	1024K
Macintosh Quadra 840AV	2048K

Apple Workgroup Servers	
Apple Workgroup Server 60	1024K
Apple Workgroup Server 80	1024K
Apple Workgroup Server 90	1024K
Apple Workgroup Server 95	1024K
Apple Workgroup Server 6150	4096K
Apple Workgroup Server 8150	4096K
Apple Workgroup Server 9150	4096K
Apple Workgroup Server 7250	4096K
Apple Workgroup Server 8550	4096K

Power Macintosh Models	
Power Macintosh 4400 series	4096K
Power Macintosh 5200/75 LC	4096K
Power Macintosh 5260/100	4096K
Power Macintosh 5300/100 LC	4096K
Power Macintosh 5400 series	4096K
Power Macintosh 5500 series	4096K
Power Macintosh 6400 series	4096K
Power Macintosh 6500 series	4096K
Power Macintosh 6100 series	4096K

Power Macintosh 7100 series	4096K
Power Macintosh 7200 series	4096K
Power Macintosh 7300 series	4096K
Power Macintosh 7500/100	4096K
Power Macintosh 7600 series	4096K
Power Macintosh 8100 series	4096K
Power Macintosh 8500 series	4096K
Power Macintosh 8600 series	4096K
Power Macintosh 9500 series	4096K
Power Macintosh 9600 series	4096K
Power Macintosh G3	4096K
Power Macintosh G3 (Blue and White)	1024K

Macintosh PowerBook Models	
Macintosh Portable	256K
Macintosh Backlit Portable	256K
PowerBook 100	256K
PowerBook 140	1024K
PowerBook 145	1024K
PowerBook 150	1024K
PowerBook 160	1024K
PowerBook 165c	1024K
PowerBook 170	1024K
PowerBook 180/180c	1024K
PowerBook Duo 210	1024K
PowerBook Duo 230	1024K
PowerBook Duo 250	1024K
PowerBook Duo 270c	1024K
PowerBook Duo 280/280c	1024K
PowerBook 520/520c	2048K
PowerBook 540/540c	2048K
PowerBook 1400	1024K
PowerBook Duo 2300 series	4096K
PowerBook 5300 series	4096K

Last Modified: Feb 19, 2012

Archived - ABS Tech Note: DAL17 INGRES Locking Issues

This technical note describes special locking considerations when using DAL with INGRES.
This article has been archived and is no longer updated by Apple.
By default, INGRES provides "repeatable read" transactions. This means that during a single transaction, your application can repeat a DAL query two or more times and is guaranteed that the query results will be identical. Thus, no database changes made by other users during your transactions will be visible to your program. INGRES provides this high level of transaction integrity by locking the sections of the database that your query has accessed until your transaction ends with a COMMIT or ROLLBACK statement. During your transaction, no other user may update the locked portions of the database.

This default INGRES locking can reduce the amount of concurrent access to an INGRES database, especially when a transaction includes "think time" during which your program is waiting for user input. To increase concurrency, INGRES provides several locking parameters which can be set programmatically through the INGRES SET LOCKMODE statement. These excerpts from the INGRES SQL reference manual, pages 2-56 and 2-57, describe these parameters.

Description of lock modes:

SET LOCKMODE provides four different parameters to govern the nature of locking in an INGRES session:

```
* Level: This refers to the level of granularity desired when the table is accessed. You can specify any of
the following locking levels:

   page       Specifies locking at the level of the data page (subject to
              escalation criteria; see below)
   table      Specifies table-level locking in the database
   session    Specifies the current default for your INGRES session
   system     Specifies that INGRES will start with page-level locking,
              unless it estimates that more than Maxlocks pages will be
              referenced, in which case table-level locking will be used.
```

* Readlock: This refers to locking in situations where table access is required for reading data only (as opposed to updating data). You can specify any of the following Readlock modes:

```
nolock     Specifies no locking when reading data
   shared     Specifies the default mode of locking when reading data
   exclusive  Specifies exclusive locking when reading data (useful in
              "select-for-update" processing within a multi-statement
              transaction)
   system     Specifies the general Readlock default for the INGRES system
```

* Maxlocks: This refers to an escalation factor, or number of locks on data pages, at which locking escalates from page-level to table-level. The number of locks available to you is dependent upon your system
configuration. You can specify the following Maxlocks escalation factors:

```
n          A specific (integer) number of page locks to allow before
              escalating to table-level locking. The default "n" is 10,
              and "n" must be greater than 0.
   session    Specifies the current Maxlocks default for your INGRES
              session
   system     Specifies the general Maxlocks default for the INGRES system
```

Note: If you specify page-level locking, and the number of locks granted during a query exceeds the system-wide lock limit, or if the operating system's locking resources are depleted, locking escalates to table-level. This escalation occurs automatically and is independent of the user.

* Timeout: This refers to a time limit, expressed in seconds, for which a lock request should remain pending. If INGRES cannot grant the lock request within the specified time, then the query that requested the lock aborts. You can specify the following timeout characteristics:

```
n          A specific (integer) number of seconds to wait for a lock
              (setting "n" to 0 requires INGRES to wait indefinitely for
              the lock)
   session    Specifies the current timeout default for your INGRES
              session (which is also the INGRES default)
   system     Specifies the general timeout default for the INGRES system
```

Against the backdrop of these SET LOCKMODE parameters and options are the INGRES system defaults for each of the parameters:

Level dynamically determined by INGRES
Readlock shared
Maxlocks 10
Timeout 0 (no timeout)

If you select the system option for any of the SET LOCKMODE parameters, the values above are automatically supplied. When you begin your INGRES session, the INGRES system defaults are in effect. If you override them with other values using the SET LOCKMODE command, you can revert to the system defaults easily.

Similarly, if you set session parameters (such as locking behavior for all user tables accessed by queries in your INGRES session), you can further set parameters for individual tables on an ad hoc basis. After setting the ad hoc locking behavior, you can return it to either the session defaults or to the INGRES system defaults.

INGRES tries to place a lock on every page it touches in a transaction. Depending on the Lockmode, this will lead to an exclusive, shared, or no lock condition on the page. INGRES also escalates locks (as with more than "Maxlocks," the whole table will be locked to prevent deadlocks). The default Lockmode in INGRES is shared. This means that several users can share the same page for "selects," but updates or inserts cannot take place until the page is held only by the updating user. If a user performs a "select * from xxx" type of query, then every physical page in the table is marked and the locks are not removed until the transaction is finished. This prevents other users from making updates to the same table. Concurrency will therefore be reduced.

However, concurrency is only an issue when there are write operations performed on the database on-line (as with updates or inserts). If no updates are going to take place in your application, you should use the "nolock" mode.

If you know in advance that your application will not be updating data in a transaction, it can use the "nolock" mode to eliminate the need for INGRES to lock parts of the database accessed by a query. Here is an example of a DAL sequence that uses this technique:

```
/* Open INGRES for "select" and non-updating operations only: */
 open INGRES dbms;
 open INGRES database "cl1demo";
 execute in INGRES "set lockmode session where readlock = nolock";
 select * from offices;
 [continue with session]
```

If you do not want to turn off locking, you can still improve concurrency in a query-only application by making sure that a COMMIT statement is executed as soon as you have finished processing each set of query results. Do not perform two or more queries in sequence without an intervening COMMIT statement unless your application absolutely depends on there being no changes to the database between the queries.

Finally, if your application must update the database, it should avoid "think" periods during a transaction that locks the database whenever possible. For example, this statement sequence will work correctly when the lockmode is shared or exclusive, but may lock large parts of the database during the "think time:"

```
select (my_columns) where bool_expr;
 /* think and make changes */
 update (my_columns) where bool_expr;
 commit;
```

An alternative approach that will improve concurrency is:

```
/* Do the query the first time without locking */
 execute in INGRES "set lockmode session where level = system,
         readlock = nolock";
 select (my_columns) where bool_expr;
 printall;
 /* application puts data in buffer #1 */
 /* think and make changes and store updates in a buffer #3 */

 /* Turn on locking and do the query a second time */
 execute in INGRES "set lockmode session where level = page,
         readlock = exclusive";
 select (my_columns) where unique_id;
 printall;
 /* application puts data in buffer #2 */
```

```
/* If data remains unchanged from first query, do the update */
if buffer2 == buffer1 {
    update (my_columns)  where unique_id;    /* using contents of buffer
#3 */
   commit;
}
else
{
    /* warn the user that the data has changed since last select */
}

/* Turn locking back off again */
execute in INGRES "set lockmode session where level = system, readlock =
nolock";
```

The "unique_id" can be, for example, the employee number or another identifier that uniquely identifies the rows to be updated. The objective in an update process is to "touch" as few pages as possible, since all touched pages will be locked until the transaction commits. The reason for going through this lengthy process is to avoid having a page locked up for a long time.

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- **Last Modified:** Feb 19, 2012
- **Article:** TA29056

- **Views:**

  1623

- **Rating:**
  - 4.0/5 Stars

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ABS Tech Note: DAL25 DB2 and Secondary AUTHIDs

This Tech Note explains what actions are necessary to implement DAL using secondary AUTHIDs, a facility of DB2. Secondary AUTHIDs are utilized in conjunction with a system resource security package (for example, RACF) to simplify access to tables under DB2.

This article has been archived and is no longer updated by Apple.
Information on DB2 modifications necessary to support secondary AUTHIDs should be obtained from the relevant IBM publications. Similarly, more information on security procedures and strategies (such as GROUP definitions with RACF) can be found in the related IBM or third-party publications.

Why secondary AUTHIDs might be used
Secondary AUTHIDs are generally implemented in large IS environments where there are many users that require access to multiple tables in DB2. Although a GRANT could be done for each user/table combination, it is easier to assign users to different groups within the security software and then GRANT table access to the groups, as opposed to the users. For example, there might be fifteen users who all work in the accounting department that require identical access to a DB2 table. All fifteen users can be 'connected' to a group named 'ACTG' within RACF and then the necessary access can be GRANTed (using SPUFI or other DB2 utilities) to 'ACTG'. This way, if more people are added to the accounting department, they only have to be 'connected' to the group within RACF; no other GRANT would be necessary.

How DAL implements secondary AUTHIDs
Since DAL is not used for GRANTing access to tables or performing any system security functions, it can only take advantage of those accesses that are already in place. To do so, the database open must be performed with the 'as user <username>' option. This should be done right after opening the DBMS. An example is shown on the next page.

The DBMS and database are opened without usage of secondary AUTHIDs. The USERID that was utilized to logon to the DAL MVS/VTAM Server is 'RJOHNSO'.

```
DAL> open DB2 DBMS;
DAL> open database 'DB2T' ;
```

A selection is performed against a nonexistent table. The error generated indicates that the USERID was prepended to the query.

```
DAL> select * from foo;
****Remote DAL Error****
*Error:
undefined table name in database (-10204) table not found in database
"network", line 1 :
DSNT408I SQLCODE = -204, ERROR: RJOHNSO.FOO IS AN UNDEFINED NAME
DSNT415I SQLERRP = DSNXOCA SQL PROCEDURE DETECTING ERROR
DSNT416I SQLERRD = 500 0 0 1 0 0 SQL DIAGNOSTIC INFORMATION
```

The database is closed and reopened using a secondary AUTHID that either does not exist or of which 'RJOHNSO' is not a member.

```
DAL> close database;
DAL> open database 'DB2T' as user 'DALPROD' ;
****Remote DAL Error****
*Error:
database not opened (-923) DB2T
"network", line 1 :
DSNT408I SQLCODE = -553, ERROR: DALPROD SPECIFIED IS NOT ONE OF THE
VALID AUTHORIZATION IDS
DSNT415I SQLERRP = DSNXRST SQL PROCEDURE DETECTING ERROR
```

The database is now opened using a valid secondary AUTHID, and a selection is again performed against a nonexistent table. This time, however, the error message indicates that the secondary AUTHID is now prepended to all queries.

```
DAL> open database 'DB2T' as user 'DALTEST' ;
DAL> select * from foo;
****Remote DAL Error****
*Error: undefined table name in database (-10204) table not found in
database
"network", line 1 :
DSNT408I SQLCODE = -204, ERROR: DALTEST.FOO IS AN UNDEFINED NAME
DSNT415I SQLERRP = DSNXOCA SQL PROCEDURE DETECTING ERROR
```

DSNT416I SQLERRD = 500 0 0 1 0 0 SQL DIAGNOSTIC INFORMATION

If the table 'DALTEST.FOO' actually existed, a query would have been performed against it even though the USERID that logged on to the server is 'RJOHNSO'.

Verifying DB2 service levels
If V2.2.0 of DB2 is being used, it is important to verify the application of a PTF from IBM. This PTF, number UN23430, is specifically related to the use of secondary AUTHIDs with DB2. Contact your authorized IBM service representative for more information.
Last Modified: Feb 19, 2012

Additional Product Support Information

Macintosh: VRAM Chart

This article is a matrix of Macintosh computers and their VRAM requirements.
This article has been archived and is no longer updated by Apple.
Note: VRAM specifications for other Macintosh computers can be located by searching the Tech Info Library for the Technical Specifications article. Use the product name as your search query.

LC Family					
Model	**On Board**	**VRAM Slots**	**Max VRAM**	**RAM Speed**	**SIMM Size**
Color Classic	256K (1)	1	512K	100ns	256K
LC	256K/512K (2)	1	512K	100ns	256K or 512K
LC II	256K/512K (2)	1	512K	100ns	256K or 512K
LC III	512K (1)	1	768K	100ns	256K or 512K (3)
LC 475	512K (2)	2	1 MB	80ns	256K
LC 520	512K (1)	1	768K	80ns	256K
LC 550	512K	1	1 MB	80ns	512K
LC 575	0	2	1 MB	80ns	256K or 512K
LC 580	1 MB	0	1 MB	n/a	n/a
LC 630	1 MB (1,4)	0	1 MB	n/a	n/a

Performa Family					
Model	**On Board**	**VRAM Slots**	**Max VRAM**	**RAM Speed**	**SIMM Size**
400/410/430	512K (2)	1	512K	100ns	256K or 512K
405	256K (2)	1	512K	100ns	256K or 512K
450/460	512K (1)	1	768K	100ns	256K or 512K (3)
466/467	512K (1)	1	768K	100ns	256K or 512K (3)
475/476	512K (2)	2	1 MB	80ns	256K
550/560	512K (1)	1	1 MB	80ns	512K
600	512K (2)	2	1 MB	100ns	256K or 512K
630/635/636/637/638	1 MB (1,4)	0	1 MB	n/a	n/a
5200 Series	1 MB	0	1 MB	60ns	n/a (1)
5300 Series	1 MB	0	1 MB	60ns	n/a (1)
6200 Series	1 MB	0	1 MB	60ns	n/a (1)
6400 Series	1 MB	0	1 MB	60ns	n/a (1)
6360/160	1 MB	0	1 MB	60ns	n/a (1)

Macintosh II Family					
Model	**On Board**	**VRAM Slots**	**Max VRAM**	**RAM Speed**	**SIMM Size**
IIsi	0 (5)	0	0	n/a	n/a
IIci	0 (5)	0	0	n/a	n/a
IIvx	512K (2)	2	1 MB	100ns	256K or 512K
IIvi	512K (2)	2	1 MB	100ns	256K or 512K

Note: The Macintosh II, IIx, IIfx, and IIcx have no on-board video, and therefore require video display cards.

Centris/Quadra Family					
Model	**On Board**	**VRAM Slots**	**Max VRAM**	**RAM Speed**	**SIMM Size**
Centris 610	512K (1)	2	1 MB	100ns	256K
Centris 650	512K (1)	2	1 MB	80ns	256K

Centris 660AV	1 MB (1)	0	1 MB	80ns	n/a
Quadra 605	512K (2)	2	1 MB	80ns	256K
Quadra 610	512K (1)	2	1 MB	100ns	256K
Quadra 630	1 MB (1,4)	0	1 MB	n/a	n/a
Quadra 650	512K (1)	2	1 MB	80ns	256K
Quadra 660AV	1 MB (1)	0	1 MB	80ns	n/a
Quadra 700	512K (1)	6 (16)	2 MB	100ns	256K (6)
Quadra 800	512K (1)	2	1 MB	80ns	256K
Quadra 840AV	1 MB (1)	4	2 MB	80ns	256K
Quadra 900	1 MB (1)	4	2 MB	80ns	256K (6)
Quadra 950	1 MB (1)	4	2 MB	80ns	256K (6)
AWS 60	512K (1)	2	1 MB	100ns	256K
AWS 80	512K (1)	2	1 MB	80ns	256K

Power Macintosh Family					
Model	**On Board**	**VRAM Slots**	**Max VRAM**	**RAM Speed**	**SIMM or DIMM Size**
4400/200	2 MB	1	4 MB	60 ns	1, 2, 4 MB (13)
5200/75	1 MB	0	1 MB	60ns	n/a (1)
5300/100	1 MB	0	1 mB	60ns	n/a (1)
5400 Series	1 MB	0	1 MB	60ns	n/a (1)
5500 Series	2 MB	0	2 MB	n/a	n/a (14)
6400/200	1 MB	0	1 MB	60ns	n/a (1)
6500 Series	2 MB	0	2 MB	n/a	n/a (14)
6100 (7)	n/a	n/a	n/a	n/a	n/a
6100AV (7)	2 MB	0	2 MB	n/a	n/a
7100 (7)	1 MB	4	2 MB	80ns	256K
7100AV (7)	2 MB	0	2 MB	n/a	n/a
8100 (7)	2 MB	4	4 MB	80ns	512K
8100AV (7)	2 MB	0	2 MB	n/a	n/a
7200 (8)	1 MB	3	4 MB	(10)	1 MB
7300 (8)	2 MB (9)	4 (9)	4 MB	(10)	1 MB
7500 (8)	2 MB (9)	4 (9)	4 MB	(10)	1 MB
7600 (8)	2 MB (9)	4 (9)	4 MB	(10)	1 MB
8500 (8)	2 MB (9)	4 (9)	4 MB	(10)	1 MB
8600 (8)	2 MB (9)	4 (9)	4 MB	(10)	1 MB
9500 (w/video card)	2 MB (card)	2 (11)	4 MB	(11)	(11)
9500 (w/o video card)	No onboard VRAM; requires video card				
9600 (w/video card)	4 MB (card)	0	4 MB	(15)	(15)

Apple Server Family					
Model	**On Board**	**VRAM Slots**	**Max VRAM**	**RAM Speed**	**DIMM Size**
7250/120 (8)	1 MB	3	4 MB	70ns	1 MB
8550/132 (8)	2 MB (9)	4	4 MB	70ns	1 MB

Notes

1. VRAM soldered on the logic board.
2. Removable SIMM. No VRAM soldered on the logic board.
3. You can install 512K VRAM SIMM, but only an additional 256K of VRAM is recognized.
4. Uses DRAM instead of VRAM. The amount of DRAM is not expandable.
5. The IIci and IIsi use the 1 MB of DRAM installed in the computer. On the IIci, this is the bank A.
6. VRAM SIMMs in the Quadra 700, Quadra 900, and Quadra 950 must be installed in pairs of two SIMMs.

7. Power Macintosh models use DRAM based video for the built-in video, they are only expandable with the VRAM Expansion Card installed. All SIMM slots must be filled on the VRAM expansion card. The Power Macintosh 6100/60 is not expandable. The AV card in the AV versions of the Power Macintosh computers have 2 MB of VRAM and are not expandable.
8. The 7200, 7300, 7500, 7600, 8500, 8600, and 9500 use VRAM DIMMs instead of the customary SIMMS in older Macintosh computers.
9. "On Board" in context of the PCI-based Power Macintosh computers indicates that 1 or more VRAM slots are taken up with DIMMS when they leave the factory: thus, the 7200 has 3 available VRAM slots, while the 7300, 7500, 7600, 8500, and 8600 each have two available to reach the 4 MB VRAM maximum.
10. All DIMMs for these computers are manufactured with identical specs; so this is not a relevant statistic.
11. For the Power Macintosh 9500 computers with the onboard video you can purchase a separate 2 MB Upgrade Kit that installs onto the card itself.
12. Since Power Macintosh 9500 computers without video cards require third-party PCI video support, the VRAM requirements and capabilities vary by manufacturers.
13. The Power Macintosh 4400 series includes 2 MB of EDO memory for video memory, but it supports configurations up to 2 MB 5 V EDO memory or 1, 2, or 4 MB of 3.3 V SDRAM or 3.3 V SGRAM.
14. The Power Macintosh 5500 and 6500 series computers include 2 MB of SGRAM, which is NOT expandable.
15. The video card included with the Power Macintosh 9600 series computers includes 4 MB of video memory, which is not expandable.
16. The VRAM banks must be populated in order. If there is a VRAM upgrade, the SIMM slots should be populated from the back of the CPU to the front.

Last Modified: Feb 19, 2012

Additional Product Support Information

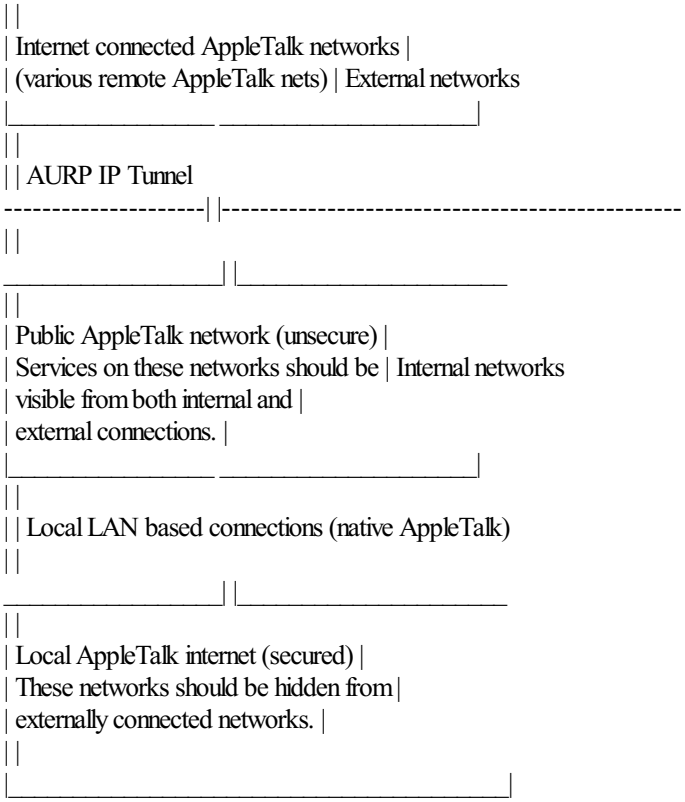
Archived - Apple Internet Router 3.0, IP Extension, & Public Zone (3/93)

I want to allow remote and local AppleTalk networks to connect to a "public network". I want the "clients" attaching to this public network to see the services on that public network only and to have no knowledge of the peer networks attached to the public network. I may not have control of those who wish to connect to my network, so I need a method to manage the "filtering" of the inbound and outbound AppleTalk traffic.

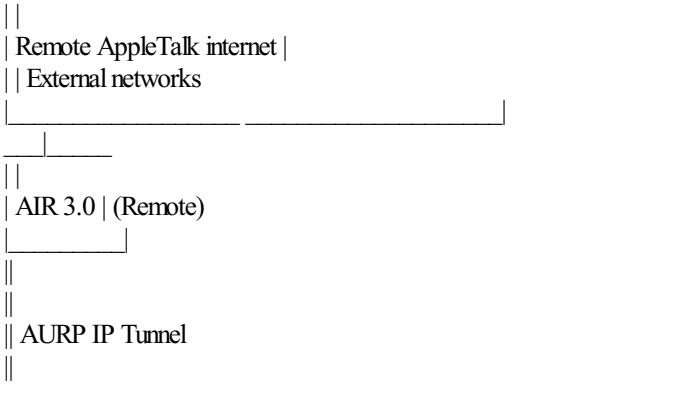
How can I set this service up using AIR 3.0 with the IP extension?

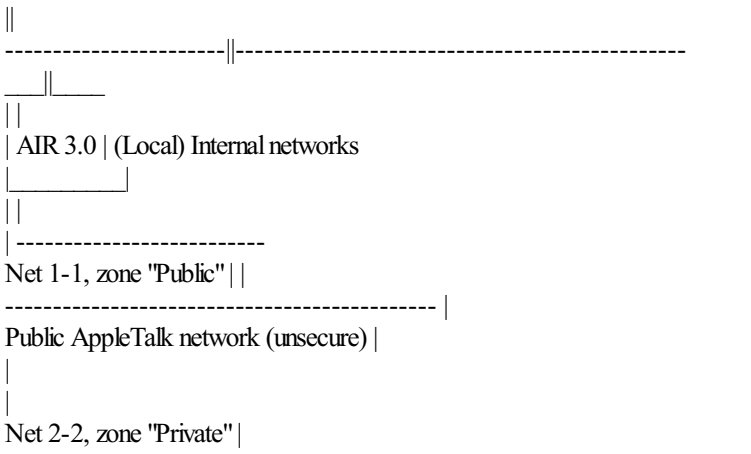
This article has been archived and is no longer updated by Apple.
The information provided below will give you with the type of functionality you're looking for.

First, the following diagrams.



The first diagram lays out the basic design of the network; more detail is added below to show a more workable solution.





The Local Apple Internet Router

Given this configuration, you would follow these steps to configure the routers:

1) In the port info box for the IP tunneling port, deselect "Use only host ID's listed. This would allow any remote site to connect to this router to establish an AURP tunnel.

2) Select "Allow more than 15 hops". This takes care of any problems associated with remote networks that are more than 15 hops away from the public network.

3) Select "Remap remote network numbers". This will allow remote networks which use the same network number as the public network to establish an AURP connection. Chose a range of networks large enough to satisfy the expected number of remote networks you'll have to remap. This will vary from situation to situation, but with a possible range 65,279 - (local network numbers used) you should be able to spare a few thousand numbers for remote remapping purposes.

4) Select "Cluster remapped networks". This is optional and only necessary if you are concerned about the size of the routing table or RTMP packets sent to the local networks.

5) Select "Hide all networks except those listed" from the "Hide from this network" pop-up menu. Input the network number of the public network in the list of networks not to hide, in this example you would list 1-1. This would hide all your local networks to any of your AURP connected remote internets.

6) Configure all other local network numbers and zone assignments.

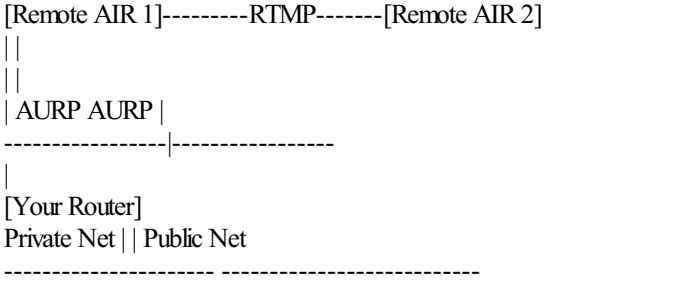
The Remote Apple Internet Router(s)

The remote router would only need to supply the address of your router and set up any options specific to their site (network number remapping, clustering, etc.).

Considerations given this configuration:

* Zones from remote sites will show up in the zone list on the local (secure) AppleTalk internet. Even though zones will show up, no services should be visible because the secure networks are hidden and thus no path exists for remote devices to respond to NBP requests.

* No routing loops can be present. In other words, no remote site could have multiple connections to your public network and also have RTMP-based connectivity between themselves.

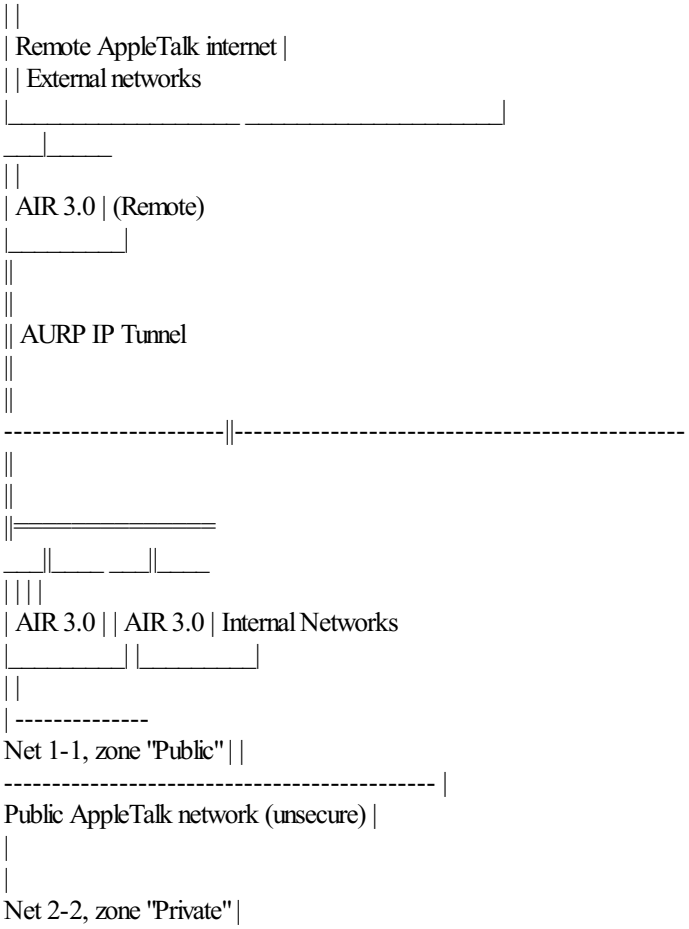


This type of configuration will not work unless you don't use network number remapping.

Private (Secured) Network

Your private (secured) network nodes would not be able to connect to other "public" networks which may be advertised on the Internet without adding another interface to the router, or by adding another router, and changing the security configuration. We just can't come up with a good general way to provide the best of both worlds such as is possible using IP.

Now let's see if I can make it a little better:



What We're trying to show here is a second Apple Internet Router connected

via IP to the local public network. This configuration offers some advantages over the first configuration.

* The biggest advantage is that your local users wouldn't be bothered seeing random zones appear because you would be connected to the public network via an IP tunnel over which you would only see a single route to network 1, and a single zone "Public". This would, for the same reason, only increase the size of a local RTMP packet by a single network entry.

* You could easily configure the second router to also connect to other "public" Internet networks -- although security would still have to be carefully thought through for your private network users. Security would need to be considered because in order to enable your private network-based users to connect to remote "public" networks, you have to supply a route back into your private networks which means they cannot be hidden. You could hide your file servers and your printers using the device hiding features of the Apple Internet Router. But NBP-based security is really not all that secure since the devices could still be attacked if someone was able to discover their network and node information.

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- **Last Modified:** Feb 19, 2012
- **Article:** TA29141

- **Views:**

  45

Apple II: Transferring Data to a Macintosh Without AFE (10/94)

- **Last Modified:** October 18, 1994
- **Article:** TA29143

- **Old Article:** 1178

How can I transfer information from my Apple II to my Macintosh without Apple File Exchange or Macintosh PC Exchange?

The best way to transfer data files from an Apple IIe to a Macintosh, and vice versa, is to use Apple File Exchange (AFE) or Macintosh PC Exchange. However, AFE requires that the Apple II data first be put on 3.5" disks. If that isn't feasible, there's another way:

1. Connect the serial ports of the two computers, using a Macintosh Imagewriter cable. In the case of the Apple IIe, the connection is made a Super Serial Card. The Apple IIc, Apple IIGS, and all Macintosh computers have built-in serial ports.

2. Point the jumper block on the Super Serial Card to MODEM.

3. Run Access II (or comparable application) on the Apple II and MacTerminal (or comparable application) on the Macintosh.

4. Set one system up to send a file and the other to receive a file. Make sure both systems are set for the same baud rate, data bits, and so forth.

Sample Software Setup:

Apple II Macintosh
--- ---
TTY Mode TTY Mode
Line Feed + Carriage Return New LIne
8 Bits 8 Bits
Xon/Xoff Xon/Xoff
9600 Baud 9600 Baud
No Parity No Parity
Half Duplex Local Echo
Normal Video Underline Cursor
Wraparound Wraparound
80 Column

OnLine
Auto repeat
Modem Connection

Article Change History:
18 Oct 1994 - Reviewed for technical accuracy, revised formatting.

Support Information Services
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Archived - DART 1.5.3: Version Change History

This article details the version change history for last three versions of DART.

DART has been replaced by Disk Copy 6.x, which reads and mounts DART disk images. The most recent version of Disk Copy 6.x can be downloaded from **http://asu.info.apple.com/swupdates.nsf/artnum/n11162**.

This article has been archived and is no longer updated by Apple.

What Is DART?

DART (Disk Archive/Retrieval Tool) is an application that enables you to duplicate Macintosh, Lisa, Apple II, or MS-DOS disks, save disk images, and create disks from image files. DART 1.5 can read disk image files in DART, DiskMaker, or Disk Copy 4.2 format. DART 1.5 image files are compressed, approaching a reduction in size comparable to that obtained by using a commercial compression utility. DART 1.5 is System 7.0 "savvy", and implements a custom Apple event mechanism to automate the conversion of older DART or Disk Copy files to 1.5 format. The conversion process can be run by "remote control" (even across a network!) using the accompanying HyperCard stack. (For more information, please refer to the DART User Manual.)

What's New in version 1.5.3

* Compatibility with Centris 660AV, Quadra 660AV, and Quadra 840AV.

* Compatibility with Apple Event Manager 1.0.1 (a component of AppleScript).

Note: A -64 error occurs launching DART 1.5.3 on a Power Macintosh, but if you click OK, DART continues and everything works as expected.

What's New in version 1.5.2

* Compatibility with new Macintosh Quadra 800 and Centris machines.

* Under certain circumstances, it was possible for DART to open a corrupted Disk Copy file and create an identically corrupted disk (or image file) from it. Checksums on source disk images are now verified correctly, and DART will always display a warning message if the expected and actual checksum values don't match. (Note that while a damaged Disk Copy file can no longer be converted to DART format, it's still possible to make a disk from it and potentially salvage the data on that disk.)

* Fixed a minor (but annoying) display glitch in "Multiple Copies" mode where a portion of the Status message would sometimes be "hidden" underneath the progress bar.

What's New in version 1.5.1

* Compatibility with A/UX 3.0.

* Under System 7, you can now drop a floppy disk onto DART to create an image file.

* The default filename in Save dialogs is now filled in with the volume name of the source disk (if a source has been selected.)

* Volumes can now be mounted in the Finder when DART is running in the background.

* Fixed a bug which could occasionally cause a bus error on certain machines. The error would occur either immediately on launch, or after the about box was dismissed.

* Fixed a bug which could cause DART to refuse to format a blank 1.4M floppy disk (or a 1.4M floppy formatted as 800K) when "Format Disk" was checked.

Last Modified: Feb 19, 2012

ARCHIVE

PowerBook Express Modem: Software Version History

- **Last Modified:** November 17, 1999
- **Article:** TA29160

- **Old Article:** 11803

This article has been archived and is no longer updated by Apple.

This article provides a version history of the PowerBook Express Modem software and some related support issues.

```
Software Versions:
------------------
1.0    First release. Support for PowerBook Duo 210 and 230 only.
      Includes Fax Sender 1.1

1.0.1  Added support for PowerBook 160 and 180.
      * Includes System Enabler 111 (1.0.2).
      * Improved compatibility with third party extensions.

1.0.2  European release only.

1.0.3  Italy release only.

1.0.4  Worldwide release. Includes Fax Sender 1.1.2
      * Early versions of the software had trouble with connections
        requiring parity. (Typically host connections using 7 data
        bits.) Connections requiring parity are now fully supported in
        1.0.4.
      * Fixed ring detection problem.
      * Added support for Loss of Carrier indication through the serial
        driver (SerSatus call, ctsHold byte).
      * Fixed problem with XON/XOFF flow control during error corrected
        connections.
      * Improved compatibility with US Robotics high speed modems when
        running LAP-M error correction.
      * Problems involving Fax Terminal Pref file corruption have been
        addressed in 1.0.4. Symptoms customers would experience, would
        be seeing an "X" appear through the Fax extension upon startup
        and not being able to send a fax.
      * When sending a fax, the six special dial characters (*,#,A,B,C,D)
        are now supported in the dial string.
      * Fax Sender 1.1.2 now allows you to cancel sending a fax during
        imaging. Earlier versions only allowed cancellation after
        imaging was complete.

      Problems not fixed in 1.0.4:
```

```
      * Incompatibility with Prodigy software, where Prodigy does not
        recognize the Express Modem (currently under investigation).
      * Problems have been reported using the "W" (wait for dial tone)
        and ":" (wait for calling card tone) dial commands. For example,
        calling card tones like Pacific Bell's and AT&T's are detected
        correctly, but not some others like MCI (currently under
        investigation). If you find that the tone is not being properly
        detected, you may need to enter one or more commas (,) to tell
        the modem to wait before sending the calling card number. Each
        comma represents a delay of 2 seconds.

1.1.2  Updated to include the Macintosh AV computers that now include
      the Express Modem option.

1.5.1  * Fixed the '@' dial modifier command so that it now works as
        described in the Express Modem user manual.
      * Improved throughput and reliability. Fixed a problem where
        fallback from MNP to async could fail and the Express Modem would
        hang up.
      * Removed dependency on A/ROSE. A/ROSE is no longer required.
      * Changed the default factory profile of atN value from 0 to 1.
      * Added support for GeoPort for Power Macintosh.

1.5.2  * Fixed a problem where Faxing caused hanging from time to time
        with EM 1.5/1.5.1
      * V23 rework for France (Minitel was not working well)
      * Fixed a problem where crashes appears at random in 1.5 and 1.5.1
        during the fax process or the modem power-up sequence.

1.5.3  Was released to support Japanese System Software and systems.
      * Fax blacklisting delay for Norway was too short and was
        corrected.
      * Italy and Germany line detect button was not handled properly in
        EM 1.5.2.
      * RAM Memory card > 12MBytes were conflicting with EM 1.5.2 this is
        now fixed.

1.5.4  The addition of the Fax Terminal 7.5 compatibility extension. The
      extension consists of delaying the Fax sending of documents which
      are in the "Fax Waiting To Be Sent" folder at start up time.

1.5.5  * Improvement for the PowerBook 500 series modem in Sweden and
        France. (Express Modem II only ships internationally. The Global
     Village Mercury ships in the U.S.)
      * Corrected a HDLC issue on all configurations except on PowerBook
        200 Series computers. This affected large file transfers in
        MNP/V.42 mode.
```

Using the Express Modem software with the PowerBook Fax/Data Modem

The Express Modem software includes Fax Sender 1.1.2. Fax Sender 1.1.2 is backward compatible with the PowerBook Fax/Data Modem.

Why would PowerBook Fax/Data modem users want to upgrade to the Express Modem version of Fax Sender?

- Fax Sender 1.0.1 and 1.0.3 had a problem where the Fax Page Length produced would be A4 (~12.5 inches) even though US Letter was selected. This was correc
- New Fax Quick Send feature.

When using Fax Sender 1.1.2 software on a PowerBook with a PowerBook Fax/Data Modem it is important to note that the Serial Tool extension is required. The Serial Tool is "left over" from any earlier Fax Sender 1.0.1 or 1.0.3 installation, or can be dragged into the Extensions folder manually if a 'clean' System Software & Express Modem software installation is performed.

Other Issues Involving the Express Modem

- When sending a fax it is impossible to image with a full disk. There is no workaround (rare problem). For example, sending a 14-page fax may require approximately 1MB of free disk space.
- ATL commands are not supported but will result in "OK" if used. Use the Sound Control Panel to set volume level of the speaker.
- AT&T (Self Tests) commands are documented in the "Express Modem AT Cmds" read me, but actually are not supported.
- The Express Modem was designed to work with the Communications Toolbox (CTB). The Express Modem Tool, a CTB Connection Tool, was designed to work specifically with the Express Modem. If you use an application that supports the CTB, it is preferable that you choose the Express Modem Tool, rather than selecting the Serial Tool, Apple Modem Tool, or disabling the CTB.
- The Express Modem provides compatibility for applications that do not support the CTB. Selecting "Internal Modem" in the PowerBook control panel enables applications using serial port A (External Modem Port) to communicate with the Express Modem.
- It is not necessary to explicitly turn on the modem through the Express Modem control panel. When an application attempts to use the Express Modem, the modem will automatically be turned on.

- When your computer is transmitting or receiving data or faxes, make sure that it does not go to sleep. You can select "Don't sleep when plugged in" from the Options dialog box in the PowerBook control panel.
- Fax Terminal is not set by default to receive faxes. You must first select the "Answer calls" check box in Fax Terminal Preferences in order to receive faxes automatically.
- If you have AppleTalk Remote Access installed, it is recommended that you remove the "Serial Port Arbitrator" extension from the Extensions folder inside the System Folder. AppleTalk Remote Access will still function properly. The extension just keeps track of the names of applications using serial ports for user notification.
- Applications that use a non-standard means of accessing a modem (for example, bypassing the serial driver and directly controlling the hardware, or implementing an alternate to the standard serial driver) will have no means of accessing and using the Express Modem.
- Fax Sender will turn a page in landscape mode to portrait mode before faxing. There is no work around.

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Performa: Can't Use Apple Restore for External Drives (6/95)

- **Last Modified:** October 04, 2008
- **Article:** TA29185

- **Old Article:** 11848

This article has been archived and is no longer updated by Apple.

I want to place the Performa operating system onto external hard drives to allow booting Performa computers from the external drive.

It appears that Apple Restore looks for SCSI ID "0" as a destination for the restored software. This doesn't allow performing a restore to the external drive.

Is there any way to get Apple Restore to allow for restoring to external hard drives?

Apple Restore will only let you restore to the internal drive (SCSI=0). The only workaround would be to use a third-party backup program like Retrospect.

Apple Restore was written with novice users in mind to make it as easy as possible to use.

Article Change History:
08 Jun 1995 - Updated article and changed distribution status.

Support Information Services
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ProFile: Formatting Compatibility (10/94)

For what operating systems is the Apple ProFile compatible?

This article has been archived and is no longer updated by Apple.

ProFiles can be formatted for two main types of operating systems:

1. the Lisa Operating System for the Lisa

or

2. ProDOS for the Apple II, and SOS for the Apple III.

ProFiles are formatted at the factory with the Apple III SOS format and contain the Apple III System Utilities program. This format is completely compatible with the Apple II ProDOS format, and so can be used on either the Apple II or Apple III; additionally, these ProFiles can be used without difficulty on the Macintosh XL (running Lisa or Macintosh software).

Once a ProFile has been formatted by Lisa software, it will not be able to work any longer on an Apple II or III.

ProFiles don't need any special software to function with these systems other than the respective system formatters which accompany each system's operating system utilities, regardless of what system it was used on previously.

NOTES:

1. The Pascal ProFile Manager will not format a ProFile; the ProFile must already be formatted with ProDOS.

2. If you're unable to initialize a Profile for use with an Apple II or Apple III after it's been used with a Macintosh XL, check with a Level II service center: the ProFile may need reformatting.

Article Change History:
18 Oct 1994 - Reviewed for technical accuracy, revised formatting.

Support Information Services

Last Modified: Feb 19, 2012

AppleTalk Connection for Macintosh: Product Details (3/93)

This article provides system requirements, ordering and licensing information, and other product details for AppleTalk Connection for Macintosh.

This article has been archived and is no longer updated by Apple.

```
System Requirements
-------------------
* A Macintosh computer with the appropriate data link such as built-in
  LocalTalk or Ethernet, or a networking card such as the Apple Ethernet
  NB Card, Apple Ethernet LC Card, the original Apple EtherTalk Card, Apple
  Token Ring 4/16 NB Card, or the original Apple TokenTalk NB Card.
* A 1.44MB floppy disk drive such as the Apple SuperDrive
* To use the AppleTalk software, you need System 6 (version 6.0.5 or
  later) or System 7 and at least 2MB of RAM.
* To use the MacSNMP software, you need System 7 or later (4MB of RAM
  recommended). You also need an SNMP console that supports AppleTalk,
  such as those available from NEON Software and InterCon.

Product Details
---------------
Automatic Addressing
 AppleTalk devices automatically acquire their own addresses so that the
 user doesn't need to learn how to set addresses.

AppleTalk Zones
 AppleTalk supports a resource-grouping feature called zones, which allows
 easier access to resources in large internetworks.

The SNMP agents included in this product support the following Management
Information Base (MIB) definitions:
* Parts of the AppleTalk MIB (RFC 1243): LLAP, AARP, ATPort, DDP, NBP, and
  ATEcho groups
* Parts of the TCP/IP MIB-II (RFC 1213): System, Interfaces, and SNMP
  groups
* Macintosh System MIB (defined by Apple)

SNMP over TCP/IP
 To manage Macintosh computers over the TCP/IP protocols, you need Apple's
 TCP/IP Connection software.

Ordering and Licensing Information
----------------------------------
AppleTalk Connection and the other products in the Connection series are
available as retail products consisting of a single-user package with
multi-user license extensions. A MacSNMP developer product is available
from APDA.

AppleTalk Connection for Macintosh
Single-user package (Order No. M8069Z/A)
* AppleTalk stack and driver software
* MacSNMP Client
* Macintosh, AppleTalk, and Network agents and MIBs
* AppleTalk Connection Installation and User's Guide
20-user license extension (Order No. M8065Z/A).  This license extension
contains no software.

AppleTalk Administration for Macintosh
Single-user package (Order No. M8066Z/A)
* Complete AppleTalk Connection product
* MacSNMP Admin software
* About AppleTalk Administration
```

* MacSNMP Administrator's Guide
* AppleTalk Connection Installation and User's Guide
* Planning and Managing AppleTalk Networks

TCP/IP Connection for Macintosh
Single-user package (Order No. M8113Z/A)
* MacTCP stack and driver software
* MacSNMP Client
* Macintosh, TCP/IP, and Network agents and MIBs
* TCP/IP Connection User's Guide
20-user license extension (Order No. M8115Z/A). This license extension contains no software.

TCP/IP Administration for Macintosh
Single-user package (Order No. M8114Z/A)
* Complete TCP/IP Connection product
* MacTCP Admin and MacSNMP Admin software
* MacTCP Administrator's Guide
* MacSNMP Administrator's Guide
* TCP/IP Administration: Overview and Installation
* TCP/IP Connection User's Guide

OSI Connection for Macintosh
Single-user package (Order No. M8096Z/A)
* MacOSI Transport and driver software
* MacOSI Transport connection tool
* MacOSI Transport Administrator's Guide

MacSNMP 1.0 Developer's Kit
Available on the Essentials*Tools*Objects (E.T.O.) CD-ROM from APDA. (Order No. M0895LL). To order APDA products or get additional information, contact APDA

Apple Computer, Inc.
P.O. Box 319
Buffalo, NY 14207-0319 USA
800-282-2732 (United States)
800-637-0029 (Canada)
716-871-6555 (International)
Fax: 716-871-6511
Internet address: APDA@applelink.apple.com

AppleTalk Connection and TCP/IP Connection Products: Large-Volume Licenses
Licensing details are available from ESD Licensing Department

Apple Computer, Inc.
20525 Mariani Avenue, M/S 35-AE
Cupertino, CA 95014 USA
Telephone: 408-974-2320

Last Modified: Feb 19, 2012

Additional Product Support Information

ARCHIVE

StyleWriter II: Executive Paper Size

- **Last Modified:** August 24, 2000
- **Article:** TA29192

- **Old Article:** 11860

This article has been archived and is no longer updated by Apple.
The StyleWriter II manual states that the Executive paper size is 7.5-in.by 10.5-in., but the Page Setup dialog shows it as 5.5-in. by 8.5-in.
Version 1.2 of StyleWriter driver has been changed to use 7.5-in.w x 10.5-in.h as the Executive paper size. Apple has decided to standardize on that size for all Apple printers.

If you want to modify the StyleWriter II driver to use the 7.5-in.w by 10.5-in.h paper size, the best way is to modify the StyleWriter II PREC id=3 resource. Just change the paper height and width values of Btn 3 to 1260 (105x12) and 900 (75x12), respectively.
Rate this article:

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Easy Access: Slow Keys Appears to Prevent Keyboard Input

I lose the ability to input data from the keyboard after entering numerous hard returns in Microsoft Word or TeachText. I hear a beep, then the keyboard won't accept any more keystrokes, it just makes a strange beep. Even quitting the application doesn't fix it.

This doesn't happen with extensions off, but occurs even immediately after a clean install.

This article has been archived and is no longer updated by Apple.
This is a feature of Easy Access called Slow Keys. Slow Keys gets turned on whenever the return key is held down for 8 consecutive seconds (there's a warning beep after 4 seconds). Thus, even though all features of the Easy Access control panel may be off, Slow Keys can still activate itself.

Slow Keys is supposed to prevent accidental key presses by waiting a brief amount of time before accepting a keystroke. This delay makes it appear as though the keyboard is locked up.

When this happens, turn off Slow Keys in the Easy Access control panel (the mouse will still be functional). Be aware, however, that holding the return key down again for another 8 seconds will turn it back on. The long-term solution is simply to disable or remove Easy Access.

Rate this article:

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- **Last Modified:** February 19, 2012
- **Article:** TA29193

- **Views:**

  2062

- **Rating:**
  - 3.0/5 Stars

  (9 Responses)

Macintosh: DOS, OS/2, and Windows Compatibility (3/93)

I hear that Macintosh computers are compatible with MS-DOS and Windows computers. How does Apple define compatible?

This article has been archived and is no longer updated by Apple.
The best way to start answering these questions is to determine what you are really asking about when you discuss compatibility. There are two questions to ask when defining levels of compatibility:

*Do you want to use MS-DOS or Windows files on a Macintosh?

* Do you want to run MS-DOS applications (software programs) on a Macintosh? The essential ingredients that ensure compatibility come with your Macintosh Performa computer: a SuperDrive disk drive and Macintosh PC Exchange software.

Every Macintosh has a built-in SuperDrive, which can read and write to DOS, Windows, OS/2, and Apple II formatted 3.5-inch floppy diskettes. These floppy diskettes can be 400K, 800K, or 1.44MB in capacity. Macintosh PC Exchange is included in the System software that comes with every Macintosh Performa, Power Macintosh and other selected Macintosh models.

With Macintosh PC Exchange users can easily work with files stored on DOS or Windows floppy disks. You can move files between a Macintosh and PC as easily as you can between two Macintosh computers. By creating program links, you can directly launch a Macintosh program and translate a file by simply double-clicking on your PC file. You can even format floppy disks in DOS or Windows format on your Macintosh using Macintosh PC Exchange.

If you want to run MS-DOS applications on your Macintosh, you will need an additional program such as SoftPC or SoftWindows (for the Power Macintosh series) from Insignia Solutions, Inc.

To locate a vendor's address and phone numbers, use the vendor name as a
search string in the Apple Tech Info Library.

Article Change History:
25 March 1994 - Revised and retitled to reflect additional Macintosh models in addition to the Performa series.

Support Information Services
Published Date: Feb 19, 2012

ARCHIVE

Macintosh Performa: System Disks Not Included (7/95)

- **Last Modified:** July 10, 1995
- **Article:** TA29211

- **Old Article:** 11887

This article has been archived and is no longer updated by Apple.

I just purchased a Performa computer, and I think I'm missing something from my package. Where are the system disks? And where are the master disks for the application software that was included with my Performa? Everything is on the hard drive, but what happens if something happens to the software there?

You are not missing anything. The Performa line of computers comes with Apple Backup, a software utility that allows you to backup the entire hard drive, including system software and application software, onto high density floppy disks. You can buy blank floppy disks at many office supply stores, as well as from computer retailers.

Many later Performa computers come with the Performa Backup CD. Computers that include the Performa Backup CD are:

Macintosh Performa 550 (later versions)
Macintosh Performa 575, 577, 578
Macintosh Performa 630CD, 635CD, 636CD, 637CD, 638CD
Macintosh Performa 5200 series
Macintosh Performa 6110CD, 6112CD, 6115CD, 6118CD

This disc contains all the software that is pre-loaded on your hard drive including system software and third party programs. If you have this disc, it is not necessary for you to run the Apple Backup program to back up your pre-loaded software. However, you should still back up your personal files and any other software you add later.

If at some time you remove software from your computer, you will need to use the backup disks you create and run the Apple Restore program or use the Performa Backup CD to restore the software. This procedure will restore all the programs, but will replace them so that there are no duplicate copies on your hard drive. You will not lose any personal files.

Backing up regularly is a good habit to get into, as it provides a way for you to recover important documents that you have created, as well as system software and applications, should anything ever happen to your hard drive.

Article Change History:

10 Jul 1995 - Updated to include Performa Backup CD information.

Support Information Services
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TA29224_Macintosh_LC_III_FPU_Configurations_with_PDS_Cards_(793)_(TIL11904).pdf

Archived - Macintosh LC III: FPU Configurations with PDS Cards (7/93)

A Macintosh LC III (Performa 450) can potentially have two FPUs: one on the logic board, and another on an expansion card. This article describes the four possible combinations of FPU (on logic board and on add-on card) in a Macintosh LC III.

This article has been archived and is no longer updated by Apple.
* No FPU on the logic board, and none on the expansion card. No problem.

* No FPU on the logic board, but one on the expansion card. The system uses the one on the card -- at 16 MHz.

* An FPU on the logic board, but none on the expansion card. The system uses the one on the logic board -- at 25 MHz.

* Two FPUs: one on the logic board, and one on the expansion card. Both FPUs are on the processor bus. There's no way to predict which one will respond to a given FPU cycle, and no way to assign priority.

Apple does NOT recommend removing an FPU from an expansion card and installing it on the logic board. Expansion card FPUs are 16 MHz, but the logic board requires a 25-MHz FPU.

If, after installing a card with an FPU, your system crashes, contact the vendor of the card to determine if there are any known incompatibilities between that card and the Macintosh LC III.

Article Change History:
07/13/93 - Revised to include Performa 450.
06/24/93 - Revised in response to input from Apple Engineering.

Last Modified: Feb 19, 2012

Macintosh PC Exchange: OS/2 Filing System Support (4/93)

- **Last Modified:** April 23, 1993
- **Article:** TA29245

- **Old Article:** 11937

Which directory filing system does Macintosh PC Exchange support?

Macintosh PC Exchange supports Apple II, DOS FAT, and IBM's OS/2 implementation of DOS FAT -- but not OS/2 native HPFS.

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Archived - Language Kits: Unreadable Text

Why text may appear unreadable in the Chinese or Japanese Language Kits. This discussion uses the Japanese Language Kit as an example.
This article has been archived and is no longer updated by Apple.
When the Japanese Language Kit is installed, there are instances when Japanese text is unreadable (for example: é*éãéªé*). This occurs when an English font is used for Japanese text. In some instances, the issue can be fixed, in others not.

Japanese Font System Basics
Please check the following basic points to make sure the Japanese font system is complete:

Kanji Bitmap Fonts In Root Level Of System Folder
The "fbit/fdef" Kanji bitmap fonts (the one with the Kanji character "kan" and the circle behind it icon) are at the System Folder root level (not Fonts folder). At minimum, the Osaka (*Beijing* or Taipei for Chinese Language Kit) font must be installed.

InputBackSupport in Extensions
The InputBackSupport extension is installed in the Extensions folder.

Make Unreadable Fonts Readable
Following are situations where unreadable Japanese text can be made readable:

Filenames In Finder Windows:
Open the Views control panel and select a Japanese font (for example, Osaka).

Note: There is a side effect in choosing a Japanese font in the Views control panel. Certain accented character and symbols (Ä and ¬) will be replaced by another character. This occurs because Japanese fonts have a different character mapping of the upper ASCII table than Roman fonts.

Japanese Application Menu Bar And Dialog Boxes:
Applications have a resource that tells the system for which language the application was written. The system uses the information to select the proper font. In some case, this resource was not properly set and the system has assumed English as the application's language. Use the Japanese Language Register (or Chinese Language Register) application to register the application as Japanese (or Chinese). NOTE: Some applications hard-code the font to be used, for example in text entry window or font list. In this case, the Japanese Language Register will not correct this misused font.

Unreadable Text That Cannot Be Made Readable
The following are situations where Japanese text shows up as unreadable and there is no fix:

Unreadable Text In Menus And Dialog Boxes
Unreadable text will occur in the menus and dialog boxes. For example, the Applications Menu showing an application with a Japanese name. These areas of the system were not designed to support multiple scripts (writing systems). You will see this with the Kotoeri alert messages. The alert dialog box routine uses the primary script to display the message.

Rate this article:

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- Very helpful
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- **Last Modified:** February 19, 2012
- **Article:** TA29266

- **Views:**

  20183

- **Rating:**
  - 2.0/5 Stars

  (3 Responses)

TA29266_Language_Kits_Unreadable_Text_(TIL11968).pdf

Languages

English

TA29318_ProFile_interface_card_for_Apple_III_Pinouts_(1094)_(TIL01204).pdf

ProFile interface card for Apple III: Pinouts (10/94)

What are the pinouts for the Apple /// ProFile Interface Card?

This article has been archived and is no longer updated by Apple.
The pinouts for the ProFile card are as follows:

1 PHI 13 XD7
2 GND 14 GND
3 TRw 15 PSTRB (low = true)
4 GND 16 BSY/INT (low = true)
5 XD0 17 CMD (low = true)
6 XD1 18 RPARITY (low = true)
7 (not used) 19 GND
8 XD2 20 GND
9 GND 21 CRES (low = true)
10 GND 22 XD3
11 XD5 23 XD4
12 XD6 24 GND
25 CDET (low = true)

The cable to the ProFile is pin-to-pin straight through.

Article Change History:
18 Oct 1994 - Reviewed for technical accuracy, revised formatting.

Support Information Services
Last Modified: Feb 19, 2012

Additional Product Support Information

Color Classic: Apple File Exchange Error Message (8/93)

- **Last Modified:** August 31, 1993
- **Article:** TA29319

- **Old Article:** 12040

Article Created: 4 May 1993
Article Reviewed/Updated: 30 August 1993

On the Macintosh Color Classic, opening Apple File Exchange sometimes gives a type 1 error or the message "Application unknown has unexpectedly quit." You need to install the Hardware System Update to resolve this.

There's a known problem with the Color Classic and Apple File Exchange, where Apple File Exchange will crash or not operate correctly. The problem was fixed in the Hardware System Update. Install the Hardware System Update on a Macintosh Color Classic to fix the Apple File Exchange problem.

Without the update, there were problems when running in both 24- and 32-bit mode. However, a crash normally only resulted when running Apple File Exchange in 24-bit mode. This is why some articles suggested running in 32-bit mode with Apple File Exchange on a Color Classic.

Installing the Hardware System Update resolves this issue, and the Color Classic can then run in either 24- or 32-bit mode.

You can find the Hardware System Update on AppleLink following this path:

Software Sampler
Apple Software Updates
Macintosh
Supplemental System Software

Article Change History:
30 August 1993 - Combined information from a similar article.

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TA29319_Color_Classic_Apple_File_Exchange_Error_Message_(893)_(TIL12040).pdf

Macintosh PC Exchange: Version 1.0.2 Update (5/93)

- **Last Modified:** July 02, 1993
- **Article:** TA29323

- **Old Article:** 12048

Article Created: 5 May 1993

This article discusses version 1.02 of Macintosh PC Exchange.

Version 1.0.2 resolves several technical problems reported by PC Exchange customers and is available to customers at no charge.

Mac PC Exchange 1.0.2 doesn't include any new features or enhancements over the previous version 1.0.1, but incorporates fixes for the following problems:

* PC Exchange 1.0.1 wouldn't recognize certain brands of pre-formatted PC floppy disks. Instead, PC Exchange asked users if they wanted to initialize the floppy disk. Version 1.0.2 of PC Exchange should now recognize all brands of PC-format floppy disks, regardless of the method used to pre-format the disk.

* Occasionally, the first file that users selected from a locked, PC-format floppy disk wouldn't open, or the content of the document would appear as garbage characters. If users unlocked the floppy disk, all files on the PC-format disk would open without difficulty. With version 1.0.2 of PC Exchange, you can open documents from a locked, PC-format floppy disk without problems.

* When PC Exchange initializes a floppy disk that is damaged, the initialization process can take a long time to update the damaged disk. Version 1.0.2 of PC Exchange displays a new message while a damaged disk is being updated. This message reports the progress of the disk update and gives the option to cancel the disk initialization.

* If there isn't enough free space in the application heap, a format failure or system crash could occur when PC Exchange is formatting a PC

floppy disk. This problem shouldn't occur with version 1.0.2 of PC Exchange.

The Macintosh PC Exchange 1.0.2 update kit includes an 800K program disk and a cover letter.

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Printing Differences: Lines Per Inch and Dots Per Inch (5/93)

Article Created: 11 May 1993

The Apple Color Printer spec sheet says the printer has 360 dots per inch, but it also says the printer has 65 screen lines per inch. Can you explain the difference between lines per inch and dots per inch?

This article has been archived and is no longer updated by Apple.

Dots per inch (dpi) represent the quantity of dots per inch a printer is capable of putting onto paper. Dots per inch is also known as the resolution of the printer.

Lines per inch (lpi) represent the number of halftone dots (per inch) that a screen contains Lines per inch is also referred to as the screen frequency or screen ruling.

The halftone dot is quite different from the dpi dot. The halftone dot can actually be a variety of shapes: lines, ellipsoids, squares, dots, random flecks, and a variety of other solid black shapes. Typically dots and ellipsoids are used. However, for the more artistic representations other shapes are often used. The number of shapes per inch is measured by lines per inch, that is, shapes per inch equals lines per inch.

With the exception of daisy wheel type printers, output from computers has always been based on a quantity of dots placed together to represent alphanumeric characters and graphics. The first printers of this nature were the dot matrix printers. Laser printers and ink jet printers use this same principal. The laser and ink jet dots are smaller than the dot matrix printers, but they work the same way. The number of dots these printers produce is the measured in the dots per inch (dpi) notation.

Prior to the use of the dot based printers the pre-press/printing industry used various methods of placing solid forms of ink onto paper (gravure, letterpress, offset, and so on.). These methods do not use dots to form the alphanumeric characters. Similar to the daisy wheel printers, the characters are fully formed ink impressions. The problem with using solid ink comes when attempting to print graphic images which consist of more than solid lines or solid blocks (line art). Some method to vary the amount of ink placed on the paper is needed in order to represent various levels of gray. Otherwise, printing photographs and other continuous tone artwork would not be possible.

To address this need, a technique was developed to print various sized black halftone dots on the paper. An area of various sized, solid black halftone dots will trick the eye into thinking it is seeing various levels of gray.

In the traditional technique used to create these various sized dots a screen is placed over the photographic enlargement paper to break the continuous-tone photograph into halftone dots. A screen can best be described as a sheet of plastic which contains the inverse (negative) gray scale pattern of halftone dots. This sheet of semi-transparent plastic allows varying amounts of light to pass through and contact the photographic paper placed beneath it. In the computer technique, there is no physical screen used. The halftone dots are created via computer image processing.

The number of halftone dots in the screen is represented by the lines per inch (lpi) measurement. That is, 65 halftone dots per inch equals 65 lines per inch. The number of halftone dots per inch for a screen can vary. Typical values are 65 lpi for newspaper photograph halftones to 200 lpi (or higher) for art reproduction books.

There is a relationship between dpi and lpi. The relationship exists as a limit. The lpi of a printer will always be less than the dpi of the printer, because the halftone dot is composed of a matrix of the dpi dots. Higher dpi does not directly indicate higher lpi, only the possibility of higher lpi. Both a 300 dpi printer and 600 dpi printer can produce halftone dots of (possibly) 53 lpi, 75 lpi, 83 lpi, 106 lpi, and 150 lpi, but the 600 dpi printer would be able to produce additional, higher lpi.

Published Date: Feb 19, 2012

AppleCD 300: SCSI-2 Support

- **Last Modified:** January 13, 2000
- **Article:** TA29338

- **Old Article:** 12078

Is the external AppleCD 300 compatible with the SCSI-2 interface standard?
Yes, the external AppleCD 300 drive does use the industry standard SCSI-2 interface. This standard addresses both the electrical interface and command protocols to this drive.

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TA29351_Apple_Writer_III_Installing_Under_Catalyst_2-0_(TIL00121).pdf

Apple Writer III: Installing Under Catalyst 2.0

This article has been archived and is no longer updated by Apple.

To get Catalyst 2.0 to access either Apple Writer III 2.0 or Apple Speller III on a ProFile, you must install them using a special data disk obtained from Quark. This disk comes with instructions on installing these Apple packages correctly.

Last Modified: Feb 19, 2012

SANE: Technical Product Description (2 of 2) (10/94)

- **Last Modified:** October 18, 1994
- **Article:** TA29374
- **Old Article:** 1216

This article has been archived and is no longer updated by Apple.

This article describes the Standard Apple Numeric Environment (SANE).

III. Choosing a Data Type:

Typically, picking a data type requires that you determine the
trade-offs between:

* fixed - or floating-point form
* precision
* range
* memory usage
* speed

The precision, range, and memory usage for each SANE data type are shown in the table of SANE types below. Effects of the data types on performance (speed) vary among the implementations of SANE.

Most accounting applications require a counting type that counts things (pennies, dollars, widgets) exactly. Accounting applications can be implemented by representing money values as integrel numbers of cents or mils, which can be stored exactly in the storage format of the COMP (for computational) type. The sum, difference, or product of any two comp values is exact if the magnitude of the result does not exceed 2^63 - 1 (that is, 223,372,036,854,775,807). This number is larger than the U.S national debt expressed in Argentine pesos. In addition, comp values (such as the results of accounting computations) can be mixed with extended values in floating-point compitations (such as compound interest).

Arithmetic with comp-type variables, like all SANE arithmetic, is done internally using extended-precision arithmetic. There is no loss of precision, as converson from comp to extended is always exact. Space can be saved by storing numbers in the comp type, which is 20 percent shorter than extended. Non-accounting applications will normally be better served by floating-point data formats.

IV. Values Represented:

The floating-point storage formats (single, double and extended) provide binary encodings of a SIGN (+ or -), an EXPONENT, and a SIGNIFICAND. A represented number has the value

+/-significand = 2 exponent

where the significand has a single bit to the left of the binary point (that is, O <- significand < 2).

V. Range and Precision of SANE Types:

The table below describes the range and precision of the numeric data types supported by SANE. Decimal ranges are expressed as chopped two-digit decimal representations of the exact binary values.

SANE DATA TYPES

TYPE CLASS APPLICATION ARITHMETIC

Type Identifier Single Double Comp Extended

Size (bytes:bits) 4:32 8:64 8:64 10:80

Binary exponent
range
Minimum -126 -1022 --- -16383
Maximum 127 1023 --- 16383

Significand precision
Bits 24 53 63 64
Decimal digits 7-8 15-16 18-19 19-20

Decimal range
(approximate)
Min negative -3.4E+38 -1.7E+308 9.2E18 -1.1E+4932
Max neg norm -1.2E-38 -2.3E-308 -1.7E-4932
Max neg denorm -1.5E-45 -5.0E-324 -1.9E-4591

Min pos denorm 1.5E-45 5.0E-324 1.9E-4951
Min pos norm 1.2E-38 2.3E-308 1.7E-4932
Max positive 3.4E+38 1.7E+308 9.2E18 1.1E+4932

Infinitive Yes Yes No Yes

NaNs Yes Yes Yes Yes

Usually numbers are stored in a normalized form, to afford maximum precision for a given significan width. Maximum precision is acheived if the high order bit in thr significand is 1 (that is, 1</- significand < 2).

Article Change History:
18 Oct 1994 - Reviewed for technical accuracy, revised formatting.

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Archived - PowerBook: SCSI Bus, Termination, and Termination Power

This article provides technical information on the following topics, as they relate to PowerBook (including Duo) computers:

- PowerBook Termination and SCSI Disk Mode
- PowerBook Termination Power
- SCSI System Cable and Adapter

This article has been archived and is no longer updated by Apple.

PowerBook Termination and SCSI Disk Mode

On most PowerBook computers, termination is supplied by the internal hard drive termination. However, PowerBooks using IDE (ATA) hard drives lack SCSI termination. This includes the PowerBook 1400 series and PowerBook 3400 series (see note).

PowerBook computers depend on the internal hard drive to supply termination, so that they are properly terminated when placed in SCSI disk mode. In SCSI disk mode, the PowerBook is just another hard drive in the SCSI chain, because all other subsystems have been shut down.

With the introduction of IDE (ATA) specification internal hard drives in PowerBook computers it is necessary to supply double-termination to the SCSI bus. When connecting a device with internal termination an extra external terminator should be placed between the cable and the device. If the device lacks internal termination a total of two external terminators are required. One should be placed between the cable and the device, and the second terminator should be applied to the second port on the device.

*Double-termination does not apply to Disk Mode or Target Mode applications.

Because the PowerBook is internally terminated by the hard drive, it must always be at the end of the SCSI chain. If you have two PowerBook computers and other devices on the chain, one PowerBook must be the very last device in the SCSI chain (in SCSI disk mode) and the second PowerBook must be at the beginning of the chain. It is not possible to have more than one PowerBook on a single SCSI bus in SCSI disk mode.

PowerBook Termination Power

Some all-in-one PowerBook computers and the Duo series supply termination power. Those models that do not supply termination power rely on external devices to provide termination power on the bus. Because termination power is not supplied by these PowerBook computers, Apple advises that you do not have powered-off devices on the bus.

PowerBook Duo computers, the PowerBook G3, PowerBook G3 Series, PowerBook 3400 and PowerBook 2400 do not rely on an external device to provide termination power. The DuoDock provides termination power to the bus. They are actively terminated, which means they provide termination power and have the best architecture for termination of any other device on the bus.

SCSI System Cable and Adapter

Apple's SCSI cables are built to tight specifications to minimize electrical noise on the SCSI bus. The wires are laid out to provide minimal signal degradation. Poor quality cable construction may lead to intermittent SCSI operation and potential system crashes.

HDI-30 Adapter SCSI Cable (socket) & HDI-30 SCSI Cable (plug)
* Material: 30 conductors 26 AWG 90% braid plus foil shield.

Note

For the PowerBook 1400, it is necessary to supply double-termination to the SCSI bus. When connecting a device with internal termination an extra external terminator should be placed between the cable and the device. If the device lacks internal termination a total of two external terminators are required. One should be placed between the cable and the device, and the second terminator should be applied to the second port on the device.

*Double-termination does not apply to Disk Mode or Target Mode applications.

For electrical, mechanical, and shielding specifications, see the following Tech Info Library article:

Article 5475: "**SCSI: Cable Specifications**"

For more information on connecting SCSI devices, please see the following Tech Info Library articles:

Article 13611: "**PowerBook: Using SCSI Devices**"

Article 9387: "**Macintosh: Connecting SCSI Devices**"
Last Modified: Feb 19, 2012

Additional Product Support Information

- Mac notebooks
- Mac notebooks

TA29435_Apple_IIGS_Graphics_Modes_(1094)_(TIL01225).pdf

Apple IIGS: Graphics Modes (10/94)

What are the available graphics modes available on the Apple IIgs?

This article has been archived and is no longer updated by Apple.
The Apple IIGS can perform graphics under a number of different types of graphics displays: Lo-res and Hi-res modes found on all Apple II systems, the double Hi-res mode available on the Apple IIe and IIc, and new Super Hi-Res modes.

Both Lo-res and Hi-res modes are unchanged from the Apple II, and the manual "Applesoft on the IIGS" shows the commands for using those modes. The IIGS ROM doesn't have routines for the use of double Hi-res graphics; a programmer must add assembler routines that will properly draw lines, locate points, etc., in double Hi-res mode. Commercially available packages include these routines.

Only on the Apple IIGS performs in Super Hi-Res graphics modes with a resolution of 320 X 200 or 640 X 200. Using 320 X 200 mode permits a full 16 colors per line. 640 X 200 mode can also use 16 colors per line, but each pixel is limited to a choice of 4 of the 16 colors. Both modes are supported by the Apple IIGS QuickDraw II tools. To make programming easier, screen memory is mapped contiguously in Super Hi-Res mode.

320 X 200 Super Hi-Res mode

Each line of pixels in 320 mode is associated with a table of 16 entries that correspond to the 16 colors to be shown on that line. Each entry represents one of the possible 4096 colors available on the Apple IIGS. There may be as many as 16 color tables defined, permitting 256 colors on the screen at one time.

Within each line, a byte determines two pixels' colors. The high 4 bits of a byte contain a number from 0 to 15, which is used as an offset into the color table for that line. The pixel mapped to that memory location will have the color found at the appropriate table location. Similarly, the low 4 bits of that byte will determine the color of the adjacent pixel.

Pixels in 320 mode are almost square. The aspect ratio in this mode is 5:6 on an Apple Monochrome Monitor, an AppleColor Monitor, or an Apple RGB Monitor.

640 X 200 Super Hi-Res Mode
---
640 mode also allows 16 colors per line, but each pixel is limited to one of four colors (this mode is sometimes called Limited 16 Colors). As in 320 mode, each line addresses one of up to 16 color tables. However, each pixel in the line is represented by only 2 bits, so that each byte contains information about 4 pixels.

To represent 4 adjacent pixels, bits 7 and 6 choose from among colors 0 through 3 in the appropriate color palette, bits 5 and 4 choose colors 4 through 7, bits 3 and 2, from colors 8 through 11, and the last two bits choose from colors 12 through 15. Therefore, each pixel can be one of four colors, but there may be a total of 16 colors on each line.

The pixel aspect ratio in 640 mode is 5:12 on an Apple monitor, so that each pixel's height is approximately twice the width.

Color Fill Mode

The Apple IIGS can also use 320 X 200 mode with color fill. If this mode is chosen, the color zero (0) takes on a special meaning. A pixel with color 0 will have the same color as the preceding pixel, so that a series of bytes with value 80 00 00 would all be shown in the color represented by the eighth entry in the color palette. Using 0 to represent no color change limits the selection to only 15 colors per line, but does save time for the programmer.

Article Change History:
18 Oct 1994 - Reviewed for technical accuracy, revised formatting.

Support Information Services
Published Date: Feb 19, 2012

Apple III and ProFile: Running Them on an Inverter (10/94)

Can I run my Apple /// and ProFile on an inverter?

This article has been archived and is no longer updated by Apple.
The Apple III and ProFile may both be run on an inverter that produces either a square or a sinusoidal wave.

The Apple III itself works on an inverter without any problems, as long as the inverter has sufficient current capacity. The Apple III has a switching power supply and will therefore tolerate power fluctuations and line noise without any trouble, as long as it's receiving a minimum of 95 volts.

The ProFile, on the other hand, is somewhat more sensetive to power flucuations and line noise. If you use your ProFile with an inverter that produces a square wave, take care that:

1. Make sure that the inverter can supply at least 8 amps, since 5 amps is the minimum power required to start up the ProFile.

2. If you wish to use square-wave power, which is by nature quite noisy, use a noise suppression kit so that no unnecessary noise reaches the ProFile power supply and prevents the ProFile from coming Ready. Your noise suppressor must have a minimum capacity of 10 amps.

NOTE:
You can avoid the necessity of noise suppressors by running your ProFile on DC power if you wish. To do so, however, you will need to regulate the +12V from a car battery, as well as generate and regulate +5V and -12V.

Article Change History:
18 Oct 1994 - Reviewed for technical accuracy, revised formatting.

Support Information Services
Last Modified: Feb 19, 2012

Additional Product Support Information

Apple III+: External Drive Adapter Pin Configuration (10/94)

The following is a wiring diagram of the Apple III+ external disk drive adapter.

This article has been archived and is no longer updated by Apple.

Apple III+ Disk
(DB-25) (26 Pin)

1 13,15,17,19
2 1,3,5,7
3 16
4 1,3,5,7
5 10
6 18
7 11,12
8 22
9 1,3,5,7
10 1,3,5,7
11 14
12 20
13 NC
14 26
15 2
16 4
17 6
18 8
19 13,15,17,19
20 13,15,17,19
21 23
22 21
23 9
24 11,12
25 24

-->DB-25:
Viewing the adapter from the AIII+, Pin 13 should be removed to prevent damage to the Apple III+.

1 2 3 4 .. .. 12 13
14 15 16 .. .. 24 25

-->26 Pin:
Viewing the adapter from the drive:

25 23 21 19 . . . 5 3 1
26 24 22 20 . . . 6 4 2

Article Change History:
18 Oct 1994 - Reviewed for technical accuracy, revised formatting.

Support Information Services
Last Modified: Feb 19, 2012

Additional Product Support Information

Macintosh: SCSI Data Transfer Rates

What is the maximum sustained asynchronous data transfer rate for the various Macintosh models? What SCSI chip is used inside the various Macintosh models?

This article has been archived and is no longer updated by Apple.

Note: After May 25, 1999, this article will not be updated. Product specific information on SCSI controller chips can be obtained from the Developer Note for a particular product. You can view and download Developer Notes from the following Web site: **http://developer.apple.com/hardware/**.

MACINTOSH MODEL	SCSI CHIP	MAX DTR *	NOTES
Macintosh 128K	none	0	
Macintosh 512K	none	0	
Macintosh 512Ke	none	0	
Mac Plus	NCR 53C80	1.25 MB/sec	
Macintosh SE	NCR 53C80	1.25 MB/sec	
Macintosh SE/30	NCR 53C80	1.25 MB/sec	
Macintosh Classic	NCR 53C80	1.25 MB/sec	
Macintosh Classic II	NCR AM85C80	1.25 MB/sec	
Macintosh Color Classic	NCR AM85C80	1.25 MB/sec	
Macintosh LC	NCR AM85C80	1.5 MB/sec	
Macintosh LC II	NCR AM85C80	1.5 MB/sec	
Macintosh LC III	NCR AM85C80	1.5 MB/sec	
Macintosh LC 475	NCR 53C96	5 MB/sec	(1),(2)
Macintosh LC 520	NCR AM85C80	1.5 MB/sec	
Macintosh TV	NCR AM85C80	1.5 MB/sec	
Macintosh II	NCR 53C80	1.25 MB/sec	
Macintosh IIx	NCR 53C80	1.25 MB/sec	
Macintosh IIcx	NCR 53C80	1.25 MB/sec	
Macintosh IIci	NCR 53C80	1.25 MB/sec	
Macintosh IIfx	Apple SCSI DMA	3 MB/sec	
Macintosh IIsi	NCR AM85C80	1.25 MB/sec	
Macintosh IIvi	NCR AM85C80	1.5 MB/sec	
Macintosh IIvx	NCR AM85C80	1.5 MB/sec	
Macintosh Centris 610	NCR 53C96	5 MB/sec	(1),(2)
Macintosh Centris 650	NCR 53C96	5 MB/sec	(1),(2)
Macintosh Quadra 605	NCR 53C96	5 MB/sec	(1),(2)
Macintosh Quadra 610	NCR 53C96	5 MB/sec	(1),(2)
Macintosh 630 Family	Custom IC		(5)
Macintosh Quadra 650	NCR 53C96	5 MB/sec	(1) (2)
Macintosh Quadra 660AV	NCR 53C96	5 MB/sec	(1),(2)
Macintosh Quadra 700	NCR 53C96	5 MB/sec	(1)
Macintosh Quadra 800	NCR 53C96	5 MB/sec	(1),(2)
Macintosh Quadra 840AV	NCR 53C96	5 MB/sec	(1),(2)
Macintosh Quadra 900	NCR 53C96	5 MB/sec	(1),(2),(3)
Macintosh Quadra 950	NCR 53C96	5 MB/sec	(1),(2),(3)
Power Macintosh 5200			
5300			
5400			
5500			
Power Macintosh 6100	Custom IC	5 MB/sec	(2)
Power Macintosh 6200			
6300			
6400			
6500			
Power Macintosh 7100	Custom IC	5 MB/sec	(2)
Power Macintosh 7200	Custom IC	5 MB/sec	

Power Macintosh 7500			(2),(6)
Internal/external	Custom IC	5 MB/sec	
Fast SCSI (internal)	MESH Custom IC	10 MB/sec	
Power Macintosh 7600			(2),(6)
Internal/external	Custom IC	5 MB/sec	
Fast SCSI (internal)	MESH Custom IC	10 MB/sec	
Power Macintosh 8100	Custom IC	5 MB/sec	(2)
Power Macintosh 8500			(2),(6)
Internal/external	Custom IC	5 MB/sec	
Fast SCSI (internal)	MESH Custom IC	10 MB/sec	
Power Macintosh 9500			(2),(6)
Internal/external	Custom IC	5 MB/sec	
Fast SCSI (internal)	Custom IC	10 MB/sec	
Power Macintosh G3	Custom IC		
Macintosh Portable	NCR 53C80	1.25 MB/sec	
Macintosh PowerBook 100	NCR AM85C80	1.5MB/sec	
Macintosh PowerBook 140	NCR AM85C80	1.5MB/sec	
Macintosh PowerBook 145	NCR AM85C80	1.5MB/sec	
Macintosh PowerBook 145B	NCR AM85C80	1.5MB/sec	
Macintosh PowerBook 150	NCR AM85C80	1.5MB/sec	(4)
Macintosh PowerBook 160	NCR AM85C80	1.5MB/sec	
Macintosh PowerBook 165c	NCR AM85C80	1.5MB/sec	
Macintosh PowerBook 170	NCR AM85C80	1.5MB/sec	
Macintosh PowerBook 180	NCR AM85C80	1.5MB/sec	
Macintosh PowerBook 180c	NCR AM85C80	1.5MB/sec	
Macintosh PowerBook 190			
Macintosh Duo 210	NCR AM85C80	1.5MB/sec	
Macintosh Duo 230	NCR AM85C80	1.5MB/sec	
Macintosh Duo 250	NCR AM85C80	1.5MB/sec	
Macintosh Duo 270c	NCR AM85C80	1.5MB/sec	
Macintosh Duo 280c	Custom IC	1.5MB/sec	
Macintosh PowerBook 520	Custom IC	1.5MB/sec	
Macintosh PowerBook 540	Custom IC	1.5MB/sec	
PowerBook 1400	Custom IC		
PowerBook 2400	Custom IC		
PowerBook 3400	Custom IC		
PowerBook 5300	Custom IC		
PowerBook G3	Custom IC		
PowerBook G3 Series	Custom IC		

Notes
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* This is a theoretical maximum synchronous sustained data transfer rate. The practical data transfer rate varies depending on many factors, such as SCSI chip transfer rate limit, SCSI driver used, hard drive performance, software applications, cables, and other configurations.

Note (1)
The transfer rate of the 53C96 can reach 6MB/sec when using a fast hard drive, provided the cabling is capable of supporting that speed. The cabling and termination of the internal SCSI bus are optimized so that the 53C96 that controls the internal bus can support data transfers at a faster rate (up to 5MB per second with existing faster third-party hard drives). Externally with standard Apple cables, SCSI throughput was rated at 4 MB per second. The improved SCSI performance results in increased system responsiveness when accessing large amounts of data on a fast hard drive.

Note (2)
The internal SCSI channel also supports active termination which improves SCSI bus signal quality and reliability through improved transmission line and terminator design. This means that only one terminator is needed at the end of the external SCSI chain. The external channel's termination

also offers a more uniform impedance and cleaner termination scheme. However, because external cabling and termination are less predictable, performance on the external bus could be lower than the internal. Electrically isolating the two channels ensures that changes in external cabling and termination don't impact the performance of the internal devices.

Note (3)
Even though the internal and external SCSI chains are physically different, they are still logically the same, and can therefore, like all Macintosh systems, accommodate up to seven SCSI devices. The added value of the Macintosh Quadra 950 dual-controller design is that the internal hard drive(s) performance won't be affected by problematic devices (like a scanner) attached to the external SCSI connector. Improvements in signal quality on the SCSI bus result in higher SCSI reliability.

Note (4)
The PowerBook 150 only supports external SCSI devices, the internal hard drive is an IDE type drive.

Note (5)
The Macintosh 630 family utilizes an internal IDE hard drive, SCSI is only valid for external drives. The transfer rate external approaches 5 MB/sec.

Note (6)
These computers have dual-channel asynchronous SCSI. There are two completely separate SCSI buses. The Fast SCSI bus is for internal SCSI connections only. The other SCSI bus is for both internal and external SCSI connections.

Published Date: Feb 19, 2012

Macintosh PC Exchange: Supports 5.25-inch Drives (6/93)

- **Last Modified:** June 18, 1993
- **Article:** TA29484

- **Old Article:** 12340

Article Created: 16 June 1993

The back of the PC Exchange box says that it "Works with 3.5-inch and 5.25-inch floppy disks formatted using MS-DOS, Windows, and OS/2." Also "Formats 360K or 1.2MB MS-DOS disks on any Macintosh with a third-party 5.25-inch external floppy disk drive."

Does Macintosh PC Exchange work with 5.25-inch PC drives? We've been told repeatedly that it doesn't work with any 5.25-inch drive, including the Apple 5.25-inch drive.

Macintosh PC Exchange works with external 5.25-inch low- and high-density drives from these third-party manufacturers:

Peripheral Land, Inc.
Dayna Communications
Kennect Technology

For Macintosh PC Exchange to work properly, you must install the third-party software (that is, driver) that comes with those drives.

Macintosh PC Exchange doesn't work with the "old" Apple 5.25-inch drive (customers will continue to have to use Apple File Exchange), nor with any 5.25-inch Macintosh LC (really, Apple II) drives.

This information should supersede all other information you've seen reported on the compatibility of Macintosh PC Exchange with 5.25 PC drives.

Note that there's one little-known problem when using Macintosh PC Exchange with Dayna Communications' DOS Mounter. High-density disks aren't supported with the currently shipping version of Macintosh PC Exchange, version 1.0.2. This incompatibility will be fixed in a future version of Macintosh PC Exchange.

To locate a vendor's address and phone numbers, use the vendor name as a search string.

Rate this article:

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TA29484_Macintosh_PC_Exchange_Supports_5-25-inch_Drives_(693)_(TIL12340).pdf

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TA29489_Apple_III_Interfacing_a_LaserWriter_and_III_E-Z_Pieces_(1094)_(TIL01235).pdf

Apple III: Interfacing a LaserWriter and III E-Z Pieces (10/94)

The following describes the connection between III E-Z Pieces on the Apple III and the LaserWriter.

This article has been archived and is no longer updated by Apple.

I. Apple III:

A. Driver: .RS232
1. Data Configuration Block:

0 1 2 3 4 5 6 7 8 9 A B
-- -- -- -- -- -- -- -- -- -- -- --
0E 00 00 00 00 80 13 11 DF 84 50 00

No parity is set automatically in the Printer Mode.

II. The Connection

1. Cables

A. Connect Modem Eliminator Cable (Part #590-0166) to the connector on the back panel of the Apple III.

B. Connect the Serial and Communications Cable (Part #590-0037) to the connector on the Laserwriter.

C. Connect the remaining ends of the two cables together.

D. Here is a diagram of the connection:

From: To:

Apple III LaserWriter

Back panel Serial Port
DB-25 connector DB-25 connector

signal - pin wiring pin - signal

Frame Ground 1 <-> 1 Frame Ground
Tx 2 <-> 3 Rx (Receive Data)
Rx 3 <-> 2 Tx (Transmit Data)
RTS 4 <-> 4 RTS (Ready To Send)
Signal Ground 7 <-> 7 Signal Ground
DTR 20 <-> 20 Tx (Transmit Data)

III. LaserWriter

1. Set the Selector Switch on the LaserWriter to "Special". This can be done without turning off the printer. In Diablo 630 emulation mode the LaserWriter uses 9600 baud, XON/XOFF protocol, and no parity.

IV. Verification

1. To verify the connection, turn on the III, video monitor, and LaserWriter. Boot III E-Z Pieces and choose "Other Activities" from the Main Menu. Add a custom printer, naming it LaserWriter.

Use these settings for this custom printer:

1. Needs line feeds after each Return No
2. Accepts top-of-page commands Yes
3. Stop at end of each page No
4. Platen width 8.0 inches
5. Printer codes Yes

The printer codes for the Diablo Emulation are in the LaserWriter Technical Description. If you specifiy no printer codes, the typeface will default to Courier standard, 12 characters per inch, monospaced.

2. Return to the Main Menu and try to print a document.

3. Be aware that when you use the 3E-Z Pieces command OA-H (for hard copy), you will have to print a document using OA-P before you may use the OA-H command again. This is because the command OA-H does not issue the form feed the LaserWriter needs to clear its Diablo emulation settings.

Article Change History:
18 Oct 1994 - Reviewed for technical accuracy, revised formatting.

Support Information Services

Last Modified: Feb 19, 2012

Apple Workgroup Server 95: How Mount Points Work

- **Last Modified:** August 07, 2000
- **Article:** TA29580

- **Old Article:** 12483

This article has been archived and is no longer updated by Apple.

How do mount points work on the Apple Workgroup Server (AWS) 95?

UNIX file systems are hierarchical with only one root, the startup volume. If there is more than one physical disk (or partition) all volumes must be connected to that startup volume. These connections are made with mount points. The administrator chooses a folder on the startup volume for each additional volume to connect to (by default, this is "/ Shared Data"). The additional volume then appears as a folder within the chosen folder (this is the mount point).

Since AppleShare Pro runs atop the A/UX file system, there is one special consideration when sharing. Folders with mount points in them can not be shared. This includes the A/UX startup volume (which has the Macintosh startup volume mount point in it).

If all mount points are created within the Shared Data folder, then you would normally share each folder within the Shared Data folder within AppleShare Administrator.

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AWS 95 - A/UX: Remove File with 8-Bit, Option Characters (5/95)

I have special Macintosh characters in my file names on my Apple Workgroup Server (AWS) 95 Disk, such as "Àrich".

When I try to remove them from the command shell by the command:

rm Àrich

OR

rm "Àrich"

I am prompted, "Use 'exit' to leave csh". How can I remove these files from the command shell or startup shell?

This article has been archived and is no longer updated by Apple.
You can create, copy, or rename file names with a special character -- such as the trademark character -- under the A/UX 3.x Finder. Under CommandShell running the default shell, csh, you cannot EXPLICITLY specify the file name with a special character on the command line since this special character cannot be recognized by the CommandShell. Hence, you get the "Use exit to leave csh" message.

Additionally, the option 8, "*" is usually translated into a period in the CommandShell environment, but with the environment variable TBSEEDOTS=1 set in A/UX 3.1.1, this character is translated to "," in the CommandShell environment. If the usual delete commands "rm" or "rmdir" are used to remove one of these files, the CommandShell may report that the file with these characters is nonexistent, even though you can see it both from the Finder and by using the "ls" command in the command shell.

Here is how to remove eight bit characters like ã, ┤, *,╩¤, and ┐ in a file's name under AWS 95 A/UX CommandShell or A/UX Startup Shell.

Under A/UX CommandShell
═══════════════════════

Option 1

No matter which CommandShell you are using, you can do:

```
ls -li # To list all files in a directory, and find the inode number
. # that the 8-bit character file name you are going to delete.

find . -inum inode-number(s) -exec rm {} \\; # This will remove all files
. # with the correspondent
. # inode.
```

NOTE: The inode-numbers(s) are the inode numbers you found with 'ls -li', for example remove files with inode numbers 100, 120, 140, and 155. Below is an example of the command to remove files with inode numbers 100, 120, 140, and 155.

```
find . -inum 100 120 140 155 -exec rm {} \\;
```

Option 2

Under Korn Shell (ksh), you can explicitly remove that file, for example, try to remove the ¢abcã file.

```
% ls -FC
--> ¢abcã
$ ksh
$ rm *abc*
```

or

```
$ rm ¢abcã
```

If the file name contains space(s), you may use single quotes to enclose the name. Below is an example:

$ rm '¢ a b cã'

Under A/UX Startup Shell

Sometime it may necessary to go into the Startup Shell to remove or move files, if the system crashes as a result of a eight bit character file name in the System Folder, and these files need to be removed or moved to some other directory. To get into the Startup Shell, press Command-"." (period) to stop the A/UX start up process while A/UX Startup is launching; you will then get to the "startup#" prompt. Since the 'find' command is not available in A/UX Startup Shell, use the 'rm -ir' command, and answer no to all the files in the directory except the offending file.

startup# cd to-a-directory
startup# rm -ir .

NOTE: There is a space and period following the r.

WARNING: This command does a recursive delete of the current directory asking for permission for every file. DO NOT FORGET THE "-i" OPTION because the -r option alone recursively deletes the entire contents of the specified directory, and the directory itself.

Article Change History:
11 May 1995 - Updated article and changed title.

Support Information Services
Published Date: Feb 19, 2012

DAL For AS/400 & SNA■ps 5250: Improve Performance

- **Last Modified:** July 31, 2000
- **Article:** TA29594

- **Old Article:** 12498

This article has been archived and is no longer updated by Apple.

This article covers two items which can be done to the configuration of an AS/400 which will improve the performance of SNA*ps 5250 and DAL for The AS/400.

AS/400 Process Overview

To understand these configuration changes, it is helpful to review how these products are connected externally and internally with the AS/400. Both SNA*ps 5250 and DAL use APPC sessions which are Prebound-Contention Winners that are provided through a SNA*ps Gateway connection. The physical connection to the AS/400 is via a Token Ring or SDLC line attachment. Since this is an APPC connection and the SNA*ps gateway is in a Peer-to-Peer relationship, the Macintosh client applications make a call to a transaction program which is available on the AS/400. SNA*ps 5250 calls the Display-Station Passthru program while DAL for the AS/400 calls the DALSERVER.

The AS/400 is divided up into subsystems which receive and manage work for the system and users. The major subsystems are QBATCH, QINTER and QCMN. QBATCH manages all batch processing jobs running in the AS/400. The QINTER subsystem is used by all interactive jobs such as terminal emulation and print emulation. When SNA*ps 5250 is logged onto the AS/400, an interactive job is running in the QINTER subsystem. The QCMN subsystem is used by the APPC connections to the AS/400. These include DAL for the AS/400, SNA*ps 5250, and PC Support (for IBM PCs). Any client application which makes a program call via an APPC link, has to first be managed by QCMN and have a job assigned to the process.

When SNA*ps 5250 requests the Display Station Passthru request to the AS/400, QCMN deals with the request. Once the user logs on the AS/400, a second job is started in the QINTER subsystem which manages that part of the user process. So with SNA*ps 5250, there are two AS/400 jobs running, one in QCMN for APPC and one in QINTER for the interactive terminal process.

When DAL for the AS/400 requests a connection to the AS/400, a call to the DALSERVER is made and the QCMN subsystem manages the entire job. The DAL client user logs on to the DALSERVER using AS/400 security for validation but a DAL session is always an APPC session on the AS/400 and does not create a second interactive job to support the process like SNA*ps 5250.

So you can see the QCMN subsystem is very important to the operation and performance of both DAL and SNA*ps 5250. There are two entries in the QCMN subsystem which can be altered to better optimize performance: routing entries and prestart job entries.

Based on how QCMN is configured for routing entries, a Class gets assigned to the process. A class contains parameters that control the running of a routing step. The Class defines the overall Run Priority of the job in the AS/400. The rating for Run Priority ranges from 1 (very high availability of the AS/400 resources to the job) to 99 (very low availability of AS/400 resources to the job). The Class also defines the Time Slice of the AS/400 that is assigned to the job. Time Slice is defined as a maximum amount of processor time, in milliseconds, given to the job before other jobs are given the opportunity to run. The time slice establishes the amount of time needed by the job to accomplish a meaningful amount of processing. At the end of the time slice, the job might be put in an inactive condition so that other jobs can become active. The larger that Time Slice value, the more processor time can be assigned to the job before other jobs step in. The range of Time Slice is 1000 to 10,000 milliseconds.

The Prestart job entries allow the QCMN subsystem to be prepared to run a large program, such as, the DALSERVER. A Prestart job can have

a Class with a higher Run Priority than the default values given the routing entries in the Subsystem.

Changing Routing Entries Details For SNA*ps 5250

QCMN Routing Entries

If a DSPSBSD AS/400 command is done for the QCMN subsystem, the following screen appears:

Subsystem description: QCMN Library: QSYS
Status: ACTIVE

Select one of the following:

1. Operational attributes
2. Pool definitions
3. Autostart job entries
4. Work station name entries
5. Work station type entries
6. Job queue entries
7. Routing entries
8. Communications entries
9. Remote location name entries
10. Prestart job entries

* Select option 7, Routing Entries:

```
>>>>>>>>>>>>>>>>>>>>>>>>>
                                                          Start
Opt    Seq Nbr    Program       Library       Compare Value          Pos
         50      *RTGDTA                     'QVPPRINT'             37
        100      *RTGDTA                     'QTFDWNLD'             37
        150      *RTGDTA                     'QMFRCVR'              37
        180      *RTGDTA                     'QPAPAS'               37
        200      *RTGDTA                     'QMFSNDR'              37
        210      *RTGDTA                     'QHQTRGT'              37
        220      *RTGDTA                     'QRQSRV'               37
        230      *RTGDTA                     'QPCSUPP'              37
        250      *RTGDTA                     'QCNPCSUP'             37
        275      *RTGDTA                     '#INTER'                1
        300      *RTGDTA                     'PGMEVOKE'             29
325 *RTGDTA 'QPCSUPP' 1
350 *RTGDTA 'RSCLIB47' 1

>>>>>>>>>>>>>>>>>>>>>>>>>
```

The Sequence numbers are in order of system searches for a match in the program call to the subsystem. The program call is in the form of a call record which is character start position oriented. The word PGMEVOKE always appears starting in column position 29 followed by the actual name of the program in start position 37. The routing entries shown above have
two entries which are found in OS/400 V2R2M0 and important to SNA*ps and DAL. Sequence number 300 is a generalized matching entry, supplied by IBM, for any PGMEVOKE with a name that does not match any of the specific names found starting in position 37. The routing entry with sequence number 180 was added to catch the Display Station Passthru call from SNA*ps 5250 to the QCMN subsystem. Before the addition of sequence 180, the call was routed based on the entry with sequence number 300. Lets look at the differences between these two entries.

Sequence number 300:

Routing entry sequence number . . . . . : 300
Program . . . . . : *RTGDTA
Library . . . . . :
Class . . . . . : QBATCH
Library . . . . . : QGPL
Maximum active routing steps . . . . . : *NOMAX
Pool identifier . . . . . : 1
Compare value . . . . . : 'PGMEVOKE'

Compare start position . . . . . : 29

The Class for this entry is QBATCH which is IBM supplied and has a Run Priority of 50. The Time Slice is 5000 milliseconds. This is lower than

any PC Support process which runs with Priority 20.

Now lets look at the Sequence number 180 entry:

Routing entry sequence number . . . . . : 180
Program . . . . . : *RTGDTA
Library . . . . . :
Class . . . . . : QWCPCSUP
Library . . . . . : QGPL
Maximum active routing steps . . . . . : *NOMAX
Pool identifier . . . . . : 1
Compare value . . . . . : 'QPAPAS'

Compare start position . . . . . : 37

The Class for this entry is QWCPCSUP which is IBM supplied and has a Run Priority of 20. This is the same as that of any PC Support process and places the SNA*ps 5250 workstation function at the same performance threshold as PC Support. The Time Slice is 500 milliseconds which is adequate for interactive sessions like SNA*ps 5250.

If the SNA*ps 5250 program call is made to a standard set of entries in QCMN, the results would be to use the QBATCH Class which would perform slower than a PC Support WorkStation Function emulation.

If the user logs on to the AS/400, then a job starts in the Interactive Subsystem or QINTER. All jobs managed by the QINTER subsystem use the QINTER Class. This Class has a Run Priority of 20 and a Time Slice of 2000 milliseconds. From this we can see that a SNA*ps 5250 connection will be running with priority 20 in the QINTER subsystem but then have to wait, on a busy machine, for time to complete the data transfer through the QCMN subsystem since it has a priority of 50 there. PC Support 5250 sessions do not have this delay since both jobs running on their behalf have priority of 20. (Remember 20 is better than 50.)

How to add the Routing entry to QCMN subsystem for SNA*ps 5250:

In order to configure the QCMN routing entries to improve performance on heavily loaded machines do the following steps. Log on as QSYSOPR or QSECOFR. Be sure all users on the QCMN subsystem have been warned with a broadcast message that the subsystem will be going down and all passthru sessions will be terminated. Stop the QCMN subsystem at the AS/400 console. Enter the following command on the command line:

ADDRTGE SBSD(QCMN) SEQNBR(180) CMPVAL(QPAPAS 37) PGM(*RTGDTA) CLS(QWCPCSUP)

The Sequence number has to be a number which is not currently in use by the subsystem. The compare value is the name QPAPAS which is the name of the Passthru program in the PGMEVOKE call. The class QWCPCSUP is an IBM supplied Class with Run Priority of 20. However, a new Class could be configured with a different Run Priority than 20 but this is not really necessary.

Changing Routing Entries For DAL For The AS/400
The DAL Server call is made to the routing entries of the QCMN subsystem just like the SNA*ps 5250 Passthru call. The DAL call is routed through the generalized PGMEVOKE 29 location and acquires the Class of that routing entry. The IBM default for this routing entry is QBATCH Class which has Run Priority 50. If DAL is compared with a PC Support connection (Run
Priority 20 which is higher and therefore providing better service), DAL will come out slower that any PC Support driven process. One fix is to change the Class of the PGMEVOKE 29 routing entry to something with a Run Priority of 20. This may not be the best solution for the overall AS/400 since all program calls which are only qualified by PGMEVOKE will be given an interactive process Run Priority. DAL as an interactive process should be running with at least a Run Priority of 20.

Adding A Prestart Job For DAL In Subsystem QCMN

As an alternative to altering the Class of the PGMEVOKE 29 routing entry, it makes more sense to define a new Class, like DALCLS and define a Run Priority and Time Slice that makes sense. Use the CRTCLS AS/400 command and a Prompt Key and use the following as an example:

```
>>>>>>>>>>>>>>>>>>>

                        Display Class Information
                                                       System:  APPLE SR
Class . . . . . :   DALCLS
  Library . . . . . :     QGPL
Run priority  . . . . . :   20
Time slice in milliseconds  . . . . . :   3000
Eligible for purge  . . . . . :   *YES
Default wait time in seconds  . . . . . :   30
Maximum CPU time in milliseconds  . . . . . :   *NOMAX
Maximum temporary storage in K bytes  . . . . . :   *NOMAX
Text  . . . . . :   Class for DALServer
```

```
>>>>>>>>>>>>>>>>>>>>
```

Notice the Run Priority of 20 (more like interactive) and Time Slice of 3000 milliseconds (more like a batch process).

Next, a Prestart Job should be added to the QCMN Subsystem. Enter an ADDPJE command on the AS/400 and the Prompt Key. The example below should be used as a template to fill in the screen:

```
>>>>>>>>>>>>>>>>>>>>
```

```
                    Display Prestart Job Entry Detail
                                                        System:  APPLE SR
Subsystem description:   QCMN           Status:   ACTIVE


Program  . . . . . . . . . . . . . . . . . . . . . :   DALSERVER
 Library  . . . . . . . . . . . . . . . . . . . . . :     DALLIB
User profile . . . . . . . . . . . . . . . . . . . . :   QUSER
Job  . . . . . . . . . . . . . . . . . . . . . . . . :   DALSERVER
Job description  . . . . . . . . . . . . . . . . . . :   *USRPRF
 Library  . . . . . . . . . . . . . . . . . . . . . :
Start jobs . . . . . . . . . . . . . . . . . . . . . :   *YES
Initial number of jobs . . . . . . . . . . . . . . . :   3
Threshold  . . . . . . . . . . . . . . . . . . . . . :   2
Additional number of jobs  . . . . . . . . . . . . . :   2
Maximum number of jobs . . . . . . . . . . . . . . . :   *NOMAX
Maximum number of uses . . . . . . . . . . . . . . . :   200
Wait for job . . . . . . . . . . . . . . . . . . . . :   *YES
Pool identifier  . . . . . . . . . . . . . . . . . . :   1
Class  . . . . . . . . . . . . . . . . . . . . . . . :   DALCLS
 Library  . . . . . . . . . . . . . . . . . . . . . :     QGPL
 Number of jobs to use class  . . . . . . . . . . . :     *CALC
Class  . . . . . . . . . . . . . . . . . . . . . . . :   *NONE
 Library  . . . . . . . . . . . . . . . . . . . . . :
 Number of jobs to use class  . . . . . . . . . . . :     *CALC
```

```
>>>>>>>>>>>>>>>>>>>>
```

The most important entries on this screen are:

1) Program name - DALSERVER
2) Library Name - DALLIB is the DAL install default
3) Initial number of Jobs should be kept at the default of 3
4) The Additional number of Jobs should be kept at 2 which is the value used to determine how many additional jobs to start after the initial number are started and used.
5) Maximum number of jobs stays at *NOMAX
6) The Class should be DALCLS which is in library QGPL. This is the Class we just created for the DALSERVER and it will be used with the Prestart Job entry in Subsystem QCMN.

When the DAL process starts now, it will start faster and have a Run Priority of 20 which will place it on the same level as PC Support and Showcase VISTA, an AS/400 database query tool, which is competing with DAL.

Let's test this enhancement for DAL. If we connect a DAL client to the AS/400 and then do a WRKACTJOB on the AS/400, we see that a job has been started for the DALSERVER as a PJ (Prestart Job) in Subsystem QCMN.

```
>>>>>>>>>>>>>>>>>>>>
```

```
Opt  Subsystem/Job  User        Type  CPU %  Function        Status
    QBATCH         QSYS        SBS      .0                 DEQW
    QCMN           QSYS        SBS      .0                 DEQW
      DALSERVER    QUSER       PJ       .0                 CPCW  <<<DAL
      TKNAXTC      XCOM        EVK      .0  *  -PASSTHRU    EVTW
    QCTL           QSYS        SBS      .0                 DEQW
      QSYSSCD      QPGMR       BCH      .0  PGM-QEZSCNEP    EVTW
    QINTER         QSYS        SBS      .0                 DEQW
      QPADEV02     QSECOFR     INT      .0  CMD-WRKACTJOB   RUN
    QSPL           QSYS        SBS      .0                 DEQW
```

```
>>>>>>>>>>>>>>>>>>>>
```

If we work with the details for DALSERVER connection (option 5) and then display the run attributes of the Job (option 3), we see that the DALSERVER now has the Class privileges of DALCLS (RP of 20 and TS of 3000 ms):

```
>>>>>>>>>>>>>>>>>>>>
```

```
Job:   DALSERVER      User:   QUSER          Number:   019163
```

```
Run priority  . . . . . . . . . . . . . . . . . . . :   20
Time slice in milliseconds  . . . . . . . . . . . . :   3000
Eligible for purge  . . . . . . . . . . . . . . . . :   *YES
Default wait time in seconds  . . . . . . . . . . . :   30
Maximum CPU time in milliseconds  . . . . . . . . . :   *NOMAX
 CPU time used . . . . . . . . . . . . . . . . . . . :    5335
Maximum temporary storage in K bytes  . . . . . . . :   *NOMAX
 Temporary storage used  . . . . . . . . . . . . . . :    6

>>>>>>>>>>>>>>>>>>>
```

Another DAL For AS/400 Performance Enhancement
It is possible to place the DALSERVER in AS/400 main storage and have it load more quickly at program start time and perhaps program execution time depending on the available RAM space in the selected pool. The AS/400 command is SETOBJACC (Set Object Access). The function of SETOBJACC is shown below from the AS/400 help screen on this command.

The Set Object Access (SETOBJACC) command temporarily changes the speed of access to an object by bringing the object into a main storage pool or purging it from all main storage pools. An object can be kept main storage resident by selecting a pool for the object that has available space and does not have jobs associated with it. Repeated use of the command can cause a set of objects to be resident in a main storage pool.

The command entry screen for SETOBJACC is shown below filled in with the default DAL values.

```
>>>>>>>>>>>>>>>>>>>
                        Set Object Access (SETOBJACC)


Type choices, press Enter.


Object . . . . . . . . . . . . . . > DALSERVER     Name
  Library  . . . . . . . . . . . . >   DALLIB      Name, *LIBL, *USRLIBL...
Object type  . . . . . . . . . . . > *PGM          *FILE, *PGM
Storage pool:
  Shared pool or subsystem name  . > *BASE         Name, *JOB, *BASE...
  Pool identifier  . . . . . . . . > 2            1-10

>>>>>>>>>>>>>>>>>>>
```

After this command has been done the following appears on line 25 of the 5250 screen:

"3K of DALSERVER brought to pool with 9K unused".

The DALSERVER is now launched by the AS/400 as quickly as possible. It is a Prestart Job in the QCMN subsystem and it is resident in a Main Storage pool. These suggestions should enhance DAL for AS/400 performance on very busy or smaller AS/400s (9402 and 9404 models).
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Macintosh PC Exchange 1.0.3: Using with Other Applications

- **Last Modified:** July 02, 1993
- **Article:** TA29601
- **Old Article:** 12505

Article Created: 1 July 1993

Macintosh PC Exchange lets you use PC-formatted floppy disks on your Macintosh. It lets you transfer files between a Macintosh and a PC-compatible computer by copying the files to and from a floppy disk. This article tells you what you need to install Macintosh PC Exchange 1.0.3, and to use it with other types of programs.

What You Need to Install Macintosh PC Exchange

To use Macintosh PC Exchange, you must have Macintosh system software version 7.0 or later. Macintosh PC Exchange doesn't work with system software version 6.

If you've already installed another PC disk mounting utility in your Macintosh, be sure to remove it before installing Macintosh PC Exchange. Then drag the PC Exchange icon into the Control Panels folder of your System Folder, and restart the Macintosh.

Notes on Using Macintosh PC Exchange

If you change the name of a PC-format disk to a name that's longer than 11 characters, the disk name will be truncated when you view it on a PC-compatible computer.

If Macintosh PC Exchange encounters a problem while formatting a disk, an Updating Disk... dialog may appear. This dialog includes a progress bar that shows the status of the updating process. To stop the disk from being updated, click the Cancel button. This cancels the initialization process, and the disk ejects from the disk drive.

In the PC Exchange control panel, you can't create an assignment with a blank DOS suffix.

Sometimes a Macintosh application program can't interpret the file format of a PC document. When this happens, the document's formatting displays incorrectly, and you may see strange characters in the document. When this happens, try using another application, or translate the document into a different file format using one of the file format translation utilities available for the Macintosh (like MacLinkPlus Translators from DataViz).

Paint Programs

Some paint programs, like MacPaint and SuperPaint, save documents onto PC-format disks very slowly. To get around this, always save paint documents onto your computer's hard disk. If you like, you can then copy the document onto a PC-format floppy disk.

ClarisWorks Version 1.0v2 or Earlier

Some versions of ClarisWorks can't read or write files on PC-format disks. To open a PC document in ClarisWorks, you must first copy the document onto the hard disk. Always save ClarisWorks documents onto your hard disk. Contact Claris to obtain version 1.0v3 or later.

AutoDoubler

To use AutoDoubler with Macintosh PC Exchange, you must first open the AutoDoubler control panel and remove the X from the box labeled "Show DD on Compressed Files."

Directory Assistance II

You shouldn't use this program while the Macintosh PC Exchange control panel is open. You can turn off Directory Assistance II from the PC Exchange control panel by holding down the Option key while you click the Add or Change buttons in the control panel window. Using the PC Exchange control panel temporarily disables Directory Assistance, and closing the PC Exchange control panel automatically enables it.

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Opening MS-DOS documents using Macintosh PC Exchange (7/93)

- **Last Modified:** July 12, 1993
- **Article:** TA29632

- **Old Article:** 12553

Article Created: 7 July 1993

This article describes how to designate a specific Macintosh application for opening MS-DOS documents by the extension following its file name.

Double-clicking an MS-DOS or Windows file like you would a Macintosh file at the Finder level usually doesn't result in the file opening. This is because the document doesn't know which Macintosh application to use. By using the PC Exchange control panel you can assign certain MS-DOS files to certain applications. This is done in the PC Exchange control panel window.

1) Open the PC Exchange control panel located in the Control Panel folder in your System Folder.

2) Click on Add.

3) Type in a period and the three letter extension, for example .TXT.

4) Select which Macintosh application is to be assigned that file type.

So that all members of a Network are consistent, make a master list of assignments on one Macintosh and place a copy of the PC Exchange Preferences folder in the Preferences folder of each licensed user of Macintosh PC Exchange.

Rate this article:

- Not helpful
- Somewhat helpful

TA29632_Opening_MS-DOS_documents_using_Macintosh_PC_Exchange_(793)_(TIL12553)

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System 7.x: Can‘t Rename HD & Custom Icons, Shared Items (9/94)

I can't rename the hard disk on my Macintosh running System 7 or System 7.0.1; or I changed the Macintosh hard disk icon to a custom icon. I chose "Get Info" under the Finder's File menu and pasted in another icon. I couldn't clear or change back to the original icon.

What causes this and what can be done to fix it other than completely reinitializing the hard disk?

This article has been archived and is no longer updated by Apple.
First ensure that you aren't running File Sharing, and you don't have the hard drive shared. Even if you do not set the sharing permissions for a particular volume, File Sharing still makes all volumes available to the owner for remote access. To change the name of a mounted volume, turn File Sharing off with the Sharing Setup Control Panel, rename the disk, then turning File Sharing back on again.

If an AppleShare File or Print Server software is running and you can't change the name of a mounted volume, then quit the sever software, rename the disk, then start the server software again.

If File Sharing or AppleShare Server software is not on, then the problem is with versions of System 7 prior to 7.0.1 where volume names and icons sometimes can't be changed. If you are a System 7.0 user and are having trouble renaming your hard disk or a folder, you may need Rename Rescue. The problem was corrected in System 7.0.1 and later.

What It Is

Rename Rescue is a small application that unlocks the name of folders and volumes.

How To Use It

If file sharing or AppleShare server software is on, turn it off.

From the Finder, select the items that need to be unlocked and drag them onto the Rename Rescue icon. You may select one or many items at a time. The Finder will automatically highlight Rename Rescue's icon. If Rename Rescue was not already started, it will open at this time, attempt to unlock, present a dialog for each item reporting the results. It will then automatically quit.

The possible results are:

* The item can not be renamed because it is being shared.
* The item can not be renamed because it is a System reserved folder.
* The item was already renameable.
* The item is now renameable.

After Rename Rescue unlocks the items, you should restart your Macintosh so the Finder will recognize the change.

Technical Information (how folders get locked in the first place)

The names of folders or volumes may get inadvertently locked on a computer running System 7.0. For this to happen, several things must occur. Unless all of these things have occurred, you will probably not need Rename Rescue.

* The volume or folder is (or was) used on a drive connected to a computer running System 7.0 (the problem is corrected in System 7.0.1 and newer).
* The volume or folder was shared with a computer running System 6.x (all versions of System 6) and the connection was unexpectedly interrupted (power failure, crash, or improper shutdown).
* Upon restart, the volume and/or folder on the System 7.0 computer may not renameable.

To get Rename Rescue, search on one of the following articles:

Where To Find Apple Software Updates - listing of online services for

all "free" Apple software updates.

Obtaining Apple Product Support in the USA - a list of 800#'s and online services for Apple support info, software updates, and a subset of the Apple Tech Info Library.

Article Change History:
15 Sept 1994 - Removed program binary file.
05 April 1994 - Added information about AppleShare software.
29 March 1994 - Added information about the Raname Rescue. Updated enclosure.

Support Information Services
Published Date: Feb 19, 2012

Chinese System Software: File Encoding Method

- **Last Modified:** May 09, 2000
- **Article:** TA29701

- **Old Article:** 12634

What character encoding method is used for simplified Chinese in WorldScript? The two common encoding types are GB and Big 5. Which one does Apple uses, or has Apple developed it's own.
The character encoding methods used for Traditional and Simplified versions of Chinese System Software for WorldScript are BIG 5 and GB respectively. BIG 5 is used for Traditional Chinese system software, and GB used for Simplified Chinese system software.
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Performa 450: Converting DOS Files to WP Works (7/93)

- **Last Modified:** May 24, 1995
- **Article:** TA29711

- **Old Article:** 12654

Article Created: 20 July 1993

I have a Performa 450 with WordPerfect Works and PC Exchange already installed. I have been trying unsuccessfully to convert a DOS Word file (.DOT) into WordPerfect Works. Can I convert this file?

Products Affected

Windows OS

WordPerfect Works can only work with a limited number of MS-DOS files. The .DOT file is probably not one of them.

Here are some suggestions for you to try:

* Try loading it back into the DOS application and trying to save as Text Only, Microsoft Word, WordPerfect, or any other common file format.

* Ask your local dealer about products that work in conjunction with PC Exchange and actually translate documents into various types of Macintosh files. Some of them have several different translators that your WordPerfect Works application does not have.

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ARCHIVE

Performa: Kensington System Saver

- **Last Modified:** June 07, 1999
- **Article:** TA29715

- **Old Article:** 12658

This article has been archived and is no longer updated by Apple.
I recently replaced my Apple IIgs with a Macintosh Performa 405. On my IIgs I used a Kensington System Saver. Can I use the Kensington System Saver with the Performa?
Kensington doesn't recommend using this unit on a Macintosh computer. The System Saver was designed to add a fan and surge protection to the Apple IIgs. The Performa 405 has a fan built-in and therefore requires no additional fan. You can purchase a surge protector from most hardware stores and have all the features the System Saver afforded.

Kensington also offered a System Saver for the compact Macintosh computers such as the 128, 512K, 512KE, SE, Plus, SE/30, Classic, Classic II and Performa 200. As with the System Saver for the Apple IIgs, this System Saver will not fit on the Performa 405 or Macintosh LC computers.

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Playback Quality of 16-bit Audio on Macintosh Hardware (1/96)

I mounted an audio compact disc and converted one of the tracks to a QuickTime movie sound file using 44.1KHz, 16-bit, Stereo settings in MoviePlayer's Open/Convert/ Options dialog. When I listened over headphones connected to the computer, the playback of the file through MoviePlayer had a hiss or background noise. When I played the track from MoviePlayer before it was converted (the option screen has a play selection) the sound file had the same background noise. However, when I played the same CD track through CD Remote with headphones connected directly to the CD player the sound was great and there was no background noise.

Why is there noise when playing back from MoviePlayer? Shouldn't the playback be equal to the original?

This article has been archived and is no longer updated by Apple.

The reason for the apparent noise in the playback is due to the lack of 16-bit 44.1KHz audio playback hardware on some Macintosh computers. Using the file settings you indicated, the file will be an identical copy of what is on the audio CD. The QuickTime movie file on disk is a full CD-quality 16-bit, 44.1KHz, stereo sound file. However, to enjoy the full clarity of this file, your Macintosh computer must be capable of 16-bit, 44.1KHz sound output. Starting with the original AV computers released in July 1993, most subsequently released Macintosh computers have 16-bit sound capability. The Power Macintosh 5200, 5300, 6200, and 6300 series computers have 16-bit sound out capability but only at 22.05KHz. You can use this procedure below to determine if your computer supports 16-bit sound:

Step 1

Choose Control Panels from your Apple menu.

Step 2

Open the Sound control panel.

Step 3

Choose "Sound Out" from the "Alert Sounds" pull down menu. If the 16-bit sound radio button is grayed out, you only have 8-bit sound capabilities.

If 16-bit is not grayed out, make sure there is a dot in the radio button next to it.

Step 4

Use the close box in the upper left corner to close the Sound control panel.

Older Macintosh computers that do not support 16-bit sound can be made 16-bit capable by adding an audio card like Digidesign's AudioMedia II card. To use a 16-bit audio card like this will require Sound Manager 3.x and a Sound Manager component (driver) for the card. The driver component will be supplied by the card manufacturer.

Creating a sound file from the audio disc using the method described is actually a file transfer from the audio disc to the Macintosh hard disk. Thus, there is no conversion of the digital audio to analog audio when transferring the track from the audio disc to the hard disk. By keeping the audio track in the digital domain, it is possible to make an identical copy. Using the 44.1KHz, 16-bit, Stereo options provides that identical copy. The reason noise is introduced when playing back the sound through your computer is the limit of the of 8-bit sound only Macintosh audio hardware.

What happens to the recorded sound on 8-bit only sound capable computers

---

When playing back the sound without 16-bit hardware, the Sound Manager must throw away half of the bits in the audio samples and playback only half of the samples that exist. Thus, the actual data being used is only 25% of the original file.

The reason only 25% of the original data is used is because 8-bit sound Macintosh computers only sample at 22.05KHz. Therefore, the 16-bits must be reduced to 8-bits; and the 44.1KHz must be reduced to 22.05KHz. The Sound Manager accomplishes this "dithering" (known as "downsampling") of the sound - much like QuickDraw dithers a 24-bit color image into an 8-bit color image.

As a side note: Sound Manager 3.x uses a more sophisticated method of downsampling than Sound Manager 2.0. This improves the playback quality of the 16-bit, 44.1KHz sound file on an 8-bit, 22.05KHz system; although, it does not come close to playing back the full 16-bit, 44.1KHz recording.

Digital audio engineers would not usually use "noise" to describe what is happening to the sound. It is more correctly called quantization distortion. Unless you are discussing this issue with a digital audio engineer, "noise" is an acceptable phrase - that is, after all, what it sounds like to the your ear.

In digital audio the main measurement of maximum expressible amplitude to error ratio is called Signal-to-Error (S/E) ratio. This expressible amplitude is also referred to as the "maximum signal" of the recorded sound. The error is what is perceived as noise. The S/E ratio specification of a digital system is closely related to the Signal-to-Noise (S/N) ratio of an analog system, although it is not identical in nature due to differences between digital and analog methods.

The S/E ratio can be expressed specifically by calculating first a maximum signal value, second an error value, and finally creating their ratio. Although there are intervening steps in the math, the final formula to use when calculating the strength of the audio signal above the noise (distortion or error) level looks like this:

```
6.02 * n + 1.76 dB
```

Where n is equal to the number of bits in the sample. The following results are approximate signal above noise ratios for a various number of bits in a sample. Generally, the calculated results will be slightly higher than the measured results. Also, specific implementations of hardware will affect the actual measured ratios in a downward fashion.

```
16-bit samples (number in CD audio)  = 98 dB

12-bit samples                       = 86 dB

 8-bit samples (Macintosh sound)     = 48 dB
```

To relate the quality of these digital recordings to analog recordings, think of the 8-bit recordings as inexpensive cassette recorders with inexpensive tape. The 12-bit recordings correlate to high quality cassette recorders with noise reduction and metal tape. The 16-bit recordings equate to professional studio reel-to-reel tape recorders with noise reduction and professional tape at high tape speeds.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

31 Jan 1996 - Added 8-bit and 16-bit computer information.

26 Jan 1996 - Made minor technical and formatting changes.

Support Information Services

Last Modified: Feb 19, 2012

Additional Product Support Information

Macintosh AV Series: Monitor Support

This article provides information on monitors supported on the Quadra 840AV, Quadra 660AV, and Centris 660AV and on how two frame buffers are used to support both computer graphics and video.
This article has been archived and is no longer updated by Apple.

Frame Buffers

The members of the Macintosh AV Series are the first Macintosh computers to use two different frame buffers. These are the graphics frame buffer, and the video frame buffer. VRAM can be used in two different ways, either used completely by the graphics frame buffer (standard Macintosh display), or split 50/50 between the graphics frame buffer and the video frame buffer.

To achieve the highest graphics bit depth, the two frame buffers are often used together for graphics. Consequently, video-in is not available when displaying graphics at the highest bit depth for many monitors. When displaying live video, the two frame buffers are merged so the video-input appears as a window on the graphics display.

For example, a Quadra 840AV with 2MB of VRAM can support a 14-inch color monitor at 24-bits in a strictly graphic environment or can provide support for a 16-bit graphics window and a 16-bit video window.

VRAM & Bit Depth

The Quadra 840AV and Centris 660AV come standard with 1 MB VRAM. The Quadra 840AV is expandable to 2 MB VRAM. Upgrading the Quadra 840AV's VRAM to 2 MB permits 24 bit display (millions of colors) on monitors up to 16 inches and 16 bit (thousands of colors) on the 21-inch color monitor.

The machines can drive an NTSC or PAL monitor directly, without the use of an encoder box. In order for that feature to be enabled, the display resolution should be either 512x384 or 640x480 for NTSC, or 640x480 or 768x576 for PAL. Hence the different resolutions available for each display.

Notes:
1) The Macintosh Centris 660AV always has 1 MB of VRAM.

2) The Macintosh Quadra 840AV comes standard with 1 MB of VRAM and may be expanded to 2 MB of VRAM. Four 80 ns (nanosecond) 256K VRAM SIMMs are required.

3) Where multiple resolutions are available, an asterisk (*) indicates the standard resolution. Additional resolutions allow you to display more colors by only using a portion of the monitor. Select the resolution by using the Options dialog of the Monitors Control Panel. You must reboot to change resolutions. The size of the pixels will not change in these alternate modes. Instead, a black border will appear around the smaller active video area.

4) A "Flicker-free" mode (sometimes referred to as Apple Convolution) is available when displaying on a TV. This mode is available at up to 8 bits/pixel and is not available when using video-in.

5) bpp is Bits Per Pixel. A range is given in table below, indicating which of the following are available:

1 bpp - Black & White
2 bpp - 4 colors or greys
4 bpp - 16 colors or greys
8 bpp - 256 colors or greys (greys only for Video in)
16 bpp - Thousands of colors (5 bits each of R, G, and B)
32 (24 plus 8) bpp - Millions of colors (8 bits each of R, G, and B)

6) The maximum visible number of colors is millions. In the past, Apple has labeled this as 24 bit color. However, 24 bpp or 32 bpp are interchangeably used to mean support for millions of colors. When you see 32 bpp listed on the chart below, think 24 plus 8: 24 bpp for displaying millions of colors plus 8 bpp for special uses, such as alpha channel support and chroma key support.

7) Both the video and graphics portions of VRAM are often used together to display graphics at the highest available bit depth. In the table below, the range of graphics bit depths is marked with # when video-in is available at the maximum graphics bit depth. In all other cases video-in is not available when using the highest graphics bit depth.

		1 MByte VRAM	2 MByte VRAM

Display	Resolution	Graphics bpp	Video-in bpp	Graphics bpp	Video-in bpp
12-inch RGB	512 x 384*	1-32	8-16	1-32	8-16
	560 x 384	1-32	8-16	1-32	8-16
13-inch, 14-inch RGB & 12-inch Monochrome	512 x 384	1-32	8-16	1-32	8-16
	640 x 400	1-32	8-16	1-32	8-16
	640 x 480*	1-16	8-16	1-32	8-16
15-inch Portrait Full-Page Monochrome	512 x 384	1-8#	8-16	1-8#	8-16
	640 x 480	1-8#	8-16	1-8#	8-16
	640 x 870*	1-8	8-16	1-8#	8-16
15-inch Portrait Full-Page RGB	640 x 870*	1-8	8-16	1-16	8-16
16-inch RGB	512 x 384	1-32	8-16	1-32	8-16
	640 x 480	1-16	8-16	1-32	8-16
	768 x 576	1-16	8-16	1-32	8-16
	832 x 624*	1-16	8-16	1-32	8-16
19-inch RGB	1024 x 768*	1-8	8	1-16	8
21-inch Two-Page Monochrome	512 x 384	1-8#	8	1-8#	8
	640 x 480	1-8#	8	1-8#	8
	768 x 576	1-8#	8	1-4#	8
	1152 x 870*	1-8	8	1-8#	8
21-inch Two Page RGB	512 x 384	1-16	8	1-16	8
	640 x 480	1-16	8	1-16	8
	768 x 576	1-4#	8	1-4#	8
	1152 x 870*	1-8	8	1-16	8
VGA/SVGA Displays 56Hz 72Hz 60Hz 70Hz	640 x 480*	1-16	8-16	1-32	8-16
	800 x 600	1-16	8-16	1-32	8-16
	800 x 600	1-16	8-16	1-32	8-16
	1024 x 768	1-8	8	1-16	8
	1024 x 768	1-8	8	1-16	8
Composite and S-Video Output Modes:					
NTSC convolved (flicker-free mode)					
Underscan (Safetitle)	512 x 384	1-8	N/A	1-8	N/A
Overscan (Fullframe)	640 x 480 *	1-8	N/A	1-8	N/A
NTSC non-convolved					
Underscan (Safetitle)	512 x 384	1-32	8-16	1-32	8-16
Overscan (Fullframe)	640 x 480*	1-16	8-16	1-32	8-16
PAL convolved (flicker-free mode)					
Underscan (Safetitle)	640 x 480	1-8	N/A	1-8	N/A
Overscan (Fullframe)	768 x 576*	1-8	N/A	1-8	N/A
PAL non-convolved					
Underscan (Safetitle)	640 x 480	1-16	8-16	1-32	8-16
Overscan (Fullframe)	768 x 576*	1-16	8-16	1-32	8-16

* Default resolution. See note 3 above.
# Video-in is availble at the highest graphics bit depth. See note 6 above.

(Note: Special thanks to Noah Price of Apple's AV Design Team for portions of this article.)

TA29752_Macintosh_AV_Series_Monitor_Support_(TIL12703).pdf

Published Date: Feb 19, 2012

Digital Signal Processor (DSP) - Overview

This article gives a overview of the Digital Signal Processor (DSP) chip which is a part of the Macintosh Centris 660AV and Quadra 840AV computers.
This article has been archived and is no longer updated by Apple.
The Quadra 840AV and Centris 660AV are the first Macintosh computers that include a Digital Signal Processor (DSP) chip integrated on the logic board.

Apple uses an AT&T DSP3210 chip for both models, the only difference being the clock frequency which is 55 Mhz on Centris 660AV and 66.7 Mhz on the Quadra 840AV.

The DSP implementation on the Quadra 840AV and Centris 660AV uses it's own multitasking operating system (the Apple Real-Time Architecture or ARTA) but shares the same memory as the host CPU, the 68040. The Quadra 840AV and Centris 660AV are truly dual processor Macintosh computers, as both the 68040 and the DSP have equal access to system resources.

The DSP on the Quadra 840AV and Centris 660AV is primarily responsible for performing real time processing of tasks such as speech recognition, sound, analog modem signal processing, or any other time-correlated data. The DSP can also be programmed to perform non real-time (also called timeshare) tasks such as image processing.

Real-Time versus Timeshare Processing

The difference between real-time and timeshare processing is that real-time tasks such as speech recognition requires guaranteed processing bandwidth.

Timeshare tasks are processes that don't involve a time dependency such as image manipulation or number crunching. Timeshare tasks are processed whenever there is excess DSP bandwidth not being used by a real-time process.

Please note that real-time tasks will not necessarily execute faster than timeshare tasks. In many cases, timeshare tasks will get more of the processing bandwidth and will complete sooner than real-time tasks. Real-time refers to tasks that need a specific amount of data to be processed during a specific amount of time.

Sound Manager 3.0, Speed Recognition API, and the Communication Toolbox utilize the DSP, but for an application to do more than sound, telecommunications, and speech recognition, it will have to be specifically written to use the Apple Real-Time Architecture manager.

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- **Last Modified:** September 30, 2011
- **Article:** TA29753

- **Views:**

  434

Centris 660AV & Quadra 840AV: 2MB ROM Information

This article provides information on the new 2MB ROM in the Centris 660AV and Quadra 840AV.
This article has been archived and is no longer updated by Apple.
The Centris 660AV and Quadra 840AV are the first Macintosh computers to implement a 2MB ROM using two 512Kx16 chips. The new ROM is also the first ROM that contains code for portions of System 7 that were able to be moved to the ROM, freeing up RAM for applications and other system use.

The ROM has also been vectorized which allows for easier System patch creation and from a development perspective is much easier to maintain.

The new ROM also includes:

* Support for the Digital Signal Processor (DSP)
* New drivers for DMA based LocalTalk, Ethernet, Floppy disk, and SCSI
* QuickTime 1.5*
* Sound Manager 3.0
* Video input and output driver
* Speech recognition and text to speech driver

* Apple Events and AppleScript
* Software support for telecom capabilities
* QuickTime 1.5 is installed in ROM, however, the software version of QuickTime 1.6 was installed at the factory and will override the version in ROM.

Published Date: Feb 19, 2012

ARCHIVE

Macintosh AV Series: Video Features and Subsystems

- **Last Modified:** October 04, 2008
- **Article:** TA29779

- **Old Article:** 12738

This article has been archived and is no longer updated by Apple.
This article describes the video features of the Macintosh AV Series computers and their video subsystem.
New Video Features of the Macintosh AV Series

Composite and S-video output is supported directly from the logic board. This allows the Centris 660AV, Quadra 660AV and Quadra 840AV to connect directly to presentation equipment, televisions, or a VCR. NTSC and PAL video formats are supported.

Video and graphic acceleration and manipulation is enhanced by the inclusion of a new Digital Audio Visual (DAV) connector. This permits NuBus cards that have DAV connectors to manipulate audio and video signal directly from the main logic board.

Composite and S-video input can be connected directly to the Centris 660AV, Quadra 660AV and Quadra 840AV and can display and process this information in a separate video window. NTSC, PAL, and SECAM formats are supported.

Video Subsystem

DAV

The Digital Audio Video (DAV) connector is a 40 pin DAV connector that lines up with one of the NuBus slots in the Quadra 840AV. It is included as an option when customers purchase the NuBus adapter card for the Centris 660AV and Quadra 660AV. This connector provides access to the video input signals directly from the logic board in a YUV 4:2:2 format and to the digital audio signal input for the Singer CODEC.

This connector allows 3rd party NuBus card developers to access components on the 840AV logic board for audio and video compression, which eliminates the need for redundant components on the card and allows the customer the choice of compression technologies : e.g., MPEG, JPEG, DVI, or H.261 (videoconferencing).

Macintosh Universal NuBus Interface (MUNI)

Supports the full range of NuBus master/slave transactions with single or block moves, including dumps and runs in which the main processor is master and the NuBus is slave , supports faster data transfer rates to and from the CPU bus, and supports NuBus 90 data transfers between cards at a clock rate of 20 MHz.

NOTE: the MUNI is located on the main logic board in the Quadra 840AV and on the optional NuBus adapter card for the Centris 660AV and Quadra 660AV.

Two different Frame Buffers

The Macintosh AV Series computers are the first Macintosh computers to use two different frame buffers. These are the graphics frame buffer, and the video frame buffer. VRAM can be used in two different ways, either used completely by the graphics frame buffer (standard Macintosh display), or split 50/50 between the graphics frame buffer and the video frame buffer.

For example, A Quadra 840AV with 2MB of VRAM can support a 14-inch color monitor at 24-bits in a strictly graphic environment or can provide support for a 16-bit graphics window and a 16-bit video window.

The video subsystem digitizes video input and coverts the image to YUV format which is available at the Digital Audio/Video expansion adapter (DAV Connector). This provides expansion for our third party developers to develop NuBus cards for video compression and decompression, acceleration, image enhancements, etc.

Cyclone Integrated Video Interface Controller (CIVIC)

Manages VRAM; controls data transfer between VRAM, the VDC and Sebastian; provides 32-bit or 64-bit data paths between VRAM and the main processor or aslot card; peforms convolution; provides needed video timing signals; and generates the vertical blanking and video- in interrupt signals.

Video Data Path Chip (VDC)

Performs input video window scaling with horizontal and vertical filtering, accepts YUV 4:2:2 color-encoded input from the Digital Multistandard Decoder or the DAV slot card bus, and produces 16-bit 1:5:5:5 RGB, 8-bit grayscale, or YUV 4:2:2 output.

Sebastian

Sebastian - A video color palette and video digital-to-analog converter (DAC). It accepts up to 64 bits of digital input, either as one 64-bit port or as two 32-bit ports. Lets one 32-bit port handle digital video while the other processes graphics using the same or different color lookup tables. Supports mixing video with still graphics, uses a convolution filter to minimize flicker in line-interlaced displays, and supports displays with clock speeds up to 100 MHz.

Mickey

Accepts analog video signals from Sebastian, provides the encoding to NTSC or PAL digital formats, and produces S-video, composite, and RGB video outputs.

66 MHZ AT&T DSP3210

This processor is a 32-bit floating point processor that provides real- time processing of modem signals, video, sound, and speech recognition data which releases the 68040 from these tasks.

Video In

The video-in capabilities of the Quadra 840AV support full-motion, full-screen viewing of any video material in the NTSC, PAL, or SECAM format.

The video subsystem is completely independant of the CPU or DSP. One of the features provided by this subsystem is the ability to record a quarter screen* image at 10 to 20 frames per second directly to a hard disk in real-time without data compression.

Video-in provides for on-screen viewing of video materials, 24 bit frame capture, and QuickTime movie recording without additional hardware.

* Quarter Screen defintions: There are two competing definitions of a one-quarter size screen, assuming the standard Macintosh 640 x 480 screen. These two definitions are often used interchangeably:

1) The actual number of pixels on the screen divided by 4, equaling 320 x 240 pixels. This is one-quarter of the standard Macintosh 640 x 480 screen and what the QuickTime development team refers to as a one-quarter size screen.

2) The horizontal number of pixels divided by 4, and the vertical number of pixels divided by 4, equaling 160 x 120 pixels. This is one-eighth of the standard Macintosh 640 x 480 screen and what the VideoFusion application (bundled with the Macintosh AV Series) refers as a one-quarter size screen.

Video Out

The Quadra 840AV provides standard video output in both the NTSC and PAL formats. This allows you to send the video output directly to standard video inputs such as those on TV monitors, VCR's, etc.

The Quadra 840AV also supports convolution, 7 levels of transparency for blending video and graphics and Chroma-keying.

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Apple IIc: Setting serial port 2's firmware from BASIC

If DOS or ProDOS is in RAM, you can access the firmware of serial port 2 from BASIC using the list of command codes below.
This article has been archived and is no longer updated by Apple.
- To change a firmware setting when the port is in terminal mode, issue a CTRL-D (hex 04), IN#2, the command character CTRL-A, and the command code.

- To change a firmware setting when the port is in non-terminal or local mode, issue a CTRL-D (hex 04), IN#2 or PR#2, the command character CTRL-A, and the command code.

- To change the firmware setting without DOS or ProDOS, leave CTRL-D out of the string and issue the IN#2 or PR#2, command character, and code.

As soon as you issue the command character, the serial port firmware displays a flashing question mark cursor to indicate that it's awaiting a command code. If you press RETURN, you get the current video cursor again. You do not have to press RETURN after command codes.

Subsequent input and output are routed to the modem (or other communications device) connected to serial port 2 until the next IN# commands that the input be routed to another port. You can therefore issue the CTRL-D and IN#2 and then a string of command codes, each beginning with the command character CTRL-A, to change more than one setting of the port firmware.

We recommended two substitutes to the command character CTRL-A: CTRL-V and CTRL-W. To make the substitution, issue the current command character and follow it with the substitute command character, e.g. CTRL-A CTRL-V.

For example, to set the port and startup AppleWorks:

1. Write a program to set the Apple IIc port and end the program with the line:

```
50 D$=CHR$(4)
100 PRINT D$;"-APLWORKS": REM Launch AppleWorks
```

2. Save the program as STARTUP on the AppleWorks startup disk.

3. Rename the file /APPLEWORKS/APLWORKS.SYSTEM as /APPLEWORKS/APLWORKS to match the named file in line 100 in step 1 above.

4. Copy the file BASIC.SYSTEM to the AppleWorks startup disk.

5. Boot the AppleWorks startup disk. STARTUP will set the port and then pass control to AppleWorks.

- Modem Port Command Codes:

1. Line width
a. Code: A number from 1 through 255 followed by a carriage return.
b. Code: A number from 1 through 255 followed by the letter N. This form of the command code also means that output will not be echoed to the screen.
c. To turn off automatic generation of carriage return, either:
1. use the Z command
2. use the System Utilities Disk.

2. Baud rate

Code Rate
1B 50
2B 75
3B 110 (109.92)
4B 135 (134.58)
5B 150
6B 300
7B 600
8B 1200
9B 1800
10B 2400
11B 3600
12B 4800

13B 7200
14B 9600
15B 19200

3. Data format

Code Data bits Stop bits
0D 8 1
1D 7 1
2D 6 1
3D 5 1
4D 8 2
5D 7 2
6D 6 2
7D 5 2

4. Echo output on the screen

Code Effect
I Output is echoed on the screen.

5. Line feed after carriage return.

Code Effect
K A line feed is not sent after a carriage return.
L A line feed is sent after a carriage return.

6. Parity

Code Parity
0P None
1P Odd
2P None
3P Even
4P None
5P MARK (1)
6P None
7P SPACE (0)

7. Terminal Mode

Code Effect
T Enter Terminal Mode. Use this command after IN#2 only. If you follow this command by PR#2, the Apple IIc will echo input to output. If the other device does so too, the first character entered will loop endlessly, locking up the system. Use CTRL-RESET to get out.

Q Quit terminal mode.

8. Reset
Code Effect
R Reset port 2 and exit from serial port 2 firmware.

9. Break
Code Effect
S Send a 233 millisecond BREAK character.

10. Ignore
Code Effect
Z Zap (ignore) further command characters until CTRL-Reset.

NOTE: Do not format output or insert carriage returns into output stream.

11. Terminal mode command codes from remote devices

Code Effect
CTRL-T If IN#2 is already in effect, this command puts the Apple IIc in terminal mode, just as does the local command T.

CTRL-R This command undoes the remote terminal mode command. If IN#2 and PR#2 are in effect, the remote keyboard and display become the input and output devices of the local Apple IIc.

WARNING: Apple IIc firmware DOES NOT allow you to use control characters B, C, H, I, J, L, M, or Y: doing so may cause unpredictable effects.
Last Modified: Feb 19, 2012

Additional Product Support Information

Newton MessagePad: How to Backup and Restore

- **Last Modified:** January 13, 1998
- **Article:** TA29791

- **Old Article:** 12752

This article has been archived and is no longer updated by Apple.
This article describes how to make a backup of your Newton, as well as how to restore backup data.
There are two ways to backup the data on your Newton:

1) Using the Newton Connection Kit
2) Using a PCMCIA Type II storage card

Using the Newton Connection Kit

It is easy to use the Newton Connection Kit to backup up your data to a Macintosh. When you synchronize your Newton MessagePad with the Newton Connection Kit, it performs a backup of the data on your Newton to the Macintosh system to which you connect. Follow the procedure described in your Connection Kit documentation to connect and synchronize the Connection Kit. Once you have done this, you will find three files displayed on your Macintosh:

- Newton
- Newton Archive
- Newton Backup

These three files contain information stored on your Newton MessagePad.

Newton

The file named Newton contains the current backup of all of your Newtons data. You can also use this file, along with the Connection Kit, to add data to your Newton. To do this, enter into this file and synchronize your Newton with the Connection Kit. Your Newton is updated with this new data. Remember that the new data from the Connection Kit replaces all existing data on your MessagePad.

Newton Backup

This file is a copy of the previous synchronization file. When you synchronize, the current synchronization file (the file named Newton) is renamed to Newton Backup, which completely overwrites the old Newton Backup file. Then, a new synchronization file (or Newton file) is created. If you want to keep a copy of the Newton Backup file, you must duplicate it before synchronizing.

Newton Archive

This file contains all information deleted from your Newton since the last time you synchronized. You can use this archive file to recover data that youve inadvertently deleted from your Newton.

During synchronization, the Connection Kit looks at the Newton Backup file to determine which data youve deleted from your Newton since your last synchronization. This data is then copied from the Newton Backup file to the Newton Archive file.

Using a PCMCIA Type II Storage Card

You can keep a backup copy of your Newtons data on a PCMCIA Type II storage card, then restore your data to your Newton from that card.

TA29791_Newton_MessagePad_How_to_Backup_and_Restore.pdf

Making a Backup

These steps describe how to backup to a storage card:

1) Insert a storage card into your Newton. Note that each storage card can only store one backup copy. Existing backup copies are erased to make room for the new one.

2) Tap Extras, then tap Card. When the dialog box appears, tap Backup. When your Newton is finished backp up data, the message box disappears.

Restoring a Backup

These steps describe how to restore information from a storage card:

1) Insert the storage card with your backup copy into your Newton.

2) Tap Extras, then tap Card. You see a dialog box that shows the contents of the storage card.

3) Tap Restore. You see a dialog box that reminds you that you are replacing all of the information in your Newton. This procedure overwrites all data currently in your Newton. Tap OK if you want to continue or Cancel to stop.

Regardless of the method you select, remember to make regular backups!

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Archived - Newton MessagePad: How to Insert/Replace Batteries

This article describes how to insert and/or replace the batteries into your Newton.
This article has been archived and is no longer updated by Apple.
There are two different batteries in the Newton, the main battery pack and the backup battery. The main battery pack consists of either a battery holder which contains 4 disposable AAA batteries or a rechargeable nickel-cadmium battery pack. The backup battery is a round disposable 3-volt Duracell DL2032 lithium battery.

Warning: If both the main battery pack and the backup battery are exhausted, you will lose the entire contents of your Newton's memory, including any memory-based system updates that have been loaded into your Newton.

Replacing the Main Battery Pack
---

1) Place your Newton screen-side down on a surface that won't damage the screen.

2) Remove the rear battery cover. You will see a large rectangular opening for the main battery pack, a small round opening for the backup battery, an orange switch and a reset switch.

3) Slide the orange switch to the Replace Main position.

4) Insert a small coin in the slot on the left side of the main battery pack, then use the coin to lift the battery pack out of the battery compartment.

5) If you are using a disposable battery pack, open the door on the battery pack, remove any discharged AAA batteries, and insert fresh batteries. Be sure to orient the batteries as shown on the battery holder.

6) Slide the fresh battery pack into the Newton from left to right and and press the battery pack down into place. Be sure not to damage the spring-style power terminals inside the battery compartment.

7) Move the orange switch to the In Use position.

Note: If you are installing batteries in your Newton for the first time ONLY, press the reset switch with the plastic stylus that is included with your Newton.

8) Replace the rear battery cover. You may now use your Newton.

Replacing the Backup Battery
---

1) Place your Newton screen-side down on a surface that won't damage the screen.

2) Remove the rear battery cover. You will see a large rectangular opening for the main battery pack, a small round opening for the backup battery, an orange switch and a reset switch.

3) Slide the orange switch to the Replace Backup position.

4) If a backup battery is already in place, remove it.

5) Pick up the fresh backup battery by its edges and insert it into its opening. Wipe off any fingerprints with a soft cloth.

Warning: BE SURE to insert backup battery with the positive (+) side up. If the battery is inserted incorrectly, it may explode.

6) Move the orange switch to the In Use position and replace the rear battery cover. You may now use your Newton.
Last Modified: Feb 19, 2012

MacTest 6.0: Wrong Error Number During Test Of External Drive

- **Last Modified:** November 09, 1988
- **Article:** TA29809

- **Old Article:** 1277

MacTest 6.0 displays an erroneous error number during the external drive test when it's run for the first time. You can perform a valid test without rebooting simply by running the external drive test a second time.

Follow these steps when you want to use MacTest 6.0:

1. Boot MacTest 6.0 on either a 512K or 128K Macintosh. Run all tests by choosing Start.

2. If all is well, Pass will be highlighted. Choose Select Test, then specify that only the external drive test be run.

3. Click on Start. MacTest will return a Failed message with the number 50010.0004.

4. Click on Start again. This time the drive test should run properly. If the external drive is good, the test will indicate "Pass"; if the test returns a "Failed" message again, the drive is indeed faulty.

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TA29809_MacTest_6-0_Wrong_Error_Number_During_Test_Of_External_Drive_(TIL01277).p

Newton MessagePad: How to Capitalize a Word

Will my Newton capitalize a word that it's recognized without opening the keyboard and retyping the whole word?
This article has been archived and is no longer updated by Apple.
Newton will automatically capitalize words at the beginnings of sentences, but it can't automatically capitalize proper names, or sense when you intend an whole word to be spelled with all capital letters. You can, however, capitalize words or change their case after they have been recognized by your Newton.

To tell Newton to change the case of a letter:

1) Select the word.

2) Draw a vertical line (not with the selecting gesture) up through a letter you want uppercase, down through a letter you want lowercase.

To tell Newton to capitalize all the letters in a word or words:

1) Select the word or words.

2) Draw a line through the middle of the word; up for all caps, down for lowercase.
Published Date: Feb 19, 2012

Newton MessagePad: Using the Newton Assistan

- **Last Modified:** October 04, 2008
- **Article:** TA29816

- **Old Article:** 12784

This article has been archived and is no longer updated by Apple.

How do I use the Newton Assistant?

The Newton Assistant is the intuitive part of Newton. You may ask it to do things for you using various key request words. These words may or may not be capitalized, and each has several acceptable synonyms. Here is a list of the request words, along with the action they take:

Request Word Action
------------ ------
call, ring, dial --------- Dial a phone number

fax, fax it ------------ Send the item on your screen as a fax (requires a Newton fax modem)

find, find it, look for ----- Search for text search for, locate, locate it

mail, link, e-mail, ------ Send the item on your screen as send this electronic mail
mail this

print, print it ---------- Print the item on your screen (requires a printer)

remember, remind, ----- Add a reminder to your to do list to do, don't forget to, don't let me forget, don't let me forget to do
remind me,

schedule, meet, meet me, -- Add an appointment to your calendar
see, talk to,

- breakfast (implies 7 a.m.),
- lunch (implies noon),
- dinner (implies 7 p.m.),
- holiday (implies day note instead of appointment),
- birthday, bday, b-day, anniversary (all imply a day note that repeats every year)

time, time in, the time in, -- Look up the time in another city
what time is it, what time is it in,
what time, what is the time,
what is the time in

NOTE: You will often ask Newton to do something involving another person. For instance, you may write "lunch with Eric Tuesday." Newton will scan your Names File for Eric, and schedule lunch with him on the following Tuesday. The more complete your Names File, the more helpful the Assistant will be.

Requests in the Assist Drawer

---

1) Tap the Assist button on the bottom-right of your screen.

2) Tap Please, and choose the appropriate request word. After the request word, write as much information as you can -- such as where, when and with whom -- to direct Newton's action.

3) Tap the Do button.

4) In the confirmation slip that pops up, make any additions or adjustments to the information displayed.

5) Tap the confirmation button at the bottom of the window to tell Newton to follow through on your request (schedule, print, fax, mail, etc.).

Requests Outside the Assist Drawer

---

1) Write at least one word of your request, beginning with the request word.

2) Select your request, using the select motion.

3) Tap Assist. If Newton is able to decipher your entry, confirmation slip will pop up.

4) Make any additions or adjustments to the confirmation slip.

5) Tap the confirmation button.

Confirmation Slips

Each request, except for Time, has a confirmation slip. Here are some tips on using them:

- Tap the diamonds for suggestions for filling in blanks.
- Fill out all required information, then tap the confirmation button.

NOTE: The more information you offer Newton in the Assist drawer, the more complete the call confirmation slip will be.

Using the Assistant to Dial the Phone

---

1) Tap Assist.

2) Tap Please, then tap Call, or write an accepted synonym for Call (as listed above) in the blank. Write the name of who you want to call, and the person's number. Tap Do.

3) If you cannot remember the person's number, Newton will fill in the first number listed under that name in its file. If there is more than one number for that person, choose the number you want Newton to dial by tapping the diamond by the word phone. (Hint: If you include the word "home," "work," or "beeper," Newton will look up the proper number. For instance, if you write "call Elaine's beeper" or "call Elaine home," Newton will fill in the proper number in the blank.)

4) Tap Speaker to have Newton dial through its speaker or tap Modem to have Newton dial through the modem.

5) Tap Options to set the calling options, such as your access code for your electronic mail server or a credit card number to charge long-distances costs to.

6) Tap Call.

7) If you tapped Speaker in step 3, hold your Newton to the speaker of the phone. If the call does not go through, try turning the sound volume up under Preferences in the Extras drawer.

Using the Assistant to Fax

---

1) Tap Assist.

2) Tap Please, then tap Fax, or write an accepted synonym for Fax (as listed above) in the blank. Write the name of the person to whom you want to fax. Newton will look in the Names File for the person you list. Tap Do.

3) If the names card for that person has a fax number, Newton will fill in that blank on the confirmation slip. If not, fill it in yourself.

4) Select the box next to cover page if you want one. Tap Notes to write comments on the cover sheet.

5) Tap Options to enter a credit card number to charge any long-distance costs.

6) Tap Preview to view the fax as it will be sent. Tap Fax if everything is correct.

Using the Assistant to Mail
---
1) Tap Assist.

2) Tap Please, then tap Mail, or write an accepted synonym for Mail (as listed above) in the blank. Write the name of the person you want to mail the item to. Newton will look in the Names File for the person you list. Tap Do.

3) If the Names card for that person includes a electronic mail address, it will fill in that blank on the confirmation slip. If not, fill it in yourself.

4) Fill in the subject blank.

5) Tap the diamond next to format and choose a style.

6) Tap Preview to view the message as it will be sent.

7) Tap Mail to mail the message now.

8) Tap Mail Later to mail the message later. The item will wait in the Out Box in the Extras drawer until you tap it later to send it.

Using the Assistant With the To Do List
---
1) Tap Assist.

2) Tap Please, then tap Remember, or write and accepted synonym for Remember (as listed above) in the blank. Write what you want to remember to do. Tap Do.

3) Scrub out the date and time on the confirmation slip, and write in the date on which you want the reminder to appear.

4) Tap Do.

Using the Assistant to Print
---
1) Tap Assist.

2) Tap Please, then Tap Print. Tap Do.

3) Tap Printer to select a printer.

4) Tap Format to choose a style.

5) Tap Preview to view how the item will be printed.

6) Tap Print.

7) If your Newton is hooked to a printer, the item will be printed. If not, It will be put into the out box. When your Newton is hooked up to a Printer, go to the out box and print the item from there by tapping it.

Using the Assistant to Schedule an Appointment
---
1) Tap Assist.

2) Tap Please, then tap Schedule, or write an accepted synonym for Schedule (as listed above) in the blank. Be as specific with the synonym for

Schedule as you can; for instance, if you want to schedule a lunch date, write lunch. You may write who you want to schedule the appointment with in the blank, or the date of the appointment.

Note: The more you write in the blank, the more fully Newton can complete the confirmation slip.

3) Scrub out the date on the when line of the confirmation slip and enter the correct date and time. Tap the diamond to see how Newton interpreted what you wrote. You may need to double tap the when line to use a keyboard to write the date and time.

4) You may fill in any or all of the other blanks for the location and subject of the appointment or with whom you are having the meeting.

5) Tap Schedule.

Using the Assistant to Determine the Time or Time Zone
---
1) Tap Assist.

2) Tap Please, then tap Time, or write an accepted synonym for Time (as listed above) in the blank. Write the name of the city you want to know about. Tap Do.

3) Newton will open the time zone map and show you the date and time in the city you've chosen. If the city you write in the blank is not in Newton's list, Newton will tell you it is unable to decipher your request.

Note: There is no confirmation slip for time requests.
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Newton MessagePad: What to Do When Newton "Crashes"

My Newton froze and won't let me do anything. I can't even turn it off. What do I do?
This article has been archived and is no longer updated by Apple.
If your Newton freezes or "hangs," take your stylus and press the Reset button in the battery compartment on the back of your Newton. This should allow you to restart your Newton.
Last Modified: Feb 19, 2012

Additional Product Support Information

ARCHIVE

Newton Connection Kit for Macintosh: Installation

- **Last Modified:** January 16, 1998
- **Article:** TA29853

- **Old Article:** 12844

This article has been archived and is no longer updated by Apple.
This article discusses installing the Newton Connection Kit for the Macintosh and connecting your Newton to your Macintosh.
The Newton Connection Kit allows your Macintosh to communicate with your Newton. You can backup and restore Newton data, examine the data on your Macintosh and download Newton software applications to your Newton.

Installing the Connection Kit

Here's how to install the Newton Connection kit onto your Macintosh:

1) Insert the disk entitled, "Newton Connection Kit Install 1" into the floppy drive of your Macintosh.

2) Double-click the Installer icon.

3) Click OK in the welcome dialog box that appears.

4) In the Installer box, click Install.

5) Follow the instructions on the screen. Insert the disk entitled "Newton Connection Kit Install 2" when the program requests it.

Connecting to a Macintosh

There are two ways to connect the Newton to the Macintosh: via a serial cable or an LocalTalk network. The network connection is more complicated, but enables faster communication.

Here's how to connect with a serial cable:

1) Plug one end of the serial cable into your Newton.

2) Plug the other end into the printer port on your Macintosh.

Here's how to connect over a LocalTalk Network:

1) Make sure your computer is turned off.

2) Follow the instructions that accompanied your Apple LocalTalk kit to connect your Macintosh to a network if it is not already connected.

3) Plug the LocalTalk cable into the communications port on the lower-right side of your Newton.

4) Turn on your Macintosh and choose the Chooser from the Apple menu.

5) Make sure AppleTalk is active in the window that appears.

When you want to disconnect your Newton, remove the cable from the Newton communications port and leave everything else connected. When you want to re-establish the connection between your Macintosh and Newton, plug the cable in again.

Note: If you connect Newton to a PowerBook that has an internal modem, you need to open the PowerBook control panel and select the External Modem button to complete the serial connection.

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Newton Connection Kit for Macintosh: Synchronizing

- **Last Modified:** October 04, 2008
- **Article:** TA29854

- **Old Article:** 12845

This article has been archived and is no longer updated by Apple.

This article discusses synchronizing files between the Newton and Macintosh.

The first time the Newton Connection Kit synchronizes your Newton with your Macintosh, all the information from your Newton will be copied onto your Macintosh's hard drive. After the first time, synchronizing will copy only new or changed information from Newton to your Macintosh or vice versa. When synchronization is completed, the identical information exists both in the Newton folder on your Macintosh's hard drive and in your Newton.

When you synchronize, all information you deleted since the previous synchronization is stored in an Archive file on the Macintosh. The entire file left by the previous synchronization will be stored as a file called "Backup."

How to Set Up For Synchronization

To prepare the Macintosh for communication with the Newton:

1) Double-click the Newton Connection icon.

2) Choose Preferences from the Edit menu.

3) In the dialog box that appears, click on the method you used to connect your Newton and Macintosh. Click OK to save your preferences, and close the box. (You only need to do this the first time you use the Connection software, unless you change the setup.)

4) Click the Synchronize button. A message will appear to confirm that the Macintosh is ready.

To prepare the Newton for connection:

1) Tap the Extras button on Newton's screen.

2) Tap the Connection button.

3) Tap "Macintosh serial" or "Macintosh LocalTalk" to indicate how you are set up. (If you are using a serial cable, skip to the next section, titled Synchronizing.)

4) If you chose Macintosh LocalTalk, tap the Choose Macintosh button that appears.

5) A list of Macintoshes that are running Newton Connection appear. If the one you want is not listed, tap Change Zone and choose the proper zone (if your network doesn't have zones, this button will not appear). If the Macintosh you want does not appear, make sure the Connection software is launched on that computer.

6) Tap the Macintosh you want.

7) To begin synchronizing, tap Connect. To stop at any time, tap Stop.

The process will copy all the information that has changed since the last synchronization from your Newton onto the Macintosh's hard drive in a file that bears your name. If you haven't entered your name in your Newton, the file will be called Newton.

If you want to synchronize automatically, choose Preferences from the Edit menu and click "Always ready to synchronize."

Setting Up a Synchronization Station

If you use Newton Connection on a network with other Newton users, you may want to establish one Macintosh where everyone can synchronize and store their Newton files.

To do this:

1) Make sure the chosen Macintosh is hooked into the network.

2) Open Newton Connection.

3) Turn on "Always ready to synchronize" in the Preferences box (in the Edit menu).

4) Always leave the station Macintosh on.

5) Make sure everyone who uses the station has his or her name entered in Newton's Personal area under Preferences in the Extras drawer. This ensures that everyone's synchronization files will be stored separately.

Newton Changes Take Precedence

Immediately after you complete synchronization, the information in the Newton folder on your hard drive and on your Newton are identical. If you change the same piece of information in both places, when you next synchronize, the changes you made on the Newton will take precedence.

For instance, if you change Bob's address in the Names File on Newton, and Bob's title in the Names File on your Macintosh, both files will reflect Bob's new address, but not his new title. The changes you made on the Macintosh --Bob's title -- will be saved into the Newton archive folder on the Macintosh.

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Archived - PowerBook 100: Creating and Using a RAM Disk(7/93)

How can I use a RAM disk to maximize the power of my PowerBook 100?

Products Affected

PowerBook

This article has been archived and is no longer updated by Apple.
The PowerBook 100 is uniquely suited to the use of a RAM disk, because it's the only PowerBook with batteries that supply power to RAM even when the computer is shut down. On all other PowerBooks, the RAM is erased upon shut down.

Since PowerBooks are set to turn off their hard drives after several minutes of inactivity, simple tasks like saving or opening new documents require that the hard disk spin up again. This takes time and battery power. However, you can allow the hard disk to spin down and stay there if you use a RAM disk.

However, RAM disks are only efficient if you have 6MB or more of memory on your hard disk.

An ideal RAM disk has a System Folder, applications, documents and anything else you'd store on any disk. But for safety, it's a good idea to back up the information on the RAM disk to your hard drive periodically.

You will find, while using a RAM disk, that your battery life improves significantly.

Creating a RAM Disk
---
1) Choose Control Panels from the Apple menu.

2) Open the Memory control panel.

3) Click the On button beneath the words "RAM disk."

4) Drag the slider to choose the percentage of available memory you want to use for your RAM disk. The default size is 100 percent of available memory over 2 MB; that is, the largest RAM disk you can have. The size appears in the "RAM Disk Size" box.

5) Close the control panel.

6) Choose Restart from the Special menu. A RAM disk appears on the desktop.

Making a RAM Disk Your Startup Disk
---
1) Insert the Install 1 floppy disk that came with your PowerBook.

2) Open the Installer program.

3) Click the Switch Disk button until the RAM disk is displayed.

4) Click Customize.

5) Scroll through the list of items until you see "Min System for Macintosh PowerBook 100.

6) Click Install, and follow the instructions on the screen.

7) Click Quit.

8) Choose Control panels from the Apple menu.

9) Open the Startup Disk control panel.

10) Select the RAM disk as your Startup disk.

11) Choose Restart from the Special menu.

Make a backup copy of the disk a soon as you can, and back up its contents regularly to the hard drive.

Removing the RAM Disk

If you later decide to remove the RAM disk:

1) Throw its contents away and empty the trash.

2) Choose Control Panels from the Apple menu.

3) Choose the Memory control panel.

4) Move the slider in the memory control panel to 0 percent.

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- **Last Modified:** February 19, 2012
- **Article:** TA29863

- **Views:**

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ImageWriter: MacWrite Form Feed Feature

- **Last Modified:** March 09, 1998
- **Article:** TA29865

- **Old Article:** 1286

DISCUSSION

The Finder 4.1 update disk includes Imagewriter code that was revised and released in March 1985. When MacWrite starts to print documents with the "no breaks between pages option", MacWrite assumes that the pinch rollers are at the starting edge of the paper. The paper is rolled backward from this standard starting position whenever there is information in the top half-inch of the page, as is the case with labels, or when the "no breaks between pages " option is in effect. When the starting edge of the paper is rolled backward, this starting edge may slip out from between the pinch rollers and the platen; the edge of the paper may then cause a jam when it's moved forward as printing continues.

The Finder 4.1 disk, therefore, includes special new Imagewriter code that sends a form feed to the Imagewriter before MacWrite begins to print. This puts extra paper beyond the pinch rollers so that the Imagewriter can back up the paper without losing of control of it.

To avoid the form feed, either don't enter information in the top half-inch of the page or don't select "no breaks between pages", selecting "normal pages" instead.

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ImageWriter Hardware Communication Problems

This article has been archived and is no longer updated by Apple.

DESCRIPTION:
This table is composed of typical Imagewriter communication problems
and fixes. If your problem matches a symptom, perform the appropriate fix.

YOU WILL NEED:
1. Apple IIe computer
2. Super Serial Card and printer cable
3. Level I Tech Procedures
4. Imagewriter User's Manual
5. Pencil and paper

BEFORE YOU START:
1. If replacement or adjustment procedures are needed, refer to the Tech
Procedures.
2. If a replacement doesn't fix the problem, reinstall the original
module/part before proceeding with the procedure.
3. If location for IW controls are needed, refer to the User's Manual.

INSTRUCTIONS: In order to isolate a hardware communications problem, you
first need to eliminate the possibility of a software or DIP switch
configuration problem. To do this perform the following:

1. Turn off the printer, write down the customer's Super Serial Card and
printer DIP switch configurations. Set the DIP switches as shown below:
(Note: Op = open, Cl = closed, up = On, dn = Off)

_____IW-SW2_____ _____IW-SW1_____
Cl Cl Op Op Op Op Op Op Cl Cl Op Cl
1 2 3 4 1 2 3 4 5 6 7 8

_____SSC-SW1_____ _____SSC-SW2_____
Off Off Off On Off On On On Off Off On On Off Off MODEM/TERM jumper
1 2 3 4 5 6 7 1 2 3 4 5 6 7 block to TERM

2. Remove all peripheral cards from the IIe. Install the Super Serial card
in slot 1. Connect the IW to the S/S card via printer cable
Turn on the IW (make sure cover is installed). Turn on the IIe and press
the RESET key while you press the CONTROL key (DO NOT BOOT A DISK). The
cursor should blink.

Type the program exactly as shown below.

```
10 PR#1
20 FOR A = 1 TO 100
30 FOR I = 32 TO 126
30 PRINT CHR$(I);:NEXT I:PRINT
40 NEXT A
50 PR#0
60 END
```

3. Type RUN and press the <RETURN> key. The printer should print
out about 100 character sets like the one shown below. If it does, the
IW communicates with the computer OK.

!#$%&'()*+,-./0123456789:;<>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\\]^_'abcdefghijklmno
pqrstuvwxyz{|}

If the printout is not OK, look below for problems.

* If you get a SYNTAX ERROR on the computer, you may have mis-typed a line. To correct the syntax error perform the following:
(1) Type LIST and press <RETURN>. The program should appear on the screen.
(2) Examine the program for accuracy. Spaces, colons, etc. are important.
(3) To correct a line, simply retype the line and press <RETURN>. LIST again to make sure the correction is OK.

* If nothing happens on the printer or the computer, press the RESET key while you press the CONTROL key. Then LIST your program as described above in the SYNTAX ERROR explanation to look for typing errors.

* If no syntax errors occured and the cursor is blinking again, then the program has probably run OK so check for the problems below:

PROB: The printer does not print a set of characters.
FIX: Recheck for the problem after each of the following steps. If no problem is found, go to step 4.
(1) Check that the computer is properly powered on and initialized.
(2) Check that the SEL light is on. If it's not, press SEL and try to print from the computer again using the program above. If it prints while the SEL light is off, replace the switch panel.
(3) Make sure that the interface cable between the printer and the computer is connected and secured at both ends.
(4) Replace main logic PCB.

PROB: The printer prints a set of characters but print quality is poor.
FIX: Do a word search for "Imagewriter and HTS and Self Test Problems" to obtain the print quality FIX.

4. Reset the DIP switches to the customer's original configuration. Then refer to the User's Manual and the Appendix in the Imagewriter section of the Tech Procedures to see if the customer's DIP switch configuration caused the problem.

Published Date: Feb 19, 2012

Quadra: Where to Find Brackets for Drives (8/93)

Article Created: 11 August 1993

I bought a third-party tape drive for my Quadra and it didn't come with the proper size bracket or a faceplate for the front of the computer. Can I order these items from Apple?

This article has been archived and is no longer updated by Apple.
Apple does not sell these parts individually.

You'll need to contact the vendor who sold the storage device to obtain the correct bracket and front template for your Quadra.

If you have any problems, contact your local authorized Apple dealer or call Apple's Customer Assistance Center for further help.

Published Date: Feb 19, 2012

Duo Dock/Duo Dock II: External Pinouts

- **Last Modified:** August 07, 1997
- **Article:** TA29922

- **Old Article:** 12929

This article gives the pin assignments and functions for the connectors on the Duo Dock and Duo Dock II.

Main Expansion Connector (Processor-Direct Slot)

A 152-pin main expansion connector, JAE part number JX20-152BA-D1LTH, provides the interface between the PowerBook Duo computer, and the Duo Dock. It mounts directly to the Duo Dock's main logic board, and plugs into the matching connector on the PowerBook Duo rear panel, giving the Duo Dock direct access to the microprocessor's 32-bit address bus, 32-bit data bus, and control signals. It also provides access to power, control, and status signals in other parts of the computer, and allows the Duo Dock to provide power to the PowerBook Duo.

The table below lists the subset of signals used for the Duo Dock interface. A slash before a signal name (/AS) indicates an active-low signal.

Pin number	Signal name	Description
1, 2, 77, 78, 79	PR +24V EXT	Raw +24 V from AC adapter
3	/PLUG IN	Power surge control (grounded in the expansion device)
4, 19, 20, 30, 38, 39, 51, 61, 65, 66, 80, 81, 115, 141, 142	GND	Logic ground
7	/ON/OFF OUT	On/off button
9	/STERM	Synchronous termination
10	/DS	Data strobe
11	/AS	Address strobe
12, 29, 42,	+5V MAIN OUT	+5 V regulated power
13	/HALT	Halt
14	/BERR	Bus error
15	/BGACK	Bus grant acknowledge
21	ADDR[0]	Address bit 0
22	ADDR[2]	Address bit 2
23	ADDR[4]	Address bit 4
24	ADDR[6]	Address bit 6
25	ADDR[8]	Address bit 8
26	ADDR[10]	Address bit 10
27	ADDR[12]	Address bit 12
28	ADDR[14]	Address bit 14
31	ADDR[18]	Address bit 18
32	ADDR[20]	Address bit 20
33	ADDR[22]	Address bit 22

34	ADDR[24]	Address bit 24
35	ADDR[26]	Address bit 26
36	ADDR[28]	Address bit 28
37	ADDR[30]	Address bit 30
40	IOCLK	15.6672 MHz I/O clock
41	SIZ[1]	Transfer size bit 1
43	DATA[0]	Data bit 0
44	DATA[1]	Data bit 1
45	DATA[2]	Data bit 2
46	DATA[3]	Data bit 3
47	DATA[4]	Data bit 4
48	DATA[5]	Data bit 5
49	DATA[6]	Data bit 6
50	DATA[7]	Data bit 7
52	DATA[17]	Data bit 17
53	DATA[18]	Data bit 18
54	DATA[19]	Data bit 19
56	DATA[20]	Data bit 20
57	DATA[21]	Data bit 21
58	DATA[22]	Data bit 22
59	DATA[23]	Data bit 23
62	/SCC IRQ	SCC interrupt request
63	SERVEE	-5 V for SCC transceivers
67	+8V SOUND	Special "clean" +8 V power for sound output
68	+5V MODEM	+5 V power for modem
69	LINET/R	Modem DAA line talk/receive
70	+5V SOUND	+5 V power for sound output
72	SND OUT L	Sound output left channel
73	EXT MIC FILT R	Right input signal from external microphone
74	EXT MIC FILT L	Left input signal from external microphone
75, 76, 151, 152	DAA GND	Modem ground
83	ADB DATA	Apple Desktop Bus data
84	/ADBPWRON	ADB power-on key
86	/CBREQ	Cache burst request
87	/DSACK1	Data size acknowledge bit 1
88	/DSACK0	Data size acknowledge bit 0
89	/BR	Bus request
90	/BG	Bus grant
91	/SLEEP	Sleep-state signal
92	FC[1]	Function code bit 1
93	FC[0]	Function code bit 0
94	/RMC	Read-modify-write cycle
95	CPUCLK	CPU bus clock

96	/CPURESET	CPU reset (bus invalid)
97	ADDR[1]	Address bit 1
98	ADDR[3]	Address bit 3
99	ADDR[5]	Address bit 5
100	ADDR[7]	Address bit 7
101	ADDR[9]	Address bit 9
102	ADDR[11]	Address bit 11
103	ADDR[13]	Address bit 13
104	ADDR[15]	Address bit 15
105	ADDR[16]	Address bit 16
106	ADDR[17]	Address bit 17
107	ADDR[19]	Address bit 19
108	ADDR[21]	Address bit 21
109	ADDR[23]	Address bit 23
110	ADDR[25]	Address bit 25
111	ADDR[27]	Address bit 27
112	ADDR[29]	Address bit 29
113	ADDR[31]	Address bit 31
114	/SLOT IN	Expansion device plugged in grounds pin
116	RD	Read/Write
117	SIZ[0]	Transfer size bit 0
118	DATA[8]	Data bit 8
119	DATA[9]	Data bit 9
120	DATA[10]	Data bit 10
121	DATA[11]	Data bit 11
122	+5VEXTSENSE	+5 V external sense
123	DATA[12]	Data bit 12
124	DATA[13]	Data bit 13
125	DATA[14]	Data bit 14
126	DATA[15]	Data bit 15
127	DATA[16]	Data bit 16
128	DATA[24]	Data bit 24
129	DATA[25]	Data bit 25
130	DATA[26]	Data bit 26
131	DATA[27]	Data bit 27
132	DATA[28]	Data bit 28
133	DATA[29]	Data bit 29
134	DATA[30]	Data bit 30
135	DATA[31]	Data bit 31
137	/SWIM CS	SWIM chip select
138	/SLOT E IRQ	Pseudo-NuBus expansion slot E interrupt
139	/PFW	Power fail warning (shutdown bit)
140	/IO RESET	Reset output to I/O systems
143	DAA CNTLF	Modem DAA control

144	DAA ID IN	ID input from 152-pin connector to modem card
145	/RING DET	Ring detect signal from the modem DAA
146	/RB DVR	Modem relay B driver
147	/RA DVR	Modem relay A driver
148	EXT MIC SEL	External microphone plugged in

Video Port

The video connection is made through a standard DB-15 connector.

Pin number	Signal name	Description
1	RED GND	Red ground
2	RED VID	Red video signal
3	/CSYNC	Composite sync
4	SENSE0	Monitor sense bit 0
5	GRN VID	Green video signal
6	GRN GND	Green ground
7	SENSE1	Monitor sense bit 1
8	mc	No connection
9	BLU VID	Blue video signal
10	SENSE2	Monitor sense bit 2
11	C&VSYNC GND	Ground for CSYNC and VSYNC
12	/VSYNC	Vertical sync
13	BLU GND	Blue ground
14	HSYNC GND	HSYNC ground
15	HSYNC	Horizontal sync

HDI-30 SCSI Connector

Pin number	Signal name	Description
1	nc	Reserved for SCSI disk mode.
2	/DB0	Bit 0 of SCSI data bus
3, 8, 10, 12, 13, 15, 17, 20, 22, 24	GND	Ground
4	/DB1	Bit 1 of SCSI data bus
5	TPWR	Termination power
6	/DB2	Bit 2 of SCSI data bus
7	/DB3	Bit 3 of SCSI data bus
9	/ACKS	Handshake signal. When low acknowledges a request for data transfer
11	/DB4	Bit 4 of SCSI data bus
14	/DB5	Bit 5 of SCSI data bus
16	/DB6	Bit 6 of SCSI data bus
18	/DB7	Bit 7 of SCSI data bus
19	/DBP	SCSI data bus parity bit
21	/REQ	Request for a data transfer
23	/BSY	When active (low) indicates that the SCSI data bus is busy

25	/ATN	When active (low) indicates an attention condition
26	/C/D	When active (low) indicates that data is on the SCSI bus. When high, indicates that control signals are on the bus
27	/RST	SCSI bus reset
28	/MSG	Indicates the message phase
29	/SEL	SCSI select
30	/I/O	Controls the direction of data output. When high, data is input

Modem and Printer Ports

Pin number	Signal name	Description
1	HSKo	Handshake output. Connected to the Request to Send (RTS) pin on the Combo chip. Tristated when the Data Terminal Ready (DTR) signal is inactive.
2	HSKi	Handshake input. Connected to the Transmit Receive Clock(TRXC) pin on the Combo chip.
3	/TXD	Transmit data (inverted). Connected to the Transmit Data (TXD) pin on the Combo chip. Tristated when DTR is inactive.
4	SG	Signal ground. Connected to logic and chassis ground.
5	/RXD	Receive data (inverted). Connected to the Receive Data (RXD) pin on the Combo chip.
6	TXD	Transmit data. Connected to the Transmit Data (TXD) pin on the Combo chip. Tristated when DTR is inactive.
7	GPi	General purpose input. Connected to the Data Carrier Detect (DCD) pin on the Combo chip.
8	RXD+	Receive data. Connected to the Receive Data (RXD) pin on the Combo chip.
10, 11, 12	GND	These pins are connected to chassis ground.

Apple Desktop Bus Interface

Pin number	Signal name	Description
1	ADB	Bidirectional data bus for input and output
2	POWER ON	Key on ADB keyboard (if connected) grounds this pin to pin 4, enabling power to be turned on from the keyboard
3	+5V	+5 V power
4	GND	Logic ground
5, 6, 7	GND	Chassis ground

Sound Ports

Two monaural mini phone jacks provide connections for sound input and output.

Modem Adapter Card (optional)

When the PowerBook Duo computer is housed in the Duo Dock, you cannot access the integral modem via the RJ-11 connector on the PowerBook Duo's rear panel. A modem adapter card provides the connection. It plugs into the side of the Duo Dock's

main logic board, using a 10-pin header connector. The card supplies the RJ-11 hook up, which is accessed on the rear panel of the Duo Dock. The adapter card interfaces with the modem card in the PowerBook Duo computer via its 10-pin connector, printed circuit traces, and the 152-pin expansion connector. The table below lists the signal assignments for the connector.

Modem Adapter Connector Signal Assignments

Pin number	Signal name	Description
1	LINET/R	Line/talk receive
2, 3, 4	DAA GND	Modem DAA ground
5	/RA DVR	Modem relay A driver
6	DAA ID IN	ID input
7	/RING3 DET	Ring detect signal
8	/RBDVR	Modem relay B driver
9	DAA CNTL	Modem DAA control
10	+5 V MODEM	+5 V power

Built-In Ethernet Connector (Duo Dock II only)

Pin	Signal name	Description
1	FN Pwr	Power (+12V @ 2.1W or +5V @ 1.9W)
2	DI-A	Data In circuit A
3	DI-B	Data In circuit B
4	VCC	Voltage Common
5	CI-A	Control In circuit A
6	CI-B	Control In circuit B
7	+5V	+5 volts (from host)
8	+5V	Secondary +5 volts (from host)
9	DO-A	Data Out circuit A
10	DO-B	Data Out circuit B
11	VCC	Secondary Voltage Common
12	NC	Reserved
13	NC	Reserved
14	FN Pwr	Secondary +12V @ 2.1W or +5V @ 1.9W
Shell	Protective Gnd	Protective Ground

AAUI signals have the same description, function, and electrical requirements as the AUI signals of the same name, as detailed in IEEE Standard 802.3-1990 CSMA/CD, section 7.

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TA29932_Apple_III_Hardware_5-volt_Confidence_RAM_Test_(TIL01294).pdf

Apple III Hardware: 5-volt Confidence RAM Test

This article has been archived and is no longer updated by Apple.

There is a Confidence RAM Test for Apple IIIs on the Confidence Disk and the Dealer Diagnostic Disk. With this test, you can locate bad chips on a 5-volt board.

--> NOTE: Before runnning the Confidence RAM test, remove all peripheral cards from the Apple III, especially any ProFile interface cards and Grappler printer cards.

The test results show the bank, address, and test expectations and actual performance. For example, after the test, say the console displays:

BNK 82, ADR 37AF, EXP 40, GOT 48.

To locate the bad chip, you must translate these results into a map that corresponds to the 2 banks of 16 chips on the memory board.

1. The bad chip is in bank 2. The bank number comes from the last digit of the BNK field.

BANKS: 0, 1, 2 X X X X X X X X X X X X X X X X
BANKS: 3, 4, 5, 6 x x x x x x x x x x x x x x x x

2. The bad chip is in the right side of the bank. The side is determined by the range into which the address--37AF, the number in the ADR field--falls.

ADDRESS RANGE: ADDRESS RANGE:
4000-7FFF 2000-3FFF
8000-9FFF

BANKS: 0, 1, 2 x x x x x x x x X X X X X X X X

ADDRESS RANGE: ADDRESS RANGE:
4000-7FFF 2000-3FFF
8000-9FFF

BANKS: 3, 4, 5, 6 x x x x x x x x x x x x x x x x

3. The bad chip is D5. The bad chip shows up in the comparison of the binary representation of the hexidecimal values in the fields EXP and GOT, which contain the test expectations and performance. Any difference between the two indicates where to find the bad chip or chips.

hexidecimal binary hexidecimal binary hexidecimal binary

0 0000
1 0001 6 0110 B 1011
2 0010 7 0111 C 1100
3 0011 8 1000 D 1101
4 0100 9 1001 E 1110
5 0101 A 1010 F 1111

EXP = 40 (hexadecimal) = 01000000 (binary)
GOT = 48 (hexadecimal) = 01001000 (binary)

EXP = 40 (hexadecimal) = 0 1 0 0 0 0 0 0 (binary)
GOT = 48 (hexadecimal) = 0 1 0 0 1 0 0 0 (binary)
ok ok ok ok ! ok ok ok

ADDRESS RANGE:
2000-3FFF

BANK 1 x x x x x x x x x x x x X x x x

In the chip location number D5, the letter comes from the letter of the banks of chips on the memory board:

LETTER: D
BANKS: 0, 1, 2 x x x x x x x x x x x x X x x x

LETTER: C
BANKS: 3, 4, 5, 6 x x x x x x x x x x x x x x x x

The number comes from the number of the chip on the memory board:

NUMBER: 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2

LETTER: D x x x x x x x x x x x x X x x x (BANKS 0, 1, 2)
C x x x x x x x x x x x x x x x x (BANKS 3, 4, 5, 6)

Replace the bad memory chip(s) and run the test again. If the system fails the memory board test, exchange the memory board itself. If that dosen't help, exchange the main logic board.

Last Modified: Feb 19, 2012

Macintosh Plus: External Pinouts (5/93)

Article Created: 29 April 1993

This article gives the pin assignments and functions for the external connectors on the Macintosh Plus.

This article has been archived and is no longer updated by Apple.

Mouse Connector

Pin Name Description, Notes

1 CGND Chassis ground
2 +5V See hardware Description, Notes for power limits
3 CGND Chassis ground
4 X2 Horizontal movement line (connected to VIA PB4 line)
5 X1 Horizontal movement line (connected to SCC DCDA- line)
6 N-C Not connected
7 SW- Mouse button line (connected to VIA PB3)
8 Y2 Vertical movement line (connected to VIA PB5 line)
9 Y1 Vertical movement line (connected to SCC DCDB- line)

Keyboard Connector

Pin Name Description, Notes

1 CGNB Chassis ground
2 KBD1 Keyboard clock
3 KBD2 Keyboard data
4 +5V

External Drive Connector

Pin Name Description, Notes

1 CGNB Chassis ground
2 CGND Chassis ground
3 CGND Chassis ground
4 CGND Chassis ground
5 -12V
6 +5V
7 +12V
8 +12V
9 N-C Not connected
10 PWM Regulates speed of the drive
11 CA0 Control line to send commands to the drive
12 CA1 Control line to send commands to the drive
13 CA2 Control line to send commands to the drive
14 LSTRB Control line to send commands to the drive
15 WrReq- Turns on the ability to write data to the drive
16 HdSel Control line to send commands to the drive
17 Enbl2- Enables the Rd line (else Rd is tristated)
18 Rd Data actually read from the drive
19 Wr Data actually written to the drive

Modem and Printer Ports

Pin	Signal name	Signal description
1	HSKo	Handshake out
2	HSKi	Handshake in/external clock
3	TXD-	Transmit data -
4	GND	Signal ground
5	RXD-	Receive data -
6	TXD+	Transmit data +
7	NC	General purpose input*
8	RXD+	Receive data +

- Connector type: 8-pin minicircular

SCSI Port (25-pin)

Pin	Signal name	Signal description
1	REQ/	Request
2	MSG/	Message
3	I/O/	Input/Output
4	RST/	SCSI bus reset
5	ACK/	Acknowledge
6	BSY/	Busy
7	GND	Signal ground
8	DB0/	Data bit 0
9	GND	Signal ground
10	DB3/	Data bit 3
11	DB5/	Data bit 5
12	DB6/	Data bit 6
13	DB7/	Data bit 7
14	GND	Signal ground
15	C/D/	Common/Data
16	GND	Signal ground
17	ATN/	Attention
18	GND	Signal ground
19	SEL/	Select
20	DBP/	Data parity

21 DB1/ Data bit 1

22 DB2/ Data bit 2

23 DB4/ Data bit 4

24 GND Signal ground

25 NC No connection

- Connector type: DB-25

- Total length of all cables not to exceed 6 m (20 ft.)

WARNING: The SCSI port uses the same type of connector as a standard RS-232, DB-25 serial interface, but it is different electrically. Do not connect any RS-232 device to this connector. Doing so can result in damage to both the device and the Macintosh Classic.

Audio Output Port

Pin Signal name Signal description

(Sleeve) GND Signal ground

(Tip) AUDIO .5 volt peak-to-peak audio signal

- Connector type: Miniature mono phone plug

- The internal speaker is disabled when this port is in use.

Published Date: Feb 19, 2012

Macintosh SE and SE 30: External Pinouts (5/93)

- **Last Modified:** August 11, 1993
- **Article:** TA29939

- **Old Article:** 12947

This article has been archived and is no longer updated by Apple.

Article Created: 29 April 1993

This article gives the pin assignments and functions for the connectors on the back panels of the Macintosh SE and SE/30. The pinouts are the same with the exception of the audio output ports. The Macintosh SE provides a monaural signal and the Macintosh SE/30 a stereo signal. Appropriate information appears below.

Apple Desktop Bus (ADB)

Pin Signal name Signal description

1 ADB Data

2 NC Reserved

3 +5v +5 volts DC

4 GND Signal ground

- Connector type: 4-pin minicircular

- Total length of all cables not to exceed 16 feet (5 meters)

SCSI Port (25-pin)

Pin Signal name Signal description

1 REQ/ Request

2 MSG/ Message

3 I/O/ Input/Output

4 RST/ SCSI bus reset

5 ACK/ Acknowledge

6 BSY/ Busy

7 GND Signal ground

8 DB0/ Data bit 0

9 GND Signal ground

10 DB3/ Data bit 3

11 DB5/ Data bit 5

12 DB6/ Data bit 6

13 DB7/ Data bit 7

14 GND Signal ground

15 C/D/ Common/Data

16 GND Signal ground

17 ATN/ Attention

18 GND Signal ground

19 SEL/ Select

20 DBP/ Data parity

21 DB1/ Data bit 1

22 DB2/ Data bit 2

23 DB4/ Data bit 4

24 GND Signal ground

25 TPWR Terminator power

- Connector type: DB-25

- Total length of all cables not to exceed 20 feet (6 meters)

WARNING: The SCSI port uses the same type of connector as a standard RS-232, DB-25 serial interface, but it is different electrically. Do not connect any RS-232 device to this connector. Doing so can result in damage to both the device and the Macintosh LC.

Modem and Printer Ports

Pin Signal name Signal description

1 HSKo Handshake out

2 HSKi Handshake in/external clock

3 TXD- Transmit data -

4 GND Signal ground

5 RXD- Receive data -

6 TXD+ Transmit data +

7 GPi General purpose input*

8 RXD+ Receive data +

*Modem port only. Can be set in software to be a second external clock.

- Connector type: 8-pin minicircular

Disk Drive Port

Pin Signal name Signal description

1 GND Signal ground

2 GND Signal ground

3 GND Signal ground

4 GND Signal ground

5 -12v -12 volts DC

6 +5v +5 volts DC

7 +12v +12 volts DC

8 +12v +12 volts DC

9 NC No connection

1 PWM Motor speed control

11 PH0 Register select CA0

12 PH1 Register select CA1

13 PH2 Register select CA2

14 PH3 Register write strobe LSTRB

15 WRREQ/ Write request

16 SEL Register select line SEL

17 ENBL/ Drive enable

18 RD Read data

19 WR Write data

- Connector type: DB-19

Audio Jack for the Macintosh SE

Pin Signal name Signal description

(Sleeve) GND Signal ground

(Tip) AUDIO .5 volt peak-to-peak

audio signal

- Connector type: Miniature mono phone plug

- The internal speaker is disabled when this port is in use.

Audio Jack for the Macintosh SE/30

Pin Signal name Signal description

(Sleeve) GND Signal ground

(Ring) RIGHT .75 volt peak-to-peak audio
signal, right channel

(Tip) LEFT .75 volt peak-to-peak audio
signal, left channel

- Connector type: Stereo miniature phone plug

- The internal speaker is disabled when this port is in use.

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Apple III Hardware: 12-volt Confidence RAM Test

This article has been archived and is no longer updated by Apple.

A Confidence RAM Test for Apple IIIs is on the Confidence Disk and the Dealer Diagnostic Disk. With this test, you can locate bad chips on a 12-volt board.

--> NOTE: Before running the Confidence RAM test, remove all peripheral cards from the Apple III, especially any ProFile interface cards and Grappler printer cards.

The test results show the bank, address, and test expectations and actual performance. For example, after the test, say the console displays:

BNK 82, ADR 67AF, EXP 40, GOT 48.

To locate the bad chip, you must translate these results into a map that corresponds to the 3 banks of 16 chips on the memory board.

1. The bad chip is in bank 2. The bank number comes from the last digit of the BNK field.

BANK: 0 x x x x x x x x x x x x x x x x
BANK: 1 x x x x x x x x x x x x x x x x
BANK: 2 X X X X X X X X X X X X X X X X

2. The bad chip is in the right side of the bank. The side is determined by the range that the address, 67AF, the number in the ADR field, falls into.

ADDRESS RANGE: ADDRESS RANGE:
2000-3FFF 4000-7FFF
8000-9FFF
BANK 0 x x x x x x x x x x x x x x x x

ADDRESS RANGE: ADDRESS RANGE:
0800-0FFF 0000-07FF
1800-1FFF 1000-17FF
C000-C7FF A000-BFFF
D000-D7FF C800-CFFF
E000-FFFF D800-DFFF
BANK 1 x x x x x x x x x x x x x x x x

ADDRESS RANGE: ADDRESS RANGE:
2000-5FFF 6000-9FFF
BANK 2 x x x x x x x x X X X X X X X X

3. The bad chip is in location number B5. The bad chip shows up in the comparison of the binary representation of the hexidecimal values in the fields EXP and GOT, which contain the test expectations and performance. Any difference between the two is a map of where to find the bad chip or chips.

hexidecimal binary hexidecimal binary hexidecimal binary

0 0000
1 0001 6 0110 B 1011
2 0010 7 0111 C 1100
3 0011 8 1000 D 1101
4 0100 9 1001 E 1110
5 0101 A 1010 F 1111

EXP = 40 (hexadecimal) = 01000000 (binary)
GOT = 48 (hexadecimal) = 01001000 (binary)

EXP = 40 (hexadecimal) = 0 1 0 0 0 0 0 0 (binary)
GOT = 48 (hexadecimal) = 0 1 0 0 1 0 0 0 (binary)

ok ok ok ok ! ok ok ok

ADDRESS RANGE:
6000-9FFF

BANK 2 x x x x x x x x x x x X x x x

In the chip location number B5, the letter comes from the letter of the banks of chips on the memory board:

LETTER: D
BANK: 0 x x x x x x x x x x x x x x x x

LETTER: C
BANK: 1 x x x x x x x x x x x x x x x x

LETTER: B
BANK: 2 x x x x x x x x x x x X x x x

The number comes from the number of the chip on the memory board:

NUMBER: 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2
LETTER: D x x x x x x x x x x x x x x x x (BANK 0)
C x x x x x x x x x x x x x x x x (BANK 1)
B x x x x x x x x x x x X x x x (BANK 2)

Replace the bad memory chip(s) and run the test again. If the system fails the memory board test, exchange the memory board itself. If that dosen't help, exchange the main logic board.

Last Modified: Feb 19, 2012

Newton MessagePad: How to Add Words to the Word List

- **Last Modified:** January 16, 1998
- **Article:** TA29943

- **Old Article:** 12953

How do I add words to Newton's word list?
You can add words to Newton's word list with Newton's on-screen keyboard. Here are two ways to do that:

1) Double-tap words that Newton misinterprets. This will display the on-screen keyboard. Type in the correct word with your stylus, then tap Yes when Newton asks you if you want the word added to your personal word list.

2) Tap the keyboard icon inside the Preferences Menu or on the bottom left of the Note Pad to display. When the keyboard is displayed, type in the desired word with your stylus, then tap Add to add your word to the word list.

Only add words to your personal word list that you use often. Try not to add many short words, abbreviations or acronyms to the list, because it will slow down Newton's interpretive process and increase the likelihood of future mistakes.

If Newton seems to continuously misinterpret specific letters or words, you may want to go back to Letter Styles in the Preferences Menu and narrow or expand the styles you want Newton to recognize.

Rate this article:

- Not helpful
- Somewhat helpful
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Macintosh: Using High-Density Disks in 800K Drives (01/95)

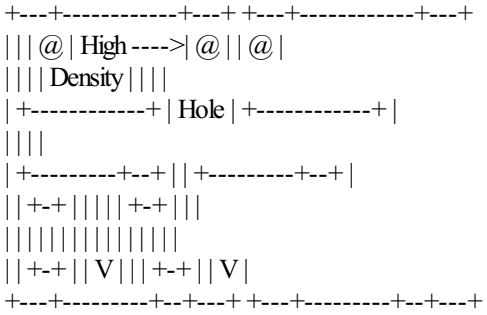
This article describes how to use a 1.4MB high-density disk in an 800K drive.

This article has been archived and is no longer updated by Apple.
If you take brand new high-density, "preformatted for Macintosh" floppy disks and copy some files off an earlier model Macintosh (such as a Macintosh Plus) to transfer them to a newer model Macintosh (such as a Performa). When you insert the disk in the newer model's drive, you get the message "This disk is unreadable. Do you want to initialize it?"

This happens because you are using high-density disks to perform your file transfer, but the earlier Macintosh and the newer Macintosh do not use the same type of disk drive. The earlier models, along with most original Macintosh II models and some Macintosh SE systems do not have the high-density SuperDrive (or FDHD ð floppy drive, high density) necessary to read and format a high-density disk.

So, if you insert a blank high-density disk in a double-density (800K) drive like the one in a Macintosh Plus, it does not know the difference between a double- density and a high-density floppy, and happily formats your expensive 1.4MB disk as an 800K disk.

When you move this disk to a Macintosh with a SuperDrive, the newer drive recognizes the disk as a high-density floppy by its extra hole. Since the disk has been formatted as 800K instead of as 1.4MB, the SuperDrive misreads it and asks you if you want to initialize it.



As a temporary workaround, place a small piece of tape over both sides of the extra hole (the one on the upper left when looking at the diskette from the front, as shown in the above diagram) on the high-density disk to trick the Macintosh into treating the disk as a double-density disk. This is a temporary solution, and the tape should be removed and the disk reformatted to the proper size as soon as possible.

Article Change History:
13 Jan 1995 - Added keyword, retitled, and made several technical updates.

Support Information Services
Last Modified: Feb 19, 2012

Additional Product Support Information

Macintosh: Possible Cures for Jumpy Mouse Pointer

- **Last Modified:** October 04, 2008
- **Article:** TA29956

- **Old Article:** 12970

This article has been archived and is no longer updated by Apple.

My mouse pointer jumps all over the screen now, but it used to glide smoothly. What happened?
A jumpy mouse pointer is usually indicative of a loose cable. To check it, power your computer off, unplug and replug the cable into your computer, then restart.

If the jumpiness persists, the small rollers inside the mouse may be dirty. Remove the mouseball retaining ring by turning it counter-clockwise one quarter turn. The retainer will pop off and the mouse ball will come out.

Check the black rollers for contamination. If you notice a buildup of dirt on the rollers, clean them with your fingernail or other non-metal tool. The mouseball should also be cleaned periodically to ensure it will roll smoothly and grip the rollers inside the mouse. Use a soft rag and water or a mild soap to clean the ball. Rinse it thoroughly before reinstalling it into the mouse.

If the mouse continues to act up, it may be in need of replacement. Try the mouse on another computer, or try a different mouse on your computer to determine where the fault lies. Contact your local Apple Authorized Service Provider for a replacement mouse.

Refer to TIL article 6491: "**How to Clean a Mouse**" for complete instructions on cleaning Apple mice.

Rate this article:

- Not helpful
- Somewhat helpful
- Helpful
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Apple II, II+, IIe, IIc: ASCII characters, values & keystrokes

The following table contains the ASCII codes generated by pressing a key or combination of keys on the Apple II, Apple II Plus, Apple IIe, Apple IIc, and Enhanced Apple IIe.

This article has been archived and is no longer updated by Apple.

The character names come from the American Standard Code for Interchange of Information. Certain peripherals or programs or functions, such as the BASIC function CHR$, may require the decimal values; certain peripherals or programs may require the hexadecimal values as well.

The fourth column in the table below is for simple keystrokes or those made with the SHIFT key held down; the fifth and sixth columns are for those made either with the CTRL key held down or with both the SHIFT and CTRL keys held down simultaneously.

NOTE: An asterisk next to keystrokes or character names means that the Apple II and Apple II Plus can't generate that charcter from its keyboard. The double asterisk indicates a special case.

The comments column defines the non-printing ASCII characters.

			Keystrokes	Holding down:		Comments
Char	Dec	Hex	Regular	CTRL	SHIFT-CTRL	
NUL	00	00			@ **	null character
SOH	01	01		a	A	start of header
STX	02	02		b	B	start transmission
ETX	03	03		c	C	end of text
EOT	04	04		d	D	end of transmission
ENQ	05	05		e	E	enquire
ACK	06	06		f	F	acknowledge
BEL	07	07		g	G	bell
BS	08	08	Left-arrow	h	H	back space
HT	09	09	Tab	i	I	horizontal tab
LF	10	0A	Down-arrow	j	J	line feed
VT	11	0B	Up-arrow	k	K	vertical tab
FF	12	0C		l	L	form feed
CR	13	0D	Return	m	M	carriage return
SO	14	0E		n	N	shift out
SI	15	0F		o	O	shift in
DLE	16	10		p	P	data link escape
DC1	17	11		q	Q	device C 1
DC2	18	12		r	R	device C 2
DC3	19	13		s	S	device C 3
DC4	20	14		t	T	device C 4
NAK	21	15	Right-arrow	u	U	negative acknowledge
SYN	22	16		v	V	synchronous idle
ETB	23	17		w	W	end of text block
CAN	24	18		x	X	cancel
EM	25	19		y	Y	end of medium
SUB	26	1A		z	Z	start subroutine
ESC	27	1B	Escape	[*	{ *	escape
FS	28	1C		\\ *	| *	file separator
GS	29	1D		] *	} *	group separator
RS	30	1E			^	record separator
US	31	1F			_ *	unit separator
SP	32	20	Space Bar			space
!	33	21				
"	34	22				
#	35	23				
$	36	24				
%	37	25				
&	38	26				
'	39	27				
(	40	28				

)	41	29
*	42	2A
+	43	2B
,	44	2C
-	45	2D
/	47	2F
0	48	30
1	49	31
2	50	32
3	51	33
4	42	34
5	43	35
6	44	36
7	45	37
8	46	38
9	57	39
:	58	3A
;	59	3B
<	60	3C
=	61	3D
>	62	3E
?	63	3F
@	64	40
A	65	41
B	66	42
C	67	43
D	68	44
E	69	45
F	70	46
G	71	47
H	72	48
I	73	49
J	74	4A
K	75	4B
L	76	4C
M	77	4D
N	78	4E
O	79	4F
P	80	50
Q	81	51
R	82	52
S	83	53
T	84	54
U	85	55
V	86	56
W	87	57
X	88	58
Y	89	59
Z	90	5A
[*	91	5B
\\ *	92	5C
] *	93	5D
^	94	5E
_ *	95	5F
` *	96	60
a	97	61
b	98	62
c	99	63
d	100	64
e	101	65
f	102	66
g	103	67
h	104	68
i	105	69
j	106	6A

k	107	6B	
l	108	6C	
m	109	6D	
n	110	6E	
o	111	6F	
p	112	70	
q	113	71	
r	114	72	
s	115	73	
t	116	74	
u	117	75	
v	118	76	
w	119	77	
x	120	78	
y	121	79	
z	122	7A	
{ *	123	7B	
| *	124	7C	
} *	125	7D	
~ *	126	7E	
DEL *	127	7F	Delete

* The Apple II and Apple II Plus can't generate that charcter from the keyboard.

** Use SHIFT-P.

Published Date: Feb 19, 2012

Macintosh: Troubleshooting a Rejected Disk

- **Last Modified:** January 20, 2000
- **Article:** TA29966

- **Old Article:** 12982

I keep getting a message saying, "This is not a Macintosh disk: Do you want to initialize it?" or "This disk is damaged: Do you want to initialize it?"I know the disk had already been formatted for a Macintosh and I have not had problems with it before. What is wrong now?
When you get these messages and you are certain the disk is properly formatted, click No. If you click Yes, all the data on the disk is overwritten by the Macintosh and lost.

Immediately lock the disk. This protects your data in case the problem is a damaged directory or misaligned drive; both of these problems can cause your data to be erased from an unlocked disk.

What to Look For
If you are using a Macintosh Quadra 660AV or Quadra 840AV, your disks could be rejected because these models use a different floppy disk controller which reads and writes data more precisely than the one in most other Macintosh computers. It may not be able to read your disk, especially if it was manufactured by a mass-duplication process. If this occurs with software installation floppy disks, contact the vendor for another copy of the software.

NOTE: This problem can occur if composite SIMMs are installed in your machine. Confirm that any additional RAM added is non-composite. Apple only supports non-composite SIMMs. If you are not sure whether you have composite SIMMs, read the Technical Information Library article titled, "Composite SIMMs: How to Identify."

1.4 MB High-Density Disks
If the disk is a 1.4 MB high-density disk and the drive can only read 400K or 800K disks (Macintosh computers before and including the Macintosh Plus, the original Macintosh II models, and some Macintosh SE models), it cannot be read by anything other than a SuperDrive (FDHD, or floppy drive, high density).

High-Density Disks
If the disk is a high-density disk that was formatted as an 800K disk, your drive gives you a message like "This disk is improperly formatted for this drive. Do you want to initialize it?"

The best option in this case is to remove the disk and reinsert it in an 800K drive. However, if no 800K drive is available, you can trick the drive by putting tape over the hole in the upper-left corner of the disk (be sure to cover both sides of the hole).

Save any information you need from the disk onto the hard drive, eject the disk, remove the tape, and reformat the disk as soon as possible.

NOTE: Use this technique only for emergencies.

Putting tape or any other item that could come off in the floppy drive can damage your computer.

Try the disk in another drive
If it works properly, this may indicate that one of the drives is misaligned or broken. When a disk that was written on by one drive cannot be read by another, the heads on one of the drives is out of alignment. The drive that is misaligned or broken may not be the drive that cannot read the disk; try the disk in three or four drives to identify the drive with the problem.

Warm or Cold Disks
If the disk is too warm or too cold, the drive may not be able to read it properly.

You can warm up a cold disk safely by setting it on top of your monitor for a few minutes. An overly warm disk can be cooled by placing it in a shady, cool place. DO NOT attempt to heat or cool a disk in an oven or refrigerator.

Damaged Disks
If none of these resolves or identifies the problem, the disk is damaged. You can attempt to make a copy of unreadable or damaged disks using a disk recovery software program (like MacTools FastCopy by Central Point Software), then try fixing the problem using a repair utility.

The first utility to try would be Disk First Aid which is included on one of the System disks (Utilities or Disk Tools) that came with your Macintosh computer. If it

does not completely repair the problem, try running Disk First Aid several times. If Disk First Aid cannot fix the problem, there are many other recovery utilities you can try.

Other repair or recovery utilities may do more complex repairs than Disk First Aid. You might try one of these utilities for severely damaged disks. You might at least be able recover some of your data. Some examples of these utilities include Norton Utilities by Symantec or MacTools Deluxe by Central Point Software.

Other Disk Formats
If you are using MS-DOS or ProDOS formatted disks, you must have the PC Exchange control panel installed and have a High-Density drive installed in your Macintosh computer. While your macintosh computer can read both ProDOS and MS-DOS disks, you should still use only Macintosh formatted disks if you are not exchanging files between Apple II or MS-DOS computers.

There is an additional step you may have to perform if you are using MS-DOS or ProDOS formatted floppies. You may have to throw away the PC Exchange Preferences file. It is located in the Preferences folder within the System Folder. If this file has become damaged, you may no longer be able to mount MS-DOS and ProDOS formatted disks. Once you have removed the PC Exchange Preferences file, a new one is created the next time you start your computer.

This article provides information about some non-Apple products. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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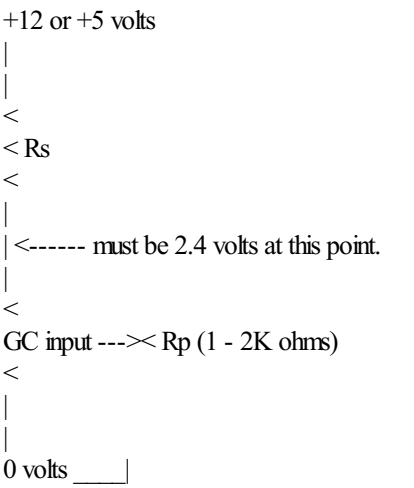
Apple III: Game Paddles

Standard Apple II 150K game paddles cannot be used with the Apple III. A high impedance potentiometer like the Apple II paddle will not work properly connected to an Apple III port.

This article has been archived and is no longer updated by Apple.

The analog inputs on Port A and Port B of the Apple III are designed to read a voltage between 0 and 2.4 volts and convert it to a number between 0 and 255. The schematic on page 82 of the Apple III Owner's Guide is drawn for a joystick with 5,000 ohm potentiometers. Only the bottom 20% of the potentiometer's range is used. Using the +12 volt power supply will result in the most stable readings.

The following circuit can be used if the entire range of the potentiometer is desired.



The voltage range at the GC inputs should go from 0v to 2.4v. The value of Rs can be calculated for +5 volt systems with this formula:

Rs = Rp * 2.6 / 2.4

For +12 volt systems use: Rs = Rp * 9.6 / 2.4

Last Modified: Feb 19, 2012

Archived - Retrospect: Error Messages (1 of 2)

This article list the following Retrospect error messages and possible solutions.

1) Catalog out of sync
2) Bad StorageSet header
3) Content Unknown
4) Content Damaged
5) Compare Error
6) Error 34 (volume full)
7) Errors 35 and 53 (volume doesn't exist, volume off-line)
8) Error 36 (I/O error)

For more information on Retrospect error messages, see article 13002: "**Retrospect: Error Messages (2 of 2)**"
This article has been archived and is no longer updated by Apple.

1) Catalog out of sync Error
Each time Retrospect performs a backup to a StorageSet, it updates the information in the Catalog.

* A "Catalog out of sync" error indicates that Retrospect was unable to update the Catalog the last time it copied data to this StorageSet -- possibly because of equipment failure or power failure.

* This error may also be caused by a full disk error (error -34) or by an out of memory error (error -108). (Both of these errors are explained in separate articles in the Tech Info Library.)

What to do:
Repair the Catalog. For instructions, see "Updating a Catalog" on page 162 of the Retrospect User's Guide. If updating the Catalog does not eliminate the "Catalog out of sync" error, the Catalog cannot be repaired.

You have three options:

* Perform a Full Backup, resetting the Catalog and erasing the tape.

* Select Catalogs from the Configure icon. Choose the StorageSet and select Media Control. Click Skip, forcing Retrospect to use a new piece of media for the next backup.

* Create a new StorageSet and begin a new backup.

2) Bad StorageSet header Error
Each file in your StorageSet is preceded by a header that contains information such as its name and size. A bad StorageSet header error will appear if Retrospect reads a header that is obviously damaged or invalid.

What to do:
If the error appears immediately while you are recreating a Catalog file, it means you forgot to tell Retrospect that the StorageSet was encrypted. If the error appears during backup or retrieving, it can indicate SCSI communication issues. See "SCSI problems" on page 180 of the Retrospect User's Guide for details.

3) Content Unknown Error
A "Content Unknown" error means that Retrospect can see data on your media, but the data is not recognized as Retrospect-formatted data. For tapes, this usually means that the tape was damaged or used by a different backup program.

4) Content Damaged Error
The "Content Damaged" error message appears if you change the name of a disk or cartridge that is part of a Disk StorageSet.

What to do:
If you want to preserve this data, rename the disk to the original name it was given by Retrospect. The original disk uses the format "1-The StorageSet." If you do not want to save the data and want to use the disk for other purposes, erase the disk using the Erase Disk command from the Special menu in the Finder.

5) Compare Error
A compare error appears if a backup file does not match the file from which it was copied. Retrospect will try to back up the file again during the

next backup session.

The following messages in Retrospect Log indicate a compare error:

* File "Home": different modify date/time
* File "My File": didn't compare at data offset 263,078
* File "My File": didn't compare at resource offset 731,429

What to do:
If you know the file was in use at the time the backup occurred, a compare error is usually nothing to worry about. It simply means the file changed between backup and verification. Compare Errors that mention data or resource offsets usually indicate SCSI communication issues. See "SCSI problems" on page 180 of the Retrospect User's Guide for details.

6) Error 34 (volume full)
Error 34 (volume full) means that a volume has run out of free storage space. You will see this error in the following situations:

* If you are restoring more files to a volume than will fit.
Solution: Try restoring fewer files, or restore to a larger volume.

* When Retrospect is updating a StorageSet Catalog during a backup and the volume where the Catalog is located runs out of room.
Solution: Check your hard disk to see if it is full, or close to full.

* If you are backing up to a Macintosh File StorageSet and the destination volume runs out of free space.
Solution: Check the hard disk containing the Catalog file, to see if it is full.

7) Errors 35 and 53 (volume doesn't exist, volume off-line)
The Errors 35 and 53 (volume doesn't exist, volume off-line) mean that Retrospect cannot find a volume when it is time to perform a backup.

What to do:
Make sure the volume is actually connected to the Macintosh and that it is mounted on the Desktop. If it is, click the Immediate icon in the Retrospect Directory, then click View to scan the volume and display the Browser.

8) Error 36 (I/O error)
When an Error 36 (I/O error) is reported by Retrospect, a media issue has occurred on a source volume.

What to do:
Try verifying the media on your source disk using a disk utility or the formatting program that came with your hard drive. If you are using an Apple hard disk, try using the Test command in the Apple HD SC Setup utility or MacCheck (MacCheck is included with Macintosh computers after July 1993, and on the Macintosh Software Utility Update 1.0 disk).

If you have a Power Macintosh with the native version of Retrospect 2.1i installed, and while Retrospect displays a dialog that says "Scanning...." you encounter this error, contact Dantz.

Note: For further information on working with Retrospect and Retrospect A/UX, search the Tech Info Library by "Retrospect" or "Remote."
Rate this article:

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- Somewhat helpful
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- **Last Modified:** February 19, 2012
- **Article:** TA29985

- **Views:**

  10823

- **Rating:**
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Archived - Retrospect: Error Messages (2 of 2)

This article list the following Retrospect error messages and possible solutions.

1) Error 43 (file not found)
2) Error 54 (file busy/locked)
3) Error 102 (trouble communicating)
4) Error 108 (out of application memory)
5) Error 203 (hardware failure)
6) Error 205 (lost access to storage media)
7) Errors -24201 (chunk checksum failed) and -25040 (Catalog invalid or damaged)
8) Error 24062 (limited to 32000 files/folders)

For more information on Retrospect error messages, see article 13001: "**Retrospect: Error Messages (1 of 2)**"
This article has been archived and is no longer updated by Apple.

1) Error 43 (file not found)
Error 43 (file not found) in Retrospect means that someone moved or deleted one or more files and folders on the target Macintosh while a backup or compare operation was in progress.

What to do:
Try backing up again. If this error continues to occur, run Apple's Disk First Aid, or another commercial disk checking utility on the disk in question.

2) Error 54 (file busy/locked)
There are two causes for Error 54 (file busy/locked):

* You are trying to back up System files using System 7 file sharing or AppleShare.
* Another application, such as FileMaker or 4th Dimension, had the files open, preventing Retrospect from accessing them.

What to do:
Back up the busy files from the local Macintosh, quit the application that owns the busy file, or install Retrospect Remote and back up the files.

3) Error 102 (trouble communicating)
Error 102 (trouble communicating) occurs when the Macintosh loses contact with the backup device. The most common cause is improper SCSI termination.

What to do:
Refer to the following information on SCSI issues below:

Troubleshooting SCSI Issues
If the Macintosh SCSI chain is not set up properly, communication errors may occur that can cause data corruption or system failures during backup operations. This following information is designed to give you guidance when encountering SCSI issues.

Some devices such as scanners, CD-ROM drives, or external SCSI floppy drives can cause issues on the SCSI bus, especially if they are turned off. If you are experiencing SCSI communication issues, make sure that all of your SCSI devices are powered ON when you start your Macintosh.

The following sample errors can indicate communication errors on the SCSI bus:

* File "Home" didn't compare at resource offset 10,750
* File "Tech Note" didn't compare at data offset 3,253
* Trouble writing: "1-Office Backup 2" (0), error 102 (trouble communicating)
* Trouble reading: "1-Office Backup 2" (0), error 102 (trouble communicating)

The above errors can usually be traced to some failure in the SCSI configuration, whether it is termination, a particular device, cabling, or device order. The most common cause of communication issues is improper termination or bad SCSI cables.

Termination
The general rule for termination is to have only two terminators on the SCSI bus, one at the beginning and one at the end. If you have only a single device on the SCSI bus, then only one terminator is needed. Most Macintosh computers purchased with internal hard disks are internally terminated. Some SCSI peripherals come with internal termination built-in, and must be placed at the end of a SCSI chain.

For more information, refer to your Macintosh user's guide and the manual that came with your hardware device.

SCSI Cables
Communication issues can be caused by bad or loose-fitting SCSI cables. Check all cables for proper seating in each connector. The entire length of your SCSI bus should not exceed 20 feet. Whenever possible, avoid using cables over six feet in length.

Device Order and Device Conflicts
To avoid issues caused by device order or device conflicts, make sure that each device has a unique SCSI address. If issues occur, try changing the order of SCSI devices or temporarily removing unneeded devices.

For further information on working with Retrospect and Retrospect A/UX, search the Tech Info Library by "Retrospect" or "Remote."

4) Error 108 (out of application memory)
Error 108 (out of application memory) means that Retrospect needs more memory.

What to do:
Increase the memory you have allocated to Retrospect by using the Get Info command from the Finder's File menu. The following is a guide for how much memory Retrospect will need to back up large volumes:

- 1,700K for 3,500 files/folders (This is the default setting.)
- 4,000K for 10,000 files/folders
- 6,000K for 20,000 files/folders
- 8,000K for 32,000 files/folders

[BR]
If you are backing up volumes that contain a large number of files, you may need more than the recommended amount of memory.

5) Error 203 (hardware failure)
Error 203 (hardware failure) means that the tape drive is failing because of a bad tape, a SCSI issue, or a mechanical error.

What to do:
* If the error only occurs when you use a particular tape, that tape is probably damaged. Try using a new tape.

* If the error occurs when you use any tape, you may have an issue with your SCSI chain or device. Try turning off the tape drive and computer for two minutes and then turning them back on again. See article 13022: "Retrospect: Troubleshooting SCSI Issues" for more information.

6) Error 205 (lost access to storage media)
Error 205 (lost access to storage media) usually indicates that the SCSI bus was reset during a backup, causing Retrospect to lose contact with the tape. Usually this error indicates a SCSI issue and may be accompanied by an Error 102 (trouble communicating).

What to do:
If Error 102 accompanies Error 205, see article 13022: "Retrospect: Troubleshooting SCSI Issues."

If Error 102 does not accompany Error 205 and SCSI communication issues have been ruled out, the next step is to check for media failure on the source volume. Some hard disks reset the SCSI bus when they sense they are experiencing a media failure. Try testing the drive with the software that was originally used to format it.

7) Errors -24201 (chunk checksum failed) and -25040 (Catalog invalid or damaged)
Errors -24201 (chunk checksum failed) and -25040 (Catalog invalid or damaged) mean that a Catalog or other Retrospect 2.0 format file is unusable.

What to do:
If the error occurs when you are trying to back up to a particular StorageSet, you need to rebuild the Catalog for that StorageSet. After the recatalog, reselect this StorageSet in your scripts. If the error occurs when you launch Retrospect, the Retro.Configuration file may be unusable. Remove this file from the Retrospect Preferences folder and launch Retrospect again.

After you do this, you will need to recreate your scripts and other settings.

Alternatively, restore a previous copy of your Retro.Configuration file from one of your StorageSets.

8) Error 24062 (limited to 32000 files/folders)

Error 24062 (limited to 32000 files/folders) occurs if you:
* try to back up a volume that contains more than 32,000 files and folders, or
* perform a search request which finds more than this number of items.

What to do:
Partition your hard disk into two or more partitions, keeping less than 32,000 items in each partition. Or define each of the top level folders of the volume as a Subvolume.

Note: Dantz strongly recommends that you store fewer than 32,000 files on any single volume, both for Retrospect compatibility and because the Macintosh file system becomes less stable with this many files on a single volume.

Note: For further information on working with Retrospect and Retrospect A/UX, search the Tech Info Library by "Retrospect" or "Remote."
Last Modified: Feb 19, 2012

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Retrospect: Troubleshooting SCSI Issues

- **Last Modified:** August 02, 2000
- **Article:** TA29994

- **Old Article:** 13022

This article has been archived and is no longer updated by Apple.
This article describes how to troubleshoot SCSI issues when using Retrospect.

SCSI Issues

If the Macintosh SCSI chain is not set up properly, communication errors may occur, when using Retrospect, that can cause data corruption or system failures during backup operations. This section is designed to give you guidance when encountering SCSI issues.

Some devices such as scanners, CD-ROM drives, or external SCSI floppy drives can cause issues on the SCSI bus, especially if they are turned off. If you are experiencing SCSI communication issues, make sure that all of your SCSI devices are turned on when you start your Macintosh.

The following sample errors can indicate communication errors on the SCSI bus:

* File "Home" didn't compare at resource offset 10,750
* File "Tech Note" didn't compare at data offset 3,253
* Trouble writing: "1-Office Backup 2" (0), error 102 (trouble communicating)
* Trouble reading: "1-Office Backup 2" (0), error 102 (trouble communicating)

The above errors can usually be traced to some failure in the SCSI configuration, whether it is termination, a particular device, cabling, or device order. The most common cause of communication issues is improper termination or bad SCSI cables.

Termination

The general rule for termination is to have only two terminators on the SCSI bus, one at the beginning and one at the end. If you have only a single device on the SCSI bus, then only one terminator is needed. Most Macintosh computers purchased with internal hard disks are internally terminated. Some SCSI peripherals come with internal termination built-in, and must be placed at the end of a SCSI chain. For more information, refer to your Macintosh user's guide and the manual that came with your hardware device.

SCSI Cables

Communication issues can be caused by bad or loose-fitting SCSI cables. Check all cables for proper seating in each connector. The entire length of your SCSI bus should not exceed 20 feet. Whenever possible, avoid using cables over six feet in length.

Device Order and Device Conflicts

To avoid issues caused by device order or device conflicts, make sure that each device has a unique SCSI address. If issues occur, try changing the order of SCSI devices or temporarily removing unneeded devices.

For further information on working with Retrospect and Retrospect A/UX, search the Tech Info Library by "Retrospect" or "Remote."

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Macintosh Serial Port: Maximum Speed

It appears that the maximum speed that I can drive the Macintosh serial port is 9600 bps when also communicating to a printer or other AppleTalk device.

I need to drive the modem port at 19.2 kbps while communicating to a AppleShare file server. The Macintosh cannot keep up with the DEC terminal server under the above circumstance. Is there any test data that would confirm or debunk my observation?
This article has been archived and is no longer updated by Apple.
This article addresses Macintosh computers slower than the Macintosh IIfx. For those systems, the information from the following "d e v e l o p" magazine article presented is accurate.

For 68040 and PowerPC based desktop Macintosh computers, the limit is higher. While no official testing has been done to identify the exact limit of each platform, customers have reported error-free 14.4kbps, 19.2kbps, and 28.8kbps connections with simultaneous LocalTalk connectivity.

All 68030 based Macintosh PowerBook computers are impacted by the 9600bps limit. The 68040-based PowerBook computers have a higher limit (56.6kbps) and customers have reported successful 28.8kbps connections with simultaneous LocalTalk connectivity.

Maximum communication speeds of the Macintosh Serial Ports are limited when both ports are used simultaneously.

What follows is an article from issue 9, Winter 1992 (pages 86-88), of "d e v e l o p - The Apple Technical Journal."

Question: When my hardware device sends data to a Macintosh at 57.6 kbps, characters can get lost if LocalTalk is on and a file server is mounted. Does Apple know about the problem? Is there a solution?

Answer: The specification for the top speed of the serial port on a Macintosh is an absolute maximum given that no other processing or use of the SCC are present. Although the speed of the Macintosh IIfx has now allowed this ceiling to be reached in the presence of other processing, it is just not attainable on other models of the Macintosh except when the machine is dedicated to this purpose.

While AppleTalk remains active there is no guarantee on serial port data transmissions over 2400 bps. The same processor must handle the OS, the Serial driver and the AppleTalk driver (with no advantage of DMA), so the overhead is considerable. Because of the AppleTalk driver's considerations for incoming serial data, users can usually work at up to 9600 bps without any problems. All models in the current product line, except the Macintosh IIfx, are unable to sustain throughput with baud rates beyond 19.2 kbps except when exclusively dedicated to that task.

There is essentially no way to guarantee 100% serial data acquisition when using AppleTalk. This is due to the fact that while the Macintosh is receiving an AppleTalk packet, interrupts are disabled for the duration of packet transmission. What this means in a "worst case" situation is that a 603-byte packet (the largest possible AppleTalk packet) sent to the serial port would take approximately 26 milliseconds to receive. Compare this with asynchronous serial data transmitted at 9600 bps which would only take 1 millisecond to receive. A very realistic situation arises in which 26 bits could be lost during a concurrent AppleTalk/Serial Device transmission. The possibility is further strengthened when there are routers on the network, which send out large RTMPs (Routing Table Maintenance Packets).

To alleviate possible data loss, the AppleTalk driver interrogates the serial port at key times that won't interfere with packet reception. However, the checks are not at regular intervals; they are encoded in the driver as stated above. This means that these random checks may not coincide with the demands of the serial driver, and an occasional character is lost.

This same loss of characters may also occur in conjunction with the Sony driver. If a disk is inserted and it requires special attention (like formatting) then the odds of losing characters is increased. The Sony driver has built-in considerations like the AppleTalk driver (although not as frequent). So you can still lose data at high transfer rates if a disk is inserted during the transfer.

The character dropout also occurs on systems which are not currently running AppleTalk but are receiving serial transmissions from high-speed devices (57.6 kbps) and are performing CPU tasks which require a high amount of memory access (such as a CPU like the Macintosh IIsi or IIci running on-board video in 8-bit mode, or a CPU using VM).

There is, however, a way to ensure reception of high-speed serial data without character lossthrough the use of a Serial NuBus card or other third-party NuBus cards with a dedicated processor necessary to provide higher speeds. The cards in essence operate as dedicated port-handling circuitry. They are able to perform necessary buffering while the processor is servicing other interrupts. This is the reason that network cards such as EtherTalk and TokenTalk can accomplish lossless transactions; they do at least some of their own buffering until being serviced to avoid interference with other operations like receiving serial data.

Alternatively, you may want to develop a custom card yourself that exactly fits the needs of your product. In this case you should look into the Macintosh Coprocessing Platform (MCP) and Apple / Real-time Operating System Environment (A/ROSE) as a basis of this line of development. Development packages for both these products are available from APDA.
Published Date: Feb 19, 2012